

Job No: 2005/307

Friday, 14 August 2009

Pittwater Council
P.O. Box 882
Mona Vale NSW 1660

Attention: General Manager

**RE: Interim Occupation Certificate No. 05/307/01
Warriewood Aged Care Facility,
6 – 14 Macpherson Street, Warriewood**

Please find attached a copy of Interim Occupation Certificate 05/307/01 and required attachments issued by Steve Watson & Partners for the above mentioned development in accordance with Section 109C(1)(c) and 109H of the Environmental Planning and Assessment Act 1979.

Please find attached a cheque in the amount of \$30.00 payable for the registration of the Occupation Certificate.

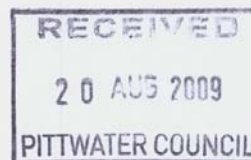
Can you please forward SWP a receipt for the acknowledgment of the lodgement cheque.

With regard to the attached certificate please do not hesitate to contact me should you have any queries or require any further information.

Regards,



Tim Abovian
Assistant Building Regulations Consultant
Steve Watson & Partners Pty Ltd





STEVE WATSON & PARTNERS

BUILDING REGULATIONS CONSULTANTS AND CERTIFIERS
FIRE SAFETY ENGINEERS

LEVEL 5, 432 KENT STREET, SYDNEY NSW 2000
TEL +61 2 9283 6555 IFAX +61 2 9283 8500
sydney@swpartners.com.au
www.swpartners.com.au
ABN 48 102 366 576

INTERIM OCCUPATION CERTIFICATE

Issued under the Environmental Planning and Assessment Act 1979 Section 109C(1)(c) and 109H

Interim Occupation Certificate No. 05/307/01

I, Stephen Watson, certify that:

- I have been appointed as the Principal Certifying Authority under section 109E.
- I have taken into consideration the health and safety of the occupants of the building.
- A Development Consent or Complying Development Certificate is in force with respect to the building.
- A Construction Certificate has been issued with respect to the plans and specifications for the building.
- The building is suitable for occupation or use in accordance with its classification under the Building Code of Australia.
- Where required, a Final Fire Safety Certificate has been issued for the building or an Interim Fire Safety Certificate has been issued for the relevant part of the building.
- Where required, a report from the Commissioner of Fire Brigades has been considered.

Applicant	Name: Anglican Retirement Villages C/o Morgan Moore & Associates Address: Level 5, 140 Arthur Street Suburb: North Sydney State: NSW Postcode: 2060
Location of the Property	Address: 6-14 Macpherson Street Suburb: Warriewood State: NSW Postcode: 2102 Real Property Description: Lot B DP400488, Lot 22 DP5464, Lot B DP358765, Lot B DP345528, PT Lot 1 DP208149, PT Lot 3 DP579309, PT Lot 3 DP942319, PT Lot 4 DP579309
Building Description	Stage 1 – Independent Living Units
Building Code of Australia Classification	Class 2
Date of Receipt	Date Received: 19th June 2009
Determination	Approved Date of Determination: 14th August 2009
Development Consent	Development Consent Number: N 0102/05 & S96 modifications Council: Pittwater Date of Determination: 6th April 2006 & 24th October 2007, 22nd December 2006, 8th January 2007, 24th October 2007 & 23rd May 2008
Construction Certificate	Construction Certificate Number: 05/307/02 & 05/307/05 Date of Determination: 20th December 2007 & 19th July 2008

Steve Watson

Accreditation Body: **BPB**

Accreditation No: **BPB0432**

Date of Endorsement: **Friday, 14 August 2009**

Documentation relied upon to issue Occupation Certificate 05/307/01 for Warriewood Retirement Village.

Item No	Description	Date
1.	Mandatory inspection record (Final)	24.07.09
2.	Mandatory inspection record (Stormwater)	11.06.09
3.	Mandatory inspection record (Waterproofing)	07.05.09
4.	Application for Occupation Certificate	19.06.09
5.	Final fire safety certificate	14.08.09
6.	Certificates contained within SWP Certification Package	-
7.	SWP DA Checklist and associated documentation	-



STEVE WATSON & PARTNERS

BUILDING REGULATIONS CONSULTANTS AND CERTIFIERS
FIRE SAFETY ENGINEERS

LEVEL 5, 432 KENT STREET, SYDNEY NSW 2000
TEL +61 2 9283 6555 | FAX +61 2 9283 8500
sydney@swpartners.com.au
www.swpartners.com.au
ABN 48 102 366 576

S162B Site Inspection Record

Project Address 6-14 Macpherson Street, Warriewood Inspection record # 05/307 F

Inspector Steven Watson Accreditation # BPB0432

DA ref 0102/05 & S96 modifications CC Ref 05/307/02 & 05/307/05

Date 24/07/09 Type COMPLETION

Checklist

Consistency with approved plans?	Yes	BCA compliance matters OK?	Yes
Pre OC DA Conditions? (see checklist attached)	Yes	Basix matters OK?	Yes

Issues/Rectification works required

#	Issue	Comment/requirement	Action by
1.			
2.			

Was the Inspection

- Satisfactory
 Satisfactory subject to resolution of the issues identified above
 Unsatisfactory

Signed

Inspector

24/07/09

Date



STEVE WATSON & PARTNERS

BUILDING REGULATIONS CONSULTANTS AND CERTIFIERS
FIRE SAFETY ENGINEERS

LEVEL 5, 432 KENT STREET, SYDNEY NSW 2000
TEL +61 2 9283 6555 FAX +61 2 9283 8500
sydney@swpartners.com.au
www.swpartners.com.au
ABN 48 102 366 576

S162B Site Inspection Record

Project Address	6-14 Macpherson Street, Warriewood	Inspection record #	05/307 SW
Inspector	Andrew Rys	Accreditation #	BPB0356
DA ref	0102/05 & S96 modifications	CC Ref	05/307/02 & 05/307/05
Date	11/06/09	Type	STORMWATER CONNECTION

Checklist

Pipe appears to fall to the junction point?	Yes	Certification from Hydraulic Engineer provided?	Yes
Workmanship appears adequate?	Yes	Photographic record kept?	N/A

Issues/Rectification works required

#	Issue	Comment/ requirement	Action by
1.			
2.			

Was the Inspection

- Satisfactory
 Satisfactory subject to resolution of the issues identified above
 Unsatisfactory

Signed

Inspector

11/06/09
Date



STEVE WATSON & PARTNERS

BUILDING REGULATIONS CONSULTANTS AND CERTIFIERS
FIRE SAFETY ENGINEERS

LEVEL 5, 432 KENT STREET, SYDNEY NSW 2000
TEL +61 2 9283 6555 IFAX +61 2 9283 8500
sydney@swpartners.com.au
www.swpartners.com.au
ABN 48 102 366 576

S162B Site Inspection Record

Project 6-14 Macpherson Street, Inspection record # 05/307 W
Address Warriewood
Inspector Andrew Rys Accreditation # BPB0356
DA ref 0102/05 & S96 modifications CC Ref 05/307/02 & 05/307/05
Date 07/05/09 Type WATERPROOFING

Generic Data

Wall/floor description	Concrete	
Product type and brand – floor	Vulkem Non Exposed Membrane	
Product type and brand – walls	Tremproof 90 Two Pack Cementitious Acrylic	
Angle locations?	Door	

Schedule of units inspected.

Unit #	Main	Ensuite	Laundry
63	Yes	Yes	Yes
64	Yes	Yes	Yes
69	Yes	N/A	Yes
65	Yes	Yes	Yes
66	Yes	Yes	Yes
84	Yes	N/A	Yes
88	Yes	Yes	Yes
87	Yes	Yes	Yes

Issues/Rectification works required

#	Issue	Comment/ requirement	Action by
1.			

Was the Inspection

- Satisfactory
- Satisfactory subject to resolution of the issues identified above
- Unsatisfactory

Signed



Inspector

07/05/09
Date

WARRIEWOOD



STEVE WATSON
& PARTNERS

BUILDING REGULATIONS CONSULTANTS AND CERTIFIERS
FIRE SAFETY ENGINEERS

LEVEL 5, 482 KENT STREET, SYDNEY NSW 2000
TEL +61 2 9283 4555 FAX +61 2 9283 8500
sydney@swpartners.com.au
www.swpartners.com.au
ABN 46 107 366 576

APPLICATION FOR
OCCUPATION
CERTIFICATE

PART 1 Application and Site Details

<p>Type of Certificate Sought <i>Tick appropriate boxes</i></p>	<p><input type="radio"/> Interim certificate <input checked="" type="radio"/> Final certificate <input type="radio"/> Change of building use of an existing building <input type="radio"/> Occupation/use of a new building</p>
<p>Applicant <i>It is important that we are able to contact you if we need more information.</i> <i>Please give us as much detail as possible.</i></p>	<p>Mr <input type="checkbox"/> Mrs <input type="checkbox"/> Miss <input type="checkbox"/> Ms <input type="checkbox"/> Other <input type="text"/></p> <p>Surname (or Company): <u>ANGELICAN RETIREMENT VILLAGES</u> Given names (or ABN): _____</p> <p>Address: <u>LEVEL 2, 62 NORTH BALLEVARO</u> <u>BANKHAM HILLS</u> State: <u>NSW</u> Post Code: <u>2153</u></p> <p>Phone: <u>(02) 9421 5333</u> Fax: () _____ Mobile: _____ E-mail: _____</p>
<p>Location of the Property <i>We need this to correctly identify the land.</i></p>	<p>Address: <u>6 - 14 MALHERSON ST</u> <u>WARRIEWOOD</u> State: _____ Post Code: _____</p> <p>Real Property Description: <u>lot B, DP400488 ; lot B, DP 358765 ;</u> (eg. Lot/DPI/Section, etc) <u>lot A, DP400488 ; lot A, DP 358765 ; lot 22 DP 45464.</u></p> <p><i>The real property description is mandatory, these details are shown on your rate notices, property deeds etc</i></p>

PART 2 Work Description

<p>Development Consent or Complying Development Certificate</p>	<p>Development Consent/Complying Development No: <u>N 0102/05 & S96 Modifications.</u> Date of Determination: <u>06/04/06, 24/10/07, 22/12/06</u> <u>08/01/07, 24/10/07, 23/05/08.</u></p>
<p>Construction Certificate</p>	<p>Construction Certificate No: <u>05/307/05 & 05/307/02.</u> Date of Determination: <u>19/06/08 & 20/12/07.</u></p>

Building Details

The building classification must be the same as that specified in the Complying Development Certificate or Construction Certificate

If you are applying for an Occupation Certificate for part of the building, describe the part of the building:

Stage 1. - Independant living Units.

Describe the proposed use of the building: RETIREMENT VILLAGE

What is the classification of the building under the BCA: 2.

Change in Classification

What is the existing classification of the building under the BCA: _____

What is the new classification of the building under the BCA: _____

Attachments

The following information must accompany an application for an Occupation Certificate:

- A copy of Development Consent or Complying Development Certificate
- A copy of the Construction Certificate, where relevant
- A Final Fire Safety Certificate or Interim Fire Safety Certificate (not required for class 1a or 10 buildings).
- Other certificates or documentation relied on.

PART 3 Declaration**Declaration**

If the applicant is a company or strata title body corporate, a director or authorised delegate must sign this declaration.

I declare that all the information in the application is, to the best of my knowledge, true and accurate.

I also understand that if the information is incomplete the application may be delayed or rejected or more information may be requested. I acknowledge that if the information provided is misleading, any approval granted 'may be void'.

Signature: 

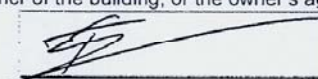
Date: 19 / 6 / 09

Name, if you are not the applicant: RICHARD ABBOTT

In what capacity are you signing if you are not the applicant: PROJECT MANAGER

FIRE SAFETY CERTIFICATE

The owner of a building, or the owner's agent, needs to provide a fire safety certificate to the certifying authority (a council or a private certifier) with an application for an occupation certificate. You can use this form to do so. A copy of the certificate also needs to be given to the Commissioner of New South Wales Fire Brigades, and displayed in the building in a prominent position.

1. Details of the Building being Certified	
Name of the owner of the building or part of the building	
Full name/company name	Anglican Retirement Villages, Diocese of Sydney
Address of the building	
Flat/street no.	6-14
Street name	Macpherson Street
Suburb or town	Warriewood
Postcode	2101
Nearest cross street	Boondah Road
This certificate is for: whole building	
Description of the building or part of the building	
All new work (entire building) – Stage 1	
2. Type of Certificate	
This is the: final fire safety certificate	
Date of this certificate	14/8/2009
3. Certification	
I, <u>Terry Edwards</u>	of <u>Southern Cross Constructors (NSW) P/L</u>
being the owner of the building described above, or the agent of the owner, certify that:	
<ul style="list-style-type: none"> each of the essential fire safety measures listed in part 7 has been assessed by a properly qualified person, and was found, when it was assessed by that person, to be capable of performing to at least the standard required by the current fire safety schedule for the building; the information contained in this statement is true and accurate to the best of my knowledge and belief. 	
4. Information Attached to this Certificate	
<input checked="" type="checkbox"/> The current fire safety schedule for the building	
5. Signature	
The owner of the building, or the owner's agent, must complete and sign the certificate.	
Signature	 Name <u>TERRY EDWARDS</u>
Address	<u>40 Southern Cross Constructors (NSW) P/L</u> <u>135 - 153 New South Head Rd</u> <u>ENGLISCH, NSW</u> The capacity in which you are signing if you are not the owner of the building <u>PROJECT MANAGER</u>

6. Privacy policy

You need to provide the information in this certificate to the certifying authority if you are applying for an occupation certificate. You also need to give the information to the council and the Commissioner of New South Wales Fire Brigades if a fire safety order has been made for the building once you have satisfied that order. If you do not supply a fire safety certificate as required, you will be in breach of the *Environmental Planning and Assessment Act 1979* and you could be found guilty of an offence and/or required to take further action. Please contact the council if the information you have provided in this certificate is incorrect or changes.

7. Assessment of Fire Safety Measures

Measure	Standard of performance required by the fire safety schedule	Date of assessment
Access panels, doors and hoppers to fire resisting shafts	BCA2008 Clause C3.13 and AS 1530.4	2/6/09
Automatic fail safe devices	Scheduled devices release upon trip of smoke detection, fire detection and sprinkler activation in accordance with BCA2008 clauses D2.19(b) and D2.21 (d) and/or AS 1670.1	20/7/09
Automatic fire detection and alarm system (smoke alarm system)	BCA2008 Specification E2.2a and AS 3786 - 1993	14/8/09
Automatic fire detection and alarm system (smoke detection system)	BCA2008 Specification E2.2a and AS 1670.1 - 2004	14/8/09
Automatic fire suppression systems (Sprinklers in carpark only)	BCA2008 Specification E1.5 and AS 2118.1 - 1999	3/6/09
Emergency lighting	BCA2008 Clause E4.2, E4.4 and AS 2293.1 - 2005	17/7/09
Exit signs	BCA2008 Clause E4.5, NSW E4.6, E4.8 and AS 2293.1 - 2005	17/7/09
Fire dampers	BCA2008 Clause C3.15 and AS/NZS 1688.1 - 1998 (AS 1682.1-1990 and AS 1682.2-1990)	16/6/09
Fire doors	BCA2008 Specification C3.4 and AS 1905.1 - 2005	3/8/09
Fire hydrant system	BCA2008 Clause E1.3 and AS 2419.1 - 2005	5/6/09
Fire seals protecting openings in fire resisting components of the building- Joints, gaps and miscellaneous penetrations	BCA2008 Clause C3.15 and AS 1530.4 and AS 4072.1 and installed in accordance with the tested prototype.	2/6/09
Fire seals protecting openings in fire resisting components of the building- Electrical penetrations	BCA2008 Clause C3.15 and AS 1530.4 and AS 4072.1 and installed in accordance with the tested prototype.	16/7/09
Fire seals protecting openings in fire resisting components of the building- Plumbing and penetrations	BCA2008 Clause C3.15 and AS 1530.4 and AS 4072.1 and installed in accordance with the tested prototype.	5/6/09
Hose reel systems	BCA2008 Clause E1.4 and AS 2441 - 2005	5/6/09
Lightweight construction (fire rated)	BCA2008 Specifications C1.8 and A2.3 and AS 1530.4	2/6/09
Portable fire extinguishers	BCA2008 Clause E1.6 and AS 2444 - 2001	4/6/09
Smoke detectors and heat detectors (detectors for the automatic closing operation of horizontal exits)	BCA2008 Clause C3.7 and AS 1670.1 - 2004	14/7/09
Smoke detectors and heat detectors (detectors for the automatic closing operation of smoke doors)	BCA2008 Specification C3.4 and AS 1670.1 - 2004	14/7/09
Smoke doors	BCA2008 Specifications C2.5 and C3.4 and AS 1288 - 2006	3/8/09
Warning and operational signs	BCA2008 Clauses D1.17, D2.23, E1.4 and E3.3	31/7/09

AUTOMATIC FIRE DETECTION AND ALARM SYSTEM - INSTALLATION CERTIFICATE

Project Name	<i>Warriewood – Stage 1</i>
Address	<i>6-14 Macpherson Street Warriewood NSW 2101</i>
Part of Building to be certified	<i>All new work (entire building)</i>

I hereby certify that:

- a) The works have been inspected during construction and have been completed in accordance with the design, specifications and the nominated Standards of Performance.

Measure and/or system	Standards of Performance
Automatic fire detection and alarm system (<i>smoke alarm system</i>)	BCA2008 Specification E2.2a and AS 3786 – 1993
Automatic fire detection and alarm system (<i>smoke detection system</i>)	BCA2008 Specification E2.2a and AS 1670.1 – 2004

- b) I am a properly qualified person and have a good working knowledge of the relevant codes and standards referenced above. (My qualifications and accreditations are listed below)

Relevant qualifications and accreditations: Electrician

- c) The information contained in this statement is true and accurate to the best of my knowledge.

Name of Certifier: Andrew Mitchell

Company: Heyday Group Pty

Address: 9 Waterloo Road, North Ryde 2113

Phone No. 98556666 Fax No. 98556691



Signature

14th AUGUST 2009 . ADW

~~14th July 2009~~

Date

NOTE - ALSO COMPLETE COMMISSIONING TEST REPORT ON FOLLOWING PAGES (see attached)

AS 1670.1 COMMISSIONING TEST REPORT



Heyday Group

Heyday Group Pty Ltd
ABN 62 121 276 168
Heyday Electrics
ACC Technologies
Heyday Communications
Heyday Fire Technologies
9 Waterloo Road
North Ryde NSW 2113
Phone: (02) 9855 6666
Facsimile: (02) 9855 6655

Commissioning Checklist
(General Detection System)

Project: Warriebrook Retirement Village, Warriewood.
Sheet 1/3 The Ferneries (Bldg A)

Date: 14th July 09

Device Loop /Address	Device type	Point Description/Location	Correct Zone Indication on Flip (Y/N)	Fire Bell Activated (Y/N)	EWS System Activated (Y/N)	General Fire Trip Activated(Y/N)	Fire Brigade Called (Y/N)
L1S1	PHOTOOPTICAL	BASEMENT ELEC/MECH CUPBOARD	✓	✓	✓	✓	✓
L1S2	PHOTOOPTICAL	BASEMENT LIFT LOBBY FLOOR	✓	✓	✓	✓	✓
L1S3	PHOTOOPTICAL	GROUND CORRIDOR SOUTH	✓	✓	✓	✓	✓
L1S4	PHOTOOPTICAL	GROUND FIRE STAIR SOUTH	✓	✓	✓	✓	✓
L1S5	PHOTOOPTICAL	GROUND FLOOR CORRIDOR SOUTH	✓	✓	✓	✓	✓
L1S6	PHOTOOPTICAL	GROUND FLOOR CORRIDOR SOUTH	✓	✓	✓	✓	✓
L1S7	PHOTOOPTICAL	GROUND FLOOR LIFT LOBBY	✓	✓	✓	✓	✓
L1S8	PHOTOOPTICAL	GROUND FLOOR LIFT LOBBY CUPBOARD	✓	✓	✓	✓	✓
L1S9	PHOTOOPTICAL	GROUND FLOOR ENTRY FOYER	✓	✓	✓	✓	✓
L1S10	PHOTOOPTICAL	GROUND FLOOR CORRIDOR EAST	✓	✓	✓	✓	✓
L1S11	PHOTOOPTICAL	GROUND FLOOR CORRIDOR EAST	✓	✓	✓	✓	✓
L1S12	PHOTOOPTICAL	GROUND FIRE STAIR EAST	✓	✓	✓	✓	✓
L1S13	PHOTOOPTICAL	GROUND FLOOR CORRIDOR EAST	✓	✓	✓	✓	✓
TESTED BY:		Andrew Mitchell					

FERNERIES_1.doc

Revision No. 4



Heyday Group

Heyday Group Pty Ltd
ABN 62 121 276 168

Heyday Electrics
ACC Technologies
Heyday Communications
Heyday Fire Technologies

9 Waterloo Road
North Ryde NSW 2113
Phone: (02) 9855 6666
Facsimile: (02) 9855 6655

Commissioning Checklist (General Detection System)

Project: Warrierook Retirement Village, Warriewood.
Sheet 2/3 The Ferneries (Bldg A)

Date: 14th July 09

Device Loop /Address	Device type	Point Description/Location	Correct Zone Indication on Fip (Y/N)	Fire Bell Activated (Y/N)	EWS System Activated (Y/N)	General Fire Trip Activated(Y/N)	Fire Brigade Called (Y/N)
L1S14	PHOTOOPTICAL	FIRST FLOOR CORRIDOR SOUTH	✓	✓	✓	✓	✓
L1S15	PHOTOOPTICAL	FIRST FLOOR FIRE STAIR SOUTH	✓	✓	✓	✓	✓
L1S16	PHOTOOPTICAL	FIRST FLOOR CORRIDOR SOUTH	✓	✓	✓	✓	✓
L1S17	PHOTOOPTICAL	FIRST FLOOR CORRIDOR SOUTH	✓	✓	✓	✓	✓
L1S18	PHOTOOPTICAL	FIRST FLOOR LIFT LOBBY	✓	✓	✓	✓	✓
L1S19	PHOTOOPTICAL	FIRST FLOOR LIFT LOBBY CUPBOARD	✓	✓	✓	✓	✓
L1S20	PHOTOOPTICAL	TOP OF LIFT SHAFT	✓	✓	✓	✓	✓
L1S21	PHOTOOPTICAL	FIRST FLOOR CORRIDOR EAST	✓	✓	✓	✓	✓
L1S22	PHOTOOPTICAL	FIRST FLOOR CORRIDOR EAST	✓	✓	✓	✓	✓
L1S23	PHOTOOPTICAL	FIRST FLOOR FIRE STAIRS EAST	✓	✓	✓	✓	✓
L1S24	PHOTOOPTICAL	FIRST FLOOR CORRIDOR EAST	✓	✓	✓	✓	✓
L1S25	PHOTOOPTICAL	ROOF SPACE SOUTH	✓	✓	✓	✓	✓
L1S26	PHOTOOPTICAL	ROOF SPACE SOUTH	✓	✓	✓	✓	✓
TESTED BY:		Andrew Mitchell					

FERNERIES_2.doc

Revision No. 4



Heyday Group

**Commissioning Checklist
(General Detection System)**

Heyday Group Pty Ltd
ABN 82 121 276 168
Heyday Electrics
ACC Technologies
Heyday Communications
Heyday Fire Technologies
9 Waterloo Road
North Ryde NSW 2113
Phone: (02) 9855 6666
Facsimile: (02) 9855 6655

Project: Warriebrook Retirement Village, Warriewood.

Sheet 3/3 The Ferneries (Bldg A)

Date: 14th July 09

Device Loop /Address	Device type	Point Description/Location	Correct Zone Indication on Fip (Y/N)	Fire Bell Activated (Y/N)	EWS System Activated (Y/N)	General Fire Trip Activated(Y/N)	Fire Brigade Called (Y/N)
L1S27	PHOTOOPTICAL	ROOF SPACE SOUTH	✓	✓	✓	✓	✓
L1S28	PHOTOOPTICAL	ROOF SPACE EAST	✓	✓	✓	✓	✓
L1S29	PHOTOOPTICAL	ROOF SPACE EAST	✓	✓	✓	✓	✓
L1S35	3 I/O DEVICE INPUT 1-FAN RUNNING OUTPUT 1-FAN START OUTPUT 2- FAN STOP OUTPUT 3- G.F.T.	FAN CONTROL BUILDING A (CEF A)	N/A	N/A	N/A	N/A	N/A
L1S36	3 I/O DEVICE INPUT 1 - ALARM SIGNAL FROM LAKELANDS OUTPUT 1 - ALARM SIGNAL TO LAKELANDS	I/O MODULE INSIDE FERNERIES FIP	Input/Output Operated on Fire Trip? ✓	N/A	N/A	N/A	N/A
L1S100	SINGLE I/O DEVICE OUTPUT 1-LIGHTING TRIP	LIGHTING TRIP FERNERIES(IN BEASEMENT)	Output Operated on Fire Trip? ✓	N/A	N/A	N/A	N/A
TESTED BY:		Andrew Mitchell					

FERNERIES_3.doc

Revision No. 4



Heyday Group

AS1668 Fan Controls

Heyday Group Pty Ltd
AEN 62 121 276 166

Heyday Electrics
ACC Technologies
Heyday Communications
Heyday Fire Technologies

9 Waterloo Road
North Ryde NSW 2113
Phone: (02) 9855 6666
Facsimile: (02) 9855 6655

Project: Warriebrook Retirement Village, Warriewood.
The Ferneries (A)

Job No. NFC 233
Tested By: Andrew Mitchell

Date: 14th July 09

FAN DESCRIPTION	MANUAL OVERRIDE		AUTO OVERRIDE		RUN	INDICATIONS		SUPPLY AIR DETECTOR	COMMENTS
	START	STOP	START	STOP		STOP	FAULT		
CEF-A	✓	✓	✓	✓	✓	✓	✓	N/A	



Heyday Group

**Commissioning Checklist
(General Detection System)**

Heyday Group Pty Ltd
 ABN 62 121 276 166
 Heyday Electrics
 ACC Technologies
 Heyday Communications
 Heyday Fire Technologies
 9 Waterloo Road
 North Ryde NSW 2113
 Phone: (02) 9855 6666
 Facsimile: (02) 9855 6655

Project:	Warriebrook Retirement Village, Warriewood.
Sheet 1/5	The Lakelands(B+C)
Date:	14 th July 09

Device Loop /Address	Device type	Point Description/Location	Correct Zone Indication on FIP (Y/N)	Fire Bell Activated (Y/N)	EWS System Activated (Y/N)	General Fire Trip Activated(Y/N)	Fire Brigade Called (Y/N)
L1S1	PHOTOOPTICAL	BASEMENT METER/SWITCHBOARD ROOM	✓	✓	✓	✓	✓
L1S2	PHOTOOPTICAL	BASEMENT COMMS ROOM	✓	✓	✓	✓	✓
L1S3	PHOTOOPTICAL	GROUND FLOOR CORRIDOR NORTH	✓	✓	✓	✓	✓
L1S4	PHOTOOPTICAL	GROUND FLOOR FIRE STAIRS NORTH	✓	✓	✓	✓	✓
L1S5	PHOTOOPTICAL	GROUND FLOOR ENTRY FOYER NORTH	✓	✓	✓	✓	✓
L1S6	PHOTOOPTICAL	GROUND FLOOR CORRIDOR NORTH	✓	✓	✓	✓	✓
L1S7	PHOTOOPTICAL	GROUND FLOOR CORRIDOR NORTH	✓	✓	✓	✓	✓
L1S8	PHOTOOPTICAL	GROUND FLOOR CORRIDOR NORTH	✓	✓	✓	✓	✓
L1S9	PHOTOOPTICAL	GROUND FLOOR CORRIDOR NORTH	✓	✓	✓	✓	✓
L1S10	PHOTOOPTICAL	GROUND FLOOR CORRIDOR NORTH	✓	✓	✓	✓	✓
L1S11	PHOTOOPTICAL	GROUND FLOOR CORRIDOR NORTH	✓	✓	✓	✓	✓
L1S12	PHOTOOPTICAL	GROUND FLOOR CORRIDOR SOUTH	✓	✓	✓	✓	✓
L1S13	PHOTOOPTICAL	GROUND FLOOR CORRIDOR SOUTH	✓	✓	✓	✓	✓
TESTED BY:		Andrew Mitchell	<i>AM</i>				



Commissioning Checklist (General Detection System)

Heyday Group Pty Ltd
 ABN 82 121 276 168
 Heyday Electrics
 ACC Technologies
 Heyday Communications
Heyday Fire Technologies
 9 Waterloo Road
 North Ryde NSW 2113
 Phone: (02) 9855 6666
 Facsimile: (02) 9855 6655

Project:	Warriebrook Retirement Village, Warriewood.
Sheet 2/5	The Lakelands(B+C)
Date:	14 th July 09

Device Loop /Address	Device type	Point Description/Location	Correct Zone Indication on Fip (Y/N)	Fire Bell Activated (Y/N)	EWS System Activated (Y/N)	General Fire Trip Activated(Y/N)	Fire Brigade Called (Y/N)	
L1S14	PHOTOOPTICAL	GROUND FLOOR CORRIDOR SOUTH	✓	✓	✓	✓	✓	
L1S15	PHOTOOPTICAL	GROUND FLOOR ENTRY FOYER SOUTH	✓	✓	✓	✓	✓	
L1S16	PHOTOOPTICAL	GROUND FLOOR CORRIDOR SOUTH	✓	✓	✓	✓	✓	
L1S17	PHOTOOPTICAL	GROUND FLOOR CORRIDOR SOUTH	✓	✓	✓	✓	✓	
L1S18	PHOTOOPTICAL	GROUND FLOOR FIRE STAIRS SOUTH	✓	✓	✓	✓	✓	
L1S19	PHOTOOPTICAL	GROUND FLOOR CORRIDOR SOUTH	✓	✓	✓	✓	✓	
L1S20	PHOTOOPTICAL	LEVEL 1 CORRIDOR NORTH	✓	✓	✓	✓	✓	
L1S21	PHOTOOPTICAL	LEVEL 1 FIRE STAIRS NORTH	✓	✓	✓	✓	✓	
L1S22	PHOTOOPTICAL	LEVEL 1 CORRIDOR NORTH	✓	✓	✓	✓	✓	
L1S23	PHOTOOPTICAL	LEVEL 1 CORRIDOR NORTH	✓	✓	✓	✓	✓	
L1S24	PHOTOOPTICAL	LEVEL 1 CORRIDOR ELECT. CUPBOARD	✓	✓	✓	✓	✓	
L1S25	PHOTOOPTICAL	LEVEL 1 CORRIDOR NORTH	✓	✓	✓	✓	✓	
L1S26	PHOTOOPTICAL	LEVEL 1 COMMS CUPBOARD NORTH	✓	✓	✓	✓	✓	
TESTED BY:		Andrew Mitchell						

LAKELANDS_2.doc

Revision No. 4



Heyday Group

**Commissioning Checklist
(General Detection System)**

Heyday Group Pty Ltd
 ABN 62 121 276 166
 Heyday Electrics
 ACC Technologies
 Heyday Communications
 Heyday Fire Technologies
 9 Waterloo Road
 North Ryde NSW 2113
 Phone: (02) 9855 6666
 Facsimile: (02) 9855 6655

Project:	Warriebrook Retirement Village, Warriewood.
Sheet 3/5	The Lakelands(B+C)
Date:	14 th July 09

Device Loop /Address	Device type	Point Description/Location	Correct Zone Indication on Fip (Y/N)	Fire Bell Activated (Y/N)	EWS System Activated (Y/N)	General Fire Trip Activated(Y/N)	Fire Brigade Called (Y/N)	
L1S27	PHOTOOPTICAL	LEVEL 1 CORRIDOR NORTH	✓	✓	✓	✓	✓	
L1S28	PHOTOOPTICAL	LEVEL 1 CORRIDOR SOUTH	✓	✓	✓	✓	✓	
L1S29	PHOTOOPTICAL	LEVEL 1 CORRIDOR SOUTH	✓	✓	✓	✓	✓	
L1S30	PHOTOOPTICAL	LEVEL 1 CORRIDOR SOUTH	✓	✓	✓	✓	✓	
L1S31	PHOTOOPTICAL	LEVEL 1 LIFT LOBBY SOUTH	✓	✓	✓	✓	✓	
L1S32	PHOTOOPTICAL	LEVEL 1 CORRIDOR SOUTH	✓	✓	✓	✓	✓	
L1S33	PHOTOOPTICAL	LEVEL 1 FIRE STAIRS SOUTH	✓	✓	✓	✓	✓	
L1S34	PHOTOOPTICAL	LEVEL 1 CORRIDOR SOUTH	✓	✓	✓	✓	✓	
L1S35	PHOTOOPTICAL	LEVEL 2 CORRIDOR NORTH	✓	✓	✓	✓	✓	
L1S36	PHOTOOPTICAL	LEVEL 2 FIRE STAIRS NORTH	✓	✓	✓	✓	✓	
L1S37	PHOTOOPTICAL	LEVEL 2 CORRIDOR NORTH	✓	✓	✓	✓	✓	
L1S38	PHOTOOPTICAL	LEVEL 2 CORRIDOR NORTH	✓	✓	✓	✓	✓	
L1S39	PHOTOOPTICAL	LEVEL 2 CORRIDOR NORTH	✓	✓	✓	✓	✓	
TESTED BY:		Andrew Mitchell						

LAKELANDS_3.doc

Revision No. 4

**Commissioning Checklist
(General Detection System)**

Project:	Warriebrook Retirement Village, Warriewood.
Sheet 4/5	The Lakelands(B+C)
Date:	14 th July 09

Device Loop /Address	Device type	Point Description/Location	Correct Zone Indication on Fip (Y/N)	Fire Bell Activated (Y/N)	EWS System Activated (Y/N)	General Fire Trip Activated(Y/N)	Fire Brigade Called (Y/N)
L1S40	PHOTOOPTICAL	LEVEL 2 COMMS CUPBOARD NORTH	✓	✓	✓	✓	✓
L1S41	PHOTOOPTICAL	LEVEL 2 CORRIDOR NORTH	✓	✓	✓	✓	✓
L1S42	PHOTOOPTICAL	LEVEL 2 CORRIDOR NORTH	✓	✓	✓	✓	✓
L1S43	PHOTOOPTICAL	LEVEL 2 CORRIDOR SOUTH	✓	✓	✓	✓	✓
L1S44	PHOTOOPTICAL	LEVEL 2 CORRIDOR SOUTH	✓	✓	✓	✓	✓
L1S45	PHOTOOPTICAL	LEVEL 2 CORRIDOR SOUTH	✓	✓	✓	✓	✓
L1S46	PHOTOOPTICAL	LEVEL 2 LIFT LOBBY SOUTH	✓	✓	✓	✓	✓
L1S47	PHOTOOPTICAL	LEVEL 2 CORRIDOR SOUTH	✓	✓	✓	✓	✓
L1S48	PHOTOOPTICAL	LEVEL 2 FIRE STAIRS SOUTH	✓	✓	✓	✓	✓
L1S49	PHOTOOPTICAL	LEVEL 2 CORRIDOR SOUTH	✓	✓	✓	✓	✓
L1S50	PHOTOOPTICAL	ROOF SPACE NORTH	✓	✓	✓	✓	✓
L1S51	PHOTOOPTICAL	ROOF SPACE NORTH	✓	✓	✓	✓	✓
L1S52	PHOTOOPTICAL	ROOF SPACE NORTH	✓	✓	✓	✓	✓
TESTED BY:		Andrew Mitchell					



Heyday Group

**Commissioning Checklist
(General Detection System)**

Heyday Group Pty Ltd
 ABN 82 121 276 168
 Heyday Electrics
 ACC Technologies
 Heyday Communications
 Heyday Fire Technologies
 9 Waterloo Road
 North Ryde NSW 2113
 Phone: (02) 9855 6666
 Facsimile: (02) 9855 6655

Project:	Warrierook Retirement Village, Warriewood.
Sheet 5/5	The Lakelands(B+C)
Date:	14 th July 09

Device Loop /Address	Device type	Point Description/Location	Correct Zone Indication on FIP (Y/N)	Fire Bell Activated (Y/N)	EWS System Activated (Y/N)	General Fire Trip Activated(Y/N)	Fire Brigade Called (Y/N)
L1S53	PHOTOOPTICAL	GROUND FLOOR MEETING ROOM	✓	✓	✓	✓	✓
L1S54	PHOTOOPTICAL	ROOF SPACE SOUTH	✓	✓	✓	✓	✓
L1S55	PHOTOOPTICAL	ROOF SPACE SOUTH	✓	✓	✓	✓	✓
L1S56	PHOTOOPTICAL	ROOF SPACE SOUTH	✓	✓	✓	✓	✓
L1S64	PHOTOOPTICAL	NORTH LIFT SHAFT DETECTOR	✓	✓	✓	✓	✓
L1S65	PHOTOOPTICAL	SOUTH LIFT SHAFT DETECTOR	✓	✓	✓	✓	✓
L2S1	SINGLE I/O DEVICE INPUT 1- SIGNAL FROM FERNERIES OUTPUT 1- SIGNAL TO FERNERIES	I/O MODULE INSIDE FERNERIES FIP	N/A	N/A	N/A	N/A	N/A
L2S60	3 I/O DEVICE INPUT 1-FAN RUNNING OUTPUT 1-START OUTPUT 2-STOP OUTPUT 3-GFT	CPEF FAN CONTROL B+C	N/A	N/A	N/A	N/A	N/A
L2S67	SINGLE I/O DEVICE INP-UTTI-PRESSURE SWITCH	SPRINKLER PRESSURE SWITCH	✓	✓	✓	✓	✓
L2S68	SINGLE I/O DEVICE OUTPUT 1- LIGHTING TRIP	LIGHTING TRIP B+C	N/A	N/A	N/A	N/A	N/A
L2S69	SINGLE I/O DEVICE OUTPUT 1- SECURITY TRIP	SECURITY TRIP B+C	N/A	N/A	N/A	N/A	N/A




Heyday Group

**Commissioning Checklist
(General Detection System)**

Heyday Group Pty Ltd
ABN 62 121 276 166

**Heyday Electrics
ACC Technologies
Heyday Communications
Heyday Fire Technologies**

9 Waterloo Road
North Ryde NSW 2113
Phone: (02) 9855 6666
Facsimile: (02) 9855 6655

TESTED BY:	Andrew Mitchell					
-------------------	-----------------	-------------------------------------------------------------------------------------	--	--	--	--



Heyday Group

AS1668 Fan Controls

Heyday Group Pty Ltd
ABN 82 121 276 168

Heyday Electrics
 ACC Technologies
 Heyday Communications
 Heyday Fire Technologies

9 Waterloo Road
 North Ryde NSW 2113
 Phone: (02) 9855 6666
 Facsimile: (02) 9855 6655

Project: Warriebrook Retirement Village, Warriewood.

Level/Zone/Room: The Lakelands (B+C)

Job No. NFC 233

Tested By: Andrew Mitchell

Date: 14th July 09

FAN DESCRIPTION	MANUAL OVERRIDE		AUTO OVERRIDE		RUN	INDICATIONS		SUPPLY AIR DETECTOR	COMMENTS
	START	STOP	START	STOP		STOP	FAULT		
CEF-B	✓	✓	✓	✓	✓	✓	✓	✓	

LAKELANDS_AS1668.doc

Revision No. 4



Heyday Group

Heyday Group Pty Ltd
ABN 82 121 276 168

Heyday Electrics
ACC Technologies
Heyday Communications
Heyday Fire Technologies

9 Waterloo Road
North Ryde NSW 2113
Phone: (02) 9855 6666
Facsimile: (02) 9855 6655

AS1668 Fan Controls

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

LAKELANDS_AS1668.doc

Revision No. 4

DEPOSITED PLAN ADMINISTRATION SHEET

Sheet 1 of sheet(s)

* OFFICE USE ONLY

SIGNATURES, SEALS and STATEMENTS of intention to dedicate public roads, to create public reserves, drainage reserves, easements, restrictions on the use of land or positive covenants.

PURSUANT TO SEC. 88B OF THE CONVEYANCING ACT 1919 IT IS INTENDED TO CREATE:

- EASEMENT FOR DRAINAGE 2.5 WIDE. [A]

PURSUANT TO SEC. 88B OF THE CONVEYANCING ACT 1919 IT IS INTENDED TO RELEASE:

- EASEMENT FOR DRAINAGE 0.915 WIDE SHOWN SO BURDENED IN VOL 5852 FOL 70. (D768122)
- EASEMENT FOR DRAINAGE 0.915 WIDE SHOWN SO BURDENED IN VOL 5852 FOL 71. (D768122)

IT IS INTENDED TO DEDICATE TO THE PUBLIC AS ROAD:

- ROAD WIDENING OF BRANDS LANE (AT MACPHERSON STREET).
- ROAD WIDENING (AT MACPHERSON STREET)

Registered: *
Title System:
Purpose:

PLAN OF SUBDIVISION OF LOTS A & B DP358765, LOTS A & B DP400488, LOT 22 SEC C DP5464 AND LOTS 5, 6, 7 & 8 IN DP 1115877


LGA: PITTWATER
Locality: WARRIEWOOD
Parish: NARRABEEN
County: CUMBERLAND

Surveying Regulation, 2006

I, PETER LAURENCE NANCARROW.....
of SUMMIT GEOMATIC PTY LTD.....
a surveyor registered under the *Surveying Act, 2002*, certify that the survey represented in this plan is accurate, has been made in accordance with the *Surveying Regulation, 2006* and was completed on: 10/05/2008.....

The survey relates to .LOTS 1 - 6.....

(specify the land actually surveyed or specify any land shown in the plan that is not the subject of the survey)

Signature:  Dated: 10/5/2008
Surveyor registered under the *Surveying Act, 2002*

Datum Line: "X"-"Y".....
Type: Urban/Rural

Plans used in the preparation of survey/compilation

- | | | |
|------------|------------|------------|
| DP 581495 | DP 972209 | DP 579309 |
| DP 553816 | DP 537054 | DP 228171 |
| DP 208149 | DP 400488 | DP 1088226 |
| DP 270426 | DP 1071760 | DP 1080979 |
| DP 1011273 | DP 647935 | DP 5671414 |
| DP 581495 | DP 358765 | DP 349085 |
| DP 345528 | DP 942319 | DP 5464 |
| DP 1115877 | | |

(if insufficient space use Plan Form 6A annexure sheet)

SURVEYOR'S REFERENCE: 2644-STG2

Use PLAN FORM 6A for additional certificates, signatures, seals and statements

Crown Lands NSW/Western Lands Office Approval

.....in approving this plan certify
(Authorised Officer)
that all necessary approvals in regard to the allocation of the land shown herein have been given

Signature:.....
Date:.....
File Number:.....
Office:.....

Subdivision Certificate

I certify that the provisions of s.109J of the Environmental Planning and Assessment Act 1979 have been satisfied in relation to:

the proposed..... set out herein
(insert 'subdivision' or 'new road')

* Authorised Person/General Manager/Accredited Certifier

Consent Authority:.....
Date of Endorsement:.....
Accreditation no:.....
Subdivision Certificate no:.....
File no:.....

* Delete whichever is inapplicable.

SURVEY REPORT

PLAN OF SUBDIVISION

No.6 - 14 MACPHERSON STREET, WARRIEWOOD:

Lot A & B DP 358765, Lot A & B DP 400488, Lot 22 SEC C DP 5464 AND Lots 5, 6,
7 & 8 DP 1115877

SURVEYORS REFERENCE: 2644-STG2

DATE: 10/05/2008

The survey was completed in May 2008. The purpose of the survey is to subdivide nine lots into six, dedicate road widening and create a public reserve.

The rear of the property is bounded by Narrabeen Creek.

The original position of this creek has been altered substantially due to the construction of a channel which cuts across the subject lots and removing the original 'dogs leg' section of the creek. From accounts by neighboring landholders this work was carried out by the council approximately thirty years ago to ease the flow of water and reduce flooding in the area. Dredging work along the channel was also carried out at various times to maintain the flow of the creek.

Adjacent properties to the west (fronting Macpherson Street) have had substantial fill placed adjoining and over the original creek position which has largely obliterated the natural water course.

AZIMUTH OF SURVEY

The datum line of azimuth adopted was between SSM 145906 FD (EST.) and PM 15783 FD (EST.), being a line of bearing 81°49'48" MGA and a distance of 662.314 by survey. Confirmation to five other established marks showed good agreement between observed and calculated positions.

BOUNDARY DEFINITION

Boundary redefinition of Warriewood Road and Macpherson Street frontages was established from recent and older plans dating back to 1906. In particular DP 1071760 was used to redefine Warriewood Road frontage and DP 1080979 was used to define Macpherson Street frontage. Very good agreement was found between these plans and surveyed positions of marks. A registered plan of subdivision carried out by myself (DP 1115877) was also used as a basis for the definition.

Remaining marks were also found to be in good agreement.

Creek Boundary

Observations to the northern and southern banks were taken using electronic total station from a closed traverse to determine the current position of Narrabeen Creek adjoining the surveyed land.

As discussed above, the present position has altered significantly since the creek was plotted in 1906 by DP 5464. The original position cannot be determined due to extensive fill and excavation which has been ongoing for many years.

In order to determine the original position of the creek the position as plotted by DP 5464 was traced. Short lines representing the original creek position were created to re define the boundary. DP 5464 was chosen as the creek has been shown clearly over a extended section of the creek. Agreement between Macpherson Street and Warriewood Road was also very good with original distances available at the eastern side of the surveyed lots.

The land on the southern side of the redefined creek position is to be dedicated a public reserve. Land to the north of the creek will also be dedicated in the future as public reserve when development takes place.

Lots 1 – 5 in the plan are to be developed into a retirement village by Anglican Retirement Villages.

ENCROACHMENTS

No encroachments were discovered during the course of the survey with the exception of fencing as shown on the plan

Peter Nancarrow
Registered Surveyor
Summit Geomatic Pty Ltd
Ph 02 9891 1490

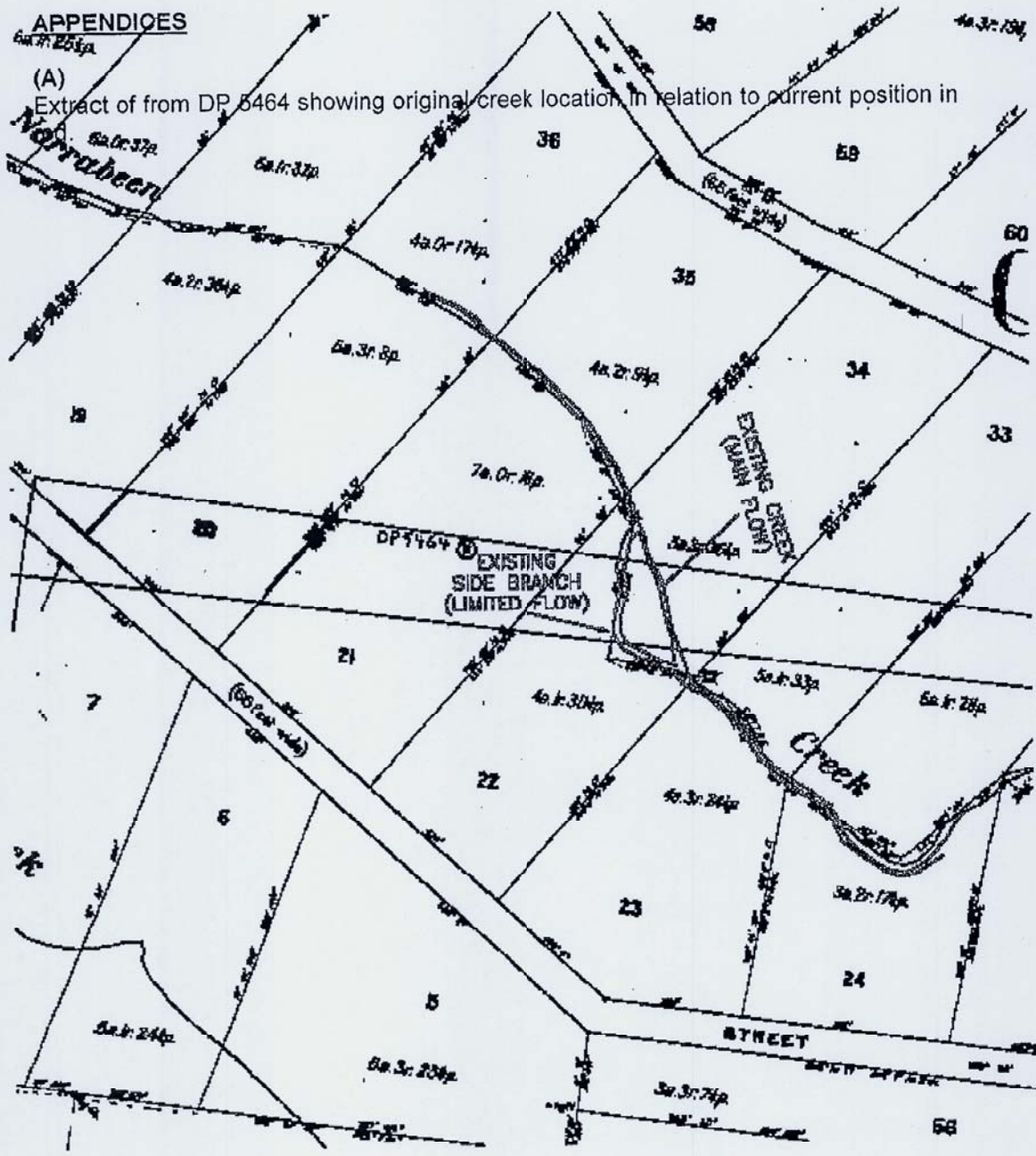
10th May 2008

APPENDICES

6a. 21. 25 1/2 p.

(A)

Extract of from DP 5464 showing original creek location in relation to current position in



(B)
Photo of Narrabeen Creek easternmost corner of proposed lot 3 looking to the south-
west.



(C)
Photo of Narrabeen Creek (new channel) near south east corner proposed lot 3 looking to the south.



SMOKE DOORS - INSTALLATION CERTIFICATE - INSTALLATION CERTIFICATE

Project Name	Warriewood - Stage 1
Address	6-14 Macpherson Street Warriewood NSW 2101
Part of Building to be certified	All new work (entire building)

I hereby certify that:

- a) The smoke doors nominated below have been installed in accordance with the nominated Standards of Performance.

Measure and/or system	Standards of Performance
Smoke doors	BCA2008 Specifications C2.5 and C3.4 and AS 1288 - 2006

Door ID #	Door ID #	Door ID #
24489/24487 Ferneries Ground	24452/24453 Lakelands Level 2	
24490/24486 Ferneries Level 1		
24448/24449 Lakelands Ground		
24442/24443 Lakelands Level 1		

- b) I am a properly qualified person and have a good working knowledge of the relevant codes and standards referenced above. (My qualifications and accreditations are listed below)

Relevant qualifications and accreditations: Six years involved in production, manufacture and testing of fire rated doors

- c) The information contained in this statement is true and accurate to the best of my knowledge.

Name of Certifier: Michael Fergusson

Company: Ikon Doors Pty

Address: 7B Tilley Lane Frenchs Forest NSW 2086

Phone No. (02) 9451 3511 Fax No. (02) 9451 3566

Signature 

Date 3.08.09

WATERPROOFING OF WET AREAS - INSTALLATION CERTIFICATE

Project Name	<i>Warriewood - Stage 1</i>
Address	<i>6-14 Macpher on Street Warriewood NSW 2101</i>
Part of Building to be certified	<i>All new work (entire building)</i>

I hereby certify that:

- a) The works have been inspected during construction and have been completed in accordance with the nominated Standards of Performance.

Measure and/or system	Standards of Performance
Waterproofing of wet areas	BCA2008 Clause F1.7 and AS 3740 - 2004 and installed in accordance with the manufacturer's recommendations

- b) I am a properly qualified person and have a good working knowledge of the relevant codes and standards referenced above. (My qualifications and accreditations are listed below)

Relevant qualifications and accreditations: The Superseal Group Waterproofing Licence: 205741C
Tremco approved applicator

- c) The information contained in this statement is true and accurate to the best of my knowledge.


Name: David Scott

Company: The Superseal Group Pty Ltd

Address: Unit 10.9 Ladbroke Street, Milperra NSW 2214

Phone No. 02 9773 4963

Fax No. 02 9773 4965


Signature

10 July 2009
Date

WATERPROOFING WORKS: SUMMARY OF COMPLIANCE METHODS

Wall/floor types waterproofed	Concrete floors, Gyprock		
Product type and brand – floor	Tremco Vulkem NEM		
Product type and brand – walls	Tremproof 90		
Product used as bond breaker	Dymonic NT		
Enclosed or open (frameless) showers?	Frameless		
Waterstop angle locations?	Door entrance (Laundry & Powder Room) and shower recess		

Schedule of Areas waterproofed.

Unit or level #	Main Bathroom & Ensuite (if applicable)	Laundry	Balcony
Units 1 to 64	YES	YES	YES

Other areas waterproofed (roofs, planter boxes, landscaped areas, etc.)

Location	Description
Tiled Drying Rooms	Throughout Ferneries & Lakelands Buildings
Tiled Ground Floor Terraces	Throughout Ferneries & Lakelands Buildings

ATTACH MANUFACTURERS DATA SHEET FOR ALL PRODUCTS USED

TREMCO

Vulkem Non-Exposed Membrane

ONE PART URETHANE WATERPROOFING MEMBRANE

Key Benefits Summary

- Permanently flexible 600%
- Meets requirements of AS 3740-2004
- Compatible with TREMfix ceramic tile adhesive
- Primerless single pack product
- Fast curing
- Compatible with Metz C26 tile adhesive
- High strength and puncture resistant
- Vertical and horizontal applications
- Easy to apply
- Resistant to range of chemicals and pollutants

PRODUCT INFORMATION

DESCRIPTION

Vulkem Non-Exposed Membrane is a single pack elastomeric, moisture curing high tensile strength and tough curing polyurethane membrane. It cures to form a rubber membrane surface that provides watertight substrates.

Vulkem Non-Exposed Membrane may be used to apply a seamless, monolithic waterproof membrane to concrete substrates, AC sheeting compressed, timber decks which are well anchored and primed. Simple, easy to follow procedures and use of conventional equipment and tools or spray equipment permit fast, sure and secure application.

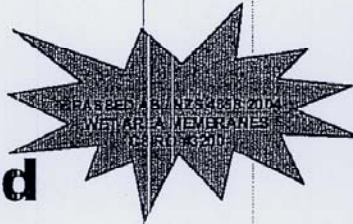
BASIC USES

For :

- | | |
|----------------------------------------|----------------------------------------------------|
| <input type="checkbox"/> Wet Areas | <input type="checkbox"/> Laundries |
| <input type="checkbox"/> Roof Terraces | <input type="checkbox"/> Kitchens |
| <input type="checkbox"/> Decks | <input type="checkbox"/> Concrete Substrate Plazas |
| <input type="checkbox"/> Balconies | <input type="checkbox"/> Shower Recesses |

USAGE GUIDELINES

One part urethane, Vulkem Non-Exposed Membrane bonds firmly to clean, dry concrete and well anchored wood substrates. It retains its integrity even if substrate movement causes hairline cracks of up to 1.5mm. If cut or damaged, Vulkem Non-Exposed Membrane will prevent water migration between it and its substrate. Vulkem Non-Exposed Membrane can be finished after a 48-72 hours cure at temperatures over 15.6°C. A Quick Cure Catalyst can be utilized for a fast track application procedures.



02/05
2 Pages

PRODUCT
DATA
SHEET

SUBSTRATE PREPARATION

- Concrete should be cured for 21-28 days
- Remove all dirt, dust, plaster, cement droppings, protrusions, oil and other contaminants. Fill screw holes
- To the wall/floor junctions and the floor/hob, hob/wall joints within the shower tray, apply fillet bead of Tremco PU1 Polyurethane Sealant as a bond breaker. Apply sealant around floor penetrations, tap and shower rose and other discontinuities. Floor wastes in concrete shall be cut level with the floor. For sheet flooring, leak control flanges shall be fitted and fully sealed.
- Cracks: non movement and hairline cracks may be filled with a brush coat of Vulkem Non-Exposed Membrane. Movement cracks to be routed out, cleaned and filled with Tremco PU1 Polyurethane Sealant.

PRIMING

- Vulkem Non-Exposed Membrane is generally a primerless membrane on most clean substrates
- All wood surfaces are to be primed using Vulkem Primer 171
- All metal surfaces are to be primed using Vulkem Primer 181
- Existing urethane membrane surfaces are to be primed using Vulkem Primer 191.

METHOD OF APPLICATION

- Mix the Vulkem Non-Exposed Membrane to ensure no settlement of the material is in the bottom of the pail and the colour of the material is consistent with no streaks or striations
- All internal wet areas should be waterproofed to meet AS 3740-2004 requirements
- Apply one coat of Vulkem Non-Exposed Membrane at specified coverage rates using both brush, roller or squeegee
- Ensure the membrane is turned down into the floor waste or well sealed around the leak control flange and other penetrations. Ensure flashing angles are properly sealed across doorways. Check for cracks in the membrane when dry and rectify
- Tremco TREMfix Tile Adhesive should be used to adhere tiles directly to membrane
- A light broadcast of sand into the Vulkem Non-Exposed Membrane may be introduced when adhering directly to the membrane

COVERAGE

- Approximately 1.2L/m² at a dry film thickness of 1.0mm (approximately 16m² per 18.9L pail) to achieve the waterproof requirements as stated in AS 3740-2004
- Approximately 0.6L/m² at a dry film thickness of 0.5mm (approximately 32m² per 1.89L pail) to achieve water resistant requirements as stated in AS 3740-2004 (vertical applications).



Vulkem Non-Exposed Membrane

TECHNICAL INFORMATION

TYPICAL PHYSICAL PROPERTIES

Property	Test Method	Result
Tensile	ASTM D-412	2MPa
Elongation	ASTM D-412	600%
S100	ASTM D-412	414kPa
Hardness (Shore A)	ASTM C-661	20
Peel Strength	ASTM C-794	30lbs, 100% coh on concrete
Permeability	E-96	0.12metric perms

UL 790 CLASS A FIRE RATING

CAN/ULC - S102.2 - MBB CLASS A RATING

Wet Material Properties

Non Volatile Content	ASTM D-1353	79% min
Viscosity, cps	Brookfield HBT	8-10,000
Cure Time	ASTM D-1640	48 Hours max.
@ 25°C - 50% R.H		
Flash point	Setaflash	44.4°C

AVAILABILITY

Vulkem Non-Exposed Membrane is available through your nearest Tremco office.

HEALTH AND SAFETY PRECAUTIONS

Material Safety Data Sheet must be read and understood before use.

TECHNICAL SERVICE

TREMCO has a team of qualified Technical Sales Representatives who provide assistance in the selection and specifications of products. For more detailed information or service and advice call Customer Service on (02) 9638 2755 or fax (02) 9638 2955.

GUARANTEE/WARRANTY

We warrant our products to be free of defects and manufactured to meet published physical properties when tested according to applicable specifications and TREMCO standards.

Under this warranty we will provide at no charge, product to replace any product proven to be defective when applied in accordance with our written instructions and in applications recommended by TREMCO as being suitable for this product.

All claims concerning product defects must be made within 12 months of shipment. Absence of such claims in writing during this period will contribute a waiver of all claims with respect to such product. This warranty is in lieu of any and all other warranties expressed or implied.

TREMCO PTY LTD ABN 25 000 024 064
Unit 1, 2 Park Rd, RYDALMERE NSW 2116 Australia
Tel: (02) 9638 2755 Fax: (02) 9638 2955
tremco@tremco.com.au

TREMPRO

TREMproof® 90

A TWO PART LIQUID APPLIED
COPOLYMER MEMBRANE WITH
FIBROUS REINFORCEMENT

Key Benefits Summary

- Simple application, water based
- Fast drying
- Tile in 24 hrs
- Good flexibility
- No reinforcement
- Seamless, no joints or cracks
- UV Stable
- Low odour, non toxic

PRODUCT INFORMATION

DESCRIPTION

TREMproof® 90 is a two part liquid applied co-polymer membrane with fibrous reinforcement.

TREMproof® 90 cures rapidly to form a flexible waterproof lining for showers and other wet areas as described in the Australian Standard A3740-1994 "Waterproofing wet areas within residential buildings."

TREMproof® 90 forms a waterproof lining to most building materials including reinforced concrete, cement render, water resistant plaster board, and fibre reinforced cement sheet flooring, etc. The surface must be firmly fixed to manufacturers direction, clean and dry.

TREMproof® 90 is suitable to external use on light pedestrian trafficable decks, parapets and flashings.

USAGE/PURPOSE

- For waterproofing;
- Showers and wet areas
 - Light traffic areas
 - Tiles, decks and balconies

PACK SIZE

20 Kg powder + 20 Litres Liquid = 30 Litres mixed.

COLOUR

- Green

TECHNICAL INFORMATION

GENERAL

- COVERAGE
1.5 Litres/sq metre/1.2mm (Dry Film Thickness)
- NUMBER OF COATS
2-3
- TOUCH DRY
Approx 3 hours at 0.6mm DFT, 22 degrees C
- COLOUR
Green
- CLEAN UP
Water (before curing)
- TOXICITY
Non toxic
- SOLVENT RESISTANCE
Not resistant
- WEATHER RESISTANCE
Good
- SHELF LIFE
6 months in dry storage
- MIX RATIO
Powder 1Kg, Liquid 1litre
- POT LIFE
Use within 3 hours of mixing
- PACKAGING
(20litre liquid) + (20Kg powder) = 30litres mixed

NOTE: Typical Properties should not be used as Specifications.

USAGE GUIDELINES

SUBSTRATE PREPARATION

- Remove all dirt, dust, plaster and cement droppings, protrusions, oil and other contaminants. Fill screw holes.
- Apply a bond breaker tape (eg PVC duct tape) over sheet flooring joints. To the wall/floor junctions and the floor/hob, hob/wall joints within the shower tray, apply approx 8mm silicone or P.U. sealant or foam backing rod as a bond breaker. Apply sealant around floor penetrations, tap and rose plumbing and other discontinuities. Floor wastes in concrete shall be cut level with the floor. For sheet flooring, leak control flanges shall be fitted and fully sealed.

10/00
2 Pages

PRODUCT
DATA
SHEET

10/00
2 Pages
PRODUCT
DATA
SHEET



TREMproof® 90

- Cracks - non movement and hairline cracks may be filled with a brush coat of Tremproof® 90. Movement cracks shall be routed out, cleaned and filled with silicone sealant. Apply a reinforcing bandage embedded in Tremproof® 90 and allow to dry.

PRIMING

- Prime all surfaces with Tremproof® 90 WB Primer. External surfaces shall be primed with Tremproof® 100 primer.
- All metal surfaces are to be primed using a zinc rich primer.

METHOD OF APPLICATION

- Mixing - stir powder component into half the liquid until smooth, stand for 5 minutes, re-stir and add the balance of the liquid. DO NOT add water to mixture before or during use.
- Apply two or more coats of Tremproof® 90 to the floor and covered areas to ensure a minimum dry film thickness of 1.2mm. Apply one or two coats to wall areas above the shower tray to a dry film thickness of .5mm. Use brush of short nap roller for walls.

Ensure the membrane is turned down into the floor waste or well sealed around the leak control flange and other penetrations. Ensure flashing angles are properly sealed across doorways. Check for pinholes, missed or cracks in the membrane when dry and rectify.

PRECAUTIONS

Do not apply at above 35°C or below 6°C. Areas subject to rising damp or back pressure should be first sealed with an epoxy coating. Cold damp conditions retard cure - allow plenty of air flow to aid drying. Do not apply excessive thickness to internal corners or shrinkage cracking may occur. Make sure that the membrane is fully dry before tiling over, normally 1-3 days. Protect membrane against damage before and during tiling - very important on timber floors. Do not apply more than 1.2mm DFT per coat or reduced flexibility will occur.

Tremproof® 90 is suitable for tiling over. Use standard cement or water based tile adhesive. Do not use solvent based adhesives.

HEALTH & SAFETY PRECAUTIONS

The Material Safety Data Sheet (MSDS) must be read and understood prior to use.

STORAGE

Dry storage

SHELF LIFE

6 months in dry storage

TECHNICAL SERVICE

TREMCO has a team of qualified Technical Sales Representatives. For more detailed information or service and advice call Customer Service on (02) 9638 2755 or fax (02) 9638 2955.

GUARANTEE/WARRANTY

TREMCO products are manufactured to rigid standards of quality. Any product which has been applied (a) in accordance with TREMCO written instructions and (b) in any application recommended by TREMCO, but which is proved to be defective, will be replaced free of charge.

Any information provided by TREMCO in this document in relation to TREMCO's goods or their use is given in good faith and is believed by TREMCO to be appropriate and reliable. However, the information is provided as a guide only, as the actual use and application will vary with application conditions which are beyond our control. TREMCO makes no representation, guarantee or warranty relating to the accuracy or reliability of the information and assumes no obligation or liability in connection with the information. To the extent permitted by law, all warranties, expressed or implied are excluded.

TREMCO PTY LTD ABN 25 000 024 064
Unit 1, 2 Park Rd, RYDALMERE NSW 2116 Australia
Tel: (02) 9638 2755 Fax: (02) 9638 2955
tremco@tremco.com.au

TREMCO

Dymonic NT

HIGH PERFORMANCE, ONE PART, LOW
MODULUS POLYURETHANE
ELASTOMERIC SEALANT

07/06
2 Pages

PRODUCT
DATA
SHEET

Key Benefits Summary

- One component, ready for use.
- Excellent unprimed adhesion to most building substrates.
- Wide Movement Accommodation: +100% / -50%
- Good resistance to u.v. weathering and ageing.
- Rapid cure, even at low temperatures and low humidity.
- Non-staining on most substrates.

Standards

Dymonic NT meets the requirements of BS EN ISO 11600
F-25LM, DIN 18540 F, SNJF elastomere 1ere cat and
CAF approved. Conforms to US Federal Specification
TT-S-230C, Type II, Class A and ASTM C920 Type S,
Grade NS, Class 25 Use NT, G, A and M.

PRODUCT INFORMATION

DESCRIPTION

Dymonic NT is a high performance, low modulus, one part, moisture curing polyurethane sealant.

USAGE/PURPOSE

Dymonic NT is a versatile joint sealing compound for building construction. It is used in :

- Civil and industrial expansion and connecting joints in architectural and heavy construction, between concrete, brickwork, natural and artificial stone, steel, aluminium, wood, ceramic tiles, rigid plastics etc.,

Designed for sealing dynamically moving joints in :

- Precast concrete construction and curtain wall joints.

Suitable for sealing :

- Wide vertical joints up to 100mm

Also for perimeter caulking and bedding of :

- Windows, doors, panels etc.,

LIMITATIONS

Dymonic NT is not recommended for:

- Prolonged immersion in water.
- Application over damp or contaminated surfaces
- Exposure to harsh chemicals
- Special architectural finishes without prior testing
- Certain grades of marble and stone work without prior testing and additional surface preparation

COLOURS

White, Black, Buff, Aluminium Stone, Dark grey

PACKAGING

Dymonic NT is packaged in 600ml sausages (20 per carton)

TECHNICAL INFORMATION

COMPOSITION

Dymonic NT is a one part moisture curing polyurethane sealant.

CHARACTERISTICS (Typical values)
SPECIFIC GRAVITY 1.28

PERFORMANCE (Typical Properties)

- CONSISTENCY (Boeing Jig)
Non-sag
- SKIN FORMING TIME (at 23°C, 50% RH)
40 minutes
- CURE RATE (at +23°C, 50% RH)
4mm/1st day 10mm/6 days
- TENSILE STRENGTH
0.26 MPa
- ULTIMATE ELONGATION
634%
- MODULUS AT 100% ELONGATION
0.13 MPa
- HARDNESS SHORE 'A'
15
- ELASTIC RECOVERY
89%
- SERVICE TEMPERATURE RANGE
-40°C TO +90°C
- MOVEMENT CAPABILITY
+100% / -50%

NOTE: Typical Properties should not be used as specifications.



Dymonic NT

USAGE GUIDELINES

JOINT DESIGN CONSIDERATIONS

- Joints should be designed in accordance with BS 6093
- For the purpose of joint width calculation in BS6093 the MAF of Dymonic NT is +100% to -50%
- For optimum performance, the width to depth ratio of Dymonic NT should be 2:1 subject to a minimum depth of 10mm on porous substrates and 6mm on non-porous substrates
- A maximum depth of 15mm should be maintained for joint widths of 30mm or more.
- Sealant width should never be less than sealant depth
- For fillet joints the minimum bite onto each surface should be 10mm for porous substrates and 6mm for non-porous substrates

SURFACE PREPARATION

- Joint faces should ideally be clean, dry, sound and free from grease and any other contaminants likely to impair adhesion
- Loose friable material must be removed and arrisses made good
- Extensive laboratory tests and field experience has shown that Dymonic NT exhibits no staining on a number of different substrates. If substrate is unusual, then TREMCO recommend testing.

SEALANT BACKING

- Install smooth faced, closed cell polyethylene foam rod under 20% - 30% compression
- Sealing backing is installed to:
 - prevent sealant adhesion to the rear of the joint pocket "Three sided adhesion"
 - control the depth of the sealant
 - provide a firm base for tooling
- Where joint depth is insufficient to allow the use of a polyethylene foam rod, a silicone faced self adhesive bond breaker tape should be used

PRIMING

- Dymonic NT provides excellent unprimed adhesion to most common building substrates, however, based on the results of in-house testing, a primer may be recommended for certain installations/applications

METHOD OF APPLICATION

- Application should be in accordance with BS 8000:16 "Code of practice for sealing joints in buildings using sealants"
- Apply between +5°C and +50°C
- All beads should be tooled after application to ensure firm, full contact with the joint faces

COVERAGE RATE

(Approximate Linear Metres per 600ml sausage)

WIDTH	6mm	10mm	20mm	25mm
DEPTH (min)				
6mm	16.7	10.0	-	-
10mm	-	-	3.0	-
12mm	-	-	-	2.0

CLEANING

Immediately remove excess sealant and smears adjacent to the joint (use masking tape where appropriate). Equipment may be cleaned with xylol or toluol while sealant is in an uncured state.

STORAGE

- Store in dry conditions between +5°C and +25°C. The storage temperature should not exceed +25°C for extended periods of time.
- Keep away from heat sources

HEALTH AND SAFETY PRECAUTIONS

Material Safety Data Sheet must be read and understood before use.

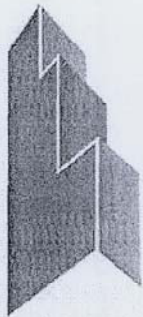
TECHNICAL SERVICE

TREMCO has a team of qualified Technical Sales Representatives who provide assistance in the selection and specifications of products. For more detailed information or service and advice call Customer Service on (02) 9638 2755 or fax (02) 9638 2955.

GUARANTEE/WARRANTY

We warrant our products to be free of defects and manufactured to meet published physical properties when tested according to applicable specifications and TREMCO standards. Under this warranty we will provide at no charge, product to replace any product proven to be defective when applied in accordance with our written instructions and in applications recommended by TREMCO as being suitable for this product. All claims concerning product defects must be made within 12 months of shipment. Absence of such claims in writing during this period will contribute a waiver of all claims with respect to such product. This warranty is in lieu of any and all other warranties expressed or implied.

TREMCO PTY LTD ABN 25 000 024 064
Unit 1, 2 Park Rd, RYDALMERE NSW 2116 Australia
Tel: (02) 9638 2755 Fax: (02) 9638 2955
tremco@tremco.com.au



Another quality of project

Sydney PLASTER

A B N: 57 108 749 444

Unit 18, 6-20 Braidwood Street
Strathfield South NSW 2136
PH (02) 9742 5988
FAX (02) 9742 5999

ACCESS PANELS, DOORS AND HOPPERS TO FIRE RESISTING SHAFTS - DESIGN CERTIFICATE

Project Name	Warriewood - Stage 1
Address	6-14 Macpherson Street Warriewood NSW 2101
Part of Building to be certified	All new work (entire building)

I hereby certify that:

- a) The drawings and specifications have been designed in accordance with the nominated Standards of Performance.

Measure and/or system	Standards of Performance
Access panels, doors and hoppers to fire resisting shafts	BCA2008 Clause C3.13 and AS 1530.4

- a) I am a properly qualified person and have a good working knowledge of the relevant codes and standards referenced above. (My qualifications and accreditations are listed below)

Relevant qualifications and accreditations: Dry Plasterer License Number: 204271C

- b) The information contained in this statement is true and accurate to the best of my knowledge.

Name: Willis Woo
 Company: Sydney Plaster Pty Ltd.
 Address: Unit 18, 6-20 Braidwood Street, Strathfield South NSW. 2136.
 Phone No. (02) 9742 5988 Fax No. (02) 9742 5999



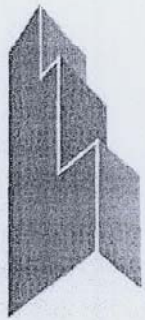
 Signature

02/06/2009

 Date

2 June 2009

Page 1 of 7



Another quality of project

Sydney PLASTER

ABN: 57 108 749 444

Unit 18, 6-20 Braidwood Street
Strathfield South NSW 2136
PH (02) 9742 5988
FAX (02) 9742 5999

FIRE SEALS PROTECTING MISCELLANEOUS GAPS JOINTS AND PENETRATIONS IN FIRE RESISTING COMPONENTS OF THE BUILDING - INSTALLATION CERTIFICATE

Project Name	Warriewood - Stage 1
Address	6-14 Macpherson Street Warriewood NSW 2101
Part of Building to be certified	All new work (entire building)

I hereby certify that:

- a) The works have been inspected during construction and have been completed in accordance with the nominated Standards of Performance.

Measure and/or system	Standards of Performance
Fire seals protecting openings in fire resisting components of the building- Joints, gaps and miscellaneous penetrations	BCA2008 Clause C3.15 and AS 1530.4 and AS 4072.1 and installed in accordance with the tested prototype.

- b) I am a properly qualified person and have a good working knowledge of the relevant codes and standards referenced above. (My qualifications and accreditations are listed below)

Relevant qualifications and accreditations: Dry Plasterer License Number: 204271C

- c) The information contained in this statement is true and accurate to the best of my knowledge.

Name: Willis Woo

Company: Sydney Plaster Pty Ltd.

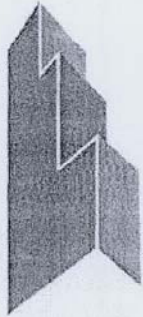
Address: Unit 18, 6-20 Braidwood Street, Strathfield South NSW. 2136.

Phone No. (02) 9742 5988 Fax No. (02) 9742 5999

Signature

02/06/09

Date



Another quality of project

Sydney PLASTER

A B N: 57 108 749 444

Unit 18, 6-20 Braidwood Street
Strathfield South NSW 2136
PH (02) 9742 5988
FAX (02) 9742 5999

LIGHTWEIGHT CONSTRUCTION (FIRE RATED) - INSTALLATION CERTIFICATE

Project Name	Warriewood - Stage 1
Address	6-14 Macpherson Street Warriewood NSW 2101
Part of Building to be certified	All new work (entire building)

I hereby certify that:

- a) The works have been inspected during construction and have been completed in accordance with the nominated Standards of Performance.

Measure and/or system	Standards of Performance
Lightweight construction (fire rated)	BCA2008 Specifications C1.8 and A2.3 and AS 1530.4

- b) I am a properly qualified person and have a good working knowledge of the relevant codes and standards referenced above. (My qualifications and accreditations are listed below)

Relevant qualifications and accreditations: _____ Dry Plasterer License Number: 204271C

- c) The information contained in this statement is true and accurate to the best of my knowledge.

