



**BARKER RYAN  
CONSULTING**

mail@barkerryan.com.au  
ABN: 47 112 621 539  
[www.barkerryan.com.au](http://www.barkerryan.com.au)

CIVIL ENGINEERS

ACCREDITED CERTIFIERS

PROJECT MANAGERS

ENVIRONMENTAL ENGINEERS

PLANNERS

9/7/08

R/ 241305-  
\$ 30.00

7<sup>th</sup> July 2008

The General Manager  
Pittwater Council  
Unit 11, 5 Vuko Place  
WARRIEWOOD NSW 2102

Dear Sir / Madam,

**Construction Certificate – Cabarita Road 96**

Please find attached a copy of a construction certificate issued for the above development, together with the lodgement fee in the amount of \$30.00.

Yours faithfully

Garry Ryan  
Barker Ryan Consulting Pty Ltd

**SYDNEY**

A: Level 1 409B George Street  
PO Box 378,  
Windsor NSW 2756  
P: 02 4587 9760  
F: 02 4587 9761

**NEWCASTLE**

A: Suite 3, Level 1 464  
Hunter Street, Newcastle  
PO Box 207,  
Newcastle NSW 2300  
P: 02 4929 3639  
F: 02 4929 3686

**CENTRAL COAST**

A: PO Box 523,  
Gosford NSW 2250  
P: 02 4304 1144  
F: 02 4929 3686

20070001

**SOUTH COAST**

A: PO Box 3108,  
Nowra North NSW 2541  
P: 02 4480 6200  
F: 02 4587 9761





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PLANNERS

## Construction Certificate

Issued under S109C(1)(b) of the Environmental Planning and Assessment Act 1979.

### Applicant Details

Timothy Moon Architects Pty Ltd  
PO Box 875, Pymble Business centre

### Development Details

#### Location

Lot 14, DP 858130  
96-104 Cabarita Road, Avalon

#### Consent Details

Pittwater  
DA 714/02 LEC 103154/2003  
18 July 2003  
3 Lot subdivision including construction of internal driveway

### Certification Details

Works completed in accordance with the plans and specifications listed below, will comply with the requirements of the Environmental Planning and Assessment Regulation 2000 as referred to in section 81A(5) of the Environmental Planning and Assessment Act 1979.

### Plans and/or Specification Details

See attached Schedule 1.

### Standards or Requirements Complied With

Consent Condition No.'s 11, 12, 17, 19 & 20 inclusive and Council's Engineering Guidelines for Subdivisions and Developments being, Aus-Spec Development Series Specifications – Design.

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Nowra North NSW 2541  
P: 02 4480 6200  
F: 02 4587 9761

20070001C01.doc



### Accreditation Details

Certificate No.	20070001C01
Date of Issue	4 July 2008
Issued By	Garry Ryan
Accred. No.	BPB0565
Accreditation Body	New South Wales Building Professionals Board

Signed

.....  
*Garry Ryan*



**Schedule 1**  
**Attachment to Construction Certificate No. 20070001C01**  
**List of Plans & Specifications**

Author	Description	Plan No.	Rev.
ACOR	Proposed driveway Plan and Long Section	C1.01	H
ACOR	Proposed Driveway cross Sections	C1.02	F
ACOR	Proposed Stormwater Management Plan	C1.03	G
ACOR	Driveway Sections	C1.04	E
ACOR	Site Plan of Stormwater Catchment Plan	C1.05	B
ACOR	Soil and Water Management Plan	C1.06	C
ACOR	Bulk Earthworks Plan	C2.01	A

# SITEWORKS NOTES

- ORIGIN OF LEVELS AUSTRALIAN HEIGHT DATUM (AHD)
- CONTRACTOR MUST VERIFY ALL DIMENSIONS AND EXISTING LEVELS ON SITE PRIOR TO COMMENCEMENT OF WORK
- ALL WORK IS TO BE UNDERTAKEN IN ACCORDANCE WITH THE DETAILS SHOWN ON THE DRAWINGS. THE SPECIFICATIONS AND THE DIRECTIONS OF THE SUPERINTENDENT
- EXISTING SERVICES HAVE BEEN PLOTTED FROM SUPPLIED DATA AND AS SUCH THEIR ACCURACY CANNOT BE GUARANTEED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH THE LOCATION AND LEVEL OF ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY WORK. ANY DISCREPANCIES SHALL BE REPORTED TO THE SUPERINTENDENT. CLEARANCES SHALL BE OBTAINED FROM THE RELEVANT SERVICE AUTHORITY
- WHERE NEW WORKS ADJUT EXISTING THE CONTRACTOR SHALL ENSURE THAT A SMOOTH EVEN PROFILE FREET FROM ABRUPT CHANGES IS OBTAINED

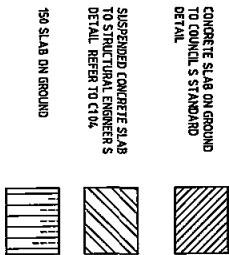
- THE CONTRACTOR SHALL ARRANGE ALL SURVEY SETOUT TO BE CARRIED OUT BY A REGISTERED SURVEYOR
- CARE IS TO BE TAKEN WHEN EXCAVATING NEAR EXISTING SERVICES. NO MECHANICAL EXCAVATIONS ARE TO BE UNDERTAKEN OVER TELECOM OR ELECTRICAL SERVICES. HAND EXCAVATE IN THESE AREAS
- ALL SERVICE TRENCHES UNDER VEHICULAR PAVEMENTS SHALL BE BACKFILLED WITH WELL GRADED GRANULAR MATERIAL, COMPACTED TO THE SPECIFIED DENSITY RATIO AND SO AS TO BE ESSENTIALLY IMPERVIOUS TO WATER ACCUMULATION
- ALL TRENCH BACKFILL MATERIAL SHALL BE COMPACTED TO THE SAME DENSITY AS THE ADJACENT MATERIAL

