Source: google earth

Douglas Partners Geotechnics / Environment / Groundwater	**2007 Aerial Photograph** **Phase 1 Contamination Assess.** **Patons Lane, Orchard Hills**	PROJECT: 71102.05 PLATE No: C11 REV: A
	CLIENT: Dellara Pty Ltd	DATE: Jan 2012

Source: google earth

Douglas Partners Geotechnics / Environment / Groundwater	**2009 Aerial Photograph** **Phase 1 Contamination Assess.** **Patons Lane, Orchard Hills**	PROJECT: 71102.05 PLATE No: C12 REV: A
	CLIENT: Dellara Pty Ltd	DATE: Jan 2012

Appendix D

Historical Title Deeds Search

Service First Registration Pty Ltd
ACN: 108 037 029
Ph: 02 9233 1314
Fax: 9233 2878
Suite 102, Level 1, 64 Castlereagh Street
Sydney 2000
PO Box 1539 Sydney 2000
DX 189 Sydney

Summary of Owners Report

LPMA **Sydney**

Re: - 123 – 179 Patons Lane, Orchard Hills

Description: - Lot 40 D.P. 738126

The first Real Property Act Title being Certificate of Title Volume 2253 Folio 198 issued in the name of Fitzwilliam Wentworth on 17.05.1912

The search papers attached to Primary Application No. 16433 has investigated Fitzwilliam Wentworth and other members of the Wentworth Family from 05.07.1827 up to the issue of Certificate of Title Volume 2253 Folio 198

This land formed part of land that was first vested in D'Arcy Wentworth by Deed Old Register 7 Page 66 Entry No.297 dated 15th & 16th October 1817

The search papers attached to Primary Application No. 16433 make no reference to any leases or easements from 1817 to 1912

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
17.05.1912 (1912 to 1912)	Fitzwilliam Wentworth (Gentleman)	Vol 2253 Fol 198
18.06.1912 (1912 to 1920)	William Vanstone (Grazier)	Vol 2253 Fol 198
22.04.1920 (1920 to 1927)	William Davies (Grazier)	Vol 2253 Fol 198
14.12.1927 (1927 to 1945)	Elymra Lillias Newton (Married Woman)	Vol 2253 Fol 198
08.10.1945 (1945 to 1959)	Colin Paterson (Grazier)	Vol 2253 Fol 198
24.10.1959 (1959 to 1963)	John Arthur Atkinson (Dairy Man)	Vol 2253 Fol 198 Now Vol 9468 Fol 218
22.03.1963 (1963 to 1966)	J.A. Atkinson Pty Limited	Vol 9468 Fol 218 Now Vol 10414 Fol 71
26.10.1966 (1966 to 2002)	Vacik Pty Limited	Vol 10414 Fol 71 Now 40/738126
18.01.2002 (2002 to 2008)	Orchard Holdings (NSW) Pty Limited	40/738126
21.08.2008 (2008 to date)	# Dellara Pty Limited	40/738126

# Denotes Current Registered Proprietor

Easements: -

- 23.01.1969. Easement for Transmission Line variable width (L 277936)

Email: grolly1@bigpond.net.au

Service First Registration Pty Ltd
ACN: 108 037 029
Ph: 02 9233 1314
Fax: 9233 2878
Suite 102, Level 1, 64 Castlereagh Street
Sydney 2000
PO Box 1539 Sydney 2000
DX 189 Sydney

Leases: - NIL

Yours Sincerely
Mark Groll
17 January 2012
(Ph: 0412 199 304)

Email: grolly1@bigpond.net.au

Reverse Street Address Inquiry

Provides street address details for a title.

Street Address associated with title reference: **40/738126**

Address:

123-179 PATONS LANE ORCHARD HILLS 2748

Client Reference:
Date of Service: 17-Jan-2012 14:53:15

This information is provided as a searching aid only.
The Registrar General does not guarantee the information provided.

Please forward any feedback or data quality issues to feedback@lands.nsw.gov.au

Land & Property Information
A division of the Department of Finance & Services

Cadastral Records Enquiry Report

Ref : 29

Requested Parcel : Lot 40 DP 738126

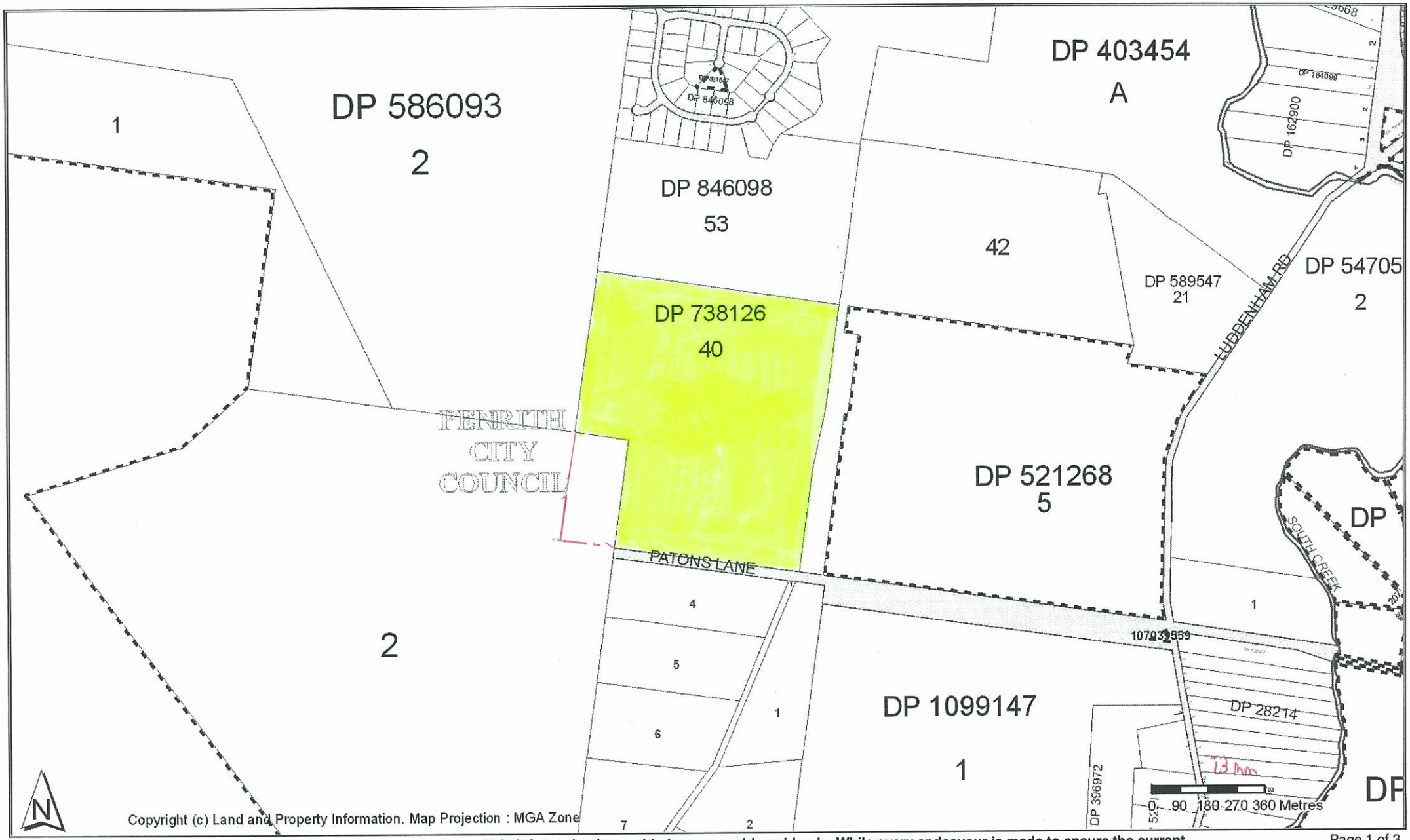
Identified Parcel : Lot 40 DP 738126

Locality : ORCHARD HILLS

LGA : PENRITH

Parish : CLAREMONT

County : CUMBERLAND



Report Generated 9:50:18 AM, 16 January, 2012

This information is provided as a searching aid only. While every endeavour is made to ensure the current cadastral pattern is accurately reflected, the Registrar General cannot guarantee the information provided. For all ACTIVITY PRIOR to SEPT 2002 you must refer to the RGs Charting and Reference Maps.

09468218

M

NEW SOUTH WALES

(For Grant and title reference prior to first edition see Deposited Plan.)

[redacted]IFICATE OF TITLE
[redacted]ERTY ACT, 1900, as amended

CANCELLED
Vol. 9468 Fol. 218

1st Edition issued 8-7-1963

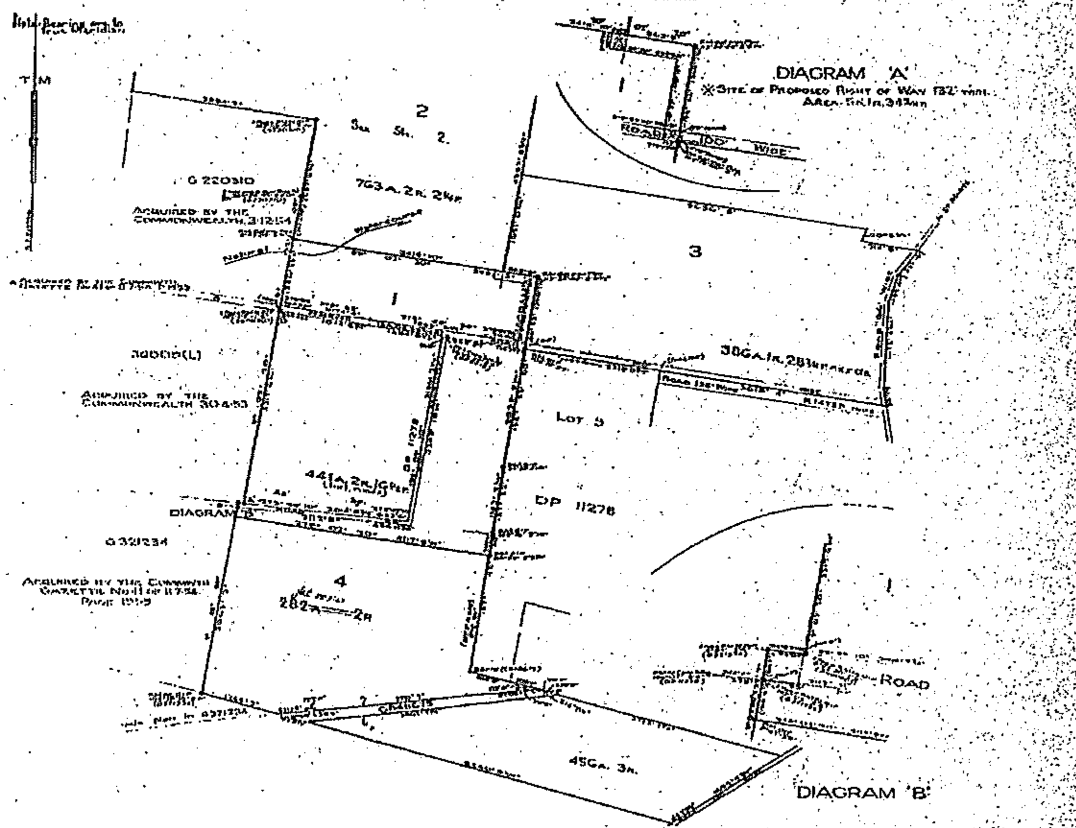
(Page 1) Vol. 9468 Fol. 218

I certify that the person described in the First Schedule is the registered proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

Witness *R. Brown*

[signature]
Registrar-General.

PLAN SHOWING LOCATION OF LAND



ESTATE AND LAND REFERRED TO.

Estate in Fee Simple in Lot 3 in Deposited Plan 213729 at Kingswood in the City of Penrith Parish of Claremont and County of Cumberland excepting thereout the roads 66 feet and 100 feet wide shown in the plan hereon.

FIRST SCHEDULE (Continued overleaf)

~~JOHN ARTHUR ATKINSON, of Northmead, Dairyman.~~

[signature]
Registrar General.

SECOND SCHEDULE (Continued overleaf)

1. Reservations and conditions, if any, contained in the Crown Grant(s) referred to in the said Deposited Plan.

2. ~~Mortgage No. J63425 to The Commercial Banking Company of Sydney Limited Entered 12-10-1962.~~ *Discharged see J379974*

[signature]
Registrar General.

PERSONS ARE CAUTIONED AGAINST ALTERING OR ADDING TO THIS CERTIFICATE OR ANY NOTIFICATION HEREON

WARNING: THIS DOCUMENT MUST NOT BE REMOVED FROM THE LAND TITLES OFFICE.

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR-GENERAL ARE CANCELLED.

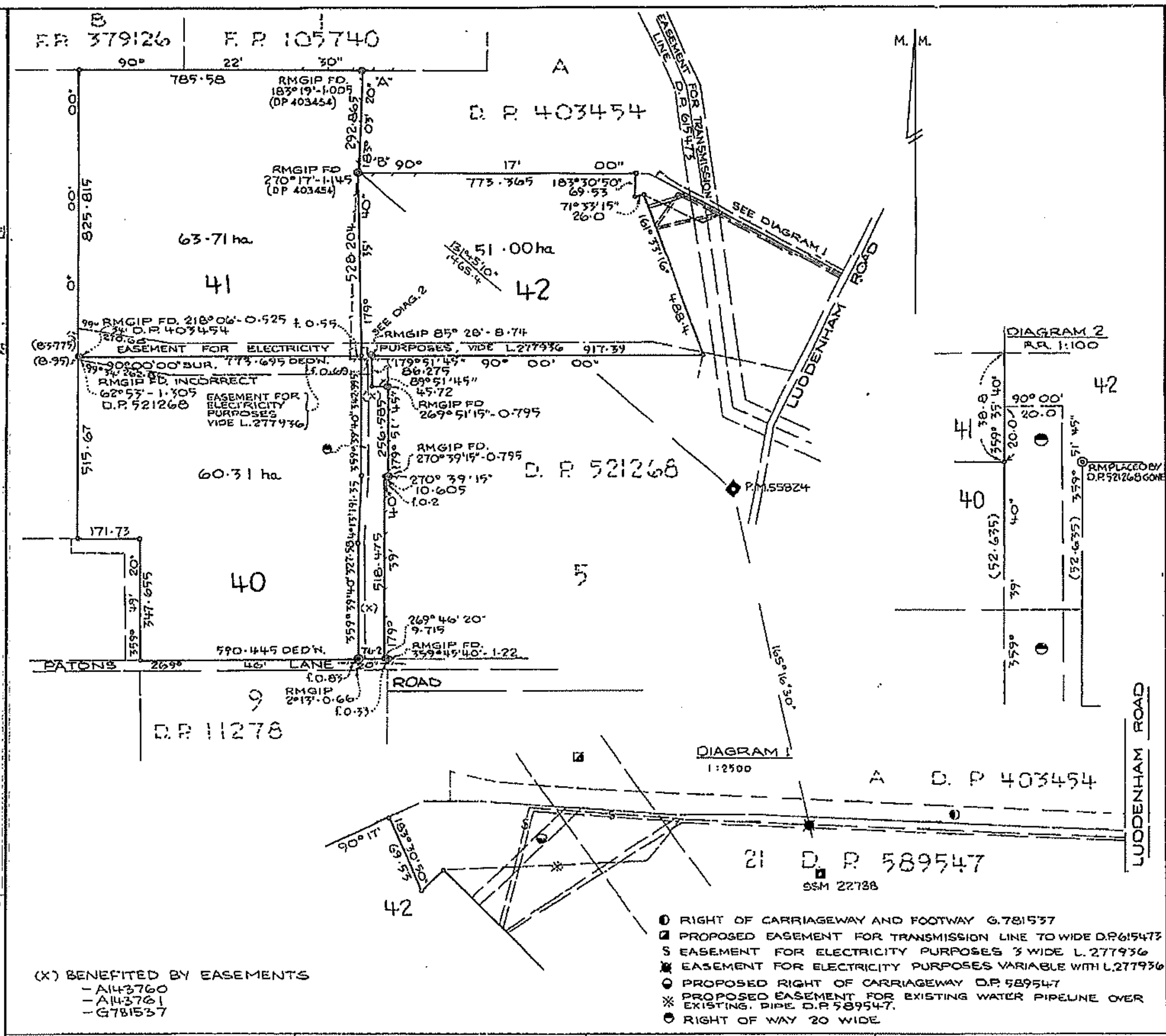
PLAN FORM 2

Plan Drawing only to appear in this space

*OFFICE USE ONLY

Signatures and seals only.

BARRY THOMAS SHARPE
ASSISTANT MANAGER
SECURITIES SERVICES N.S.W.



D P 738126

Registered: 13-1-1987

C.A.: No. 55529 OF 25-7-1986

Title System: TORRENS

Purpose: SUBDIVISION

Ref. Map: U7352-1, 2, 4, 5 & 23

Last Plan: D P 521268 / D P 589547

PLAN OF SUBDIVISION OF LOT 20 D.P. 589547 AND LOT 4 D.P. 521268

Reduction Ratio 1: 8000
Lengths are in metres.

City: PENRITH

Locality: ERSKINE PARK ~~ST. MARYS~~

Parish: CLAREMONT

County: CUMBERLAND

This is sheet 1 of my plan in ____ sheets. (Delete if inapplicable).

I, JOHN LEVEN of 153A QUEEN ST. ST. MARYS a surveyor registered under the Surveyors Act, 1929, as amended, hereby certify that the survey represented in this plan OF NEW BOUNDARY is accurate and has been made *(1) by me ~~(2) under my immediate supervision~~ in accordance with the Survey Practice Regulations, 1933, and was completed on † 13.6.86

Signature ____
Surveyor registered under Surveyors Act, 1929, as amended.
Datum Line of Azimuth: A - B
*Strike out either (1) or (2). †Insert date of survey.

Panel for use only for statements of intention to dedicate public roads or to create public reserves, drainage reserves, easements or restrictions as to user.

PURSUANT TO SECTION 88B OF THE CONVEYANCING ACT 1919-1964 IT IS INTENDED TO CREATE:-

1. RIGHT OF WAY 20 WIDE

Council Clerk's Certificate 75/86

I hereby certify that —

(a) the requirements of the Local Government Act, 1919 (other than the requirements for the registration of plans), and

*(b) the requirements of section 340 of the †Metropolitan Water, Sewerage and Drainage Act, 1924, as amended, †Hunter District Water, Sewerage, and Drainage Act, 1938, as amended

have been complied with by the applicant in relation to the proposed Subdivision (Insert "new road", "subdivision" or "consolidated lot") set out herein

Subdivision No. S. 5529

Date 25-7-86

(Signature) ____ Council Clerk

*This part of certificate to be deleted where the application is only for a consolidated lot or the opening of a new road or where the land to be subdivided is wholly outside the areas of operations of the Metropolitan Water Sewerage and Drainage Board and the Hunter District Water Board.
†Delete if inapplicable.

MPD

WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION

SURVEYOR'S REFERENCE 4807

This negative is a photograph made as a permanent record of a document in the custody of the Registrar General this day.

14th January, 1987

Vol. 9468 Fol. 218

CT 2C
DP521265
4/10/65

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	ENTERED	Signature of Registrar-General
J. A. Atkinson Pty. Limited	Transfer	J 379975	22.3.1963	22.7.1963	[signature]

This deed is cancelled as to the residue
New Certificates of Title have issued on 11-10-1966
for lots in Deposited Plan No. 521268 as follows:-
Lots 4 and 5 Vol. 10414 Fols. 71 & 72 respectively.

[signature]
REGISTRAR GENERAL

SECOND SCHEDULE (continued)

INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	PARTICULARS	ENTERED	Signature of Registrar-General	CANCELLATION
Mortgage	J 379976	20.6.1963	To The Commercial Banking Company of Sydney Limited	22.7.1963	[signature]	

FORM No. 184A NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR-GENERAL ARE CANCELLED

Req:R296937 /Doc:CT 10414-071 CT /Rev:30-Oct-2007 /Sts:SC.OK /Prt:17-Jan-2012 07:44 /Pgs:ALL /Seq:1 of 2
Ref:mg /Src:M

10414-071

NEW SOUTH WALES

[redacted]FICATE OF TITLE
[redacted]RTY ACT, 1900, as amended.