Name: _____ Willis Woo

Company: _____ Sydney Plaster Pty Ltd.

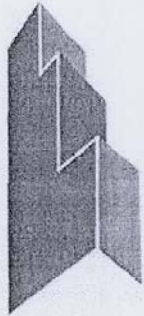
Address: _____ Unit 18, 6-20 Braidwood Street, Strathfield South NSW. 2136.

Phone No. _____ (02) 9742 5988 Fax No. _____ (02) 9742 5999

02/06/09

Signature

Date



Sydney PLASTER

A B N: 57 108 749 444

Unit 18, 6-20 Braidwood Street
Strathfield South NSW 2136
PH (02) 9742 5988
FAX (02) 9742 5999

Another quality of project

FIRE RESISTING CONSTRUCTION - INSTALLATION CERTIFICATE

Project Name	Warriewood - Stage 1
Address	6-14 Macpherson Street Warriewood NSW 2101
Part of Building to be certified	All new work (entire building)

I hereby certify that:

- a) The works have been inspected during construction and have been completed in accordance with the nominated Standards of Performance.

Measure and/or system	Standards of Performance
Fire resisting construction	BCA2008 Part C2, AS 1170.1 - 1989, AS 1170.2 - 1989, AS 1170.4 - 1993, AS 3600 - 2001, AS 3700 - 2001, AS 4100 - 1998 and in accordance with a tested prototype to the scheduled Architects drawings.

- b) I am a properly qualified person and have a good working knowledge of the relevant codes and standards referenced above. (My qualifications and accreditations are listed below)

Relevant qualifications and accreditations: Dry Plasterer License Number: 204271C

- c) The information contained in this statement is true and accurate to the best of my knowledge.

Name: Willis Woo

Company: Sydney Plaster Pty Ltd.

Address: Unit 18, 6-20 Braidwood Street, Strathfield South NSW. 2136.

Phone No. (02) 9742 5988 Fax No. (02) 9742 5999

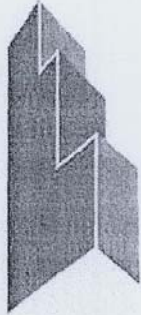
Signature

02/06/2009

Date

2 June 2009

Page 4 of 7



Another quality of project

Sydney PLASTER

ABN: 57 108 749 444

Unit 18, 6-20 Braidwood Street
Strathfield South NSW 2136
PH (02) 9742 5988
FAX (02) 9742 5999

FIRE RESISTING CONSTRUCTION – PLASTERBOARD WALLS AND/OR CEILINGS - INSTALLATION CERTIFICATE

Project Name	Warriewood - Stage 1
Address	6-14 Macpherson Street Warriewood NSW 2101
Part of Building to be certified	All new work (entire building)

I hereby certify that:

- a) The works have been inspected during construction and have been completed in accordance with the nominated Standards of Performance.

Measure and/or system	Standards of Performance
Fire resisting construction (Plasterboard walls and/or ceilings)	BCA2008 Part C2 and in accordance with an approved Manufacturer's system as required by the Architects drawings.

- b) I am a properly qualified person and have a good working knowledge of the relevant codes and standards referenced above. (My qualifications and accreditations are listed below)

Relevant qualifications and accreditations: Dry Plasterer License Number: 204271C

- c) The information contained in this statement is true and accurate to the best of my knowledge.

Name: Willis Woo

Company: Sydney Plaster Pty Ltd.

Address: Unit 18, 6-20 Braidwood Street, Strathfield South NSW. 2136.

Phone No. (02) 9742 5988 Fax No. (02) 9742 5999

Signature

02/06/2009

Date



Another quality of project

Sydney PLASTER

ABN: 57 108 749 444

Unit 18, 6-20 Braidwood Street
Strathfield South NSW 2136
PH (02) 9742 5988
FAX (02) 9742 5999

SOUND INSULATION - INSTALLATION CERTIFICATE

Project Name	Warriewood - Stage 1
Address	6-14 Macpherson Street Warriewood NSW 2101
Part of Building to be certified	All new work (entire building)

I hereby certify that:

- a) The works have been inspected during construction and have been completed in accordance with the nominated Standards of Performance.

Measure and/or system	Standards of Performance
Sound insulation	BCA2008 Part F5, Specification F5.2 and Specification F5.5, AS/NZS 1276.1 - 1999 or ISO 717.1 - 1996 and AS/ISO 717.2 - 2004

- b) I am a properly qualified person and have a good working knowledge of the relevant codes and standards referenced above. (My qualifications and accreditations are listed below)

Relevant qualifications and accreditations: Dry Plasterer License Number: 204271C

- c) The information contained in this statement is true and accurate to the best of my knowledge.

Name: Willis Woo

Company: Sydney Plaster Pty Ltd.

Address: Unit 18, 6-20 Braidwood Street, Strathfield South NSW. 2136.

Phone No. (02) 9742 5988 Fax No. (02) 9742 5999

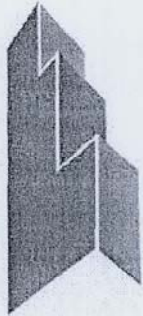
Signature

02/06/2009

Date

2 June 2009

Page 6 of 7



Sydney PLASTER

A B N: 57 108 749 444

Unit18, 6-20 Braidwood Street
Strathfield South NSW 2136
PH (02) 9742 5988
FAX (02) 9742 5999

Another quality of project

SARKING - INSTALLATION CERTIFICATE

Project Name	Warriewood - Stage 1
Address	6-14 Macpherson Street Warriewood NSW 2101
Part of Building to be certified	All new work (entire building)

I hereby certify that:

- a) The works have been inspected during construction and have been completed in accordance with the nominated Standards of Performance.

Measure and/or system	Standards of Performance
Sarking for roof and walls	BCA2008 F1.6 and AS/NZS4200.1 and .2

- b) I am a properly qualified person and have a good working knowledge of the relevant codes and standards referenced above. (My qualifications and accreditations are listed below)

Relevant qualifications and accreditations: Dry Plasterer License Number: 204271C

- c) The information contained in this statement is true and accurate to the best of my knowledge.

Name: Willis Woo

Company: Sydney Plaster Pty Ltd.

Address: Unit 18, 6-20 Braidwood Street, Strathfield South NSW. 2136.

Phone No. (02) 9742 5988 Fax No. (02) 9742 5999

Signature

02/06/2009

Date



ERBAS & ASSOCIATES Pty. Ltd.
 Building Services Consulting Engineers
 ACN 077 132 266 ABN 57 077 132 266



Quality
 Endorsed
 Company
 ISO 9001 Lic. 20494
 Standards Australia

PO Box 41 St Leonards NSW 1590
 Level 1, 15 Atchison Street, St Leonards NSW 2065
 Tel: (02) 9437 1022 Fax: (02) 9437 1025 Email: general@erbas.com.au
 Website : www.erbas.com.au

VENTILATION (GENERAL) - DESIGN CERTIFICATE

Project Name	<i>Warriewood - Stage 1</i>
Address	<i>6-14 Macpherson Street Warriewood NSW 2101</i>
Part of Building to be certified	<i>All new work (entire building)</i>

I hereby certify that:

- a) The drawings and specifications have been designed in accordance with the nominated Standards of Performance.

Measure and/or system	Standards of Performance
Ventilation (general)	BCA2008 Clause NSW F4.5(b) and AS 1668.2 - 1991

- a) I am a properly qualified person and have a good working knowledge of the relevant codes and standards referenced above. (My qualifications and accreditations are listed below)

Relevant qualifications and accreditations: B.Sc, M.sc, MIEAust, CPEng, MAIRAH, MASHRAE, Affiliate M, CIBSE

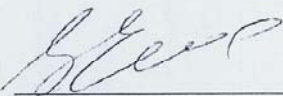
- b) The information contained in this statement is true and accurate to the best of my knowledge.

Name: Ken Erbas

Company: Erbas & Associates Pty Ltd

Address: L1 15 Atchison Street St. Leonards

Phone No. (02) 9437 1022 Fax No. (02) 9437 1025


 Signature

22/05/2009
 Date



ERBAS & ASSOCIATES Pty. Ltd.

Building Services Consulting Engineers

ACN 077 132 266 ABN 57 077 132 266

PO Box 41 St Leonards NSW 1590
Level 1, 15 Atchison Street, St Leonards NSW 2065
Tel: (02) 9437 1022 Fax: (02) 9437 1025 Email: general@erbas.com.au
Website : www.erbas.com.au



Quality
Endorsed
Company
ISO 9001 Lic: 20454
Standards Australia

FIRE DAMPERS - DESIGN CERTIFICATE

Project Name	Warriewood - Stage 1
Address	6-14 Macpherson Street Warriewood NSW 2101
Part of Building to be certified	All new work (entire building)

I hereby certify that:

- a) The drawings and specifications have been designed in accordance with the nominated Standards of Performance.

Measure and/or system	Standards of Performance
Fire dampers	BCA2008 Clause C3.15 and AS/NZS 1668.1 - 1998 (AS 1682.1-1990 and AS 1682.2-1990)

- a) I am a properly qualified person and have a good working knowledge of the relevant codes and standards referenced above. (My qualifications and accreditations are listed below)

Relevant qualifications and accreditations: B.Sc, M.sc, MIEAust, CPEng, MAIRAH, MASHRAE, Affiliate M, CIBSE

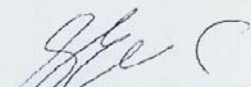
- b) The information contained in this statement is true and accurate to the best of my knowledge.

Name: Ken Erbas

Company: Erbas & Associates Pty Ltd

Address: L1 15 Atchison Street St. Leonards

Phone No. (02) 9437 1022 Fax No. (02) 9437 1025


Signature

22/05/2009
Date

HANDOVER DOCUMENTATION



10 July 2009

Document # 529
File Code: ARV-5 / 0404

rentokill
PO Box 164
MARULAN NSW 2579

Att: Des Collis
Fax: 93197841

**RE: TERMITE PROTECTION WARRANTY
WARRIWOOD STAGE 1 NEW A,B & C, MACPHERSON STREET WARRIWOOD NSW 2102**

Please be advised that Southern Cross Constructions (NSW) Pty Ltd have activated the termite protection warranty for 'Trithor' for the Warriewood Project. This form has been attached for your reference, and the original shall be posted to your office (PO Box 164, Marulan NSW 2579).

This warranty is for 50 years. In 7 years, upon expiration of the 7 year builders warranty, the official name that this warranty applies to is to be changed to the Building Owner 'Anglican Retirement Villages' for the remaining period, details as follows:

Anglican Retirement Villages
Level 2, Century Corporate Centre 62 Norwest Bvd
Baulkham Hills NSW 1755

Phone: 9421 5319
Fax: 9421 2217

Should you have any questions relating to the above please contact the undersigned

Regards,
Southern Cross Constructions (NSW) Pty Ltd

Terry Edwards
Project Manager

Anglican Retirement Villages Michael Lockwood Fax: 9421 2217

TRITHOR


WAYS BETTER TERMITE PROTECTION

TRITHOR WARRANTY ACTIVATION FORM

To initiate your Trithor Termite Protection Warranty you must complete this form in full and return it to your Trithor Authorised Installer within 30 days of taking possession of your new property.

I have read and understood all the information contained in the Trithor Information kit including the details of the Trithor Termite Damage Warranty. I now wish to activate my Warranty.

Name: Terry Edward (Southern Cross Construction Group Pty Ltd. - Project Manager)

Signature: 

Address where Trithor is installed: Lot # 6 House # The Ferneres & Lakeland Buildings

Street Name: Macpherson Street

Suburb: Warriewood State: NSW

Mail Address if different: _____

Builder: Southern Cross Construction (NSW) P/L Completion Date: 14/1/09 ~~20/7/09~~

Trithor Warranty #: 14796 Telephone: (02) 9363 11 11

Mobile: 0420960254

Email: terrye@southerncrossgroup.net



YOU MUST COMPLETE THIS FORM TO ACTIVATE YOUR WARRANTY

*Subject to Annual Inspection. Refer to the warranty document for complete details.

TRITHOR

WAYS BETTER TERMITE PROTECTION

Certificate of Compliance in accord AS 3660.1



TRITHOR

This Certificate is to certify that Trithor Termite Protection was installed by a Trithor Authorised Installer in accord with the specifications of the manufacturer, Ensystem Australia Pty Ltd. Trithor Termite Protection complies with the requirements of AS 3660.1 Termite management - New building work the referenced Standard of the Building Code of Australia. Trithor Termite Protection forms part only of the termite management system for a new property. A concrete slab constructed in accordance with AS 2870 Residential slabs and footing construction is also required.

NB a copy of this Report is to be attached to the Trithor Termite Damage Warranty N^o: 2009-01-0004337STB

Installation Date: 14 January 2009
Installation Address: 6-14 Macpherson Street
WARRIEWOOD NSW 2102

Builder: Southern Cross Constructions

Building Description: Residential Building
Total Square Metres Installed: 0
N^o of Service Penetrations Protected: 0
Lineal Metres of Building Protected: 587.6

Trithor Authorised Operator: Safeguard Termite Barriers. Authorisation N^o: 14796
Address: PO Box 164
Marulan, NSW 2579 Phone: 1300 855 822

Comments:
Installed Trithor Termite protection to the perimeter cavity only of the residential building on site.

Signed by: _____

TRITHOR

WAYS BETTER TERMITE PROTECTION

Trithor* Termite Protection System

PAGE 1

Site Installation Report

This Site Installation Report is to certify that Trithor Termite Protection was installed by a Trithor Authorised Installer in accord with the specifications of Ensysstex Australia Pty Ltd. Trithor Termite Protection complies with the requirements of AS 3660.1 Termite management - New building work the referenced Standard of the Building Code of Australia. Trithor Termite Protection forms part only of the termite management system for a new property. A concrete slab constructed in accord with AS 2870 Residential slabs and footing construction is also required. This report forms part of the Certificate of Installation required by AS 3660.1.

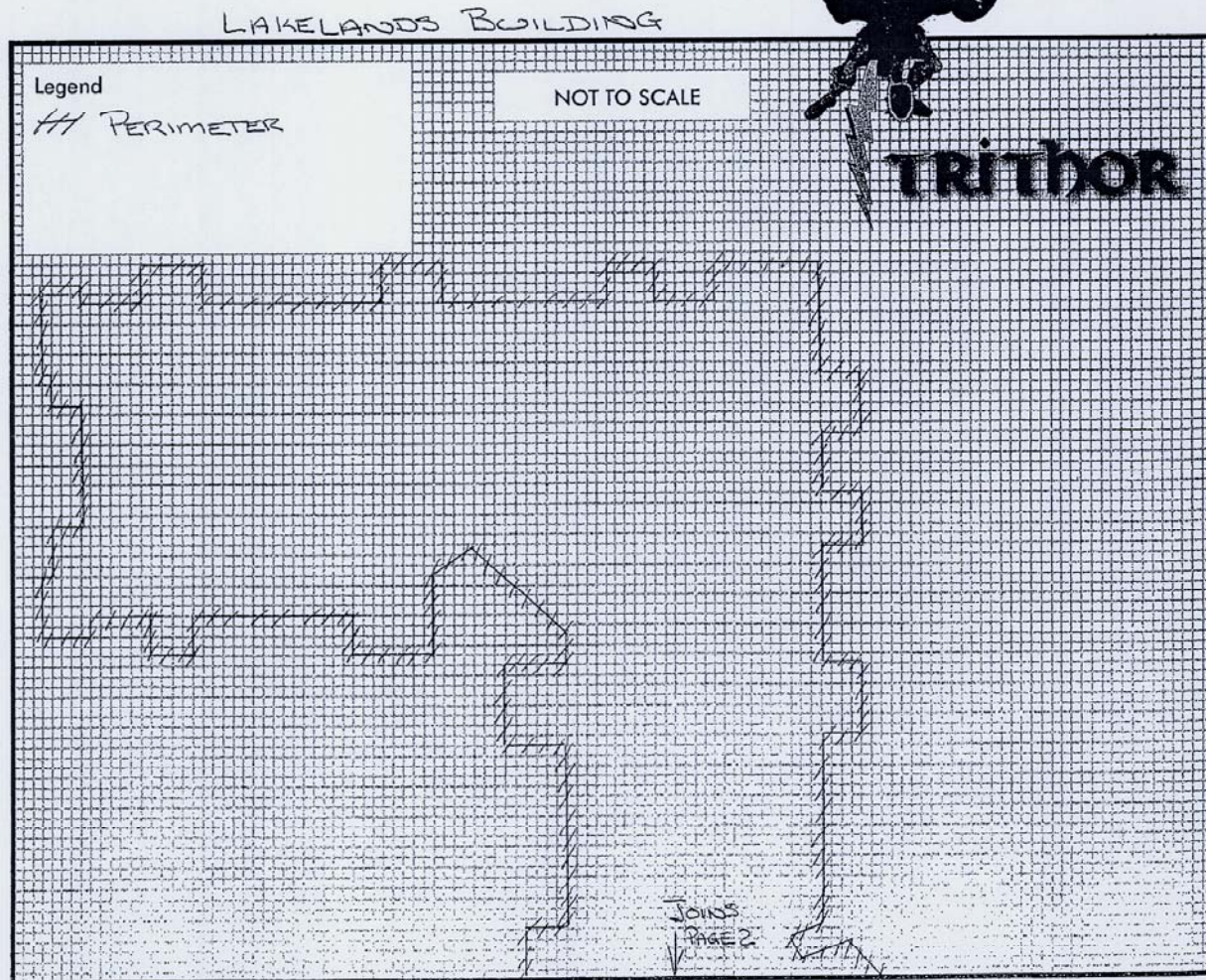
NB a copy of this Report is to be attached to the Trithor Termite Damage Warranty No: 2009-01

-0004337SE

Installation Date: 14-1-09 Builder: SOUTHERN CROSS

Installation Address: 6-14 MACPHERSON CONSTRUCTIONS

STREET, WARRIEWOOD Installer: SAFEGUARD



*Trithor is a Trademark of Ensysstex Inc. For use by Trithor Authorised Installers only.

TRITHOR

WAYS BETTER TERMITE PROTECTION

Trithor* Termite Protection System

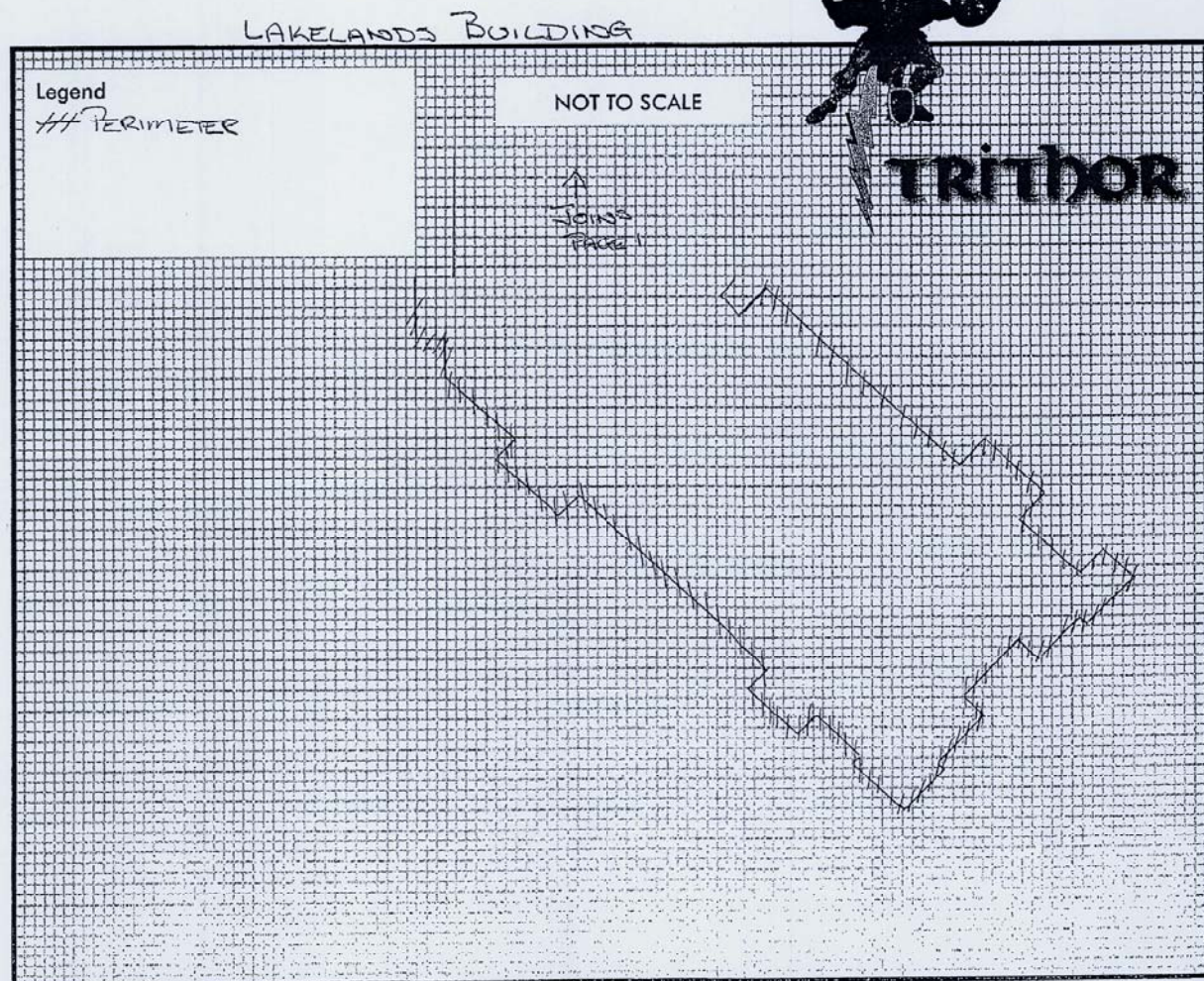
PAGE 2

Site Installation Report

This Site Installation Report is to certify that Trithor Termite Protection was installed by a Trithor Authorised Installer in accord with the specifications of Ensysstex Australia Pty Ltd. Trithor Termite Protection complies with the requirements of AS 3660.1 Termite management - New building work the referenced Standard of the Building Code of Australia. Trithor Termite Protection forms part only of the termite management system for a new property. A concrete slab constructed in accord with AS 2870 Residential slabs and footing construction is also required. This report forms part of the Certificate of Installation required by AS 3660.1.

NB a copy of this Report is to be attached to the Trithor Termite Damage Warranty No: 2009-01
-00043375

Installation Date: 14-1-09 Builder: SOUTHERN CROSS
Installation Address: 6-14 MACPHERSON CONSTRUCTION
STREET, WARRIEWOOD Installer: SAFEGUARD



*Trithor is a Trademark of Ensysstex Inc. For use by Trithor Authorised Installers only.

TRITHOR

WAYS BETTER TERMITE PROTECTION

Trithor* Termite Protection System

Site Installation Report

This Site Installation Report is to certify that Trithor Termite Protection was installed by a Trithor Authorised Installer in accord with the specifications of Ensysyex Australia Pty Ltd. Trithor Termite Protection complies with the requirements of AS 3660.1 Termite management - New building work the referenced Standard of the Building Code of Australia. Trithor Termite Protection forms part only of the termite management system for a new property. A concrete slab constructed in accord with AS 2870 Residential slabs and footing construction is also required. This report forms part of the Certificate of Installation required by AS 3660.1.

NB a copy of this Report is to be attached to the Trithor Termite Damage Warranty No: 2009-01

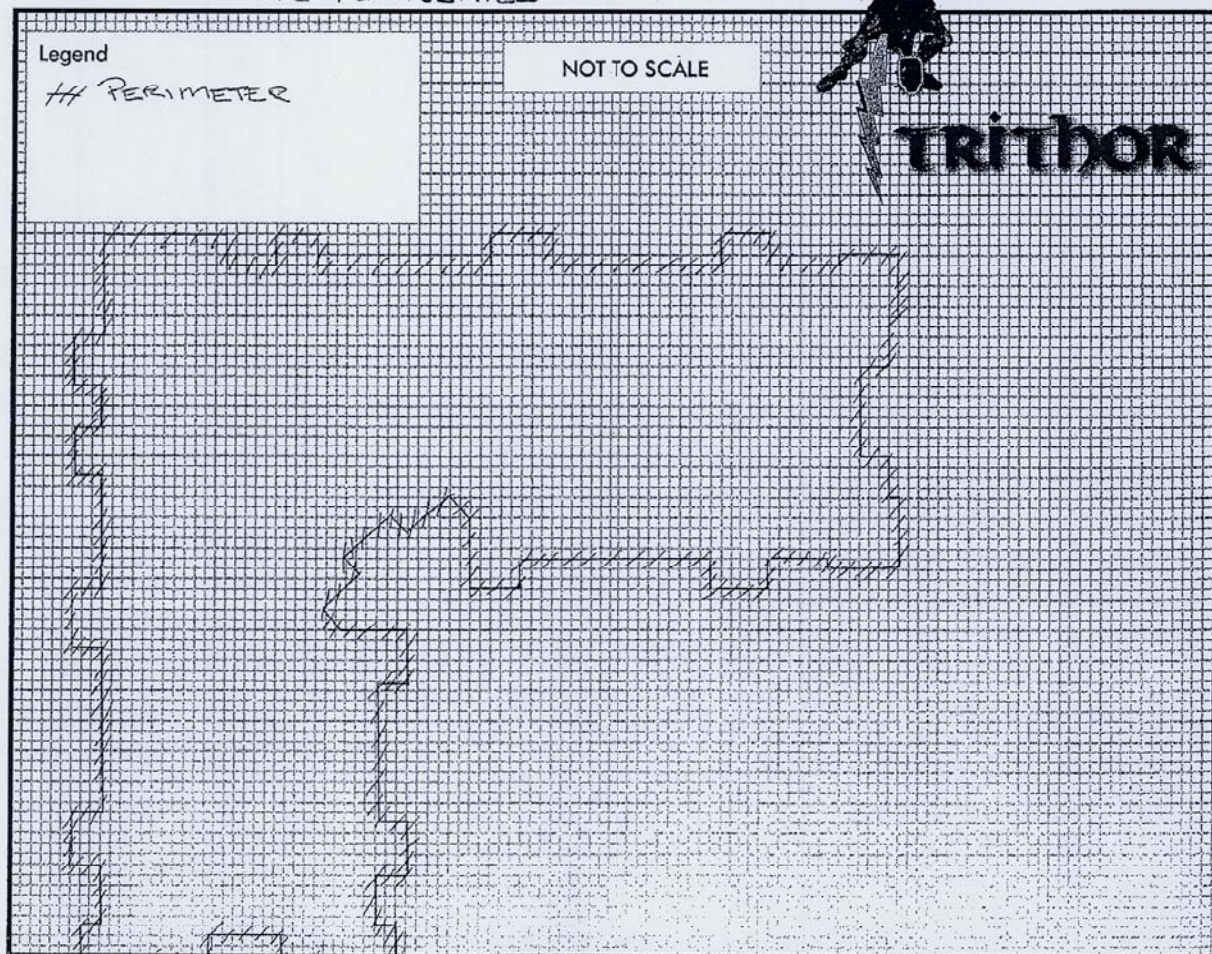
-000433751

Installation Date: 14-1-09 Builder: SOUTHERN CROSS

Installation Address: 6-14 MACPHERSON CONSTRUCTIONS

STREET, WARRIEWOOD Installer: SAFEGUARD

THE FERNERIES



*Trithor is a Trademark of Ensysyex Inc. For use by Trithor Authorised Installers only.

TRITHOR

TRITHOR WARRANTY - CONDITIONS

Subject to the following illustrations, conditions and exclusions, Ensystem Australia Pty Ltd (Ensystem) warrants the performance of the Trithor Termite Protection System installed on the Covered Property.

WARRANTY

Subterranean Termite Control

During the Warranty Period, Ensystem agrees to be responsible for the control of subterranean termites attacking the Covered Property that breach or otherwise penetrate a properly installed, intact, undiminished, unmodified and undamaged Trithor component that was installed in the Covered Property by a Trithor Authorised Operator. Ensystem only provides for control of subterranean termites that are discovered and notified to Ensystem during the Warranty Period.

Subterranean Termite Damage Repair

During the Warranty Period, Ensystem agrees to be responsible for the repair of damage caused by Subterranean Termites that breach or otherwise penetrate a properly installed, intact, undiminished, unmodified and undamaged Trithor component of the Covered Property by a Trithor Authorised Operator. Ensystem's responsibility for repairing, remediating or replacing Compliant Damage is limited to a maximum of \$100,000.00 (including GST). The Warranty only covers damage discovered and notified to Ensystem during the Warranty Period. Ensystem's responsibility for repairing, remediating or replacing Compliant Damage is limited to a maximum of \$100,000.00 (including GST). After certain elapsed periods of time during the Warranty Period, Ensystem's responsibility for repairing, remediating or replacing Compliant Damage is limited to a maximum of \$100,000.00 (including GST).

WARRANTY PERIOD

The Warranty Period shall begin on the Warranty Inception Date and shall have a minimum of one year. The Warranty Period shall be automatically extended for one year provided that a Qualified Inspection of the Covered Property for the presence of Subterranean Termites, performed at the Property by a Qualified Inspector, has been performed since the last (immediately prior) anniversary of the Warranty Inception Date or since the Warranty Inception Date in the case of the first year of the Warranty Period. The Warranty Period will, upon the performance of the required annual Qualified Inspections, be extended for fifty consecutive one year periods.

WARRANTY PERIOD EXPIRATION AND WARRANTY TERMINATION

The Warranty Period will not be extended if the Warranty Period has already terminated if all Qualified Inspections required during the Warranty Period have not been performed and to the extent required, this Warranty shall be terminated automatically and without notice to the Property Owner on the anniversary of the Warranty Inception Date that occurs without a Qualified Inspection of the Covered Property having been performed since the last Warranty Inception Date anniversary. All of Ensystem's obligations according to this Warranty shall be terminated upon the termination of the Warranty.

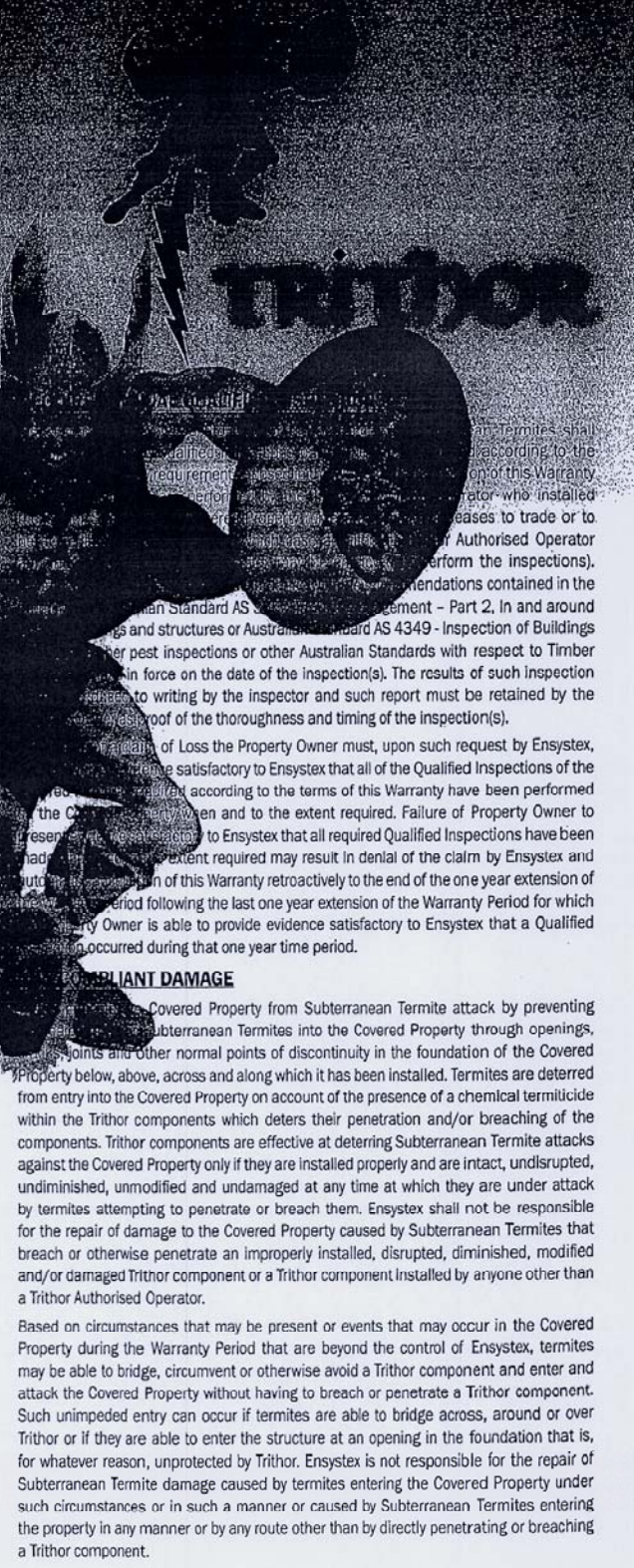
LIMITATION ON ENSYSTEM'S RESPONSIBILITY FOR LOSS

Beginning on the tenth anniversary of the Warranty Inception Date and for the remainder of the Warranty Period, Ensystem shall be responsible for the repair of a portion of any Compliant Damage and only if the amount of Loss exceeds a certain amount, with the amount of Loss for which Ensystem is responsible varying based on the number of years that have elapsed between the Warranty Inception Date and the date on which the Compliant Damage is notified to Ensystem, as follows:

Property Owner shall be responsible for the first \$2,500.00 of Loss notified to Ensystem between the tenth and fifteenth anniversaries of the Warranty Inception Date.

Property Owner shall be responsible for the first \$5,000.00 of Loss notified to Ensystem between the fifteenth and twentieth anniversaries of the Warranty Inception Date.

Property Owner shall be responsible for the first \$10,000.00 of Loss notified to Ensystem between the twentieth and fiftieth anniversaries of the Warranty Inception Date.



NO OTHER WARRANTIES

No other warranties, representations or other terms and conditions of any nature not expressly contained in this Warranty shall have any force unless they have been reduced to writing and signed by all parties and are expressed to be a modification of this Warranty. This clause does not exclude statutory warranties or conditions.

PROPERTY OWNER'S RESPONSIBILITIES

The Property Owner must:

1. not damage, remove, modify, tamper or interfere with any Trithor component.
2. act with the utmost good faith in the event of a Loss or in filing a claim for Loss. If the Property Owner lodges a fraudulent claim or provides false or misleading information, Ensystem may cancel the Warranty and/or deny responsibility for the claim.
3. immediately notify Ensystem in writing if termites or termite damage are found in the Covered Property.
4. have all Qualified Inspections performed, at their expense, according to the terms contained in the Required Annual Qualified Inspections Section of this Warranty.
5. not allow or fail to prevent the accumulation of wood, rubbish or timber against the exterior of the Covered Property.
6. not allow the Trithor barrier dividing the soil surface from the Covered Property to be bridged or broken by any material or matter through or over which termites may bypass a Trithor component and enter the Covered Property.
7. not allow the finished ground level against the exterior of the Covered Property to, at any point, exceed in height the level of the lowest Trithor component in the Covered Property opposite that point.

EXCLUSIONS

No cover under this Warranty shall be provided in respect of:

1. the repair of any Subterranean Termite Damage discovered or reported after the termination or expiration of the Warranty.
2. consequential or indirect loss or loss of any nature except as specified herein. Ensystem will not pay or compensate the Property Owner and Ensystem hereby disclaims any responsibility for devaluation of the Covered Property, stress, loss of sleep, anxiety, alternative accommodation or loss of income.
3. any Loss associated with Betterment.
4. any Loss on account of alterations, additions or modifications to the Covered Property that disrupt, diminish, modify or damage a Trithor component.
5. damage occurring to chattels of any nature including, but not limited to, antiques, artwork, heirlooms, paintings, carpets, floor coverings, fittings, furniture, personal property or stored materials.
6. damage to fences, gates, poles, bridges, wharves, jetties, landscaping timbers, garden structures or pergolas.
7. damage to buildings connected to or additions to the Covered Property that are not protected by Trithor.
8. damage to the Covered Property that occurs other than as a result of a performance failure of a Trithor component.
9. damage to the Covered Property if any Trithor component protecting the Covered Property was installed by any person or entity other than a Trithor Authorised Operator.

OTHER CONDITIONS

Control of termites that penetrate or breach a Trithor component and that are the responsibility of Ensystem to control shall be controlled according to the method of control chosen by Ensystem.

All repair, remediation and replacement of Compliant Damage performed according to and/or on account of this Warranty shall be performed at the direction and expense of Ensystem. Ensystem shall not be responsible for reimbursement or other compensation for the repair, remediation or replacement of Compliant Damage when the repair, remediation or replacement is performed or otherwise arranged for by the Property Owner or some other third party (including a Trithor Authorised Operator) not working under the authority and direction of Ensystem, unless prior to performance of such repair, remediation or replacement, written authorisation for such repair, remediation or replacement was received from Ensystem.

The responsibility of Ensystem to perform repairs to the Covered Property shall be limited in scope to the repair, remediation or replacement of components of the Covered Property that Ensystem deems necessary to correct or remedy the effects on the Covered Property of any Compliant Damage.

The valuation of Loss shall be computed from the following formula. Loss = cost of the materials and labour (at prevailing local per hour wage rates) deemed necessary by Ensystem to correct or remedy the effects of the Compliant Damage plus applicable taxes, permits and insurance plus twenty five percent for overhead.

During the inspection and authentication of any Compliant Damage to the Covered Property, Ensystem will not be responsible for creating openings to and/or dismantling any part of the Covered Property directly upon which no visible evidence of Compliant Damage is found by Ensystem.

Any repairs by Ensystem to the Covered Property will be performed to match, as close as reasonably possible, the existing fit, finish and appearance of the damaged area of the Covered Property. If any part or component of an item of decor (e.g. paint, tile, flooring, wallpaper, panelling, moulding, trim, siding, roofing, brick, finishes, etc.) of the Covered Property sustains Compliant Damage or is damaged during the repair of Compliant Damage, Ensystem will make a reasonable effort during repair or replacement of this part or component of this item of decor to match it to existing, similar, undamaged parts or components of this item of decor. However, Ensystem will not be responsible for repairing and/or replacing undamaged parts or components of the item of decor in order that they exactly and indistinguishably match parts or components of the item that were repaired or replaced.

During the performance of repairs, Ensystem, in lieu of removing and replacing any damaged component of the Covered Property, can instead, at its option, reinforce and/or reconstruct the component or part of the Covered Property containing the component in such a way that the structural purpose of the component is preserved, supplemented or transferred to another component, existing or installed by Ensystem, provided that the area of the Covered Property that contains such component shall have an appearance after repair, when viewed from the exterior or interior living spaces of the Covered Property, similar to its appearance before it was damaged.

DISPUTE RESOLUTION

Any dispute under, or arising out of, this Warranty shall be referred to the Institute of Arbitrators & Mediators Australia, for resolution. Each case will first be referred to a Conciliator appointed by the Institute unless either party wishes to proceed directly to arbitration. If the conciliation is not satisfactorily concluded within six weeks or if the parties want to proceed directly to arbitration, the Institute will appoint an Arbitrator who will make a final and binding award.

DEFINITIONS

Betterment means that part of any Loss associated with the use of materials of superior quality to those used in the construction of the Covered Property.

Compliant Damage means Subterranean Termite Damage to the Covered Property caused by Subterranean Termites that, according to the terms of this Warranty, is the responsibility of Ensystem to repair, remediate or replace. Compliant Damage is damage caused or created by Subterranean Termites that breach or otherwise penetrate a properly installed, intact, undiminished, unmodified and undamaged Trithor component. Any other damage is Non-Compliant Damage and is not the responsibility of Ensystem to repair, remediate or replace.

Covered Property means the residential or commercial building(s) specifically identified in this Warranty as being protected by Trithor. Additions made to the Covered Property within which Trithor is not installed by a Trithor Authorised Operator are not covered by this Warranty.

Trithor Authorised Operator means a person or entity who has within the last year been accredited or reaccredited by Ensystem to install Trithor and to offer this Warranty.

Loss means all costs and expense incurred to repair, remediate or replace Compliant Damage. According to this Warranty, Ensystem may not be responsible for paying to repair, remediate or replace all Loss that occurs to the Covered Property.

Non-Compliant Damage means Subterranean Termite Damage to the Covered Property that, according to the terms of this Warranty, is not the responsibility of Ensystem to repair, remediate or replace. Non-Compliant Damage includes any damage not classified as Compliant Damage.

Property Owner means the holder of the Warranty including successors in title.

Subterranean Termites means termites of the families Rhinotermitidae and Termitidae, which require soil contact or a continuous supply of moisture and are regarded as the group of termites most damaging to buildings.

Subterranean Termite Damage means Subterranean Termite consumption of **Timber** that impairs the integrity of structural and/or internal Timber(s).

Timber means the wood or wood derived products used in the structural framing and finishes of the Covered Property.

Trithor Termite Protection System or Trithor means the Trithor components installed in the Covered Property by a Trithor Authorised Operator.

Warranty Inception Date means the date on which the Warranty took effect on the Covered Property. The Trithor Warranty Activation Form supplied as part of the 'Trithor handover kit' for the Covered Property must first be completed and forwarded to the Trithor Authorised Operator who installed the Trithor System in the Covered Property.

Warranty Period means the period beginning on the Warranty Inception Date and ending on the date of the termination of this Warranty.

TRITHOR

TERMITE MANAGEMENT

Trithor Termite Protection has been installed in your property in accordance with Australian Standard AS 3660 Termite Management Part 1: New building work and the Building Code of Australia. This is an integrated system that requires ongoing maintenance by you.

VERY IMPORTANT INFORMATION

Standard AS 3660 and the Building Code provide for your property to be protected against concealed entry by subterranean termites from the soil into the building through the ground. This is achieved by creating a barrier to termite entry. However, it is important to note that even "a complete termite barrier" does not guarantee protection in accordance with this Standard of Australia because the barriers can be bridged by structures such as bridge barriers, the evidence can be seen in the following inspections."

Regular Inspections Required

It is therefore imperative that you have your home inspected on a regular basis. The Australian Standard advises that competent inspections should be carried out at least once a year on a regular basis, but more frequent inspections are strongly recommended. It is a condition of your Trithor Warranty that you must contact your Trithor Authorised Installer to perform a regular maintenance inspection of your property at least once every year.

Looking after your Trithor Termite Protection

If the Trithor Termite Protection System is in any way disturbed or damaged, then concealed subterranean termite infestation is possible. Trithor Termite Protection can be damaged when you perform building alterations, repairs or additions involving the erection of pergolas, awnings, verandahs, etc. It may also be damaged if you perform any landscaping work or gardening work which involves raising the level of the soil or paths adjacent to the protected structure. Such work may bridge (cover over) the termite barrier. If you intend performing such work you should consult first with your Trithor Authorised Installer.

Important Care of Your Property to Minimise Termite Infestation

Air vents or weep holes around your property must never be blocked.

Drainage You should ensure that the ground level around your property are maintained to minimise water entering under the building. Where necessary sub-surface drains should be installed and maintained to assist with the drainage. On a sloping site you may need to install surface or agriculture drains on the uphill side of your property to divert groundwater away.

perimeter wall may allow termites to enter. Termite entry points should not be sealed. Storage areas such as stored materials and attachments such as pergolas, steps, pergolas, provide access for termites to enter your property. Attachments to buildings are not provided with termite protection. If they cannot be easily inspected, they should be separated from the building by a clear gap of at least 25mm.

Timber fences and landscape timbers Any part of a timber fence or landscape timber which comes in contact with the ground is at risk of termite infestation. All timber in ground contact should be termite and decay resistant.

Regular maintenance Minimise the presence of loose timber, wood, mulch, and areas of direct wood to soil contact around your property. Fix faulty plumbing, leaks, dampness caused by drainage, condensation or leaks from the roof or other areas onto, onto, or around the structure(s). Remove water pools around your property. Remove any dead trees and stumps which are nesting sites for subterranean termites. Rake mulch away from the structure to expose weep holes and the edge of the concrete slab.

If you become aware of any breaches to your Trithor System; or changes to the building structure such as those detailed above, you should immediately contact your Trithor Authorised Installer.

What if you find live termites?

If you find live termites you should immediately contact your Trithor Authorised Installer. It is very important that the termite workings remain undisturbed until a method of management has been determined.

ABOUT TERMITES

No property in mainland Australia is safe from termites. Termites are the cause of the greatest economic losses of timber in service. Australia's subterranean termite species (white ants) are the most destructive timber pests in the world. In fact it can take "as little as three months for a termite colony to severely damage almost all the timber in a home".

How Termites Attack Homes The most destructive species live in large underground nests containing more than a million timber destroying insects. The problem arises when a nest matures near your property. Buildings tend to provide natural shelter and a food source for the termites. The gallery system of a single colony may exploit food sources over as much as one hectare, with individual galleries extending up to 50 metres or more to enter buildings, where there is a smorgasbord of timber to feast upon.

Even concrete slabs do not act as a barrier; termites can penetrate through cracks in the slab to gain access. They also build mud tubes around the slab to gain access to above ground timbers.

Termite Damage Once in contact with timber, termites excavate it, often leaving only a thin veneer on the outside. If left undiscovered, the economically important species can cause many thousands of dollars damage and cost two to five thousand dollars (or more) to treat.

Subterranean Termite Ecology Termites are social insects usually living in large underground nests. They tunnel underground to enter the building and then remain hidden within the timber making it difficult to locate their presence. Where timbers are concealed, as in most modern properties, it makes it more difficult to locate their presence. Especially if gardens have been built up and termite barriers are either not in place or poorly maintained.

There are about 3,000 species of termites found in the world with about 300 species in Australia. All termites eat some form of plant cellulose. Most termites simply eat humus in the soil, or grass and leaves. Very few species eat wood, and only a small number of these eat sound wood (i.e. wood that has not been decayed by fungus). Some 20 or more species cause serious economic loss to Australian buildings.

Termite Biology. Termites or "white ants" are social insects that work and live together in groups called colonies. Each colony contains several 'castes' which differ in body shape, behaviour and tasks performed.



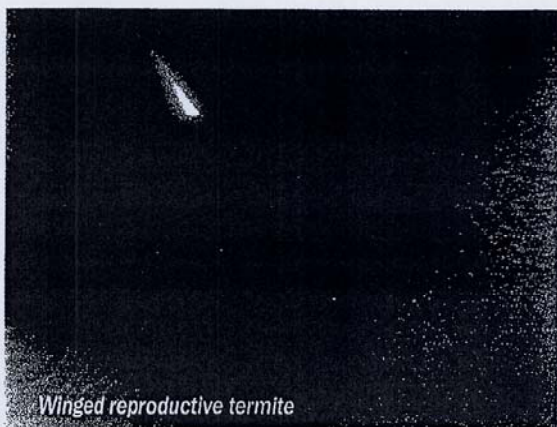
Termite colony members.

The reproductive pair (king and queen termite) mate and control the entire colony. In most species that cause economic loss in Australia the queen becomes 'physogastric'. This means she has a grossly enlarged abdomen to enable her to lay millions of eggs. She essentially becomes an egg laying machine.

The eggs hatch into the nymphal stage and through a series of moults develop into one of the adult castes described below. The worker caste has the largest number of individuals within the colony and is responsible for building the nest, tending eggs and young termites, gathering food and feeding those castes that are unable to feed themselves. Worker termites are wingless, blind and do not reproduce. Workers perform almost all the tasks in the colony except for defence and reproduction.

The soldier caste can be distinguished from the other castes by their head. The head of the soldier caste is large, dark and may have large mandibles or a 'nasute' (pointed) protuberance. Soldier termites defend the colony against predators such as ants and are also unable to reproduce.

The winged reproductive caste are the potential kings and queens of new colonies. This caste has eyes and wings and usually leaves the parent colony in large swarms. They do not fly far before shedding their wings.



Winged reproductive termite



Call 13 35 36

www.trithor.com.au

Installed by:



HUGHES TRUEMAN PTY LTD
AS TRUSTEE FOR HTL REINHOLD TRUST

ABN 53 831 529 091
QUALITY CERTIFIED AS 9001

www.hughestrueman.com.au

Level 2, 60 Pacific Highway
PO Box 151
St Leonards NSW 1590

Australia
T 02 9439 2633
F 02 9438 4505

stleonards@hughestrueman.com.au

4th June, 2009

Terry Edwards
Sothern Cross Constructions
Address
Address

Dear Sir,

**STRUCTURAL DESIGN AND INSPECTION CERTIFICATE
WARRIEWOOD BROOK RETIREMENT VILLAGE STAGE 1 (BUILDINGS A B + C)**

This is to certify that:

The structural engineering components of this project as shown on our drawings numbers TFS01, TFS02, TFS03, TFS05, TFS06, TFS07, TFS08, TFS09, TFS10, TFS11, TFS12, TFS13, TFS14, TFS20, TFS21, TFS22, TFS23, TFS30, TFS31, LLS05, LLS06, LLS10, LLS11, LLS12, LLS20, LLS30 & LLS31 were designed by a practising structural engineer in accordance with the relevant Australian Standards, Building Code of Australia and accepted engineering practice and principles.

A practising structural engineer from this office carried out inspections during construction of the works. At the time of the inspections the works inspected were considered to be in accordance with the structural drawings, or when minor corrections were required the engineer left written instructions for rectification with the builder.

In carrying out the design and inspections we exercised the degree of skill, care and diligence normally exercised by Consulting Engineers in similar circumstances.

This certificate does not relieve other parties of their responsibilities for the works.

Yours sincerely

HUGHES TRUEMAN
JOHN WILLIAMS
Director





STRUCTURAL ADEQUACY - INSTALLATION CERTIFICATE

Project Name	Warriewood - Stage 1
Address	6-14 Macpherson Street Warriewood NSW 2101
Part of Building to be certified	Post-Tensioning to New Buildings

I hereby certify that:

- a) The works have been inspected during construction and have been completed in accordance with the nominated Standards of Performance.

Measure and/or system	Standards of Performance
Structure general	BCA2008 Part B1 including: Imposed Actions/Loads: • AS/NZS 1170.0 (general principles) • AS/NZS 1170.1 (permanent & other actions) Structural Resistance of Materials & Forms of Construction: • AS3600 (concrete construction)

- b) I am a properly qualified person and have a good working knowledge of the relevant codes and standards referenced above. (My qualifications and accreditations are listed below)

Relevant qualifications and accreditations: _____
 B.Eng (Civil) - UTS
 MIP Aust

- c) The information contained in this statement is true and accurate to the best of my knowledge.

Name: Shaun Sullivan
 Company: Structural Systems
 Address: 20 Hilly St Mortlake
 Phone No. 87676200 Fax No. 87676299

Signature [Signature]

Date 2/6/09



STRUCTURAL ADEQUACY - DESIGN CERTIFICATE

Project Name	Warriewood - Stage 1
Address	6-14 Macpherson Street Warriewood NSW 2101
Part of Building to be certified	Post-Tensioning to New Buildings

I hereby certify that:

- a) The drawings and specifications have been designed in accordance with the nominated Standards of Performance.

Measure and/or system	Standards of Performance
Structure general	BCA2008 Part B1 including: Imposed Actions/Loads: <ul style="list-style-type: none"> • AS/NZS 1170.0 (general principles) • AS/NZS 1170.1 (permanent & other actions) Structural Resistance of Materials & Forms of Construction: <ul style="list-style-type: none"> • AS3600 (concrete construction)

- a) I am a properly qualified person and have a good working knowledge of the relevant codes and standards referenced above. (My qualifications and accreditations are listed below)

Relevant qualifications and accreditations:

B Eng (Civil) - UTS
 MIEAust

- b) The information contained in this statement is true and accurate to the best of my knowledge.

Name: Shaun Sullivan
 Company: Structural Systems
 Address: 20 Hilly St Mortlake
 Phone No. 87676200 Fax No. 87676299

Shaun Sullivan
 Signature

2/6/09
 Date

FIRE RESISTING CONSTRUCTION – REINFORCED CONCRETE - INSTALLATION CERTIFICATE

Project Name	Warriewood – Stage 1
Address	6-14 Macpherson Street Warriewood NSW 2101
Part of Building to be certified	The structural engineering components of this project as shown on our drawings numbers TFS01, TFS02, TFS03, TFS05, TFS06, TFS07, TFS08, TFS09, TFS10, TFS11, TFS12, TFS13, TFS14, TFS20, TFS21, TFS22, TFS23, TFS30, TFS31, LLS05, LLS06, LLS10, LLS11, LLS12, LLS20, LLS30 & LLS31

I hereby certify that:

- a) The works have been inspected during construction and have been completed in accordance with the nominated Standards of Performance.

Measure and/or system	Standards of Performance
Fire resisting construction (Reinforced Concrete)	BCA2008 Part C2, AS 1170.1 - 1989, AS 1170.2 - 1989, AS 1170.4 - 1993, AS 3600 - 2001, AS 3700 - 2001, AS 4100 - 1998 and in accordance with a tested prototype to the scheduled Architects drawings.

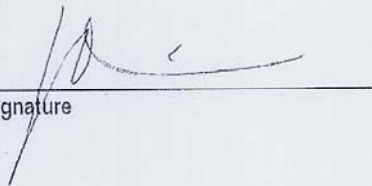
- b) I am a properly qualified person and have a good working knowledge of the relevant codes and standards referenced above. (My qualifications and accreditations are listed below)

Relevant qualifications and accreditations: BE AIAUST

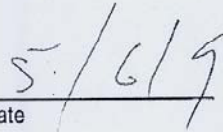
- c) The information contained in this statement is true and accurate to the best of my knowledge.

Name: JOHN R L WILLIAMS
 Company: HUGHES TRUMAN
 Address: L2 60 CALIFORNIA HWY ST LIEDMANNS
 Phone No. 94392633 Fax No. 94384505

Signature

A handwritten signature in black ink, consisting of a stylized initial 'A' followed by a horizontal line and a small flourish.

Date

A handwritten date '5/6/9' in black ink, written above a horizontal line.

STRUCTURAL ADEQUACY - DESIGN CERTIFICATE

Project Name	Warriewood - Stage 1
Address	6-14 Macpherson Street Warriewood NSW 2101
Part of Building to be certified	The structural engineering components of this project as shown on our drawings numbers TFS01, TFS02, TFS03, TFS05, TFS06, TFS07, TFS08, TFS09, TFS10, TFS11, TFS12, TFS13, TFS14, TFS20, TFS21, TFS22, TFS23, TFS30, TFS31, LLS05, LLS06, LLS10, LLS11, LLS12, LLS20, LLS30 & LLS31

I hereby certify that:

- a) The drawings and specifications listed above have been designed in accordance with the nominated Standards of Performance.

Measure and/or system	Standards of Performance
Structure general	<p>BCA2008 Part B1 including:</p> <p>Imposed Actions/Loads:</p> <ul style="list-style-type: none"> • AS/NZS 1170.0 (general principles) • AS/NZS 1170.1 (permanent & other actions) • AS/NZS 1170.2 (wind actions) • AS 1170.1 (dead & live loads) • AS 1170.2 (wind loads) • AS1170.4 (earthquake loads) <p>Structural Resistance of Materials & Forms of Construction:</p> <ul style="list-style-type: none"> • AS3700 (masonry) • ASAS4100 (steel structures) • AS/NZS 4600 (cold form steel structures) • Residential & low rise steel framing NASH standard • AS3600 (concrete construction) • AS2327.1 (composite steel & concrete) • AS/NZS 1664.1 or 2 (aluminium construction) • AS1720.1 (design of timber structures) • AS1684.2 or .3 or .4 (timber structures) • AS2159 (Piling) • AS1860 (particleboard structural flooring) • AS1735.2 (lift shafts without an FRL) <p>Concrete External Walls</p> <ul style="list-style-type: none"> • BCA2007 Specification C1.11 <p>Balustrades</p> <ul style="list-style-type: none"> • AS1170.1 Clause 4.7.1

- a) I am a properly qualified person and have a good working knowledge of the relevant codes and standards referenced above. (My qualifications and accreditations are listed below)

Relevant qualifications and accreditations: BE, MIE Aust


b) The information contained in this statement is true and accurate to the best of my knowledge.

Name: JOHN R L WILLIAMS

Company: HUGHES TRUMAN

Address: L2 60 PACIFIC HWY STEUN ANNS

Phone No. 9439 2633 Fax No. 9438 4505



Signature

5/6/9

Date



25/378 Parramatta Road, Homebush NSW 2140

Postal Address: PO Box 114
Sydney Markets NSW 2129
Phone: (02) 9764 5555
Fax: (02) 9764 5559
Email: enquiries@basefire.com.au
Web: www.basefire.com.au
ABN: 61 109 092 891

PORTABLE FIRE EXTINGUISHERS - INSTALLATION CERTIFICATE

Project Name	Warriewood – Stage 1
Address	6-14 Macpherson Street Warriewood NSW 2101
Part of Building to be certified	All new work (entire building)

I hereby certify that:

- a) The works have been inspected during construction and have been completed in accordance with the nominated Standards of Performance.

Measure and/or system	Standards of Performance
Portable fire extinguishers	BCA2008 Clause E1.6 and AS 2444 – 2001

- b) I am a properly qualified person and have a good working knowledge of the relevant codes and standards referenced above. (My qualifications and accreditations are listed below)

Relevant qualifications and accreditations: Senior Design Engineer

- c) The information contained in this statement is true and accurate to the best of my knowledge.

Name: Daniel Lehn

Company: Base Fire Protection Pty Ltd

Address: Unit 25/378 Parramatta Road, Homebush 2140

Phone No. 02 9864 5555 Fax No. 02 9764 5559

Signature

Date 4/6/09





25/378 Parramatta Road, Homebush NSW 2140

Postal Address: PO Box 114
Sydney Markets NSW 2129
Phone: (02) 9764 5555
Fax: (02) 9764 5559
Email: enquiries@basefire.com.au
Web: www.basefire.com.au
ABN: 61 109 092 891

AUTOMATIC FIRE SUPPRESSION SYSTEMS - INSTALLATION CERTIFICATE

Table with 2 columns: Field Name, Value. Rows include Project Name (Warriewood - Stage 1), Address (6-14 Macpherson Street Warriewood NSW 2101), and Part of Building to be certified (All new work (entire building)).

I hereby certify that:

- a) The works have been inspected during construction and have been completed in accordance with the nominated Standards of Performance.

Table with 2 columns: Measure and/or system, Standards of Performance. Row: Automatic fire suppression systems (Sprinklers in carpark only) | BCA2008 Specification E1.5 and AS 2118.1 - 1999

- b) I am a properly qualified person and have a good working knowledge of the relevant codes and standards referenced above. (My qualifications and accreditations are listed below)

Relevant qualifications and accreditations: Senior Design Engineer

- c) The information contained in this statement is true and accurate to the best of my knowledge.

Name: Daniel Lehn
Company: Base Fire Protection Pty Ltd
Address: Unit 25 / 378 Parramatta Road, Homebush, NSW 2140
Phone No. 02 9764 5555 Fax No. 02 9764 5559

Handwritten signature of Daniel Lehn

3-6-09

Signature

Date





25/378 Parramatta Road, Homebush NSW 2140

Postal Address: PO Box 114
Sydney Markets NSW 2129
Phone: (02) 9764 5555
Fax: (02) 9764 5559
Email: enquiries@basefire.com.au
Web: www.basefire.com.au
ABN: 61 109 092 891

AUTOMATIC FIRE SUPPRESSION SYSTEMS - DESIGN CERTIFICATE

Project Name	Warriewood – Stage 1
Address	6-14 Macpherson Street Warriewood NSW 2101
Part of Building to be certified	All new work (entire building)

I hereby certify that:

- a) The drawings and specifications have been designed in accordance with the nominated Standards of Performance.

Measure and/or system	Standards of Performance
Automatic fire suppression systems (Sprinklers in carpark only)	BCA2008 Specification E1.5 and AS 2118.1 – 1999

- a) I am a properly qualified person and have a good working knowledge of the relevant codes and standards referenced above. (My qualifications and accreditations are listed below)

Relevant qualifications and accreditations: Senior Design Engineer

- b) The information contained in this statement is true and accurate to the best of my knowledge.

Name: Daniel Lehn for Bill O,Shea

Company: Base Fire Protection Pty Ltd

Address: Unit 25/378 Parramatta Road, Homebush, NSW 2140

Phone No. 02 9764 5555 Fax No. 02 9764 5559

4-6-09

Date

Signature



SOUND INSULATION - DESIGN CERTIFICATE

Project Name	<i>Warriewood – Stage 1</i>
Address	<i>6-14 Macpherson Street Warriewood NSW 2101</i>
Part of Building to be certified	<i>All new work (entire building)</i>

I hereby certify that:

- a) The drawings and specifications have been designed in accordance with the nominated Standards of Performance.

Measure and/or system	Standards of Performance
Sound insulation	BCA2008 Part F5, Specification F5.2 and Specification F5.5, AS/NZS 1276.1 - 1999 or ISO 717.1 – 1996 and AS/ISO 717.2 - 2004

- a) I am a properly qualified person and have a good working knowledge of the relevant codes and standards referenced above. (My qualifications and accreditations are listed below)

Relevant qualifications and accreditations:

1. Master Degree of Mechanical Engineering
2. Bachelor Degree of Mechanical Engineer
3. Diploma of HVAC and Refrigeration

- b) The information contained in this statement is true and accurate to the best of my knowledge.

Name: George Wei

Company: Acoustic Logic Consultancy

Address: 9 Sarah St, Mascot

Phone No. 8338 9888 Fax No. 8338 8399

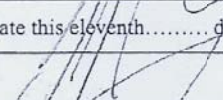
FINAL/INTERIM FIRE SAFETY CERTIFICATE

Environmental Planning and Assessment Regulation 2000

Amendments

Schedule 1

(Form 15) Final/Interim Fire Safety Certificate
Issued under the Environmental Planning and Assessments Regulation 2000

Type of Certificate (see note 1)	Interim	
Certification	I, Jonathan Ryan	
Name owner/agent Address	of, Banabelle Electrical Pty Limited Unit 6, 11 Ponderosa Parade WARRIEWOOD NSW 2102	
See Note 2 (over leaf) assessment requirements	Certify that: a) Each of the essential fire measures listed below: <ul style="list-style-type: none"> • Has been assessed by a person (chosen by me) who was properly, qualified to do so, and • Was found, when it was assessed, to have been properly implemented and to be capable of performing to a standard not less than that required by the most recent fire safety schedule (refer below) for the building for which the certificate is issued. 	
See Note 3 (over leaf) relevant fire safety schedule	b) The information contained in this certificate is, to the best of my knowledge and belief, true and accurate.	
Identification of building (location)	Street: Side of street: nearest cross street: house/unit no or name:	6-14 Macpherson Street Warriewood North Boondah Street Units 1 to 64
Particulars of building	Whole / Part Description of part (where applicable)	Internal Units 1 to 64 inclusive
Date of assessment	11 th July 2009	
Owner's details	Name: Address:	Anglican Retirement Village, Diocese of Sydney PO Box 284, Castle Hill NSW 1765 PO Box 414 Cammeray NSW 2062
Essential Fire Safety Measures (see note 3)	Measure: Apartment Smoke Detectors	Standard of Performance AS/ 3786-1993
Date of certificate	Date this eleventh..... day of ...July 2009	
Signature	 Owner / Agent	

FINAL/INTERIM FIRE SAFETY CERTIFICATE

Environmental Planning and Assessment Regulation 2000

Amendments

Schedule 1

(Form 15) Final/Interim Fire Safety Certificate

Issued under the Environmental Planning and Assessments Regulation 2000

- A copy of this certificate together with the relevant fire safety schedule must be forwarded to the council and the Commissioner of the New South Wales Fire Brigades.
- A copy of this certificate together with the relevant fire safety schedule must be prominently displayed in the building .

Notes for completing Final/Interim Fire Safety Certificate

Note 1 An interim fire safety certificate or a final fire safety certificate is required before:

- An interim occupation certificate can be issued to allow a partially completed new building (including an altered portion of, or an extension to, a new building) to be occupied or used, or
- An interim occupation certificate can be issued to allow a change of building use for part of an existing building.

A final fire safety certificate is required:

- Before a final occupation certificate can be issued to allow a new building (including an altered portion of, or extension to, a new building) to be occupied or used, or
- Before a final occupation certificate can be issued to allow a change of building use for an existing building, or
- In accordance with a fire safety order given by a council.

An interim fire safety certificate is issued for part of the building and may deal only with those essential fire safety measures appearing on the most recent fire safety schedule (see note 3) relevant to the part of the building for which an interim occupation certificate will be sought.

A final fire safety certificate must deal with all essential fire safety measures appearing on the most recent fire safety schedule (see note 3), subject to the following:

An interim fire safety certificate or a final fire safety certificate need not deal with those essential fire safety measures which have been the subject of some other final safety certificate or annual fire safety statement within the previous 6 months, unless the person or authority responsible for determining the relevant development consent, complying development certificate, construction certificate or fire safety order, has specified otherwise in the schedule.

See also note 3.

Note 2 The person who carried out the assessment:

- Must inspect and verify the performance of each fire safety measure being assessed, and
- In the case of a (interim or final) fire safety certificate for a new building (not an alteration to, or enlargement or extension of an existing building) must test the operation of each item of fire safety equipment in the building.

Note 3 The relevant essential fire safety measures are those specified in the most recent fire safety schedule, attached to one of the following:

- Development consent fore a change of building use,
- Complying development certificate for the erection of a building or a change of building use.
- Construction certificate for proposed building work, including building work associated with a change of building use.
- A fire safety order.

The fire safety schedule will also identify the required standard of performance for each essential fire safety measure.

ROOF CONSTRUCTION AND COVERING - INSTALLATION CERTIFICATE

Project Name	Warriewood – Stage 1
Address	6-14 Macpherson Street Warriewood NSW 2101
Part of Building to be certified	All new work (entire building)

I hereby certify that:

- a) The works have been inspected during construction and have been completed in accordance with the nominated Standards of Performance.

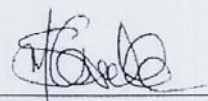
Measure and/or system	Standards of Performance
Roof construction and covering	BCA2008 Clauses B1.4 and F1.5 • AS/NZS 1562.3 & AS4266-1-2,3 & 6 (plastic roofing) • AS2049 & AS2060 (roof tiling) • AS/NZS 2908.1 with safety mesh installed in accordance with AS/NZS 1562.3 (Corrugated cement sheets) • AS1562.1 (Metal roofing)

- b) I am a properly qualified person and have a good working knowledge of the relevant codes and standards referenced above. (My qualifications and accreditations are listed below)

Relevant qualifications and accreditations: DIRECTOR, PROJECT MANAGER

- c) The information contained in this statement is true and accurate to the best of my knowledge.

Name: SIMON CARNOVALE
 Company: ACE Metal Roofing PL
 Address: 3 Narraba Road Narrabeen
 Phone No. 9913 3800 Fax No. 9913 1899



 Signature

30/6/09

 Date

FIXED PLATFORMS, WALKWAYS, STAIRWAYS & LADDERS - INSTALLATION CERTIFICATE

Project Name	Warriewood - Stage 1
Address	6-14 Macpherson Street Warriewood NSW 2101
Part of Building to be certified	All new work (entire building)

I hereby certify that:

- a) The works have been inspected during construction and have been completed in accordance with the nominated Standards of Performance.

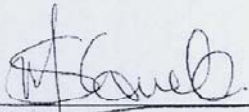
Measure and/or system	Standards of Performance
ROOF SAFETY SYSTEM - Fixed platforms, walkways, stairways, and ladders	BCA2008 Clauses D1.16, D2.18 and H1.6, AS1657-1992 and Work Cover Authority requirements

- b) I am a properly qualified person and have a good working knowledge of the relevant codes and standards referenced above. (My qualifications and accreditations are listed below)

Relevant qualifications and accreditations: DIRECTOR / PROJECT MANAGER

- c) The information contained in this statement is true and accurate to the best of my knowledge.

Name: SIMON CARWALE
 Company: ARF METAL ROOFING PTY LTD
 Address: 3 WARWICK ROAD MURRYBEECH NSW 2101
 Phone No. 9913 3800 Fax No. 9915 1899



 Signature

30/6/09

 Date



40 Saggart Field Road, Minto NSW 2566 PO Box 312, Campbelltown NSW 2560
Phone: (02) 8796 9000 Fax: (02) 8796 9090

Interim Compliance Certificate

WORKS HAVE NOW BEEN COMPLETED AT:

Warriewood Brook RACF – Stage
6-14 Macpherson Street, Warriewood NSW
Buildings A, B & C

Safemaster Height Safety Solutions certifies that the **ROOF SAFETY SYSTEM** has been fitted in accordance with Australian Standards 1891, 1657 and the WorkCover Handbooks Parts 1 and 2 – 'Safe Work on Roofs'.

This is an Interim Certificate only and is valid until: **03/08/2009**

In compliance with the above regulations and standards, full 12 month Certification will be provided upon receipt of all outstanding monies.

Issued on behalf of
Safemaster Height Safety Solutions Pty. Ltd.
ABN 39 104 705 320

A handwritten signature in black ink, appearing to read "Andrew Pridham", written over a horizontal dotted line.

Andrew Pridham
Director
Project Manager
Height Safety Technical Consultant

Safemaster takes **NO** responsibility for the misuse of, or tampering of this Height Safety System.

Safemaster takes **NO** responsibility for **ANY** damage occurring to this Height Safety System by other contractors during the construction period.

This system **MUST** only be used by personnel who are trained in the use of this system.

SARKING - INSTALLATION CERTIFICATE

Project Name	Warriewood - Stage 1
Address	6-14 Macpherson Street Warriewood NSW 2101
Part of Building to be certified	All new work (entire building)

I hereby certify that:

- a) The works have been inspected during construction and have been completed in accordance with the nominated Standards of Performance.

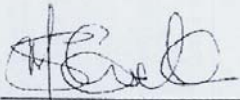
Measure and/or system	Standards of Performance
Sarking for roof and walls	BCA2008 F1.6 and AS/NZS4200.1 and .2

- b) I am a properly qualified person and have a good working knowledge of the relevant codes and standards referenced above. (My qualifications and accreditations are listed below)

Relevant qualifications and accreditations: DIRECTOR, PROJECT MANAGER.

- c) The information contained in this statement is true and accurate to the best of my knowledge.

Name: SIMON CARNEALE
 Company: AGF METAL ROOFING PTY LTD
 Address: 3 WARARA ROAD NARRABEEN
 Phone No. 9913 3800 Fax No. 9913 1899.



 Signature

30/6/09

 Date



FIRE HYDRANT SYSTEM - INSTALLATION CERTIFICATE

Project Name	Warriewood - Stage 1
Address	6-14 Macpherson Street Warriewood NSW 2101
Part of Building to be certified	All new work (entire building)

I hereby certify that:

- a) The works have been inspected during construction and have been completed in accordance with the nominated Standards of Performance.

Measure and/or system	Standards of Performance
Fire hydrant system	BCA2008 Clause E1.3 and AS 2419.1 - 2005

- b) I am a properly qualified person and have a good working knowledge of the relevant codes and standards referenced above. (My qualifications and accreditations are listed below)

Relevant qualifications and accreditations: Plumber drainer and Gasfitter Licence number - 27727C

- c) The information contained in this statement is true and accurate to the best of my knowledge.

Name: Greg Lord

Company: McPherson Plumbing

Address: PO Box 3019, Erina, NSW 2251

Phone No: 0243653940 Fax No. 0243653928

Signature 

Date 5th June 2009



FIRE SEALS PROTECTING OPENINGS IN FIRE RESISTING COMPONENTS OF THE BUILDING – PLUMBING PENETRATIONS - INSTALLATION CERTIFICATE

Project Name	Warriewood – Stage 1
Address	6-14 Macpherson Street Warriewood NSW 2101
Part of Building to be certified	All new work (entire building)

I hereby certify that:

- a) The works have been inspected during construction and have been completed in accordance with the nominated Standards of Performance.

Measure and/or system	Standards of Performance
Fire seals protecting openings in fire resisting components of the building- Plumbing and penetrations	BCA2008 Clause C3.15 and AS 1530.4 and AS 4072.1 and installed in accordance with the tested prototype.

- b) I am a properly qualified person and have a good working knowledge of the relevant codes and standards referenced above. (My qualifications and accreditations are listed below)

Relevant qualifications and accreditations: Plumber drainer and Gasfitter Licence number – 27727C

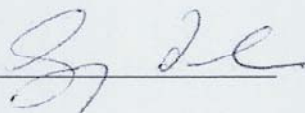
- c) The information contained in this statement is true and accurate to the best of my knowledge.

Name: Greg Lord

Company: McPherson Plumbing

Address: PO Box 3019, Erina, NSW 2251

Phone No: 0243653940 Fax No: 0243653928

Signature 

Date 5th June 2009



HOSE REEL SYSTEMS - INSTALLATION CERTIFICATE

Project Name	Warriewood – Stage 1
Address	6-14 Macpherson Street Warriewood NSW 2101
Part of Building to be certified	All new work (entire building)

I hereby certify that:

- a) The works have been inspected during construction and have been completed in accordance with the nominated Standards of Performance.

Measure and/or system	Standards of Performance
Hose reel systems	BCA2008 Clause E1.4 and AS 2441 – 2005

- b) I am a properly qualified person and have a good working knowledge of the relevant codes and standards referenced above. (My qualifications and accreditations are listed below)

Relevant qualifications and accreditations: Plumber drainer and Gasfitter Licence number – 27727C

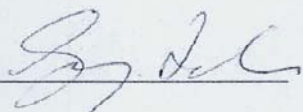
- c) The information contained in this statement is true and accurate to the best of my knowledge.

Name: Greg Lord

Company: McPherson Plumbing

Address: PO Box 3019, Erina, NSW 2251

Phone No: 0243653940 Fax No: 0243653928

Signature 

Date 5th June 2009



STORMWATER DRAINAGE - INSTALLATION CERTIFICATE

Project Name	Warriewood - Stage 1
Address	6-14 Macpherson Street Warriewood NSW 2101
Part of Building to be certified	All new work (entire building)

I hereby certify that:

- a) The works have been inspected during construction and have been completed in accordance with the nominated Standards of Performance.

Measure and/or system	Standards of Performance
Stormwater drainage	BCA2008 Clause F1.1 and AS/NZS 3500.3.2

- b) I am a properly qualified person and have a good working knowledge of the relevant codes and standards referenced above. (My qualifications and accreditations are listed below)

Relevant qualifications and accreditations: Plumber drainer and Gasfitter Licence number - 27727C

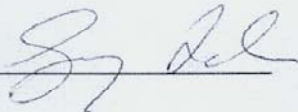
- c) The information contained in this statement is true and accurate to the best of my knowledge.

Name: Greg Lord

Company: McPherson Plumbing

Address: PO Box 3019, Erina, NSW 2251

Phone No. 0243653940 Fax No. 0243653928

Signature  Date 5th June 2009

Showroom:
14 Harris Street, St Marys NSW
Mon-Fri 8.00am - 4.30pm
E: sales@noiseshield.com.au
W: www.noiseshield.com.au

NOISESHIELD WINDOWS PTY LTD
ACN 009 904 161
ABN 34 009 904 161
P.O. Box 899, St Marys, NSW, 1790
P: 02 9833 0855 F: 02 9833 0856

GLAZING - INSTALLATION CERTIFICATE

Project Name	Warriewood - Stage 1
Address	6-14 Macpherson Street Warriewood NSW 2101
Part of Building to be certified	All new work (entire building)

I hereby certify that:

- a) The works have been inspected during construction and have been completed in accordance with the nominated Standards of Performance.

