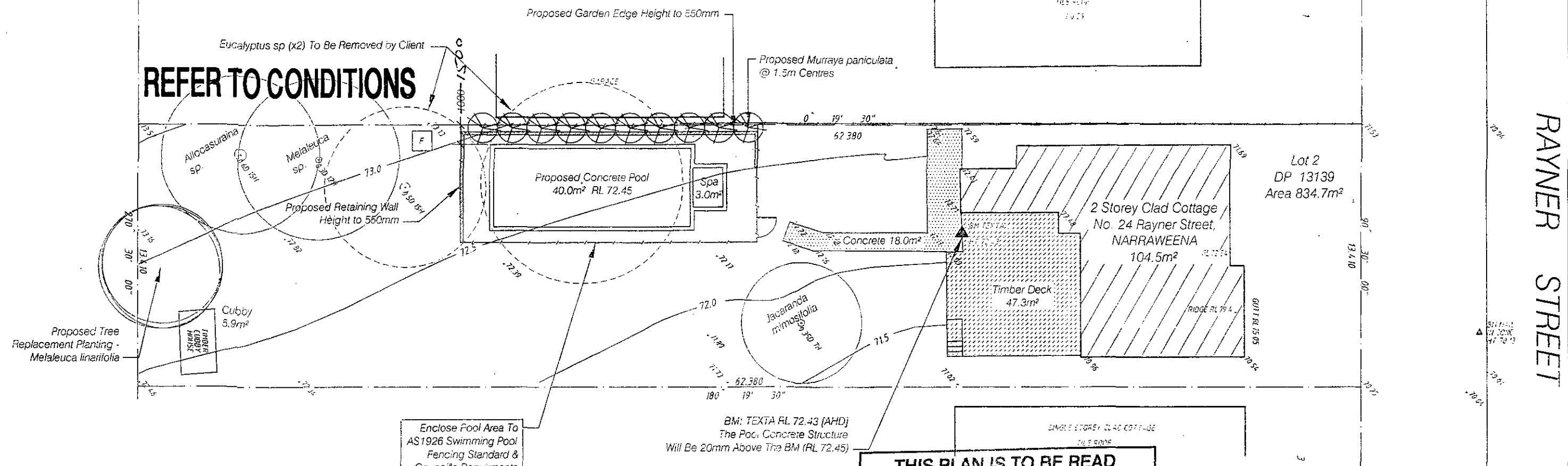
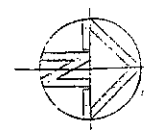




Legend	
	Boundary
	To Be Removed
	Existing Spot Heights
	Paving
	Existing Tree

IDENTIFY & MARK THE LOCATION OF ALL ABOVE & BELOW GROUND SERVICES PRIOR TO COMMENCING ANY WORK. TAKE ALL REQUIRED PRECAUTIONS TO PREVENT DAMAGE TO SERVICES

BM: TEXTA RL 72.43 (AHD)
The Pool Concrete Structure Will Be 20mm Above The BM (RL 72.45)