Application No.16433

Prior Title Vol.9468 Fol.218

CANCELLED

MA

Vol. 10414 Fol. 71

Edition issued 11-10-1966

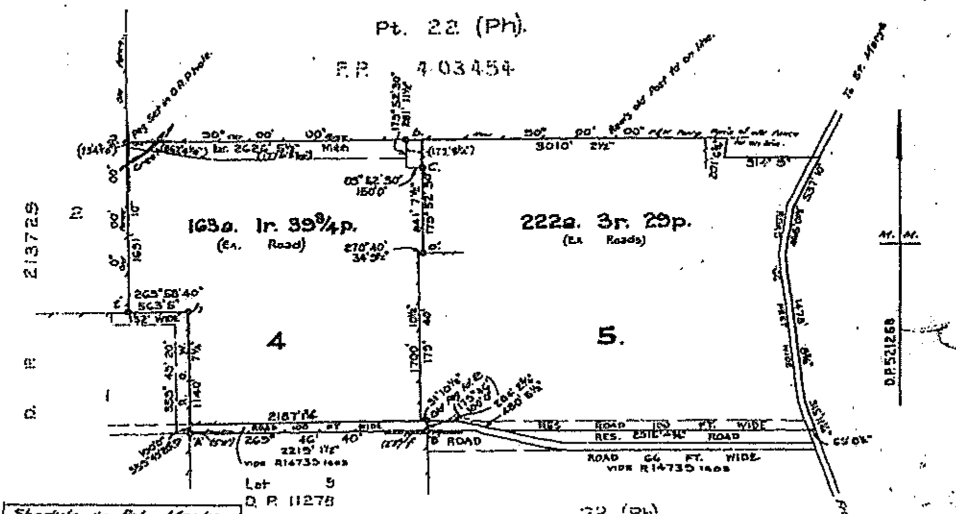
(Page 1) Vol. 10414 Fol. 71

I certify that the person described in the First Schedule is the registered proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

Witness J. O'Sullivan.

Registrar General.

PLAN SHOWING LOCATION OF LAND



Shedule to Ref Marks.				
No	Type	Bear.	Dist.	Corner
a.	G.I.P.	30°00'	5'0"	Peg
	Gum	131°45'	5'1¼"	"
b.	G.I.P.	3°47'	23'0¼"	"
c.	"	263°52'	2'7¼"	a. R. P.
d.	"	270°40'	2'7¼"	"
e	"	353°16'	4'0"	Old Peg fd.
f.	"	—	—	at Cor.
g.	[illegible]	263°47'	3'5"	½ Peg fd.
h.	" fd.	103°3'	5'11⅛"	Steel Post
i.	G.I.P	347°11'	3'6¼"	Peg.

ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 4 in Deposited Plan 521268 at Kingswood in the City of Penrith Parish of Claremont and County of Cumberland being part of Portion 22 granted to Gregory Blaxland on 1-1-1810 Excepting thereout the road shown in the plan hereon.

FIRST SCHEDULE (continued overleaf)

~~J. A. ATKINSON PTY. LIMITED.~~

Registrar General.

SECOND SCHEDULE (continued overleaf)

1. Reservations and conditions, if any, contained in the Crown Grant above referred to.
2. ~~Mortgage No. J379976 to The Commercial Banking Company of Sydney Limited. Entered 22-7-1963.~~ Discharged K488457

Registrar General.

PT 1 . 17 V.C.N. Blight, Government Printer

Vol. 10414 Fol 71

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	ENTERED	Signature of Registrar-General
Vaik Pty. Limited	Transfer	K488458	26-10-1966	2-11-1966	

DP 738126 Registered 13/1/1987
This folio is cancelled as to whole upon creation
of computer folios for lots 40 and 42 in the
abovementioned plan.

SECOND SCHEDULE (continued)

INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	PARTICULARS	ENTERED	Signature of Registrar-General	CANCELLATION		
Transfer	L277936	8-10-1968	Easement for Transmission Line as more fully set out in the said Instrument affecting the part of the land within described shown as covenable width in the plan hereon	23-1-1969				
~~Mortgage~~	~~I-342564~~	~~10-4-1969~~	~~to Commonwealth Trading Bank of Australia~~	~~15-4-1969~~		Discharged	P836036	
~~Mortgage~~	~~I-446064~~	~~12-1-1970~~	~~to Commonwealth Trading Bank of Australia~~	~~24-1-1970~~		Discharged	N246130	
~~Mortgage~~	~~I-772545~~	~~13-9-1969~~	~~to Zoo-O-Matic Limited~~	~~9-4-1970~~		Discharged	N246131	
~~Mortgage~~	~~N180773~~	~~2-2-1973~~	~~to Australian Industry Development Corporation~~	~~16.5.1973~~		Discharged	P836037	
Mortgage	N800840	5-10-1973	to Commonwealth Development Bank of ~~Australia~~ Australia	23-4-1974				
Mortgage	P836038	—	to The Commercial Banking Company of Sydney Limited	10-8-1976				
Postponement	P836039	—	mortgage No P836036 is entitled in priority as if it had been registered before mortgage No N180840	10-8-1976				
~~Mortgage~~	~~R435178~~	—	~~to The Commercial Banking Company of Sydney Limited~~	~~24-9-1979~~		Discharged	V635019	
V121942 Caveat by The Council of the City of Penrith. Registered 10-5-1984								
Interests created pursuant to Section 888 Conveyancing Act, 1919, by the registration of DP 738126								
Registered 13.1.1987								

(Page 2 of 2 pages)

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR-GENERAL ARE CANCELLED

SFR
Service First Registration

Historical Title

LEAP Searching
An Approved LPI NSW
Information Broker

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE
17/1/2012 7:44AM

FOLIO: 40/738126

First Title(s): OLD SYSTEM
Prior Title(s): VOL 10414 FOL 71

Recorded	Number	Type of Instrument	C.T. Issue
15/1/1987	DP738126	DEPOSITED PLAN	FOLIO CREATED EDITION 1
8/9/1988	X648520	DISCHARGE OF MORTGAGE	EDITION 2
26/4/1996	2103370	REQUEST	
18/1/2002	8278160	WITHDRAWAL OF CAVEAT	
18/1/2002	8223838	DISCHARGE OF MORTGAGE	
18/1/2002	8223839	TRANSFER	
18/1/2002	8223840	MORTGAGE	EDITION 3
22/4/2005	AB431015	CAVEAT	
9/5/2005	AB464008	WITHDRAWAL OF CAVEAT	
23/8/2005	AB715408	DISCHARGE OF MORTGAGE	
23/8/2005	AB715409	MORTGAGE	EDITION 4
24/4/2006	AC254037	CAVEAT	
5/7/2006	AC436592	CAVEAT	
19/7/2006	AC469367	WITHDRAWAL OF CAVEAT	
16/10/2006	AC671738	WITHDRAWAL OF CAVEAT	
14/12/2006	AC810996	CAVEAT	
21/6/2007	AD203982	CAVEAT	
5/7/2007	AD250120	WITHDRAWAL OF CAVEAT	
25/9/2007	AD439732	CAVEAT	
15/2/2008	AD768437	CAVEAT	
20/2/2008	AD609838	REJECTED - APPLICATION FOR PREPARATION OF LAPSING NOTICE	
20/2/2008	AD609839	REJECTED - APPLICATION FOR	

END OF PAGE 1 - CONTINUED OVER

mg

PRINTED ON 17/1/2012

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE
17/1/2012 7:44AM

FOLIO: 40/738126 PAGE 2

Recorded	Number	Type of Instrument	C.T. Issue
		PREPARATION OF LAPSING NOTICE	
28/2/2008	AD793664	WITHDRAWAL OF CAVEAT	
28/2/2008	AD793665	CAVEAT	
17/3/2008	AD793699	UNNECESSARY - APPLICATION FOR PREPARATION OF LAPSING NOTICE	
17/3/2008	AD793699	RE-INSTATED - APPLICATION FOR PREPARATION OF LAPSING NOTICE	
17/3/2008	AD793699	APPLICATION FOR PREPARATION OF LAPSING NOTICE	
17/3/2008	AD832000	WITHDRAWAL OF CAVEAT	
17/3/2008	AD832235	WITHDRAWAL OF CAVEAT	
23/6/2008	AE37890	CAVEAT	
9/7/2008	AE76319	WITHDRAWAL OF CAVEAT	
21/8/2008	AE161956	WITHDRAWAL OF CAVEAT	
21/8/2008	AE161957	DISCHARGE OF MORTGAGE	
21/8/2008	AE161958	TRANSFER	EDITION 5
25/11/2010	AF900693	CAVEAT	

*** END OF SEARCH ***

mg PRINTED ON 17/1/2012

Req:R296966 /Doc:DL 8223839 /Rev:23-Jan-2002 /Sts:NO.OK /Prt:17-Jan-2012 07:49 /Pgs:ALL /Seq:1 of 2
Ref:mg /Src:M

Form: 97-01T
Licence: 10V/0096/96
Edition: 9804

TRANSFER

New South Wales
Real Property Act 1900

8223839Q

STAMP DUTY

Office of State Revenue use only

NEW SOUTH WALES DUTY
20-07-2001 0000686715-002
SECTION 18(2)
DUTY $ ********2.00

(A) **TORRENS TITLE**

If appropriate, specify the part or share transferred

Identifier 40/738126

(B) **LODGED BY**

LTO Box	Name, Address or DX and Telephone	CODES
698B	DIBBS BARKER GOBLING Reference (optional):	T TS (s713) TW (Sheriff)

(C) **TRANSFEROR**

VACIK PTY LIMITED ACN 000 313 771

(D) The tranferor acknowledges receipt of the consideration of $ $3,850,000.00 and as regards the land specified above transfers to the transferee an estate in fee simple.

(E) Encumbrances (if applicable): 1. 2. 3.

(F) **TRANSFEREE**

ORCHARD HOLDINGS (NSW) PTY LIMITED ACN 097 062 283

(G) **TENANCY:**

(H) We certify this dealing correct for the purposes of the Real Property Act 1900. **DATE:** NO NO NO

Signed in my presence by the transferor who is personally known to me.

The Common Seal of VACIK PTY LIMITED ACN 000 313 771 was hereunto affixed in accordance with its Articles of Association and in the presence of:-

Signature of witness:

Name of witness:

Address of witness:

X Secretary VICTOR BATES.

Signature of transferor:

Director

Clifford Dee.

Signed in my presence by the transferee who is personally known to me.

Signature of witness:

Name of witness:

Address of witness:

Signature of transferee:

If signed on the transferee's behalf by a solicitor or licensed conveyancer, show the signatory's full name and capacity below:

Peter Carey Prior /Solicitor Hornsby

All handwriting must be in block capitals.
A set of notes on this form (97-01T-2) is available from the Land Titles Office.

Checked by (LTO use):

STATUTORY DECLARATION

I PETER CAREY PRIOR of 3/143 Pacific Highway Hornsby in the State of New South Wales Solicitor do solemnly and sincerely declare as follows:

1 I am the Solicitor acting for the purchaser Orchard Holdings Pty Limited of a property at 123-179 Patons Lane Orchard Hills being Identifier 40/738126

2 I declare that I signed the transfer on the 19th July 2001 and stamp duty was paid on the Contract and Transfer on the 20th July 2001

3 The Transfer was forwarded to the Vendor's Solicitors and was signed on or about the 27th July 2001 by the Vendor company.

4 Settlement was due to take place on or about the 20th July but we obtained an extension of time under the Contract.

5 Settlement was due to take place by the end of October but due to problems with the mortgagee settlement is now due to take place under a Notice to Complete on the 7th November 2001.

6 We would request that the Land Titles Office proceed to registration of the Transfer under the circumstances.

AND I MAKE this solemn declaration conscientiously believing the same to be true under the provisions of the Oaths Act 1900.

MADE AND DECLARED at Hornsby
the 6th day of November 2001
before me:
A Justice of the Peace

MERLE ANNETTE TAIT
Justice of the Peace NSW
8100217

Title Search

LEAP Searching
An Approved LPI NSW
Information Broker

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 40/738126

SEARCH DATE	TIME	EDITION NO	DATE
17/1/2012	7:44 AM	5	21/8/2008

LAND

LOT 40 IN DEPOSITED PLAN 738126
AT ERSKINE PARK
LOCAL GOVERNMENT AREA PENRITH
PARISH OF CLAREMONT COUNTY OF CUMBERLAND
TITLE DIAGRAM DP738126

FIRST SCHEDULE

DELLARA PTY LIMITED (T AE161958)

SECOND SCHEDULE (3 NOTIFICATIONS)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
2 EASEMENT(S) AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM CREATED BY:
L277936 -FOR TRANSMISSION LINE VARIABLE WIDTH
2103370 EASEMENT VESTED IN NEW SOUTH WALES ELECTRICITY TRANSMISSION AUTHORITY
* 3 AF900693 CAVEAT BY ELEM INVESTMENTS PTY LIMITED

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

mg PRINTED ON 17/1/2012

* Any entries preceded by an asterisk do not appear on the current edition of the Certificate of Title. Warning: the information appearing under notations has not been formally recorded in the Register. Leap Searching an approved NSW Information Broker hereby certifies that the information contained in this document has been provided electronically by the Registrar General in accordance with Section 96B (2) of the Real Property Act 1900.

Appendix E

WorkCover Documentation

WorkCover NSW
92-100 Donnison Street, Gosford, NSW 2250
Locked Bag 2906, Lisarow, NSW 2252
T 02 4321 5000 F 02 4325 4145
WorkCover Assistance Service 13 10 50
DX 731 Sydney workcover.nsw.gov.au

Our Ref: D12/007430
Your Ref: Nerilee Edwards

20 January 2012

Attention: Nerilee Edwards
Douglas Partners
PO BOX 472
West Ryde NSW 2114

Dear Ms Edwards,

RE SITE: 123-179 Patons Lane Orchard Hills NSW

I refer to your site search request received by WorkCover NSW on 17 January 2012 requesting information on licences to keep dangerous goods for the above site.

A search of the Stored Chemical Information Database (SCID) and the microfiche records held by WorkCover NSW has not located any records pertaining to the above mentioned premises.

If you have any further queries please contact the Dangerous Goods Licensing Team on (02) 4321 5500.

Yours Sincerely

Brent Jones
Senior Licensing Officer
Dangerous Goods Team

Appendix F

Section 149(2&5) Certificate

Available Council Records

PENRITH CITY COUNCIL
Serving Our Community

Civic Centre
601 High Street, Penrith

PO Box 60 Penrith NSW 2751
DX 8017 Penrith
Email: pencit@penrithcity.nsw.gov.au

Telephone: 02 4732 7777
Facsimile: 02 4732 7958

PLANNING CERTIFICATE UNDER SECTION 149

Environmental Planning and Assessment Act, 1979

Property No: 394638
Your Reference: R Miller Urgent Fax
Contact No: 9904 5369

Issue Date: 18/01/2012
Certificate No: 12/00133
Receipt Date: 18/01/2012
Receipt No: 2422729

Issued to: R Miller
PO Box 1265
NEUTRAL BAY NSW 2089

PRECINCT 2010

DESCRIPTION OF LAND

County: CUMBERLAND **Parish:** CLAREMONT

Location: 123-179 Patons Lane ORCHARD HILLS NSW 2748
Land Description: Lot 40 DP 738126

- PART 1 PRESCRIBED MATTERS –

In accordance with the provisions of Section 149(2) of the Act the following information is furnished in respect of the abovementioned land:

1 *NAMES OF RELEVANT PLANNING INSTRUMENTS AND DCPs*

1(1) The name of each environmental planning instrument that applies to the carrying out of development on the land:

Penrith Local Environmental Plan 2010, published 22nd September, 2010, applies to the land.

Sydney Regional Environmental Plan No.9 - Extractive Industry (No.2), gazetted 15 September 1995, as amended, applies to the local government area of Penrith.

Sydney Regional Environmental Plan No. 20 - Hawkesbury-Nepean River (No. 2 - 1997), gazetted 7 November 1997, as amended, applies to the local government area of Penrith (except land to which Sydney Regional Environmental Plan No. 11 - Penrith Lakes Scheme applies).

The names of each State environmental planning policy applying to the land are:
State Environmental Planning Policy No. 4 - Development Without Consent and Miscellaneous Exempt and Complying Development. (Note1: This policy may not apply to land reserved for certain public purposes. See clause 4 of the policy. Note 2: Clause 6 of the policy does not apply to land subject to Penrith City Centre Local Environmental Plan 2008 or State Environmental Planning Policy (Western Sydney Employment Area) 2009. Note 3: Clause 6 and Parts 3 and 4 of the policy do not apply to land subject to Penrith Local Environmental Plan (Glenmore Park Stage 2) 2009, Penrith Local Environmental Plan (South Werrington Urban Village) 2009, Penrith Local Environmental Plan (Caddens) 2009, or Penrith Local Environmental Plan 2010.)
State Environmental Planning Policy No. 6 - Number of Storeys in a Building.
State Environmental Planning Policy No.19 - Bushland in Urban Areas. (Note: This policy does not apply to certain land referred to in the National Parks and Wildlife Act 1974 and the Forestry Act 1916.)
State Environmental Planning Policy No.21 - Caravan Parks.

PENRITH CITY COUNCIL
Serving Our Community

Civic Centre
601 High Street, Penrith

PO Box 60 Penrith NSW 2751
DX 8017 Penrith
Email: pencit@penrithcity.nsw.gov.au

Telephone: 02 4732 7777
Facsimile: 02 4732 7958

PLANNING CERTIFICATE UNDER SECTION 149

Environmental Planning and Assessment Act, 1979

(Note: If no zoning appears in this section see section 1(1) for zoning and land use details (under the Sydney Regional Environmental Plan or State Environmental Planning Policy that zones this property).)

Zone E2 Environmental Conservation
(Penrith Local Environmental Plan 2010)

1 Objectives of zone

- To protect, manage and restore areas of high ecological, scientific, cultural or aesthetic values.
- To prevent development that could destroy, damage or otherwise have an adverse effect on those values.
- To protect, manage, restore and enhance the ecology, hydrology and scenic values of riparian corridors and waterways, wetlands, groundwater resources, biodiversity corridors, areas of remnant indigenous vegetation and dependent ecosystems.
- To allow for low impact passive recreational and ancillary land uses that are consistent with the retention of the natural ecological significance.

2 Permitted without consent

Nil

3 Permitted with consent

Environment facilities; Environmental protection works; Flood mitigation works; Recreation areas; Roads

4 Prohibited

Business premises; Hotel or motel accommodation; Industries; Multi dwelling housing; Recreation facilities (major); Residential flat buildings; Restricted premises; Retail premises; Seniors housing; Service stations; Warehouse or distribution centres; Any other development not specified in item 2 or 3

Zone RU2 Rural Landscape
(Penrith Local Environmental Plan 2010)

1 Objectives of zone

- To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.
- To maintain the rural landscape character of the land.
- To provide for a range of compatible land uses, including extensive agriculture.
- To minimise conflict between land uses within the zone and land uses within adjoining zones.
- To preserve and improve natural resources through appropriate land management practices.
- To ensure development is compatible with the environmental capabilities of the land and does not unreasonably increase the demand for public services or public facilities.

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Serving Our Community

Civic Centre
601 High Street, Penrith

PO Box 60 Penrith NSW 2751
DX 8017 Penrith
Email: pencit@penrithcity.nsw.gov.au

Telephone: 02 4732 7777
Facsimile: 02 4732 7958

PLANNING CERTIFICATE UNDER SECTION 149

Environmental Planning and Assessment Act, 1979

Note 5: Under the terms of Clause 5.1 of Penrith Local Environmental Plan 2010 development on land acquired by an authority of the State under the owner-initiated acquisition provisions may, before it is used for the purpose for which it is reserved, be carried out, with development consent, for any purpose.

Note 6: Under the terms of Clause 5.3 of Penrith Local Environmental Plan 2010 development consent may be granted to development of certain land for any purpose that may be carried out in an adjoining zone.