Measure and/or system	Standards of Performance
Glazing	<p>Glazing in external walls</p> <ul style="list-style-type: none"> • BCA2008 Clause F1.13 • AS2047 <p>Other Glazing</p> <ul style="list-style-type: none"> • AS1288 (including bi-fold doors, revolving doors, skylights, shopfront doors & one off doors) • All external glazing had a maximum reflectivity index of 25% to comply with DA condition B33

- b) I am a properly qualified person and have a good working knowledge of the relevant codes and standards referenced above. (My qualifications and accreditations are listed below)

Relevant qualifications and accreditations:

Industry Experience

Carpenter / Joiner Trade Certificate

- c) The information contained in this statement is true and accurate to the best of my knowledge.

Name: Michael Brookes

Company: Noiseshield Windows Pty Ltd

Address: 14 Harris Street, St Marys NSW 2760

Phone No. 02 9833 0855

Fax No. 02 9833 0856

Signature

Date: 29 June 2009

REMAILI BROS. PTY. LIMITED
 UNIT 12, 65 ELIZABETH STREET, PO Box 5049
 WETHERILL PARK N.S.W. 2164

FIXED PLATFORMS, WALKWAYS, STAIRWAYS & LADDERS - INSTALLATION CERTIFICATE

Project Name	Warriewood - Stage 1
Address	6-14 Macpherson Street Warriewood NSW 2101
Part of Building to be certified	All new work (entire building)

I hereby certify that:

- a) The works have been inspected during construction and have been completed in accordance with the nominated Standards of Performance.

Measure and/or system	Standards of Performance
Fixed platforms, walkways, stairways, and ladders	BCA2008 Clauses D1.16, D2.18 and H1.8, AS1657-1992 and Work Cover Authority requirements

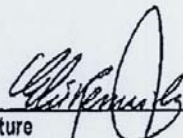
- b) I am a properly qualified person and have a good working knowledge of the relevant codes and standards referenced above. (My qualifications and accreditations are listed below)

Relevant qualifications and accreditations: Licence No. R014 314 C
Remaili Bros P/L

- c) The information contained in this statement is true and accurate to the best of my knowledge.

Name: Elie Remaili
 Company: Remaili Bros P/L ABN 89 003 509420
 Address: 12/ 65 Elizabeth St. Wetherill Park 2164
 Phone No. 02 9756 2544 Fax No. 02 9756 1858

Signature



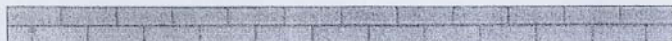
Date

23/06/09

REMAILI BROS. PTY. LIMITED
 UNIT 12, 65 ELIZABETH STREET, PO Box 5049
 WETHERILL PARK N.S.W. 2164

F.B. BUILDING PTY LTD

BRICK AND BLOCKLAYING CONTRACTORS



ABN: 50 106 485 009
P.O. BOX 231, SEAFORTH NSW 2092
PHONE: 9949 8607
FAX: 9949 8708
EMAIL: fbuild@bigpond.net.au

FIRE SEALS PROTECTING MISCELLANEOUS GAPS JOINTS AND PENETRATIONS IN FIRE RESISTING COMPONENTS OF THE BUILDING - INSTALLATION CERTIFICATE

Project Name	Warriewood - Stage 1
Address	6-14 McPherson Street Warriewood NSW 2101
Part of Building to be certified	All new work (entire building)

I hereby certify that:

- a) The works have been inspected during construction and have been completed in accordance with the nominated Standards of Performance.

Measure and/or system	Standards of Performance
Fire seals protecting openings in fire resisting components of the building- Joints, gaps and miscellaneous penetrations	BCA2008 Clause C3.15 and AS 1530.4 and AS 4072.1 and installed in accordance with the tested prototype.

- b) I am a properly qualified person and have a good working knowledge of the relevant codes and standards referenced above. (My qualifications and accreditations are listed below)

Relevant qualifications and accreditations:

35 year experience in the construction industry, Contractor Licence #179937C and Supervisor Licence #30403S

- c) The information contained in this statement is true and accurate to the best of my knowledge.

Name: **FRANK BARBALACE**

Company: **F.B. BUILDING PTY LTD**

Address: **UNIT C/4, 1 CAMPBELL PARADE, MANLY VALE NSW 2093**

Phone No. **(02) 9949 8607**

Fax No. **(02) 9949 8708**

Signature

Wednesday, 17 June 2009
Date

C4/1 CAMPBELL PARADE, MANLY VALE NSW 2093
CONTRACTOR LIC. NO. 179937C

F.B. BUILDING PTY LTD

BRICK AND BLOCKLAYING CONTRACTORS

ABN: 50 106 485 009
P.O. BOX 231, SEAFORTH NSW 2092
PHONE: 9949 8607
FAX: 9949 8708
EMAIL: fbbuild@bigpond.net.au

FIRE RESISTING CONSTRUCTION – MASONRY CONSTRUCTION - INSTALLATION CERTIFICATE

Project Name	Warriewood – Stage 1
Address	6-14 McPherson Street Warriewood NSW 2101
Part of Building to be certified	All new work (entire building)

I hereby certify that:

- a) The works have been inspected during construction and have been completed in accordance with the nominated Standards of Performance.

Measure and/or system	Standards of Performance
Fire resisting construction (Masonry)	BCA2008 Part C2, AS 1170.1 - 1989, AS 1170.2 - 1989, AS 1170.4 - 1993, AS 3600 - 2001, AS 3700 - 2001, AS 4100 - 1998 and in accordance with a tested prototype to the Architects drawings.

- b) I am a properly qualified person and have a good working knowledge of the relevant codes and standards referenced above. (My qualifications and accreditations are listed below)

Relevant qualifications and accreditations:

35 year experience in the construction industry, Contractor Licence #179937C and Supervisor Licence #30403S

- c) The information contained in this statement is true and accurate to the best of my knowledge.


Name: FRANK BARBALACE

Company: F.B. BUILDING PTY LTD

Address: UNIT C/4, 1 CAMPBELL PARADE, MANLY VALE NSW 2093

Phone No. (02) 9949 8607

Fax No. (02) 9949 8708



Signature

Wednesday, 17 June 2009

Date

C4/1 CAMPBELL PARADE, MANLY VALE NSW 2093
CONTRACTOR LIC. NO. 179937C



GDK Hydraulics Consulting Pty Ltd
ABN 64 114 102 279
Suite 6, 17 Burwood Road
Burwood NSW 2134 Australia
Phone: (02) 9745 0700
Fax: (02) 9745 0722
Email: office@gdk.net.au

DESIGN CERTIFICATION

ADDRESS 6-14 McPherson Street, Warriewood
PROJECT Stage 1 – Building A, 'The Ferneries' and Buildings B & C, 'Lakelands'

Pursuant to the provision of Clause A2.2(a)(iii) of the Building Code of Australia 2008, Vol 1.

I, George Koutoulas of GDK Hydraulics Consulting Pty Ltd
6/17 Burwood Road, Burwood, NSW, 2134

Qualifications and experience: Full Member of AHSCA

Hereby certify:

That the Fire Services Design Drawings have been designed to comply with:

- a) the relevant clauses of the Building Code of Australia, as follows:
Clause E1.3 – Fire Hydrants
Clause E1.4 – Fire Hose Reels
- b) the relevant Australian Standards listed in the Building Code of Australia as follows:
AS 2419.1 – 2005
AS 2441 – 2005
- c) The drawings relevant to this Certification are numbered:-
Hydraulics – H-01B, H-02B, H-03B, H-04B, H-05B, H-06B, H-08B, H-09B, H-10B & H-17B

Signature: *G. Koutoulas*

Date: 6 July, 2009

IKON

DOORS PTY LTD

ABN: 54 110 094 301

FIRE DOOR CERTIFICATE

Certificate Number 0181

Project Name: Warriewood Ferniers
Building Address: Macpherson Street
Warriewood NSW 2102

Part/Whole Building: Whole

The member company nominated certifies that the fire door sets identified on the attached Schedule have been inspected and labeled as required by the appropriate regulatory authorities in accordance with Australian standard AS1530.4 – 2005 and AS1905.1 – 2005 in respect to the evidence of Compliance at Clause 6.3 or 6.4. All fire doors are supplied and installed to comply in respect to supply, labeling and installation in accordance with the following Australian standards and BCA codes:

BCA	Clause C3.4 & Clause C1.1 type A
AS 1530.4-2005	Methods For fire tests on building materials, components and structures, Part 4: Fire-resistance test of elements of building construction
AS 1905.1-2005	Components for the protection of openings in fire-resistant walls, Part 1: Fire-resistant doorsets

Certified by **IKON DOORS PTY LTD**

Name of Certifier: Michael Ferguson

Signature:

Date:

03.08.09

TAG REGISTER
CERTIFICATE NUMBER 0181

DATE: 03.08.09

PROJECT: SOUTHERN CROSS WARRIEWOOD FERNIERS

Door no.	Level	FIRE RATING	DOOR SIZE	TAG NO.
1.01 ENTRY	GROUND	1 HOUR	2040X920X38	17736
2.01 ENTRY	GROUND	1 HOUR	2040X920X38	17735
3.01 ENTRY	GROUND	1 HOUR	2040X920X38	17734
4.01 ENTRY	GROUND	1 HOUR	2040X920X38	17730
5.01 ENTRY	GROUND	1 HOUR	2040X920X38	17731
6.01 ENTRY	GROUND	1 HOUR	2040X920X38	17791
7.01 ENTRY	GROUND	1 HOUR	2040X920X38	17732
8.01 ENTRY	GROUND	1 HOUR	2040X920X38	17725
9.01 ENTRY	GROUND	1 HOUR	2040X920X38	17728
10.01 ENTRY	GROUND	1 HOUR	2040X920X38	17726
11.01 ENTRY	GROUND	1 HOUR	2040X920X38	17724
12.01 ENTRY	GROUND	1 HOUR	2040X920X38	17799
DAG 07 CORR	GROUND	2 HOUR	2045X1740X45	24489/24487
DAG 01 STAIR	GROUND	1 HOUR	2050X870X38	17727
DAG 09 STAIR	GROUND	1 HOUR	2050X870X38	17733
12.01 ENTRY	LEVEL 1	1 HOUR	2040X920X38	17799
13.01 ENTRY	LEVEL 1	1 HOUR	2040X920X38	17729
14.01 ENTRY	LEVEL 1	1 HOUR	2040X920X38	17723
15.01 ENTRY	LEVEL 1	1 HOUR	2040X920X38	17794
16.01 ENTRY	LEVEL 1	1 HOUR	2040X920X38	17796
17.01 ENTRY	LEVEL 1	1 HOUR	2040X920X38	17793
18.01 ENTRY	LEVEL 1	1 HOUR	2040X920X38	17798
19.01 ENTRY	LEVEL 1	1 HOUR	2040X920X38	17784
20.01 ENTRY	LEVEL 1	1 HOUR	2040X920X38	17787
21.01 ENTRY	LEVEL 1	1 HOUR	2040X920X38	17785
22.01 ENTRY	LEVEL 1	1 HOUR	2040X920X38	17788
DAF 06 CORR	LEVEL 1	2 HOUR	2045X1540X45	24490/24486
DAF 01 STAIR	LEVEL 1	1 HOUR	2050X870X38	17782
DAF 08 STAIR	LEVEL 1	1 HOUR	2050X870X38	17797

IKON

DOORS PTY LTD

ABN: 54 110 094 301

FIRE DOOR CERTIFICATE

Certificate Number 0182

Project Name: Warriewood Lakelands

Building Address: Macpherson Street
Warriewood NSW 2102

Part/Whole Building: Whole

The member company nominated certifies that the fire door sets identified on the attached Schedule have been inspected and labeled as required by the appropriate regulatory authorities in accordance with Australian standard AS1530.4 – 2005 and AS1905.1 – 2005 in respect to the evidence of Compliance at Clause 6.3 or 6.4. All fire doors are supplied and installed to comply in respect to supply, labeling and installation in accordance with the following Australian standards and BCA codes:

BCA	Clause C3.4 & Clause C1.1 type A
AS 1530.4-2005	Methods For fire tests on building materials, components and structures, Part 4: Fire-resistance test of elements of building construction
AS 1905.1-2005	Components for the protection of openings in fire-resistant walls, Part 1: Fire-resistant doorsets

Certified by **IKON DOORS PTY LTD**

Name of Certifier: Michael Ferguson

Signature:

Date:

03.08.09

TAG REGISTER
CERTIFICATE NUMBER 0182

DATE: 03.08.09

PROJECT: **SOUTHERN CROSS WARRIEWOOD LAKELANDS**

Door no.	Level	FIRE RATING	DOOR SIZE	TAG NO.
DBCB-04 SWITCH ROOM	BASEMENT	2 HOUR	2045X870X38	24450
DBCB-05 COMMS	BASEMENT	2 HOUR	2045X870X38	24451
DBCB-06 PLANT ROOM	BASEMENT	2 HOUR	2045X1740X45	24474/24475
DBCB-11 SPRINKLER	BASEMENT	2 HOUR	2040X870X38	24418
23.01 ENTRY	GROUND	1 HOUR	2040X920X38	17469
24.01 ENTRY	GROUND	1 HOUR	2040X920X38	17721
25.01 ENTRY	GROUND	1 HOUR	2040X920X38	17743
26.01 ENTRY	GROUND	1 HOUR	2040X920X38	17702
27.01 ENTRY	GROUND	1 HOUR	2040X920X38	16444
28.01 ENTRY	GROUND	1 HOUR	2040X920X38	16292
29.01 ENTRY	GROUND	1 HOUR	2040X920X38	17709
30.01 ENTRY	GROUND	1 HOUR	2040X920X38	17781
47.01 ENTRY	GROUND	1 HOUR	2040X920X38	17708
48.01 ENTRY	GROUND	1 HOUR	2040X920X38	17753
49.01 ENTRY	GROUND	1 HOUR	2040X920X38	17746
50.01 ENTRY	GROUND	1 HOUR	2040X920X38	17705
51.01 ENTRY	GROUND	1 HOUR	2040X920X38	17707
52.01 ENTRY	GROUND	1 HOUR	2040X920X38	17750
DBCG-01 STAIR	GROUND	1 HOUR	2050X870X38	17768
DBCG-06 CORR	GROUND	2 HOUR	2045X1740X45	24448/24449
DBCG-10 STAIR	GROUND	1 HOUR	2050X870X38	17713
DBCG-13 MEETING ROOM	GROUND	1 HOUR	2045X870X38	17754
31.01 ENTRY	LEVEL 1	1 HOUR	2040X920X38	17701
32.01 ENTRY	LEVEL 1	1 HOUR	2040X920X38	17751
33.01 ENTRY	LEVEL 1	1 HOUR	2040X920X38	17755
34.01 ENTRY	LEVEL 1	1 HOUR	2040X920X38	17467
35.01 ENTRY	LEVEL 1	1 HOUR	2040X920X38	17466
36.01 ENTRY	LEVEL 1	1 HOUR	2040X920X38	17772
37.01 ENTRY	LEVEL 1	1 HOUR	2040X920X38	17764
38.01 ENTRY	LEVEL 1	1 HOUR	2040X920X38	17776
53.01 ENTRY	LEVEL 1	1 HOUR	2040X920X38	17757
54.01 ENTRY	LEVEL 1	1 HOUR	2040X920X38	17763
55.01 ENTRY	LEVEL 1	1 HOUR	2040X920X38	17709
56.01 ENTRY	LEVEL 1	1 HOUR	2040X920X38	17704
57.01 ENTRY	LEVEL 1	1 HOUR	2040X920X38	17800
58.01 ENTRY	LEVEL 1	1 HOUR	2040X920X38	17720
DBCF-01 STAIR	LEVEL 1	1 HOUR	2050X870X38	17738
DBCF-03 STAIR	LEVEL 1	1 HOUR	2050X870X38	16448
DBCF-06 CORR	LEVEL 1	1 HOUR	2045X1740X45	24442/24443
39.01 ENTRY	LEVEL 2	1 HOUR	2040X920X38	16447
40.01 ENTRY	LEVEL 2	1 HOUR	2040X920X38	17752
41.01 ENTRY	LEVEL 2	1 HOUR	2040X920X38	17717
42.01 ENTRY	LEVEL 2	1 HOUR	2040X920X38	17710
43.01 ENTRY	LEVEL 2	1 HOUR	2040X920X38	17759
44.01 ENTRY	LEVEL 2	1 HOUR	2040X920X38	17766
45.01 ENTRY	LEVEL 2	1 HOUR	2040X920X38	17765
46.01 ENTRY	LEVEL 2	1 HOUR	2040X920X38	17775
59.01 ENTRY	LEVEL 2	1 HOUR	2040X920X38	17749
60.01 ENTRY	LEVEL 2	1 HOUR	2040X920X38	17756
61.01 ENTRY	LEVEL 2	1 HOUR	2040X920X38	17775
62.01 ENTRY	LEVEL 2	1 HOUR	2040X920X38	17773
63.01 ENTRY	LEVEL 2	1 HOUR	2040X920X38	17703
64.01 ENTRY	LEVEL 2	1 HOUR	2040X920X38	16445
DBCS-01 STAIR	LEVEL 2	1 HOUR	2050X870X38	17714
DBCS-03 STAIR	LEVEL 2	1 HOUR	2050X870X38	17716
DBCS-06 CORR	LEVEL 2	2 HOUR	2045X1740X45	24452/24453



PREMIER FIRE PROTECTION SERVICES (NSW) PTY LTD

A.C.N. 087 986 258
A.B.N. 30 087 986 258

No. 2 Railway Parade, Thornleigh NSW 2120
Phone: (02) 9980 8777 / Fax: (02) 9980 9676

FINAL FIRE SAFETY STATEMENT
Environmental Planning and Assessment Act 2000

Address of Building: APA Group
Level 19
580 George Street, Sydney

Owner's Name:

Owner's Address:

Date of Assessment: 7th July, 2009

List of essential/critical fire safety measures:


MEASURES	STANDARD OF PERFORMANCE
<i>Automatic Fire Sprinkler System</i>	<i>AS 2118</i>
<i>Emergency Warning & Intercommunication System</i>	<i>AS 2220</i>

I, CRAIG JEHN of PREMIER FIRE PROTECTION SERVICES (NSW) PTY LIMITED certify that

- (a) each of the essential fire safety measures listed above
- (i) has been assessed by a properly qualified person and;
 - (ii) was found, when it was assessed, to be properly implemented and to be capable of performing to a standard not less than that required by the most recent fire safety schedule for the building for which the schedule was issued.

(b) the information contained in this Certificate is, to the best of my knowledge and belief, true and accurate.

Date: 7th July, 2009

Signed: 

NOTES: 1. *A copy of this Statement must be forwarded to the Council and Commissioner of the New South Wales Fire Brigades and a copy must be prominently displayed in the building.*

**Attachment M2
Mechanical Ventilation Certificate of Completion and
Performance
Ventilation, Acoustics, Fire Precautions, Smoke Hazard
Management**

ADDRESS: Part L19, 580 George Street Sydney

FITOUT NUMBER: _____

Pursuant to the provisions of Section 93 of the Local Government Act 1993 ⁽ⁱ⁾, I hereby certify that the mechanical ventilation system has been installed or altered at the above premises in accordance with the Certified Drawings and Documentation specified in Attachment M1 dated _____ and in accordance with the approved plans released for construction.

The installed mechanical ventilation system has been inspected, commissioned and tested, and performs in accordance with the approved plans, the accepted Certified Design, and any dispensation granted by Council or the Fire Brigade.

Details of the performance tests as applicable are submitted in the attached documents:

1.0 air quantities, air movement, air temperature

Proof of registration under the Public Health Act:

2.0 There is a Cooling Tower or other system requiring registration under the Public Health Act.

Tick the appropriate square Yes No

2.1 The Council Registration number is N/A

I hereby certify that I am an appropriately qualified and competent person in the area of mechanical ventilation and as such can certify that the installation and performance of mechanical ventilation systems comply with the Building Code of Australia, the plans approved by Council, AS 1668 and other relevant Codes.

I possess Indemnity Insurance to the satisfaction of the building owner or my principal.

Date of Development Consent (Compulsory) _____

Date/s of Construction Certificate (Compulsory) _____

Full Name of Certifier: Norm Stolar

Qualifications and Experience ⁽ⁱⁱⁱ⁾ BE (MIE)AUST CP ENG

Address of Certifier: 94 SOUTH ST RYDALMERE

Telephone Numbers: Bus 96386100 Mob 0418221344 Fax 96387111

Signature  Date 22nd July 2009

Name of Employer, (Self or Company) COMPUTER AIR P/L

Notes:

- (i) The Local Government Act 1993 absolves Council from liability by relying on this Certificate;
- (ii) Attach all test figures and other documentary evidence to which this Certification applies;
- (iii) Please submit Curriculum Vitae with your first Certification.

ELECTRICAL & FIRE SAFETY INTERIM STATEMENT CERTIFICATE

City/Municipality/ or Shire: City of Sydney
 Building Name: HSBC Building
 Address: Level 19, 580 George Street
 Sydney NSW 2000
 Owner's/Tenancy Name: APA Group

List of essential fire or other safety measures designated by Council in the Schedule attached to its approval:-

Emergency Lighting	Emergency Lighting - BCA Clauses E4.2/E4.4 and AS/NZS 2293.1 – 2005 Exit Signs - BCA Clauses E4.5/NSW E4.6/E4.7/E4.8 and AS/NZS 2293.1 – 2005
General Power	AS/NZS 3000:2000/Amdt 3:2003
Lighting	AS/NZS 3000:2000/Amdt 3:2003, BCA Section J6 BCA 2007 Part 4.4, AS 1680 1998
Communication Cabling	AS/NZS 3085.1:2004
Connection of extra Power, Lighting and Communication Cabling to suit APA Group office revamp.	For and behalf of Grose Technologies PTY LTD 2 Rossell Place Glenfield NSW 2167

I, Matthew Grose of Grose Technologies Pty Ltd

Certify that:-

- (a) Each of the essential fire, electrical or other safety measures listed above has been assessed by a person chosen by me, and
- (b) The building has been inspected by a person chosen by me who, for the purposes of that inspection, had regard to the provisions of current Australian Standards and best practise.
- (c) The persons concerned were, to the best of my knowledge and belief, properly qualified to conduct the relevant assessments, and
- (d) Based on the results of the assessments undertaken:
 - (i) Each of the measures listed above:
 - Is capable of functioning at a standard of performance not less than that required by Australian Standards and Building Codes Australia.
- (e) The information contained in this Certificate is to the best of my knowledge and belief true and accurate.

DATE: 03-07-09

SIGNED:

Matthew Grose
Owner / Agent



ABN 39 080 621 601

60 Power Street
St Marys NSW 2760
P.O. Box 2474
Smithfield NSW 2164

22nd June, 2009.

Keystone Interiors Pty Limited
Unit 33
7-9 Percy Street,
AUBURN NSW 2144

Fax Number: 9649-9140

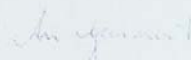
CERTIFICATE OF COMPLIANCE

This is to certify that Clearwall Contracting Pty Limited uses glass, which carries the Australian Standard 2208 and has installed this glass to Australian Standard 1288-2006 at APA Group, Level 19, 580 George Street, Sydney.

Certified by Michael Mallia, a qualified and certified glazier in excess of 20 years.

Should you require any further information, please do not hesitate to contact this office.

Yours faithfully,


Michael Mallia
Clearwall Contracting Pty Limited

Telephone: (02) 9833 3390 • Facsimile: (02) 9833 4465 • Email: ~~clearwal@bigpond.net.au~~

FIRE DAMPERS - INSTALLATION CERTIFICATE

Project Name	Warriewood - Stage 1
Address	6-14 Macpherson Street Warriewood NSW 2101
Part of Building to be certified	All new work (entire building)

I hereby certify that:

- a) The works have been inspected during construction and have been completed in accordance with the nominated Standards of Performance.

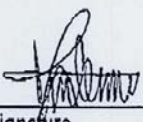
Measure and/or system	Standards of Performance
Fire dampers	BCA2008 Clause C3.15 and AS/NZS 1668.1 - 1998 (AS 1682.1-1990 and AS 1682.2-1990)

- b) I am a properly qualified person and have a good working knowledge of the relevant codes and standards referenced above. (My qualifications and accreditations are listed below)

Relevant qualifications and accreditations: Member Institute of Engineers
AUSTRALIA (MIEAUST) 2615295
MEMBER AIRAH 13944

- c) The information contained in this statement is true and accurate to the best of my knowledge.

Name: Rico Nicozeanu
 Company: GARRIC Pty. Ltd. t/a Air Conditioning Services (Aust)
 Address: 9, 2-6 Chaplin Drive Lane Cove, NSW
 Phone No. 02 9427 8779 Fax No. 02 9428-2759



 Signature

16/06/09

 Date

VENTILATION (GENERAL) - INSTALLATION CERTIFICATE

Project Name	Warriewood - Stage 1
Address	6-14 Macpherson Street Warriewood NSW 2101
Part of Building to be certified	All new work (entire building)

I hereby certify that:

- a) The works have been inspected during construction and have been completed in accordance with the nominated Standards of Performance.

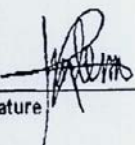
Measure and/or system	Standards of Performance
Ventilation (general)	BCA2008 Clause NSW F45(b) and AS 1668.2 - 1991

- b) I am a properly qualified person and have a good working knowledge of the relevant codes and standards referenced above. (My qualifications and accreditations are listed below)

Relevant qualifications and accreditations: MIEAUST 2615295, MAIRAH 13904

- c) The information contained in this statement is true and accurate to the best of my knowledge.

Name: RIC NICODEMUS
 Company: GARRIC Pty. LTD. 4a Air Conditioning Services (AUSTRALIA)
 Address: 9, 2-6 Chaplin Drive, Lane Cove NSW.
 Phone No. 02 9427-8179 Fax No. 92 9428-2759

Signature 

Date 16/06/09

AUTOMATIC FAIL SAFE DEVICES - INSTALLATION CERTIFICATE

Project Name	Warriewood - Stage 1
Address	6-14 Macpherson Street Warriewood NSW 2101
Part of Building to be certified	All new work (entire building)

I hereby certify that:

- a) The works have been inspected during construction and have been completed in accordance with the nominated Standards of Performance.

Measure and/or system	Standards of Performance
Automatic fail safe devices	Scheduled devices release upon trip of smoke detection, fire detection and sprinkler activation in accordance with BCA2008 clauses D2.19(b) and D2.21 (d) and/or AS 1670.1

- b) I am a properly qualified person and have a good working knowledge of the relevant codes and standards referenced above. (My qualifications and accreditations are listed below)

Relevant qualifications and accreditations: Electrician

- c) The information contained in this statement is true and accurate to the best of my knowledge.

Name: Andrew Mitchell

Company: Heyday Group Pty

Address: 9 Waterloo Road, North Ryde, NSW, 2113

Phone No. 98556666 Fax No. 98556691

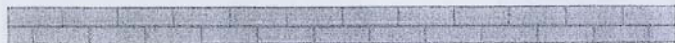


Signature

20th July 2009
Date

F.B. BUILDING PTY LTD

BRICK AND BLOCKLAYING CONTRACTORS



ABN: 50 106 485 009
P.O. BOX 231, SEAFORTH NSW 2092
PHONE: 9949 8607
FAX: 9949 8708
EMAIL: fbuild@bigpond.net.au

DAMP PROOFING - INSTALLATION CERTIFICATE

Project Name	Warriewood -- Stage 1
Address	6-14 McPherson Street Warriewood NSW 2101
Part of Building to be certified	All new work (entire building)

I hereby certify that:

- a) The works have been inspected during construction and have been completed in accordance with the nominated Standards of Performance.

Measure and/or system	Standards of Performance
Damp proofing	BCA2008 Clauses F1.9 and F1.10 and • AS/NZS2904 or AS3660.1; and • AS2870

- b) I am a properly qualified person and have a good working knowledge of the relevant codes and standards referenced above. (My qualifications and accreditations are listed below)

Relevant qualifications and accreditations:

35 year experience in the construction industry, Contractor Licence #179937C and Supervisor Licence #30403S

- c) The information contained in this statement is true and accurate to the best of my knowledge.

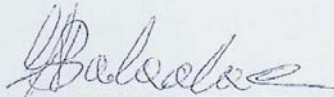
Name: FRANK BARBALACE

Company: F.B. BUILDING PTY LTD

Address: UNIT C/4, 1 CAMPBELL PARADE, MANLY VALE NSW 2093

Phone No. (02) 9949 8607

Fax No. (02) 9949 8708


Signature

Wednesday, 17 June 2009
Date

C4/1 CAMPBELL PARADE MANLY VALE NSW 2093
CONTRACTOR LIC. NO. 179937C

EMERGENCY LIGHTING - INSTALLATION CERTIFICATE

Project Name	Warriewood - Stage 1
Address	6-14 Macpherson Street Warriewood NSW 2101
Part of Building to be certified	All new work (entire building) A, and B/C

I hereby certify that:

- a) The works have been inspected during construction and have been completed in accordance with the nominated Standards of Performance.

Measure and/or system	Standards of Performance
Emergency lighting	BCA2008 Clause E4.2, E4.4 and AS 2293.1 - 2005

- b) I am a properly qualified person and have a good working knowledge of the relevant codes and standards referenced above. (My qualifications and accreditations are listed below)

Relevant qualifications and accreditations: Electrical Contractors licence 121952C _____

- c) The information contained in this statement is true and accurate to the best of my knowledge.

Name: Jonathan Ryan _____

Company: Banabelle Electrical Pty Ltd _____

Address: 6/11 Ponderosa Parade Warriewood 2102 _____

Phone No. (02) 9999-3344 _____ Fax No. (02) 9979-6667 _____

Signature



17th July 2007
Date

EXIT SIGNS - INSTALLATION CERTIFICATE

Project Name	Warriewood - Stage 1
Address	6-14 Macpherson Street Warriewood NSW 2101
Part of Building to be certified	All new work (entire building) A and B/C

I hereby certify that:

- a) The works have been inspected during construction and have been completed in accordance with the nominated Standards of Performance.

Measure and/or system	Standards of Performance
Exit signs	BCA2008 Clause E4.5, NSW E4.6, E4.8 and AS 2293.1 - 2005

- b) I am a properly qualified person and have a good working knowledge of the relevant codes and standards referenced above. (My qualifications and accreditations are listed below)

Relevant qualifications and accreditations: Electrical Contractors licence 121952C _____

- c) The information contained in this statement is true and accurate to the best of my knowledge.

Name: Jonathan Ryan _____

Company: Banabelle Electrical Pty Ltd _____

Address: 6/11 Ponderosa Parade Warriewood 2102 _____

Phone No. (02) 9999-3344 _____

Fax No. (02) 9979-6667 _____

Signature _____

Date

17th July 2009

FIRE SEALS PROTECTING OPENINGS IN FIRE RESISTING COMPONENTS OF THE BUILDING – ELECTRICAL PENETRATIONS - INSTALLATION CERTIFICATE

Project Name	Warriewood - Stage 1
Address	6-14 Macpherson Street Warriewood NSW 2101
Part of Building to be certified	All new work (entire building) A and B/C

I hereby certify that:

- a) The works have been inspected during construction and have been completed in accordance with the nominated Standards of Performance.

Measure and/or system	Standards of Performance
Fire seals protecting openings in fire resisting components of the building- Electrical penetrations	BCA2008 Clause C3.15 and AS 1530.4 and AS 4072.1 and installed in accordance with the tested prototype.

- b) I am a properly qualified person and have a good working knowledge of the relevant codes and standards referenced above. (My qualifications and accreditations are listed below)

Relevant qualifications and accreditations: Electrical Contractors licence 121952C _____

- c) The information contained in this statement is true and accurate to the best of my knowledge.

Name: Jonathan Ryan _____

Company: Banabelle Electrical Pty Ltd _____

Address: 6/11 Ponderosa Parade Warriewood 2102 _____

Phone No. (02) 9999-3344 _____ Fax No. (02) 9979-6667 _____

Signature 

Date 16th July 2009

SMOKE DETECTORS AND HEAT DETECTORS - INSTALLATION CERTIFICATE

Project Name	Warrlewood - Stage 1
Address	6-14 Macpherson Street Warrlewood NSW 2101
Part of Building to be certified	All new work (entire building)

I hereby certify that:

- a) The works have been inspected during construction and have been completed in accordance with the nominated Standards of Performance.

Measure and/or system	Standards of Performance
Smoke detectors and heat detectors (<i>detectors for the automatic closing operation of horizontal exits</i>)	BCA2008 Clause C3.7 and AS 1670.1 - 2004
Smoke detectors and heat detectors (<i>detectors for the automatic closing operation of smoke doors</i>)	BCA2008 Specification C3.4 and AS 1670.1 - 2004

- b) I am a properly qualified person and have a good working knowledge of the relevant codes and standards referenced above. (My qualifications and accreditations are listed below)

Relevant qualifications and accreditations: Electrician

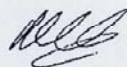
- c) The information contained in this statement is true and accurate to the best of my knowledge.

Name: Andrew Mitchell

Company: Heyday Group Pty

Address: 9 Waterloo Road, North Ryde, NSW, 2113

Phone No. 98556666 Fax No. 98556691



14th July 2009

Signature

Date

LIGHTING (GENERAL) - INSTALLATION CERTIFICATE

Project Name	<i>Warriewood - Stage 1</i>
Address	<i>6-14 Macpherson Street Warriewood NSW 2101</i>
Part of Building to be certified	<i>All new work (entire building)</i>

I hereby certify that:

- a) The works have been inspected during construction and have been completed in accordance with the nominated Standards of Performance.

Measure and/or system	Standards of Performance
Light (general)	BCA2008 Clause F4.4 and AS 1680.0 - 1998

- b) I am a properly qualified person and have a good working knowledge of the relevant codes and standards referenced above. (My qualifications and accreditations are listed below)

Relevant qualifications and accreditations: Electrical Contractors licence 121952C

- c) The information contained in this statement is true and accurate to the best of my knowledge.

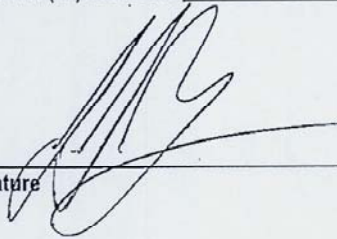
Name: Jonathan Ryan _____

Company: Banabelle Electrical Pty Ltd _____

Address: 6/11 Ponderosa Parade Warriewood 2102 _____

Phone No. (02) 9999-3344 _____ Fax No. (02) 9979-6667 _____

Signature



Date

17th July 2009

ANGLICAN RETIREMENT VILLAGES WARRIEWOOD BROOK

STAGE 1

GHD PROJECT No. 21-13577



Map reproduced with permission of UBQ. Copyright Universal Press Pty. Lt. 19 88/86

DRAWING LIST

DRG No.	DRAWING TITLE
21-13577-C01	OVERALL SITE PLAN
21-13577-C02	ROAD 1 & 2 DETAIL PLANS
21-13577-C03	ROAD 2 & 3 DETAIL PLANS
21-13577-C04	ROAD TYPICAL SECTIONS A, B & C
21-13577-C05	ROAD 1 CROSS SECTIONS
21-13577-C06	ROAD 2 CROSS SECTIONS
21-13577-C07	ROAD 3 CROSS SECTIONS
21-13577-C08	ROAD DETAIL A
21-13577-C09	ROAD DETAIL B
21-13577-C10	ROAD DETAIL C
21-13577-C11	ROAD DETAIL D
21-13577-C12	ROAD DETAIL E
21-13577-C13	ROAD DETAIL F
21-13577-C14	ROAD DETAIL G
21-13577-C15	ROAD DETAIL H
21-13577-C16	ROAD DETAIL I
21-13577-C17	ROAD DETAIL J
21-13577-C18	ROAD DETAIL K
21-13577-C19	ROAD DETAIL L
21-13577-C20	ROAD DETAIL M
21-13577-C21	ROAD DETAIL N
21-13577-C22	ROAD DETAIL O
21-13577-C23	ROAD DETAIL P
21-13577-C24	ROAD DETAIL Q
21-13577-C25	ROAD DETAIL R
21-13577-C26	ROAD DETAIL S
21-13577-C27	ROAD DETAIL T
21-13577-C28	ROAD DETAIL U
21-13577-C29	ROAD DETAIL V
21-13577-C30	ROAD DETAIL W
21-13577-C31	ROAD DETAIL X
21-13577-C32	ROAD DETAIL Y
21-13577-C33	ROAD DETAIL Z

DRAWING LIST

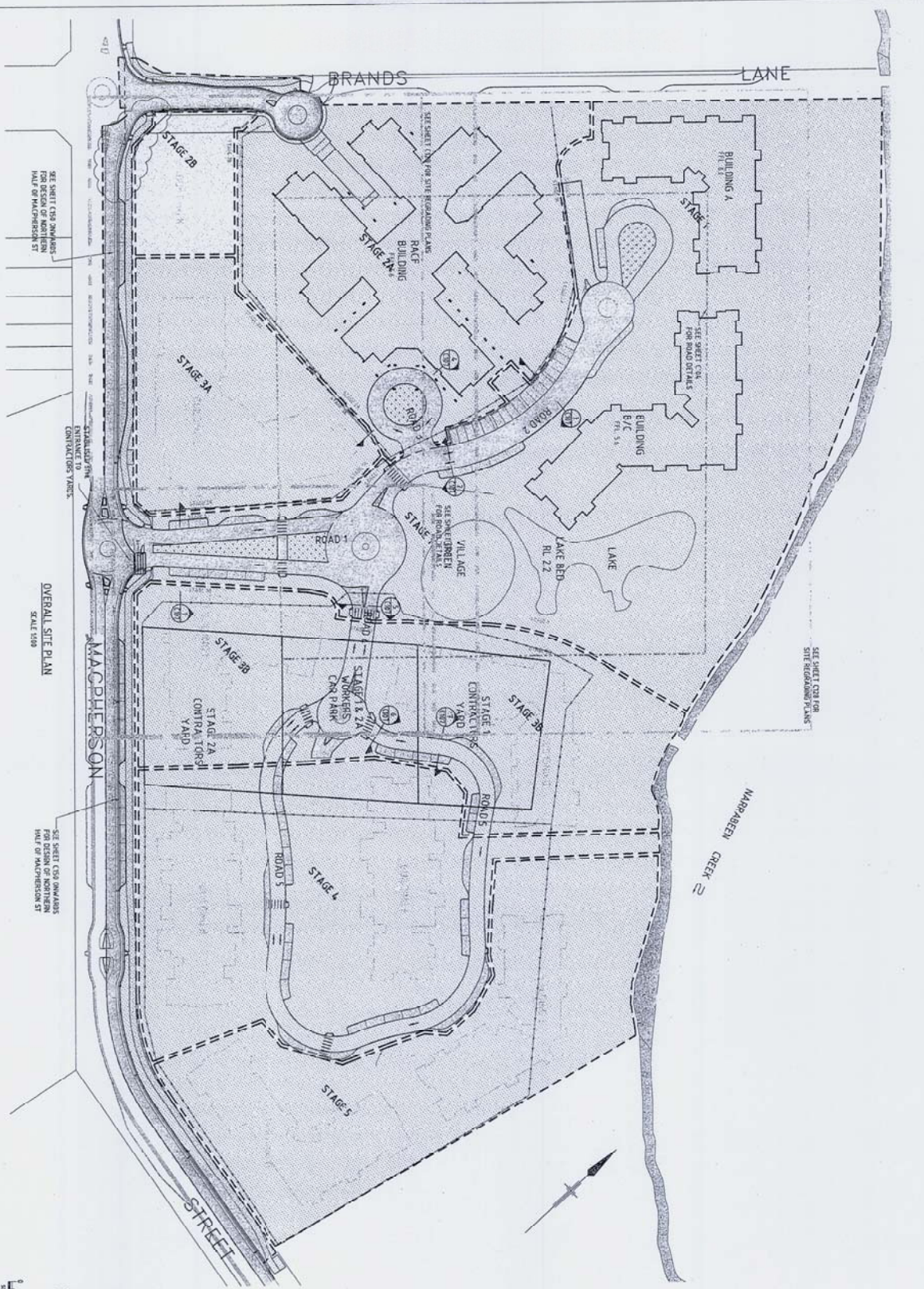
DRG No.	DRAWING TITLE
21-13577-165	MCCREPPERON ST. P.M. & LONG SECTION
21-13577-166	MCCREPPERON ST. P.M. & LONG SECTION
21-13577-167	MCCREPPERON ST. P.M. & LONG SECTION
21-13577-168	MCCREPPERON ST. P.M. & LONG SECTION
21-13577-169	MCCREPPERON ST. P.M. & LONG SECTION
21-13577-170	MCCREPPERON ST. P.M. & LONG SECTION
21-13577-171	MCCREPPERON ST. P.M. & LONG SECTION
21-13577-172	MCCREPPERON ST. P.M. & LONG SECTION
21-13577-173	MCCREPPERON ST. P.M. & LONG SECTION
21-13577-174	MCCREPPERON ST. P.M. & LONG SECTION
21-13577-175	MCCREPPERON ST. P.M. & LONG SECTION
21-13577-176	MCCREPPERON ST. P.M. & LONG SECTION
21-13577-177	MCCREPPERON ST. P.M. & LONG SECTION

DRAWING LIST

DRG No.	DRAWING TITLE
21-13577-C01	OVERALL SITE PLAN
21-13577-C02	ROAD 1 & 2 DETAIL PLANS
21-13577-C03	ROAD 2 & 3 DETAIL PLANS
21-13577-C04	ROAD TYPICAL SECTIONS A, B & C
21-13577-C05	ROAD 1 CROSS SECTIONS
21-13577-C06	ROAD 2 CROSS SECTIONS
21-13577-C07	ROAD 3 CROSS SECTIONS
21-13577-C08	ROAD DETAIL A
21-13577-C09	ROAD DETAIL B
21-13577-C10	ROAD DETAIL C
21-13577-C11	ROAD DETAIL D
21-13577-C12	ROAD DETAIL E
21-13577-C13	ROAD DETAIL F
21-13577-C14	ROAD DETAIL G
21-13577-C15	ROAD DETAIL H
21-13577-C16	ROAD DETAIL I
21-13577-C17	ROAD DETAIL J
21-13577-C18	ROAD DETAIL K
21-13577-C19	ROAD DETAIL L
21-13577-C20	ROAD DETAIL M
21-13577-C21	ROAD DETAIL N
21-13577-C22	ROAD DETAIL O
21-13577-C23	ROAD DETAIL P
21-13577-C24	ROAD DETAIL Q
21-13577-C25	ROAD DETAIL R
21-13577-C26	ROAD DETAIL S
21-13577-C27	ROAD DETAIL T
21-13577-C28	ROAD DETAIL U
21-13577-C29	ROAD DETAIL V
21-13577-C30	ROAD DETAIL W
21-13577-C31	ROAD DETAIL X
21-13577-C32	ROAD DETAIL Y
21-13577-C33	ROAD DETAIL Z

NOT CONSTRUCTED
WORKS AS EXECUTED
SIGNED: [Signature]
DATE: 18/08/2008

<p>1. PREPARATION OF THIS DRAWING:</p> <p>A. DESIGNED FOR CONSTRUCTION:</p> <p>Drawn by: [Name] Checked by: [Name] Date: [Date]</p>	<p>Scale: 1:500 Date: [Date] Drawn by: [Name] Checked by: [Name]</p>	<p>Project: ANGLICAN RETIREMENT VILLAGES WARRIEWOOD BROOK STAGE 1 Drawing No: 21-13577-C101</p>	<p>Sheet No: 1 Total Sheets: [Number]</p>
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------



SEE SHEET C130 FOR
SITE REGRADING PLANS

OVERALL SITE PLAN
SCALE 1:100

SEE SHEET C130 FOR
SITE REGRADING PLANS

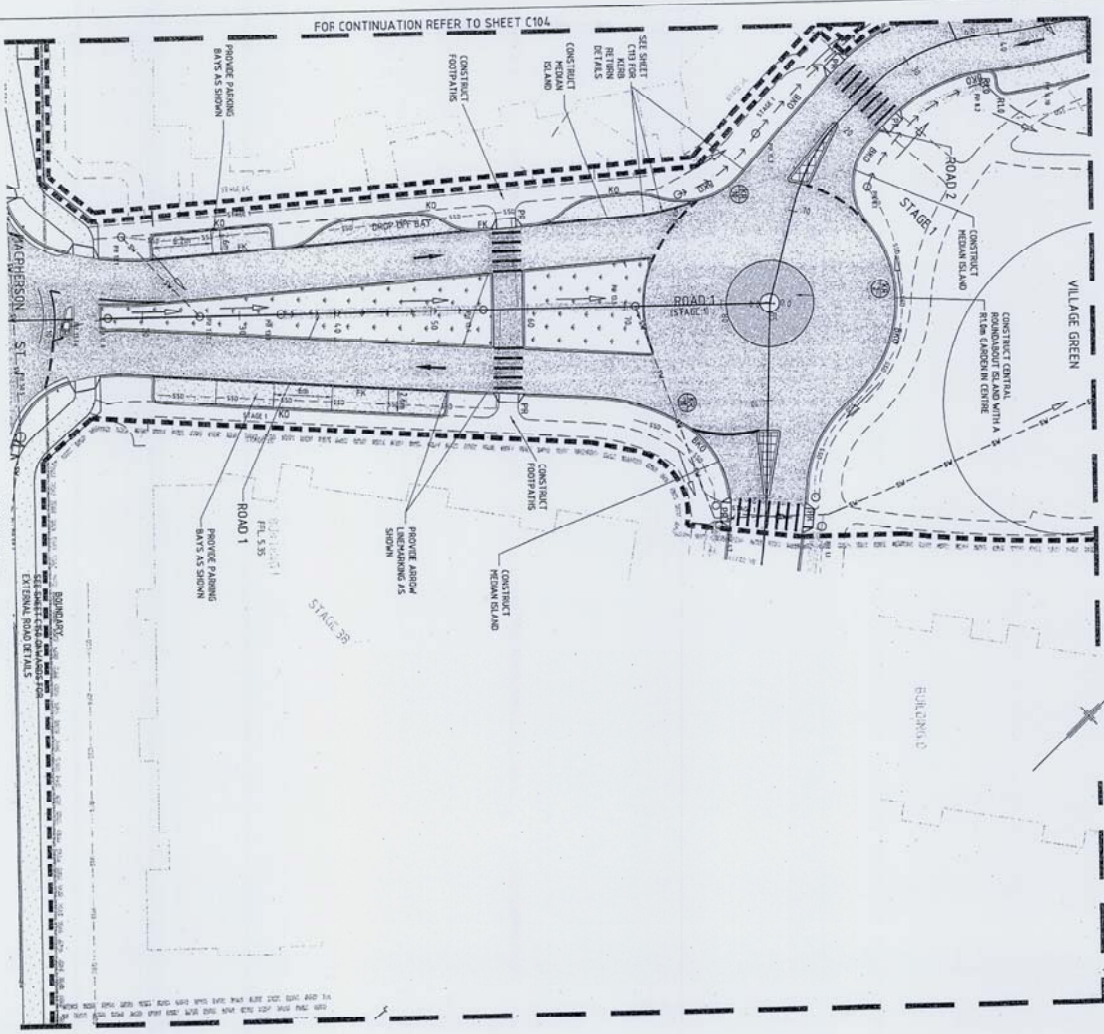
SEE SHEET C130 FOR
SITE REGRADING PLANS

- LEGEND**
- REINFORCED CONCRETE ISLAND
 - SWALE ISLAND
 - ASPHALT PAVEMENT
 - PAVEMENT
 - CONCRETE ROADWAY
 - STAGE 1
 - STAGE 2A
 - STAGE 2B
 - STAGE 3A
 - STAGE 3B
 - STAGE 4
 - STAGE 5

WORKS AS EXECUTED
 SIGNED: *[Signature]*
 DATE: 12/05/2009

CONSTRUCTION

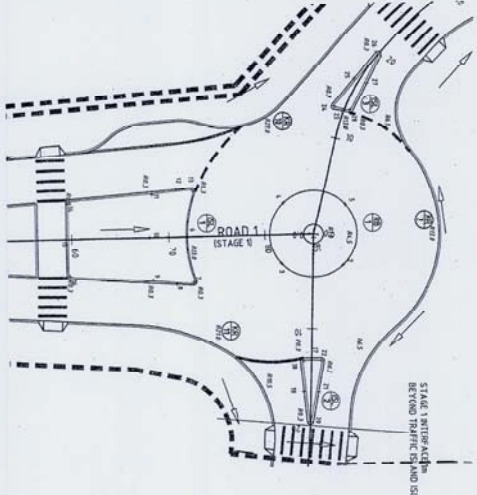
1. REVISED AS CLOAKED		DATE	BY
0. ISSUED FOR CONSTRUCTION		DATE	BY
<p>ANGELICAN RETIREMENT VILLAGES CIVIL WORKS OVERALL SITE PLAN SHOWING STAGING</p>			
<p>ANGELICAN RETIREMENT VILLAGES CIVIL WORKS OVERALL SITE PLAN SHOWING STAGING</p>		<p>DATE: 21-13577-C102</p>	<p>REV: 1</p>



SCALE 1:500

CONSTRUCTION

ROUNDABOUT CENTRAL & MEDIUM ISLAND SETOUT PLAN
SCALE 1:500



- NOTES:
1. REFER TO D86 C02 FOR EXTERNAL SET-OUT PLAN
 2. EXTERNAL SET-OUT PLAN RETENTION DETAILS

ROUNDABOUT CENTRAL & MEDIUM ISLAND SETOUT

POINT	EASTING	NORTHING	DESCRIPTION
RS1	347682.10	627765.05	ISLAND CENTRE RL3
2	347682.10	627765.05	ISLAND
3	347682.10	627765.05	ISLAND
4	347682.10	627765.05	ISLAND
5	347682.10	627765.05	ISLAND
RS1	347682.10	627765.05	ISLAND CENTRE RL3
RS2	347682.10	627765.05	ISLAND CENTRE RL3
6	347682.10	627765.05	ISLAND
7	347682.10	627765.05	ISLAND
8	347682.10	627765.05	ISLAND
9	347682.10	627765.05	ISLAND
10	347682.10	627765.05	ISLAND
11	347682.10	627765.05	ISLAND
12	347682.10	627765.05	ISLAND
13	347682.10	627765.05	ISLAND
14	347682.10	627765.05	ISLAND
15	347682.10	627765.05	ISLAND
16	347682.10	627765.05	ISLAND
17	347682.10	627765.05	ISLAND
18	347682.10	627765.05	ISLAND
19	347682.10	627765.05	ISLAND
20	347682.10	627765.05	ISLAND
21	347682.10	627765.05	ISLAND
22	347682.10	627765.05	ISLAND
23	347682.10	627765.05	ISLAND
24	347682.10	627765.05	ISLAND
25	347682.10	627765.05	ISLAND
26	347682.10	627765.05	ISLAND
27	347682.10	627765.05	ISLAND
28	347682.10	627765.05	ISLAND

LEGEND

[Pattern]	MEDIUM CONCRETE ISLAND
[Pattern]	SMALL ISLAND
[Pattern]	ASPHALT PAVEMENT
[Pattern]	PAVINGS
[Pattern]	CONCRETE ROUNDABOUT
[Symbol]	SLOTTED STORMWATER PIPE AND SMALL
[Symbol]	STORMWATER PIPE AND PIT
[Symbol]	SLOTTED PIPE
[Symbol]	SUBSOIL DRAIN
[Symbol]	FOOTPATHS
[Symbol]	SPOT LEVEL, SET-OUT POIN, NUMBER, RADIOS

POINT MARKS: BOUNDARY, ROAD CENTERLINE, CURB, FISHING, POINT, WATER, EXIST, DRAIN, CROSSING, KERB & GUTTER, LINE, MARKING

FINISHED GROUND SURFACE CONTOUR

WORKS AS EXECUTED
 SIGNED: [Signature]
 DATE: 13/08/2009

ANGLO-AMERICAN RETIREMENT VILLAGES
 SPECIALISED FINANCIAL SERVICES

NO.	REVISION	DATE	BY	CHKD.	APPD.	SCALE	DESCRIPTION
1		13/08/09	AL	AL	AL	1:500	FOR CONTINUATION REFER TO SHEET C104
2			AL	AL	AL	1:500	CONSTRUCTION
3			AL	AL	AL	1:500	CONSTRUCTION
4			AL	AL	AL	1:500	CONSTRUCTION

ANGLO-AMERICAN RETIREMENT VILLAGES
 SPECIALISED FINANCIAL SERVICES

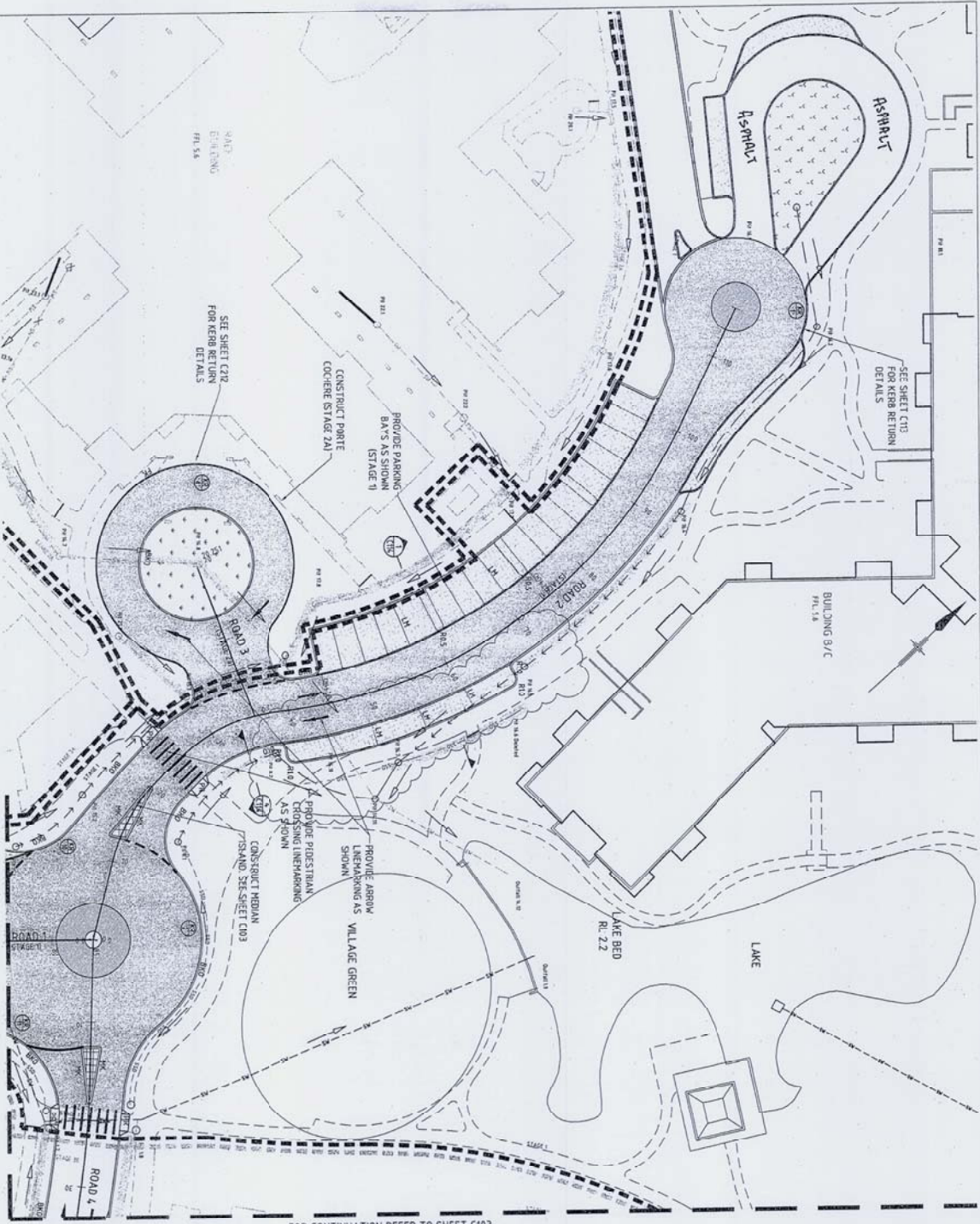
CONSTRUCTION

ANGLO-AMERICAN RETIREMENT VILLAGES
 WARRENWOOD BROOK - STAGE 1
 ROAD 1 & 4 DETAIL PLANS

Project No: 21-13577-C103

Rev: 1

- NOTES**
- REFER TO OTHER SHEETS FOR OVERALL
 - SEE SHEET C103 FOR STAGE 2 KERB RETURN DETAILS



FOR CONTINUATION REFER TO SHEET C103

LEGEND

- MIDIAN CONCRETE ISLAND
- SMALL ISLAND
- ASPHALT PAVEMENT
- PAVERIES
- CONCRETE ROADWAY
- SLOTTED STOP/MATERIAL PER AND SMALL
- SLOTTED STOP/MATERIAL PER AND ASPHT
- STOP/MATERIAL PER AND PFT
- SLOTTED PPE
- SUBSOIL DRAIN
- FOOTPATHS
- SPOT LEVEL, SETOUT POINT NUMBER, BOUNDS
- PAVAN BAMP, INCHEN WITH ONLY, KERS ONLY, FLUSH KERB, MOUNTAIN KERS, BUS OVERSINK, ROAD & SLOTTED LINE MARKING
- FINISHED GROUND SURFACE CONTOUR

WORKS AS EXECUTED
SIGNED: *[Signature]*
DATE: 13/8/07

SCALE 1:200

CONSTRUCTION

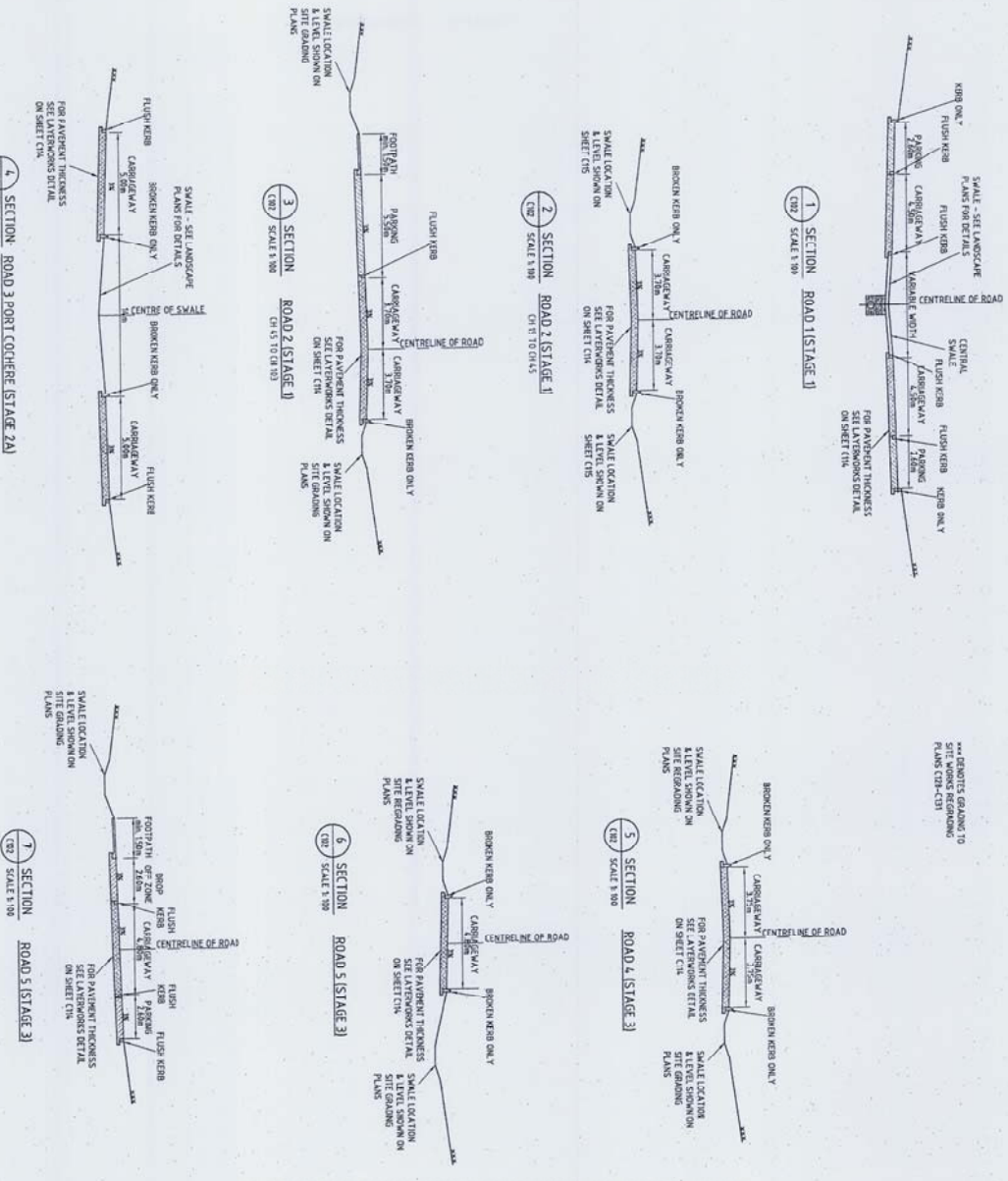
REVISIONS		DRAWN		CHECKED		DATE	
1	ISSUED FOR CONSTRUCTION	LSM	AL	AL	AL	21.08.07	
0	ISSUED FOR CONSTRUCTION	LSM	AL	AL	AL	13.08.07	

PROJECT INFORMATION	
Client:	Anglican Retirement Villages
Project:	Warrenwood Brook - Stages 1
Sheet:	Road 2 & 3 Detail Plans
Scale:	1:200
Rev:	1

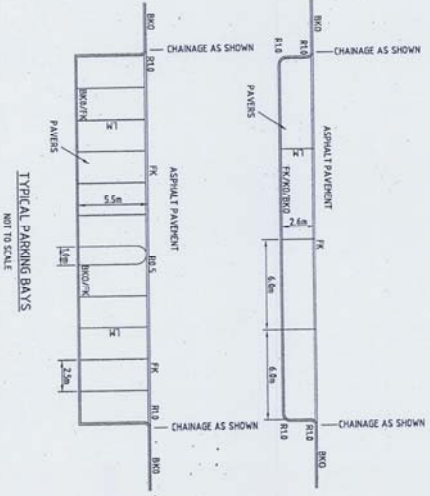
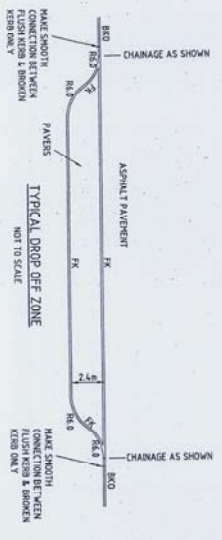
DO NOT SCALE	
Drawn:	AL
Checked:	AL
Approved:	AL

0 BIDDING / NOT CONSTRUCTION		
Plan No.	Sheet No.	Sheet Title
010	1230	ROAD TYPICAL SECTIONS & DETAILS
Client	Contract No.	Contract Title
ANGLO-AMERICAN RETIREMENT VILLAGES	21-13577-C-107	ROAD TYPICAL SECTIONS & DETAILS
Contractor	Contract No.	Contract Title
ANGLO-AMERICAN RETIREMENT VILLAGES	21-13577-C-107	ROAD TYPICAL SECTIONS & DETAILS

CONSTRUCTION



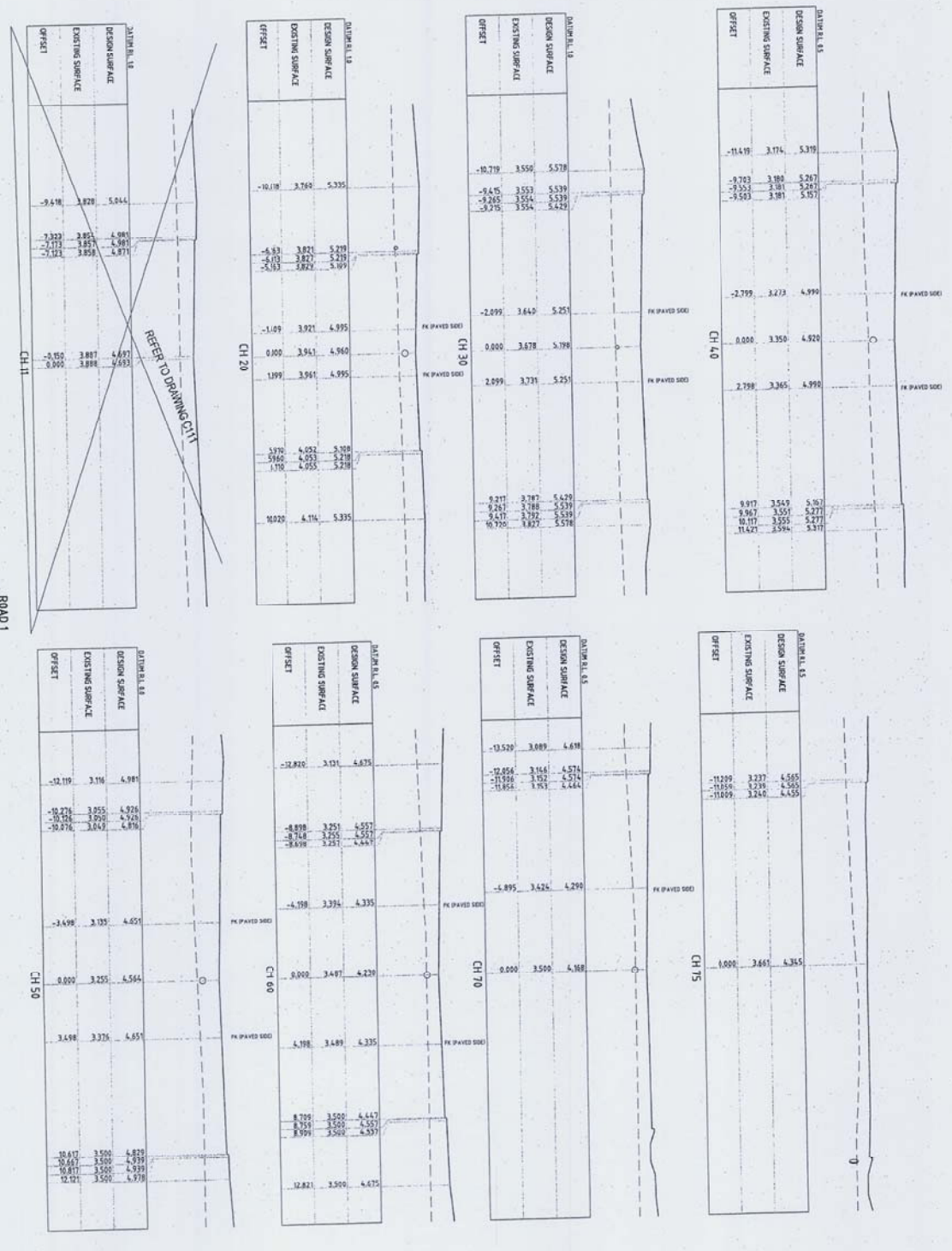
*** DENOTES GRADING TO SITE WORKS RESERVING PLANS CIB-107



- NOTES:**
1. GENERALLY, WHERE PARKING IS NOT ADJOINING A FOOTPATH, PROVIDE KERB ONLY, ONE OR TWO COURSE, PROVIDE FLUSH KERB ON FOOTPATH SIDE.
 2. PROVIDE CARBIDEWAY ON SIDE OF ROAD, PROVIDE FLUSH KERB ON SIDE OF ROAD.
 3. REFER TO DRAWINGS CIB FOR PAVEMENT AND KERBS DETAILS.

WORKS AS EXECUTED
 SIGNED: *[Signature]*
 DATED: 13/01/2014

LEGEND
 - - - PROPOSED DESIGN SURFACE
 - - - EXISTING SURFACE
 - - - PROPOSED GRADE



WORKS AS EXECUTED
 SIGNED: *[Signature]*
 DATE: 12/8/09

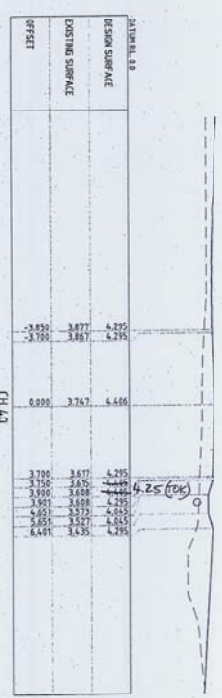
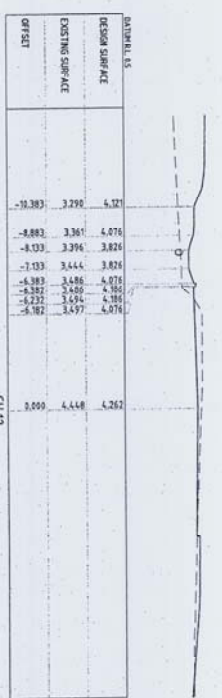
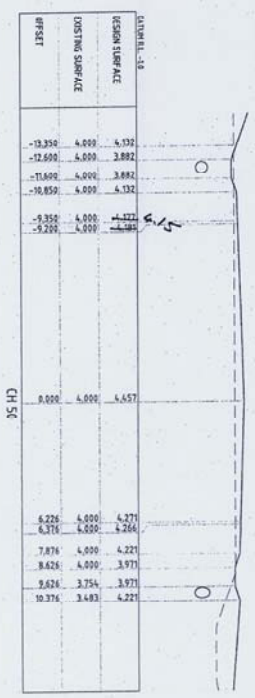
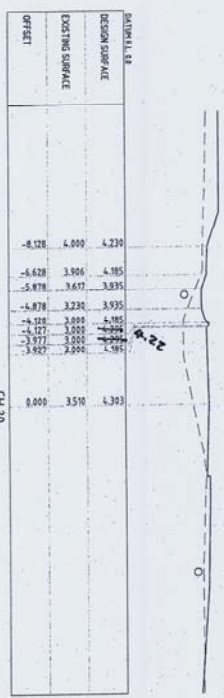
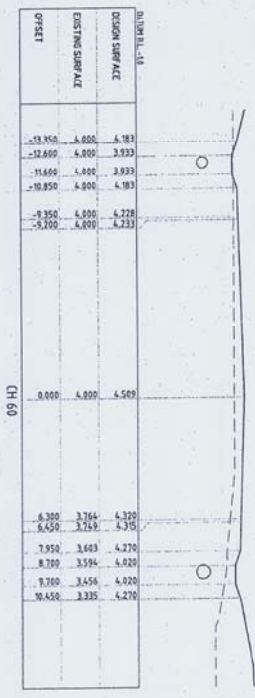
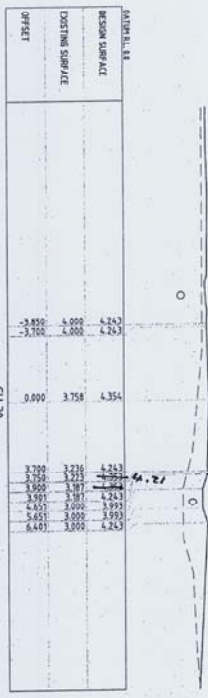
ROAD 1
 HORIZONTAL SCALE - 1/8" = 1'-0"
 VERTICAL SCALE - 1/8" = 1'-0"

CONSTRUCTION

3	LEVELS BETWEEN CH 11.20 AND CH 20	ALL	CON	CON	5/20/09
2	PROPOSED SURFACING	ALL	AL	AL	4/14/09
1	EXISTING SURFACING	ALL	AL	AL	12/18/08
0	PROPOSED CONSTRUCTION	ALL	AL	AL	12/18/08

Project	ANGULICAN RETIREMENT VILLAGES
Stage	STAGE 1: WARRIMOOD BROOK
Section	ROAD 1 CROSS SECTIONS
Revision	21-13577-C108

LEGEND
 — PROPOSED DESIGN SURFACE
 - - - EXISTING SURFACE
 ○ PROPOSED DRAINAGE



ROAD 2
 HORIZONTAL SCALE - 1:500
 VERTICAL SCALE - 1:50

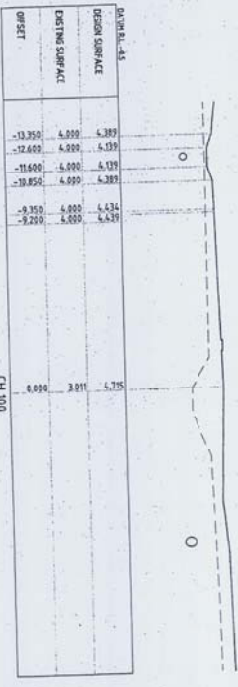
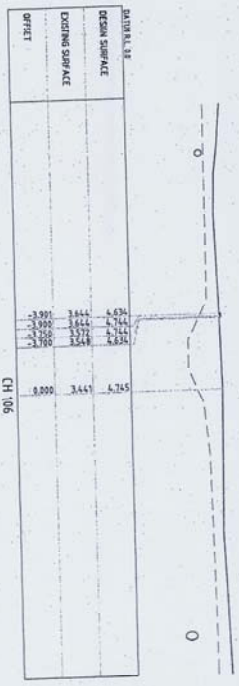
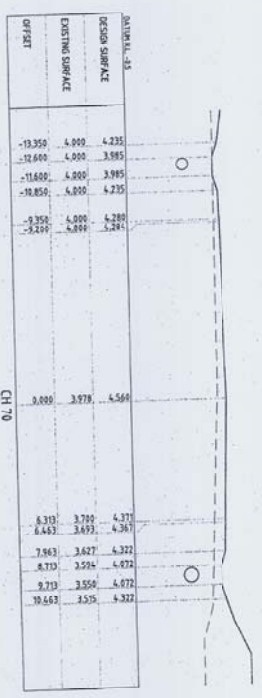
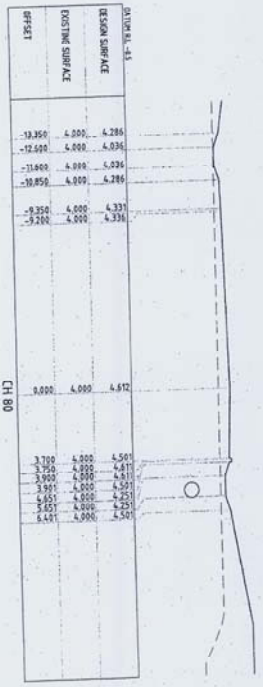
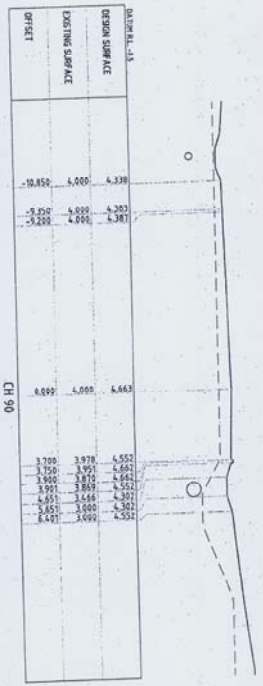
WORKS AS EXECUTED
 SKIEMED: *[Signature]*
 DATE: 12/08/09

CONSTRUCTION

1	ROAD EXISTING SURFACE	1:500	NO	1:500	NO	1:500	NO	1:500	NO
2	ROAD EXISTING SURFACE	1:500	NO	1:500	NO	1:500	NO	1:500	NO
3	ROAD EXISTING SURFACE	1:500	NO	1:500	NO	1:500	NO	1:500	NO
4	ROAD EXISTING SURFACE	1:500	NO	1:500	NO	1:500	NO	1:500	NO
5	ROAD EXISTING SURFACE	1:500	NO	1:500	NO	1:500	NO	1:500	NO

ANGELAN RETIREMENT VILLAGES
 WARRENWOOD BROOK
 CIVIL WORKS
 ROAD 2 CROSS SECTIONS SHEET 1 OF 2
 Drawing No: 21-13577-C109
 Rev: 2

LEGEND
 PROPOSED DESIGN SURFACE
 EXISTING SURFACE
 PROPOSED DRAINAGE



ROAD 2
 HORIZONTAL SCALE - 1:500
 VERTICAL SCALE - 1:50

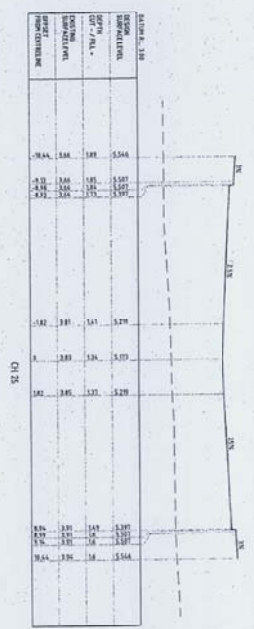
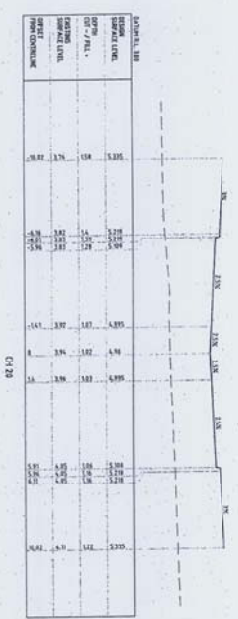
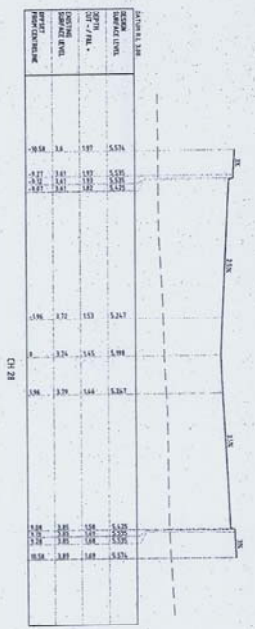
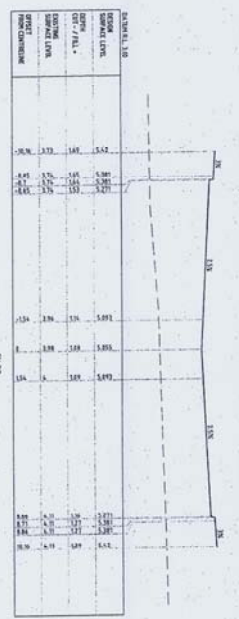
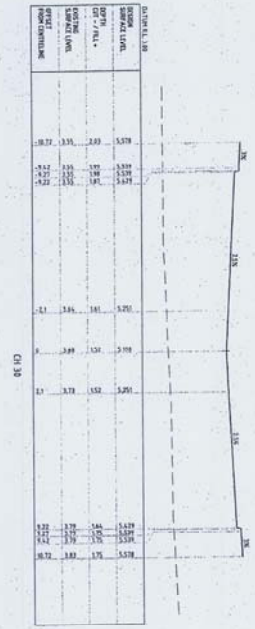
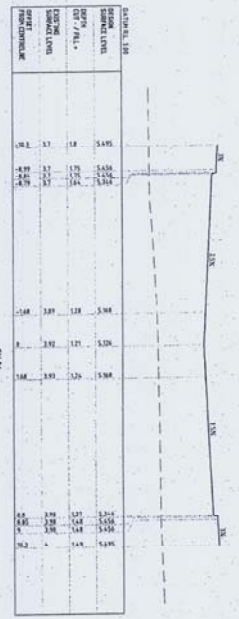
WORKS AS EXECUTED
 SIGNED: *OFFICIAL*
 DATE: 13/08/09



CONSTRUCTION

ANGLO-AMERICAN RETIREMENT VILLAGES DEVELOPMENT PHASE 2	
Client: ANGLICAN RETIREMENT VILLAGES	Contract No: 21-13577-C110
Contractor: CIVIL WORKS WARREROOD BROOK	Drawn By: [Name]
Checked By: [Name]	Scale: 1:500
Approved By: [Name]	Date: 13/08/09
Project Manager: [Name]	Sheet: 2 OF 2

LEGEND
 PROPOSED SECTION SURFACE
 EXISTING SURFACE
 PROPOSED DRAINAGE

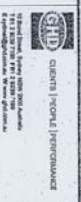


ROAD
 HORIZONTAL SCALE - 1:50
 VERTICAL SCALE - 1:20

WORKS AS EXECUTED
 SIGNED: *[Signature]*
 DATE: 13/8/07

CONSTRUCTION

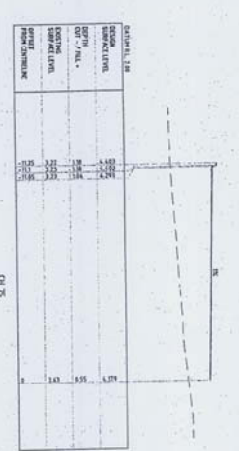
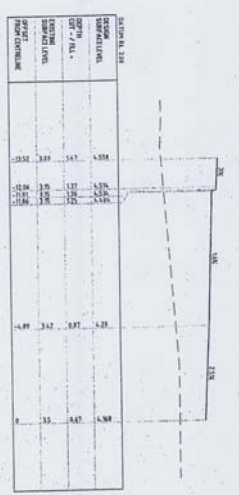
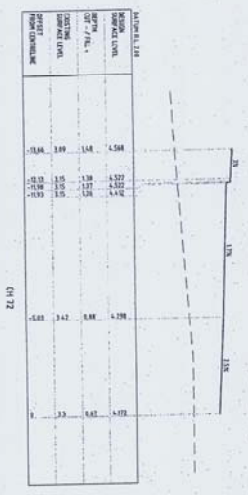
0 ISSUED FOR CONSTRUCTION No. Revisions: _____ Date: _____		Scale: _____ Date: _____	
Author: _____ Designer: _____ Checker: _____ Approver: _____	Date: _____ Scale: _____ Date: _____	Author: _____ Designer: _____ Checker: _____ Approver: _____	Date: _____ Scale: _____ Date: _____



DO NOT SCALE
 Conditions of use: This drawing is valid only for the project and site specified. It is not to be used for any other purpose without the written consent of the engineer.

