



Pittwater Council

ABN 61 340 837 871

All Correspondence to be addressed to General Manager

Units 9, 11 & 12/ 5 Vuko Place
WARRIEWOOD NSW 2102
Avalon Customer Service Centre
59A Old Barrenjoey Road, AVALON 2107

Postal Address
P.O. Box 882
MONA VALE NSW 1660
DX 9018 MONA VALE

Telephone (02) 9970 1111
Facsimile (02) 9970 7150
Internet www.pittwaterlga.com.au
Email: pittwater_council@pittwater.nsw.gov.au

Environmental Compliance
8am to 6pm Mon - Thurs, 8am to 5pm Fri
Phone 9970 1111

9 December 2003

Register
COPY

AWARD POOLS & LANDSCAPES
LOT 4 OLD WINDSOR ROAD
KELLYVILLE NSW 2155

Dear Sir/Madam

Re: Construction Certificate CC0289/03
Property: 27C ALEXANDRA CRESCENT BAYVIEW NSW 2104

Please find enclosed your approved Construction Certificate and stamped plans.

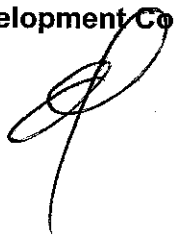
Did you know that work is unable to commence until such time as a completed **Notification of Commencement Form** has been submitted to Council at least two (2) days prior to starting work? To assist you please find enclosed a Notification of Commencement Form and Information Sheet.

Council is committed to providing a quality service and would value your business in being appointed as the Principal Certifying Authority for your development.

An Officer will contact you in the next few days to discuss your development and help ensure your development progresses smoothly.

Yours faithfully

Development Compliance Group

Per: 



Pittwater Council

Construction Certificate No: CC0289/03

Site Details: **27C ALEXANDRA CRESCENT BAYVIEW NSW 2104**

Legal Description: **Lot 33 DP 876610**

Type of Development: **Building Work**

Description: **a swimming pool**

Associated Development Consent No: **N0435/03** Dated: **01/10/2003**

Building Code of Australia Certification: **Class 10b**

COPY

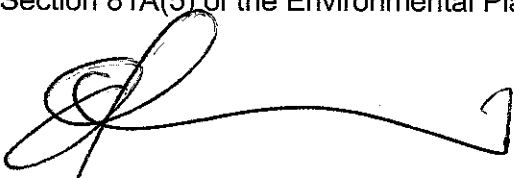
Details of plans, documents or Certificates to which this Certificate relates:

- **Structural plans prepared by D K Martin Pty Ltd
Drawing No AP002 Sheets 1 of 4, 2 of 4, 3 of 4 and 4 of 4 dated 16/03/03**
- **Landscape plan prepared by Syncarpia Vegetation Management
Drawing 1 of 1 dated 20/10/03**
- **Geotechnical Risk Management Policy for Pittwater – Form 2
prepared by Paul Wilson & Peter Wright dated 30/10/03**
- **Geotechnical Risk Management Policy for Pittwater – Form 2
prepared by Donald Martin & Paul Stubbs dated 04/11/03**
- **Hydraulic Services/Site Plan prepared by Sparks & Partners
Job No 01473 Drawing SW/01 Issue B dated April 2002.**

I hereby certify that the above plans, documents or Certificates satisfy:

- The relevant provisions of the Building Code of Australia.
- The relevant conditions of Development Consent No: N0435/03

Further that the work, completed in accordance with the Building Code of Australia, all relevant Australian Standards and these plans and specifications, will comply with the requirements of Section 81A(5) of the Environmental Planning and Assessment (Amendment) Act, 1997.



Darren Greenow
Development Compliance Group

9 December 2003
Date of Endorsement

Note: You are reminded that pursuant to provisions of Clause 81A, you must nominate whether Council or an accredited certifier will be the principal certifying authority, also you must give notice to Council of your intention to commence work at least two days beforehand.

SPECIFICATION

ALL DIMENSIONS TO BE CHECKED ON SITE, ADJUST IF NECESSARY TO GIVE REQUIRED BOUNDARY CLEARANCES AND SET BACKS FROM SUDNEY WATER SEWER, AUTHORITY STORMWATER DRAINS ETC.

NOTE: POOL IS NOT DESIGNED FOR DIVING.

POOL SETOUT ON SITE TO BE CONFIRMED WITH OWNER BEFORE COMMENCING TO DIG. CONCRETE SIZES SHOWN ARE EXCLUSIVE OF REINFORCING OR OTHER INTERNAL FINISH AND SHALL NOT BE VARIED OR PENETRATED BY HOLES UNLESS SHOWN ON PLAN OR APPROVED BY ENGINEER.

PVC PLUMBING PIPES TO BE 50mm FROM STEEL REINFORCEMENT, OR IF TIED TO STEEL REINFORCEMENT TO BE FULLY ENCASED WITH AT LEAST 50mm CONCRETE COVER.

FOUNDATION MATERIAL TO BE INSPECTED FOR SAFE BEARING CAPACITY OF AT LEAST 200kPa.

POOL WALLS NOT TO PROJECT MORE THAN 600mm OUT OF SOUND SUPPORTING MATERIAL (AT LEAST 200kPa MATERIAL) OR SEEK ENGINEERING ADVICE.

PROVIDE 10mm EXPANSION JOINT MATERIAL BETWEEN POOL CONCRETE AND ALL EXISTING RIGID STRUCTURES ON THE SITE INCLUDING BRICK WALLS OF HOUSE, DRIVEWAY SLAB ETC.

WALKWAYS HAVE BEEN DESIGNED FOR A SUPERIMPOSED LOAD OF 3kPa.

ADDITIONAL LOAD NOT TO BE PLACED ON WALKWAYS UNLESS ALLOWED FOR IN THE DESIGN (OR REFER TO ENGINEER).

REINFORCEMENT TO BE STRUCTURAL GRADE 250 DEFORMED BAR TO AS1302 LAPPED 450mm AS REQUIRED, TIED SECURELY WITH 1.2mm ANNEALED WIRE AND SHALL BE SUPPORTED ON APPROVED TYPE BAR CHAIRS AT 900mm CENTRES BOTH WAYS.

MINIMUM CONCRETE COVER TO REINFORCEMENT TO BE 50mm FROM WATER FACE FOR POOL FLOOR WALLS AND TOP OF WALKWAY, 75mm FROM SOIL FACE, 50mm FROM EDGE BOARDS.

CONCRETE Fc 25MPa AT 28 DAYS (32MPa WHERE WITHIN ONE KILOMETRE OF SEA) USING 10mm MAXIMUM AGGREGATE SIZE (POOL MAX) SLUMP 75mm. ADDITIVES NOT PERMITTED WITHOUT APPROVAL.

DESIGN COMPLIES WITH RELEVANT SECTIONS OF AS3600 AND AS2783 ISSUE 1992 FOR PNEUMATICALLY APPLIED CONCRETE FOR USE IN REINFORCED SWIMMING POOLS. ENGINEER TO BE NOTIFIED TO INSPECT REINFORCEMENT PRIOR TO CONCRETE PLACEMENT.

PROVIDE 10mm CONTROL JOINTS AT MAXIMUM 3500mm CENTRES AND AT ALL POINTS OF CONTRA-CURVATURE IN PLAN VIEW OF WALKWAY FINISH. PROVIDE 10mm CONTROL AT JUNCTION OF ANY ADDITIONAL PAVING TO POOL STRUCTURE AND/OR POOL FINISHES.

TILE PAVEMENTS IN POOL AREA TO BE LAID IN ACCORDANCE WITH AS3958-1 AND AS3958-2.

DESIGN SUITABLE FOR CLASS A, S OR M SITE CLASSIFIED UNDER AS2670-1996.

THIS DRAWING IS A STANDARD SPECIFICATION. ITEMS SHOWN ARE INCLUDED ONLY WHEN INDICATED IN CONTRACT.