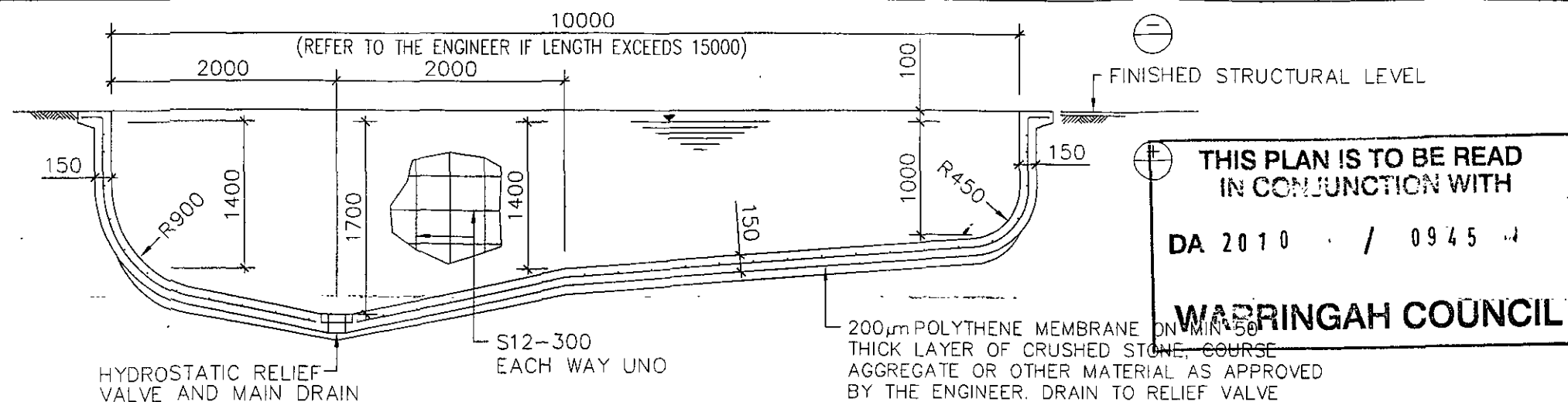
Sound Proof Filter Box

POOL OVERFLOW TO BE PUMPED TO SEWER TO COUNCIL'S & SYDNEY WATER'S REQUIREMENTS

PLANTING LEGEND			
PROPOSED TREES & SHRUBS			
BOTANIC NAME	COMMON NAME	NUMBER	POT SIZE
<i>Mitella leuca linifolia</i>	Snow-In-Summer	1	140mm
<i>Murraya paniculata</i>	Murraya	10	140mm

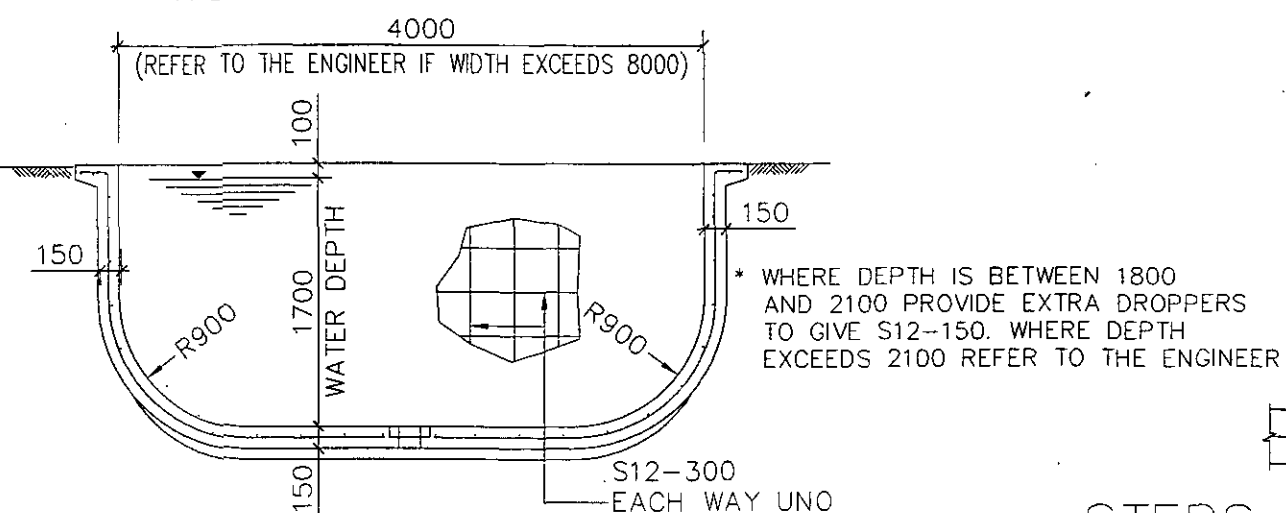
SITE CALCULATIONS	
Site -	834.7m²
PROPOSED SITE COVERAGE	
Residence -	104.5m²
Decking -	47.3m²
Paved Areas -	18.0m²
Cubby -	5.9m²
Proposed Pool -	40.0m²
Proposed Spa -	3.0m²
Proposed Pool Coping -	6.7m²
PROPOSED IMPERVIOUS AREAS (not including Deck, Pool)	
182.4m² (21.9%)	
PROPOSED SOFT LANDSCAPE AREA (including Pool, not including areas <2m)	
617.6m² (74.0%)	
AREA WITHIN 6m OF REAR BOUNDARY	
80.5m²	
BUILT UPON AREA WITHIN 6m OF REAR BOUNDARY	
5.9m² (7.3%)	