ANGLICAN RETIREMENT VILLAGES
 STAGE 1: WARRIMOOD BROOK
 CIVIL WORKS
 ROAD 1 CROSS SECTIONS SHEET 2 OF 2
 Drawing No: 21-13577-C111
 Rev: 0

LEGEND
 PROPOSED DESIGN
 SURFACE
 EXISTING SURFACE
 PROPOSED DRAINAGE



ROAD 1
 HORIZONTAL SCALE - 1:50
 VERTICAL SCALE - 1:50

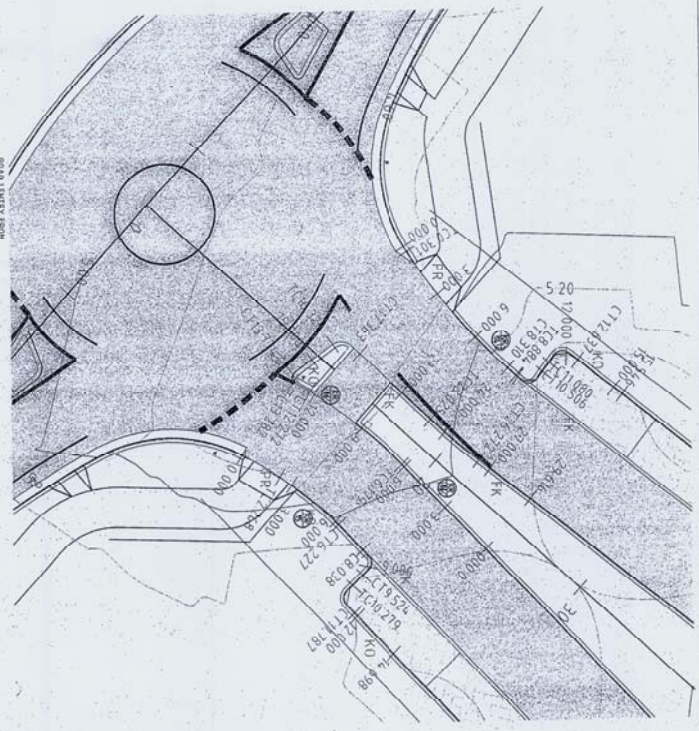
CONSTRUCTION

WORKS AS EXECUTED
 SIGNED: *AT*
 DATE: 13/08/01

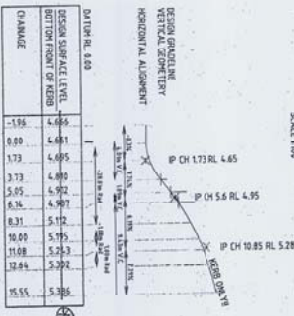


NO.	REVISION	DATE	BY	CHKD.	APPROVED
1	ISSUED FOR CONSTRUCTION	13/08/01			

ANGLICAN RETIREMENT VILLAGES
 STAGE 1: WARRIMOOD BROOK
 ROAD 1 CROSS SECTIONS SHEET 2 OF 2

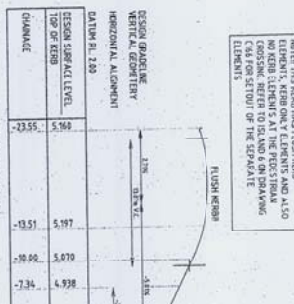


KERB RETURN PLAN
SCALE 1:100



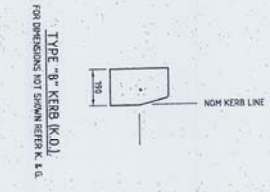
KERB RETURN 14
HORIZ 1200 VERT 120

⊗ KERB WAEX GENERALLY
100mm LOWER THAN DESIGN.



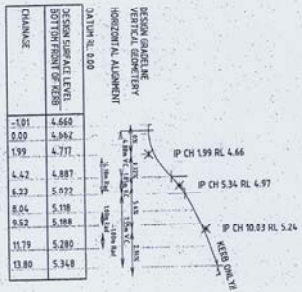
KERB RETURN 16
HORIZ 1200 VERT 120

NOTE THIS KERB HAS FLUSH KERB
LEGENDS, KERB CURB ELEVATIONS ARE ALSO
GIVEN IN THE DRAWING. CROSSING REFER TO ROAD & ON DRAWING
LEGENDS FOR SETOUT OF THE KERB.



TYPE 'B' KERB (K.O.)
FOR DIMENSIONS FOR SPANN KERB & 4.0

FLUSH KERB (K.K.)
SCALE 1:10



KERB RETURN 15
HORIZ 1200 VERT 120

PI	Starting	Ending	Nothing	Level	Radius
P1	20.00	34.914.021	42708.139	5.97	
P2	20.00	34.914.021	42708.139	5.97	
TC	6.00	34.919.506	42708.477	6.83	
CT	6.00	34.919.506	42708.477	6.83	
P2	9.00	34.919.506	42708.170	6.78	
P3	9.00	34.919.506	42708.170	6.78	
TC	12.00	34.919.506	42708.139	6.61	
CT	12.00	34.919.506	42708.139	6.61	
TC	13.82	34.919.461	42708.552	6.81	
CT	13.82	34.919.461	42708.552	6.81	
P1	13.71	34.919.356	42708.273	7.20	3.4
P2	13.71	34.919.356	42708.273	7.20	3.4
TC	16.28	34.919.226	42708.139	6.82	
CT	16.28	34.919.226	42708.139	6.82	
P4	16.64	34.919.136	42708.155	6.97	3.0
P5	17.83	34.919.232	42708.464	6.67	
TC	18.00	34.919.232	42708.467	6.60	
CT	21.00	34.919.232	42708.139	6.83	
TC	21.00	34.919.169	42708.171	6.91	
P5	21.00	34.919.169	42708.421	6.78	
TC	21.00	34.919.169	42708.421	6.78	
CT	21.27	34.919.169	42708.421	6.87	
CT	21.27	34.919.169	42708.421	6.87	
TC	21.00	34.919.169	42708.421	6.83	

PI	Starting	Ending	Level	Radius
P1	0.00	34.917.719	42707.779	6.62
TC	2.86	34.918.955	42707.833	6.731
CT	3.00	34.919.233	42708.457	6.716
P2	6.26	34.919.956	42708.152	6.82
TC	6.00	34.919.238	42708.124	5.99
CT	6.27	34.919.646	42708.888	5.92
TC	8.18	34.918.209	42708.421	5.98
P3	8.11	34.918.147	42708.363	6.00
P4	8.00	34.918.433	42708.161	5.86
TC	9.29	34.918.639	42708.171	5.88
CT	10.29	34.918.639	42708.171	5.88
P5	11.33	34.918.599	42708.676	-1.00
TC	11.81	34.918.477	42708.423	5.80
CT	12.00	34.918.477	42708.423	5.80
P5	14.09	34.918.639	42708.437	5.88

PI	Starting	Ending	Level	Radius
P1	0.00	34.927.225	42708.431	6.61
TC	0.301	34.927.448	42708.571	6.62
CT	1.00	34.928.666	42708.543	6.673
P2	2.00	34.927.895	42708.151	6.96
P3	3.00	34.928.191	42708.332	6.78
TC	4.00	34.928.448	42708.722	6.80
P4	4.305	34.928.501	42708.701	-8.812
TC	5.00	34.928.249	42708.348	6.80
CT	6.00	34.928.191	42708.441	6.91
TC	7.00	34.928.137	42708.328	6.83
CT	8.00	34.928.137	42708.160	5.95
TC	8.39	34.928.166	42708.449	5.92
TC	8.81	34.928.192	42708.215	5.84
TC	9.00	34.928.165	42708.205	5.84
P5	9.85	34.928.639	42708.285	-1.00
TC	10.00	34.928.179	42708.157	5.95
CT	10.54	34.928.163	42708.561	5.93
TC	11.00	34.928.150	42708.373	5.93
TC	11.00	34.928.150	42708.373	5.93
P6	11.81	34.928.176	42708.544	6.00
TC	12.00	34.928.171	42708.731	5.79
CT	12.87	34.928.266	42708.329	5.92
TC	13.00	34.928.152	42708.654	5.95
TC	14.40	34.928.143	42708.388	5.86
TC	15.00	34.928.154	42708.172	5.93
P5	15.16	34.928.093	42708.140	5.88

WORKS AS EXECUTED
SIGNED: [Signature]
DATE: 13/08/09

CONSTRUCTION

ANGICAN RETIREMENT VILLAGES
WARRENWOOD BROOK STAGE 1
KERB RETURN DETAILS - sheet 3

NO	REVISION	DATE	BY	CHKD	APPD
1	ISSUED FOR CONSTRUCTION				

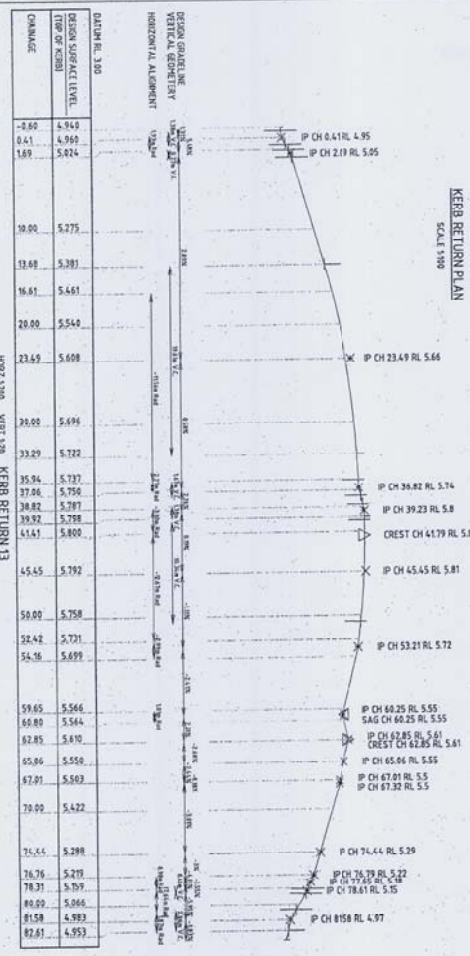
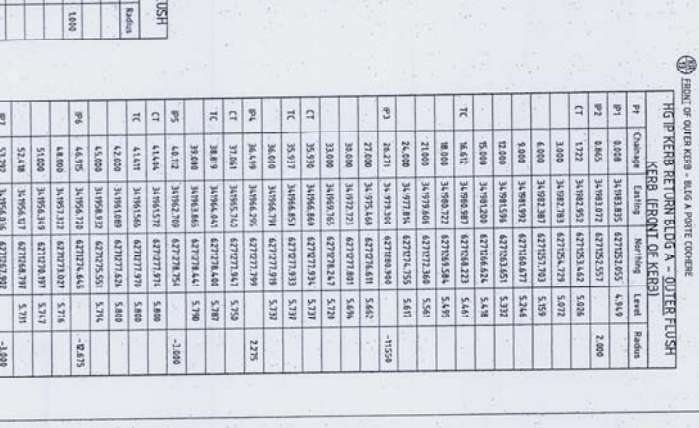
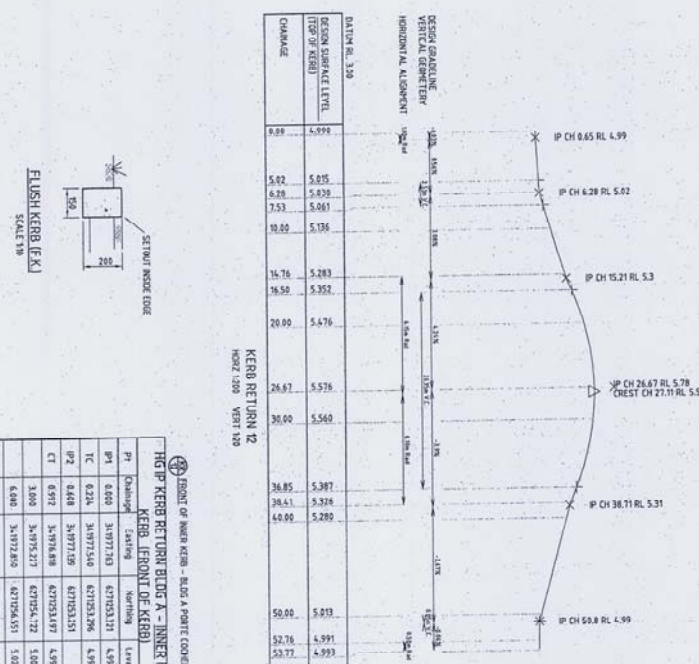
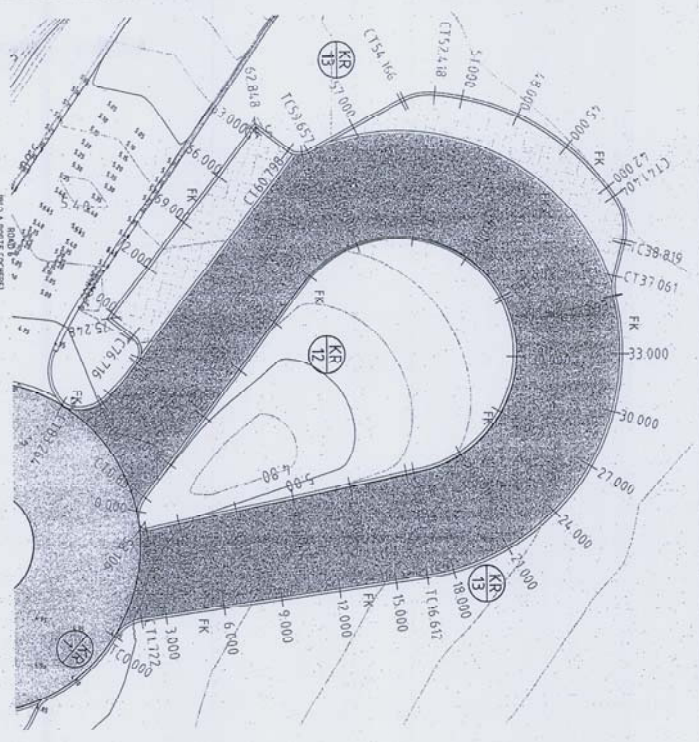
ANGICAN RETIREMENT VILLAGES
WARRENWOOD BROOK STAGE 1
KERB RETURN DETAILS - sheet 3

ANGICAN RETIREMENT VILLAGES
WARRENWOOD BROOK STAGE 1
KERB RETURN DETAILS - sheet 3

DO NOT SCALE

ANGICAN RETIREMENT VILLAGES
WARRENWOOD BROOK STAGE 1
KERB RETURN DETAILS - sheet 3

ANGICAN RETIREMENT VILLAGES
WARRENWOOD BROOK STAGE 1
KERB RETURN DETAILS - sheet 3



WORKS AS EXECUTED
 SIGNED: *[Signature]*
 DATE: 13/08/09

PR	CH	RI	RL	SL	
1	CH	0.41	RL	4.95	
2	CH	2.17	RL	5.05	
3	CH	23.49	RL	5.66	
4	CH	26.82	RL	5.74	
5	CH	39.23	RL	5.8	
6	CREST	CH	41.79	RL	5.8
7	CH	45.45	RL	5.81	
8	CH	53.21	RL	5.72	
9	CH	62.25	RL	5.55	
10	SAG	CH	60.25	RL	5.55
11	CH	62.85	RL	5.61	
12	CREST	CH	62.85	RL	5.61
13	CH	65.06	RL	5.55	
14	CH	67.01	RL	5.55	
15	CH	67.32	RL	5.55	
16	CH	74.44	RL	5.26	
17	CH	75.79	RL	5.22	
18	CH	78.61	RL	5.05	
19	CH	815.8	RL	4.97	

PR	CH	RI	RL	SL	
1	CH	0.65	RL	4.99	
2	CH	4.28	RL	5.02	
3	CH	15.21	RL	5.3	
4	CH	26.67	RL	5.78	
5	CREST	CH	27.11	RL	5.58
6	CH	38.71	RL	5.31	
7	CH	50.8	RL	4.99	

PR	CH	RI	RL	SL
1	CH	0.60	RL	4.99
2	CH	5.02	RL	5.05
3	CH	6.28	RL	5.42
4	CH	7.53	RL	5.061
5	CH	18.00	RL	5.138
6	CH	15.76	RL	5.283
7	CH	16.50	RL	5.352
8	CH	20.00	RL	5.476
9	CH	26.67	RL	5.576
10	CH	30.00	RL	5.560
11	CH	38.85	RL	5.387
12	CH	38.71	RL	5.316
13	CH	40.00	RL	5.200
14	CH	50.00	RL	5.813
15	CH	52.76	RL	5.691
16	CH	52.77	RL	5.664

PR	CH	RI	RL	SL
1	CH	0.60	RL	4.99
2	CH	5.02	RL	5.05
3	CH	6.28	RL	5.42
4	CH	7.53	RL	5.061
5	CH	18.00	RL	5.138
6	CH	15.76	RL	5.283
7	CH	16.50	RL	5.352
8	CH	20.00	RL	5.476
9	CH	26.67	RL	5.576
10	CH	30.00	RL	5.560
11	CH	38.85	RL	5.387
12	CH	38.71	RL	5.316
13	CH	40.00	RL	5.200
14	CH	50.00	RL	5.813
15	CH	52.76	RL	5.691
16	CH	52.77	RL	5.664

ANGLIAN RETIREMENT VILLAGES
 WARRENWOOD BROOK STAGE 1
 KEEN RETURN DETAILS - SHEET 2 OF 2

DATE: 21-13577-C-112

Scale: 1/8" = 1'-0"

DO NOT SCALE

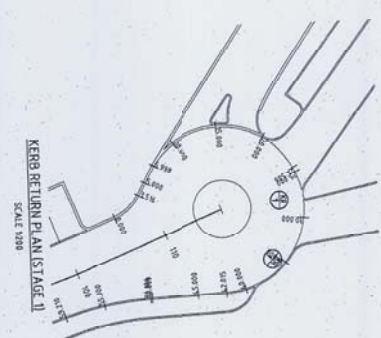
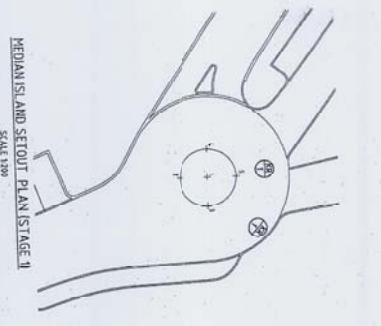
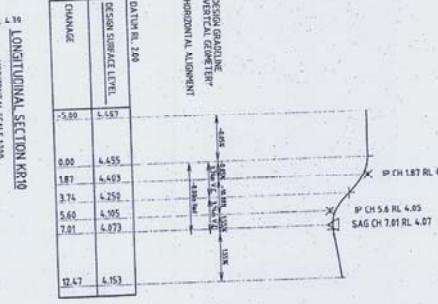
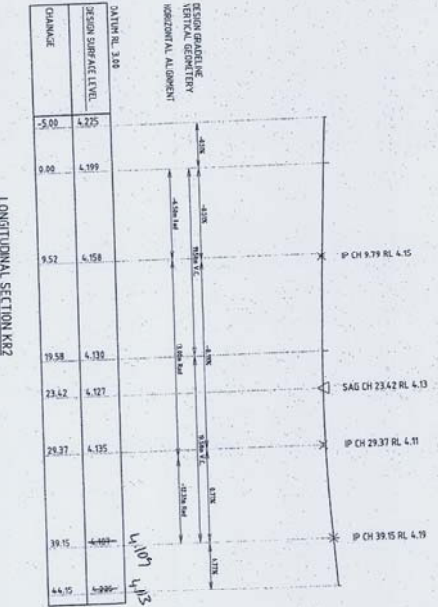
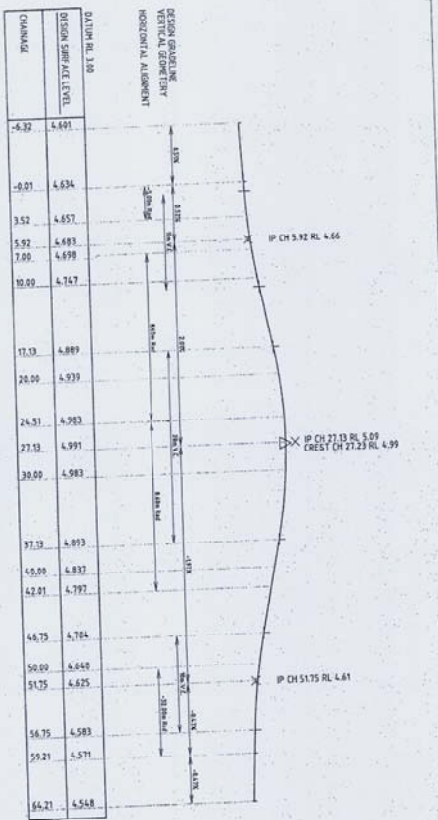
ANGLIAN RETIREMENT VILLAGES
 WARRENWOOD BROOK STAGE 1
 KEEN RETURN DETAILS - SHEET 2 OF 2

ANGLIAN RETIREMENT VILLAGES
 WARRENWOOD BROOK STAGE 1
 KEEN RETURN DETAILS - SHEET 2 OF 2

Scale: 1/8" = 1'-0"

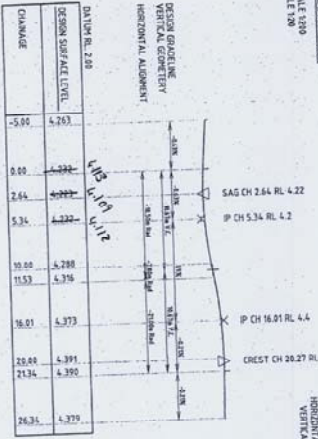
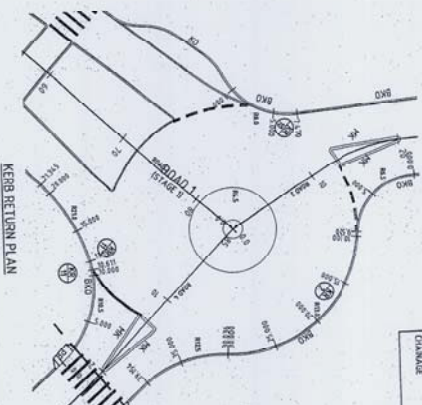
DO NOT SCALE

ANGLIAN RETIREMENT VILLAGES
 WARRENWOOD BROOK STAGE 1
 KEEN RETURN DETAILS - SHEET 2 OF 2



MEDIAN ISLAND SETOUT

POINT	STATIONING	DESCRIPTION
1	34.979444	ISLAND CENTRE P33
2	34.979444	ISLAND
3	34.979444	ISLAND
4	34.979444	ISLAND
5	34.979444	ISLAND



KERB RETURN 1 SETOUT

POINT	STATIONING	DESCRIPTION
1	34.979444	ISLAND CENTRE P33
2	34.979444	ISLAND
3	34.979444	ISLAND
4	34.979444	ISLAND
5	34.979444	ISLAND

KERB RETURN 2 SETOUT

POINT	STATIONING	DESCRIPTION
1	34.979444	ISLAND CENTRE P33
2	34.979444	ISLAND
3	34.979444	ISLAND
4	34.979444	ISLAND
5	34.979444	ISLAND

KERB RETURN 10 SETOUT

POINT	STATIONING	DESCRIPTION
1	34.979444	ISLAND CENTRE P33
2	34.979444	ISLAND
3	34.979444	ISLAND
4	34.979444	ISLAND
5	34.979444	ISLAND

KERB RETURN 10 SETOUT

POINT	STATIONING	DESCRIPTION
1	34.979444	ISLAND CENTRE P33
2	34.979444	ISLAND
3	34.979444	ISLAND
4	34.979444	ISLAND
5	34.979444	ISLAND

1 KERB RETURN SECTION (UNLIFTED)

2 ISLAND FOR CONSTRUCTION

3 ANGLICAN RETIREMENT VILLAGES

4 CIVIL WORKS

5 KERB RETURN DETAILS

6 CONSTRUCTION

7 DO NOT SCALE

8 ANGLICAN RETIREMENT VILLAGES

9 CIVIL WORKS

10 KERB RETURN DETAILS

11 CONSTRUCTION

12 DATE: 12/08/09

13 SIGNED: [Signature]

14 WORKS AS EXECUTED

15 ANGLICAN RETIREMENT VILLAGES

16 CIVIL WORKS

17 KERB RETURN DETAILS

18 CONSTRUCTION

19 PROJECT NO: 21-13577-C113

20 SHEET NO: 1



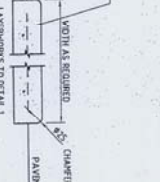
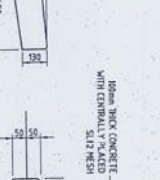
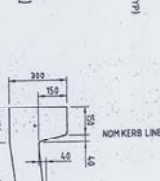
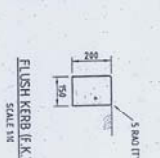
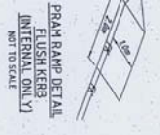
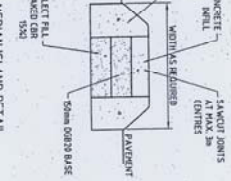
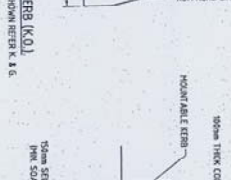
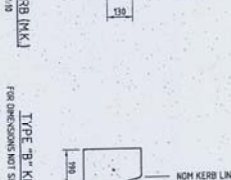
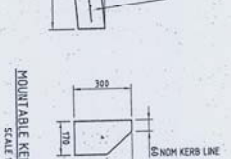
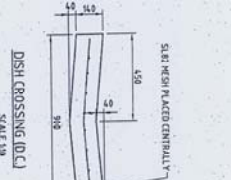
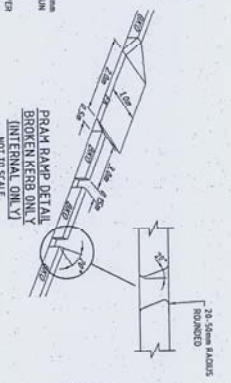
WIDTH AS SHOWN

FOOTPATH NOTES (INTERNAL ONLY)

1. REINSTRUMENT FOOTPATH TO BE CONSTRUCTED IN ACCORDANCE WITH THE SPACING CONTRACTING OF SIMILAR THICK APPROVED JOINTING MATERIAL. JOINTS TO RUN FULL DEPTH OF CONCRETE SPACING FROM DEPTH OF CONCRETE TO 200MM ABOVE AT 28 DAYS OVER 200MM THICK BEDDING SAND.
2. 200MM THICK BEDDING SAND COMPACTED IN ACCORDANCE WITH THE SPECIFICATION.
3. NO JOINTS TO FORM ANGLES $\leq 45^\circ$ WITH AN EDGE WITHOUT LOCAL REINFORCEMENT.
4. SURFACE FINISH TO ACCORDANCE ARCHITECT DETAIL.

GENERAL NOTES

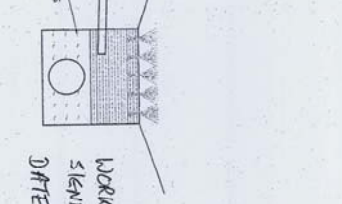
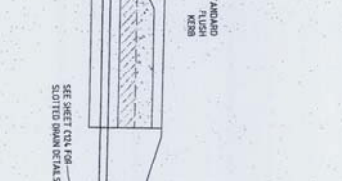
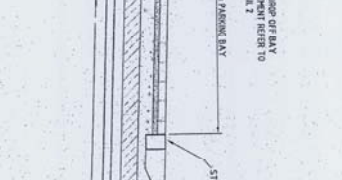
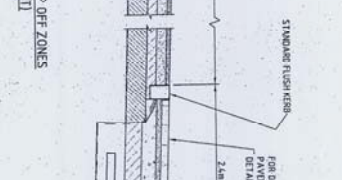
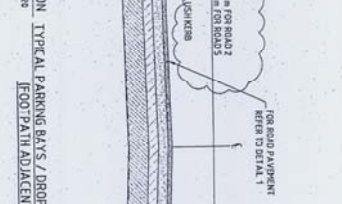
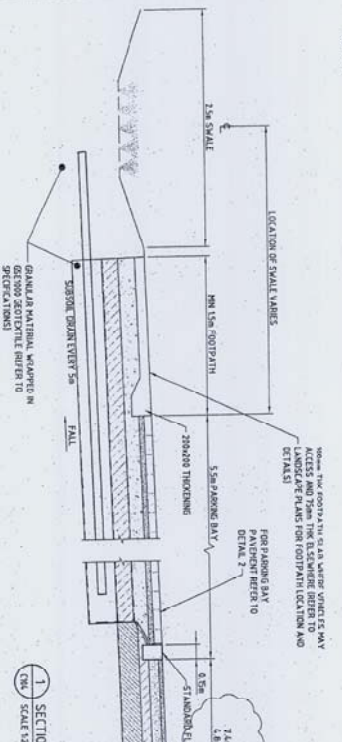
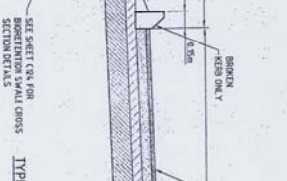
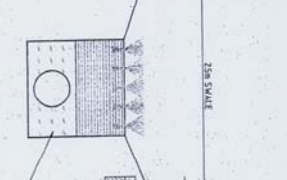
1. CONTRACTOR SHALL BE READ IN CONJUNCTION WITH THE CIVIL WORKS SPECIFICATION WHEN OBLIGATIONS ARE REQUIRED. THE CONTRACTOR SHALL ADVISE THE SUPERINTENDENT IMMEDIATELY FOR CLARIFICATION.
2. PRIOR TO COMMENCEMENT OF WORKS: THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING SERVICES AND STRUCTURES WHETHER OR NOT SHOWN ON THE DRAWINGS. ANY DAMAGE TO EXISTING SERVICES AND STRUCTURES SHALL BE RECTIFIED AT THE CONTRACTOR'S EXPENSE. WHEN COMPRESSIBLE FILLER MATERIAL IS REQUIRED, IT SHALL BE COMPACTED TO THE SAME DENSITY AS ALL EXISTING MATERIAL. ALL SPENT MATERIAL SHALL BE ADDED TO SOFT FINISHED SURFACE LEVELS.
3. THE CONTRACTOR SHALL MAINTAIN SERVICES AND ALL WEATHER ACCESS AT ALL TIMES TO ACCORDANCE PROPERTIES.
4. TO MINIMIZE DISRUPTION THE CONTRACTOR SHALL STAGE THE WORKS TO THE SATISFACTION OF THE SUPERINTENDENT.
5. ALL NEW WORKS SHALL BE SMOOTHLY TRANSITIONED INTO EXISTING WORKS.
6. DIMENSIONS IF ANY DETAIL SHALL NOT BE SCALED DIMENSIONS. IF IN DOUBT, IT SHALL BE VERIFIED BY THE SUPERINTENDENT.
7. ALL SURVEY DATA AND CONTROL DATA SHALL BE OBTAINED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
8. THE CONTRACTOR SHALL PROVIDE APPROPRIATE TRAFFIC MANAGEMENT MEASURES WHICH ARE TO BE REVIEWED AND APPROVED DURING CONSTRUCTION.
9. ALL CONDITIONS AND PLANS SHALL BE Laid PRIOR TO LAYING THE FINAL ASPHALT OR CONCRETE SEAL LAYER.
10. THE CONTRACTOR SHALL CHECK LOCATION SIZE AND ANGLE/LEVEL OF ALL STOREFRONTS, PERCEPMENTS AND SIGN POSTS MANHOLES ETC PRIOR TO ANY WORK COMMENCING AND SHALL NOTIFY THE SUPERINTENDENT IF THERE ARE ANY DISCREPANCIES WITH THE DESIGN DRAWINGS.



TYPICAL SUBSOIL DRAIN UNDER PAVEMENTS



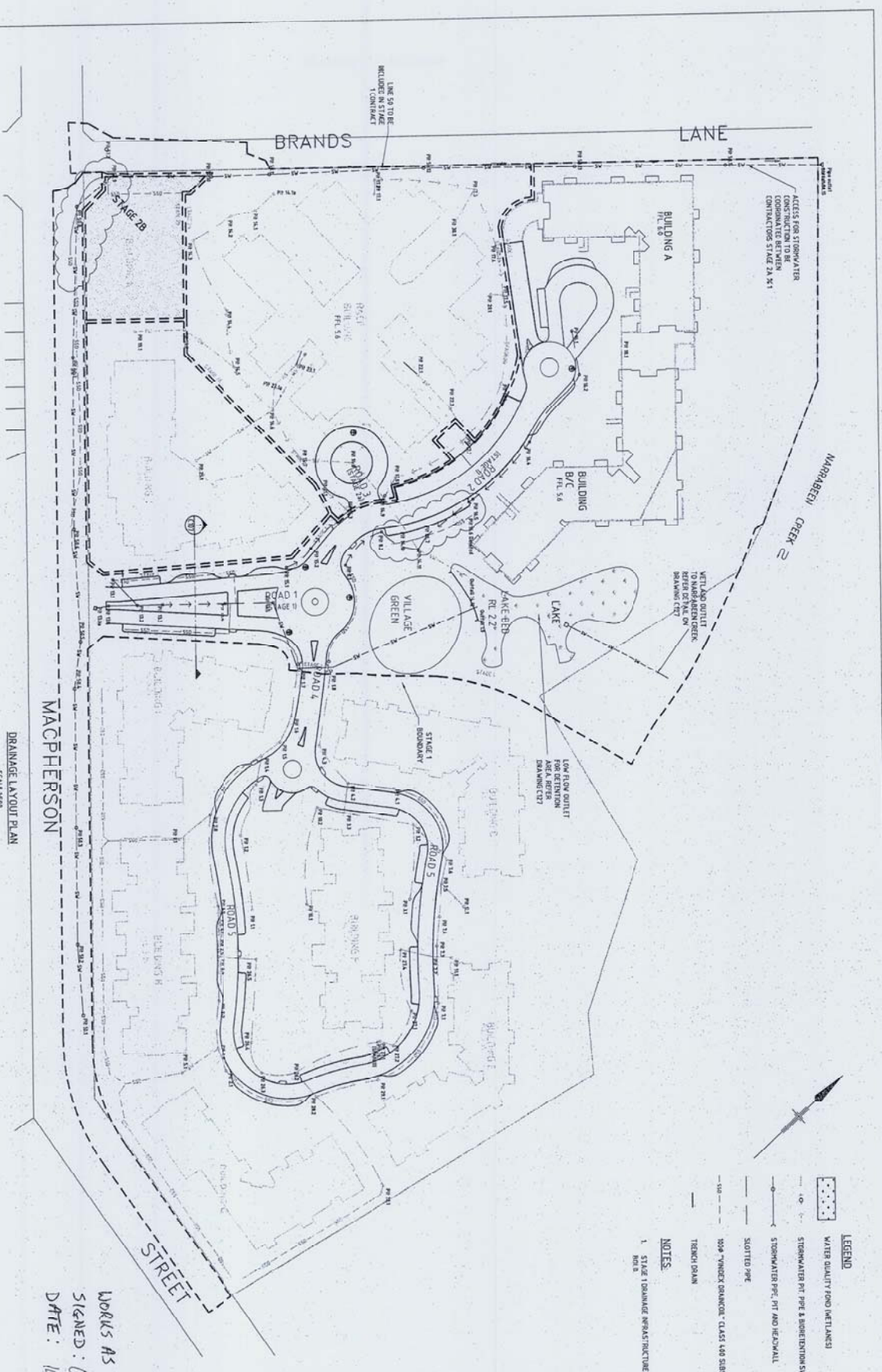
TYPICAL KERB EDGE AND FOOTPATH



WORKS HAS EXECUTED
 SIGNED: [Signature]
 DATE: 13/08/09

1	ROAD 21/2011 CONNECTION	AL	AL	AL	AL	AL	AL	AL	AL	AL	AL	AL	AL	AL	AL	AL	AL	AL	AL
2	ROAD 21/2011 CONNECTION	AL	AL	AL	AL	AL	AL	AL	AL	AL	AL	AL	AL	AL	AL	AL	AL	AL	AL
3	ROAD 21/2011 CONNECTION	AL	AL	AL	AL	AL	AL	AL	AL	AL	AL	AL	AL	AL	AL	AL	AL	AL	AL

ANGULCAN RETIREMENT VILLAGES
 WARREWOOD BROOK STAGE 1
 DRAWING NO: 21-13577-C114



- LEGEND**
- WATER QUALITY POND (MET/LANDS)
 - STORMWATER PIT PIPE & BODIEDITION SWALE
 - STORMWATER PIPES AND HEADWALL
 - SLOTTED PIPE
 - WAP THICK GRANULAR CLASS 150 SURFOL DRAIN
 - TRUNK DRAIN
- NOTES**
1. STAGE 1 DRAINAGE AREAS INDICATED SHOWN IN BLUE

WORKS AS EXECUTED
 SIGNED: *CP 101/115*
 DATE: 14/08/09

FOR CONSTRUCTION

4	IT'S A BUILDING	1.250	AC	AC	13/2/09
3	REVISED AS CLOSED	1.250	AC	AC	13/11/08
2	NEW DRAWING BY T3A ADDED	1.250	AC	AC	02/2/08
1	PRELIMINARY LAYOUT AMENDED	1.250	AC	AC	12/8/07
0	ISSUED FOR CONSTRUCTION	1.250			

Author	Rev	Revised	Revised by	Revised on	Revised for
CP 101/115	1	14/08/09	CP 101/115	14/08/09	WORKS AS EXECUTED

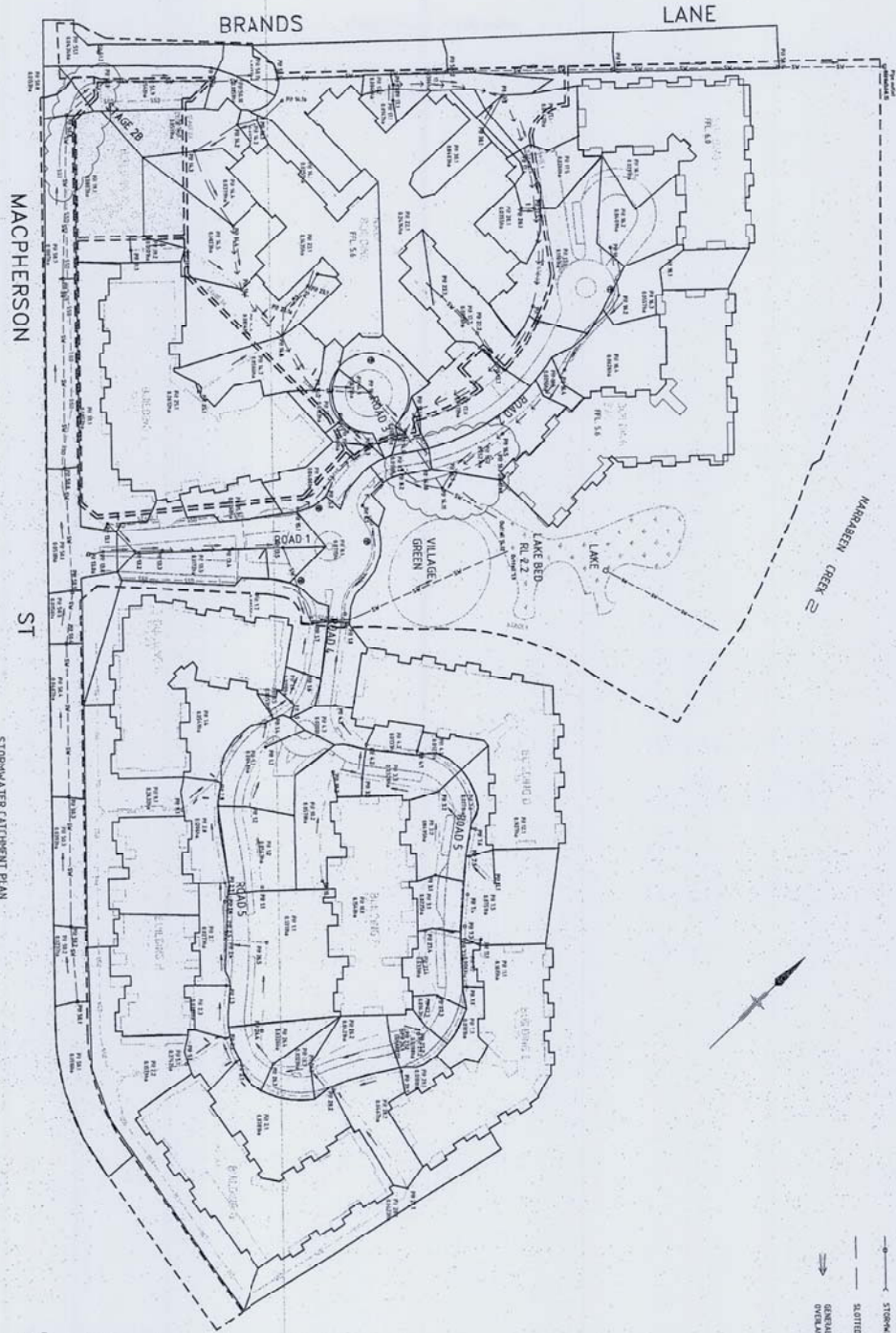
Client	Project	Location
ANGELICAN RETIREMENT VILLAGES	WARREMWOOD BROOK STAGE 1	WARREMWOOD BROOK

ANGELICAN RETIREMENT VILLAGES
 WARREMWOOD BROOK STAGE 1
 STORMWATER DRAINAGE PLAN

SCALE: 1:500

ANGELICAN RETIREMENT VILLAGES
 WARREMWOOD BROOK STAGE 1
 STORMWATER DRAINAGE PLAN

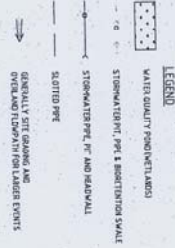
ANGELICAN RETIREMENT VILLAGES
 WARREMWOOD BROOK STAGE 1
 STORMWATER DRAINAGE PLAN
 DRAWING NO: 21-13577-C115
 BOX: 4



ST
MACHPHERSON

STORMWATER CATCHMENT PLAN
SCALE 1:500

CONSTRUCTION



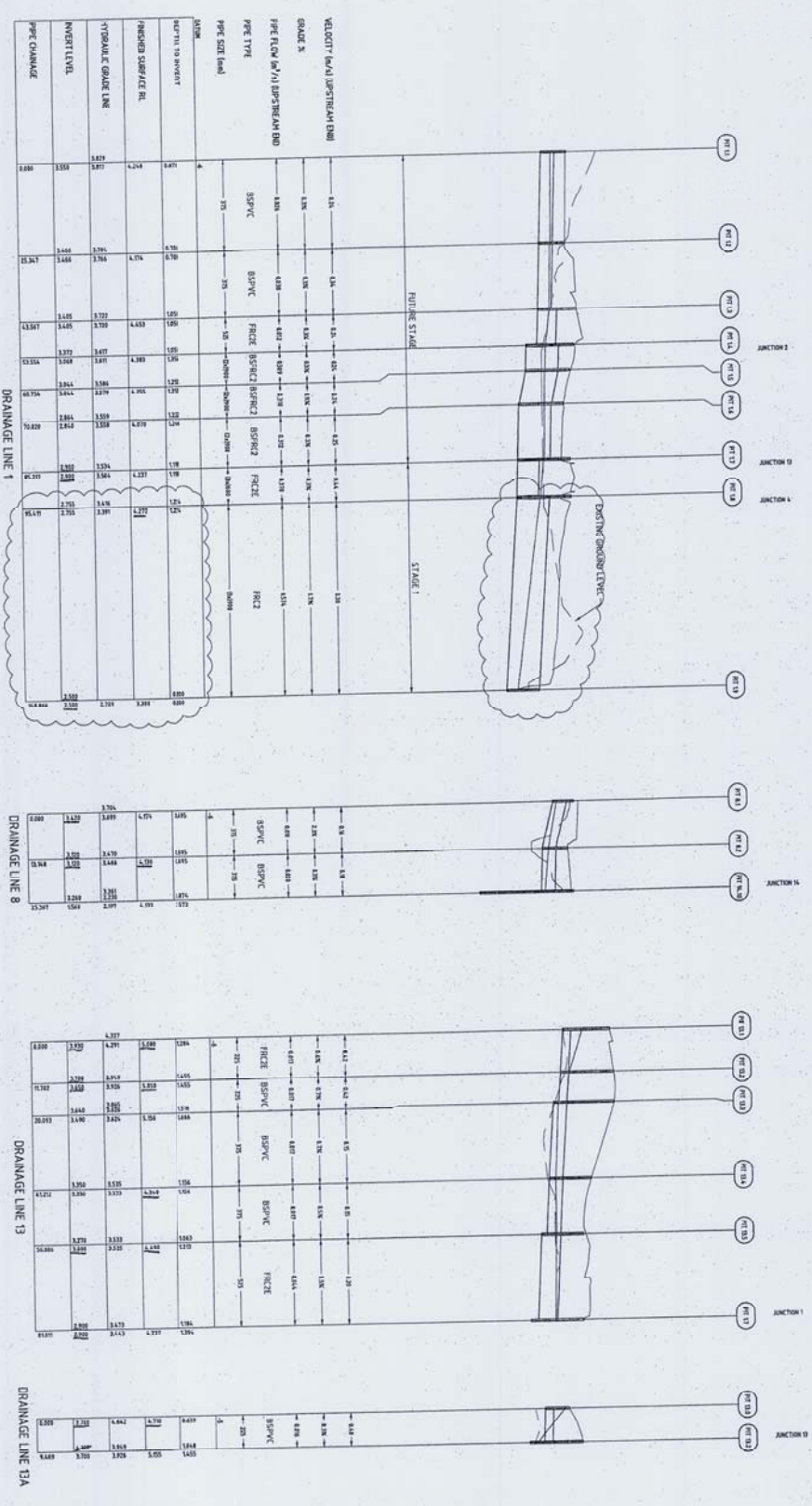
WORKS AS EXECUTED
SIGNED: *[Signature]*
DATE: 14/08/09

REVISIONS	NO.	DATE	DESCRIPTION
1	1	14/08/09	ISSUED FOR CONSTRUCTION
2	2	14/08/09	ISSUED FOR CONSTRUCTION

PROJECT NO.	21-13577-C-116
CLIENT	ANTICLIMB RETIREMENT VILLAGES
DATE	14/08/09
SCALE	1:500
DRAWN BY	[Name]
CHECKED BY	[Name]
APPROVED BY	[Name]

PROJECT NAME	ANTICLIMB RETIREMENT VILLAGES
CLIENT	ANTICLIMB RETIREMENT VILLAGES
DATE	14/08/09
SCALE	1:500
DRAWN BY	[Name]
CHECKED BY	[Name]
APPROVED BY	[Name]

PROJECT NO.	21-13577-C-116
CLIENT	ANTICLIMB RETIREMENT VILLAGES
DATE	14/08/09
SCALE	1:500
DRAWN BY	[Name]
CHECKED BY	[Name]
APPROVED BY	[Name]



LEGEND

FRCA - FRIBOROUGH CONCRETE CLASS 3 SLOTTED PER ENCASED
 FRCA - FRIBOROUGH CONCRETE CLASS 2 UNSLOTTED PER ENCASED
 FRCA - FRIBOROUGH CONCRETE CLASS 1 UNSLOTTED PER ENCASED
 FRCA - FRIBOROUGH CONCRETE CLASS 2 UNSLOTTED PER ENCASED
 FRCA - FRIBOROUGH CONCRETE CLASS 1 UNSLOTTED PER ENCASED
 FRCA - FRIBOROUGH CONCRETE CLASS 2 UNSLOTTED PER ENCASED



CONSTRUCTION

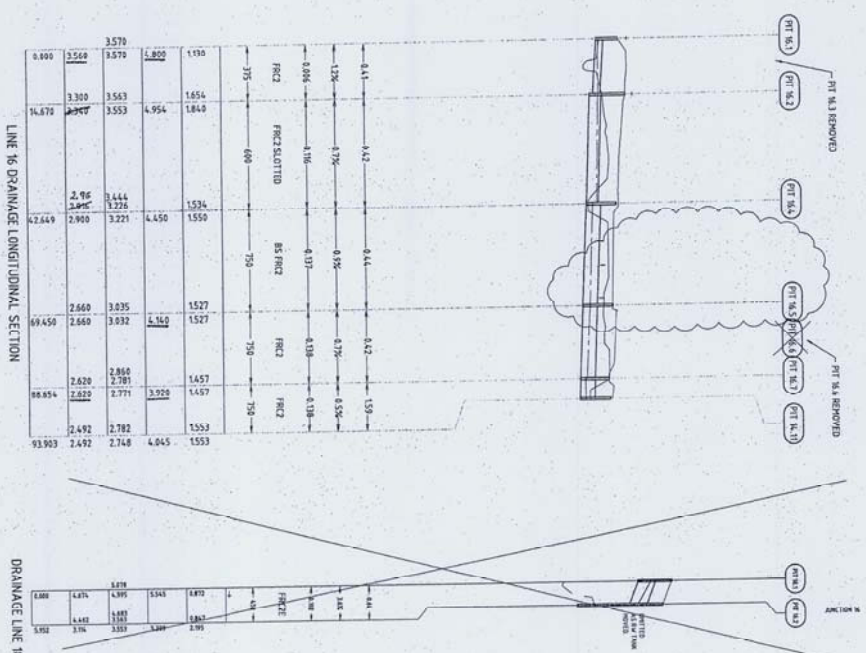
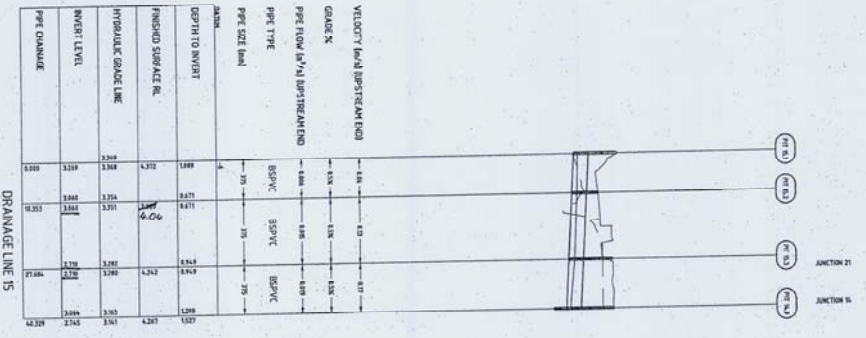
WORKS AS EXECUTED
 SIGNED: *(Signature)*
 DATE: 14/08/09

1	FRCA	AL	AL	AL	AL
2	FRCA	AL	AL	AL	AL
3	FRCA	AL	AL	AL	AL
4	FRCA	AL	AL	AL	AL
5	FRCA	AL	AL	AL	AL
6	FRCA	AL	AL	AL	AL
7	FRCA	AL	AL	AL	AL
8	FRCA	AL	AL	AL	AL
9	FRCA	AL	AL	AL	AL
10	FRCA	AL	AL	AL	AL
11	FRCA	AL	AL	AL	AL
12	FRCA	AL	AL	AL	AL
13	FRCA	AL	AL	AL	AL
14	FRCA	AL	AL	AL	AL
15	FRCA	AL	AL	AL	AL
16	FRCA	AL	AL	AL	AL
17	FRCA	AL	AL	AL	AL
18	FRCA	AL	AL	AL	AL
19	FRCA	AL	AL	AL	AL
20	FRCA	AL	AL	AL	AL
21	FRCA	AL	AL	AL	AL
22	FRCA	AL	AL	AL	AL
23	FRCA	AL	AL	AL	AL
24	FRCA	AL	AL	AL	AL
25	FRCA	AL	AL	AL	AL

ANGLOMAN RETIREMENT VILLAGES
 WAREWOOD BROOK
 STORMWATER LONG SECTIONS - STAGE 1, SHEET 1
 Rev: 5

4	LEVELS MARKED	MSM	NL	NL'	11/10/11	11/11/11	11/12/11	11/13/11	11/14/11
3	INVERT CHANGES DUE TO CANTILE CHANGE AT PVI PLACES	MSM	NL	NL'	11/10/11	11/11/11	11/12/11	11/13/11	11/14/11
2	MANHOLES AS RECORDED	MSM	NL	NL'	11/10/11	11/11/11	11/12/11	11/13/11	11/14/11
1	LEVELS MARKED	MSM	NL	NL'	11/10/11	11/11/11	11/12/11	11/13/11	11/14/11
0	ISSUED FOR CONSTRUCTION	MSM	NL	NL'	11/10/11	11/11/11	11/12/11	11/13/11	11/14/11

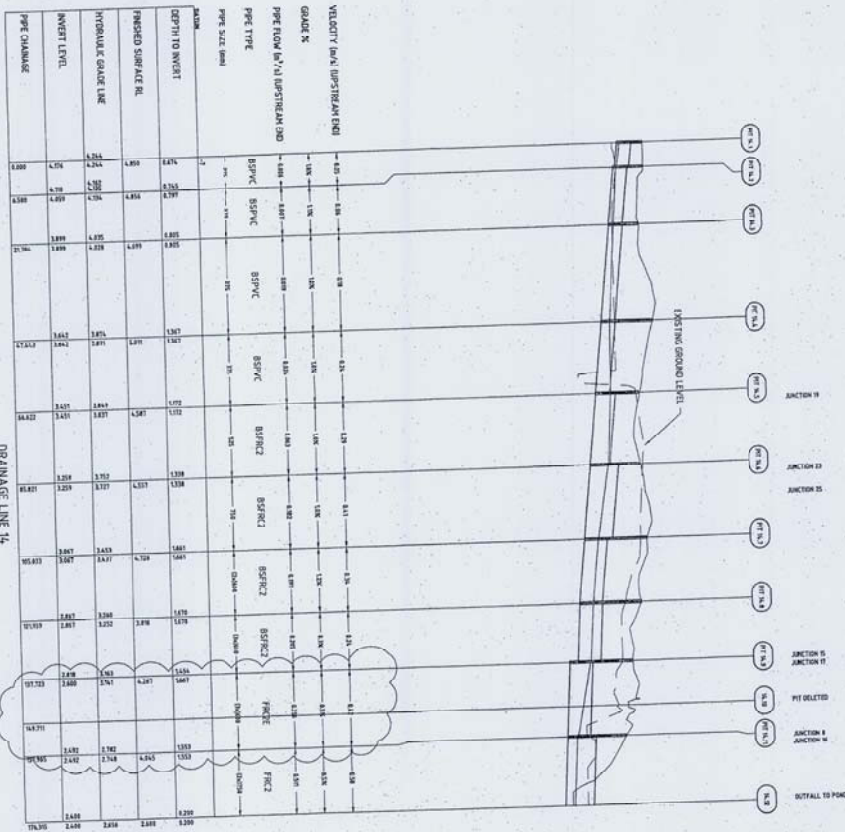
LEGEND
 P-R-C - PIPE REINFORCED CONCRETE CLASS 1, 200 TO 300mm THICK
 R-A-C - REINFORCED CONCRETE CLASS 4, UNBELLISHED PIPE
 R-P-C - REINFORCED CONCRETE CLASS 4, UNBELLISHED PIPE
 R-P-C-2 - SUBSTANTIUM SMALL PIPE REINFORCED CONCRETE CLASS 2, 450 TO 600mm



CONSTRUCTION

1	10	20	30	40	50	60	70	80	90	100
---	----	----	----	----	----	----	----	----	----	-----

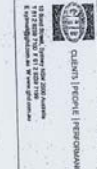
WORKS AS EXECUTED
 SIGNED: *BY/Date*
 DATE: 14/08/09



VERTICAL SCALE
HORIZONTAL SCALE

LEGEND
 FRICT - FRICTION LOSS PER UNIT LENGTH OF PIPE (PK/CM)
 FRICT - FRICTION LOSS PER UNIT LENGTH OF PIPE (PK/CM)
 BS1PC - 150MM SLOTTED PERFORATED PIPE
 BS1PC - 150MM SLOTTED PERFORATED PIPE
 BS1PC - 150MM SLOTTED PERFORATED PIPE
 BS1PC - 150MM SLOTTED PERFORATED PIPE

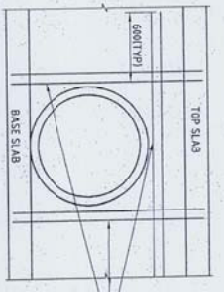
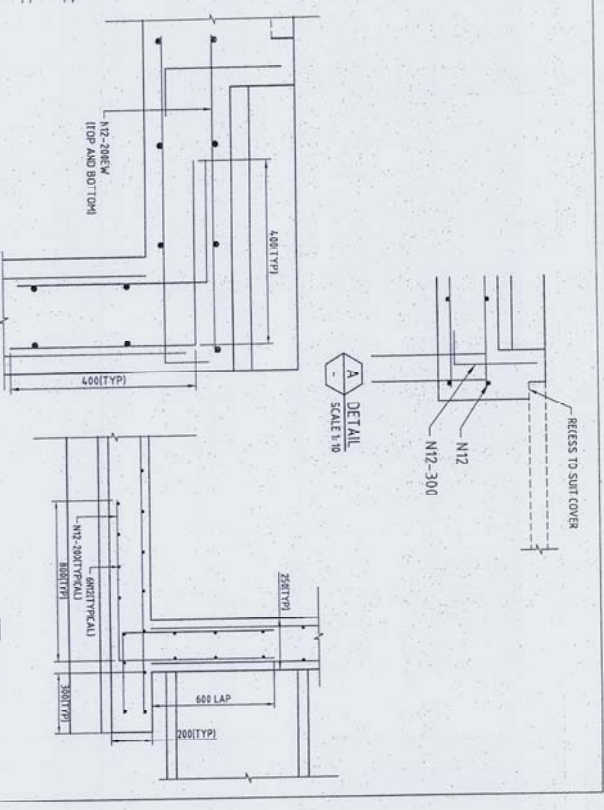
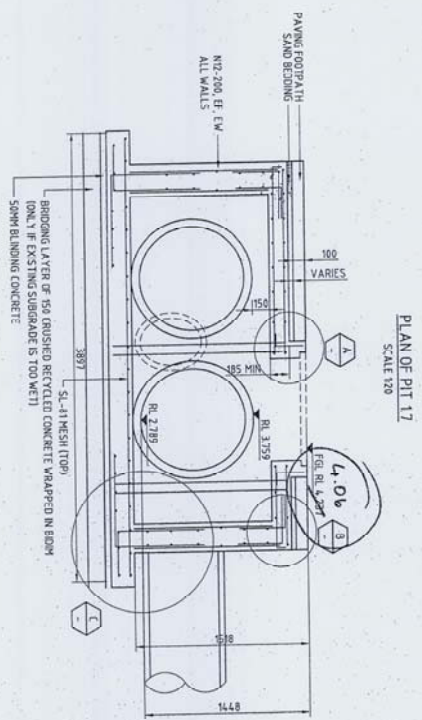
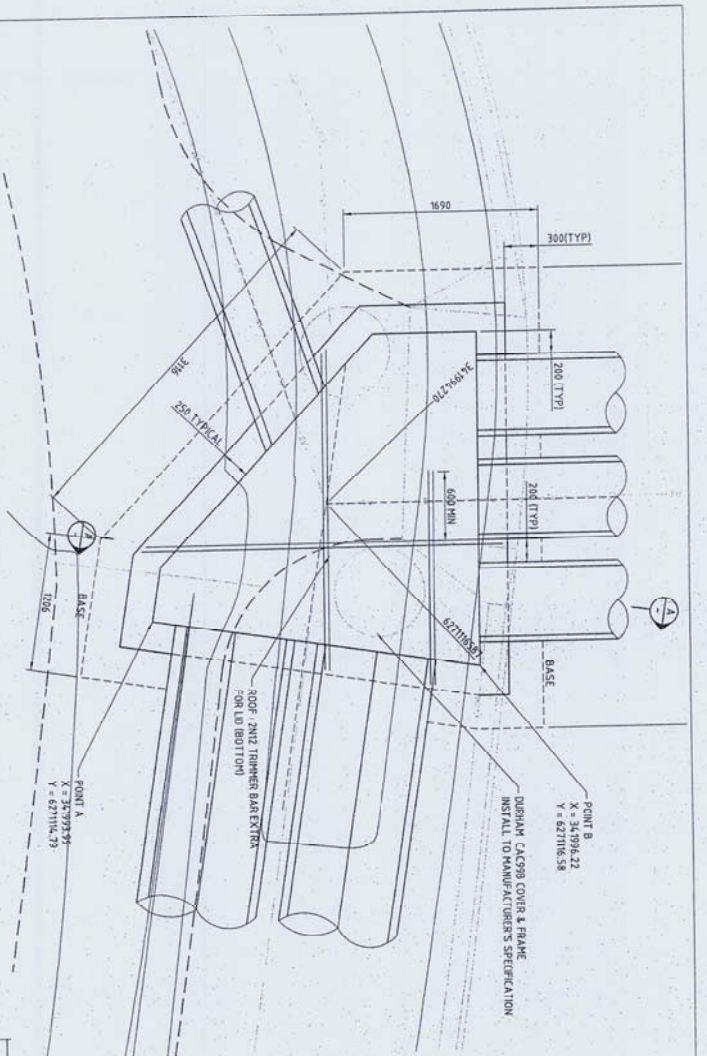
ITEM	DESCRIPTION	UNIT	QTY	PRICE	TOTAL
1	CONCRETE	m	100	150	15000
2	PIPE	m	2000	15	30000
3	LABOUR	hr	1000	100	100000
4	MAINTENANCE	hr	100	100	10000
5	PERMIT	hr	100	100	10000
6	INSURANCE	hr	100	100	10000
7	TOTAL				160000



DO NOT SCALE
 THIS DRAWING IS FOR INFORMATION ONLY.
 ANY CHANGES MUST BE APPROVED BY THE DESIGNER.
 ANY CONSTRUCTION MUST BE DONE IN ACCORDANCE WITH THE SPECIFICATIONS.

ANGLO-CLAREN PISCINE PERFORMANCE
 ANGLICAN RETIREMENT VILLAGES
 WARREWOOD BROOK
 STORMWATER LONG SECTION - STAGE 2A, SHEET 1
 DRAWING NO: 21-13577-C119
 REV: 5

WORKS AS EXECUTED
 SIGNED: *[Signature]*
 DATE: 14/08/09



- NOTE:**
1. THE STRUCTURE IS TO BE FOUND ON 100KA HANSHI ALLOWABLE GROUND BEARING PRESSURE
 2. CONCRETE STRENGTH CLASS IS M20
 3. SOIL PROPERTIES (ASSUMED)
Ka: 0.5
Density: 24kN/m³
 4. LOADING
1.5 kPa
 5. ALL PIPE WORKS INCLUDING FUTURE STAGE PREWORK, TO BE Laid AND CAST INTO PIT WALLS IN STAGE 1. FUTURE PREWORKS TO THEN BE BLANKED OFF WITH STONE, BROW AND MESH.

WORKS AS EXECUTED
 SIGNED: *[Signature]*
 DATE: 14/08/09

CONSTRUCTION

0	ISSUED FOR CONSTRUCTION	Drawn: RAS	Checked: Approved	Date:
---	-------------------------	------------	-------------------	-------

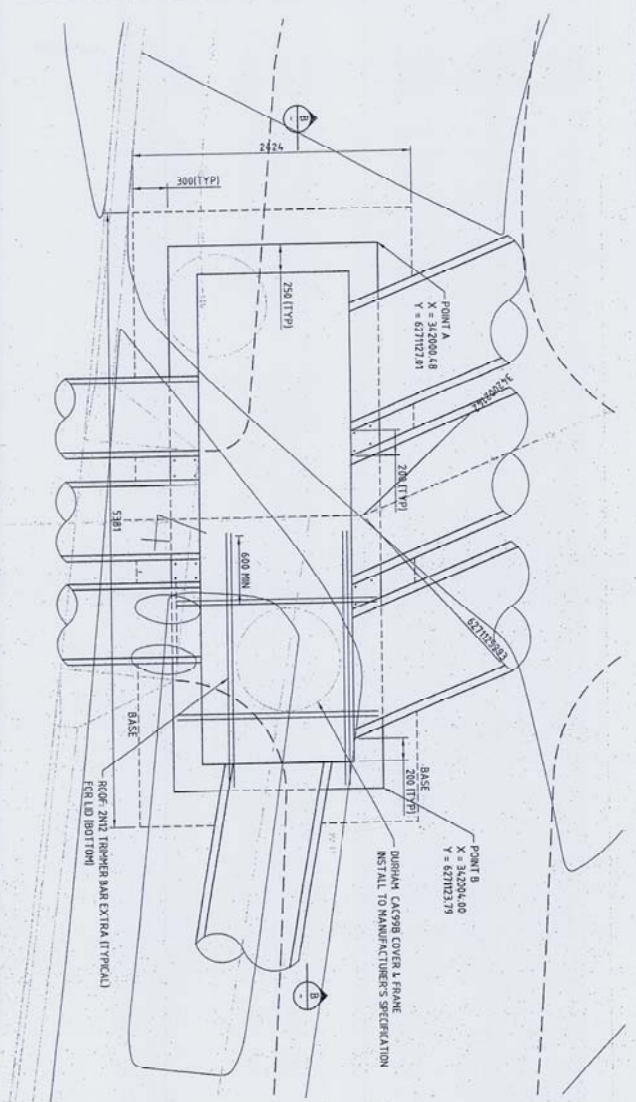
ANGELICAN RETIREMENT VILLAGES
 DIRECTORS OF RESIDENCES

11 BROAD STREET, SPRINGWOOD VIC 3000 Australia
 Tel: 03 9450 1000 Fax: 03 9450 1001
 Email: info@angelican.com.au Website: www.angelican.com.au

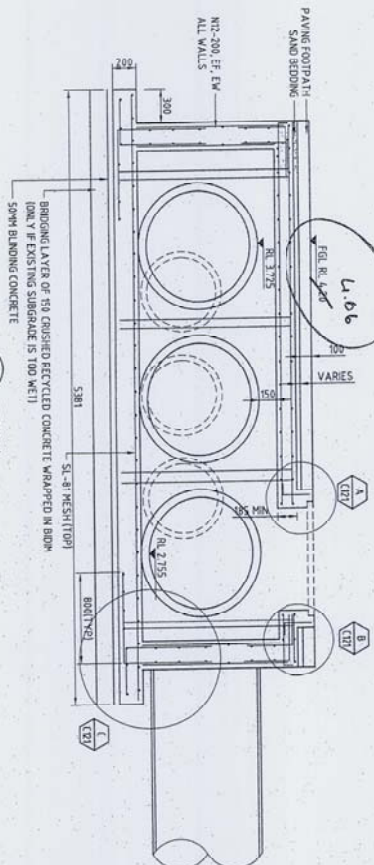
Client's Approval	Project Performance
Approved	Approved
Scale: AS SHOWN	Scale: AS SHOWN

DO NOT SCALE	Drawn: RAS	Designed: RAS
Checked: AL	Checked: AL	Checked: AL
Scale: AS SHOWN	Scale: AS SHOWN	Scale: AS SHOWN

Project: ANGELICAN RETIREMENT VILLAGES
 WARREWOOD BROOK STAGE 1
 Title: CIVIL WORKS
 STORM PIT DETAILS (PIT 1.7) SHEET 1 OF 2
 Drawing No: 21-13577-C121
 Rev: 0



PLAN OF PIT 1.2
SCALE 1:20



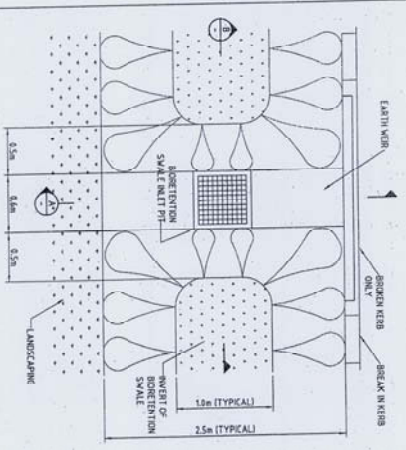
SECTION B
SCALE 1:20

- NOTE:
1. THE STRUCTURE IS TO BE FOUNDED ON 100kPa MINIMUM ALLOWABLE GROUND BEARING PRESSURE
 2. CONCRETE GRADE: M40 (GENERALLY 40mm FOR ROOF)
 3. SOIL PROPERTIES (ASSUMED)
Ka: 0.05
DENSITY: 20kN/m³
 4. LOADING: ULS 1.5 HPa
 5. ALL PAVING ARE INCLUDING CURB/STAGE BARRIERS TO BE LIFTED AND CAST INTO PLACE AT FINISH STAGE. FUTURE PREPARATIONS TO THEM BE BLANKED OFF WITH STONE, BIRM AND MESH.