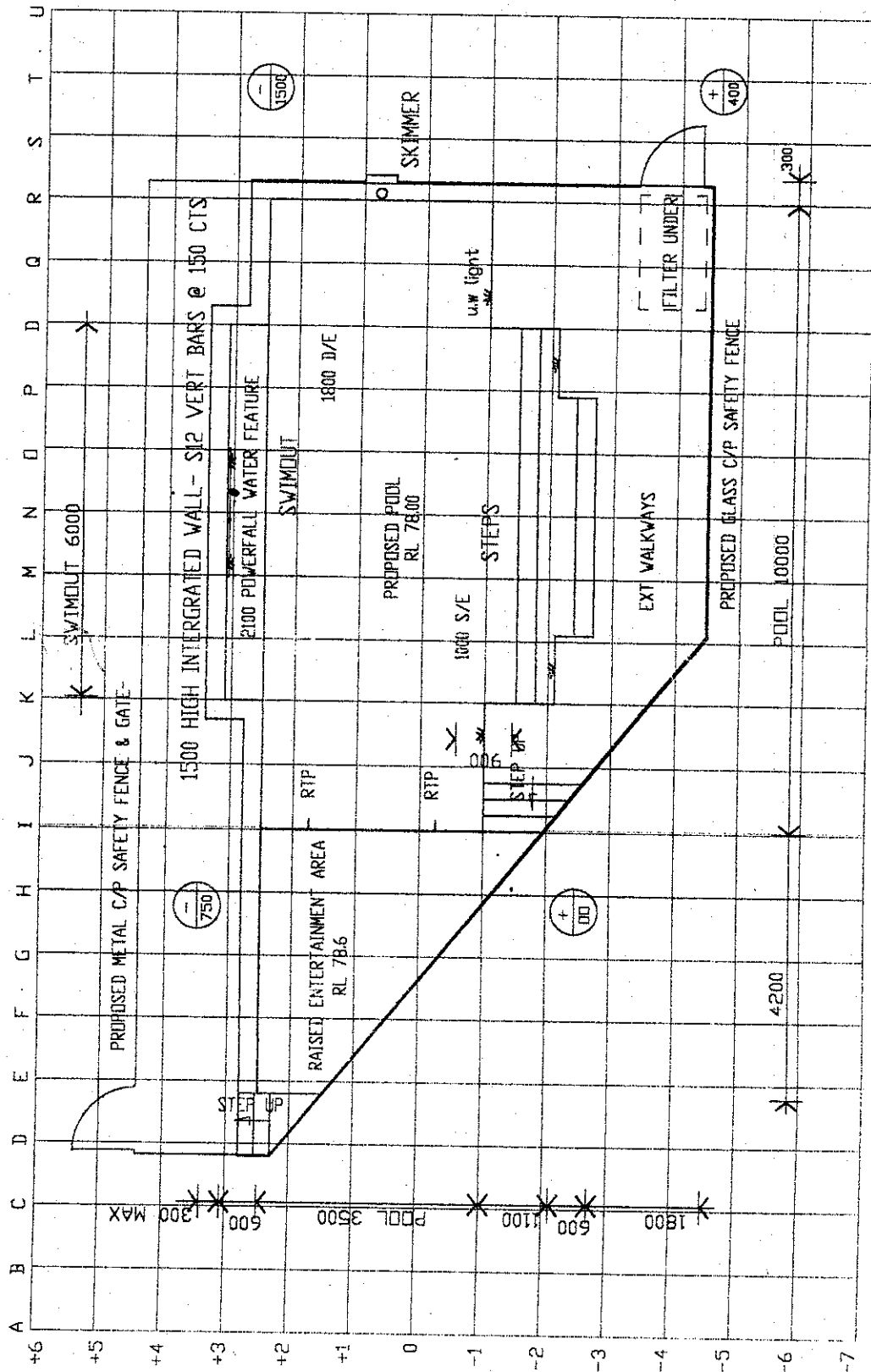
THIS DRAWING IS NOT PART OF ANY CONTRACT.

PLANS ARE ONLY APPROVED WHEN BEARING AN ORIGINAL SIGNATURE OF THE ENGINEER.

NOTE: POOL TO BE CONSTRUCTED IN ACCORDANCE WITH THE GEOTECH REPORT BY GDK KEIGHRAN GEOTECHNICS- DATED 12 FEB 2003 ADJOINING NEIGHBOURS RESIDENCE

ALL BASE / FOOTINGS OF POOL AND WALKWAYS TO BE FOUNDED ON SAME STRATA- SANDSTONE BEDROCK AS PER GEOTECH REPORT 450 dia. PIERS @ 1500 CTS ARE TO BE PROVIDED ON THE LOWER SIDE OF THE POOL AND MUST BE FOUNDED AT LEAST 200mm INTO HIGHLY WEATHERED OR BETTER SANDSTONE BEDROCK

AN ALLOWABLE DESIGN BEARING PRESSURE OF 600kPa IS REQUIRED- SEE GEOTECH REPORT



POOL PLAN
SCALE: 1:100

LEVELS SHOWN INDICATE FINISHED STRUCTURAL LEVEL
OR BELOW
EXISTING GROUND LEVELS.

PITTSBURGH COUNCIL CONSTRUCTION CERTIFICATE	
Number:	CC0289/03
This is a copy of submitted plans, documents, Certificates associated with the issue of the Construction Certificate.	
Endorsed by:	
Date:	09 DEC 2003

D.K. MARTIN PTY LTD
CONSULTING STRUCTURAL ENGINEERS
89 HIGHS ROAD, WEST PENNANT HILLS, NSW 2125
PH: (02) 9634 3541 FAX: (02) 9889 8361 MOB: 0408 413 768

Signature: *[Signature]* Date: / / D. K. MARTIN
B.E., M.I.E. Aust

AWARD POOLS & LANDSCAPES

PO BOX 6763, BAULKHAM HILLS BUSINESS CENTRE 2153

Tel: -9629 3639 BUILDERS LIC- 41211

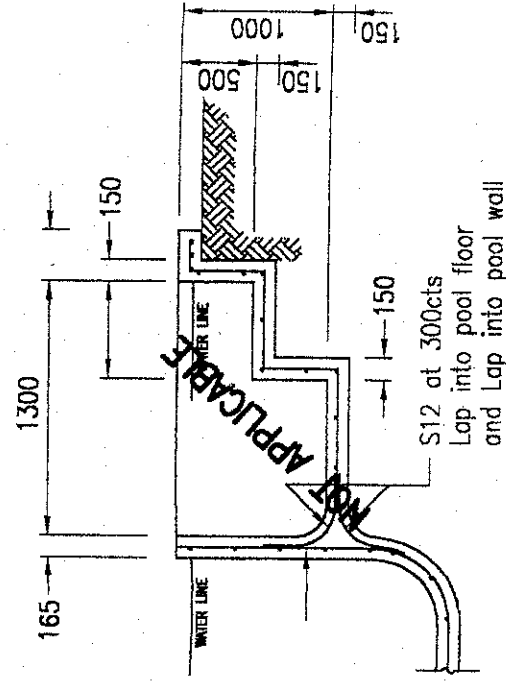
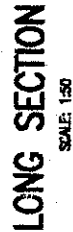
PROPOSED INGROUND CONCRETE SWIMMING POOL

FOR **MR & MRS MARROCCO**

AT **27 c ALEXANDRA CR**

DATE **16/03/03** DRAWN **JF** SCALE **AS SHOWN** SHEET **1 OF 4** DWG No. **AP002**

SUBURB **BAYVIEW**



SPA SECTION

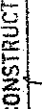
DESK STUDIES

HEIGHT OF WALKWAY ABOVE ADJACENT GROUND	A _____	B _____
	C _____	D _____
WALKWAY WIDTH REINFORCEMENT		
300mm and 350mm	4/S12	
450mm	4/S12	
600mm	5/S12	
800mm	6/S12	
900mm	7/S12	



HYDROSTATIC RELIEF VALVE SCUTTLING TYPE

SCALE 1:25

PITTSBURGH COUNCIL ON CONSTRUCTION CERTIFICATE
Number: CC 0289 03
This is a copy of submitted plans, documents or Certificates associated with the issue of the Construction Certificate.
Endorsed by: 
Date: 09 DEC 2003

Typical wall and floor reinforcement S12 at 300mm centres both ways. Where pool wall extends more than 600mm above undisturbed subsoil (200Kpa material) and/or where depth of excavation in other than rock exceeds 1800mm, provide additional vertical bars S12 at 300(droppers) to extend from 450 below walkway level 1200mm into floor. Cover base of excavation with 100uM PVC membrane to separate concrete from natural or constructed drainage layer. Reinforcement bar chairs - 75mm from soil face, 50mm from edge board. 120mm at depth of 1500mm and deeper where pool wall extends 1500mm or more out of firm ground. Pool safety fence complete with self latching gate to comply with AS1926. Note: Pool fencing is owner's responsibility. Where pool walkway/coping level is in part below adjoining ground levels, provide surface catch drains and/or sub-surface drains to divert stormwater and/or ground water away from pool.