- ON COMPLETION OF PRE INSTALLATION ALL DISTURBED AREAS MUST BE RESTORED TO ORIGINAL, INCLUDING KERBS, FOOTPATHS, CONCRETE AREAS, GRAVEL AND GRASED AREAS AND ROAD PAVEMENTS
- PROVIDE 12mm WIDE EXPANDING CONK JOINTS BETWEEN BUILDINGS AND ALL CONCRETE PAVEMENTS
- CONTRACTOR TO OBTAIN ALL AUTHORITY APPROVALS
- ALL BATTERS TO BE GRASED LINED WITH MINIMUM 100 TOPSOIL AND APPROVED COUCHLAND AS TOP
- MAKE SMOOTH TRANSITION TO EXISTING SERVICES AND MAKE GOOD
- THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY DRAINAGE DRAINS AND HANDS TO ENSURE THAT AT ALL TIMES EXPOSED SURFACES ARE FREE DRAINING AND WHERE NECESSARY EXCAVATE SWIRPS AND PROVIDE PUMPING EQUIPMENT TO DRAIN EXPOSED AREAS
- THESE PLANS SHALL BE READ IN CONJUNCTION WITH APPROVED ARCHITECTURAL, STRUCTURAL, HYDRAULIC AND MECHANICAL DRAWINGS AND SPECIFICATIONS

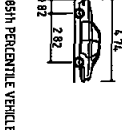
- TRENCHES THROUGH EXISTING ROAD AND CONCRETE PAVEMENTS SHALL BE SKIMOUT TO FULL DEPTH OF CONCRETE AND A MIN 50mm IN BITUMINOUS PAVING
- ALL GRASS, GRASS AND WATER SERVICES UNDER DRIVEWAYS AND BRICK PAVING SHALL BE LIFTED AND RE-PAVED BY VC SEVERE GRADE CONDITIONS EXTENDING 1.0M OF 500mm PAST PAVING
- THE DESIGN LIFE FOR THIS STRUCTURE IS 50 YEARS IN ACCORDANCE WITH AUSTRALIAN STANDARD AS 4586-2006. THE CONTRACTOR SHALL VERIFY THE STABILITY OF THE STRUCTURE FOR ITS INTENDED PURPOSE
- THESE SHALL BE NO 5 TOPPING OF EXCESS MATERIALS ON SITE. ALL EXCESS MATERIALS SHALL BE REMOVED FROM SITE
- ONLY THOSE TREES LISTED BELOW SHALL BE REMOVED FROM SITE. SHOULD FURTHER TREES BE REQUIRED TO BE REMOVED THEN COUNCIL APPROVAL WILL BE REQUIRED

- TREES TO BE REMOVED. REFER TO CAMPBELL AND ANDERSON PLAN 15646 01 FOR TREE NUMBERS AND LOCATIONS  
79 58a 58b 79a 91 93 93a 104 120 121
- ONLY TREES TO BE REMOVED ARE THOSE NECESSARY TO CARRY OUT THE APPROVED CONSTRUCTION WORKS. THE CONTRACTOR SHALL OBTAIN COUNCIL APPROVAL AS UNDESIRABLE FOR RETENTION
- ALL WORKS ARE TO BE CARRIED OUT IN ACCORDANCE WITH COUNCIL SPECIFICATIONS
- ALL EXCESS MATERIAL IS TO BE DISPOSED OFF SITE AND NOT USED AS FILL ACROSS THE SITE
- ALL NATURAL LANDSCAPE FEATURES, INCLUDING NATURAL ROCK OUTCROPS, NATURAL VEGETATION, SOIL AND WATERCOURSES ARE TO REMAIN UNDISTURBED EXCEPT WHERE NECESSARY

