Queensland Government
Environmental Protection Agency

File note of meeting/discussion

(tick one box only)

❑ Meeting ❑ Telephone

FM549-3 April2003

Date 26/6/08. Time

Between kmm of

and Allen of

Subject(s) Information Response

Hi kmm,

AS discussed. A information response, (stage 2) that was placed on file and no one told. This is the one from CTPI 49-Sch4. Attached is the email you sent me. also is all the files I found that go with it.

CTPI 49-Sch4

Published on DES Disclosure Log RTI Act 2009

Initial/signature page of
(each page please)

Reminder - is written confirmation required? ❑ Yes ❑ No

PLEASE FORWARD TO RECORDS MANAGEMENT SECTION.

Allen Johns

From: Kim Barry
Sent: Tuesday, 10 June 2008 10:35 AM
To: Allen Johns
Subject: FW: DA2007/1921 - Cooroy Lower Mill Site EPA file 902326

Attachments: EPA info.pdf



EPA info.pdf (583 KB)

Published on DES Disclosure Log
FOI Act 2009

Kim Barry
Acting Team Leader
Contaminated Land Unit
Environmental Operations
Environmental Protection Agency
Tel: (07) 3225 1045 Fax: (07) 3247 3278
E-mail: kim.barry@epa.qld.gov.au
http://www.epa.qld.gov.au/environmental_management/land/contaminated_land/

-----Original Message-----
From: Adam Britton [mailto:Adam.Britton@sunshinecoast.qld.gov.au]
Sent: Friday, 6 June 2008 11:38 AM
To: Kim Barry
Subject: DA2007/1921 - Cooroy Lower Mill Site EPA file 902326

Hello Kim,

Im chasing information with regard to EPA's assessment of the SMP submitted by SKM CTPI 49-Sch4 for the proposed development on the lots contained on the EMR. As you can appreciate this is having an effect on the programming of our works.

If there is any information you require dont hesitate to let me know and Ill endeavour to get it for you as soon as possible.

Kind regards.

<<EPA info.pdf>>

Adam Britton
Manager Commercial Development
Sunshine Coast Regional Council
Ph 54495361 Fax 54471062
Mob CTPI 49-Sch4
email: adam.britton@sunshinecoast.qld.gov.au

****
****
The Sunshine Coast Regional Council is now open for business. There is nothing you need to do as we have taken care of everything for you to ensure it is business as usual. Please continue to do business with your local Council office where you will still find the same friendly faces and the same great service. For further information head to the Sunshine Coast Regional Council website: www.sunshinecoast.qld.gov.au This email, together with any attachments, is intended for the named recipient(s) only. Any form of review, disclosure, modification, distribution and or publication of this email message is prohibited without the express permission of the author. Please notify the sender immediately if you have received this e-mail by mistake and delete it from your system. Unless otherwise stated, this email represents only the views of the sender and not the views of the Sunshine Coast Regional Council.
****
*****

BNE 21917 CONT SITE

Sinclair Knight Merz
369 Ann Street, Brisbane 4000
PO Box 246
Spring Hill QLD 4004 Australia

Tel: +61 7 3244 7100
Fax: +61 7 3244 7307
www.skmconsulting.com

23 MAY 2008

Mrs Kim Barry
Environmental Protection Agency
Southern Region
GPO Box 2771
BRISBANE QLD 4001

CTPI 49-Sch4

CTPI 49-Sch

19 May 2008

Stage 2 EPA Submission
QE09442

Dear Kim

Information Request Response - Material Change of Use for relocation of woodworkers cottage, Cooroy Lower Mill Domain

Reference is made to the Information Request issued by the Environmental Protection Agency (EPA) – Contaminated Land Unit (CLU) in relation to the abovementioned development application (EPA- CLU Reference: 10153 Part 1). On behalf of the application, Sunshine

Published on DERM Disclosure Log
RTI Act 2009

Site Investigation Report

Request

"A site investigation report, prepared in accordance with the *Environmental Protection Act 1994* (EP Act) and the *Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland* (DEH, 1998), must be submitted to the Environmental Protection Agency – Contaminated Land Unit (EPA – CLU). The report must demonstrate that Lot 1 on RP87371 and Lot 5 on SP173771 are suitable for the intended use and enable the EPA to either:

> Removed the site from the Environmental Management Register; or
>
> Approve a submitted draft Site Management Plan/Remediation Action Plan."

Response

Reference is made to contaminated land investigation reports previously submitted with respect to the subject land parcels, namely:

Sinclair Knight Merz Pty Limited
The SKM logo trade mark is a registered trade mark of Sinclair Knight Merz Pty Ltd.ABN 37 001 024 095
Offices across Australia, New Zealand, UK, South East Asia, Middle East, the Pacific and Americas

SKM

- Stage II Investigation Report Boral Timber Yards, prepared by Fleur Daniel GTI (Australia) Pty Ltd, dated 9 October 1998; *(previously submitted to the EPA – refer file number 902328)*
- Remediation Plan Boral Timber yards, prepared by Fleur Daniel GTI (Australia) Pty Ltd, dated 2 November 1998; *(previously submitted to the EPA – refer file number 902328)*
- Additional Environmental Investigations – Boral Timber Cooroy Mill, prepared by IT Environmental (Australia) Pty Ltd, dated 28 September 2000 ; *(previously submitted to the EPA – refer file number 902328)*
- Final Plan for Stormwater Management and Site Remediation– Boral Timber Mill Cooroy, prepared by IT Environmental (Australia) Pty Ltd, dated 6 October 2000 and 11 October 2000 for clarification; *(previously submitted to the EPA – refer file number 902328)*
- Closure Report – Soil Remediation and Stormwater Management Works, - Boral timber Mill, prepared by IT Environmental (Australia) Pty Ltd, dated 19 April 2001; *(previously submitted to the EPA – refer file number 902328)*

Published on DES Disclosure Log RTI Act 2009

On behalf of SCRC, IT Environmental (Australia) Pty Ltd undertook a review of these reports with respect to the specifics of this Development Application and the EPA's related Information Request. Copies of the relevant Statutory Declarations relating to the original reports have been attached (Attachment A) for information.

The review indicated that these reports were insufficient to meet the requirements of the EPA's Information Request for this Development Application. An Addendum Environmental Site Assessment was therefore undertaken and results are attached to this correspondence (Attachment B), together with the relevant Statutory Declaration.

On the basis of the original reports and their review and the Addendum Environmental Site Assessment, a draft Site Management Plan has been prepared and is attached to this correspondence (Attachment C) for the EPA's review and approval.

Pursuant to Section 3.3.8 of the Integrated Planning Act 1997, this response is provided as a full response to the Information request dated 31 October 2007 and constitutes the end of the

The SKM logo trade mark is a registered trade mark of Sinclair Knight Merz Pty Ltd.

R

information request stage under IDAS. SCRC looks forward to the progression into the application assessment stage and awaits the EPA – CLU's decision about this Development Application.

Should you have any queries or questions in relation to the information provided, please contact myself in the first instance (contact details provided below).

Yours sincerely

CTPI 49-Sch4

CTPI 49-Sch4

Environmental Manager - Contaminated Land
Phone: CTPI 49-Sch4
(07) 3224 7306
E-mail: CTPI 49@skm.com.au

Published on DES Disclosure Log
RTI Act 2009

The SKM logo trade mark is a registered trade mark of Sinclair Knight Merz Pty Ltd.

SKM

Appendix A

Published on DES Disclosure Log
RTI Act 2009

The SKM logo trade mark is a registered trade mark of Sinclair Knight Merz Pty Ltd.

STATUTORY DECLARATION

(LETTER REPORT PREPARER)

Address of Site Investigated:	1 Maple Street, Cooroy QLD
Real Property Descriptions:	Lot 5 on SP173770 Lot 7 on SP173770 Lot 2 on RP47020 Lot 1 on RP87371 Parish of Tewantin, County of March
Title of Report:	Addendum Environmental Site Assessment former Boral Timber Mill site (18 April 2008)

I CTPI 49-Sch4 of *Coffey Environments Pty Ltd*, in the State of Queensland, do solemnly and sincerely declare that:

- I was *letter report preparer* of the report described above;
- I am a member of *Environment Institute of Australia and New Zealand* and my qualifications and experience as outlined in documents provided previously to the EPA are relevant to this investigation;
- I have not knowingly included any false, misleading or incomplete information in the report; and
- I have not knowingly failed to reveal any relevant information or document to the administering authority.

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.

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

Signature CTPI 49-Sch4

Name _____

Taken and Declared before me in Brisbane this 9TH day of MAY 2008

Witness CTPI 49-Sch4 (comm for Dec Declarations)

Name CTPI 49-Sch4

COMMISSIONER FOR DECLARATIONS ... Per No 38398 ... LEGALS DEPARTMENT

Published on DES Disclosure Log RTI Act 2009

STATUTORY DECLARATION

(INVESTIGATOR AND VALIDATION REPORT PREPARER)

Address of Site Investigated:	1 Maple Street, Cooroy QLD
Real Property Descriptions:	Lots 1, 2 and 3 on RP153299 Lots 1, 2 and 3 on RP87371 Lot 2 on RP47020 Lot 1 on RP88582 Lots 2 and 3 on RP110206 Parish of Tewantin, County of March
Title of Report:	Closure Report Soil Remediation and Stormwater Management Works Boral Timber Mill Maple Street, Cooroy, QLD (19 April 2001)

I CTPI 49-Sch4 of *IT Environmental (Australia) Pty Ltd*, in the State of Queensland, do solemnly and sincerely declare that:

I was the *investigator and report preparer* of the report described above;

I am a member of *Environment Institute of Australia and New Zealand* and my qualifications and experience as outlined in documents provided previously to the EPA are relevant to this investigation;

I have not knowingly included any false, misleading or incomplete information in the report; and

I have not knowingly failed to reveal any relevant information or document to the administering authority.

I certify that:

the report addresses the relevant matters for the investigation and is factually correct;

the opinions expressed in it are honestly and reasonably held

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

Signature CTPI 49-Sch4

Name

Taken and Declared before me at Brisbane this 13

Witness CTPI 49-Sch4

Name

Reg. No. 73390

Published on DES Disclosure Log RTI Act 2009

STATUTORY DECLARATION

(INVESTIGATOR AND ESA REPORT PREPARER)

Address of Site Investigated:	1 Maple Street, Cooroy QLD
Real Property Descriptions:	Lots 1. 2 and 3 on RP153299 Lots 1. 2 and 3 on RP87371 Lot 2 on RP47020 Lot 1 on RP88582 Lots 2 and 3 on RP110206 Parish of Tewantin, County of March
Title of Report:	Stage II Investigation Report, Boral Timber Yards 1 Maple Street Cooroy, QLD (9 October 1998)

I CTPI 49-Sch4 of *IT Environmental (Australia) Pty Ltd*, in the State of Queensland, do solemnly and sincerely declare that:

I was the *investigator and report preparer* of the report described above;

I am a member of *Environment Institute of Australia and New Zealand* and my qualifications and experience as outlined in documents provided previously to the EPA are relevant to this investigation;

I have not knowingly included any false, misleading or incomplete information in the report; and

I have not knowingly failed to reveal any relevant information or document to the administering authority.

I certify that:

the report addresses the relevant matters for the investigation and is factually correct;

the opinions expressed in it are honestly and reasonably held.

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

Signature CTPI 49-Sch4

Name

Taken and Declared before me in Brisbane this

Witness CTPI 49-Sch4

Name

Published on DES Disclosure Log RTI Act 2009

STATUTORY DECLARATION

(REMEDIATION PLAN PREPARER)

Address of Site Investigated:	1 Maple Street, Cooroy QLD
Real Property Descriptions:	Lots 1. 2 and 3 on RP153299 Lots 1. 2 and 3 on RP87371 Lot 2 on RP47020 Lot 1 on RP88582 Lots 2 and 3 on RP110206 Parish of Tewantin, County of March
Title of Report:	Final Plan for Stormwater Management and Site Remediation Boral Timber Mill Cooroy, QLD (6 October 2000, plus 11 October 2000 clarification)

I CTPI 49-Sch4 of *IT Environmental (Australia) Pty Ltd*, in the State of Queensland, do solemnly and sincerely declare that:

I was the *investigator and report preparer* of the report described above;

I am a member of *Environment Institute of Australia and New Zealand* and my qualifications and experience as outlined in documents provided previously to the EPA are relevant to this investigation;

I have not knowingly included any false, misleading or incomplete information in the report; and

I have not knowingly failed to reveal any relevant information or document to the administering authority.

I certify that:

the report addresses the relevant matters for the investigation and is factually correct;

the opinions expressed in it are honestly and reasonably held.

Published on DES Disclosure Log
RTI Act 2009

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

Signature CTPI 49-Sch4

Name

Taken and Declared before me in B sbane this

Witness CTPI 49-Sch4

Name

Reg. No.

STATUTORY DECLARATION

(INVESTIGATOR AND REPORT PREPARER)

Address of Site Investigated:	1 Maple Street, Cooroy QLD
Real Property Descriptions:	Lots 1. 2 and 3 on RP153299 Lots 1. 2 and 3 on RP87371 Lot 2 on RP47020 Lot 1 on RP88582 Lots 2 and 3 on RP110206 Parish of Tewantin, County of March
Title of Report:	Additional Environmental Investigations Boral Timber Cooroy Mill 1 Maple Street Cooroy, QLD (28 September 2000)

I CTPI 49-Sch4 of *IT Environmental (Australia) Pty Ltd*, in the State of Queensland, do solemnly and sincerely declare that:

I was the *investigator and report preparer* of the report described above;

I am a member of *Environment Institute of Australia and New Zealand* and my qualifications and experience as outlined in documents provided previously to the EPA are relevant to this investigation;

I have not knowingly included any false, misleading or incomplete information in the report; and

I have not knowingly failed to reveal any relevant information or document to the administering authority.

I certify that:

the report addresses the relevant matters for the investigation and is factually correct;

the opinions expressed in it are honestly and reasonably held.

Published on DES Disclosure Log RTI Act 2009

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

Signature CTPI 49-Sch4

Name

Taken and Declared before me in B ane this 15 day of

Witness CTPI 49-Sch4

Name

SKM

Appendix B

Published on DES Disclosure Log
RTI Act 2009

The SKM logo trade mark is a registered trade mark of Sinclair Knight Merz Pty Ltd.

R

environments
SPECIALISTS IN LIVING AND WORKING PLACES

28 April 2008

Noosa Shire Council
c/- Sinclair Knight Mertz
369 Ann Street
Brisbane, QLD, 4000

Attention: CTPI 49-Sch4

Dear CTPI 49-Sch4

Addendum Environmental Site Assessment - former Boral Cooroy Timber Mill site.

Published on DES Disclosure Log
RTI Act 2009

Coffey Environments have been engaged by Noosa Shire Council to provide recommendations regarding the suitability of allotments subdivided from the former Boral Cooroy Timber Mill. Based on the information provided, Coffey Environments understands that the allotments have been earmarked for industrial activities.

Current correspondence received from SKM states that for some of the land parcels (Lot 1 on RP87371 and Lot 5 on SP173771), the intention is to create a cluster of woodworking activities for community educational purposes. This will include the refurbishment of the existing old boiler and kiln and as such the end land use for these particular land parcels will not change from the original, historical land use, as part of a timber mill.

Background Information

These allotments: Lot 5 on SP173770, (formerly part of Lot 2 on RP87371); Lot 7 on SP173770 (formerly part of Lot 1 on RP 885282); Lot 2 on RP47020; and Lot 1 on RP87371, were part of the Boral Cooroy timber mill which operated from 1959-2001. Prior to the establishment of the timber mill at the site, the site was used for transient farming and residence. No environmental impacts are known to have occurred at the site prior to its use as a timber mill.

Coffey Environments Pty Ltd ABN 45 090 522 759
47 Doggett Street, Newstead QLD 4006 Australia
T (+61) (7) 3608 2500 F (+61) (7) 3852 2805
ENVINEWS07570AH-L02.doc

Previous Environmental Investigations

As part of this investigation, a review of the following environmental reports for the former Boral Cooroy Timber Mill site was undertaken.

- **Envirotest** Environmental Audit of Boral-Cooroy Wood Treatment Facility. November 1991.
- **Fluor Daniel GTI (Australia) Pty Ltd** Stage II Investigation Report, Boral Timber Yards, 1 Maple Street, Cooroy Queensland, 9 October 1998 (our ref: B7570BR01).
- **IT Environmental (Australia) Pty Ltd** Additional Environmental Investigations, Boral Timber Cooroy Mill, 1 Maple Street, Cooroy Queensland, 28 September 2000 (our ref: J207570E-R01).
- **IT Environmental (Australia) Pty Ltd** Closure Report, Soil Remediation and Stormwater Management Works Boral Timber Mill, Maple Street, Cooroy, QLD.

Residual Contamination

Lot 2 RP47020:

No soil impact in excess Queensland Environmental Protection Agency (Qld EPA) Health-based Investigation Level (HIL) "F" (commercial/industrial). Metal concentrations in excess of Qld EPA Environmental Investigation Levels (EILs) remain onsite with maximum concentrations detected being: 111mg/kg of arsenic, which is also above Health-based Investigation Level (HIL) "A" (standard residential with garden/accessible soil); 109mg/kg of copper; and 1220 mg/kg of zinc. All impacted material occurs at shallow depth (0-200mm) in fill material present across the lot, and attenuates rapidly with depth, with all the (200-500mm) samples collected from natural in-situ soils at these locations reporting metal concentrations below the EILs.

Lot 1 RP87371:

No soil impact in excess Qld EPA HIL "F" (commercial/industrial). Metal concentrations in excess of Qld EPA EILs remain onsite, with maximum concentrations being: 112mg/kg of arsenic (also above HIL "A" guidelines); 143mg/kg of copper; 148mg/kg of chromium (III); and 884 mg/kg zinc. Although there is no nominated guideline for boron, two samples collected from this allotment also reported concentrations of boron in excess of the acknowledged background concentrations (maximum concentration detected was 723mg/kg). All impacted material occurs at shallow depth (0-200mm) in fill material present across the lot.

Lot 5 SP173771:

In the area to the east and south east of the former boiler building, metal concentrations in excess of Qld EPA commercial/industrial HIL "F" guidelines remain onsite. Maximum concentrations detected were: 8820mg/kg of arsenic; 8930mg/kg of copper; and 30400mg/kg of chromium. This impacted material occurs at shallow depth (0-200mm) in fill material present in this area of the site.

Published on DES Disclosure Log RTI 20079

Although no nominated guideline exists for boron, samples collected from this allotment also reported concentrations of boron in excess of the acknowledged background concentrations (maximum concentration detected was 9410mg/kg). In other areas of Lot 5, metal concentrations in excess of Qld EPA EILs remain onsite, with maximum concentrations detected being: 60mg/kg for arsenic, and 131mg/kg for chromium(III). All impacted material occurs at shallow depth (0-200mm) in fill material.

Lot 7 SP173771

Residual soil impact in the location of the former evaporation pond exceeds Qld EPA HIL"F" levels for arsenic, and the EILs for copper and chromium (III). As part of soil remediation works undertaken at the site in 2000, this area was backfilled with soil excavated during the replacement of the causeway at the site, the soil excavated from behind the boiler as part of other soil remediation works onsite, and imported clay fill. This backfill was then capped by a 500mm clay layer. Sections of this clay capping layer were covered by either 100mm of road base (trafficable areas) or clean soil (non-trafficable areas).

Residual soil impact in the vicinity of the former sawdust hopper exceeds Qld EPA EILs for arsenic, copper and chromium (III). As part of soil remediation works undertaken at the site in the year 2000, this area was capped by a 500mm clay layer. This clay capping layer has a confirmed density ratio of 95.5%. This capping layer was covered by 100mm of clean soil.

Metal concentrations in excess of Qld EPA EILs also exist in the vicinity of the former sawdust shed. This area has maximum concentrations of 101mg/kg for arsenic (also above HIL "A" guidelines), 92mg/kg for copper, and 142mg/kg for chromium (III). All impacted material occurs at shallow depth (0-200mm) in fill material present in this area of the lot.

Conclusions/Recommendations

Based on the results of the previous environmental investigations conducted across the allotments, a Site Management Plan has been generated covering all four lots. Coffey Environments recommends that the aforementioned allotments are suitable for non-sensitive commercial/industrial landuses which includes premises such as shops and offices as well as factories and industrial sites with minimal opportunities for contact with residual impacted soil, provided the controls outlined in the Site Management Plan are implemented and maintained.

Published on DERM Disclosure Log
RTI Act 2009

For and on behalf of Coffey Environments Pty Ltd

CTPI 49-Sch4

CTPI 49-Sch4

Senior Project Manager

CTPI 49-Sch4

Principal Geologist
State Manager QLD

SKM

Appendix C

Published on DES Disclosure Log
RTI Act 2009

The SKM logo trade mark is a registered trade mark of Sinclair Knight Merz Pty Ltd.

Queensland Government
Environmental Protection Agency
Queensland Parks and Wildlife Service

DRAFT SITE MANAGEMENT PLAN (SMP)
***Environmental Protection Act 1994 (EP Act)*, Chapter 7 Part 8 Division 5**

DATE: 28 April 2008

RPD Lot 5 on Plan SP173770;
Lot 7 on Plan SP173770
Lot 2 on Plan RP47020;
Lot 1 on Plan RP87371 **EPA File: 902326**

Published by DES Disclosure Log
PPR Act 2008

1.0 SUMMARY OF CONTAMINATION

These allotments, Lot 5 on SP173770, (formerly part of Lot 2 on RP87371) Lot 7 on SP173770 (formerly part of Lot 1 on RP 885282), Lot 2 on RP47020 and Lot 1 on RP87371; were part of the Boral Cooroy timber mill which operated from 1959-2001. Prior to the establishment of the timber mill at the site, the site was used for transient farming and residence. No environmental impacts are known to have occurred at the site prior to its use as a timber mill.

The site, known as the Cooroy Lower Mill Domain, is currently occupied by a number of (vacant) buildings associated with the old timber mill activities. It is proposed to use the site to create a cluster of wood working activities for community use through the refurbishment, reuse and preservation of the old mill kiln, hopper and boiler building.

Previous environmental investigations at the timber mill site have identified a number of areas as containing levels of soil contamination in excess of the Queensland Environmental Protection Agency's (EPA's) Environmental Investigation Levels (EILs). Figure 1 shows the location of the former timber mill infrastructure in relation to the current allotment boundaries.

Based on the results of the investigations conducted across the allotments, the aforementioned allotments can be used for non-sensitive commercial/industrial landuses which includes premises such as shops and offices as well as factories and industrial sites with minimal opportunities for contact with residual impacted soil, provided the controls outlined herein are implemented and maintained. The proposed activities are consistent with these land uses.

Soil impact left in place is discussed below.

Lot 2 RP47020:

Metal concentrations in excess of Queensland Environmental Protection Agency (Qld EPA) Environmental Investigation Levels (EILs) remain onsite (as shown on Figure 2), with maximum concentrations detected being:111mg/kg of arsenic, which is also above Health-based Investigation Level (HIL) "A" (standard residential with

R

garden/accessible soil); 109mg/kg of copper; and 1220 mg/kg of zinc. All impacted material occurs at shallow depth (0-200mm) in fill material present across the lot, and attenuates rapidly with depth, with all the (200-500mm) samples collected from natural insitu soils at these locations reporting metal concentrations below the EILs.

Lot 1 RP87371:

Metal concentrations in excess of Qld EPA EILs remain onsite (as shown on Figure 3), with maximum concentrations being: 112mg/kg of arsenic (also above HIL "A" guidelines); 143mg/kg of copper; 148mg/kg of chromium (III); and 884 mg/kg zinc. Although there is no nominated guideline for boron, two samples collected from this allotment also reported concentrations of boron in excess of the acknowledged background concentrations (maximum concentration detected was 723mg/kg). All impact occurs in samples collected at shallow depth (0-200mm) in fill material present across the lot, however in some locations the impact has not been vertically delineated.

Lot 5 SP173771:

In the area to the east and south east of the former boiler building (as shown on Figure 4) metal concentrations in excess of Qld EPA commercial/industrial health based investigation levels (HIL "F") guidelines remain onsite, with maximum concentrations detected being: 8820mg/kg of arsenic; 8930mg/kg of copper; and 30400mg/kg of chromium. This impact occurs at shallow depth (0-200mm) in fill material present in this area of the lot, however in one location it has not been vertically delineated.

Although no nominated guideline exists for boron, these samples also reported concentrations of boron in excess of the acknowledged background concentrations (maximum concentration detected was 9410mg/kg).

In other areas of Lot 5, metal concentrations in excess of Qld EPA EILs remain onsite, with maximum concentrations detected in other areas of the site being: 60mg/kg for arsenic, and 131mg/kg for chromium(III). All impacted material occurs at shallow depth (0-200mm) in fill material, however in some areas the impact has not been vertically delineated.

Lot 7 SP173771

Areas of residual soil impact across this lot are shown in Figure 5.

Residual soil impact in locations F2 and F3 exceeds Qld EPA EILs for arsenic, copper and chromium (III). As part of soil remediation works undertaken at the site in the year 2000, this area was capped by a 500mm clay layer. This clay capping layer has a confirmed density ratio of 95.5%. This capping layer was covered by 100mm of clean soil.

Residual soil impact in the location of the former evaporation pond exceeds Qld EPA HIL"F" levels for arsenic, and the EILs for copper and chromium (III). As part of soil remediation works undertaken at the site in 2000, this area was backfilled with soil excavated during the replacement of the causeway at the site, the soil excavated from behind the boiler as part of other soil remediation works onsite, and imported clay fill. This backfill was then capped by a 500mm clay layer. Sections of this clay capping

Published on DES Disclosure Log RTI Act 2009

layer were covered by either 100mm of road base (trafficable areas) or clean soil (non-trafficable areas).

Metal concentrations in excess of Qld EPA EILs also exist in the vicinity of the former sawdust shed. This area has maximum concentrations of 101mg/kg for arsenic (also above HIL "A" guidelines), 92mg/kg for copper, and 142mg/kg for chromium (III). All impact was detected in soil samples collected at shallow depth (0-200mm) in fill material present in this area of the lot, however the impact has not been vertically delineated in some locations.

2.0 OBJECTIVES OF THE SMP

The purpose of this SMP is to manage contaminated soils and materials on the lots in a manner that protects human health and the environment. This objective will be achieved through the following processes.

- Monitoring and control of all intrusive site works including excavations, trenching, drilling and scraping.
- The placement and maintenance of landscaping and capping layers which will provide barriers to occupiers of the site and the general public from the contamination, as well as restricting erosion and water infiltration and the potential for residual impact to migrate via leaching processes.
- The application of maintenance and monitoring requirements for the capping layers.

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 in order to achieve the objectives. The obligations and conditions set out in this SMP bind the owner of the land.

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

3.3 Site Capping.

3.3.1 Existing Capping. The existing capping is to remain in place, undisturbed, other than for the construction of service trenches. In the event that the existing capping layers are disturbed or removed, a new capping layer, of equal or better standard and designed to achieve the objectives of this SMP, is to be installed.

The capping layer must consist of 500mm of compacted clay and/or other equivalent low permeability (less than $1x10^{-9}$ m/s) cover, and is to be installed within areas as outlined in Figures 2 – 5 (attached) to maintain a barrier between the residual contamination and site users. The capping layer is to be maintained in sound condition at all times. If vegetation is to be placed over the capping layer, a minimum thickness of

Published on DES Disclosure Log
RTI Act 2009

R

100mm of top soil must be placed on top of the capping layer and only short root zoned plants such as grasses can be used as a vegetative cover.

3.3.2 Boiler Room Area. The identified contamination area (as shown on Figure 4) is to be capped with at least 100mm of structural reinforced concrete or interlocking pavers on a compacted base or equivalent cover. This area is not to be used for any activity which will disturb the capping, or surface soils.

3.3.3 Capping Maintenance. All capping materials are to be maintained in a sound condition at all times. Inspections of the site during construction of any capping materials are to be undertaken with documentation of actual cover, thicknesses and details.

3.4 Soil excavation & Removal. Any soil excavated on the site must be assessed for contaminants of concern to determine if the material is contaminated and to identify appropriate management and disposal/re-use options.

Representative sampling and analysis of soil from excavation in contaminated areas must be managed by a person suitably qualified and experienced 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.

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

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

3.6 *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.

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

4.0 MONITORING AND REPORTING

The owner is to undertake annual inspections of the site to determine and record the state of the installed capping in contaminated areas, and to provide the results of these inspections, and any corrective actions implemented to ensure that capping and protective barriers including vegetative covers remain in sound condition, to authorised officers of the EPA on request.

Published on DES Disclosure Log
RTI Act 2009

R

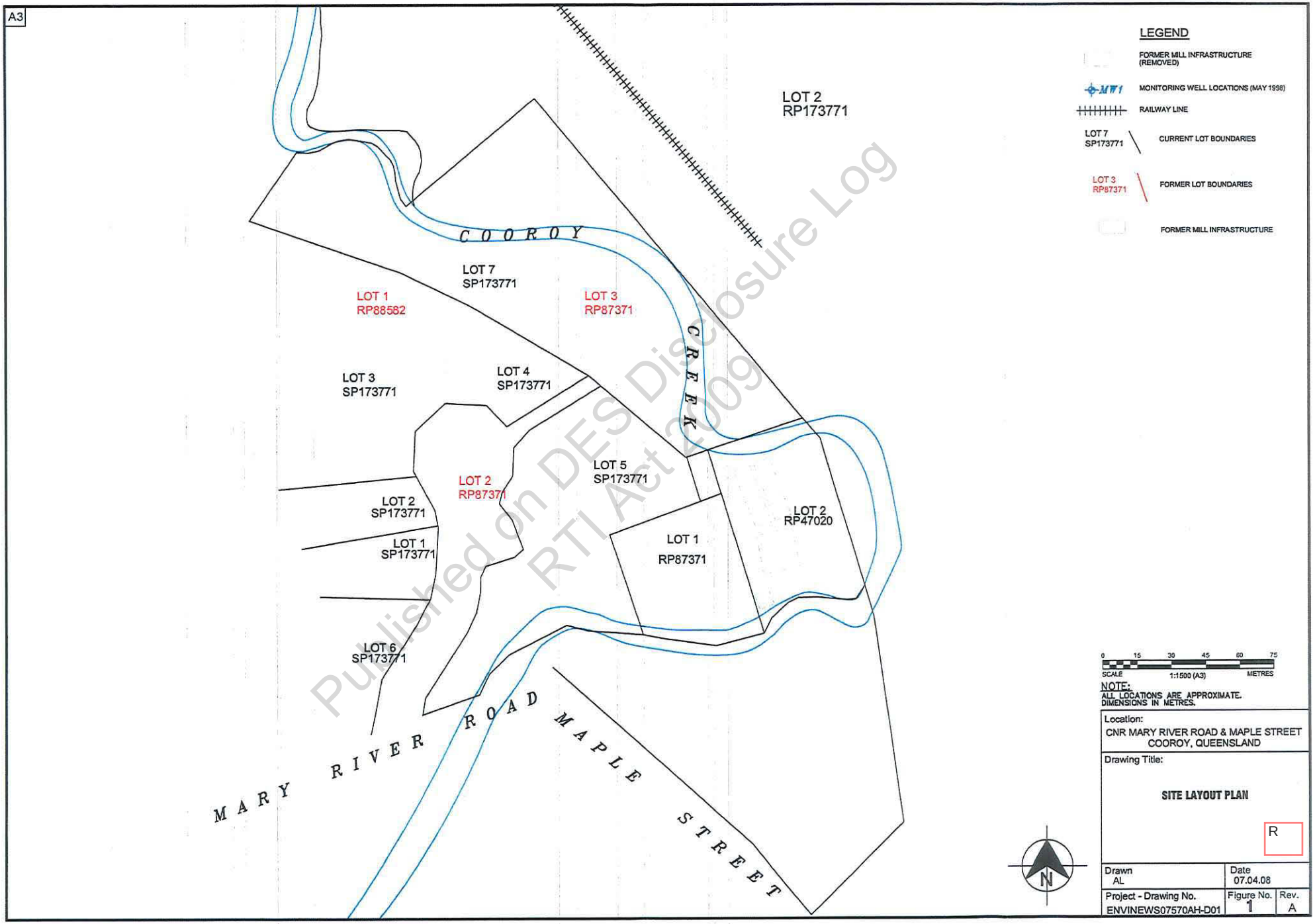
Records are to be kept of any inspections, soil excavation in contaminated areas, disposal permits and SMP compliance for review by the administering authority from time to time.

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

This SMP makes reference to two plan attachments that are available from the Administering Authority if required.

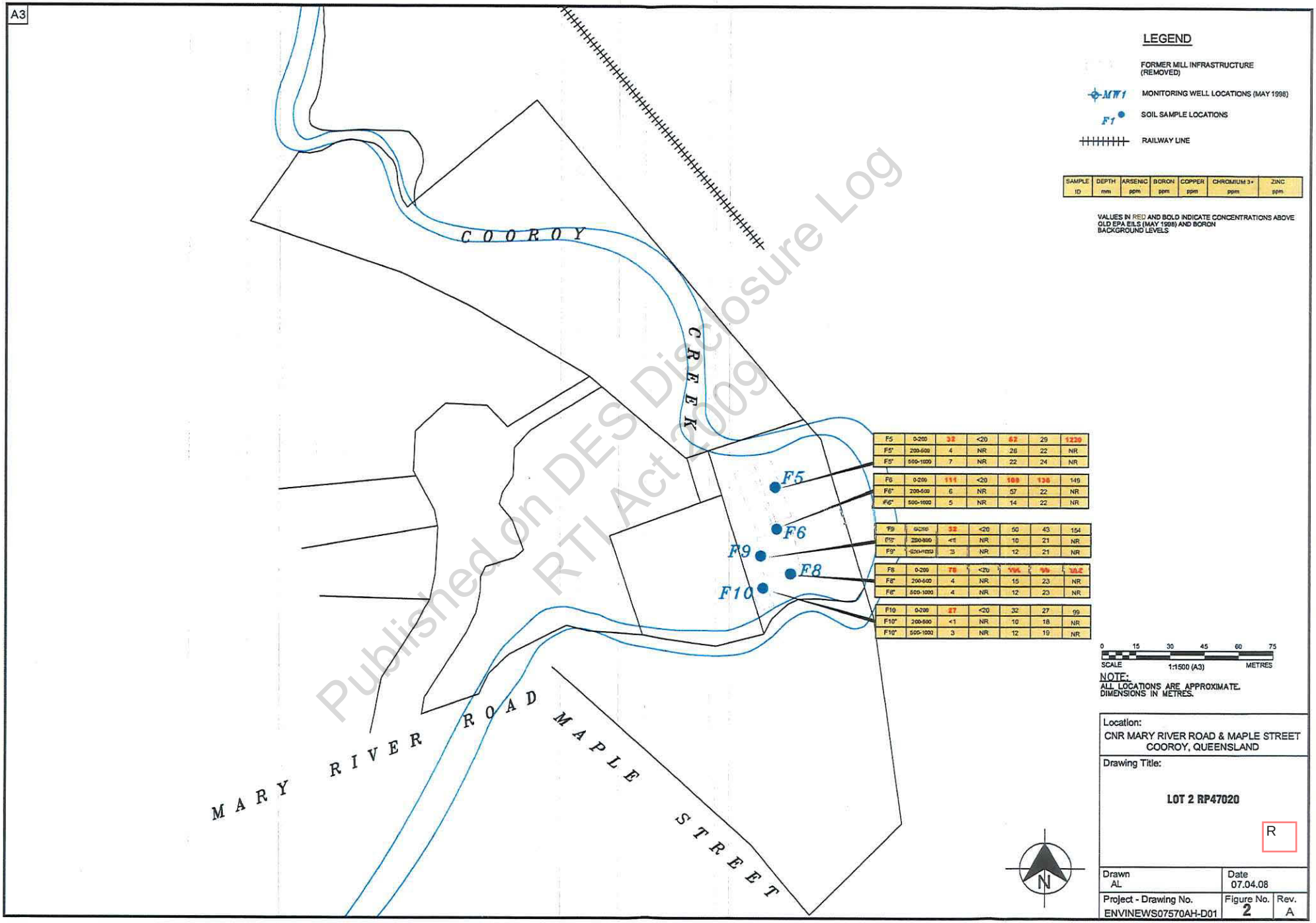
Published on DES Disclosure Log
RTI Act 2009

R



Published on DES Disclosure Log
RTI Act 2009

A3



SAMPLE ID	DEPTH mm	ARSENIC ppm	BORON ppm	COPPER ppm	CHROMIUM 3+ ppm	ZINC ppm
F5	0-200	32	<20	62	29	1230
F5'	200-500	4	NR	26	22	NR
F5"	500-1000	7	NR	22	24	NR
F6	0-200	111	<20	188	136	149
F6'	200-500	6	NR	57	22	NR
F6"	500-1000	5	NR	14	22	NR
F9	0-200	32	<20	50	43	154
F9'	200-500	<1	NR	10	21	NR
F9"	500-1000	3	NR	12	21	NR
F8	0-200	78	<20	196	96	302
F8'	200-500	4	NR	15	23	NR
F8"	500-1000	4	NR	12	23	NR
F10	0-200	27	<20	32	27	99
F10'	200-500	<1	NR	10	18	NR
F10"	500-1000	3	NR	12	19	NR

Location:
CNR MARY RIVER ROAD & MAPLE STREET
COOROY, QUEENSLAND

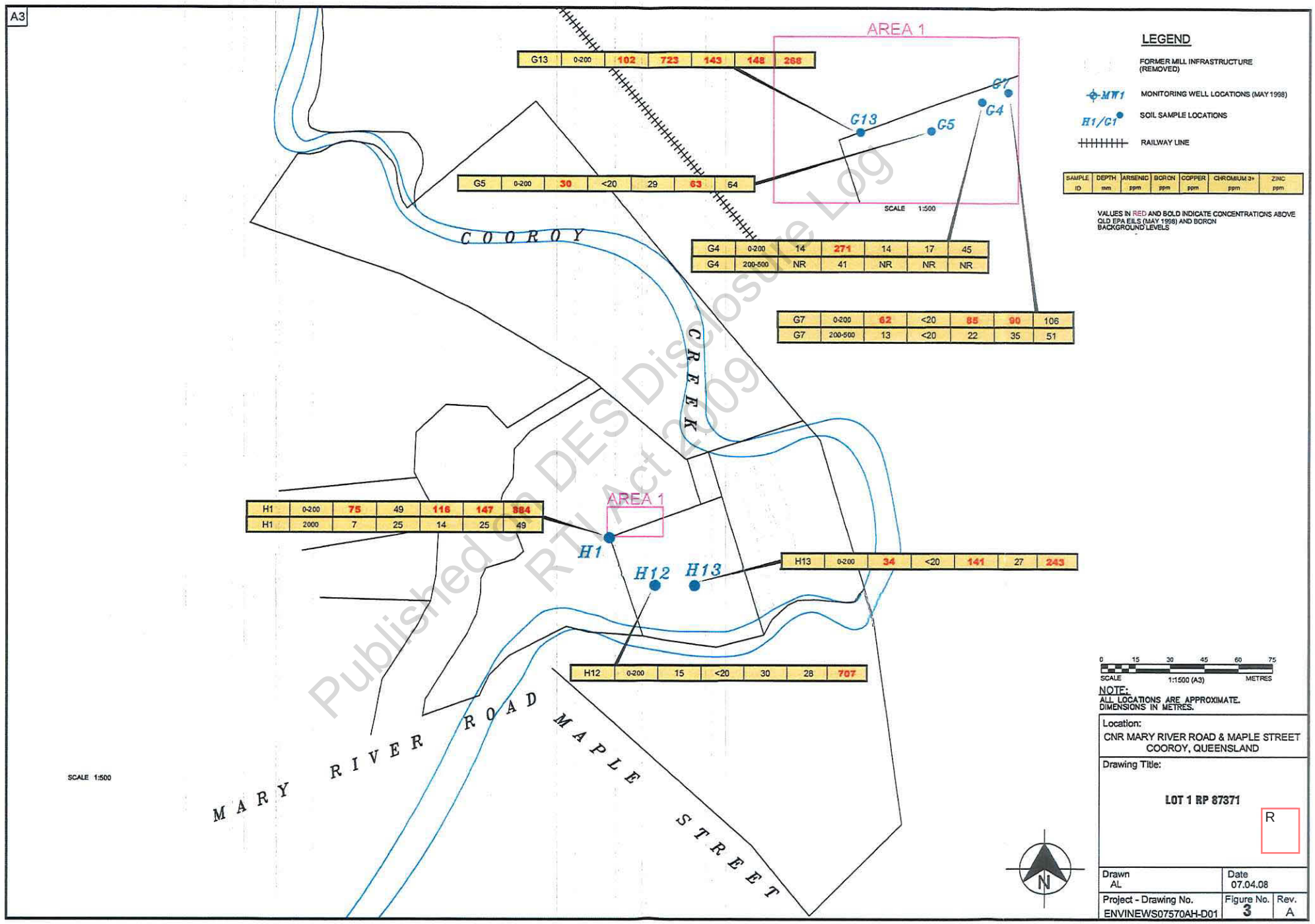
Drawing Title:

LOT 2 RP47020

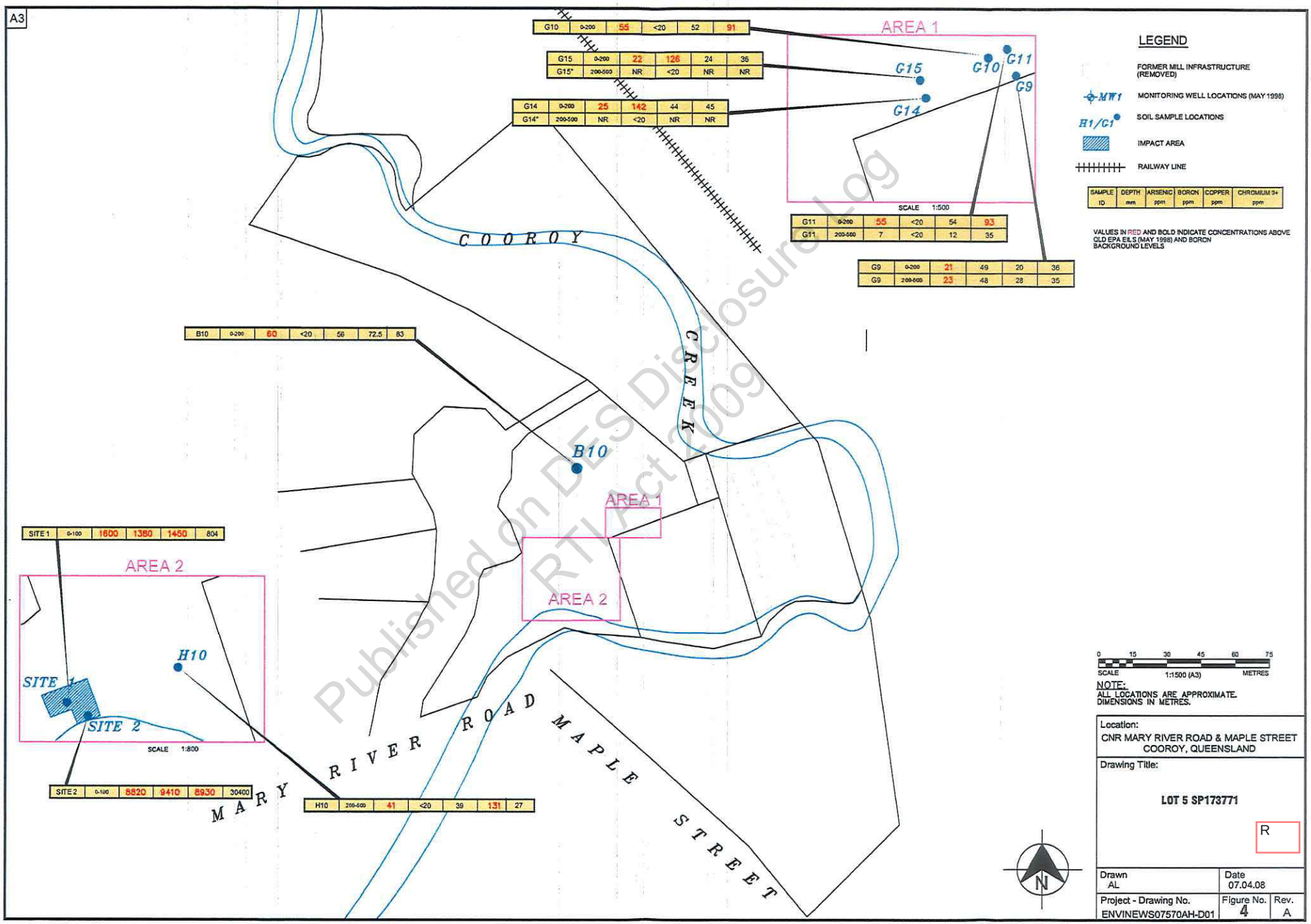
R

Drawn	Date	
AL	07.04.08	
Project - Drawing No.	Figure No.	Rev.
ENVINEWS07570AH-D01	2	A

Published on DES Disclosure Log
RTI Act 2009

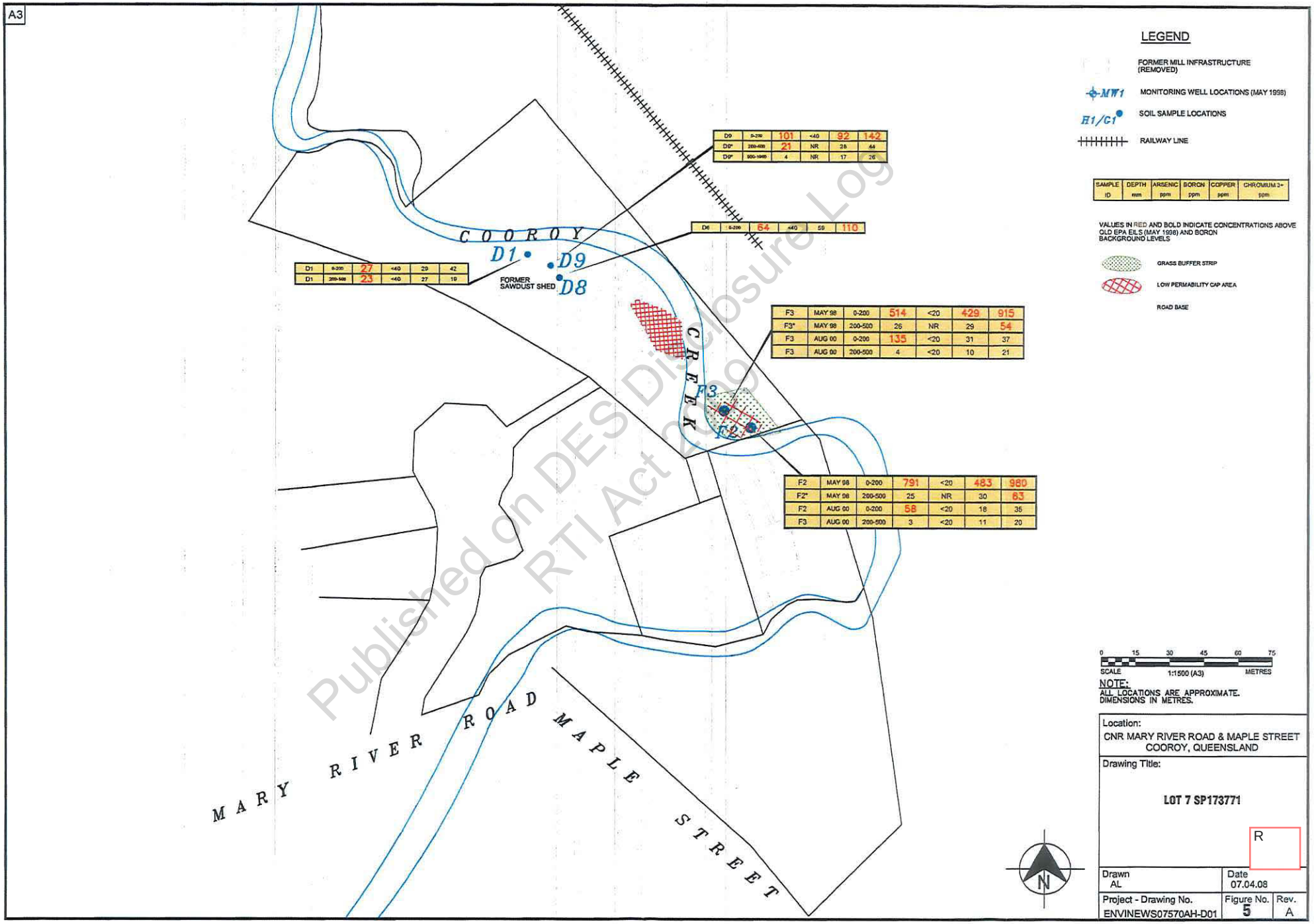


Published on DES Disclosure Log RTI Act 2009



Published on DES Disclosure Log
RTI Act 2009

A3



Location:
CNR MARY RIVER ROAD & MAPLE STREET
COOROY, QUEENSLAND

Drawing Title:

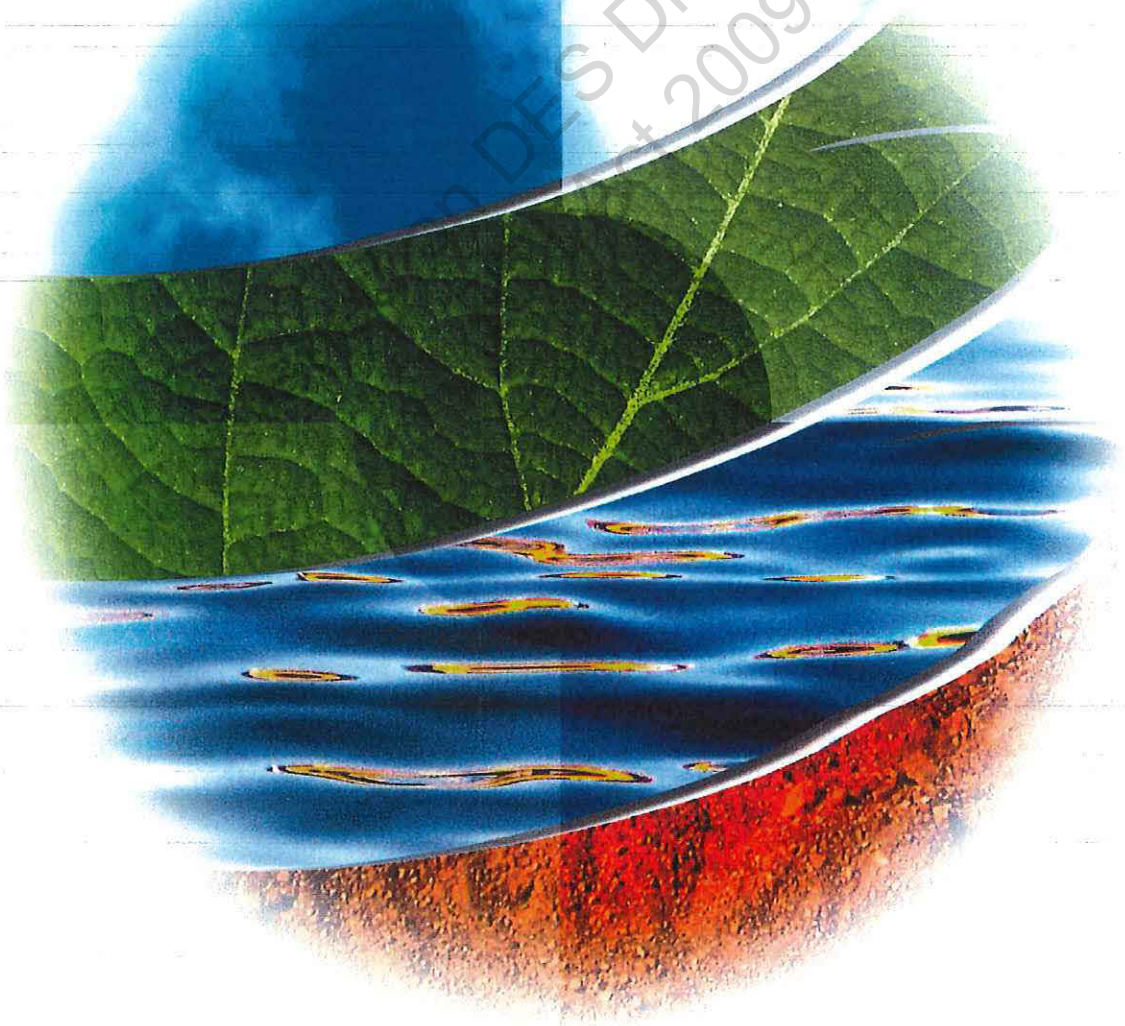
LOT 7 SP173771

R

Drawn	Date	
AL	07.04.08	
Project - Drawing No.	Figure No.	Rev.
ENVINEWS07570AH-D01	5	A

Published on DES Disclosure Log
RTI Act 2009

IT Environmental



DES Disclosure Log
2009

R

STATUTORY DECLARATION

(INVESTIGATOR AND VALIDATION REPORT PREPARER)

Address of Site Investigated:	1 Maple Street, Cooroy QLD
Real Property Descriptions:	Lots 1. 2 and 3 on RP153299 Lots 1. 2 and 3 on RP87371 Lot 2 on RP47020 Lot 1 on RP88582 Lots 2 and 3 on RP110206 Parish of Tewantin, County of March
Title of Report:	Closure Report Soil Remediation and Stormwater Management Works Boral Timber Mill Maple Street, Cooroy, QLD (19 April 2001)

I CTPI 49-Sch4 of *IT Environmental (Australia) Pty Ltd*, in the State of Queensland, do solemnly and sincerely declare that:

I was the *investigator and report preparer* of the report described above;

I am a member of *Environment Institute of Australia and New Zealand* and my qualifications and experience as outlined in documents provided previously to the EPA are relevant to this investigation;

I have not knowingly included any false, misleading or incomplete information in the report; and

I have not knowingly failed to reveal any relevant information or document to the administering authority.

I certify that:

the report addresses the relevant matters for the investigation and is factually correct;

the opinions expressed in it are honestly and reasonably held.

Published on DES Disclosure Log
RTI Act 2009

I make this solemn declaration conscientiously believing the same to be true and by virtue of the provisions of the *Oat ct 1867*

Signature CTPI 49-Sch4

Name

Taken and Declared before me Brisbane this

Witness CTPI 49-Sch4

Name

Rec. No. 73390

J207570G-statdec4.doc

Closure Report
Soil Remediation and Stormwater Management Works
Boral Timber Mill
Maple Street, Cooroy QLD

Prepared for:

Boral Limited
147 Coronation Drive
PO Box 1369
MILTON QLD 4064

19 April 2001
Project Reference: J207570F-R02

Published on DES Disclosure Log
RTI Act 2009

Prepared by:

T Environmental (Australia) Pty Ltd
Level 2, 33 Longland Street, Newstead 4066
Queensland, Australia

Written/Submitted by:

CTPI 49-Sch4

CTPI 49-Sch4
Senior Project Manager

Reviewed/Approved by:

CTPI 49-Sch4

CTPI 49-Sch4
State Manager - QLD/NT

Record of Distribution

No. of	Report File Name	Report Status		Prepared for:	Initials
	J207570F-R02a		5 A ril 2001	Boral Limited	CTP
	J207570F-R02a		5 A ril 2001	IT Environmental	
	J207570F-R02		19 A ril 2001	Boral Limited	
	J207570F-R02		19 A ril 2001	IT Environmental	
	J207570F-R02		5 June 2003	ueensland State Develo ment	
	J207570F-R02		13 Au ust 2004	Calla han & Toth	

Published on DES Disclosure Log
RTI Act 2009

Table of Contents

Glossary

Executive Summary

Introduction

Background

Soil Remediation Works

Evaporation Pond

Area H3

Area F2/F3

Areas D5/D7 and TP25

Stormwater Management Works

Evaporation Pond

Timber Waste Area

Conclusions

References

Published on DES Disclosure Log
RTI Act 2009

List of Appendices

FIGURES

Figure 1 Site Location Plan
Figure 2 Site Plan Showing Modified Areas

APPENDICES

Appendix A Survey Data
Appendix B Soil Analytical Results and EPA Correspondence
Appendix C Geotechnical Test Results and Specification
Appendix D Site Photographs

R

Glossary

	Australian Hei ht Datum
ANZECC	Australian and New Zealand Environment and Conservation Council
	Chain of Custod
	Queensland De artment of Natural Resources
	Dissolved Ox
	Electrical Conductivit
	Oxidation/Reduction Potential
	Environmental Investi ation Level
	Environmental Mana ement Re ister
	Queensland Environmental Protection A enc
	Environmental Site Assessment
	Identification
	Interface Probe
	IT Environmental Australia) Pt Ltd
	Limit of Quantification
	Limit of Re ortin
	metre
	Method Detection Limit
	micro rams er litre
m	m
m	m
m	millimetre
M	Monitorin Well
PI	Photoionisation Detector
P(	Practical Quantitation Limit
Q/	Qualit Assurance
Q(	Qualit Control
RI	Reduced Level
RI	Relative Percent Difference
SI	Soil Bore
S(	Standard O eratin Procedures
S\	Static Water Level
TI	Tem orar Benchmark
TI	Total De th
TI	Total Dissolved Solids
T(	To of Casin

Published on DES Disclosure Log
RTI Act 2009

R

Executive Summary

IT Environmental (Australia) Pty Ltd (*IT*) was contracted by Boral Limited (Boral) to undertake soil remediation and stormwater management works at the Boral timber mill on Maple Street in Cooroy Queensland.

Ownership of the Boral timber mill in Cooroy is being transferred from Boral to the Queensland State Government. As part of Boral's due diligence requirements prior to site divestment, a plan to address remediation of soil "hot spots" and stormwater management issues was prepared by *IT*.

Soil remediation works were undertaken at five identified "hot spots". At four of the hot spots the clay capping was compacted to at thickness of 500mm before topping with soil or road base, as described below.

Evaporation pond: backfilled and capped with imported clay then finished with 100mm of road base in trafficable areas and imported soil and hydromulched in filter strip areas

Sample location H3: approximately 80m^2 area excavated to 600mm depth – excavated material placed in evaporation pond and H3 excavation backfilled with imported clay and finished with 100mm of road base.

Sample locations F2/F3: capped with imported clay and finished with imported soil and hydromulched.

Sample locations D5/D7: included in evaporation pond capping.

Sample location TP25 (Timber Waste Area): surface soil from around sample location TP25 was scraped to an approximate depth of 400mm and over an area approximately 10 metres square and placed in the base of the evaporation pond.

The objectives of stormwater management works were to minimise ponding onsite and sediment discharge from the site into Cooroy Creek, per the requirements set out in Schedule D of the Environmental Authority for the site (no. SR388). To achieve the objectives of Schedule D, two main areas of the site were the focus of stormwater management works: the evaporation pond and the timber waste area.

The finished evaporation pond surface extending to Cooroy Creek was contoured to maximise sheet flow across the area to the creek. The clay cap was covered with 100 mm of clean soil along the creek bank and an 8-metre wide strip of vegetation along the creek was established to act both as erosion control and as a filter strip to minimise sediment transport into the creek. The remaining clay cap area was covered with 100 mm of road base to establish a trafficable surface.

The timber waste area was filled with imported soil that was spread, compacted and trimmed to gradients directing overland flows across a wide area of the bank of Cooroy Creek. An unstable area of creek bank (in the vicinity of the previously filled eroded gully) was stabilised using 100-150mm shot rock. To reduce flow velocities from upstream of the timber waste area the bank leading down into the timber waste area from the storage/drying area was cut to a lesser gradient and stabilised using geo-fabric and 100-150mm shot rock. Finally, a vegetated filter strip was established over the entire timber waste area.

With the completion of soil remediation and stormwater management works, the requirements of Schedule D of the Environmental Authority for the site have been met and no further action is required.

Published on DERM Disclosure Log
RTI Act 2009

R

Introduction

IT Environmental (Australia) Pty Ltd (*IT*) was contracted by Boral Limited (Boral) to undertake soil remediation and stormwater management works at the Boral timber mill on Maple Street in Cooroy, Queensland (Figure 1). This report summarises the work completed.

Background

Ownership of the Boral timber mill in Cooroy is being transferred from Boral to the Queensland State Government. As part of Boral's due diligence requirements prior to site divestment, a plan to address remediation of soil "hot spots" and stormwater management issues was prepared by *IT*. This plan is entitled "*Final Plan for Stormwater Management and Site Remediation at the Boral Timber Mill, Corooy QLD*", and dated 6 October 2000 (our ref: J207570E-L30). There was a subsequent "*Clarification to the Final... Plan"* issued by *IT* on 11 October 2000 (our ref: J207570E-L32).

Works at the site were completed in accordance with *IT's* 6 October Plan. Where revisions or modifications to the original plan were necessary, they were vetted by Boral, Allan Watson Associates (as consultant engineer to *IT*) and Golder Associates (as 3rd party review and sign-off).

Published on DES Disclosure Log
RTI Act 2009

R

Soil Remediation Works

Previous investigations at the Cooroy timber mill identified five main areas (see Figure 2) as containing levels of soil contamination in excess of the Queensland Environmental Protection Agency's (EPA's) Environmental Investigation Levels (EILs): the evaporation pond, sample location H3, sample locations F2/F3, sample locations D5/D7 and sample location TP25 (timber waste area) These areas are shown on Figure 2. Per our 6 October Plan, the actions taken at the five "hot spots" were as follows.

Evaporation pond: backfilled and capped with imported clay then finished with 100mm of road base in trafficable areas and imported soil and hydromulched in filter strip areas

Sample location H3: approximately 80m^2 area excavated to 600mm depth – excavated material placed in evaporation pond and H3 excavation backfilled with imported clay and finished with 100mm of road base.

Sample locations F2/F3: capped with imported clay and finished with imported soil and hydromulched.

Sample locations D5/D7: included in evaporation pond capping.

Sample location TP25 (Timber Waste Area): surface soil from around sample location TP25 was scraped to an approximate depth of 400mm and over an area approximately 10 metres square and placed in the base of the evaporation pond.

Soil remediation works completed at each area are discussed in the following sections.

Published on DES Disclosure Log
RTI Act 2009

Evaporation Pond

Prior to backfilling, water remaining in the evaporation pond was sampled, then pumped out and removed offsite by licensed trade waste hauler (Suttons Cleaning Services to Maroochy Water Services' sewage treatment plant).

The height of the levee bank along the creek side of the evaporation pond was cut to a level suitable for the required finished grade over the pond area. Spoil from the cut was placed in the base of the evaporation pond.

To stabilise wet areas on the western side of the pond, concrete pieces left over from the causeway replacement works (completed by others) were placed in the deepest part of the western end of the pond. Fill was then placed over the concrete.

The deepest part of the evaporation pond was the sedimentation pond located in the eastern end, adjacent to the concrete sedimentation sump. Soil in this area was difficult to dry out due to the depth of the pond and seepage back into the sedimentation pond from the boiler discharge pipe. To prevent further seepage the pipe was cut and capped.

After consultation with Allan Watson Associates regarding concerns over stability of the base of the pit (i.e., potential differential settling issues), a decision was made to excavate the wettest soil from the base in this area. Then approximately 25 tonnes of 100-150mm shot rock, sourced from Boral's Coolum quarry, were deposited in the sedimentation pond and compacted using a 10 tonne vibrating pad foot roller. Concrete pieces left over from the causeway replacement works (completed by others) were also placed in the sedimentation pond and compacted. To further add to the stability of the fill, cement powder (approximately 14 bags) was then added prior to backfilling.