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 89 HIGHS ROAD, WEST PENNANT HILLS, NSW 2125
 PH: (02) 9634 3541 FAX: (02) 9899-8361 MOB: 0408 413 768
 ACN 002 044 831

Signature: [Signature] Date: 11/11/11 D K MARTIN

Tel: --9629 3639 BUILDERS I/C-- 41211

AWARD POOLS & LANDSCAPES

PO BOX 6763, BAULKHAM HILLS BUSINESS CENTRE 2153

PROPOSED INGROUND CONCRETE SWIMMING POOL

FOR MR & MRS MARROCCO

AT 27 C ALEXANDRIA CR

STIRRED
PAYMENT

SILTATION & SEDIMENTATION CONTROL PLAN

A SEDIMENTATION BARRIER SHALL BE ERECTED TO PREVENT RUN-OFF INTO ADJOINING NEIGHBOURS RESIDENCE

SANDBAGS SHALL BE USED TO PREVENT RUN-OFF INTO EXISTING STORMWATER SYSTEM

WASTE MANAGEMENT PLAN

ALL EXCAVATED MATERIAL SHALL BE REMOVED FROM SITE

NO CONSTRUCTION MACHINERY TO REMAIN ON SITE

ALL CONSTRUCTION WASTE SHALL BE DEPOSITED AT THE DESIGNATED STOCKPILE AREA AND REMOVED FROM SITE

ACCESS WAYS SHALL BE KEPT CLEAR AT ALL TIMES, SOIL TRANSPORT MACHINERY SHALL BE CLEANED DOWN PRIOR TO ENTERING PUBLIC ROADWAYS



STOCKPILE AREA

DWELLING

1200 APPROX TO BUILD

PROPOSED CONCRETE POOL

1200 HIGH CHILD SAFETY POOL FENCE AND SELF CLOSING GATE

TO COMPLY TO AS1926-93 & COUNCIL REQUIREMENTS, by others

SEDIMENTATION BARRIER

LANDSCAPE PLAN

FUTURE PLANTING BY OTHERS, SURROUND OF POOL TO BE LANDSCAPED TO SUIT ENVIRONMENT AND EXISTING LANDSCAPED AREAS

D.K. MARTIN PTY LTD ACN 002 044 831
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89 HIGHS ROAD, WEST PENNANT HILLS, NSW 2125
PH: (02) 9634 3541 FAX: (02) 9699 8361 MOB: 0408 413 768

Signature: Date: / / D. K. MARTIN

AWARD POOLS & LANDSCAPES

PO BOX 6763, BAULKHAM HILLS BUSINESS CENTRE 2153

Tel: -9629 3639 BUILDERS LIC- 41211

FOR **MR & MRS MARROCCO**

AT **27 c ALEXANDRA CR**

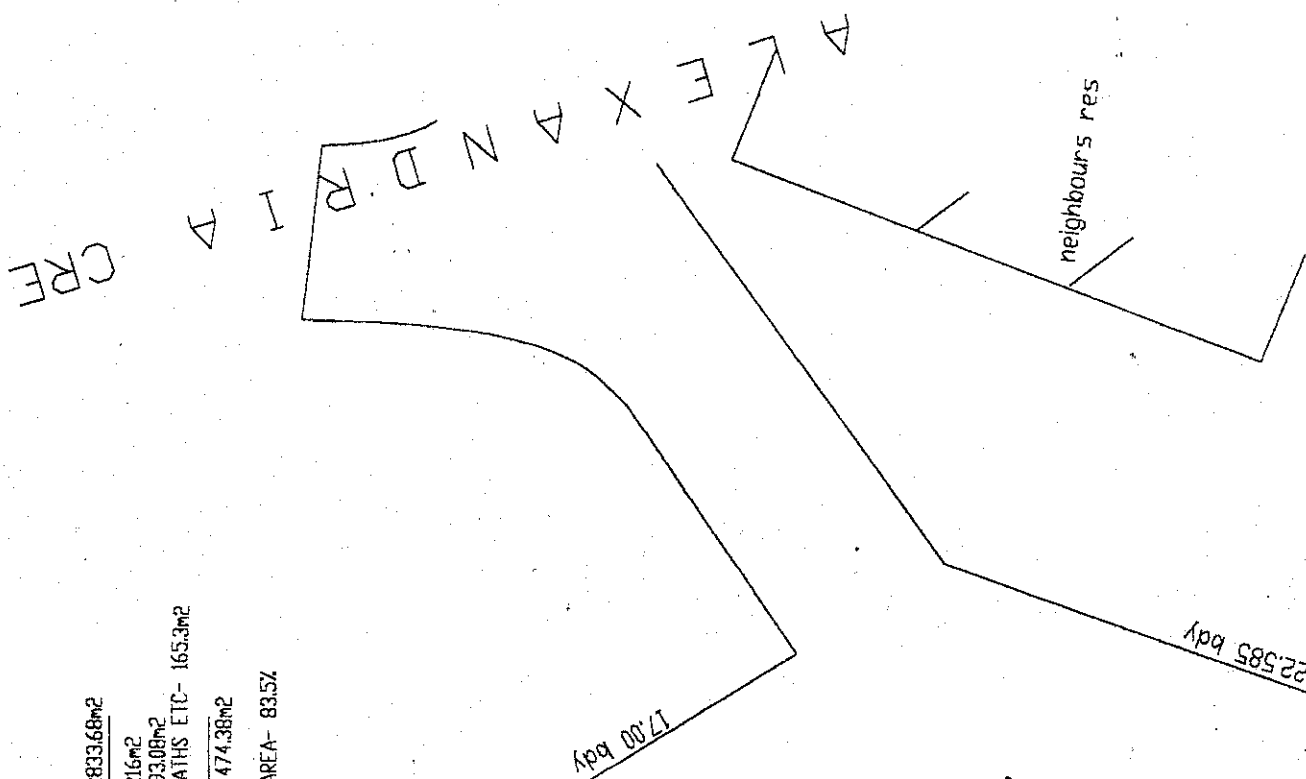
DATE **16/03/03** DRAWN **JF** SCALE **AS SHOWN** SHEET **2 OF 4** PIANO NO **AP0002**

PROPOSED INGROUND CONCRETE SWIMMING POOL

PITTSWATER COUNCIL CONSTRUCTION CERTIFICATE	
Number:	CC 0289/03
This is a copy of submitted plans, documents or Certificates associated with the issue of the Construction Certificate	
Endorsed by:	
Date:	09 DEC 2003

SWIMMING POOL SITE
SCALE: 1:250

SITE AREA- 2833.68m²
RESIDENCE- 216m²
PROP POOL- 93.08m²
DRIVEWAY/ PATHS ETC- 165.3m²
TOTAL BUA- 474.38m²
LANDSCAPED AREA- 83.5%



△ DATUM: AS PER SURVEY PLAN OF SITE- NEIGHBOURS 1ST STORY EAVE RL- 73.67 -AS MARKED
Top of finished coping to be 43.30 ABOVE datum point (RL- 48.00)

3-S-12 Bent Bars
each way, all round

3-S-12 1500 lg

650

WATER LINE

3-S12 (extra)
1500mm long
under skimmer

650

3-S-12 1500 lg

3-S12 (extra)
1500mm long
under skimmer

FRONT VIEW SKIMMER

DATE: 4-27-

SKIMMER SECTION

SCALE: 1:25

FOOTING PIERS WHERE ADJACENT TO SYDNEY WATER SEWER

SCALE: 1:25

Leave rough

750 MAX

—

WATER LINE

3-S12 Bars

3-S12 Bars

BOND BEAM DETAIL

SCANS 1:25

BUSH ROCK EDGE DETAIL

9041 F. 1-75

WATERFALL DETAILS

SCALE: 1-25

GREATER THAN 900 300 dia. Concrete Piers
at 2000cfs.

Std Walkway Max. 900 OR PROVIDE PIERS

S12-- 200 CTS ALONG WALKWAY

WATER LINE

S12 Bent Bars at 300cts
150cts for widths >900mm

S12 - 150 CTS EOP WALKWAY

150

1

CANTERLEVER WALKWAY DETAIL-MAX 900

CALL: 1-25

WALKWAY SUPPORT PIERS DETAIL

56-1-31635

at 2000cts.