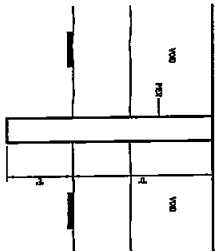
## PAVEMENT LEGEND



NOTE  
THESE DRAWINGS TO BE READ IN CONJUNCTION WITH ARCHITECTURAL PLANS



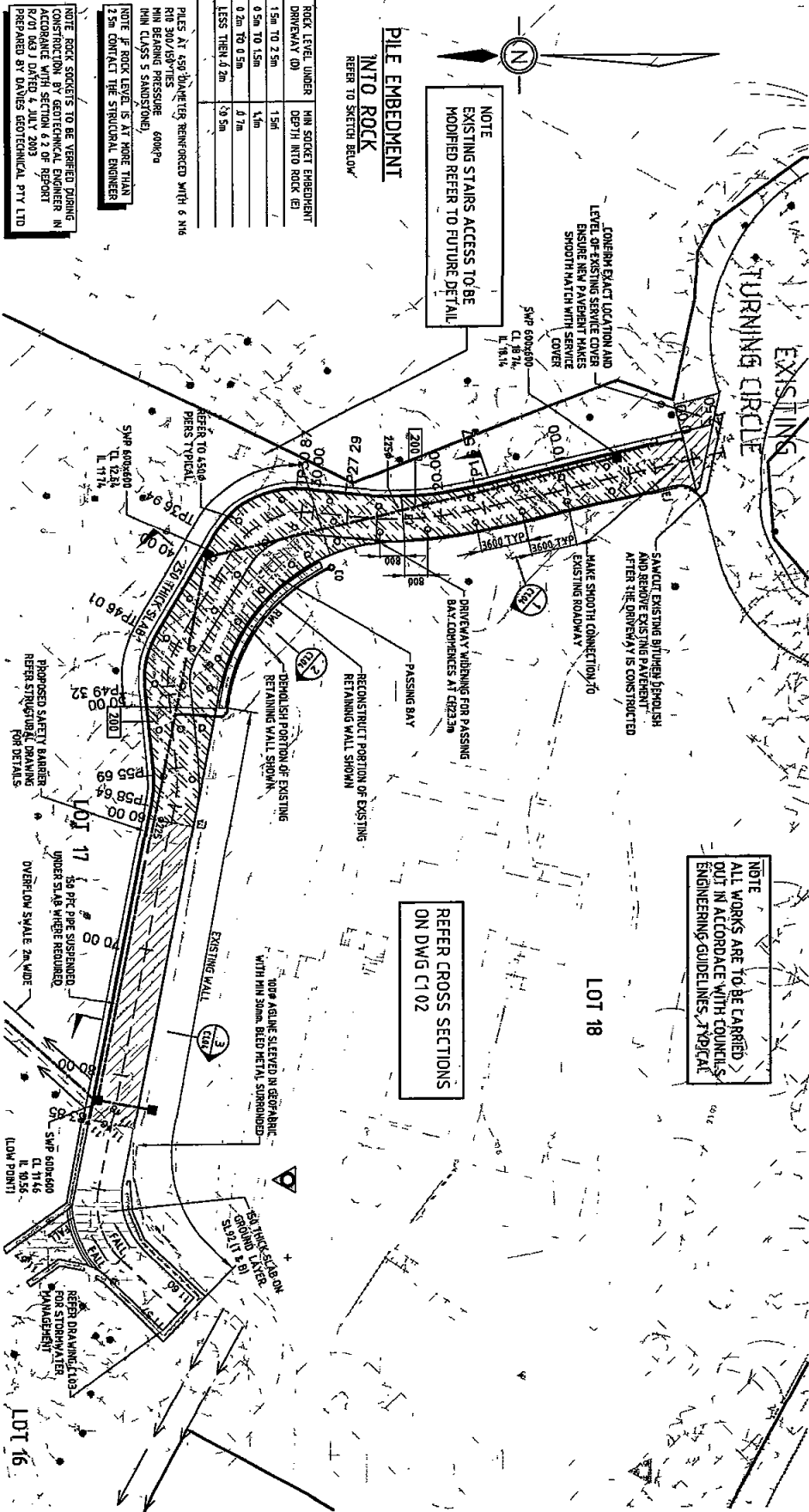
## DESIGN VEHICLE - 85th PERCENTILE



## PILE EMBEDMENT DETAIL

Barker Ryan Consulting Pty Ltd  
CONSTRUCTION CERTIFICATE  
Certificate No  
20070001001  
Date of Issue  
4-17-08  
Issuing Officer  
Garry Ryan  
Accreditation No  
0180565  
These plans/specifications form part of the  
certificate issued by Barker Ryan Consulting Pty Ltd

H	RESUME FOR CC SUBMISSION	04.07.08	H1H	RBS
G	RESUME FOR CC SUBMISSION	03.07.08	H1H	RBS
F	ISSUED FOR CC SUBMISSION	23.06.08	H1H	RBS
E	ISSUED FOR DISCUSSION	19.06.08	JH1	CHS
D	ISSUED FOR DISCUSSION	19.06.08	JH1	CHS
C	GEOTECHNICAL INFORMATION ADDED	19.06.08	JH1	CHS
B	ISSUED FOR APPROVAL	16.12.07	H1H	RBS
A	ISSUED FOR CONSTRUCTION	12.06.07	H1H	RBS
P1	ISSUED FOR COMMENT AND REVIEW	31.05.07	H1H	RBS
Rev	Description	Drawn	Checked	



CHAINAGE	EXISTING LEVELS	DESIGN LEVELS	VERTICAL GRADE	HORIZONTAL GEOMETRY	DATUM 4.0
2.50	19.542	19.542	2.164%	2.164%	19.542
0.00	19.472	19.472	6.00% VC	6.00% VC	19.472
3.00	19.717	19.717	21.64%	21.64%	19.717
6.00	19.912	19.912	31.00% rad	31.00% rad	19.912
15.00	16.067	16.794	25.00% VC	25.00% VC	16.794
16.57	15.777	16.454	3.52% rad	3.52% rad	16.454
25.00	14.311	14.634	25.00% VC	25.00% VC	14.634
27.29	13.823	14.161	2.22% rad	2.22% rad	14.161
30.00	13.218	13.656	1.03%	1.03%	13.656
30.07	13.037	13.508	1.03%	1.03%	13.508
36.94	11.953	12.641	1.03%	1.03%	12.641
37.50	11.826	12.576	1.03%	1.03%	12.576
45.00	10.838	11.196	1.03%	1.03%	11.196
46.07	10.788	11.172	1.03%	1.03%	11.172
49.32	11.003	11.816	1.03%	1.03%	11.816
50.00	11.099	11.806	1.03%	1.03%	11.806
55.69	11.449	11.748	1.03%	1.03%	11.748
58.64	11.478	11.718	1.03%	1.03%	11.718
60.00	11.480	11.704	1.03%	1.03%	11.704
75.00	11.780	11.551	1.03%	1.03%	11.551
80.00	12.042	11.5	1.03%	1.03%	11.5
83.85	12.274	11.46	1.03%	1.03%	11.46