Soil used to backfill the evaporation pond came from five sources:

soil excavated (by others) during the causeway replacement;

R

excess imported clay from the causeway replacement;

soil excavated from Area H3;

soil scraped up from sample location TP25;and

approximately 270 tonnes of imported clay fill (sourced from Bracalba Quarry)

The soil excavated from Area H3 and sample location TP25 was placed in the deepest parts of the sedimentation pond (after base stabilisation, as described above) and then the sedimentation pond was backfilled to the required base level. The backfill was compacted by a 10 tonne vibrating pad foot roller.

The remainder of the evaporation pond was contoured to an approximate base level of 600mm below the finished level and at the appropriate grade across the site. A licensed surveyor then surveyed the top of the fill to allow validation of the clay cap thickness (see Appendix A). Representatives from Allan Watson Associates and Golder Associates inspected the evaporation pond prior to and during backfilling.

Capping of the evaporation pond with 500mm of imported clay and finishing with 100mm of road base, or imported soil and hydromulch, is discussed later in the stormwater management section of this report.

The wet soil excavated from the deepest part of the sedimentation pond was spread out on a sacrificial clay base adjacent to the evaporation pond to dry. The soil was sampled and the volume confirmed by survey (104m^3). Based on contaminants identified in previous investigations, five samples of the stockpiled soil were submitted to a NATA-registered laboratory for analyses for arsenic, boron, chromium (total) and copper. Analytical results are included in Appendix B, along with correspondence subsequently received from the EPA deeming the soil to be clean and therefore not requiring a disposal permit. Based on the EPA's correspondence the soil was retained on the site and was spread (by Boral) in an area away from the creek adjacent to the western site boundary.

Published on DES Disclosure Log RTI Act 2009

2.2 Area H3

An area approximately 80 metres (m) square was excavated around sample location H3 to a depth of 600mm, as shown on Figure 2. Based on the results of previous soil investigations in this area, validation sampling of the base of the excavation was not necessary. The excavated soil was used as fill in the base of the evaporation pond.

The H3 excavation was backfilled with clean, imported clay (from Bracalba Quarry) of minimum 500mm thickness as confirmed by survey (see Appendix A). The clay was compacted in two lifts using a 10 tonne vibrating pad foot roller. Geotechnical testing of the clay confirmed that a density ratio of 96% was achieved (sample no. 8432), which met our specified compaction of not less than 95%. Geotechnical test results are included in Appendix C, along with the material specification.

A 100 mm layer of imported road base material was then placed over the clay as a trafficable surface. The road base for Area H3 was sourced from Bonnell Brothers Earthmoving in Cooroy.

2.3 Area F2/F3

Previous sample locations F2 and F3 are located on the northern side of Cooroy Creek, just east of the evaporation pond (see Figure 2). To protect the surrounding environment from shallow soil contamination previously identified in this area, a 500-mm thick clay cap (clay from Bracalba Quarry) was placed over locations F2 and F3.

R

As this area was heavily vegetated with grass, it was cleared prior to capping. The clay was placed in two lifts, with each lift compacted using a 10 tonne vibrating pad foot roller. Geotechnical testing confirmed a density ratio of 95.5% at this location (see results for sample no. 8498 in Appendix C) The thickness and extent of the clay cap area was confirmed by survey (see Appendix A).

A 100-mm layer of clean soil sourced from Bonnel Brothers Earthmoving was placed over the clay cap in Area F2/F3. This area was reinstated by hydromulching with a standard grass mix. A recent site inspection by Boral (30 March 2001) has indicated that grass growth has already been established in Area F2/F3.

Areas D5/D7 and TP25

As mentioned at the start of this Section, sample locations D5 and D7 were in the western part of the evaporation pond. Therefore these locations were covered during the evaporation pond backfilling/capping program.

Surface soil from around sample location TP25 was scraped to an approximate depth of 400mm and over an area approximately 10 metres square and placed in the base of the evaporation pond. Based on information already available from previous investigations further validation sampling at this location was not required.

Published on DES Disclosure Log
RTI Act 2009

R

Stormwater Management Works

As stated in our 6 October plan, the objectives of stormwater management works were to minimise ponding onsite and sediment discharge from the site into Cooroy Creek, per the requirements set out in Schedule D of the Environmental Authority (no. SR388) for the site. It should be noted that the Environmental Authority is related to a notifiable activity of sawmilling or woodchipping.

To achieve the objectives of Schedule D, two main areas of the site were the focus of re-contouring and stabilisation works: the evaporation pond and the timber waste area.

Evaporation Pond

After the evaporation pond was backfilled and contoured to an appropriate base level (as described in the Section 2.1), a 500-mm thick clay cap was placed over the filled surface. The clay cap, installed to specifications, provides a low permeability barrier over the contaminated soil in the base of the evaporation pond. The clay was sourced from Bracalba Quarry, and met the specifications set out in our 6 October plan. Quality testing of the clay was undertaken prior to and after delivery to site (see geotechnical test results in Appendix C).

Prior to placement of the clay, the fill surface was scarified and wetted as required to achieve good bonding with the clay. The clay was placed in at least three lifts, with each lift compacted using a 10 tonne vibrating pad foot roller. Representatives from Allan Watson Associates and Golder Associates inspected the clay capping during placement.

Two utility poles were located within the area to be capped and discussions with Boral personnel onsite indicated that these poles could not be relocated. After consultation with Allan Watson Associates and Golder Associates, a decision was made to place a 300 mm diameter concrete collar" around each pole with the finished level at approximately 100mm above the top of the clay cap. One groundwater-monitoring well (MW 2) was also located within the capped area. This monitoring well was brought up to the new surface and finished with a "gatic" cast iron well cover.

Geotechnical testing of the clay cap confirmed overall compliance with the specification. Permeability results for one clay sample were 2 x 10^{-9} m/s, compared to the specified 1 x 10^{-9} m/s. However, discussions with Golder Associates indicated that this value was acceptable, in light of the other test results.

licensed surveyor surveyed the finished level of the clay cap to confirm the clay thickness and final gradient across the cap. Survey results are included in Appendix A.

The evaporation pond area was finished as follows (see also Figure 2):

- a 100 mm thick layer of clean soil, sourced from Bonnel Brothers Earthmoving, was placed in a (minimum) 8-metre wide strip along the creek (see photographs in Appendix D) and then hydromulched with a standard grass mixture; and
- a 100 mm thick layer of road base from Boral's Coolum quarry was placed over the remainder of the clay cap to make a trafficable surface.

The finished evaporation pond surface extending to Cooroy Creek was contoured to maximise sheet flow across the area and protect the steep bank of Cooroy Creek adjoining the northern most extremity of the clay cap. Also, a low perimeter bank of soil, approximately 300 mm above finished level and at an approximate grade of 1%, was constructed originating at the western end of the evaporation pond and following the creek bank for a distance of approximately 60 metres. This construction is designed to divert runoff away from the steep section of the creek bank and towards the grass filter strip in the timber waste area. The newly vegetated areas along the creek bank act

Published on EES Disclosure Log
RTI 2009

R

both as erosion control and as a filter strip to minimise sediment transport into the creek. A recent site inspection by Boral (30 March 2001) has indicated that grass growth has already been established in this filter strip area.

Timber Waste Area

The timber waste area, in the north east of the site, is low-lying and adjacent to Cooroy Creek. It receives run-off from a large area, including the timber storage/drying area to the south. Prior to development of our 6 October plan, run-off had resulted in the formation of an eroded gully leading into Cooroy Creek. Our 6 October plan therefore, outlines a strategy to formalise this gully using crushed rock over geo-fabric.

After finalisation of our 6 October plan, but prior to site works commencing, the timber waste area was cleaned up by Boral site personnel. The clean up included extensive grading of the ground surface, and filling in of the eroded gully. A period of at least 10 weeks elapsed from the time of clean up to the time of stormwater management works in the timber waste area and during this time some heavy rainfall events occurred at the site. The eroded gully did not reform as a result of these rainfall events.

The focus of works in the timber waste area was on contouring to minimise run-off velocity and maximise sheet flow, and stabilisation of the bank leading down into the timber waste area from the timber storage/drying area. To this end, the timber waste area was filled with soil sourced from Bonnel Brothers Earthmoving. The soil was spread, compacted and trimmed to calculated gradients that directed overland flows across a wide area of the bank of Cooroy Creek (see photographs in Appendix D).

An unstable area of creek bank (in the vicinity of the filled eroded gully) was stabilised using 100-150mm shot rock. To reduce flow velocities from upstream of the timber waste area the bank eading down into the timber waste area from the storage/drying area was cut to a lesser gradient and stabilised using geo-fabric and 100-150mm shot rock (see photographs in Appendix D). Once earthworks were complete, a licensed surveyor surveyed the finished levels across the timber waste area (see Appendix A). Finally, a vegetated filter strip was established over the entire timber waste area (see Figure 2).

Published on DERM Disclosure Log
October 2009

R

Conclusions

IT has completed the soil remediation and stormwater management works as outlined in our 6 March 2001 plan, or where modifications were made, with the approval of relevant parties. In so doing, the requirements of Schedule D of the Environmental Authority for the site have been met and no further action is required.

Published on DES Disclosure Log
RTI Act 2009

R

References

ANZECC *Guidelines for the Assessment of Onsite Containment of Contaminated Soil*, September 1999

Fluor Daniel GTI (Australia) Pty Ltd *Stage II Investigation Report, Boral Timber Yards, 1 Masple Street Cooroy Queensland*, 9 October 1998 (our ref: B7570BR01)

IT Environmental (Australia) Pty Ltd *Additional Environmental Investigations, Boral Timber Cooroy Mill 1 Maple Street, Cooroy Queensland*, 28 September 2000 (our ref: J207570E-R01)

IT Environmental (Australia) Pty Ltd *Final Plan for Stormwater Management and Site Remediation at the Boral Timber Mill, Cooroy QLD*, 6 October 2000 (our ref: J207570E-L30)

IT Environmental (Australia) Pty Ltd *Clarification to Final Stormwater Management and Remediation Plan*, 11 October 2000 (our ref: J207570E-L32).

Queensland Department of Environment *Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland*, 1998.

IT ENVIRONMENTAL (AUSTRALIA) PTY LTD

Published on DES Disclosure Log
RTI Act 2009

R

Statement of Limitations

IT Environmental (Australia) Pty Ltd has conducted work concerning the environmental status of the property which is the subject of this report, and has prepared this report on the basis of that assessment.

The work was conducted, and the report has been prepared, in response to specific instructions from the client to whom this report is addressed, within the time and budgetary requirements of the client, and in reliance on certain data and information made available to IT Environmental. The analyses, evaluations, opinions and conclusions presented in this report are based on those instructions, requirements data or information, and they could change if such instructions etc. are in fact inaccurate or incomplete.

IT Environmental will not update the report and has not taken into account events occurring after the time its assessment was conducted.

This report is intended for the sole use of the client and only for the purpose for which it was prepared. Any representation contained in the report is made only to the client.

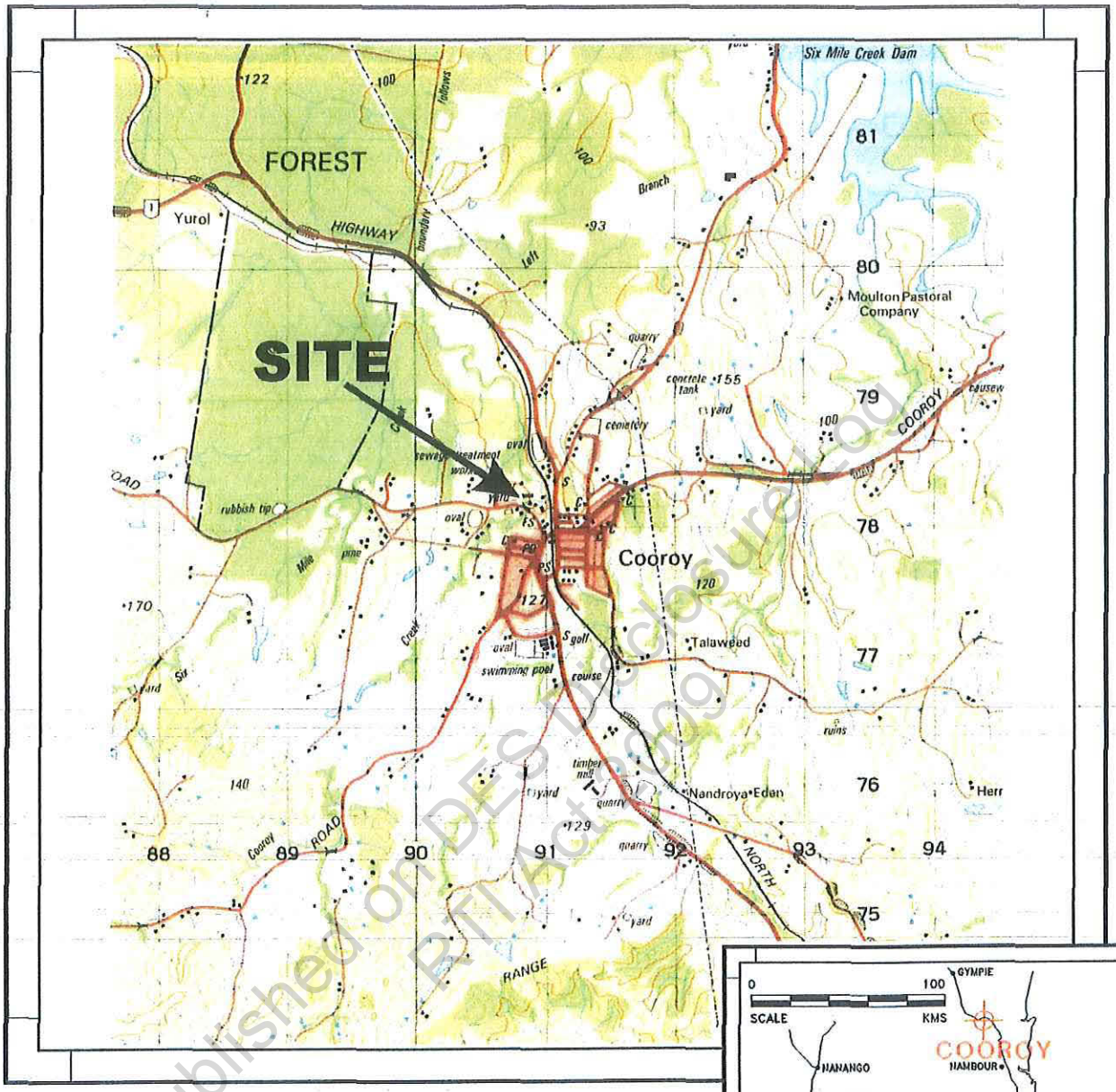
Published on DES Disclosure Log
RTI Act 2009

IT ENVIRONMENTAL (AUSTRALIA) PTY LTD

R

Published on DES Disclosure Log
RTI Act 2009

R



Published on DES Disclosure Log
RTI Act 2009

N

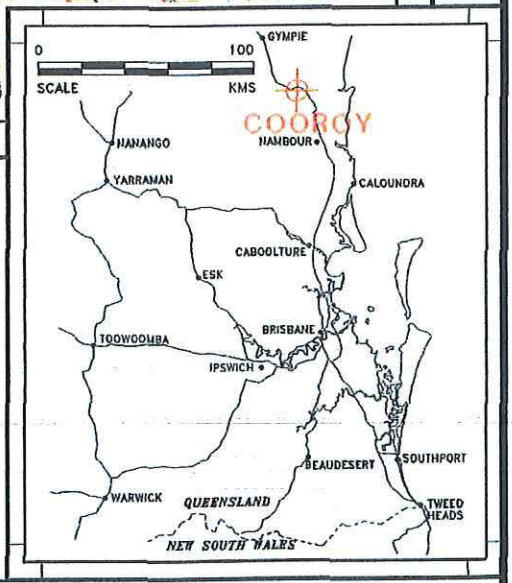
SOURCE: QUEENSLAND TOPOGRAPHIC IMAGE MAP
COOROY, QUEENSLAND
SHEET: 9445–11
EDITION 1 1980

THIS MAP IS CROWN COPYRIGHT AND HAS BEEN REPRODUCED WITH THE PERMISSION OF THE GENERAL MANAGER, AUSTRALIAN LAND INFORMATION GROUP, DEPARTMENT OF ADMINISTRATIVE SERVICES, CANBERRA, A.C.T.

SCALE: 1:50 000

0 5000

SCALE METRES



IT Environmental
A Member of the igroup
Level 2, 33 Longland Street
Newstead QLD 4006
Ph: (07) 3252 5711
Fax: (07) 3252 5712

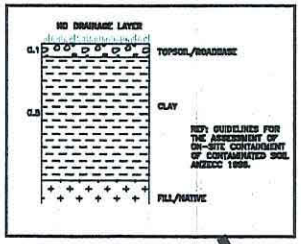
DESIGNED:	CTPI 49
COMPILED:	CTPI 49
PROJ. NO.	J207570E

SITE LOCATION MAP

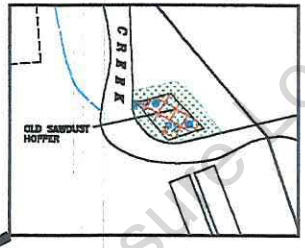
CLIENT:	BORAL TIMBERS – COOROY
LOCATION:	CNR MARY RIVER RD & MAPLE ST COOROY, QUEENSLAND
DRAWING DATE:	01/07/98
FIGURE:	1

ACAD FILE: J207570F–D02b

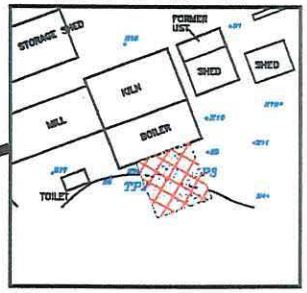
Detail1: Low Permeability Cover System

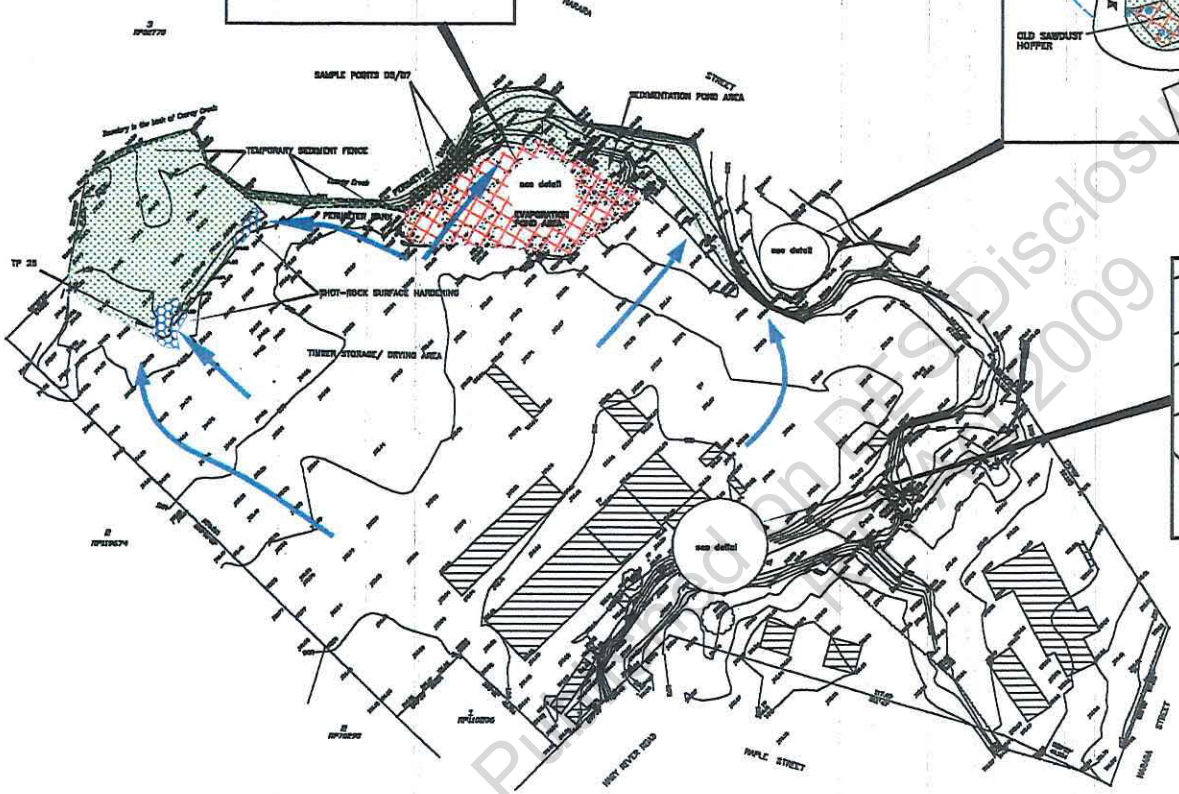


Detial 2: Area F2/F3



Detial 3: Area H3





LEGEND

- STORMWATER FLOW DIRECTION
- GRASS BUFFER STRIP
- LOW PERMABILITY CAP AREA
- ROAD BASE
- GEOFABRIC AND SHOT–ROCK
- SITE STRUCTURE

N

N.B. – NOT TO SCALE

IT Environmental (Australia) Pty Ltd ©

ISSUE	DATE	AMENDMENTS	DRN	CKD	APPD
B	22/02/01	ADD GEOFABRIC AND VEGETATION BUND WAL	CTP		
A	05/02/01	ORIGINAL ISSUE			

A2

DIMENSIONS IN m
DO NOT SCALE
DRAWING PRACTICE TO AS1100

NOTES: ALL LOCATIONS ARE APPROXIMATE.
SOURCE: IT ENVIRONMENTAL

IT Environmental
A Member of the igroup
Level 2, 33 Longland Street
Newstead QLD 4006
Ph: (07) 3252 5711
Fax: (07) 3252 5712

CHECKED:
APPROVED:

BORAL COOROY TIMBER MILL SHOWING MODIFIED AREAS

SITE PLAN

CLIENT: BORAL TIMBER
LOCATION: 10 MAPLE STREET COOROY, QUEENSLAND
DESIGNED: CTP
DRAWN:
DATE: 06/04/01
REV. NO: B
PROJECT NO.: J207570F
FIGURE: 2

Public Domain DES Disclosure Log 2009

Published on DES Disclosure Log
RTI Act 2009

Appendix A

Closure Report - Soil Remediation and Stormwater Management Works
Boral Timber Mill, Maple Street, Cooroy QLD

R

Our ref: J207570F-R02

MAX WATTERSON & ASSOCIATES
CONSULTING SURVEYORS & PLANNERS
ABN: 59 847 644 252 (formerly Clement, Reid & Watterson)

Principal
MAXWELL L.WATTERSON Licensed Surveyor (Qld)
Regd. Svyr (NSW), B. Surv (UNSW), M.I.S. Aust.

10 Maple Street
(PO Box 639) COOROY 4563
Ph: (07) 5442 6121
Fax: (07) 5442 5125
Email: CTPI 49-Sch4

5th March, 2001
Ref: 98/657B

IT Environmental (Australia) Pty Ltd
P.O. Box 2320
FORTITUDE VALLEY Q 4006

Attention: CTPI 49-Sch4

Dear Sir,

Re: Volume Survey
Stockpile at Boral Mill, Cooroy.

As instructed we have carried out a survey of the stockpile at the above-mentioned property to determine the volume and we advise that:

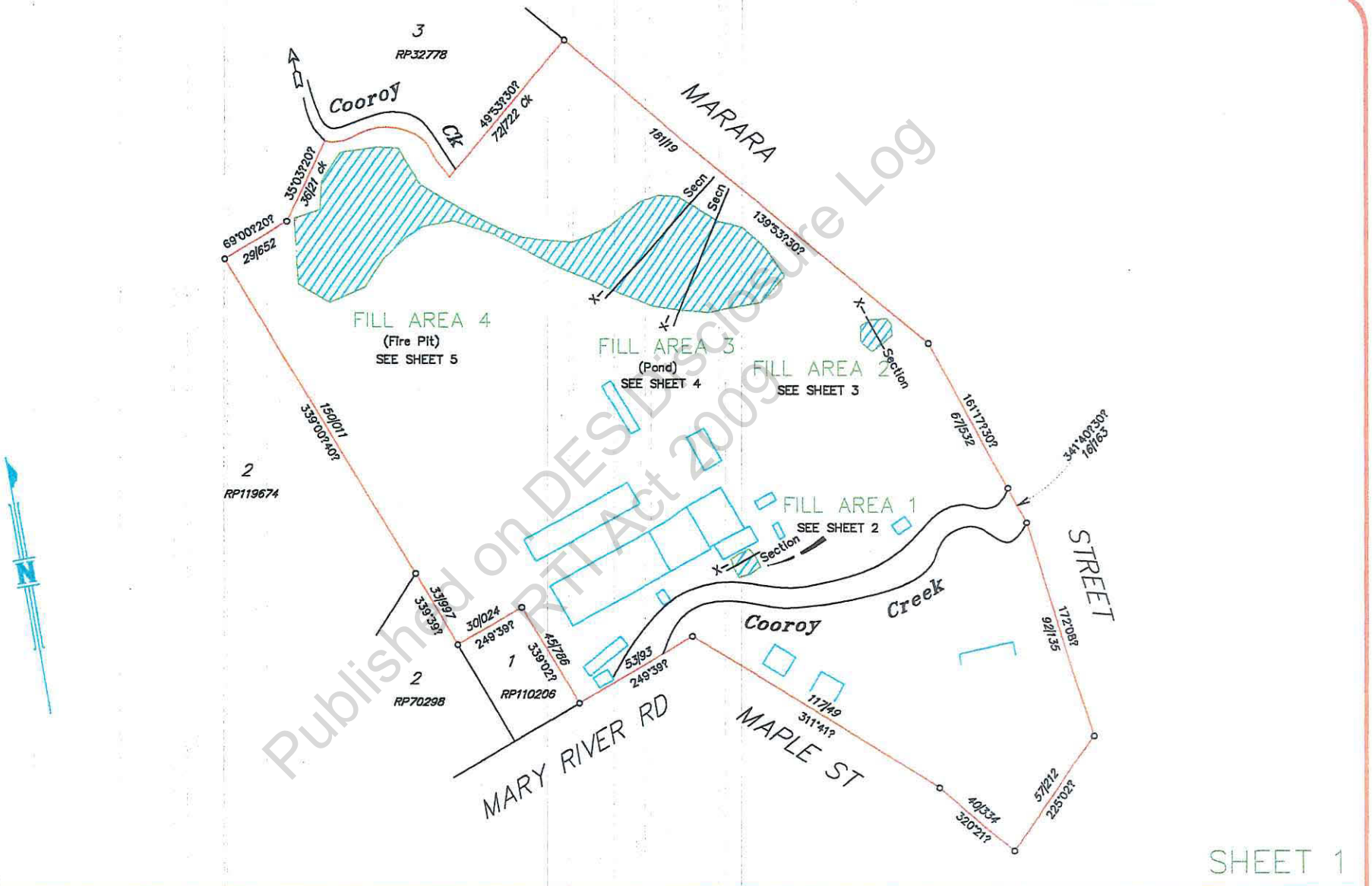
- The volume of the stockpile is $104m^3$

Yours faithfully

CTPI 49-Sch4

MAX L. WATTERSON

Published on DES Disclosure Log RTI Aug 2009



Published on DESI Disclosure Log
RTI Act 2009

LEVEL DATUM AHD

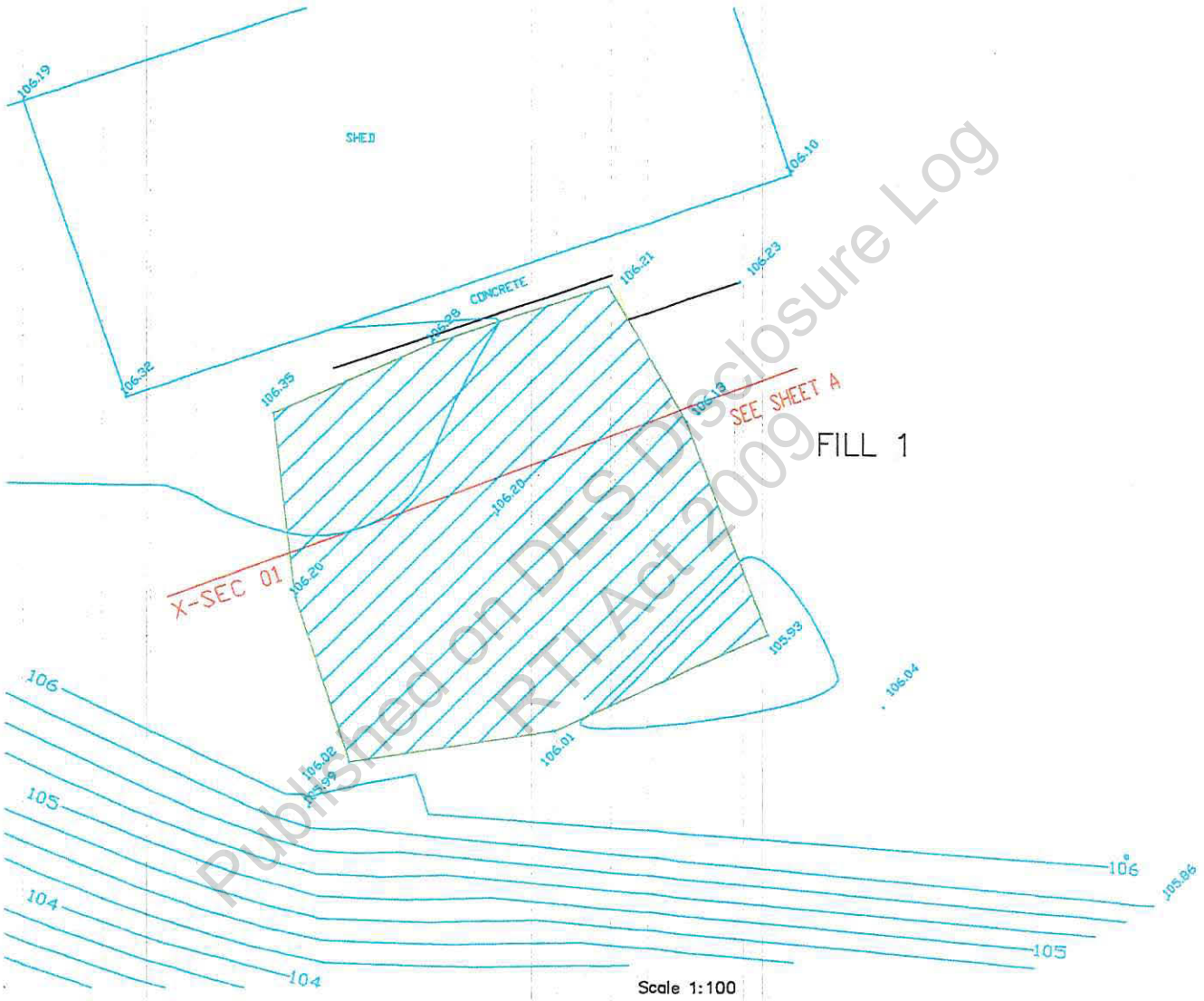
ROBCARTO BORAL 2				Scale 1:1500 (0 20 40 60 80 100)
	A	02.04.01	ORIGINAL ISSUE	
A3	ISSUE	DATE		AMENDMENTS JOB NO 98/657D

IT Environmental (Australia) Pty Ltd

FILL AREA control plan
BORAL FACTORY COOROY

MAX WATTERSON & ASSOCIATES
SURVEYORS AND TOWN PLANNERS
SHOP 1, 10 MAPLE STREET, COOROY 4563
PH COOROY 0754 426121 FAX 0754 425125

R



Published on DES Disclosure Log
RTI Act 2009

LEVEL DATUM AHD

SHEET 2

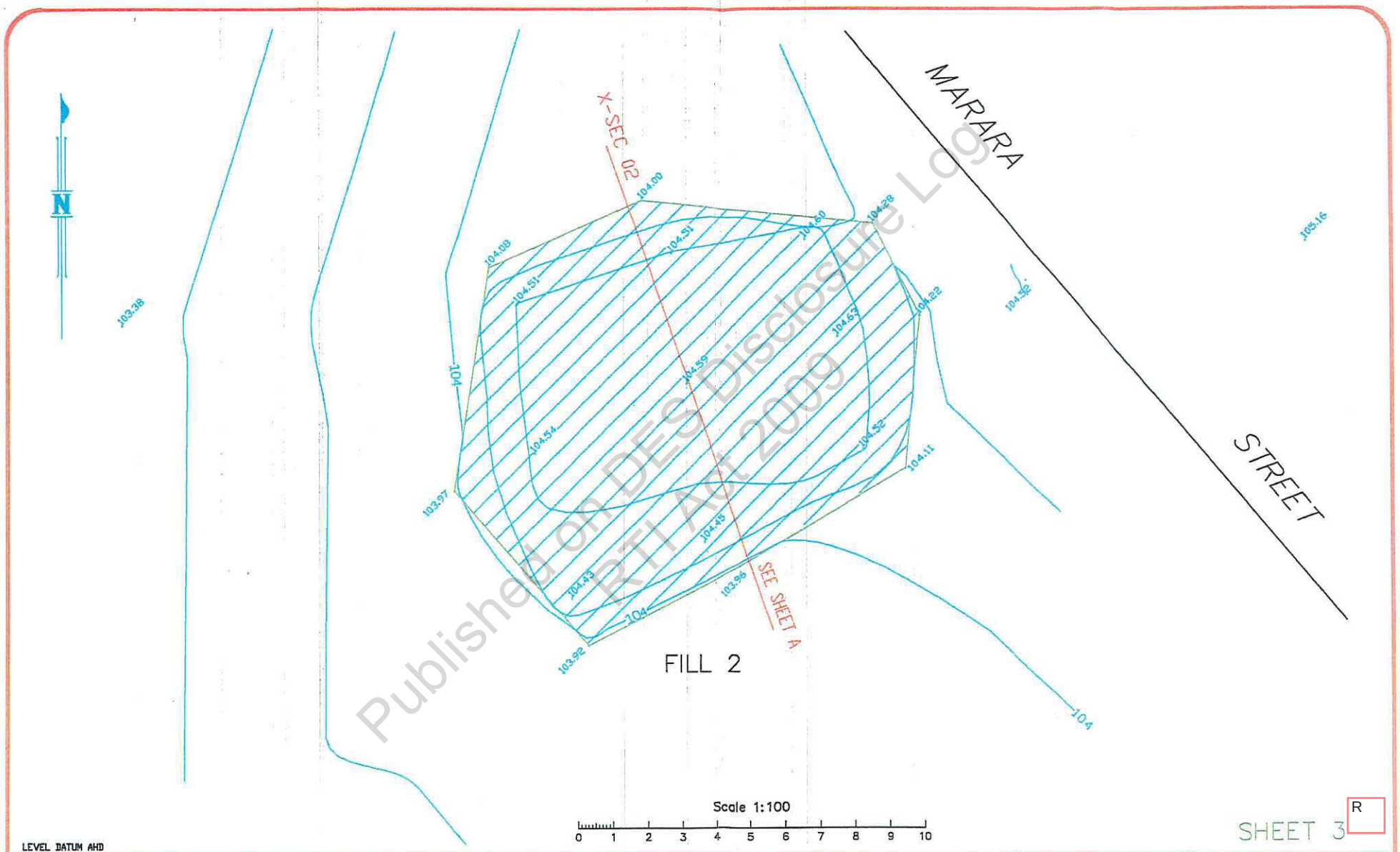
ROBCARTO BORAL 2				SCALES As Shown	
A3					
	A	02.04.01	ORIGINAL ISSUE		
	ISSUE	DATE		AMENDMENTS	JOB NO 98/657D

IT Environmental (Australia) Pty Ltd

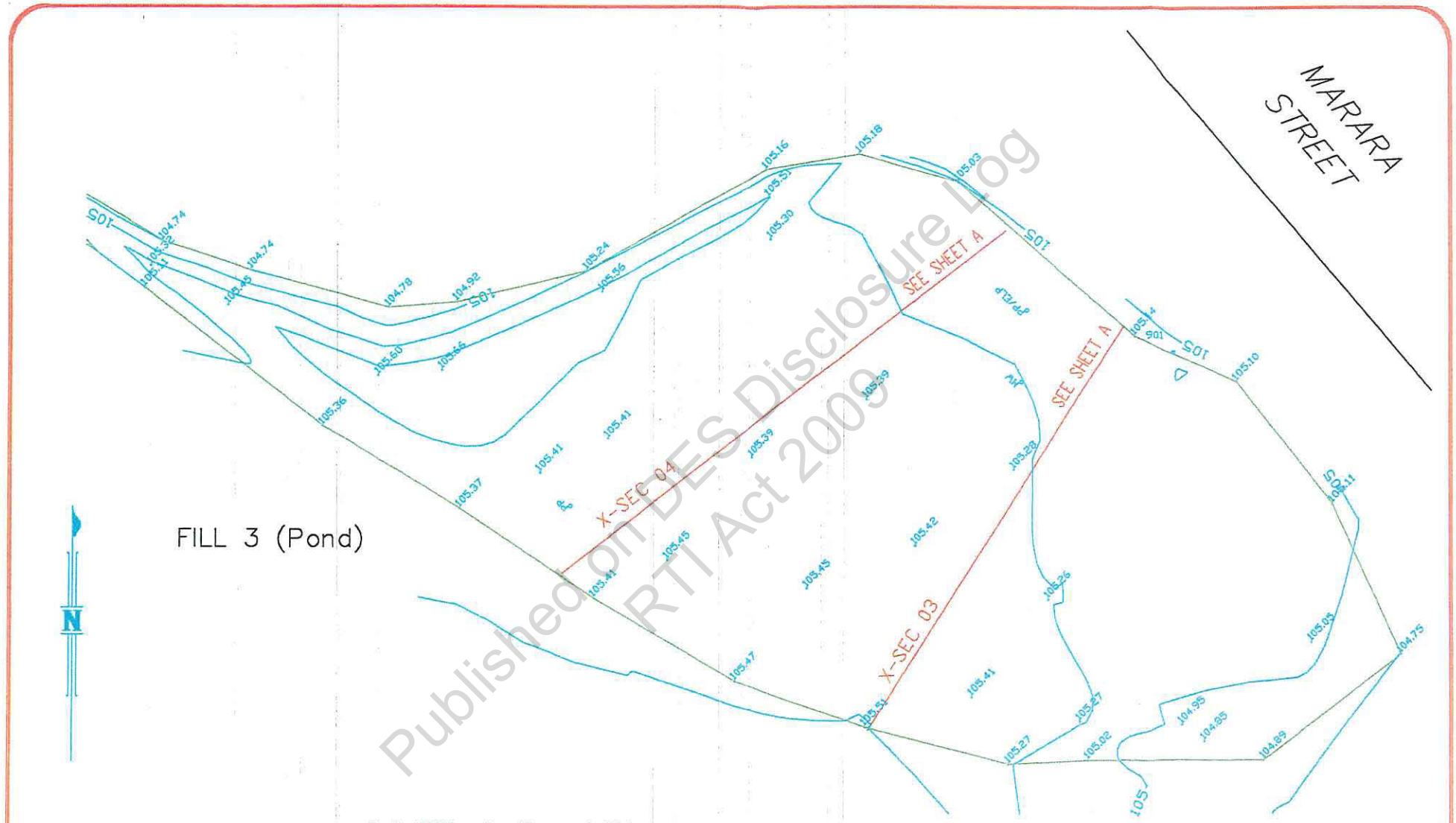
FILL AREA 1
BORAL FACTORY COOROY

MAX WATTERSON & ASSOCIATES
SURVEYORS AND TOWN PLANNERS
SHOP 1, 10 MAPLE STREET, COOROY 456
PH COOROY 0754 426121 FAX 0754 425125

R



Published on DES Disclosure Log
RTI Act 2009



Published on DES Disclosure Log
RTI Act 2009

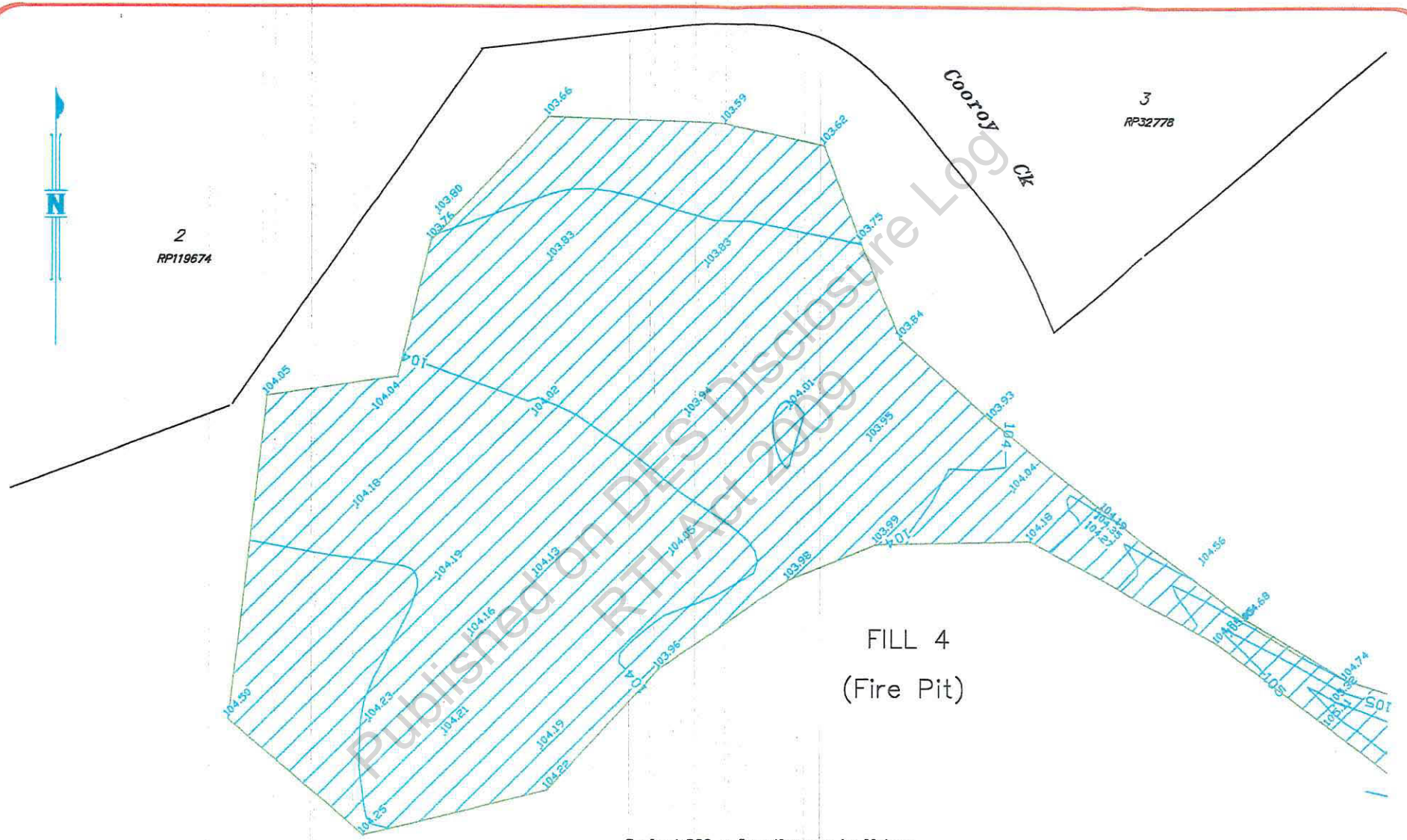
SHEET 4 R

LEVEL DATUM AHD

ROBCARTO BORAL 2				SCALES As Shown
A3	A	02.04.01	ORIGINAL ISSUE	
	ISSUE	DATE		AMENDMENTS JOB NO 98/657D

IT Environmental (Australia) Pty Ltd
FILL AREA 3 (Pond)
BORAL FACTORY COOROY

MAX WATTERSON & ASSOCIATES
SURVEYORS AND TOWN PLANNERS
SHOP 1, 10 MAPLE STREET, COOROY 4563
PH COOROY 0754 428121 FAX 0754 425125



Published on DES Disclosure Log
RTI Act 2009

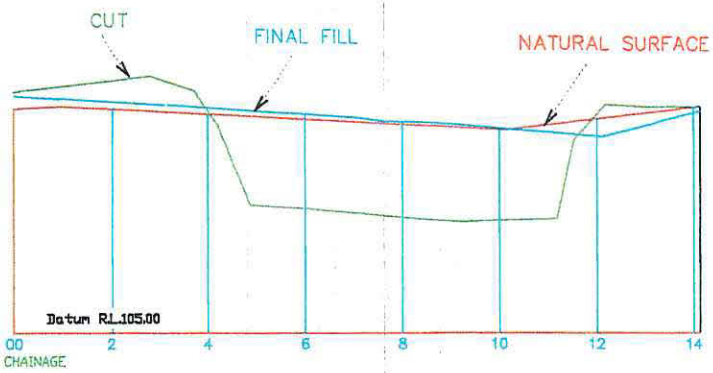
LEVEL DATUM AHD

SHEET 5 R

ROBCARTO BORAL 2				SCALES As Shown
A3	A	02.04.01	ORIGINAL ISSUE	
	ISSUE	DATE		AMENDMENTS JOB NO 98/657D

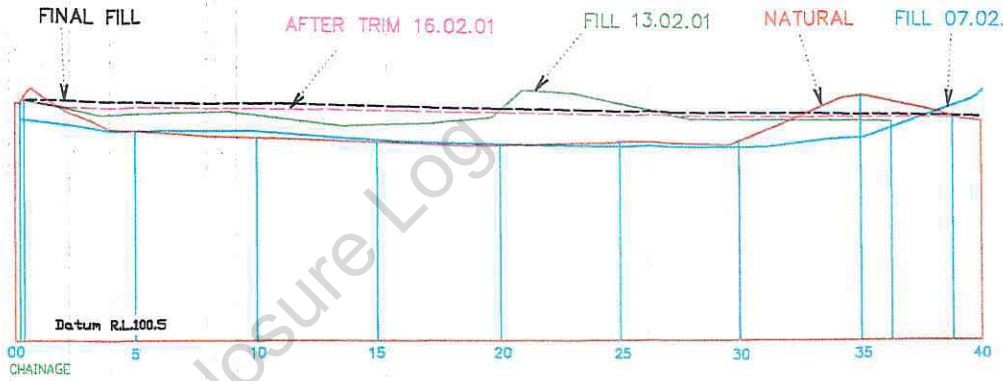
IT Environmental (Australia) Pty Ltd
FILL AREA4 (FIRE PIT)
BORAL FACTORY COOROY

MAX WATTERSON & ASSOCIATES
SURVEYORS AND TOWN PLANNERS
SHOP 1, 10 MAPLE STREET, COOROY 4563
PH COOROY 0754 426121 FAX 0754 425125



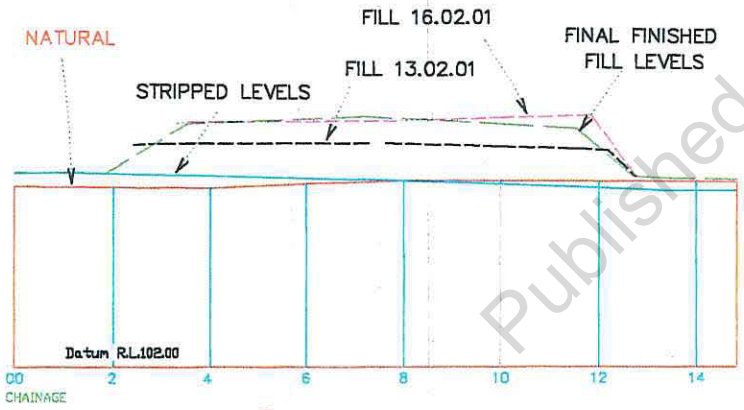
FILL AREA No 1

SCALES Horizontal 1: 100
Vertical 1:25



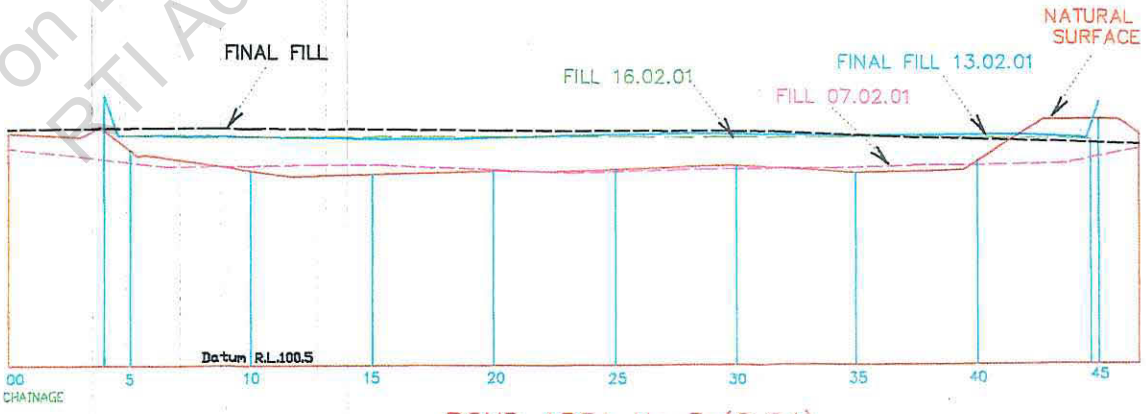
POND AREA No 3 (CL03)

SCALES Horizontal 1: 200
Vertical 1:100



FILL AREA No 2

SCALES Horizontal 1: 100
Vertical 1:50



POND AREA No 3 (CL04)

SCALES Horizontal 1: 200
Vertical 1:100

SHEET A R

LEVEL DATUM AHD

ROBCARTO BORAL 2				SCALES As Shown
A3	A	02.04.01	ORIGINAL ISSUE	
	ISSUE	DATE		AMENDMENTS JOB NO 98/657D

IT Environmental (Australia) Pty Ltd
CROSS SECTIONS FILL AREAS
BORAL FACTORY COOROY

MAX WATTERSON & ASSOCIATES
SURVEYORS AND TOWN PLANNERS
SHOP 1, 10 MAPLE STREET, COOROY 4563
PH COOROY 0754 426121 FAX 0754 425125

Published on DES Disclosure Log
RTI Act 2009

Published on DES Disclosure Log
RTI Act 2009

Appendix B
Soil Analytical Results and EPA

Closure Report - Soil Remediation and Stormwater Management Works
Boral Timber Mill, Maple Street, Cooroy QLD

R

Our ref: J207570F-R02

Explosives
Water & Waste Water
Environmental
Food & Pharmaceuticals
Biological

Analytical Laboratories
A.C.N. 006 823 089
585 Blackburn Road Notting Hill,
Victoria, Australia 3168
Telephone (03) 9562 5899 Fax (03) 9562 0336

Analytical Report

IT ENVIRONMENTAL
LEVEL 2
33 LONGLAND ST
NEWSTEAD
QLD 4006

RECEIVED
01 MAR

Contact : CTPI 49-Sch4
Batch Number : **0102079**
Job Ref : **J207570F/23233**
Sample(s) Received : **23/02/2001**
Report No : **30778**

Methods:

406-MS Elements by ICP-MS, Dry Weight
E100.01 Moisture Content

Published on DES Disclosure Log
RTI Act 2009

Attached Results Approved by:

CTPI 49-Sch4
CTPI 49-Sch4
B.App.Sci. (Environmental)
Laboratory Manager

CTPI 49-Sch4
CTPI 49-Sch4
Dip.App.Sci (Chemistry)
Senior Analyst - Metals

This Laboratory is accredited by the National Association of Testing Authorities, Australia. The tests reported herin have been performed in accordance with its terms of accreditation.

NATA ENDORSED DOCUMENT
Document may not be reproduced except in full.
NATA Accreditation No. 1645

** This is the Final Report which supersedes any reports previously issued relating to the sample(s) included.*
All samples tested as submitted by client.
 # Denotes methods not covered by NATA terms of accreditation

Analytical Laboratories
A.C.N. 006 823 089
585 Blackburn Road Notting Hill,
Victoria, Australia 3168
Telephone (03) 9562 5899 Fax (03) 9562 0336

Results

Report No: 30778

	0102079/001 EVAP/SS1	0102079/002 EVAP/SS2	0102079/003 EVAP/SS3	0102079/004 EVAP/SS4	0102079/005 EVAP/SS5
	22/02/2001 23/02/2001	22/02/2001 23/02/2001	22/02/2001 23/02/2001	22/02/2001 23/02/2001	22/02/2001 23/02/2001
ELEMENTS by ICP-MS, DRY WEIGHT					
Method: 406-MS Units: mg/kg					
Arsenic	<2.0	18	32	21	9.7
Boron	<2.0	2.7	3.1	4.1	<2.0
Chromium	6.1	40	64	35	34
Copper	5.2	29	41	29	17
OVEN MOISTURE CONTENT					
Method: E100.01 Units: % w/w					
Moisture	17.4	22.3	16.8	14.9	14.7

Published on DES Disclosure Log
RTI Act 2009

R

Explosives
Water & Waste Water
Environmental
Food & Pharmaceuticals
Biological

Analytical Laboratories
A.C.N. 006 823 089
585 Blackburn Road Notting Hill,
Victoria, Australia 3168
Telephone (03) 9562 5899 Fax (03) 9562 0336

Quality Results

Report No: 30778

	0102079Q006 DIGEST BLANK	0102079Q007 Duplicate 0102079/001	0102079Q008 Spike Recovery 0102079/001	0102079Q009 Spike Recovery Lab Control
		26/02/2001		
	23/02/2001	26/02/2001	24/02/2001	26/02/2001
	23/02/2001		26/02/2001	26/02/2001
ELEMENTS by ICP-MS, AS RECEIVED				
Method: 406-MS Units: mg/kg				
Arsenic	<2.0	-	-	-
Boron	<2.0	-	-	-
Chromium	<2.0	-	-	-
Copper	<2.0	-	-	-
QC RESULTS - DUPLICATES				
Relative Percent Difference, %				
Arsenic	-	3.3	-	-
Boron	-	<1.0	-	-
Chromium	-	3.6	-	-
Copper	-	2.1	-	-
QC RESULTS - SPIKED SAMPLES				
Percent Recovery, %				
Arsenic	-	-	84.5	101
Boron	-	-	91.7	121
Chromium	-	-	90.2	99.8
Copper	-	-	102	99.5

Published on DES Disclosure Log
RTI Act 2009

Quality Results provided in this report are for laboratory Quality Control purposes.

R

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

25255

IT Environmental (Australia) Pty Ltd
ACN 003 931 057
A Member of The IT Group
www.theitgroup.com.au

the IT group

- ☐ **Adelaide:** Tel (08) 8443 5600 Fax (08) 8443 6499, 27 Queen Street, Thebarton SA 5031
- ☒ **Brisbane:** Tel (07) 3252 5711 Fax (07) 3252 5712, Level 2, 33 Longland Street, Newstead QLD 4006
- ☐ **Hobart:** Tel (03) 6231 1620 Fax (03) 6231 1640, 127 Bathurst Street, Hobart TAS 7000
- ☐ **Melbourne:** Tel (03) 9819 0284 Fax (03) 9819 4079, 169 Burwood Road, Hawthorn VIC 3122
- ☐ **Perth:** Tel (08) 9481 4333 Fax (08) 9481 4122, Level 7, 220 George's Terrace, Perth WA 6000
- ☐ **Sydney:** Tel: (02) 9502 4844 Fax (02) 9502 2105, 17 Forrester Street, Kingsgrove NSW 2208
- ☐ **Other:**

Project No: J207570 F. Task No: 002.

Project Name: BORAL COOROY. Laboratory: GRIBBLES.

Samplers Name: CTPI 49-Sch4 Project Manager: CTPI 49-Sch4

Special Instructions:

METALS = Cu, Cr, As + BORON.

Analysis Request Section

Lab. No.	Sample ID	Sample Location	Sample Depth	Sample Date	Time	Matrix (Soil ... etc)	Container Type & Preservative*	T-A-T (Specify)	TPH	BTEX	METALS (Specify)	PAH's	PHENOLS	OC's / OP's	NOTES
	EVAP/SS1	NA	NA	22/2/01	PM	SOIL	1x250ml G	STD			X				
	EVAP/SS2	↓	↓	↓	↓	↓	↓	↓			X				
	EVAP/SS3										X				
	EVAP/SS4										X				
	EVAP/SS5										X				

COPY

Published on DES Disclosure Log
RTI Act 2009

RELINQUISHED BY:

Signature: CTPI 49-Sch4 Date: 22/2/01
Company: IT ENVIRONMENTAL Time: 4.30
Signature: Date:
Company: Time:

RECEIVED BY:

Signature: CTPI 49-Sch4 Date: 23/2/01
Company: GRIBBLES Time: 01:45AM.
Signature: Date:
Company: Time:

Sample Receipt Advice: *(Lab Use Only)*

All Samples Received in Good Condition . . . ☑
All Documentation is in Proper Order . . . . . ☑
Samples Received Properly Chilled . . . . . ☑
Lab. Ref/Batch No. 0102079

* **Container Type & Preservation Codes: P** - Plastic, **G** - Solvent Washed Acid Rinsed Glass Bottle, **V** - Vial, **N** - Nitric Acid Preserved
C - Hydrochloric Acid Preserved, **S** - Sulphuric Acid Preserved, **I** - Ice

F301 CHAIN OF CUSTODY AND ANALYSIS REQUEST ISSUE: 3 ISSUE DATE: 10/4/00

GRIBBLES Analytical Laboratories
A Subsidiary of Gribbles Pathology (Vic) Pty Ltd
585 Blackburn Road, Notting Hill
Victoria, Australia 3168
Phone: 03 9562 5899 Fax: 03 9562 0336

SAMPLE RECEIPT ADVICE

Date	Client Name	Client Job No.	GAL Batch No.
14/2	IT ENVIRONMENTAL	JR07570F	0101678

The above samples were received for analysis at our Notting Hill laboratory on the dates indicated. The following sample conditions were noted on receipt.

- ☐ Correctly completed Chain of Custody accompanied samples. Yes/~~No~~
- ☐ Samples were adequately preserved in correct containers. Yes/~~No~~
- ☐ Samples were received within recommended holding times Yes/~~No~~
- ☐ Sample transport temperatures were acceptable. Yes/~~No~~
- ☐ Samples were received in good order and undamaged. Yes/~~No~~
- ☐ Samples logged in for the following turnarounds 24hour 48hour Routine

Note: Turnaround time starts when samples are received at the laboratory.
Surcharge applies for 24 and 48 hour turnaround

- ☐ Please contact CTPI 49-Sch4 (Lab Manager) for turnaround/technical questions.
- ☐ Please contact CTPI 49-Sch4 for Results/Reporting.
- ☐ Please contact CTPI 49-Sch4 or CTPI 49-Sch4 for any issues in relation to sample condition /labeling or breakage's.

Comments/Exceptions:

CTPI 49-Sch4

Signed: CTPI 49-Sch4
(for Gribbles Analytical Laboratories)

Date: 14/2/01
Time: 9:30

Published on DES Disclosure Log
RTI Act 2009

CTPI 49-Sch4

From: Anita Packwood [anita.packwood@env.qld.gov.au]
Sent: Wednesday, 21 March 2001 10:32 AM
To: CTPI 49-Sch4
Subject: Re: Contaminated soil - Cooroy Mill

Hi CTPI 49-S

As we discussed the following are the Health Based Investigation (A) Levels for the contaminants that you sent me results for - As = 100mg/kg, Bo = No level has been set but background levels can be between 1 - 75mg/kg, Cr = 100mg/kg for hexavalent form Cr(VI) and 120g/kg (grams not milligrams) for trivalent form Cr (III) and Cu = 1000mg/kg.

So from the results you provided all are below the levels listed above. As such the Contaminated Land Unit considers this soil to be clean and not to require a Disposal Permit. This soil can be appropriately disposed of at the facility discussed.

Anita Packwood
A/Principal Scientific Advisor
Contaminated Land Unit
Environmental Operations
Environmental Protection Agency
Tel: (07) 3224 8168 Fax: (07) 3247 3278
E-mail: anita.packwood@env.qld.gov.au
Visit us online at http://www.env.qld.gov.au

CTPI 49-Sch4 wrote:

> Anita
>
> Just to confirm our conversation this morning. IT Environmental are
> seeking to have 104 cu m of CCA and Boron contaminated soil removed from
> the mill site and disposed to landfill at Noosa Shire's Eumundi Road
> site.
>
> Sample results presented by IT in mg/kg are:-
>

> As	<2.0	18	32	21	9.7
> Bo	<2.0	2.7	3.1	4.1	<2.0
> Cr	6.1	40	64	35	34
> Cu	5.2	29	41	29	17

>
> Could you please confirm that the said soil can be disposed of as top
> fill as discussed.
>
> Thanks and regards - CTPI 49-Sch

+----------+
Remember:
We do not inherit the world from our ancestors.
We borrow it from our children.

Published on DES Disclosure Log RTI Act 2009

Published on DES Disclosure Log
RTI Act 2009

Appendix C

Closure Report - Soil Remediation and Stormwater Management Works
Boral Timber Mill, Maple Street, Cooroy QLD

R

Our ref: J207570F-R02a

BOWLER GEOTECHNICAL (Sunshine Coast) Pty Ltd

Address:
PO Box 459
Coolum Beach Qld 4573

Telephone:
(07) 5472 7722

Facsimile:
(07) 5472 7028

Geotechnical Engineering Consultants
Soils Laboratory Services
(Incorp. in Qld. A.C.N. 069 667 652)

Also at:
Gold Coast, Geebung, Browns Plains, Gladstone, Mackay, Townsville, Cairns, Darwin.
Office in Vietnam and Representative Office in Papua New Guinnea.

Dry Density Ratio/Moisture Ratio Report

Client:	IT Environmental	Report Number:	8430NUCR
Job Number:	2473	Report Date:	09/02/2001
Project:	Boral Sawmill	Order Number:	B6164TJB
Location:	Cooroy	Test Method: AS1289.5.4.1, 5.1.1, 5.8.1, 2.1.1	

Lab No:	8430	8431	8432	
ID No:	-	-	-	
Lot No:	-	-	-	
Spec No:	-	-	-	
Date/Time Tested:	08/02/2001	08/02/2001	08/02/2001	
Material Source:	-	-	-	
Use / Soil Description:	Clay Capping	Clay Capping	Clay Capping	
Sample Location:	Evaporation Pond Chainage 24 1m Right 0.22m < FFL	Evaporation Pond Chainage 44 9m Right 0.10m < FFL	Area H3 O/S SW Corner 4m Nth / 3m Est FFL	
Test/Layer Depth (mm)	200 / -	200 / -	200 / -	
Maximum Size (mm):	19.0	19.0	19.0	
Oversize Wet (%):	0	0	0	
Oversize Dry (%):	0	0	0	
Field Moisture (%):	17.5	17.0	16.0	
Field Dry Density (t/m³):	1.74	1.75	1.77	
MDR Number:	8430	8431	8432	
Assigned MDR (Y/N):	No	No	No	
MDR Sample Date:	08/02/2001	08/02/2001	08/02/2001	
MDD (t/m³):	1.75	1.78	1.84	
OMC (%):	17.0	17.5	14.0	
Variation from OMC:	0.5% Wet	0.5% Dry	2.0% Wet	
Field Density Method:	AS1289.5.8.1	AS1289.5.8.1	AS1289.5.8.1	
MC Method:	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	
Standard or Modified:	Standard	Standard	Standard	
Moisture Ratio (%):	103.0	97.0	114.5	
Density Ratio (%):	99.5	98.0	96.0	
Remarks:				

Published on DES Disclosure Log
RTI Act 2009

NATA ENDORSED TEST REPORT
National Association of Testing Authorities Australia
This document must not be reproduced except in full

NATA Accreditation No. 3747

Form Number:
REP NUC-1

APPROVED BY: ..... CTPI 49-Sch4 .....