KWAY WIDENS OVER 1000'

Where pool excavation
Provide 300 dia piers
Out of ground piers

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ACN 002 044 831

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~~(b)(7) DCP, (b)(7) DPP~~

Signature  Date  D. K. MARTIN
S.E., MJE Aust

AWARD POOLS & LANDSCAPES

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Tel: -9629 3639 BUILDERS LIC- 41211

FOR
MR & MRS MARROCCO

AT 27 c ALEXANDRIA C8

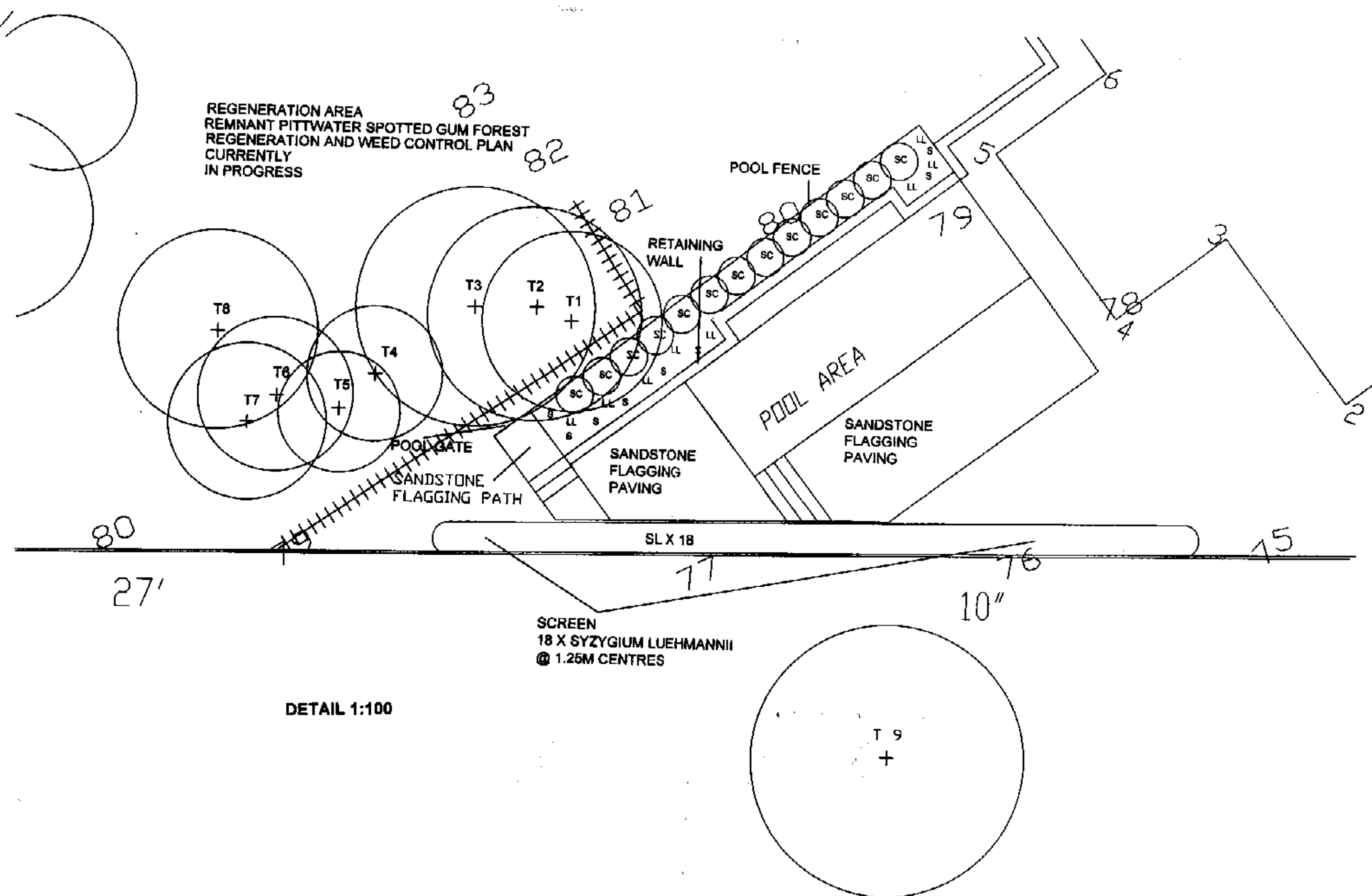
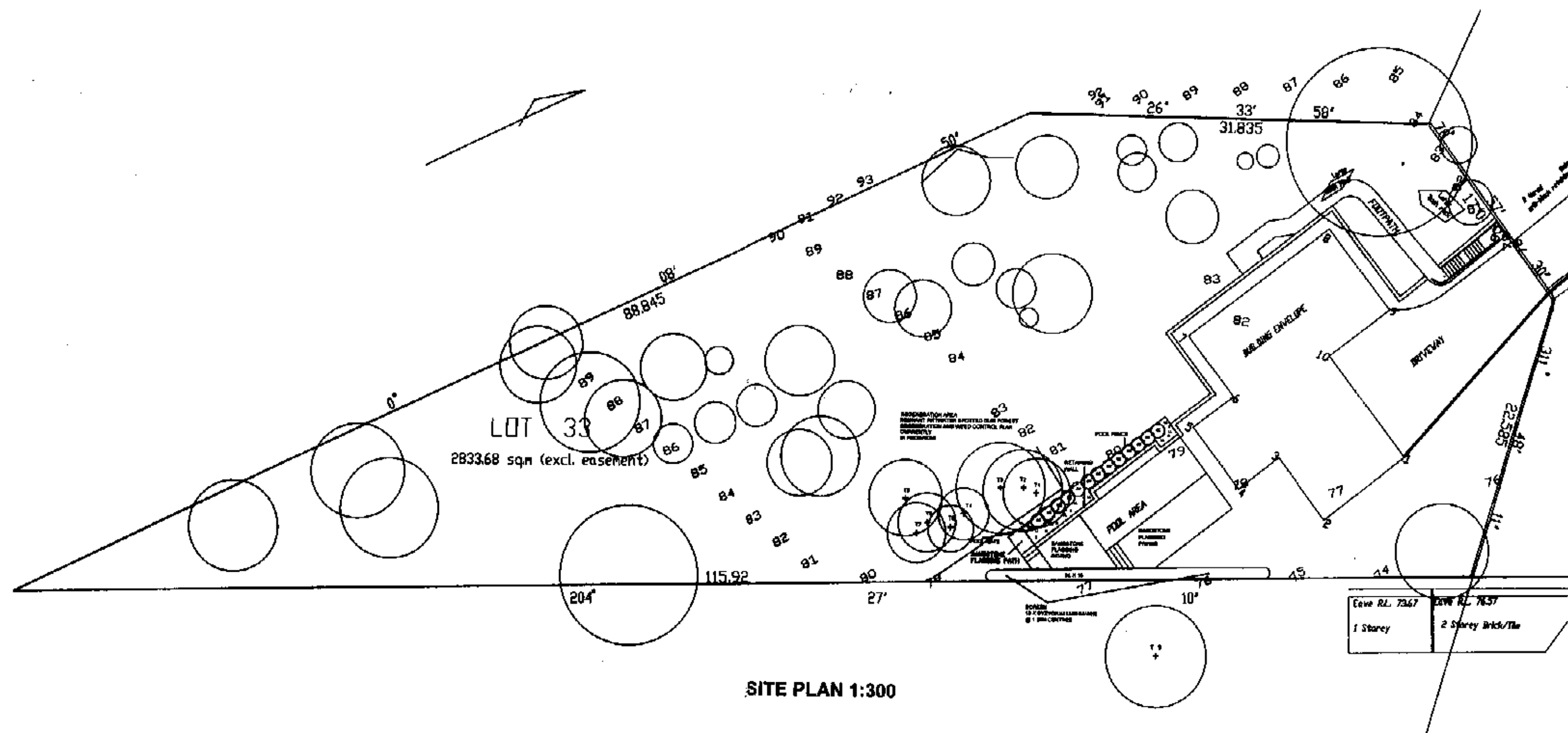
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SCALE AS SHOWN