Vertical scale 1:100  
Horizontal scale 1:200

## LONGITUDINAL SECTION - DRIVEWAY CENTRELINE



TIMOTHY MOON  
ARCHITECTS PTY LTD  
PO BOX 875  
PYMBLE NSW 2073  
PHONE (02) 9440 2888  
FAX (02) 9440 2777  
ACN 003 909 578

ACOR CONSULTANTS

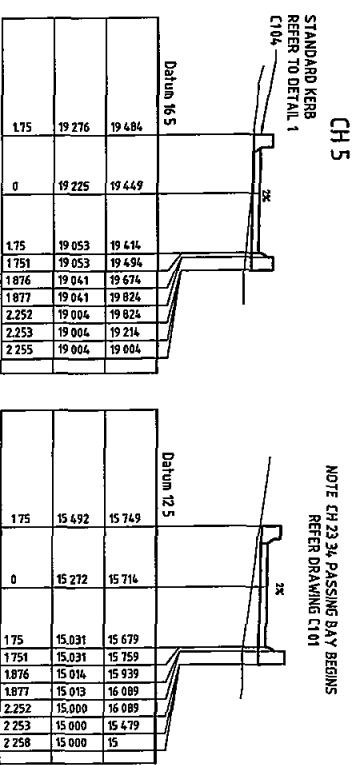
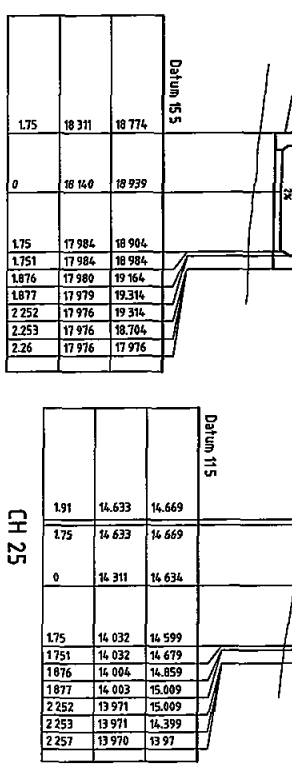
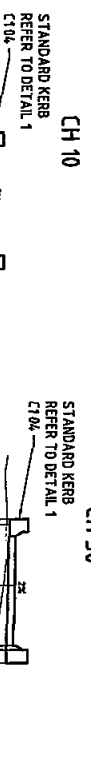
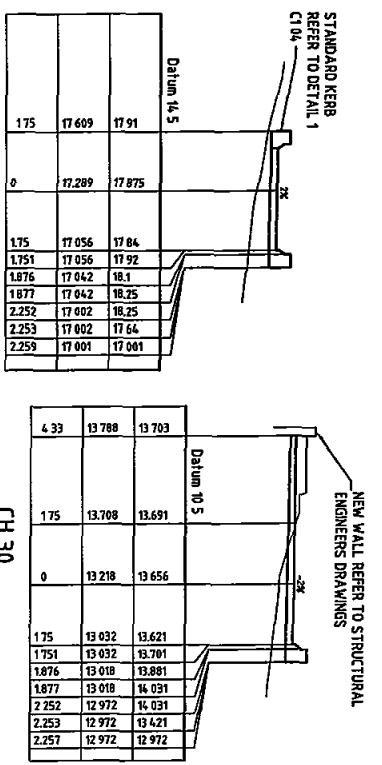
ENGINEERS  
MANAGERS  
INFRASTRUCTURE  
PLANNERS  
Level 1 24 Flock Street  
Crows Nest NSW 1585  
Ph (02) 5488 4088  
fax (02) 5488 4088  
email info@acor.com.au

PROPOSED SUBDIVISION  
AND DRIVEWAY  
PLAN  
56 104 CABARITA ROAD  
ANALON NSW

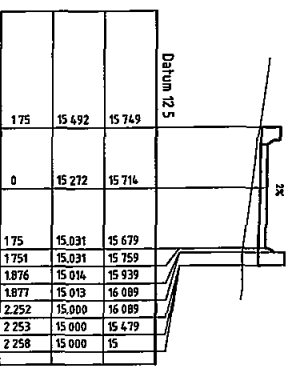
Drawn	Date	Scale	At	Check	Date
H1H	MAY 2007	AS SHOWN			
Checked	Proposed to				
RBS	SY07 0170				

Barker Ryan Consulting Pty Ltd  
CONSTRUCTION CERTIFICATE  
Certificate No  
20070001001  
Date of Issue  
4-11-08  
Issuing Officer  
Accreditation No  
B0565  
These plans/specifications form part of the  
certif cate issued by Barker Ryan Consulting Pty Ltd