BOWLER GEOTECHNICAL (Sunshine Coast) Pty Ltd

Address: PO Box 459 Coolum Beach Qld 4573

Telephone: (07) 5472 7722

Facsimile: (07) 5472 7028

Geotechnical Engineering Consultants
Soils Laboratory Services
(Incorp. in Qld. A.C.N. 069 667 652)

Also at:
Gold Coast, Geebung, Browns Plains, Gladstone, Mackay, Townsville, Cairns, Darwin.
Office in Vietnam and Representative Office in Papua New Guinnea.

Dry Density Ratio/Moisture Ratio Report

Client:	IT Environmental	Report Number:	8494NUCR
Job Number:	2473	Report Date:	16/02/2001
Project:	Boral Sawmill	Order Number:	B6164TJB
Location:	Cooroy	Test Method: AS1289.5.4.1, 5.1.1, 5.8.1, 2.1.1	

Lab No:	8494	8495	8496	8497
ID No:	-	-	-	-
Lot No:	-	-	-	-
Spec No:	-	-	-	-
Date/Time Tested:	15/02/2001	08/02/2001	08/02/2001	08/02/2001
Material Source:	-	-	-	-
Use / Soil Description:	Clay Capping	Clay Capping	Clay Capping	Clay Capping
Sample Location:	Evaporation Pond Chainage 34 Centre-line FFL	Evaporation Pond Chainage 50 3m Left of CL FFL	Evaporation Pond Chainage 66 1m Left of CL FFL	Evaporation Pond Chainage 82 16m Right of CL FFL
Test/Layer Depth (mm)	200 / -	200 / -	200 / -	200 / -
Maximum Size (mm):	19.0	19.0	19.0	19.0
Oversize Wet (%):	0	0	0	0
Oversize Dry (%):	0	0	0	0
Field Moisture (%):	17.5	18.5	19.0	19.0
Field Dry Density (t/m³):	1.76	1.81	1.73	1.76
MDR Number:	8494	8495	8496	8497
Assigned MDR (Y/N):	No	No	No	No
MDR Sample Date:	15/02/2001	15/02/2001	15/02/2001	15/02/2001
MDD (t/m³):	1.78	1.80	1.76	1.78
OMC (%):	17.5	15.0	16.0	17.0
Variation from OMC:	0.0%	3.5% Wet	3.0% Wet	2.0% Wet
Field Density Method:	AS1289.5.8.1	AS1289.5.8.1	AS1289.5.8.1	AS1289.5.8.1
MC Method:	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Standard or Modified:	Standard	Standard	Standard	Standard
Moisture Ratio (%):	100.0	123.5	119.0	112.0
Density Ratio (%):	99.0	101.0	98.5	98.5
Remarks:				

Published on DES Disclosure Log
RTI Act 2009

NATA ENDORSED TEST REPORT
National Association of Testing Authorities Australia
This document must not be reproduced except in full

NATA Accreditation No. 3747

Form Number: REP NUC-1

CTPI 49-Sch4

APPROVED BY: ....

BOWLER GEOTECHNICAL (Sunshine Coast) Pty Ltd

Address:
PO Box 459
Coolum Beach Qld 4573

Telephone:
(07) 5472 7722

Facsimile:
(07) 5472 7028

Geotechnical Engineering Consultants
Soils Laboratory Services
(Incorp. in Qld. A.C.N. 069 667 652)

Also at:
Gold Coast, Geebung, Browns Plains, Gladstone, Mackay, Townsville, Cairns, Darwin, Office in Vietnam and Representative Office in Papua New Guinnea.

Dry Density Ratio/Moisture Ratio Report

Client:	IT Environmental	Report Number:	8498NUCR
Job Number:	2473	Report Date:	16/02/2001
Project:	Boral Sawmill	Order Number:	B6164TJB
Location:	Cooroy	Test Method: AS1289.5.4.1, 5.1.1, 5.8.1, 2.1.1	

Lab No:	8498			
ID No:	-			
Lot No:	-			
Spec No:	-			
Date/Time Tested:	15/02/2001			
Material Source:	-			
Use / Soil Description:	Clay Capping			
Sample Location:	Area F2/F3 O/S NE Corner 5m Wst / 2m Sth FFL			
Test/Layer Depth (mm)	200 / -			
Maximum Size (mm):	19.0			
Oversize Wet (%):	0			
Oversize Dry (%):	0			
Field Moisture (%):	17.0			
Field Dry Density (t/m³):	1.76			
MDR Number:	8498			
Assigned MDR (Y/N):	No			
MDR Sample Date:	15/02/2001			
MDD (t/m³):	1.84			
OMC (%):	13.5			
Variation from OMC:	3.5% Wet			
Field Density Method:	AS1289.5.8.1			
MC Method:	AS1289.2.1.1			
Standard or Modified:	Standard			
Moisture Ratio (%):	126.0			
Density Ratio (%):	95.5			
Remarks:				

Published on DES Disclosure Log RTI Act 2009

NATA ENDORSED TEST REPORT
National Association of Testing Authorities Australia
This document must not be reproduced except in full

NATA Accreditation No. 3747

Form Number:
REP NUC-1

APPROVED BY: ..... CTPI 49-Sch4 .....

1/29 Finchley Street, Milton, Qld. 4064
P.O. Box 434, Paddington, Qld. 4064

Australian Geomechanical Laboratories Pty Ltd
ACN 065 630 506

Telephone: (07) 3217 5535
Facsimile: (07) 3217 5311

PERMEABILITY BY FALLING HEAD

NATA Laboratory 9926

TEST PROCEDURE: AS1289 6.1.1, KH1 Based on K H Head (1988) Manual of Laboratory Testing, 10.7

Client: Bowler Geotechnical	Certificate No. 102260-1
Project: Boral Sawmill Cooroy	Date: 5/3/01 Order No.

Clients Sample No.	8430
Maximum Dry Density (t/m³):	*1.75
Optimum Moisture Content (%):	*17.0
Placement Wet Density (t/m³):	1.98
Placement Moisture (%):	20.4
Swell during saturation (%):	0
PERMEABILITY:	$k = 2 \times 10^{-9}$ m/s

Classification: (CH) Clay with fine to coarse sand and a trace of fine to medium gravel, brown, moist.

Remarks: * Supplied by client

National Association of Testing Authorities, Australia
NATA ENDORSED DOCUMENT
This document may not be reproduced except in full.

AUTHORISED SIGNATORY:

CTPI 49-Sch4

CTPI 49-Sch4

G.T.0.10

Published on DES Disclosure Log
RTI Act 2009

Australian Geomechanical Laboratories Pty Ltd
ACN 065 630 506
1/29 Finchley Street, Milton, Qld. 4064
P.O. Box 434, Paddington, Qld. 4064
Telephone: (07) 3217 5535
Facsimile: (07) 3217 5311

PERMEABILITY BY FALLING HEAD

NATA Laboratory 9926

TEST PROCEDURE: AS1289 6.1.1, KH1 Based on K H Head (1988) Manual of Laboratory Testing, 10.7

Client: Bowler Geotechnical (Sunshine coast)	Certificate No. 102189-2
Project: Boral Sawmill Cooroy	Date: 22/2/01

Client Sample No.	8431
Maximum Dry Density (t/m³):	1.78
Optimum Moisture Content (%):	17.5
Placement Wet Density (t/m³):	1.70
Placement Moisture (%):	17.2
Density Ratio at Placement (%):	95.5
PERMEABILITY:	**k(20) = 8 x 10^{-10} m/s**
Classification: (CH) Clay with fine to coarse sand, grey and red/brown, moist.	
Remarks: reissue of certificate 102260-1	

National Association of Testing Authorities, Australia
NATA ENDORSED DOCUMENT
This document may not be reproduced except in full

Authorised Signatory:

CTPI 49-Sch4

CTPI 49-Sch4

GT010

Published on DES Disclosure Log
RTI Act 2009

BOWLER GEOTECHNICAL (Sunshine Coast) Pty Ltd

Address:
PO Box 459
Coolum Beach Qld 4573

Telephone:
(07) 5472 7722

Facsimile:
(07) 5472 7028

Geotechnical Engineering Consultants
Soils Laboratory Services
(Incorp. in Qld. A.C.N. 069 667 652)

Also at:
Gold Coast, Geebung, Browns Plains, Gladstone, Mackay, Townsville, Cairns, Darwin.
Office in Vietnam and Representative Office in Papua New Guinnea.

Quality of Materials Report

Client:	IT Environmental	Report Number:	8430QUAL
Job Number:	2473	Report Date:	20/02/2001
Project:	Boral Sawmill	Order Number:	B6164TJB
Location:	Cooroy		
Lab No:	8430	Sample Location	
Date Sampled:	08/02/2001	Chainage 24	
Date Tested:	10/02/2001	1m Right of CL	
Sampled By:	DN	0.22m < FFL	
Sample Method:	-		
Material Source:	-		
For Use As:	Evaporation Pond	Lot Number:	-
Remarks	-	Spec Number:	-

Test Methods: Q103, Q104D, Q105, Q106 AS Sieve Sizes	Specification Minimum	Percent Passing	Specification Maximum
9.50mm			
6.70mm			
4.75mm		100	
2.36mm		97	
1.18mm		97	
0.600mm		96	
0.425mm		95	
0.300mm		92	
0.150mm		80	
0.075mm		72	

Atterberg Tests	Specification Minimum	Result	Specification Maximum
Liquid Limit (%):		43	
Plastic Limit (%):		16	
Plasticity Index:		27	
Linear Shrinkage (%):		13.5	
P.I. X % Passing 0.425mm:		2565	
L.S. X % Passing 0.425mm:		1283	
Ratio of % Passing (0.075 / 0.425):		0.76	

NATA ENDORSED TEST REPORT
National Association of Testing Authorities Australia
This document must not be reproduced except in full

NATA Accreditation No. 3747

Form Number
REP QUAL-1

APPROVED BY: ..... CTPI 49-Sch4 .....

Published on DES Disclosure Log RTI Act 2009

BOWLER GEOTECHNICAL (Sunshine Coast) Pty Ltd

Address:
PO Box 459
Coolum Beach Qld 4573

Telephone:
(07) 5472 7722

Facsimile:
(07) 5472 7028

Geotechnical Engineering Consultants
Soils Laboratory Services
(Incorp. in Qld. A.C.N. 069 667 652)

Also at:
Gold Coast, Geebung, Browns Plains, Gladstone, Mackay, Townsville, Cairns, Darwin.
Office in Vietnam and Representative Office in Papua New Guinnea.

Quality of Materials Report

Client:	IT Environmental	Report Number:	8431QUAL
Job Number:	2473	Report Date:	20/02/2001
Project:	Boral Sawmill	Order Number:	B6164TJB
Location:	Cooroy		
Lab No:	8431	Sample Location	
Date Sampled:	08/02/2001	Chainage 44	
Date Tested:	10/02/2001	9m Right of CL	
Sampled By:	DN	0.1m < FFL	
Sample Method:	-		
Material Source:	-		
For Use As:	Evaporation Pond	Lot Number:	-
Remarks	-	Spec Number:	-

Test Methods: Q103, Q104D, Q105, Q106 AS Sieve Sizes	Specification Minimum	Percent Passing	Specification Maximum
9.50mm			
6.70mm			
4.75mm		100	
2.36mm		98	
1.18mm		98	
0.600mm		97	
0.425mm		96	
0.300mm		93	
0.150mm		79	
0.075mm		71	

Atterberg Tests	Specification Minimum	Result	Specification Maximum
Liquid Limit (%):		45	
Plastic Limit (%):		19	
Plasticity Index:		26	
Linear Shrinkage (%):		14.0	
P.I. X % Passing 0.425mm:		2496	
L.S. X % Passing 0.425mm:		1344	
Ratio of % Passing (0.075 / 0.425):		0.74	

NATA ENDORSED TEST REPORT
National Association of Testing Authorities Australia
This document must not be reproduced except in full

NATA Accreditation No. 3747

Form Number: REP QUAL-1

APPROVED BY: ..... CTPI 49-Sch4 .....

Published on DES Disclosure Log RTI Act 2009

Construction Materials

The clay capping material is to be sourced from off-site. The clay cap will be a cohesive material of medium to high plasticity, free of significant organic matter, containing less than 10% by volume of rock greater than 25mm average dimension that does not break under the specified compactive effort. The clay capping material is also to meet the following general materials specifications:

Parameter	Specification	Test Procedure
Liquid Limit	greater than 30%	AS 1289.3.9
Plastic Limit	greater than 15%	AS 1289.3.3.1
Passing 75 µm sieve	greater than 30%	AS 1289.3.6.1
Maximum dry density	Greater that 1.5 t/m3	AS 1289.5.1.1 (std method)
Permeability	$1*10^{-9}$ or lower	internal method on laboratory sample remoulded to minimum of 95% standard compaction at a moisture content equal to or greater than optimum

A sample of the clay material will be tested as supplied from the source to confirm it meets the requirements above. One further sample will be tested from the clay as received onsite.

Placement and Compaction

The clay capping will be placed in an approximately uniform layer of homogeneous nature and with appropriate water content prior to compaction. The clay capping will be compacted to a dry density of not less than 95% of standard maximum dry density (AS 1289.5.1.1). Moisture content of the compacted clay capping shall be within 4% of optimum moisture content (OMC). Laboratory testing costs have been included to validate the quality, field density and compaction of the clay capping material. We have allowed for four compaction tests and eight field density tests on the clay (four call-outs for the geotechnical laboratory).

Published On EES Disclosure Log
RTIO 2009

R

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

23082

IT Environmental (Australia) Pty Ltd
ACN 003 931 057
A Member of The IT Group
www.theitgroup.com.au

☐ **Adelaide:** Tel (08) 8443 5600 Fax (08) 8443 6499
27 Queen Street, Thebarton SA 5031

☒ **Brisbane:** Tel (07) 3252 5711 Fax (07) 3252 5712
Level 2, 33 Longland Street, Newstead QLD 4006

☐ **Hobart:** Tel (03) 6231 1620 Fax (03) 6231 1640
127 Bathurst Street, Hobart TAS 7000

☐ **Melbourne:** Tel (03) 9819 0284 Fax (03) 9819 4079
169 Burwood Road, Hawthorn VIC 3122

☐ **Perth:** Tel (08) 9481 4333 Fax (08) 9481 4122
Level 7, 220 George's Terrace, Perth WA 6000

☐ **Sydney:** Tel: (02) 9502 4844 Fax (02) 9502 2105
17 Forrester Street, Kingsgrove NSW 2208

☐ **Other:**

Project No: J207570 F. Task No:

Project Name: JOHN COOPER Laboratory: AGL.

Samplers Name: CTPI 49-Sch4 Project Manager: CTPI 49-Sch4

Special Instructions: AS PER QUOTED RATE

Analysis Request Section

Lab. No.	Sample ID	Sample Location	Sample Depth	Sample Date	Time	Matrix (Soil ... etc)	Container Type & Preservative*	T-A-T (Specify)	TPH	BTEX	METALS (Specify)	PAH's	PHENOLS	OC's / OP's	NOTES
	BRICALBA - QUICKSAND	NA	12/10	PM	SOIL	ENC.	STD.								1 BAG TAKE.
	BRICALBA - SAND ASH	NA	"												HOLD

Published on DES Disclosure Log
RTI Act 2009

RELINQUISHED BY:

Signature: CTPI 49-Sch4 Date: 16.10.00

Company: IT ENVIRONMENTAL Time: 10.10.00

Signature: Date:

Company: Time:

RECEIVED BY:

Signature: Date:

Company: Time:

Signature: Date:

Company: Time:

Sample Receipt Advice: *(Lab Use Only)*

All Samples Received in Good Condition . . . ☐

All Documentation is in Proper Order . . . . . ☐

Samples Received Properly Chilled . . . . . ☐

Lab. Ref/Batch No.

*** Container Type & Preservation Codes:** **P** - Plastic, **G** - Solvent Washed Acid Rinsed Glass Bottle, **V** - Vial, **N** - Nitric Acid Preserved
C - Hydrochloric Acid Preserved, **S** - Sulphuric Acid Preserved, **I** - Ice

1/29 Finchley Street, Milton, Qld. 4064
P.O. Box 434, Paddington, Qld. 4064

Australian Geomechanical Laboratories Pty Ltd
ACN 065 630 506

Telephone: (07) 3217 5535
Facsimile: (07) 3217 5311

23 OCT

PERMEABILITY BY FALLING HEAD

NATA Laboratory 9926

TEST PROCEDURE: K H Head (1988) Manual of Laboratory Testing, 10.7,
AS1289 3.1.1, 3.2.1, 3.3.1, 3.4.1, 3.6.1, 5.1.1

Client: IT ENVIRONMENTAL PTY LTD	Certificate No. 010071-1
Project: J207570F Proposed Clay Capping.	Date: 19/10/0

Client's Sample Identification:	Quiksand Sample 1
Initial Moisture Content (%):	17.6
Liquid Limit (%):	65
Plastic Limit (%):	22
Plasticity Index :	43
Linear Shrinkage (%):	17
Passing 75um sieve (%):	92
Maximum Dry Density (t/m^3):	1.68
Optimum Moisture Content (%):	20.5
Placement Wet Density (t/m^3):	1.92
Placement Moisture (%):	19.8
Placement Density Ratio (%):	95
PERMEABILITY:	$k_{20} = 1 \times 10^{-10}$ m/s
Remarks:	

Published on DES Disclosure Log
RTI Act 2009

National Association of Testing Authorities, Australia
NATA ENDORSED DOCUMENT
This document may not be reproduced except in full.

Authorised Signatory.

CTPI 49-Sch4

CTPI 49-Sch4

Published on DES Disclosure Log
RTI Act 2009

Appendix D

Closure Report - Soil Remediation and Stormwater Management Works
Boral Timber Mill, Maple Street, Cooroy QLD

R

Our ref: J207570F-R02



Photograph 1. Placement of soil cover (brown) over clay cap at evaporation pond (view looking north)



Photograph 2. Clean soil cover (brown) over clay cap at evaporation pond (view looking east)

Released on DES Disclosure Log
RTI Act 2009

R

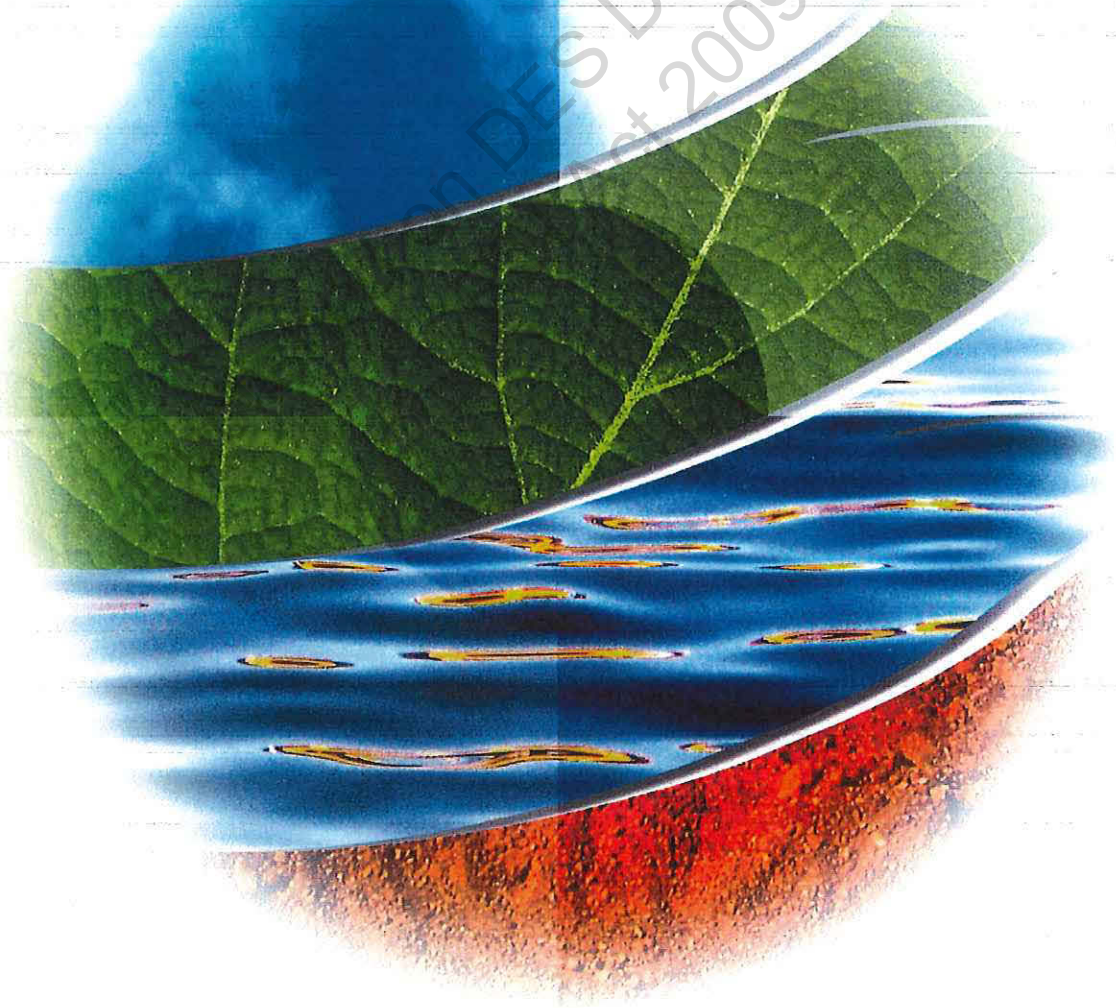


Photograph 3. Looking west into timber waste area – rock-hardened bank visible at centre, with clean soil (brown) spread throughout timber waste area.



Photograph 4. Looking east from timber waste area toward timber storage/drying area, with clean soil (brown) and rock-hardened bank visible.

IT Environmental



DES Disclosure Log
2009

R

STATUTORY DECLARATION

(INVESTIGATOR AND REPORT PREPARER)

Address of Site Investigated:	1 Maple Street, Cooroy QLD
Property Descriptions:	Lots 1. 2 and 3 on RP153299 Lots 1. 2 and 3 on RP87371 Lot 2 on RP47020 Lot 1 on RP88582 Lots 2 and 3 on RP110206 Parish of Tewantin, County of March
Title of Report	Additional Environmental Investigations Boral Timber Cooroy Mill 1 Maple Street Cooroy, QLD (28 September 2000)

I CTPI 49-Sch4 of *IT Environmental (Australia) Pty Ltd*, in the State of Queensland, do solemnly and sincerely declare

I was the *investigator and report preparer* of the report described

I am a member of *Environment Institute of Australia and New Zealand* and my qualifications and experience as outlined in documents provided previously to the EPA are relevant to this investigation

I have not knowingly included any false, misleading or incomplete information in the report; and

I have not knowingly failed to reveal any relevant information or document to the administering authority.

certify that:

the report addresses the relevant matters for the investigation and is factually

the opinions expressed in it are honestly and reasonably held.

Published on DES Disclosure Log
RTI Act 2009

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

Signature CTPI 49-Sch4

Name

Taken and Declared before me in B ane this

Witness CTPI 49-Sch4

Name

Reg. No.

J207570G-statdec2.doc

ADDITIONAL ENVIRONMENTAL INVESTIGATIONS
BORAL TIMBER COOROY MILL
1 MAPLE STREET
COOROY QUEENSLAND

Prepared

Mr. CTPI 49-Sch4, Environmental Services - Qld
Boral Limited
147 Coronation Drive
PO Box 1369
MILTON QLD 4064

28 September 2000
Project Ref: J207570E
Document Ref: J207570E-R01

Published on DES Disclosure Log
RTI Act 2009

Prepared by:

Written/Submitted
CTPI 49-Sch4
CTPI 49-Sch4
Senior Project anager

Reviewed/Approved by:
CTPI 49-Sch4
CTPI 49-Sch4
State Manager - QLD/NT

IT ENVIRONMENTAL (AUSTRALIA) PTY LTD A.C.N. 003 931 057
Level 2, 33 Longland Street Newstead QLD 4006 Australia PO Box 2320 Fortitude Valley MAC QLD 4006 Australia
Telephone: 61 7 3252 5711 Fax: 61 7 3252 5712 Email: briadmin@fdgti.com.au

DISTRIBUTION LIST

No. of	Reference	Status	Issued	Prepared for:	Initials
	J207570ER01	FINAL	28/9/00	Boral Limited – Rob Griffin	CTP
	J207570ER01	FINAL	28/9/00	IT Environmental Australia P Ltd	
	J207570ER01	FINAL	13/8/04	Calla han & Toth	

Published on DES Disclosure Log
RTI Act 2009

TABLE OF CONTENTS

EXECUTIVE SUMMARY

INTRODUCTION

Objectives.

Scope of Works

Regulatory Guidelines.

INVESTIGATION RESULTS

Sawdust Stockpile Area

Timber Waste Area

Evaporation Pond

Cooroy Creek

Monitoring Well MW5.

Identified "Hot Spots" F2, F3, F6 and H3.

CONCLUSIONS AND RECOMMENDATIONS

REFERENCES

LIST OF APPENDICES

FIGURES

FIGURE 1	Site Location Map
FIGURE 2	Site Plan
FIGURE 3	Sample Locations – Sawdust Stockpile Area
FIGURE 4	Sample Locations – Timber Area
FIGURE 5	Additional Sampling – Area F
FIGURE 6	Additional Sampling – H3

TABLES

TABLE 1	Soil Analytical Results - Metals
TABLE 2	Soil Analytical Results – TCLP Metals
TABLE 3	Water Analytical Data – Field Results
TABLE 4	Water Analytical Results - Metals
TABLE 5	Water Analytical Results – Physical Properties
TABLE 6	Soil Analytical Results - Hydrocarbons

APPENDIX A	Test Pit Logs
APPENDIX B	Laboratory Certificates

Published on DES Disclosure Log
RTI Act 2009

R

EXECUTIVE SUMMARY

IT Environmental (Australia) Pty Ltd (*IT*) were commissioned by Boral Limited (Boral) to undertake additional sampling at the Cooroy timber mill in Queensland. It is our understanding that the additional investigations are a precursor to site divestment, and have been partially directed by outstanding issues raised in previous investigations at the

The objectives of the additional investigation at the Cooroy site were to:

- further assess the extent of environmental impact resulting from operations at the site;
- ensure that sufficient environmental data exist to allow an assessment of the site's suitability for continued use as a timber mill; and
- evaluate the potential for any ongoing environmental liabilities associated with the

To achieve the stated objectives, the following series of soil, sediment and water sampling events were conducted over the period 12 July 2000 through 8 August 2000:

	Sample Medium	Analysis
Sawdust stockpile area (12/7/00)		Metals and Boron
Timber waste area (13/7/00)		Metals and Boron
Evaporation pond (13/7/00 & 1/8/00)	Surface water and sediment	Metals, Boron, TCLP Metals and various water quality parameters
Cooroy Creek and MW5 (3/8/00)	Surface water and groundwater	Metals and Boron
Identified "Hot Spots" F2, F3, F6 and H3. (8/8/00)		Metals (F2,F3,H3) and TPH (F6)

Based on the results of previous (i.e., October 1998) and the current investigation, and in respect to the present and latent environmental impact associated with the Boral Cooroy Mill, the reported concentrations for target analytes in soil indicate the site meets the *EPA Exposure Setting F* requirements in all sample areas. This is appropriate for an ongoing commercial/industrial

However, analysis of evaporation pond water indicates contaminants associated with this water are in concentrations in excess of ANZECC Guidelines for aquatic ecosystems. Furthermore, sediment samples taken from the evaporation pond contain levels of arsenic and copper in excess of *EPA Environmental Investigation Levels*. In comparison with the remainder of the site the evaporation pond area poses the greatest potential risk to the surrounding environment in particular the water quality of Cooroy Creek. It is our understanding that the water quality of Cooroy Creek is to be used as an indicator of environmental quality for the

In order to mitigate the future potential deleterious impacts to the receiving environment (notably, Cooroy Creek) from the evaporation pond area *IT* recommends

- following offsite disposal of contaminated pond waters, further sediment samples be collected and analysed for selected total and TCLP metals
- appropriate remedial measures (which may include offsite disposal or capping) be developed, depending on the results of the sediment TCLP
- groundwater samples be collected from existing monitoring wells MW2 and MW3 in the pond area for analyses of target metal concentrations; and
- surface runoff be directed away and off the area.

R

Published on DES Disclosure Log
FOI Act 2009

With respect to the metal contamination identified at the "Hot Spots" in Areas F and H, these surficial issues will be addressed when developing appropriate remedial measures for the evaporation pond area.

Published on DES Disclosure Log
RTI Act 2009

INTRODUCTION

IT Environmental (Australia) Pty Ltd (*IT*) were commissioned by Boral Limited (Boral) to undertake additional sampling at the Cooroy timber mill in Queensland. Figure 1 shows the site location, and Figure 2 shows the site

It is our understanding that the additional investigations are a precursor to site divestment, and have been partially directed by outstanding issues raised in previous investigations at the site. These previous investigations were completed by *IT* in 1998 under our previous company name, Fluor Daniel GTI, and are detailed in our 9 October 1998 report entitled *Stage II Investigation Report, Boral Timber Yards, 1 Maple Street, Cooroy, Queensland* (our ref: B7570BR01). The information in the October1998 report is considered to be integral to the current investigation and therefore should be read in conjunction with this report

Published on DES Disclosure Log
RTI Act 2009

Objectives

The objectives of the additional investigation at the Cooroy site were to:

- further assess the extent of environmental impact resulting from operations at the
- ensure that sufficient environmental data exist to allow an assessment of the site's suitability for continued use as a timber mill; and
- evaluate the potential for any ongoing environmental liabilities associated with the

Scope of Works

To achieve the stated objectives, the following series of soil, sediment and water sampling events were conducted over the period 12 July 2000 through 8 August 2000:

	Metals and Boron
	Metals and Boron
Surface water and sediment	Metals, Boron, TCLP Metals and various water quality parameters
Surface water and groundwater	Metals and Boron
	Metals (F2,F3,H3) and TPH (F6)

H3. (8/8/00)

R

Regulatory Guidelines

In assessing the results of the additional investigations undertaken, the following guidelines were

Queensland Environmental Protection Agency (EPA) *Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland* Environmental Investigation Thresholds (EILs), Health-based Exposure Settings E (parks, recreational open space playing including secondary schools) (commercial/industrial);

Australian and New Zealand Environment Conservations Council (ANZECC) *Australian Water Quality Guidelines for Fresh and Marine Waters*, 1992 – Protection of Aquatic Ecosystems (Fresh water);

Department of Environment (DoE) Waste Management Branch, *Draft Guideline* (hydrocarbons in soil), 11 August 1997;

Brisbane City Council (BCC) *Liquid Industrial Waste Policy and Management Plans* 1994 – Allowable Leaching Contaminant Levels for Lined and Unlined Landfills; and

National Environment Protection Council *National Environment Protection (Assessment of Site Contamination) Measure* 1999 – Health-based Soil Investigation Levels.

Published on DES Disclosure Log
RTI Act 2009

INVESTIGATION RESULTS

Sawdust Stockpile Area

Figure 2 shows the location of an area previously used to stockpile sawdust generated from the milling of treated and non-treated timber. Sixteen test pits (TP1-TP16 on Figure 3) were excavated in the sawdust stockpile area and samples were collected at depths of 0-200mm, 200-500mm 2m and 3m

Samples were identified as (for example) *TP1 (0-200)*, indicating the test pit number and the depth interval of the sample. It is important to note that samples were not collected as composites from various locations or depths, but rather were from a column representative of that particular interval or depth. The soil was collected either from the test pit walls (if accessible and samples less than 1-meter depth) or from the backhoe bucket after reaching the determined depth (for deeper samples or shallow inaccessible samples). All test pit logs are included in Appendix A

A 30m by 40m rectangle defined the sampling area (based on information supplied by Boral regarding the "footprint" of the previous stockpile area) and this area was further subdivided into 15m by 20m rectangles. Samples collected from within the subdivided areas were identified as "interior samples". Interior samples from 0-200mm and 200-500mm were analysed initially. "Perimeter" samples were collected from approximately 2m outside the boundary of the Perimeter samples from 0-200mm were analysed initially. A third tier of "step-out" samples was collected from approximately 5 to 10 metres outside the perimeter samples. All perimeter samples were initially held, pending the initial analytical results.

All samples were sent to the laboratory. A total of 19 samples from the sawdust stockpile area were analysed for arsenic (As), cadmium (Cd), chromium (Cr), copper (Cu), lead (Pb), zinc (Zn) and boron (B). This suite of analytes was based on the sampling regime used in previous

The results of sampling in the sawdust stockpile area are summarised on Table 1 and below. All laboratory certificates are included in Appendix B

No results from samples taken from the sawdust stockpile area exceeded *EPA Exposure Setting F*. Only arsenic concentrations from sample TP4 (0-200) at 43 mg/kg and TP5 (0-200) at 45 mg/kg exceeded the *EPA EIL* (20mg/kg).

Published on DES Disclosure Log
RTI Act 2009

Timber Waste Area

Figure 2 shows an area on the site where (solid) timber waste (e.g., offcuts) from treated and untreated wood products was stored. Sixteen test pits (TP17-TP32 on Figure 4) were excavated in the timber waste area and samples were collected at intervals of 0-200mm, 200-500mm 1m. 2m and 3m. Samples were identified as described in Section

A 30m by 40m rectangle defined the sampling area (based on information supplied by Boral regarding the "footprint" of the previous stockpile area) and this area was further subdivided into 15m by 20m rectangles. The sample locations and methodology were the same as for the sawdust stockpile area (Section

A total of 18 samples from the timber waste area were analysed for As, Cd, Cr, Cu, Pb, Zn and B The analytical results are summarised in Table 1 and below

No results from samples taken from the timber waste area exceeded *EPA Exposure Setting F*. Only arsenic concentrations from sample TP25 at 32 mg/kg exceeded the *EPA EIL* (20mg/kg).

Evaporation Pond

Four sediment samples (SS1, SS2, SS3 and SS4) were collected from the evaporation pond floor at approximately 25m intervals along the western boundary, approximately 3m in from the bund bank (see Figure 3). All sediment samples were analysed for As Cd. Cr. Cu Pb. Zn and B concentrations. The sediment sample with the highest total metal contractions (SS1) was selected for leachability analysis (copper, chromium and arsenic only) using the toxicity characteristic leaching procedure (TCLP). The results of sediment sampling are summarised in Table 1, Table 2 and below

- **No results from samples taken from the evaporation pond area exceeded *EPA Exposure Setting F*. Arsenic concentrations from all sediment samples (SS1-SS4) exceeded the *EPA EIL* (20mg/kg). Copper and chromium concentrations from SS1, SS2 and SS3 also exceeded the *EPA EILs* (60mg/kg and 50 mg/kg, respectively).**

- **TCLP results for SS1 are below the BCC allowable leaching contaminant criteria for unlined landfills.**

Published on DES Disclosure Log
RTI Act 2009

Five water samples (WS1, WS2, WS3, WS4 and POND 1) were taken from the evaporation pond and analysed for metals and boron. These samples were taken from evaporation pond water that was collected in a decontaminated bucket and then field-filtered. Sample locations WS1 through WS5 are shown on Figure 3. Sample POND 1 was a composite of three water samples collected from along the mill-side length of the pond. Field data and analytical results of the pond water samples are summarised in Tables 3, 4, and 5, and below

pH was essentially neutral, ranging from 6.74 to 7.02.

Electrical conductivity was constant at 0.08 Siemens per metre (S/m).

The water was very turbid (turbity reading off the scale).

Dissolved oxygen concentrations ranged from 4 to 5.8 mg/L

Physical properties results were within ANZECC Guidelines for Protection of Aquatic Ecosystems, where established.

Concentrations of arsenic, chromium, and copper, in all of these water samples exceeded the ANZECC Guidelines for Protection of Aquatic Ecosystems.

The lead concentration in WS1 was outside the upper range of values given in the ANZECC Guidelines for Protection of Aquatic Ecosystems.

Zinc concentrations in all but WS4 were outside the upper range of values given in the ANZECC Guidelines for Protection of Aquatic Ecosystems.

Published on DES Disclosure Log
RTI Act 2009

Cooroy Creek

Water samples were taken from Cooroy Creek at four locations: upstream (near bridge), mid-site downstream and from the stormwater culvert draining Cooroy township and emptying to the south of the site. Results are summarised in Tables 3 and 4 and below

pH ranged from 6.73 (upstream) to 7.67 (stormwater culvert).

Electrical conductivity was 0.01 S/m in all samples but the stormwater culvert (0.04

Turbidity ranged from 268 mg/L (upstream) to 292 mg/L (stormwater culvert).

Dissolved oxygen ranged from 4.8 mg/L (upstream and stormwater culvert) to 5.1 mg/L (mid-site).

"Upstream" concentrations of cadmium and zinc may exceed ANZECC Guidelines for Aquatic Ecosystems depending on water hardness and other parameters (e.g., pH, water temperature, and presence of organic compounds).

"Mid-site" concentrations of cadmium and zinc may exceed ANZECC Guidelines for Aquatic Ecosystems depending on water hardness and other parameters (e.g., pH, water temperature, and presence of organic compounds).

"Downstream" concentrations of cadmium, copper and zinc may exceed ANZECC Guidelines for Aquatic Ecosystems depending on water hardness and other parameters (e.g., pH, water temperature, and presence of organic compounds).

"Stormwater culvert" concentrations of cadmium, copper, lead and zinc may exceed ANZECC Guidelines for Aquatic Ecosystems depending on water hardness and other parameters (e.g., pH, water temperature, and presence of organic compounds).

The metal analytes cadmium, copper, lead and zinc all exhibit increased toxicity with increasing water "softness". *IT's* creek water sampling was not aimed at water quality parameters, therefore it is not possible at this time to state conclusively that the cadmium, copper lead and zinc concentrations detected in the creek comply with the guidelines shown

Published on DES Disclosure Log
RTI Act 2009

Monitoring Well MW5

A groundwater sample was collected from monitoring well MW5, near the borax pits (see Figure 2). The sample was collect using standard protocols, i.e., all sampling equipment was decontaminated prior to use, the sampler wore disposal nitrile gloves while purging and sampling the well, and appropriate sample containers were supplied by the laboratory. Samples were collected after at least three well volumes had been purged, or after the well purged dry, whichever occurred first. Results are summarised in Tables 3 and 4 and below

pH was slightly acidic (5.54); electrical conductivity was 0.04 S/m; turbidity was off the scale of the instrument (>999 mg/L); dissolved oxygen was 3.8 mg/L).

Concentrations of copper and zinc in groundwater from MW5 exceeded ANZECC Guidelines for the Protection of Aquatic Ecosystems.

Identified "Hot Spots" F2, F3, F6 and H3

"Hot Spots" identified in previous investigations (Fluor Daniel GTI, October 1998) were sampled to further define these previously identified areas of impact. Test pits F2, F3 (old sawdust hopper area)

and F6 (old mill area) were sampled as close as possible to the locations sampled previously (see Figure 5 and Fluor Daniel GTI, October 1998 Figure

Sampling around test pit H3 (see Figure 6 and Fluor Daniel GTI, October 1998 Figure 4H) was more intense, with three extra samples taken within a 4m radius of the original location and a sample taken from as close as possible to the original location of H3.

Samples taken from F2, F3 and H3 were analysed for metals and boron and samples taken from F6 were analysed for TPH and BTEX. This is in line with analytes identified in the October 1998 investigation as having elevated concentrations.

Results of the "Hot Spot" sampling are shown in Figures 5 and 6, and are summarised in Tables 1 and 6 and below

No TPH or BTEX compounds were detected at location F6.

No metal or boron concentrations exceeded *EPA Exposure Setting F*.

Arsenic and chromium concentrations at H3/TP2 (0-200mm) exceeded *EPA EILs*.

Arsenic concentrations at H3/TP4 (0-200mm) meet *EPA EILs*.

Arsenic concentrations at F2 (0-200mm) exceeded *EPA EILs*.

Arsenic concentrations at F3 (0-200mm) exceeded *EPA EILs*.

Elevated metal concentrations at the identified "Hot Spots" appear to be surficial phenomena (i.e confined to the upper 500 mm of soil profile), and generally attenuate rapidly with

Published on DES Disclosure Log
RTI Act 2009

R

CONCLUSIONS AND RECOMMENDATIONS

Based on the results of previous (i.e., October 1998) and the current investigation, and in respect to the present and latent environmental impact associated with the Boral Cooroy Mill, the reported concentrations for target analytes in soil indicate the site meets the *EPA Exposure Setting F* requirements in all sample areas. This is appropriate for an ongoing commercial/industrial

However, analysis of evaporation pond water indicates contaminants associated with this water are in concentrations in excess of ANZECC Guidelines for aquatic ecosystems. Furthermore, sediment samples taken from the evaporation pond contain levels of arsenic and copper in excess of *EPA Environmental Investigation Levels*. In comparison with the remainder of the site the evaporation pond area poses the greatest potential risk to the surrounding environment in particular the water quality of Cooroy Creek. It is our understanding that the water quality of Cooroy Creek is to be used as an indicator of environmental quality for the

In order to mitigate the future potential deleterious impacts to the receiving environment (notably, Cooroy Creek) from the evaporation pond area *IT* recommends

following offsite disposal of contaminated pond waters, further sediment samples be collected and analysed for selected total and TCLP metals

appropriate remedial measures (which may include offsite disposal or capping) be developed, depending on the results of the sediment TCLP

groundwater samples be collected from existing monitoring wells MW2 and MW3 in the pond area for analyses of target metal concentrations; and

surface runoff be directed away and off the area.

These actions should be incorporated into an overall stormwater management plan with the objective of limiting mobilisation of identified contaminants to the surrounding environment. Achieving and maintaining effective stormwater quality management has been identified as a priority by Boral. *IT* provides the following preliminary recommendations regarding stormwater management at the Cooroy

Published on DES Disclosure Log
RTI Act 2009

The objective of stormwater management should be to minimise sediment discharge from the site into Cooroy Creek. It is anticipated that the stormwater management plan will be implemented over two stages and include the following

Interim Stage 1 stormwater controls such as sediment fences and/or hay bales to capture sediment in surface runoff until permanent structures/vegetation are established.

Stage 2 measures to stop erosion e.g. reduce site gradient in selected areas by redistributing soil on-site and/or importing clean fill. This approach will also remove areas of ponding, ensuring surface runoff is directed away from and off the proposed evaporation pond cap. Vegetated swale drains may possibly be

Maximising sheet flow of surface runoff thereby avoiding the concentration of runoff to any one area of the

Barriers, with the aim of reducing energy levels of water and allowing water to discharge while "trapping sediments and resisting flooding appropriately designed gravel/sand/silt bunds with vegetative cover.

Maintenance of permanent stormwater management control devices.

With respect to the metal contamination identified at the "Hot Spots" in Areas F and H, these surficial issues will be addressed when developing appropriate remedial measures for the evaporation pond area.

Published on DES Disclosure Log
RTI Act 2009

R

REFERENCES

Fluor Daniel GTI (Australia) Pty Ltd *Stage II Investigation Report, Boral Timber Yards, 1 Maple Street, Cooroy, Queensland*, 9 October 1998 ref: B7570BR01.

ANZECC (1992) *Australian Water Quality Guidelines for Fresh and Marine Waters. Australian and New Zealand Environment & Conservation Council*. ISBN 0-642-18297-3.

Brisbane City Council (BCC) *Liquid Industrial Waste Policy and Management Plans* 1994 – Allowable Leaching Contaminant Levels for Lined and Unlined Landfills.

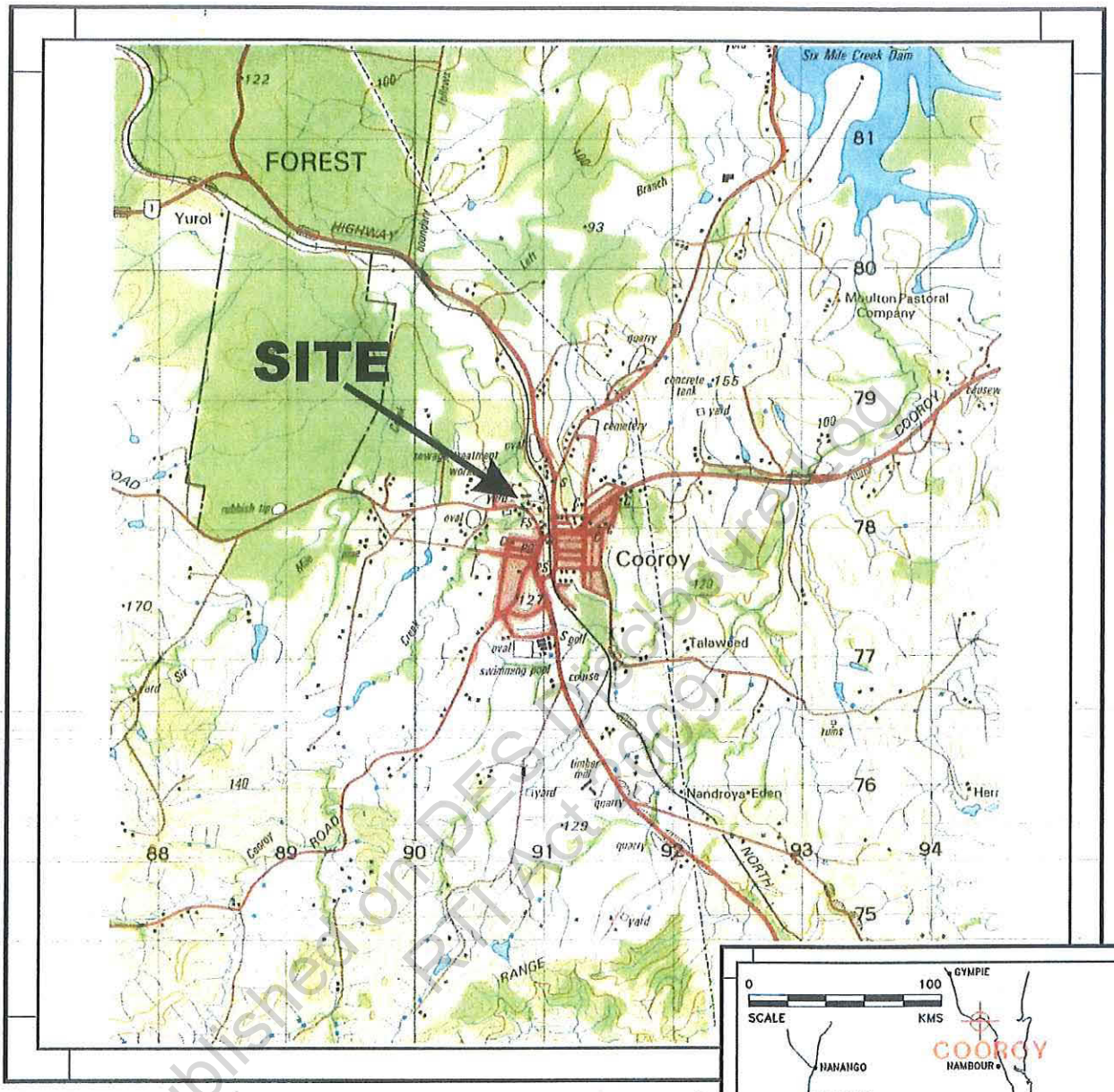
Department of Environment (DoE) Waste Management Branch, *Draft Guideline* (hydrocarbons in soil), 11 August

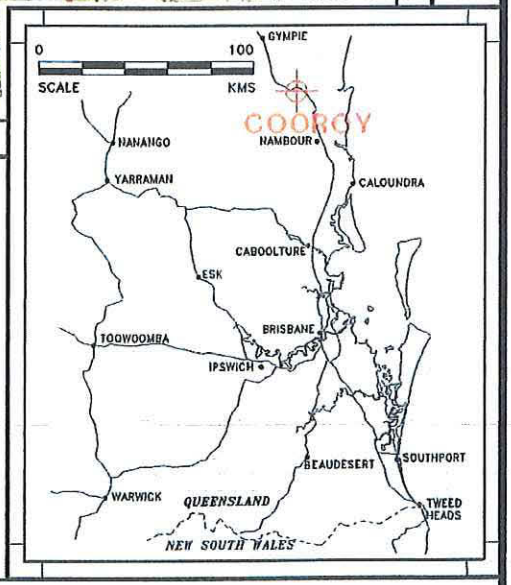
Queensland Environmental Protection Agency (EPA) *Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland*,

National Environment Protection Council, *National Environment Protection (Assessment of Site Contamination) Measure*

Published on DES Disclosure Log
RTI Act 2009

R





N

SOURCE: QUEENSLAND TOPOGRAPHIC IMAGE MAP
COOROY, QUEENSLAND
SHEET: 9445-11
EDITION 1 1980

THIS MAP IS CROWN COPYRIGHT AND HAS BEEN REPRODUCED WITH THE PERMISSION OF THE GENERAL MANAGER, AUSTRALIAN LAND INFORMATION GROUP, DEPARTMENT OF ADMINISTRATIVE SERVICES, CANBERRA, A.C.T.

SCALE: 1:50 000

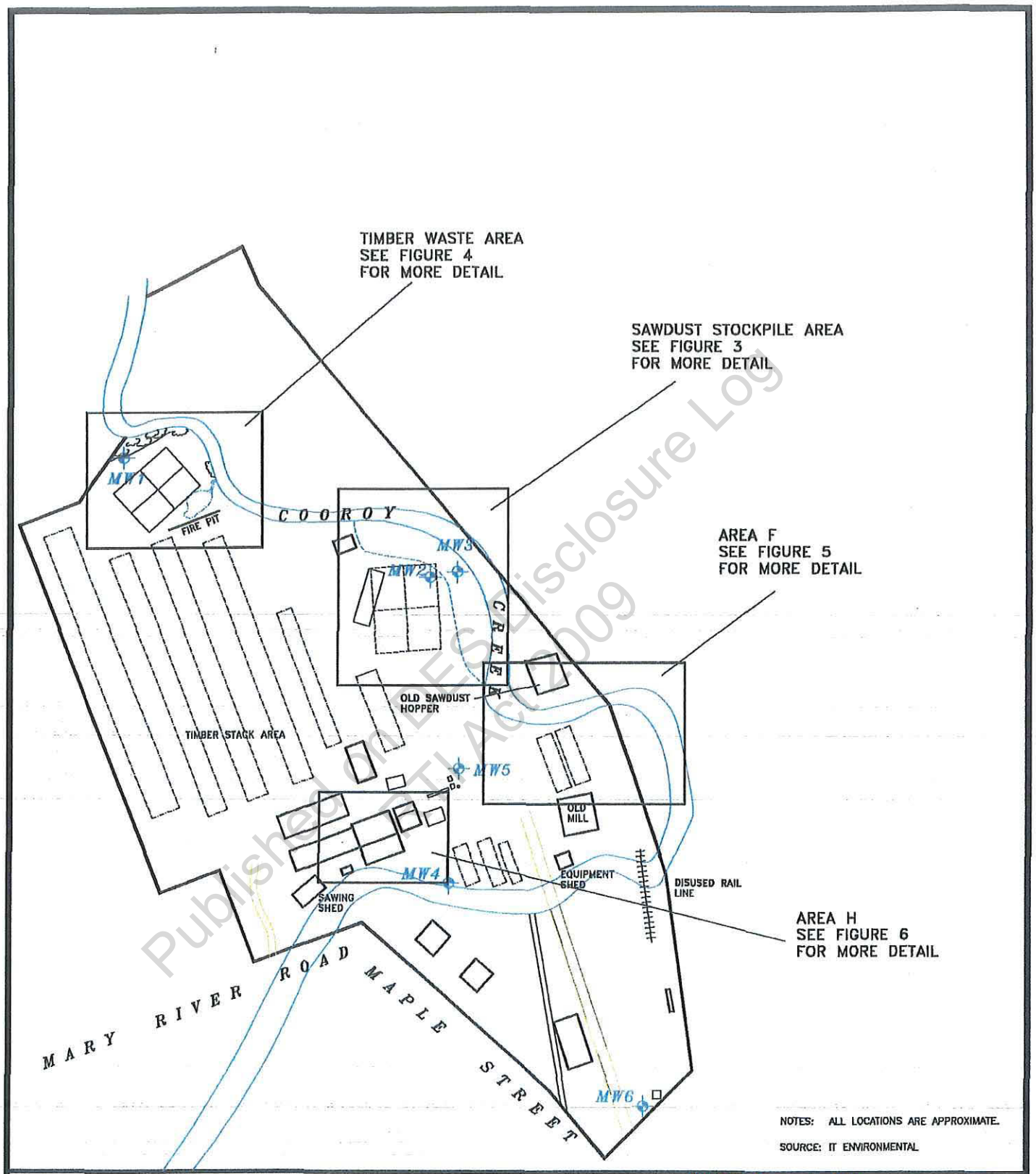
0 5000

SCALE METRES

Published on DES Disclosure Log
Refer to disclosure log

FT Environmental
A Member of the group
Level 2, 33 Longland Street
Newstead QLD 4006
Ph: (07) 3252 5711
Fax: (07) 3252 5712

DESIGNED: CTPI 49-S	SITE LOCATION MAP	
COMPILED: CTPI 49-S	CLIENT: BORAL TIMBERS – COOROY	DRAWING DATE: 01/07/98
PROJ. NO. J207570E	LOCATION: CNR MARY RIVER RD & MAPLE ST COOROY, QUEENSLAND	FIGURE: 1



Published on DES Disclosure Log
RTI Act 2009

LEGEND

STRIPPED TIMBER

MW6 MONITORING WELL LOCATIONS

N

25 0 20 40 60 80 100
SCALE 1:2500 (A4) METRES

IT Environmental
A Member of the Igroup
Level 2, 33 Longland Street
Newstead QLD 4006
Ph: (07) 3252 5711
Fax: (07) 3252 5712

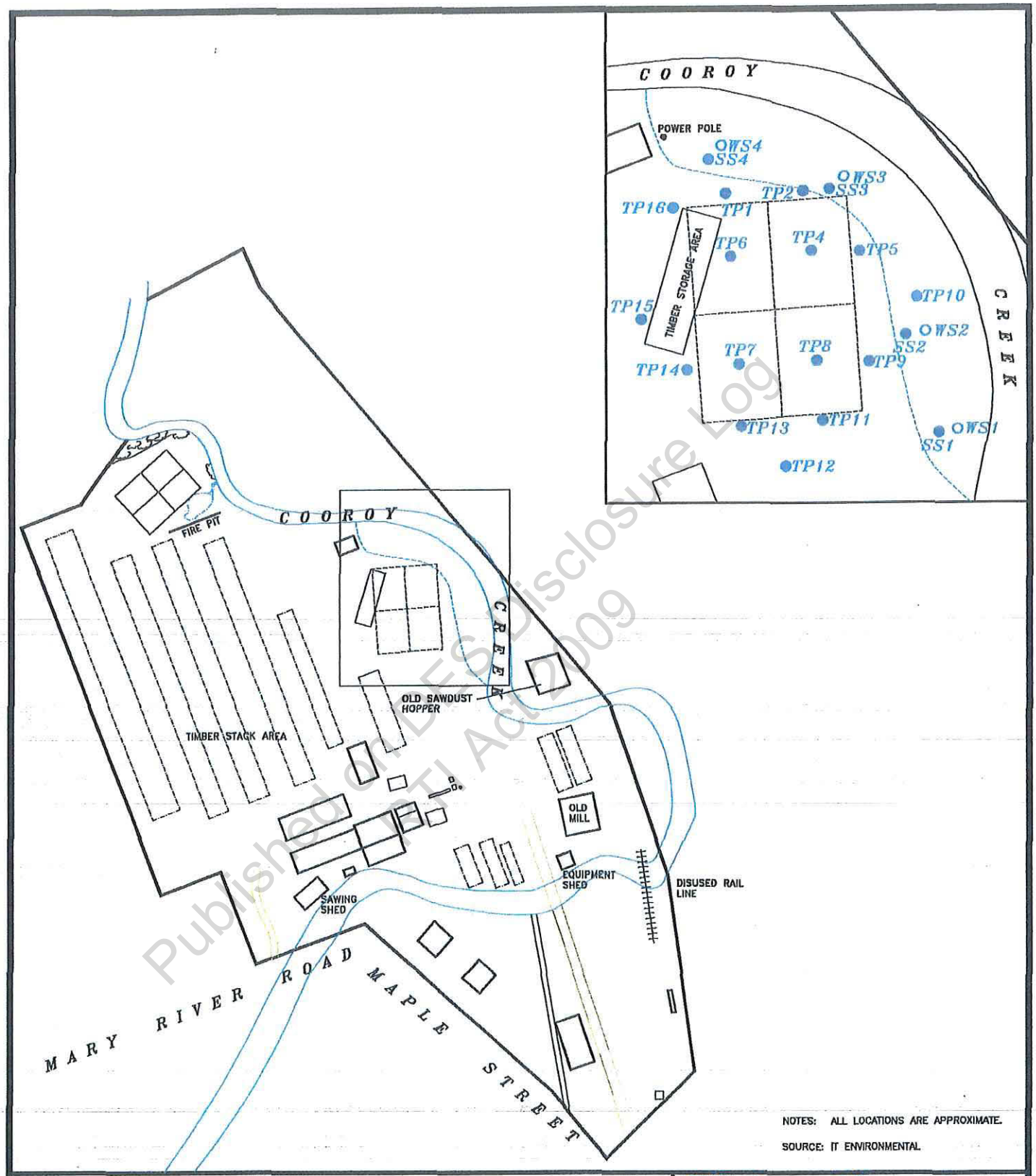
REV. NO.:	DRAWING DATE:	ACAD FILE:
B	28/09/00	J207570E

BORAL COOROY

SITE MAP

CLIENT:	PM:
BORAL TIMBERS – COOROY	
LOCATION: CNR MARY RIVER RD & MAPLE ST COOROY, QUEENSLAND	PS:
DESIGNED: CTPI 4 / DETAILED: CTPI 49- / PROJECT NO.: J207570E	FIGURE: 2

IT Environmental (Australia) Pty Ltd ©



Published on DES Disclosure Log
RTI Act 2009

LEGEND

- STRIPPED TIMBER
- TP8 TEST PIT LOCATION (AUG. 2000)
- OWS SURFACE WATER SAMPLE LOCATION (AUG. 2000)
- SS1 SEDIMENT SAMPLE LOCATION (AUG. 2000)

N

25 0 20 40 60 80 100
SCALE 1:2500 (A4) METRES

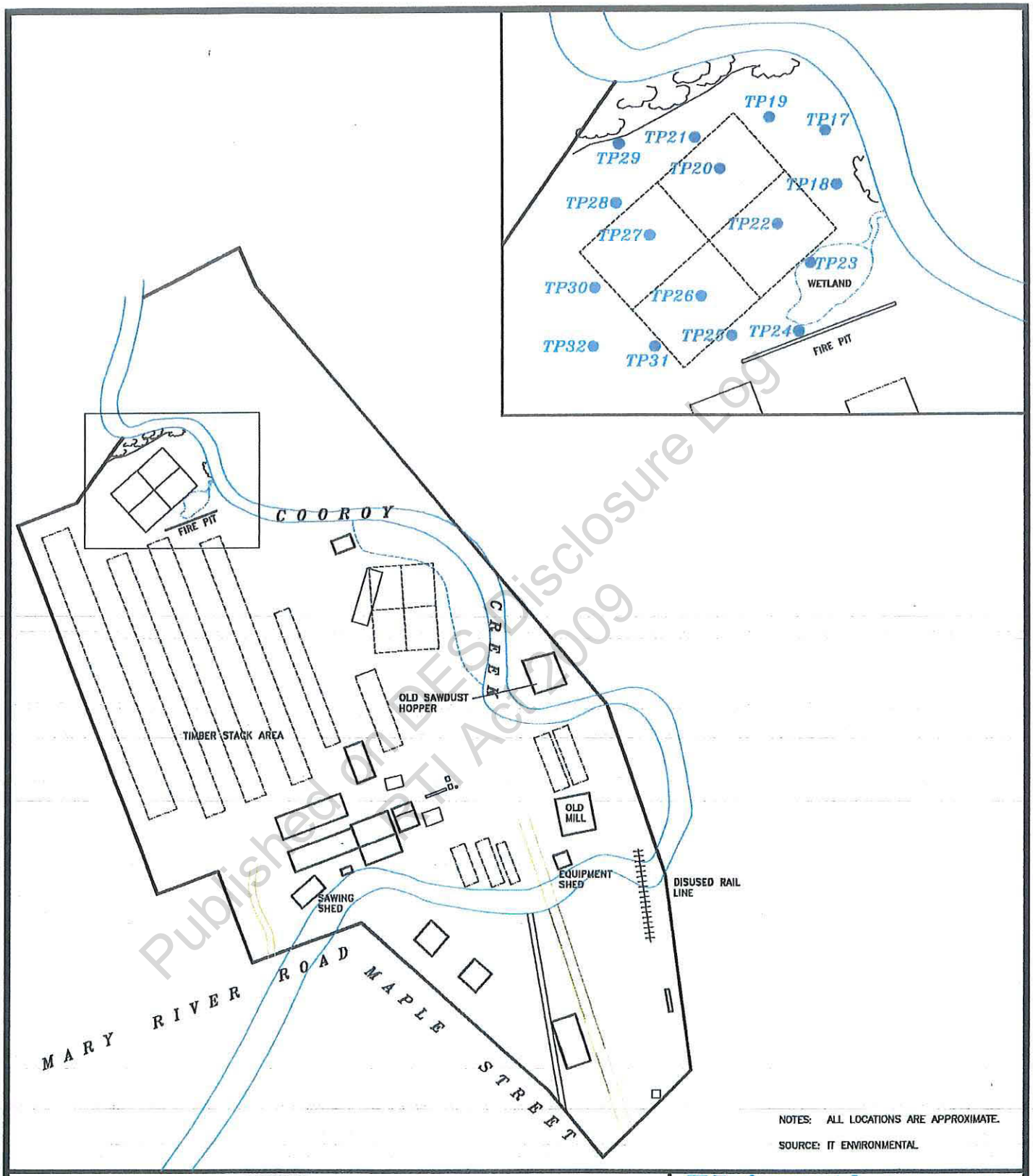
IT Environmental
A Member of the group
Level 2, 33 Longland Street
Newstead QLD 4006
Ph: (07) 3252 5711
Fax: (07) 3252 5712

REV. NO.:	DRAWING DATE:	ACAD FILE:
B	28/09/00	BZ07570E

BORAL COOROY
SAMPLE LOCATIONS - SAWDUST STOCKPILE AREA

CLIENT:	PM:
BORAL TIMBERS – COOROY	
LOCATION: CNR MARY RIVER RD & MAPLE ST COOROY, QUEENSLAND	PS:
DESIGNED: CTPI 4 / DETAILED: CTPI 49 / PROJECT NO.: J207570E	FIGURE: 3

IT Environmental (Australia) Pty Ltd ©



Published on DES Disclosure Log
CTI Act 2009

LEGEND

STRIPPED TIMBER

TP8 TEST PIT LOCATION (AUG. 2000)

N

25 0 20 40 60 80 100'

SCALE 1:2500 (A4) METRES

IT Environmental (Australia) Pty Ltd©

IT Environmental
A Member of the group
Level 2, 33 Longland Street
Newstead QLD 4006
Ph: (07) 3252 5711
Fax: (07) 3252 5712

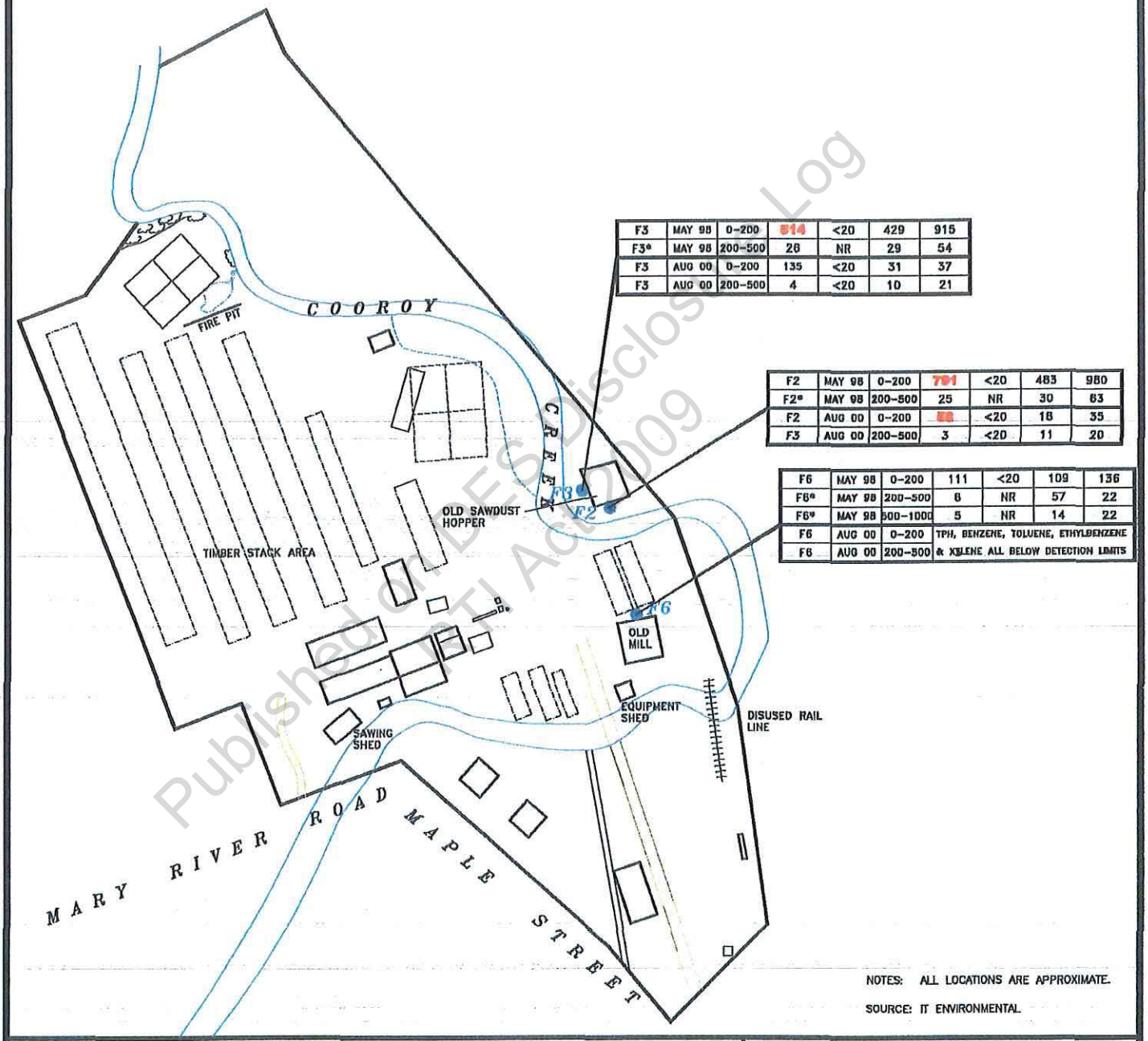
REV. NO.:	DRAWING DATE:	ACAD FILE:
B	28/09/00	J207570E

BORAL COOROY

SAMPLE LOCATIONS - TIMBER WASTE AREA

CLIENT:	PM:
BORAL TIMBERS – COOROY	
LOCATION: CNR MARY RIVER RD & MAPLE ST COOROY, QUEENSLAND	PS:

DESIGNED:	DETAILED:	PROJECT NO.:	FIGURE:
CTPI 49-	CTPI 49-	J207570E	4



F3	MAY 98	0–200	814	<20	429	915
F3*	MAY 98	200–500	28	NR	29	54
F3	AUG 00	0–200	135	<20	31	37
F3	AUG 00	200–500	4	<20	10	21

F2	MAY 98	0–200	791	<20	483	980
F2*	MAY 98	200–500	25	NR	30	83
F2	AUG 00	0–200	88	<20	18	35
F3	AUG 00	200–500	3	<20	11	20

F6	MAY 98	0–200	111	<20	109	136
F6*	MAY 98	200–500	6	NR	57	22
F6*	MAY 98	500–1000	5	NR	14	22
F6	AUG 00	0–200	TPH, BENZENE, TOLUENE, ETHYLBENZENE			
F6	AUG 00	200–500	& XYLENE ALL BELOW DETECTION LIMITS			

NOTES: ALL LOCATIONS ARE APPROXIMATE.