7307

AP02



EXISTING TREE SURVEY

KEY	Botanical Name	Common Name	Assessment	DBH	Proposal
T1	<i>Glochidion ferdinandi</i>	Cheese Tree	Semi-mature Height = 8m Canopy = 4m Suppressed development of canopy. Health = good Condition = good	200mm	Retain Protect Does not require removal for proposed development
T2	<i>Corymbia maculata</i>	Spotted Gum	Semi-mature Height = 18m Canopy = 5m Trunk wound at 4m with extensive swelling indicating decay. Extensive dieback throughout canopy. Very sparse foliage cover. No habitat hollows. Health = poor Condition = poor	520mm	Retain Does not require removal for proposed development
T3	<i>Glochidion ferdinandi</i>	Cheese Tree	Semi-mature Height = 13m Canopy = 7m Co-dominant trunks with inclusion. Trunk wound at 2m decay evident. Co-dominant leaders at 4.5m with inclusion. Health = Fair Condition = Fair	250mm & 200mm	Retain Does not require removal for proposed development
T4	<i>Syncarpia glomulifera</i>	Turpentine	Semi-mature Height = 8m Canopy = 6m Suppressed canopy development. Cissus antartica damage to canopy. Sparse canopy. Health and condition = Fair	200mm	Retain Protect
T5	<i>Syncarpia glomulifera</i>	Turpentine	Juvenile Height = 6m Canopy = 2m Suppressed canopy development. Very poor form. Cissus antartica damage to canopy. Sparse canopy. Health and condition = Poor	200mm	Retain Protect
T6	<i>Syncarpia glomulifera</i>	Turpentine	Semi-mature Height = 10m Canopy = 4m Suppressed canopy development. Poor form. Cissus antartica damage to canopy. Sparse canopy. Health and condition = Fair	200mm	Retain Protect
T7	<i>Syncarpia glomulifera</i>	Turpentine	Semi-mature Height = 8m Canopy = 4m Suppressed canopy development. Poor form. Cissus antartica damage to canopy. Sparse canopy. Health and condition = Fair	200mm	Retain Protect
T8	<i>Syncarpia glomulifera</i>	Turpentine	Semi-mature Height = 11m Canopy = 8m Old storm damage to leader. Healthy vigorous canopy. Health = good Condition = Fair	300mm	Retain Protect
T9	<i>Corymbia maculata</i>	Spotted Gum	Mature Height = 23m Canopy = 8m Health & Condition = good	470mm	Retain Protect

PLANTING SCHEDULE

Botanical Name	Sym	Common Name	Size	No	Pot Size
Groundcovers <i>Lomandra longifolia</i> <i>Scariosa</i> sp.	LL S	Mat-rush Scaevola	Shrubby Ground Groundcover	9 10	150mm Tubes
Shrubs/Trees <i>Syzygium cascade</i>	Sc	Dwarf Weeping Lily Pilly	2m	13	300mm
<i>Syzygium luehmannii</i>	Sl	Weeping Lily Pilly	4-6m	18	25L

PLAN OR DOCUMENT CERTIFICATION

I am a qualified Environmental Horticulturist
I hold the following qualifications: BSc. (Environmental & Urban Horticulture) MAILDM MAH MAABR

Further I am appropriately qualified to certify this component of the project.

I hereby state that this Detailed Landscape Plan complies with the conditions of Development Consent (B45, B45a) DCP 23 Landscape and Vegetation Management and DCP 25 Conservation of Biodiversity in Pittwater.

Julia Stanton
Name
20/10/03
Date
Signature

NOTES

- EXCLUSION FENCING IS TO BE IN PLACE PRIOR TO THE COMMENCEMENT OF WORK.
- SILT AND SEDIMENT CONTROLS ARE TO BE IN PLACE DOWN SLOPE OF AREAS TO BE EXCAVATED PRIOR TO THE COMMENCEMENT OF WORK.
- NO INCREASE OR DECREASE OF SOIL LEVELS, COMPACTION OF SOIL OR DISPOSAL OF BUILDING WASTE IN THE EXCLUSION ZONES.
- SITE PREPARATION PRIOR TO PLANTING:
 - WEEDS ARE TO BE CONTROLLED IN SCREEN PLANTING AREAS
 - GARDEN BEDS TO BE MULCHED TO A DEPTH OF 75MM.
- PLANTING (TO BE COMPLETE PRIOR TO ISSUE OF CONSTRUCTION CERTIFICATE)
 - SCREEN ON EAST BOUNDARY 18 X *Syzygium luehmannii* PLANTED AT 1.25M CENTRES
 - SCREEN ALONG POOL FENCE 13 X *Syzygium cascade* PLANTED AT 1M CENTRES
 - STAKING NOT REQUIRED

MATERIALS

- TURFING NOT REQUIRED
- RETAINING WALL, FENCING AND PAVING BY OTHERS

LEGEND

EXISTING TREES

- TREES TO BE RETAINED
- TREES TO BE REMOVED

PROPOSED PLANTINGS

- SL X 18 PROPOSED SCREENING
- LL S LL PROPOSED GROUND COVERS

SITE PROTECTION DETAILS

- EXCLUSION FENCING

Landscape Plan - Pool

Mr and Mrs Marrocco
27c Alexandra Crescent Bayview

Date: 20/10/03

Scale 1:100 & 1:300

Drawing No: 1 of 1

Syncarpia Vegetation Management
P.O. Box 284 Church Point 2105
Fax: (02) 9973 1849 MDR: 0403074075

PITTWATER COUNCIL CONSTRUCTION CERTIFICATE

Number: CC 0289/03
This is a copy of submitted plans, documents or Certificates associated with the issue of the Construction Certificate.
Endorsed by:
Date: 19 DEC 2003

GEOTECHNICAL RISK MANAGEMENT POLICY FOR PITTWATER
FORM NO. 2 - To be submitted with detailed design for construction certificate

Development Application for Mr A Marocco

Name of Applicant

Address of site 276 Alexandra Crescent, BAYVIEW.

Declaration made by Structural or Civil Engineer in relation to the incorporation of the Geotechnical issues into the project design:

I, John Wilson on behalf of SPARKS & PARTNERS
(person name) (trading or company name)on this date 30/10/2003Hydraulic

certify that I am a ~~Structural~~ Hydraulic Engineer as defined by the Geotechnical Risk Management Policy for Pittwater. I am authorised by the above organization/company to issue this document and to certify that the organization/company has a current professional indemnity policy of at least \$2million. I also certify that I have prepared the below listed structural documents in accordance with the recommendations given in the Geotechnical Report for the above development.

Geotechnical Report Details:

Report Title: Geotechnical Assessment For Proposed Swimming Pool, 276 Alexandra Cr, Bayview.
 Report Date: 25 June 2003
 Author: Peter Wright (Jeffery and Katsarskas Pty Ltd).

Structural Documents List:

Sparks and Partners	Hydraulics Services	Job 01473	Drawing SW-01 Issue B
"	"	"	Job 01473 Drawing SW-02 Issue B
"	"	"	Job 01473 Drawing SW-03 Issue A

I am also aware that Pittwater Council relies on the processes covered by the Geotechnical Risk Management Policy, including this certification as the basis for ensuring that the geotechnical risk management aspects of the proposed development have been adequately addressed to achieve an "Acceptable Risk Management" level for the life of the structure taken as at least 100 years unless otherwise stated and justified.

John Wilson
(name)

Peter Wright
(signature)

Declaration made by Geotechnical Engineer or Engineering Geologist in relation to Structural Drawings

I prepared and/or technically verified the abovementioned Geotechnical Report as per Form 1 dated 25/6/03 and now certify that I have viewed the above listed structural documents prepared for the same development. I am satisfied that the recommendations given in the Geotechnical Report have been appropriately taken into account by the structural engineer in the preparation of these structural documents. I am aware that Pittwater Council relies on the processes covered by the Geotechnical Risk Management Policy, including this certification as the basis for ensuring that the geotechnical risk management aspects of the proposed development have been adequately addressed to achieve an "Acceptable Risk Management" level for the life of the structure taken as at least 100 years unless otherwise stated and justified in the Report and that reasonable and practical measures have been identified to remove foreseeable risk.

Signature P. Wright
 Name Peter Wright
 Chartered Professional Status MJE Aust
 Membership No. 446230

PITTWATER COUNCIL CONSTRUCTION CERTIFICATENumber: CC 0289/03

This is a copy of submitted plans, documents or Certificates associated with the issue of the Construction Certificate.