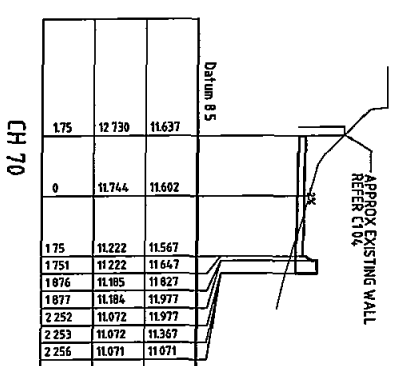
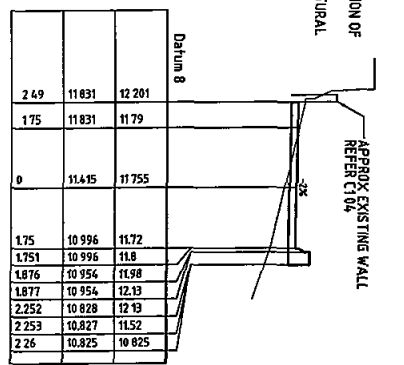
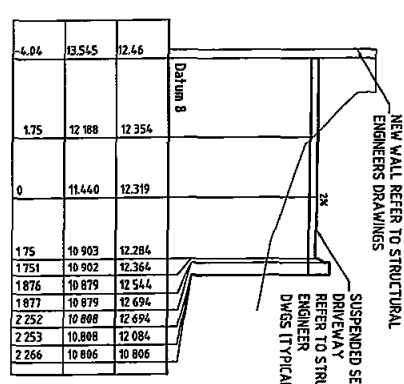
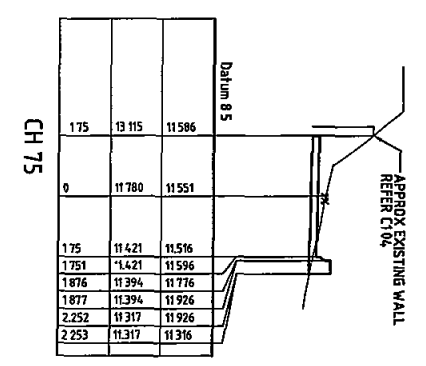
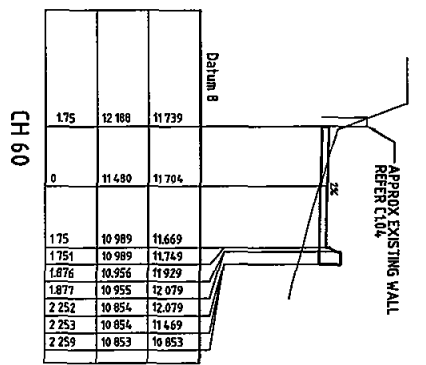
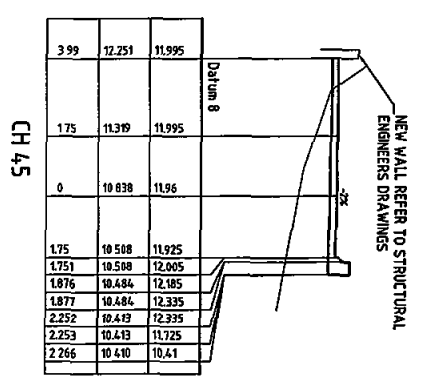
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FOR TYPICAL DRIVEWAY  
DETAILS



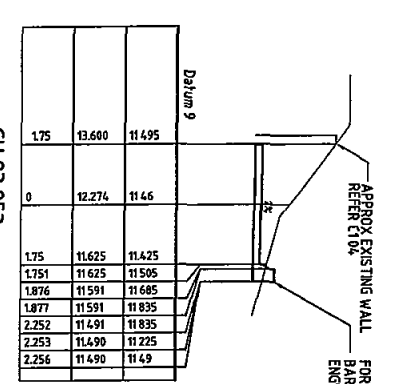
CH 0



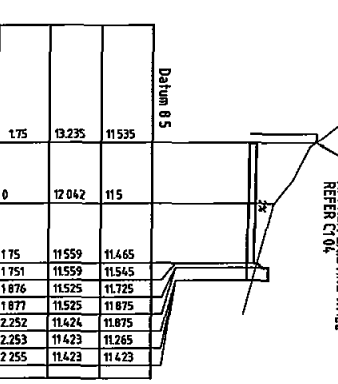
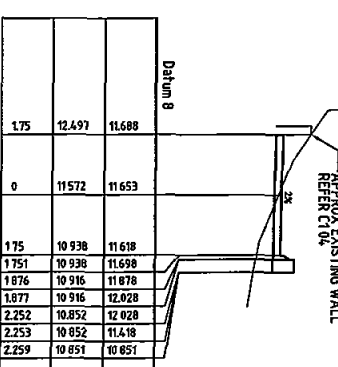
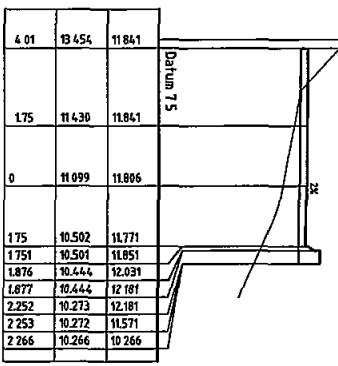
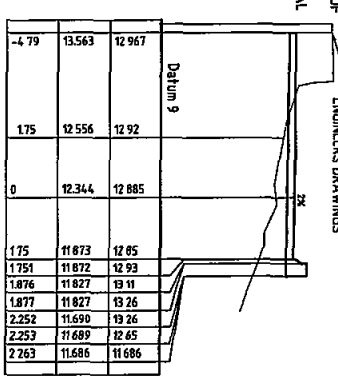
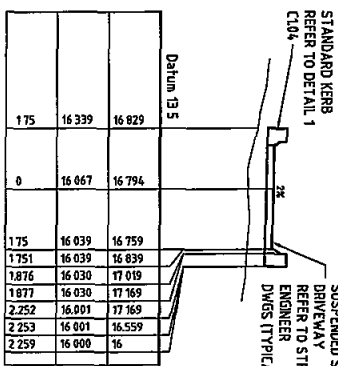
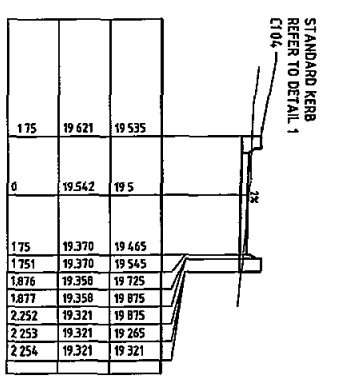
NOTE CH 23 34, PASSING BAY BEGINS  
REFER DRAWING C1 01