SOURCE: IT ENVIRONMENTAL

Published under DES Disclosure Log
CTI Act 2009

LEGEND

STRIPPED TIMBER

H2 SOIL SAMPLE LOCATIONS (MAY 1998)

SAMPLE ID	DEPTH mm	ARSENIC ppm	BORON ppm	COPPER ppm	CHROMIUM 3+ ppm

VALUES IN RED AND **BOLD** INDICATE CONCENTRATIONS ABOVE DEH HEALTH BASED "F" THRESHOLDS (MAY 1998) AND BORON BACKGROUND LEVELS

H3* SEQUENTIAL ANALYSES COMPLETED ON STORED SAMPLES

NR NOT REQUESTED

N

25 0 20 40 60 80 100

SCALE 1:2500 (A4) METRES

IT Environmental
A Member of the Igroup
Level 2, 33 Longland Street
Newstead QLD 4006
Ph: (07) 3253 5711
Fax: (07) 3252 5712

REV. NO.:	DRAWING DATE:	ACAD FILE:
B	28/09/00	J207570E

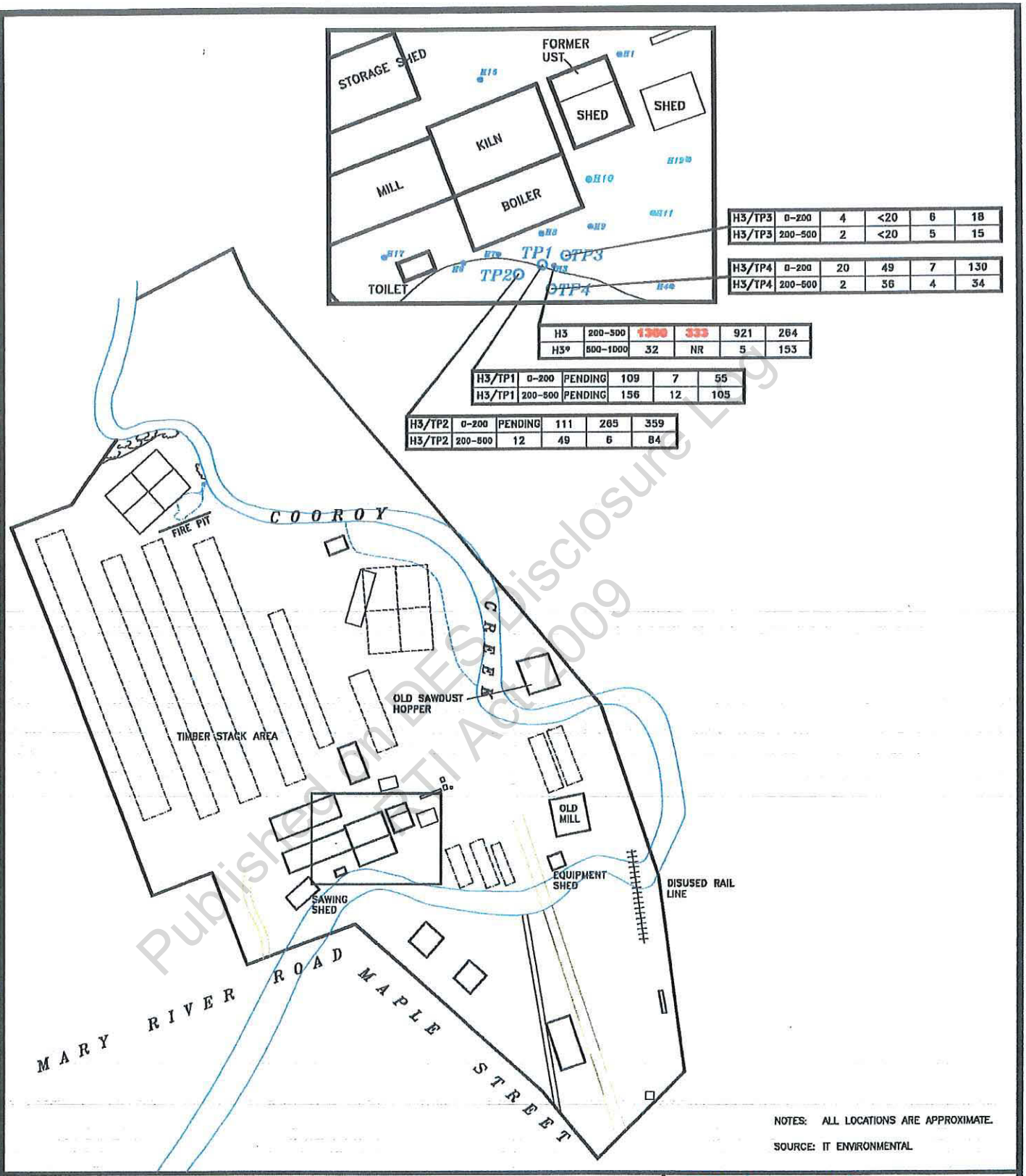
BORAL COOROY

ADDITIONAL SAMPLING - AREA F

CLIENT: BORAL TIMBERS – COOROY		PM:
LOCATION: CNR MARY RIVER RD & MAPLE ST COOROY, QUEENSLAND		PS:
DESIGNED: CTPI 4	DETAILED: CTPI 49	PROJECT NO.: J207570E

FIGURE: 5

IT Environmental (Australia) Pty Ltd ©



H3/TP3	0–200	4	<20	6	18
H3/TP3	200–500	2	<20	5	15

H3/TP4	0–200	20	49	7	130
H3/TP4	200–500	2	36	4	34

H3	200–500	1300	333	921	264
H3*	500–1000	32	NR	5	153

H3/TP1	0–200	PENDING	109	7	55
H3/TP1	200–500	PENDING	156	12	105

H3/TP2	0–200	PENDING	111	265	359
H3/TP2	200–500	12	49	6	84

Published on DES Disclosure Log
RTI Act 2009

LEGEND

- STRIPPED TIMBER
- H2 — SOIL SAMPLE LOCATIONS (MAY 1998)

SAMPLE ID	DEPTH mm	ARSENIC ppm	BORON ppm	COPPER ppm	CHROMIUM 3+ ppm

VALUES IN RED AND **BOLD** INDICATE CONCENTRATIONS ABOVE DEH HEALTH BASED "F" THRESHOLDS (MAY 1998) AND BORON BACKGROUND LEVELS

- H3* — SEQUENTIAL ANALYSES COMPLETED ON STORED SAMPLES
- NR — NOT REQUESTED
- OTP3 — SOIL SAMPLE LOCATIONS (AUG. 2000)

N

25 0 20 40 60 80 100

SCALE 1:2500 (A4) METRES

IT Environmental
A Member of the group
Level 2, 33 Longland Street
Newstead QLD 4006
Ph: (07) 3252 5711
Fax: (07) 3252 5712

REV. NO.:	DRAWING DATE:	ACAD FILE:
B	28/09/00	J207570E

BORAL COOROY

ADDITIONAL SAMPLING - H3

CLIENT: BORAL TIMBERS – COOROY	PM:
LOCATION: CNR MARY RIVER RD & MAPLE ST COOROY, QUEENSLAND	PS:
DESIGNED: CTPI 4	DETAILED: CTPI 49
PROJECT NO.: J207570E	FIGURE: 6

Table 1
Soil Analytical Results - Metals
Booral Cooroy Mill
(all results in mg/kg unless stated otherwise)

PA Environmental Investigation Levels									
PA Exposure Setting E (Parkland/open space)				*6000**		*24%***			*14000*
PA Exposure Setting F (Commercial/Industrial)				*15000**		*60%***			*35000*
Sample ID	**Area**	**Location**	**Arsenic**	**Boron**	**Cadmium**	**Chromium**	**Copper**	**Lead**	
TP1(0-200)	**SAWDUST**	Perimeter							
TP2(0-200)	**STORAGE**	Perimeter							
TP4(0-200)		Interior							
TP4(200-500)		Interior							
TP5(0-200)		Perimeter							
TP5(200-500)		Perimeter							
TP6(0-200)		Interior							
TP6(200-500)		Interior							
TP6(1m)		Interior							
TP7(0-200)		Interior							
TP7(200-500)		Interior							
TP8(0-200)		Interior							
TP8(200-500)		Interior							
TP9(0-200)		Perimeter							
TP10(0-200)		Step-out							
TP11(0-200)		Perimeter							
TP13(0-200)		Perimeter							
TP14(0-200)		Perimeter							
TP16(0-200)		Perimeter							

Published on DES Disclosure Log
RTI Act 2009

Table 1
Soil Analytical Results - Metals
Booral Cooroy Mill
(all results in mg/kg unless stated otherwise)

'PA Environmental Investigation Levels								
'PA Exposure Setting E (Parkland/open space)				*6000**		*24%***		*14000*
EPA Exposure Setting F (Commercial/Industrial)				*15000**		*60%***		*35000*
Sample ID		**Location**	**Arsenic**	**Boron**	**Cadmium**	**Chromium**	**Copper**	
TP18(0-200)	**TIMBER**	Perimeter						
TP19(0-200)	**WASTE**	Perimeter						
TP20(0-200)	**STORAGE**	Interior						
TP20(200-500)		Interior						
TP21(0-200)		Perimeter						
TP22(0-200)		Interior						
TP22(200-500)		Interior						
TP23(0-200)		Perimeter						
TP24(0-200)		Step-out						
TP25(0-200)		Perimeter						
TP25(200-500)		Perimeter						
TP26(0-200)		Interior						
TP26(200-500)		Interior						
TP27(0-200)		Interior						
TP27(200-500)		Interior						
TP28(0-200)		Perimeter						
TP30(0-200)		Perimeter						
TP31(0-200)		Perimeter						
	EVAP POND	Sediment						
		Sediment						
		Sediment						
		Sediment						

Published on DES Disclosure Log
RTI Act 2009

Table 1
Soil Analytical Results - Metals
Booral Cooroy Mill
(all results in mg/kg unless stated otherwise)

EPA Environmental Investigation Levels							
EPA Exposure Setting E (Parkland/open space)			*6000**		*24%***		*14000*
EPA Exposure Setting F (Commercial/Industrial)			*15000**		*60%***		*35000*
Sample ID	**Location**	**Arsenic**	**Boron**	**Cadmium**	**Chromium**	**Copper**	
H3/TP1 (0-200)	**HOT SPOTS**						
H3/TP1(200-500)							
H3/TP2 (0-200)							
H3/TP2 (200-500)							
H3/TP3(0-200)							
H3/TP3 (200-500)							
H3/TP4 (0-200)							
H3/TP4 (200-500)							
F2 (0-200)							
F2 (200-500)							
F3 (0-200)							
F3 (200-500)							

Notes:

EPA = Queensland Environmental Protection Agency *Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland, 1998*

* = National Environment Protection Council, 1999 National Environment Protection Measure Health Investigation Levels for Soil

** = Assumes trivalent state

Bold concentrations indicate concentrations above Environmental Investigation Thresholds

Test Pit

Sediment Sample

Published on DES Disclosure Log
RTI Act 2009

R

Table 2
Soil Analytical Results - TCLP Metals
Boral Cooroy Mill
(all results in mg/L unless stated otherwise)

Sample ID	Sample Depth (m)		Arsenic	Chromium	Copper
	0-200mm	13/07/2000			
nvestigation Thresholds					
Allowable Contaminant Leaching Levels - Unlined Landfills[1]					
Allowable Contaminant Leachin Levels - Lined Landfills[1]					

Notes
(1) Brisbane City Council 1994

Published on DES Disclosure Log
RTI Act 2009

R

IT Environmental
A Member of The IT Group

Table 3
Water Analytical Results - Field Data
Boral Cooroy
(All results in mg/L, unless specified)

Sample ID		Temperature	Conductivity	Turbidity	Dissolved Oxygen
	01/08/2000				
	01/08/2000				
	01/08/2000				
MW5	03/08/2000				
UPSTREAM CREEK	03/08/2000				
MID-SITE CREEK	03/08/2000				
STORMWATER CULVERT	03/08/2000				
DOWNSTREAM CREEK	03/08/2000				

Notes: No field readings available for WS4, POND 1 - equipment malfunction.

Published on DES Disclosure Log
RTI Act 2009

R

Table 4
Water Analytical Results - Metals
Boral Cooroy Mill
(all results in mg/L unless specified otherwise)

Sample ID		Arsenic	Boron	Cadmium	Chromium	Copper	Lead	
	12/07/2000			<0.001	**0.043**	**0.033**	**0.017**	
	12/07/2000			<0.001	**0.044**	**0.016**		**0.081**
	12/07/2000			<0.001	**0.048**	**0.018**	0.004	**0.097**
	12/07/2000			<0.001		**0.019**	0.003	0.004
POND 1	01/08/2000			<0.001	**0.053**			
MW5	03/08/2000	<0.001		0.0002	<0.001	**0.008**	0.001	**0.156**
UPSTREAM CREEK	03/08/2000	<0.001		<0.002	<0.001	0.002	<0.001	0.029
MID-SITE CREEK	03/08/2000	<0.001		<0.002	<0.001	0.001	<0.001	0.027
STORMWATER CULVERT	03/08/2000			<0.002	<0.001			0.034
DOWNSTREAM CREEK	03/08/2000	<0.001		<0.002	<0.001		<0.001	0.034
			Investigation Thresholds					
				0.0002-0.002		0.002-0.005	0.001-0.005	0.005-0.05

Notes:

Australian and New Zealand Environment and Conservation (1992) National Water Quality Management Strategy - Australian Water Quality Guidelines for Fresh and Marine Waters (Protection of Aquatic Ecosystems).

Bold concentrations indicate concentrations above ANZECC Guidelines

The toxicity of metals Cd, Cu, Pb, and Zn is dependant on water hardness and other parameters, so compliance with the guidelines cannot be determined at this time.

Published on DES Disclosure Log
RTI Act 2009

R

Table 5
Water Analytical Results - Physical Properties
Boral Cooroy
(All results in mg/L, unless specified in Notes)

Sample ID	**POND 1**	
	1/08/00	**Aquatic Ecosystems**
Analyte		
Bicarbonate Alkanlinity		
Carbonate Alkanlinity		
Chloride		
Sulphate		
Biochemical Oxygen Demand		
Chemical Oxygen Demand		
Potassium		
Hardness		
Total Kjeldahl Nitrogen		
Sodium Adsorption Ratio		
Total Dissolved Solids		
Total Suspended Solids		<10% seasonal change

Notes:

Australian and New Zealand Environment and Conservation Council (1992) - Australian Water Quality Guidelines for Fresh and Marine Waters (Protection of Aquatic Ecosystems).

Published on DES Disclosure Log
RTI Act 2009

R

Published on DES Disclosure Log
RTI Act 2009

APPENDIX A

TEST PIT LOGS

R

TEST PIT LOGS: BORAL TIMBER COOROY MILL JULY/AUGUST 2000

LOCATION	TEST PIT IDENTITY	DEPTH INTERVAL	LITHOLOGY DESCRIPTION	COMMENTS
SAWDUST STOCKPILE AREA	TP-1 (Perimeter)	0 - 200mm	• Description – Gravelly, clayey, SILT (Fill) • Colour – orange to yellow • Plasticity - non plastic • Gradation/Angularity – med-course, sub-angular gravel • Moisture – dry	• road base fill
		200mm - 1.1m	• Description – Silty, sandy CLAY (Fill) • Colour – grey • Plasticity – non plastic • Moisture – moist to dry	• fill – note cinders and ash throughout • sand is medium to very course with little gravel
		1.1m - 2m	• Description – Clayey SILT • Colour – yellow • Plasticity - low • Moisture – moist	
	TP-2 (Perimeter)	0-200mm	• Description – Gravelly, clayey, SILT (Fill) • Colour – orange to yellow • Plasticity - non plastic • Gradation/Angularity – med-course, sub-angular • Moisture – dry	• road base fill • little cobbles and some wood fragments
		200mm- 750mm	• Description – Silty, sandy CLAY • Colour – grey • Plasticity – non plastic • Moisture – moist to dry	
		750mm - 2m	• Description – Clayey, SILT • Colour – yellow • Plasticity - low • Moisture – moist	

Published on DES Disclosure Log
EI Act 2009

R

TEST PIT LOGS: BORAL TIMBER COOROY MILL JULY/AUGUST 2000

LOCATION	TEST PIT IDENTITY	DEPTH INTERVAL	LITHOLOGY DESCRIPTION	COMMENTS
Sawdust Stockpile Area	TP-3 (Step-out sediment sample from evaporation pond - no pit)	0 – 200mm	• Description – Gravelly, clayey, SILT • Colour – black • Plasticity - non plastic • Gradation/Angularity – med-course, sub-angular • Moisture – wet	
	TP-4 (Interior)	0 - 400mm	• Description – Sandy, clayey SILT (fill) • Colour – grey • Plasticity - non plastic • Gradation/Angularity – med-course, sub-angular • Moisture – dry	• road base fill • little cobbles and some wood fragments
		400mm – 2m	• Description – Silty CLAY • Colour – yellow • Plasticity – low • Moisture – moist	
	TP-5 (Perimeter)	0 – 300mm	• Description –Sandy, clayey SILT (fill) • Colour – grey • Plasticity - non plastic • Gradation/Angularity – med-course, sub-angular • Moisture – dry	• Adjacent to pond • Wet at the surface but dry at 1m
		300mm – 2m	• Description – Silty CLAY • Colour – yellow • Plasticity – non • Moisture – dry	• hard and crumby

Published on DES Disclosure Log
RTI Act 2009

R

the igroup
IT Environmental
A Member of The IT Group

TEST PIT LOGS: BORAL TIMBER COOROY MILL JULY/AUGUST 2000

LOCATION	TEST PIT IDENTITY	DEPTH INTERVAL	LITHOLOGY DESCRIPTION	COMMENTS
Sawdust Stockpile Area	TP-6 (Interior)	0 – 200mm	• Description –Gravelly CLAY (fill) • Colour – black • Plasticity – low • Gradation/Angularity – course, V. angular • Moisture – dry	• Adjacent to pond • Wet at the surface but dry at 1m
		200mm – 2m	• Description – Silty CLAY • Colour – yellow • Plasticity – low • Moisture – moist	• hard and crumby
	TP-7 (Interior)	0-200mm	• Description –Gravelly, clayey SILT (fill) • Colour – brown • Plasticity - low • Gradation/Angularity – course, angular • Moisture – dry	• gravel size 50-75mm road base
		200mm – 2m	• Description –Silty CLAY • Colour – yellow • Plasticity – low • Moisture – dry	
	TP-8 (Interior)	0-200mm	• Description –Gravelly CLAY (Fill) • Colour – brown to black • Plasticity - low • Gradation/Angularity – course, angular • Moisture – dry	• gravel size 50-75mm road base
		200mm– 500mm	• Description – CLAY • Colour –brown to grey • Plasticity – low • Moisture – moist	
		500mm – 2m	• Description – Silty CLAY • Colour – yellow to brown • Plasticity – low to medium • Moisture – moist	

Published by DES Disclosure Log RTI Act 2009

TEST PIT LOGS: BORAL TIMBER COOROY MILL JULY/AUGUST 2000

LOCATION	TEST PIT IDENTITY	DEPTH INTERVAL	LITHOLOGY DESCRIPTION	COMMENTS
Sawdust Stockpile Area	TP-9 (Perimeter)	0-200mm	• Description – Gravelly CLAY (fill) • Colour – brown to black • Plasticity - low • Gradation/Angularity – course, angular • Moisture – dry	• gravel size 50-75mm road base • little gravel content
		200mm – 2m	• Description – Silty CLAY • Colour – yellow to brown • Plasticity – low to medium • Moisture – moist	
	TP-10 (Step-out sediment sample from evaporation pond - no pit)	0 – 200mm	• Description – Clayey, gravelly ,SILT • Colour – black to yellow • Plasticity – low • Moisture – saturated	
	TP-11 (Perimeter)	0-200mm	• Description – Gravelly CLAY • Colour –black • Plasticity - low • Gradation/Angularity – med.course, angular • Moisture – dry	
		200mm– 500mm	• Description – Gravelly CLAY • Colour – yellow • Plasticity – low • Gradation/Angularity – med. rounded • Moisture – dry	• Trace gravel content
		500mm – 1m	• Description – Gravelly CLAY • Colour – orange to yellow • Plasticity – low • Gradation/Angularity – med. rounded • Moisture – dry	• Little gravel
		1m – 2m	• Description – Clayey SILT • Colour – red, orange to yellow • Plasticity – low • Moisture – moist	

Published on DES Disclosure Log
RTI Act 2009

TEST PIT LOGS: BORAL TIMBER COOROY MILL JULY/AUGUST 2000

LOCATION	TEST PIT IDENTITY	DEPTH INTERVAL	LITHOLOGY DESCRIPTION	COMMENTS
Sawdust Stockpile Area	TP 12 (Step-Out)	0- 200mm	• Description – Gravelly CLAY • Colour – orange, yellow • Plasticity - low • Gradation/Angularity – med. angular • Moisture – dry	• Little gravel 25mm
		200mm – 2m	• Description – Silty CLAY • Colour – orange, yellow • Plasticity – low • Moisture – dry to moist	
	TP 13 (Perimeter)	0- 200mm	• Description – Silty CLAY • Colour – black to brown • Plasticity - low • Moisture – dry	• Little road base gravel 25mm
		200mm – 2m	• Description – Silty CLAY • Colour – orange to yellow • Plasticity - low • Moisture – moist	
	TP 14 (Perimeter)	0- 200mm	• Description – Gravelly CLAY • Colour – black to brown • Plasticity - low • Gradation/Angularity – med. angular • Moisture – dry	• Little road base gravel 25mm
		200mm – 500mm	• Description –Clayey SILT • Colour – black to brown • Plasticity - low • Moisture – dry to moist	
		500mm – 2m	• Description – Clayey SILT • Colour – orange to yellow • Plasticity - low • Moisture – dry to moist	

Published by DES Disclosure Log RTI Act 2009

TEST PIT LOGS: BORAL TIMBER COOROY MILL JULY/AUGUST 2000

LOCATION	TEST PIT IDENTITY	DEPTH INTERVAL	LITHOLOGY DESCRIPTION	COMMENTS
Sawdust Stockpile Area	TP 15 (Step-out)	0- 200mm	• Description – Gravelly CLAY (Fill) • Colour – black to brown • Plasticity - low • Gradation/Angularity – med. to course, angular • Moisture – dry	• Some road base gravel 25mm
		200mm-500mm	• Description – Clayey SILT • Colour – Black to Brown • Plasticity – low • Moisture – moist	• Little organic matter present
		500mm – 2m	• Description – Silty CLAY • Colour – Orange to yellow • Plasticity – low • Moisture – moist	
	TP 16 (Perimeter)	0- 200mm	• Description – Gravelly CLAY • Colour – red to orange • Plasticity - low • Gradation/Angularity – med. to course, very angular to angular • Moisture – dry	• 35 –50 % quartz based gravels
		200mm - 2m	• Description – Clayey SILT • Colour – orange to red • Plasticity - low • Moisture – moist	

Published by DES Disclosure Log RTI Act 2009

TEST PIT LOGS: BORAL TIMBER COOROY MILL JULY/AUGUST 2000

LOCATION	TEST PIT IDENTITY	DEPTH INTERVAL	LITHOLOGY DESCRIPTION	COMMENTS
TIMBER WASTE AREA	TP 17 (Step-Out)	0- 1m	• Description – Clayey SILT (Fill) • Colour – yellow • Plasticity - medium • Moisture – moist to wet	• 35-50% Timber Off-cuts • Ground water at 1m
	TP 18 (Perimeter)	0- 200mm	• Description – CLAY • Colour – red to orange to yellow • Plasticity - medium • Moisture – moist to wet	
		200mm – 1.5m	• Description – CLAY • Colour – red to orange to yellow • Plasticity - medium • Moisture – moist to wet	
		1.5m –2m	• Description – Sandy/gravelly CLAY • Colour – red to orange to yellow • Plasticity – low • Gradation/Angularity – fine , angular • Moisture – moist to wet	

Published on DES Disclosure Log
RTI Act 2009

R

TEST PIT LOGS: BORAL TIMBER COOROY MILL JULY/AUGUST 2000

LOCATION	TEST PIT IDENTITY	DEPTH INTERVAL	LITHOLOGY DESCRIPTION	COMMENTS
TIMBER WASTE AREA	TP 19 (Perimeter)	0- 200mm	• Description – CLAY • Colour – black to brown • Plasticity - medium • Moisture – moist	
		200mm – 1.5m	• Description – Silty CLAY • Colour – orange to yellow • Plasticity - low • Moisture – moist	
		1.5m –2 m	• Description – CLAY • Colour – yellow to white • Plasticity – medium to high • Moisture – wet	
	TP 20 (Internal)	0- 500mm	• Description – Silty CLAY • Colour – orange to yellow • Plasticity - low • Moisture – moist	• 250mm of fill above natural ground level
		500mm – 2m	• Description – Silty CLAY • Colour – yellow to white • Plasticity - medium • Moisture – moist	
	TP 21 (Perimeter)	0- 200mm	• Description – Sandy SILT (Fill) • Colour – black to brown • Plasticity - low • Moisture – dry	• 300mm of fill above natural ground level
		200mm – 2m	• Description – Silty CLAY • Colour – orange to yellow to white • Plasticity – low to medium • Moisture – moist	

Published on DLS Disclosure Log
GIPA Act 2009

TEST PIT LOGS: BORAL TIMBER COOROY MILL JULY/AUGUST 2000

LOCATION	TEST PIT IDENTITY	DEPTH INTERVAL	LITHOLOGY DESCRIPTION	COMMENTS
TIMBER WASTE AREA	TP 22 (Internal)	0- 500mm	• Description – Silty, sandy CLAY (Fill) • Colour – orange to yellow • Plasticity - medium • Moisture – moist	• 1m of fill over natural ground level
		500mm - 2m	• Description – CLAY • Colour – orange to yellow • Plasticity – medium to high • Moisture – moist	
	TP 23 (Perimeter)	0- 200mm	• Description – Silty CLAY • Colour – brown • Plasticity - low • Moisture – moist	• 500mm of fill over natural ground level
		200mm – 1.8m	• Description – CLAY • Colour – orange to yellow • Plasticity - low • Moisture – moist	
		1.8m – 2m	• Description – Gravelly sandy CLAY • Colour – white • Plasticity – low • Gradation/ Angularity – fine , sub-rounded • Moisture – moist to wet	
	TP 24 (Step-Out)	0- 500mm	• Description – Silty CLAY • Colour – brown • Plasticity - low • Moisture – moist	
		500mm – 1.5m	• Description – Silty CLAY • Colour – orange to yellow • Plasticity - low • Moisture – dry to moist	
		1.5m – 2m	• Description – CLAY • Colour – orange to yellow • Plasticity – medium • Moisture – moist	

Published by DES Disclosure Log
GTI Act 2009

TEST PIT LOGS: BORAL TIMBER COOROY MILL JULY/AUGUST 2000

LOCATION	TEST PIT IDENTITY	DEPTH INTERVAL	LITHOLOGY DESCRIPTION	COMMENTS
TIMBER WASTE AREA	TP 25 (Perimeter)	0- 500mm	• Description –Silty, sandy CLAY • Colour – brown • Plasticity – low • Gradation/ Angularity – fine , sub-rounded • Moisture – dry	• Trace sands • 2m o/s from c/orb wall
		500mm – 1m	• Description – Silty CLAY • Colour – yellow • Plasticity - low • Moisture – dry to moist	
		1m – 2m	• Description – CLAY • Colour – orange to yellow to white • Plasticity – low to medium • Moisture –moist	
	TP 26 (Internal)	0- 200mm	• Description – Silty CLAY • Colour – black • Plasticity – low • Moisture – dry to moist	• 500 mm of fill over natural ground level
		200mm – 1.8m	• Description – CLAY • Colour – orange to yellow to white • Plasticity – low • Moisture – moist	•
		1.8m – 2m	• Description – Sandy silty CLAY • Colour –white • Plasticity – low • Gradation/ Angularity – fine to medium , angular to sub-rounded • Moisture – wet	• Some gravel • Very wet at 2m +

Published by DES Disclosure Log
GIPA Act 2009

TEST PIT LOGS: BORAL TIMBER COOROY MILL JULY/AUGUST 2000

LOCATION	TEST PIT IDENTITY	DEPTH INTERVAL	LITHOLOGY DESCRIPTION	COMMENTS
TIMBER WASTE AREA	TP 27 (Internal)	0 - 1.8m	• Description – CLAY • Colour – yellow • Plasticity – low • Moisture – dry to moist	• 500 mm of fill over natural ground level
		1.8m – 2m	• Description – Silty CLAY • Colour – red, orange, yellow • Plasticity – low • Moisture – moist	•
	TP 28 (Perimeter)	0 - 1.8m	• Description – Silty CLAY • Colour – brown • Plasticity – low • Moisture – moist	
		1.8m – 2m	• Description – CLAY • Colour – yellow to white • Plasticity – medium • Moisture – moist	
	TP 29 (Step-Out)	0 - 1.5m	• Description – Silty CLAY • Colour – brown to yellow • Plasticity – low • Moisture – moist	• Test pit in swale drain
		1.5m – 2m	• Description – CLAY • Colour – yellow to white • Plasticity – medium • Moisture – moist	

Published by DES Disclosure Log
PPIT Act 2009

TEST PIT LOGS: BORAL TIMBER COOROY MILL JULY/AUGUST 2000

LOCATION	TEST PIT IDENTITY	DEPTH INTERVAL	LITHOLOGY DESCRIPTION	COMMENTS
TIMBER WASTE AREA	TP 30 (Perimeter)	0 - 500 mm	• Description – Silty CLAY • Colour – brown • Plasticity – low • Moisture – moist	• 500 mm of fill over natural ground level
		500mm – 2m	• Description – CLAY • Colour – orange, yellow, white • Plasticity – medium • Moisture – moist	
	TP 31 (Perimeter)	0 - 1m	• Description – Silty CLAY • Colour – brown • Plasticity – low • Moisture – dry to moist	
		1m – 2m	• Description – Silty sandy CLAY • Colour – orange, yellow • Plasticity – medium • Moisture – moist	• Trace sands
	TP 32 (Step-Out)	0 - 1m	• Description – Silty CLAY • Colour – brown • Plasticity – low • Moisture – dry to moist	
		1m – 2m	• Description – CLAY • Colour – orange, yellow, white • Plasticity – medium • Moisture – moist	

Published on DES Disclosure Log
GIPA Act 2009

R

the igroup
IT Environmental
A Member of The IT Group

TEST PIT LOGS: BORAL TIMBER COOROY MILL JULY/AUGUST 2000

LOCATION	TEST PIT IDENTITY	DEPTH INTERVAL	LITHOLOGY DESCRIPTION	COMMENTS
Hot Spot Sampling	F2	0-200mm	• Description – Silty CLAY • Colour – brown • Plasticity – medium • Moisture – moist	• 35-50% organic matter
		200mm - 1.5m	• Description – Silty CLAY • Colour – brown • Plasticity – medium • Moisture – moist	
	F3	0-200mm	• Description – organic matter and CLAY • Colour – black to brown • Plasticity – low • Moisture – moist	• >50% organic matter
		200mm - 1m	• Description – Silty sandy CLAY • Colour – light brown • Plasticity – medium • Gradation/Angularity – fine, sub-angular to sub-rounded • Moisture – moist	
		1m – 2m	• Description – Sandy gravelly CLAY • Colour – light brown • Plasticity – low • Gradation/Angularity - medium , sub-angular to sub-rounded • Moisture – moist	
	F6	0-1m	• Description – Sandy CLAY • Colour – dark brown • Plasticity – medium • Gradation/Angularity - fine , sub-angular • Moisture – moist	
		1m – 1.5m	• Description – Silty sandy CLAY (loam) • Colour – yellow • Plasticity – low to medium • Gradation/Angularity - fine , sub-angular • Moisture – moist	

Published under the GIPA Act 2009 DPIE Disclosure Log

TEST PIT LOGS: BORAL TIMBER COOROY MILL JULY/AUGUST 2000

LOCATION	TEST PIT IDENTITY	DEPTH INTERVAL	LITHOLOGY DESCRIPTION	COMMENTS
Hot Spots	H3 TP1, TP2, TP3 & TP4	0-200	• Description – Silty CLAY • Colour – light brown • Plasticity – low to medium • Moisture – dry	
		500mm – 1m	• Description – Silty CLAY • Colour – yellow • Plasticity – medium • Moisture – moist	
		1m – 1.5m	• Description – CLAY • Colour – red • Plasticity – medium • Moisture – moist	

Published on DES Disclosure Log
RTI Act 2009

R

Published on DES Disclosure Log
RTI Act 2009

APPENDIX B

LABORATORY CERTIFICATES

R

UNIBOLES Analytical Laboratories
A.C.N. 006 823 089
585 Blackburn Road
Notting Hill, Victoria, Australia 3168
Telephone (03) 9562 5899
Fax (03) 9562 0336

Replacement Analytical Report

Replacement for Report no: 18619, issued on: 18 Jul 2000

IT ENVIRONMENTAL
LEVEL 2
33 LONGLAND ST
NEWSTEAD
QLD 4006

Contact : CTPI 49-Sch4
Batch Number : **0006659**
Job Ref : **J207570D/23055-58**
Sample(s) Received : **17/07/2000**
Replacement Report No : **19132**

Methods:

406-MS Elements by ICP-MS, Dry Weight
E100.01 Moisture Content

Published on DES Disclosure Log
RTI Act 2009

Attached Results Approved by:

CTPI 49-Sch4
B.App.Sci. (Environmental)
Senior Analyst

CTPI 49-Sch4
Dip.App.Sci (Chemistry)
Senior Analyst - Metals

This Laboratory is accredited by the National Association of Testing Authorities, Australia. The tests reported herin have been performed in accordance with its terms of accreditation.

NATA ENDORSED DOCUMENT

Document may not be reproduced except in full.

NATA Accreditation No. 1645

** This is the Final Report which supersedes any reports previously issued relating to the sample(s) included.*

All samples tested as submitted by client.

 # Denotes methods not covered by NATA terms of accreditation

Analytical Laboratories
A.C.N. 006 823 089
585 Blackburn Road
Notting Hill, Victoria, Australia 3168
Telephone (03) 9562 5899
Fax (03) 9562 0336

Results

Replacement Report No: 19132

	0006659/001 TP1(0-200)	0006659/005 TP2(0-200)	0006659/010 TP4(0-200)	0006659/011 TP4(200-500)	0006659/014 TP5(0-200)
	12/07/2000 17/07/2000	12/07/2000 17/07/2000	12/07/2000 17/07/2000	12/07/2000 17/07/2000	12/07/2000 17/07/2000
ELEMENTS by ICP-MS, DRY WEIGHT					
Method: 406-MS Units: mg/kg					
Arsenic	14	7.5	43	8.3	45
Boron	<2.0	<2.0	<2.0	3.3	<2.0
Cadmium	<1.0	<1.0	<1.0	<1.0	<1.0
Chromium	19	12	70	23	71
Copper	20	9.6	39	13	48
Lead	23	24	49	14	34
Zinc	70	32	51	27	72
OVEN MOISTURE CONTENT					
Method: E100.01 Units: % w/w					
Moisture	14.0	7.5	21.1	21.5	15.4

Published on DES Disclosure Log
RTI Act 2009

R

Analytical Laboratories
A.C.N. 006 823 089
585 Blackburn Road
Notting Hill, Victoria, Australia 3168
Telephone (03) 9562 5899
Fax (03) 9562 0336

Results

Replacement Report No: 19132

	0006659/015 TP5(200-500)	0006659/018 TP6(0-200)	0006659/019 TP6(200-500)	0006659/020 TP6(1M)	0006659/022 TP7(0-200)
	12/07/2000 17/07/2000	12/07/2000 17/07/2000	12/07/2000 17/07/2000	12/07/2000 17/07/2000	12/07/2000 17/07/2000
ELEMENTS by ICP-MS, DRY WEIGHT					
Method: 406-MS Units: mg/kg					
Arsenic	5.2	10	9.5	5.3	6.1
Boron	<2.0	<2.0	<2.0	<2.0	<2.0
Cadmium	<1.0	<1.0	<1.0	<1.0	<1.0
Chromium	23	48	53	31	26
Copper	14	12	10	13	10
Lead	13	64	10	15	21
Zinc	31	31	18	27	19
OVEN MOISTURE CONTENT					
Method: E100.01 Units: % w/w					
Moisture	18.5	19.0	14.5	20.1	15.3

Published on DES Disclosure Log
RTI Act 2009

R

GRIBBLES Analytical Laboratories
A.C.N. 006 823 089
585 Blackburn Road
Notting Hill, Victoria, Australia 3168
Telephone (03) 9562 5899
Fax (03) 9562 0336

Results

Replacement Report No: **19132**

	0006659/023 TP7(200-500)	0006659/026 TP8(0-200)	0006659/027 TP8(200-500)	0006659/030 TP9(0-200)	0006659/034 TP10(0-200)
	12/07/2000 17/07/2000	12/07/2000 17/07/2000	12/07/2000 17/07/2000	12/07/2000 17/07/2000	12/07/2000 17/07/2000
ELEMENTS by ICP-MS, DRY WEIGHT					
Method: 406-MS Units: mg/kg					
Arsenic	3.0	10	9.4	6.5	11
Boron	<2.0	<2.0	12	<2.0	<2.0
Cadmium	<1.0	<1.0	<1.0	<1.0	<1.0
Chromium	22	31	27	14	28
Copper	7.0	14	14	9.8	15
Lead	8.7	27	26	13	18
Zinc	12	27	52	18	40
OVEN MOISTURE CONTENT					
Method: E100.01 Units: % w/w					
Moisture	14.0	13.0	22.7	13.3	31.4

Published on DES Disclosure Log
RTI Act 2009

R

GRIBBLES Analytical Laboratories
A.C.N. 006 823 089
585 Blackburn Road
Notting Hill, Victoria, Australia 3168
Telephone (03) 9562 5899
Fax (03) 9562 0336

Results

Replacement Report No: 19132

	0006659/035 TP11(0-200)	0006659/043 TP13(0-200)	0006659/047 TP14(0-200)	0006659/055 TP16(0-200)
	12/07/2000 17/07/2000	12/07/2000 17/07/2000	12/07/2000 17/07/2000	12/07/2000 17/07/2000
ELEMENTS by ICP-MS, DRY WEIGHT				
Method: 406-MS Units: mg/kg				
Arsenic	19	3.5	6.5	3.3
Boron	16	<2.0	<2.0	<2.0
Cadmium	<1.0	<1.0	<1.0	<1.0
Chromium	34	18	29	32
Copper	28	7.7	9.9	3.0
Lead	100	18	17	6.5
Zinc	120	16	14	<2.0
OVEN MOISTURE CONTENT				
Method: E100.01 Units: % w/w				
Moisture	20.6	16.7	12.9	9.2

Published on DES Disclosure Log
RTI Act 2009

R

ANALYTICAL LABORATORIES
Analytical Laboratories
A.C.N. 006 823 089
585 Blackburn Road
Notting Hill, Victoria, Australia 3168
Telephone (03) 9562 5899
Fax (03) 9562 0336

Quality Results

Replacement Report No: 19132

	0006659Q059 Duplicate 0006659/023 17/07/2000 17/07/2000	0006659Q060 Spike Recovery 0006659/023 17/07/2000 17/07/2000	0006659Q061 Spike Recovery Lab Control 17/07/2000 17/07/2000	0006659Q062 DIGEST BLANK 18/07/2000 18/07/2000
ELEMENTS by ICP-MS, AS RECEIVED				
Method: 406-MS Units: mg/kg				
Arsenic	-	-	-	<1.0
Cadmium	-	-	-	<1.0
Chromium	-	-	-	<1.0
Copper	-	-	-	<1.0
Lead	-	-	-	<1.0
Nickel	-	-	-	<1.0
Zinc	-	-	-	<1.0
MERCURY by VAPOUR-AAS, AS RECEIVED				
Method: 404FIMS Units: mg/kg				
Mercury	-	-	-	<0.01
QC RESULTS - DUPLICATES				
Relative Percent Difference, %				
Boron	<1.0	-	-	-
Chromium	12.4	-	-	-
Copper	18.7	-	-	-
Lead	6.6	-	-	-
Zinc	22.1	-	-	-
QC RESULTS - SPIKED SAMPLES				
Percent Recovery, %				
Arsenic	-	71.2	94.8	-
Boron	-	79.5	76.5	-
Cadmium	-	94.7	98.3	-
Chromium	-	91.7	92.9	-
Copper	-	97.1	92.9	-
Lead	-	107	108	-
Zinc	-	84.0	95.2	-

Published on DES Disclosure Log
RTI Act 2009

Quality Results provided in this report are for laboratory Quality Control purposes.

R

Explosives
Water & Waste Water
Environmental
Food & Pharmaceuticals
Biological

GRIBBLES
Analytical Laboratories
A.C.N. 006 823 089
585 Blackburn Road
Notting Hill, Victoria, Australia 3168
Telephone (03) 9562 5899
Fax (03) 9562 0336

Replacement Analytical Report

Replacement for Report no: 19139, issued on: 18 Jul 2000

IT ENVIRONMENTAL
LEVEL 2
33 LONGLAND ST
NEWSTEAD
QLD 4006

Contact : CTPI 49-Sch4
Batch Number : **0006660**
Job Ref : **J207570D**
Sample(s) Received : **15/07/2000 .. 28/07/2000**
Replacement Report No : **19454**

Methods:

406-MS Elements by ICP-MS, Dry Weight
406-MS Elements by ICP-MS, mg/L
406-MS Elements by ICP-MS, TCLP
E100.01 Moisture Content

Published on DES Disclosure Log
RTI Act 2009

Attached Results Approved by:

CTPI 49-Sch4
B.App.Sci. (Environmental)
Senior Analyst

CTPI 49-Sch4
Dip.App.Sci (Chemistry)
Senior Analyst - Metals

This Laboratory is accredited by the National Association of Testing Authorities, Australia. The tests reported herin have been performed in accordance with its terms of accreditation.

NATA ENDORSED DOCUMENT

Document may not be reproduced except in full.

NATA Accreditation No. 1645

** This is the Final Report which supersedes any reports previously issued relating to the sample(s) included.*

All samples tested as submitted by client.

 # Denotes methods not covered by NATA terms of accreditation

Explosives
Water & Waste Water
Environmental
Food & Pharmaceuticals
Biological

GRIBBLES
Analytical Laboratories
A.C.N. 006 823 089
585 Blackburn Road
Notting Hill, Victoria, Australia 3168
Telephone (03) 9562 5899
Fax (03) 9562 0336

Results

Replacement Report No: **19454**

	0006660/004 SOIL TP18 0-200	0006660/008 SOIL TP19 0-200	0006660/012 SOIL TP20 0-200	0006660/013 SOIL TP20 200-500	0006660/016 SOIL TP21 0-200
ELEMENTS by ICP-MS, DRY WEIGHT					
Method: 406-MS Units: mg/kg					
Arsenic	4.1	5.0	4.6	5.7	9.4
Boron	<2.0	<2.0	<2.0	<2.0	<2.0
Cadmium	<1.0	<1.0	<1.0	<1.0	<1.0
Chromium	14	27	19	26	24
Copper	8.1	13	11	15	14
Lead	6.2	13	12	17	22
Zinc	7.9	28	21	24	45
OVEN MOISTURE CONTENT					
Method: E100.01 Units: % w/w					
Moisture	14.6	18.9	20.8	21.4	19.5

Published on DES Disclosure Log
RTI Act 2009

R

Explosives
Water & Waste Water
Environmental
Food & Pharmaceuticals
Biological

GRIBBLES
Analytical Laboratories
A.C.N. 006 823 089
585 Blackburn Road
Notting Hill, Victoria, Australia 3168
Telephone (03) 9562 5899
Fax (03) 9562 0336

Results

Replacement Report No: **19454**

	0006660/020 SOIL TP22 0-200	0006660/021 SOIL TP22 200-500	0006660/024 SOIL TP23 0-200	0006660/028 SOIL TP24 0-200	0006660/032 SOIL TP25 0-200
ELEMENTS by ICP-MS, DRY WEIGHT					
Method: 406-MS Units: mg/kg					
Arsenic	2.9	3.9	3.7	4.5	32
Boron	<2.0	<2.0	<2.0	<2.0	<2.0
Cadmium	<1.0	<1.0	<1.0	<1.0	<1.0
Chromium	15	14	20	33	31
Copper	3.4	2.6	8.7	9.3	17
Lead	18	12	16	8.5	19
Zinc	21	7.1	14	18	53
OVEN MOISTURE CONTENT					
Method: E100.01 Units: % w/w					
Moisture	17.7	12.3	16.5	15.1	18.6

Published on DES Disclosure Log
RTI Act 2009

R

Explosives
Water & Waste Water
Environmental
Food & Pharmaceuticals
Biological

GRIBBLES
Analytical Laboratories
A.C.N. 006 823 089
585 Blackburn Road
Notting Hill, Victoria, Australia 3168
Telephone (03) 9562 5899
Fax (03) 9562 0336

Results

Replacement Report No: **19454**

	0006660/033 SOIL TP25 200-500	0006660/036 SOIL TP26 0-200	0006660/037 SOIL TP26 200-500	0006660/040 SOIL TP27 0-200	0006660/041 SOIL TP27 200-500
ELEMENTS by ICP-MS, DRY WEIGHT					
Method: 406-MS Units: mg/kg					
Arsenic	<2.0	17	3.8	<2.0	2.5
Boron	<2.0	<2.0	<2.0	<2.0	<2.0
Cadmium	<1.0	<1.0	<1.0	<1.0	<1.0
Chromium	7.6	28	13	15	14
Copper	11	20	8.8	4.8	6.5
Lead	9.3	130	9.2	11	11
Zinc	24	75	12	14	11
OVEN MOISTURE CONTENT					
Method: E100.01 Units: % w/w					
Moisture	14.2	17.7	15.8	15.3	14.7

Published on DES Disclosure Log
RTI Act 2009

R

Explosives
Water & Waste Water
Environmental
Food & Pharmaceuticals
Biological

GRIBBLES
Analytical Laboratories
A.C.N. 006 823 089
585 Blackburn Road
Notting Hill, Victoria, Australia 3168
Telephone (03) 9562 5899
Fax (03) 9562 0336

Results

Replacement Report No: **19454**

	0006660/044 SOIL TP28 0-200	0006660/052 SOIL TP30 0-200	0006660/056 SOIL TP31 0-200	0006660/066 SOIL SS1	0006660/067 SOIL SS2
ELEMENTS by ICP-MS, DRY WEIGHT					
Method: 406-MS Units: mg/kg					
Arsenic	5.6	4.2	2.6	140	85
Boron	<2.0	<2.0	<2.0	<2.0	<2.0
Cadmium	<1.0	<1.0	<1.0	<1.0	<1.0
Chromium	30	25	21	220	110
Copper	16	11	8.2	130	67
Lead	20	15	9.3	37	39
Zinc	52	26	20	98	73
OVEN MOISTURE CONTENT					
Method: E100.01 Units: % w/w					
Moisture	24.2	19.4	18.0	43.2	25.7

Published on DES Disclosure Log
RTI Act 2009

R

GRIBBLES Analytical Laboratories
A.C.N. 006 823 089
585 Blackburn Road
Notting Hill, Victoria, Australia 3168
Telephone (03) 9562 5899
Fax (03) 9562 0336

Results

Replacement Report No: 19454

	0006660/068 SOIL SS3	0006660/069 SOIL SS4	0006660/070 WATER WS1	0006660/071 WATER WS2	0006660/072 WATER WS3
ELEMENTS by ICP-MS					
Method: 406-MS Units: mg/L					
Arsenic	-	-	0.16	0.21	0.23
Boron	-	-	1.4	1.9	1.5
Cadmium	-	-	<0.001	<0.001	<0.001
Chromium	-	-	0.043	0.044	0.048
Copper	-	-	0.033	0.016	0.018
Lead	-	-	0.017	0.003	0.004
Zinc	-	-	0.48	0.081	0.097
ELEMENTS by ICP-MS, DRY WEIGHT					
Method: 406-MS Units: mg/kg					
Arsenic	120	31	-	-	-
Boron	<2.0	<2.0	-	-	-
Cadmium	<1.0	<1.0	-	-	-
Chromium	200	49	-	-	-
Copper	110	47	-	-	-
Lead	31	15	-	-	-
Zinc	39	77	-	-	-
OVEN MOISTURE CONTENT					
Method: E100.01 Units: % w/w					
Moisture	21.5	19.3	-	-	-

Published on DES Disclosure Log
RTI Act 2009

R

GRIBBLES Analytical Laboratories
A.C.N. 006 823 089
585 Blackburn Road
Notting Hill, Victoria, Australia 3168
Telephone (03) 9562 5899
Fax (03) 9562 0336

Results

Replacement Report No: 19454

	0006660/073 WATER WS4	0006660/074 WATER QC3	0006660/088 SOIL TCLP SS1
ELEMENTS by ICP-MS			
Method: 406-MS Units: mg/L			
Arsenic	0.24	0.24	-
Boron	1.6	1.8	-
Cadmium	<0.001	<0.001	-
Chromium	0.050	0.049	-
Copper	0.019	0.019	-
Lead	0.003	0.004	-
Zinc	0.13	0.14	-
ELEMENTS by ICP-MS, TCLP EXTRACT			
Method: 406-MS Units: mg/L			
Arsenic	-	-	0.14
Chromium	-	-	0.036
Copper	-	-	0.18

Published on DES Disclosure Log
RTI Act 2009

R

GRIBBLES Analytical Laboratories
A.C.N. 006 823 089
585 Blackburn Road
Notting Hill, Victoria, Australia 3168
Telephone (03) 9562 5899
Fax (03) 9562 0336

Quality Results

Replacement Report No: 19454

	0006660Q075 SOIL DIGEST BLANK	0006660Q076 WATER SOLUTION BLANK	0006660Q077 Spike Recovery Lab Control	0006660Q078 Duplicate 0006660/040	0006660Q079 Spike Recovery 0006660/040
ELEMENTS by ICP-MS					
Method: 406-MS Units: mg/L					
Arsenic	-	<0.001	-	-	-
Boron	-	<0.001	-	-	-
Cadmium	-	<0.001	-	-	-
Chromium	-	<0.001	-	-	-
Copper	-	<0.001	-	-	-
Lead	-	<0.001	-	-	-
Zinc	-	<0.001	-	-	-
ELEMENTS by ICP-MS, AS RECEIVED					
Method: 406-MS Units: mg/kg					
Arsenic	<1.0	-	-	-	-
Boron	<1.0	-	-	-	-
Cadmium	<1.0	-	-	-	-
Chromium	<1.0	-	-	-	-
Copper	<1.0	-	-	-	-
Lead	<1.0	-	-	-	-
Zinc	<1.0	-	-	-	-
QC RESULTS - DUPLICATES					
Relative Percent Difference, %					
Arsenic	-	-	-	3.4	-
Boron	-	-	-	<1.0	-
Cadmium	-	-	-	<1.0	-
Chromium	-	-	-	24.6	-
Lead	-	-	-	15.5	-
QC RESULTS - SPIKED SAMPLES					
Percent Recovery, %					
Arsenic	-	-	94.8	-	75.6
Boron	-	-	76.5	-	89.9
Cadmium	-	-	101	-	94.4
Chromium	-	-	92.6	-	91.8
Copper	-	-	92.9	-	95.0
Lead	-	-	108	-	102
Zinc	-	-	95.0	-	80.2

R

Published on DES Disclosure Log
RTI Act 2009

GRIBBLES Analytical Laboratories
A.C.N. 006 823 089
585 Blackburn Road
Notting Hill, Victoria, Australia 3168
Telephone (03) 9562 5899
Fax (03) 9562 0336

Quality Results

Replacement Report No: 19454

	0006660Q080 Duplicate 0006660/070	0006660Q081 Spike Recovery 0006660/070	0006660Q082 Spike Recovery Lab Control	0006660Q085 Duplicate 0006660/028	0006660Q086 Spike Recovery 0006660/028
QC RESULTS - DUPLICATES					
Relative Percent Difference, %					
Arsenic	9.5	-	-	18.2	-
Boron	15.5	-	-	<1.0	-
Cadmium	<1.0	-	-	14.8	-
Chromium	7.0	-	-	-	-
Copper	1.4	-	-	23.9	-
Lead	1.6	-	-	5.6	-
Zinc	4.4	-	-	-	-
QC RESULTS - SPIKED SAMPLES					
Percent Recovery, %					
Arsenic	-	78.5	102	-	77.9
Boron	-	-	75.5	-	83.4
Cadmium	-	92.3	99.9	-	94.1
Chromium	-	72.2	98.8	-	74.2
Copper	-	75.8	99.5	-	97.1
Lead	-	91.6	107	-	91.9
Zinc	-	-	101	-	78.4

Published on DES Disclosure Log
RTI Act 2009

R

Explosives
Water & Waste Water
Environmental
Food & Pharmaceuticals
Biological

GRIBBLES
Analytical Laboratories
A.C.N. 006 823 089
585 Blackburn Road
Notting Hill, Victoria, Australia 3168
Telephone (03) 9562 5899
Fax (03) 9562 0336

Quality Results

Replacement Report No: 19454

	0006660Q087 Spike Recovery Lab Control	0006660Q089 Duplicate 0006660/088	0006660Q090 Spike Recovery Lab Control
QC RESULTS - DUPLICATES			
Relative Percent Difference, %			
Arsenic	-	1.4	-
Chromium	-	7.2	-
Copper	-	5.5	-
QC RESULTS - SPIKED SAMPLES			
Percent Recovery, %			
Arsenic	97.9	-	110
Boron	95.2	-	-
Cadmium	99.9	-	-
Chromium	94.6	-	117
Copper	99.8	-	121
Lead	93.5	-	-
Zinc	105	-	-

Published on DES Disclosure Log
RTI Act 2009

Quality Results provided in this report are for laboratory Quality Control purposes.

R

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

23067

IT Environmental (Australia) Pty Ltd
ACN 003 931 057
A Member of The IT Group
www.theitgroup.com.au

☐ **Adelaide:** Tel (08) 8443 5600 Fax (08) 8443 6499
27 Queen Street, Thebarton SA 5031

☒ **Brisbane:** Tel (07) 3252 5711 Fax (07) 3252 5712
Level 2, 33 Longland Street, Newstead QLD 4006

☐ **Hobart:** Tel (03) 6231 1620 Fax (03) 6231 1640
127 Bathurst Street, Hobart TAS 7000

☐ **Melbourne:** Tel (03) 9819 0284 Fax (03) 9819 4079
169 Burwood Road, Hawthorn VIC 3122

☐ **Perth:** Tel (08) 9481 4333 Fax (08) 9481 4122
Level 7, 220 George's Terrace, Perth WA 6000

☐ **Sydney:** Tel: (02) 9502 4844 Fax (02) 9502 2105
17 Forrester Street, Kingsgrove NSW 2208

☐ **Other:**

Project No: J207570 E ~~Job No~~ Quotation 10

Project Name: BORAL COOROY Laboratory: GRIBBLES.

Samplers Name: CTPI 49-Sch4 Project Manager: CTPI 49-Sch4

Special Instructions: *METALS = As, Cd, Cr, Co, Pb, Zn, Hg, B.
*CATIONS = Ca, Mg, Na, K. *PHYSICALS = TDS, TSS, TOTAL ALKALINITY as $CaCO_3$
TOTAL HARDNESS as $CaCO_3$, MAJOR ANIONS (Cl, SO_4, CO_3, HCO_3), NITRATE, TANNIN, SAR

Analysis Request Section

Lab. No.	Sample ID	Sample Location	Sample Depth	Sample Date	Time	Matrix (Soil ... etc)	Container Type & Preservative*	T-A-T (Specify)	TPH	BTEX	METALS (Specify) *	PAH's	PHENOLS	MAJOR CATIONS, *	GC's/OP's	TOTAL P	TKN	COD/TOC	BOD (5)	PHYSICALS *	NOTES
	POND 1	EVAP. POND	–	1·8·00	AM	WATER.	VARIOUS.	STD.			X	X	X	X		X	X				QUOTATION 10'

COPY

Published on DES Disclosure Log
RTI Act 2009

RELINQUISHED BY:		RECEIVED BY:	
Signature: CTPI 49-Sch4	Date: 1·8·00	Signature: CTPI 49-Sch4	Date: 2/8/00
Company: ITENVIRONMENTAL	Time: 3.20.	Company: G.A.L	Time: 16:30
Signature:	Date:	Signature:	Date:
Company:	Time:	Company:	Time:

Sample Receipt Advice: *(Lab Use Only)*

All Samples Received in Good Condition . . . ☑
All Documentation is in Proper Order . . . . . ☑
Samples Received Properly Chilled . . . . . ☑

Lab. Ref/Batch No. 807435

* **Container Type & Preservation Codes:** **P** - Plastic, **G** - Solvent Washed Acid Rinsed Glass Bottle, **V** - Vial, **N** - Nitric Acid Preserved
C - Hydrochloric Acid Preserved, **S** - Sulphuric Acid Preserved, **I** - Ice

Explosives
Water & Waste Water
Environmental
Food & Pharmaceuticals
Biological

ORIBLES Analytical Laboratories
A.C.N. 006 823 089
585 Blackburn Road
Notting Hill, Victoria, Australia 3168
Telephone (03) 9562 5899
Fax (03) 9562 0336

Replacement Analytical Report

Replacement for Report no: 20334, issued on: 08 Aug 2000

IT ENVIRONMENTAL
LEVEL 2
33 LONGLAND ST
NEWSTEAD
QLD 4006

Contact : CTPI 49-Sch4
Batch Number : **0007435**
Job Ref : **J207570E/23067**
Sample(s) Received : **02/08/2000**
Replacement Report No : **20785**

Methods:

202 Bicarbonate Alkalinity by Titration
202 Carbonate Alkalinity by Titration
208 Anions by Ion Chromatography, mg/L
212 Biochemical Oxygen Demand, 5 Day
214 Chemical Oxygen Demand
238/246 Solids - Suspended & Dissolved, mg/L
240 Total Kjeldahl Nitrogen, mg N/L
242 Total Organic Carbon, mg/L
402-AES Elements by ICP-AES, mg/L
404FIMS Mercury by Vapour AAS, mg/L
406-MS Elements by ICP-MS, mg/L
G540.11 Hardness
G554 Sodium Adsorption Ratio
Referral Laboratory: ALS, NATA Reg.13785

Attached Results Approved by:

CTPI 49-Sch4
Dip.App.Sci (Chemistry)
Senior Analyst - Metals

CTPI 49-Sch4
B.App.Sci. MRACI
Chief Chemist

CTPI 49-Sch4
B.App.Sci. (Environmental)
Senior Analyst

CTPI 49-Sch4
B.App.Sci (Chemistry)
Senior Analyst - Chromatography

This Laboratory is accredited by the National Association of Testing Authorities, Australia. The tests reported herin have been performed in accordance with its terms of accreditation.