Note 7: Under the terms of Clause 5.9 of Penrith Local Environmental Plan 2010 trees or other vegetation subject to Penrith Development Control Plan 2010 must not be ringbarked, cut down, topped, lopped, removed, injured or wilfully destroyed without the authority conferred by a development consent or a Council permit.

Note 8: Clause 5.10 of Penrith Local Environmental Plan 2010 details when development consent is required/not required in relation to heritage conservation.

Note 9: Under the terms of Clause 5.11 of Penrith Local Environmental Plan 2010 bush fire hazard reduction work authorised by the *Rural Fires Act 1997* may be carried out on any land without development consent.

Note 10: Sex services premises and restricted premises may only be permitted subject to the requirements of Clause 6.15 of Penrith Local Environmental Plan 2010.

2(e) whether any development standards applying to the land fix minimum land dimensions for the erection of a dwelling-house on the land and, if so, the minimum land dimensions so fixed:

(Information is provided in this section only if any development standards applying to the land fix minimum land dimensions for the erection of a dwelling-house on the land and, if so, the minimum land dimensions so fixed.)

2(f) whether the land includes or comprises critical habitat:

(Information is provided in this section only if the land includes or comprises critical habitat.)

2(g) whether the land is in a conservation area (however described):

(Information is provided in this section only if the land is in a conservation area (however described).)

2(h) whether an item of environmental heritage (however described) is situated on the land:

(Information is provided in this section only if an item of environmental heritage (however described) is situated on the land.)

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(NOTE: (1) Council has relied on Department of Planning Circulars and Fact Sheets in the preparation of this information. Applicants should seek their own legal advice in relation to this matter with particular reference to State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.)

(2) Penrith Local Environmental Plan 2010 (if it applies to the land) contains additional complying development not specified in State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.)

4 *COASTAL PROTECTION*

The land is not affected by the operation of sections 38 or 39 of the Coastal Protection Act 1979, to the extent that council has been so notified by the Department of Public Works.

5 *MINE SUBSIDENCE*

The land is not proclaimed to be a mine subsidence district within the meaning of section 15 of the Mine Subsidence Compensation Act 1961.

6 *ROAD WIDENING AND ROAD REALIGNMENT*

The land is not affected by any road widening or road realignment under:
(a) Division 2 of Part 3 of the Roads Act 1993, or
(b) an environmental planning instrument, or
(c) a resolution of council.

7 *COUNCIL AND OTHER PUBLIC AUTHORITY POLICIES ON HAZARD RISK RESTRICTIONS*

(a) Council Policies

The land is not affected by a policy adopted by the council that restricts the development of the land because of the likelihood of land slip, bushfire, tidal inundation, subsidence, acid sulphate soils or any other risk (other than flooding and the item Noted below).

Note: Council has adopted by resolution a policy on contaminated land which may restrict the development of the land. This policy, Part 2.1 of Penrith Development Control Plan 2006 and Section 4.4 of Penrith Development Control Plan 2010, is implemented when zoning or land use changes are proposed on lands which have previously been used for certain purposes. Consideration of council's adopted policy and the application of provisions under relevant State legislation is warranted.

(b) Other Public Authority Policies

The Bush Fire Co-ordinating Committee has adopted a Bush Fire Risk Management Plan that covers the local government area of Penrith City Council, and includes public, private and Commonwealth lands.

The land is not affected by a policy adopted by any other public authority and notified to the council for the express purpose of its adoption by that authority being referred to in planning certificates issued by the council, that restricts the development of the land because of the likelihood of land slip, tidal inundation, subsidence, acid sulphate soils or any other risk (other than flooding).

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11 BUSH FIRE PRONE LAND

Some of the land is identified as bush fire prone land according to Council records. Guidance as to restrictions that may be placed on the land as a result of the land being bush fire prone can be obtained by contacting Council. Such advice would be subject to further requirements of the NSW Rural Fire Services.

12 PROPERTY VEGETATION PLANS

(Information is provided in this section only if Council has been notified that the land is land to which a property vegetation plan under the Native Vegetation Act 2003 applies.)

13 ORDERS UNDER TREES (DISPUTES BETWEEN NEIGHBOURS) ACT 2006

(Information is provided in this section only if Council has been notified that an order has been made under the Trees (Disputes Between Neighbours) Act 2006 to carry out work in relation to a tree on the land.)

14 DIRECTIONS UNDER PART 3A

(Information is provided in this section only if there is a direction by the Minister in force under section 75P(2)(c1) of the Act that a provision of an environmental planning instrument prohibiting or restricting the carrying out of a project or a stage of a project on the land under Part 4 of the Act does not have effect.)

15 SITE COMPATIBILITY CERTIFICATES AND CONDITIONS AFFECTING SENIORS HOUSING

(Information is provided in this section only if:

(a) there is a current site compatibility certificate (seniors housing), of which the council is aware, issued under State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 in respect of proposed development on the land; and/or

(b) any terms of a kind referred to in clause 18(2) of State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 have been imposed as a condition of consent to a development application granted after 11 October 2007 in respect of the land.)

16 SITE COMPATIBILITY CERTIFICATES FOR INFRASTRUCTURE

(Information is provided in this section only if there is a valid site compatibility certificate (infrastructure), of which council is aware, in respect of proposed development on the land.)

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PLANNING CERTIFICATE UNDER SECTION 149

Environmental Planning and Assessment Act, 1979

Information is provided only to the extent that Council has been notified by relevant government departments.

149(5) Certificate
This Certificate is directed to the following relevant matters affecting the land

When information pursuant to section 149(5) is requested the Council is under no obligation to furnish any of the information supplied herein pursuant to that section. Council draws your attention to section 149(6) which states that a council shall not incur any liability in respect of any advice provided in good faith pursuant to sub-section (5). The absence of any reference to any matter affecting the land shall not imply that the land is not affected by any matter not referred to in this certificate.

Note:

- Council's 149(5) information does not include development consent or easement information. Details of development consents may be obtained by making enquiries with Council's Development Services Department pursuant to section 12 of the Local Government Act 1993 or (for development applications lodged after January 2007) by viewing the Online Services area at www.penrithcity.nsw.gov.au . Details of any easements may be obtained from a Title Search at Land and Property Information New South Wales.
- This certificate does not contain information relating to Complying Development Certificates.
- This certificate may not provide full details of development rights over the land.

* When considering any development application Council must have regard to the Threatened Species Conservation Act 1995. Please note that this legislation may have application to any land throughout the city. Interested persons should make their own enquiries in regard to the impact that this legislation could have on this land.

* Agricultural Activities Within Rural Areas
This property is located in a rural area and there may be certain agricultural activities occurring that some people may find offensive (for example noise, dust and odours). This should be considered if you purchase the subject property or build a dwelling thereon.
If you do purchase the subject property or build a dwelling, the potential impact that your activities (for example pets, inadequate fencing, drainage, litter and poor weed control) might have on the agricultural activities in the area should also be considered.

* Council is currently carrying out a citywide overland flow flood study. This study has identified this property as subject to a flood or drainage risk in an extreme event. This may not necessarily result in flood related development controls.

* See Clause 5.9 of Penrith Local Environmental Plan 2010 and Chapter C2 of Penrith Development Control Plan 2010 for specific controls relating to the preservation of trees and vegetation.

* See Clause 6.8 of Penrith Local Environmental Plan 2010 for specific controls relating to dual occupancy and secondary dwellings in Zones RU1, RU2, RU4, E3 and E4.

* Penrith Development Control Plan 2010, which applies to the land, sets out requirements for a range of issues that apply across the Penrith Local Government Area, including:

- Site Planning and Design Principles
- Vegetation Management
- Water Management
- Land Management

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Some years ago the Commonwealth Government proposed a second major airport for Sydney at Badgery's Creek. As part of that proposal there were a number of airport options some of which may have had an effect on the subject property. You should make your own enquiries as to the government's present position on the second Sydney airport with the Commonwealth Department of Infrastructure and Transport. (Website: www.infrastructure.gov.au)

Alan Stoneham
General Manager

PER _____

Section 91 of the Protection of the Environment Operations Act 1997

Clean-Up Notice

Department of Environment and Conservation NSW

ORCHARD HOLDINGS (NSW) PTY LTD,
ABN 46 097 062 283,
87 LISBON STREET,
FAIRFIELD NSW 2165

Notice Number 1067129
File Number FIL06/1203
Date 17-Jan-2007

NOTICE OF CLEAN-UP ACTION

BACKGROUND

A. The Environment Protection Authority ("EPA") is responsible for the administration and enforcement of the Protection of the Environment Operations Act 1997 ("the Act").

B. Erskine Park Quarry Pty Ltd holds Environment Protection Licence No. 11706 in relation to land at 123 - 179 Patons Lane, Orchard Hills, NSW ("the Premises"). That licence authorises the scheduled activity of extractive industries but does not authorise the activity of a waste facility.

C. The EPA is the appropriate regulatory authority for activities at the Premises.

D. On 3 August 2006 EPA Authorised Officers attended the Premises. At the Premises the officers noted several truck loads of mixed waste. This waste consisted of soil, bricks, broken timber, plastics and broken tiles, being inert waste as defined in the Act.

E. The location of these piles was approximately 500 metres to the north side of the site office. During the same inspection EPA Officers inspected the waste in the trailer of an incoming truck, whose material was consistent with the waste described above.

F. Also during this inspection an EPA Authorised Officer observed dog and trailer trucks with NSW registration AC62YL and AA61MN containing building and demolition waste (being inert waste as defined by the Act)

G. Registration details obtained for vehicle registration AC62YL shows that Orchard Holdings (NSW) Pty Ltd registered that vehicle.

H. Registration details obtained for vehicle registration AA61MN shows that Orchard Holdings (NSW) Pty Ltd registered that vehicle.

I. After inspecting this waste on the Premises, EPA officers met with Mr Robert Kady, one of the Directors of Orchard Holdings (NSW) Pty Ltd, who informed them that the waste on the Premises was from a site in Fairfield. Mr Kady further stated that the waste was being brought to the Premises site so it could be sorted and then sent to the appropriate places.

J. On 9 November 2006 EPA Authorised Officers returned to the Premises and inspected the waste piles. It appeared that more mixed waste had been added to the Premises since the 3 August 2006 inspection. The officers observed a pile of mixed waste containing asphalt type material which also had an organic smell.

K. At the time of the inspection a section 191 notice, to provide information and records was served by EPA Authorised Officers on Mr Robert Kady.

L. On 20 December 2006 the DEC received a facsimile from Mr Robert Kady of Orchard Holdings (NSW) Pty Ltd in response to the section 191 notice. In this facsimile Mr Robert Kady has written "as at 3 August 2006 Erskine Park Quarry (in liquidation) is an un-secured creditor to Orchard Holdings".

M. On 23 November 2006 a draft clean up notice was both faxed and sent by registered post to Mr Robert Kady of Orchard Holdings (NSW) Pty Ltd.

N. On 21 December 2006 the DEC received a facsimile from Mr George Maroon of Orchard Holdings (NSW) Pty Ltd requesting an extension to the time for compliance with the clean up notice until the end of January or early February 2007.

O. On 22 December 2006 EPA Authorised Officers undertook another inspection of the Premises. On this inspection they met with George Maroon, who stated that he was managing the site and supervising the delivery of virgin excavated natural material (VENM) to the site. Whilst at the Premises EPA Authorised Officers noticed a number of trucks enter the site and deposit their loads of VENM. A number of freshly deposited piles of waste were noticed on the bund wall (see photographs 4 and 5). Although these piles were predominantly made up of top soil, there was a small amount of demolition waste such as brick and pipe located in them.

P. Neither Mr Robert Kady or Orchard Holdings (NSW) Pty Ltd have the appropriate EPA licences or authority to store this waste at the Premises.

Q. The EPA has advice from Penrith City Council which confirms that there is no Development Consent for any type of waste to be received, stored, processed, or disposed of at the Premises.

R. The EPA reasonably suspects that Orchard Holdings (NSW) Pty Ltd has caused or is causing a pollution incident at the Premises by receiving waste at the Premises. This activity appears to be unlawful.

S. The EPA requires Orchard Holdings (NSW) Pty Ltd to take clean up action set out in this notice.

DIRECTION TO TAKE CLEAN-UP ACTION

1. The EPA directs ORCHARD HOLDINGS (NSW) PTY LTD to take the following clean-up action:

   a) Immediately cease receiving any solid material, being "waste" (including "solid waste", "inert waste" and "virgin excavated natural material") as defined in the Act, at the Premises.

   b) Immediately cease causing any solid material, being "waste" (including "solid waste", "inert waste", and "virgin excavated natural material") as defined in the Act, to be placed or disposed at the Premises.

   c) Remove all of the waste received or transported to the Premises by Orchard Holdings (NSW) Pty Ltd (not including the pile of bricks near the workshop area on the Premises) including the waste sighted by EPA Authorised Officers on the bund wall on the 22 December 2006, to a place that can lawfully receive that waste **by 5:00pm on Friday 9 February 2007.**

   d) Provide copies of disposal dockets and/or invoices for the lawful removal of waste referred to in item 1(c) of this notice to EPA's Manager Waste Operations **by 5:00pm on Friday 16 February 2007.**

FEE TO BE PAID

☐ You are required by law to pay a fee of $320 for the administrative costs of issuing this notice.

Clean-Up Notice

- It is an offence not to pay this fee. However you can apply for an extension of time to pay the fee or for the fee to be waived. At the end of this notice there is information about how and when to pay the fee and how to apply for an extension or a waiver of the fee.

.....

Mr Chris McElwain

Principal Officer

Waste Operations

(By Delegation)

INFORMATION ABOUT THIS CLEAN-UP NOTICE

- This notice is issued under section 91 of the Protection of the Environment Operations Act 1997.
- It is an offence against the Act not to comply with a clean-up notice unless you have a reasonable excuse.

Penalty for not complying with this notice

- The maximum penalty for a corporation is $1,000,000 and a further $120,000 for each day the offence continues. The maximum penalty for an individual is $250,000 and a further $60,000 for each day the offence continues.

Cost recovery from the person who caused the incident

- If you comply with this clean-up notice but you are not the person who caused the pollution incident to which the notice relates, you have a right to go to court to recover your costs of complying with the notice from the person who caused the incident.

Deadline for paying the fee

- The fee must be paid by **no later than 30 days after the date of this notice**, unless the Environment Protection Authority extends the time to pay the fee, or waives the fee.

How to pay the fee

- Possible methods of payment are listed on the last page of the attached invoice/statement.
- Please include the payment slip from the attached invoice/statement with your payment.

How to apply for an extension of time to pay/waive the fee

- Any application for and extension of time to pay the fee or for the fee to be waived should be made in writing to the Environment Protection Authority and sent to PO Box A290 Sydney South NSW 1232. The application should set out clearly why you think your application should be granted.

(5)

Our Ref: JH
Contact: Mr J Howe
Telephone: (02) 4732 7775

28 April 2008

Orchard Holdings (NSW) Pty Ltd
C/O: Mr Robert Kady
87 Lisbon Street
FAIRFIELD NSW 2165

Fax No: 9659 0647
(Facsimile & Post)

ORDER 15
ENVIRONMENTAL PLANNING & ASSESSMENT ACT, 1979
SECTION 121(b)

Council has conducted investigations into the operation of quarry activities on the above premises. Council's investigations have indicated that excavated material has been imported onto your property additional to that approved by DA No: 116/80.

In accordance with the provisions of Section 121(b) Part 1(b) of the *Environmental Planning and Assessment Act, 1979*, as amended, Penrith City Council Orders you to do such things as specified below at the undermentioned premises:

Premises to which the Order refers:

Lot 40 DP 738126, (123) Patons Lane, Orchard Hills.

The required work to be performed is:

	Timeframe
1. **To cease importing fill material for the construction of bund walls on the premises.**	*Immediately*
2. **To comply with Development Consent DA No. 116/80. The following conditions of consent are required to be addressed:** **Comply with Condition 21 of Development Consent No 116/80. Condition 21 states;** ***"the occupier is to submit at intervals of three months a plan prepared by a registered surveyor which shows the surface levels of the site as they exist at that time."***	*Within 28 days from the date of the Order*
3. **All fill material existing in the bund walls, is to be classified by an appropriately qualified person (as defined by Penrith Development Control Plan 2006). This classification is to be carried out in accordance with the relevant guidelines in particular the Environment Protection Authority Guidelines for the Assessment, Classification and Management of Non-liquid Wastes (1997). A copy of this**	*Within 28 days from the date of the Order*

classification is to be provided to Council for consideration.

4. **The appropriately qualified person is also to provide the following details on the bund walls:**

   - **The width at the base of each bund wall.**
   - **The width at the top of each bund wall.**
   - **The height of each bund wall.**
   - **The volume of the material that exists in each bund wall.**

5. **Provide a detailed plan for staged extraction and rehabilitation in accordance with condition 14 (a) and 14 (b) of Development Consent No 116/80.** *Within 28 days from the date of the Order.*

6. **Provide a plan for the removal of excess material in the bund walls for Councils consideration that details the volume of material to be removed and where the material will be taken.** *Within 28 days from the date of the Order.*

The circumstances that require the work to be performed:

The property Lot 40 DP 738126, 123 - 179 Patons Lane, Orchard Hills has a development application approved by Penrith City Council for an Extractive Industry.

1. Compliance with Condition 21 of DA No: 116/80

A review of the development application has indicated that a survey of the surface levels of the premises have not been received by Council in the past 3 months. This does not comply with condition 21 of Development Consent No. DA No:116/80 approved on the property.

2. Filling of Land

During an inspection carried out on the 18th December 2006 it was observed that filling of land has occurred on the bund walls on the premises known as Lot 40 DP 738126 , 123 - 179 Patons Lane, Orchard Hills greater than that approved by DA No: 116/80.

In accordance with the Environmental impact statement submitted in association with DA No: 116/80 "The bund wall was to be approximately 3 metres high and 12 – 15 metres wide at there base." At present the bund walls are approximately 12 – 15 metres high and 30 – 40 metres wide at there base.

Development consent is required for the filling of land in accordance with Sydney Regional Environmental Plan No 20 and the Penrith Local Environmental Plan No. 201 (Rural Lands).

Development Consent has not been obtained for the importation of filling material for the further construction of bund walls on the subject property.

Please note it is your responsibility to contact Council for a reinspection once the required works are complete.

Sixty (60) days from date of service for total works to be completed.
(Individual timeframes apply for certain works to be completed.)

FAILURE TO COMPLY WITH AN ORDER

Your attention is drawn to the following sections of the *Environmental Planning & Assessment Act, 1979* concerning non-compliance with this order:

121ZJ Failure to comply with order - carrying out of work by consent authority

(1) If a person fails to comply with the terms of an order given to the person under this Division, the person who gave the order may do all such things as are necessary or convenient to give effect to the terms of the order, including the carrying out of any work required by the order.

(2) If the person who gave the order gives effect to it by demolishing a building, the person:
(a) may remove any materials concerned, and
(b) may sell the materials, unless the person's expenses in giving effect to the terms of the order are paid to the person within 14 days after removal of the materials.

(4) If the proceeds of sale do not exceed those expenses, the person who gave the order:
(a) may retain the proceeds, and
(b) may recover the deficiency (if any) together with the person's costs of recovery from the owner as a debt.

126 Penalties

(1) A person guilty of an offence against this Act shall, for every such offence, be liable to the penalty expressly imposed and if no penalty is so imposed to a penalty not exceeding 1,000 penalty units ($100,000) and to a further daily penalty not exceeding 100 penalty units ($10,000).

(2) A person guilty of an offence against the regulations is liable to a penalty not exceeding 100 penalty units ($10,000).