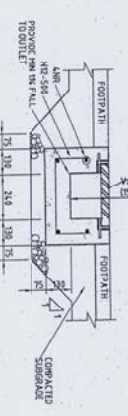
WORKS AS EXECUTED
SIGNED: *[Signature]*
DATE: 14/08/09

CONSTRUCTION

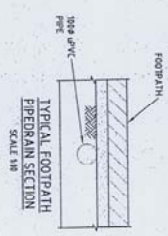
0	ISSUED FOR CONSTRUCTION	BAAS	Checked Approved	DATE
<p>ANGLO-AMERICAN RETIREMENT VILLAGES DIRECTOR OF WORKS</p> <p>GHD CLIENTS PEOPLE PERFORMANCE</p> <p>89 Bond Street, Sydney NSW 2000 Australia P 61 2 9252 9000 F 61 2 9252 9001 www.ghd.com.au</p>				
<p>DO NOT SCALE</p> <p>Conditions of Use: This drawing is the property of GHD. It is to be used only for the project and site for which it was prepared and no other use without the written consent of GHD. It is not to be used for any other project or site.</p>				
Client: RAAS	Design: RAAS	Checked: AL	Design: RAAS	Checked: AL
Approved: AL	Approved: AL	Approved: AL	Approved: AL	Approved: AL
Scale: A3 B3/C3/D3	Scale: A3 B3/C3/D3	Scale: A3 B3/C3/D3	Scale: A3 B3/C3/D3	Scale: A3 B3/C3/D3
Sheet: A1	Project: ANGLICAN RETIREMENT VILLAGES WARRIEWOOD BROOK STAGE 1	Project: ANGLICAN RETIREMENT VILLAGES WARRIEWOOD BROOK STAGE 1	Project: ANGLICAN RETIREMENT VILLAGES WARRIEWOOD BROOK STAGE 1	Project: ANGLICAN RETIREMENT VILLAGES WARRIEWOOD BROOK STAGE 1
Drawing No: 21-13577-C122	Sheet: STORM PIT DETAILS (PIT 1.2) SHEET 2 OF 2	Sheet: STORM PIT DETAILS (PIT 1.2) SHEET 2 OF 2	Sheet: STORM PIT DETAILS (PIT 1.2) SHEET 2 OF 2	Sheet: STORM PIT DETAILS (PIT 1.2) SHEET 2 OF 2
Rev: 0				



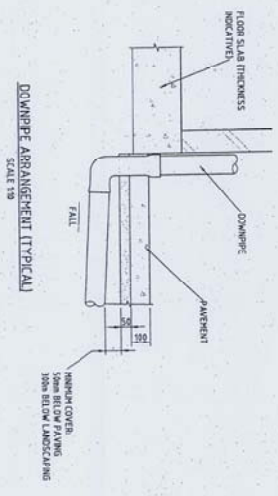
EIORETENTION SWALE PIT ARRANGEMENT
SCALE 1/20



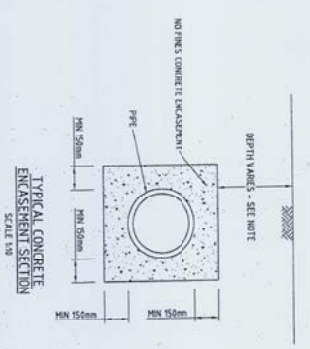
TYPICAL FOOTPATH
TRENCH DRAIN SECTION
SCALE 1/8



TYPICAL FOOTPATH
FIBERGLASS SECTION
SCALE 1/8

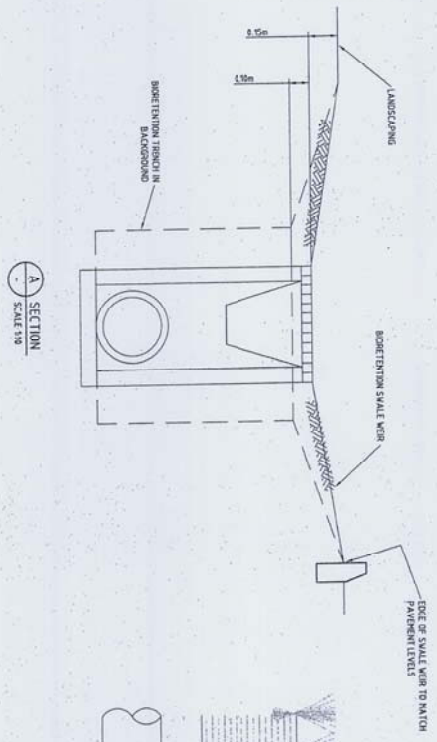


DOWNPIPE ARRANGEMENT (TYPICAL)
SCALE 1/8

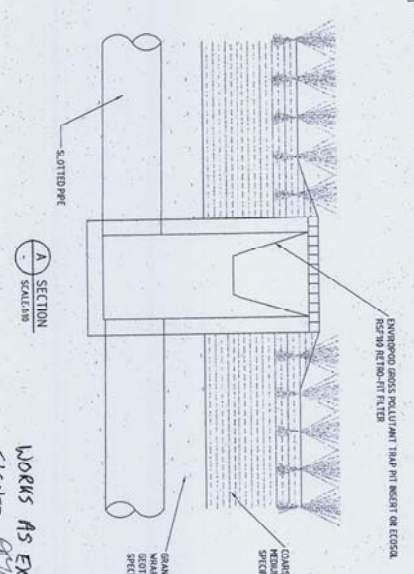


TYPICAL CONCRETE
ENCASEMENT SECTION
SCALE 1/8

NOTE
CONCRETE ENCASEMENT GENERALLY 1' DEEP AT LEAST
1. PAVEMENTS WHERE COVER IS 600mm
2. LANDSCAPING WHERE COVER IS 300mm



SECTION A
SCALE 1/8



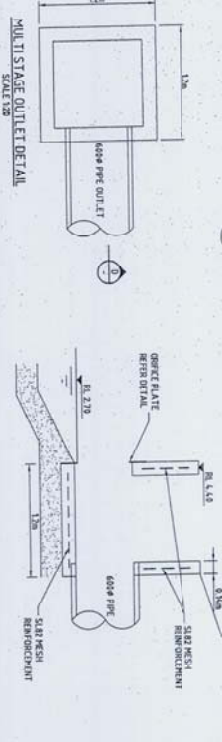
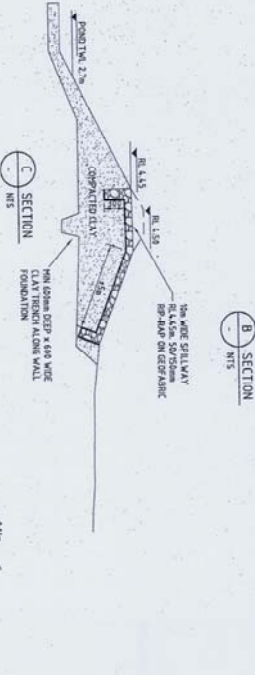
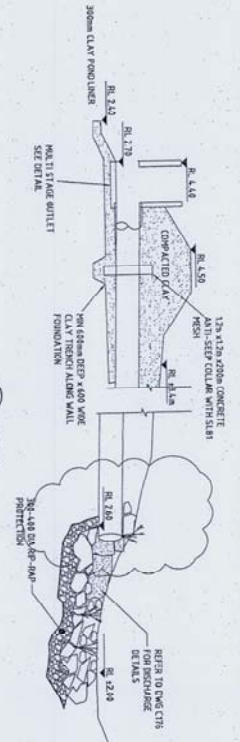
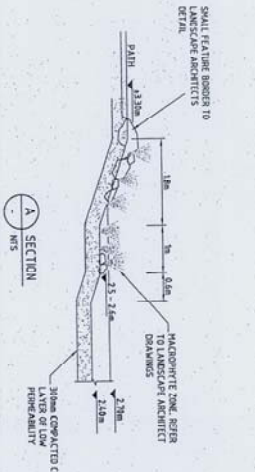
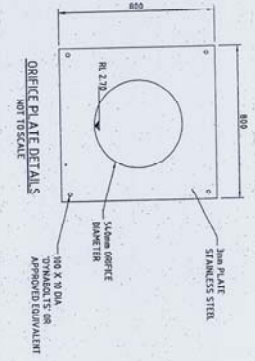
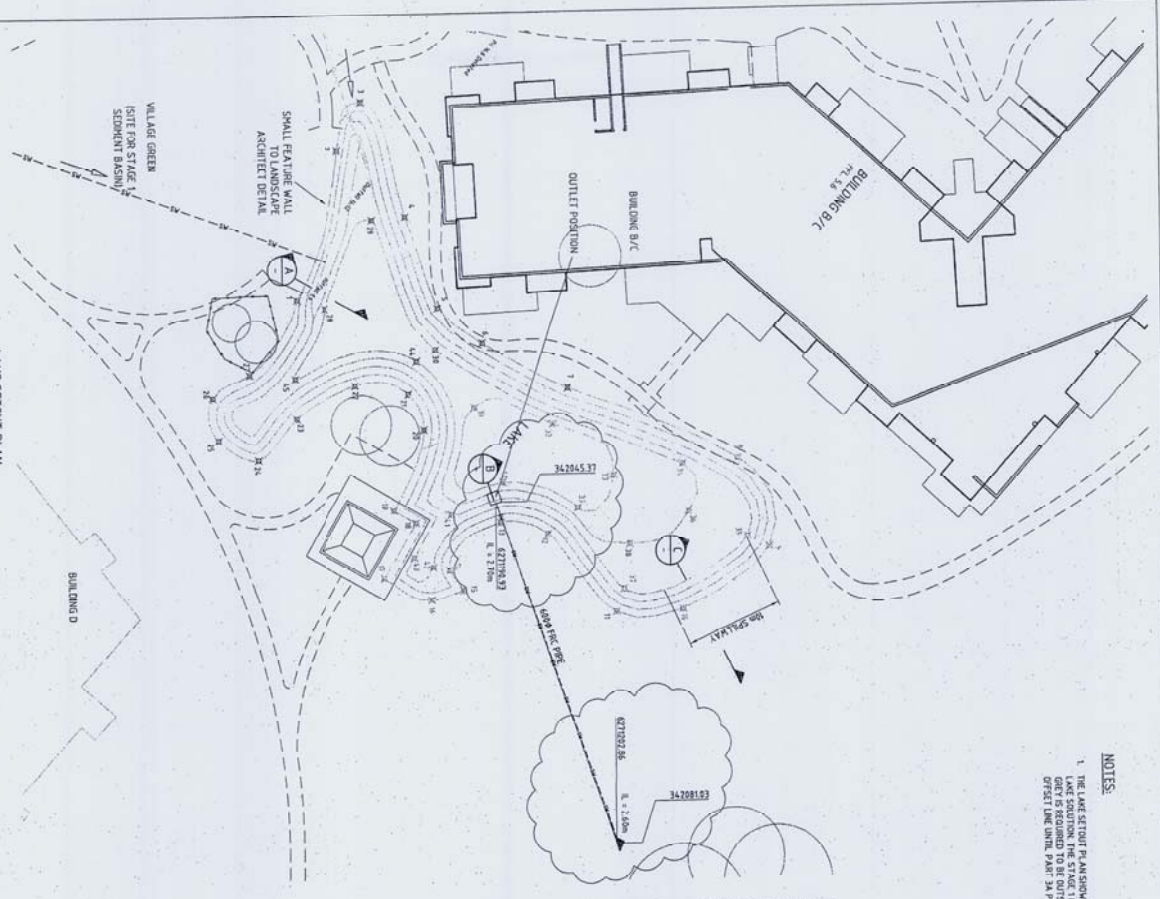
SECTION A
SCALE 1/8

WORKS AS EXCLUDED
SIGNED: *[Signature]*
DATE: 14/08/09

CONSTRUCTION

PROJECT: ANGLICAN RETIREMENT VILLAGES CIVIL WORKS STORMWATER DRAINAGE SWALE DETAILS		DATE: 21-13577-C124	
DRAWING NO. B1		REV: 0	
CLIENT: ANGLICAN RETIREMENT VILLAGES		PROJECT: ANGLICAN RETIREMENT VILLAGES	
ADDRESS: WARRIEWOOD BROOK STAGE 1		ADDRESS: WARRIEWOOD BROOK STAGE 1	
DRAWING NO. B1		DATE: 21-13577-C124	
SCALE: AS SHOWN		SCALE: AS SHOWN	
PROJECT NO. 13577		PROJECT NO. 13577	
DRAWING NO. B1		DRAWING NO. B1	
DATE: 21-13577-C124		DATE: 21-13577-C124	
DRAWN BY: [Name]		DRAWN BY: [Name]	
CHECKED BY: [Name]		CHECKED BY: [Name]	
APPROVED BY: [Name]		APPROVED BY: [Name]	
DATE: 14/08/09		DATE: 14/08/09	
PROJECT: ANGLICAN RETIREMENT VILLAGES CIVIL WORKS STORMWATER DRAINAGE SWALE DETAILS		PROJECT: ANGLICAN RETIREMENT VILLAGES CIVIL WORKS STORMWATER DRAINAGE SWALE DETAILS	
DRAWING NO. B1		DRAWING NO. B1	
DATE: 21-13577-C124		DATE: 21-13577-C124	
DRAWN BY: [Name]		DRAWN BY: [Name]	
CHECKED BY: [Name]		CHECKED BY: [Name]	
APPROVED BY: [Name]		APPROVED BY: [Name]	
DATE: 14/08/09		DATE: 14/08/09	

NOTES:
 1. THE LAKE SETOUT PLANS SHOWS THE OUTLINE OF THE LAKE SETOUT. THE LAKE SETOUT IS TO BE CONSTRUCTED TO BE OUTSIDE THE CONCRETE OFFSET LINE UNTIL PART 3A PERMIT IS OBTAINED.



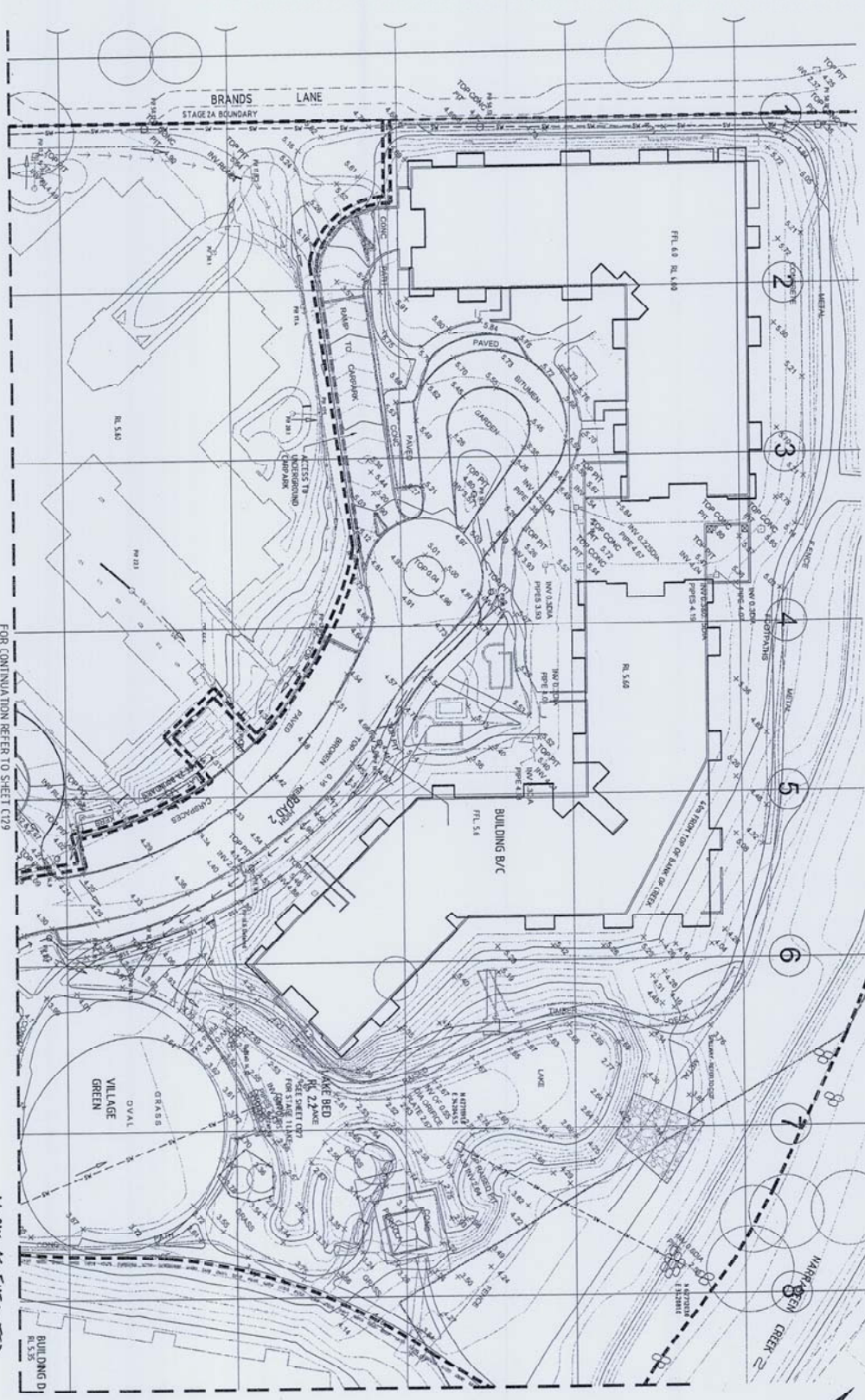
LAKE SETOUT

FROM	TO	HEIGHT	
1	342021.50	627192.54	3.200
2	342020.68	627194.57	3.200
3	342020.00	627197.50	3.200
4	342019.32	627199.53	3.200
5	342018.64	627198.71	3.200
6	342017.96	627197.89	3.200
7	342017.28	627197.07	3.200
8	342016.60	627196.25	3.200
9	342015.92	627195.43	3.200
10	342015.24	627194.61	3.200
11	342014.56	627193.79	3.200
12	342013.88	627192.97	3.200
13	342013.20	627192.15	3.200
14	342012.52	627191.33	3.200
15	342011.84	627190.51	3.200
16	342011.16	627189.69	3.200
17	342010.48	627188.87	3.200
18	342009.80	627188.05	3.200
19	342009.12	627187.23	3.200
20	342008.44	627186.41	3.200
21	342007.76	627185.59	3.200
22	342007.08	627184.77	3.200
23	342006.40	627183.95	3.200
24	342005.72	627183.13	3.200
25	342005.04	627182.31	3.200
26	342004.36	627181.49	3.200
27	342003.68	627180.67	3.200
28	342003.00	627179.85	3.200
29	342002.32	627179.03	3.200
30	342001.64	627178.21	3.200
31	342000.96	627177.39	3.200
32	342000.28	627176.57	3.200
33	341999.60	627175.75	3.200
34	341998.92	627174.93	3.200
35	341998.24	627174.11	3.200
36	341997.56	627173.29	3.200
37	341996.88	627172.47	3.200
38	341996.20	627171.65	3.200
39	341995.52	627170.83	3.200
40	341994.84	627170.01	3.200
41	341994.16	627169.19	3.200
42	341993.48	627168.37	3.200
43	341992.80	627167.55	3.200
44	341992.12	627166.73	3.200

LAKE SETOUT PLAN
 SCALE 1:200

2. OUTLET LOCATION AND DIMENSIONS		AML	CV	AML	CV
1. CONDITIONS REMARKS		1.00	1.00	1.00	1.00
0. ISSUED FOR CONSTRUCTION					

DO NOT SCALE
 Project: ANGLICAN RETIREMENT VILLAGES WARRENWOOD BROOK - STAGE 1
 Drawing No: 21-13577-C-127
 Scale: 1:200
 Date: 14/09/09
 Signed: *[Signature]*
 Works as Executed
 Construction



LEGEND
 DESIGN CONTOUR
 LANDSCAPE 'IMPOUND'

FOR CONTINUATION REFER TO SHEET C129
 SITE REGRADING PLAN
 SCALE 1:250

WORKS AS EXECUTED
 SIGNED: *[Signature]*
 DATE: 14/08/09



NO.	REVISION	DATE	BY	CHKD.	DESCRIPTION
1					ISSUED FOR TENDERS
2					REVISED TO REFLECT COMMENTS
3					REVISED TO REFLECT COMMENTS
4					REVISED TO REFLECT COMMENTS
5					REVISED TO REFLECT COMMENTS
6					REVISED TO REFLECT COMMENTS
7					REVISED TO REFLECT COMMENTS
8					REVISED TO REFLECT COMMENTS
9					REVISED TO REFLECT COMMENTS
10					REVISED TO REFLECT COMMENTS

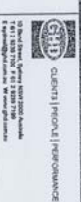
NO.	REVISION	DATE	BY	CHKD.	DESCRIPTION
1					ISSUED FOR TENDERS
2					REVISED TO REFLECT COMMENTS
3					REVISED TO REFLECT COMMENTS
4					REVISED TO REFLECT COMMENTS
5					REVISED TO REFLECT COMMENTS
6					REVISED TO REFLECT COMMENTS
7					REVISED TO REFLECT COMMENTS
8					REVISED TO REFLECT COMMENTS
9					REVISED TO REFLECT COMMENTS
10					REVISED TO REFLECT COMMENTS

NO.	REVISION	DATE	BY	CHKD.	DESCRIPTION
1					ISSUED FOR TENDERS
2					REVISED TO REFLECT COMMENTS
3					REVISED TO REFLECT COMMENTS
4					REVISED TO REFLECT COMMENTS
5					REVISED TO REFLECT COMMENTS
6					REVISED TO REFLECT COMMENTS
7					REVISED TO REFLECT COMMENTS
8					REVISED TO REFLECT COMMENTS
9					REVISED TO REFLECT COMMENTS
10					REVISED TO REFLECT COMMENTS

NO.	REVISION	DATE	BY	CHKD.	DESCRIPTION
1					ISSUED FOR TENDERS
2					REVISED TO REFLECT COMMENTS
3					REVISED TO REFLECT COMMENTS
4					REVISED TO REFLECT COMMENTS
5					REVISED TO REFLECT COMMENTS
6					REVISED TO REFLECT COMMENTS
7					REVISED TO REFLECT COMMENTS
8					REVISED TO REFLECT COMMENTS
9					REVISED TO REFLECT COMMENTS
10					REVISED TO REFLECT COMMENTS

NO.	REVISION	DATE	BY	CHKD.	DESCRIPTION
1					ISSUED FOR TENDERS
2					REVISED TO REFLECT COMMENTS
3					REVISED TO REFLECT COMMENTS
4					REVISED TO REFLECT COMMENTS
5					REVISED TO REFLECT COMMENTS
6					REVISED TO REFLECT COMMENTS
7					REVISED TO REFLECT COMMENTS
8					REVISED TO REFLECT COMMENTS
9					REVISED TO REFLECT COMMENTS
10					REVISED TO REFLECT COMMENTS

NO.	REVISION	DATE	BY	CHKD.	DESCRIPTION
1					ISSUED FOR TENDERS
2					REVISED TO REFLECT COMMENTS
3					REVISED TO REFLECT COMMENTS
4					REVISED TO REFLECT COMMENTS
5					REVISED TO REFLECT COMMENTS
6					REVISED TO REFLECT COMMENTS
7					REVISED TO REFLECT COMMENTS
8					REVISED TO REFLECT COMMENTS
9					REVISED TO REFLECT COMMENTS
10					REVISED TO REFLECT COMMENTS



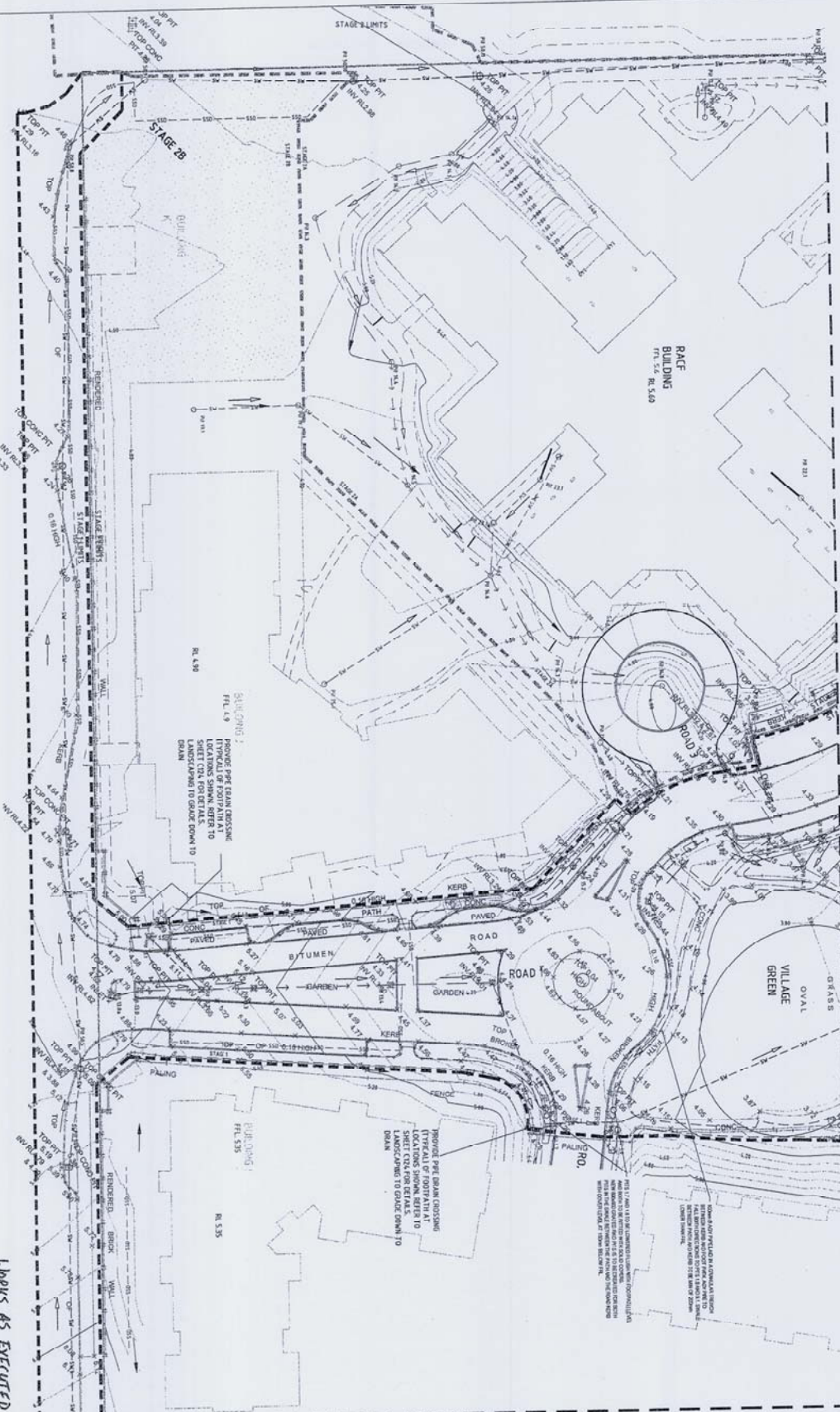
DO NOT SCALE

GRID	DATE	BY	CHKD.
1	14/08/09		
2			
3			
4			
5			
6			
7			
8			
9			
10			

ANGLOICAN RETIREMENT VILLAGES
 WARREWOOD BROOK STAGE 1
 CIVIL WORKS
 SITE REGRADING PLAN SHEET 1 OF 2

Rev: 10
 Drawing No: 21-13577-C128

FOR CONTINUATION REFER TO SHEET C128



LEGEND

- DESIGN CONTROL
- LANDSCAPE WORKS

SITE REGRADING PLAN

SCALE 1:500

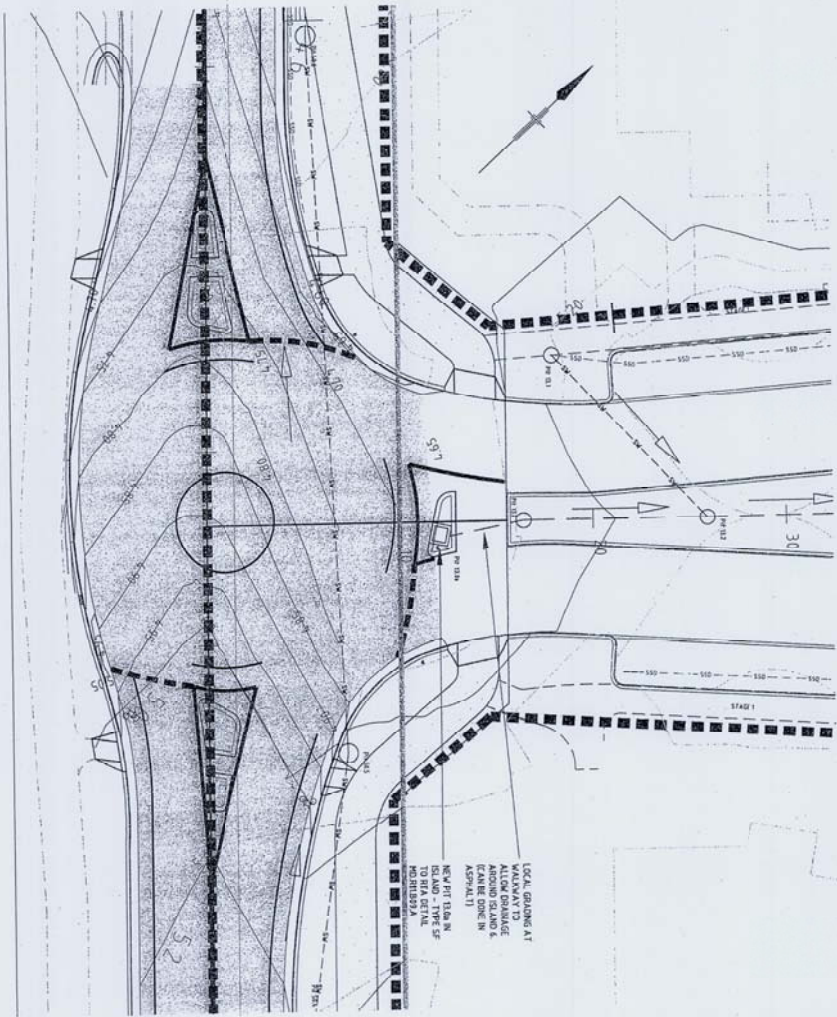
WORKS AS EXECUTED
SIGNED: *[Signature]*
DATE: 14/08/09

CONSTRUCTION

9 25 5 15 10 02 AM
SCALE 1:500
SCALE OF ORIGINAL SET

7	VILLAGE GREEN/STAGE 26/RAAF BUILDING	LM	N	N	71.38					
3	STORMWATER & 1/4 S. LAYOUT	LM	N	N	90.98					
2	CONTINGENTS	LM	N	N	4.18					
1	NEW DRAINAGE TO 1/4	LM	N	N	15.29					
0	ISOLATED CONSTRUCTION	LM	N	N	4.28					
5	STORMWATER AGEED AT ROAD 15-48									

Client	ANGUICAN RETIREMENT VILLAGES
Project	WARRENWOOD BROOK STAGE 1
Sheet	SITE REGRADING PLAN SHEET 2 OF 2
Drawing No.	21-13577-C129
Rev.	5



LEGEND
 DESIGN CONTOUR
 LANDSCAPE "POUND"

SITE ENTRANCE GRADING
 DETAIL
 SCALE 1/8" = 1'-0"

WORKS AS EXECUTED
 SIGNED: *[Signature]*
 DATE: 10/08/09



CONSTRUCTION

0	DESIGN FOR CONSTRUCTION	DATE	10/08/09	BY	AS/3/09/09
1	DESIGN FOR CONSTRUCTION	DATE		BY	
2	DESIGN FOR CONSTRUCTION	DATE		BY	
3	DESIGN FOR CONSTRUCTION	DATE		BY	
4	DESIGN FOR CONSTRUCTION	DATE		BY	
5	DESIGN FOR CONSTRUCTION	DATE		BY	
6	DESIGN FOR CONSTRUCTION	DATE		BY	
7	DESIGN FOR CONSTRUCTION	DATE		BY	
8	DESIGN FOR CONSTRUCTION	DATE		BY	
9	DESIGN FOR CONSTRUCTION	DATE		BY	
10	DESIGN FOR CONSTRUCTION	DATE		BY	

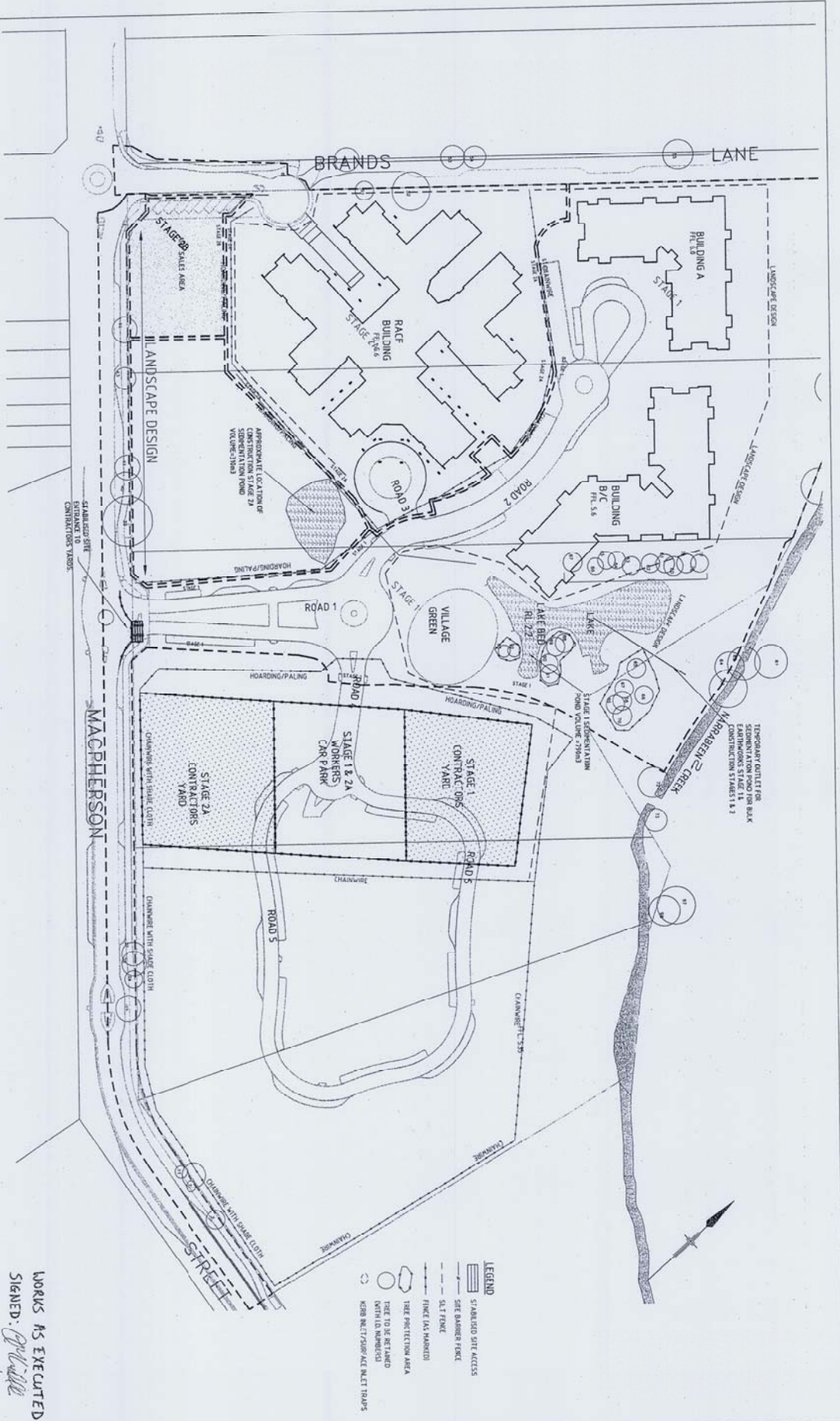


DO NOT SCALE
 CADD FILE
 THIS DRAWING IS THE PROPERTY OF THE ENGINEER AND SHOULD NOT BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT PERMISSION IN WRITING FROM THE ENGINEER.

DATE	10/08/09	BY	AS/3/09/09
DATE		BY	
DATE		BY	
DATE		BY	
DATE		BY	

ANGLICAN RETIREMENT VILLAGES
 WARRENWOOD BROOK STAGE 1
 CIVIL WORKS
 SITE ENTRANCE GRADING PLAN
 Drawing No: 21-13577-C-130

REV: 0



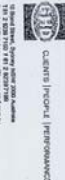
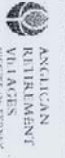
SEDIMENT & EROSION CONTROL PLAN
SCALE 1:500

WORKS AS EXECUTED
SIGNED: *[Signature]*
DATE: 14/08/09

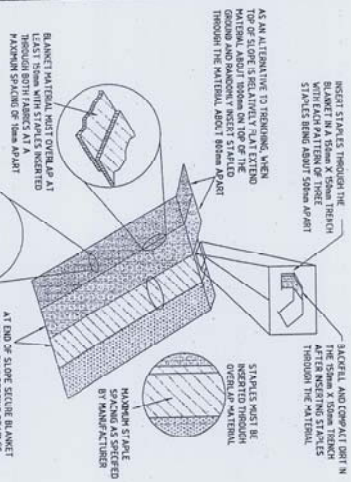
CONSTRUCTION

1	VOID LAYOUT/ANNUSED	1:500	AL	13/03/08
0	SEDIMENT/CONSTRUCTION	1:500	ND	10/07/08
0	SEDIMENT/CONSTRUCTION	1:500	ND	10/07/08

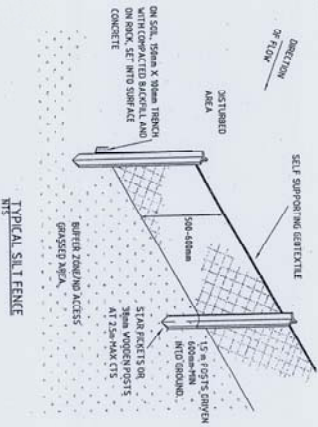
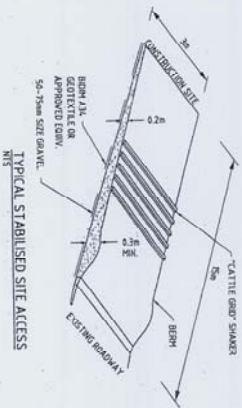
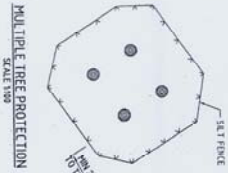
Client	ANGLICAN RETIREMENT VILLAGES
Project	WARRIEWOOD BROOK - STAGE 1
Discipline	CIVIL WORKS
Drawing No.	21-13577-C132
Sheet	1



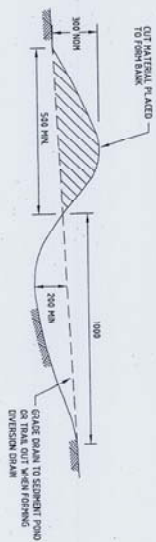
DO NOT SCALE	Scale	1:500
DATE	14/08/09	
PROJECT	WARRIEWOOD BROOK - STAGE 1	
DISCIPLINE	CIVIL WORKS	
DRAWING NO.	21-13577-C132	
SHEET	1	



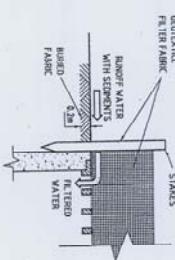
DETAIL 3-BANK STABILISATION (WHERE REQUIRED)



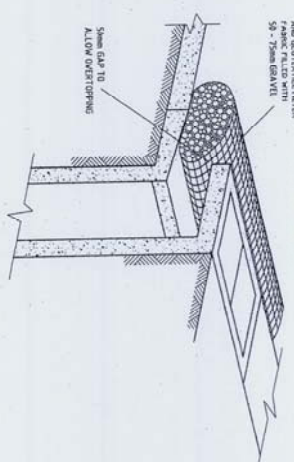
TYPICAL DETAIL OF DIVERSION OR CATCH DRAIN



TYPICAL PROTECTION OF SURFACE INLET PITS NOT TO SCALE



KERB INLET FILTERS NOT TO SCALE



- NOTES**
1. ALL EROSION AND SEDIMENT CONTROL MEASURES TO BE IN ACCORDANCE WITH THE DEPARTMENT OF HOUSING, ENERGY AND COMMUNITARIAN AFFAIRS (DEH) GUIDELINES FOR EROSION AND SEDIMENT CONTROL (BULE 3000).
 2. WORKS SHALL BE UNDERTAKEN IN THE FOLLOWING SEQUENCE:
 1. INSTALL ALL SILT FENCES.
 2. CONSTRUCT DIVERSION CHANNELS.
 3. INSTALL EROSION AND SEDIMENT CONTROL.
 4. REMOVE EXISTING TOPSOIL AND CLAY CUT BACK EARTHWORKS.
 5. TOPSOIL AND REHABILITATE BULK EARTHWORK AREAS IMMEDIATELY UPON COMPLETION.
 6. UNDERTAKE REPAIRING SITE WORKS IN ACCORDANCE WITH THE EROSION PLAN.
 7. REHABILITATE REMAINING SITES.
 8. UNDERTAKE FINAL EROSION CONTROL WORKS ONCE SURFACES ARE STABILISED TO THE SATISFACTION OF THE SUPERINTENDENT AND CONSOLE.
 3. THIS ORDER MAY BE CHANGED SUBJECT TO FIELD CONDITIONS BUT ANY SUCH CHANGE MUST ACHIEVE ALL ENVIRONMENTAL AND CONSTRUCTION GOALS.

- EROSION CONTROL MEASURES**
1. CONTROLS AFFECTED BY WORKS ARE TO BE ESTABLISHED PRIOR TO THE COMPLETION OF EACH DAY'S WORK.
 2. THE CONTRACTOR IS TO STABILISE TOPSOIL, STITCHES AND ALL DISTURBED AREAS AS SOON AS THEY REACH FINAL LEVELS.
 3. WHERE SURFACE SLOPES ARE STEEPER THAN GRADIENT STABILISATION WILL NEED TO BE PROVIDED.
 4. DUST CONTROL MEASURES SHALL BE IMPLEMENTED CONTINUOUSLY DURING CONSTRUCTION WORKS TO THE SATISFACTION OF THE SUPERINTENDENT AND CONSOLE.

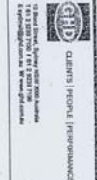
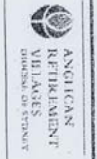
- SEDIMENT CONTROL MEASURES**
1. TOPSOIL SHALL BE REPRODUCED AND STABILISED AS SOON AS POSSIBLE. DISTURBED AREAS SHALL BE LEFT WITH A SCARPED SHOULDER TO ENSURE MAXIMUM RETENTION AND ASSIST FLOW IN TOPSOIL.
 2. THE CONTRACTOR SHALL TEMPORARILY REHABILITATE ANY DISTURBED AREAS WITHIN 28 DAYS WHERE FINAL SHAPING HAS OCCURRED. THE CONTRACTOR SHALL PROVIDE FINAL REHABILITATION WITHIN 28 DAYS.

- TEMPORARY EROSION CONTROL MEASURES**
1. EROSION CONTROL TRAYS AND DAMS ARE TO BE MAINTAINED SUCH THAT:
 - (A) SEDIMENT IS SEPARATED QUICKLY THAT NO LESS THAN 70% OF THE SEDIMENT REMAINS AT ANY ONE TIME.
 - (B) MATERIALS ARE REPLACED OR REPAIRED AS REQUIRED TO ENSURE EFFECTIVENESS OF BOTH THE TRAP AND THE TRAP OR BASIN.
 - (C) THE COMPLETION OF THE CONTRACT MAINTENANCE PERIOD.
 2. FOLLOWING COMPLETION AND RESTORATION OF SITE, REMOVE ALL MATERIALS AND FILL DIVERSION CHANNELS, EROSION CONTROL TRAYS AND SEDIMENT BASINS AND COMPACT IN ACCORDANCE WITH CONSOLE SPECIFICATION TO ALL LEVELS OF THE PREVIOUSLY COMPLETED WORK. PROVIDE TRIM, TOPSOIL, AND HYDRATED.
 3. ACCESS POINT TO ALLOW MACHINE ENTRY / EXIT ARE TO BE MAINTAINED TO ALL EXISTING ROAD MELTS IN THIS VICINITY.
 4. TEMPORARY KERB INLET SEDIMENT TRAPS TO BE PROVIDED TO ALL EXISTING ROAD MELTS IN THIS VICINITY.
 5. THE CONTRACTOR SHALL MAINTAIN A LOG BOOK DETAILING:
 - (A) LOCATION OF ALL INLET TRAPS.
 - (B) CONDITION OF SOIL AND WATER MANAGEMENT STRUCTURES.
 - (C) ANY APPLICATION OF FERTILISERS AND SEDIMENT TRAPS.
 - (D) VOLUMES OF ALL WATER RECORDED FROM SEDIMENT TRAPS TO BE PROVIDED TO ANY APPOINTED PERSON (S) AS REQUESTED. THE ORIGINAL LOG BOOK SHALL BE SUBMITTED TO THE PROJECT MANAGER AT THE COMPLETION OF THE WORKS.
 6. THE CONTRACTOR SHALL AT ALL TIMES PREVENT CONSTRUCTION EQUIPMENT FROM DOING THE EROSION CONTROL TRAPS. THE CONTRACTOR SHALL NOT EXTEND LAND DISTURBANCE BEYOND 20m FROM THE EDGE OF ANY ESSENTIAL CONSTRUCTION ACTIVITY.

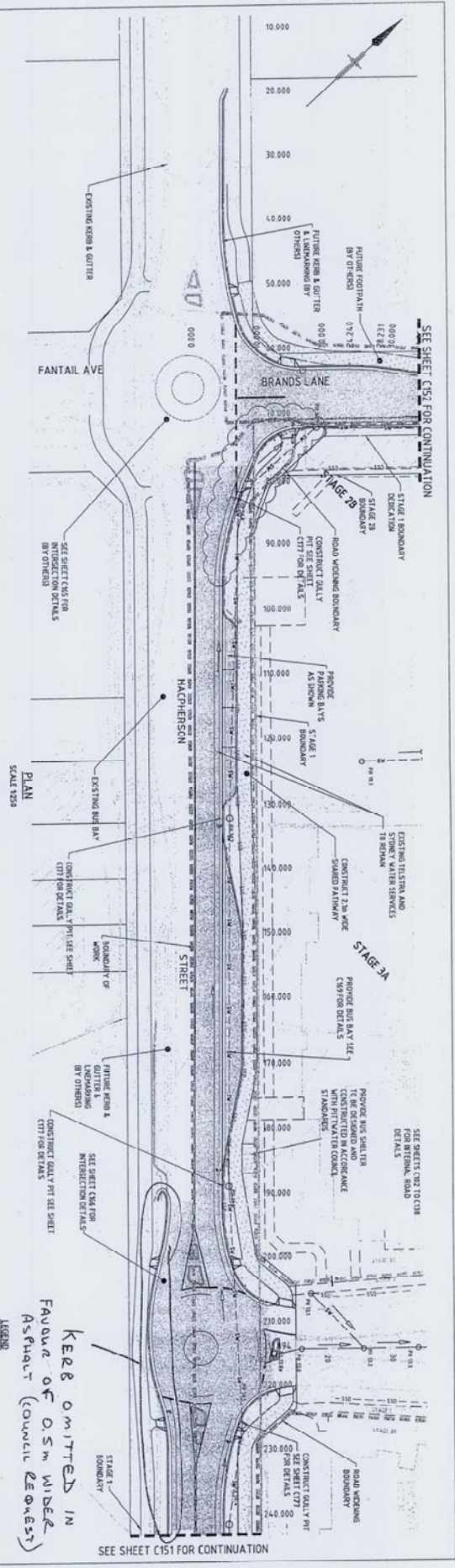
WORKS AS EXECUTED
SIGNED: [Signature]
DATE: 14/08/09

CONSTRUCTION

3	ISSUED FOR CONSTRUCTION	10/08/09	10/08/09	10/08/09	10/08/09	10/08/09	10/08/09	10/08/09	10/08/09	10/08/09	10/08/09	10/08/09	10/08/09	10/08/09	10/08/09	10/08/09	10/08/09	10/08/09	10/08/09	10/08/09
---	-------------------------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------

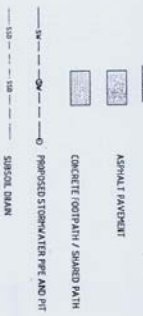


ANGLICAN RETIREMENT VILLAGES
STAGE 1: WAIRREED BROOK
CIVIL WORKS
SEDIMENT & EROSION CONTROL DETAILS
Drawing No: 21-13577-C133
Rev: 0



NOTE:

- WORKS NOTED BY CONCR. REFLECT TO POSITIVE SIDE OF ROAD.
- FOR PROPOSED ELECTRICAL INSTALLATION, REFER TO ELECTRICAL DRAWINGS.



STATION	CHANGING	VERTICAL CURVE DATA	VERTICAL CURVE DATA
0+00		1.20%	
0+10		1.20%	
0+20		1.20%	
0+30		1.20%	
0+40		1.20%	
0+50		1.20%	
0+60		1.20%	
0+70		1.20%	
0+80		1.20%	
0+90		1.20%	
1+00		1.20%	
1+10		1.20%	
1+20		1.20%	
1+30		1.20%	
1+40		1.20%	
1+50		1.20%	
1+60		1.20%	
1+70		1.20%	
1+80		1.20%	
1+90		1.20%	
2+00		1.20%	

LONGITUDINAL SECTION - MACPHERSON ST
SCALE - 1:100
VERT 1:80

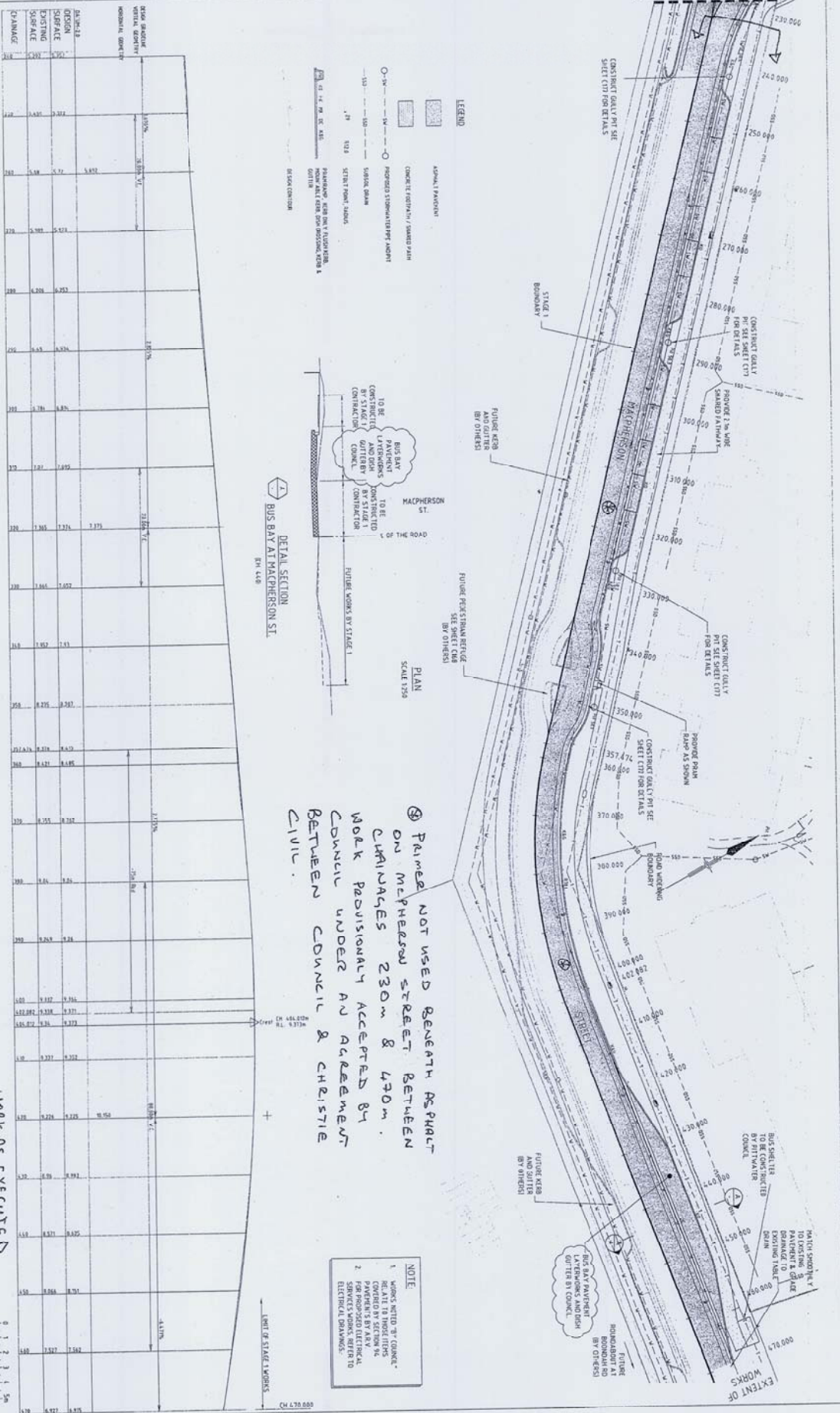
WORK AS EXECUTED
Signed: [Signature]
DATE: 14/08/19

CONSTRUCTION

NO	REVISION	DATE	BY	CHKD	APP'D	DESCRIPTION
1	ISSUED FOR CONSTRUCTION	14/08/19	[Signature]	[Signature]	[Signature]	
2	ISSUED FOR CONSTRUCTION	14/08/19	[Signature]	[Signature]	[Signature]	

PROJECT NO	ANGILICAN RETIREMENT VILLAGES
SHEET NO	21-13377-C150
DRAWING NO	21-13377-C150
DATE	14/08/19
PROJECT NAME	ANGILICAN RETIREMENT VILLAGES
CLIENT	WARREWOOD BROOK
DESIGNER	CIVIL WORKS
ENGINEER	MACPHERSON ST PLAN & LONG SECTION

SEE SHEET C150 FOR CONTINUATION



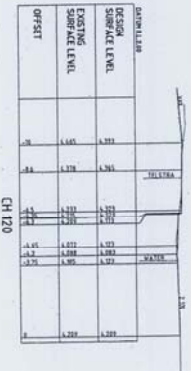
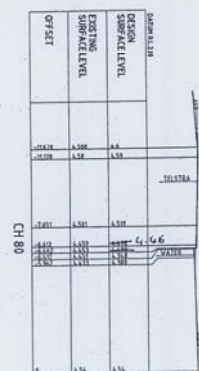
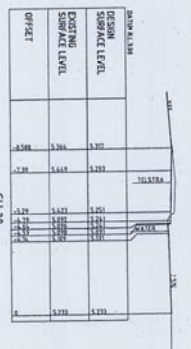
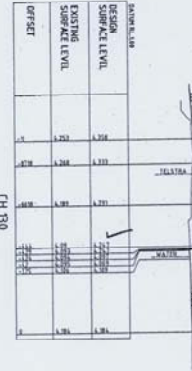
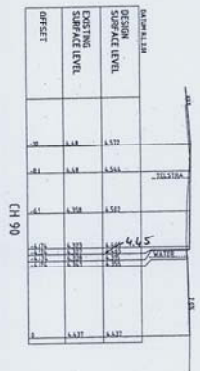
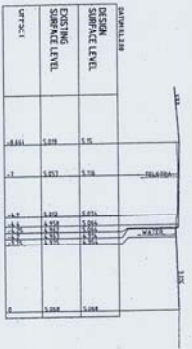
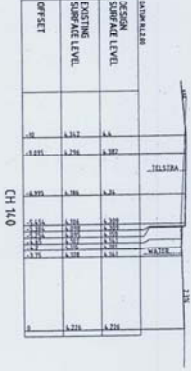
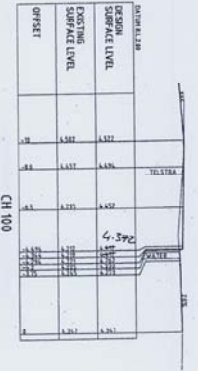
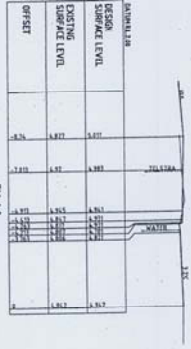
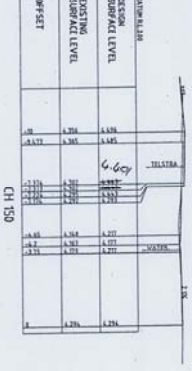
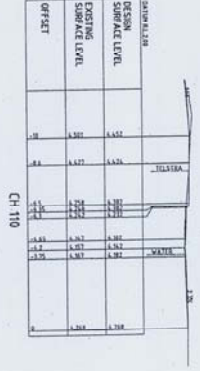
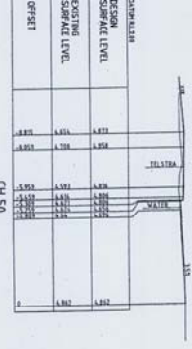
LONGITUDINAL SECTION - MACPHERSON ST
SCALE - 1:500 VERT. 1:50

CONSTRUCTION

1	REVENUES CLERK	15M	ANL	ANL	23.8M
2	REVENUES CLERK	15M	ANL	ANL	23.8M
0	SERIALS UNIT CONSTRUCTION	15M	ANL	ANL	23.8M

Project No.	21-13577-C151
Client	ANGELICAN RETIREMENT VILLAGES SOCIETY OF SYDNEY
Contract No.	21-13577-C151
Contract Name	ANGELICAN RETIREMENT VILLAGES CIVIL WORKS WARRENWOOD BROOK
Contract Location	MACPHERSON ST PLAN & LONG SECTION
Contract Start Date	21-13577-C151
Contract End Date	

*** GRADIENTS REGARDING TO
SITE WORKS REGRADING
PLANS (CH-151)



MACHPHERSON ST. CROSS SECTIONS

SCALE - 1:500 3000

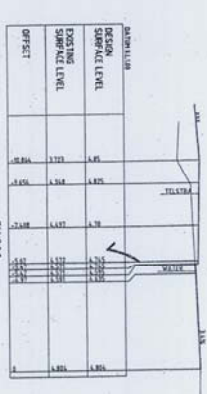
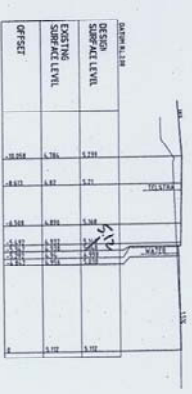
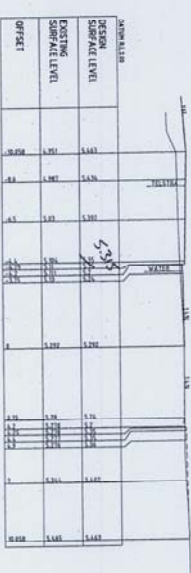
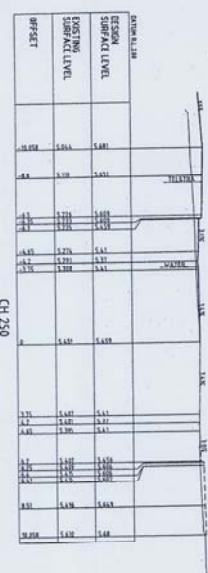
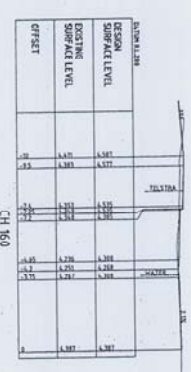
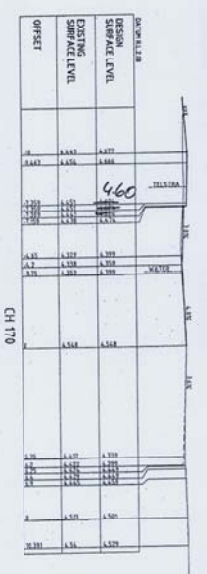
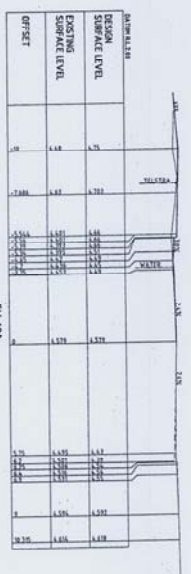
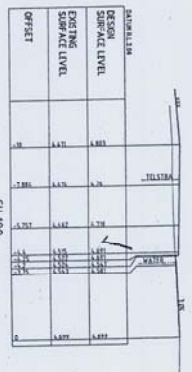
CONSTRUCTION



WORKS AS EXECUTED
SIGNED: *CH/11/09*
DATE: 14/08/09

<p>ANGELICAN RETIREMENT VILLAGES VILLAGE 1 SHEETS OF 5</p>	
<p>Client: ANGELICAN RETIREMENT VILLAGES Project: MACHPHERSON BRICK</p>	<p>Drawn: MACHPHERSON Checked: MACHPHERSON Date: 21-11-2007</p>
<p>Contract No: 21-13577-C153</p>	<p>Rev: 0</p>
<p>ANGELICAN RETIREMENT VILLAGES VILLAGE 1 SHEETS OF 5</p>	

*** REMOTE GRADING TO SITE WORKS REGARDING PLANS FOR CSI



MACPHERSON ST. CROSS SECTIONS
SCALE - HORIZ 1:500
VERT 1:500

WORKS AS EXECUTED
SIGNED: *Paul [Signature]*
DATE: 14/08/09



CONSTRUCTION

ANGLO-AMERICAN RETIREMENT VILLAGES
HUNTERS HILLS
DIVISION OF STRONG

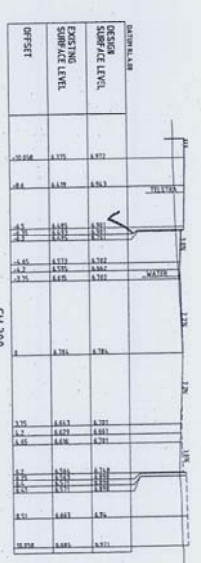
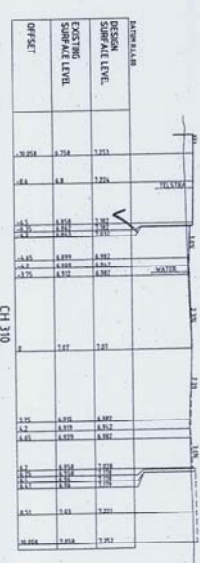
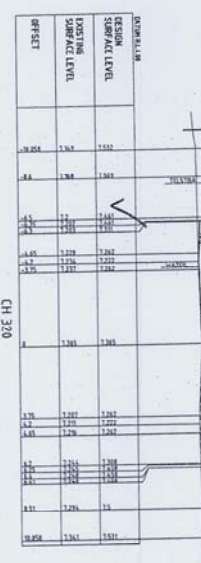
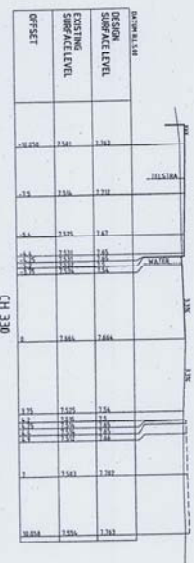
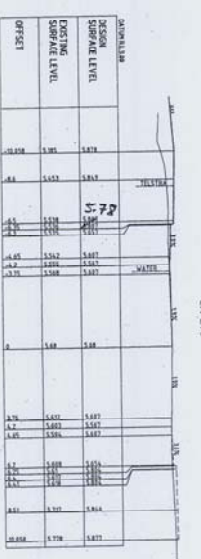
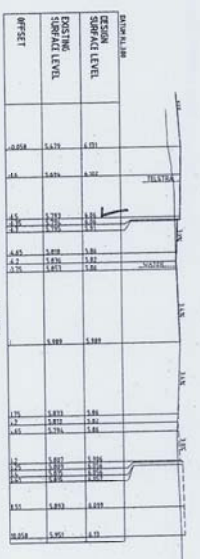
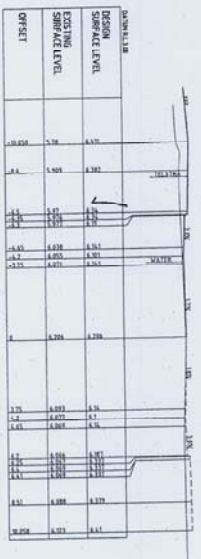
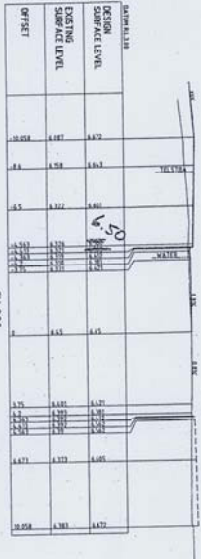
CLIENTS PROJECT PERFORMANCE

DO NOT SCALE

ANGLO-AMERICAN RETIREMENT VILLAGES
WARREWOOD BRICK

ANGLO-AMERICAN RETIREMENT VILLAGES
WARREWOOD BRICK
MACPHERSON ST CROSS SECTIONS SHEET 2 OF 5
Drawing No: 21-13577-C154

SEE DETAILS GRADING TO
SITE WORKS RECORDING
PLANS (3/26/13)



MACPHERSON ST CROSS SECTIONS

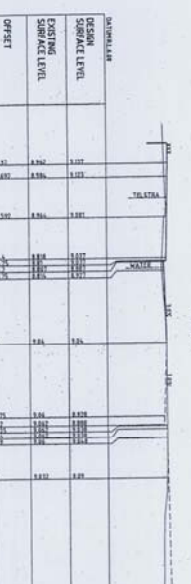
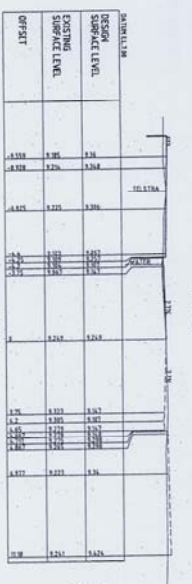
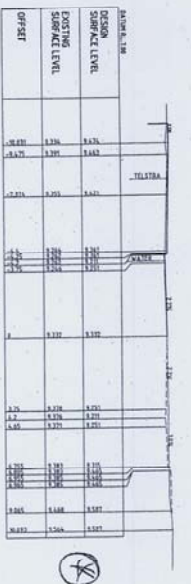
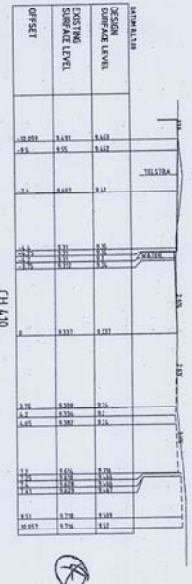
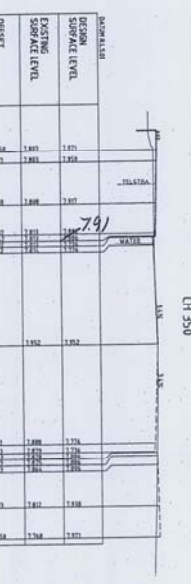
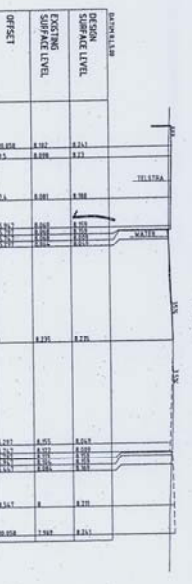
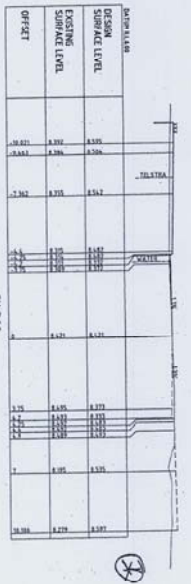
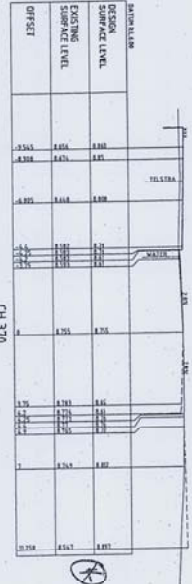
SCALE - HORIZ 1:500
VERT 1:500

CONSTRUCTION

WORKS AS EXECUTED
SIGNED: *Phil Miller*
DATE: 10/08/09

 ANGLICAN RETIREMENT VILLAGES VILLAS VILLAGE ST STEVENSON	
DO NOT SCALE	
Client: ANGELICAN RETIREMENT VILLAGES Project: CIVIL WORKS MACPHERSON ST CROSS SECTIONS SHEET 3 OF 5 Drawing No: 21-13577-C-155	Scale: HORIZ 1:500 VERT 1:500

— AS BUILT GRADES TO
SITEWORKS BEGINNING
PLANS C28-C31



MACPHERSON ST. CROSS SECTIONS
SCALE - 1:100 1:50
VERT 1:50

⊗ AS BUILT LEVELS
NOT SUPPLIED
BY CONTRACTOR.

WORKS AS EXECUTED
DRAWN: [Signature]
DATE: 14/08/09

ANGLO-AMERICAN RETIREMENT VILLAGES
DIRECTOR OF CONSTRUCTION

SHD CLIENTS PEOPLE PERFORMANCE

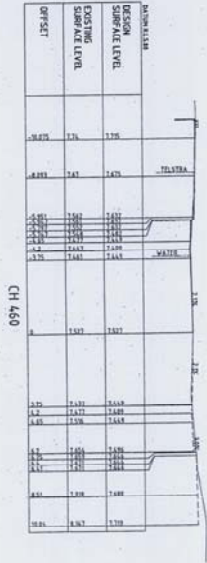
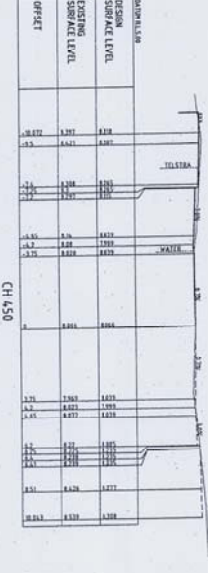
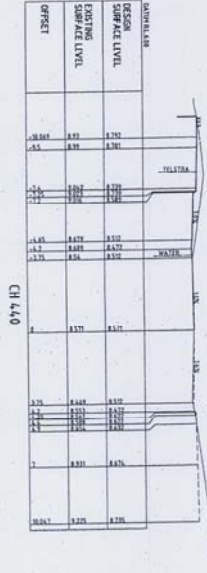
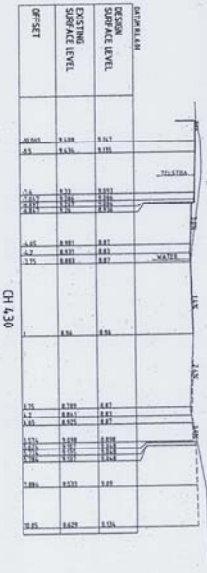
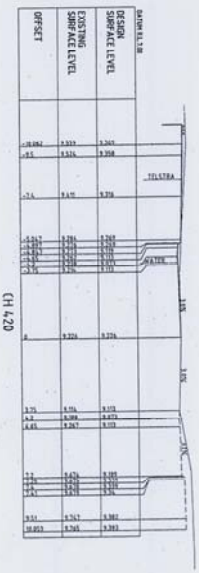
DO NOT SCALE

Client	ANGLO-AMERICAN RETIREMENT VILLAGES
Project	MACPHERSON ST CROSS SECTIONS SHEET 4 OF 5
Drawn	81
Checked	

ANGLO-AMERICAN RETIREMENT VILLAGES
DIRECTOR OF CONSTRUCTION
21-13577-C156

0 RIGID PAV CONSTRUCTION <small>See Section 21-114 for details on rigid pavement construction.</small>		LANE: 1L, 1R, 2L, 2R <small>See Section 21-114 for details on lane markings.</small>	
DATE: 12/28/11 <small>See Section 21-114 for details on date.</small>		SCALE: 1" = 4' VERT <small>See Section 21-114 for details on scale.</small>	
SHEET NO: 21-13877-C157 <small>See Section 21-114 for details on sheet numbering.</small>			

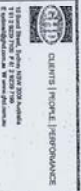
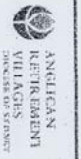
MACPHERSON ST CROSS SECTIONS
SCALE - 1"=4' VERT



FOR ANNOTATE DRAWING TO
SITE WORKS REGARDING
PLANS CH 431

LEVELS NOT PROVIDED
BY CONTRACTOR FOR
THESE CHAINAGES.

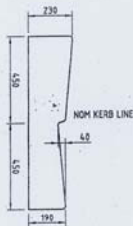
WORKS AS EXECUTED
SIGNED:
DATE:



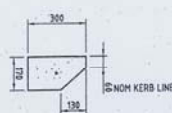
DO NOT SCALE	Checked: LMB	Approved: RMB
Drawn by: LMB	Checked: LMB	Scale: AS SHOWN

ANGELICAN RETIREMENT VILLAGES
WARRENWOOD BROOK
MACPHERSON ST CROSS SECTIONS SHEET 5 OF 5
Drawing No: 21-13877-C157
Rev: 0





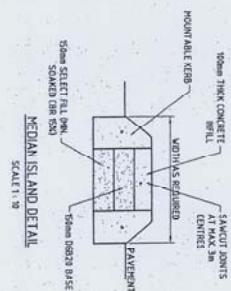
STANDARD LAPBACK (B)
SCALE 1:10



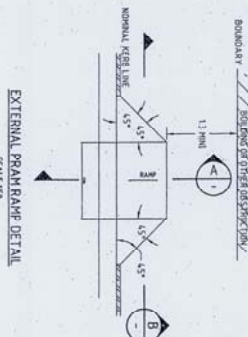
MOUNTABLE KERB (M,K)
SCALE 1:10



TYPE "P" KERB (K,O)
FOR DIMENSIONS NOT SHOWN REFER K & G.



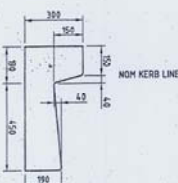
MEDIAN ISLAND DETAIL
SCALE 1:10



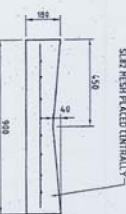
EXTERNAL BRAM RAMP DETAIL
SCALE 1:10



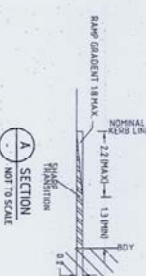
FOOTPATH DETAIL
SCALE 1:10



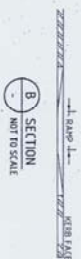
STANDARD KERB & GUTTER (K&G)
SCALE 1:10



DISH CROSSING (D,C)
SCALE 1:10



RAMP GRADIENT (R,M,K)
SCALE 1:10



SECTION A
NOT TO SCALE

SECTION B
NOT TO SCALE

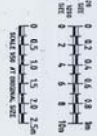
NOTES:

1. THE RAMP AND SLOPING SIDES SHOULD BE SLP RESISTANT AND COLOURED TYPICALLY.
2. ALL KERB INDICATIONS SPECIFIED IN THIS DRAWING SHOULD BE REFERRED TO AND CONSIDERED FOR APPROVED DIMENSIONS AND FINISHES. THE FINISHES SHOULD BE SPECIFIED TO MATCH THE FINISHES OF THE ADJACENT PAVED SURFACES. THE FINISHES SHOULD BE SPECIFIED TO MATCH THE FINISHES OF THE ADJACENT PAVED SURFACES.
3. PREPARATION: REMOVE EXISTING MATERIAL IS ANTICIPATED. THE SLOPE OF KERB RAMP SHALL BE GRADED. FILLING SURFACES SHOULD BE SUFFICIENTLY COMPACTED WITH A MINIMUM HEIGHT OF 150MM IS PROVIDED.
4. FOOTPATH FOOTPATH TO BE CONSTRUCTED IN ACCORDANCE TO THE SPECIFICATION.
5. PAVEMENT JOINTS AT CURB SPACING CONSISTING OF 15MM THICK APPROVED JOINTING MATERIAL. JOINTS TO BE CONCRETE JOINTS.
6. ROUGH FILL DEPTH OF CONCRETE SHALL BE 150MM.
7. CONCRETE 100MM THICK, F10-3000, AT 28 DAYS OVER 40MM THICK ECONOMIC SAND.
8. SUB-GRADE TO BE COMPACTED IN ACCORDANCE WITH THE SPECIFICATION.
9. ALL DIMENSIONS TO FACE UNLESS OTHERWISE SPECIFIED.
10. SEE GENERAL NOTES TO DRAWING.