NATA ENDORSED DOCUMENT

Document may not be reproduced except in full.

NATA Accreditation No. 1645

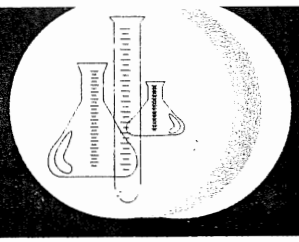
Published on DES Disclosure Log
RTI Act 2009

**** This is the Final Report which supersedes any reports previously issued relating to the sample(s) included.***

All samples tested as submitted by client.

 # Denotes methods not covered by NATA terms of accreditation

Reported: Thursday, 24 August 2000



Explosives
Water & Waste Water
Environmental
Food & Pharmaceuticals
Biological

GRIBBLES Analytical Laboratories
A.C.N. 006 823 089
585 Blackburn Road
Notting Hill, Victoria, Australia 3168
Telephone (03) 9562 5899
Fax (03) 9562 0336

Results

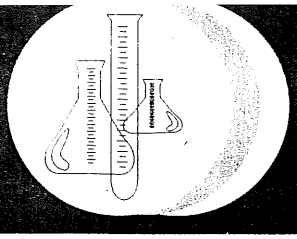
Replacement Report No: 20785

	0007435/001 WATER POND 1
ALKALINITY	
Method: 202 Units:mg CaCO3/L	
Bicarbonate Alkalinity	150
Carbonate Alkalinity	<3.0
ANIONS by ION CHROMATOGRAPHY	
Method: 208 Units: mg/L	
Chloride	170
Nitrate	<0.5
Sulphate	5.5
BIOCHEMICAL OXYGEN DEMAND	
Method: 212 Units: mg/L	
Biochemical Oxygen Demand	91
COD by COLORIMETRY	
Method: 214 Units: mg/L	
Chemical Oxygen Demand	700
ELEMENTS by ICP-AES	
Method: 402-AES Units: mg/L	
Calcium	18
Magnesium	8.6
Potassium	11
Sodium	260
ELEMENTS by ICP-MS	
Method: 406-MS Units: mg/L	
Arsenic	0.22
Boron	2.9
Cadmium	<0.001
Chromium	0.053
Copper	0.019
Lead	0.001
Zinc	0.22
HARDNESS ANALYSIS	
Method: G540.11 Units: mg CaCO3/L	
Hardness	80
MERCURY by VAPOUR-AAS	
Method:404FIMS Units: mg/L	
Mercury	<0.0001
NITROGEN by KJELDAHL	
Method: 240 Units: mg N/L	
Total Kjeldahl Nitrogen	6.0
SODIUM ADSORPTION RATIO	
Method: G554 Units: Ratio	
Sodium Adsorption Ratio	13

Published on DES Disclosure Log
RTI Act 2009

R

Reported: Thursday, 24 August 2000



Explosives
Water & Waste Water
Environmental
Food & Pharmaceuticals
Biological

GRIBBLES Analytical Laboratories
A.C.N. 006 823 089
585 Blackburn Road
Notting Hill, Victoria, Australia 3168
Telephone (03) 9562 5899
Fax (03) 9562 0336

Results

Replacement Report No: 20785

0007435/001
WATER
POND 1

SOLIDS CONTENT ANALYSIS

Method: 238/246 Units: mg/L

Total Dissolved Solids	250
Total Suspended Solids	3300

Tested by Australian Laboratory Services

Units as stated

Tannins, mg/L	6

TOTAL ORGANIC CARBON in water

Method: 242 Units: mg/L

Total Organic Carbon	69

Published on DES Disclosure Log
RTI Act 2009

R

ORIBLES Analytical Laboratories
A.C.N. 006 823 089
585 Blackburn Road
Notting Hill, Victoria, Australia 3168
Telephone (03) 9562 5899
Fax (03) 9562 0336

Quality Results

Replacement Report No: 20785

	0007435Q002 WATER SOLUTION BLANK	0007435Q003 Duplicate 0007435/001	0007435Q004 Spike Recovery Lab Control
ELEMENTS by ICP-AES			
Method: 402-AES Units: mg/L			
Calcium	<0.1	-	-
Magnesium	<0.1	-	-
Potassium	<1.0	-	-
Sodium	1.0	-	-
ELEMENTS by ICP-MS			
Method: 406-MS Units: mg/L			
Arsenic	<0.001	-	-
Boron	<0.001	-	-
Cadmium	<0.001	-	-
Chromium	<0 001	-	-
Copper	<0 001	-	-
Lead	<0.001	-	-
Zinc	<0.001	-	-
MERCURY by VAPOUR-AAS			
Method:404FIMS Units: mg/L			
Mercury	<0.0001	-	-
QC RESULTS - DUPLICATES			
Relative Percent Difference, %			
Arsenic	-	1.9	-
Boron	-	4.2	-
Cadmium	-	<1.0	-
Chromium	-	<1.0	-
Copper	-	1.2	-
Lead	-	4.0	-
Zinc	-	5.9	-
QC RESULTS - SPIKED SAMPLES			
Percent Recovery, %			
Arsenic	-	-	109
Boron	-	-	118
Cadmium	-	-	100
Chromium	-	-	111
Copper	-	-	114
Lead	-	-	101
Zinc	-	-	113

Published on DES Disclosure Log
RTI Act 2009

Quality Results provided in this report are for laboratory Quality Control purposes.

R

Reported: Thursday, 24 August 2000

ALS Environmental

SAMPLE RECEIPT ADVICE

COMPANY: IT ENVIRONMENTAL (AUST) P/L
ATTENTION: MS CTPI 49-Sch4
DATE: Aug. 04, 2000
FROM: CTPI 49-Sch4 ENV BRISBANE

ALS has received samples pertaining to your reference: J207570E

For future reference the batch number on this order is: EB30900

All samples and paper work were received in good order.
Samples have been received within recommended holding times.
Samples chilled when received.
Samples received in appropriately pretreated and preserved containers.
Please direct any turnaround/technical queries to Paul VOGEL.
Any queries relating to sample condition/numbering/breakages should be directed to Kellie Davis.
All aqueous samples are stored for two weeks and solid samples for three months from the date of completion of the batch, unless specific arrangements are made otherwise.

Chain of Custody Reference Number: 23068
Project Name: BORAL COOROY

You can expect results to be reported as detailed below:

All Environmental Results Aug. 07, 2000

Comments:

Published on DES Disclosure Log RTI Act 2009

A L S - SERVICING YOUR NEEDS BETTER

AUSTRALIAN LABORATORY SERVICES P/L
ABN: 84 009 936 029

BRISBANE	SYDNEY	MELBOURNE	NEWCASTLE	AUCKLAND
Tel: 61-7-3243 7222	Tel: 61-2-8784 8555	Tel: 61-3-9538 4444	Tel: 61-2-4968 9433	Tel: 64-9-379 9437
Fax: 61-7-3243 7218	Fax: 61-2-8784 8500	Fax: 61-3-9538 4400	Fax: 61-2-4968 0349	Fax: 64-9-379 1449

ALS Environmental

CERTIFICATE OF ANALYSIS

Batch: AME30900
Sub Batch: 0

CONTACT: MS CTPI 49-Sch4
CLIENT: IT ENVIRONMENTAL (AUST) P/L
ADDRESS:
P O BOX 2320
FORTITUDE VALLEY QLD 4006

LABORATORY: BRISBANE
DATE RECEIVED: 03/08/2000
DATE COMPLETED: 10/08/2000
SAMPLE TYPE: WATER
No. of SAMPLES: 6

ORDER No.: J207570E
PROJECT: BORAL COOROY

COMMENTS

This batch supersedes EB30900.

NOTES

This is the Final Report and supersedes any preliminary reports with this batch number.
Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release.

ISSUING LABORATORY: BRISBANE

Address
32 Shand Street
Stafford QLD 4053
Australia

Phone: 61-7-3243 7222
Fax: 61-7-3243 7218
Email: CTPI 4@als.com.au

Signatory CTPI 49-Sch4

Published on DES Disclosure Log
RTI Act 2009

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

Batch: AME30900
Sub Batch: 0
Date of Issue: 10/08/2000
Client: IT ENVIRONMENTAL (AUST) P/L
Client Reference: BORAL COOROY

CERTIFICATE OF ANALYSIS

				SAMPLE IDENTIFICATION									
		Laboratory I.D.		1	2	3	4	5	6				
		Date Sampled		03/08/2000	03/08/2000	03/08/2000	03/08/2000	03/08/2000	03/08/2000				
METHOD	ANALYSIS DESCRIPTION	UNIT	LOR	MW5	UPSTREAM CREEK	MID-SITE CREEK	STORMWATER CULVERT	DOWNSTREAM CREEK	QC1				
EG-005F	Boron - Filtered	mg/L	0.2	31.5	<0.2	<0.2	<0.2	<0.2	<0.2				
EG-020F	Arsenic - Filtered	mg/L	0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001				
EG-020F	Cadmium - Filtered	mg/L	0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002				
EG-020F	Chromium - Filtered	mg/L	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001				
EG-020F	Copper - Filtered	mg/L	0.001	0.008	0.002	0.001	0.005	0.003	0.004				
EG-020F	Lead - Filtered	mg/L	0.001	0.001	<0.001	<0.001	0.001	<0.001	0.001				
EG-020F	Zinc - Filtered	mg/L	0.001	0.156	0.029	0.027	0.034	0.029	0.034				

Published on DES Disclosure Log
RTI Act 2009

R

Batch: AME30900
Sub Batch: 0
Date of Issue: 10/08/2000
Client: IT ENVIRONMENTAL (AUST) P/L
Client Reference: BORAL COOROY

QUALITY CONTROL REPORT

				SAMPLE IDENTIFICATION									
		Laboratory I.D.		200	201								
		Date Sampled		03/08/2000	03/08/2000								
METHOD	ANALYSIS DESCRIPTION	UNIT	LOR	Method Blank	LCS % Rec								
				CHECKS AND SPIKES									
EG-005F	Boron - Filtered	mg/L	0.2	<0.2	----								
EG-020F	Arsenic - Filtered	mg/L	0.001	<0.001	103%								
EG-020F	Cadmium - Filtered	mg/L	0.0002	<0.0002	102%								
EG-020F	Chromium - Filtered	mg/L	0.001	<0.001	101%								
EG-020F	Copper - Filtered	mg/L	0.001	<0.001	101%								
EG-020F	Lead - Filtered	mg/L	0.001	<0.001	90.0%								
EG-020F	Zinc - Filtered	mg/L	0.001	<0.001	106%								

Published on DES Disclosure Log
RTI Act 2009

R

ALS Environmental

SAMPLE RECEIPT ADVICE

COMPANY: IT ENVIRONMENTAL (AUST) P/L
ATTENTION: MS CTPI 49-Sch
DATE: Aug. 09, 2000
FROM: CTPI 49-Sch4 ENV BRISBANE

ALS has received samples pertaining to your reference: J207570E

For future reference the batch number on this order is: EB30999

All samples and paper work were received in good order.
Samples have been received within recommended holding times.
Samples chilled when received.
Samples received in appropriately pretreated and preserved containers.
Please direct any turnaround/technical queries to Paul VOGEL.
Any queries relating to sample condition/numbering/breakages should be directed to Kellie Davis.
All aqueous samples are stored for two weeks and solid samples for three months from the date of completion of the batch, unless specific arrangements are made otherwise.

Chain of Custody Reference Number: 23069-72
Project Name: BORAL COOROY/NANDROYA

You can expect results to be reported as detailed below:

Inorganic Results	Aug. 09, 2000
Organic Results	Aug. 09, 2000

A L S - SERVICING YOUR NEEDS BETTER

Published on DES Disclosure Log RTI Act 2009

AUSTRALIAN LABORATORY SERVICES P/L
ABN: 84 009 936 029

BRISBANE	SYDNEY	MELBOURNE	NEWCASTLE	AUCKLAND
Tel: 61-7-3243 7222	Tel: 61-2-8784 8555	Tel: 61-3-9538 4444	Tel: 61-2-4968 9433	Tel: 64-9-379 9437
Fax: 61-7-3243 7218	Fax: 61-2-8784 8500	Fax: 61-3-9538 4400	Fax: 61-2-4968 0349	Fax: 64-9-379 1449

ALS Environmental

CERTIFICATE OF ANALYSIS

Batch: EB30999
Sub Batch: 0

CONTACT:	MS CTPI 49-Sch4	**LABORATORY:**	BRISBANE
CLIENT:	IT ENVIRONMENTAL (AUST) P/L	**DATE RECEIVED:**	08/08/2000
ADDRESS:	P O BOX 2320 FORTITUDE VALLEY QLD 4006	**DATE COMPLETED:**	11/08/2000
		SAMPLE TYPE:	SOIL
		No. of SAMPLES:	25
ORDER No.:	J207570E		
PROJECT:	BORAL COOROY CC23069		

COMMENTS

Samples as received digested by USEPA method 3051 prior to the determination of metals. Results reported on a dry weight basis. This report supersedes any previous preliminary reports of the same batch number.

NOTES

This is the Final Report and supersedes any preliminary reports with this batch number.
Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release.

ISSUING LABORATORY: BRISBANE

Address
32 Shand Street
Stafford QLD 4053
Australia

Phone: 61-7-3243 7222
Fax: 61-7-3243 7218
Email: CTPI 4 @als.com.au

Signatory CTPI 49-Sch4

Published on DES Disclosure Log RTI Act 2009

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

NATA No. 825

Batch: EB30999
Sub Batch: 0
Date of Issue: 11/08/2000
Client: IT ENVIRONMENTAL (AUST) P/L
Client Reference: BORAL COOROY CC23069

CERTIFICATE OF ANALYSIS

				SAMPLE IDENTIFICATION									
		Laboratory I.D.		1	2	3	4	5	6	7	8	9	10
		Date Sampled		08/08/2000	08/08/2000	08/08/2000	08/08/2000	08/08/2000	08/08/2000	08/08/2000	08/08/2000	08/08/2000	08/08/2000
METHOD	ANALYSIS DESCRIPTION	UNIT	LOR	TP1/ 0-200	TP1/ 2.5m	TP2/ 0-200	TP2/ 3m	TP3/ 0-200	TP3/ 3m	TP4/ 0-200	TP4/ 3000	BOWSER/ 0-200	BOWSER/ 1000
EA-055	Moisture Content (dried @ 103'C)	%	0.1	9.1	13.3	19.1	24.4	19.5	28.9	16.9	26.1	12.5	22.1
EG-005T	Arsenic - Total	mg/kg	1	----	----	----	----	----	----	----	----	----	----
EG-005T	Boron - Total	mg/kg	20	----	----	----	----	----	----	----	----	----	----
EG-005T	Cadmium - Total	mg/kg	1	----	----	----	----	----	----	----	----	----	----
EG-005T	Chromium - Total	mg/kg	1	----	----	----	----	----	----	----	----	----	----
EG-005T	Copper - Total	mg/kg	1	----	----	----	----	----	----	----	----	----	----
EG-005T	Lead - Total	mg/kg	1	8	6	11	4	9	3	9	4	58	14
EG-005T	Zinc - Total	mg/kg	1	----	----	----	----	----	----	----	----	----	----
EG-035T	Mercury - Total	mg/kg	0.1	----	----	----	----	----	----	----	----	----	----
EP-071-SS	**TOTAL PETROLEUM HYDROCARBONS**												
EP-071-SS	C6 - C9 Fraction	mg/kg	2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
EP-071-SS	C10 - C14 Fraction	mg/kg	50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
EP-071-SS	C15 - C28 Fraction	mg/kg	100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
EP-071-SS	C29 - C36 Fraction	mg/kg	100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
EP-080-SS	**BTEX**												
EP-080-SS	Benzene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
EP-080-SS	Toluene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
EP-080-SS	Chlorobenzene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
EP-080-SS	Ethylbenzene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
EP-080-SS	meta- & para-Xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
EP-080-SS	ortho-Xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
EP-080S-SS	**VOLATILE TPH/BTEX COMPOUND SURROGATES**												
EP-080S-SS	1.2-Dichloroethane-D4	%	1	120	131	113	108	101	112	118	111	122	118
EP-080S-SS	Toluene-D8	%	1	96	88	92	94	86	94	96	92	83	89
EP-080S-SS	4-Bromofluorobenzene	%	1	109	110	96	97	91	100	100	99	98	101

R

Published on DES Disclosure Log RTI Act 2009

Batch: EB30999
Sub Batch: 0
Date of Issue: 11/08/2000
Client: IT ENVIRONMENTAL (AUST) P/L
Client Reference: BORAL COOROY CC23069

CERTIFICATE OF ANALYSIS

				SAMPLE IDENTIFICATION									
		Laboratory I.D.		11	12	13	14	15	16	17	18	19	20
		Date Sampled		08/08/2000	08/08/2000	08/08/2000	08/08/2000	08/08/2000	08/08/2000	08/08/2000	08/08/2000	08/08/2000	08/08/2000
METHOD	ANALYSIS DESCRIPTION	UNIT	LOR	SB1/ 0-200	F6/ 0-200	F6/ 200-500	H3/TP1 0-200	H3/TP1 200-500	H3/TP2 0-200	H3/TP2 200-500	H3/TP3 0-200	H3/TP3 200-500	H3/TP4 0-200
EA-055	Moisture Content (dried @ 103'C)	%	0.1	6.0	17.9	18.6	17.4	16.6	18.6	18.5	13.8	18.0	18.1
EG-005T	Arsenic - Total	mg/kg	1	----	----	----	20	17	220	12	4	2	20
EG-005T	Boron - Total	mg/kg	20	----	----	----	109	156	111	49	<20	<20	49
EG-005T	Cadmium - Total	mg/kg	1	----	----	----	<1	<1	<1	<1	<1	<1	<1
EG-005T	Chromium - Total	mg/kg	1	----	----	----	55	105	359	84	18	15	130
EG-005T	Copper - Total	mg/kg	1	----	----	----	7	12	265	6	5	3	7
EG-005T	Lead - Total	mg/kg	1	31	----	----	10	19	18	10	11	9	12
EG-005T	Zinc - Total	mg/kg	1	----	----	----	10	9	153	11	8	8	15
EG-035T	Mercury - Total	mg/kg	0.1	----	----	----	<0.1	0.1	<0.1	0.1	<0.1	<0.1	<0.1
EP-071-SS	**TOTAL PETROLEUM HYDROCARBONS**												
EP-071-SS	C6 - C9 Fraction	mg/kg	2	<2	<2	<2	----	----	----	----	----	----	----
EP-071-SS	C10 - C14 Fraction	mg/kg	50	<50	<50	<50	----	----	----	----	----	----	----
EP-071-SS	C15 - C28 Fraction	mg/kg	100	<100	<100	<100	----	----	----	----	----	----	----
EP-071-SS	C29 - C36 Fraction	mg/kg	100	<100	<100	<100	----	----	----	----	----	----	----
EP-080-SS	**BTEX**												
EP-080-SS	Benzene	mg/kg	0.2	<0.2	----	----	----	----	----	----	----	----	----
EP-080-SS	Toluene	mg/kg	0.2	<0.2	----	----	----	----	----	----	----	----	----
EP-080-SS	Chlorobenzene	mg/kg	0.2	<0.2	----	----	----	----	----	----	----	----	----
EP-080-SS	Ethylbenzene	mg/kg	0.2	<0.2	----	----	----	----	----	----	----	----	----
EP-080-SS	meta- & para-Xylene	mg/kg	0.2	<0.2	----	----	----	----	----	----	----	----	----
EP-080-SS	ortho-Xylene	mg/kg	0.2	<0.2	----	----	----	----	----	----	----	----	----
EP-080S-SS	**VOLATILE TPH/BTEX COMPOUND SURROGATES**												
EP-080S-SS	1.2-Dichloroethane-D4	%	1	119	119	120	----	----	----	----	----	----	----
EP-080S-SS	Toluene-D8	%	1	99	94	94	----	----	----	----	----	----	----
EP-080S-SS	4-Bromofluorobenzene	%	1	104	101	107	----	----	----	----	----	----	----

Published on DES Disclosure Log RTI Act 2009

R

Batch: EB30999
Sub Batch: 0
Date of Issue: 11/08/2000
Client: IT ENVIRONMENTAL (AUST) P/L
Client Reference: BORAL COOROY CC23069

CERTIFICATE OF ANALYSIS

				SAMPLE IDENTIFICATION									
		Laboratory I.D.		21	22	23	24	25					
		Date Sampled		08/08/2000	08/08/2000	08/08/2000	08/08/2000	08/08/2000					
METHOD	ANALYSIS DESCRIPTION	UNIT	LOR	H3/TP4 200-500	F2/ 0-200	F2/ 200-500	F3/ 0-200	F3/ 200-500					
EA-055	Moisture Content (dried @ 103'C)	%	0.1	17.2	31.0	21.8	25.7	22.7					
EG-005T	Arsenic - Total	mg/kg	1	2	135	4	58	3					
EG-005T	Boron - Total	mg/kg	20	36	<20	<20	<20	26					
EG-005T	Cadmium - Total	mg/kg	1	<1	<1	<1	<1	<1					
EG-005T	Chromium - Total	mg/kg	1	34	37	21	35	20					
EG-005T	Copper - Total	mg/kg	1	4	31	10	18	11					
EG-005T	Lead - Total	mg/kg	1	10	14	12	14	15					
EG-005T	Zinc - Total	mg/kg	1	9	34	27	141	33					
EG-035T	Mercury - Total	mg/kg	0.1	<0.1	<0.1	0.1	0.1	0.1					
EP-071-SS	**TOTAL PETROLEUM HYDROCARBONS**												
EP-071-SS	C6 - C9 Fraction	mg/kg	2	----	----	----	----	----					
EP-071-SS	C10 - C14 Fraction	mg/kg	50	----	----	----	----	----					
EP-071-SS	C15 - C28 Fraction	mg/kg	100	----	----	----	----	----					
EP-071-SS	C29 - C36 Fraction	mg/kg	100	----	----	----	----	----					
EP-080-SS	**BTEX**												
EP-080-SS	Benzene	mg/kg	0.2	----	----	----	----	----					
EP-080-SS	Toluene	mg/kg	0.2	----	----	----	----	----					
EP-080-SS	Chlorobenzene	mg/kg	0.2	----	----	----	----	----					
EP-080-SS	Ethylbenzene	mg/kg	0.2	----	----	----	----	----					
EP-080-SS	meta- & para-Xylene	mg/kg	0.2	----	----	----	----	----					
EP-080-SS	ortho-Xylene	mg/kg	0.2	----	----	----	----	----					
EP-080S-SS	**VOLATILE TPH/BTEX COMPOUND SURROGATES**												
EP-080S-SS	1.2-Dichloroethane-D4	%	1	----	----	----	----	----					
EP-080S-SS	Toluene-D8	%	1	----	----	----	----	----					
EP-080S-SS	4-Bromofluorobenzene	%	1	----	----	----	----	----					

Published on DES Disclosure Log RTI Act 2009

R

Batch: EB30999
Sub Batch: 0
Date of Issue: 11/08/2000
Client: IT ENVIRONMENTAL (AUST) P/L
Client Reference: BORAL COOROY CC23069

QUALITY CONTROL REPORT

				SAMPLE IDENTIFICATION									
		Laboratory I.D.		200	201	402	403						
		Date Sampled		08/08/2000	08/08/2000	08/08/2000	08/08/2000						
METHOD	ANALYSIS DESCRIPTION	UNIT	LOR	Method Blank	LCS % Rec	TPHT2959 SCS % Rec	TPHT2959 DCS % Rec						
				CHECKS AND SPIKES									
EA-055	Moisture Content (dried @ 103'C)	%	0.1	----	----	----	----						
EG-005T	Arsenic - Total	mg/kg	1	<1	97.0%	----	----						
EG-005T	Boron - Total	mg/kg	20	<20	----	----	----						
EG-005T	Cadmium - Total	mg/kg	1	<1	96.0%	----	----						
EG-005T	Chromium - Total	mg/kg	1	<1	95.0%	----	----						
EG-005T	Copper - Total	mg/kg	1	<1	98.0%	----	----						
EG-005T	Lead - Total	mg/kg	1	<1	102%	----	----						
EG-005T	Zinc - Total	mg/kg	1	<1	101%	----	----						
EG-035T	Mercury - Total	mg/kg	0.1	<0.1	92.0%	----	----						
EP-071-SS	**TOTAL PETROLEUM HYDROCARBONS**												
EP-071-SS	C6 - C9 Fraction	mg/kg	2	<2	----	110%	109%						
EP-071-SS	C10 - C14 Fraction	mg/kg	50	<50	----	121%	121%						
EP-071-SS	C15 - C28 Fraction	mg/kg	100	<100	----	114%	116%						
EP-071-SS	C29 - C36 Fraction	mg/kg	100	<100	----	----	----						
EP-080-SS	**BTEX**												
EP-080-SS	Benzene	mg/kg	0.2	<0.2	----	101%	110%						
EP-080-SS	Toluene	mg/kg	0.2	<0.2	----	106%	104%						
EP-080-SS	Chlorobenzene	mg/kg	0.2	<0.2	----	106%	107%						
EP-080-SS	Ethylbenzene	mg/kg	0.2	<0.2	----	107%	109%						
EP-080-SS	meta- & para-Xylene	mg/kg	0.2	<0.2	----	108%	104%						
EP-080-SS	ortho-Xylene	mg/kg	0.2	<0.2	----	108%	107%						
EP-080S-SS	**VOLATILE TPH/BTEX COMPOUND SURROGATES**												
EP-080S-SS	1.2-Dichloroethane-D4	%	1	115	----	94	89						
EP-080S-SS	Toluene-D8	%	1	101	----	100	103						
EP-080S-SS	4-Bromofluorobenzene	%	1	103	----	104	104						

Published on DES Disclosure Log
RTI Act 2009

R

ORGANICS QUALITY CONTROL REPORT

BATCH No. : EB30999 **DATE BATCH RECEIVED : 8/8/2000**

CLIENT : IT Environmental **DATE BATCH COMPLETED : 10/8/2000**

Where applicable, internal standards are added to sample extracts prior to instrumental analysis.

Absolute peak areas and retention times fall within the criteria specified in the individual methods.

Method Code	Test	Matrix	Method Reference		QC Lot Number	Date Samples Extracted	Date Samples Analysed
			Extraction	Analysis			
EP-071	TPH-Volatile	Soil	USEPA 5030 A	USEPA 8260A	VOCS2959	08/08/00	08/08/00
	-Semivolatile	Soil	Tumbler	USEPA 8015A	TPHT2959	08/08/00	09/08/00
EP-080	BTEX	Soil	USEPA 5030 A	USEPA 8260A	VOCS2959	08/08/00	08/08/00

Published on DES Disclosure Log
RTI Act 2009

R

BATCH QUALITY CONTROL

ALS EP-071 : Total Petroleum Hydrocarbons by Fractions

QC Lot No. : VOCS2959
MATRIX : Soil

ANALYST: CTPI 49-S

Volatile Components

COMPOUND	Level Of Reporting (LOR)	Blank Conc	Spike Conc	SPIKE RESULTS				Control Limits		
				SCS Conc	DCS Conc	Av. Rec.	RPD	Recovery (%)		RPD
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%	%	Low	High	%
C6-C9	2.0	<LOR	20	22.1	21.7	109	2	89	113	20

Published on DES Disclosure Log
RTI Act 2009

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-080 : BTEX ANALYSIS

QC Lot No. : VOCS2959
MATRIX : Soil

ANALYST: CTPI 49-S

COMPOUND	Blank Results	Spike Conc	QC SPIKE RESULTS				Control Limits		
			SCS Conc	DCS Conc	Av. Rec.	RPD	Recovery		RPD
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	Low	High	%
Benzene	<LOR	1.0	1.0	1.1	106	9	92	111	20
Toluene	<LOR	1.0	1.1	1.0	105	2	85	115	20
Chlorobenzene	<LOR	1.0	1.1	1.1	107	1	92	111	20
Ethylbenzene	<LOR	1.0	1.1	1.1	108	2	89	112	20
m- & p-Xylene	<LOR	1.0	1.1	1.0	106	4	87	113	20
o-Xylene	<LOR	1.0	1.1	1.1	107	1	91	110	20

Published on DES Disclosure Log RTI Act 2009

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-071 : Total Petroleum Hydrocarbons by Fractions

Matrix : Soil

QC Lot : TPHT2959

Analyst : CTPI 49-Sch4

Semivolatile Components

COMPOUND	Level Of Reporting (LOR)	Blank Conc.	Spike Conc.	Spike Results				Control Limits		
				SCS Conc.	DCS Conc.	Av. Rec.	RPD	Recovery %		RPD
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%	%	Low	High	%
C10-C14	50	<LOR	350	422	424	121	0	91	136	20
C15-C28	100	<LOR	420	480	486	115	1	83	130	20
C29-C36	100	<LOR	N/A	N/A	N/A	N/A	N/A	60	110	20

Published on DES Disclosure Log RTI Act 2009

COMMENTS:

1) The control limits are based on ALS laboratory statistical data (Method QWI-ORG/07).

2) * : Recovery or RPD falls outside the recommended control limit.

Enquiries	Karen Hopper
Telephone	(07) 3225 8425
Your reference	ADT.be
Our reference	902328

6 May 2003

Mr CTPI 49-Sc
Callaghan & Toth Consulting Engineers
PO Box 203
TEWANTIN Q 4565

Dear Mr CTPI

No.1 Maple Street, Cooroy

I refer to your correspondence dated 24 April 2003 concerning the Boral Timber Yards at Maple Street Cooroy. In relation to your request for information, the Environmental Protection Agency (EPA) provide the following:

The Contaminated Land Unit has received the following reports in relation to the site on the 1 February 1999:

Stage II Investigation Report, Boral Timber Yards, 1 Maple Street, Cooroy prepared by Fluor Daniel GTI (Australia) Pty Ltd dated 9 October 1998; and,

Remediation Plan, Boral Timberyards, 1 Maple Street, Cooroy prepared by Fluor Daniel GTI (Australia) Pty Ltd dated 2 November 1998.

The most recent correspondence on file is dated 16 August 1999 from the IT Group (purchasers of Fluor Daniel GTI). I have enclosed a copy of this correspondence and related EPA correspondence for your information.

In relation to the land parcels in question, no lots are listed on the Contaminated Land Register. Lot 2 on RP470202 **is not** listed on the Environmental Management Register (EMR). The following lots **are** listed on the EMR for Notifiable Activity:

Lot 1 on RP88582
Lots 2 and 3 on RP110206
Lots 1-3 on RP153299
Lots 1-3 on RP87371.

It should be noted that should the remediation of the site include the on-site management of contamination, a draft Site Management Plan (SMP) will be required to be submitted with the validation reports for approval by the EPA. The landowners will be required to agree to this plan. This would result in the land parcels remaining on the EMR, but with a 'managed' status.

Please do not hesitate to contact me should you wish to discuss this further.

Yours sincerely

CTPI 49-Sch4

EPA (BG) corresp 17/6/99

CTPI 49-S

Karen Hopper
Principal Environment Officer
Environmental Operations (Contaminated Land)

Published on DERM Disclosure Log
RTI Act 2009

288 Edward Street Brisbane
Queensland 4000 Australia

GPO Box 2771 Brisbane Street
Queensland 4002 Australia

Telephone 3225 8425
Facsimile 3247 3278
Website www.epa.qld.gov.au
ABN 87 221 158 786

CALLAGHAN & TOTH
Consulting Engineers
P.O. Box 203, TEWANTIN 4565

ABN No. 59 405 570 314

CTPI 49-Sch4 RPEQ 1306
Phone 5449 0406
5474 2261

Lex Toth NPER (Env.) NPER (Civil)
Phone 54749 081
5474 9041

April 24, 2003

EPA Fax 32473278
Land Contamination Unit

Attention Ann Marie Dolton
No 1 Maple Street Cooroy Release from contaminated site Register

Dear Sir,

We act on behalf of Noosa Shire Council (Business Directorate) in relation to the development of the old Boral sawmill site on Mary River Road Cooroy

Noosa Council owns the property and has engaged us to advise on its development
Council has instructed us to find out the status of the land in relation to the contaminated

Boral have said that the site was remediated and taken off the register before sale
I request a copy of the certificate and any information which describes to what level the site was contaminated and to what lower level has it been remediated.
The RP descriptions are as follows: County of March Parish of Tewantin

ot 2 RP 470202
1 RP 88582 wood treatment + preservation Karen
1
1
RP 153299
RP 153299
153299 tackw
HOPPER
2 RP 87371
HOPPER.

Please contact the undersigned should you require any further information

Yours faithfully,

CTPI 49-Sch4

CTPI 49-Sch4

ADT.bc
C:\Keays\Jobs\CT\0303cooroy mill sites\lower mill site\contamination report request.doc

Published on DES Disclosure Log
RTI Act 2009

Environmental
Services, Qld

ITES

BORAL LIMITED
ACN 008 421 761

147 Coronation Drive
Milton Qld 4064
PO Box 1369, Milton Qld 4064

Telephone: (07) 3867 7601
Facsimile: (07) 3867 7488
Mobile: CTPI 49-Sch4
Email: CTPI 49-S@boral.com.au

25 August 2000

Mr Gary O'Connor
Hazardous Wastes and Contaminated Sites Section
Environmental Protection Agency
PO Box 155
Brisbane Albert Street Qld 4002

AGENCY
CTPI 49-Sch4
AUG 2000

Dear Gary,

BNE 200

NOTIFICATION OF

MAPLE STREET, COOROY, QLD 4563

Enclosed are two completed Notification of Land forms covering different parcels of land at the above property.

These parcels of land are described as:

Lot 2 RP 87371 County of March, Parish of Tewantin Title Ref. 13955238

Lot 3 RP 153299 County of March, Parish of Tewantin Title Ref. 15572079 1010156

There have been underground fuel storages on these parcels of land and in each case, these underground tanks have been removed.

notification information is forwarded for inclusion on the Environmental Management Register.

Yours faithfully

1010156 to include

NA#29

CTPI 49-Sch4 (BG)

CTPI 49-S

CTPI 49-S

CTPI 49-S

AUG 2000

CTPI 49-Sch4

Manager, Environmental Services Qld
Boral Limited

CTPI 49-Sch4 Boral Timber, Nandroya

Published on DES Disclosure Log
RTI Act 2009

Hazardous Waste and Contaminated Sites Section
Department of Environment and Heritage
PO Box 155
BRISBANE ALBERT STREET
QLD 4002
Ph: (07) 3225 1827 Fax: (07) 3227 8341

QUEENSLAND GOVERNMENT

Environment and Heritage

Notification of Land

Sections 118E and 118F *Environmental Protection Act (1994)*

The following information should be supplied by people providing notification to the Department of Environment and Heritage of contaminated land or land used for a notifiable activity under Schedule 3 of the *Environmental Protection Act 1994*.

Essential information

*Please complete **all** information* *Please complete one form per lot* **Date:** 25 - 8 - 2000.

Please refer to the reverse side for information on how to complete this form

1. Local government

NOOSA COUNCIL

2. Information provided by

Name CTPI 49-Sch4

Telephone

Organisation BORAL LIMITED

Address

MILTON QLD Postcode

3. Name by which the property is known locally

TIMBER

4. Lot on Plan description of parcel of land

Parish TEWANTIN.

5. Location

Street Address 1 MAPLE STREET

Town/suburb COOROY QLD

Postcode

6. Name and postal address of land owner

Address 34 HOLTS ROAD

COOROY Postcode

7. Area of parcel in square metres

(this information is used as a cross-check on the land description details)

8. Notification information *(please refer to the reverse side of this form and Schedule 3 of the Environmental Protection Act 1994)*

Description of the notifiable activity/ies for which the land is or has been used and the source/s of the suspected contamination *(please list all notifiable activities that the land has been used for and provide details).*

UNDER GROUND TANK WITH MORE THAN 200 LITRE CAPACITY
UNDERGROUND STORAGE TANK REMOVED.

9. Map or locality plan *(The processing of this information would be greatly assisted by the inclusion of a map or locality plan)*

Signature of person providing notification information CTPI 49-Sch4

30 AUG 2000

Published on DES Disclosure Log RTI Act 2009

Cooroy Country FIRST NATIONAL REAL ESTATE
22 Cedar Street, Cooroy 4563 Ph: (07) 5447 6888
A Hrs Ross Bellingham 0412 015

Map Ref: 15

491E B C D 492E E F G H JOINS 5 J K L M 494E N P Q

7079N 7078N 7077N 7076N 7075N 7074N

LIMIT OF MAPS

Cooroy Pmy
Cooroy
Noosa District High
Swim Pool
Ashmond Villas
Retirement Village
Clubhouse
Golf Course
Cemetery
Fire Stn
P
RSL
Lake Macdonald
LAKE MACDONALD
4563
COOROY
4563
SITE
Noosa
Cooroy - Noosaville 796-797
Palmwoods - Traveston 748/1
Palmwoods - Traveston 719/2
COOROY NOOSA RD
GUM TREE DR
PINE TREE DR
FANTAIL CR
CURLEW CR
FALCON CR
SWIFT CR
WILSEE CT
GEM ST
ELM ST
LAKE MACDONALD ST
SAPPHIRE ST
PEARL ST
DIAMOND ST
DIAMOND LA
OPAL ST
OPAL LA
RUBY ST
TOPAZ ST
KAURI ST
MIVA ST
OLIVINE LA
PEARTREE LA
TEWANTIN AMBULANCE LA
MARARA ST
MAPLE ST
ELM ST
CRYSTAL ST
CEDAR ST
TULIP ST
MYALL ST
COOLUM RD
OVERLANDER AV
FERRELL ST
HOLTS BRUCE
NANDROYA
BROWNS GREGG RD
MOUNTAIN RD
MARTINS RD
HOLTS RD
OCEAN VIEW DR
LUKES RD
COOROY MOUNTAIN RD
BIDNERS RD
FIG TREE LA
CAPRICORN CT
BUMUNDI
RAINBOW VIEW ST
LONE HAND RANGE
KIMBERLEY CT
DIERDRE DR
MAIN CAMP RD
HWY 1
6

Published on DES Disclosure Log RTI Act 2009

COPYRIGHT © UNIVERSAL PRESS PTY LTD (PUBLISHER) 1998

491E A B C D 492E E F G H JOINS 25 J K L M 494E N P Q

QUEENSLAND GOVERNMENT
Department of
Environment and Heritage

Hazardous Waste and Contaminated Sites Section
Department of Environment and Heritage
PO Box 155
BRISBANE ALBERT STREET
QLD 4002
Ph: (07) 3225 1827 Fax: (07) 3227 8341

Notification of Land

Sections 118E and 118F *Environmental Protection Act (1994)*

The following information should be supplied by people providing notification to the Department of Environment and Heritage of contaminated land or land used for a notifiable activity under Schedule 3 of the *Environmental Protection Act 1994*.

Essential information

- *Please complete **all** information*
- *Please complete one form per lot*

Date: 25-8-2000

- ***Please refer to the reverse side for information on how to complete this form***

1. Local government

NOOSA COUNCIL

2. Information provided by

Name CTPI 49-Sch4

Telephone 07-3867 7601

Organisation BORAL LIMITED

Address 147 CORONATION DRIVE

MILTON QLD Postcode 4064

3. Name by which the property is known locally

BORAL TIMBER

4. Lot on Plan description of parcel of land

Lot 3 Plan RP 153299

Parish TEWANTIN

5. Location

Street Address 1 MAPLE STREET

Town/suburb COOROY QLD

Postcode 4563

6. Name and postal address of land owner

Name ALLEN TAYLOR & COMPANY

Address 34 HOLTS ROAD

COOROY QLD Postcode 4563

7. Area of parcel in square metres

(this information is used as a cross-check on the land description details)

8. Notification information *(please refer to the reverse side of this form and Schedule 3 of the Environmental Protection Act 1994)*

Description of the notifiable activity/ies for which the land is or has been used and the source/s of the suspected contamination *(please list all notifiable activities that the land has been used for and provide details).*

THIS LAND HAS BEEN USED FOR NOTIFIABLE ACTIVITY No. 29 (a) PETROLEUM PRODUCT OR OIL STORAGE IN AN UNDERGROUND TANK WITH MORE THAN 200 LITRE CAPACITY. THIS UNDERGROUND STORAGE HAS BEEN REMOVED.

9. Map or locality plan *(The processing of this information would be greatly assisted by the inclusion of a map or locality plan)*

Signature of person providing notification information CTPI 49-Sch4

Published on DES Disclosure Log
RTI Act 2009

Cooroy Country FIRST NATIONAL REAL ESTATE
22 Cedar Street, Cooroy 4563 Ph: (07) 5447 6888
Map Ref: 1
A Hrs Ross Bellingham 0412 015



Published on DES Disclosure Log RTI Act 2009

IT Environmental (Australia) Pty Ltd
ACN 003 931 057

Level 2, 33 Longland Street Newstead QLD 4006
PO Box 2320 Fortitude Valley MAC QLD 4006
Telephone: 61 7 3252 5711
Facsimile: 61 7 3252 5712
Email: briadmin@fdgti.com.au

A Member of The IT Group

18 AUG 1999

16 August 1999

Project Ref: J207570

Environmental Protection Agency
Contaminated Land Unit
11th Floor, 160 Anne Street
BRISBANE QLD 4002

Attention: Ms. Belinda Gay
Senior Environmental Officer

EPA File no. 902328
Lot 1,2,3 on RP153299, Lot 1,2,3 on RP87371, Lot 2 on RP47020
Lot 1 on RP88582, Lot 2,3 on RP110206
Boral Timber
1 Maple Street, TEWANTIN

Published on DES Disclosure Log
RTI Act 2009

Dear Belinda

As discussed in our meeting on 13 July 1999, IT Environmental (Australia) Pty Ltd is responding to the EPA's letter of 17 June 1999 regarding the above-referenced site

We understand that a suitability statement cannot be issued for the site until sufficient remediation and validation has been completed. In commenting on the EPA's 17 June letter, we have used the same item numbers:

1. IT Environmental's remediation plan for the site includes an onsite monofill and/or insitu capping to manage impacted soils and sludges. In designing any type of onsite disposal cell we would ensure that site characteristics such as inundation, soil type, and proximity to groundwater and surface water are taken into account. Therefore engineering or geotechnical controls would be incorporated into any cap to make it impermeable and/or the disposal cell would be located well outside the inundation zone.

   We also understand that Noosa Shire Council should be consulted with respect to ongoing plans for the site at such time as the Site Management Plan is being prepared.

   We have used the 1998 draft health-based "E" thresholds as interim soil concentration goals for site remediation with the understanding that these relate to human health impact. However, mitigating ongoing risk to the environment would be a critical factor in the development and implementation of any remediation and site management plan (including ongoing monitoring) for the site.

R

We would like to thank the EPA for taking the time to meet with IT Environmental and Boral regarding this site. We will keep you apprised of any environmental developments at the site. In the meantime, please do not hesitate to contact the undersigned should you have any questions regarding the information in this letter or the site in general.

Yours sincerely

CTPI 49-Sch4

Senior Project Manager

CTPI 49-Sch4

Principal Hydrogeologist

cc: CTPI 49-Sch4 *Manager, Environmental Services, QLD & NZ, Boral Limited*

Published on DES Disclosure Log
RTI Act 2009

PO Box 155 Brisbane Albert Street, Brisbane, QLD 4002

Enquiries to Belinda Gay
Telephone (07) 3227 7715 fax: (07) 3227 7677
Your reference B7570R03
Our reference 902328

17 June, 1999

Attention: CTPI 49-Sch4
IT Environmental (Australia) Pty Ltd
PO Box 2320
FORTITUDE VALLEY QLD 4006

Site Contamination Assessment
Lot 1,2,3 on RP153299, Lot 1,2,3 on RP87371, Lot 2 on RP47020,
Lot 1 on RP88582, Lot 2,3 on RP110206
1 Maple Street, TEWANTIN QLD

Thank you for the copy of the site contamination assessment report regarding the above site. A site suitability statement can not be issued for Lot 1,2,3 on RP153299, Lot 1,2,3 on RP RP87371, Lot 2 on RP47020, Lot 1 on RP88582, Lot 2,3 on RP110206 until sufficient remediation and validation has been satisfactorily completed.

It is recommended that the following issues be addressed in future remediation and validation reports submitted to the Contaminated Sites Section for the subject site. Addressing these issues will assist in reducing the time taken for the assessment of individual reports and the need to supply further information.

The Remediation Plan section 3.3 proposes to use either an on-site monofil or in situ capping to manage hydrocarbon, metals and boron impacted soils and sludges. Section 3.3 further states that off-site disposal was discounted at this stage due to the relatively low metals concentrations and volumes of soil. Please discuss the appropriateness of in situ capping or on site monofil given the site is subject to flooding. Note: If it is proposed for council to take possession of the land, the council should be consulted with respect to the SMP conditions.

The report refers to soils exceeding health "E" thresholds, these levels relate to human health impacts and do not address the environmental risks. Please address any issues related to environmental risk from soils remaining on site with contamination levels above the environmental investigation level but below the health "E" threshold.

Published on DES Disclosure Log RTI Act 2009

It is advised that the NSW EPA should be contacted to determine any interstate movement requirements for the borax pit process wastewater.

Should require any further information please do not hesitate to contact Belinda Gay on 3227 7715.

Yours sincerely

CTPI 49-Sch4

Belinda Gay
Senior Environmental Officer
Contaminated Sites Section

Published on DES Disclosure Log
RTI Act 2009

IT Environmental (Australia) Pty Ltd
(Formerly Fluor Daniel GTI Australia Pty Ltd)
A Member of The IT Group

FACSIMILE

This facsimile contains CONFIDENTIAL INFORMATION which may also be LEGALLY PRIVILEGED and which is intended only for the use of the Addressee(s) named. If you are not the intended recipient of this facsimile, or the employee or agent responsible for delivering it to the intended recipient, you are hereby notified that any dissemination or copying of this facsimile is strictly prohibited. If you received this facsimile in error, please notify us immediately by telephone and destroy the original facsimile. Thank you.

DATE: 9-4-99 **TIME:** 1345

FAX #: 3227 7677

TO: Belinda Gay, HWCSS

FROM: CTPI 49-Sch4 CTPI 49

 # OF PAGES (including cover page): 9

Re: BORAL Maple St, Coorey.

attached are ALS results you requested - sorry about poor copies in report

COC 14102 are soil samples from the well bores:

MW1
5 - depth (m) - Results are in
26/05/98 (date) the Tables.

CTPI 49-Sch4

Published on DES Disclosure Log
RTI Act 2009

IT ENVIRONMENTAL (AUSTRALIA) PTY LTD A.C.N. 003 931 057
12 Stratton Street NEWSTEAD QLD 4006 (PO Box 2320 FORTITUDE VALLEY QLD 4006)
Telephone: (07) 3252 5711 Fax: (07) 3252 5712 Email: briadmin@fdgti.com.au

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

ANALYTICAL REPORT

CONTACT: MR CTPI 49-Sch4
CLIENT: FLUOR DANIEL GTI (AUST) P/L
ADDRESS: P O BOX 2320
FORTITUDE VALLEY QLD 4006

LABORATORY: ENV BRISBANE
BATCH NUMBER: EB15333
SUB BATCH: 0
No. OF SAMPLES: 31
DATE RECEIVED: 29/06/98
DATE COMPLETED: 08/07/98

ORDER No.: B7570 COC14117 SAMPLE TYPE: SOIL PROJECT: BORAL COOROY

SAMPLE NUMBER	ELEMENT / UNIT / METHOD / L.O.R.	Moisture % EA-055 0.1	As mg/kg EG-005T 1	B mg/kg EG-005T 20	Cr mg/kg EG-005T 1	Cu mg/kg EG-005T 1	Cr 3+ mg/kg EG-049 1
C9	200-500 25/05/	20.5	9	----	38	18	38
C9	500-1000 25/05	20.0	6	----	21	14	21
D5	200-500 27/05/	59.5	331	----	694	351	694
D5	500-1000 27/05	66.1	288	----	581	229	581
D6	200-500 27/05/	21.9	32	----	29	25	29
D6	500-1000 27/05	20.4	4	----	25	17	25
D7	200-500 27/05/	25.6	168	----	261	169	261
D9	200-500 27/05/	20.8	21	----	44	28	44
D9	500-1000 27/05	19.9	4	----	26	17	26
E3	200-500 27/05/	15.3	8	----	34	19	34
F1	200-500 27/05/	18.5	3	----	25	15	25
F2	200-500 27/05/	20.6	25	----	63	30	63
F3	200-500 27/05/	19.5	26	----	54	29	54
F4	200-500 27/05/	17.7	5	----	21	13	21
F5	200-500 27/05/	20.6	4	----	22	26	22
F6	200-500 27/05/	18.8	6	----	22	57	22
F7	200-500 27/05/	19.2	<1	----	23	12	23
F8	200-500 27/05/	18.2	4	----	23	15	23
F9	200-500 27/05/	15.0	<1	----	21	10	21
F10	200-500 27/05/	14.6	<1	----	18	10	18
F5	500-1000 28/05	19.0	7	----	24	22	24
F6	500-1000 28/05	16.6	5	----	22	14	22
F7	500-1000 28/05	19.5	6	----	23	16	23
F8	500-1000 28/05	17.2	4	----	23	12	23
F9	500-1000 28/05	14.9	3	----	21	12	21
F10	500-1000 28/05	14.8	3	----	19	12	19
G4	200-500 28/05/	26.4	----	41	----	----	----
G14	200-500 28/05/	16.1	----	<20	----	----	----
G15	200-500 28/05/	15.2	----	<20	----	----	----
H3	500-1000 28/05	17.8	32	----	153	5	153

COMMENTS: Samples as received digested by USEPA method 3051 prior to the determination of metals. Results reported on a dry weight basis. Cr3+ determined as the difference between total chromium and hexavalent chromium. Cr+6 determined on a 1:5 soil/water extract. LOR's for samples D5 200-500 & D5 500-1000 raised due to high moisture conte CTPI 49-Sch4

• This is the Final Report which supersedes any preliminary reports with this batch number. • Results apply to sample(s) as submitted by client.

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

Alice Springs Laboratory
Phone: (08) 8952 6020 Fax: (08) 8952 6028
Bendigo Laboratory
Phone: (03) 5446 1390 Fax: (03) 5446 1389
Brisbane Laboratory
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: (08) 9021 1457 Fax: (08) 9021 6253
New Zealand Laboratory
Phone: (07) 575 7654 Fax: (07) 575 7641
Orange Laboratory
Phone: (02) 6363 1722 Fax: (02) 6363 1189
Perth Laboratory
Phone: (08) 9249 2988 Fax: (08) 9249 2942
Townsville Laboratory
Phone: (077) 79 9155 Fax: (077) 79 9729

Released under FOI Act 2009 DES Disclosure Log

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

ANALYTICAL REPORT

CONTACT: MR CTPI 49-Sch4
CLIENT: FLUOR DANIEL GTI (AUST) P/L
ADDRESS: P O BOX 2320
FORTITUDE VALLEY QLD 4006

LABORATORY: ENV BRISBANE
BATCH NUMBER: EB15333
SUB BATCH: 0
No. OF SAMPLES: 31
DATE RECEIVED: 29/06/98
DATE COMPLETED: 08/07/98

ORDER No.: B7570 COC14117 SAMPLE TYPE: SOIL PROJECT: BORAL COOROY

SAMPLE NUMBER	ELEMENT UNIT METHOD L.O.R.	Moisture % EA-055 0.1	As mg/kg EG-005T 1	B mg/kg EG-005T 20	Cr mg/kg EG-005T 1	Cu mg/kg EG-005T 1	Cr 3+ mg/kg EG-049 1
H19 200-500 28/05/		16.8	5	----	35	16	35

CTPI 49-Sch4

COMMENTS:

NATA 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.

• 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: (08) 8952 6020 Fax: (08) 8952 6028
Bendigo Laboratory
Phone: (03) 5446 1390 Fax: (03) 5446 1389
Brisbane Laboratory
Phone: (07) 3243 7222 Fax: (07) 3243 7218
Charters Towers Laboratory
Phone: (077) 87 4155 Fax: (077) 87 4220
Glenorchy Laboratory
Phone: (077) 42 1323 Fax: (077) 42 1685
Kalgoorlie Laboratory
Phone: (08) 9021 1457 Fax: (08) 9021 6253
New Zealand Laboratory
Phone: (07) 575 7654 Fax: (07) 575 7641
Orange Laboratory
Phone: (02) 6363 1722 Fax: (02) 6363 1189
Perth Laboratory
Phone: (08) 9240 2988 Fax: (08) 9240 2942
Townsville Laboratory
Phone: (077) 79 9155 Fax: (077) 79 9729

Published on DES Disclosure Log RTI Act 2009

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

ANALYTICAL REPORT

CONTACT: MR CTPI 49-Sch4
CLIENT: FLUOR DANIEL GTI (AUST) P/L
ADDRESS: P O BOX 2320
FORTITUDE VALLEY QLD 4006

LABORATORY: ENV BRISBANE
BATCH NUMBER: EB15333
SUB BATCH: 0
No. OF SAMPLES: 31
DATE RECEIVED: 29/06/98
DATE COMPLETED: 08/07/98

ORDER No.: B7570 COC14117 SAMPLETYPE: SOIL
PROJECT: BORAL COORDY

SAMPLE NUMBER	ELEMENT UNIT METHOD L.O.R.	Cr 6+ mg/kg EG-050 0.1
C9 200-500 25/05/		<0.1
C9 500-1000 25/05		<0.1
D5 200-500 27/05/		<0.2
D5 500-1000 27/05		<0.2
D6 200-500 27/05/		<0.1
D6 500-1000 27/05		<0.1
D7 200-500 27/05/		<0.1
D9 200-500 27/05/		<0.1
D9 500-1000 27/05		<0.1
E3 200-500 27/05/		<0.1
F1 200-500 27/05/		<0.1
F2 200-500 27/05/		<0.1
F3 200-500 27/05/		<0.1
F4 200-500 27/05/		<0.1
F5 200-500 27/05/		<0.1
F6 200-500 27/05/		<0.1
F7 200-500 27/05/		<0.1
F8 200-500 27/05/		<0.1
F9 200-500 27/05/		<0.1
F10 200-500 27/05/		<0.1
F5 500-1000 28/05		<0.1
F6 500-1000 28/05		<0.1
F7 500-1000 28/05		<0.1
F8 500-1000 28/05		<0.1
F9 500-1000 28/05		<0.1
F10 500-1000 28/05		<0.1
G4 200-500 28/05/		----
G14 200-500 28/05/		----
G15 200-500 28/05/		----
H3 500-1000 28/05		<0.1

COMMENTS:

CTPI 49-Sch4

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.

• 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: (08) 8952 6020 Fax: (08) 8952 6028
Bendigo Laboratory
Phone: (03) 5446 1390 Fax: (03) 5446 1389
Brisbane Laboratory
Phone: (07) 3243 7222 Fax: (07) 3243 7218
Charters Towers Laboratory
Phone: (077) 87 4155 Fax: (077) 87 4220
Glenelg Laboratory
Phone: (077) 42 1323 Fax: (077) 42 1685
Kalgoorlie Laboratory
Phone: (08) 9021 1457 Fax: (08) 9021 6263
New Zealand Laboratory
Phone: (07) 575 7654 Fax: (07) 575 7641
Orange Laboratory
Phone: (02) 6363 1722 Fax: (02) 6363 1189
Perth Laboratory
Phone: (08) 9249 2988 Fax: (08) 9249 2942
Townsville Laboratory
Phone: (077) 79 9155 Fax: (077) 79 9720

Released by DES Disclosure Log RTI Act 2009

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

ANALYTICAL REPORT

CONTACT: MR CTPI 49-Sch4
CLIENT: FLUOR DANIEL GTI (AUST) P/L
ADDRESS: P O BOX 2320
FORTITUDE VALLEY QLD 4006

LABORATORY: ENV BRISBANE
BATCH NUMBER: EB15333
SUB BATCH: 0
No. OF SAMPLES: 31
DATE RECEIVED: 29/06/98
DATE COMPLETED: 08/07/98

ORDER No.: B7570 COC14117 SAMPLE TYPE: SOIL PROJECT: BORAL COOROY

SAMPLE NUMBER	ELEMENT UNIT METHOD L.O.R.	Cr 6+ mg/kg EG-050 0.1					
H19 200-500 28/05/		<0.1					

Published on DES Disclosure Log
RTI Act 2009

CTPI 49-Sch4

COMMENTS:

NATA No. 625
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.

• 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: (08) 8952 6020 Fax: (08) 8952 6028
Bendigo Laboratory
Phone: (03) 5446 1390 Fax: (03) 5446 1389
Brisbane Laboratory
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: (08) 9021 1467 Fax: (08) 9021 6253
New Zealand Laboratory
Phone: (07) 575 7654 Fax: (07) 575 7641
Orange Laboratory
Phone: (02) 6363 1722 Fax: (02) 6363 1189
Perth Laboratory
Phone: (08) 9249 2988 Fax: (08) 9249 2942
Townsville Laboratory
Phone: (077) 79 9155 Fax: (077) 79 9729

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

ANALYTICAL REPORT

CONTACT: MR CTPI 49-Sch4
CLIENT: FLUOR DANIEL GTI (AUST) P/L
ADDRESS: P O BOX 2320
FORTITUDE VALLEY QLD 4006

LABORATORY: ENV BRISBANE
BATCH NUMBER: EB14826
SUB BATCH: 0
No. OF SAMPLES: 11
DATE RECEIVED: 29/05/98
DATE COMPLETED: 10/06/98

ORDER No.: B7570 COC 14103 SAMPLE TYPE: SOIL PROJECT: BORAL - COOROY

SAMPLE NUMBER	ELEMENT UNIT METHOD L.O.R.	Moisture % EA-055 0.1	As mg/kg EG-005T 2	B mg/kg EG-005T 40	Cd mg/kg EG-005T 2	Cu mg/kg EG-005T 2	Pb mg/kg EG-005T 2
D1 0-0.2 27/05/98		18.2	27	<40	<2	29	42
D1 0.2-0.5 27/05/		25.3	23	<40	<2	27	31
D2 0-0.2 27/05/98		20.0	26	<40	<2	29	33
D3 0-0.2 27/05/98		12.2	20	<40	<2	43	26
D4 0-0.2 27/05/98		15.6	10	<40	<2	9	17
D5 0-0.2 27/05/98		55.0	464	<40	<2	469	<2
D6 0-0.2 27/05/98		31.2	132	<40	<2	114	21
D7 0-0.2 27/05/98		40.2	279	<40	2	221	21
D8 0-0.2 27/05/98		20.2	64	<40	<2	59	19
D9 0-0.2 27/05/98		36.9	101	<40	2	92	86
D10 0-0.2 27/05/98		23.3	17	<40	<2	28	27

Published on DES Disclosure Log RTI Act 2009

NATA 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.

COMMENTS: Samples as rec'd dig'd by USEPA 3051 prior to the det'n of metals. Hexavalent Chromium determined on a 1:5 soil/water extract. Trivalent chromium determined as the difference between total chromium and hexavalent chromium. Rslts rep'd on a dry wt basis. This report supersedes any previous preliminary reports of the same batch number.

CTPI 49-Sch4

• This is the Final Report which supersedes any preliminary reports with this batch number. • Results apply to sample(s) as submitted by client.

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

Alice Springs Laboratory
Phone: (08) 8952 6020 Fax: (08) 8952 6028
Bendigo Laboratory
Phone: (03) 5446 1390 Fax: (03) 5446 1389
Brisbane Laboratory
Phone: (07) 3243 7222 Fax: (07) 3243 7218
Charters Towers Laboratory
Phone: (077) 87 4155 Fax: (077) 87 4220
Glenorchy Laboratory
Phone: (077) 42 1323 Fax: (077) 42 1665
Kalgoorlie Laboratory
Phone: (08) 9021 1457 Fax: (08) 9021 6253
New Zealand Laboratory
Phone: (07) 575 7654 Fax: (07) 575 7641
Orange Laboratory
Phone: (02) 6363 1722 Fax: (02) 6363 1189
Perth Laboratory
Phone: (08) 9249 2988 Fax: (08) 9249 2942
Townsville Laboratory
Phone: (077) 79 9155 Fax: (077) 79 9729

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

ANALYTICAL REPORT

CONTACT: MR CTPI 49-Sch4
CLIENT: FLUOR DANIEL GTI (AUST) P/L
ADDRESS: P O BOX 2320
FORTITUDE VALLEY QLD 4006

LABORATORY: ENV BRISBANE
BATCH NUMBER: EB14826
SUB BATCH: 0
No. OF SAMPLES: 11
DATE RECEIVED: 29/05/98
DATE COMPLETED: 10/06/98

ORDER No.: B7570 COC 14103 SAMPLE TYPE: SOIL PROJECT: BORAL - COOROY

SAMPLE NUMBER	ELEMENT UNIT METHOD L.O.R.	Zn mg/kg EG-005T 2	Cr 3+ mg/kg EG-049 2	Cr 6+ mg/kg EG-050 2			
D1 0-0.2 27/05/98		62	42	<2			
D1 0.2-0.5 27/05/		71	39	<2			
D2 0-0.2 27/05/98		53	43	<2			
D3 0-0.2 27/05/98		115	39	<2			
D4 0-0.2 27/05/98		12	28	<2			
D5 0-0.2 27/05/98		10	1190	<2			
D6 0-0.2 27/05/98		42	217	<2			
D7 0-0.2 27/05/98		52	483	<2			
D8 0-0.2 27/05/98		37	110	<2			
D9 0-0.2 27/05/98		94	142	<2			
D10 0-0.2 27/05/98		59	41	<2			

Published on DES Disclosure Log
RTI Act 2009

COMMENTS:

CTPI 49-Sch4

• 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: (08) 8952 6020 Fax: (08) 8952 6028
Bendigo Laboratory
Phone: (03) 5446 1390 Fax: (03) 5446 1389
Brisbane Laboratory
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: (08) 9021 1457 Fax: (08) 9021 6253
New Zealand Laboratory
Phone: (07) 575 7654 Fax: (07) 575 7641
Orange Laboratory
Phone: (02) 6363 1722 Fax: (02) 6363 1189
Perth Laboratory
Phone: (08) 9249 2988 Fax: (08) 9249 2942
Townsville Laboratory
Phone: (077) 79 9155 Fax: (077) 79 9729

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

ANALYTICAL REPORT

CONTACT: MR CTPI 49-Sch4
CLIENT: FLUOR DANIEL GTI (AUST) P/L
ADDRESS: P O BOX 2320
FORTITUDE VALLEY QLD 4006

LABORATORY: ENV BRISBANE
BATCH NUMBER: EB14824
SUB BATCH: 0
No. OF SAMPLES: 19
DATE RECEIVED: 29/05/98
DATE COMPLETED: 09/06/98

ORDER No.: B7570 COC 14104 SAMPLE TYPE: SOIL PROJECT: BORAL - COOROY

SAMPLE NUMBER	ELEMENT / UNIT / METHOD / L.O.R.	Moisture % EA-055 0.1	As mg/kg EG-005T 1	B mg/kg EG-005T 20	Cd mg/kg EG-005T 1	Cu mg/kg EG-005T 1	Pb mg/kg EG-005T 1
E1	0-0.2 27/05/98	37.1	155	<20	2	172	36
E1	0.2-0.5 27/05/	41.3	187	<20	<1	203	23
E2	0.2-0.5 27/05/	23.6	73	<20	1	64	30
E3	0-0.2 27/05/98	33.9	198	<20	<1	185	26
E4	0.2-0.5 27/05/	24.8	19	<20	1	25	29
E5	0-0.2 27/05/98	17.3	56	24	1	68	77
E5	0.2-0.5 27/05/	18.6	9	<20	2	12	27
E6	0.2-0.5 27/05/	22.2	15	<20	1	24	43
E7	0-0.2 27/05/98	25.2	76	27	2	106	119
E7	0.2-0.5 27/05/	22.9	18	26	2	46	127
E8	0-0.2 27/05/98	13.6	27	23	1	73	93
E8	0.2-0.5 27/05/	20.6	12	<20	1	15	23
E9	0-0.2 27/05/98	26.3	13	<20	1	23	29
E10	0-0.2 28/05/98	16.4	10	<20	1	16	34
E11	0-0.2 28/05/98	22.7	10	<20	1	22	39
E11	0.2-0.5 28/05/	19.7	10	<20	1	17	35
E12	0-0.2 28/05/98	6.7	10	<20	1	25	32
E13	0-0.2 28/05/98	19.4	22	<20	<1	32	58
EP	S 28/05/98	43.3	50	<20	<1	59	44

Published on PES Disclosure Log RTI Act 2009

CTPI 49-Sch4

NATA 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.