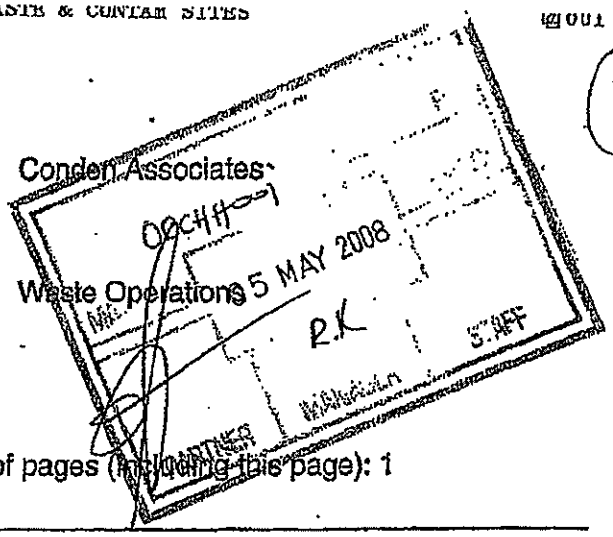
121ZK Appeals concerning orders

(1) A person on whom an order is served may appeal against the order to the Land & Environment Court.

(3) The appeal must be made within 28 days after the service of the order on the person.

Yours faithfully

Justin Howe
Environmental Compliance Officer.
Health & Environment Unit



(7)

Fax to: Mr Shon Condon / Mr Robert Kite — Condon Associates

Fax no: (02) 9891 1833

From: Chris McElwain — of: Waste Operations

Phone: (02) 9995 5737

cc:

Date: 5 May 2008 — No of pages (including this page): 1

Dear Sir

Re: Orchard Holdings (NSW) Pty Ltd – Clean Up Notice No. 1067129 dated 17 January 2007

I refer to my telephone conversation with Mr Robert Kite on Friday 2 May 2008 regarding the above.

I confirm that the DECC has evidence that there has been compliance with the requirements of paragraphs 1(a), (b), (c) and (d) of Clean Up Notice No. 1067129 dated 17 January 2007. At this stage, the Environment Protection Authority does not propose to take any further regulatory action in relation to the requirements of that Notice.

If you have any questions regarding the above, please call me on (02) 9995 5737.

Yours faithfully

Chris McElwain
Unit Head
Department of Environment and Climate Change

PO Box A290 Sydney South NSW 1232
59-61 Goulburn St Sydney NSW 2000
Tel: (02) 9995 5000 Fax: (02) 9995 5999
TTY (02) 9211 4723
ABN 30 841 387 271
www.environment.nsw.gov.au

Department of **Environment and Conservation** NSW

Our Ref: GL:LG IMS:
Contact: Mr Graham Liehr
Telephone: (02) 4732 7580

20 May 2010

The Manager
Metropolitan Operations Centre – Mine Site
Department Environment Climate Change and Water
PO Box A290
SYDNEY SOUTH NSW 1232

Dear Sir

Erskine Park Quarry - 123-179 Paton's Lane Orchard Hills

The Director General of the Department of Planning has received a project application from Dellara Pty Ltd for a resource recovery facility on the above site. The proposal includes receiving up to 600,000 tonnes of putrescibles waste per year for processing along with clay/shale extraction of up to 400,000 tonnes per year.

The proposal is classified as Major Development under State Environmental Planning Policy (Major Development) 2005 and will be assessed and determined by the Minister for Planning under Part 3A of the Environmental Planning and Assessment Act 1979. The application is accompanied by an Environmental Assessment (EA) which has also been referred to the Department Environment Climate Change and Water.

The EA indicates up to 5000 tonnes of the existing bunding contains special waste (asbestos). The identification of the asbestos on the site has created significant community concern relating to impacts on health.

Council requests that Department Environment Climate Change and Water, as the Appropriate Regulatory Authority for this site under Section 6 the Protection of the Environment Operations Act 1997, to take urgent action to remediate the site. Specifically, Council requests that action be taken to ensure that the asbestos on the site does not pose a risk to health and would prefer that the material is removed and disposed of to an approved landfill facility that is licensed to accept the special waste.

Should you wish to discuss the above matter, please contact me on (02) 4732 7580.

Yours faithfully

Graham Liehr
Environmental Health Manager

IMS:
Matthew Bullivant
(02) 4732 7725

3 June 2010

The Manager
Dellara Pty Ltd
Suite 2, Level 9
171 Clarence Street
SYDNEY NSW 2000

Clay and Shale extraction -Lot 40 DP 738126 –Patons Lane, Orchard Hills
BA 116/80

I refer to the above development.

Following site inspections carried out by Council officers and based on the building application details submitted as part of the original building application it is apparent that there is a breach of development consent notice 116/80 dated 23 November 1981. The details of the relevant conditions that appear to be infringed are:

1. Conditions 6, 9, 10, 11, 18 & 43 (as modified) which include requirements for rehabilitation works to occur within short timeframes from completion of extraction or as directed by Council and this has not occurred.

2. Condition No.21 requires the occupier to submit at intervals of three months a plan prepared by a registered surveyor which shows the surface levels of the site as they exist at that time. This has not been complied with.

3. The original EIS (1980) submitted with the application indicated that:

    - the lifespan of the extractive operations would be some 15 years. This has not occurred.

    - the bund walls were only proposed to be a height of 3m with bases 12-15m wide. Council's site inspections have revealed that the bund walls are about 10m high and do not comply with the consent.

4. Council's site visit indicated that little or no rehabilitation works have occurred to date on this site and that there have been excavations outside the area approved.

For the record Council requests that you confirm that you own a site (known as Lot 40 DP738126) where development has occurred that has breached the above conditions of consent. You are requested to confirm that you agree that this is the situation within 14 days from that date of this letter.

I reinforce that if you will not give this undertaking then Council will have to consider commencing legal proceedings to assert the position put forward within this letter. In addition, please advise on what action you are taking to address the non-compliance matters.

With respect to your Part 3A application Council will be making a submission to the Department of Planning outlining its position in respect of that application.

You are requested to provide your response within 14 days from the date of this letter.

Should you need to clarify the above matter please do not hesitate to call me (02) 4732-7625.

Yours faithfully

Matthew Bullivant
Legal Officer

Our reference : DOC10/25495

The Proper Officer
Dellara Pty Ltd
SYDNEY NSW 2083

Attn: Mr Rick Miller

STANDARD POST

9 June 2010

Dear Sir/Madam

123-179 Patons Lane Orchard Hills – Proposed Waste Recycling and Management Facility

I refer to a site inspection undertaken by authorised officers of the Department of Environment, Climate Change and Water ("DECCW") on 1 June 2010 of 123 - 179 Patons Lane Orchard Hills (the "Site").

I also refer to a subsequent telephone conversation between representatives of the DECCW and Rick Miller of Dellara Pty Ltd on 2 June 2010 in relation to the Site. The Department of Planning is currently considering a proposal under Part 3A of the *Environmental Planning and Assessment Act*, 1979 for a waste disposal and resource recovery facility on the Site.

On 1 June, DECCW received an Environment Line Report in relation to possible discharge of stormwater from the Premises, and the excavation of waste within the noise mounds. DECCW inspected the site on the same day and sought further information and clarification from the proponent in relation to the activities being undertaken at the Site.

Dellara Pty Ltd provided advice to the DECCW that stormwater had been discharged from the Site following chemical testing in accordance with Penrith Council's requirements. Penrith Council is the consent authority for current activities on the Site.

Dellara Pty Ltd also advised that excavation works were carried out on-site by consultants on the 1 June 2010 to assess the nature of waste in the mounds in response to concerns from Penrith Council about the estimated quantity of asbestos contaminated waste that may be in the noise mounds. Dellara indicated in discussions with DECCW staff, that these works were carried out at the request and approval of council. DECCW has been advised by Penrith Council that the works to excavate into the noise mounds was not approved by council.

PO Box A290 Sydney South NSW 1232
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Tel: (02) 9995 5000 Fax: (02) 9995 5999
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ABN 30 841 387 271
www.environment.nsw.gov.au

DECCW is concerned that the disturbance of waste within the noise mounds has the potential to expose waste that may contain asbestos and generate leachate that may not be effectively contained on the site.

The waste within the noise mounds and management of leachate and wastewaters are being addressed as part of the Environmental Assessment for the proposed waste disposal and resource recovery facility for the site. Accordingly, as advised on 2 June 2010, DECCW requests that no further works be undertaken at the Premises until a determination has been made by the DoP in relation to the proposal, unless the works are being undertaken with the approval of an appropriate consent authority.

DECCW also requests that any exposed waste on the site be immediately covered with on-site Virgin Excavate Natural Material (VENM) to minimise any potential to generate leachate, odour or dust emissions.

If any works are still needed to re-bury the waste, please advise DECCW prior to commencement of these works.

Yours sincerely

Mark Gorta
Manager Waste Manager
Environment Protection and Regulation
Department of Environment, Climate Change and Water

cc: Graham Liehr, Penrith City Council
Felicity Greenway, Department of Planning

9/6/10

Megan Webb - ORCHARD HILLS RECYCLING AND MANAGEMENT FACILITY SITE INSPECTION 1 JUNE 2010

From: "Rick Miller" <rodericksyd@ozemail.com.au>
To: sally.powers@environment.nsw.gov.au
Date: 10/06/2010 8:40 AM
Subject: ORCHARD HILLS RECYCLING AND MANAGEMENT FACILITY SITE INSPECTION 1 JUNE 2010
CC: Felicity.Greenway@planning.nsw.gov.au; admin@rwcorkery.com

Dear Mark \Sally,
With regards to the above discharging water from the site this was done with the Permission of NSW Water in July last year the discharge happened in Aug-Nov 2009 following chemical testing.
Regarding the works in the bund walls we were doing investigations of the Special waste (demolition material with traces of asbestos) on the request of Graham Liehr a senior environmental officer of Penrith council. All work was done With and under the supervision of Douglas Partners.
We will respect your wishes that no further work will be undertaken on site And that exposed waste on site will be immediately covered with virgin excavate Natural material.
Yours sincerely
Rick Miller

Our Ref: PL:LG: IMS:
Contact: Paul Lemm
Telephone: (02) 4732 7526

30 June 2010

The Hon Frank Sartor MP
Minister for Climate Change and the Environment
Level 35, Governor Macquarie Tower
1 Farrer Place
SYDNEY NSW 2000

Dear Mr Sartor,

Regulation of the Waste Disposal Industry

Council has for some time had reservations about the regulatory nature of the Waste Disposal Industry. Council concerns are particularly directed to the owner of proof that is required by an Authorised Regulatory Authority to establish whether there have been any breaches to development consents, licensing agreements or statutory requirements.

The legislation has come under scrutiny because a site within the Penrith LGA, Patons Lane, Orchard Hills which has for some 30 years been used for an extractive industry, approved by Council and licensed by Department of Environment Climate Change and Water, which has more recently had large amounts of unauthorised fill. Council officers in collaboration with DECCW pursued the unauthorised nature of the fill however establishing proof beyond reasonable doubt to commence prosecution procedures has proven extremely difficult. In the mean time the operator and owner of the site which were the focus of these enquiries went into liquidation. The property has a new owner.

The site in question is not approved as a landfill site and the self regulatory nature of the waste industry has cast serious doubts about the effectiveness and adequacy of the existing controls that regulate the disposal of waste within the State. Often there are two compliance roles being pursued one by Council for compliance with consent conditions and the other from DECCW for compliance with licensing conditions. The coordination of these actions often proves difficult and the resourcing required to pursue matters of non-compliance is often not an effective as it should be.

What has become known about the fill within the site in Penrith is that is contains asbestos which is a significant concern for Council and the broader community. Council received a report about this site and resolved to bring to your attention its concerns with the current regulatory regime governing the waste industry and in particular the disposal of asbestos or other hazardous materials.

Council is of a view that the statutory regime and the responsibility for establishing proof in respect to compliance issues unreasonably disadvantages Council or a Authorised Regulatory Authority and that more responsibility for compliance with the

statutory requirements should rest with the waste producers, the transporters of waste and those that receive the waste.

As the States population grows, the demand for the disposal of waste will continue with the likelihood of asbestos or other hazardous matierals forming part of that waste material there is a need to ensure that suitable compliance provisions apply. It is unlikely that the Department of Environment and Climate Change and Council have the capacity to monitor the entire waste industry and as such changes are required to enable better compliance and environmental outcomes.

Should you have any further enquiries regarding this matter please contact me on the above number during normal business hours.

Yours faithfully

Alan Stoneham
General Manager

NSW GOVERNMENT | Environment, Climate Change & Water

Our reference: MD/2382
Contact: Mr Rob Hogan 9995 5760

Mr Alan Stoneham
General Manager
Penrith City Council
PO Box 60
PENRITH NSW 2751

Dear Mr Stoneham

I refer to your letter of 5 July 2010 to the Minister for Climate Change and the Environment, the Hon Frank Sartor MP, regarding the regulation of the waste disposal industry. The Minister referred your correspondence to the Department of Environment, Climate Change and Water (DECCW) and I am responding on his behalf.

I acknowledge Council's concerns about the growing demand for waste disposal and the need to effectively regulate the waste industry. I also note Council's concerns about the former Erskine Park Quarry at Orchard Hills' unlawful use as a waste facility and the difficulties in establishing proof of culpability for prosecution.

Proof of culpability is a matter which will need to be addressed by Council's legal counsel. However, DECCW would like to bring Council's attention to the following provisions within the *Protection of the Environment Operations (POEO) Act 1997,* which provide for offences under the following sections:

- Section 143, the unlawful transporting or depositing of waste; and
- Section 144, the use of land as waste facility without lawful authority.

Section 143 provides penalties up to $1,000,000 for the unlawful transportation and/or deposition of waste. Section 144 provides penalties up to $1,000,000 applicable to the owner or occupier of the land who uses, causes or permits the land to be used as a waste facility without lawful authority. In any proceedings for an offence under these sections, the defendant bears the onus of proving that the place to which the waste was transported can lawfully be used as a waste facility.

These provisions provide a very robust framework for the prosecution of unlawful waste facilities. DECCW believes that the framework provides a strong basis for regulating the waste industry both now, and into the future, as demand grows and economic drivers change.

Additionally, while it is disappointing that the previous landowner of the Erskine Park Quarry entered into liquidation proceedings prior to the conclusion of DECCW's and Council's investigations, I can assure you that DECCW is continuing to pursue, through the liquidators, the costs accrued by the landowner for breaches of the POEO Act.

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As Council would be aware, the current landowners, Dellara Holdings Pty Ltd, have submitted a development application to the Department of Planning for a recycling and waste disposal facility at the site. If approval is granted, the waste facility will require an environment protection licence under the POEO Act.

Furthermore, the POEO Act allows for a financial assurance to be required to secure funding towards the carrying out of works or programs required under or by an environment protection licence. Should the proposed facility be approved, DECCW will seek an appropriate level of assurance from the proponent prior to issuing a licence. This funding will ensure that if for any reason the licensee is unwilling or unable to fulfil the responsibilities of the licence, then DECCW can draw on the assurance to remove any waste and render the site safe.

However, should the proposal be refused, DECCW is satisfied that the provisions of the POEO Act are sufficient to ensure the current landowner still meets all responsibilities for disposing of or otherwise managing any unlawful wastes.

DECCW welcomes any opportunity to liaise with the Department of Planning and Penrith City Council to provide further assistance as required in relation to these matters.

Should you wish to discuss these matters further, DECCW's Manager Waste Operations, Mr Rob Hogan, can be contacted on 9995 5760.

I trust this information is of assistance.

Yours sincerely

Lamberton 1/9/10

CRAIG LAMBERTON
Director Specialised Regulation
Environment Protection and Regulation