AMENDMENT	NOTES TO THE PLAN	PROJECT	DRAWN BY	DRAWING LANDSCAPE PLAN			
	THIS PLAN IS TO BE READ AS PART OF A COMPLETE SET OF DRAWINGS RELATING TO THE PROPOSED DEVELOPMENT	PROPOSED SWIMMING POOL	Unit 20 12 Phillip Mail West Pymble 2073 outside LIVING Phone 9440 5451 Facsimile 9402 6499 Member of - Australian Institute of Horticulture - Australian Institute of Landscape Designers and Managers	CLIENT Mr E De Martin 24 RAYNER STREET NARRAWEENA			
	THIS PLAN RELATES TO A SPECIFIC DEVELOPMENT. INFORMATION RELATING TO THE DEVELOPMENT NEEDS TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION						
	ALL MEASUREMENTS ARE IN MILLIMETRES UNLESS OTHERWISE INDICATED						
				JOB No 10-063	SCALE 1:200 @A3	DATE 15 JUNE 2010	DWG No 1 OF 1



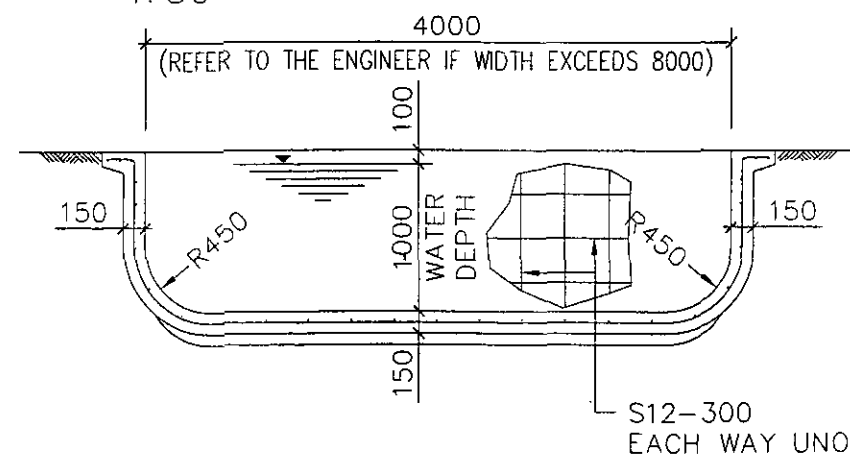
LONGITUDINAL SECTION

1:50



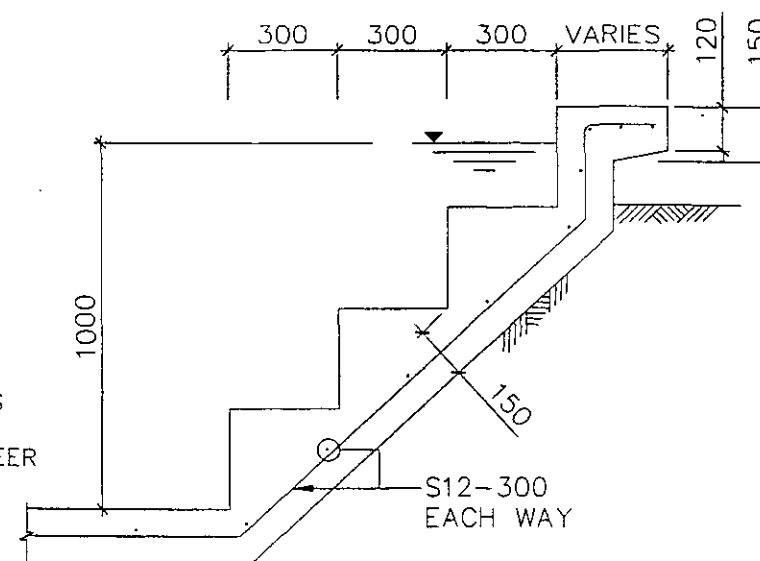
DEEP END SECTION

1:50



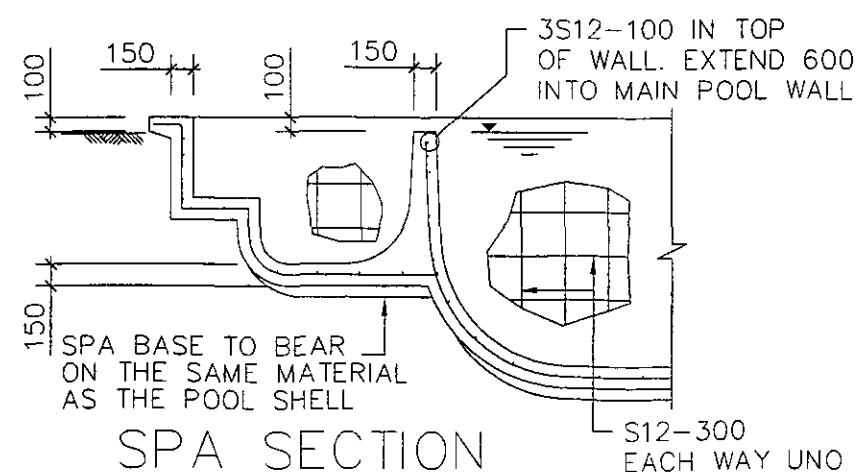
SHALLOW END SECTION

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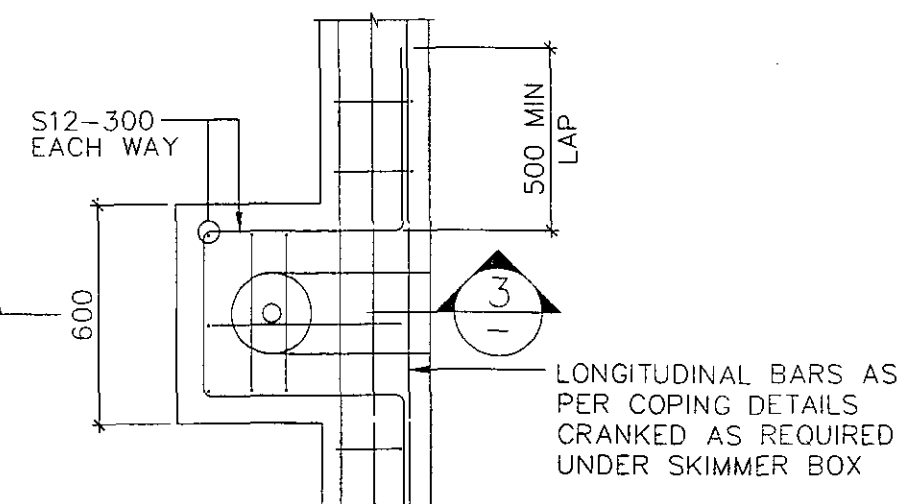
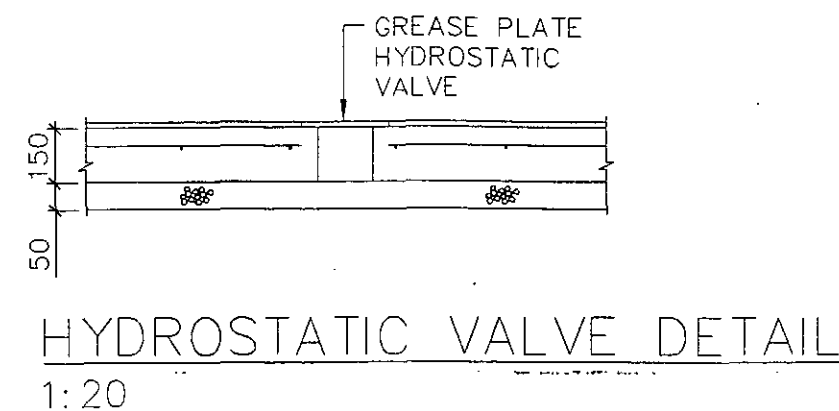
STEPS CAST AGAINST GROUND