COMMENTS: Samples as received digested by USEPA 3051 prior to the determination of metals. Trivalent chromium determined as the difference between total chromium and hexavalent chromium. Hexavalent Chromium determined on 1:5 soil/water extract. Rslts rep'd on a dry wt basis. This report supersedes any previous preliminary reports of the same batch number.

• This is the Final Report which supersedes any preliminary reports with this batch number. • Results apply to sample(s) as submitted by client.

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

Alice Springs Laboratory
Phone: (08) 8952 6020 Fax: (08) 8952 6028
Bendigo Laboratory
Phone: (03) 5446 1390 Fax: (03) 5446 1389
Brisbane Laboratory
Phone: (07) 3243 7222 Fax: (07) 3243 7218
Charters Towers Laboratory
Phone: (077) 87 4155 Fax: (077) 87 4220
Glenelg Laboratory
Phone: (077) 42 1923 Fax: (077) 42 1685
Kalgoorlie Laboratory
Phone: (08) 9021 1457 Fax: (08) 9021 6253
New Zealand Laboratory
Phone: (07) 576 7654 Fax: (07) 575 7641
Orange Laboratory
Phone: (02) 6363 1722 Fax: (02) 6363 1189
Perth Laboratory
Phone: (08) 9249 2988 Fax: (08) 9249 2342
Townsville Laboratory
Phone: (077) 79 9155 Fax: (077) 79 9729

ABORATORY SERVICES P/L
A.C.N. 009 936 029

ANALYTICAL REPORT

CONTACT: MR CTPI 49-Sch4
CLIENT: FLUOR DANIEL GTI (AUST) P/L
ADDRESS: P O BOX 2320
FORTITUDE VALLEY QLD 4006

LABORATORY: ENV BRISBANE
BATCH NUMBER: EB14824
SUB BATCH: 0
No. OF SAMPLES: 19
DATE RECEIVED: 29/05/98
DATE COMPLETED: 09/06/98

ORDER No.: B7570 COC 14104 SAMPLE TYPE: SOIL PROJECT: BORAL - COOROY

SAMPLE NUMBER	ELEMENT UNIT METHOD L.O.R.	Zn mg/kg EG-005T 1	Cr 3+ mg/kg EG-049 1	Cr 6+ mg/kg EG-050 1
E1	0-0.2 27/05/98	79	226	<1
E1	0.2-0.5 27/05/	68	332	<1
E2	0.2-0.5 27/05/	72	118	<1
E3	0-0.2 27/05/98	54	271	<1
E4	0.2-0.5 27/05/	63	34	<1
E5	0-0.2 27/05/98	125	77	<1
E5	0.2-0.5 27/05/	28	26	<1
E6	0.2-0.5 27/05/	82	32	<1
E7	0-0.2 27/05/98	120	79	<1
E7	0.2-0.5 27/05/	131	39	<1
E8	0-0.2 27/05/98	214	49	<1
E8	0.2-0.5 27/05/	48	31	<1
E9	0-0.2 27/05/98	71	27	<1
E10	0-0.2 28/05/98	76	28	<1
E11	0-0.2 28/05/98	75	30	<1
E11	0.2-0.5 28/05/	47	30	<1
E12	0-0.2 28/05/98	90	23	<1
E13	0-0.2 28/05/98	267	35	<1
EP	S 28/05/98	176	80	<1

Published on DES Disclosure Log
RTI Act 2009

COMMENTS:

CTPI 49-Sch4

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.

• 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: (08) 8952 6020 Fax: (08) 8952 6028
Bendigo Laboratory
Phone: (03) 5446 1390 Fax: (03) 5446 1389
Brisbane Laboratory
Phone: (07) 3243 7222 Fax: (07) 3243 7218
Charters Towers Laboratory
Phone: (077) 87 4155 Fax: (077) 87 4220
Clonsurry Laboratory
Phone: (077) 42 1323 Fax: (077) 42 1685
Kalgoorlie Laboratory
Phone: (08) 9021 1457 Fax: (08) 9021 6253
New Zealand Laboratory
Phone: (07) 575 7654 Fax: (07) 575 7641
Orange Laboratory
Phone: (02) 6363 1722 Fax: (02) 6363 1189
Perth Laboratory
Phone: (08) 9249 2988 Fax: (08) 9249 2942
Townsville Laboratory
Phone: (077) 79 9155 Fax: (077) 79 9729

Queensland Department of Environment and Heritage

File note of meeting/discussion

(tick one box only) ☐ Meeting ☐ Telephone 1 of 5

Date 8/4/99 Time _____ am/pm

Between ~~from~~ Belinda Gay of _____

and ~~File~~ File 902328. of _____

~~Subject(s)~~ Proposed remediation of Boral timber yards to a Park area.

p3 of 12 major contaminates CCA treatment p3 of 12.
borax dips.
boiler ash
ground water.

p3 of 12 → site is still operational. p3 of 12.

p4 of 12 → CCA saw dust - ~~stock~~ pole shed, ~~above~~ ground collection topper up to 1m deep. p4 of 12.

p4 of 12 → arsenic in area of former fire pit road adjacent to present mill

p5 of 12 → hydrocarbon impacted soil near former diesel UST excavated, remediated, validated & returned to hole.

p5 of 12 → sludges (metals & boron) in evaporation pond & borax pit

p5 of 12 → PAHs in sample location C6. ≃ 1m³

p5 of 12 → TPH in sample F6 near old mill. ≃ 1m³

→ ground water MW5 Thoron 40.4mg/L.

p4 of 12 → borax dips. 20,000L at 9.5mg/L B & 100,000L at 1.4mg/L B

→ intend to remove saw dust

→ ground water? options - remove bore & dispose.

* p2 of 12 Site subject to flooding from Coorey Creek. Creek runs through property.

Initial/signature _____ page ____ of ____
(each page please)

FM549 JULY95

Reminder - is written confirmation required? ☐ Yes ☐ No R

Please forward to records management section.

Published on DES Disclosure Log RTI Act 2009

Queensland Department of Environment and Heritage

File note of meeting/discussion

(tick one box only) ☐ Meeting ☐ Telephone 295

Date 8/4/99 Time _____ am/pm

Between From: Belinda Gay of _____

and File 9023298 of _____

Subject(s) ~~Proposed~~ remediation of Boral timber yards

Proposed remediation

p6 5/12 - Sawdust to be removed.

p6 5/12 - Waste water → re-use in Tertiefield plant & discharge low levels to sewer

p 75/12 - ~~Impacted~~ Soil - onsite monofill or in situ capping to manage hydrocarbon, metal, boron soils & sludges objective to isolate soils above "E" thresholds from direct exposure to potential site users.

p 95/12 - Groundwater - removal of borax dips + implementation of controls to prevent future use of groundwater

p 95/12 → emptied concrete borax dips to be used for entombment of impacted soils.

p 95/12 SMP will be required for remediation activities + 2nd SMP for ongoing management of the site.

p 125/12 Any contaminated material left on site to be left in situ or placed in a dedicated monofill & accurately surveyed.

* Issue of ash not addressed

R

Initial/signature _____ page ____ of ____
(each page please)

FM549 JULY95

Reminder - is written confirmation required? ☐ Yes ☐ No
Please forward to records management section.

Published on DES Disclosure Log RTI Act 2009

Queensland Department of Environment and Heritage

File note of meeting/discussion

(tick one box only) ☐ Meeting ☐ Telephone

3 of 5

~~Date~~ _____ Time _____ am/pm

Between _____ of _____

and _____ of _____

Subject(s) Site investigation.

p 2 of 30 - 110 sample locations.
- 6 monitoring wells. Ground water sampling.
- 7 sediment (creek) samples
- 9 H_2O (creek) samples

~~Site history - pre 19~~

p 4 of 30 site history - timber mill since early 1900's → 1940's
- ~~storage~~ of timber 1940-1953
- mill built 1959-60 (current
- kiln x boiler 1959-60.
- land levelled 1960's
- timber drying 1969.
- UST (type) L3 RP153299 removed at date unknown.
- UST x above ground ST near kiln.
- boron treatment commenced 1960's stopped early 90
- no CCA treatment on site
- CCA treated timber imported onto site for milling.
- Ash x sawdust disposed of across the site since 1960's stopped ~ mid 1990's.

Published on DES Disclosure Log RTI Act 2009

Initial/signature _____ page ____ of ____
(each page please)

Reminder - is written confirmation required? ☐ Yes ☐ No

R

FM549 JULY95

Please forward to records management section.

Queensland Department of Environment and Heritage

File note of meeting/discussion

(tick one box only) ☐ Meeting ☐ Telephone 4 5 / 5

Date _____ Time _____ am/pm

Between _____ of _____

and _____ of _____

Subject(s) _____

p5 of 30 → 1991 Envirotest - environmental site audit.
- fire pit, boiler, evaporator pond, borax pits.
contaminated - B, Cu, Cr, As,

p6 of 30 Area A - Vacant land & Office low risk
- no timber processing.

p7 of 30 Area B - timber stock area for processed timber
- herbicide, diesel as dust suppressants.

p7 of 30 Area C Fire pit. - (Enviropest - surface contamination within 8m of pit.

p7 of 30 Area D. New CCA sawdust stockpile.

p7 of 30 Area E Evaporation Pond & catchment.
- sediment contamination, dumped boiler ash.

p8 of 30 Area F milling of CCA timber. CCA sawdust

R

Initial/signature _____ page ____ of ____
(each page please)

FM549 JULY95

Reminder - is written confirmation required? ☐ Yes ☐ No
Please forward to records management section.

Published on DES Disclosure Log RTI Act 2009

Queensland Department of Environment and Heritage

File note of meeting/discussion

(tick one box only) ☐ Meeting ☐ Telephone

SJS

Date _____ Time _____ am/pm

Between _____ of _____

and _____ of _____

Subject(s) _____

p8 of 30 - Area G Borax pits - High ground H_2O content + contaminated soil.

p8 of 30 Area H - boiler ash & fill impacted with CCA. CCA sawdust - infill area.

p8 of 30 Area I Creek sediments & H_2O levels Cr, Cu, B exceed guidelines.

- All sites well sampled, - figures 3a → 6.

p18 of 30 - ground H_2O 1 → 3 m.

→ 'E' level human health - do they constitute an E risk in this situation?

→ Transport of regulated waste to NSW → Gary if its okay.

→ In situ capping on site landfill appropriately sited due to the site loading.

→ Cap needs to be flood stable.

→ suitable site to cap?

Published on DES Disclosure Log RTI Act 2009

Initial/signature _____ page ____ of ____
(each page please)

Reminder - is written confirmation required? ☐ Yes ☐ No
Please forward to records management section.

R

FM549 JULY95

Queensland Department of Environment and Heritage

File note of meeting/discussion

(tick one box only) ☐ Meeting ☐ Telephone

6A.

Date 9/4/99 Time _____ am/pm

Between Fiona Belinda Sgy of _____

and File 902328 of _____

Subject(s) Proposed remediation of boral timber yards to a Park land.

⇒ Samples - analytical report for samples A1-A4 supplied twice

~~⇒ analytical report for Samples B1-B11 As, B, Cd, Cu results not supplied. - follow~~

⇒ Order no. B7570 COC ~~14103~~ 14103 Analysis cont tell what the samples is's are.

" " B7570 COC 14104 cont tell what the sample no's are.

" " B7570 COC 14117

~~B7570 COC 14102~~ I rang 89/4/99 & requested they fax these sheets through.

MW1-MW6 - Soil samples according to ALS. B7570 COC 14102

Ground H_2O samples according to SFT. Table 13.

⇒ no ALS report for ~~Groundwater~~ final samples.

" " " " H_2O samples from ~~Evaporation pond~~ or ~~bore pit~~. table 14

⇒ No ALS report for samples from the ~~test~~ pit & local farm Table 15.

Initial/signature _____ page ____ of ____
(each page please)

R FM549 JULY95

Reminder - is written confirmation required? ☐ Yes ☐ No
Please forward to records management section.

Published on DES Disclosure Log RTI Act 2009

table corresponds with lab rep
COC supplied + lab receipt

TABLE 3
Soil Analytical Results - Metals - Area A - Vacant Land and Office Area
Results in parts per million (ppm)

Sample ID	Depth (mm)	Arsenic	Boron	Cadmium	Copper	Lead	Zinc	Trivalent Chromium	Hexavalent Chromium
A1-0-0.2	0-200	4	<20	<1	84	22	61	21	<0.1
A2-0-0.2	0-200	1	<20	<1	7	14	22	20	<0.1
A3-0-0.2	0-200	22	<20	7	94	276	479	34	<0.1
A4-0-0.2	0-200	2	<20	<1	9	18	77	19	<0.1
Maximum		22	<20	7	94	276	479	34	<0.1
Minimum		1	<20	<1	7	14	22	19	<0.1
Mean		7.250	<20	1.750	48.500	82.500	159.750	23.500	<0.1
Median		3	<20	7	46.5	20	69	20.5	<0.1
Stand Dev.		9.912	0.000	3.500	46.950	129.041	214.083	7.047	0.000
Level of Reporting		1	20	1	1	1	1	1	0.1
Investigation Thresholds									
DoE Environmental - 1998 (Draft)		20	1-75 *	3	60	300	200	50	NE
DoE Health Based "A" - 1998 (Draft)		100	1-75	20	1000	300	7000	12%	100
DoE Health Based "E" - 1998 (Draft)		200	1-75	20	2000	600	14000	24%	200
DoE Health Based "F" - 1998 (Draft)		500	1-75	20	5000	1500	35000	60%	500

TPH ✓

Published on DES Disclosure Log
RTI Act 2009

NOTES: < Number = less than level of reporting

Shading indicates concentrations above health-based "E" investigation thresholds

Department of Environment Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland - 1998

* DoE 1-75 ppm boron range refers to background levels only

R

Sample reciept ad ✓
C&C ✓

TABLE 4
Soil Analytical Results - Metals - Area B - Timber Stack Area
Results in parts per million (ppm)

Sample ID	Depth (mm)	Arsenic	Boron	Cadmium	Copper	Lead	Zinc	Trivalent Chromium	Hexavalent Chromium
B1-0-200	0-200	15	<20	<1	19	22	23	34.2	<0.1 <0.2
B2-0-200	0-200	43	<20	<1	35	111	99	51.4	<0.1 <0.2
B3-0-200	0-200	53	<20	<1	41	17	37	39.5	<0.1 TPH ✓
B4-0-200	0-200	25	<20	<1	24	10	12	55.4	<0.1
B5-0-200	0-200	4	<20	<1	9	10	14	15	<0.1 TPH ✓
B6-0-200	0-200	8	<20	<1	3	10	5	60.3	<0.1
B7-0-200	0-200	4	<20	<1	9	13	18	20.2	<0.1
B8-0-200	0-200	18	<20	<1	20	30	97	28.3	<0.1
B9-0-200	0-200	12	<20	<1	11	16	37	23.1	<0.1 TPH ✓
B10-0-200	0-200	60	<20	<1	56	48	83	72.5	<0.1
B11-0-200	0-200	8	<20	<1	24	30	44	57.8	<0.1 TPH ✓
B8DUP	0-200	14	<20	<1	16	24	62	21.2	<0.1
Maximum		60	<20	<1	56	111	99	72.5	<0.1
Minimum		4	<20	<1	3	10	5	15	<0.1
Mean		22.000	<20	<1	22.250	28.417	44.250	39.908	<0.1
Median		14.5	<20	<1	19.5	19.5	37	36.85	<0.1
Stand Dev.		19.363	0.000	0.000	15.262	28.299	33.491	19.019	0.000
Level of Reporting		1	20	1	1	1	1	1	0.1
Investigation Thresholds									
DoE Environmental - 1998 (Draft)		20	1-75 *	3	60	300	200	50	NE
DoE Health Based "A" - 1998 (Draft)		100	1-75	20	1000	300	7000	12%	100
DoE Health Based "E" - 1998 (Draft)		200	1-75	20	2000	600	14000	24%	200
DoE Health Based "F" - 1998 (Draft)		500	1-75	20	5000	1500	35000	60%	500

NOTES: < Number = less than level of reporting

Shading indicates concentrations above health-based "E" investigation thresholds

Department of Environment Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland - 1998

* DoE 1-75 ppm boron range refers to background levels only

Published on DES Disclosure Log
RTI Act 2009

R

Our Ref: B7570R01.xls

9 October 1998

FLUOR DANIEL GTI

[redacted]

Chain of custody
Sample receipt advice

ls - Area C - Fire Pit
illion (ppm)

Sample ID	Depth (mm)	A	B	Cadmium	Copper	Lead	Zinc	Trivalent Chromium	Hexavalent Chromium
		3	<20	<1	12	15	38	12	<0.1
		5	<20	<1	18	19	28	18	<0.1
		5	<20	<1	13	10	20	12	<0.1
		2	<20	<1	9	8	10	9	<0.1
		2	<20	<1	8	6	10	8	<0.1
		17	<20	<1	22	12	11	22	<0.1
		<1	<20	<1	8	10	11	8	<0.1
		53	29	<1	230	45	119	56	<0.1
		6	<20	<1	12	14	22	19	<0.1
		35	<20	<1	41	58	73	56	<0.1
		10	<20	<1	44	18	89	27	<0.1
		260	<20	<1	212	19	61	470	<0.1
		9	NR	NR	18	NR	NR	38	<0.1
		6	NR	NR	14	NR	NR	21	<0.1
		3	<20	<1	11	9	15	16	<0.1
		16	<20	<1	29	17	35	42	<0.1
		2	<20	<1	9	9	12	16	<0.1
		48	<20	<1	53	12	21	153	<0.1
		6	<20	<1	15	15	54	25	<0.1
MW1	5000	7	<20	1	49	13	44	19	<1
		260	29	1	230	58	119	470	<0.1
		<1	<20	<1	8	9	15	8	<0.1
			1.450	0.050		15.450	33.650	52.350	<0.1
		6	29	1	16.5	13.5	25	20	<0.1
Stand Dev.		57.423	6.485	0.224	63.136	13.601	31.562	103.444	0.000
Level of Reporting		1	20	1	1	1	1	1	0.1
Investigation Thresholds									
		20		3	60	300	200	50	NE
D		100	1-75	20	1000	300	7000	12%	100
		200	1-75	20	2000	600	14000	24%	200
DoE Health Based "F" - 1998 (Draft)		500	1-75	20	5000	1500	35000	60%	500

PAHs
PAHs
PAHs

Published on DES Disclosure Log
RTI Act 2009

Contaminated Land in Queensland - 1998

R

9 October1998

100% RECYCLED PAPER

	Depth (mm)				Lead		Zinc		Hexavalent Chromium
		27	[illegible]	29	42	62	42		<C
		23	[illegible]	27	31	71	39		<C
		26	[illegible]	29	33	53	43		<C
		20	[illegible]	44	26	[illegible]	39		<C
		10	[illegible]	9	17	12	28		<C
		[illegible]	[illegible]	409	42	10	1190		<C
		[illegible]	NB	NB	311	NB	NB	56	<C
		[illegible]	NB	NB	219	NB	NB	51	<C
		151	[illegible]	154	21	42	2[illegible]		<C
		32	NB	NB	25	NB	NB	29	
		1	NB	NB	17	NB	NB	25	<C
		[illegible]	[illegible]	2	211	21	42	46	<C
		151	NB	NB	169	NB	NB	25	<C
		64	[illegible]	[illegible]	52	15	37	130	<C
		13	[illegible]	2	92	16	54	113	<C
		21	NB	NB	28	NB	NB	44	<C
		1	NB	NB	17	NB	NB	26	<C
	(>20)	17	[illegible]	[illegible]	28	27	15	41	<C
	3200	3	[illegible]	1	35	27	15	25	<C
		151	[illegible]	2	409	16	116	1190	<C
		1	[illegible]	[illegible]	9	<2	10	25	<C
			[illegible]	(0.253					<C
		27	[illegible]	2	29	27	515	43	<C
				(0.553					CICO
Number of Penetrometer Tests		1	20	1	1	1	1		01
Investigation Thresholds									
DoE Environmental Guidelines (1993) (Dutch)		10		3	60	300	200	10	NE
ICE Waste Framework (1993) (Draft)		100	75	20	1000	300	1000	[illegible]%	100
ICE Waste Framework (1993) (Draft)		200	75	20	2000	600		[illegible]%	200
ICE Waste Framework (1993) (Draft)		500	75	20	5000	400		[illegible]%	500

Soil and Groundwater Contamination: New Approaches to Investigation and Remediation

Department of Environment Contaminated Land Guidance Note 59/83 Assessment and Management

Published on DES Disclosure Log
RTI Act 2009

R

							Lead	Zinc		
		155		2	172	36	79	226		<0.1
		187		<1	203	23	68	332		<0.1
		73		1	64	30	72	118		<0.1
		198		<1	185	26	54	271		<0.1
		8		NR	19	NR	NR	34		<0.1
		19		1	25	29	63	34		<0.1
		56		1	68	77	125	77		<0.1
		9		2	12	27	28	26		<0.1
		15		1	24	43	82	32		<0.1
		76		2	106	119	120	79		<0.1
		18		2	46	127	131	89		<0.1
		27		1	73	93	214	19		<0.1
		12		1	15	23	48	31		<0.1
		13		1	23	29	71	27		<0.1
		10		1	16	34	76	28		<0.1
		10		1	22	39	75	30		<0.1
		10		1	17	35	47	30		<0.1
		10		1	25	32	90	23		<0.1
		22		<1	32	58	267	15		<0.1
EFS	)	50		<1	59	44	176	30		<0.1
		51		1	62	57	770	99		<0.1
	2000	4		1	13	27	28	28		<0.1
		198		2	203	127	770	332		<0.1
		4		<1	12	23	28	23		<0.1
				0.955						<0.1
		18..	26	1	28.5	35	76	34.5		<0.1
	)	1	20	1	1	1	1	1		0.
				Investigation Threshold						
	199 (Draft)	20		3	60	300	200	60		NE
	lth Based "A" - 1998 (Draft)	100	1-75	20	1000	300	1000	12%		100
	th Based "B" - 1998 (Draft)	200	1-75	20	2000	500		24%		200
	lth Based "I" - 1998 (Draft)	500	1-75	20	5000	500		60%		500

Published on DES Disclosure Log
RTI Act 2009

R

	Depth (mm)	Arsenic	B	Cadmium	Copper	Lead	Zinc	Ch	Hexachlorobenzene
		150	<20	<2	271	10	20	470	<2
		3	NR	NR	15	NR	NR	25	<0.1
		791	<20	1	483	10	56	980	<0.1
		25	NR	NR	30	NR	NR	63	<0.1
		514	<20	3	429	33	103	915	<0.1
		26	NR	NR		NR	NR	56	<0.1
		74	<20	1	203	14	55	145	<0.1
		5	NR	NR	13	NR	NR	21	<0.1
		32	<20	3	62	32	220	35	<0.1
		4	NR	NR	26	NR	NR	22	<0.1
		7	NR	NR	22	NR	NR	24	<0.1
		111	<20	1	109	48	149	136	<0.1
		6	NR	NR	57	NR	NR	32	<0.1
		5	NR	NR	14	NR	NR	22	<0.1
		8	<20	<1	15	28	64	37	<0.1
		<1	NR	NR	12	NR	NR	23	<0.1
		6	NR	NR	16	NR	NR	23	<0.1
		78	<20	<1	106	71	302	96	<0.1
		4	NR	NR	15	NR	NR	23	<0.1
		4	NR	NR	12	NR	NR	23	<0.1
		32	<20	<1	50	39	154	43	<0.1
		<1	NR	NR	10	NR	NR	21	<0.1
		3	NR	NR	12	NR	NR	21	<0.1
		27	<20	<1	32	271	99	47	<0.1
		<1	NR	NR	10	NR	NR	18	<0.1
		3	NR	NR	12	NR	NR	19	<0.1
		14	<20	<1	28	49	97	38	<0.1
		9	<20	<1	18	40	71	23	<0.1

Published on DES Disclosure Log
RTI Act 2009

R

Sample ID	Depth (mm)	A	B	Cadmium	Copper	Lead	Zinc	Trivalent Cr	Hexavalent Cr
		15	<20	<	9	31	60	29	<0.1
		60	43	<	72	53	346	63	<0.1
		9	<20	<	14	37	60	68	<0.1
F8dup		10	<20	<	74	55	244	98	<0.1
MW6	6000	19	<20	<	13	45	69	36	<0.1
		791	43	3	483	271	1120	980	<2
		3	<20	<5	9	10	30	18	<2
			1.303	0.273					<2
		141.5	43	1	22	45	97	27	<2
Stan Dev.		159.557	7.435	0.751	115.05	92.144			(0.100)
		1	20	1	1	1	1	1	0.1
Investigation Thresholds									
		20		3	60	300	200	50	NE
		100	165	20	1000	300	7000	2%	100
DoE Health Based 'E' - 1998 (Draft)		200	165	20	2000	600		24%	200
DoE Health Based 'F' - 1998 (Draft)		500	165	20	5000	1500		60%	500

Published on DES Disclosure Log
RTI Act 2009

Sample ID	Depth (mbgl)	Arsenic	Boron	Cadmium	Chromium	Copper	Lead	Nickel	Trivalent Chromium	Zinc	Hexavalent Chromium
GI	0.50	20	5	<1	8	37	19		38		<0.1
	1	100	11	<1	14	30	69		30		<0.1
			12	<1	15	27	36		39		<0.1
	1	100	7	<1	13	28	28		36		<0.1
			9	<1	10	25	27		34		<0.1
	1	100	10	<1	16	25	36		30		<0.1
			11	7	<1	14	18	45	17		<0.1
			NR		NR	NR	NR	NR	NR		NR
			30	1	<1	29	39	64	55		<0.1
			4	1	<1	12	30	24	30		<0.1
			10		<1	13	25	24	34		<0.1
			62	1	<1	85	34		90		<0.1
			13	1	<1	22	32	51	35		<0.1
			1	1	<1	12	28	24	31		<0.1
	0-200		21		<1	20	37	73	30		<0.1
			23		<1	28	35	94	35		<0.1
			55	1	<1	52	41	75	91		<0.1
	0-200		55	1	<1	54	38	55	95		<0.1
			2	1	<1	12	24	21	35		<0.1
			10	1	<1	20	27	86	22		<0.1
			102	3	<1	143	14	26	48		<0.1
			25	2	<1	44	47	17	45		<0.1
*			NR	0	NR	NR	NR	NR	NR		NR
	0-200		22	4	<1	24	87	68	30		<0.1
			NR	0	NR	NR	NR	NR	NR		NR
WS	0-500		2	0	1	13	10	2	11		<0.1
			102	3	1	143	14	26	48		<0.1
			15	0	<1	8	10	2	11		<0.1
					0.03						<0.1
			12	126	1	16	30	51	30		<0.1
Standard Dev.			23.065	150.035	0.194	30.509	27.815	51.655	32.801		0.000
Level of R				20	1	1	1	1	1		0.1
Investigation Thresholds:											
Toxic	1998 (Draft)	20	1-5*	3	60	300	200		50		NS
DoE Health Based 'A' - 1998 (Draft)		100	1.75	10	1000	500	600		250		100
DoE Health Based 'B' - 1998 (Draft)		200	1.75	20	2000	600			3450		200
DoE Health Based 'C' - 1998 (Draft)		500	1.75	20	5000	500			10%		500

Published on DES Disclosure Log RTIA 2016

R

9 October 2018

Sample rec'd at advice (SJC.

ID	Depth (mm)					Lead	Zinc			
		75	49	<1	116	59	884	147		<0.1
H1-2	1000	7	25	<1	14	18	49	25		<0.1
H2-0	0	53	<20	<1	51	39	138			<0.1
		1360	333	<1	921	184	31	264		<0.1
		32	NR	NR	5	NR	NR	153		<0.1
		4	<20	<1	8	20	16	24		2
		11	<20	<1	27	41	99	30		<0.1
		6	<20	<1	36	15	3	46		<0.1
		50	24	<1	56	13	9	67		<0.1
		66	25	<1	34	29	44	115		<0.1
		4	<20	<1	6	25	6	25		<0.1
		41	<20	<1	39	25	27	131		<0.1
		5	<20		10	21	34			<0.1
		15	<20	2	30	184	707	28		<0.1
		34	<20	<1	141	73	243	27		<0.1
		13	<20	<1	21	35	96	30		<0.1
		11	<20	<1	8	13	21	49		<0.1
		5	<20	<1	8	30	27	45		<0.1
		22	<20			25	48	58		<0.1
		23	<20	1	24	56	93	32		<0.1
		112	49	1	133	30	65	133		<0.1
		5	NR	NR	16	NR	NR	35		<0.1
		7	<20	1	11	25	22	25		<0.1
		1360	333	2	921	184	884	264		2
		4	<20	<1	5	7	3	24		<0.1
Mean										
		15	37	1	24	25	44	45		2
d				0.518						
Investigation Thresholds										
DoE E	1998 (Draft)	20		3	60	300	200	50		NE
	d "A" - 1998 (Draft)	100	1-75	20	1000	300	1000	12%		00
	th Based "E" - 1998 (Draft)	200	1-75	20	2000	600		24%		200
	th Based "F" - 1998 (Draft)	500	1-75	20	5000	1500		60%		500

TPH C

Published by DES Disclosure Log RTI Act 2009

R

Sample receipt advice
rcgc

TABLE 11

Creek Sediment Sample Analytical Results - Metals - Area I - Cooroy Creek

Results in parts per million (ppm)

Sample ID	Depth (mm)	Arsenic	Boron	Cadmium	Copper	Lead	Zinc	Trivalent Chromium	Hexavalent Chromium
CKS1	0	11	<40	<2	23	51	116	22	<0.1
CKS2	0	16	<40	<2	39	76	237	73	<0.1
CKS3	0	11	<20	<1	26	121	242	28	<0.1
CKS4	0	6	<40	<2	18	25	114	18	<0.1
CKS5	0	8	<20	<1	7	5	20	13	<0.1
CKS6	0	42	<40	<2	36	69	141	38	<0.1
CKS7	0	45	<20	<1	55	40	98	73	<0.1
CKS3DUP	0	13	<20	<1	20	99	186	16	<0.1
Maximum		45	<40	<2	55	121	242	73	<0.1
Minimum		6	<40	<2	7	5	20	13	<0.1
Mean		19.000	<40	<2	28.000	60.750	144.250	35.125	<0.1
Median		12	<40	<2	24.5	60	128.5	25	<0.1
Stand Dev.		15.437	0.000	0.000	14.871	38.369	74.835	24.637	0.000
Level of Reporting		1	20	1	1	1	1	1	0.1
Investigation Thresholds									
DoE Environmental - 1998 (Draft)		20	1-75 **	3	60	300	200	50	NE
DoE Health Based "A" - 1998 (Draft)		100	1-75	20	1000	300	7000	12%	100
DoE Health Based "E" - 1998 (Draft)		200	1-75	20	2000	600	14000	24%	200
DoE Health Based "F" - 1998 (Draft)		500	1-75	20	5000	1500	35000	60%	500

Published on DES Discos Library
RTI 31 2009

NOTES: < Number = less than level of reporting

Shading indicates concentrations above **environmental investigation thresholds**

Department of Environment Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland - 1998

* Denotes sequential sample analyses

** DoE 1-75 ppm boron range refers to background levels only

Our Ref: B7570R01.xls

R *9 October 1998*

Sample receipt ✓
(g)C ✓

TABLE 12
Creek Water Sample Analytical Results - Metals -Area I
Results in milligrams per litre (mg/L)

Sample ID	Arsenic	Boron	Cadmium	Copper	Lead	Zinc	Trivalent Chromium	Hexavalent Chromium
CK1W	0.002	<0.2	<0.0002	0.001	0.002	0.012	<0.02	<0.02
CK2W	<0.001	<0.2	<0.0002	<0.001	<0.001	0.002	<0.02	<0.02
CK3W	<0.001	<0.2	<0.0002	0.003	0.004	0.034	<0.02	<0.02
CK4W	0.001	<0.2	<0.0002	<0.001	<0.001	0.003	<0.02	<0.02
CK5W	<0.001	<0.2	<0.0002	<0.001	<0.001	0.003	<0.02	<0.02
CK6W	0.002	<0.2	<0.0002	<0.001	<0.001	0.002	<0.02	<0.02
CK7W	0.009	<0.2	<0.0002	0.005	<0.001	0.002	<0.02	<0.02
CKU/SW	0.001	<0.2	<0.0002	<0.001	<0.001	0.002	<0.02	<0.02
CKD/SW	0.001	<0.2	<0.0002	<0.001	<0.001	0.002	<0.02	<0.02
CK5DUPW	<0.001	<0.2	<0.0002	<0.001	<0.001	0.005	<0.02	<0.02
FIELD BLANK	<0.001	<0.2	<0.0002	<0.001	<0.001	0.004	<0.02	<0.02
Maximum	0.009	<0.2	<0.0002	0.005	0.004	0.034	<0.02	<0.02
Minimum	<0.001	<0.2	<0.0002	<0.001	<0.001	0.002	<0.02	<0.02
Mean	0.001	<0.2	<0.0002	0.001	0.001	0.006	<0.02	<0.02
Median	0.0015	<0.2	<0.0002	0.003	0.003	0.003	<0.02	<0.02
Stand Dev.	0.003	0.000	0.000	0.002	0.001	0.010	0.000	0.000
Level of Reporting	0.001	0.2	0.0002	0.001	0.001	0.001	0.01	0.01
Investigation Thresholds								
ANZECC Fresh & Marine Waters - 1992	0.05	NE	0.0002	0.002-0.005*	0.001	0.005	NE	NE
NHMRC Australian Drinking Water - 1996	0.007	0.3	0.002	2	0.01	NE	NE	0.05

Published on DES Website
FOI Act 2002

NOTES: < Number = less than level of reporting, shading indicates concentrations above investigation thresholds, * Depends on hardness of water

Australian and New Zealand Environment and Conservation Council - Australian Water Quality Guidelines for Fresh and Marine Waters - 1992

National Health and Medical Research Council - Australian Drinking Water Guidelines - 1996

R

Our Ref: B7570R01.xls

9 October 1998

Sample receipt advised C&JC ✓

Appendix 1 results.

TABLE 13

Groundwater Sample Analytical Results - Metals

Results in milligrams per litre (mg/L)

These results do not match AIS report. Samples in Appendix F

Sample ID	Arsenic	Boron	Cadmium	Copper	Lead	Zinc	Trivalent Chromium	Hexavalent Chromium
MW1	0.004	3	<0.001	<0.001	0.001	0.006	<0.01	<0.01
MW2	0.002	1.6	<0.001	<0.001	<0.001	0.019	<0.01	<0.01
MW3	<0.001	2.8	<0.001	<0.001	0.001	0.018	<0.01	<0.01
MW4	<0.001	3.8	<0.001	0.002	0.004	0.080	<0.01	<0.01
MW5	<0.001	40.4	<0.001	<0.001	0.003	0.032	<0.01	<0.01
MW6	<0.001	0.2	<0.001	0.001	0.052	0.017	<0.01	<0.01
MW1DUP	0.004	3	<0.001	<0.001	0.002	0.028	<0.01	<0.01
MWB	<0.001	<0.2	<0.001	<0.001	0.001	0.005	<0.01	<0.01
Maximum	0.004	40.4	<0.001	0.002	0.052	0.08	<0.01	<0.01
Minimum	<0.001	<0.2	<0.001	<0.001	<0.001	0.005	<0.01	<0.01
Mean	0.001	6.850	<0.001	0.000	0.008	0.026	<0.01	<0.01
Median	0.004	3	<0.001	0.0015	0.002	0.0185	<0.01	<0.01
Stand Dev.	0.002	13.626	0.000	0.001	0.018	0.024	0.000	0.000
Level of Reporting	0.001	0.2	0.001	0.001	0.001	0.001	0.01	0.01
Investigation Thresholds								
Dutch Intervention (1994)	0.06	NE	0.006	0.1	0.075	0.8	NE *	NE *

TPH ✓ GREX
TPH ✓ ISTEX

Published on DEC Disclosure Log RTI Oct 2009

NOTES: < Number = less than level of reporting, shading indicates concentrations above investigation thresholds,
Dutch Intervention (1994) = Environmental Quality Objectives in the Netherlands – Intervention Values
MWB = Field blank, MW1DUP = Duplicate of MW1
* Chromium = 0.03

R

lab receipt ✓
COC ✓

TABLE 14
Water Sample Analytical Results - Metals
Results in milligrams per litre (mg/L)

Sample ID	Arsenic	Boron	Cadmium	Copper	Lead	Zinc	Trivalent Chromium	Hexavalent Chromium
Evaporation Pond	0.207	1.4	<0.001	0.082	0.021	0.118	0.06	<0.01
Boron Pit #1	0.959	11.2	0.020	2.42	0.067	1.93	0.93	<0.01
Boron Pit #2	1.16	724	0.015	0.85	0.050	1.13	1.11	<0.01
Boron Pit #3	0.973	950	<0.050	0.50	0.051	1.50	1.20	<0.01
Maximum	1.16	950	0.02	2.42	0.067	1.93	1.2	<0.01
Minimum	0.207	1.4	<0.001	0.082	0.021	0.118	0.06	<0.01
Mean	0.825	421.650	0.009	0.963	0.047	1.170	0.825	<0.01
Median	0.966	367.6	0.0175	0.675	0.0505	1.315	1.02	<0.01
Stand Dev	0.422	488.415	0.010	1.021	0.019	0.773	0.522	0.000
Level of Reporting	0.001	0.2	0.001	0.001	0.001	0.001	0.02	0.02

NOTES: < Number = less than level of reporting,
* Total chromium

No Evaporation pond results from AES? or lab receipt & COC.

Published on DES Disclosure Log
RTI Act 2009

R

C of C ✓
lab receipt ✓

DO TAS Report

TABLE 15

Tank Pit & Land Farm Soil Sample Analytical Results - TPH, BTEX & Lead

Results in parts per million (ppm)

Sample ID	Depth (m)	TPH	C6-C9	C10-C14	C15-C28	C29-C36	B	T	E	X	Total BTEX	Total Lead
E/WALL	1.5	<LOR	<2	<50	<100	<100	<0.2	<0.2	<0.2	<0.2	<LOR	11
W/WALL	1.5	<LOR	<2	<50	<100	<100	<0.2	<0.2	<0.2	<0.2	<LOR	13
N/WALL	1.5	<LOR	<2	<50	<100	<100	<0.2	<0.2	<0.2	<0.2	<LOR	13
S/WALL	1.5	<LOR	<2	<50	<100	<100	<0.2	<0.2	<0.2	<0.2	<LOR	10
BASE	3	<LOR	<2	<50	<100	<100	<0.2	<0.2	<0.2	<0.2	<LOR	12
LF1-0.5	0.5	<LOR	<2	76	355	247	<0.2	<0.2	<0.2	<0.2	<LOR	nr
LF2-0.5	0.5	<LOR	<2	52	1020	1270	<0.2	<0.2	<0.2	<0.2	<LOR	nr
LF3-0.5	0.5	<LOR	<2	<50	283	364	<0.2	<0.2	<0.2	<0.2	<LOR	nr
LF4-0.5	0.5	<LOR	<2	<50	259	449	<0.2	<0.2	<0.2	<0.2	<LOR	nr
Maximum		<LOR	<2	76	1020	1270	<0.2	<0.2	<0.2	<0.2	<LOR	13
Minimum		<LOR	<2	<50	<100	<100	<0.2	<0.2	<0.2	<0.2	<LOR	10
Mean		<LOR	<2	14.222	213.000	258.889	<0.2	<0.2	<0.2	<0.2	<LOR	6.556
Median		<LOR	<2	64	319	406.5	<0.2	<0.2	<0.2	<0.2	<LOR	12
Stand Dev		0.000	0.000	28.852	336.392	419.046	0.000	0.000	0.000	0.000	0.000	6.287
Level of Reporting		NE	2	50	100	100	0.2	0.2	0.2	0.2	NE	1
Investigation Thresholds												
			C6-C9	C10-C14	C15-C36							
CHEM Unit (Draft 1991)		NE	100	100	1000		NE	NE	NE	NE	7	300
CHEM Unit (1992)		NE	NE	NE	NE	NE	1	NE	NE	NE	NE	300
Dept. of Env. 1998 Draft (Env)		NE	NE	NE	NE	NE	1	NE	NE	NE	NE	300

Published on DES Database.org
Permission Pending

NOTES: TPH = total petroleum hydrocarbons; C6-C9 = carbon chain length group; B = benzene; T = toluene; E = ethylbenzene; X = xylenes; NE = threshold not established; nr = not requested; LOR = below level of reporting; Shading denotes concentrations above investigation thresholds; Chemical Hazards and Emergency Management (CHEM) Unit (Draft 1991 and 1992) Guidelines for the Assessment of Contaminated Land in Queensland; Department of Environment (1998) Draft Guidelines (Environmental) for the Assessment & Management of Contaminated Land in Queensland.

R

TABLE 1
Generic Soil Profile

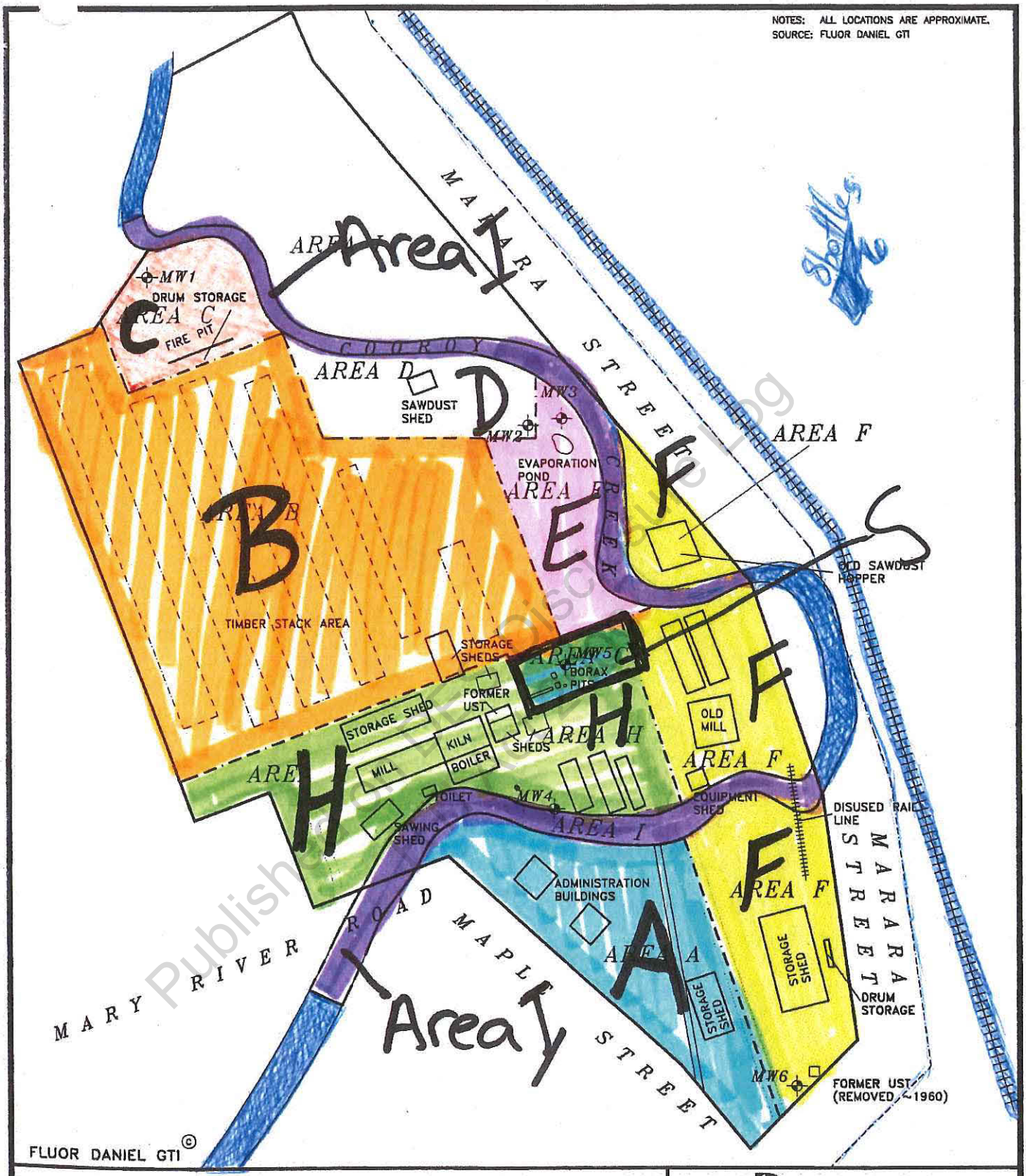
Area ID	DEPTH	LITHOLOGY
Area A		
	0 - 0.2m 0.2 – 0.5m	Soil, black, dry Clay, yellow, dry, low plasticity
Area B		
	0 – 0.1m 0.1 – 0.5m	Fill, silt, grey, plus rock chips, dry. Clay, grey/orange, dry, low plasticity.
Area C		
	0 – 0.1m 0.1 – 2.0m	Fill, silt, grey, plus rock chips. Clay, grey/red, mottled, dry, low plasticity.
Area D		
	0 –0.3m 0.3 – 2.0m	Fill, Silty clay, grey, plus rock chips, dry Silty clay, grey/orange, damp, low plasticity
Exceptions	D5 – D9 0.3 –1.4m	Sawdust layer at surface to between 0.3 and 1.4metres.
Area E		
	0 – 0.5m 0.5 –2.0m	Soil, black, damp Silty clay, orange, damp, low plasticity
Exceptions	E3 – E4 0 - 0.35m	Sawdust, damp.
	E8 – E13 0 – 0.2m 0.2 – 0.5m	Fill, silty clay plus rock chips, grey, dry, minor ash. Silty clay, grey/orange, damp, low plasticity
Area F		
	F1 – F4 0 – 0.3m 0.3 – 0.5m	Sawdust, dry. Clay, brown, damp, low plasticity.
Exceptions	F4 0 - 0.3m	Soil, black, damp
	F5 – F10 0 - 0.2m 0.2 – 1.0m	Fill, silt, grey, rock chips and some sawdust, dry. Clay, orange, damp, low plasticity.
	F11 – F14 0 – 0.2 0.2 – 1.0m	Fill, silt, grey, dry, plus, rock chips Clay, grey/orange, damp, low plasticity, minor ash
	F15 0 – 0.1m 0.1 – 2.0m	Fill, silt, grey, dry Silty clay, orange, damp, low plasticity

Published on DES Disclosure Log
RTI Act 2009

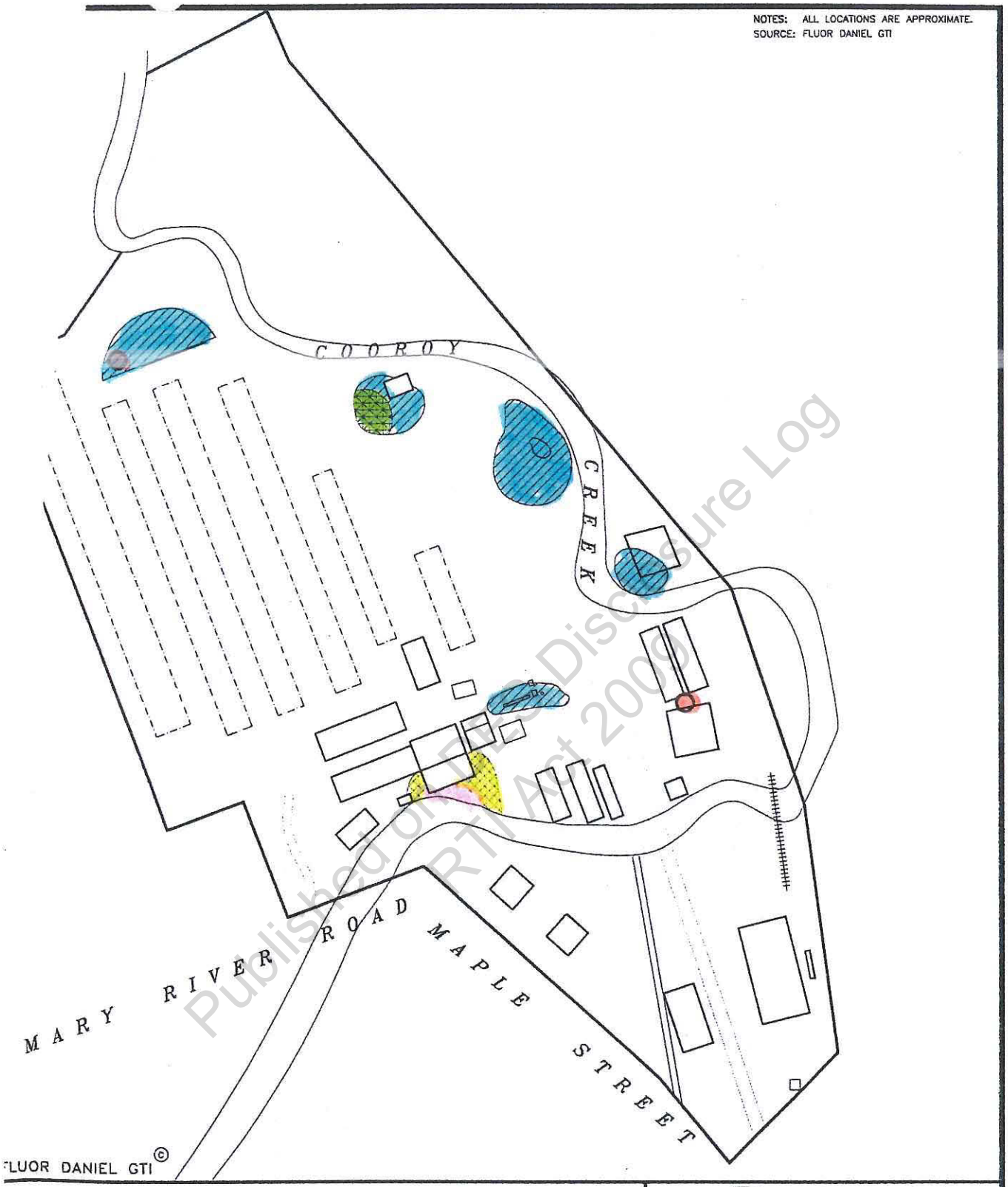
TABLE 1 (Continued)
Generic Soil Profile

Area G		
	G1 – G3 0 – 0.1m 0.1 – 2.0m 2.0 – 3.0m	 Fill, silt, grey, plus, rock chips, dry. Clay, orange, damp, low plasticity Clay, orange, mottled, damp, low plasticity
	G4 –G15 0 - 0.2m 0.2 – 1.0m	 Fill, silt, grey, plus rock chips, dry. Clay, grey, damp, low plasticity
Area H		
	H1 0 – 0.2m 0.2 – 1.5m 1.5 – 3.0m	 Fill, silt, grey, plus rock chips, dry, stained. Clay, yellow, damp, low plasticity Clay, yellow/brown, mottled, Fe nodules, damp, low plasticity.
	H3 – H5 0 – 0.2m 0.2 – 1.0m	 Silt, grey, damp Clay, orange, damp, low plasticity.
	H2, H6 – H19 0 – 0.2m 0.1 – 1.0m	 Fill, silt, grey, plus rock chips, dry. Silt clay, grey/orange, damp, low plasticity
Exceptions	H8, H19 0 – 0.1m	 Plus minor ash.
Exceptions	H10, H11 0.2 – 0.5m	 Plus minor ash.

Published on DES Disclosure Log
RTI Act 2009



Published by Queensland Government Publishing Log



Published on DES Disclosure Log
RTI Act 2009

LEGEND

- STRIPPED TIMBER
- CCA/BORON IMPACT 0–200mm
- CCA/BORON IMPACT 0–500mm
- CCA/BORON IMPACT 500–1000mm
- CCA/BORON IMPACT >1000mm
- ISOLATED "HOTSPOT" (HYDROCARBONS)

N

0 20 40 60 80 100
SCALE METRES
1:2000 (A4)

FLUOR DANIEL GTI
12 STRATTON STREET
NEWSTEAD QLD 4006
(07) 3252 5711

REV. NO.:	DRAWING DATE:	ACAD FILE:
1	28/08/98	B7570F7

SITE PLAN – AREAS OF IMPACT

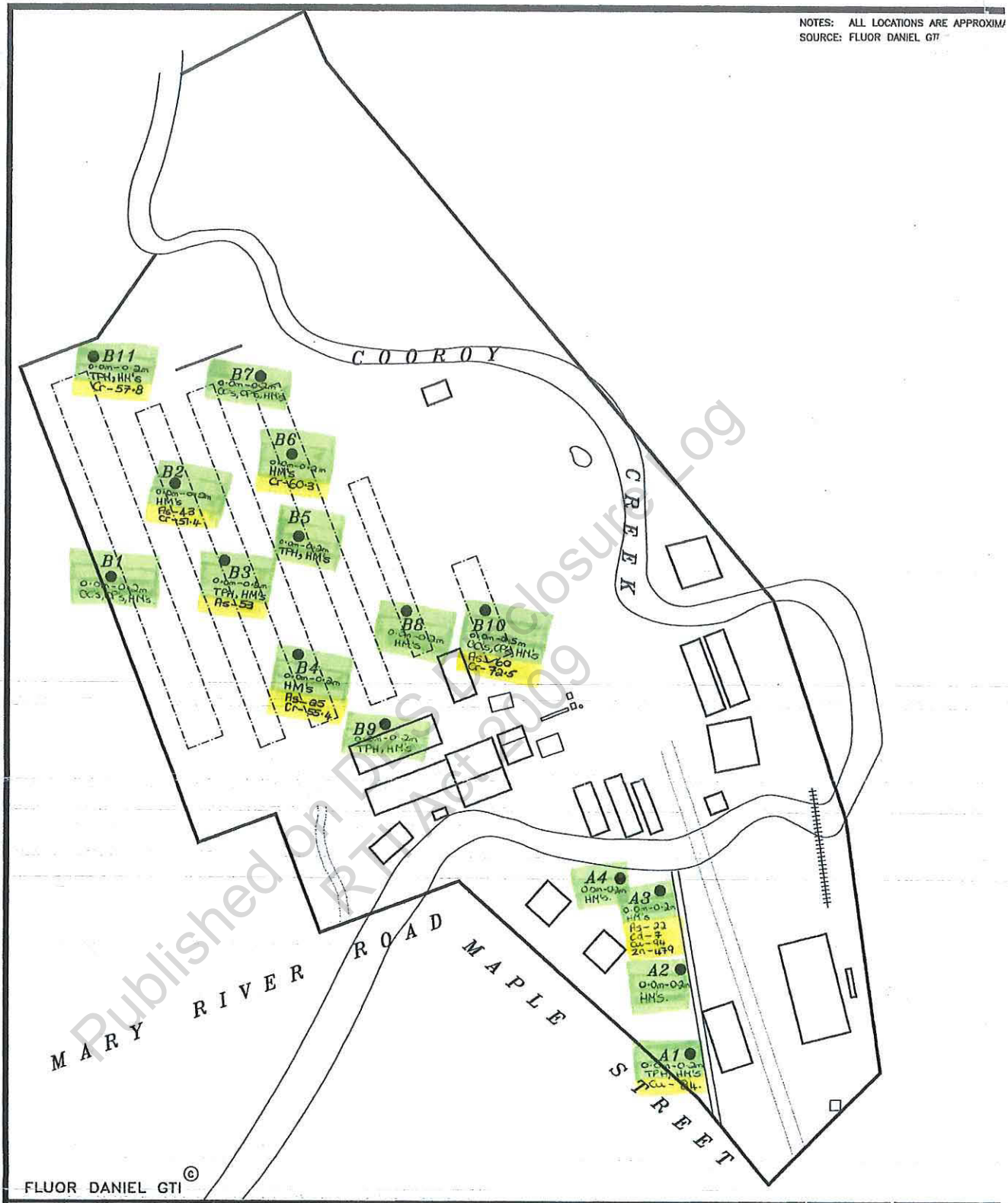
CLIENT:	PM:
BORAL TIMBERS – COOROY	
LOCATION: CNR MARY RIVER RD & MAPLE ST COOROY, QUEENSLAND	PS:

DESIGNED:	DETAILED:	PROJECT NO.:	FIGURE:
CTPI 4	CTPI 4	B7570	7

TABLE 1b
Site Historical Operations – Potential Impacts

Activity	Dates	Potential Impacts
Farming	Pre 1900	Nil
Drying, sawing, planing	~1900 to ~1960s	Nil
Boron treatment	~1960s to ~1990s	Boron
Burning and disposal of CCA and boron treated sawdust/ash in boiler	~1970s to present	Copper, chrome, arsenic, other metals, boron
Burning of waste timbers in fire pit	To present	CCA, other metals, boron
Vehicle refuelling (cars)	~1960s to 1980s	Petroleum hydrocarbons, lead
Vehicle/plant refuelling (current)	~1980s to present	Petroleum hydrocarbons (diesel)
Stormwater/sediment collection (evaporation pond)	To present	Metals, boron
Sawdust stockpiling (post-burning, pre shed stockpiling)	~1990 to 1997	CCA
Dust suppression in Area B	To ~1990	Petroleum hydrocarbons
Timber drying (Area B)	To present	CCA, OC/OP

Published on DES Disclosure Log
RTI Act 2009



Published on DES Disclosure Log RTI Act 2009

A & B Samples

TABLE 3
Soil Analytical Results - Metals - Area A - Vacant Land and Office Area
Results in parts per million (ppm)

Sample ID	Depth (mm)	Arsenic	Boron	Cadmium	Copper	Lead	Zinc	Trivalent Chromium	Hexavalent Chromium
A1-0-0.2	0-200	4	<20	<1	84	22	61	21	<0.1
A2-0-0.2	0-200	1	<20	<1	7	14	22	20	<0.1
A3-0-0.2	0-200	22	<20	7	94	276	479	34	<0.1
A4-0-0.2	0-200	2	<20	<1	9	18	77	19	<0.1
Maximum		22	<20	7	94	276	479	34	<0.1
Minimum		1	<20	<1	7	14	22	19	<0.1
Mean		7.250	<20	1.750	48.500	82.500	159.750	23.500	<0.1
Median		3	<20	7	46.5	20	69	20.5	<0.1
Stand Dev.		9.912	0.000	3.500	46.950	129.041	214.083	7.047	0.000
Level of Reporting		1	20	1	1	1	1	1	0.1
Investigation Thresholds									
DoE Environmental - 1998 (Draft)		20	1-75 *	3	60	300	200	50	NE
DoE Health Based "A" - 1998 (Draft)		100	1-75	20	1000	300	7000	12%	100
DoE Health Based "E" - 1998 (Draft)		200	1-75	20	2000	600	14000	24%	200
DoE Health Based "F" - 1998 (Draft)		500	1-75	20	5000	1500	35000	60%	500

NOTES: < Number = less than level of reporting

Shading indicates concentrations above health-based "E" investigation thresholds

Department of Environment Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland - 1998

* DoE 1-75 ppm boron range refers to background levels only

Published on DES disclosure log RTI Act 2009

TABLE 4

Soil Analytical Results - Metals - Area B - Timber Stack Area

Results in parts per million (ppm)

Sample ID	Depth (mm)	Arsenic	Boron	Cadmium	Copper	Lead	Zinc	Trivalent Chromium	Hexavalent Chromium
B1-0-200	0-200	15	<20	<1	19	22	23	34.2	<0.1
B2-0-200	0-200	43	<20	<1	35	111	99	51.4	<0.1
B3-0-200	0-200	53	<20	<1	41	17	37	39.5	<0.1
B4-0-200	0-200	25	<20	<1	24	10	12	55.4	<0.1
B5-0-200	0-200	4	<20	<1	9	10	14	15	<0.1
B6-0-200	0-200	8	<20	<1	3	10	5	60.3	<0.1
B7-0-200	0-200	4	<20	<1	9	13	18	20.2	<0.1
B8-0-200	0-200	18	<20	<1	20	30	97	28.3	<0.1
B9-0-200	0-200	12	<20	<1	11	16	37	23.1	<0.1
B10-0-200	0-200	60	<20	<1	56	48	83	72.5	<0.1
B11-0-200	0-200	8	<20	<1	24	30	44	57.8	<0.1
B8DUP	0-200	14	<20	<1	16	24	62	21.2	<0.1
Maximum		60	<20	<1	56	111	99	72.5	<0.1
Minimum		4	<20	<1	3	10	5	15	<0.1
Mean		22.000	<20	<1	22.250	28.417	44.250	39.908	<0.1
Median		14.5	<20	<1	19.5	19.5	37	36.85	<0.1
Stand Dev.		19.363	0.000	0.000	15.262	28.299	33.491	19.019	0.000
Level of Reporting		1	20	1	1	1	1	1	0.1
Investigation Thresholds									
DoE Environmental - 1998 (Draft)		20	1-75 *	3	60	300	200	50	NE
DoE Health Based "A" - 1998 (Draft)		100	1-75	20	1000	300	7000	12%	100
DoE Health Based "E" - 1998 (Draft)		200	1-75	20	2000	600	14000	24%	200
DoE Health Based "F" - 1998 (Draft)		500	1-75	20	5000	1500	35000	60%	500

Published on DES Disclosure Log
RTI Act 2009

NOTES: < Number = less than level of reporting

Shading indicates concentrations above health-based "E" investigation thresholds

Department of Environment Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland - 1998

* DoE 1-75 ppm boron range refers to background levels only

Our Ref: B7570R01.xls

9 October 1998

FLUOR DANIEL GTI

100% RECYCLED PAPER

TABLE 5

Soil Analytical Results - Metals - Area C - Fire Pit

Results in parts per million (ppm)

Sample ID	Depth (mm)	Arsenic	Boron	Cadmium	Copper	Lead	Zinc	Trivalent Chromium	Hexavalent Chromium
C1-0-200	0-200	3	<20	<1	12	15	38	12	<0.1
C2-2-200	2-200	5	<20	<1	18	19	28	18	<0.1
C3-200-500	200-500	5	<20	<1	13	10	20	12	<0.1
C4-200-500	200-500	2	<20	<1	9	8	10	9	<0.1
C4-200-500	500-1000	2	<20	<1	8	6	10	8	<0.1
C5-200-500	200-500	17	<20	<1	22	12	11	22	<0.1
C5-500-1000	500-1000	<1	<20	<1	8	10	11	8	<0.1
C6-200-500	200-500	53	29	<1	230	45	119	56	<0.1
C6-500-1000	500-1000	6	<20	<1	12	14	22	19	<0.1
C7-0-200	0-200	35	<20	<1	41	58	73	56	<0.1
C8-0-200	0-200	10	<20	<1	44	18	89	27	<0.1
C9-0-200	0-200	260	<20	<1	212	19	61	470	<0.1
*C9-200-500	200-500	9	NR	NR	18	NR	NR	38	<0.1
*C9-500-1000	500-1000	6	NR	NR	14	NR	NR	21	<0.1
C10-0-200	0-200	3	<20	<1	11	9	15	16	<0.1
C11-0-200	0-200	16	<20	<1	29	17	35	42	<0.1
C12-200-500	200-500	2	<20	<1	9	9	12	16	<0.1
C13-500-1000	500-1000	48	<20	<1	53	12	21	153	<0.1
C13-0-200	0-200	6	<20	<1	15	15	54	25	<0.1
MW1	5000	7	<20	1	49	13	44	19	<1
Maximum		260	29	1	230	58	119	470	<0.1
Minimum		<1	<20	<1	8	9	15	8	<0.1
Mean		24.750	1.450	0.050	41.350	15.450	33.650	52.350	<0.1
Median		6	29	1	16.5	13.5	25	20	<0.1
Stand Dev.		57.423	6.485	0.224	63.136	13.601	31.562	103.444	0.000
Level of Reporting		1	20	1	1	1	1	1	0.1
Investigation Thresholds									
DoE Environmental - 1998 (Draft)		20	1-75 **	3	60	300	200	50	NE
DoE Health Based "A" - 1998 (Draft)		100	1-75	20	1000	300	7000	12%	100
DoE Health Based "E" - 1998 (Draft)		200	1-75	20	2000	600	14000	24%	200
DoE Health Based "F" - 1998 (Draft)		500	1-75	20	5000	1500	35000	60%	500

NOTES:

< Number = less than level of reporting

Shading indicates concentrations above health-based "E" investigation thresholds

Department of Environment Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland - 1998

* Denotes sequential sample analyses

** DoE 1-75 ppm boron range refers to background levels only

NR = Not requested

Published on DES Disclosure Log
RTI Act 2009

Nothing above detect.