Appendix G

Extracts from Previous Reports

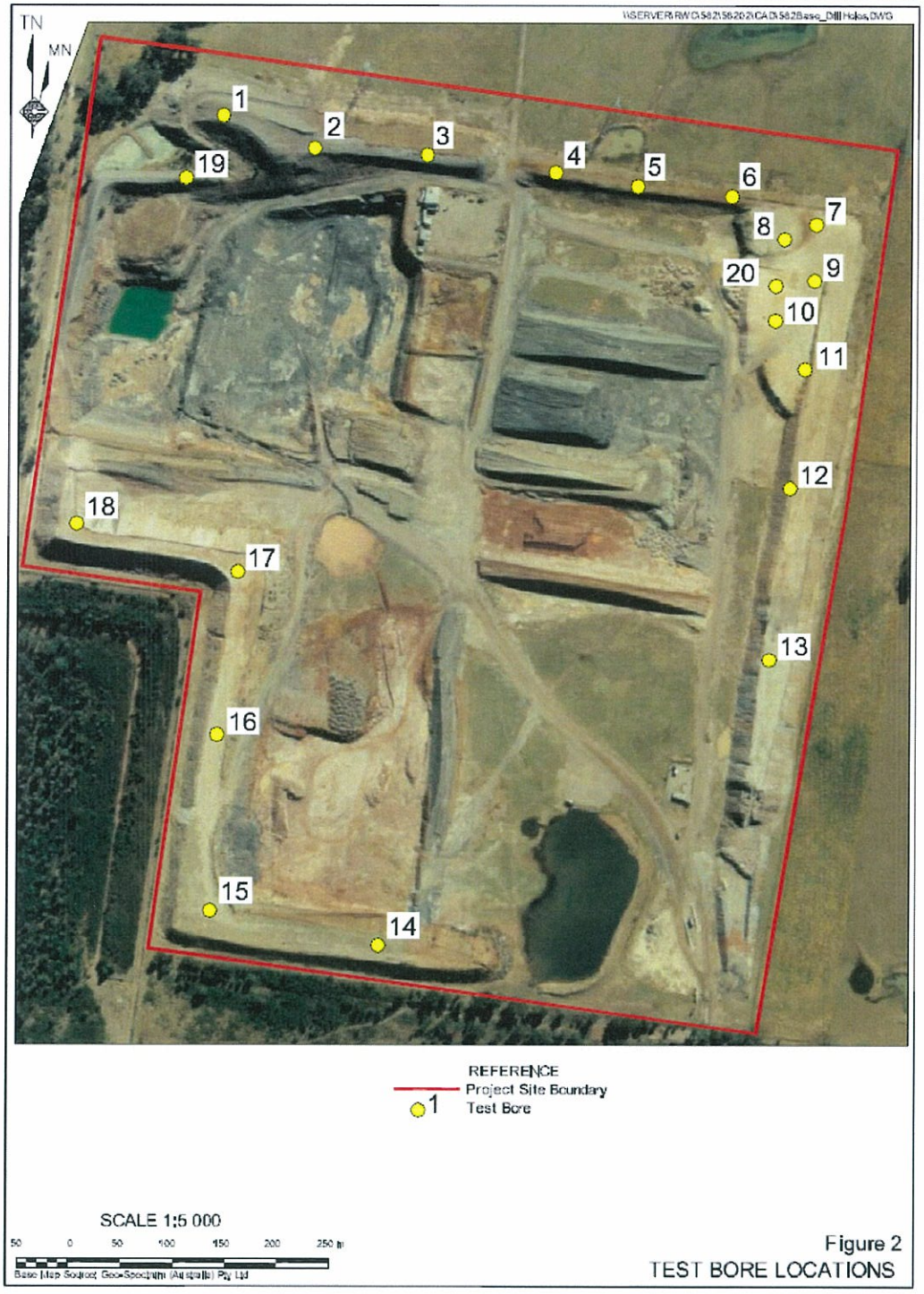


Figure 2
TEST BORE LOCATIONS

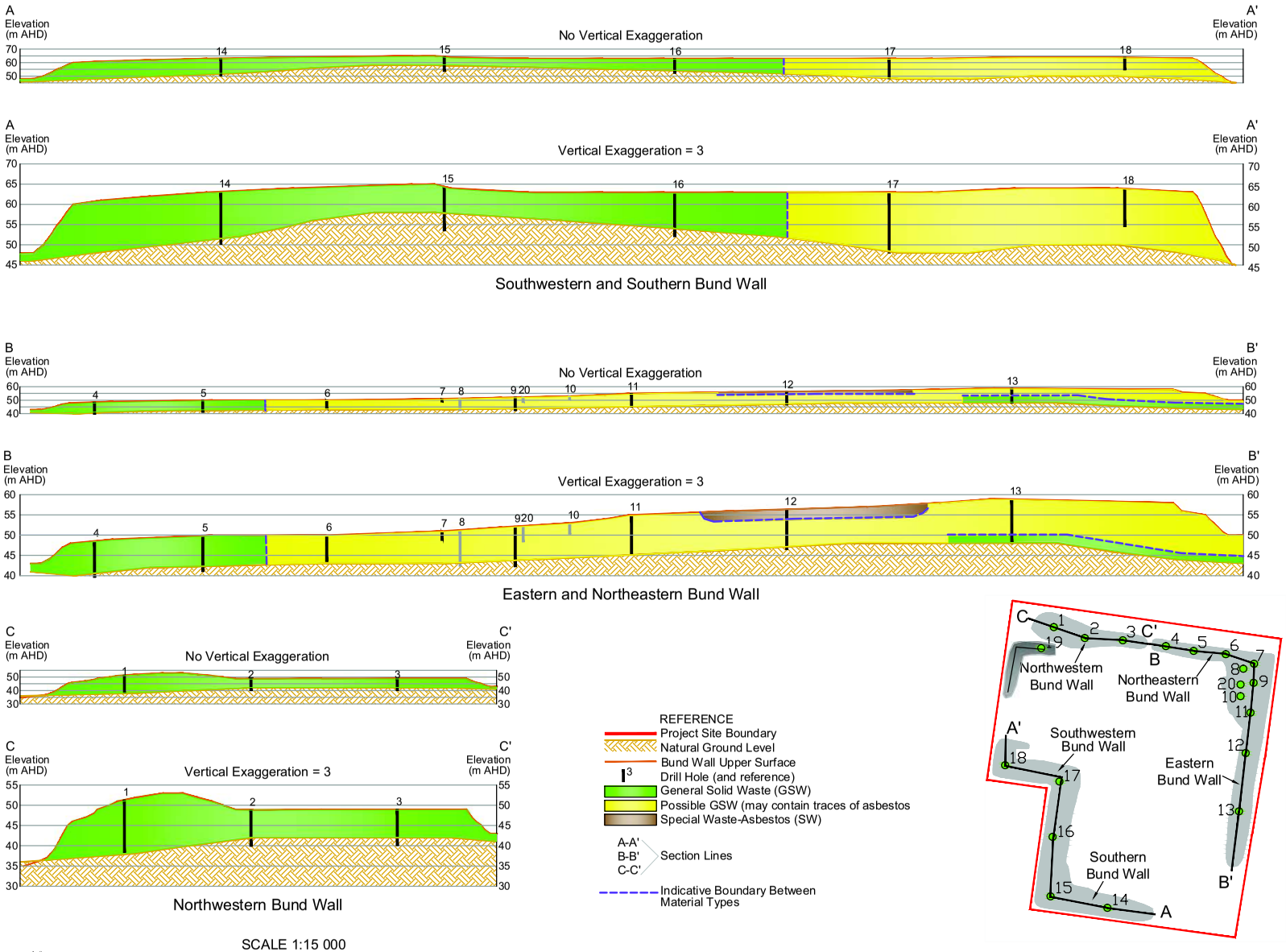
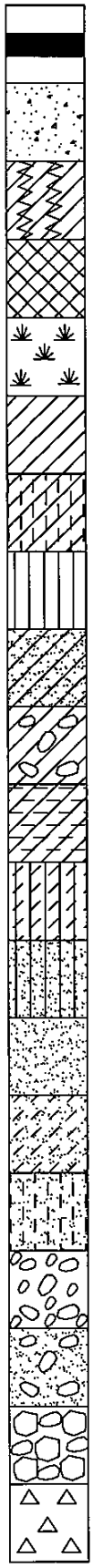


Figure 3
BUND WALL SECTIONS

GRAPHIC SYMBOLS FOR SOIL & ROCK

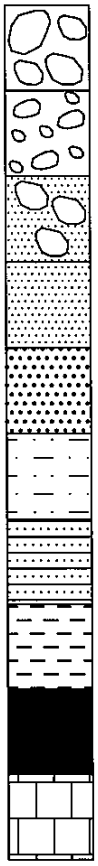
SOIL AND OTHER MATERIALS (1)



BITUMINOUS CONCRETE
CONCRETE
TOPSOIL
FILLING
PEAT
CLAY
SILTY CLAY
SILT
SANDY CLAY
GRAVELLY CLAY
SHALY CLAY
CLAYEY SILT
SANDY SILT
SAND
CLAYEY SAND
SILTY SAND
GRAVEL
SANDY GRAVEL
COBBLES/BOULDER
TALUS

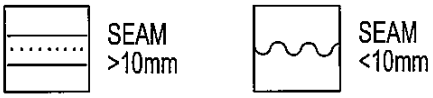
(1) As Amended August 2009 For the Purpose of this Report

SEDIMENTARY ROCK



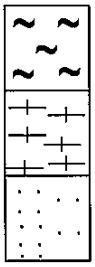
BOULDER CONGLOMERATE
CONGLOMERATE
CONGLOMERATIC SANDSTONE
SANDSTONE FINE GRAINED
SANDSTONE COARSE GRAINED
SILTSTONE
LAMINITE
MUDSTONE, CLAYSTONE, SHALE
COAL
LIMESTONE

SEAMS



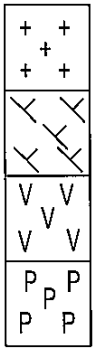
SEAM >10mm
SEAM <10mm

METAMORPHIC ROCK



SLATE, PHYLLITE, SCHIST
GNEISS
QUARTZITE

IGNEOUS ROCK



GRANITE
DOLERITE, BASALT
TUFF
PORPHYRY

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BOREHOLE LOG

CLIENT: RW Corkery & Co Pty Ltd
PROJECT: Material Classification
LOCATION: Patons Lane, Orchard Hills

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

BORE No: 1
PROJECT No: 71102
DATE: 16-17 Apr 09
SHEET 1 OF 2

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
	0.0	FILLING - grey silt with gravel		A	0.0		PID<1ppm		
					0.5				
		0.6-0.75m: higher strength (possibly shale fragments)		A	0.75		PID<1ppm		
	1				1.0				1
		1.4-1.65m: higher strength (possibly shale fragments)							
	1.65	FILLING - orange-brown mottled grey/red, clay with some ironstone nodules and gravel		A	1.65		PID<1ppm		
	2				2.0				2
		2.2-2.25m: higher strength (possibly shale fragments)			2.5				
				A			PID<1ppm		
	3				3.0				3
		- same as above but grey mottled red/orange-brown clay							
		3.5-3.6m: higher strength (possibly shale fragments)			3.5				
	3.6	FILLING - grey silt with gravel (from weathered shale-rock flour)		A			PID<1ppm		
	4				4.0				4
		4.23-4.7m: higher strength (possibly shale fragments)			4.5				
				A			PID<1ppm		
	4.8	FILLING - brown clay							
	5.0	FILLING - grey silt (from weathered shale-rock flour), with some shale fragments			5.0				
	5				5.3				5
				A			PID<1ppm		
	6				6.0				6
	6.5	FILLING - orange/brown mottled red-brown, clay with some ironstone fragments/nodules (possibly excavated natural material)			6.5				
				A			PID<1ppm		
	7				7.0				7
		7.3m: orange brown mottled grey/red-brown clay			7.3				
				A**			PID<1ppm		
	8				8.0				8
	8.5	FILLING - orange-brown mottled yellow-brown/grey (possibly excavated natural material)			8.5				
				A			PID<1ppm		
	9				9.0				9
					9.5				
				A			PID<1ppm		

RIG: 4x4 truck-mounted drill rig **DRILLER:** L Cooper **LOGGED:** W Yuan **CASING:** Uncased

TYPE OF BORING: 100mm diameter solid flight auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: *Denotes field replicate sample BD3/70409 collected. **Slight hydrocarbon odour
^Approximate levels shown on Figure 3, Appendix A

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U$_x$	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep ▼ Water level

CHECKED	
Initials:	
Date:	

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BOREHOLE LOG

CLIENT: RW Corkery & Co Pty Ltd
PROJECT: Material Classification
LOCATION: Patons Lane, Orchard Hills

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

BORE No: 1
PROJECT No: 71102
DATE: 16-17 Apr 09
SHEET 2 OF 2

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
		FILLING - orange-brown mottled yellow-brown/grey (possibly excavated natural material) *(continued)*			10.0				
		- brown silty clay		A	10.5		PID<1ppm		
	11				11.0				
	11.3	SHALY CLAY - orange-brown shaly clay		A	11.3		PID<1ppm		
	12				12.0				
				A*	12.5		PID<1ppm		
	13 13.0	Bore discontinued at 13.0m - target depth reached			13.0				
	14								
	15								
	16								
	17								
	18								
	19								

RIG: 4x4 truck-mounted drill rig **DRILLER:** L Cooper **LOGGED:** W Yuan **CASING:** Uncased

TYPE OF BORING: 100mm diameter solid flight auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: *Denotes field replicate sample BD3/70409 collected. **Slight hydrocarbon odour
^Approximate levels shown on Figure 3, Appendix A

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U_x	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep ▼ Water level

CHECKED	
Initials:	
Date:	

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Geotechnics · Environment · Groundwater

BOREHOLE LOG

CLIENT: RW Corkery & Co Pty Ltd
PROJECT: Material Classification
LOCATION: Patons Lane, Orchard Hills

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

BORE No: 2
PROJECT No: 71102
DATE: 17 Apr 09
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
	0.0	FILLING - grey silty clay with gravel		A	0.0		PID<1ppm		
				A	0.5		PID<1ppm		
	1				1.0				1
				A	1.5		PID<1ppm		
	2				2.0				2
					2.5				
	2.8			A	2.8		PID<1ppm		
	3 3.0	FILLING - orange-brown, clay with some ironstone cobbles/gravel			3.0				3
		FILLING - brown silty clay with gravel		A			PID<1ppm		
	4				4.0				4
	4.5	FILLING - orange-brown, clay with some ironstone nodules		A	4.5		PID<1ppm		
	5				5.0				5
				A	5.7		PID<1ppm		
	6				6.0				6
	6.5	FILLING - higher strength (possibly shale/ironstone boulders)							
	6.8			A	6.8		PID<1ppm		
	7	FILLING - grey clay with gravel, wet			7.0				7
	7.5	CLAY - red-brown mottled orange-brown clay with some ironstone gravel		A	7.5		PID<1ppm		
	8				8.0				8
	8.5	SHALY CLAY - grey shaly clay		A	8.5		PID<1ppm		
	9 9.0	Bore discontinued at 9.0m - target depth reached			9.0				9

RIG: 4x4 truck-mounted drill rig **DRILLER:** L Cooper **LOGGED:** W Yuan **CASING:** Uncased
TYPE OF BORING: 100mm diameter solid flight auger
WATER OBSERVATIONS: No free groundwater observed
REMARKS: ^Approximate levels shown on Figure 3, Appendix A

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U_x	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep ▼ Water level

CHECKED
Initials:
Date:

Douglas Partners
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BOREHOLE LOG

CLIENT: RW Corkery & Co Pty Ltd
PROJECT: Material Classification
LOCATION: Patons Lane, Orchard Hills

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

BORE No: 3
PROJECT No: 71102
DATE: 17 Apr 09
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
		FILLING - grey, silty (from weathered shale-rock flour) with some shale gravel		A	0.0		PID<1ppm		
		0.6-0.8m: higher strength (possibly shale boulder)			0.5				
				A	0.8		PID<1ppm		
1		1.0-1.3m: higher strength (possibly shale boulder)			1.0				1
				A	1.8		PID<1ppm		
2					2.0				2
				A	2.7		PID<1ppm		
3					3.0				3
				A	3.5		PID<1ppm		
4					4.0				4
	4.5	FILLING - orange-brown clay, with some shale gravel, wet (possibly excavated natural material)		A	4.5		PID<1ppm		
5					5.0				5
	5.5	SHALY CLAY - orange-brown mottled red/yellow-brown, shaly clay with some ironstone cobbles/gravel							
6					6.0				6
				A	6.6		PID<1ppm		
7					7.0				7
		7.8m: as above with ironstone bands		A	7.8		PID<1ppm		
8					8.0		PID<1ppm		8
				A	8.5				
				A	8.8		PID<1ppm		
9	9.0	Bore discontinued at 9.0m - target depth reached			9.0				9

RIG: 4x4 truck-mounted drill rig **DRILLER:** L Cooper **LOGGED:** W Yuan **CASING:** Uncased
TYPE OF BORING: 100mm diameter solid flight auger
WATER OBSERVATIONS: No free groundwater observed
REMARKS: ^Approximate levels shown on Figure 3, Appendix A

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U_x	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep ▼ Water level

CHECKED	
Initials:	
Date:	

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BOREHOLE LOG

CLIENT: RW Corkery & Co Pty Ltd
PROJECT: Material Classification
LOCATION: Patons Lane, Orchard Hills

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

BORE No: 4
PROJECT No: 71102
DATE: 24 Apr 09
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
	0.0	FILLING - brown silty clay with aggregate/gravel		A	0.0		PID<1ppm		
				A	0.5		PID<1ppm		
	1				1.0				1
		1.5m: as above but with building rubble (tile fragments)		A	1.5		PID<1ppm		
	2				2.0				2
	2.5	FILLING - orange-brown mottled red-brown, clay with ironstone nodules and aggregate		A	2.5		PID<1ppm		
	3				3.0				3
	3.5	FILLING - brown clay with some aggregate		A	3.5		PID<1ppm		
	4				4.0				4
	4.5	FILLING - brown silty clay, with building rubble (tile fragments) and aggregate		A	4.5		PID<1ppm		
	5				5.0				5
	5.5	FILLING - brown clay, with ironstone gravel and aggregate		A	5.5		PID<1ppm		
	6				6.0				6
	6.5	FILLING - brown sandy/silty clay, with aggregate and tile fragments, moist		A	6.5		PID<1ppm		
	7				7.0				7
	8								8
	8.3	CLAY - orange-brown clay		A	8.3		PID<1ppm		
	9				9.0				9
	9.0	Bore discontinued at 9.0m - target depth reached							

RIG: 4x4 truck-mounted drill rig **DRILLER:** K Kerney-Ennis **LOGGED:** W Yuan **CASING:** Uncased
TYPE OF BORING: 100mm diameter solid flight auger
WATER OBSERVATIONS: No free groundwater observed
REMARKS: ^Approximate levels shown on Figure 3, Appendix A

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U,	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep ▼ Water level

CHECKED
Initials:
Date:

Douglas Partners
Geotechnics · Environment · Groundwater

BOREHOLE LOG

CLIENT: RW Corkery & Co Pty Ltd
PROJECT: Material Classification
LOCATION: Patons Lane, Orchard Hills

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

BORE No: 5
PROJECT No: 71102
DATE: 24 Apr 09
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
		FILLING - brown silty clay		A	0.0		PID<1ppm		
		0.5m: red-brown mottled grey clay with aggregate		A	0.5		PID<1ppm		
	1				1.0				1
		1.5-1.7m: higher strength (possibly concrete)		A	1.7		PID<1ppm		
	2 2.0	FILLING - brown silty clay with aggregate/gravel			2.0				2
		2.5m: becoming grey silty clay with aggregate		A	2.5		PID<1ppm		
	3				3.0				3
	3.5	FILLING - brown silty clay, with some aggregate and ironstone gravel		A	3.5		PID<1ppm		
	4				4.0				4
		4.6-4.8m: higher strength (possibly concrete)		A	4.5		PID<1ppm		
		4.8m: as above with concrete fragments			5.0				
	5			A	5.5		PID<1ppm		5
	6								6
				A	6.5		PID<1ppm		
	7				7.0				7
	8								8
	8.6	CLAY - red-brown mottled orange-brown clay with ironstone nodules		A	8.6		PID<1ppm		
	9 9.0	Bore discontinued at 9.0m - target depth reached			9.0				9

RIG: 4x4 truck-mounted drill rig **DRILLER:** K Kerney-Ennis **LOGGED:** W Yuan **CASING:** Uncased
TYPE OF BORING: 100mm diameter solid flight auger
WATER OBSERVATIONS: No free groundwater observed
REMARKS:

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U_x	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep ▼ Water level

CHECKED	
Initials:	
Date:	

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BOREHOLE LOG

CLIENT: RW Corkery & Co Pty Ltd
PROJECT: Material Classification
LOCATION: Patons Lane, Orchard Hills

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

BORE No: 6
PROJECT No: 71102
DATE: 16 Apr 09
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
		FILLING - brown, silty clay with some gravel		A*	0.0		PID<1ppm		
				A	0.5		PID<1ppm		
	1.0	FILLING - orange-brown, clay with some gravel			1.0				
		1.5m: orange-brown mottled red-brown, clay with gravel		A	1.5		PID<1ppm		
					2.0				
	2.5	FILLING - brown, silty clay with some gravel		A	2.5		PID<1ppm		
		3.1-3.25m: higher strength (possibly gravel)			3.0				
				A	3.5		PID<1ppm		
		4.5m: brown clay with some gravel			4.0				
				A	4.5		PID<1ppm		
					5.0				
				A	5.5		PID<1ppm		
					6.0				
	6.5	Bore discontinued at 6.5m - refusal on concrete		A	6.5		(bag sample only)		

RIG: 4x4 truck-mounted drill rig **DRILLER:** L Cooper **LOGGED:** W Yuan **CASING:** Uncased

TYPE OF BORING: 100mm diameter solid flight auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: *Denotes field replicate sample BD2/160409 collected
^Approximate levels shown on Figure 3, Appendix A

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U_x	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep ▼ Water level

CHECKED
Initials:
Date:

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BOREHOLE LOG

CLIENT: RW Corkery & Co Pty Ltd
PROJECT: Material Classification
LOCATION: Patons Lane, Orchard Hills

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

BORE No: 7
PROJECT No: 71102
DATE: 16 Apr 09
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
		FILLING - brown silty clay, with some building rubble (tiles), gravel and rootlets		A	0.0		PID<1ppm		
					0.5				
		0.6m: higher strength (possibly bricks)							
	0.8	FILLING - poorly compacted, fine grained, brown silty clay with some building rubble and gravel, strong odour		A	0.85		PID<1ppm		
	1				1.0				1
					1.5				
				A			PID<1ppm		
	2	2.3m: higher strength (possibly concrete)			2.0				2
	2.3	Bore discontinued at 2.3m - refusal on possible concrete, moved to borehole 7A							
	3								3
	4								4
	5								5
	6								6
	7								7
	8								8
	9								9

RIG: 4x4 truck-mounted drill rig **DRILLER:** L Cooper **LOGGED:** W Yuan **CASING:** Uncased
TYPE OF BORING: 100mm diameter solid flight auger
WATER OBSERVATIONS: No free groundwater observed
REMARKS: ^Approximate levels shown on Figure 3, Appendix A

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U$_x$	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep ▼ Water level

CHECKED	
Initials:	
Date:	

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BOREHOLE LOG

CLIENT: RW Corkery & Co Pty Ltd
PROJECT: Material Classification
LOCATION: Patons Lane, Orchard Hills

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

BORE No: 7A
PROJECT No: 71102
DATE: 16 Apr 09
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
	0.1	FILLING - brown silty/sandy clay with gravel, building rubble (concrete, tiles) and roots							
		FILLING - red-brown, clay with gravel and building rubble (concrete, tiles)		A	0.5		PID<1ppm		
	0.85	0.85m: higher strength (possibly concrete)			0.85				
	1	Bore discontinued at 0.85m - refusal on concrete							
	2								
	3								
	4								
	5								
	6								
	7								
	8								
	9								

RIG: 4x4 truck-mounted drill rig **DRILLER:** L Cooper **LOGGED:** W Yuan **CASING:** Uncased
TYPE OF BORING: 100mm diameter solid flight auger
WATER OBSERVATIONS: No free groundwater observed
REMARKS: ^Approximate levels shown on Figure 3, Appendix A

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U,	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep ▼ Water level

CHECKED	
Initials:	
Date:	

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BOREHOLE LOG

CLIENT: RW Corkery & Co Pty Ltd
PROJECT: Material Classification
LOCATION: Patons Lane, Orchard Hills