Endorsed by:

Date: 09 DEC 20032/6/03

GEOTECHNICAL RISK MANAGEMENT POLICY FOR PITTWATER
FORM NO. 2 - To be submitted with detailed design for construction certificate

Development Application for Mr A Marrocco
 Name of Applicant

Address of site 27c Alexandra Crescent, BAYVIEW.

Declaration made by Structural or Civil Engineer in relation to the incorporation of the Geotechnical issues into the project design
Donald MARTIN on behalf of D.K. MARTIN P/L
 (insert name) (trading or company name)

on this the 4-11-2003
 (date)

certify that I am a Structural or Civil Engineer as defined by the Geotechnical Risk Management Policy for Pittwater. I am authorised by the above organization/company to issue this document and to certify that the organization/company has a current professional indemnity policy of at least \$2million. I also certify that I have prepared the below listed structural documents in accordance with the recommendations given in the Geotechnical Report for the above development

Geotechnical Report Details:

Report Title: Geotechnical Assessment For Proposed Swimming Pool, 27c Alexandra Cr, Bayview
 Report Date: 25 June 2003
 Author: Peter Wright (Jeffery and Kelusky Pty Ltd)

Structural Documents List:

DK Martin Pty Ltd Drawing AP002, Sheets 1 to 4 of 4 dated 16/3/03

I am also aware that Pittwater Council relies on the processes covered by the Geotechnical Risk Management Policy, including this certification as the basis for ensuring that the geotechnical risk management aspects of the proposed development have been adequately addressed to achieve an "Acceptable Risk Management" level for the life of the structure taken as at least 100 years unless otherwise stated and justified.

Donald MARTIN
 (name)

Donald Martin
 (signature)

Declaration made by Geotechnical Engineer or Engineering Geologist in relation to Structural Drawings

I prepared and/or technically verified the abovementioned Geotechnical Report as per Form 1 dated 25/6/03 and now certify that I have viewed the above listed structural documents prepared for the same development. I am satisfied that the recommendations given in the Geotechnical Report have been appropriately taken into account by the structural engineer in the preparation of these structural documents. I am aware that Pittwater Council relies on the processes covered by the Geotechnical Risk Management Policy, including this certification as the basis for ensuring that the geotechnical risk management aspects of the proposed development have been adequately addressed to achieve an "Acceptable Risk Management" level for the life of the structure taken as at least 100 years unless otherwise stated and justified in the Report and that reasonable and practical measures have been identified to remove foreseeable risk.

Signature [Signature]

Name

Chartered Professional Status

Membership No.



Paul Stubbs

MIE Aust CP Eng

Chartered Professional Engineer

Membership No. 130775

PITTWATER COUNCIL CONSTRUCTION CERTIFICATE

Number: CC 0289/03

This is a copy of submitted plans, documents or Certificates associated with the issue of the Construction Certificate.

Endorsed by:

Date:

09 DEC 2003

7/6/03

Pittwater Council Stormwater Detention Requirements

Doc No: 01473 Date: 10-04-02 Version: 1.0

Storage Requirements

$$SAR = (0.003 - 100 - T(14)) \times 2.4 \times 10^{-6} \times A \text{ (m}^3\text{)}$$

Total Site Area:	2633.00	(m ²)		(%)	
Total Site Area Considered:	1000.00	(m ²)	37.72	(%)	
Pre Developed Imp Area:	100	(m ²)	3.78	(%)	
Post Developed Imp Area:	417.86	(m ²)	15.88	(%)	
Total Site Draining Thru OSD:	(T)	874	(m ²)	31.11	(%)
Increase in Impervious Area:	(I)	817.86	(m ²)	29.71	(%)

Site Storage Required:	88.7	m ³
Min Below Ground Storage (30%):	2.64	m ³

Discharge Requirements

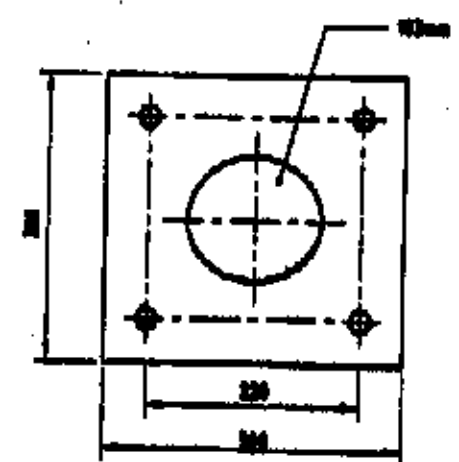
$$PSD = [A + (P(1) \times B) - (D(1) \times C)] \times \text{Area (m}^2\text{)}$$

Total Site to Drain to OSD	(A)	91.11	(%)	0.0211	(Table 4.1)
Total Site to Drain to OSD	(B)	91.11	(%)	0.00048	(Table 4.1)
Total Site to Drain to OSD	(Area)	874	(m ²)	0.00048	(Table 4.1)
Pre Developed Imp/ Pav	(P)	100	(m ²)	0.08	(%)
Post Developed Imp Area:	(D)	417.86	(m ²)	35.08	(%)
Increase in Impervious Area:	(D)	817.86	(m ²)	25.71	(%)
Permissible Site Discharge:		22.00	l/s		

Outlet Orifice Plate Diameter

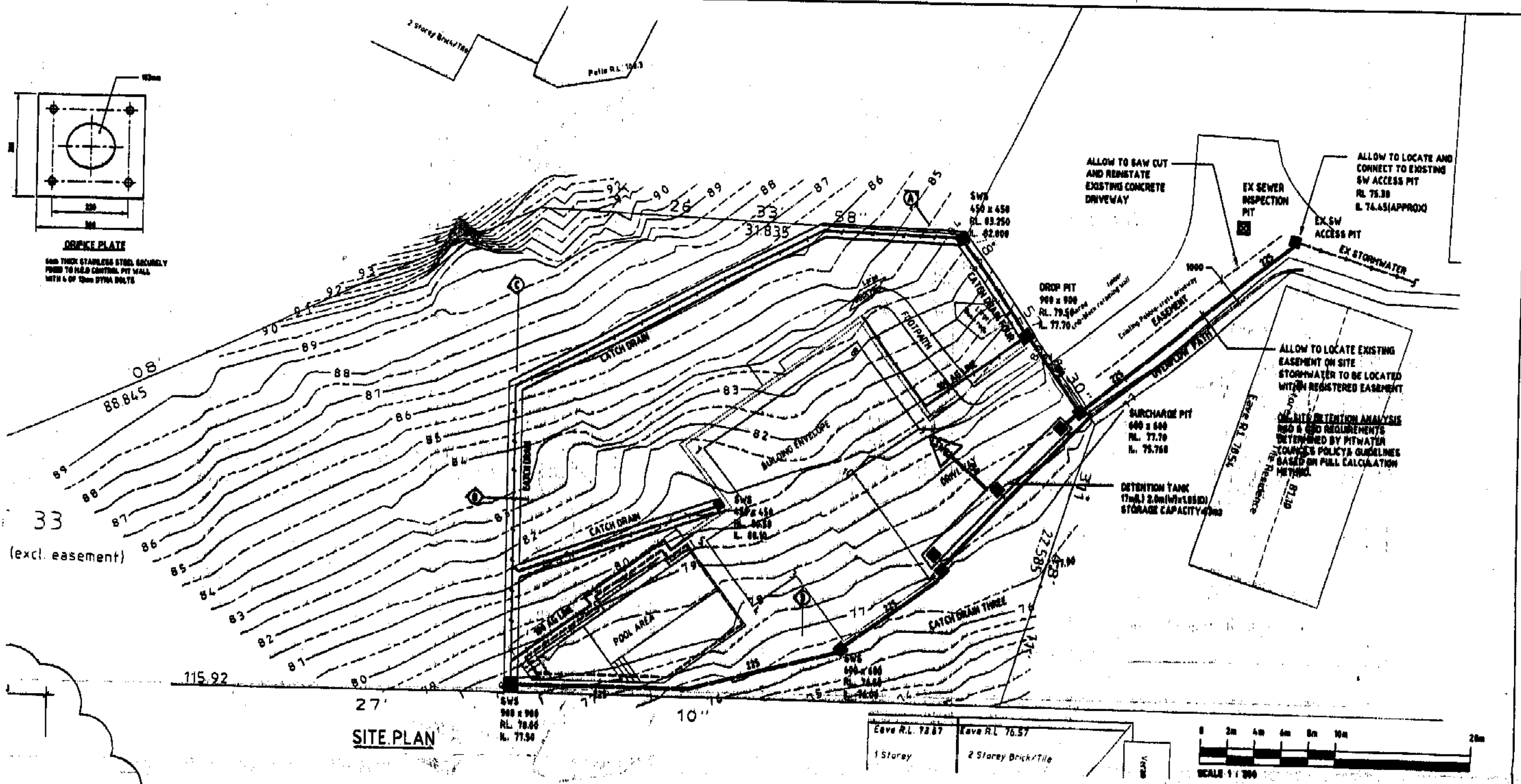
$$\text{Orifice Dia} = ((0.48 \times 0.0119) \times \text{PSD})^{0.5}$$