Our Ref: B7570R01.xls

9 October 1998

FLUOR DANIEL GTI

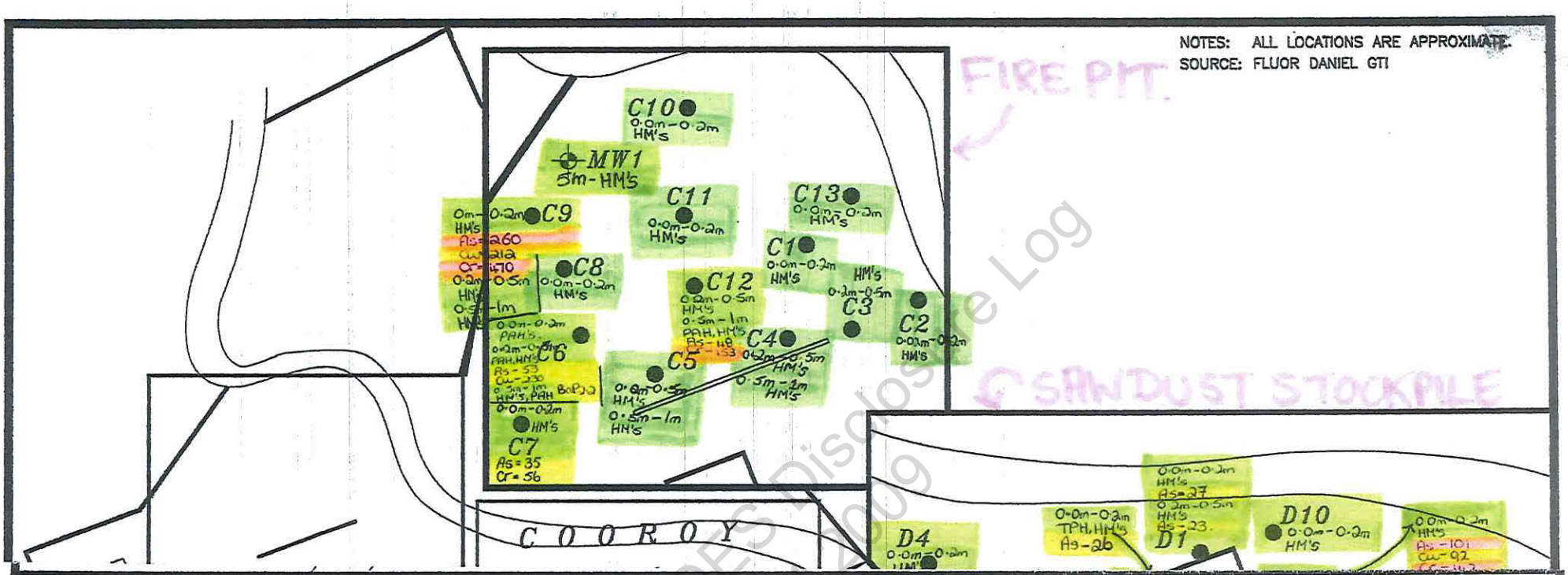
100% RECYCLED PAPER

TABLE 6
Soil Analytical Results - Metals - Area D - Sawdust Stockpile
Results in parts per million (ppm)

Sample ID	Depth (mm)	Arsenic	Boron	Cadmium	Copper	Lead	Zinc	Trivalent Chromium	Hexavalent Chromium
D1-0-200	0-200	27	<20	<2	29	42	62	42	<0.1
D1-200-500	200-500	23	<20	<2	27	31	71	39	<0.1
D2-0-200	0-200	26	<20	<2	29	33	53	43	<0.1
D3-0-200	0-200	20	<20	<2	43	26	115	39	<0.1
D4-0-200	0-200	10	<20	<2	9	17	12	28	<0.1
D5-0-200	0-200	464	<20	<2	469	<2	10	1190	<0.1
*D5-200-500	200-500	331	NR	NR	351	NR	NR	694	<0.2
*D5-500-100	500-1000	288	NR	NR	229	NR	NR	581	<0.2
D6-0-200	0-200	132	<20	<2	114	21	42	217	<0.1
*D6-200-500	200-500	32	NR	NR	25	NR	NR	29	<0.1
*D6-500-100	500-1000	4	NR	NR	17	NR	NR	25	<0.1
D7-0-200	0-200	275	<20	2	221	21	52	483	<0.1
D7-200-500	200-500	168	NR	NR	169	NR	NR	261	<0.1
D8-0-200	0-200	64	<20	<2	59	19	37	110	<0.1
D9-0-200	0-200	101	<20	2	92	86	94	142	<0.1
*D9-200-500	200-500	21	NR	NR	28	NR	NR	44	<0.1
*D9-500-100	500-1000	4	NR	NR	17	NR	NR	26	<0.1
D10-0-200	0-200	17	<20	<2	28	27	59	41	<0.1
MW2	3000	5	<20	1	15	27	35	25	<0.1
Maximum		464	<20	2	469	86	115	1190	<0.1
Minimum		4	<20	<2	9	<2	10	25	<0.1
Mean		106.105	<20	0.263	103.737	18.421	33.789	213.632	<0.1
Median		27	<20	2	29	27	52.5	43	<0.1
Stand Dev.		136.611	0.000	0.653	129.275	21.639	35.629	312.939	0.000
Level of Reporting		1	20	1	1	1	1	1	0.1
Investigation Thresholds									
DoE Environmental - 1998 (Draft)		20	1-75 **	3	60	300	200	50	NE
DoE Health Based "A" - 1998 (Draft)		100	1-75	20	1000	300	7000	12%	100
DoE Health Based "E" - 1998 (Draft)		200	1-75	20	2000	600	14000	24%	200
DoE Health Based "F" - 1998 (Draft)		500	1-75	20	5000	1500	35000	60%	500

NOTES:
< Number = less than level of reporting
Shading indicates concentrations above health-based "E" investigation thresholds
Department of Environment Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland - 1998
* Denotes sequential sample analyses
** DoE 1-75 ppm boron range refers to background levels only
NR = Not requested

Fax Sheet DES 05 Biosolids Log



Published on DES Disclosure Log
RTI Act 2009

FLUOR DANIEL GTI
12 STRATTON STREET
NEWSTEAD QLD 4006
(07) 3252 5711

REV. NO.:	DRAWING DATE:	ACAD FILE:
1	28/08/98	B7570F3B

SITE PLAN WITH SAMPLING LOCATIONS

CLIENT:	PM:
BORAL TIMBERS – COOROY	
LOCATION: CNR MARY RIVER RD & MAPLE ST COOROY, QUEENSLAND	PS:

DESIGNED:	DETAILED:	PROJECT NO.:	FIGURE:
CTPI 49	CTPI 49	B7570	3b

TABLE 12
Creek Water Sample Analytical Results - Metals -Area I
Results in milligrams per litre (mg/L)

Sample ID	Arsenic	Boron	Cadmium	Copper	Lead	Zinc	Trivalent Chromium	Hexavalent Chromium
CK1W	0.002	<0.2	<0.0002	0.001	0.002	0.012	<0.02 <0.01	<0.02 <0.01
CK2W	<0.001	<0.2	<0.0002	<0.001	<0.001	0.002	<0.02 <0.01	<0.02 <0.01
CK3W	<0.001	<0.2	<0.0002	0.003	0.004	0.034	<0.02 <0.01	<0.02 <0.01
CK4W	0.001	<0.2	<0.0002	<0.001	<0.001	0.003	<0.02 <0.01	<0.02 <0.01
CK5W	<0.001	<0.2	<0.0002	<0.001	<0.001	0.003	<0.02 <0.01	<0.02 <0.01
CK6W	0.002	<0.2	<0.0002	<0.001	<0.001	0.002	<0.02 <0.01	<0.02 <0.01
CK7W	0.009	<0.2	<0.0002	0.005	<0.001	0.002	<0.02 <0.01	<0.02 <0.01
CKU/SW	0.001	<0.2	<0.0002	<0.001	<0.001	0.002	<0.02 <0.01	<0.02 <0.01
CKD/SW	0.001	<0.2	<0.0002	<0.001	<0.001	0.002	<0.02 <0.01	<0.02 <0.01
CK5DUPW	<0.001	<0.2	<0.0002	<0.001	<0.001	0.005	<0.02 <0.01	<0.02 <0.01
FIELD BLANK	<0.001	<0.2	<0.0002	<0.001	<0.001	0.004	<0.02 <0.01	<0.02 <0.01
Maximum	0.009	<0.2	<0.0002	0.005	0.004	0.034	<0.02	<0.02
Minimum	<0.001	<0.2	<0.0002	<0.001	<0.001	0.002	<0.02	<0.02
Mean	0.001	<0.2	<0.0002	0.001	0.001	0.006	<0.02	<0.02
Median	0.0015	<0.2	<0.0002	0.003	0.003	0.003	<0.02	<0.02
Stand Dev.	0.003	0.000	0.000	0.002	0.001	0.010	0.000	0.000
Level of Reporting	0.001	0.2	0.0002	0.001	0.001	0.001	0.01	0.01
Investigation Thresholds								
ANZECC Fresh & Marine Waters - 1992	0.05	NE	0.0002	0.002-0.005*	0.001	0.005	NE	NE
NHMRC Australian Drinking Water - 1996	0.007	0.3	0.002	2	0.01	NE	NE	0.05

Tarins
<2
<2
<2
<2
<2
<2
<2
<2

NOTES: < Number = less than level of reporting, shading indicates concentrations above investigation thresholds, * Depends on hardness of water

Australian and New Zealand Environment and Conservation Council - Australian Water Quality Guidelines for Fresh and Marine Waters - 1992

National Health and Medical Research Council - Australian Drinking Water Guidelines - 1996

Published on DPE Publications Web Log
GTI 1/6/2010

Samples reanalysed/resampled 1mth later, all returned Cd = <0.0002

R

Our Ref: B7570R01.xls

9 October 1998

FLUOR DANIEL GTI

100% RECYCLED PAPER

TABLE 13
Groundwater Sample Analytical Results - Metals
Results in milligrams per litre (mg/L)

Sample ID	Arsenic	Boron	Cadmium	Copper	Lead	Zinc	Trivalent Chromium	Hexavalent Chromium
MW1	0.004	3	<0.001	<0.001	0.001	0.006	<0.01	<0.01
MW2	0.002	1.6	<0.001	<0.001	<0.001	0.019	<0.01	<0.01
MW3	<0.001	2.8	<0.001	<0.001	0.001	0.018	<0.01	<0.01
MW4	<0.001	3.8	<0.001	0.002	0.004	0.080	<0.01	<0.01
MW5 TPH BTEX	<0.001	40.4	<0.001	<0.001	0.003	0.032	<0.01	<0.01
MW6 TPH, BTEX	<0.001	0.2	<0.001	0.001	0.052	0.017	<0.01	<0.01
MW1DUP	0.004	3	<0.001	<0.001	0.002	0.028	<0.01	<0.01
MWB	<0.001	<0.2	<0.001	<0.001	0.001	0.005	<0.01	<0.01
Maximum	0.004	40.4	<0.001	0.002	0.052	0.08	<0.01	<0.01
Minimum	<0.001	<0.2	<0.001	<0.001	<0.001	0.005	<0.01	<0.01
Mean	0.001	6.850	<0.001	0.000	0.008	0.026	<0.01	<0.01
Median	0.004	3	<0.001	0.0015	0.002	0.0185	<0.01	<0.01
Stand Dev.	0.002	13.626	0.000	0.001	0.018	0.024	0.000	0.000
Level of Reporting	0.001	0.2	0.001	0.001	0.001	0.001	0.01	0.01
Investigation Thresholds								
Dutch Intervention (1994)	0.06	NE	0.006	0.1	0.075	0.8	NE *	NE *

Cr
0.003
0.001
0.001
0.001
0.001
0.003
0.002
<0.001

Published on DES Disclosure Log
RTI Act 2009

NOTES: < Number = less than level of reporting, shading indicates concentrations above investigation thresholds,
Dutch Intervention (1994) = Environmental Quality Objectives in the Netherlands – Intervention Values
MWB = Field blank, MW1DUP = Duplicate of MW1
* Chromium = 0.03

As	B	Cd	Cu	Pb	Zn	Tri-Cr	Hexa-Cr	Cr
0.207	1.4	<0.001	0.082	0.021	0.118	0.06	<0.01	0.058

Sample ID: EPW

Our Ref: B7570R01.xls

R

9 October 1998

FLUOR DANIEL GTI

100% RECYCLED PAPER

TABLE 11
Creek Sediment Sample Analytical Results - Metals - Area I - Cooroy Creek
Results in parts per million (ppm)

Sample ID	Depth (mm)	Arsenic	Boron	Cadmium	Copper	Lead	Zinc	Trivalent Chromium	Hexavalent Chromium
CKS1	0	11	<40	<2	23	51	116	22	<0.1
CKS2	0	16	<40	<2	39	76	237	73	<0.1
CKS3	0	11	<20	<1	26	121	242	28	<0.1
CKS4	0	6	<40	<2	18	25	114	18	<0.1
CKS5	0	8	<20	<1	7	5	20	13	<0.1
CKS6	0	42	<40	<2	36	69	141	38	<0.1
CKS7	0	45	<20	<1	55	40	98	73	<0.1
CKS3DUP	0	13	<20	<1	20	99	186	16	<0.1
Maximum		45	<40	<2	55	121	242	73	<0.1
Minimum		6	<40	<2	7	5	20	13	<0.1
Mean		19.000	<40	<2	28.000	60.750	144.250	35.125	<0.1
Median		12	<40	<2	24.5	60	128.5	25	<0.1
Stand Dev.		15.437	0.000	0.000	14.871	38.369	74.835	24.637	0.000
Level of Reporting		1	20	1	1	1	1	1	0.1
Investigation Thresholds									
DoE Environmental - 1998 (Draft)		20	1-75 **	3	60	300	200	50	NE
DoE Health Based "A" - 1998 (Draft)		100	1-75	20	1000	300	7000	12%	100
DoE Health Based "E" - 1998 (Draft)		200	1-75	20	2000	600	14000	24%	200
DoE Health Based "F" - 1998 (Draft)		500	1-75	20	5000	1500	35000	60%	500

NOTES: < Number = less than level of reporting

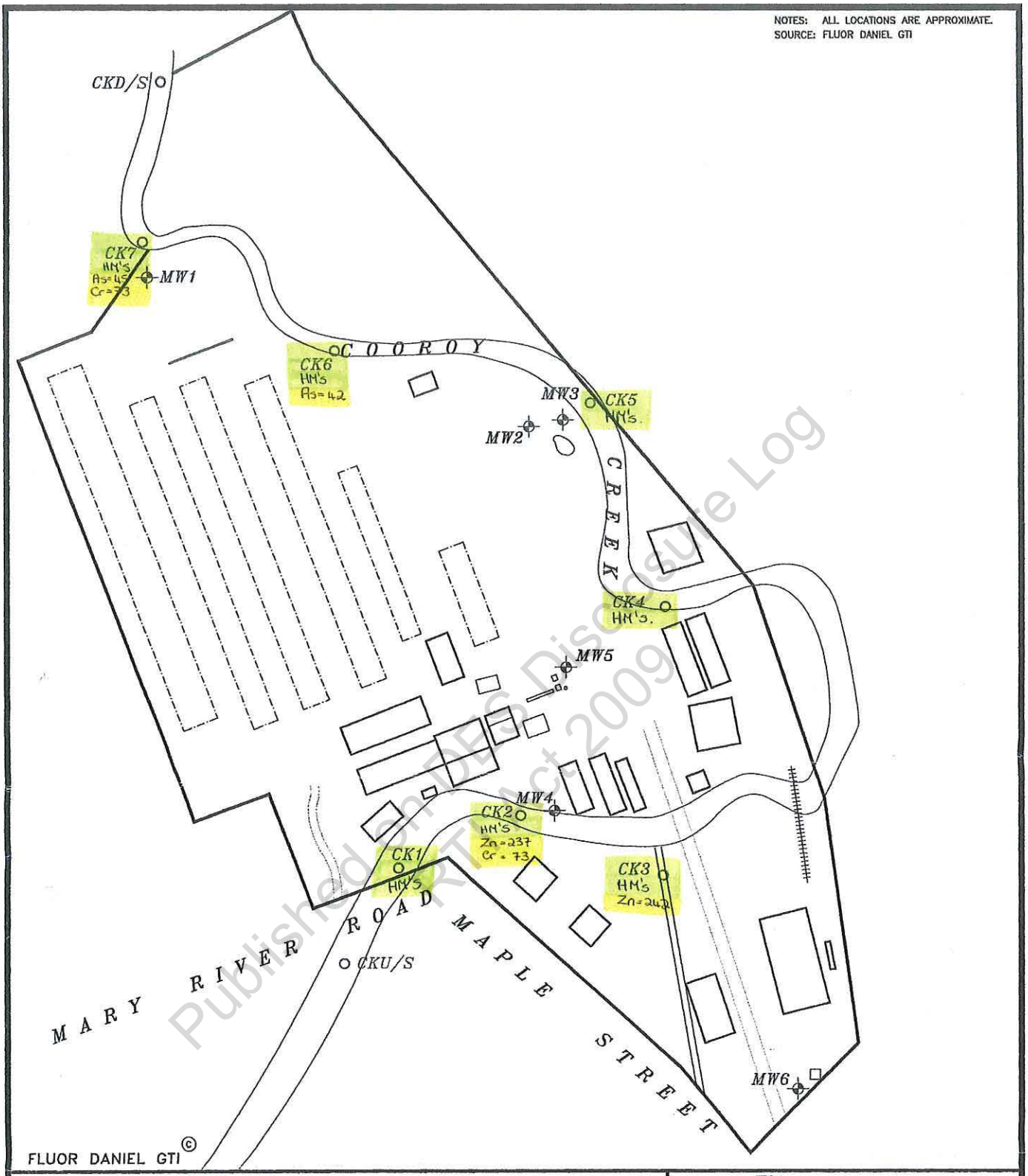
Shading indicates concentrations above **environmental investigation thresholds**

Department of Environment Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland - 1998

* Denotes sequential sample analyses

** DoE 1-75 ppm boron range refers to background levels only

Published on DES Disclosure Log
RTI Act 2009



Published on DES Disclosure Log
RTI Act 2009

LEGEND

- STRIPPED TIMBER
- O CK3 — CREEK SEDIMENT SAMPLE LOCATIONS (MAY 1998)
- MW1 — MONITORING WELL LOCATIONS (MAY 1998)

SOIL
- Below EIL
- Above EIL but < HIL(A)
- Above HIL(A)

WATER
- Below ANZECC Fresh & Marine
- Above ANZECC Rec drinking water.

N

SCALE 0 20 40 60 80 100 METRES
1:2000 (A4)

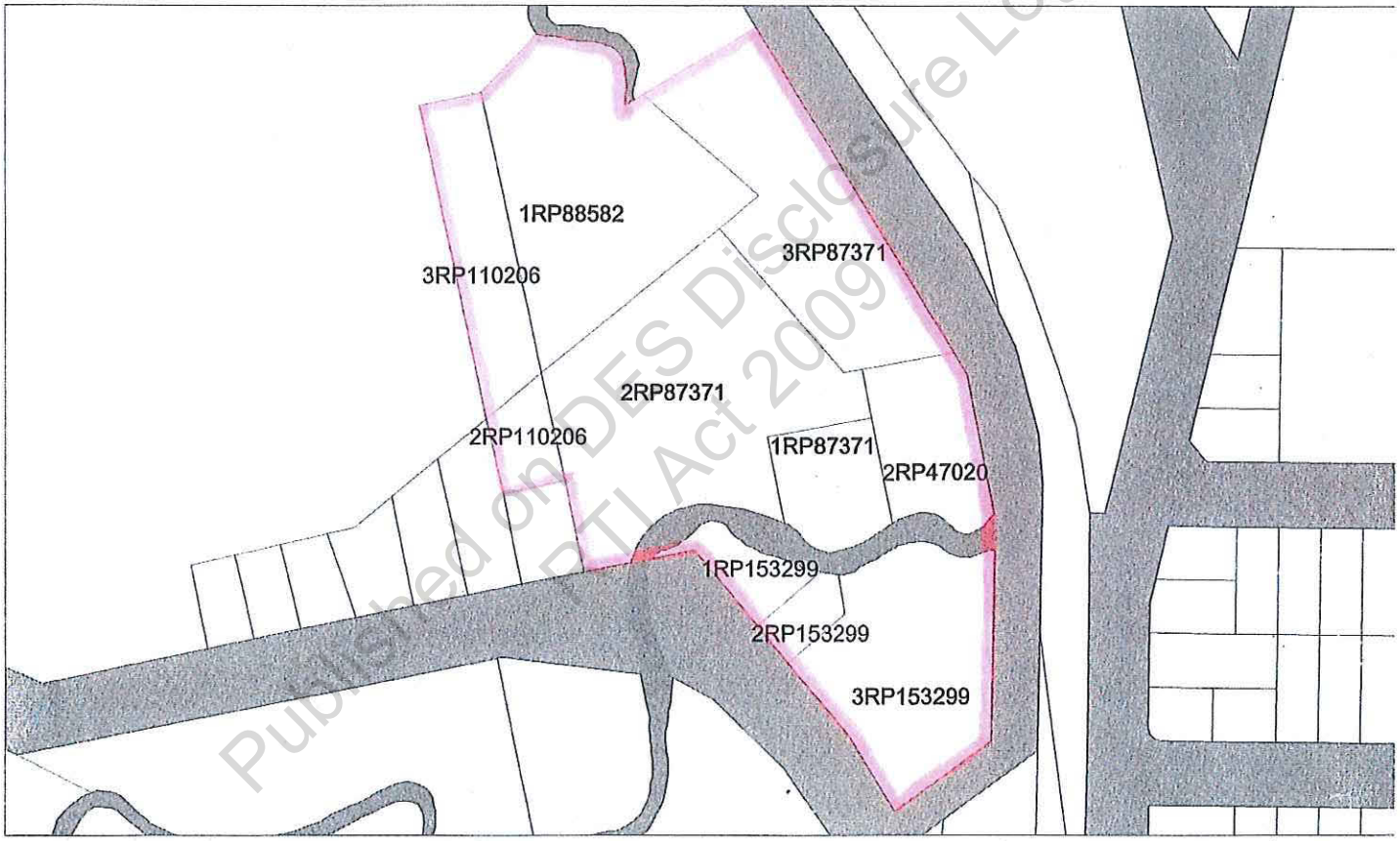
FLUOR DANIEL GTI
12 STRATTON STREET
NEWSTEAD QLD 4006
(07) 3252 5711

REV. NO.:	DRAWING DATE:	ACAD FILE:
1	28/08/98	B7570

SITE PLAN WITH SAMPLING LOCATIONS

CLIENT:	PM:
BORAL TIMBERS – COOROY	
LOCATION: CNR MARY RIVER RD & MAPLE ST COOROY, QUEENSLAND	PS:

DESIGNED:	DETAILED:	PROJECT NO.:	FIGURE:
CTPI 4	CTPI 4	B7570	3e



Published on DES Disclosure Log
RTI Act 2009

R

TABLE 7

Soil Analytical Results - Metals - Area E - Evaporation Pond and Catchment Area

Results in parts per million (ppm)

Sample ID	Depth (mm)	Arsenic	Boron	Cadmium	Copper	Lead	Zinc	Trivalent Chromium	Hexavalent Chromium
E1-0-200	0-200	155	<20	2	172	36	79	226	<0.1
E1-200-500	200-500	187	<20	<1	203	23	68	332	<0.1
E2-200-500	200-500	73	<20	1	64	30	72	118	<0.1
E3-0-200	0-200	198	<20	<1	185	26	54	271	<0.1
*E3-200-500	200-500	8	NR	NR	19	NR	NR	34	<0.1
E4-200-500	200-500	19	<20	1	25	29	63	34	<0.1
E5-0-200	0-200	56	24	1	68	77	125	77	<0.1
E5-200-500	200-500	9	<20	2	12	27	28	26	<0.1
E6-200-500	200-500	15	<20	1	24	43	82	32	<0.1
E7-0-200	0-200	76	27	2	106	119	120	79	<0.1
E7-200-500	200-500	18	26	2	46	127	131	39	<0.1
E8-0-200	0-200	27	23	1	73	93	214	49	<0.1
E8-200-500	200-500	12	<20	1	15	23	48	31	<0.1
E9-0-200	0-200	13	<20	1	23	29	71	27	<0.1
E10-0-200	0-200	10	<20	1	16	34	76	28	<0.1
E11-0-200	0-200	10	<20	1	22	39	75	30	<0.1
E11-200-500	200-500	10	<20	1	17	35	47	30	<0.1
E12-0-200	0-200	10	<20	1	25	32	90	23	<0.1
E13-0-200	0-200	22	<20	<1	32	58	267	35	<0.1
EPS	0	50	<20	<1	59	44	176	80	<0.1
MW3	200-500	51	26	1	62	57	1770	99	<0.1
MW3	2000	4	<20	1	13	27	28	28	<0.1
Maximum		198	27	2	203	127	1770	332	<0.1
Minimum		4	<20	<1	12	23	28	23	<0.1
Mean		46.955	5.727	0.955	58.227	45.818	167.455	78.545	<0.1
Median		18.5	26	1	28.5	35	76	34.5	<0.1
Stand Dev.		58.567	10.833	0.653	57.925	31.681	363.287	86.204	0.000
Level of Reporting		1	20	1	1	1	1	1	0.1
Investigation Thresholds									
DoE Environmental - 1998 (Draft)		20	1-75 **	3	60	300	200	50	NE
DoE Health Based "A" - 1998 (Draft)		100	1-75	20	1000	300	7000	12%	100
DoE Health Based "E" - 1998 (Draft)		200	1-75	20	2000	600	14000	24%	200
DoE Health Based "F" - 1998 (Draft)		500	1-75	20	5000	1500	35000	60%	500

NOTES:

< Number = less than level of reporting

Shading indicates concentrations above health-based "E" investigation thresholds

Department of Environment Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland - 1998

* Denotes sequential sample analyses

** DoE 1-75 ppm boron range refers to background levels only

NR = Not requested

Published on DES Disclosure Log
RTI Act 2009

Delete Background

R

Our Ref: B7570R01.xls

9 October 1998

FLUOR DANIEL GTI

100% RECYCLED PAPER

TABLE 8

Soil Analytical Results - Metals - Area F - Old Mills, Maintenance Shed and Sawdust Collection Hopper

Results in parts per million (ppm)

Sample ID	Depth (mm)	Arsenic	Boron	Cadmium	Copper	Lead	Zinc	Trivalent Chromium	Hexavalent Chromium
F1-0-200	0-200	150	<20	<2	271	10	20	470	<2
*F1-200-500	200-500	3	NR	NR	15	NR	NR	25	<0.1
F2-0-200	0-200	791	<20	1	483	10	56	980	<0.1
*F2-200-500	200-500	25	NR	NR	30	NR	NR	63	<0.1
F3-0-200	0-200	514	<20	3	429	33	103	915	<0.1
*F3-200-500	200-500	26	NR	NR	29	NR	NR	54	<0.1
F4-0-200	0-200	74	<20	1	203	114	95	146	<0.1
*F4-200-500	200-500	5	NR	NR	13	NR	NR	21	<0.1
F5-0-200	0-200	32	<20	3	62	82	1220	29	<0.1
*F5-200-500	200-500	4	NR	NR	26	NR	NR	22	<0.1
*F5-500-1000	500-1000	7	NR	NR	22	NR	NR	24	<0.1
F6-0-200	0-200	111	<20	1	109	48	149	136	<0.1
*F6-200-500	200-500	6	NR	NR	57	NR	NR	22	<0.1
*F6-500-1000	500-1000	5	NR	NR	14	NR	NR	22	<0.1
F7-0-200	0-200	8	<20	<1	15	28	64	27	<0.1
*F7-200-500	200-500	<1	NR	NR	12	NR	NR	23	<0.1
*F7-500-1000	500-1000	6	NR	NR	16	NR	NR	23	<0.1
F8-0-200	0-200	78	<20	<1	106	71	302	96	<0.1
*F8-200-500	200-500	4	NR	NR	15	NR	NR	23	<0.1
*F8-500-1000	500-1000	4	NR	NR	12	NR	NR	23	<0.1
F9-0-200	0-200	32	<20	<1	50	39	154	43	<0.1
*F9-200-500	200-500	<1	NR	NR	10	NR	NR	21	<0.1
*F9-500-1000	500-1000	3	NR	NR	12	NR	NR	21	<0.1
F10-0-200	0-200	27	<20	<1	32	271	99	27	<0.1
*F10-200-500	200-500	<1	NR	NR	10	NR	NR	18	<0.1
*F10-500-1000	500-1000	3	NR	NR	12	NR	NR	19	<0.1
F11-0-200	0-200	14	<20	<1	28	49	97	38	<0.1
F12-0-200	0-200	9	<20	<1	18	40	71	23	<0.1

Published on DES Disclosure Log
BTEX 2009

PAH, OC/OP's, TPH, BTEX

R

TABLE 8

Soil Analytical Results - Metals - Area F - Old Mills, Maintenance Shed and Sawdust Collection Hopper

Results in parts per million (ppm)

Sample ID	Depth (mm)	Arsenic	Boron	Cadmium	Copper	Lead	Zinc	Trivalent Chromium	Hexavalent Chromium
F13-0-200	0-200	15	<20	<1	9	31	60	29	<0.1
F14-0-200	0-200	60	43	<1	72	53	346	62	<0.1
F15-0-200	0-200	9	<20	<1	14	37	60	68	<0.1
F8dup	0-200dup	70	<20	<1	74	55	244	98	<0.1
MW6	6000	19	<20	<1	13	45	39	35	<0.1
Maximum		791	43	3	483	271	1220	980	<2
Minimum		3	<20	<2	9	10	20	18	<2
Mean		64.061	1.303	0.273	69.485	30.788	96.333	110.485	<2
Median		14.5	43	1	22	45	97	27	<2
Stand Dev.		159.557	7.485	0.761	115.051	52.144	220.707	230.803	0.000
Level of Reporting		1	20	1	1	1	1	1	0.1
Investigation Thresholds									
DoE Environmental - 1998 (Draft)		20	1-75 **	3	60	300	200	50	NE
DoE Health Based "A" - 1998 (Draft)		100	1-75	20	1000	300	7000	12%	100
DoE Health Based "E" - 1998 (Draft)		200	1-75	20	2000	600	14000	24%	200
DoE Health Based "F" - 1998 (Draft)		500	1-75	20	5000	1500	35000	60%	500

NOTES:

< Number = less than level of reporting

Shading indicates concentrations above health-based "E" investigation thresholds

Department of Environment Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland - 1998

* Denotes sequential sample analyses

** DoE 1-75 ppm boron range refers to background levels only

NR = Not requested

Published on DES Disclosure Log RTI Act 2009

TPH

F16 200-500 TPH, BTEX 2m TPH, BTEX.

R

TABLE 9

Soil Analytical Results - Metals - Area G - Borax Dip Pits

Results in parts per million (ppm)

Sample ID	Depth (mm)	Arsenic	Boron	Cadmium	Copper	Lead	Zinc	Trivalent Chromium	Hexavalent Chromium
G1-200-500	200-500	9	<20	<1	8	37	19	38	<0.1
G1-1	1000	11	<20	<1	14	30	69	36	<0.1
G2-200-500	200-500	12	<20	<1	15	27	36	39	<0.1
G2-1	1000	7	<20	<1	13	28	28	36	<0.1
G3-200-500	200-500	9	<20	<1	10	25	27	34	<0.1
G3-1	1000	10	<20	<1	16	25	36	36	<0.1
G4-0-200	0-200	14	271	<1	14	18	45	17	<0.1
*G4-200-500	200-500	NR	41	NR	NR	NR	NR	NR	NR
G5-0-200	0-200	30	<20	<1	29	39	64	63	<0.1
G6-0-200	0-200	8	<20	<1	12	30	24	36	<0.1
G6-200-500	200-500	10	<20	<1	13	25	24	34	<0.1
G7-0-200	0-200	62	<20	<1	85	34	106	90	<0.1
G7-200-500	200-500	13	<20	<1	22	32	51	35	<0.1
G8-0-200	0-200	8	<20	<1	12	28	24	31	<0.1
G9-0-200	0-200	21	49	<1	20	37	73	36	<0.1
G9-200-500	200-500	23	48	<1	28	35	94	35	<0.1
G10-0-200	0-200	55	<20	<1	52	41	75	91	<0.1
G11-0-200	0-200	55	<20	<1	54	33	59	93	<0.1
G11-200-500	200-500	7	<20	<1	12	24	21	35	<0.1
G12-0-200	0-200	10	<20	<1	20	27	86	22	<0.1
G13-0-200	0-200	102	723	<1	143	141	268	148	<0.1
G14-0-200	0-200	25	142	<1	44	47	177	45	<0.1
*G14-200-500	200-500	NR	<20	NRE	NR	NR	NR	NR	NR
G15-0-200	0-200	22	126	<1	24	87	68	36	<0.1
*G15-200-500	200-500	NR	<20	NR	NR	NR	NR	NR	NR
MW5	4500	2	<20	1	13	10	2	11	<0.1
Maximum		102	723	1	143	141	268	148	<0.1
Minimum		13	<20	<1	8	10	2	11	<0.1
Mean		20.192	53.846	0.038	25.885	33.077	56.769	41.423	<0.1
Median		12	126	1	16	30	51	36	<0.1
Stand Dev.		23.663	150.095	0.196	30.509	27.819	58.655	32.801	0.000
Level of Reporting		1	20	1	1	1	1	1	0.1
Investigation Thresholds									
DoE Environmental - 1998 (Draft)		20	1-75 **	3	60	300	200	50	NE
DoE Health Based "A" - 1998 (Draft)		100	1-75	20	1000	300	7000	12%	100
DoE Health Based "E" - 1998 (Draft)		200	1-75	20	2000	600	14000	24%	200
DoE Health Based "F" - 1998 (Draft)		500	1-75	20	5000	1500	35000	60%	500

NOTES: < Number = less than level of reporting

Shading indicates concentrations above health-based "E" investigation thresholds and boron background levels

Department of Environment Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland - 1998

* Denotes sequential sample analyses

** DoE 1-75 ppm boron range refers to background levels only

NR = Not requested

Released to DES Disclosure Log RTI Act 2009

Our Ref: B7570R01.xls

9 October 1998

FLUOR DANIEL GTI

100% RECYCLED PAPER

TABLE 10

Soil Analytical Results - Metals - Area H - Current Mill Sheds, Boiler, Kiln and Surrounding Area

Results in parts per million (ppm)

Sample ID	Depth (mm)	Arsenic	Boron	Cadmium	Copper	Lead	Zinc	Trivalent Chromium	Hexavalent Chromium
H1-0-200	0-200	75	49	<1	116	59	884	147	<0.1
H1-2	2000	7	25	<1	14	18	49	25	<0.1
H2-0	0	53	<20	<1	51	30	138	65	<0.1
H3-0.2-0.5	200-500	1360	333	<1	921	7	31	264	<0.1
*H3-500-1000	500-1000	32	NR	NR	5	NR	NR	153	<0.1
H4-0.2-0.5	200-500	4	<20	<1	8	20	16	24	2
H5-0-0.2	0-200	11	<20	<1	27	44	99	30	<0.1
H6-0.2-0.5	200-500	6	<20	<1	36	15	3	46	<0.1
H7-0.2-0.5	200-500	50	24	<1	56	18	9	67	<0.1
H8-0.2-0.5	200-500	66	25	<1	34	29	44	115	<0.1
H9-0.2-0.5	200-500	4	<20	<1	6	25	6	25	<0.1
H10-0.2-0.5	200-500	41	<20	<1	39	26	27	131	<0.1
H11-0.2-0.5	200-500	5	<20	<1	10	24	34	28	<0.1
H12-0-0.2	0-200	15	<20	2	30	184	707	28	<0.1
H13-0-0.2	0-200	34	<20	<1	141	78	243	27	<0.1
H14-0-0.2	0-200	13	<20	<1	21	36	96	30	<0.1
H15-0-0.2	0-200	11	<20	<1	8	18	21	49	<0.1
H16-0-0.2	0-200	5	<20	<1	8	30	27	45	<0.1
H17-0-0.2	0-200	22	<20	<1	19	25	48	58	<0.1
H18-0-0.2	0-200	23	<20	1	24	56	93	32	<0.1
H19-0-0.2	0-200	112	49	1	133	30	65	133	<0.1
*H19-200-500	200-500	5	NR	NR	16	NR	NR	35	<0.1
MW4	200-500	7	<20	1	11	25	22	25	<0.1
Maximum		1360	333	2	921	184	884	264	2
Minimum		4	<20	<1	5	7	3	24	<0.1
Mean		85.261	21.957	0.217	75.391	34.652	115.739	68.783	0.087
Median		15	37	1	24	26	44	45	2
Stand Dev.		279.284	69.553	0.518	188.557	37.225	223.069	60.825	0.417
Investigation Thresholds									
DoE Environmental - 1998 (Draft)		20	1-75 **	3	60	300	200	50	NE
DoE Health Based "A" - 1998 (Draft)		100	1-75	20	1000	300	7000	12%	100
DoE Health Based "E" - 1998 (Draft)		200	1-75	20	2000	600	14000	24%	200
DoE Health Based "F" - 1998 (Draft)		500	1-75	20	5000	1500	35000	60%	500

NOTES: < Number = less than level of reporting

Shading indicates concentrations above health-based "E" investigation thresholds

Department of Environment Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland - 1998

* Denotes sequential sample analyses

** DoE 1-75 ppm boron range refers to background levels only

NR = Not requested

Published on DES Disclosure Log
RTI Act 2009

Our Ref: B7570R01.xls

9 October 1998

FLUOR DANIEL GTI

100% RECYCLED PAPER

TABLE 14
Water Sample Analytical Results - Metals
Results in milligrams per litre (mg/L)

Sample ID	Arsenic	Boron	Cadmium	Copper	Lead	Zinc	Trivalent Chromium	Hexavalent Chromium
Evaporation Pond	0.207	1.4	<0.001	0.082	0.021	0.118	0.06	<0.01
Boron Pit #1	0.959	11.2	0.020	2.42	0.067	1.93	0.93	<0.01
Boron Pit #2	1.16	724	0.015	0.85	0.050	1.13	1.11	<0.01
Boron Pit #3	0.973	950	<0.050	0.50	0.051	1.50	1.20	<0.01
Maximum	1.16	950	0.02	2.42	0.067	1.93	1.2	<0.01
Minimum	0.207	1.4	<0.001	0.082	0.021	0.118	0.06	<0.01
Mean	0.825	421.650	0.009	0.963	0.047	1.170	0.825	<0.01
Median	0.966	367.6	0.0175	0.675	0.0505	1.315	1.02	<0.01
Stand Dev	0.422	488.415	0.010	1.021	0.019	0.773	0.522	0.000
Level of Reporting	0.001	0.2	0.001	0.001	0.001	0.001	0.02	0.02

= No Labs

NOTES: < Number = less than level of reporting,
* Total chromium

Published on DES Disclosure Log
RTI Act 2009

TABLE 15
Tank Pit & Land Farm Soil Sample Analytical Results - TPH, BTEX & Lead
Results in parts per million (ppm)

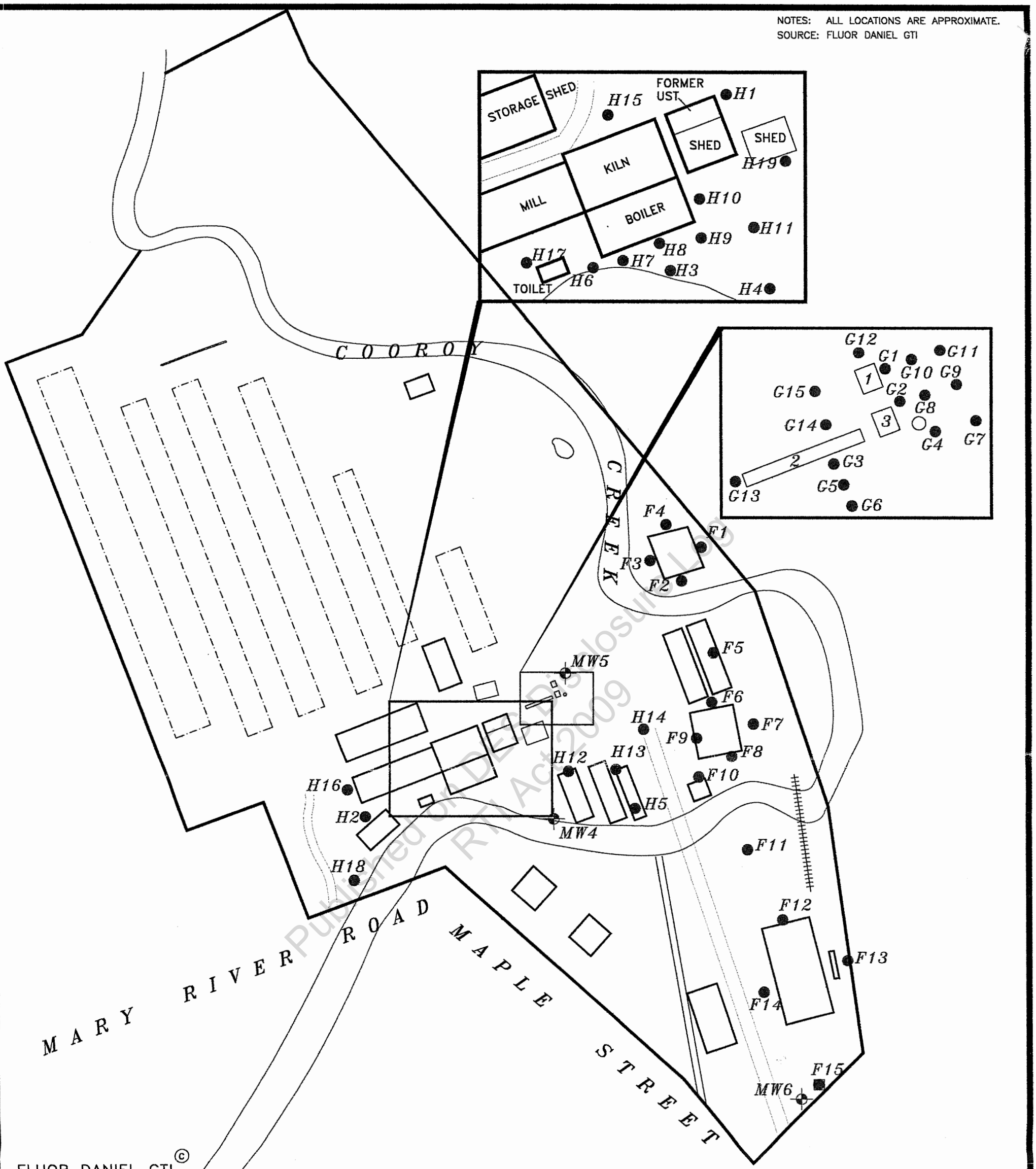
Sample ID	Depth (m)	TPH	C6-C9	C10-C14	C15-C28	C29-C36	B	T	E	X	Total BTEX	Total Lead
E/WALL	1.5	<LOR	<2	<50	<100	<100	<0.2	<0.2	<0.2	<0.2	<LOR	11
W/WALL	1.5	<LOR	<2	<50	<100	<100	<0.2	<0.2	<0.2	<0.2	<LOR	13
N/WALL	1.5	<LOR	<2	<50	<100	<100	<0.2	<0.2	<0.2	<0.2	<LOR	13
S/WALL	1.5	<LOR	<2	<50	<100	<100	<0.2	<0.2	<0.2	<0.2	<LOR	10
BASE	3	<LOR	<2	<50	<100	<100	<0.2	<0.2	<0.2	<0.2	<LOR	12
LF1-0.5	0.5	<LOR	<2	76	355	247	<0.2	<0.2	<0.2	<0.2	<LOR	nr
LF2-0.5	0.5	<LOR	<2	52	1020	1270	<0.2	<0.2	<0.2	<0.2	<LOR	nr
LF3-0.5	0.5	<LOR	<2	<50	283	364	<0.2	<0.2	<0.2	<0.2	<LOR	nr
LF4-0.5	0.5	<LOR	<2	<50	259	449	<0.2	<0.2	<0.2	<0.2	<LOR	nr
Maximum		<LOR	<2	76	1020	1270	<0.2	<0.2	<0.2	<0.2	<LOR	13
Minimum		<LOR	<2	<50	<100	<100	<0.2	<0.2	<0.2	<0.2	<LOR	10
Mean		<LOR	<2	14.222	213.000	258.889	<0.2	<0.2	<0.2	<0.2	<LOR	6.556
Median		<LOR	<2	64	319	406.5	<0.2	<0.2	<0.2	<0.2	<LOR	12
Stand Dev		0.000	0.000	28.852	336.392	419.046	0.000	0.000	0.000	0.000	0.000	6.287
Level of Reporting		NE	2	50	100	100	0.2	0.2	0.2	0.2	NE	1
Investigation Thresholds												
			C6-C9	C10-C14	C15-C36							
CHEM Unit (Draft 1991)		NE	100	100	1000		NE	NE	NE	NE	7	300
CHEM Unit (1992)		NE	NE	NE	NE	NE	1	NE	NE	NE	NE	300
Dept. of Env. 1998 Draft (Env)		NE	NE	NE	NE	NE	1	NE	NE	NE	NE	300

NOTES: TPH = total petroleum hydrocarbons; C6-C9 = carbon chain length group; B = benzene; T = toluene; E = ethylbenzene; X = xylenes;
NE = threshold not established; nr = not requested; LOR = below level of reporting; Shading denotes concentrations above investigation thresholds;
- Chemical Hazards and Emergency Management (CHEM) Unit (Draft 1991 and 1992) Guidelines for the Assessment of Contaminated Land in Queensland;
Department of Environment (1998) Draft Guidelines (Environmental) for the Assessment & Management of Contaminated Land in Queensland.

Published on DES Publications Register 2000

R

NOTES: ALL LOCATIONS ARE APPROXIMATE.
SOURCE: FLUOR DANIEL GTI



Published on DERM Disclosure Log
RTI Act 2009

LEGEND

- STRIPPED TIMBER
- G3 — SOIL SAMPLE LOCATIONS (MAY 1998)
- MW1 — MONITORING WELL LOCATIONS (MAY 1998)

N

0 20 40 60 80 100
SCALE METRES
1:2000 (A4)

FLUOR DANIEL GTI
12 STRATTON STREET
NEWSTEAD QLD 4006
(07) 3252 5711

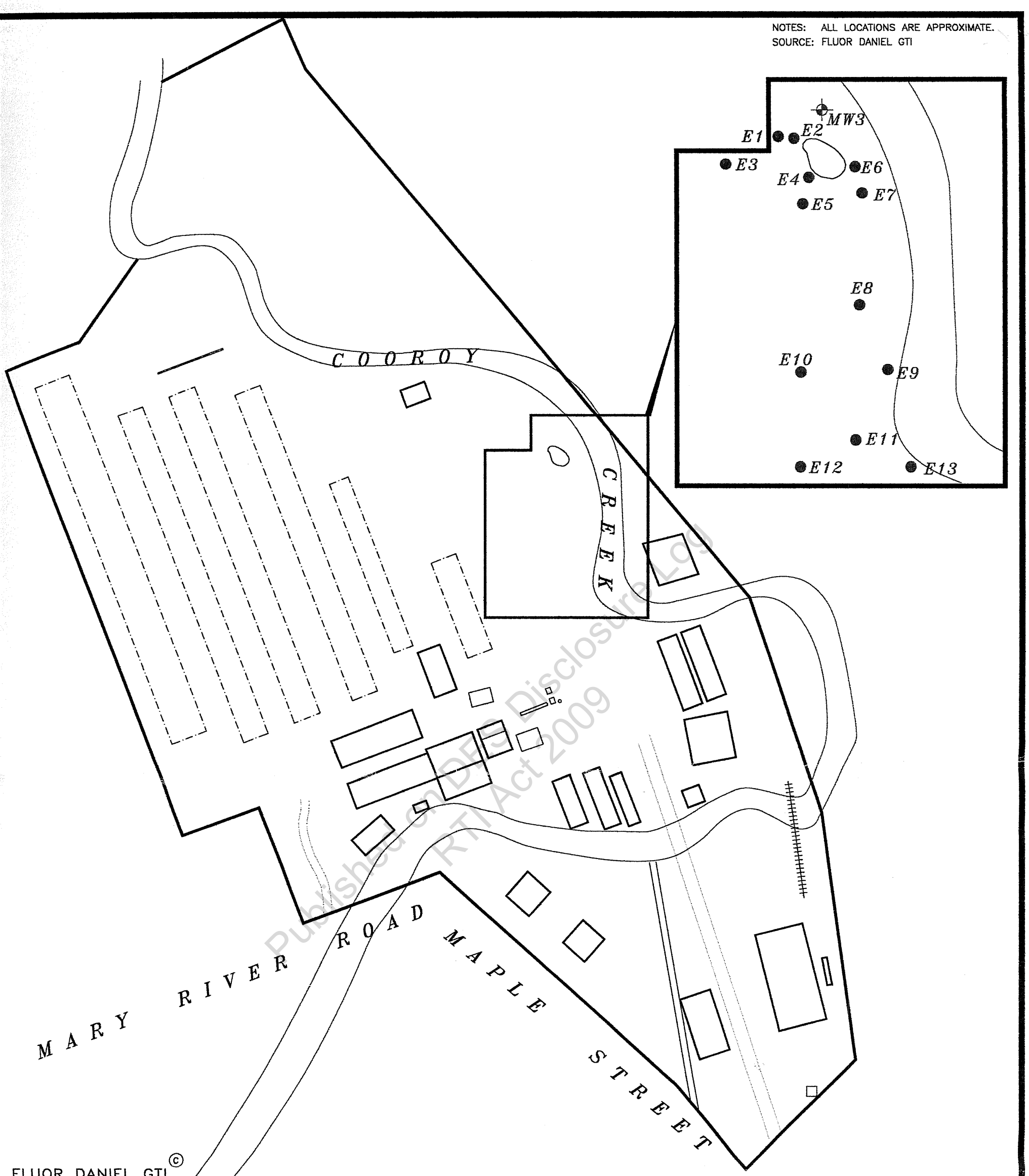
REV. NO.:	DRAWING DATE:	ACAD FILE:
1	28/08/98	B7570F3D

SITE PLAN WITH SAMPLING LOCATIONS

CLIENT:	PM:
BORAL TIMBERS – COOROY	
LOCATION: CNR MARY RIVER RD & MAPLE ST COOROY, QUEENSLAND	PS:

DESIGNED:	DETAILED:	PROJECT NO.:	FIGURE:
CTPI 49-S(	CTPI	B7570	3d

NOTES: ALL LOCATIONS ARE APPROXIMATE.
SOURCE: FLUOR DANIEL GTI



Published on DERM Disclosure Log
RTI Act 2009

FLUOR DANIEL GTI ©

LEGEND

- STRIPPED TIMBER
- E12 SOIL SAMPLE LOCATIONS (MAY 1998)
- MW1 MONITORING WELL LOCATIONS (MAY 1998)

N

0 20 40 60 80 100
SCALE METRES
1:2000 (A4)

FLUOR DANIEL GTI
12 STRATTON STREET
NEWSTEAD QLD 4006
(07) 3252 5711

REV. NO.:	DRAWING DATE:	ACAD FILE:
1	28/08/98	B7570F3C

SITE PLAN WITH SAMPLING LOCATIONS

CLIENT:	PM:
BORAL TIMBERS – COOROY	
LOCATION: CNR MARY RIVER RD & MAPLE ST COOROY, QUEENSLAND	PS:

DESIGNED:	DETAILED:	PROJECT NO.:	FIGURE:
CTPP49-S	CTPP49	B7570	3c

Check List for assessment of reports

Date: 8/4/99

Assessor: Belinda Seng

File No: 902328

Lot on Plan: L1,23RP153999, L1RP88582, L2,3RP110206 L1,2,3RP87371, L2RP47020.

Action (Proposed Remediation + Site assessment.)	Yes	No
Is site on EMR	✓	
Recorded on ACESS that you have received the file	✓	
Recorded on ACESS that more information has been requested		
Recorded on ACESS that the additional information requested has been received.		
All Information on file read - ie: previous information on EMR etc.	✓	
Tabled results match original lab reports. See page 6 for Notes		✓
Date of excavation matches date of sample taken		
Sample receipt advice is acceptable (time & condition)	✓	
Chain of custody forms supplied	✓	
Analysis dates are acceptable (time)	✓	
Sample numbers (tables and originals) match the supplied site diagram.		
Lead & metal samples noted on site diagrams		
High sample results marked on site diagrams and highlighted.		
Surrounding property uses noted		
Surrounding features of note (creeks)/ receptors	✓	
Site history noted, use changes and dates	✓	
Soil types examined		
Bore results supplied		
Sample positions (depths) noted, put on diagram and acceptable		
Stock pile maintenance and source	N/A	—
Stock pile sampling	N/A	—
All possible sources of contamination addressed.		
Original site plan supplied		
Title deeds supplied/ RP plan		
Site size on diagram provided , "mapinfo" and Certificate of title match.		
Amount of soil in stock piles matched excavation work detailed	N/A	—
Soils with different contaminates, contaminate sources stockpiled separately	N/A	—
Fill on site noted and tested		
Ground water level noted and tested if present		
Is wall sampling sufficient for excavation size.	N/A	—
Do disposal permits and receipts match.	N/A	—

Released under DERM Disclosure Log RTI Act 2009

R

Queensland Government

Environmental Protection Agency

160 Ann Street . Brisbane Queensland . PO Box 155 . BRISBANE ALBERT STREET QLD 4002
Telephone (07) 3227 6179 . Facimile (07) 3227 6536

RECEIPT

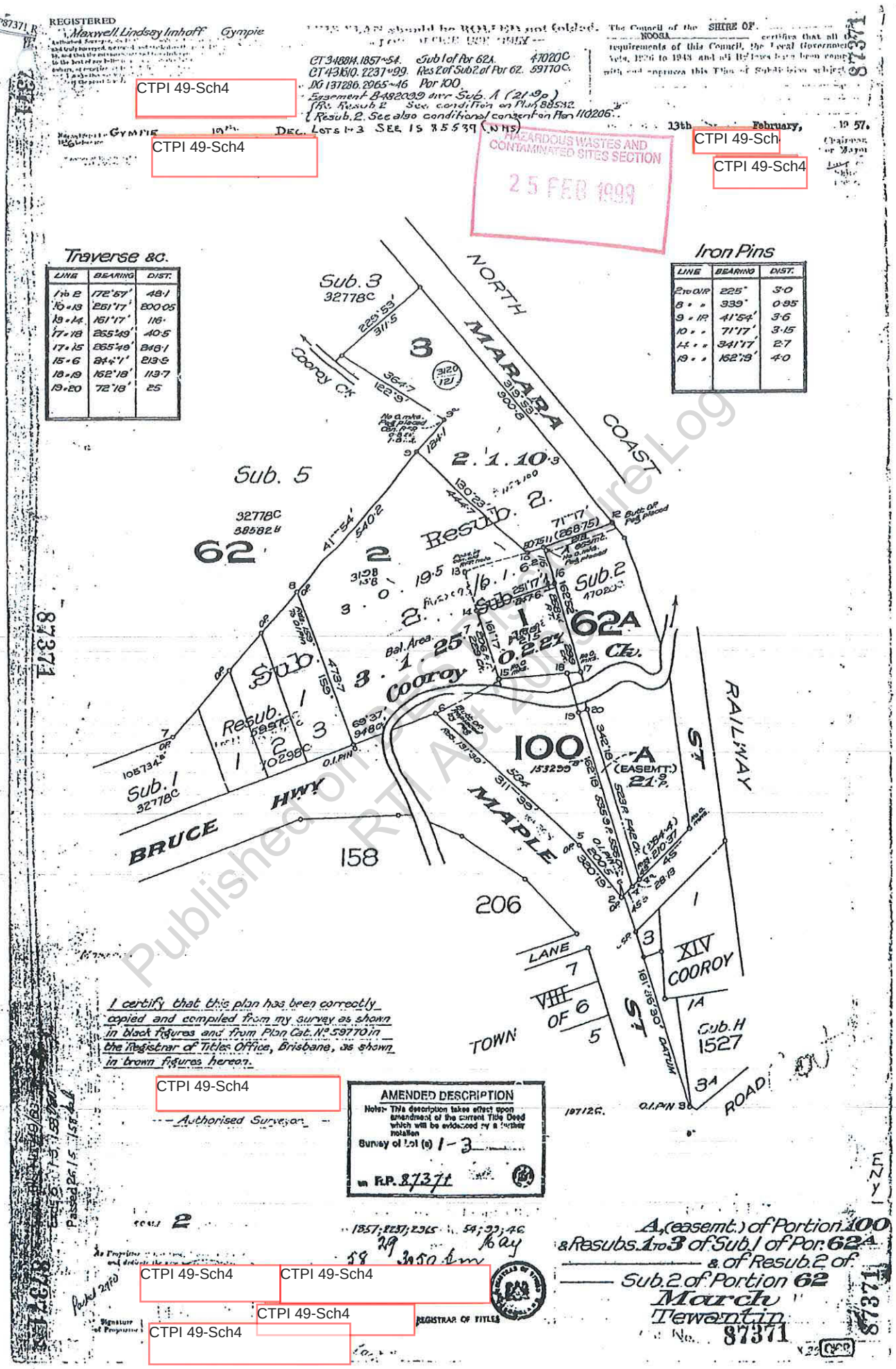
Receipt Number:	68335	Company Code:	QDOE
Receipt Date:	11.03.1999	Receipt Total:	900.00

PAYMENT FROM:
BORAL TIMBER DIVISION
WBC COOROY
$900.00

PAYMENT DETAILS	PAYMENT FOR	$ AMOUNT
CHEQUE 174037	CONTAMINATED SITE REPORT	900.00

Published on DES Disclosure Log RTI Act 2009

Received By: CTPI 49-Sch


REGISTERED
Maxwell Lindsey Imhoff Gympie
CT 34884.1857-54. Sub 1 of Por 62A. 47020C
CT 43160.2237-99. Res 2 of Sub 2 of Por 62. 59770C
DG 137286.2965-46 Por 100
Easement B492099 over Sub. 1 (21.9p.)
(Resub. 2. See also conditional consent on Plan 110206.
GYMPIE DEC. LOTS 1-3 SEE IS 85539 (NHS)
13th February, 19 57.
HAZARDOUS WASTES AND CONTAMINATED SITES SECTION
25 FEB 1999
Traverse &c.
Iron Pins
NORTH MARARA COAST
Sub. 3 32778C
Cooroy Ck
Sub. 5 32778C 38582B
62
Resub. 2.
2.1.10.3
Sub. 2 Resub. 1 Sub. 1 62A
3.1.25.7
0.2.22
Cooroy
Sub. 1 32778C
Resub. 1 Resub. 2 Resub. 3
BRUCE HWY
158
100 153295 A (EASEMT.) 21.9p.
MAPLE ST
RAILWAY ST
206
LANE
TOWN OF COOROY
XIV
Cub.H 1527
1A
34
ROAD
I certify that this plan has been correctly copied and compiled from my survey as shown in black figures and from Plan Cat. No. 59770 in the Registrar of Titles Office, Brisbane, as shown in brown figures hereon.
Authorised Surveyor
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) 1-3
in R.P. 87371
REGISTRAR OF TITLES
A, (easemt.) of Portion 100 & Resubs. 1 to 3 of Sub. 1 of Por. 62A & of Resub. 2 of Sub. 2 of Portion 62
March Tewantin
No. 87371
CTPI 49-Sch4
Published on DES Disclosure Log
RTI Act 2009

Check List for assessment of reports

Date: 7/4/99

Assessor: Belinda Seary

File No: 902328

Lot on Plan: L1,2,3 RP153999, L1 RP88582, L2,3 RP110206 L1,2,3 RP87371, L2 RP47020.