CH 83 853



DESIGN LEVELS  
EXISTING LEVELS  
OFFSET



F	ISSUED FOR CC SUBMISSION	22/06/08	H11	R.B.S
E	ISSUED FOR DISCUSSION	10/06/08	JPM	CHR
D	ISSUED FOR PERM 1 APPROVAL	09/06/08	JPT	CHR
C	GEOTECHNICAL INFORMATION ADDED	09/06/08	JPT	CHR
B	ISSUED FOR APPROVAL	04/02/07	HM	RBS
A	ISSUED FOR CONSTRUCTION	11/06/07	HM	RBS
P1	ISSUED FOR COMMENT AND REVIEW	31/05/07	HM	RBS
Issue	Description	Date	Drawn	Check

Author	Client
Architect	Proposed

TIMOTHY MOON  
ARCHITECTS PTY LTD  
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PINEBLE NSW 2073  
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FAX (02) 9440 2777  
ACN 003 809 519

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ENGINEERS  
INFRASTRUCTURE  
PLANNERS  
Level 1 24 Pylon Street  
PO Box 602  
Oxley NSW 2088  
Ph 412 8108 0066  
Fax 412 8108 0066  
Email acor@acorporation.com.au

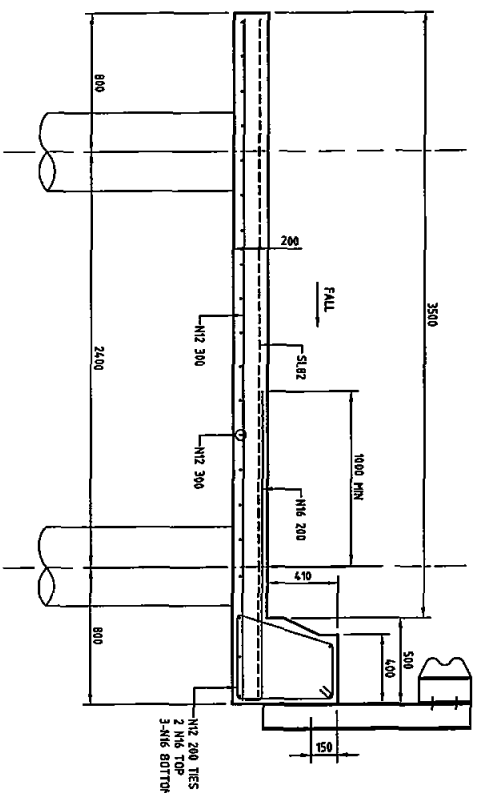
PROPOSED SUBDIVISION  
AND DRIVEWAY  
96 104 CABARRITA ROAD  
AYALTON NSW

Drawn	DATE	Scale	As I DCA Check	Per
H11	MAY 2007	1:100		
Checked	Project No	Draw No	Issue	
R.B.S	SY07 0170	C1 02	F	