Top Water Level RL:	AM	77.7	m
Centre line of orifice RL:	AM	76.8	m
Head over orifice:	AM	1.1	m
Permissible discharge through orifice:		22.00	l/s
Orifice Diameter =		0.103	m
		100	mm



ORIFICE PLATE
100mm THICK STAINLESS STEEL, SECURELY
FIXED TO HOLD CENTRAL PIT WALL
WITH A 10mm SPAN BOLT

LC 33
1833.68 m (excl. easement)

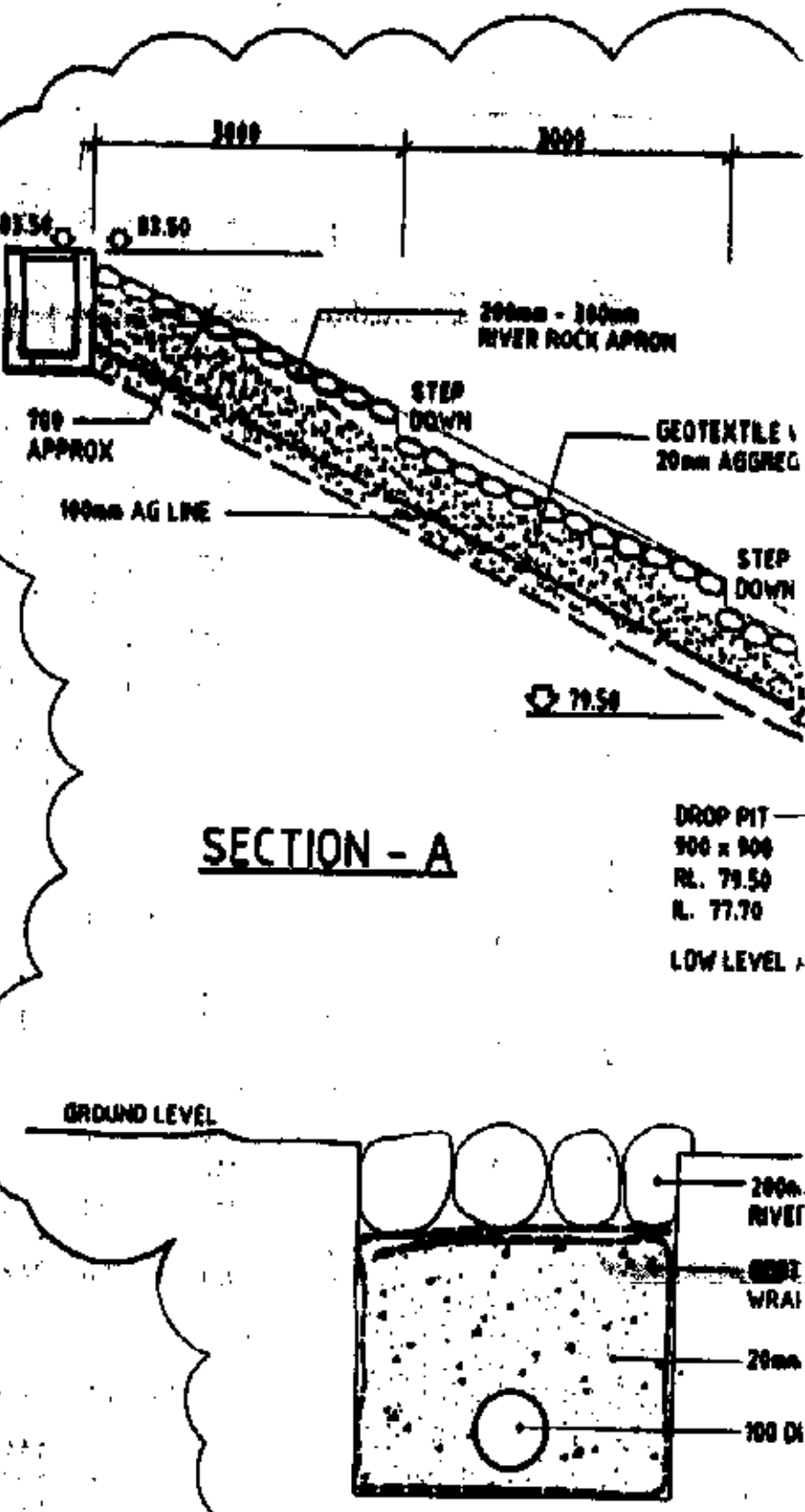


SITE PLAN

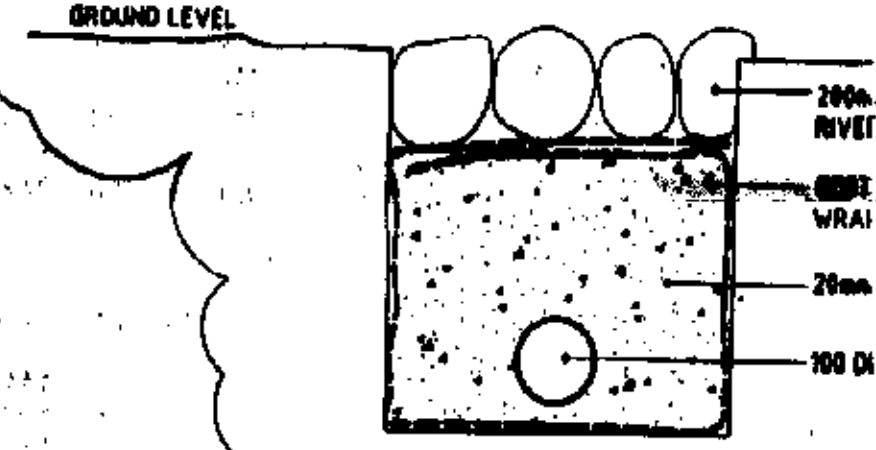
LEGEND

- STORMWATER DRAINAGE
- SUB-SOIL DRAINAGE
- TO BE RETAINED
- CONDUIT
- THROUGH DROPPER/RISER
- BEND UP
- BEND DOWN
- TEE UP
- TEE DOWN
- ACCESS CHAMBER
- SEWER INSPECTION PIT
- STORMWATER DUMP
- SEWER SERVICE LINE
- SEWER DROPPER
- DETAIL No. DRG No.
- FOR CONTINUATION REFER DWG No. JH...