FOOTPATH NOTES (EXTERNAL ONLY)

1. THE RAMP AND SLOPING SIDES SHOULD BE SLP RESISTANT AND COLOURED TYPICALLY.
2. ALL KERB INDICATIONS SPECIFIED IN THIS DRAWING SHOULD BE REFERRED TO AND CONSIDERED FOR APPROVED DIMENSIONS AND FINISHES. THE FINISHES SHOULD BE SPECIFIED TO MATCH THE FINISHES OF THE ADJACENT PAVED SURFACES. THE FINISHES SHOULD BE SPECIFIED TO MATCH THE FINISHES OF THE ADJACENT PAVED SURFACES.
3. PREPARATION: REMOVE EXISTING MATERIAL IS ANTICIPATED. THE SLOPE OF KERB RAMP SHALL BE GRADED. FILLING SURFACES SHOULD BE SUFFICIENTLY COMPACTED WITH A MINIMUM HEIGHT OF 150MM IS PROVIDED.
4. FOOTPATH FOOTPATH TO BE CONSTRUCTED IN ACCORDANCE TO THE SPECIFICATION.
5. PAVEMENT JOINTS AT CURB SPACING CONSISTING OF 15MM THICK APPROVED JOINTING MATERIAL. JOINTS TO BE CONCRETE JOINTS.
6. ROUGH FILL DEPTH OF CONCRETE SHALL BE 150MM.
7. CONCRETE 100MM THICK, F10-3000, AT 28 DAYS OVER 40MM THICK ECONOMIC SAND.
8. SUB-GRADE TO BE COMPACTED IN ACCORDANCE WITH THE SPECIFICATION.
9. ALL DIMENSIONS TO FACE UNLESS OTHERWISE SPECIFIED.
10. SEE GENERAL NOTES TO DRAWING.

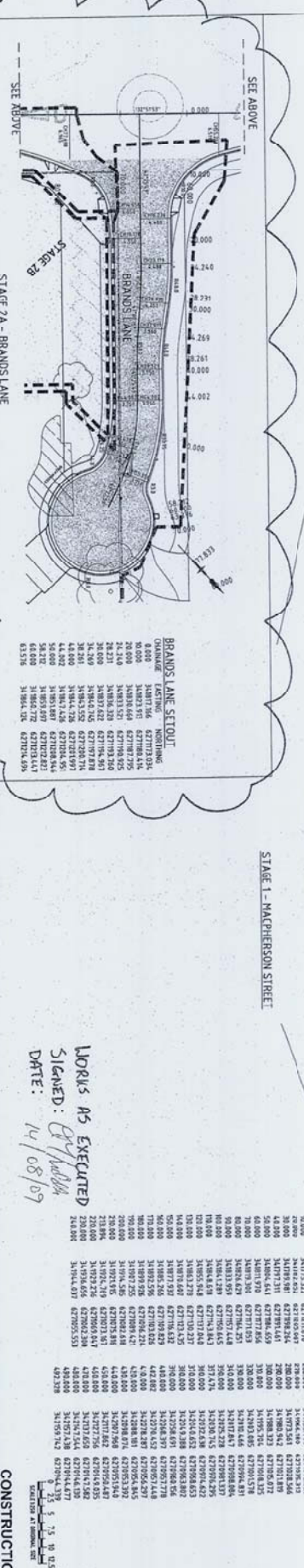
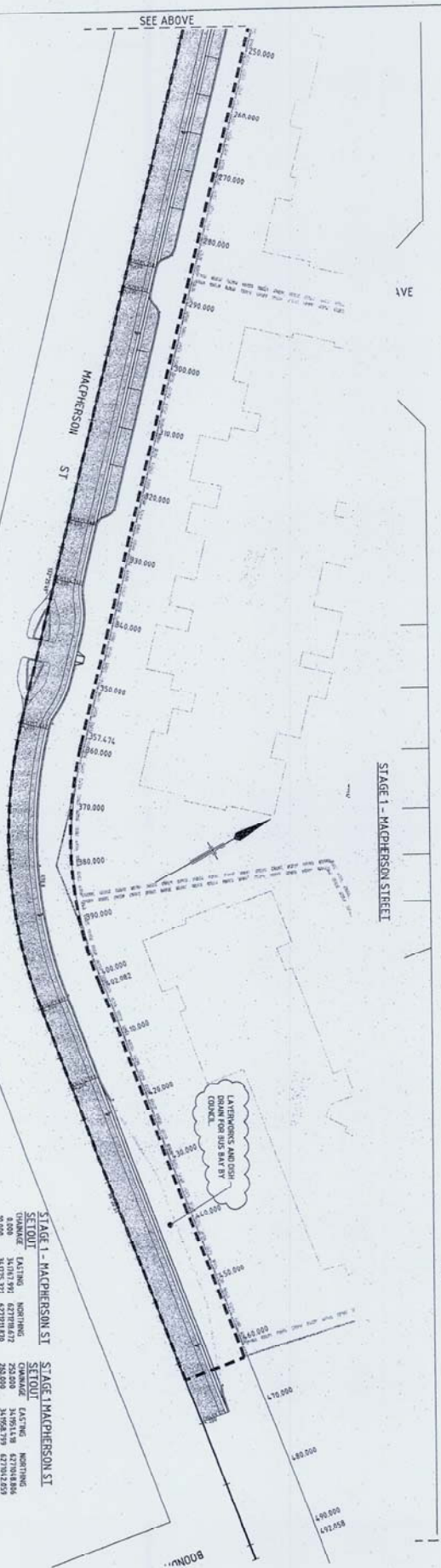
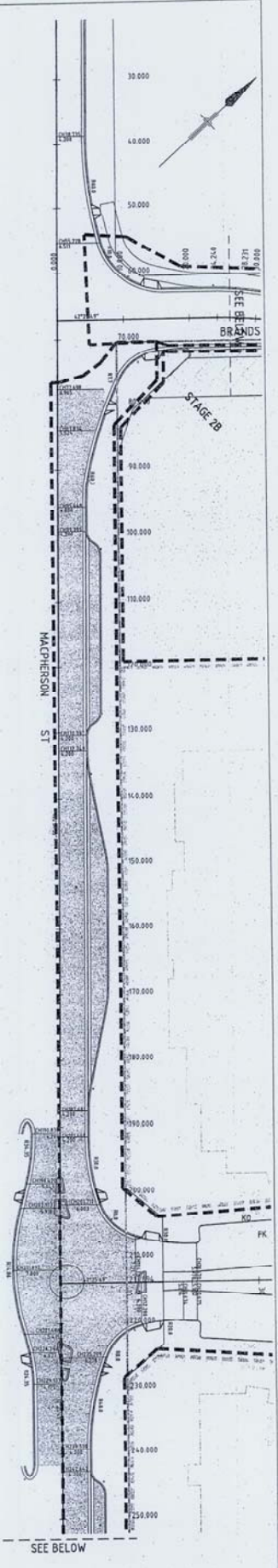
WORKS AS EXECUTED
SIGNED: *[Signature]*
DATE: 14/05/09



CONSTRUCTION

0	REVISIONS	DATE	BY	DESCRIPTION
1	ISSUED FOR CONSTRUCTION	14/05/09	MA	ISSUED FOR CONSTRUCTION

Author	MA	Check	MA	Drawn	MA	Scale	AS SHOWN
Project	ANGULICAN RETIREMENT VILLAGES						
Client	ANGULICAN RETIREMENT VILLAGES						
Contract No.	21-13577-C-162						
Revision No.	0						



BRANDS LANE SETOUT

CHANGING EASTING	NORTHING
0+000	349881.071
0+010	349878.991
0+020	349876.864
0+030	349874.692
0+040	349872.478
0+050	349870.225
0+060	349867.936
0+070	349865.605
0+080	349863.236
0+090	349860.832
0+100	349858.388
0+110	349855.908
0+120	349853.396
0+130	349850.846
0+140	349848.262
0+150	349845.638
0+160	349842.970
0+170	349840.263
0+180	349837.522
0+190	349834.747
0+200	349831.931
0+210	349829.078
0+220	349826.184
0+230	349823.253
0+240	349820.289
0+250	349817.296
0+260	349814.269
0+270	349811.213
0+280	349808.123
0+290	349805.004
0+300	349801.851
0+310	349798.660
0+320	349795.436
0+330	349792.174
0+340	349788.879
0+350	349785.554
0+360	349782.195
0+370	349778.807
0+380	349775.385
0+390	349771.934
0+400	349768.449
0+410	349764.934
0+420	349761.384
0+430	349757.804
0+440	349754.190
0+450	349750.546
0+460	349746.868
0+470	349743.151
0+480	349739.399
0+490	349735.618
0+500	349731.804

WORKS AS EXECUTED
SIGNED: *A. Williams*
DATE: 14/08/09

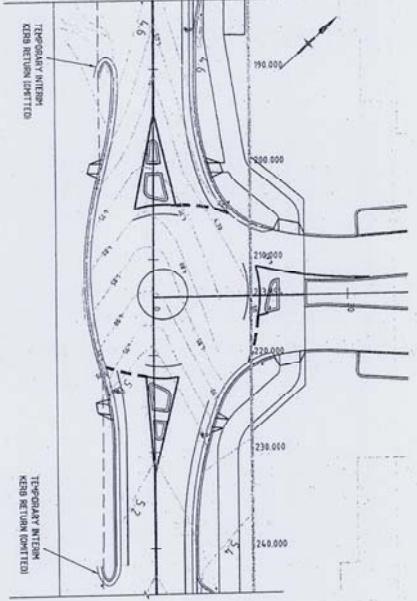
CONSTRUCTION
SCALE: 1:100
EXPIRES AT: 01/01/2015

3	CONDUCTED AND CHECKED BY: [Signature]	DATE: 14/08/09
2	DESIGNED BY: [Signature]	DATE: 14/08/09
1	APPROVED BY: [Signature]	DATE: 14/08/09
6	REQUIRED FOR CONSTRUCTION	

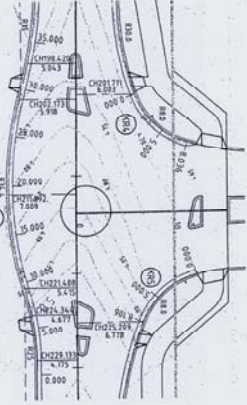
LINE NO.	LINE	NAME	TYPE	START	END
1	1	MACPHERSON ST	ROAD	0+000	1+000
2	2	BRANDS LANE	ROAD	0+000	0+500

NO.	NAME	TYPE	START	END
1	MACPHERSON ST	ROAD	0+000	1+000
2	BRANDS LANE	ROAD	0+000	0+500

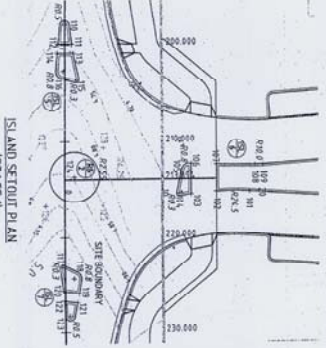
ANGELIAN RETIREMENT VILLAGES
BRANDS BROOK
SETOUT PLAN & DETAILS
Drawing No: 21-13577-C-163
Rev: 3



PLAN STAGE 1
SCALE 1:200

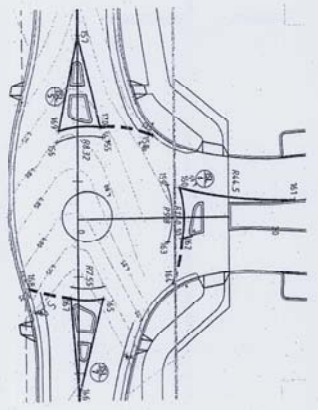


KERB RETURN PLAN
(STAGE 1)
SCALE 1:200



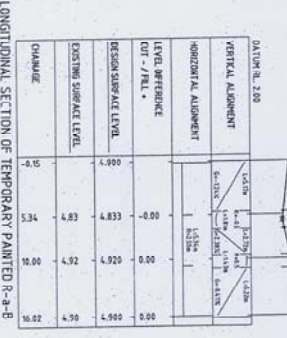
ISLAND SETOUT PLAN
(STAGE 1)
SCALE 1:200

Station	Point	DATE	DESCRIPTION
101	341928.531	6/27/2014	...
102	341938.648	6/27/2014	...
103	341948.765	6/27/2014	...
104	341958.882	6/27/2014	...
105	341968.999	6/27/2014	...
106	341979.116	6/27/2014	...
107	341989.233	6/27/2014	...
108	341999.350	6/27/2014	...
109	342009.467	6/27/2014	...
110	342019.584	6/27/2014	...
111	342029.701	6/27/2014	...
112	342039.818	6/27/2014	...
113	342049.935	6/27/2014	...
114	342060.052	6/27/2014	...
115	342070.169	6/27/2014	...
116	342080.286	6/27/2014	...
117	342090.403	6/27/2014	...
118	342100.520	6/27/2014	...
119	342110.637	6/27/2014	...
120	342120.754	6/27/2014	...
121	342130.871	6/27/2014	...
122	342140.988	6/27/2014	...
123	342151.105	6/27/2014	...
124	342161.222	6/27/2014	...
125	342171.339	6/27/2014	...
126	342181.456	6/27/2014	...
127	342191.573	6/27/2014	...
128	342201.690	6/27/2014	...
129	342211.807	6/27/2014	...
130	342221.924	6/27/2014	...

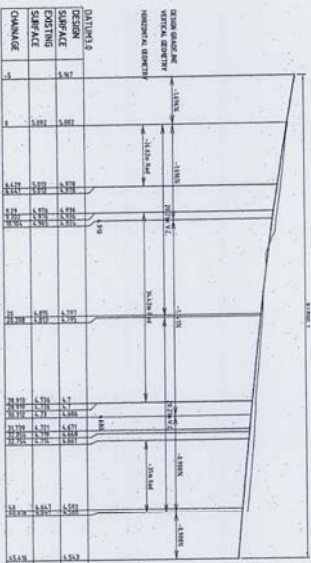


LINE-MARKING SETOUT PLAN
(STAGE 1)
SCALE 1:200

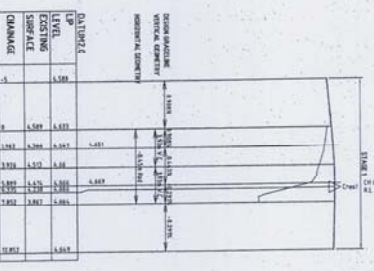
Station	Point	DATE	DESCRIPTION
101	341928.531	6/27/2014	...
102	341938.648	6/27/2014	...
103	341948.765	6/27/2014	...
104	341958.882	6/27/2014	...
105	341968.999	6/27/2014	...
106	341979.116	6/27/2014	...
107	341989.233	6/27/2014	...
108	341999.350	6/27/2014	...
109	342009.467	6/27/2014	...
110	342019.584	6/27/2014	...
111	342029.701	6/27/2014	...
112	342039.818	6/27/2014	...
113	342049.935	6/27/2014	...
114	342060.052	6/27/2014	...
115	342070.169	6/27/2014	...
116	342080.286	6/27/2014	...
117	342090.403	6/27/2014	...
118	342100.520	6/27/2014	...
119	342110.637	6/27/2014	...
120	342120.754	6/27/2014	...
121	342130.871	6/27/2014	...
122	342140.988	6/27/2014	...
123	342151.105	6/27/2014	...
124	342161.222	6/27/2014	...
125	342171.339	6/27/2014	...
126	342181.456	6/27/2014	...
127	342191.573	6/27/2014	...
128	342201.690	6/27/2014	...
129	342211.807	6/27/2014	...
130	342221.924	6/27/2014	...



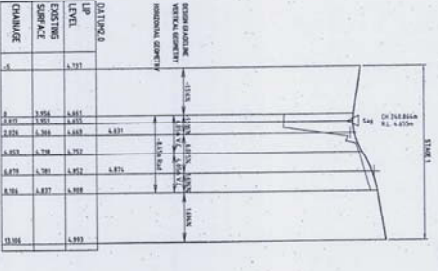
LONGITUDINAL SECTION OF TEMPORARY PAINTED R-2-B
SCALE 1:200



KERB RETURN 3
SCALE 1:200



KERB RETURN 4
SCALE 1:200



KERB RETURN 5
SCALE 1:200

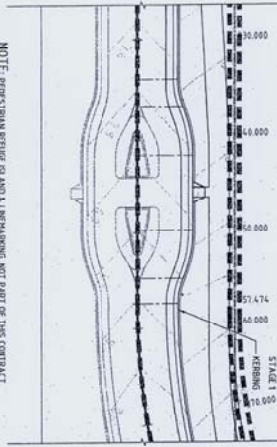
- NOTES:
- TEMPORARY ENTRY ROUNDABOUT TO HAVE A PAINTED CENTRAL ISLAND. ISLAND TO COMPENSATE A ROUND WHEEL DRIVE EXPERIENCE WITH LOCAL ROADWAY. THE ISLAND TO BE PAINTED AT EQUAL SPACING AROUND THE CENTRAL ISLAND.
 - ON THE WEST SIDE OF THE ROAD TO BE PAINTED ON THE SOUTH SIDE OF THE ROAD TO BE PAINTED FROM THE WEST AND THE ROAD TO BE PAINTED FROM THE SOUTH SIDE OF THE ROAD TO BE PAINTED FROM THE WEST.

Item	Description	Unit	Quantity
1	ROADWAY ISLAND DETAIL & NOTES ANEKO	EA	1
2	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
3	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
4	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
5	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
6	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
7	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
8	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
9	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
10	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
11	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
12	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
13	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
14	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
15	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
16	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
17	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
18	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
19	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
20	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
21	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
22	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
23	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
24	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
25	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
26	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
27	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
28	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
29	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
30	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
31	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
32	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
33	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
34	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
35	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
36	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
37	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
38	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
39	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
40	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
41	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
42	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
43	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
44	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
45	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
46	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
47	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
48	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
49	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
50	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
51	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
52	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
53	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
54	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
55	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
56	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
57	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
58	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
59	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
60	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
61	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
62	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
63	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
64	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
65	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
66	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
67	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
68	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
69	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
70	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
71	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
72	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
73	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
74	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
75	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
76	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
77	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
78	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
79	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
80	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
81	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
82	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
83	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
84	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
85	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
86	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
87	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
88	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
89	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
90	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
91	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
92	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
93	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
94	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
95	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
96	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
97	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
98	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
99	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1
100	TEMPORARY ENTRY ROUNDABOUT SETOUT	EA	1

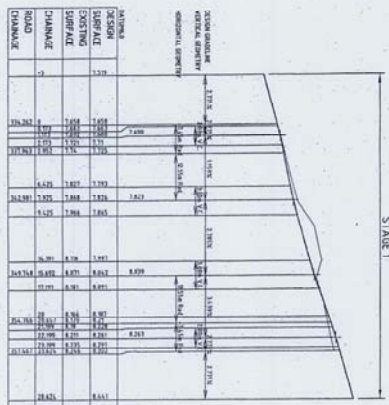
ANGLICAN RETIREMENT VILLAGES
CIVIL WORKS
MACPHERSON STRIKE ENTRY ROUNDABOUT

21-13577-C166

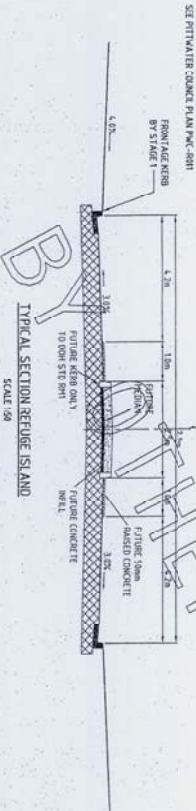
WORKS AS EXECUTED
SIGNED: *Jeff Miller*
DATE: 11/08/09



NOTE: PEDESTRIAN REFUGE ISLAND 1 LINDENHONG NOT PART OF THIS CONTRACT
REFUGEE ISLAND
SCALE 1:200



PEDESTRIAN REFUGE
KERB LONG SECTION
SCALE - 1:200
VERT 1:20

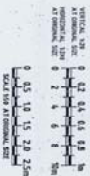


NOTE: PEDESTRIAN REFUGE ISLAND 1 LINDENHONG NOT PART OF THIS CONTRACT

SEE PATINAVER CONCRETE PLAN PVC-08H1

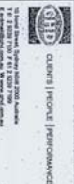
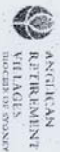
TYPICAL SECTION REFUGEE ISLAND
SCALE 1:50

WORKS AS EXECUTED
SIGNED: *[Signature]*
DATE: 14/08/09



CONSTRUCTION

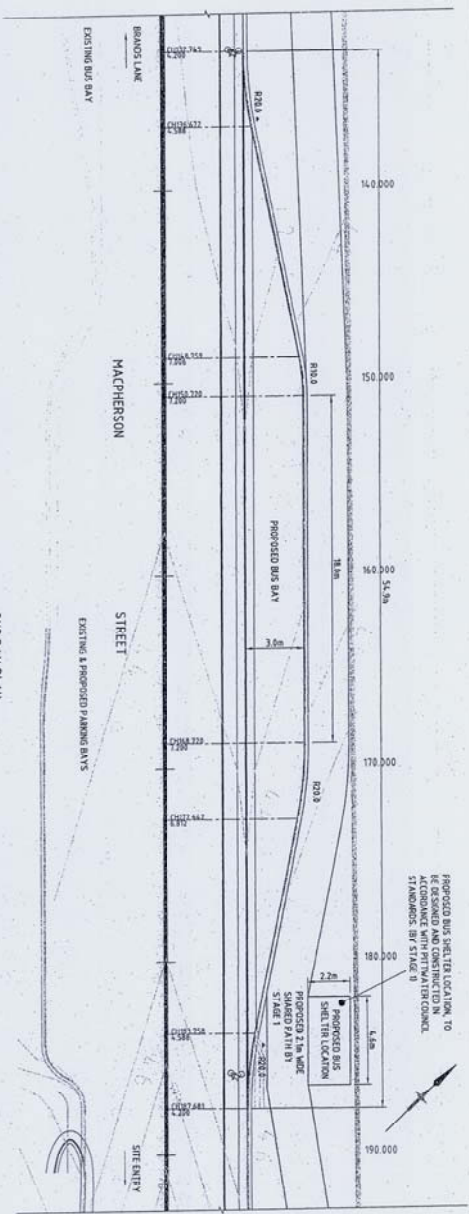
NO	REVISION	DATE	BY	CHKD
0	ISSUED FOR CONSTRUCTION	14/08/09	MN	MS



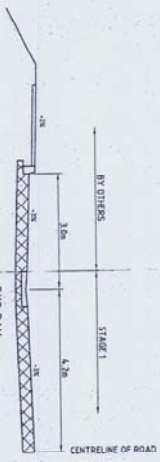
DO NOT SCALE

Checked by	Approved by	Designed by
MS	MS	MS

ANGLICAN RETIREMENT VILLAGES
MACHPIERSSEN ST PEDESTRIAN REFUGE DETAILS
Drawing No: 21-13577-C168
Rev: 0



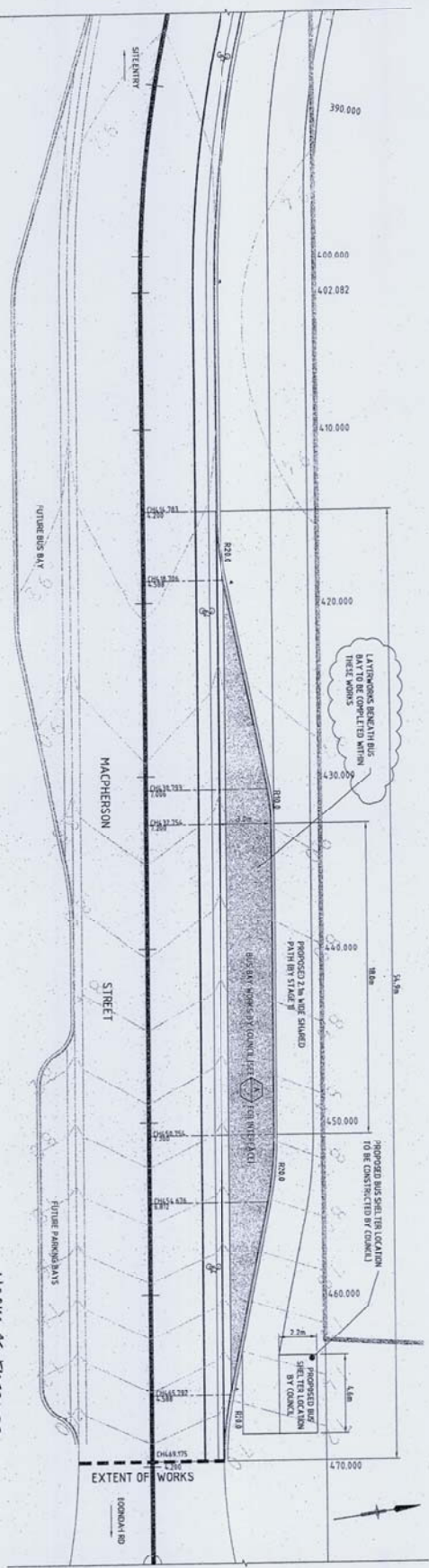
BUS BAY PLAN
[BY STAGE 1 COMPLETE]
SCALE 1:50



TYPICAL SECTION
SCALE 1:50

NOTE

1. WORKS NOTED "BY CONTRACTOR" RELATE TO THESE ITEMS.
2. FOR PROPOSED ELECTRICAL SERVICES, REFER TO ELECTRICAL DRAWINGS TO DETERMINE REQUIREMENTS.



BUS BAY PLAN
SCALE 1:50

WORKS AS EXECUTED
SIGNED: *[Signature]*
DATE: 12/08/09



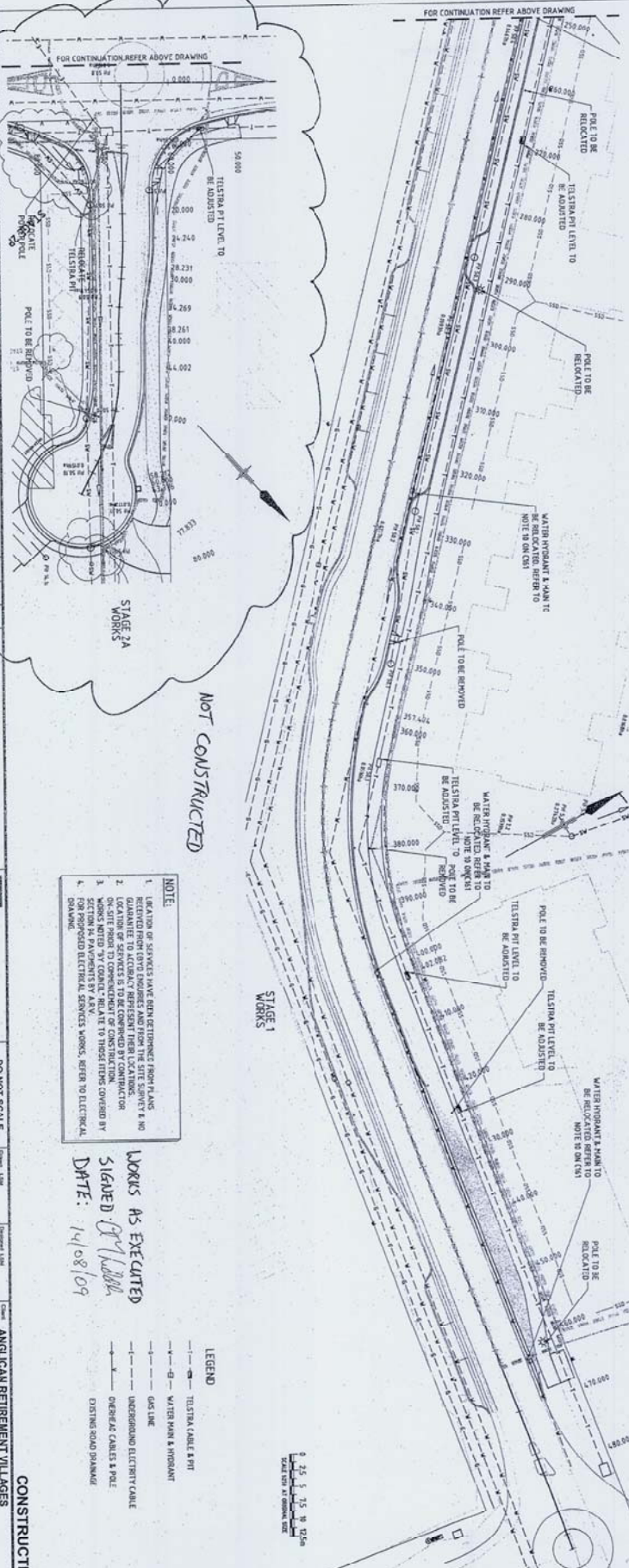
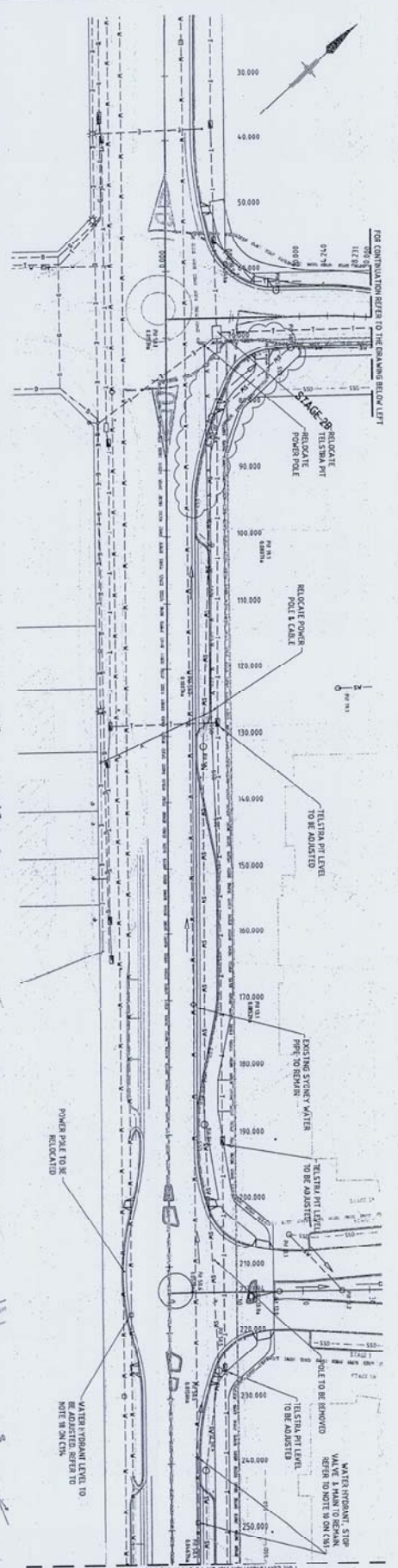
CONSTRUCTION

3	COMMISSION AT BUS BAY ACCORD	LSM	AL	AL	AL	UNCLASSIFIED
1	REVISIONS AS CLOSERD	LSM	AL	AL	AL	27-08-08
2	ISSUED FOR CONSTRUCTION	LSM	AL	AL	AL	03-28

Author	Drawn	Checked	Approved	Date

Client	Project	Scale
ANGELICAN RETIREMENT VILLAGES	MACPHERSON ST BUS BAY DETAILS	SCALE 1:50

Contract No.	Project No.	Sheet No.
21-13577-C-169	B1	2



NOTE

1. LOCATION OF SERVICES HAVE BEEN DETERMINED FROM PLANS PROVIDED FROM CIVIL ENGINEER AND FROM THE SITE SURVEY & NO GUARANTEE TO ACCURACY REPRESENT THEIR LOCATIONS.
2. LOCATION OF SERVICES TO BE CORROBORATED BY CONTRACTOR WORKS IDENTIFIED BY CONTRACT RELATE TO THOSE ITEMS COVERED BY SECTION 4. PAYMENTS BY ASV.
3. FOR PROPOSED ELECTRICAL SERVICES WORKS, REFER TO ELECTRICAL DRAWINGS.

WORKS AS EXECUTED
 SIGNED: *[Signature]*
 DATE: 14/08/09

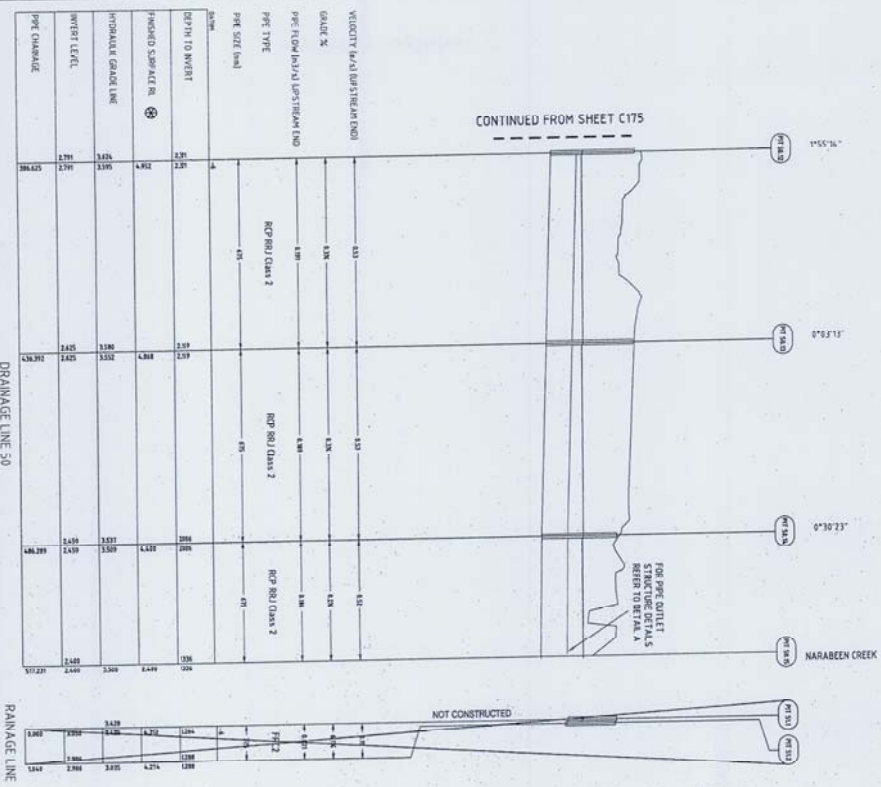
LEGEND

- TEST PIT LEVEL & PVI
- WATER MAIN & HYDRANT
- GAS LINE
- UNDERGROUND ELECTRICITY CABLE
- OVERHEAD CABLES & POLE
- EXISTING ROAD DRAWING

1:25 = 1:50 M 1:250
 SCALE 1:50 AT BOUNDARY LINE

1	REVISION AS REQUIRED	DATE	BY
0	ISSUED FOR CONSTRUCTION	14/08/09	ASV

PROJECT: ANGLICAN RETIREMENT VILLAGES
 CLIENT: ANGLICAN RETIREMENT VILLAGES
 CONTRACT NO: 21-13577-C171
 DRAWING NO: 21-13577-C171
 SHEET NO: 1



LEGEND
 RPB - REINFORCED CONCRETE CLASS 2 UNCOATED PIPE
 RBC - REINFORCED CONCRETE BOX CULVERTS
 NOTE:
 1. REFER TO PLAN DRAWING 21-13577-C175, 50, 51, & 52 FOR PIPE LOCATIONS.

NOTE:
 1. REFER TO PLAN DRAWING 21-13577-C175, 50, 51, & 52 FOR PIPE LOCATIONS.

NOTE:
 1. WORKS TO BE IN ACCORDANCE WITH THE FINISHED SURFACE LEVELS.

NOTE:
 1. WORKS TO BE IN ACCORDANCE WITH THE FINISHED SURFACE LEVELS.

NOTE:
 1. WORKS TO BE IN ACCORDANCE WITH THE FINISHED SURFACE LEVELS.

NOTE:
 1. WORKS TO BE IN ACCORDANCE WITH THE FINISHED SURFACE LEVELS.

NOTE:
 1. WORKS TO BE IN ACCORDANCE WITH THE FINISHED SURFACE LEVELS.

NOTE:
 1. WORKS TO BE IN ACCORDANCE WITH THE FINISHED SURFACE LEVELS.

- NOTES
1. WORKS TO BE IN ACCORDANCE WITH THE FINISHED SURFACE LEVELS.
 2. WORKS TO BE IN ACCORDANCE WITH THE FINISHED SURFACE LEVELS.
 3. WORKS TO BE IN ACCORDANCE WITH THE FINISHED SURFACE LEVELS.
 4. WORKS TO BE IN ACCORDANCE WITH THE FINISHED SURFACE LEVELS.
 5. WORKS TO BE IN ACCORDANCE WITH THE FINISHED SURFACE LEVELS.
 6. WORKS TO BE IN ACCORDANCE WITH THE FINISHED SURFACE LEVELS.
 7. WORKS TO BE IN ACCORDANCE WITH THE FINISHED SURFACE LEVELS.
 8. WORKS TO BE IN ACCORDANCE WITH THE FINISHED SURFACE LEVELS.
 9. WORKS TO BE IN ACCORDANCE WITH THE FINISHED SURFACE LEVELS.
 10. WORKS TO BE IN ACCORDANCE WITH THE FINISHED SURFACE LEVELS.
 11. WORKS TO BE IN ACCORDANCE WITH THE FINISHED SURFACE LEVELS.
 12. WORKS TO BE IN ACCORDANCE WITH THE FINISHED SURFACE LEVELS.
 13. WORKS TO BE IN ACCORDANCE WITH THE FINISHED SURFACE LEVELS.
 14. WORKS TO BE IN ACCORDANCE WITH THE FINISHED SURFACE LEVELS.
 15. WORKS TO BE IN ACCORDANCE WITH THE FINISHED SURFACE LEVELS.
 16. WORKS TO BE IN ACCORDANCE WITH THE FINISHED SURFACE LEVELS.
 17. WORKS TO BE IN ACCORDANCE WITH THE FINISHED SURFACE LEVELS.
 18. WORKS TO BE IN ACCORDANCE WITH THE FINISHED SURFACE LEVELS.
 19. WORKS TO BE IN ACCORDANCE WITH THE FINISHED SURFACE LEVELS.
 20. WORKS TO BE IN ACCORDANCE WITH THE FINISHED SURFACE LEVELS.
 21. WORKS TO BE IN ACCORDANCE WITH THE FINISHED SURFACE LEVELS.
 22. WORKS TO BE IN ACCORDANCE WITH THE FINISHED SURFACE LEVELS.
 23. WORKS TO BE IN ACCORDANCE WITH THE FINISHED SURFACE LEVELS.

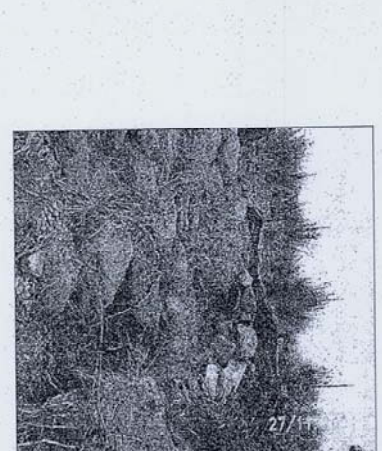
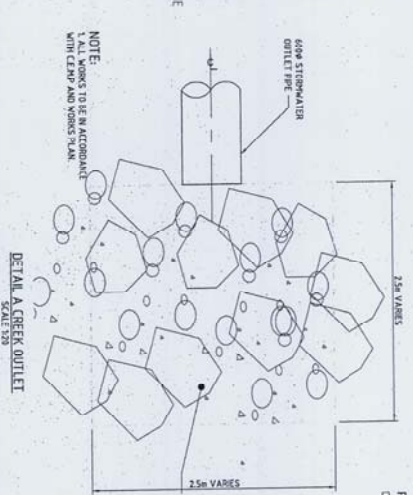
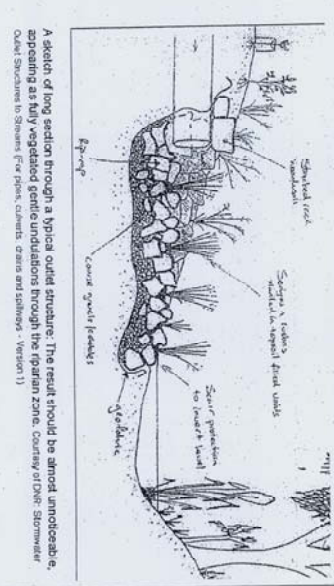


Photo of a rip-rap outlet structure with vegetation growing in the cracks between the rocks. Courtesy of DMR Stormwater Outlet Structures to Stream (For rip-rap, culverts, drains and slippers - Version 1)



A sketch of long grasses through a typical outlet structure. The result should be almost unnoticeable, appearing as if they've vegetated gently undulations through the rip-rap zone. Courtesy of DMR Stormwater Outlet Structures to Stream (For rip-rap, culverts, drains and slippers - Version 1)

WORK AS EXECUTED

WORKS AS EXECUTED
 SIGNED: [Signature]
 DATE: 14/08/09

ANGLO-AMERICAN RETIREMENT VILLAGES
 WARRIEWOOD BROOK
 STORMWATER LONG SECTION LINE 50, SHEET 2

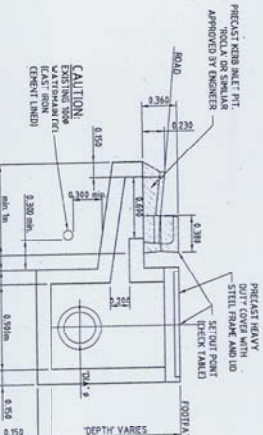
ANGLO-AMERICAN RETIREMENT VILLAGES
 WARRIEWOOD BROOK
 STORMWATER LONG SECTION LINE 50, SHEET 2

EXTERNAL WORKS HYDROLOGY CALCULATIONS

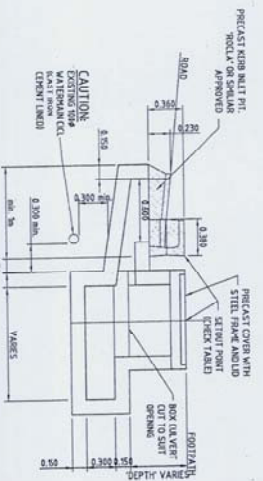
ID	Catchment Length (m)	Catchment Slope (%)	Time to Flow (min)	Intensity (mm/h)	Runoff Coefficient	Area (ha)	CA	Full Storm CA	Full Storm CA Flow (L/s)	Endowment	Inlet Type
PT 50.1	50	1	12.61	146.07	0.75	0.0052	0.0308	0.0457	16.5	kerb inlet with 1.2m inlet on 3% crossfall	1
PT 50.2	50	1	12.61	204.22	0.9	0.0662	0.0319	0.0271	8.3	kerb inlet with 1.2m inlet on 3% crossfall	1
PT 50.3	50	1	12.61	146.07	0.75	0.0135	0.0339	0.05248	14.1	kerb inlet with 1.2m inlet on 3% crossfall	1
PT 50.4	50	1	12.61	204.22	0.9	0.0447	0.0305	0.0413	16	kerb inlet with 1.2m inlet on 3% crossfall	1
PT 50.5	50	1	12.61	146.07	0.75	0.0129	0.0378	0.1138	5	kerb inlet with 1.2m inlet on 3% crossfall	1
PT 50.6	50	1	12.61	204.22	0.9	0.0314	0.0128	0.0459	18.6	kerb inlet with 1.2m inlet on 3% crossfall	1
PT 50.7	50	1	12.61	146.07	0.75	0.0101	0.0306	0.0891	36.2	kerb inlet with 1.2m inlet on 3% crossfall	1
PT 50.8	50	1	12.61	204.22	0.9	0.0095	0.015	0.0138	5.3	kerb inlet with 1.2m inlet on 3% crossfall	1
PT 50.9	50	1	12.61	146.07	0.75	0.0316	0.0072	0.0138	19.4	kerb inlet with 1.2m inlet on 3% crossfall	1
PT 50.10	50	1	12.61	204.22	0.9	0.0024	0.0124	0.0478	5.7	kerb inlet with 1.2m inlet on 3% crossfall	1
PT 50.11	50	1	12.61	146.07	0.75	0.0143	0.0139	0.0141	6.2	kerb inlet with 1.2m inlet on 3% crossfall	1
PT 50.12	50	1	12.61	204.22	0.9	0.0154	0.0013	0.0152	20.2	kerb inlet with 1.2m inlet on 3% crossfall	1
PT 50.13	50	1	12.61	146.07	0.75	0.0055	0.0041	0.0483	19.8	kerb inlet with 1.2m inlet on 3% crossfall	1
PT 50.14	50	1	12.61	204.22	0.9	0.0058	0.0044	0.0484	22.4	kerb inlet with 1.2m inlet on 3% crossfall	1
PT 50.15	50	1	12.61	146.07	0.75	0.0043	0.0053	0.0394	15	kerb inlet with 1.2m inlet on 3% crossfall	1

EXTERNAL WORKS PIT SCHEDULE

PIT SCHEDULE	TYPE	PROPOSED PIT WORK AS SPECIFIED	SETOUT	NOTE	UO TYPE CLASS
PT 50.1	kerb inlet with 1.2m inlet	0000500	341824.88	0271188.43	Ground
PT 50.2	kerb inlet with 1.2m inlet	0000600	341825.00	0271188.43	Ground
PT 50.3	kerb inlet with 1.2m inlet	0000700	341825.12	0271188.43	Ground
PT 50.4	kerb inlet with 1.2m inlet	0000800	341825.24	0271188.43	Ground
PT 50.5	kerb inlet with 1.2m inlet	0000900	341825.36	0271188.43	Ground
PT 50.6	kerb inlet with 1.2m inlet	0001000	341825.48	0271188.43	Ground
PT 50.7	kerb inlet with 1.2m inlet	0001100	341825.60	0271188.43	Ground
PT 50.8	kerb inlet with 1.2m inlet	0001200	341825.72	0271188.43	Ground
PT 50.9	kerb inlet with 1.2m inlet	0001300	341825.84	0271188.43	Ground
PT 50.10	kerb inlet with 1.2m inlet	0001400	341825.96	0271188.43	Ground
PT 50.11	kerb inlet with 1.2m inlet	0001500	341826.08	0271188.43	Ground
PT 50.12	kerb inlet with 1.2m inlet	0001600	341826.20	0271188.43	Ground
PT 50.13	kerb inlet with 1.2m inlet	0001700	341826.32	0271188.43	Ground
PT 50.14	kerb inlet with 1.2m inlet	0001800	341826.44	0271188.43	Ground
PT 50.15	kerb inlet with 1.2m inlet	0001900	341826.56	0271188.43	Ground



TYPICAL ARRANGEMENT FOR KERB INLET PIT AT PIPE
SCALE 1:30



TYPICAL ARRANGEMENT FOR KERB INLET PIT AT BRICK CULVERTS
SCALE 1:30

NOTE: SEE SHEET CIVS 138 INTERNAL ROAD STORMWATER DETAILS.

NO	REVISION	DATE	BY	CHKD	DESCRIPTION
1	WORK ASSIGNED TO DATE				
2	WORK COMPLETED				
3	PIT SCHEDULE MANDED				
4	ISD FOR CONSTRUCTION				

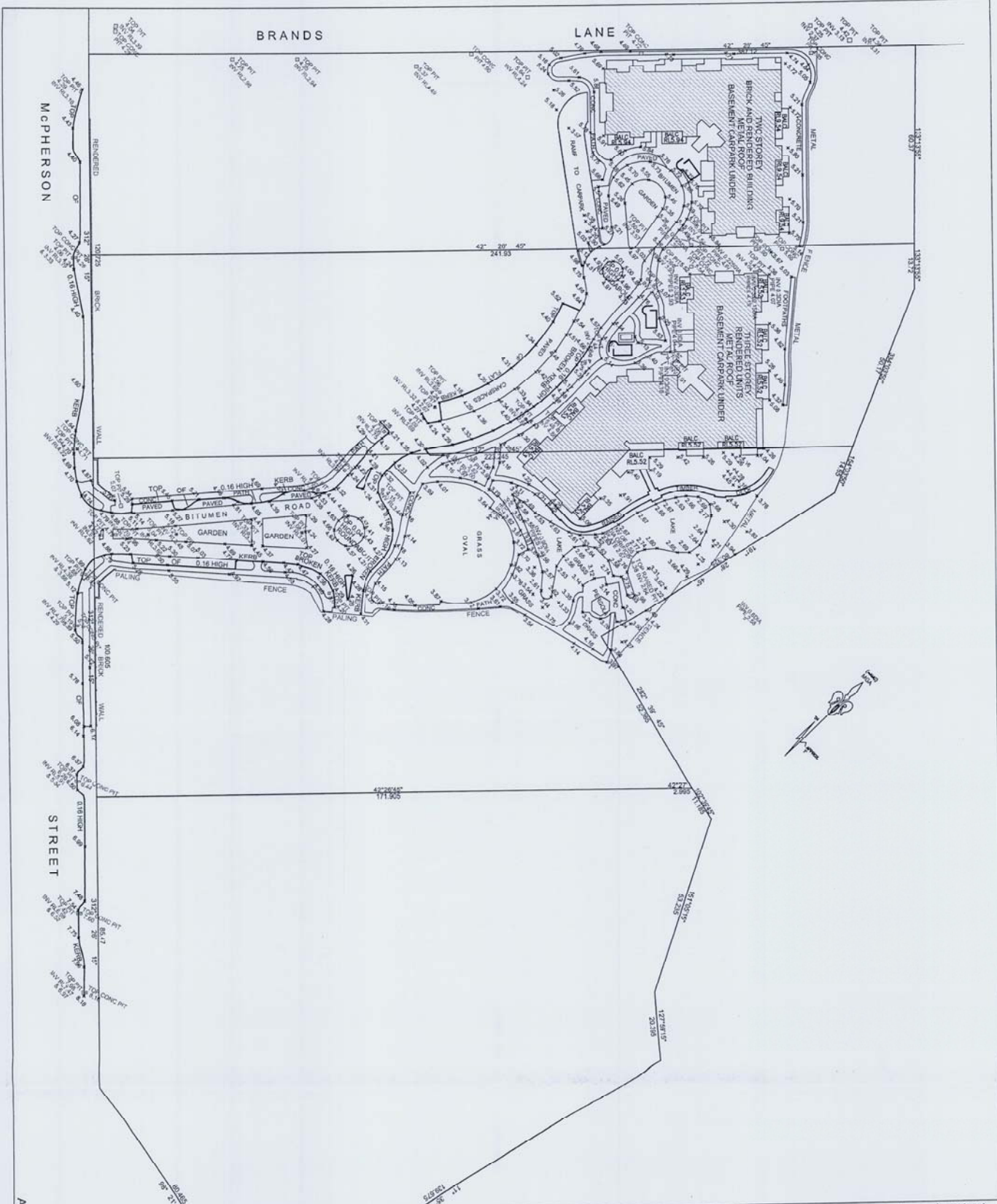
ANGELICAN RETIREMENT VILLAGES
VILLAGE OF WINDYBROOK
VILLAGE OF WINDYBROOK

SHO GENERAL PROJECT INFORMATION
33-34 WINDYBROOK DRIVE WINDYBROOK NSW 1500

DATE	SCALE	STATUS	BY	CHKD
21-13577-C177	1:50	FOR CONSTRUCTION	ADJ	

ANGELICAN RETIREMENT VILLAGES
WARRIEWOOD BROOK
CIVIL WORKS OFF SITE ROADS
EXTERNAL STORMWATER DRAINAGE DETAILS
REVISION: B1
DATE: 21-13577-C177
PAGE 3

WORKS AS EXECUTED
SIGNED: [Signature]
DATE: 14/08/09



NOTES:
 * DRAWINGS RELATIVE TO MEAN MOUTH
 * NOT ALL SERVICES ARE SHOWN
 * THE EXISTENCE OF UNDERGROUND SERVICES HAS NOT BEEN VERIFIED BY THE CONSULTANT. THE CLIENT IS RESPONSIBLE FOR VERIFYING THE EXISTENCE OF SERVICES. SERVICES NOT VERIFIED BY THE CONSULTANT BEFORE YOU DO SHOULD BE LOCATED BY ALL SERVICE PROVIDERS AND LOCATED NOT ALL SERVICE PROVIDERS ARE THE SAME. SERVICE PROVIDERS ARE THE RESPONSIBLE PARTY FOR THIS DRAWING WHICH IS NOT TO BE REMOVED



www.dial1100.com.au
DIAL 1100
 BEFORE YOU DIG

LEGEND

- ELP - ELECTRIC LIGHT POLE
- PHD - HYDRAULIC POWER DISTRIBUTION
- NM - NARRATIVE
- PP - POWER POLE
- DM - DRIVE MANHOLE
- SV - STOP VALVE
- TEL - TELEPHONE
- SW - STOP WATER

REV	AMENDMENTS	DATE

PROJECT SUBMITTER'S APPROVAL IS STRICTLY PROHIBITED
 REPRODUCTION WITHOUT WRITTEN APPROVAL IS STRICTLY PROHIBITED

SCALE 1:500

0 5 10 20 30 40 50

SHEET 1 OF 1 - DETAIL SURVEY
CLIENT: SOUTHERN CROSS CONSTRUCTIONS

SUBMITTER: **ADAM W. MACQUARIE**
 DRAWN BY: **ANTHONY HESSE DUNN**
 JOB REF: **18048**
 CLIENT REF: **20410**
 ORDER NO: **1804-20410**
 DATE OF SURVEY: **11/2/2009 AND 24/3/2009**
 DESIGN DRAWING NO:

PLAN OF: **McPHERSON STREET, WARRIMOO**

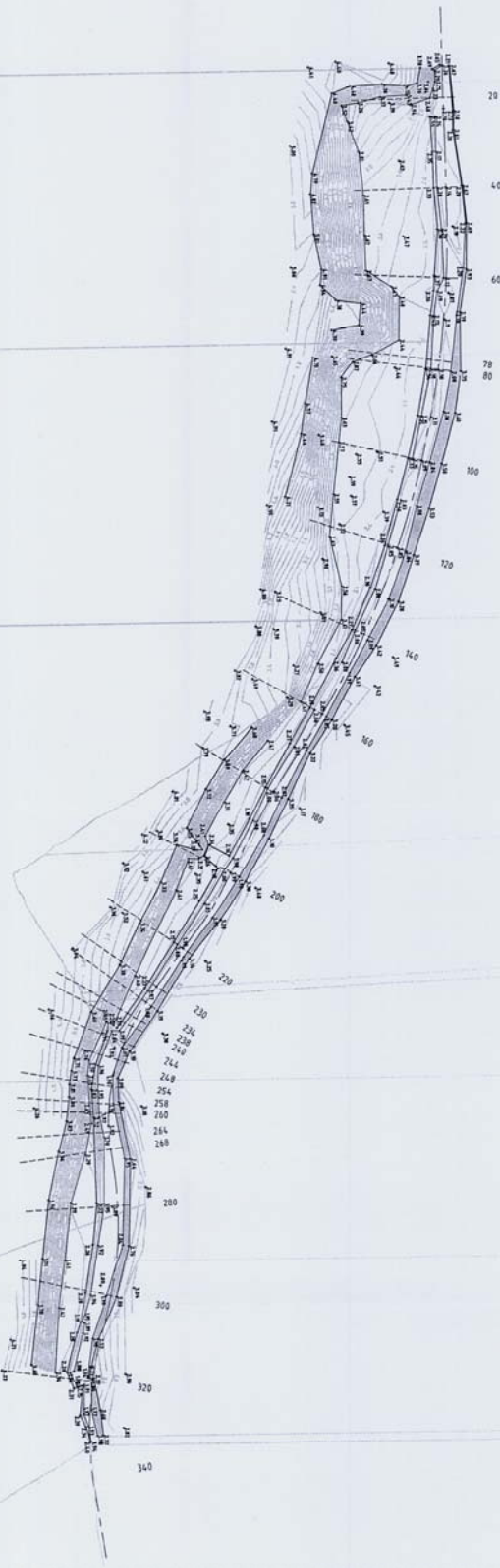
SHOWING: WORKS AS EXECUTED
 AND SITE LEVELS
 PURPOSE: ARCHITECTURAL DESIGN
 COUNCIL SUBMISSION

MACQUARIE PARK

Pt Box 4004 WARRIMOO CENTRE NSW 2713
 5/11 SITE 404, LEVEL 4 No 13-15 LYON PARK ROAD
 WARRIMOO NSW 2713
 PHONE: (0608) 3048 3048 3075
 www.dial1100.com.au

PROJECT SURVEYORS

Professional knowledge... Results



NOTE:
 1. BOUNDARIES HAVE BEEN PLOTTED ACCORDING TO DEED DATED 1944.
 2. FENCE LINES, BOUNDARIES AND CREEK WORKS BOUNDARY HAVE BEEN RECORDED ELECTRONICALLY BY PROUDST & GARDNER SURVEYORS & PLANNERS LTD ON 06/07/09.
 3. CONTOUR INTERVAL 5.0M.
 4. CONTOUR INTERVAL 1.0M.

LEGEND:
 - - - - - PLOTTED PERSON CREEK CENTRELINE
 - - - - - FENCE
 - - - - - AND CHANGERS

<p>PROUDST & GARDNER CONSULTING PTY LIMITED SURVEYORS & PLANNERS</p> <p>14 MILLER ST MELB VIC 3000 PH: 03 9414 3400 FAX: 03 9414 3401 WWW.PGSL.COM.AU</p>		<p>DATE: 12/08/09 DRAWN BY: ZS54A-COMPH/SLC SHEET 01 OF 01 SHEETS</p>	
<p>SCALE: A1 - 1:500 A3 - 1:1000</p>		<p>CLIENT: STANLEY HERBORD MANAGEMENT PTY LTD</p>	
<p>APPROVED: [Signature] DATE: 12/08/09</p>		<p>PROJECT: PLAN SHOWING AS BUILT LEVELS WARRIEWOOD BROOK CREEKWORKS WARRIEWOOD</p>	
<p>PROJECT NO: 7794</p>		<p>CLIENT: 14 MILLER ST MELB VIC 3000 PH: 03 9414 3400 FAX: 03 9414 3401 WWW.PGSL.COM.AU</p>	
<p>DATE: 12/08/09</p>		<p>PROJECT NO: 7794</p>	
<p>SCALE: A1 - 1:500 A3 - 1:1000</p>		<p>CLIENT: STANLEY HERBORD MANAGEMENT PTY LTD</p>	
<p>APPROVED: [Signature] DATE: 12/08/09</p>		<p>PROJECT: PLAN SHOWING AS BUILT LEVELS WARRIEWOOD BROOK CREEKWORKS WARRIEWOOD</p>	



CLIENTS PEOPLE PERFORMANCE

* +'

10 Bond St Sydney 2000
DX Sydney
Telephone 61 2 9239 7100 Facsimile 61 2 9239 7199
Email Address sydmail@ghd.com.au

7 UDQVP WDO
5 HFRUG

Transmittal No:
21-13577-T058

Date: 14/08/2009

To: Southern Cross Constructions (NSW) Pty Ltd

Attention: Terry Edwards

Address: 135-153 South Head Road , Edgecliffe, NSW, 2027

Copy To: STAGE 1 & 2 CONTRACTORS

From: Alan Liddle

Project: WARRIEWOOD BROOK

Job No: 2113577

WORK AS
EXECUTED
ISSUE

Reason: Revision

Drawing No	Rev	Drawing Title	Copies
C101	1	CIVIL WORKS - COVER SHEET, TITLE, LOCALITY PLAN	1
C102	1	CIVIL WORKS - OVERALL SITE PLAN SHOWING STAGING	1
C103	1	CIVIL WORKS - ROAD 1 & 4 DETAIL PLANS	1
C104	1	CIVIL WORKS - ROAD 2 & 3 DETAIL PLANS	1
C106	3	CIVIL WORKS - ROAD LONG SECTIONS	1
C107	0	CIVIL WORKS - ROAD TYP SECTIONS AND DETAILS	1
C108	3	CIVIL WORKS - ROAD 1 CROSS SECTIONS	1
C109	2	CIVIL WORKS - ROAD 2 CROSS SECTIONS - SHEET 1 OF 2	1
C110	1	CIVIL WORKS - ROAD 2 CROSS SECTIONS - SHEET 2 OF 2	1
C112	0	CIVIL WORKS - KERB RETURN DETAILS 1 OF 2	1
C1121	0	KERB RETURN DETAILS - SHEET 3	1
C113	1	CIVILWORKS - KERB RETURN DETAILS	1
C114	1	CIVIL WORKS - ROAD DETAILS	1
C115	4	CIVIL WORKS - STORMWATER DRAINAGE PLAN	1
C116	2	CIVIL WORKS - STORMWATER CATCHMENT PLAN	1
C117	5	CIVILWORKS - STORMWATER LONG SECTIONS STAGE 1 - SHEET 1	1
C118	9	CIVILWORKS - STORMWATER LONG SECTIONS STAGE 1 - SHEET 2	1
C119	5	CIVIL WORKS - STORMWATER LONG SECTIONS STAGE 2A - SHEET 1	1
C121	0	CIVIL WORKS - STORMWATER LONG SECTIONS LINES 20-26	1
C122	0	CIVIL WORKS - STORMWATER LONG SECTIONS LINES 27-29	1
C124	0	CIVIL WORKS - STORMWATER DRAINAGE SWALE DETAILS	1
C126	7	CIVIL WORKS - STORMWATER DRAINAGE PIT SCHEDULE	1
C127	2	CIVIL WORKS - STORMWATER DRAINAGE DETAILS	1
C128	10	CIVIL WORKS - SITE REGRADING PLAN SHEET 1 OF 2	1
C129	5	CIVIL WORKS - SITE REGRADING PLAN SHEET 2 OF 2	1
C130	0	CIVIL WORKS - SITE REGRADING PLAN SHEET 3 OF 4	1
C132	4	CIVIL WORKS - SEDIMENT AND EROSION CONTROL PLAN	1
C133	0	CIVIL WORKS - SEDIMENT AND EROSION CONTROL DETAILS	1
C150	2	CIVIL WORKS - MACPHERSON ST, PLAN & LONG SECTION	1
C151	2	CIVIL WORKS - MACPHERSON ST, PLAN AND LONG SECTION	1
C153	0	CIVIL WORKS - MACPHERSON ST CROSS SECTIONS SHEET 1 OF 5	1
C154	0	CIVIL WORKS - MACPHERSON ST CROSS SECTIONS SHEET 2 OF 5	1
C155	0	CIVIL WORKS - MACPHERSON ST CROSS SECTIONS SHEET 3 OF 5	1
C156	0	CIVIL WORKS - MACPHERSON ST CROSS SECTIONS SHEET 4 OF 5	1
C157	0	CIVIL WORKS - MACPHERSON ST CROSS SECTIONS SHEET 5 OF 5	1
C161	0	CIVIL WORKS OFFSITE ROADS - TYPICAL SECTIONS AND DETAILS	1
C162	0	CIVIL WORKS - MACPHERSON ST PEDESTRIAN REFUGE DETAILS	1

Drawing No	Rev	Drawing Title	Copies
C163	3	CIVIL WORKS OFFSITE ROADS - SETOUT PLAN AND DETAILS	1
C166	2	CIVIL WORKS - MACPHERSON ST / SITE ENTRY ROUNDABOUT	1
C168	0	CIVIL WORKS OFFSITE ROADS - MAC PHERSON ST PEDESTRIAN REFUGE DETAILS	1
C169	2	CIVIL WORKS - MACPHERSON ST BUS BAY DETAILS	1
C171	1	CIVIL WORKS OFFSITE - SERVICES LAYOUT	1
C172	1	CIVIL WORKS OFFSITE ROADS - EXTERNAL SIGNAGE AND LINEMARKING PLAN	1
C175	3	CIVIL WORKS OFFSITE ROADS - STORMWATER LONG SECTION LINE 50 SHEET 1	1
C176	2	CIVIL WORKS OFFSITE ROADS - STORMWATER LONG SECTION LINE 50 SHEET 2	1
C177	3	CIVIL WORKS OFFSITE ROADS - EXTERNAL STORMWATER DRAINAGE DETAILS	1

Remarks: Stage 1 Work As Executed Drawings (WAEX)

Sent by: Email

Per: 

C111 0 ROAD 1 CROSS SECTIONS SHEET 2 OF 3 (Assisting Surveyor)
C111E 0 ROAD 1 CROSS SECTIONS SHEET 3 OF 3 (Assisting Surveyor)



Certificate of Compliance

NRP ARCHITECTURE
ABN 21 083 698 882

Level 8/15 Help Street Chatswood NSW 2067
PO Box 5036 West Chatswood NSW 1515

T 61 (0)2 8966 6001 F 61 (0)2 8966 6126
E mail@nrparchitecture.com.au

Development: Stage 1: 64 Independent Living Units at
6-14 Macpherson Street Warriewood

Owners: Anglican Retirement Villages

Owners Address: 62 Norwest Blvd, Baulkham Hills, NSW

Design verification

We certify that the residential flat development achieves the design quality of the development as shown in the plans and specifications in respect of which the construction certificate was issued, having regard to the design quality principles set out in Part 2 of State Environmental Planning Policy No 65-Design Quality of Residential Flat Development.

I Morris Rosenberg of NRP Architecture, certify that to the best of my knowledge and belief, the information contained in this certificate is true and accurate.

Signed by.....

.....Dated: 14th August 2009

Rosenberg Architects Pty Limited ABN 21 083 698 882 trading as NRP ARCHITECTURE
Director / Nominated Architect Morris Rosenberg (Reg No 3303) B Arch (Hons) FRAIA



14th August 2009

Terry Edwards
Southern Cross Constructions
135-153 New South Head Road
Edgecliff NSW 2027

Dear Terry,

**RE: WARRIEWOOD BUILDINGS STAGE 1 – ACCESSIBILITY OCCUPATION CERTIFICATION
v2**

I hereby certify that the construction of Warriewood Brook Stage 1 is in accordance with normal disability access practice and meets the requirements of the Building Code of Australia, and relevant Australian Standards.

In particular the construction/design is in accordance with the following:

Access into and within the building

BCA2008 Part D3 and AS1428.1

Carparking

BCA2008 Clause D3.5 and AS2890.1

Braille and tactile signage

BCA2008 Clause D3.6, Specification D3.6 and AS1428.1

Tactile ground indicators

BCA2008 Clause D3.8 and AS1428.4

Sanitary facilities

BCA2008 Clause F2.4 and AS1428.1

Facilities within lifts

BCA2008 Clause E3.6 and AS1735.12

DA Condition C16

DA Condition E15

I am an experienced, qualified and competent person in this area and as such can certify that the building systems and layout comply with the above.

Full Name: David Goding
Company: Morris-Goding Accessibility Consulting
Qualifications: Bachelor of Civil Engineering, ACAA
Address: Unit 6, Grd Floor, 56 Bowman Street Pyrmont NSW 2009
Phone No. 02 9692 9322 Fax. 02 9692 8433



Yours faithfully,

A handwritten signature in black ink, appearing to read 'David Goding', is written over a light blue horizontal line.

David Goding
Morris-Goding Accessibility Consulting

Ross McWhirter, Project Leader - Warriewood Infrastructure
8am to 5pm Mon - Fri
Phone 9970 1207 Mobile 0419 629 007

14 August 2009

Southern Cross Constructions (NSW) Pty Ltd
135-153 New South Head Road
EDGECLIFF NSW 2027

Attention: - Terry Edwards

Dear Sir,

Re: 6-14 MacPherson Street, Warriewood - Consent No. N0102/05 (Stage 1)

Council wishes to advise with regard to the Occupation Certificate for Stage 1 of the Seniors Living development at the abovementioned property.

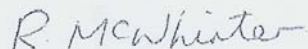
The following security deposits have been lodged with Council: -

- Bank guarantee for road maintenance in the amount of \$17,500 (in accordance with condition E24 of Consent No. N0102/05).
- Bank guarantee for maintenance of water quality control devices in the amount of \$10,000 (in accordance with condition E31 of Consent No. N0102/05).
- Bank guarantee for maintenance of civil works in Narrabeen Creek in the amount of \$37,500 (in accordance with condition E24 of Consent No. N0102/05).
- Bank guarantee for restoration of primer seal and asphalt pavement to Stage 1 pavement in MacPherson Street in the amount of \$35,000.

Conditions E5, E6 and E27 of Consent No. N0102/05 have been satisfied as all restorations relating to Stage 1 have been completed satisfactorily.

This advice relates solely to the Stage 1 Occupation Certificate.

Yours faithfully



Ross McWhirter
PROJECT LEADER - WARRIEWOOD INFRASTRUCTURE

PLANS

Project Name	Warriewood – Stage 1
Address	6-14 Macpherson Street Warriewood NSW 2101
Part of Building to be certified	All new work

In regards to DA No: N0102/05 for the Warriewood Stage 1 (ARV) project;

Specifically Part 2 Section E Clause 4.

"Plans together with street levels provided by Council and a certificate submitted by a Chartered Professional Engineer confirming to the satisfaction of the Principal Certifying Authority that the works in the public road reserve comply with Council requirements and street levels are to be provided with the Occupation Certificate application."

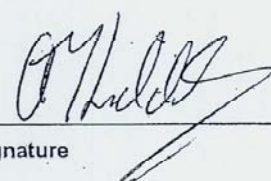
I hereby certify that the works have been constructed in accordance with the above Development Consent condition.

Name: Grahame Sproats

Company: GHD Pty Ltd.

Address: 10 Bond Street, Sydney NSW 2000

Phone No. (02) 9239 7100 Fax No. (02) 9239 7199



Signature

14/08/09
Date

Attachments: WAE DRAWINGS.

INFRASTRUCTURE

Project Name	Warriewood – Stage 1
Address	6-14 Macpherson Street Warriewood NSW 2101
Part of Building to be certified	All new work

In regards to DA No: N0102/05 for the Warriewood Stage 1 (ARV) project;

Specifically **Part 2 Section E Clause 20.**

"All appropriate infrastructure is to be provided to service the proposed residential lots, including roads and accessways, drainage facilities, landscaping, water management facilities, and siltation and sediment control measures."

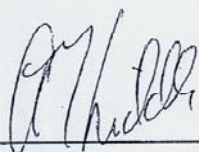
I hereby certify that the works have been constructed in accordance with the above Development Consent condition.

Name: Alan Liddle

Company: GHD Pty Ltd.

Address: 10 Bond Street, Sydney NSW 2000

Phone No. (02) 9239 7100 Fax No. (02) 9239 7199



Signature

14/08/09

Date

Attachments: WAE DRAWINGS

CIVIL WORKS

Project Name	Warriewood - Stage 1
Address	6-14 Macpherson Street Warriewood NSW 2101
Part of Building to be certified	All new work

In regards to DA No: N0102/05 for the Warriewood Stage 1 (ARV) project;

Specifically Part 2 Section E Clause 23.

"All roads, drainage and civil engineering works required under Conditions C21, C22 and C23 of this consent are to be completed prior to the issue of the Occupation Certificate."

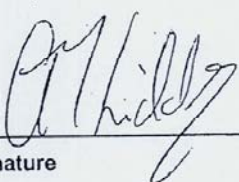
I hereby certify that the works have been constructed in accordance with the above Development Consent condition.

Name: Alan Liddle

Company: GHD Pty Ltd.

Address: 10 Bond Street, Sydney NSW 2000

Phone No. (02) 9239 7100 Fax No. (02) 9239 7199


Signature

14/08/09
Date

Attachments: WAE DRAWINGS

CIVIL WORKS

Project Name	Warriewood – Stage 1
Address	6-14 Macpherson Street Warriewood NSW 2101
Part of Building to be certified	All new work

In regards to DA No: N0102/05 for the Warriewood Stage 1 (ARV) project;

Specifically **Part 2 Section E Clause 22.**

"Certification is to be provided to Council, by an experienced civil engineer who is NPER accredited by the Institution of Engineers Australia, that all roads, drainage and other civil engineering works relating to MacPherson Street, ~~Bonds Lane~~ and the development site have been carried out and completed in accordance with the engineering plans and specifications required under conditions C21, C22 and C23 of this consent."


I hereby certify that the works have been constructed in accordance with the above Development Consent condition.

Name: Grahame Sproats

Company: GHD Pty Ltd.

Address: 10 Bond Street, Sydney NSW 2000

Phone No. (02) 9239 7100 Fax No. (02) 9239 7199


Signature

14/08/09
Date

Attachments: WAE DRAWINGS.

DRIVEWAYS

Project Name	Warriewood – Stage 1
Address	6-14 Macpherson Street Warriewood NSW 2101
Part of Building to be certified	All new work

In regards to DA No: N0102/05 for the Warriewood Stage 1 (ARV) project;

Specifically Part 2 Section E Clause 26.

"A certificate by a qualified Engineer or Architect confirming that all driveways have been constructed in accordance with the approval plans is to be submitted to the Council and the accredited certifier (if any) prior to the issue of Occupation certificate."

I hereby certify that the works have been constructed in accordance with the above Development Consent condition.

Name: Alan Liddle

Company: GHD Pty Ltd.

Address: 10 Bond Street, Sydney NSW 2000

Phone No. (02) 9239 7100 Fax No. (02) 9239 7199



Signature

14/08/09
Date

Attachments:

WAE DRAWINGS.

NOTES:

- * PLEASE REFER TO MESH 111
- * THE BOUNDARIES OF UNDERGROUND SERVICES ARE NOT TO BE TAKEN AS GUARANTEE. ALL SERVICES ARE TO BE LOCATED PRIOR TO CONSTRUCTION. THE BOUNDARIES OF UNDERGROUND SERVICES ARE NOT TO BE TAKEN AS GUARANTEE.
- * UNRECORDED METERS WILL BE VIEWED BY CLIENTS PRIOR TO CONSTRUCTION.
- * THE INFORMATION SHOWN ON THIS DRAWING IS THE PROPERTY OF PROJECT SURVEYORS AND IS TO BE USED ONLY FOR THE PROJECT SPECIFIED HEREON.
- * THIS DRAWING IS NOT TO BE REPRODUCED, COPIED OR LOANED WITHOUT THE WRITTEN PERMISSION OF PROJECT SURVEYORS.
- * THIS DRAWING IS NOT TO BE REPRODUCED, COPIED OR LOANED WITHOUT THE WRITTEN PERMISSION OF PROJECT SURVEYORS.



10 Years Limited by
Project Surveyors
Professional Engineers
(NSW) Licence No. 12808
www.projects.gov.au

**DIAL 1100
BEFORE YOU DIG**

- LEGEND:
- ESP - ELECTRICAL PIPE
 - IPG - IRRADIANT PIPE
 - AP - AERIAL PIPE
 - AS - AIRFLOW
 - PP - POTABLE PIPE
 - SS - SEWER PIPE
 - SW - STORM WATER
 - TL - TELEPHONE LINE
 - WH - WATER SUPPLY

© PROJECT SURVEYORS
INDUSTRIAL & COMMERCIAL SURVEYING

NO.	DESCRIPTION	DATE

SCALE 1:500
0 10 20 30 40 50

**SHEET 1 OF 1 - DETAIL SURVEY
CLIENT: SOUTHERN CROSS
CONSTRUCTIONS**

CLIENT: SOUTHERN CROSS
CONSTRUCTIONS
ADDRESS: 15/16-18 LYN PARK ROAD,
MACQUARIE PARK NSW 2113
PHONE: 8008 5875
www.projects.gov.au

SHOWING: WORKS TO BE EXCITED
AND SITE LEVELS
PURPOSE: CONSTRUCTION
LOCALITY: MACQUARIE PARK

MACQUARIE PARK
15/16-18 LYN PARK ROAD,
MACQUARIE PARK NSW 2113
PHONE: 8008 5875
www.projects.gov.au



PROJECT SURVEYORS
Professional Engineers - (NSW)





ANGLICAN
RETIREMENT
VILLAGES
DIOCESE OF SYDNEY

PO Box 284
CASTLE HILL NSW 1765
Phone: 61 2 9421 5333
Fax: 61 2 9421 5222
www.arv.org.au
ABN 39 922 848 563

Creating Communities of Christian Care

memo

7th August 2009

Mr Ross McWhirter
Project Leader
Pittwater Council
PO Box 882
Mona Vale NSW 1660

Dear Ross,

**Development Application No. N0102/05
6-14 Macpherson Street, Warriewood**

Further to your requests please find attached the following Bank Guarantees to act as Security Deposits for Stage 1 of Warriewood Brook for Anglican Retirement Villages.