ISSUE FOR CC SUBMISSION

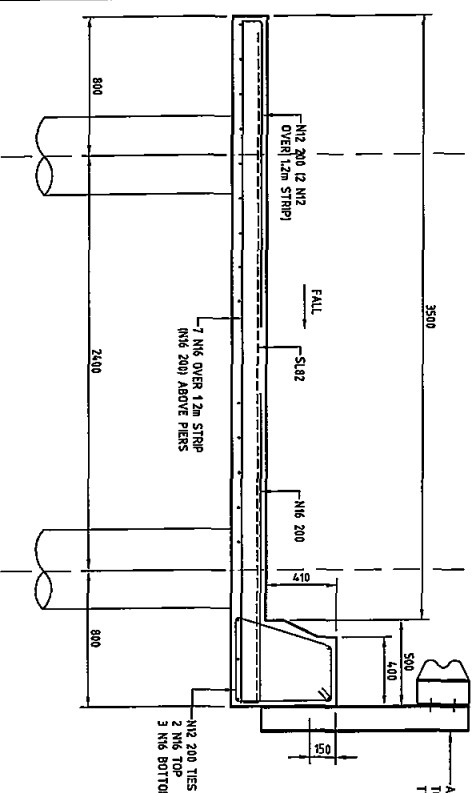






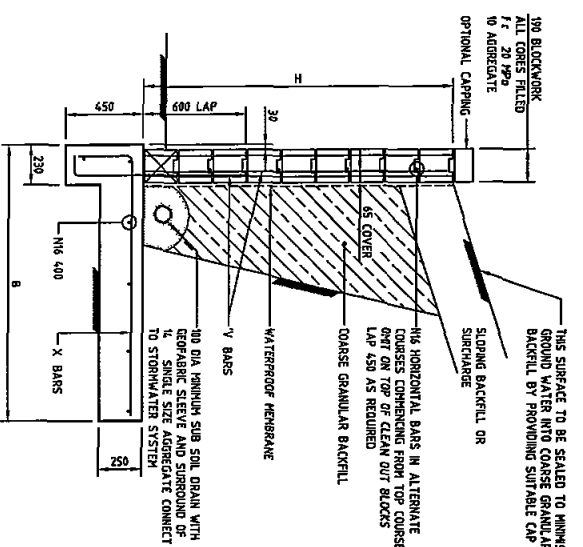
REINFORCEMENT ON SPAN  
SCALE 1:20

SECTION 1  
C101



REINFORCEMENT ON COLUMN  
STRIP (12m WIDE)  
SCALE 1:20

SECTION 1  
C101



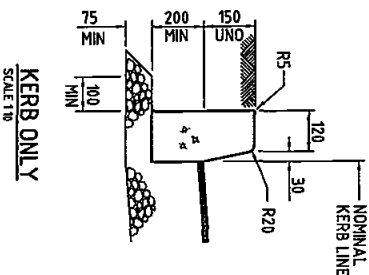
TYPICAL RETAINING WALL DETAIL - RW1  
SCALE 1:20

NOTES:  
1. JOINTS AT 800 MAXIMUM CENTRES  
2. CONCRETE STRENGTH f<sub>c</sub> 25MPa  
3. BLOCKS MUST BE ADEQUATELY PROPPED DURING BACKFILL AND COMPACTION

WALL HEIGHT H	BASE WIDTH FOR BACKFILL WITH NO SURCHARGE SLOPE OF 1 IN 4	BASE WIDTH FOR BACKFILL WITH NO SURCHARGE SLOPE OF 1 IN 4	% & V BARS
<400	400	500	N12 400
400	400	700	N12 400
600	700	900	N12 400
800	900	1000	N12 400
1000	1000	1200	N12 400
1200	1200	1400	N12 400
1400	1400	1600	N12 400
1600	1600	1800	N12 400
1800	1800	2000	N12 400
2000	2000	2200	N12 400

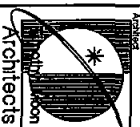
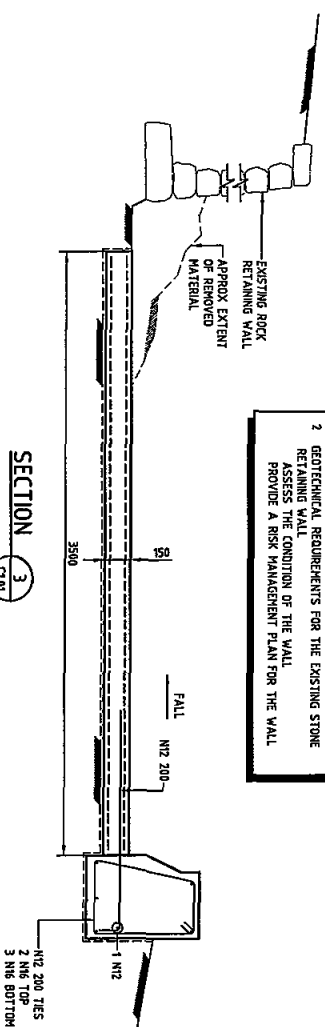
RETAINING WALL SCHEDULE

NOTE:  
1. FOR AREAS WHERE THE EXISTING ROCK RETAINING WALL IS NOT SUITABLE FOR THE PROPOSED EXCAVATION, THE EXISTING RETAINING WALL AND REPLACE WITH NEW RETAINING WALL AS PER TYPICAL DETAIL.  
2. GEOTECHNICAL REQUIREMENTS FOR THE EXISTING STONE RETAINING WALL.  
3. ASSESS THE CONDITION OF THE WALL.  
4. PROVIDE A RISK MANAGEMENT PLAN FOR THE WALL.



KERB ONLY  
SCALE 1:10

SECTION 3  
C101



TIMOTHY MOON  
ARCHITECTS PTY LTD  
PO BOX 875  
PYRMONT NSW 2073  
PHONE (02) 9440 2888  
FAX (02) 9440 2777  
ACN 003 903 919

ACOR



ACOR CONSULTANTS  
ENGINEERS  
MANAGERS  
INFRASTRUCTURE  
PLANNERS  
Land 1 st Floor 222  
Crown Hill NSW 2065  
Ph 412 2448 6508  
Fax 412 2448 6509  
Email info@acor.com.au

PROPOSED SUBDIVISION  
AND DRIVEWAY  
AVAILON NSW

Barker Ryan Consulting Pty Ltd  
CONSTRUCTION CERTIFICATE  
Certificate No 2007000101  
Date of Issue 4/1/08  
Issuing Officer Gary Ryan  
Accreditation No BFB0565  
These plans/specifications form part of the certificate issued by Barker Ryan Consulting Pty Ltd