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

BORE No: 8
PROJECT No: 71102
DATE: 16 Apr 09
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
	0.0	FILLING - brown silty clay with some plastic, gravel, building rubble (tiles), rootlets		A	0.0		PID<1ppm		
	1				1.0				1
		1.6-1.7m: higher strength (possibly gravel/concrete)			1.7				
		1.7m: trace of glass		A			PID<1ppm		
	2	2.0m: trace of concrete			2.0				2
				A			PID<1ppm		
	3				3.0				3
		3.5-3.6m: higher strength (possibly gravel/concrete)			3.6				
		3.77m: higher strength		A			PID<1ppm		
	4				4.0				4
	4.7	FILLING - yellow-brown, sandy/silty clay with some gravel, rootlets and building rubble (concrete and tiles)		A	4.7		PID<1ppm		
	5				5.0				5
	6.0	FILLING - yellow-brown, sand with rootlets, wet			6.0				6
				A			PID<1ppm		
	7.0	CLAY - red-brown clay, with some ironstone nodules			7.0				7
					7.5				
				A			PID<1ppm		
	8				8.0				8
		8.5m: becoming grey mottled red-brown clay		A			PID<1ppm		
	9.0	Bore discontinued at 9.0m - target depth reached			9.0				9

RIG: 4x4 truck-mounted drill rig **DRILLER:** L Cooper **LOGGED:** W Yuan **CASING:** Uncased
TYPE OF BORING: 100mm diameter solid flight auger
WATER OBSERVATIONS: No free groundwater observed
REMARKS: ^Approximate levels shown on Figure 3, Appendix A

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U_x	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep ▼ Water level

CHECKED
Initials:
Date:

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BOREHOLE LOG

CLIENT: RW Corkery & Co Pty Ltd
PROJECT: Material Classification
LOCATION: Patons Lane, Orchard Hills

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

BORE No: 9
PROJECT No: 71102
DATE: 23 Apr 09
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
	0.0	FILLING - brown silty clay with trace of aggregate, ironstone gravel, rubbler and plastic		A	0.0		PID=1ppm		
		0.5m: trace of nails, sand/limestone fragments		A	0.5		PID=1ppm		
	1				1.0				1
	1.5	FILLING - red-brown, silty clay with trace of concrete fragments, paint, aggregate, tile fragments and timber		A	1.5		PID=1ppm		
	2				2.0				2
	2.4	FILLING - black silty clay with trace of tile fragments, aggregate and timber		A	2.4		PID=1ppm		
	3				3.0				3
		3.5m: with trace of plastic, glass		A	3.5		PID<1ppm		
	4				4.0				4
	4.5	FILLING - orange-brown clay with some plastic, building rubble		A	4.5		PID<1ppm		
	5				5.0				5
	5.5	FILLING - brown silty/sandy clay with trace of tile fragments, rootlets and ironstone gravel		A	5.5		PID=1ppm		
	6				6.0				6
	6.5	FILLING - brown clay with some tile, concrete fragments, aggregate and ironstone gravel		A	6.5		PID<1ppm		
	7				7.0				7
	7.5	FILLING - dark brown/black, peaty clay with tile fragments and ironstone gravel		A	7.5		PID=1ppm		
	8				8.0				8
	8.5	FILLING - dark brown/black, peaty clay with aggregate (hydrocarbon odour), wet		A	8.5		PID<1ppm		
	9				9.0				9
	9.2	CLAY - red-brown mottled orange-brown/grey clay			9.5				
				A			PID<1ppm		
	10 10.0				10.0				10

Bore discontinued at 10.0m - target depth reached

RIG: 4x4 truck-mounted drill rig **DRILLER:** K Kerney-Ennis **LOGGED:** W Yuan **CASING:** Uncased

TYPE OF BORING: 100mm diameter solid flight auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: ^Approximate levels shown on Figure 3, Appendix A

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U_x	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep ▼ Water level

CHECKED
Initials:
Date:

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BOREHOLE LOG

CLIENT: RW Corkery & Co Pty Ltd
PROJECT: Material Classification
LOCATION: Patons Lane, Orchard Hills

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

BORE No: 10
PROJECT No: 71102
DATE: 15 Apr 09
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
	0	FILLING - brown sandy clay with some gravel and bricks, ceramic, sandstone, glass, plastic fragments		A*	0.5		PID<1ppm		
	1			A	1.0		PID<1ppm		
	2			A	2.0		PID<1ppm		
	2.75	Bore discontinued at 2.75m - refusal on concrete							
	3								
	4								
	5								
	6								
	7								
	8								
	9								

RIG: 4x4 truck-mounted drill rig **DRILLER:** L Cooper **LOGGED:** G Nikolaeva **CASING:** Uncased

TYPE OF BORING: 100mm diameter solid flight auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: *Denotes field replicate sample BDI/150409 collected
^Approximate levels shown on Figure 3, Appendix A

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U$_x$	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep ▼ Water level

CHECKED
Initials:
Date:

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BOREHOLE LOG

CLIENT: RW Corkery & Co Pty Ltd
PROJECT: Material Classification
LOCATION: Patons Lane, Orchard Hills

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

BORE No: 11
PROJECT No: 71102
DATE: 23 Apr 09
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
	0.0	FILLING - brown silty clay with trace of glass, plastic then aggregate		A	0.0		PID<1ppm		
				A	0.5		PID<1ppm		
	1				1.0				1
	1.5	FILLING - orange-brown, clay with ironstone gravel		A	1.5		PID<1ppm		
	2				2.0				2
		2.5m: as above with some tile fragments and aggregate		A	2.5		PID<1ppm		
	3				3.0				3
	3.5	FILLING - grey shaly clay with some shale fragments		A	3.5		PID<1ppm		
	4				4.0				4
		4.5m: trace of glass, tiles and ironstone gravel		A	4.5		PID<1ppm		
	5				5.0				5
	5.5	FILLING - red-brown silty clay with some ironstone gravel		A	5.5		PID<1ppm		
	6				6.0				6
		6.7-6.8m: higher strength (possibly roof tiles)							
	6.8	FILLING - dark brown silty clay with some aggregate, tile fragments and trace of aluminium scraps and ironstone gravel		A	6.8		PID<1ppm		
	7				7.0				7
		7.5m: as above but with rootlets		A	7.5		PID=2ppm		
	8				8.0				8
	8.6	FILLING - brown clay with some rootlets and dark brown/black peaty clay with trace of steel scraps, wires, aggregate and tile fragments		A	8.5		PID<1ppm		
	9				9.0				9
	9.3	CLAY - orange-brown mottled grey/red-brown clay		A	9.3		PID<1ppm		
	10 10.0				10.0				10

Bore discontinued at 10.0m - target depth reached

RIG: 4x4 truck-mounted drill rig **DRILLER:** K Kerney-Ennis **LOGGED:** W Yuan **CASING:** Uncased

TYPE OF BORING: 100mm diameter solid flight auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: ^Approximate levels shown on Figure 3, Appendix A

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U$_x$	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep ▼ Water level

CHECKED	
Initials:	
Date:	

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BOREHOLE LOG

CLIENT: RW Corkery & Co Pty Ltd
PROJECT: Material Classification
LOCATION: Patons Lane, Orchard Hills

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

BORE No: 12
PROJECT No: 71102
DATE: 23 Apr 09
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
	0.0	FILLING - brown silty clay with some aggregate and tiles		A	0.0		PID<1ppm		
					0.3				
	0.7	0.7m: with some sand		A	0.7		PID<1ppm		
	1				1.0				1
	1.5	FILLING - red-brown silty clay with aggregate							
				A	1.8		PID<1ppm		
	2				2.0				2
					2.5				
				A			PID<1ppm		
	2.8	FILLING - brown silty/sandy clay with some aggregate							
	3				3.0				3
					3.5				
		3.5m: red-brown clay and some ironstone gravel		A			PID<1ppm		
	4				4.0				4
					4.5				
				A			PID<1ppm		
	5				5.0				5
					5.5				
		5.5m: as above but with PVC (plastic)		A			PID<1ppm		
	6				6.0				6
					6.4				
		6.4m: trace of tile fragments		A			PID<1ppm		
	7				7.0				7
		7.5m: becoming brown silty clay							
				A	7.8		PID<1ppm		
	8				8.0				8
	9								9
	9.5	CLAY - red/orange brown mottled grey clay with some ironstone nodules (organic odour)		A	9.5		PID<1ppm		
	10 10.0				10.0				10

Bore discontinued at 10.0m- target depth reached

RIG: 4x4 truck-mounted drill rig **DRILLER:** K Kerney-Ennis **LOGGED:** W Yuan **CASING:** Uncased

TYPE OF BORING: 100mm diameter solid flight auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: ^Approximate levels shown on Figure 3, Appendix A

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U,	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep ▼ Water level

CHECKED	
Initials:	
Date:	

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BOREHOLE LOG

CLIENT: RW Corkery & Co Pty Ltd
PROJECT: Material Classification
LOCATION: Patons Lane, Orchard Hills

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

BORE No: 13
PROJECT No: 71102
DATE: 23 Apr 09
SHEET 1 OF 2

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
	0.0	FILLING - brown sandy/silty clay with some ironstone gravel		A	0.0		PID<1ppm		
	0.5	FILLING - brown clay with some ironstone gravel		A	0.5		PID<1ppm		
	1				1.0				1
	1.5	FILLING - grey mottled orange-brown, clay with some ironstone gravel, wet		A	1.5		PID<1ppm		
	2				2.0				2
	2.4	FILLING - red-brown mottled grey, clay with some ironstone nodules		A	2.4		PID<1ppm		
	3				3.0				3
					3.5				
	3.8			A			PID<1ppm		
	4	FILLING - orange/red-brown, clay with some ironstone gravel 4.2m: ironstone/sandstone boulder 4.5m: as above but with some dark brown peaty sand and trace rootlets			4.0				4
					4.5				
				A			PID<1ppm		
	5				5.0				5
				A			PID<1ppm		
	6				6.0				6
	6.7				6.7				
	7	FILLING - brown clay with some ironstone gravel, aggregate and shale fragments 7.5m: medium strength		A	7.0		PID<1ppm		7
	7.7				7.7				
	8	FILLING - dark brown silty clay with some crushed building rubble (tiles, sandstone fragments, paint) and aggregate 8.5m: medium strength		A	8.0		PID<1ppm		8
					8.7				
	9			A*	9.0		PID<1ppm		9
	9.8				9.8				
		FILLING - see next page		A			PID<1ppm		

RIG: 4x4 truck-mounted drill rig **DRILLER:** K Kerney-Ennis **LOGGED:** W Yuan **CASING:** Uncased

TYPE OF BORING: 100mm diameter solid flight auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: *Denotes field replicate sample BD4/230409 collected
^Approximate levels shown on Figure 3, Appendix A

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U_x	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep ▽ Water level

CHECKED
Initials:
Date:

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BOREHOLE LOG

CLIENT: RW Corkery & Co Pty Ltd
PROJECT: Material Classification
LOCATION: Patons Lane, Orchard Hills

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

BORE No: 13
PROJECT No: 71102
DATE: 23 Apr 09
SHEET 2 OF 2

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
	10.0	FILLING - red-brown mottled grey, clay with some ironstone nodules (possibly excavated natural material) *(continued)*			10.0				
	10.5	CLAY - red-brown mottled grey, clay with ironstone nodules		A	10.5		PID<1ppm		
11	11.0	Bore discontinued at 11.0m - target depth reached			11.0				11
12									12
13									13
14									14
15									15
16									16
17									17
18									18
19									19

RIG: 4x4 truck-mounted drill rig **DRILLER:** K Kerney-Ennis **LOGGED:** W Yuan **CASING:** Uncased

TYPE OF BORING: 100mm diameter solid flight auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: *Denotes field replicate sample BD4/230409 collected
^Approximate levels shown on Figure 3, Appendix A

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U$_x$	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep ▼ Water level

CHECKED	
Initials:	
Date:	

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BOREHOLE LOG

CLIENT: RW Corkery & Co Pty Ltd
PROJECT: Material Classification
LOCATION: Patons Lane, Orchard Hills

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

BORE No: 14
PROJECT No: 71102
DATE: 21 Apr 09
SHEET 1 OF 2

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
	0.1	TOPSOIL - brown sandy clay with some gravel and some roadbase							
		FILLING - brown sandy clay with some gravel		A	0.5		PID<1ppm		
	1			A	0.9 1.0		PID<1ppm		
	1.7	FILLING - grey clay							
	2			A	1.9 2.0		PID<1ppm		
	2.5	FILLING - orange clay							
	3			A	2.9 3.0		PID<1ppm		
	3.3	FILLING - brown to grey clay with some gravel and ironstone (?slight odour)							
	4			A	3.9 4.0		PID<1ppm		
	5			A	4.9 5.0		PID<1ppm		
	5.5	FILLING - grey to green clay with some gravel							
	6	- odour at 6.0m		A	5.9 6.0		PID<1ppm		
	7			A	6.9 7.0		PID<1ppm		
	8			A	7.9 8.0		PID<1ppm		
	8.8	FILLING - grey clay with shale fragments							
	9			A	8.9 9.0		PID<1ppm		
	9.4	FILLING - black sandy clay with some wood and brick fragments, organic odour							
					9.9		PID<1ppm		

RIG: 4x4 truck-mounted drill rig **DRILLER:** L Cooper **LOGGED:** G Nikolaeva **CASING:** Uncased
TYPE OF BORING: 100mm diameter solid flight auger
WATER OBSERVATIONS: No free groundwater observed
REMARKS: ^Approximate levels shown on Figure 3, Appendix A

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U_x	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep ▼ Water level

CHECKED
Initials:
Date:

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BOREHOLE LOG

CLIENT: RW Corkery & Co Pty Ltd
PROJECT: Material Classification
LOCATION: Patons Lane, Orchard Hills

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

BORE No: 14
PROJECT No: 71102
DATE: 21 Apr 09
SHEET 2 OF 2

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
		FILLING - black sandy clay with some wood and brick fragments, organic odour *(continued)*		A	10.0				
	10.5	CLAY - brown clay							
	11			A	10.9 11.0		PID<1ppm		
	12			A	11.9 12.0		PID<1ppm		
	13			A	12.9 13.0		PID<1ppm		
	13.0	Bore discontinued at 13.0m - target depth reached							
	14								
	15								
	16								
	17								
	18								
	19								

RIG: 4x4 truck-mounted drill rig **DRILLER:** L Cooper **LOGGED:** G Nikolaeva **CASING:** Uncased
TYPE OF BORING: 100mm diameter solid flight auger
WATER OBSERVATIONS: No free groundwater observed
REMARKS: ^Approximate levels shown on Figure 3, Appendix A

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U_x	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep ▼ Water level

CHECKED
Initials:
Date:

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BOREHOLE LOG

CLIENT: RW Corkery & Co Pty Ltd
PROJECT: Material Classification
LOCATION: Patons Lane, Orchard Hills

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

BORE No: 15
PROJECT No: 71102
DATE: 17-20/4/09
SHEET 1 OF 2

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
		FILLING - brown silty clay with some building rubble (eg tiles), ash and sandstone fragments			0.2				
				A			PID<1ppm		
	0.7				0.5				
		FILLING - orange-brown mottled red-brown clay with some ironstone gravel			0.7				
	1			A	1.0		PID<1ppm		1
					1.6				
				A			PID<1ppm		
	2				2.0				2
		2.5m: as above becoming slightly silty			2.5				
				A			PID<1ppm		
	3				3.0				3
		3.5m: becoming red-brown mottled orange-brown clay with some ironstone cobbles/gravel			3.5				
				A			PID<1ppm		
	4				4.0				4
		4.5m: orange-brown mottled red-brown/grey clay			4.5				
				A			PID<1ppm		
	5				5.0				5
	5.5				5.5				
		FILLING - grey silt with gravel (from weathered shale rock flour)		A			PID<1ppm		
	6				6.0				6
		6.5-6.8m: higher strength (possibly shale boulder)			6.5				
				A			PID<1ppm		
	7				7.0				7
	7.8				7.8				
		FILLING - grey clay with a trace of gravel		A			PID<1ppm		
	8				8.0				8
		8.4-8.7m: higher strength (possibly shale/ironstone boulder)							
	8.7				8.7				
		FILLING - red-brown/grey clay with some ironstone cobbles/gravel		A			PID<1ppm		
	9				9.0				9

RIG: 4x4 truck-mounted drill rig **DRILLER:** L Cooper **LOGGED:** W Yuan **CASING:** Uncased
TYPE OF BORING: 100mm diameter solid flight auger
WATER OBSERVATIONS: No free groundwater observed
REMARKS: ^Approximate levels shown on Figure 3, Appendix A

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U_x	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep ▼ Water level

CHECKED
Initials:
Date:

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BOREHOLE LOG

CLIENT: RW Corkery & Co Pty Ltd
PROJECT: Material Classification
LOCATION: Patons Lane, Orchard Hills

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

BORE No: 15
PROJECT No: 71102
DATE: 17-20/4/09
SHEET 2 OF 2

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
	10.0	CLAY - orange mottled grey clay, moist		A	10.0				
				A	10.8				
11	11.0	Bore discontinued at 11.0m - target depth reached			11.0				11
12									12
13									13
14									14
15									15
16									16
17									17
18									18
19									19

RIG: 4x4 truck-mounted drill rig **DRILLER:** L Cooper **LOGGED:** W Yuan **CASING:** Uncased
TYPE OF BORING: 100mm diameter solid flight auger
WATER OBSERVATIONS: No free groundwater observed
REMARKS: ^Approximate levels shown on Figure 3, Appendix A

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U_x	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep ▼ Water level

CHECKED	
Initials:	
Date:	

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BOREHOLE LOG

CLIENT: RW Corkery & Co Pty Ltd
PROJECT: Material Classification
LOCATION: Patons Lane, Orchard Hills

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

BORE No: 16
PROJECT No: 71102
DATE: 22 Apr 09
SHEET 1 OF 2

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
	0.0	FILLING - orange clay with some gravel							
	0.5	FILLING - black sandy clay with some gravel		A*	0.5		PID<1ppm		
	1			A	1.0		PID<1ppm		1
	2			A	2.0		PID<1ppm		2
		2.5m: pink sandstone inclusions and wood fragments							
	3			A	2.9 3.0		PID<1ppm		3
	3.5	FILLING - brown clay							
	4			A	3.9 4.0		PID<1ppm		4
	4.5	FILLING - black sandy clay with some gravel, pink sandstone fragments, bricks, plastic							
	5			A	4.9 5.0		PID<1ppm		5
	5.1	FILLING - black sandy clay with some gravel and wood fragments, organic odour			5.1				
				A			PID<1ppm		
	5.9	FILLING - brown sandy clay with some gravel and wood fragments			5.9				
	6								6
	6.5	FILLING - brown clay							
	7			A	6.9 7.0		PID<1ppm		7
	7.5	FILLING - brown mottled orange and grey clay							
	8			A	7.9 8.0		PID<1ppm		8
	8.5	FILLING - brown clay							
	9			A	8.9 9.0		PID<1ppm		9
					9.9		PID<1ppm		

RIG: 4x4 truck-mounted drill rig **DRILLER:** L Cooper **LOGGED:** G Nikolaeva **CASING:** Uncased
TYPE OF BORING: 100mm diameter solid flight auger
WATER OBSERVATIONS: No free groundwater observed
REMARKS: *Denotes field replicate sample BD5/220409 collected
^Approximate levels shown on Figure 3, Appendix A

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U$_x$	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep ▼ Water level

CHECKED	
Initials:	
Date:	

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BOREHOLE LOG

CLIENT: RW Corkery & Co Pty Ltd
PROJECT: Material Classification
LOCATION: Patons Lane, Orchard Hills

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

BORE No: 16
PROJECT No: 71102
DATE: 22 Apr 09
SHEET 2 OF 2

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
		FILLING - brown clay *(continued)*		A	10.0				
	10.5	CLAY - orange clay							
11	11.0			A	10.9 11.0		PID<1ppm		
		Bore discontinued at 11.0m - target depth reached							

RIG: 4x4 truck-mounted drill rig **DRILLER:** L Cooper **LOGGED:** G Nikolaeva **CASING:** Uncased

TYPE OF BORING: 100mm diameter solid flight auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: *Denotes field replicate sample BD5/220409 collected
^Approximate levels shown on Figure 3, Appendix A