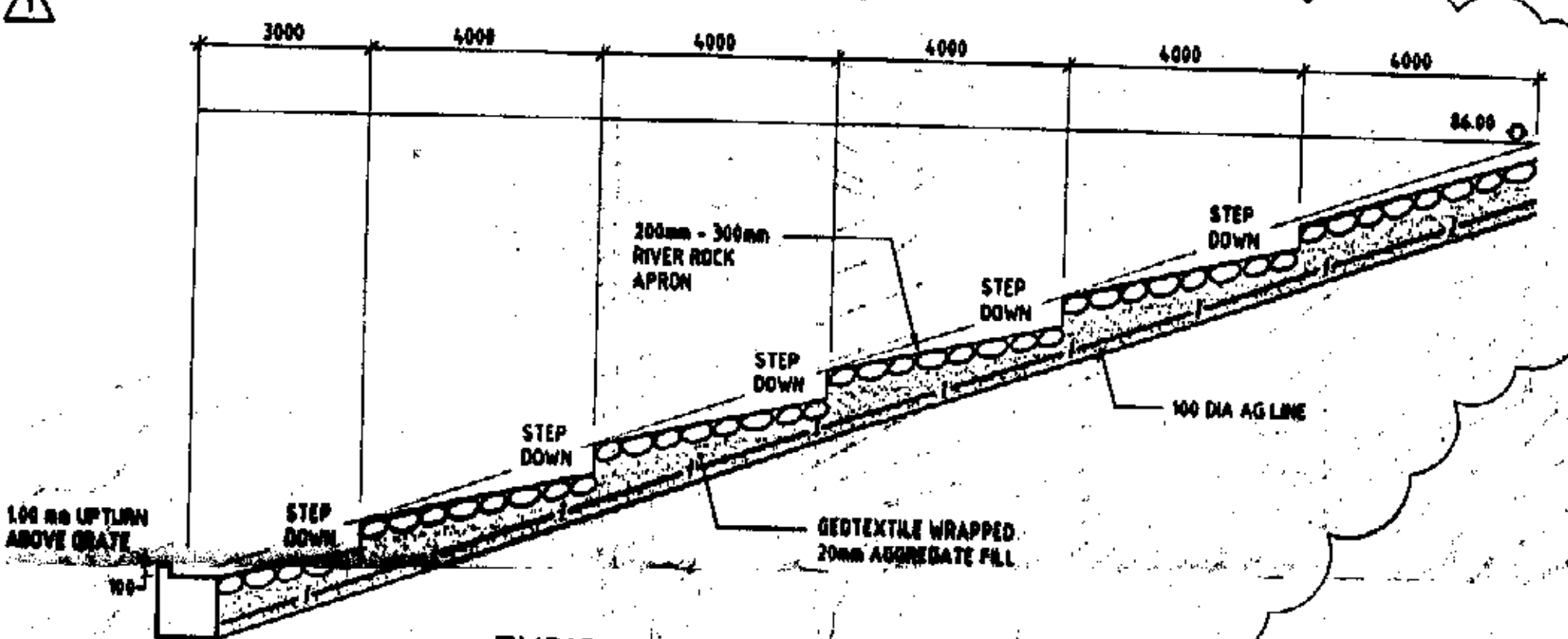
SECTION - A



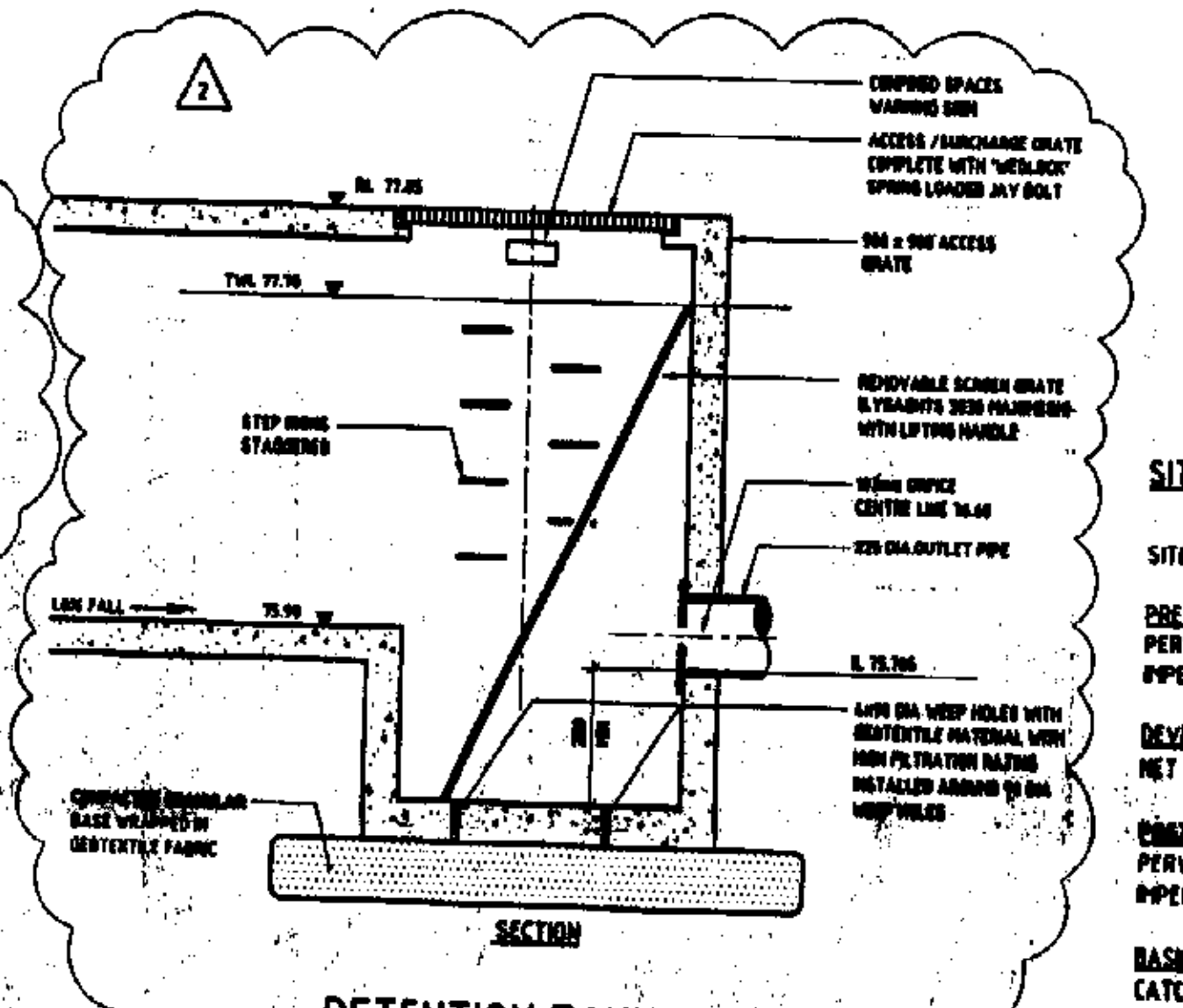
SECTION - B



TYPICAL CATCH DRAIN
DETAIL



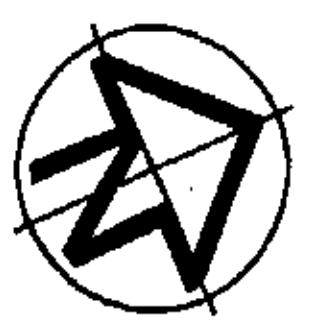
DETENTION TANK OUTLET



SITE ANALYSIS

SITE AREAS	=	2633.00
PRE DEVELOPED PERVIOUS	=	2733.00
IMPERVIOUS	=	100.00
DEVELOPMENT SITE AREA	=	1000.00 (37.72%)
PRE DEVELOPMENT PERVIOUS	=	6514.5 (61.93%)
IMPERVIOUS	=	417.55 (3.93%)
BASIN CATCHMENT	=	974.00 (36.83%)
PERVIOUS	=	417.55 (42.86%)
IMPERVIOUS	=	556.45 (57.14%)

NOT FOR CONSTRUCTION



DATE	No	AMENDMENT
01.07.02	1	DA-SUBMISSION
10.06.03	2	CATCH DRAINS AMEND DETAILS AMENDED FOR CONSTRUCTION

INT.	ISSUE	DATE	No	AMENDMENT	INT.	ISSUE
LN	A					
LN	B					

SPARKS AND PARTNERS
HYDRAULIC CONSULTANTS
111 PARRAMATTA ROAD, SYDNEY, NSW 2150
TEL: (02) 9615 1111 FAX: (02) 9615 1112
WWW.SPARKS.COM.AU



PROJECT
PRIVATE RESIDENCE
27c ALEXANDRA CRESCENT
BAYVIEW
TITLE
HYDRAULIC SERVICES
SITE PLAN/LEGEND

CLIENT MR & MRS A MARROCCO 4 LANE COVE ROAD, INGLESIDE	DESIGNED BY PDW DATE 05.04.02	CHECKED BY DATE
SCALE 1:200	DRAWN BY CT	DATE APRIL 2002
JOB NO 01473	DRAWING No. SW-01	No. IN SET 1

PITTWATER COUNCIL CONSTRUCTION CERTIFICATE
Number: CC 0289/05
This is a copy of submitted plans, documents & Certificate, associated with the issue of the Construction Certificate.
Endorsed by: [Signature]
Date: 8 DEC 2002