Bank Guarantee No 1

Favouree: Pittwater Council
Description: Road Works Maintenance Bond
Amount: \$17,500

Bank Guarantee No 2

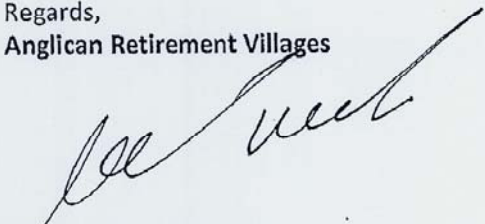
Favouree: Pittwater Council
Description: Water Quality Control Devices
Amount: \$10,000

Bank Guarantee No 3

Favouree: Pittwater Council
Description: Narrabeen Creek Civil Works
Amount: \$37,500

If you have any questions, please do not hesitate to contact me.

Regards,
Anglican Retirement Villages

A handwritten signature in black ink, appearing to read "Michael Viskovich", written in a cursive style.

Michael Viskovich
Project Manager

Premium Business Group
9 George Street
PARRAMATTA NSW 2150
Telephone: 02 8835 4208
Facsimile: 02 9835 7320

BANKER'S UNDERTAKING

To: Pittwater Council A.B.N 61 840 837 871 of PO Box 882, Mona Vale NSW 1660 (the "Favouree")

At the request of: Anglican Retirement Villages (the "Customer")

and in consideration of the Favouree accepting this Undertaking for the Road Works Maintenance Bond over Property DA 102/05, 6-14 MacPherson Street, Warriewood NSW, WESTPAC BANKING CORPORATION (the "Bank") unconditionally undertakes to pay on demand any amount or amounts which may from time to time be demanded in writing purporting to be signed by or on behalf of the Favouree, up to a maximum aggregate sum of \$17,500.00 (the "Amount").

Payment of the Amount or any part thereof will be made by the Bank to the Favouree without reference to the Customer and regardless of any notice from the Customer to the Bank not to pay any amount.

The Bank's obligations under this Undertaking cease on the earliest of the following:

- written notification is received by the Bank from the Favouree that the Undertaking is no longer required
- the Undertaking is returned to the Bank
- all payments by the Bank to the Favouree under the Undertaking total the Amount
- the Favouree notifies the Bank that the payments made by the Bank constitute the total amount required to be paid

Notwithstanding any other obligations of the Bank under this Undertaking the Bank may at any time, without being required to do so, extinguish any liability it has under the Undertaking by paying to the Favouree the Amount less any amount or amounts it has previously paid under this Undertaking, or any lesser amount the Favouree notifies the Bank as being acceptable to it.

The benefit of this Undertaking is personal to the named Favouree and is not capable of assignment.

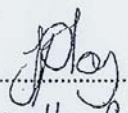
BANKER'S UNDERTAKING

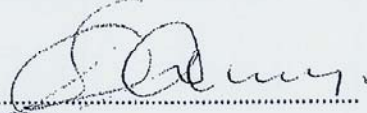
By: WESTPAC BANKING CORPORATION ABN 33 007 457 141 (the "Bank")
To: Pittwater Council A.B.N 61 840 837 871 of PO Box 882, Mona Vale NSW 1660 (the
"Favouree")
At the request of: Anglican Retirement Villages (the "Customer")
Amount: \$17,500.00

Dated at Parramatta, this 4 August 2009

I certify that the Attorney for the Bank, with whom I am personally acquainted or as to whose identity I am otherwise satisfied, signed this instrument in my presence.

SIGNED by Stephenie Hansen as attorney for Westpac Banking Corporation ABN 33 007 457 141 under power of attorney registered Book 4299 No 332.

Signature of Witness: .....
Name of Witness: Donelle Pamaly.....
Address of Witness: LEVEL 2
9 GEORGE ST
PARRAMATTA NSW 2150

.....
Signature
By executing this instrument the attorney states that the attorney has received no notice of the revocation of the power of attorney.

Please forward all notices and correspondence to The Manager, Westpac Banking Corporation at Premium Business Group 9 George Street PARRAMATTA NSW 2150.

Premium Business Group
9 George Street
PARRAMATTA NSW 2150
Telephone: 02 8835 4208
Facsimile: 02 9835 7320

BANKER'S UNDERTAKING

To: Pittwater Council A.B.N 61 840 837 871 of PO Box 882, Mona Vale NSW 1660 (the "Favouree")

At the request of: Anglican Retirement Villages (the "Customer")

and in consideration of the Favouree accepting this Undertaking for the Water Quality Control Devices over Property DA 102/05, 6-14 MacPherson Street, Warriewood NSW, WESTPAC BANKING CORPORATION (the "Bank") unconditionally undertakes to pay on demand any amount or amounts which may from time to time be demanded in writing purporting to be signed by or on behalf of the Favouree, up to a maximum aggregate sum of \$10,000.00 (the "Amount").

Payment of the Amount or any part thereof will be made by the Bank to the Favouree without reference to the Customer and regardless of any notice from the Customer to the Bank not to pay any amount.

The Bank's obligations under this Undertaking cease on the earliest of the following:

- written notification is received by the Bank from the Favouree that the Undertaking is no longer required
- the Undertaking is returned to the Bank
- all payments by the Bank to the Favouree under the Undertaking total the Amount
- the Favouree notifies the Bank that the payments made by the Bank constitute the total amount required to be paid

Notwithstanding any other obligations of the Bank under this Undertaking the Bank may at any time, without being required to do so, extinguish any liability it has under the Undertaking by paying to the Favouree the Amount less any amount or amounts it has previously paid under this Undertaking, or any lesser amount the Favouree notifies the Bank as being acceptable to it.

The benefit of this Undertaking is personal to the named Favouree and is not capable of assignment.

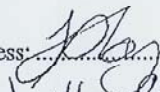
BANKER'S UNDERTAKING

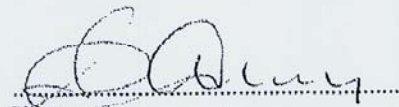
By: WESTPAC BANKING CORPORATION ABN 33 007 457 141 (the "Bank")
To: Pittwater Council A.B.N 61 840 837 871 of PO Box 882, Mona Vale NSW 1660 (the
"Favouree")
At the request of: Anglican Retirement Villages (the "Customer")
Amount: \$10,000.00

Dated at Parramatta, this 4 August 2009

I certify that the Attorney for the Bank, with whom I am personally acquainted or as to whose identity I am otherwise satisfied, signed this instrument in my presence.

SIGNED by Stephenie Hansen as attorney for Westpac Banking Corporation ABN 33 007 457 141 under power of attorney registered Book 4299 No 332.

Signature of Witness: 
Name of Witness: Jonelle Panabky
Address of Witness:
LEVEL 2
9 GEORGE ST.....
PARRAMATTA NSW 2150


Signature
By executing this instrument the attorney states that the attorney has received no notice of the revocation of the power of attorney.

Please forward all notices and correspondence to The Manager, Westpac Banking Corporation at Premium Business Group 9 George Street PARRAMATTA NSW 2150.

Premium Business Group
9 George Street
PARRAMATTA NSW 2150
Telephone: 02 8835 4208
Facsimile: 02 9635 7320

BANKER'S UNDERTAKING

To: Pittwater Council A.B.N 61 840 837 871 of PO Box 882, Mona Vale NSW 1660 (the "Favouree")

At the request of: Anglican Retirement Villages (the "Customer")

and in consideration of the Favouree accepting this Undertaking for the Narrabeen Creek Civil Works over Property DA 102/05, 6-14 MacPherson Street, Warriewood NSW, WESTPAC BANKING CORPORATION (the "Bank") unconditionally undertakes to pay on demand any amount or amounts which may from time to time be demanded in writing purporting to be signed by or on behalf of the Favouree, up to a maximum aggregate sum of \$37,500.00 (the "Amount").

Payment of the Amount or any part thereof will be made by the Bank to the Favouree without reference to the Customer and regardless of any notice from the Customer to the Bank not to pay any amount.

The Bank's obligations under this Undertaking cease on the earliest of the following:

- written notification is received by the Bank from the Favouree that the Undertaking is no longer required
- the Undertaking is returned to the Bank
- all payments by the Bank to the Favouree under the Undertaking total the Amount
- the Favouree notifies the Bank that the payments made by the Bank constitute the total amount required to be paid

Notwithstanding any other obligations of the Bank under this Undertaking the Bank may at any time, without being required to do so, extinguish any liability it has under the Undertaking by paying to the Favouree the Amount less any amount or amounts it has previously paid under this Undertaking, or any lesser amount the Favouree notifies the Bank as being acceptable to it.

The benefit of this Undertaking is personal to the named Favouree and is not capable of assignment.

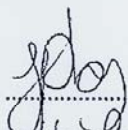
BANKER'S UNDERTAKING

By: WESTPAC BANKING CORPORATION ABN 33 007 457 141 (the "Bank")
To: Pittwater Council A.B.N 61 840 837 871 of PO Box 882, Mona Vale NSW 1660 (the
"Favouree")
At the request of: Anglican Retirement Villages (the "Customer")
Amount: \$37,500.00

Dated at Parramatta, this 4 August 2009

I certify that the Attorney for the Bank, with whom I am personally acquainted or as to whose identity I am otherwise satisfied, signed this instrument in my presence.

SIGNED by Stephenie Hansen as attorney for Westpac Banking Corporation ABN 33 007 457 141 under power of attorney registered Book 4299 No 332.

Signature of Witness: 

Name of Witness: *Janelle Parosky*

Address of Witness:
LEVEL 2
9 GEORGE ST
PARRAMATTA NSW 2150



Signature

By executing this instrument the attorney states that the attorney has received no notice of the revocation of the power of attorney.

Please forward all notices and correspondence to The Manager, Westpac Banking Corporation at Premium Business Group 9 George Street PARRAMATTA NSW 2150.

20 July 2009

Steve Watson & Partners Pty Ltd
Level 5/ 432 Kent Street
SYDNEY NSW 2000

Attention: Andrew Rys

To whom it may concern,

CERTIFICATE OF DESIGN: **LANDSCAPE ARCHITECTURE**
SUBJECT PREMISES **ARV Warriewood**
6,8,10,12 and 14 MacPherson Street, and 53, 53b, 53c and 61
Warriewood Road NSW 2102
DEVELOPMENT APPLICATION **NO 102/05**

We have inspected the above development upon practical completion of the works dated 29 June 2009.

Pursuant to the provisions of **Clause A2.2 of the Building Code of Australia**, I hereby certify that the above design is in accordance with normal engineering practice and meets the requirements of the Building Code of Australia, any relevant fire safety engineering report, the Environmental Planning and Assessment Regulation, relevant Australian Standards and relevant conditions of the Development Consent. In particular the design is in accordance with the following DA requirements for landscape:

- DA Condition B44. All fencing is to be keeping with the requirements of section D14.16 of Pittwater 21 DCP.
- DA Condition C1. Stating that 3 sets of detail landscape plans/ working drawings were submitted prior to the release of Construction Certificate, and that the plans were prepared in accordance with the landscape master plan.
- DA Condition D2. Chain wire protective mesh fencing was provided in accordance with the above condition prior to commencement of works on site

I am an appropriately qualified and competent person in this area being employed as a Landscape Architect and as such can certify that the design and performance of the design systems comply with the above and which are detailed on the following drawings.

- | | |
|------------------------------|-------|
| ▪ LC01 Landscape Finishes | Rev K |
| ▪ LC02 Landscape Finishes | Rev K |
| ▪ LC03 Landscape Finishes | Rev G |
| ▪ LC04 Landscape Finishes | Rev F |
| ▪ LC07 Fencing - MacPherson | Rev C |
| ▪ LC08 Fencing - Brands Lane | Rev C |
| ▪ LC09 Boardwalk | Rev B |
| ▪ LS01 Path Set out | Rev F |

taylor brammer landscape architects pty ltd abn 61 098 724 988 www.taylorbrammer.com.au

Sydney
218 Oxford Street Woollahra NSW 2025 Australia
t: +61 2 9387 8855 f: +61 2 9387 8155 e: sydney@taylorbrammer.com.au

Austinmer
26 Moore Street Austinmer PO Box 64 Austinmer NSW 2515 Australia
t: +61 2 4267 5088 f: +61 2 4267 4826 e: southcoast@taylorbrammer.com.au

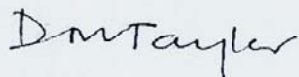
- LS02 Path Set out Rev C
- LS03 Path Set out Rev C

- LD01 Details Rev B
- LD02 Details Rev A
- LD03 Details Rev D
- LP01 Planting Plan Rev B
- LP02 Planting Plan Rev A
- LP03 Planting Plan Rev A

I possess Indemnity Insurance to the satisfaction of the building owner or my principal.

Full Name of Designer: James Heron
Qualifications: BLArch (Hons 1) HNDip Hort
Address of Designer: 218 Oxford Street
WOOLLAHRA NSW 2025
Business Telephone No: 02 9387 8855 Fax No: 02 9387 8155

Name of Employer: Matthew Taylor- Director
Signature:





ARCHITECTURE

Certificate of Compliance

NRP ARCHITECTURE
ABN 21 083 698 882

Level 8/15 Help Street Chatswood NSW 2067
PO Box 5036 West Chatswood NSW 1515

T 61 (0)2 8966 6001 F 61 (0)2 8966 6126
E mail@nrparchitecture.com.au

Development: Stage 1: 64 Independent Living Units at
6-14 Macpherson Street Warriewood

Owners: Anglican Retirement Villages

Owners Address: 62 Norwest Bvd, Baulkham Hills, NSW

Materials and colours

We certify that the materials and colours are generally in accordance with the samples submitted with the Development Application. No white or lighted coloured roofs are used.

I Morris Rosenberg of NRP Architecture, certify that to the best of my knowledge and belief, the information contained in this certificate is true and accurate.

Signed by  Date.....8th July2009

Rosenberg Architects Pty Limited ABN 21 083 698 882 trading as NRP ARCHITECTURE
Director / Nominated Architect Morris Rosenberg (Reg No 3308) B Arch (Hons) FRAIA

COMPLIANCE LETTER



24 June 2009

Document # 460
File Code: ARV-5 / 3707

Steve Watson & Partners

Level 5, 432 Kent St
SYDNEY NSW 2000

Att: Andrew Rys
Fax: 9283 8500

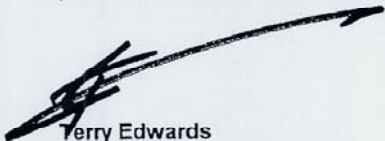
**RE: DA CONDITION D30
WARRIEWOOD STAGE 1 NEW A,B & C, MACPHERSON STREET WARRIEWOOD NSW 2102**

This is to confirm that Southern Cross Constructions (NSW) Pty Ltd have provided and maintained continuous weather vehicle access to Foley's Nursery in Brands Lane. Such access has accommodated all vehicles including retail customers and service 1 delivery vehicles, and therefore advise that we have complied with the above mentioned DA Condition.

Please contact me should you have any questions.

Regards,

Southern Cross Constructions (NSW) Pty Ltd



Terry Edwards
Project Manager

COMPLIANCE LETTER

SOUTHERN CROSS
CONSTRUCTIONS



24 June 2009

Document # 463
File Code: ARV-5 / 3707

Steve Watson & Partners

Level 5, 432 Kent St
SYDNEY NSW 2000

Att: Andrew Rys

Fax: 9283 8500

RE: DA CONDITION D29
WARRIWOOD STAGE 1 NEW A,B & C, MACPHERSON STREET WARRIWOOD NSW 2102

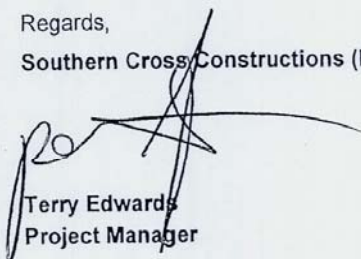
This is to confirm that Southern Cross Constructions (NSW) Pty Ltd for the duration of construction period have complied with DA Condition D29, in which all asbestos laden waste, including flat, corrugated or profiled asbestos cement sheets have been disposed on at a lawful waste disposal facility.

In accordance with DA condition D29, please find attached tipping receipts and clearance certification from David Lane & Associates as evidence of proper disposal.

Please contact me should you have any questions.

Regards,

Southern Cross Constructions (NSW) Pty Ltd



Terry Edwards
Project Manager



DAVID LANE ASSOCIATES
ARN 36 926 003 197
Environment Health Safety

25th March 2008

DL1995

Mr Terry Edwards
Southern Cross Constructions Pty. Ltd.
135-153 New South Head Road
Edgecliff
NSW 2027

Dear Mr Edwards

Asbestos Clearance Certification
Area North East of Stage 2 - 8-14 Macpherson Street, Warriewood

Following the removal of minor asbestos fragments by Cardnial Project Services Pty. Ltd. at the site identified as the Southern Cross Construction Site Establishment Area, North East of the Stage 2 retirement village development located at 8-14 Macpherson Street Warriewood, an asbestos clearance inspection was undertaken. David Lane Associates undertook a site inspection on Thursday 20th March 2008. The Site Establishment Area is approximately 1600m².

It was concluded that the area was **free of visible asbestos contamination** at the time of inspection and presented a safe environment for both personnel access and planned site establishment activities.

However, due to the nature of the material and associated site history, it is never possible to guarantee every fragment of asbestos containing material has been identified. In the unlikely event that soil disturbance uncovers a fragment of an asbestos containing material, given its bonded matrix and isolated nature, this event would not pose an unacceptable health risk to the property. However all asbestos events should be addressed and for this reason an Unexpected Finds Protocol has been included for future

SYDNEY

Unit 28 30 Leighton Place, Hornsby NSW 2077 • Phone: 9476 1765 • Fax: 9476 1557 • E-mail: dlassociates@bigpond.com

NEWCASTLE

778 Old North Rd, Rothbury NSW 2335 • Phone: 4938 3300 • Fax: 4938 3811 • E-mail: dolane@bigpond.com



site establishment activities in the Clearance documentation. The Unexpected Finds Protocol should be implemented to address any minor discoveries. The Unexpected Finds Protocol is attached.

Yours Faithfully

DAVID LANE ASSOCIATES

A handwritten signature in black ink, appearing to read "DLA", written in a cursive style.

David Lane

Director



DAVID LANE ASSOCIATES
ABN 38 928 003 197
Environment Health Safety

**Southern Cross Constructions
Site Establishment Area
North East of Stage 2
8-14 Macpherson Street, Warriewood**

**Unexpected Find of Asbestos Containing Material
PROTOCOL**

Listed below are the steps that need to be followed in the event of an unexpected discovery of suspected asbestos containing materials at the Southern Cross Constructions Site Establishment Area.

The site north east of the stage 2 development at 8-14 Macpherson Street, Warriewood NSW contained minor impaction from bonded asbestos sheet fragments in fill materials within localised areas (surface 0-150mm)

The materials were subsequently removed and appropriate Clearance Certifications issued. Due to the nature of this material it is not possible to guarantee every fragment has been identified and removed, therefore, it is appropriate this Unexpected Find Protocol is introduced on the Site.

This protocol is to be posted on-site in an accessible location for all operators to read with its contents included in the on-site induction package.

➤ **SUSPECTED ASBESTOS MATERIAL UNCOVERED**

1. Cease disturbance of the material and leave the immediate area.
2. Contact the Site Foreman or appropriate Manager.
3. Foreman to conduct an assessment of the location of the suspected asbestos containing material taking into consideration possible asbestos matrix and quantity of material.
ie. if the quantity is small the Foreman initiates a cleanup using appropriate personal protective equipment and procedures.
4. If Foreman decides the material and quantities warrants further investigation the area is to be barricaded off to provide a ten (10) metre exclusion zone. Work can recommence in adjacent areas outside the exclusion zone.
5. The Foreman arranges with his Manager to organise a further qualified assessment of the suspected materials.

6. Visual assessments and samples collected by a suitably qualified Occupational Hygienist. Samples sent to a NATA registered laboratory for analysis.

➤ **CONFIRM PRESENCE OF ASBESTOS BY VISUAL OR ANALYSIS?**

YES – Conduct asbestos clean-up utilising accepted practices in accordance with the Worksafe Code of Practice and Chapter 8 Part 8.7 Asbestos – Particular Provisions of the OHS Regulation 2001.

Conduct visual clearance inspections and airborne asbestos monitoring.

If both inspections and monitoring are acceptable the barricades can be removed and resume work notification instructed.

Complete the Asbestos Incident Report form and forward to designated Management.

NO - Remove the barricades and resume work.

**Southern Cross Constructions
Site Establishment Area
North East of Stage 2
8-14 Macpherson Street, Warriewood**

Asbestos Incident Report

Report Number _____

Time of Incident _____

Date of Incident _____

Details of
Incident _____

Classification of Incident (Circle)

- Minor asbestos Incident
- Major Asbestos Incident
- Breach of Regulations
- Regulatory Involvement

Immediate Action Taken:

Signed: _____

Date: _____



ABN 36 926 003 197

22nd July 2008

DL1995

Mr Terry Edwards
Southern Cross Constructions Pty. Ltd.
135-153 New South Head Road
Edgecliff
NSW 2027

Dear Mr Edwards

Asbestos Clearance Certification
Warriewood Brook Stage 1 – Building B/C
8-14 Macpherson Street, Warriewood

Following asbestos fragment removal by Cardinal Project Services Pty Ltd at the site identified as Warriewood Brook Stage 1 of the Anglican Retirement Village Development, located at 8-14 Macpherson Street Warriewood, an asbestos clearance inspection was undertaken. David Lane Associates undertook a site inspection on Tuesday 22nd July 2008 for the purpose of assessing remediation works.

It was concluded that detailing of the site has eliminated the health risk associated with the presence of bonded asbestos materials within a **footprint area of Building 'B' and 'C'**. All contaminated material was removed from the Site and disposed of in accordance with Protection of the Environment Operations (Waste) Regulation 2005 and the NSW DECC Waste Classification Guidelines, 2008 as stipulated in the RAP prepared by P Clifton & Associates Pty Ltd, April 2007.

The area surface was **free of visible asbestos contamination** at the time of inspection and presented a safe environment for both personnel access and planned site activities.



Due to the nature of the material and associated site history, it is never possible to guarantee every fragment of asbestos containing material has been identified. In the unlikely event that soil disturbance uncovers a fragment of an asbestos containing material, given its bonded matrix and isolated nature; this event would not pose an unacceptable health risk to the property. All asbestos events should be addressed however and for this reason an Unexpected Finds Protocol has been included for future site activities in the Clearance documentation. The Unexpected Finds Protocol should be implemented to address any minor discoveries. The Unexpected Finds Protocol is attached.

Yours Faithfully

DAVID LANE ASSOCIATES

A handwritten signature in black ink, appearing to read 'David Lane', written in a cursive style.

David Lane

Director



DAVID LANE ASSOCIATES
AEN 36 926 003 197
Environment Health Safety

**Southern Cross Constructions
Warriewood Brook Stage 1
8-14 Macpherson Street, Warriewood**

Unexpected Find of Asbestos Containing Material

PROTOCOL

Listed below are the steps that need to be followed in the event of an unexpected discovery of suspected asbestos containing materials at the Southern Cross Constructions Stage 2 Anglican Retirement Village Development.

The site at 8-14 Macpherson Street, Warriewood NSW contained minor impaction from bonded asbestos sheet fragments in fill materials within localised areas (surface 0-150mm)

The materials were subsequently removed and appropriate Clearance Certifications issued. Due to the nature of this material it is not possible to guarantee every fragment has been identified and removed, therefore, it is appropriate this Unexpected Find Protocol is introduced on the Site.

This protocol is to be posted on-site in an accessible location for all operators to read with its contents included in the on-site induction package.

➤ SUSPECTED ASBESTOS MATERIAL UNCOVERED

1. Cease disturbance of the material and leave the immediate area.
2. Contact the Site Foreman or appropriate Manager.
3. Foreman to conduct an assessment of the location of the suspected asbestos containing material taking into consideration possible asbestos matrix and quantity of material.
ie. if the quantity is small the Foreman initiates a cleanup using appropriate personal protective equipment and procedures.
4. If Foreman decides the material and quantities warrants further investigation the area is to be barricaded off to provide a ten (10) metre exclusion zone. Work can recommence in adjacent areas outside the exclusion zone.
5. The Foreman arranges with his Manager to organise a further qualified assessment of the suspected materials.
6. Visual assessments and samples collected by a suitably qualified Occupational Hygienist. Samples sent to a NATA registered laboratory for analysis.

➤ **CONFIRM PRESENCE OF ASBESTOS BY VISUAL OR ANALYSIS?**

YES – Conduct asbestos clean-up utilising accepted practices in accordance with the Worksafe Code of Practice and Chapter 8 Part 8.7 Asbestos – Particular Provisions of the OHS Regulation 2001.

Conduct visual clearance inspections and airborne asbestos monitoring.

If both inspections and monitoring are acceptable the barricades can be removed and resume work notification instructed.

Complete the Asbestos Incident Report form and forward to designated Management.

NO - Remove the barricades and resume work.

**Southern Cross Constructions
Warriewood Brook Stage 1
8-14 Macpherson Street, Warriewood**

Asbestos Incident Report

Report Number _____

Time of Incident _____

Date of Incident _____

Details of
Incident

Classification of Incident (Circle)

- Minor asbestos Incident
- Major Asbestos Incident
- Breach of Regulations
- Regulatory Involvement

Immediate Action Taken:

Signed: _____

Date: _____



ABN 36 926 003 197

1st April 2009

DL1995

Mr Terry Edwards
Southern Cross Constructions Pty. Ltd.
135-153 New South Head Road
Edgecliff
NSW 2027

Dear Mr Edwards

**Asbestos Clearance Certification
Warriewood Brook Stage 1
8-14 Macpherson Street, Warriewood**

Following the removal of asbestos contaminated stockpiled soils by TF Group Pty Ltd an asbestos footprint clearance inspection was undertaken. The site is identified as Warriewood Brook Stage 1 of the Anglican Retirement Village Development, located at 8-14 Macpherson Street Warriewood. David Lane Associates undertook a site inspection on Wednesday 1st April 2009 to enable general access by Site personnel.

It was concluded that detailing of the **Stockpile 2 Footprint** area has eliminated the health risk associated with the presence of bonded asbestos materials. All contaminated material was removed from the Site and disposed of in accordance with Protection of the Environment Operations (Waste) Regulation 2005 (as Amended, 2008) and the NSW DECC Waste Classification Guidelines, 2008 as stipulated in the RAP prepared by P Clifton & Associates Pty Ltd, April 2007.

The stockpile footprint surface was **free of visible asbestos contamination** at the time of inspection and presented a safe environment for both personnel access and planned site activities.



Due to the nature of the material and associated site history, it is never possible to guarantee every fragment of asbestos containing material has been identified. In the unlikely event that soil disturbance uncovers a fragment of an asbestos containing material, given its bonded matrix and isolated nature; this event would not pose an unacceptable health risk at the property. All asbestos events should be addressed however and for this reason an Unexpected Finds Protocol has been included for future site activities in the Clearance documentation. The Unexpected Finds Protocol should be implemented to address any minor discoveries.

Refer to **Attachment 1** Unexpected Finds Protocol.

Yours Faithfully

DAVID LANE ASSOCIATES

A handwritten signature in black ink, appearing to read 'D Lane', is positioned below the company name.

David Lane

Director

DAVID LANE ASSOCIATES



Attachment 1

Unexpected Finds Protocol

DAVID LANE ASSOCIATES



ABN 36 325 303 197

**Southern Cross Constructions
Warriewood Brook Stage 1
8-14 Macpherson Street, Warriewood**

**Unexpected Find of Asbestos Containing Material
PROTOCOL**

Listed below are the steps that need to be followed in the event of an unexpected discovery of suspected asbestos containing materials at the Southern Cross Constructions Stage 1 Anglican Retirement Village Development.

The site at 8-14 Macpherson Street, Warriewood NSW contained minor impaction from bonded asbestos sheet fragments in fill materials within localised areas (surface 0-150mm)

The materials were subsequently stockpiled, removed and appropriate Clearance Certifications issued. Due to the nature of this material it is not possible to guarantee every fragment has been identified and removed, therefore, it is appropriate this Unexpected Find Protocol is introduced on the Site.

This protocol is to be posted on-site in an accessible location for all operators to read with its contents included in the on-site induction package.

➤ SUSPECTED ASBESTOS MATERIAL UNCOVERED

1. Cease disturbance of the material and leave the immediate area.
2. Contact the Site Foreman or appropriate Manager.
3. Foreman to conduct an assessment of the location of the suspected asbestos containing material taking into consideration possible asbestos matrix and quantity of material.
ie. if the quantity is small the Foreman initiates a cleanup using appropriate personal protective equipment and procedures.
4. If Foreman decides the material and quantities warrants further investigation the area is to be barricaded off to provide a ten (10) metre exclusion zone. Work can recommence in adjacent areas outside the exclusion zone.
5. The Foreman arranges with his Manager to organise a further qualified assessment of the suspected materials.



6. Visual assessments and samples collected by a suitably qualified Occupational Hygienist. Samples sent to a NATA registered laboratory for analysis.

➤ **CONFIRM PRESENCE OF ASBESTOS BY VISUAL OR ANALYSIS?**

YES – Conduct asbestos clean-up utilising accepted practices in accordance with the Worksafe Code of Practice and Chapter 8 Part 8.7 Asbestos – Particular Provisions of the OHS Regulation 2001.

Conduct visual clearance inspections and airborne asbestos monitoring.

If both inspections and monitoring are acceptable the barricades can be removed and resume work notification instructed.

Complete the Asbestos Incident Report form and forward to designated Management.

NO - Remove the barricades and resume work.



**Southern Cross Constructions
Warriewood Brook Stage 1
8-14 Macpherson Street, Warriewood**

Asbestos Incident Report

Report Number _____

Time of Incident _____

Date of Incident _____

Details of Incident _____

Classification of Incident (Circle)

- Minor asbestos Incident
- Major Asbestos Incident
- Breach of Regulations
- Regulatory Involvement

Immediate Action Taken:

Signed: _____

Date: _____

Contract Delivery Details

for period: 5/10/2008 12:00:00AM to 5/28/2008 11:59:59PM

*W Avenue with of
Southern Cross*

SITA Australia Pty Ltd

Elizabeth Drive Landfill

1725 Elizabeth Drive
KEMPS CREEK NSW 2178

Ticket No.	Date-Time Out	Company Name	Product	Net Weight	Qty	Ex-Tax	Tax Rounding
30022066-ED	5/16/2008 12:10:	CARDINAL PROJECT	CONT SOIL	16.64			
30022116-ED	5/16/2008 15:58:	CARDINAL PROJECT	CONT SOIL	25.06			
30022296-ED	5/19/2008 10:20:	CARDINAL PROJECT	CONT SOIL	17.28			
30022360-ED	5/19/2008 11:24:	CARDINAL PROJECT	CONT SOIL	20.32			
30022485-ED	5/19/2008 13:58:	CARDINAL PROJECT	CONT SOIL	19.22			
30022539-ED	5/19/2008 15:05:	CARDINAL PROJECT	CONT SOIL	22.28			
30022663-ED	5/20/2008 9:39:	CARDINAL PROJECT	CONT SOIL	18.96			
30022675-ED	5/20/2008 10:02:	CARDINAL PROJECT	CONT SOIL	17.04			
30022686-ED	5/20/2008 10:16:	CARDINAL PROJECT	CONT SOIL	17.46			
30023025-ED	5/21/2008 10:25:	CARDINAL PROJECT	CONT SOIL	19.92			
30023030-ED	5/21/2008 10:45:	CARDINAL PROJECT	CONT SOIL	19.08			
30023048-ED	5/21/2008 11:07:	CARDINAL PROJECT	CONT SOIL	16.58			
30023208-ED	5/21/2008 14:37:	CARDINAL PROJECT	CONT SOIL	25.54			
30023242-ED	5/21/2008 15:30:	CARDINAL PROJECT	CONT SOIL	19.68			
30023359-ED	5/22/2008 9:49:	CARDINAL PROJECT	CONT SOIL	19.72			
30023372-ED	5/22/2008 10:12:	CARDINAL PROJECT	CONT SOIL	20.66			
30023538-ED	5/22/2008 14:27:	CARDINAL PROJECT	CONT SOIL	25.56			
30023580-ED	5/22/2008 15:23:	CARDINAL PROJECT	CONT SOIL	17.42			
30023671-ED	5/23/2008 9:40:	CARDINAL PROJECT	CONT SOIL	22.66			
30023812-ED	5/23/2008 13:36:	CARDINAL PROJECT	CONT SOIL	23.80			
30024017-ED	5/26/2008 10:13:	CARDINAL PROJECT	CONT SOIL	22.30			
Contract Totals:				427.18			
Site Totals:				427.18			

CARDINAL HOLDINGS
(AUST) P/L

427.18 0

Grand Totals:

TF Group Pty Ltd

Blacktown Waste Services
920 Richmond Rd

Report By Job Number
From 01/04/2009 To 06/04/2009

<u>Date</u>	<u>Time</u>	<u>Rego #</u>	<u>Direct</u>	<u>Owner</u>	<u>Product</u>	<u>Docket #</u>	<u>Delivery</u>	<u>Gross(t)</u>	<u>Tare(t)</u>	<u>Net(t)</u>
Name: TFG0323-WARRIEWOOD										
03/04/2009	08:53	AV50SR	IN	COMPAN	SPECIAL WASTE - ASB	253251	124835	49.00	17.90	31.10
03/04/2009	09:20	AGROKW	IN	COMPAN	SPECIAL WASTE - ASB	253256	124837	48.94	18.30	30.64
03/04/2009	09:23	AT94HR	IN	COMPAN	SPECIAL WASTE - ASB	253257	124838	51.62	18.52	33.10
03/04/2009	09:38	KWT658	IN	COMPAN	SPECIAL WASTE - ASB	253259	124836	49.66	19.52	30.14
03/04/2009	11:18	TFG007	IN	COMPAN	SPECIAL WASTE - ASB	253273	124839	46.88	16.42	30.46
03/04/2009	11:27	AM93RZ	IN	COMPAN	SPECIAL WASTE - ASB	253278	124840	44.62	19.96	24.66
03/04/2009	11:51	AV50SR	IN	COMPAN	SPECIAL WASTE - ASB	253283	124841	51.92	17.82	34.10
03/04/2009	12:00	AGROKW	IN	COMPAN	SPECIAL WASTE - ASB	253286	124843	45.96	18.40	27.56
03/04/2009	12:17	AT94HR	IN	COMPAN	SPECIAL WASTE - ASB	253292	124844	50.50	18.48	32.02
03/04/2009	12:38	KWT658	IN	COMPAN	SPECIAL WASTE - ASB	253296	124845	55.78	19.68	36.10
03/04/2009	13:54	AM93RZ	IN	COMPAN	SPECIAL WASTE - ASB	253310	124846	46.30	19.94	26.36
03/04/2009	14:11	AV50SR	IN	COMPAN	SPECIAL WASTE - ASB	253313	124847	49.34	17.88	31.46
03/04/2009	14:23	AGROKW	IN	COMPAN	SPECIAL WASTE - ASB	253315	124848	53.90	18.54	35.36
03/04/2009	14:32	TFG007	IN	COMPAN	SPECIAL WASTE - ASB	253318	124849	50.78	16.36	34.42
03/04/2009	14:36	AT94HR	IN	COMPAN	SPECIAL WASTE - ASB	253322	124850	48.86	18.38	30.48
03/04/2009	14:47	KWT658	IN	COMPAN	SPECIAL WASTE - ASB	253325	124751	50.70	19.62	31.08
03/04/2009	15:10	AV89DM	IN	COMPAN	SPECIAL WASTE - ASB	253333	124842	52.22	17.90	34.32
06/04/2009	09:18	KWT658	IN	COMPAN	SPECIAL WASTE - ASB	253460	124752	49.24	18.84	30.40
06/04/2009	09:40	AT94HR	IN	COMPAN	SPECIAL WASTE - ASB	253475	124753	49.78	18.24	31.54

Printed: 7/04/2009

Date	Time	Rego #	Direct	Owner	Product	Docket #	Delivery	Gross(t)	Tare(t)	Net(t)
06/04/2009	09:50	AV50SR	IN	COMPAN	SPECIAL WASTE - ASB	253481	124754	49.16	18.00	31.16
06/04/2009	10:04	AGROKW	IN	COMPAN	SPECIAL WASTE - ASB	253491	124756	52.48	18.80	33.68
06/04/2009	10:06	AV89DM	IN	COMPAN	SPECIAL WASTE - ASB	253493	124755	47.88	17.76	30.10
06/04/2009	11:35	KWT658	IN	COMPAN	SPECIAL WASTE - ASB	253536	124757	46.48	18.84	27.64
06/04/2009	12:27	AT94HR	IN	COMPAN	SPECIAL WASTE - ASB	253561	124758	47.80	18.28	29.52
06/04/2009	12:28	AV50SR	IN	COMPAN	SPECIAL WASTE - ASB	253562	124759	48.84	18.10	30.74
06/04/2009	12:37	AGROKW	IN	COMPAN	SPECIAL WASTE - ASB	253567	124760	52.94	19.00	33.94
06/04/2009	12:42	AV89DM	IN	COMPAN	SPECIAL WASTE - ASB	253569	124761	48.46	17.78	30.68
06/04/2009	13:48	KWT658	IN	COMPAN	SPECIAL WASTE - ASB	253607	124762	54.98	18.96	36.02
06/04/2009	14:55	AT94HR	IN	COMPAN	SPECIAL WASTE - ASB	253642	124763	51.84	18.16	33.68
06/04/2009	14:57	AV50SR	IN	COMPAN	SPECIAL WASTE - ASB	253643	124764	47.56	17.96	29.60
06/04/2009	15:05	AGROKW	IN	COMPAN	SPECIAL WASTE - ASB	253648	124765	54.52	18.88	35.64
Summary:								1548.92		977.70

Transactions : 31

Total Transactions: 31

Total:

1548.92

977.70

**Blacktown Waste Services
920 Richmond Rd**

**Report By Job Number
From 27/03/2009 To 27/03/2009**

Date	Time	Rego #	Direct	Owner	Product	Docket #	Delivery	Gross(t)	Tare(t)	Net
Name: TFG0323-WARRIEWOOD										
27/03/2009	10:55	AV50SR	IN	COMPAN	SPECIAL WASTE - ASB	252189	124557	48.80	17.60	31
27/03/2009	10:58	AT94HR	IN	COMPAN	SPECIAL WASTE - ASB	252170	124620	49.54	18.20	31
27/03/2009	11:18	AM93RZ	IN	COMPAN	SPECIAL WASTE - ASB	252182	121787	43.70	19.92	23
27/03/2009	11:28	AV89DM	IN	COMPAN	SPECIAL WASTE - ASB	252189	115344	47.32	17.68	29
27/03/2009	11:31	TFG007	IN	COMPAN	SPECIAL WASTE - ASB	252193	110172	44.38	17.08	27
27/03/2009	14:37	AV50SR	IN	COMPAN	SPECIAL WASTE - ASB	252297	124558	48.56	17.54	31
27/03/2009	14:38	AT94HR	IN	COMPAN	SPECIAL WASTE - ASB	252298	124621	50.92	18.20	32
27/03/2009	14:39	AM93RZ	IN	COMPAN	SPECIAL WASTE - ASB	252300	121788	40.50	19.84	20
27/03/2009	14:41	TFG007	IN	COMPAN	SPECIAL WASTE - ASB	252302	110173	45.72	16.18	29
27/03/2009	14:45	AV89DM	IN	COMPAN	SPECIAL WASTE - ASB	252306	115345	50.32	17.70	32
Transactions : 10						Summary:		469.76	289.6	
Total Transactions: 10						Total:		469.76	289.6	

Blacktown Waste Services
920 Richmond Rd

Report By Job Number
From 30/03/2009 To 30/03/2009

Date	Time	Rego #	Direct	Owner	Product	Docket #	Deliverly	Gross(t)	Tare(t)	Net(t)
Name: TFG0323-WARRIEWOOD										
30/03/2009	09:19	KWT658	IN	COMPAN	SPECIAL WASTE - ASB	252560	124802	50.92	18.96	31.96
30/03/2009	09:21	MT2474	IN	COMPAN	SPECIAL WASTE - ASB	252562	124801	48.08	16.16	31.92
30/03/2009	09:51	TFG007	IN	COMPAN	SPECIAL WASTE - ASB	252576	124804	48.70	16.02	32.68
30/03/2009	10:00	AT94HR	IN	COMPAN	SPECIAL WASTE - ASB	252584	124805	48.04	18.02	30.02
30/03/2009	10:20	AV50SR	IN	COMPAN	SPECIAL WASTE - ASB	252593	124806	50.32	17.96	32.36
30/03/2009	10:56	AM93RZ	IN	COMPAN	SPECIAL WASTE - ASB	252620	124807	47.52	19.64	27.88
30/03/2009	11:13	MT404	IN	COMPAN	SPECIAL WASTE - ASB	252629	124803	56.76	17.68	39.08
30/03/2009	11:46	KWT658	IN	COMPAN	SPECIAL WASTE - ASB	252649	124808	40.94	18.90	31.04
30/03/2009	12:01	MT2474	IN	COMPAN	SPECIAL WASTE - ASB	252664	124809	49.78	16.22	33.56
30/03/2009	12:13	TFG007	IN	COMPAN	SPECIAL WASTE - ASB	252675	124810	58.10	15.98	37.12
30/03/2009	12:33	AT94HR	IN	COMPAN	SPECIAL WASTE - ASB	252687	124811	47.76	18.08	29.68
30/03/2009	12:51	AV50SR	IN	COMPAN	SPECIAL WASTE - ASB	252705	124812	49.38	17.88	31.50
30/03/2009	13:38	AM93RZ	IN	COMPAN	SPECIAL WASTE - ASB	252726	124813	45.54	19.50	26.04
30/03/2009	14:34	KWT658	IN	COMPAN	SPECIAL WASTE - ASB	252787	124814	47.66	18.94	28.72
30/03/2009	15:00	MT2474	IN	COMPAN	SPECIAL WASTE - ASB	252782	124815	49.88	16.10	33.78
30/03/2009	15:13	TFG007	IN	COMPAN	SPECIAL WASTE - ASB	252791	124816	45.44	15.96	29.48
30/03/2009	15:32	AT94HR	IN	COMPAN	SPECIAL WASTE - ASB	252799	124817	46.46	17.94	28.52
30/03/2009	15:56	AV50SR	IN	COMPAN	SPECIAL WASTE - ASB	252811	124818	48.16	17.86	30.30
30/03/2009	16:14	AM93RZ	IN	COMPAN	SPECIAL WASTE - ASB	252822	124819	42.76	19.36	23.40

588.2

Printed: 31/03/2009

**Blacktown Waste Services
920 Richmond Rd**

**Report By Job Number
From 31/03/2009 To 31/03/2009**

Date	Time	Rego #	Direct	Owner	Product	Docket #	Deliverly	Gross(t)	Tare(t)	Net	
Name: TFG0323-WARRIEWOOD											
31/03/2009	09:19	MT2474	IN	✓	COMPAN'SPECIAL WASTE - ASB	252895	124820	48.70	16.26	32.44	
31/03/2009	09:32	KWT658	IN	✓	COMPAN'SPECIAL WASTE - ASB	252899	124822	50.52	18.94	31.58	
31/03/2009	09:55	AV50SR	IN	✓	COMPAN'SPECIAL WASTE - ASB	252907	124823	49.68	17.86	31.82	
31/03/2009	09:56	AT94HR	IN	✓	COMPAN'SPECIAL WASTE - ASB	252908	124824	49.26	18.38	30.88	
31/03/2009	09:59	AM93RZ	IN	✓	COMPAN'SPECIAL WASTE - ASB	252911	124825	48.80	19.50	29.30	
31/03/2009	10:16	MT404	IN	✓	COMPAN'SPECIAL WASTE - ASB	252918	124821	57.16	17.74	39.42	
31/03/2009	12:05	KWT658	IN	✓	COMPAN'SPECIAL WASTE - ASB	252975	124826	48.48	18.74	29.74	
31/03/2009	12:17	MT2474	IN	✓	COMPAN'SPECIAL WASTE - ASB	252978	124827	46.96	16.24	30.72	
31/03/2009	13:01	AV50SR	IN	✓	PRIVATE SPECIAL WASTE - ASB	252998	124829	51.10	17.66	33.44	
31/03/2009	13:07	AT94HR	IN	✓	COMPAN'SPECIAL WASTE - ASB	253001	124830	51.62	18.28	33.34	
31/03/2009	13:23	AM93RZ	IN	✓	COMPAN'SPECIAL WASTE - ASB	253011	124831	49.54	19.66	29.88	
31/03/2009	14:02	MT404	IN	✓	COMPAN'SPECIAL WASTE - ASB	253030	124832	58.74	17.72	41.02	
31/03/2009	14:37	KWT658	IN	✓	COMPAN'SPECIAL WASTE - ASB	253039	124833	53.00	18.74	34.26	
Transactions : 13								Summary:		663.56	427.8
Total Transactions: 13								Total:		663.56	427.8

Blacktown Waste Services
920 Richmond Rd

Report By Job Number
From 01/04/2009 To 06/04/2009

<u>Date</u>	<u>Time</u>	<u>Rego#</u>	<u>Direct</u>	<u>Owner</u>	<u>Product</u>	<u>Docket #</u>	<u>Delivery</u>	<u>Gross(t)</u>	<u>Tare(t)</u>	<u>Net(t)</u>
Name: TFG0323-WARRIEWOOD										
03/04/2009	08:53	AV50SR	IN	COMPAN	SPECIAL WASTE - ASB	253251	124835	49.00	17.90	31.10
03/04/2009	09:20	AGROKW	IN	COMPAN	SPECIAL WASTE - ASB	253256	124837	48.94	18.30	30.64
03/04/2009	09:23	AT94HR	IN	COMPAN	SPECIAL WASTE - ASB	253257	124838	51.62	18.52	33.10
03/04/2009	09:38	KWT658	IN	COMPAN	SPECIAL WASTE - ASB	253259	124836	49.66	19.52	30.14
03/04/2009	11:18	TFG007	IN	COMPAN	SPECIAL WASTE - ASB	253273	124839	46.88	16.42	30.46
03/04/2009	11:27	AM93RZ	IN	COMPAN	SPECIAL WASTE - ASB	253278	124840	44.62	19.96	24.66
03/04/2009	11:51	AV50SR	IN	COMPAN	SPECIAL WASTE - ASB	253283	124841	51.92	17.82	34.10
03/04/2009	12:00	AGROKW	IN	COMPAN	SPECIAL WASTE - ASB	253286	124843	45.96	18.40	27.56
03/04/2009	12:17	AT94HR	IN	COMPAN	SPECIAL WASTE - ASB	253292	124844	50.50	18.48	32.02
03/04/2009	12:38	KWT658	IN	COMPAN	SPECIAL WASTE - ASB	253296	124845	55.78	19.68	36.10
03/04/2009	13:54	AM93RZ	IN	COMPAN	SPECIAL WASTE - ASB	253310	124846	46.30	19.94	26.36
03/04/2009	14:11	AV50SR	IN	COMPAN	SPECIAL WASTE - ASB	253313	124847	49.34	17.88	31.46
03/04/2009	14:23	AGROKW	IN	COMPAN	SPECIAL WASTE - ASB	253315	124848	53.90	18.54	35.36
03/04/2009	14:32	TFG007	IN	COMPAN	SPECIAL WASTE - ASB	253318	124849	50.78	16.36	34.42
03/04/2009	14:36	AT94HR	IN	COMPAN	SPECIAL WASTE - ASB	253322	124850	48.86	18.38	30.48
03/04/2009	14:47	KWT658	IN	COMPAN	SPECIAL WASTE - ASB	253325	124751	50.70	19.62	31.08
03/04/2009	15:10	AV89DM	IN	COMPAN	SPECIAL WASTE - ASB	253333	124842	52.22	17.90	34.32
06/04/2009	09:18	KWT658	IN	COMPAN	SPECIAL WASTE - ASB	258460	124752	49.24	18.84	30.40
06/04/2009	09:40	AT94HR	IN	COMPAN	SPECIAL WASTE - ASB	253475	124753	49.78	18.24	31.54

Printed: 7/04/2009

Date	Time	Rego#	Direct	Owner	Product	Docket#	Delivery	Gross(t)	Tare(t)	Net(t)
06/04/2009	09:50	AV50SR	IN	COMPAN	SPECIAL WASTE - ASB	253481	124754	49.16	18.00	31.16
06/04/2009	10:04	AGROKWIN	IN	COMPAN	SPECIAL WASTE - ASB	253491	124756	52.49	18.80	33.68
06/04/2009	10:06	AV39DM	IN	COMPAN	SPECIAL WASTE - ASB	253493	124755	47.86	17.76	30.10
06/04/2009	11:35	KWT658	IN	COMPAN	SPECIAL WASTE - ASB	253536	124757	46.48	18.84	27.64
06/04/2009	12:27	AT94HR	IN	COMPAN	SPECIAL WASTE - ASB	253561	124758	47.80	18.28	29.52
06/04/2009	12:28	AV50SR	IN	COMPAN	SPECIAL WASTE - ASB	253562	124754	48.84	18.10	30.74
06/04/2009	13:37	AGROKWIN	IN	COMPAN	SPECIAL WASTE - ASB	253567	124760	52.94	19.00	33.94
06/04/2009	12:42	AV59DM	IN	COMPAN	SPECIAL WASTE - ASB	253569	124761	48.46	17.78	30.68
06/04/2009	13:48	KWT658	IN	COMPAN	SPECIAL WASTE - ASB	253607	124762	54.98	18.96	36.02
06/04/2009	14:55	AT94HR	IN	COMPAN	SPECIAL WASTE - ASB	253642	124763	51.84	18.16	33.68
06/04/2009	14:57	AV50SR	IN	COMPAN	SPECIAL WASTE - ASB	253643	124764	47.56	17.96	29.60
06/04/2009	15:05	AGROKWIN	IN	COMPAN	SPECIAL WASTE - ASB	253648	124765	54.52	18.88	35.64
Summary:								1548.92		977.70

Transactions : 31

Total Transactions: 31

Total:

1548.92 977.70



Invoice Date: 25 Jun 2008
 Customer Number: 200117
 Invoice Number:

RECEIVED
 JUN 30 2008

BY:-----

CHRISTIE CIVIL CONTRACTING P/L
 LOCKED BAG 1
 ANNANDALE NSW 2038

Docket	Date	Time	Vehicle	Order No	Approval #	Product	Chrg Rate	Method	Qty	Net	Rate	Extras	GST	Cost
EI00386674/1	19/06/2008	9:26	MT404		A8144	LLCS	CNAC6	TONNE	0.00	22.86				
EI00386668/1	19/06/2008	9:40	MT2474-T/D		A8144	LLCS	CNAC6	TONNE	0.00	24.38				
EI00386750/1	19/06/2008	12:14	MT2474-T/D		A8144	LLCS	CNAC6	TONNE	0.00	23.90				
EI00386765/1	19/06/2008	12:43	MT404		A8144	LLCS	CNAC6	TONNE	0.00	26.94				
EI00386820/1	19/06/2008	15:02	MT2474-T/D		A8144	LLCS	CNAC6	TONNE	0.00	27.90				
EI00386824/1	19/06/2008	15:21	MT404		A8144	LLCS	CNAC6	TONNE	0.00	31.68				
EI00387188/1	23/06/2008	8:45	MT404		A8144	LLCS	CNAC6	TONNE	0.00	21.24				
EI00387193/1	23/06/2008	8:56	AK02NO		A8144	LLCS	CNAC6	TONNE	0.00	21.86				
EI00387240/1	23/06/2008	11:28	MT404		A8144	LLCS	CNAC6	TONNE	0.00	17.46				
EI00387241/1	23/06/2008	11:29	AK02NO		A8144	LLCS	CNAC6	TONNE	0.00	16.64				
EI00387322/1	23/06/2008	14:36	AK02NO		A8144	LLCS	CNAC6	TONNE	0.00	28.82				
EI00387324/1	23/06/2008	14:38	MT404		A8144	LLCS	CNAC6	TONNE	0.00	24.58				

Total GST

Invoice Total (including GST)

Cnr Mamre & Erskine Park Rds Erskine Park NSW 2759 - PO Box 804 St Marys NSW 1790
 Phone: (02) 9834 3411 Fax: (02) 9834 3306
 Enviroguard Pty Ltd ACN 060 919 164
 Enviroguard Pty Ltd ABN 23 060 919 164

RPT5003.008



TAX INVOICE

CHRISTIE CIVIL CONTRACTING P/L
 LOCKED BAG 1
 ANNANDALE NSW 2038

Invoice Date: 16 Jul 2008
 Customer Number: 200117
 Invoice Number: 327130

Docket	Date	Time	Vehicle	Order No	Approval #	Product	Chrg Rate	Method	Qty	Net	Rate	Extras	GST	Cost
EI00390192/1	12/07/2008	8:20	MT404		A8144	LLCS	CNAC6	TONNE	0.00	23.44				
EI00390208/1	12/07/2008	10:57	MT404		A8144	LLCS	CNAC6	TONNE	0.00	22.54				
EI00390227/1	12/07/2008	13:21	MT404		A8144	LLCS	CNAC6	TONNE	0.00	25.84				
													71.824	

Cnr Mamre & Erskine Park Rds Erskine Park NSW 2759 - PO Box 864 St Marys NSW 1795
 Phone: (02) 9834 3411 Fax: (02) 9834 3306
 Enviroguard Pty Ltd ACN 560 919 164



TAX INVOICE

CHRISTIE CIVIL CONTRACTING PT
 LOCKED BAG 1
 ANNANDALE NSW 2038

12 JUL 2003

Invoice Date: 23 Jul 2008
 Customer Number: 200117
 Invoice Number: 327189

Docket	Date	Time	Vehicle	Order No	Approval #	Product	Chrg Rate	Method	Qty	Net	Rate	Extras	GST	Cost
E100390754/1	17/07/2008	8:19	MT2474-T/D		A8178	ASBCONT	ABAC6	TONNE	0.00	26.12				
E100390756/1	17/07/2008	8:23	JJC601		A8178	ASBCONT	ABAC6	TONNE	0.00	24.52				
E100390761/1	17/07/2008	8:29	MT404		A8178	ASBCONT	ABAC6	TONNE	0.00	25.56				
E100390813/1	17/07/2008	10:51	MT2474-T/D		A8178	ASBCONT	ABAC6	TONNE	0.00	27.56				
E100390817/1	17/07/2008	10:56	MT404-T/D		A8178	ASBCONT	ABAC6	TONNE	0.00	24.98				
E100390824/1	17/07/2008	11:05	JJC601		A8178	ASBCONT	ABAC6	TONNE	0.00	26.16				
E100390879/1	17/07/2008	13:18	MT2474-T/D		A8178	ASBCONT	ABAC6	TONNE	0.00	27.12				
E100390890/1	17/07/2008	14:01	JJC601		A8178	ASBCONT	ABAC6	TONNE	0.00	27.04				
E100390891/1	17/07/2008	14:02	MT404-T/D		A8178	ASBCONT	ABAC6	TONNE	0.00	27.90				
E100390924/1	17/07/2008	15:50	MT2474-T/D		A8178	ASBCONT	ABAC6	TONNE	0.00	30.32				
E100390953/1	18/07/2008	8:27	MT2474-T/D		A8178	ASBCONT	ABAC6	TONNE	0.00	24.72				
E100391004/1	18/07/2008	11:05	MT2474-T/D		A8178	ASBCONT	ABAC6	TONNE	0.00	25.46				
E100391046/1	18/07/2008	13:37	MT2474-T/D		A8178	ASBCONT	ABAC6	TONNE	0.00	28.40				
E100391075/1	18/07/2008	16:13	MT2474-T/D		A8178	ASBCONT	ABAC6	TONNE	0.00	27.64				
E100391100/1	19/07/2008	8:12	MT404		A8178	ASBCONT	ABAC6	TONNE	0.00	26.80				
E100391102/1	19/07/2008	8:26	MT2474-T/D		A8178	ASBCONT	ABAC6	TONNE	0.00	26.60				
E100391105/1	19/07/2008	8:37	JJC601		A8178	ASBCONT	ABAC6	TONNE	0.00	25.74				
E100391106/1	19/07/2008	8:39	AT73LZ		A8178	ASBCONT	ABAC6	TONNE	0.00	27.46				
E100391123/1	19/07/2008	10:50	MT2474-T/D		A8178	ASBCONT	ABAC6	TONNE	0.00	27.18				
E100391124/1	19/07/2008	10:53	MT404-T/D		A8178	ASBCONT	ABAC6	TONNE	0.00	26.72				
E100391131/1	19/07/2008	11:18	JJC601		A8178	ASBCONT	ABAC6	TONNE	0.00	26.44				
E100391132/1	19/07/2008	11:21	AT73LZ		A8178	ASBCONT	ABAC6	TONNE	0.00	24.80				

267-287

106-222

293-960

Cnr Mamre & Erskine Park Rd Erskine Park NSW 2759 - PO Box 80-4 St Marys NSW 1790
 Phone: (02) 9834 3411 Fax: (02) 9834 3106
 Enviroguard Pty Ltd



Enviroguard
COMMUNITY WASTE MANAGEMENT

TAX INVOICE

CHRISTIE CIVIL CONTRACTING P/L
LOCKED BAG 1
ANNANDALE NSW 2038

Invoice Date: 23 Jul 2008
Customer Number: 200117
Invoice Number: 327189

Docket	Date	Time	Vehicle	Order No	Approval #	Product	Chrg Rate	Method	Qty	Net	Rate	Extras	GST	Cost
EI00391145/1	19/07/2008	13:19	MT2474-T/D		A8178	ASBCONT	ABAC6	TONNE	0.00	30.92				
EI00391146/1	19/07/2008	13:52	AT731Z		A8178	ASBCONT	ABAC6	TONNE	0.00	26.52				
EI00391147/1	19/07/2008	13:53	JJC601		A8178	ASBCONT	ABAC6	TONNE	0.00	24.58				

Cnr Mamre & Erskine Park Rds Erskine Park NSW 2759 - PO Box 804 S. Marys NSW 1790
Phone: (02) 9834 3411 Fax: (02) 9834 3306
Enviroguard Pty Ltd A/CN 260 919 164
Enviroguard Pty Ltd A/BN 25 060 919 164



CHRISTIE CIVIL CONTRACTING P/L
 LOCKED BAG 1
 ANNANDALE NSW 2038

Invoice Date: 06 Aug 2008
 Customer Number: 200117
 Invoice Number: 327295

RECEIVED
11 AUG 2008

BY:-----

Docket	Date	Time	Vehicle	Order No	Approval #	Product	Chrg Rate	Method	Qty	Net	Rate	Extras	GST	Cost
E:00392938/1	4/08/2008	8:48	JJC601		A8178	ASBCONT	ABAC6	TONNE	0.00	27.62				
E:00392947/2	4/08/2008	9:11	TH747		A8178	ASBCONT	ABAC6	TONNE	0.00	25.14				
E:00392997/1	4/08/2008	11:26	JJC601		A8178	ASBCONT	ABAC6	TONNE	0.00	18.98				
E:00393019/1	4/08/2008	12:22	TH747		A8178	ASBCONT	ABAC6	TONNE	0.00	19.96				
E:00393054/1	4/08/2008	14:13	JJC601		A8178	ASBCONT	ABAC6	TONNE	0.00	28.34				
E:00393067/1	4/08/2008	15:45	TH747		A8178	ASBCONT	ABAC6	TONNE	0.00	13.76				
										Total Rates		133.86		

Total GST

Invoice Total (including GST)

Car Marnre & Erskine Park Rds Erskine Park NSW 2759 - PO Box 804 St Marys NSW 1790
 Phone: (02) 9834 3411 Fax: (02) 9834 3306
 Enviroguard Pty Ltd ACN 060 919 164
 Enviroguard Pty Ltd ABN 23 060 919 164

RPT5003.008

ENVIROGUARD PTY LTD
 0 QUARRY RD ERSKINE BUSINESS PARK ERSKINE PARK
 BN: 23 060 919 164

Docket List

Print Date & Time: 29/09/2008 - 8:38:32AM

Approval equals A8178 AND Date equals 26/09/2008

date	Time	Docket	Vehicle	Product	Product Rate	App No	Order No	Item Qty	Trans Gross	Trans Tax	Item Net
09/2008	8:31:06AM	E100400129	MT2474-T/D	ASBCONT	ABAC6	A8178		100.00	44.56	16.32	28.24
09/2008	8:44:48AM	E100400135/2	JS277	ASBCONT	ABAC6	A8178		100.00	42.84	17.40	25.44
09/2008	11:11:12AM	E100400189	MT2474-T/D	ASBCONT	ABAC6	A8178		100.00	44.28	16.32	27.96
09/2008	12:11:06PM	E100400211	JS277	ASBCONT	ABAC6	A8178		100.00	41.24	17.40	23.84
09/2008	1:47:56PM	E100400248	MT2474-T/D	ASBCONT	ABAC6	A8178		100.00	44.84	16.32	28.52
09/2008	2:35:36PM	E100400259	JS277	ASBCONT	ABAC6	A8178		100.00	44.62	17.40	27.22
161.22											

(Transactions listed (6 items))

Report End

5026.002



N:\WS\Waste\Jan2008\reports\Env\DockList5026.rpt



COMMUNITY WASTE MANAGEMENT

TAX INVOICE

14 OCT 2008

CHRISTIE CIVIL CONTRACTING P/L
 LOCKED BAG 1
 ANNANDALE NSW 2038

Invoice Date: 08 Oct 2008
 Customer Number: 200117
 Invoice Number: 327804

BY:-----

Docket	Date	Time	Vehicle	Order No	Approval #	Product	Chrg Rate	Method	Qty	Net	Rate	Extras	GST	Cost
E100400626/1	01/10/2008	8:35	MT2474-T/D		A8178	ASBCONT	ABAC6	TONNE	0.00	30.36				
E100400676/1	01/10/2008	11:37	MT2474-T/D		A8178	ASBCONT	ABAC6	TONNE	0.00	27.56				
E100400722/1	01/10/2008	14:25	MT2474-T/D		A8178	ASBCONT	ABAC6	TONNE	0.00	30.70				
E100400783/1	02/10/2008	8:39	MT2474-T/D		A8178	ASBCONT	ABAC6	TONNE	0.00	25.50				
E100400828/1	02/10/2008	11:26	MT2474-T/D		A8178	ASBCONT	ABAC6	TONNE	0.00	28.78				
E100400870/1	02/10/2008	14:19	MT2474-T/D		A8178	ASBCONT	ABAC6	TONNE	0.00	26.68				

Cnr Mamre & Erskine Park Rds Erskine Park NSW 2759 . PO Box 804 S. Marys NSW 1790
 Phone: (02) 9834 3411 Fax: (02) 9834 3306
 Enviroguard Pty Ltd ACN 060 919 164
 Enviroguard Pty Ltd ABN 23 060 919 164

PT5003.009

Page 1 of 1



CHRISTIE CIVIL CONTRACTING P/L
 LOCKED BAG 1
 ANNANDALE NSW 2038

Customer Invoice

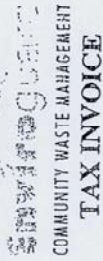
Docket	Date	Time	Vehicle	Order No	Approval #	Product	Chrg Rate	Method	Qty	Net	Rate	Extras
E100406503/1	08/12/2008	14:53	MT2474-T		A8178	ASBCONT	ABAC6	TONNE	0.00	11.92		
E100406973/1	09/12/2008	10:21	MT2474-T/D		A8178	ASBCONT	ABAC6	TONNE	0.00	26.44		
E100407038/1	09/12/2008	13:34	MT2474-T/D		A8178	ASBCONT	ABAC6	TONNE	0.00	30.82		

Total GST

Invoice Total (including GST)

Cnr Marmre & Erskine Park Rds Erskine Park NSW 2759 - PO Box 804 St Marys NSW 1790
 Phone: (02) 9834 3411 Fax: (02) 9834 3306
 Enviroguard Pty Ltd ACN 060 919 164
 Enviroguard Pty Ltd ABN 23 060 919 164

RPT5003.009



CHRISTIE CIVIL CONTRACTING PTY
 LOCKED BAG 1
 ANNANDALE NSW 2038

RECEIVED
 03 DEC 2008

Invoice Date: 30 Nov 2008
 Customer Number: 200117
 Invoice Number: 328158

Docket	Date	Time	Vehicle	Order No	Approval #	Product	Chrg Rate	Method	Qty	Net	Rate	Extras	GST	Cost
E100406014/1	27/11/2008	15:20	JJC501		A8178	ASEBCONT	ABAC6	TONNE	0.00	20.36				
E100406068/1	28/11/2008	12:42	JJC601-T		A8178	ASEBCONT	ABAC6	TONNE	0.00	9.84				

Total GST

Invoice Total (including GST)

TS003.009

Cnr Mamre & Erskine Park Rds Erskine Park NSW 2759 - PO Box 804 St Marys NSW 1790
 Phone: (02) 9834 3411 Fax: (02) 9834 3306
 Enviroguard Pty Ltd ACN 060 919 164
 Enviroguard Pty Ltd ABN 23 060 919 164

LETTER OF COMPLIANCE



24 June 2009

Document # 461
File Code: ARV-5 / 3707

Steve Watson & Partners

Level 5, 432 Kent St
SYDNEY NSW 2000

Att: Andrew Rys

Fax: 9283 8500

RE: DA CONDITION D28
WARRIEWOOD STAGE 1 NEW A,B & C, MACPHERSON STREET WARRIEWOOD NSW 2102

This is to confirm that Southern Cross Constructions (NSW) Pty Ltd for the duration of construction period have complied with DA Condition D28, in which any fill material imported to the site has been subject to testing and monitoring throughout the course of the works.

Copies of 'Fill Validation Reports' have been attached for your reference.

Please contact me should you have any questions.

Regards,

Southern Cross Constructions (NSW) Pty Ltd



Terry Edwards
Project Manager



GeoEnviro Consultancy Pty Ltd
Unit 5, 19-11 Fourth Avenue, Blacktown, NSW 2148, Australia
PO Box 1513, Macquarie Centre, North Ryde, NSW 2113

ABN 62 084 294 762
Tel : (02) 9679 8733
Fax : (02) 9679 8744

20 August 2008

JE08612A-rf

Number 1 Demolition and Excavation
3 Burroway Road,
HOMEBUSH BAY NSW 2127

Attention: Mr Nasser Matta

Dear Sir

Re **Fill Validation Report**
25 Ray Rd, Epping

MATERIAL IMPORTED

20

21

24 OCT 08

1. Introduction

As requested, the site was visited by our environmental technician on the 20th August 2008. The excavation works will result in surplus fill material required off-site disposal.

The purpose of the site visit was to assess the subsurface ground condition and to evaluate the status of the surplus fill material.

2. Site Description

The property comprised an irregular shaped area with dimensions and with access off Ray road to the Lenna Place to the north east.

The property is situated on gently undulating terrain. Based on the 1:100,000 geological map of Sydney, the property is underlain by Hawkesbury Sandstone. The sandstone typically comprises medium to coarse grained quartz sandstone with very minor shale and laminate lenses.

There were no obvious signs of gross ground contamination in the form of standing, discolouration and odour on site.

3. Subsurface condition

To aid assessment of subsurface conditions, two test pit (TP 1 & TP 2) was excavated to a depth of about 1.8 m below existing ground surface using an excavator. The indicative test location is shown on the attached Drawing No 1.

The test pits revealed a subsurface profile consisting of natural ground. The following is a summary of subsurface profile encountered on the test pit.



Test No	Depth (m)	Description
TP 1	0.0 – 0.2	Top soil: Clayey Silt: low liquid limit, dry to moist
	0.2 – 1.2	Natural Silty Clay: high plasticity, brown with some ironstone gravel. Moisture content approximately less than or equal to the plastic limit
	1.2 – 1.85	Sandstone: medium to coarse grained quartz sandstone with very minor shale and laminate lenses
TP 2	0.0 – 0.15	Top soil: Clayey Silt: low liquid limit, dark grey brown with some roots, dry to moist
	0.15 – 1.2	Natural Silty Clay: high plasticity, brown with some ironstone gravel. Moisture content approximately less than or equal to the plastic limit
	1.2 – 1.8	Shale/Sandstone: extremely to distinctly weathered, dark grey with some clay bands, medium to coarse grained quartz sandstone and laminate lenses

4. Comments and Assessment

Based on information obtained from the test pit, the site is underlain by topsoil over natural medium to high plasticity Silty Clay over dark grey Shale/Sandstone. The natural Silty Clay and Shale/Sandstone appeared clean with no obvious signs of contamination.

Based on our visual assessment, the natural Silty Clay and Shale/Sandstone fit the Department of Environment and Conservation (DEC) Guidelines: Assessment, Classification and Management of Liquid and Non-Liquid Wastes (1999) description of "Virgin excavated natural material" (VENM) and is therefore considered suitable for reuse on other sites with the most sensitive landuse such as residential.

The above classification is applicable subject to the following:

- The material consists of brown/grey medium to high plasticity Silty Clay and dark grey Shale/Siltstone.
- The material is not mixed with any other filling, topsoil, building rubble/demolition waste or other material with obvious signs of contamination
- The material appeared clean with no obvious signs of contamination in the form of staining, odour and discolouration.

If you have any questions regarding the above, please contact the undersigned.

Yours faithfully
GeoEnviro Consultancy Pty. Ltd.

Solerm Liew CPEng
Director

Summary Profile

Spall Earthmoving Pty Limited
3 Careden Ave
BEACON HILL NSW 2100
Attn: Mark Spallivero

PROJECT: Name: **VENM Determination**
Location: **71 Undercliff Road, Freshwater**
SESL Quote N°: Client Job N°: Order N°:
Date Received: **09/07/2008**



AS/NZS ISO
9001:2000
DEC 21650



**Sydney
Environmental and Soil
Laboratory**

Specialist Soil Chemistry, Agronomy
and Environmental Services

Sydney Environmental
& Soil Laboratory Pty Ltd
ABN 70 106 810 708

16 Chilvers Road
Thornleigh NSW 2120
Australia

Address, mail to:
PO Box 357
Pennant Hills NSW 1715

Tel: 02 9980 6554
Fax: 02 9484 2427
Em: info@sesl.com.au
Web: www.sesl.com.au

SAMPLE: Batch N°: **7084** Sample N°: **1**
Name: **Report Only**
Test Type: **Report**

Tests are performed under a quality system
certified as complying with ISO 9001:2000.
Results and conclusions assume that sampling
is representative. This document shall not be
reproduced except in full.

Total No Pages: 1 of 1

Virgin Excavated Natural Material Certificate

Sydney Environmental & Soil Laboratory Pty. Ltd. (SESL) carried out a visual inspection of the above site on the 08/07/08 for the purpose of determining the likely quality of natural subsurface material to be excavated. The site is located on the southern side of Undercliff Road, Freshwater. The previous residential dwelling had been demolished at the time of inspection, and the site was being prepared for bulk excavation of natural clay and sandstone materials.

Virgin Excavated Natural Material (VENM) is natural material (e.g. clay, gravel, sand and rock) not mixed with with any other waste that has been excavated from areas, and specifically not natural soil material that is contaminated, as a result of industrial, commercial, mining or agricultural activities, with manufactured chemicals and does not contain sulphidic ores or soils.

The sub soil strata observed at this sample location is typical for GyMEA soil landscape as part of the Hawkesbury Sandstone formation. Occurrences are common in the Hornsby Plateau and foreshore regions according to *Sydney Soil Landscape Series Sheet 9130* (Soil conservation Service of NSW, 1989). The minor overlying top soil and vegetation materials are the most likely layer containing contaminates from previous land use.

On the basis of this visual inspection, and in accordance with the NSW DECC's *Waste Classification Guidelines Part 1: Classifying Waste* (DECC, 2008), the layers of white/grey clay/shale, grey plastic clay, pale grey/white sandy clay to bedrock orange/red/yellow sandstone material on site is classifiable as VENM (not mixed with rail ballast, topsoil, under slab fill layer material, concrete, bricks, terracotta tiles and pipes). When this material is stockpiled, it must be controlled and not mixed with soil material from other sources for this certificate to remain valid.

The VENM validation report therefore applies to the naturally occurring clay and sandstone materials at this sample location subject to the following conditions:

- > The excavated materials of concern comprise of white/grey clay/shale, grey plastic clay, pale grey/white sandy clay through to bed rock Hawkesbury sandstone material; and
- > The natural materials are not mixed with or contain miscellaneous filling, topsoil, rail ballast, building/demolition waste or material which bears obvious signs of contamination such as staining, discolouration or odours.

Note: The findings of this report are the result of discrete/specific methodologies used in accordance with normal practices and standards. To the best of our knowledge, they represent a reasonable interpretation of the general condition of this site and do not represent the actual state of the site at all points. If the sandstone material as described is to be used as clean fill on a residential or commercial/industrial site, laboratory analysis should be included to confirm the suitability of the material for use at the proposed disposal site. Should materials or conditions be encountered other than those which have been described these will require additional assessment.

Consultant:

Ryan Jacka

Date of Report: **09/07/2008**

Authorised Signatory:

Murray Fraser

SewerFix

WATER

Memorandum

DATE 30 May 2008
 TO Delivery Team (SewerFix Wet Weather Alliance); CMS Group
 FROM Jo Heltborg (Environment Leader, SWWA)
 SUBJECT Spoil Waste Classification: NB 2.4 Collaroy

This memo provides details regarding the waste classification of spoil to be excavated from Anzac Avenue and Anzac Avenue Reserve, Collaroy.

The construction of new Sydney Water sewerage system assets will involve approximately 66m of microtunnelling and 8m of trenching within the road reserve of Anzac Avenue and the grassed area of Anzac Avenue Reserve.

Open trenching will start from the existing maintenance hole in Anzac Avenue Reserve and extend approximately 40 metres to the microtunnelling jacking shaft (also within Anzac Avenue Reserve). Approximately 15m³ of spoil is anticipated to require offsite disposal from this section.

Microtunnelling will start within Anzac Avenue Reserve and extend to the end of the works, south of the intersection with Hendy Avenue (approximately 66m in length).

- o Approximately 10m³ of spoil is anticipated to require off site disposal from excavation of the microtunnelling launch pit (Anzac Avenue Reserve) given that the majority of spoil will be reused to backfill the launch pit at the completion of works. Spoil will be temporarily stockpiled at the SWWA Beacon Hill site depot.
- o Approximately 60m³ of spoil is anticipated to require off site disposal from the excavation of the micro-tunnelling recovery shaft in Anzac Avenue.
- o Approximately 80m³ of slurry is anticipated to require off site disposal from micro-tunnelling works.