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U_x	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep ▼ Water level

CHECKED	
Initials:	
Date:	

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BOREHOLE LOG

CLIENT: RW Corkery & Co Pty Ltd
PROJECT: Material Classification
LOCATION: Patons Lane, Orchard Hills

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

BORE No: 17
PROJECT No: 71102
DATE: 21 Apr 09
SHEET 1 OF 2

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
	0.0	FILLING - brown sandy clay with some gravel		A	0.5		PID<1ppm		
	1			A	1.0		PID<1ppm		1
	1.2	FILLING - black sandy clay		A	1.2		PID<1ppm		
	1.5	FILLING - orange clay			1.5				
	2			A*	2.0		PID<1ppm		2
	2.2	FILLING - brown to black sandy clay with some gravel, glass, slag fragments							
	3			A	3.0		PID<1ppm		3
	3.4	FILLING - grey clay							
	4			A	4.0		PID<1ppm		4
	4.5	FILLING - light brown clay							
	5			A	5.0		PID<1ppm		5
	6			A	6.0		PID<1ppm		6
	6.5	FILLING - brown clay with some gravel							
	7			A	6.9 7.0		PID<1ppm		7
	8	8.0m: slight organic odour		A	7.9 8.0		PID<1ppm		8
	9			A	8.9 9.0		PID<1ppm		9
					9.9		PID<1ppm		

RIG: 4x4 truck-mounted drill rig **DRILLER:** L Cooper **LOGGED:** G Nikolaeva **CASING:** Uncased

TYPE OF BORING: 100mm diameter solid flight auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: *Denotes field replicate sample BD4/210409 collected
^Approximate levels shown on Figure 3, Appendix A

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo Ionisation detector
B	Bulk sample	S	Standard penetration test
U_x	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep ▼ Water level

CHECKED
Initials:
Date:

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BOREHOLE LOG

CLIENT: RW Corkery & Co Pty Ltd
PROJECT: Material Classification
LOCATION: Patons Lane, Orchard Hills

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

BORE No: 17
PROJECT No: 71102
DATE: 21 Apr 09
SHEET 2 OF 2

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
		FILLING - brown clay with some gravel *(continued)*		A	10.0				
	11			A	10.9 11.0		PID<1ppm		11
	12	12.0m: wood, ceramic, shale inclusions		A	11.9 12.0		PID<1ppm		12
	13			A	12.9 13.0		PID<1ppm		13
	14	14.0m: organic (manure) odour		A	13.9 14.0		PID<1ppm		14
	15 15.0			A	14.9 15.0		PID<1ppm		15
		Bore discontinued at 15.0m - target depth reached							
	16								16
	17								17
	18								18
	19								19

RIG: 4x4 truck-mounted drill rig **DRILLER:** L Cooper **LOGGED:** G Nikolaeva **CASING:** Uncased

TYPE OF BORING: 100mm diameter solid flight auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: *Denotes field replicate sample BD4/210409 collected
^Approximate levels shown on Figure 3, Appendix A

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U_x	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep ▽ Water level

CHECKED	
Initials:	
Date:	

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BOREHOLE LOG

CLIENT: RW Corkery & Co Pty Ltd
PROJECT: Material Classification
LOCATION: Patons Lane, Orchard Hills

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

BORE No: 18
PROJECT No: 71102
DATE: 21 Apr 09
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
	0.0	FILLING - brown mottled orange and grey clay with some gravel		A	0.5		PID<1ppm		
				A	0.9 1.0		PID<1ppm		
				A	1.9 2.0		PID<1ppm		
				A	2.9 3.0		PID<1ppm		
				A	3.9 4.0		PID<1ppm		
	4.3	FILLING - brown to black clay with some gravel and wood fragments		A	4.9 5.0		PID<1ppm		
	5.3	FILLING - orange clay		A	5.9 6.0		PID<1ppm		
	6.5	FILLING - grey to black clay with some gravel		A	6.9 7.0		PID<1ppm		
	7.5	FILLING - black sandy clay with some gravel, wood fragments, metal rods, organic odour		A	7.9 8.0		PID<1ppm		
				A	8.9 9.0		PID<1ppm		
	9.4	Bore discontinued at 9.4m - refusal on wood - second attempt - refusal on concrete (?) at 8.7m							

RIG: 4x4 truck-mounted drill rig **DRILLER:** L Cooper **LOGGED:** G Nikolaeva **CASING:** Uncased
TYPE OF BORING: 100mm diameter solid flight auger
WATER OBSERVATIONS: No free groundwater observed
REMARKS: ^Approximate levels shown on Figure 3, Appendix A

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo Ionisation detector
B	Bulk sample	S	Standard penetration test
U$_x$	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep ⧗ Water level

CHECKED	
Initials:	
Date:	

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BOREHOLE LOG

CLIENT: RW Corkery & Co Pty Ltd
PROJECT: Material Classification
LOCATION: Patons Lane, Orchard Hills

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

BORE No: 19
PROJECT No: 71102
DATE: 15 Apr 09
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
		FILLING - grey silt (from weathered shale) with gravel		A	0.0		PID<1ppm		
					0.5				
				A	0.8		PID<1ppm		
	1			A	1.0		PID<1ppm		
					1.5				
	2 2.0	CLAY - orange-brown shaly clay with ironstone gravel		A	2.0		PID<1ppm		
		2.5m: becoming red-brown silty clay			2.5				
	3								
					3.5				
				A			PID<1ppm		
	4			A	4.0		PID<1ppm		
		4.2m: higher strength (possibly ironstone/boulder)			4.2				
	4.5	SHALY CLAY - grey mottled orange-brown shaly clay		A	4.5		PID<1ppm		
	5 5.0	Bore discontinued at 5.0m - target depth reached			5.0				
	6								
	7								
	8								
	9								

RIG: 4x4 truck-mounted drill rig **DRILLER:** L Cooper **LOGGED:** W Yuan **CASING:** Uncased
TYPE OF BORING: 100mm diameter solid flight auger
WATER OBSERVATIONS: No free groundwater observed
REMARKS: ^Approximate levels shown on Figure 3, Appendix A

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U$_x$	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep ▼ Water level

CHECKED
Initials:
Date:

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BOREHOLE LOG

CLIENT: RW Corkery & Co Pty Ltd
PROJECT: Material Classification
LOCATION: Patons Lane, Orchard Hills

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

BORE No: 20
PROJECT No: 71102
DATE: 24 Apr 09
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
		FILLING - brown silty/sandy clay with sandstone/concrete fragments, aggregate, paint, tile fragments, roof tile fragments		A	0.0		PID<1ppm		
				A	0.5		PID<1ppm		
	1				1.0				1
				A	1.5		PID<1ppm		
	2				2.0				2
				A	2.8		PID<1ppm		
	3				3.0				3
				A*	3.5		PID<1ppm		
	4 4.0	Bore discontinued at 4.0m - refusal on concrete boulders			4.0				4
	5								5
	6								6
	7								7
	8								8
	9								9

RIG: 4x4 truck-mounted drill rig **DRILLER:** K Kerney-Ennis **LOGGED:** W Yuan **CASING:** Uncased

TYPE OF BORING: 100mm diameter solid flight auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: *Bag sample only due to collapse of test bore
^Approximate levels shown on Figure 3, Appendix A

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U$_x$	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep ▼ Water level

CHECKED
Initials:
Date:

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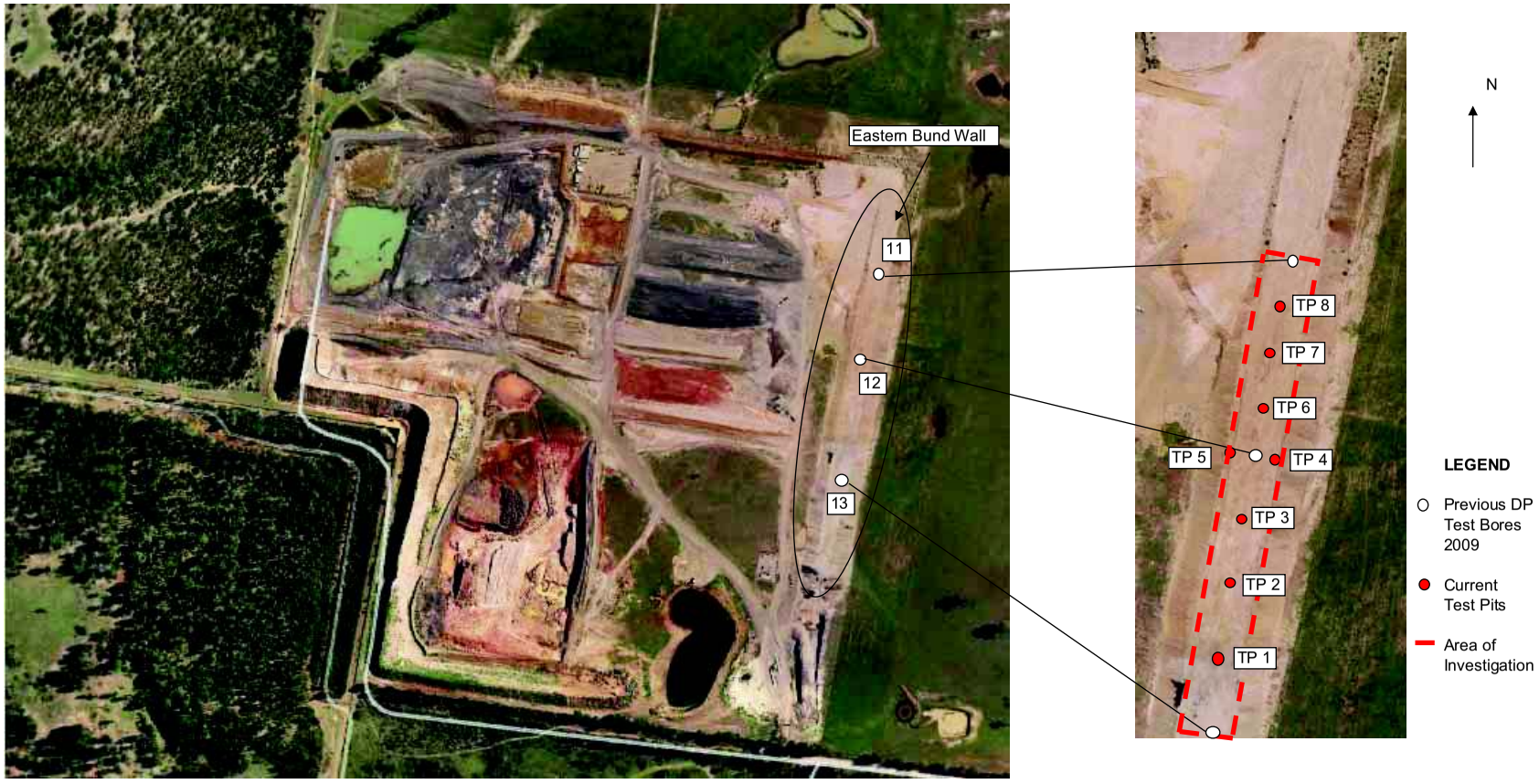

Supplementary Asbestos Assessment **Orchard Hills Waste and Resource Management Facility** **Dellara Pty Ltd**	**Project** **71102.02**	**June** **2010**	**Drawing** **1**

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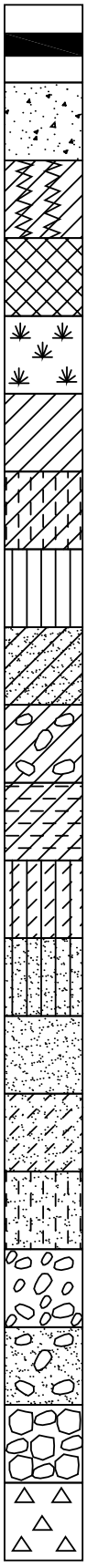
GRAPHIC SYMBOLS FOR SOIL & ROCK

SOIL



BITUMINOUS CONCRETE

CONCRETE

TOPSOIL

FILLING

PEAT

CLAY

SILTY CLAY

SILT

SANDY CLAY

GRAVELLY CLAY

SHALY CLAY

CLAYEY SILT

SANDY SILT

SAND

CLAYEY SAND

SILTY SAND

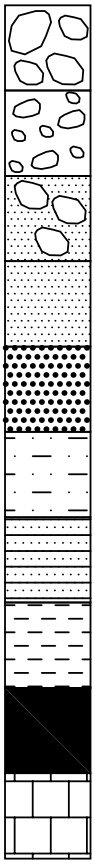
GRAVEL

SANDY GRAVEL

COBBLES/BOULDER

TALUS

SEDIMENTARY ROCK



BOULDER CONGLOMERATE

CONGLOMERATE

CONGLOMERATIC SANDSTONE

SANDSTONE FINE GRAINED

SANDSTONE COARSE GRAINED

SILTSTONE

LAMINITE

MUDSTONE, CLAYSTONE, SHALE

COAL

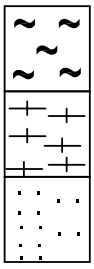
LIMESTONE

SEAMS

SEAM >10mm

SEAM <10mm

METAMORPHIC ROCK

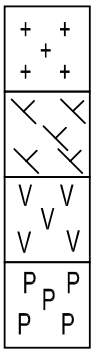


SLATE, PHYLLITE, SCHIST

GNEISS

QUARTZITE

IGNEOUS ROCK



GRANITE

DOLERITE, BASALT

TUFF

PORPHYRY

Douglas Partners

Geotechnics · Environment · Groundwater

TEST PIT LOG

CLIENT: Dellara Pty Ltd
PROJECT: Supplementary Asbestos Assessment
LOCATION: Orchard Hills Waste & Resource Management Facility, Orchard Hills

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: TP1
PROJECT No: 71102.02
DATE: 31/5/2010
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Dynamic Penetrometer Test (blows per mm)
		FILLING - brown grey, shaly clay filling with some shale and ironstone boulders		D	0.0				
					0.2				
				D	0.3				
					0.5				
		0.8m: trace of ceramic pipe and marble fragments		D	0.8				
	1.0	FILLING - red brown mottled grey, clay with some shale/ironstone fragments			1.0				1
				D	1.3				
	1.5	Pit discontinued at 1.5m			1.5				

RIG: Excavator
LOGGED: WFY

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U_x	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep ▼ Water level

CHECKED	
Initials:	
Date:	

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TEST PIT LOG

CLIENT: Dellara Pty Ltd
PROJECT: Supplementary Asbestos Assessment
LOCATION: Orchard Hills Waste & Resource Management Facility, Orchard Hills

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: TP2
PROJECT No: 71102.02
DATE: 31/5/2010
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Dynamic Penetrometer Test (blows per mm) 5 10 15 20
		FILLING - red brown mottled grey, clay with some shale and shaly clay and rootlets, stiff		D	0.0				
					0.2				
		0.3m: with trace of plastic and sandstone fragments							
				D	0.4				
					0.5				
		0.6m: with trace of brick fragments, concrete, limestone fragments and roof tile							
		0.8m: with some sandstone fragments		D	0.8				
	1	1.0m: with trace of brick, concrete fragments, slag and fibre-cement fragments*			1.0				1
					1.3				
		1.5m: metal pipe, ceramic pipe and brick		D					
	1.5	Pit discontinued at 1.5m			1.5				

RIG: Excavator
LOGGED: WFY

WATER OBSERVATIONS: No free groundwater observed

REMARKS: *2 small pieces of fibre-cement fragments found - sample taken

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U,	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep ▼ Water level

CHECKED	
Initials:	
Date:	

Douglas Partners
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TEST PIT LOG

CLIENT: Dellara Pty Ltd
PROJECT: Supplementary Asbestos Assessment
LOCATION: Orchard Hills Waste & Resource Management Facility, Orchard Hills

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: TP3
PROJECT No: 71102.02
DATE: 31/5/2010
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Dynamic Penetrometer Test (blows per mm)
		FILLING - brown grey, silty clay filling with some shale, brick, sandstone fragments, ceramic pipe, glass and trace of plaster		D	0.0				
					0.2				
				D	0.4				
		0.5m: with trace of fibre-cement* and plastic			0.5				
				D	0.8				
	1	1.0m: with trace of tile fragments, limestone, plastic, tile fragments, glass, brick and plastic pipe			1.0				1
		1.2m: trace of fibre-cement**, concrete and tile fragments		D	1.3				
	1.5	Pit discontinued at 1.5m			1.5				

RIG: Excavator

LOGGED: WFY

WATER OBSERVATIONS: No free groundwater observed

REMARKS: *4 pieces of fibre-cement fragments found - sample taken
**4 pieces of fibre-cement fragments found - sample taken

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo Ionisation detector
B	Bulk sample	S	Standard penetration test
U_x	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep ▼ Water level

CHECKED	
Initials:	
Date:	

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TEST PIT LOG

CLIENT: Dellara Pty Ltd
PROJECT: Supplementary Asbestos Assessment
LOCATION: Orchard Hills Waste & Resource Management Facility, Orchard Hills

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: TP4
PROJECT No: 71102.02
DATE: 31/5/2010
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Dynamic Penetrometer Test (blows per mm) 5 10 15 20
		FILLING - brown, silty clay filling with some sandy clay, rootlets and trace of plaster		D	0.0				
	0.2	FILLING - grey brown, shaly clay with some ironstone nodules		D	0.2				
					0.3				
				D					
					0.5				
		0.8m: with trace of slag, roof tile and gravel		D	0.8				
	1				1.0				1
		1.3m: with some building rubble, ceramic tile, roof tile, concrete, timber, trace of fibre-cement* and plaster		D	1.3				
	1.5	Pit discontinued at 1.5m			1.5				

RIG: Excavator

LOGGED: WFY

WATER OBSERVATIONS: No free groundwater observed

REMARKS: *A piece of fibre-cement fragment found - sample taken

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U_x	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep ▼ Water level

CHECKED
Initials:
Date:

Douglas Partners
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TEST PIT LOG

CLIENT: Dellara Pty Ltd
PROJECT: Supplementary Asbestos Assessment
LOCATION: Orchard Hills Waste & Resource Management Facility, Orchard Hills

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: TP5
PROJECT No: 71102.02
DATE: 31/5/2010
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Dynamic Penetrometer Test (blows per mm) 5 10 15 20
		FILLING - grey mottled red brown orange, clay filling with some rootlets, sandstone fragments, floor tile fragments, timber and shale		D	0.0				
	0.2	FILLING - brown, silty clay filling with plastic pipe, brick, ceramic tiles, glass, ceramic pipe, roof tile and slag		D	0.2				
				D	0.3				
					0.5				
				D	0.8				
	1	1.0m: with fibre-cement fragments*		D	1.0				1
					1.3				
	1.5	Pit discontinued at 1.5m			1.5				

RIG: Excavator

LOGGED: WFY

WATER OBSERVATIONS: No free groundwater observed

REMARKS: *4 pieces of fibre-cement fragments found - sample taken

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U_x	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep ▼ Water level

CHECKED
Initials:
Date:

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TEST PIT LOG

CLIENT: Dellara Pty Ltd
PROJECT: Supplementary Asbestos Assessment
LOCATION: Orchard Hills Waste & Resource Management Facility, Orchard Hills

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: TP6
PROJECT No: 71102.02
DATE: 31/5/2010
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Dynamic Penetrometer Test (blows per mm) 5 10 15 20
		FILLING - red brown mottled grey, clay with some shale fragments, ironstone fragments and rootlets		D	0.0				
	0.2	FILLING - brown, silty sandy clay filling with some shale fragments, ironstone fragments, concrete boulders, roof fragments and plastic		D	0.2				
				D	0.3				
					0.5				
				D	0.8				
	1				1.0				1
		1.3m: trace of fibre-cement fragments*		D	1.3				
	1.5	Pit discontinued at 1.5m			1.5				

RIG: Excavator
LOGGED: WFY

WATER OBSERVATIONS: No free groundwater observed

REMARKS: *2 pieces of fibre-cement fragments found - sample taken

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U_x	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep ▼ Water level

CHECKED	
Initials:	
Date:	