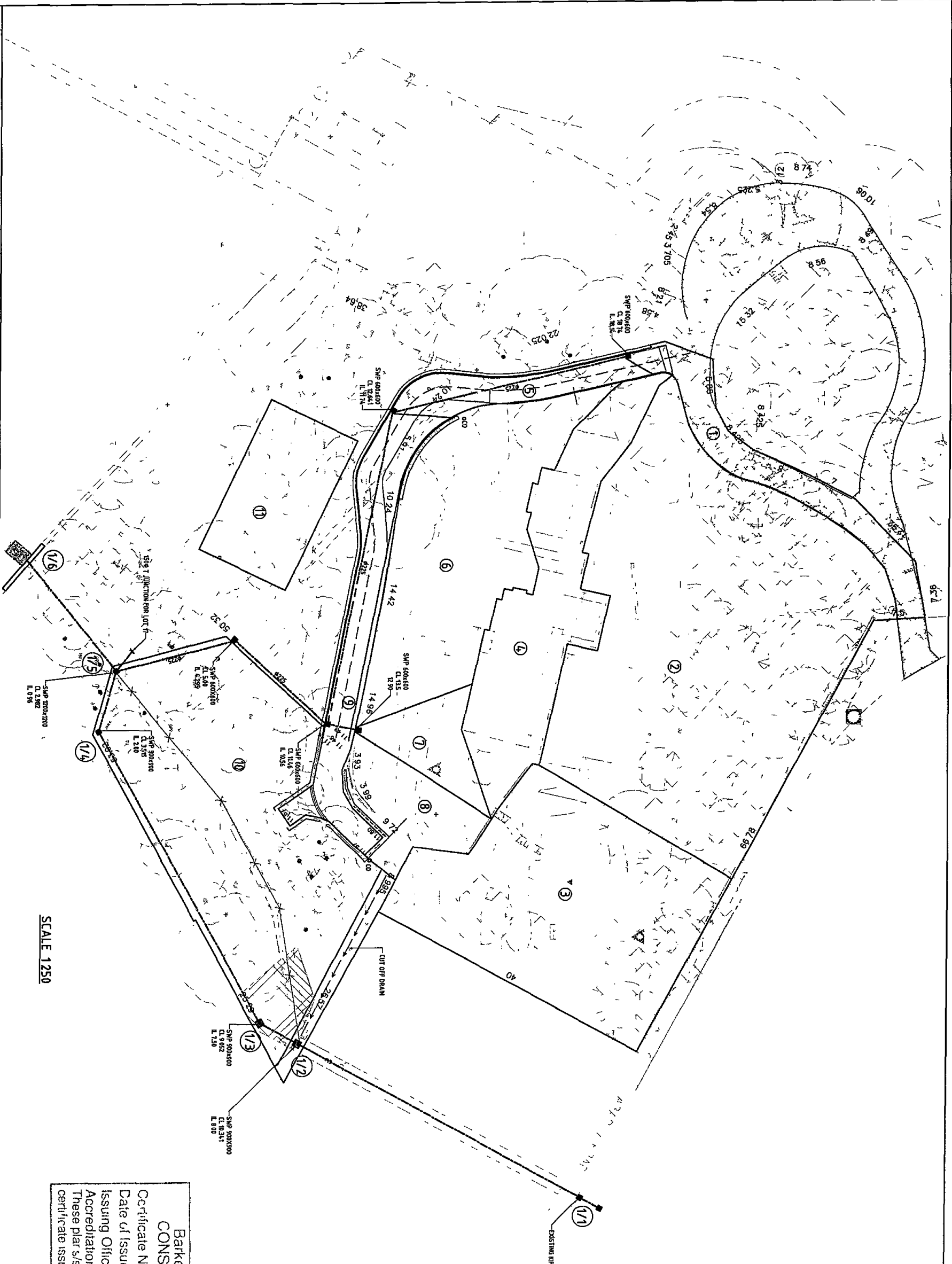
ISSUE FOR CC SUBMISSION

DRIVEWAY SECTIONS

Drawn	Scale	At	Date
H114	MAY 2007	1:1	2007
Checked	Project	Drawn	Scale
R.B.S.	SY07 0170	C1 04	E



AREA	PERVIOUS	PERVIOUS
1 232m <sup>2</sup>	100%	0%
2 1734m <sup>2</sup>	20%	80%
3 1045m <sup>2</sup>	20%	80%
4 538m <sup>2</sup>	100%	0%
5 144m <sup>2</sup>	100%	0%
6-106m <sup>2</sup>	30%	70%
7 144m <sup>2</sup>	30%	70%
8 772m <sup>2</sup>	30%	70%
9 268m <sup>2</sup>	100%	0%
10 1158m <sup>2</sup>	75%	25%
11 326m <sup>2</sup>	100%	0%



Barker Ryan Consulting Pty Ltd  
CONSTRUCTION CERTIFICATE  
Certificate No  
20070001001  
Date of Issue  
4/7/06  
Issuing Officer  
Gerry Ryan  
Accreditation No  
050565  
These plan/s/specifications form part of the  
certificate issued by Barker Ryan Consulting Pty Ltd

ISSUE FOR CC SUBMISSION

Name		Client		Project		Drawing Title	
				PROPOSED SUBDIVISION AND DRIVEWAY 98-104 CABARRITA ROAD AVALON NSW		SITE PLAN OF STORMWATER CATCHMENT CONCEPT PLAN	
Drawn		Date		Scale		At	
H.H.H.		MAY 2007		1:250		D.A. Glick	
Checked		Signature		Date		Rev	
R.B.S.		SY07 0170		C1 05		B	
Revision		Date		Drawn		Checked	
B		02/07/06		H.H.H.		R.B.S.	
A		23/06/06		H.H.H.		R.B.S.	
Title		Description		Drawn		Checked	
BARKER RYAN CONSULTING		ARCHITECTS PTY LTD		ARCHITECTS		ARCHITECTS	
PO BOX 6715		PO BOX 6715		PO BOX 6715		PO BOX 6715	
PHONE (02) 9440 2888		PHONE (02) 9440 2888		PHONE (02) 9440 2888		PHONE (02) 9440 2888	
FAX (02) 9440 2777		FAX (02) 9440 2777		FAX (02) 9440 2777		FAX (02) 9440 2777	
ACN 005 909 919		ACN 005 909 919		ACN 005 909 919		ACN 005 909 919	