1:20



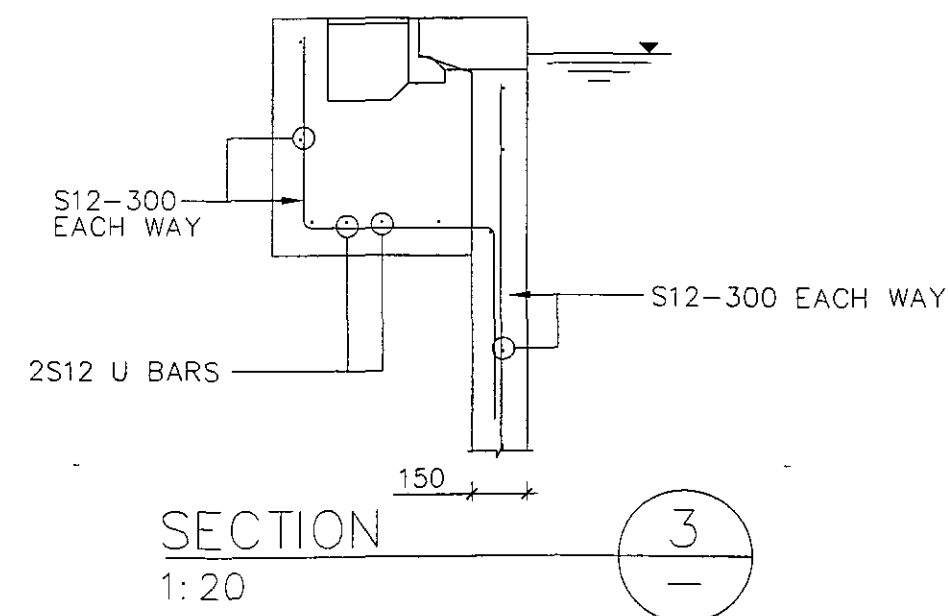
SPA SECTION

1:50



PLAN OF SKIMMER

1:20



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Consulting Structural and Civil Engineers ABN 25 003 832 291