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TEST PIT LOG

CLIENT: Dellara Pty Ltd
PROJECT: Supplementary Asbestos Assessment
LOCATION: Orchard Hills Waste & Resource Management Facility, Orchard Hills

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: TP7
PROJECT No: 71102.02
DATE: 31/5/2010
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Dynamic Penetrometer Test (blows per mm)
		FILLING - brown grey, silty clay filling with some ceramic tile, brick, wood, concrete, marble and plates		D	0.0				
					0.2				
				D	0.3				
					0.5				
				D	0.8				
	1	1.0m: with trace of fibre-cement fragments*			1.0				1
				D	1.3				
		1.5m: grey shaly clay with trace of brick, roof tile, plastic pipe and trace of fibre-cement fragments*							
	1.5	Pit discontinued at 1.5m			1.5				

RIG: Excavator

LOGGED: WFY

WATER OBSERVATIONS: No free groundwater observed

REMARKS: *A piece of fibre-cement fragment found - sample taken
**2 pieces of fibre-cement fragments found - samples taken

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U_x	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep ▼ Water level

CHECKED	
Initials:	
Date:	

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TEST PIT LOG

CLIENT: Dellara Pty Ltd
PROJECT: Supplementary Asbestos Assessment
LOCATION: Orchard Hills Waste & Resource Management Facility, Orchard Hills

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: TP8
PROJECT No: 71102.02
DATE: 31/5/2010
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Dynamic Penetrometer Test (blows per mm) 5 10 15 20
		FILLING - red brown mottled orange brown, clay filling with some rootlets, trace of concrete and ceramic tile fragments		D	0.0				
					0.2				
				D	0.3				
	0.5	FILLING - brown grey, silty clay filling with some brick, plastic pipe, polystyrene, concrete fragments and marble fragments			0.5				
				D	0.8				
	1 1.0	FILLING - red brown mottled orange brown, clay filling with some ceramic tiles			1.0				1
		- fibre-cement fragments*		D	1.3				
	1.5	Pit discontinued at 1.5m			1.5				

RIG: Excavator
LOGGED: WFY

WATER OBSERVATIONS: No free groundwater observed

REMARKS: *4 pieces of fibre-cement fragments found - samples taken

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U_x	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep ▼ Water level

CHECKED	
Initials:	
Date:	

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Appendix H

Site Photographs

Photograph: 1 Looking north from near previous Bore 15 , April 2009

Photograph: 2 Looking east from near previous Bore 15 , April 2009

Douglas Partners Geotechnics / Environment / Groundwater	**Site Photographs** **Phase 1 Contamination Assess.** **Patons Lane, Orchard Hills**	PROJECT: 71102.05 PLATE No: H1 REV: A
	CLIENT: Dellara Pty Ltd	DATE: Jan 2012

Photograph: 3 North eastern bundwall, April 2009

Photograph: 4 Northern bundwall, April 2009

Douglas Partners Geotechnics / Environment / Groundwater	**Site Photographs** **Phase 1 Contamination Assess.** **Patons Lane, Orchard Hills**	PROJECT: 71102.05 PLATE No: H2 REV: A
	CLIENT: Dellara Pty Ltd	DATE: Jan 2012

Photograph: 5 Test pitting on eastern bundwall, May 2010

Photograph: 6 Test Pit 1, May 2010

Douglas Partners Geotechnics / Environment / Groundwater	**Site Photographs** **Phase 1 Contamination Assess.** **Patons Lane, Orchard Hills**	PROJECT: 71102.05 PLATE No: H3 REV: A
	CLIENT: Dellara Pty Ltd	DATE: Jan 2012

Photograph: 7 Test Pit 5, May 2010

Photograph: 8 Test Pit 7, May 2010

Douglas Partners Geotechnics / Environment / Groundwater	**Site Photographs** **Phase 1 Contamination Assess.** **Patons Lane, Orchard Hills**	PROJECT: 71102.05 PLATE No: H4 REV: A
	CLIENT: Dellara Pty Ltd	DATE: Jan 2012

Appendix I

NOW Groundwater Bore Search Records

NSW OFFICE OF WATER
Work Summary

GW110454

Licence : 10BL602962
Licence Status Active
Work Type : Bore
Work Status :
Construct. Method : Rotary Air
Owner Type : Private

Authorised Purpose(s)	Intended Purpose(s)
MONITORING BORE	MONITORING BORE

Commenced Date :
Completion Date : 07-Apr-2009
Final Depth : 30.30 m
Drilled Depth : 30.30 m

Contractor Name : INTERTECH DRILLING
Driller : 1997 SHEEHY, Paul
Assistant Driller's Name :

Property : - DELLARA PTY LTD
GWMA : -
GW Zone : -

Standing Water Level : 6.30 m
Salinity : 10,000.00 mg/L
Yield : 1.40 L/s

Site Details

Site Chosen By	County	Parish	Portion/Lot DP
Client	Form A :CUMBERLAND	CLAREMONT	40//738126
	Licensed :CUMBERLAND	CLAREMONT	40 738126

Region : 10 - SYDNEY SOUTH COAST
River Basin :
Area / District :
CMA Map :
Grid Zone :
Scale :

Elevation :
Elevation Source :
Northing : 6256815
Easting : 290961
Latitude (S) : 33° 48' 30"
Longitude (E) : 150° 44' 30"

GS Map :
MGA Zone : 56
Coordinate Source :

Construction

Negative depths indicate Above Ground Level;

H-Hole;P-Pipe;OD-Outside Diameter;ID-Inside Diameter;C-Cemented;SL-Slot Length;A-Aperture;GS-Grain Size;Q-Quantity;PL-Placement of Gravel Pack;PC-Pressure Cemented;S-Sump;CE-Centralisers

H	P	Component	Type	From (m)	To (m)	OD (mm)	ID (mm)	Interval	Details
1		Hole	Hole	0.00	1.80	160			Rotary Air
1		Hole	Hole	1.80	5.50	120			Rotary Air
1		Hole	Hole	5.50	30.30	120			Down Hole Hammer
1	1	Casing	PVC Class 9	-0.90	1.80	125			PC: 0-1.8m; Driven into Hole
1	1	Casing	PVC Class 18	-0.90	30.30	60			PC: -.1-.3m; Screwed; Seated
1	1	Opening	Screen	1.80	30.30	60			PVC Class 18; A: .5mm; Screwed
1		Annulus	Waterworn/Rounded	0.00	0.00				Graded; GS: 1-2mm; 270L

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	□□□□□. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)
11.50	12.00	0.50				0.01		0.25	10000.00
21.50	22.00	0.50		6.30		1.40		0.25	10000.00

Drillers Log

From (m)	To (m)	Thickness(m	Drillers Description	Geological Material	Comments
0.00	4.40	4.40	CLAY,RED BROWN	Clay	
4.40	11.50	7.10	SHALE GREY	Shale	
11.50	12.00	0.50	SHALE FRACTURED	Shale	
12.00	21.50	9.50	SHALE GREY	Shale	
21.50	22.00	0.50	SHALE FRACTURED	Shale	
22.00	30.30	8.30	SHALE GREY	Shale	

Remarks

***** End of GW110454 *****

NSW OFFICE OF WATER
Work Summary

GW110455

Licence : 10BL602962 **Licence Status** Active

Work Type : Bore **Authorised Purpose(s)** MONITORING BORE **Intended Purpose(s)** MONITORING BORE

Work Status :

Construct. Method : Rotary Air

Owner Type : Private

Commenced Date : **Final Depth :** 44.40 m

Completion Date : 08-Apr-2009 **Drilled Depth :** 44.40 m

Contractor Name : INTERTECH DRILLING

Driller : 1997 SHEEHY, Paul

Assistant Driller's Name :

Property : - DELLARA PTY LTD **Standing Water Level :**

GWMA : - **Salinity :**

GW Zone : - **Yield :**

Site Details

Site Chosen By	County	Parish	Portion/Lot DP
Client	Form A :CUMBERLAND	CLAREMONT	40//738126
	Licensed :CUMBERLAND	CLAREMONT	40 738126

Region : 10 - SYDNEY SOUTH COAST **CMA Map :**

River Basin : **Grid Zone :** **Scale :**

Area / District :

Elevation : **Northing :** 6256774 **Latitude (S) :** 33° 48' 31"

Elevation Source : **Easting :** 291628 **Longitude (E) :** 150° 44' 56"

GS Map : **MGA Zone :** 56 **Coordinate Source :**

Construction

Negative depths indicate Above Ground Level;

H-Hole;P-Pipe;OD-Outside Diameter;ID-Inside Diameter;C-Cemented;SL-Slot Length;A-Aperture;GS-Grain Size;Q-Quantity;PL-Placement of Gravel Pack;PC-Pressure Cemented;S-Sump;CE-Centralisers

H	P	Component	Type	From (m)	To (m)	OD (mm)	ID (mm)	Interval	Details
1		Hole	Hole	0.00	1.60	160			Rotary Air
1		Hole	Hole	1.60	5.50	120			Rotary Air
1		Hole	Hole	5.50	44.40	120			Down Hole Hammer
1	1	Casing	PVC Class 18	-0.90	44.40	60			PC: -.1-.2m; Screwed; Seated on Bottom
1	1	Casing	PVC Class 9	0.00	1.60	125			PC: 0-1.6m; Driven into Hole
1	1	Opening	Screen	1.80	44.40	60			PVC Class 18; A: .5mm; Screwed
1		Annulus	Waterworn/Rounded	1.20	44.40				Graded; GS: 1-2mm; 396L

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)

(No Water Bearing Zone Details Found)

Drillers Log

From (m)	To (m)	Thickness(m	Drillers Description	Geological Material	Comments
0.00	4.80	4.80	CLAY RED BROWN	Clay Loam	
4.80	44.40	39.60	SHALE GREY	Shale	

Remarks

***** End of GW110455 *****

NSW OFFICE OF WATER
Work Summary

GW105054

Licence : 10BL161098
Licence Status Active
Authorised Purpose(s) INDUSTRIAL
Intended Purpose(s) INDUSTRIAL

Work Type : Bore
Work Status : Other
Construct. Method : Rotary
Owner Type :

Commenced Date :
Completion Date : 02-Oct-2002
Final Depth : 210.00 m
Drilled Depth : 210.00 m

Contractor Name : INTERTECH DRILLING
Driller : 1783 CRUMP, William
Assistant Driller's Name :

Property : - DELLARA
GWMA : -
GW Zone : -

Standing Water Level : 46.00 m
Salinity : 3,050.00 mg/L
Yield : 0.50 L/s

Site Details

Site Chosen By		County	Parish	Portion/Lot DP
Client	Driller	Form A :CUMBERLAND	CLAREMONT	LT 40 DP 738126
		Licensed :CUMBERLAND	CLAREMONT	40 738126

Region : 10 - SYDNEY SOUTH COAST
River Basin : 212 - HAWKESBURY RIVER
Area / District :

CMA Map : 9030-3N PENRITH
Grid Zone : 56/1
Scale : 1:25,000

Elevation : 0.00
Elevation Source : (Unknown)

Northing : 6256068
Easting : 291424
Latitude (S) : 33° 48' 54"
Longitude (E) : 150° 44' 47"

GS Map :
MGA Zone : 56
Coordinate Source :

Construction

Negative depths indicate Above Ground Level;

H-Hole;P-Pipe;OD-Outside Diameter;ID-Inside Diameter;C-Cemented;SL-Slot Length;A-Aperture;GS-Grain Size;Q-Quantity;PL-Placement of Gravel Pack;PC-Pressure Cemented;S-Sump;CE-Centralisers

H	P	Component	Type	From (m)	To (m)	OD (mm)	ID (mm)	Interval	Details
1		Hole	Hole	0.00	5.50	210			Down Hole Hammer
1		Hole	Hole	5.50	210.00	160			Down Hole Hammer
1	1	Casing	Steel	-0.50	5.50	168.3	158.7		C: -.1-5.5m; Driven into Hole
1	1	Casing	PVC Class 9	-0.50	59.50	140			Screwed and Glued; Suspended in Clamps

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)
96.00	101.00	5.00				0.10	102.00	0.25	4360.00
143.00	148.00	5.00				0.90	148.00	0.25	3520.00
190.00	194.00	4.00		46.00		0.50	198.00	0.25	3050.00

Drillers Log

From (m)	To (m)	Thickness(m	Drillers Description	Geological Material	Comments
0.00	3.00	3.00	CLAY BROWN	Clay	
3.00	33.00	30.00	SHALE GREY	Shale	
33.00	46.00	13.00	SHALE HARD	Shale	
46.00	47.00	1.00	SHALE GREY SOFT	Shale	
47.00	92.00	45.00	SHALE HARD	Shale	
92.00	96.00	4.00	SANDSTONE GREY	Sandstone	
96.00	101.00	5.00	SANDSTONE FINE QUARTZ	Sandstone	
101.00	116.00	15.00	SANDSTONE GREY	Sandstone	
116.00	119.00	3.00	SHALE HARD	Shale	
119.00	143.00	24.00	SANDSTONE GREY	Sandstone	
143.00	148.00	5.00	SANDSTONE QUARTZ	Sandstone	
148.00	163.00	15.00	SANDSTONE GREY	Sandstone	
163.00	163.50	0.50	SANDSTONE FINE QUARTZ	Sandstone	
163.50	190.00	26.50	SANDSTONE GREY	Sandstone	
190.00	194.00	4.00	SANDSTONE QUARTZ	Sandstone	
194.00	199.00	5.00	SANDSTONE GREY	Sandstone	
199.00	200.00	1.00	SANDSTONE FINE QUARTZ	Sandstone	
200.00	210.00	10.00	SANDSTONE GREY	Sandstone	

Remarks

Previous Lic No: 10BL160857

***** End of GW105054 *****

NSW OFFICE OF WATER
Work Summary

GW105382

Licence : 10BL164195 — **Licence Status** Active

Work Type : Bore — **Authorised Purpose(s)** INDUSTRIAL — **Intended Purpose(s)** INDUSTRIAL

Work Status :

Construct. Method : Rotary

Owner Type :

Commenced Date : — **Final Depth :** 252.00 m

Completion Date : 19-Apr-2004 — **Drilled Depth :** 252.00 m

Contractor Name : ULTRA DRILLING

Driller : 1600 DODD, Bradley Alan

Assistant Driller's Name :

Property : - OSBOURNE PARK — **Standing Water Level :** 24.00 m

GWMA : - — **Salinity :** 2,500.00 mg/L

GW Zone : - — **Yield :** 1.10 L/s

Site Details

Site Chosen By	County	Parish	Portion/Lot DP
Driller	Form A :CUMBERLAND	CLAREMONT	1 1099147
	Licensed :CUMBERLAND	CLAREMONT	1 1099147

Region : 10 - SYDNEY SOUTH COAST — **CMA Map :**

River Basin : — **Grid Zone :** — **Scale :**

Area / District :

Elevation : — **Northing :** 6255672 — **Latitude (S) :** 33° 49' 7"

Elevation Source : — **Easting :** 291651 — **Longitude (E) :** 150° 44' 56"

GS Map : — **MGA Zone :** 56 — **Coordinate Source :**

Construction

Negative depths indicate Above Ground Level;

H-Hole;P-Pipe;OD-Outside Diameter;ID-Inside Diameter;C-Cemented;SL-Slot Length;A-Aperture;GS-Grain Size;Q-Quantity;PL-Placement of Gravel Pack;PC-Pressure Cemented;S-Sump;CE-Centralisers

H	P	Component	Type	From (m)	To (m)	OD (mm)	ID (mm)	Interval	Details
1		Hole	Hole	0.00	90.00	171			Down Hole Hammer
1		Hole	Hole	90.00	252.00	140			Down Hole Hammer
1	1	Casing	Steel	0.30	1.00	168			Riveted and Glued; Driven into Hole
1	1	Casing	PVC Class 9	0.30	90.00	140			Riveted and Glued; Driven into Hole

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)
144.00	145.00	1.00			146.00	0.60	146.00	1.00	3760.00
180.00	181.00	1.00			182.00	0.90	243.00	1.00	2760.00
240.00	241.00	1.00		24.00	243.00	1.10	243.00	1.00	2490.00

Drillers Log

From (m)	To (m)	Thickness(m	Drillers Description	Geological Material	Comments
0.00	5.00	5.00	CLAY	Clay	
5.00	80.00	75.00	SHALE	Shale	
80.00	119.00	39.00	SANDSTONE	Sandstone	
119.00	125.00	6.00	SHALE	Shale	
125.00	222.00	97.00	SANDSTONE	Sandstone	
222.00	226.00	4.00	SHALE	Shale	
226.00	240.00	14.00	SANDSTONE	Sandstone	
240.00	252.00	12.00	SANDSTONE	Sandstone	

Remarks

Previous Lic No: 10BL163876

***** End of GW105382 *****

NSW OFFICE OF WATER
Work Summary

GW104135

Licence : 10BL159234
Licence Status Cancelled
Authorised Purpose(s) TEST BORE
Intended Purpose(s)

Work Type : Bore
Work Status : (Unknown)
Construct. Method : Rotary
Owner Type :

Commenced Date :
Completion Date : 17-Jul-1999
Final Depth : 366.00 m
Drilled Depth : 366.00 m

Contractor Name : ULTRA DRIILING
Driller : 1423 DODD, Alan Marcus
Assistant Driller's Name :

Property : - TWIN CREEKS
GWMA : -
GW Zone : -

Standing Water Level :
Salinity :
Yield :

Site Details

Site Chosen By		County	Parish	Portion/Lot DP
Client	Driller	Form A : CUMBERLAND	CLAREMONT	LT 1 DP 227140
		Licensed : CUMBERLAND	CLAREMONT	1 227140

Region : 10 - SYDNEY SOUTH COAST
River Basin :
Area / District :
CMA Map :
Grid Zone :
Scale :

Elevation :
Elevation Source :
Northing : 6254144
Easting : 292536
Latitude (S) : 33° 49' 57"
Longitude (E) : 150° 45' 29"

GS Map :
MGA Zone : 56
Coordinate Source :

Construction

Negative depths indicate Above Ground Level;

H-Hole;P-Pipe;OD-Outside Diameter;ID-Inside Diameter;C-Cemented;SL-Slot Length;A-Aperture;GS-Grain Size;Q-Quantity;PL-Placement of Gravel Pack;PC-Pressure Cemented;S-Sump;CE-Centralisers

H	P	Component	Type	From (m)	To (m)	OD (mm)	ID (mm)	Interval	Details
1		Hole	Hole	0.00	10.00	220			Rotary Air
1		Hole	Hole	10.00	213.00	165			Down Hole Hammer
1	1	Casing	Steel	-0.30	10.00	203	193.4		C: 0-10m; Welded; Seated on Bottom
1	1	Casing	Steel	-0.30	201.00	130	119		C: 0-201m; Welded; Suspended in Clamps

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)
231.00	232.00	1.00			235.00	0.60	235.00	0.50	3600.00
248.00	249.00	1.00			250.00	1.20	250.00	0.50	3200.00
260.00	261.00	1.00			262.00	3.00	262.00	1.00	2800.00
315.00	317.00	2.00		12.00		6.00	366.00	4.00	2100.00

Drillers Log

From (m)	To (m)	Thickness(m	Drillers Description	Geological Material	Comments
0.00	9.00	9.00	CLAY	Clay	
9.00	195.00	186.00	SHALE	Shale	
195.00	249.00	54.00	SANDSTONE	Sandstone	
249.00	250.00	1.00	SHALE	Shale	
250.00	280.00	30.00	SANDSTONE	Sandstone	
280.00	281.00	1.00	SHALE	Shale	
281.00	285.00	4.00	SANDSTONE	Sandstone	
285.00	295.00	10.00	SHALE	Shale	
295.00	308.00	13.00	SANDSTONE	Sandstone	
308.00	310.00	2.00	SHALE	Shale	
310.00	322.00	12.00	SANDSTONE	Sandstone	
322.00	329.00	7.00	SHALE	Shale	
329.00	336.00	7.00	SANDSTONE	Sandstone	
336.00	345.00	9.00	SHALE	Shale	
345.00	366.00	21.00	BROWN SHALE	Invalid Code	

Remarks

***** End of GW104135 *****