One borehole was drilled at a location along the proposed pipeline route:

BH7 was located on the 'entry driveway' to Anzac Avenue Reserve, adjacent to the intersection of Hendy Av and Anzac Av. A copy of the borehole log sheet is attached for information. In summary, the geological profile encountered consisted of the following:

- o Topsoil (0.0-0.2 mbgl)
- o Alluvial soil (0.2-0.9 mbgl)
- o Residual soil (0.9-4.10 mbgl)
- o Sandstone bedrock (4.10 mbgl)

The following waste management actions are to be implemented during construction works:

Topsoil and turf/grass: all topsoil and turf/grass is to be stockpiled separately and not mixed with any other spoil. This material is to be reused when restoring the site.

Asphaltic road paving and associated road base: is pre-classified as INERT WASTE by the EPA (1999)

Waste Classification	Inert	Inert	Inert	Inert	Inert	Inert
----------------------	-------	-------	-------	-------	-------	-------

Based on field observations (refer to attached log sheets) and the analytical results (summarised above), the fill, beneath the turf/topsoil in Anzac Reserve is considered **INERT WASTE**.

Based on field observations (refer to attached log sheets) and the analytical results (summarised above), the fill, beneath the roadbase in Anzac Avenue and overlaying natural ground is considered **INERT WASTE**.

A copy of the laboratory report (EnviroLab Services, Certificate of Analysis 18503) is attached for information purposes.

Sandstone bedrock: sandstone bedrock was encountered at approximately 3.5 mBGL during excavation of the microtunnelling recovery pit. Based on the observations made, the layer of material directly below the fill material is considered **VIRGIN EXCAVATED NATURAL MATERIAL (VENM)**.

Micro-tunnelling slurry: This material will consist of sandstone (VENM) and potable water. This material is to be removed from site by vacuum truck and disposed of to a material recycling facility.

RE-USE OF SPOIL BY McCOURT DANDO CIVIL

The laboratory results were reviewed for potential reuse of excavated spoil. There were no exceedences of the health based investigation levels as presented in DEC (2006)

Contaminated Sites Guidelines for the NSW Site Auditor Scheme (2nd edition) for the following landuses:

- Residential with gardens and accessible soil (home grown produce contributing <10% fruit and vegetable intake; no poultry), including children's daycare centres, preschools, primary schools, townhouses, villas (NEHF A)
- Residential with minimal access to soil including high-rise apartments and flats (NEHF D)
- Parks, recreational open space, playing fields including secondary schools (NEHF E)
- Commercial or Industrial (NEHF F)

Based on the analytical results the following beneficial re-use options are approved:

- Beneficial reuse of NB2.4 Collaroy spoil by McCourt Dando at their Hornsby Rail Project**
- Beneficial reuse of NB2.4 Collaroy spoil at Duffys Forest residential redevelopment (4 Namba Road, Duffys Forest, DA2002/815C)**

If you have any questions relating to this waste classification memorandum please contact the SWWA Environment Leader - Jo Heltborg on (02) 8437 2510 or 0414 554 277 or jo.heltborg@sydneywater.com.au.



ENVIRONMENTAL INVESTIGATION SERVICES

FAX MESSAGE

ATTENTION: Clinton McKinnon
 OF: Atcall Plant Hire and Haulage
 FAX No: (02) 4647 0560
 FROM: Andrew Roberts / A Kingswell

EIS JOB No: E22001K let
 DATE: 12 March 2008
 PAGE: 1 of 20

RE: VENM CLASSIFICATION
PROPOSED CARPARK DEVELOPMENT
TARONGA ZOO, BRADLEYS HEAD ROAD, MOSMAN

At your request we have sampled the natural sandstone at Taronga Zoo, Bradley's Head Road, Mosman to provide an indication of the suitability of the soil for offsite disposal at the former Boral brickpit located at Moorebank. Three surface samples were taken from exposed natural sandstone at the site.

The sandstone sample references were SS1, SS2 and SS3 and were light yellow brown, medium to coarse grained sandstone. A sketch plan of the sample locations is attached (Figure 1).

At the time of inspection the site was completely cleared of all buildings and related infrastructure. The 1943 aerial photograph appeared to show the site occupied by a carpark and vacant land.

The presence of several small stockpiles of fill soil in the centre of the site and a cover of fill material and asphalt in the southern and west section of the site was noted during the field work. Analysis of this fill material was outside the scope of work for this project. This material should be removed and disposed off separately in an appropriate manner prior to commencement of excavation works for the off-site disposal of the virgin soils.

The Prospect/Parramatta Acid Sulfate Soil Risk Map (Department of Land and Water Conservation December 1997, Edition Two, 1:25,000) indicates that the site is located within an area of no known occurrence of acid sulfate soil.

Samples were analysed for heavy metals, polycyclic aromatic hydrocarbons, organochlorine pesticides, PCBs, total petroleum hydrocarbons and BTEX compounds. The results are contained in Envirolab Report 17616 (attached).

The laboratory results have been assessed with comparison to the importation criteria for VENM material specified in the Environmental Management Plan for the Rehabilitation of Quarry Pits at Boral Quarry, Nuwarra Road, Moorebank. The laboratory results confirm the field observations that the sandstone sampled were Virgin Excavated Natural Material (VENM). The VENM must not be mixed with any fill material (including

Principal: B H Fletcher 39c (h) 143

115 WICKS ROAD, MACQUARIE PARK NSW 2113 • TEL: 02 9888 5000 • FAX: 02 9888 3004

POSTAL ADDRESS: PO BOX 978, NORTH RYDE BC NSW 1670

EIS IS A DIVISION OF JEFFERY & KATAUSKAS PTY LTD • ABN 17 501 350 801

- 2 -



building rubble), as this will invalidate the VENM classification. The fill must be separated from the VENM prior to disposal.

This letter and the limited sampling and analyses contained therein should not be construed as a site contamination report and it does not meet the NSW EPA requirements in relation to a full site assessment.

In the event that odorous conditions are encountered during excavation of the material EIS should be called to assist you with appropriate site assessment.

Section 143 of the *Protection of the Environment Operations Act 1997* states that if waste is transported to a place that cannot lawfully be used as a waste facility for that waste, then the transporter and owner of the waste are each guilty of an offence. The transporter and owner of the waste have a duty to ensure that the waste is disposed of in an appropriate manner. EIS accepts no liability whatsoever for the unlawful disposal of any waste from any site.

The samples taken for the investigation have enabled an assessment to be made of the existence of significant, large quantities of uncontaminated natural soil and shale bedrock. EIS adopts no responsibility whatsoever for any problems such as underground storage tanks, buried items or contaminated material that may be encountered between sampling locations at the site. The proposed construction activities at the site should be planned on this basis, and any unexpected problem areas that are encountered between sampling locations should be immediately inspected by experienced environmental personnel. This will ensure that such problems are dealt with in an appropriate manner, with minimal disruption to the project timetable and budget.

The findings presented in this letter are based on site conditions that existed at the time of the assessment and subsequent remediation. The conclusions are based on the investigation of conditions at specific locations, chosen to be as representative as possible under the given circumstances.

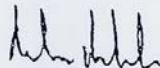
This letter has been prepared for the particular project described and no responsibility is accepted for the use of any part of this letter in any other context or for any other purpose. Copyright in this letter is the property of EIS. EIS has used a degree of care, skill and diligence normally exercised by consulting engineers in similar circumstances and locality. No other warranty expressed or implied is made or intended. Subject to payment of all fees due for the investigation, the client alone shall have a licence to use this letter.


- 3 -



If you have any questions concerning the contents of this fax please do not hesitate to contact us.

Yours faithfully
ENVIRONMENTAL INVESTIGATION SERVICES


Andrew Roberts
Environmental Scientist


AJ Kingswell
Associate

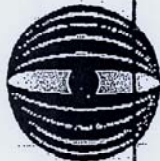
- Attachments:
1. Figure 1: Sketch plan of sampling locations
 2. Detailed laboratory data 17616
 3. Chain of Custody form.

9.MAY.2008 16:04

0294284555

NO. 725

P. 1/3



Aargus
AUSTRALIA

ACN 063 579 313

Environmental Services • Remediation • Geotechnical Engineering • Drilling

9th May 2008
Our Ref: E2232

Mr Phil Circosta
Absolute Contracting
PO Box 749
NORTH RYDE NSW 1670
By Facsimile: 9428 4555 pp 1 of 3

Dear Phil,

Re: Soil Classification
2-4 Sturt Place, St Ives NSW

Aargus Pty Ltd was appointed by Mr Phil Circosta of Absolute Contracting to conduct a soil classification of natural soil to be excavated from 2-4 Sturt Place, St Ives, NSW ("the site").

To assess the waste classification of materials to be disposed off-site, the NSW EPA refers to the *NSW EPA (1999) Environmental Guidelines: Assessment, Classification and Management of Liquid and Non-Liquid Wastes*.

Aargus staff visited the site on 9th May 2008, at which time the previous two residential buildings had been demolished. Approximately 10,000 m³ of natural soil will be transported off-site. This soil classification refers to the natural underlying soil from the site only. The natural underlying soil in question is classified as *VENM* (Virgin Excavated Natural Material) with reference to the above NSW EPA guidelines. As a result of this classification the material can be disposed of as per Schedule 1 Part 3 of the *Protection of the Environment Operations Act 1997*.

Aargus Pty Ltd
Telephone: 1300 137 038
Facsimile: 1300 136 038
Website: www.aargus.net

NSW: PO Box 398 Drummoyne NSW 2047
QLD: PO Box 1340 Forde Valley QLD 4006
VIC: Unit 3/21-23 Beveridge Drive Tullamarine VIC 3043
SA: PO Box 1143 Burnside SA 5066

9.MAY.2008 16:05

0294284555

NO.725 P.2/3

May 2008
Environmental Soil Classification, E2232
Site: 2-4 Sturt Place, St Ives NSW

page 2 of 3

As part of this soil classification, Aargus undertook a walkover of the site and took into consideration the following points where applicable:

- ④ Description and quality of the building structure & materials;
- ④ Current operations;
- ④ Waste Management Practices & trade waste;
- ④ Above ground storage tanks;
- ④ Underground Storage Tanks;
- ④ Odours;
- ④ Site vegetation & sealed surfaces;
- ④ Historical operations (if known);
- ④ Former raw materials & transportation (if known);
- ④ Surface water;
- ④ Groundwater (if known); and
- ④ Site Surrounding and their operations.

From inspection of the above details, information was gathered with regards to the property.

The Geological Survey of NSW, Department of Mineral Resources (1983) Sydney 1:100,000 Geological Sheet 9130 shows the site is underlain by Ashfield Shale of the Wianamatta Group characterised by black to dark-grey shale and laminite.

The soil profile at the site was TOPSOIL, SANDY-LOAM, dark-brown, dry to 0.3m below ground level (BGL); overlying NATURAL, MEDIUM CLAY, orange-brown to approximately 2m (BGL) followed by red-brown clay down to a depth of 3.5m (BGL). It is anticipated that this profile will continue down to natural shale at a depth of 5m (BGL). It is estimated approx. 10,000 m³ natural soil will be transported off-site.

The site was previously occupied by two residential dwellings and is to be redeveloped for medium-density residential land-use (approx. 33 units) with a basement car park.

No USTs or ASTs were visible. No staining or odours were visible at the time of the inspection. There was no evidence of localised oil or chemical spills on any sealed or unsealed areas and this issue does not warrant any concern. Trees and shrubs surrounding the site appeared generally healthy and free from stress. No visible fibro pieces were observed and this issue does not warrant any particular concern.

The site was bordered to the north by Sturt Place and thereafter low-density residential dwellings, to the east by Mona Vale Road and thereafter low-density residential, to the south by low-density residential and to the west by high-density residential.



9.MAY.2008 16:05

0294284555

NO.725 P.3/3

May 2008
Environmental Soil Classification, E2232
Site: 2-4 Start Place, St Ives NSW

page 3 of 3

With reference to previous land use, the nature of land use in the immediate area and a site inspection of surface and underlying soils, the inspected natural soil from the subject property is classified by NSW EPA criteria as *VENM* or natural clean residual soils.

If any further areas of environmental concern are uncovered during the excavation process, this office should be notified for further assessment.

It should also be noted that the soil at the site could be reused at sites with similar land use providing soil at the site meets guidelines described in NSW DEC (2006) *Guidelines for the NSW Site Auditor Scheme*. To confirm this further assessment in accordance with applicable regulatory guidelines, including sampling and analysis, would be required.

We would be pleased to provide further information on any aspects of this report.

For and behalf of
Aargus Pty Ltd

Con Kariotoglou
Project Manager

Reviewed By

Mark Kelly
Senior Environmental Geologist



From: EARTH EXCHANGE

To: 95523818
+ 61 2 97486443

29/10/2008 13:00

#880 P.002/016



Risk Management Services

NOEL ARNOLD & ASSOCIATES PTY LTD
ABN 78 006 318 019
Level 2, 11 Khartoum Road,
North Ryde, NSW 2113 Australia
Phone: (02) 9889 1800
Fax: (02) 9889 1811
Email: sydney@noel-arnold.com.au
www.noel-arnold.com.au

Date: Friday 18 July 2008
Attention: David Rix
Company: ADCO Constructions Pty Ltd
85 Alexander Street
Crows Nest, NSW 2065
Report Name: Insitu Waste Classification
NAA Reference: SA0194:67174
Site: 7-11 Manns Avenue, Neutral Bay NSW
Material Identification: Lower Layer - Natural Sands, Clays and Sandstone
Location on Site: Southwestern Car Park Area
Area / Volume: Not Determined
Number of Samples: 3 **Date Sampled:** 16 July 2008
Analytes:

- TPH;
- BTEX; &
- PAH;
- Heavy Metals.

Assessment Criteria: The visual and analytical results are compared to published guidelines from the NSW Department of Environment & Climate Change (DECC) document *Waste Classification Guidelines, 2008*.
Visual Asbestos: None observed in field work
Odours and Staining: None observed
Chemical Classification: Virgin Excavated Natural Material
Disposal Classification: Virgin Excavated Natural Material

Please refer to Appendix A for Summary Soil Tables with Criteria and Appendix B for NATA Certified Analytical Results.

Yours sincerely

NOEL ARNOLD & ASSOCIATES PTY LTD

NICK PASSLOW

Environmental Consultant

■ Melbourne ■ Sydney ■ Canberra ■ Brisbane

Practical Solutions



ABN 36 926 003 197



D:27, E:33, E:34.

4th August 2009

DL1995

Mr Terry Edwards
Southern Cross Constructions Pty. Ltd.
135-153 New South Head Road
Edgecliff
NSW 2027

Dear Mr Edwards

**Re: Asbestos and Acid Sulphate Soils (ASS) Management
completion advice**

David Lane Associates (DLA) was commissioned by Southern Cross Constructions to provide advice on and oversee the management of asbestos contaminated soils, Acid Sulphate Soils (ASS) and any required dewatering for the project identified as Warriewood Brook – Stage 1 at 6 – 14 Macpherson Street, Warriewood NSW.

Asbestos remediation was undertaken in accordance with the Remediation Action Plan (RAP) produced by P. Clifton & Associates dated April 2007. Remediation works commenced in March 2008 by locating and removing the hot spot and surface contamination identified in the RAP. Clearance inspections were undertaken and an unexpected finds protocol put in place for the remainder of works on the Site.

Eleven instances of unexpected finds have been recorded since March 2008 resulting all known Asbestos Contaminated Soil being removed from the Site. Areas excavated to remove asbestos were inspected subsequent to the removal process and sampled to allow clearance certification to be issued in accordance with Part 11; "Clearance to Reoccupy an Asbestos Work Area" of the NOHSC: 2002 *Code of Practice for the Safe Removal of Asbestos – 2nd Edition* 2005.. All waste material was classified and disposed of in accordance with the DECC 2008, *Waste Classification Guidelines*.

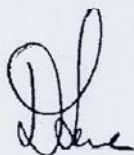


Excavations on the Warriewood Site were primarily limited to fill materials with limited potential for Acid Sulphate production. At no stage has field testing, conducted in accordance with the ASS Management Plan (GHD, 2005), indicated the presence of Potential or Actual ASS. Regular monitoring of discharge water has indicated a neutral or slightly basic trend to the groundwater being discharged, providing further evidence that ASS was not encountered during excavation.

It is the opinion of DLA that further monitoring of the groundwater is not required as no impact was discernable on the local hydrogeology. DLA is satisfied that works on the Site have been conducted in accordance with both the ASS Management Plan (GHD, 2005) and the Asbestos RAP (P. Clifton & Associates, 2007).

Yours Faithfully

DAVID LANE ASSOCIATES



David Lane

Director

DAVID LANE ASSOCIATES

COMPLIANCE LETTER



23 June 2009

Document # 459
File Code: ARV-5 / 3707

Steve Watson & Partners
Level 5, 432 Kent St
SYDNEY NSW 2000

Att: Andrew Rys
Fax: 9283 8500

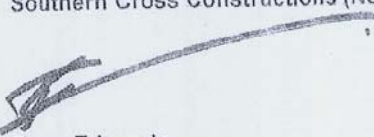
RE: DA CONDITION D22
WARRIEWOOD STAGE 1 NEW A,B & C, MACPHERSON STREET WARRIEWOOD NSW 2102

This is to confirm that Southern Cross Constructions (NSW) Pty Ltd for the duration of construction period have provided and maintained a traffic Management Plan for vehicles and pedestrians on site. These have been documented throughout the project and have been attached for your reference.

Please contact me should you have any questions.

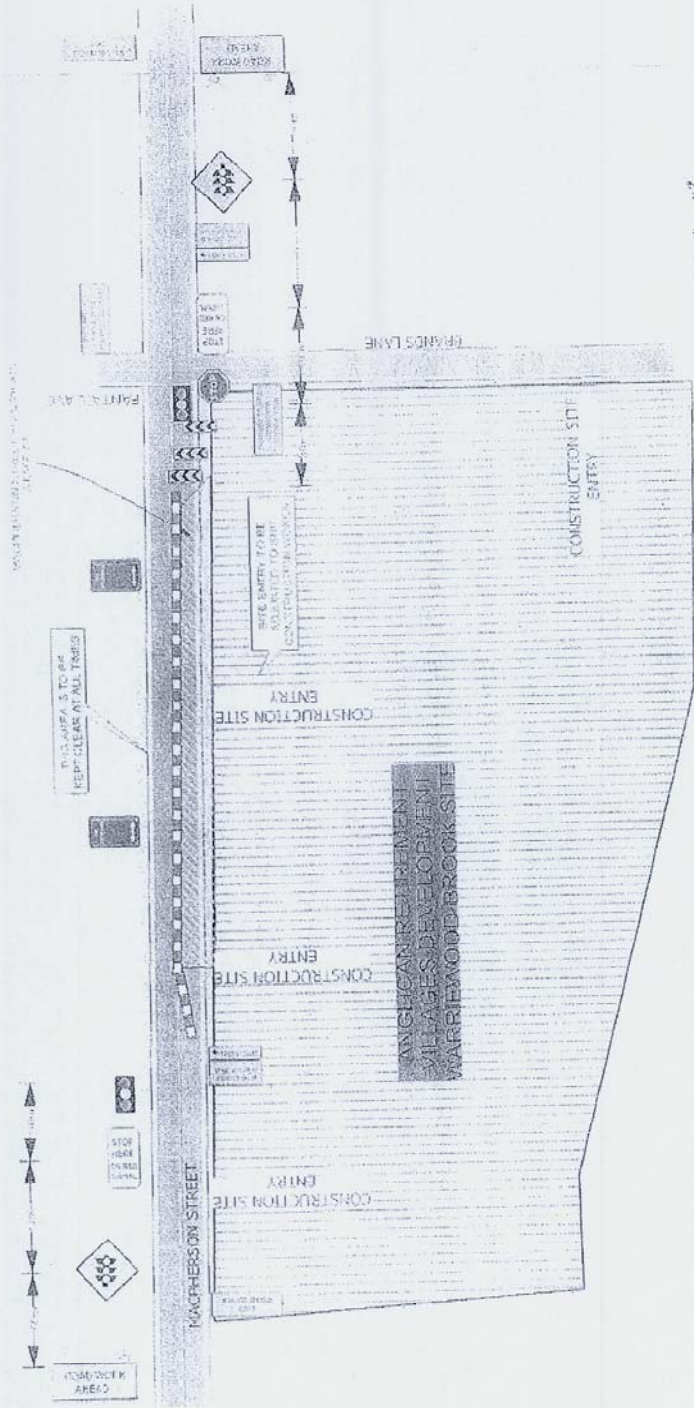
Regards,

Southern Cross Constructions (NSW) Pty Ltd



Terry Edwards
Project Manager

- NOTE:
1. THIS DRAWING SHOWS THE STAGING OF THE ROADS WORKS FOR THE UPGRADE OF MACPHERSON STREET.
 2. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE ROAD DESIGN DRAWINGS.
 3. SITE ACCESSES MUST BE ADJUSTED TO MEET THE ROAD CONSTRUCTION STAGING.
 4. ALL TRAFFIC MANAGEMENT IS BASED ON PTA DRAWING TCF-43.
 5. TRAFFIC LANE IS TO BE A MINIMUM OF 3.6 METRES WIDE.
 6. STOP LINES TO BE 200mm - 300mm WIDE.
 7. ALL SIGNS ARE TO BE CLASS 'A'.
 8. MACPHERSON STREET SPEED LIMIT IS 60KM/H.

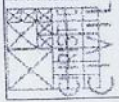


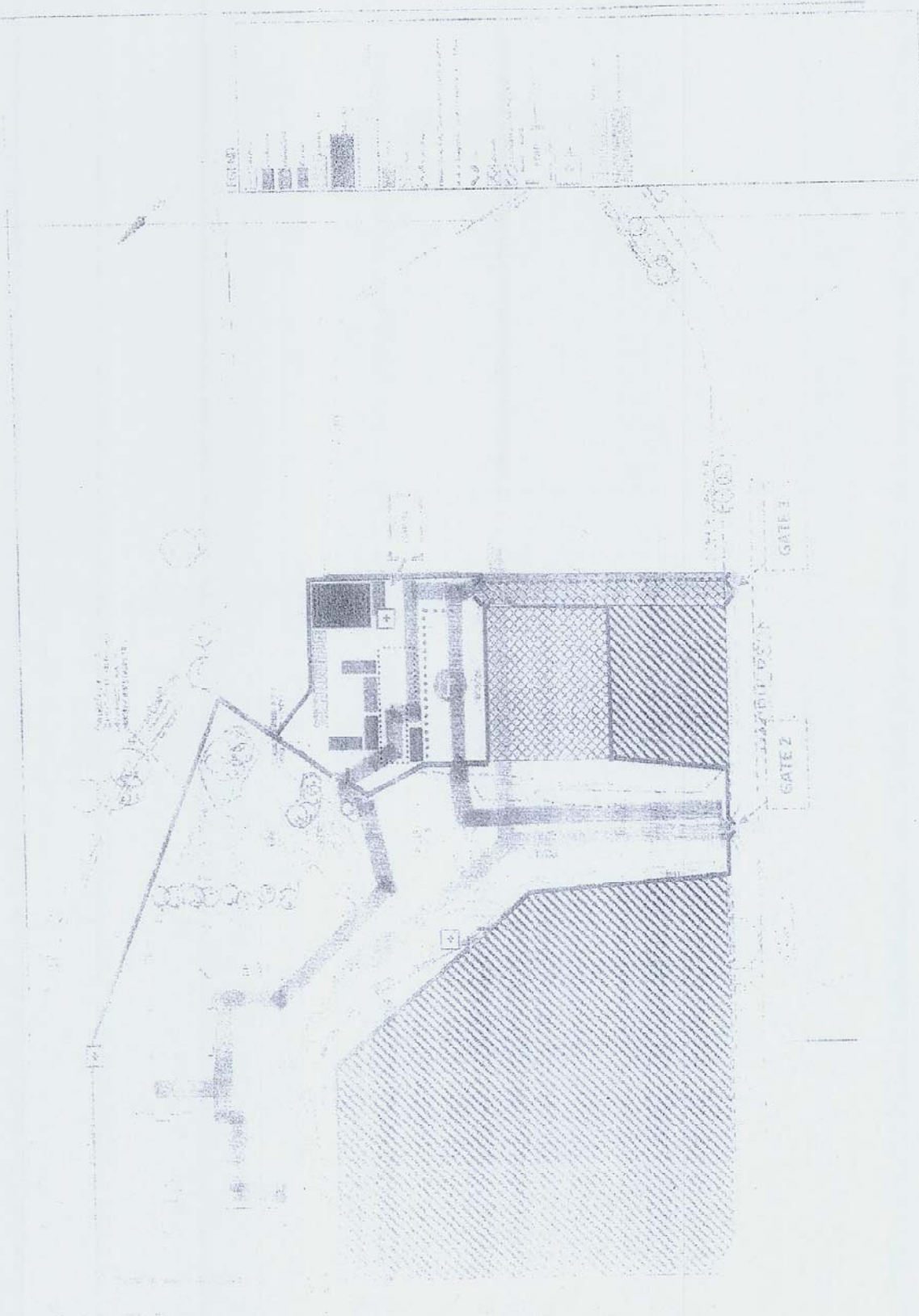
STAGE #4
MACPHERSON STREET ROADWORKS

TRAFFIC CONTROL PLAN APPROVED
BY THE AUTHORISED OFFICER
ON 20 OCTOBER 2008
AND EXPIRES ON 17 JULY 2009
Paul Davis
PH 9098 1111

Date: 1 AUG 2008 Author: CHRISTIE CIVIL P/L, GARDNER ASSOCIATES Project: MACPHERSON ROAD UPGRADE TCF-43
DEVELOPER: ANGLIAN RESIDENTIAL VILLAGES BUILDER: SOUTHERN CROSS CONSTRUCTIONS DRAWING: 2.014

Comments:
THIS TRAFFIC PLAN IS FOR THE UPGRADE OF THE NORTH SIDE OF
MACPHERSON STREET & CONSTRUCTION OF A NEW ROADWAY AT THE
SITE ENTRANCE.

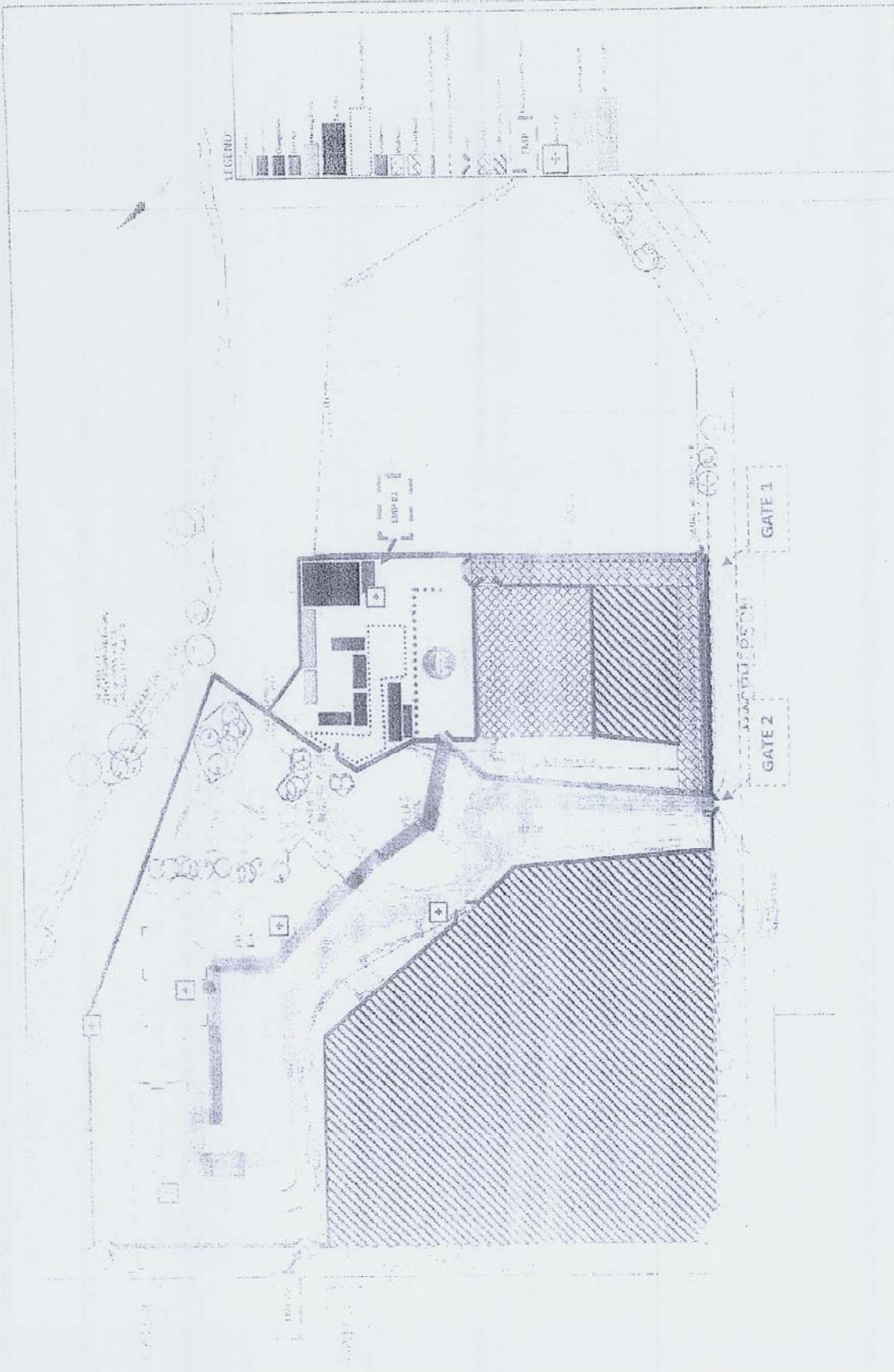




Revision 1 of 1
March 2004

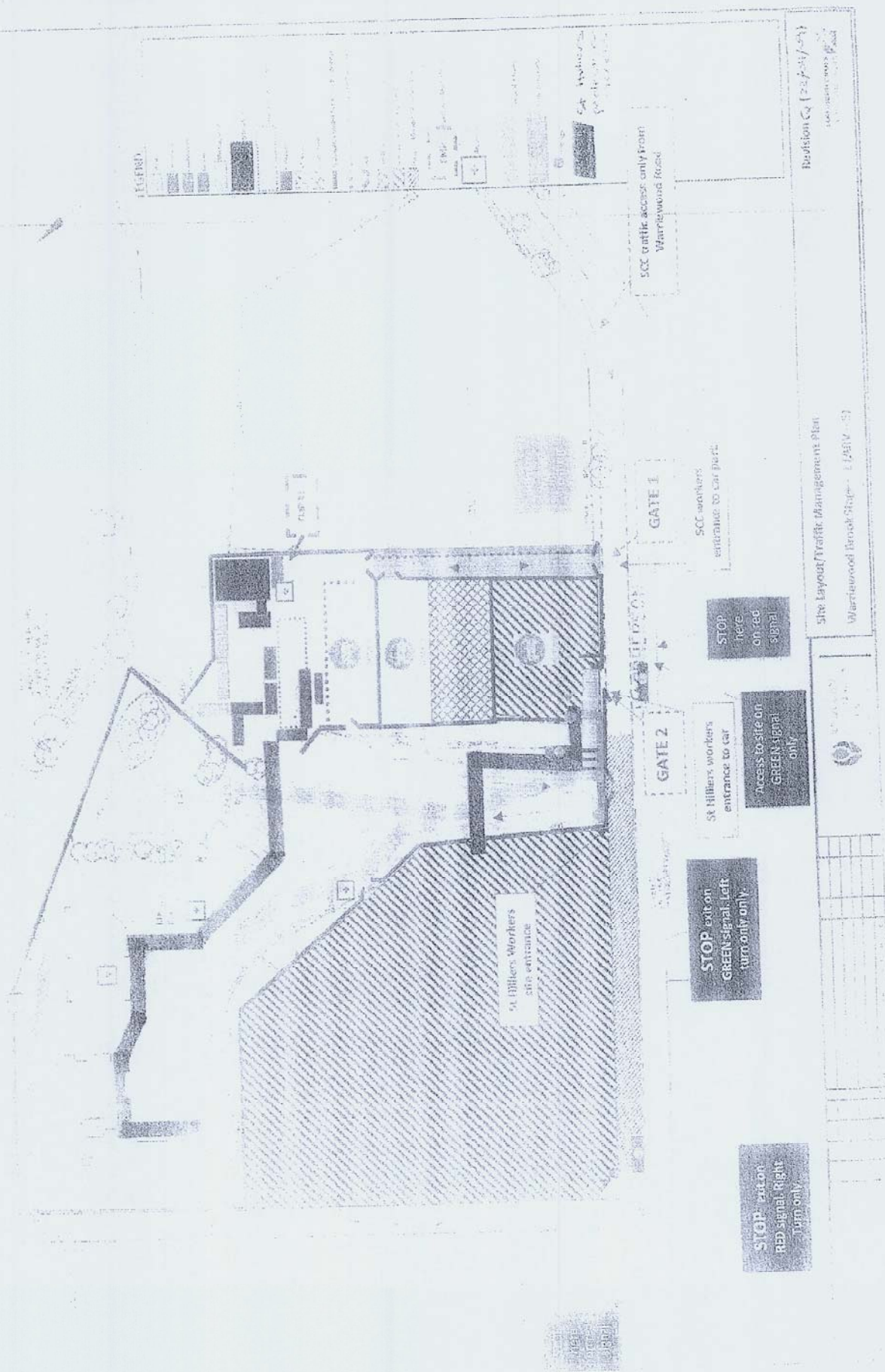
Site Layout/Traffic Management Plan
Mariposa Brook Stage - 1 (REV - 5)

NO.	DESCRIPTION	DATE
1	ISSUED FOR PERMIT	2004-03-01
2	REVISED TO SHOW CHANGES	2004-03-15
3	REVISED TO SHOW CHANGES	2004-03-25
4	REVISED TO SHOW CHANGES	2004-04-05
5	REVISED TO SHOW CHANGES	2004-04-15
6	REVISED TO SHOW CHANGES	2004-04-25
7	REVISED TO SHOW CHANGES	2004-05-05
8	REVISED TO SHOW CHANGES	2004-05-15
9	REVISED TO SHOW CHANGES	2004-05-25
10	REVISED TO SHOW CHANGES	2004-06-05
11	REVISED TO SHOW CHANGES	2004-06-15
12	REVISED TO SHOW CHANGES	2004-06-25
13	REVISED TO SHOW CHANGES	2004-07-05
14	REVISED TO SHOW CHANGES	2004-07-15
15	REVISED TO SHOW CHANGES	2004-07-25
16	REVISED TO SHOW CHANGES	2004-08-05
17	REVISED TO SHOW CHANGES	2004-08-15
18	REVISED TO SHOW CHANGES	2004-08-25
19	REVISED TO SHOW CHANGES	2004-09-05
20	REVISED TO SHOW CHANGES	2004-09-15
21	REVISED TO SHOW CHANGES	2004-09-25
22	REVISED TO SHOW CHANGES	2004-10-05
23	REVISED TO SHOW CHANGES	2004-10-15
24	REVISED TO SHOW CHANGES	2004-10-25
25	REVISED TO SHOW CHANGES	2004-11-05
26	REVISED TO SHOW CHANGES	2004-11-15
27	REVISED TO SHOW CHANGES	2004-11-25
28	REVISED TO SHOW CHANGES	2004-12-05
29	REVISED TO SHOW CHANGES	2004-12-15
30	REVISED TO SHOW CHANGES	2004-12-25



Revision N128/11/08
 SONTRUCKS
 Site layout/Traffic Management Plan
 Warrimoon Break Stage - 3 (ARY - 5)





Basiston C₄ (20/11/19)

Site Layout/Traffic Management Plan
Warwickwood Borek/Slipes - 1 (20/11/19)



STOP: exit on
RED signal, Right
Turn only

STOP: exit on
GREEN signal, left
turn only only

STOP: here
on red
signal

STOP: exit on
GREEN signal, left
turn only only

SCC workers
entrance to car park

SCC traffic access only from
Warwickwood fence

Basiston C₄ (20/11/19)

Warwickwood Borek/Slipes

COMPLIANCE LETTER



23 June 2009

Document # 457
File Code: ARV-5 / 3707

Steve Watson & Partners
Level 5, 432 Kent St
SYDNEY NSW 2000

Att: Andrew Rys
Fax: 9283 8500

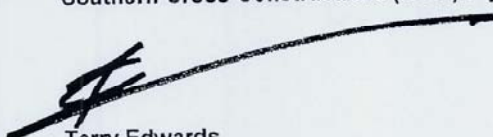
RE: DA CONDITION D13 + D12.
WARRIEWOOD STAGE 1 NEW A,B & C, MACPHERSON STREET WARRIEWOOD NSW 2102

This is to confirm that Southern Cross Constructions (NSW) Pty Ltd for the duration of construction period have provided and maintained a clay removal system for vehicles leaving the site consisting of wash down bays with cattle grids to satisfy DA condition D12.

Please contact me should you have any questions.

Regards,

Southern Cross Constructions (NSW) Pty Ltd



Terry Edwards
Project Manager

SUBDIVIDER/DEVELOPER COMPLIANCE CERTIFICATE
(A certificate under Division 9 Section 73 of the Sydney Water Act, 1994)

DESCRIPTION OF SUBDIVISION/DEVELOPMENT	
Council	Pittwater Council
Street	6 – 14 Machperson Street, Warriewood STAGE 1
Property	Lot B DP 400488, Lot A DP 400488, Lot 22 DP 5464, Lot B DP 358765, Lot A DP 358765, Pt Lot B DP 345528, Pt Lot 1 DP 208149, Pt Lot DP 579309, Pt Lot 3 DP 942319 & Pt Lot 4 DP 579309
Development	Demolition Of Existing Structures & Stage 1 Covering Construction Of Buildings A, B & C For 64 Independent Living Units.
NAME OF APPLICANT	Anglican Retirement Villages
APPLICANT'S ADDRESS	C/o Bowdens Group Australia P/L P.O. Box 387 PARRAMATTA NSW 2124

Sydney Water Corporation certifies that the above named applicant has complied with the requirements, relating to the plan of Subdivision/Development described above, of Division 9 of the Sydney Water Act, 1994.

THE FOLLOWING ITEMS 2 AND 5 APPLY TO THE DEVELOPMENT:

1. ~~Water facilities are to be provided as a result of the subdivider/developer's compliance with Sydney Water's requirements.~~
 2. **Water facilities are available.**
 3. ~~Water facilities cannot be provided within a reasonable time from the date of this certificate.~~
 4. ~~Sewerage facilities are to be provided as a result of the subdivider/developer's compliance with Sydney Water's requirements.~~
 5. **Sewerage facilities are available.**
 6. ~~Sewerage facilities are under the control of the local council.~~
 7. ~~Sewerage facilities cannot be provided within a reasonable time from the date of this certificate.~~
 8. ~~Sydney Water's requirements for future subdivision of this dual-occupancy development have NOT been met. On subdivision an additional certificate will be required.~~
- THE FOLLOWING ITEMS AND APPLY TO LOT/S IN THE DEVELOPMENT:**
9. ~~Water facilities have NOT been provided. They will only be provided after compliance with Sydney Water's requirements placed on a future applicant for subdivision/development or connection.~~
 10. ~~Sewerage facilities have NOT been provided. They will only be provided after compliance with Sydney Water's requirements placed on a future applicant for subdivision/development or connection.~~
 11. ~~Sewerage facilities are under the control of the local council.~~

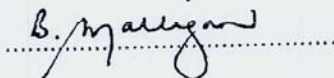
Applicant Reference No. **7199/Mcphn6-14**

Council Reference No. **DAN0102/05**
Staged Development

Name **Tracy Sutherland**
(Approving Officer for and on behalf of Sydney Water)

Signature 

Name **Brian Malligan**
(Approving Officer for and on behalf of Sydney Water)

Signature 

Developer Asset Services **Head Office**

Dated: **6th August 2009**

THIS CERTIFICATE IS ONLY VALID WHEN SIGNED BY TWO AUTHORISED SYDNEY WATER OFFICERS
A signed copy is held by Sydney Water

The original of this certificate must be presented to the appropriate consent authority, usually Council, with which the plan of subdivision/development was lodged so that you can satisfy the relevant condition of consent.

COMPLIANCE LETTER



23 June 2009

Document # 456
File Code: ARV-5 / 3707

Steve Watson & Partners

Level 5, 432 Kent St
SYDNEY NSW 2000

Att: Andrew Rys
Fax: 9283 8500

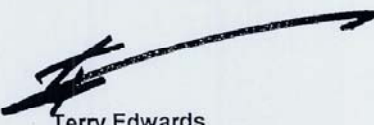
**RE: DA CONDITION D12
WARRIEWOOD STAGE 1 NEW A,B & C, MACPHERSON STREET WARRIEWOOD NSW 2102**

This is to confirm that Southern Cross Constructions (NSW) Pty Ltd have provided and maintained an all weather access way at the front of the property consisting of 50-75mm aggregate in accordance with DA condition D12.

Please contact me should you have any questions.

Regards,

Southern Cross Constructions (NSW) Pty Ltd



Terry Edwards
Project Manager

COMPLIANCE LETTER



18 July 2009

Document # 541
File Code: ARV-5 / 3707

Steve Watson & Partners
Level 5, 432 Kent St
SYDNEY NSW 2000

Att: Andrew Rys
Fax: 9283 8500

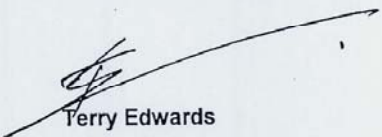
RE: DA CONDITION D11 - COMPLIANCE
WARRIEWOOD STAGE 1 NEW A,B & C, MACPHERSON STREET WARRIEWOOD NSW 2102

This is to confirm that Southern Cross Constructions (NSW) Pty Ltd have provided and maintained continuous sedimentation and erosion controls at all times during the course of construction. We therefore advise that we have complied with the above mentioned DA Condition.

Please contact me should you have any questions.

Regards,

Southern Cross Constructions (NSW) Pty Ltd



Terry Edwards
Project Manager

COMPLIANCE LETTER



11 August 2009

Document # 570
File Code: ARV-5 / 3707

Steve Watson & Partners
Level 5, 432 Kent St
SYDNEY NSW 2000

Att: Andrew Rys
Fax: 9283 8500

RE: DA CONDITION E3
WARRIEWOOD STAGE 1 NEW A,B & C, MACPHERSON STREET WARRIEWOOD NSW 2102

This is to confirm that all parking areas and driveways have been sealed to an all weather standard, linemarked, signposted and maintained prior to the occupation use of the site.

We therefore advise that we have complied with the above mentioned DA Condition E3.

Please contact me should you have any questions.

Regards,

Southern Cross Constructions (NSW) Pty Ltd



Terry Edwards
Project Manager

STUBBS CRUICKSHANK
CONSULTANTS
 STRUCTURAL BUILDING ENGINEERS
 INVESTIGATIVE AND REMEDIAL DESIGN SERVICES

19 Gertrude Street
 Balgowlah Heights NSW
 AUSTRALIA 2093
 ABN 33 002 564 794
 Tel.: (02) 9949 1965 Fax: (02) 9949 1966
 Mob: 0418 672 775
 E-mail: excel@bigpond.net.au

Southern Cross Constructions (NSW) Pty Ltd
 135-153 New South Head Road
 Edgecliff
 NSW 2027

S/C Ref. 3176

7 July 2009

Attn; Adrian Galati

Dear Sir,

COMPLETION CONDITION SURVEY
 DA NO. N0102/05
 6 MACPHERSON STREET, WARRIEWOOD, NSW

With reference to the Conditions of Approval dated 23 May 2008 issued for the Development Application No. N0102/05, and item E5 in particular, we are pleased to advise that we have re-visited the site today, 7 July 2009 and carried out a condition survey of Brands Lane on the north-west side of the site, and of the north-east side of MacPherson Street adjoining the development site.



BRANDS LANE



MACPHERSON STREET

C. IAN CRUICKSHANK B.Sc, C.Eng, M.I.C.E, M.I.E.Aust, CPEng, NPER, M.H.K.I.E. DIRECTOR
EXCEL CONSULTING PTY LTD TRADING AS STUBBS CRUICKSHANK CONSULTANTS

Brands Lane remains an un-made access road which we understand will be up-graded at some future stage of the adjoining development to the south-east side.

The only visibly permanent aspect of the Lane are the established trees on the north-west side of lane.

We cannot identify any appreciable change to these trees as first recorded by us in the general overview photographs dated 5 March 2008.



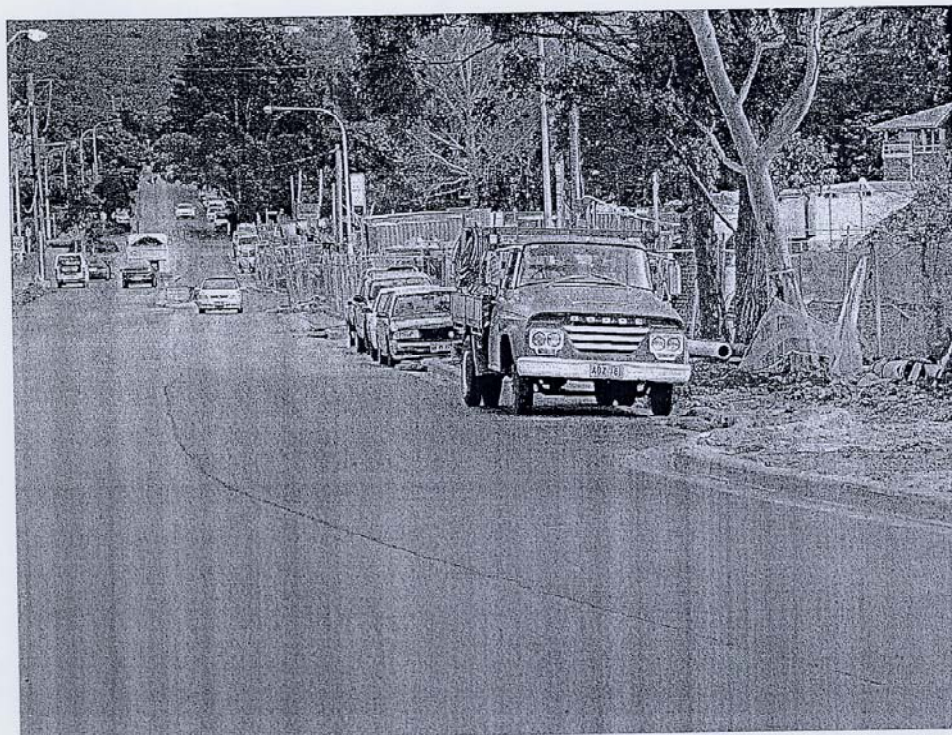
BRANDS LANE FROM MACPHERSON STREET, WARRIEWOOD

MacPherson Street has experienced a complete “make-over” on the development site side including footpath, kerb and gutter, and a re-sheeted carriageway surface extending from Brands Lane at the north-west end to near Boondah Road at the east end.



MACPHERSON STREET PROGRESSING SOUTH-EAST FROM BRANDS LANE





MACPHERSON STREET LOOKING NORTH-WEST TOWARDS BRANDS LANE

Comparison with the original street-scape recorded in March 2008 is not relevant as no previously recorded surfaces can be compared with the new overall installation provisions being made.

We are satisfied from our on-site inspection today, 7 July 2009, that no damage has been done to the previous conditions on the north-east side of MacPherson Street in so far as the previous conditions from the carriageway to the development site boundary have been replaced overall, and the surface of MacPherson Street has been fully re-sheeted.

Yours faithfully
STUBBS CRUICKSHANK CONSULTANTS

C. I. CRUICKSHANK

Chartered Professional Engineer Membership No 405307

COMPLIANCE LETTER



23 June 2009

Document # 454
File Code: ARV-5 / 3707

Steve Watson & Partners
Level 5, 432 Kent St
SYDNEY NSW 2000

Att: Andrew Rys
Fax: 9283 8500

RE: DA CONDITION B1 - COMPLIANCE STATEMENT
WARRIEWOOD STAGE 1 NEW A,B & C, MACPHERSON STREET WARRIEWOOD NSW 2102

Andrew,

This is to advise that throughout the construction of the above mentioned project, Southern Cross Constructions (NSW) Pty Ltd have complied with the Vegetation Management Plan as prepared by Pittendrigh Shrinkfield Bruce Pty Ltd dated 20 October 2005.

Regards,

Southern Cross Constructions (NSW) Pty Ltd



Terry Edwards
Project Manager



NSW Government

Department of Water & Energy

Contact: Gina Potter
Phone: 02 9895 7259
Fax: 9895 7501
Email: gina.potter@dnr.nsw.gov.au

Richard Abbott
Morgan Moore and Associates
Level 5, 140 Arthur Street
North Sydney NSW 2060

Our ref: 10 ERM2008/1071
File No: 9012985

27 March 2009

Dear Mr Abbott

**Re: Controlled Activity Approval – Issue Date 27/03/2009
Anglican Retirement village, 6 - 14 Macpherson Street, WARRIEWOOD**

I refer to your application dated 22/08/2008 for a Controlled Activity Approval under the *Water Management Act 2000*. The Department acknowledges receipt of your application fee of \$3235.00.

Controlled Activity Approval

The Department has determined to grant you a Controlled Activity Approval. Please find enclosed the Controlled Activity Approval.

Your Controlled Activity Approval will expire on **27/03/2014**.

Please read carefully the conditions of the Controlled Activity Approval and seek clarification from the Department for any condition not fully understood.

You are required to provide a copy of this Approval and any annotated documentation to your certifier and to all contractors engaged in the implementation of these works or the Vegetation Management Plan (VMP) to ensure they are also aware of the conditions.

The Controlled Activity Approval must be kept current until all works have been completed. Application for an extension of the Controlled Activity Approval should be made to the Department, in writing, at least one month prior to the expiry date.

Security Deposit

The Department acknowledges receipt of your security which will be held until such time as the works, rehabilitation and any specified maintenance period related to this Controlled Activity Approval are complete. If the application is amended or the scope of the works are changed, then the value of the security may also be amended. Details of the security are as follows:

Number	Provider	Value
1	Westpac	\$111,250.00
2	Westpac	\$111,250.00


Any security held by the Department for these works will only be returned after the reporting requirements and conditions of the approval have been met. If necessary, the works will be inspected by a Departmental officer to confirm that the requirements and conditions of the approval have been met. The current fee includes an inspection for each stage as listed. However, if extra inspections are required then additional fees will be incurred:

Macquarie Tower, 10 Valentine Avenue, Parramatta NSW 2150 FO Box 3720 Parramatta NSW 2124 Australia
t + 61 2 9895 6211 | e information@dwe.nsw.gov.au | www.dwe.nsw.gov.au | ABN 58 132 718 272

Additional fees may also apply if amendments or an extension to this Controlled Activity Approval are requested. Please contact the Department for advice on fees and charges.

Any questions regarding this correspondence should be directed to **Gina Potter**,
gina.potter@dnr.nsw.gov.au.

Yours sincerely



Gina Potter
Licensing South
Water Management Division

Enc:
Controlled Activity Approval
Annotated plans



NSW Government

Department of Water & Energy

Controlled Activity Approval

issued under the Water Management Act 2000 - for controlled activity on waterfront land in New South Wales

Reference No: 10 ERM2008/1071		File No: 9012985	
Controlled Activity Approval issued to: (Approval Holder)			
Name of Approval Holder:	Richard Abbott		
Postal Address:	Level 5, 140 Arthur Street		
	Town/City	North Sydney	State NSW P/Code 2060
Company Name:	Morgan Moore & Associates		
Office Address:	As above		
	Town/City	State	P/Code
Property Owner/s:			
Name of Owner/s (1)	Anglican Retirement Villages		
Postal Address:	c/- Michael Lockwood PO Box 284		
	Town/City	Castle Hill	State NSW P/Code 1765
Name of Owner/s (2)			
Postal Address:			
	Town/City	State	P/Code
At the site described as:			
Property Address:	6-14 Macpherson Street		
	Town/City	Warriewood	State NSW P/Code
Lot A & B	DP: 400488	Portion	Parish Narrabeen
Lot 22	DP: 5464	Portion	Parish
Lot A & B	DP: 358765		
Lot 5, 6, 7 & 8	DP: 1115877		
Name of watercourse (if known)	Narrabeen Creek		
Local Council: Pittwater Council	Development Reference: (if applicable) DA102/05		
Details of Controlled Activity to be undertaken: ('the Controlled Activity')			
Widening and partial reconstruction of Narrabeen Creek abutting the eastern frontage of the site and associated vegetation works			
Period of Approval:			
Date of Issue: 27 March 2009		Date of Expiry: 27 March 2014	



Conditions of Approval: This controlled activity approval is granted subject to the conditions listed.

Number Condition

Plans, standards and guidelines

- 1 This Controlled Activity Approval number 10 ERM2008/1071 only applies to the controlled activity carried out at the location marked on *Warriewood Valley, Anglican Retirement Village, Narrabeen Creek Riparian Restoration, Vegetation Management Plan*, Job No. 08-082S, dated 19 February 2009, by Taylor Brammer Landscape Architects Pty Ltd. as approved by the Department of Water & Energy and stamped on 27/03/2009. This Controlled Activity Approval does not permit controlled activities at any other site.
- 2 The approval holder must not transfer this Controlled Activity Approval 10 ERM2008/1071 without the written approval of the Department of Water & Energy.
- 3 The approval holder must keep a copy of the current Controlled Activity Approval 10 ERM2008/1071 on site at all times and make it available to officers from the Department of Water & Energy on request.
- 4 If the controlled activities described in this Controlled Activity Approval 10 ERM2008/1071, have not commenced or been completed within the period of this approval, the approval holder must apply for a new approval or seek an extension prior to the lapsing of the consent.
- 5 The approval holder must notify the Department of Water & Energy in writing within 14 calendar days of any change in (i) site management; (ii) land ownership; (iii) land occupation.
- 6 N/A
- 7 The approval holder must carry out all vegetation management, erosion and sediment control and rehabilitation activities in accordance with the plans and schedules approved by the Department of Water & Energy and stamped on 27/03/2009 as follows:
 - i. *Warriewood Valley, Anglican Retirement Village, Narrabeen Creek Riparian Restoration, Vegetation Management Plan*, Job No. 08-082S, dated 19 February 2009, by Taylor Brammer Landscape Architects Pty Ltd.
 - ii. *Vegetation Management Plan – Revegetation Zones*, Drawing No. LRP01, Rev F, dated 19/02/09, by Taylor Brammer Landscape Architects Pty Ltd.
 - iii. *Landscape Planting Plan – Council Dedicated Areas*, Drawing No. LRP02, Rev E, dated 19/02/09, by Taylor Brammer Landscape Architects Pty Ltd.
 - iv. *Landscape Planting Plan – Council Dedicated Areas*, Drawing No. LRP03, Rev D, dated 19/02/09, by Taylor Brammer Landscape Architects Pty Ltd.
 - v. *Landscape Planting Plan – ARV Land*, Drawing No. LRP04, Rev E, dated 19/02/09, by Taylor Brammer Landscape Architects Pty Ltd.
 - vi. *Landscape Planting Plan – ARV Land*, Drawing No. LRP05, Rev D, dated 19/02/09, by Taylor Brammer Landscape Architects Pty Ltd.
 - vii. *Creek works, Creek Plan & Longitude Section*, Drawing No. 21-13577-C1002, Rev 2, dated 6/3/09, by GHD
 - viii. *Creek works, Existing Site Plan*, Drawing No. 21-13577-C1003, Rev 0, dated 16/10/08, by GHD
 - ix. *Creek works, General Notes*, Drawing No. 21-13577-C1004, Rev 0, dated 15/10/08, by GHD
 - x. *Creek works, Creek cross sections sheet 1 of 3*, Drawing No. 21-13577-C1020, Rev 3, dated 6/3/09, by GHD



-
- xi. *Creek works, Creek cross sections sheet 2 of 3*, Drawing No. 21-13577-C1021, Rev 2, dated 6/3/09, by GHD
- xii. *Creek works, Creek cross sections sheet 3 of 3*, Drawing No. 21-13577-C1022, Rev 2, dated 6/3/09, by GHD
- xiii. *Creek works, Typical Creek Sections sheet 1 of 2*, Drawing No. 21-13577-C1030, Rev 1, dated 6/3/09, by GHD
- xiv. *Creek works, Typical Creek Sections sheet 2 of 2*, Drawing No. 21-13577-C1031, Rev 0, dated 15/10/08, by GHD
- xv. *Creek works, Sediment and Erosion Works Plan*, Drawing No. 21-13577-C1041, Rev 1, dated 9/3/09, by GHD
- xvi. *Creek works, Sediment and Erosion Details sheet 1 of 2*, Drawing No. 21-13577-C1042, Rev 0, dated 9/3/09, by GHD
- xvii. *Creek works, Sediment and Erosion Details sheet 2 of 2*, Drawing No. 21-13577-C1043, Rev 0, dated 16/10/08, by GHD
- xviii. *Warriewood Brook, Warriewood Retirement Villages, Creek Works Specification*, Rev D, dated February 2009, by GHD
- xix. *Construction Management Plan, Warriewood Brook – Creek Works*, by Co-Ordinated Landscape for Morgan Moore & Associates and Anglican Retirement Villages
- xx. *Environmental Management Plan for Warriewood Brook, Creek Works*, dated February 2009, by Co-Ordinated Landscapes
- 8 N/A
- The approval holder must clearly mark on the ground the boundaries of the areas where the controlled activity is to be carried out before commencement of the controlled activity, and maintain the markings until the works are completed.
- 10-15 N/A
- 16 The approval holder must maintain the approved controlled activity on waterfront land for a minimum period of two (2) years from the date of completion of the controlled activity works.
- 17 The approval holder must complete a maintenance period of two (2) years after final planting for all areas described in the Vegetation Management Plan (VMP) being *Warriewood Valley, Anglican Retirement Village, Narrabeen Creek Riparian Restoration, Vegetation Management Plan*, Job No. 08-082S, dated 19 February 2009, by Taylor Brammer Landscape Architects Pty Ltd approved by the Department of Water & Energy and stamped on 27/03/2009.
- 18-19 N/A
- 20 The approval holder must submit survey plans to a professional standard of work as executed, and any other information required by the Department of Water & Energy within 14 days of completion of the controlled activities.
- 21 At practical completion and at the end of the maintenance period, the approval holder must provide a final written report to the Department of Water & Energy evidencing completion of the approved controlled activity.
- 22 The approval holder must provide a report on the implementation of the vegetation management plan (VMP) to the Department of Water & Energy at the completion of the revegetation works and at every twelve (12) months up to the end of the maintenance period that must include:
- i. a schedule and map showing the vegetation species, number and location of initial and any replacement plantings and propagation materials, and
 - ii. the date of planting of vegetation, and
-



Department of Water & Energy

- iii. the percentage cover of groundcover, shrubs, trees and weeds, and
 - iv. any problems that impacted on the survival rates of plants including climatic, fire, flooding and vandalism, and
 - v. a map of the location of any staged activities, and
 - vi. photographs showing the revegetation works during the reporting period.
- 23 The approval holder must provide the Department of Water & Energy with a certificate of completion of approved activities and also a certificate of completion of maintenance to best practice provided by persons suitably experienced and/or qualified in such certification at the completion of the each stage.
- 24 N/A
- 25 The approval holder must notify the Department of Water & Energy in writing within seven (7) days if the controlled activity (i) ceases for a period of more than 30 calendar days; or (ii) is terminated before its full completion, or (iii) is resumed.

Security deposits

- 26 The approval holder has provided security of \$111,250.00 for practical completion and \$111,250.00 for maintenance by way of bank guarantee to the Department of Water & Energy. The security deposits will be held until such time as the controlled activity, together with any rehabilitation or revegetation works, have been completed in accordance with the conditions of this approval. The approval holder must certify compliance with the conditions of this Controlled Activity Approval (certificate of compliance) prior to the release of any security being held for the controlled activity.
- 27-34 N/A

Disposal

- 35 The approval holder must relocate any unused or excess materials outside the designated riparian corridor.
- 36 The approval holder must not leave materials which could obstruct the flow of water or damage river banks on waterfront land at any time.
- 37 The approval holder must remove surplus material when operations cease and the controlled activity is completed.
- 38 The approval holder must not put materials in the drainage line or river or in any area that has existing native vegetation and/or that is identified as part of the riparian corridor.
- 39-41 N/A

Erosion control

- 42-43 N/A
- 44 The approval holder must use only biodegradable materials for any erosion control matting in the riparian corridor.
- 45 The approval holder must decommission all erosion and sediment control works using a suitably qualified person when the site has stabilised.
- 46 The approval holder must (i) implement erosion and sediment control measures in accordance with the requirements of the Managing Urban Stormwater Manual, Volume 1, Soils and Construction (Landcom, 4th Edition, March 2004) prior to any works commencing at the site; and (ii) maintain the control measures for the duration of the approval to prevent sediment and dirty water entering the waterway.
- 47-59 N/A
-



NSW Government

Department of Water & Energy

River bed and bank protection

60 The approval holder must ensure that all rock rip-rap surfaces are rough and aligned with the adjoining bed, bank and floodplain profile.

61-64 N/A

65 The approval holder must not use wire mesh structures, concrete, spray concrete, concrete grouting, crib walling, masonry or car tyres for bank stabilisation.

66-67 N/A

Vegetation management and riparian corridor

68 The approval holder must delineate, protect and maintain a riparian corridor in accordance with *Warriewood Valley, Anglican Retirement Village, Narrabeen Creek Riparian Restoration, Vegetation Management Plan, Job No. 08-082S, dated 19 February 2009, by Taylor Brammer Landscape Architects Pty Ltd.*

69-71 N/A

72 The approval holder must not compromise the implementation of the Vegetation Management Plan (VMP) for any work and/or controlled activity at the site.

73 N/A

END OF CONDITIONS

Fee: \$3235.00	has been paid	exclusive of GST	Receipt No: 55820
Controlled Activity Approval issued by:			

Nikki Allwood



Notice of Determination – Controlled Activity Approval

Issued under Part 3, Chapter 3 of the Management Act 2000 - for matters assessed as integrated development under Part IV of the Environmental Planning & Assessment Act, 1979.

Approval Number:	10 ERM2008/1071
------------------	-----------------

Applicant/s Details:(First applicant)

Title (Mr, Mrs, Ms) Mr	Surname Abbott	Given name(s) Richard
Company name (if applicable)		
Address Level 5, 140 Arthur Street, , North Sydney NSW 2060		
Phone		Alternate phone
Fax	Email	

Second applicant if applicable:

Title (Mr, Mrs, Ms)	Surname	Given name(s)		
Address				
Town	State	Postcode	Country	

Determination:

Kind of Approval	Controlled Activity Approval
Date of Determination	27/03/2009
Determination	<input checked="" type="checkbox"/> Granted (subject to conditions) <input type="checkbox"/> Refused
Location	6 - 14 Macpherson Street, WARRIEWOOD
Description of Works	Anglican Retirement village
Reasons for determination	This Controlled Activity Approval is granted on the basis that the Department is satisfied the proposed development has adequate arrangements in place to ensure that no more than minimal harm will be done to waterfront land at this site as a consequence of carrying out the proposed controlled activity.

Right of Appeal: Section 368 of the Water Management Act 2000 gives a right of appeal in certain circumstances. As this application has been assessed as integrated development it will not be subject to any third party rights of appeal under the Water Management Act 2000. This does not affect any right of appeal an objector may be entitled to under section 98 of the *Environmental Planning and Assessment Act, 1979*.

Signature	
Name	Mohammed Ismail By Delegation from the Minister for Water



TREE & LANDSCAPE CONSULTANTS

Site Analysis, Arboricultural Assessments



Dip. Hort. (Arboriculture)
Assoc. Dip. Hort. (Park Management)
Hort. Cert.
Bush Regeneration. Cert.
Tree Surgery Cert.
Member IACA, LGTRA, ISAAC
P.O. Box 50
Padstow 2211 N.S.W.
Telephone / Facsimile
Mobile
Email

02) 9785 2678
0418 277 379

talc2@optusnet.com.au

1st July, 2009

Southern Cross Constructions (NSW) Pty Ltd
135-153 New South Head Road,
Edgecliff NSW 2027

Our reference: 1186-1-10

Report- Vegetation Issues:
1-8 Macpherson Street
Warriewood 2102

The property was inspected in regards to compliance with conditions E1 & E2 of DA consent No 102.05 (Warriewood Brook Stage 1-8 Macpherson Street Warriewood). An inspection has been undertaken of areas A, B & C and lake surrounds prior to soft landscaping being introduced.

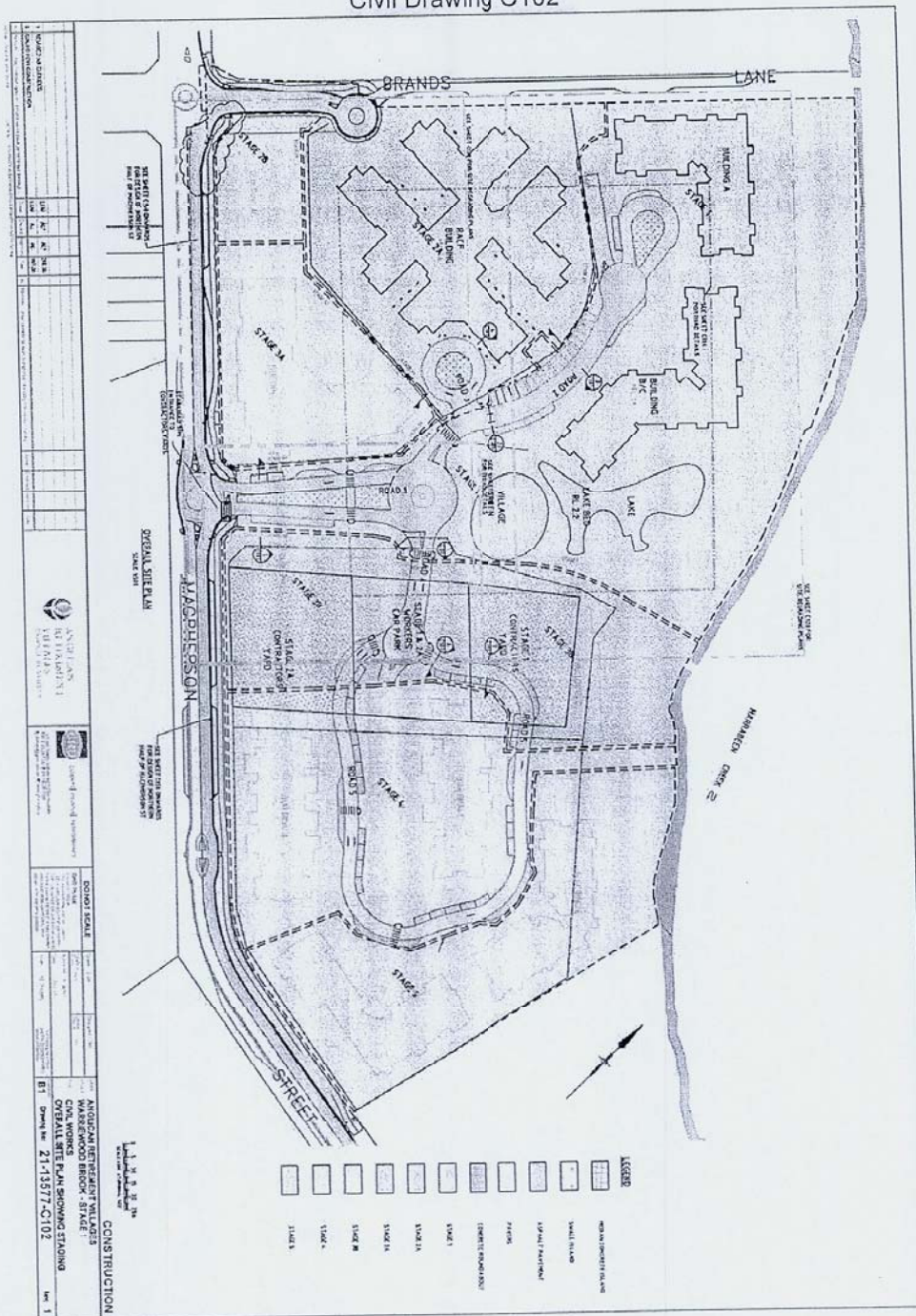
No weed species as indicated within the Vegetation Management Plan (VMP) Prepared by Taylor Brammer Landscape Architects Pty Ltd dated 14th August 2008 were present within the area of concern and removal of weeds were undertaken by Landscape contractors utilising methods prescribed within the VMP such as hard removal and selective herbicide application (see section 4.5.4 of this report). Also, secondary weeding will be required monthly for a period of six months following planting as identified within section 4.5.5 of this report.

If you require further information please contact me on 0418277379

Peter Richards
Tree & Landscape Consultants

Report- Vegetation Issues - 1-8 Macpherson Street Warriewood 2102

Attachment
Civil Drawing C102





13 August 2009

Richard Abbott
Morgan Moore and Associates
Level 5, 140 Arthur Street
North Sydney
NSW, 2060

Our ref: 21/18604/152918
Your ref:

Dear Richard

**ARV Warriewood
Stage 1 and Creek Works WAEX Assessment with respect to Flooding**

1 Requirement for this Letter

This letter reports on our assessment of Works as Executed (WAEX) at the Anglican Retirement Villages, Warriewood Retirement Village in relation to flooding and the Water Management Report (WMR, Version 4, December 2006, based on Development Footprint SK19 Rev G, 21/12853/02/109212) for the following works:

- ▶ Stage 1 works only (Buildings A, B/C and associated roads); and
- ▶ Creek works, half creek only.

2 Available Information

GHD have reviewed the following attached Works as Executed (WAEX) drawings, received as CAD drawing files and PDF format:

- ▶ Received 05/08/2009 from Morgan Moore and Associates: McPherson Street Warriewood, Works as Executed and Site Levels from Project Surveyors, DWG 19248-20419, 31.07.2009 and surveyed 03.08.2009;
- ▶ Received 13/08/2009 from Morgan Moore and Associates: Plan showing As Built Levels, Warriewood Brook Creek works from Proust & Gardner, DWG 22646-CreekDetail-C, 12/08/09;

3 Background to the Water Management Report (WMR) with respect to Flooding

The WMR assessed the impact of the proposed development on flooding, on and off-site. This flooding was assessed for the 100-year ARI event and the PMF by considering the proposed Development Footprint, SK19 Rev G in its entirety. Use was made of Councils flood model operated by their consultants Cardno Lawson and Treloar. Numerous flood model iterations were undertaken, adjusting amongst others:

- ▶ The rehabilitated creek profile and associated pinch-point;
- ▶ Internal roads and associated levels;
- ▶ Levels and spacings between buildings; and



- › Site entrance/exit areas.

In terms of flood planning levels, the Warriewood Valley Urban Land Release, Water Management Specification, Revised Version, Pittwater Council, February 2001 (WMS) requires building floor levels to be at or above the PMF level for habitable buildings and underground car park entries. For non-habitable buildings, floor levels need to be above the 100-year ARI level plus freeboard. This has required the developed form to be raised significantly compared to existing conditions. The raising however needed to make allowance for the conveyance of the PMF through the site, to ensure off-site impacts (in particular raised flood levels) are minimised.

4 A Comment on Staging

At the time of DA, construction was proposed in 4 stages. The first stage included buildings along Macpherson Street followed by the RACF and buildings along Narrabeen Creek on the eastern half of the site. The last stage would have comprised buildings along Narrabeen Creek and buildings on the western half of the site. While this presented the general staging approach, staging plans were still being developed at that time. The first stages were tested using flood modelling and found to result in minor increases in flood levels.

Since then the staging has changed significantly, with Stage 1 (Building A, B/C and associated road work) complete and Stage 2 (the RACF) currently under construction. This proposed staging has not been tested using flood model simulations and the flood impacts of individual stages through to completion of the project are not known.

This letter is required to comment on only Stage 1 and creek works (half creek). However since these works have not been simulated in the context of the staged site development, the impacts of the WAEX on flooding cannot be assessed. To this end, we are only able to comment on whether the WAEX drawings are generally in accordance the WMR intent.

5 Assessment of the WAEX with respect to Flooding

In assessing the WAEX we make specific reference to following key areas of concern:

Stage 1 WAEX:

1. The area between Building A (Stage 1) and the RACF (Stage 2), was critical to managing the conveyance of the PMF through the site as part of Development Footprint SK19 Rev G. Located within this corridor is the down ramp to the underground car park of Building A. In November 2007, Morgan Moore and Associates directed flood simulation of this down ramp and the potential blockage this ramp presented to the conveyance of the PMF through the site. The ramp was located centrally in the corridor between the buildings and ground levels were adjusted to 4.75m AHD on either side of the ramp to facilitate PMF flood conveyance.

On inspection of the WAEX, it is noted that the walls associated with the access ramp leading to the Building A underground car park, extending further around the bend towards Building A than was simulated in the November 2007 flood modelling. In addition the flow area around the car park ramp is at elevations above those advised by Cardno Lawson and Treloar. The effect of this is the potential



redirecting of flows through the narrow 2m wide pathway between the ramp and the RACF. This could have the potential of raising flood levels in the immediate area;

2. In the same area as noted above, access footpaths to Building A and the RACF have resulted in raised ground levels leading from Brands Lane to the corridor between the buildings, compared with what was simulated in the WMR. This would reduce the flood conveyance between the buildings;
3. Internal roads leading from Building A to the McPherson Street entrance are generally within approximately 100 mm to 200 mm of design levels and the levels simulated in the flood model. Better tolerances would be desirable and attention needs to be given to landscaping on either side of the roadways, to ensure conveyance of the PMF through the site;
4. A rendered low brick wall has been constructed along the frontage with McPherson Street. This has the potential to detain and or redirect flows on the site. However, Buildings K and J have not been constructed, the impact of this low wall on redirecting flood flows is unknown;
5. Building A floor levels were not provided, however balcony levels are noted as 5.94 m AHD. The WMR requires Building A floor levels to be 6.0 m AHD. Building B/C floor levels were not provided, however balcony levels are noted as 5.52 m AHD. The WMR required Building B/C floor levels to be 5.5m AHD. The entrance ramp to the car park crest is noted as 5.44m AHD. PMF levels provided in Appendix S of the WMR are approximately 5.45m AHD in this area. However, it must be noted that the levels in this area will be sensitive to resolving the issues noted in Item 1 and 2 above, with potential ramifications on flood levels; and
6. The area between Building A and the creek, before the battering down to the creek invert, is approximately 300 mm lower than was simulated in the flood model. This area was lowered as a flood relief.

Creek WAEX

7. The creek works are generally in accordance with the design intent with exception of Item 8 below. We understand that, in some areas the creek cross-sections needed adjustment to correct for existing creek invert levels and creek centrelines. In doing so, the overall cross-section flow area was maintained by adjusting the flow width on the ARV creek side; and
8. The pinch point in the creek opposite Building A differs to the final iteration used in the flood modelling. The WAEX pinch point is wider than simulated and the overflow level is approximately 1 m below the intended crest level of 5.2m AHD;



6 Findings

It is considered that the Stage 1 development and creek works are generally in accordance with the intent of the flooding aspects of the WMR with exception of items 1, 2 and 8 above. These issues will have implications on future development of the site and the management of flooding through the site.

Since this letter is required to comment on only Stage 1 and creek works (half creek) and these works have not been simulated in the context of the staged site development, the impacts of the WAEX on flooding cannot be assessed. Therefore, all future site development must be accompanied by flood modelling using Councils flood model, and any future development without flood modelling will render the findings in this letter null and void. In this flood modelling, the progressively completed works would need to be represented from WAEX drawings.

Yours faithfully
GHD Pty Ltd

A handwritten signature in black ink, appearing to be 'R. Berg', written over a horizontal line.

Dr. Rainer Berg
Business Group Manager
02 9239 7247