Action (Proposed Remediation + Site assessment)	Yes	No
Is site on EMR	✓	
Recorded on ACESS that you have received the file	✓	
Recorded on ACESS that more information has been requested		
Recorded on ACESS that the additional information requested has been received.		
All Information on file read - ie: previous information on EMR etc.	✓	
Tabled results match original lab reports. See page 6 Notes		✓
Date of excavation matches date of sample taken		
Sample receipt advice is acceptable (time & condition)	✓	
Chain of custody forms supplied	✓	
Analysis dates are acceptable (time)	✓	
Sample numbers (tables and originals) match the supplied site diagram.		
Lead & metal samples noted on site diagrams		
High sample results marked on site diagrams and highlighted.		
Surrounding property uses noted		
Surrounding features of note (creeks)/ receptors	✓	
Site history noted, use changes and dates	✓	
Soil types examined		
Bore results supplied		
Sample positions (depths) noted, put on diagram and acceptable		
Stock pile maintenance and source	N/A	—
Stock pile sampling	N/A	—
All possible sources of contamination addressed.		
Original site plan supplied		
Title deeds supplied/ RP plan		
Site size on diagram provided , "mapinfo" and Certificate of title match.		
Amount of soil in stock piles matched excavation work detailed	N/A	—
Soils with different contaminates, contaminate sources stockpiled separately	N/A	—
Fill on site noted and tested		
Ground water level noted and tested if present		
Is wall sampling sufficient for excavation size.	N/A	—
Do disposal permits and receipts match.	N/A	—

Released under DES Disclosure Log RTI Act 2009

R

Queensland Government

Environmental Protection Agency

160 Ann Street . Brisbane Queensland . PO Box 155 . BRISBANE ALBERT STREET QLD 4002

Telephone (07) 3227 6179 . Facimile (07) 3227 6536

RECEIPT

Receipt Number:	68335	Company Code:	QDOE
Receipt Date:	11.03.1999	Receipt Total:	900.00

PAYMENT FROM:
BORAL TIMBER DIVISION
WBC COOROY
$900.00

PAYMENT DETAILS	PAYMENT FOR	$ AMOUNT
CHEQUE 174037	CONTAMINATED SITE REPORT	900.00

Published on DES Disclosure Log RTI Act 2009

Received By: _____ CTPI 49-3 _____

Maxwell Lindsay Imhoff Gympie

THIS PLAN should be ROLLED not folded.

The Council of the SHIRE OF NOOSA certifies that all the requirements of this Council, the Local Government Acts, 1936 to 1948 and all Bylaws have been complied with and approves this Plan of Subdivision subject to

CT 34884.1857-54. Sub 1 of Por 62A. 47020C
CT 43610.2237-99. Res 2 of Sub 2 of Por 62. 59770C
DG 137286.2965-46 Por 100
Easement B482009 over Sub. 1 (21.9p)
As Resub 2 See condition on Plan 885942
Resub. 2. See also conditions/consent on Plan 110206.

GYMPIE 19th DEC. Lots 1-3 SEE IS 85539 (NHS) 13th February, 1957.

Chairman or Mayor

Town Clerk

CTPI 49-Sch4

HAZARDOUS WASTES AND CONTAMINATED SITES SECTION
25 FEB 1999

CTPI 49-Sch4

CTPI 49-Sch4

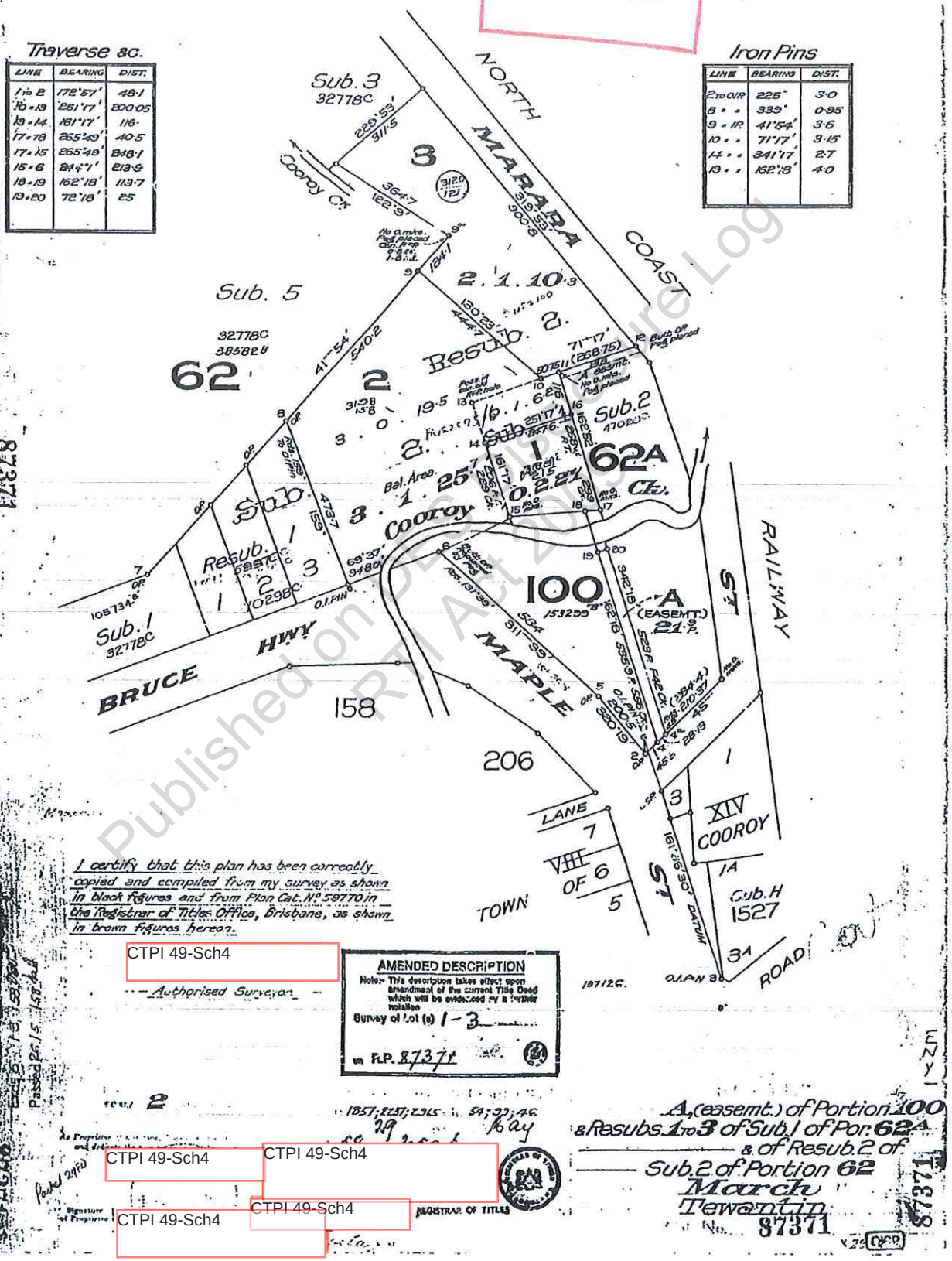
CTPI 49-Sch4

Traverse &c.

LINE	BEARING	DIST.
1 to 2	172°57'	48·1
2 - 19	251°17'	800·05
19 - 14	161°17'	116·
17 - 18	265°49'	40·5
17 - 15	265°49'	848·1
15 - 6	244°7'	213·9
18 - 19	162°18'	113·7
19 - 20	72°18'	25

Iron Pins

LINE	BEARING	DIST.
2 to O/R	225°	3·0
6 " "	339°	0·95
9 - IR	41°54'	3·6
10 " "	71°17'	3·15
14 " "	341°17'	2·7
19 " "	162°18'	4·0



I certify that this plan has been correctly copied and compiled from my survey as shown in black figures and from Plan Cat. No. 59770 in the Registrar of Titles Office, Brisbane, as shown in brown figures hereon.

CTPI 49-Sch4

Authorised Surveyor

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 - 3
in R.P. 87371

CTPI 49-Sch4

CTPI 49-Sch4

CTPI 49-Sch4

CTPI 49-Sch4

REGISTRAR OF TITLES

A, (easemt.) of Portion 100
& Resubs. 1 to 3 of Sub. 1 of Por. 62A
& of Resub. 2 of
Sub. 2 of Portion 62
March
Tewantin
No. 87371

Published on DES Disclosure Log RTI Act 2009

B472714

For Additional Plan & Document Reference Refer to GISP

87371

F.N.

1-0-0
3-0-0
1-0-0
6-0-0
5-0-0
7-6 Postal Fee
£11-7-6

2237/99 - Conveyance
2965/46 Conveyance
1857/54 - Conveyance

RECEIVED
25 MAR 1957
At

Boarer 6.3.57

Paid 3.57

CTPI 49-Sch4

CTPI 49-Sch

CTPI 49-Sch4

236 many 87 Stamps

Published on DES Disclosure Log RTI Act 2009

CTPI 49-Sch4

THIS PLAN should be ROLLED not folded.

Certificate of Title or Deed of Grant.

DC 99816 1177-76
Easement No A 171327 over Res A of Sub 2

I, ... of Gympie
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 do not to the best of my belief in any way interfere with the rights or property of any persons, owners, or occupiers of land adjoining the above land, and described in the said plan; and I make this solemn declaration conscientiously believing the same to be true, and by virtue of the provisions of the "*Oaths Act of 1867.*"

CTPI 49-Sch4

88041
Authorised Surveyor.

CTPI 49-Sch4

Made and Signed at Gympie this 2nd day of January 1929, before me

CTPI 49-Sch4

Signature of Registrar of Titles

23rd December 31

CTPI 49-Sch4

FOR OFFICE USE ONLY
Sub 1. See Plan No 87371 B
Lot 2 SEE IS 85589 (NMS)

CTPI 49-Sch4

CTPI 49-Sch4

NOTICE OF EASEMENT
Note: This description taken effect upon amalgamation of the Survey Title Deed with the Survey Title Plan as evidenced by a further notation.
Survey of Lot (s) 1 and 2 EMT A in Lot 2 on R.P. 47020

MARAFLEN

87371B

A 2|8.0 (Easement) 225.5

1

2

62A

0.3.33

0.3.25 Bal.

THE COUNCIL OF THE SHIRE OF NOOSA APPROVES OF THE WITHIN PLAN OF SUBDIVISION subject to sub 1 of portion 62A being amalgamated with sub 2 of portion 62. SEALED WITH THE COMMON SEAL OF THE COUNCIL OF THE SHIRE OF NOOSA THIS THE 2nd DAY OF January 1929.

CTPI 4

CTPI 49

Cooroy

153299

I certify that the figures shown hereon are correctly copied and compiled from my survey as shown in black and from plan Cat. No. Mch 819 in Survey Office as shown in brown

CTPI 49-Sch4

Auth. Surveyor

SURVEY

FOR LOT DESCRIPTION SEE ABOVE

OF SUBDIVISIONS 1 & 2 & EMTA IN Lot 2 & Res A

OF LOT 9062 ON MCH 819 (Easement) of Sub 2

OF ~~ALLOTMENT OR~~ PORTION NO. 62A

~~OF SECTION~~

COUNTY OF March

PARISH OF Tewantin

Cat. No. 47020

SCALE 1 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

CTPI 49-Sch4

47020

47020

CISP M.F

Published on DES Disclosure Log RTI Act 2019

For Additional Plan & Document Nothings Refer to CISP

Published on DES Disclosure Log
RTI Act 2009

47020

R

CTPI 49-Sch4

Gympie

CT 28406.1557.146 32778C
Resub. 1, See Conditional Consents hereon and on Plan No 110206.
Resub 2. See Plan No. 110206 B
Lot 1 See US 85589 (NHS)

CTPI 49-Sch4

CTPI 49-Sch4

CTPI 49-Sch4

I certify that this plan has been correctly copied and compiled from my survey as shown in black figures and from Plan Cat. No 32778 in the Registrar of Titles Office Brisbane, as shown in brown figures hereon

CTPI 49-Sch4

Authorised Surveyor

New C.T. Ref.

(Rel Sub	Vol.	Fol.
2	3548	211

63
156938 B.

270°
1978

310·
Sub.4
1234

41°
26·1 Ck.

2

61A

32778C

COOROY

MARARA

NORTH COAST RAILWAY

206·47
60 Ck.

354·7'
830·6

343·3
270
336·23

Sub.3

246·28

32778C

CE.

35·5'
165·4 P.T.
180 Ck.

49·55'

31°5

873718

Sub.3

Resub.2

Sub.2

Sub.1

Sub.2

873718

Cooroy

Sub.2

100

Sub. 2

61

533680

62

214·48

180°

437'

Resub. 1

Balance Area.

109 . 0 . 26

Sub. 3

779908

Resub. 2

954·54'

165·43'

161·75'

819·7
66·2'

104°56'

1072·5

150

400
69°39'

339°39'

391·1
67°36'

Sub.1
32778C.

WIDE

ROAD

202

P. 605

Recreation Reserve

IRON PINS

LINE	BEARING	DIST.
1 TO IP	339°2'	0·95
2 to IP	41°56'	3·6
4 "	215°5'	4·95

FOR LOT DESCRIPTION SEE OVER

Calc. Bk. No. 449/115
Exd. 5 / 3 / 158
Passed 26 / 5 / 158

SCALE 4 chains to an inch

As Proprietor of the land I agree to the Plan of ... and to lodge the same for registration

Signature of Proprietor

CTPI 49-Sch4

Particulars entered in Register Book, Vol. 1557 Folio 146 the 29 day of May 1968 at 2·20 pm

CTPI 49-Sch4

REGISTRAR OF TITLES

SURVEY

RE Lots 1 & 2 of Sub. 5 Cont Lot Sch RP88582

of portion 62

County of March

Parish of Tewantin

Cat. No. 88582.

CISP

88582 S N

88582

Published on DES Disclosure Log RTI Act 2009

B509324

For Additional Plan & Document Noting Refer to CISP

For Additional Plan & Document Noting Refer to CISP

Published on DES Disclosure Log RTI Act 2009

88582

FN

RECEIVED 12 SEP 1957

CTPI 49-Sch4

1557/146

94385.

Paid £5.7.6

1-0-0 as assessed
3-0-0
1-0-0
7-6 Postal Fee
£6.7.6

Paid £1.0.0

CTPI 49

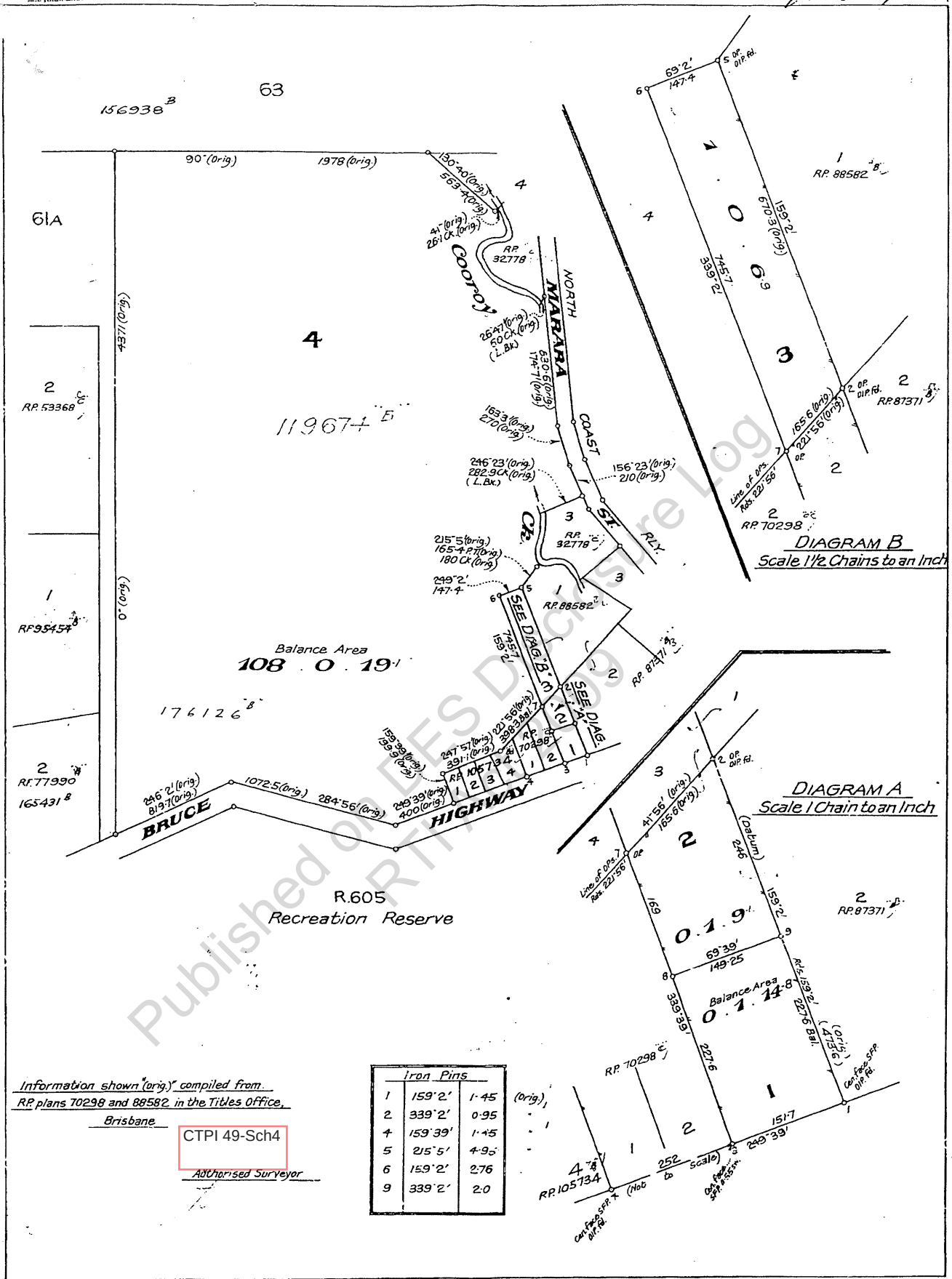
12/9/57

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 & 2
on R.P. 88582

This plan MUST NOT BE FOLDED but may be rolled.

Reg 2-3-49-2-66

110206



Published on DES Disclosure Log RTI 2009

Lots 1 to 4 Lots Lot 2
(Cancelling Sub 3 on RP 70298 and Resub 2 on RP 88582)

Orig. Portion 62 CISP SCALE 5 chains to an Inch

~~Town of~~ Orig. Grant 106964

Parish of TEWANTIN

Surveyed by A.J. Edmiston 1/12/1965

CROWN COPYRIGHT RESERVED
REGISTRAR OF TITLES, QUEENSLAND

REGISTERED PLAN CISP 110206

This plan MUST NOT BE FOLDED but may be rolled.

CTPI 49-Sch4 of Cooroy

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 do not to the best of my belief in any way interfere with the rights or property of any persons, owners or occupiers of the land adjoining the above land, and described in the said plan; and I make this solemn declaration conscientiously believing the same to be true, and by virtue of the provisions of the "Oaths Acts 1867-1940"

CTPI 49-Sch

Authorised Surveyor

Made and Signed at Cooroy this fifteenth day of December 1965 before me.

Signature of Registrar of Titles or of a Magistrate

- FOR SURVEYOR'S USE ONLY -

SURVEY OF Lots 1 to 4

County of March Parish of Tewantin

Town of To the Depth of

Cancelling Sub 3 on RP 70298 and Resub 2 on RP 88582

Orig. Grant 106964 Orig. Portion 62

The Council of the SHIRE of NOOSA certifies that all the requirements of this Council, the Local Government Acts of 1936 to 19 and all By-laws have been complied with and approves this Plan of Subdivision subject to AS EXPLANATION BY LOTS 2 & 3 WITH SUB 1 & 11 RESUB 1 & 11 SUB 3 OF PORTION 62 AND RES 1 OF SUB 5 OF PORTION 62.

Dated this 19th day of JAN 66

CTPI 49-Sch4

Chairman or Mayor

Town or Shire Clerk

- FOR OFFICE USE ONLY -

C.T. 2700-47 Sub 3. 70298 C

Previous Title C.T. 3548-211 Resub 2. 88582 B

Lot 4 See Plan No. 110674 B

Lots 2 & 3 See Is 85589 (N.M.S.)

Calcs CTPI 4

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 CTPI 49-Sch4

3548-211 - Gladys Ida Clough Johnson

2700-47 - Walter Warner

Lot 4 on RP 88582 4th gd.

For Additional Plan & Document Notings Refer to CISP

New C.T. Ref.

Ref. Sub.	Vol.	Fol.
2	3900	238
4	4081	152

C.T. 3548-211 BY BLACKMAN & BUTLER 22-2-66.
C.T. 2700-47 Due Mtge A868245 E.J.K.A. 2-3-66

Paid 26-5-66

FEES SHORT

12-7 CTP $12-75

CT 93130

1966 FEB 7 PM 1:55 CTP

REGR. OF TITLES RECEIVED

F.N. W. WARNER 1-0-0 3-0-0 2-0-0 6-0-0 5-0-0 G. JOHNSON 10-0 PHOTO 7-6 POSTAL FEE £11-17-6 7-2-66. Cash Paid £5-10-0 $4139 £5.10.0

CTPI 49-

Calc. Bk. No. 8330 Examined 16/3/66 Passed 30/5/66 Charted 14/6/66 Located P.M. TEWANTIN T.M. Cooroy

Particulars entered in Register Book Vol. 2700 Folio 47 3548 211 the 1 day of June 1966 at 10.45 a.m.

CTPI 49-Sch4

REGISTRAR OF TITLES

CTPI 49-

Lodged by: BLACKMAN & BUTLER SOLICITORS NAMBOUR 66/2792

REGISTERED PLAN 110206 JB

Published on DES Disclosure Log RTI Act 2009

Fluor Daniel GTI

CTPI 49-Sch4

07 3252 5711

07 3252 5712

PO BOX 2320
FORTITUDE VALLEY MAC 4006

Prescribed Organisation: Australian Institute of Geoscientists — Member

Comments: Australia Institute of Petroleum; International Association of Hydrogeologists; Australian Water & Wastewater Association; National Groundwater Association

Qualifications: Bachelor of Science (Hons) Uni of New South Wales

Comments: Master of Business Administration - University of Queensland 1996

contaminated land assessment, remediation and validation
design of sampling programs
environmental chemistry
human toxicology
environmental toxicology
groundwater sampling design and impact assessment
hydrogeology
soil science and geotechnology
interpretation of chemical data
quality control/quality assurance procedures
contaminant transport and assessment of exposure pathways and risk

I tried ca
Wasn in the
again

CTPI 49-Sch4

Published on DES Disclosure Log
RTI Act 2009

FILE COPY OF NOTIFICATION DISK

Code:

Site Name: COOROY SAWMILL

092-00

Category

File: 900392

SITE LOCATION
MAPLE ST
COOROY
4563

Site Lot

Plan RP153299

OWNER ADDRESS
ALAN TAYLOR & CO LTD
PO BOX 224
COOROY

4563

Zoning

Area: 1444

Current Use:

Past Use:

Comments

Published on DES Disclosure Log
RTI Act 2009

R

SITE REPORT

Date Printed: 16/03/1999

EMM7040

V1.0.1

EMR

Lot 1 **Plan** RP153299 **Category** NOTIFIABLE ACTIVITY **Record Type** BP **ID** 10155

Hist ID 92-3866

LGA NOOSA SHIRE COUNCIL **Region** SE **AMA**

Site Name TIMBERYARD - BORAL - COOROY PT12 **Notified By** DATACONV **Notif Rec'd**

Street 1 MAPLE STREET **Entry Date** 27/06/1998 **Last Altered Date** 16/03/1999

Suburb COOROY **Post code** 4865 **Ext Ref**

Owner ALLEN TAYLOR & CO LTD

Owner Address P O BOX 224
COOROY
QLD

Haz Cont

Post code 4865

Parcel Status C **Area** 0 **m²** **File** 902328 **Officer** NIL

Offsite Disposal Date

Notifiable Activities

WOOD TREATMENT AND PRESERVATION

Comments

Registered Site ID 10155

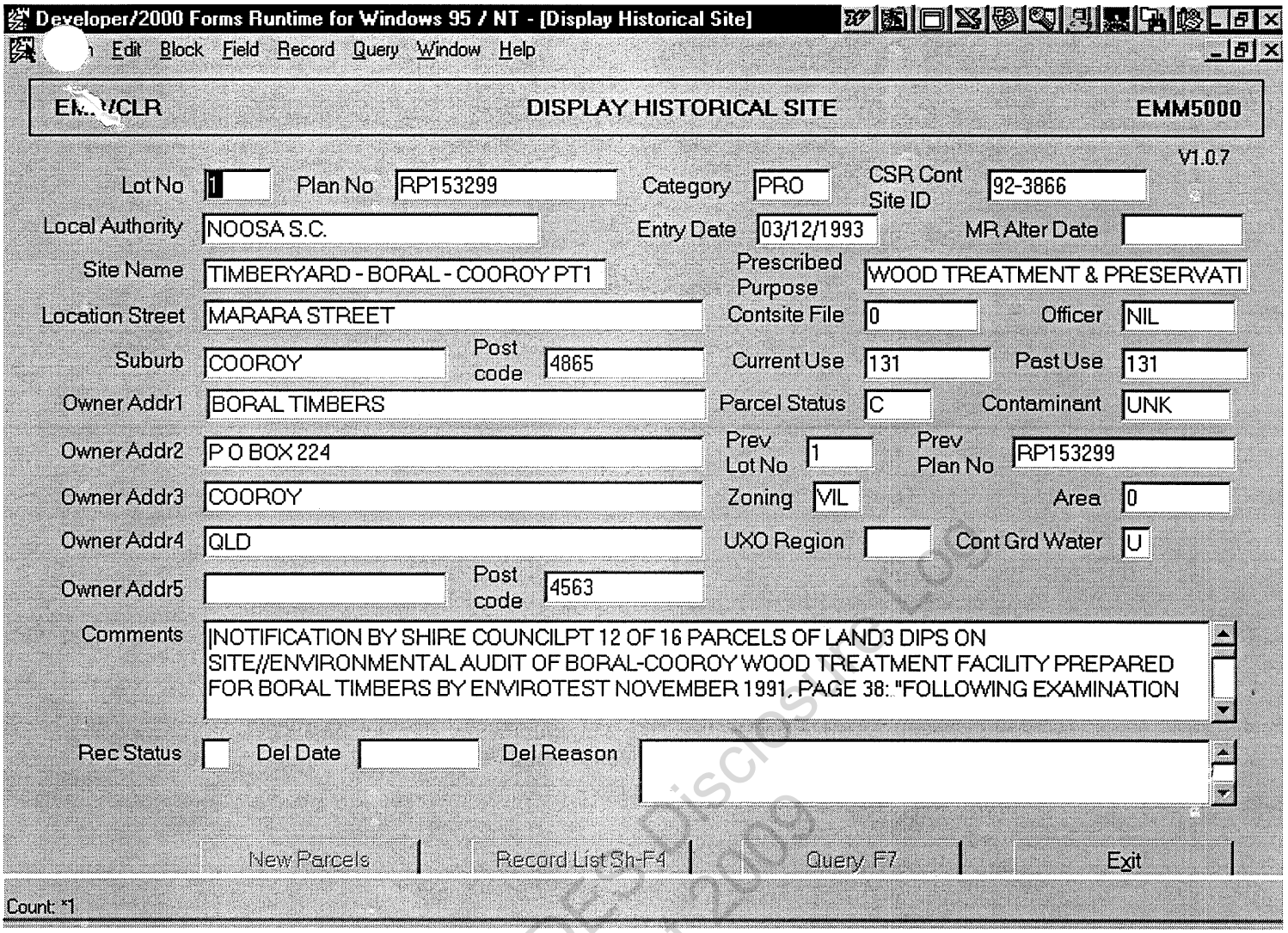
Date	User ID	Corr No	Officer Name	Finalised	How Finalised

16/03/1999 TSOURGR

CONTAMINATED SITE ASSESSMENT STAGE II INVESTIGATION REPORT AND REMEDIATION PLAN REC'D FROM FLUOR DANIEL AS PART OF CSI APPLICATION FEB '99 ON BEHALF OF BORAL TIMBER DIVISION.

Published on DES Disclosure Log
RTI Act 2009

R



Published on DES Disclosure Log
RTI Act 2009

R

SITE REPORT

Date Printed: 16/03/1999

EMM7040

V1.0.1

EMR

Lot 2 **Plan** RP87371 **Category** NOTIFIABLE ACTIVITY **Record Type** BP **ID** 10233

Hist ID 92-4038

LGA NOOSA SHIRE COUNCIL **Region** SE **AMA**

Site Name TIMBER TREATMENT - COOROY SAWMILL **Notified By** DATACONV **Notif Rec'd**

Street 1 MAPLE ST **Entry Date** 27/06/1998 **Last Altered Date** 16/03/1999

Suburb COOROY **Post code** 4563 **Ext Ref**

Owner ALLEN TAYLOR & CO LTD

Owner Address TRADING AS BORAL TIMBER DIVISION
PO BOX 224
COOROY
QLD

Haz Cont

Post code 4563

Parcel Status C **Area** 13475 m² **File** 902328 **Officer** HOPPER

Offsite Disposal Date

Notifiable Activities

PETROLEUM PRODUCT OR OIL STORAGE
WOOD TREATMENT AND PRESERVATION

Comments

Registered Site ID 10233

Date	User ID	Corr No	Officer Name	Finalised	How Finalised

16/03/1999 TSOURGR

CONTAMINATED SITE ASSESSMENT STAGE II INVESTIGATION REPORT AND REMEDIATION PLAN REC'D FROM FLUOR DANIEL AS PART OF CSI APPLICATION FEB '99 ON BEHALF OF BORAL TIMBER DIVISION. ADDED N/A 'PETROLEUM PRODUCT OR OIL STORAGE' (UST ON SITE) AS ADVISED BY KAREN HOPPER, SNR.ENVIRON.OFFICER.

Published on DES Disclosure Log
RTI Act 2009

R

BORAL LIMITED
ACN 000 051 696
Environmental Services
Ground Floor, North Court, John Oxley Centre
339 Coronation Drive, Milton QLD 4064
GPO Box 148 BRISBANE QLD 4001
Telephone (07) 3858 0600
Facsimile (07) 3367 1239
Direct CTPI 49-Sch4
Mobile CTPI 49-Sch4
Email CTPI 49-S@oca.boral.com.au.

22 January 1999

Department of Environment & Heritage
160 Ann Street
Brisbane

Attention: **Mr Michael Whittaker**
Deputy Director General

Dear Sir

APPLICATION FOR ASSESSMENT OF A SITE INVESTIGATION REPORT AND REVIEW OF REMEDIATION PLAN

SITE: **BORAL TIMBER**
1 MAPLE STREET
COOROY QLD

Following instructions from Boral Limited, Fluor Daniel GTI has prepared a Stage II Investigation Report (Stage I Report included) and a proposed Remediation Plan for the above site

Both of these reports are enclosed under cover of a letter dated 11 November 1998 from Fluor Daniel GTI.

To support this review process, enclosed is a completed Application for Assessment of a Site Investigation Report form, together with a cheque for $900.00 as the statutory fee

We look forward to receiving your review comments.

Yours sincerely

CTPI 49-Sch4

CTPI 49-Sch4
Manager, Environmental Services – Qld & NZ
Boral Limited

Attachments: Completed Application for Assessment of a Site Investigation Report
Cheque for $900.00
Fluor Daniel GTI Review letter dated 11 November 1998
Stage II Investigation Report
Remediation Plan

Published on DERM Disclosure Log
RTI Act 2009

BORAL TIMBER DIVISION
Allen Taylor & Company Limited
(Incorporated in New South Wales)
A.C.N. 000 003 056
PO Box 224 Cooroy Qld 4563
Telephone (07) 5447 6288
Fax (07) 5447 6409

REMITTANCE ADVICE

Published on DES Disclosure Log
RTI Act 2009

CREDITOR NO - 18166

DEPT ENVIRONMENT & HERITAGE

C/- CTPI 49-Sch4
BOR[illegible] LTD
PO BOX 148
BRISBANE QLD 4001

BORAL TIMBER DIVISION

Allen Taylor & Company Limited A.C.N. 000 003 056
Incorporated in N.S.W
Duncan's Holdings Limited A.C.N. 000 080 704
Incorporated in N.S.W
Tasmanian Board Mills Limited A.C.N. 009 477 427

REMITTANCE ADVICE

A Member of the Boral Limited Group
Bruce Highway Cooroy QLD 4563
PO Box 224 Cooroy QLD 4563
Phone: (07) 5447 6288
Fax: Admin: (07) 5447 6409

HERITAGE

REMITTANCE ADVICE PAGE

CTPI 49-Sch4

OURS	REFERENCE TYPE	YOURS	AMOUNT	DISCOUNT	PAYABLE

Published on DES Disclosure Log
RTI Act 2009

AMOUNT OF CHEQUE PAYMENT

11 November 1998

Project Ref: B7570R03

Department of Environment and Heritage
160 Ann Street
BRISBANE QLD

Attention: Mr Michael Whittaker
Deputy Director General

Dear Sir

STAGE II INVESTIGATION REPORT AND REMEDIATION PLAN

SITE: BORAL TIMBERYARDS
MAPLE STREET
COOROY, QUEENSLAND

Attached please find Stage II Investigation Report (Stage I report included) and proposed Remediation Plan for the Boral Cooroy Timberyards. Fluor Daniel GTI have prepared these reports for review on behalf of Boral Limited. We understand that Boral Limited will submit these reports and attach the appropriate applications and fees for review

The timberyards are still operational at this time, therefore it is not our intention to seek a suitability statement. Rather, we ask that the Department undertake a review of the Stage II Investigation and Remediation Plan. Our client seeks approval in principle to proceed with the preferred option contained in the Remediation Plan It is intended to implement the Remediation Plan in a staged approach as operations on site cease.

Please call if you have any queries.

Yours sincerely
FLUOR DANIEL GTI AUSTRALIA PTY LTD

CTPI 49-Sch4

CTPI 49-Sch4
Senior Project Manager

CTPI 49-Sch4

CTPI 49-Sch4
Senior Environmental Scientist

Attachments: Stage II Investigation Report
Remediation Plan
Application for Assessment of a Site Investigation Report
Statutory Declaration

Published on DES disclosure Log RTI Act 2009

FLUOR DANIEL GTI (AUSTRALIA) PTY. LTD. A.C.N. 003 931 057
12 Stratton Street, Newstead QLD 4006 Australia P.O. Box 2320 Fortitude Valley MAC QLD 4006 Australia
Telephone: (07) 3252 5711 Fax: (07) 3252 5712
Email: briadmin@gta.com.au
100% RECYCLED PAPER

STATUTORY DECLARATION

(INVESTIGATOR OR VALIDATION REPORT PREPARER)

Address of Site Investigated:

Real Property Description AS ELOW)

Title of Report REP

COOROY, QUEENSLAND

CTPI 49-Sch4 of Fluor Daniel GTI (Australia) Pty Ltd, in the State of Queensland, do solemnly and sincerely declare

I was the investigator/validation report preparer (delete whichever applicable) of the report described

I am a member of ITUTE and my qualifications and experience as outlined in AC ED 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

The report addresses the relevant matters for the investigation and is factually correct: and

The opinions expressed in it are honestly and reasonably

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

Signature CTPI 49-Sch4

Name CTPI 49-Sch4

Taken and Declared before BRISBAN VEMBER

Witness CTPI 49-Sch4

Name CTPI 49-Sch4

template\forms\DEHstatdec

Published on DES Disclosure Log RTI Act 2009

Public Disclosure Log

FLUOR DANIEL GTI

R

REMEDIATION PLAN
BORAL TIMBERYARDS
1 MAPLE STREET
COOROY, QUEENSLAND

Prepared for

Mr CTPI 49-Sch4
Boral Limited
GPO Box 148
BRISBANE QLD

2 November 1998
Project Ref: B7570R03

Published on DES Disclosure Log
RTI Act 2009

Prepared by

Written/Submitted

CTPI 49-Sch4

CTPI 49-Sch4

Principal Geohydrologist

Reviewed/Approved by:

CTPI 49-Sch4

CTPI 49-Sch4

Senior Environmental Scientist
Manager – Queensland/Northern Territory

FLUOR DANIEL GTI (AUSTRALIA) PTY. LTD. A.C.N. 003 931 057
12 Stratton Street, Newstead QLD 4006 Australia P.O. Box 2320 Fortitude Valley MAC QLD 4006 Australi
Telephone: (07) 3252 5711 Fax: (07) 3252 5712
Email: briadmin@gta.com.au
100% RECYCLED PAPER

TABLE OF CONTENTS

1. INTRODUCTION 1

1.1 Background 1
1.2 Objectives 2
1.3 Report Format 2

2. CURRENT SITE STATUS 3

2.1 CCA Sawdust 4
2.2 Process Wastewater 4
2.3 Impacted Soil 4
2.4 Groundwater 5

3. REVIEW OF REMEDIATION TECHNOLOGIES 6

3.1 CCA Sawdust 6
3.2 Process Wastewater 6
3.3 Impacted Soil 7
3.4 Groundwater 7

4. PROPOSED REMEDIATION PLAN 8

4.1 CCA Sawdust 8
4.2 Process Wastewater 8
4.3 Impacted Soil 9
4.4 Groundwater 9
4.5 Health And Environmental Protection During Remediation 9

5. REQUIREMENTS FOR IMPLEMENTATION 11

5.1 Preparatory Work 11
5.2 Remediation Phase 11
5.3 Post-Remediation Phase 12

TABLE:

TABLE 1 Indicative Costs: Review of Remediation Technologies

FIGURE:

Figure 1 Site Plan – Areas of Impact
Figure 2B Site Plan – Management Areas

Published on DES Disclosure Log
RTI Act 2009

R

1. INTRODUCTION

Boral Limited (Boral) contracted Fluor Daniel GTI to complete a Stage II investigation of the Allan Taylor & Co Ltd timberyards, located at 1 Maple Street, Cooroy, Queensland. Results of the investigation are contained in a "Stage II Investigation Report, Boral Timberyards, 1 Maple Street, Cooroy, Queensland" prepared by Fluor Daniel GTI (ref: B7570R01). Part of the Stage II investigation brief was to prepare this remediation plan. Please note that this remediation plan should be read in conjunction with the Stage II Investigation Report as these two documents are integrally related.

1.1 Background

Fluor Daniel GTI has prepared this remediation plan in accordance with the "Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland", issued May 1998 by the Queensland Department of Environment and Heritage (DEH).

The Draft Department of Environment and Heritage Guidelines cite a preferred order for site cleanup as being:

- On-site treatment for destruction or reduction of hazard to an acceptable level; and
- Off-site treatment so that the contaminant is destroyed or hazard reduced to an acceptable level.

If neither of these options is available, other options can be contemplated, considering the geochemical conditions on site. Such a hierarchy of decisions is very consistent with the Fluor Daniel GTI approach to remediation, and is far-reaching in its understanding of the importance of geochemical conditions. The following document is prepared as a remediation plan, recognising the importance of geochemical conditions on the parameters of concern. Since most impact at the Boral site is inorganic in nature, it is impossible to destroy these substances, but the mobility of such material can be significantly reduced by cognisance of the impact of geochemical conditions on the waste material.

Published on DES Disclosure Log
RTI Act 2009

1.2 Objectives

The overall remediation objective is to manage target analytes at the site in such a way as to render the site suitable for the proposed end use. Recognising the propensity of the site to frequent inundation from flooding of Cooroy Creek, a 'park and recreational' end use is proposed. This draft Remediation Plan has, therefore, focused on those areas in which target analytes exceed the DEH Draft 1998 health-based "E" thresholds.

This objective will be achieved upon cessation of activities, and the issue of a suitability statement from the Department of Environment and Heritage.

1.3 Report Format

Section 2 describes the current status of the site, and explains the four media identified as impacted at the site. Section 3 describes Fluor Daniel GTI's review of applicable technologies for treatment of these four media. Indicative costs have also been provided.

Section 4 describes Fluor Daniel GTI's proposed remediation approach. The approach is based upon the remediation objectives required by Boral, review of technologies and discussions with Boral personnel. Section 5 details the requirements for implementation of the proposed remediation plan.

It should be noted that, for data management and general discussion purposes, the site was broken up into eight "management areas" (A through I on Figure 2b). The divisions were based mainly on operational areas (e.g., timber stack area) or physical features (e.g., creek).

Published on DES Disclosure Log
RTI Act 2009

2. CURRENT SITE STATUS

The Boral Timberyards, 1 Maple Street, Cooroy, continue to operate. CCA-treated timber, CCA-impacted sawdust (CCA sawdust) and boiler ash (from the burning of untreated sawdust) are disposed off site. CCA sawdust is temporarily stored in the Sawdust Shed prior to removal. No underground storage tanks remain at site. Diesel fuel is currently supplied from a bunded aboveground storage tank only. Borax treatment no longer occurs at the site.

Figure 1 shows the inferred extent and distribution of CCA sawdust and impacted soil and sludges at the site, as well as the location of borax dip pits and the evaporation pond. Soil and water analytical results have been compared against the following guidelines:

- Soil - inorganic - DEH 1998 "E" Draft;
- Soil - organic - CHEM Unit Draft 1991;
- Creek & pond sediment - DEH 1998 "Environmental" Draft;
- Creek water - ANZECC 1992; and
- Groundwater - Dutch Intervention 1994.

Four significantly different media have been impacted at the site;

1. CCA sawdust from planing of copper chrome arsenate (CCA) treated wood;
2. Process wastewater occupying three borax dip pits and an evaporation pond;
3. Impacted soil resulting from the prior disposal of boiler ash derived from the prior burning of CCA treated timber and hydrocarbon use; and
4. Groundwater filling the saturated zone under the plant site.

Despite continuing operations, the extent and distribution of impact is considered unlikely to vary significantly, given current work practices continue unchanged. Some additional assessment of operational areas will be required upon cessation of operations.

Published on DES Disclosure Log
RTI Act 2009

The extent of soil and groundwater impact is described in more detail in the separate Stage II Investigation Report. The following is a brief summary of such information.

2.1 CCA Sawdust

CCA sawdust occurs primarily in the vicinity of the sawdust stockpile shed, located in Area D (Fluor Daniel GTI 1998), along the road leading from the new mill to the sawdust stockpile and in the sawdust collection hopper at the old mill (Area F).

Two sampling locations within Area D (D5 and D7) contained sawdust exceeding the Health E levels. In the case of sample D5, this sawdust deposit extends to at least 1 metre in depth. The area is anticipated to include approximately 200-300 m^3 of sawdust that will require excavation. Additional sawdust deposits in other areas are anticipated to increase the total sawdust requiring off-site disposal to 300-400 m^3.

Published on DES Disclosure Log
RTI Act 2009

2.2 Process Wastewater

Each of the three existing borax dip pits are estimated to contain approximately 20 000 litres of water, containing up to 950 mg/L boron. In addition, the evaporation pit is estimated by Boral to contain approximately 100 000 litres of process water, at a boron concentration of 1.4 mg/L.

2.3 Impacted Soil

Several areas were identified by the 1991 assessment as containing impacted soils at the surface. Deeper sampling in 1998 has indicated that impact is confined to the upper 0-200mm depth.

One sample in Area C (C9), the area of the former fire pit, and one sample in Area H (H3), adjacent to the present mill, contained arsenic concentrations in excess of the Health E threshold levels. The vertical extent of impact was limited to 0-200mm.

Hydrocarbon-impacted soil in the vicinity of the former diesel underground storage tank (UST) adjacent to the kiln was excavated, landfarmed, validated and returned to the excavation. The perimeter of the excavation was validated according to Department of Environment and Heritage protocols. Full details are provided in the Stage II investigation report.

Some sludges will require remediation (metals and boron impacted) after decommissioning of the borax pits and evaporation pond. Approximately 100-200 m^3 may require management.

A soil sample taken below the fire pit (C12 500-1000 mm) contained PAHs below investigation threshold concentrations. Three soil samples were analysed for PAHs from sample location C6. Sample C6 500-1000 mm exceeded the benzo-a-pyrene threshold of 1mg/kg (2.2 mg/kg). The lateral and vertical extent of impact is considered to be less than 1 m^3.

An isolated areas of hydrocarbon impact was detected in the vicinity of the old mill. TPH in sample F6 0-200mm (old mill) contained C_{15}-C_{36} concentrations above Draft CHEM Unit 1991 thresholds (1 422 mg/kg vs 1 000 mg/kg). The sample was obtained from a localised area of staining, and the lateral and vertical extent of impact is considered to be less than 1 m^3.

2.4 Groundwater

Groundwater samples from the various monitoring wells contained metals at concentrations below Dutch 1994 guidelines. Boron ranged from <0.2 mg/L to 3.8 mg/L in wells, except for MW5 (40.4 mg/L). The boron appears to have resulted from leaks in the borax pits. Minor input from other sources may have also occurred.

Published on DES Disclosure Log
RTI Act 2009

3. REVIEW OF REMEDIATION TECHNOLOGIES

As described in the 1998 Department of Environment and Heritage Guidelines, the general preference, where appropriate, is for on-site treatment or destruction of the contaminants, or off-site treatment and destruction if more appropriate. Since the contaminants of concern at the Boral Cooroy site are inorganic, nothing can be done to destroy the contaminants; however, the geochemical attenuation of arsenic and chromium can be utilised to prevent impacts on the environment. Such geochemical attenuation was considered in determining the various options available.

3.1 CCA Sawdust

The options for the CCA sawdust include no action, placing the sawdust in an on-site monofill engineered to consider the geochemical impacts of anaerobic decomposition of sawdust, and off-site disposal. No action was deemed inappropriate, as the proposed end use objectives would not be met. On-site landfilling was discounted as sawdust is currently being removed from site. Removal of historically spilled CCA sawdust with the current CCA sawdust removal program was the preferred option.

3.2 Process Wastewater

Options considered for disposal of the process wastewater included off-site disposal of all the water to liquid waste contractors, disposal for re-use, discharge of the water to sewer in its present form, or treating the wastewater via advanced physical chemical treatment systems, and only disposing of a limited, concentrated but non-mobile material.

Off-site disposal to a liquid waste disposal contractor is cost-prohibitive. On-site treatment technologies are not capable of reliably reducing boron concentrations to acceptable levels. Sewer discharge limits are exceeded.

Published on DES Disclosure Log
RTI Act 2009

Boral has identified a re-use option for borax pit process wastewater at its Tenterfield plant. Discussions are continuing to determine whether evaporation pond waters can be discharged to sewer.

3.3 Impacted Soil

Options for metals-impacted soil and sludges include no action, capping *in situ,* on-site landfilling and capping (including entombment within the emptied concrete borax dip pits), or off-site disposal. For those soils exceeding health "E" thresholds, no action was deemed inappropriate, as the proposed end use objectives would not be met.

Off-site disposal was also discounted at this stage. The relatively low metals concentrations and volumes of soil do not warrant this approach. Fluor Daniel GTI proposes that either an on-site monofill or *in situ* capping be used to manage hydrocarbon, metals and boron-impacted soils and sludges at the site. The objective of both options is to isolate soils impacted above level "E" thresholds, from direct exposure to potential site users.

Published on DES Disclosure Log
RTI Act 2009

3.4 Groundwater

Boron is the only target analyte above guidelines in groundwater. There is no "best practicable technology" for *in situ* modification of boron concentrations, and the success of any conventional pump and treat system for boron treatment is not promising. Therefore, the selected option for boron remediation is the removal of the source of impact (borax dip pits) and the implementation of institutional controls to prevent future use of groundwater.

Table 1 summarises the indicative costs estimated for each of the technologies reviewed. The actual costs are dependent upon a large number of factors. These estimates should be used as a guide to compare alternatives only. Actual costs may differ widely from those tabled.

PROPOSED REMEDIATION PLAN

As described in the 1998 Department of Environment and Heritage Guidelines, the general preference, where appropriate, is for on-site treatment or destruction of the contaminants the off-site treatment and destruction if more appropriate. Since the contaminants of concern at the Boral Cooroy site are inorganic, nothing can be done to destroy the contaminants; however, the geochemical attenuation of arsenic and chromium can be utilised to prevent impacts on the environment.

4.1 CCA Sawdust

Dumped CCA sawdust will be excavated and remove ith 'fresh' CCA sawdust to landfill. The excavations will be validated with respect to Cu Cr[3] and As, and backfilled or graded.

4.2 Process Wastewater

Process wastewater is proposed to be transported to Boral's Tenterfield facility for re-use. The borax dip pits will be decommissioned *in situ*

NSW EPA

Discussions are continuing to determine the efficacy of disposing of evaporation pond water to trade waste sewer. Once a suitable disposal option is determined, the evaporation pond will be decommissioned after liquid is removed. Sludges remaining after pumping of pits and pond will be removed to the on-site landfill.

Published on DES Disclosure Log
RTI Act 2009

R

Impacted Soil

As noted in Section 3, only two samples contained soil in excess of the Health E levels, other than those soils associated with contaminated sawdust The selected option is a combination of *in situ* capping and on-site landfill. This approach will utilise anticipated regrading of the site to provide a cap, which will be of a geochemical nature to ensure that the presence of the cap, together with the resultant reduction in oxidation potential, not result in migration of arsenic and chromium. Two 'hotspots' of localised hydrocarbon (TPH/PAH) impact (less than 1 m^3 each) will be included in the capped material. The objective of this approach is to isolate soils impacted above level "E" thresholds, from direct exposure to potential site users.

The emptied concrete borax dip pits will be used for the *in-situ* entombment of impacted soils also. The pits will be filled and compacted, and capped with 'clean material.

Sludges remaining after pumping of pits and pond will be removed to the on-site landfill.

4.4 Groundwater

Groundwater on the site is impacted by boron. There is no "best practicable technology" for *in situ* modification of boron concentrations, and the success of any conventional pump and treat system for boron treatment is not promising. Therefore, the selected option for boron contamination is to remove the source (borax pit liquid) and instigate institutional controls to prevent future tapping of groundwater within the area of boron

Health And Environmental Protection During Remediation

A Site Management Plan (SMP) will be required for remediation A second SMP will be required for the ongoing management of the

Published on DES Disclosure Log
RTI Act 2009

R

CCA Sawdust

The main potential environmental damage associated with excavation of the CCA sawdust would be the generation of particular matter and fugitive emissions. To preclude such emission, the excavation will be completed with a water spray to prevent fugitive emissions. Operators of equipment in the area will be provided with respiratory protection (enclosed cabin etc.), to prevent inhalation of arsenic and chromium bearing dust.

Process Wastewater

Care will be exercised by workers to assure that ingestion of the liquid not occur.

Published on DES Disclosure Log
RTI Act 2009

R

5. REQUIREMENTS FOR IMPLEMENTATION

The requirements for implementation of the Remediation Plan can be divided into the three stages of works; preparatory phase, remediation phase, and post-remediation phase. Various stages of the remediation plan can proceed whilst the site continues operations. Prior to a suitability statement being issued, the sites potentially contaminating activities must cease, and operational areas validated. The following sections outline the key issues required.

5.1 Preparatory Work

Prior to remediation works commencing, the following should typically occur:

- The proposed remediation plan should be presented to Department of Environment and Heritage with previous assessment reports and the appropriate review fee. Approval 'in principle' should be sought to ensure that the proposed plan would achieve desired objectives.

- A Construction Site Management Plan should be prepared. The Construction Site Management Plan should outline procedures for protection of human health and the environment during the actual remediation works. This Plan typically includes direction on personal protective clothing, vehicle wash-down procedures, waste handling documentation advice and material safety data.

- Permits for off-site disposal of materials should be sought prior to remediation commencing. The permitting required is dependent upon the type of waste, concentrations and location of disposal.

5.2 Remediation Phase

- Remediation workers should be briefed on the Construction Site Management Plan and be suitably qualified for the works programs. Works should be executed in accordance with the plan.

Published on DES Disclosure Log
RTI Act 2009

Works should be sufficiently documented to support final validation reporting.

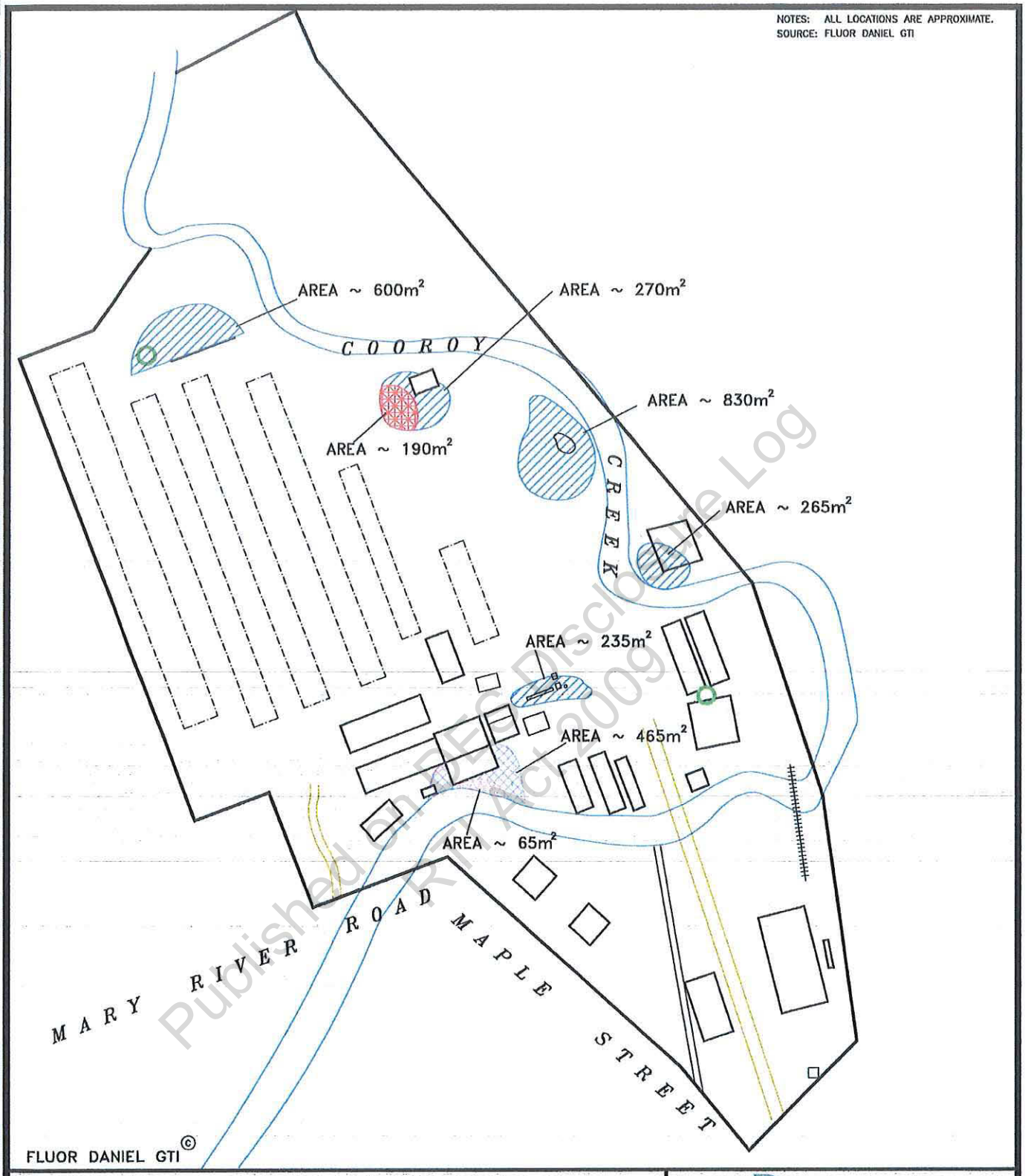
- Any materials left *in situ* or placed in a dedicated monofill on site should be accurately surveyed.
- Validation sampling should be undertaken as necessary.

5.3 Post-Remediation Phase

Under the proposed plan, a Site Management Plan will be required for on-going management of residual impact at the site. The Site Management Plan should be prepared in accordance with Department of Environment and Heritage guidelines (Draft 1998) and include, but not be limited to the following:

- Summary of impacts remaining on site;
- Objectives to be achieved;
- Management Plan details; and
- Monitoring provisions.

Published on DES Disclosure Log
RTI Act 2009



Published on DES Disclosure Log
RTI Act 2009

LEGEND

- STRIPPED TIMBER
- CCA/BORON IMPACT 0–200mm
- CCA/BORON IMPACT 0–500mm
- CCA/BORON IMPACT 500–1000mm
- CCA/BORON IMPACT >1000mm
- ISOLATED "HOTSPOT" (HYDROCARBONS)

N

0 20 40 60 80 100
SCALE METRES
1:2000 (A4)

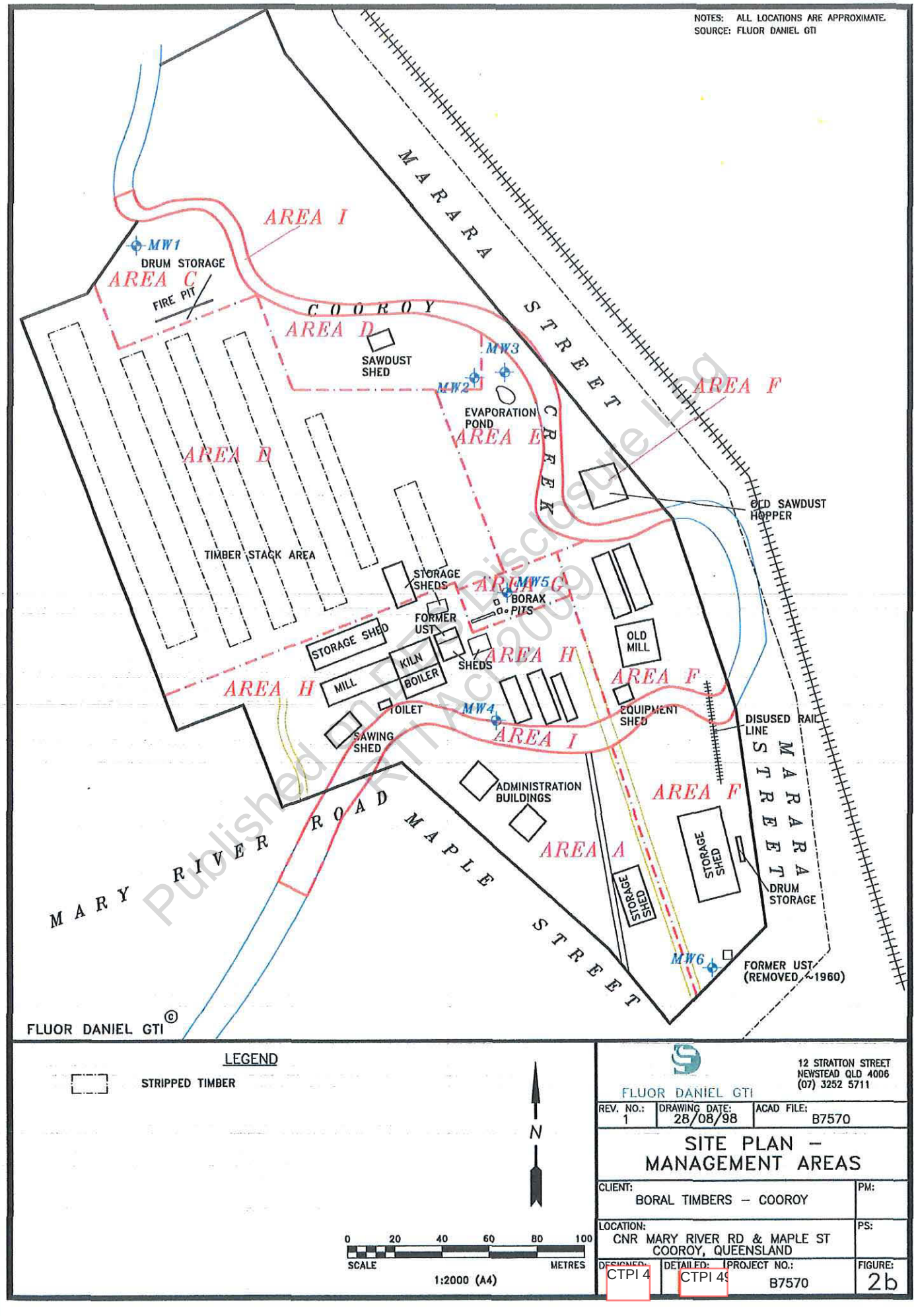
FLUOR DANIEL GTI
12 STRATTON STREET
NEWSTEAD QLD 4006
(07) 3252 5711

REV. NO.:	DRAWING DATE:	ACAD FILE:
1	28/08/98	B7570R02

SITE PLAN – AREAS OF IMPACT

CLIENT:	PM:
BORAL TIMBERS – COOROY	
LOCATION: CNR MARY RIVER RD & MAPLE ST COOROY, QUEENSLAND	PS:

DESIGNED:	DETAILED:	PROJECT NO.:	FIGURE:
CTPI 4	CTPI 49	B7570	1



Published on EPA Disclosure Log RTI Act 2009

TABLE 1
Indicative Costs – Review of Remediation Technologies

Option	Cost	Comments
CCA Sawdust (~250 – 300 m^3)		
No action	Nil	Incompatible with end use.
On-site monofill	\$75-\$100 m^{-3}	Sawdust is already being moved off site.
Off-site disposal (preferred option)	\$30-\$50 m^{-3}	Incremental cost as disposal contracts are already in place. (Cost includes validation-sampling etc.)
Process Wastewater – Borax Pits (50 000 – 70 000L)		
Off site disposal	30-50 cents/L	Expensive option.
Re-use (preferred option)	10-15 cents/L	Transport and permitting costs.
Discharge to sewer	n/a	Not allowed by Noosa Shire Council.
On-site treatment	15-25 cents/L	Boron not treated.
Process Wastewater – Evaporation Pond (75 000 - 125 000 L)		
Discharge to sewer (preferred option)	10 – 30 cents/L	Further discussions to be held with Noosa Shire Council (see Section 4.2).
Re-use	n/a	Not able to be re-used by Boral.

*Fluor Daniel GTI stresses the indicative nature of these cost estimates. A large number of assumptions are required to determine the estimates, and they should be used in order to compare different options in a generic sense only. More accurate cost estimates can be produced as more definitive information concerning the availability of plant and equipment, disposal charges and regulatory permitting issues become further clarified.

R

Published on DES Disclosure Log
RTI Act 2009

TABLE 1 (Continued)
Indicative Costs – Review of Remediation Technologies

Option	Cost	Comments
Impacted Soil and Sludges (~2 500 – 3 000 m^2, 400 – 600 m^3)		
No action	Nil	Incompatible with end use.
In situ capping	\$20-\$30 m^{-2}	Low level construction only required. May not be permissible in areas near creek.
On-site monofill	\$100-\$130 m^{-3}	Single monofill allows balance of site to be removed from EMR.
Optimal combination of *in situ* capping and on-site monofill/entombment in emptied concrete borax dip pits (~600 m^2 in situ, 250 – 300 m^3 monofill) – preferred option	\$20-\$30 m^{-2} \$75-\$100 m^{-3}	Excavate areas and fill into former fire pit area, cap and grade.
Off-site disposal	\$75-\$125 t^{-1}	Not required to achieve end use goal.
Groundwater		
Pump and treat	n/a	Not practicable technology.
Source removal and monitor - preferred option	\$10-\$20 K decommissioning \$1-\$5K per annum	Suitable as risk to environment is low if groundwater not pumped.

*Fluor Daniel GTI stresses the indicative nature of these cost estimates. A large number of assumptions are required to determine the estimates, and they should be used in order to compare different options in a generic sense only. More accurate cost estimates can be produced as more definitive information concerning the availability of plant and equipment, disposal charges and regulatory permitting issues become further clarified.

R

Our Ref: B7570R03

2 November 1998

FLUOR DANIEL GTI

100% RECYCLED PAPER

Published on DES Disclosure Log
RTI Act 2009