APPROVED

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DATE 01/06/10

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PROPOSED SWIMMING POOL STRUCTURAL DETAILS

FOR Mr E De Martin

AT 24 RAYNER STREET, NARRAWEENA

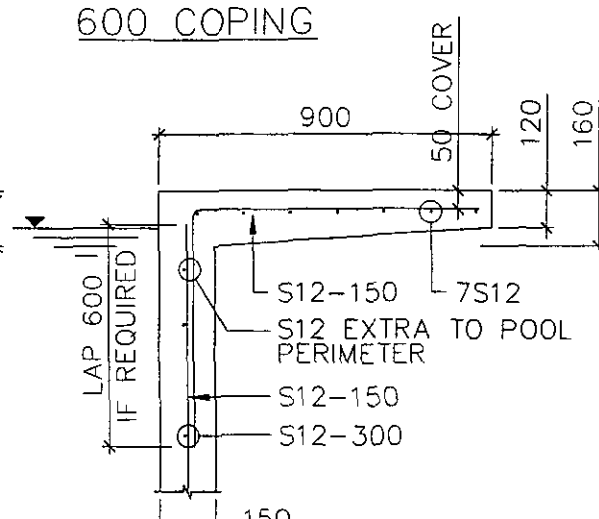
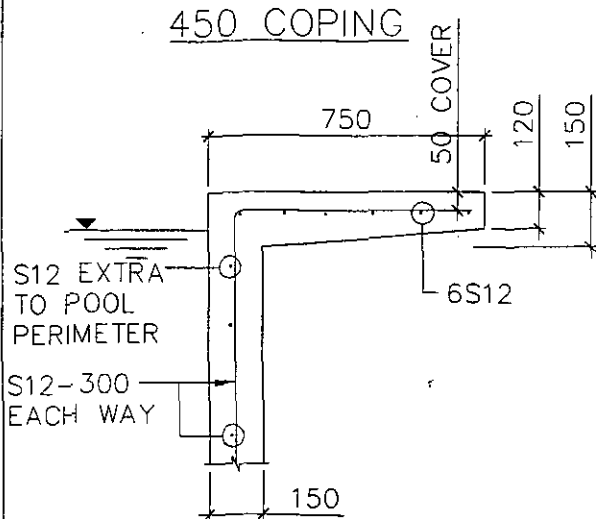
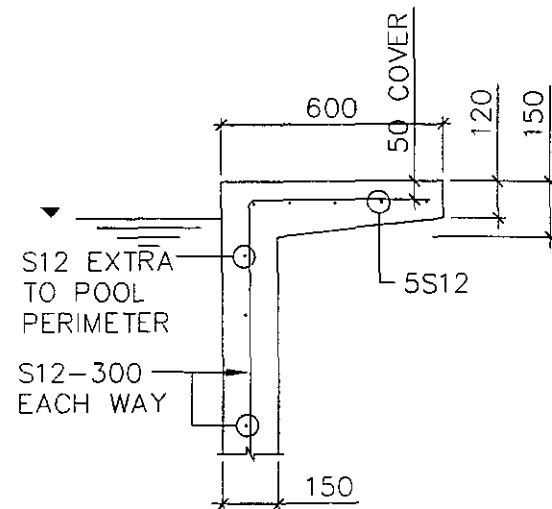
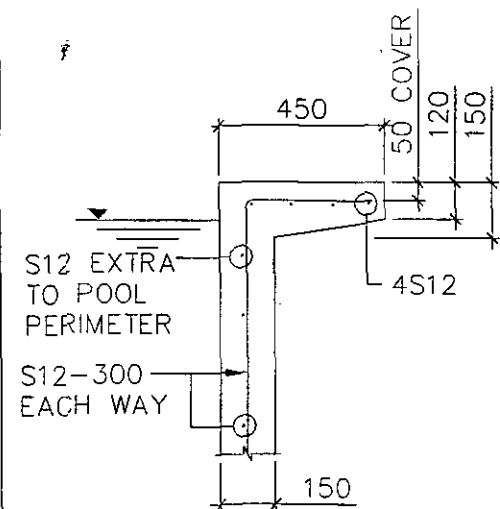
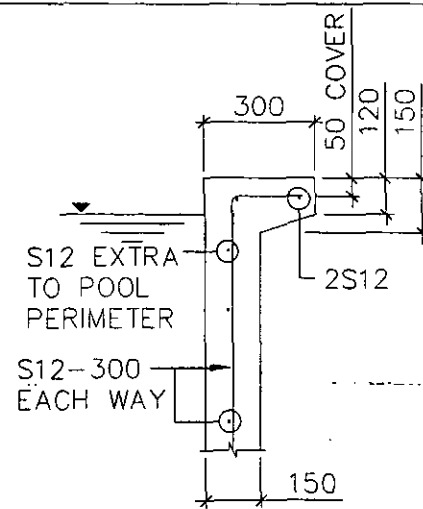
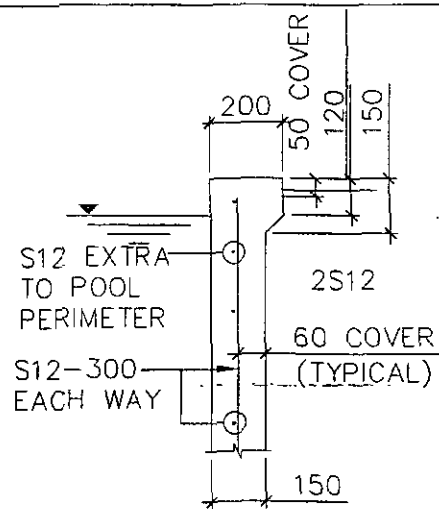
DATE: 01/06/10

DRAWN: OL10-063

SHEET 3 OF 8

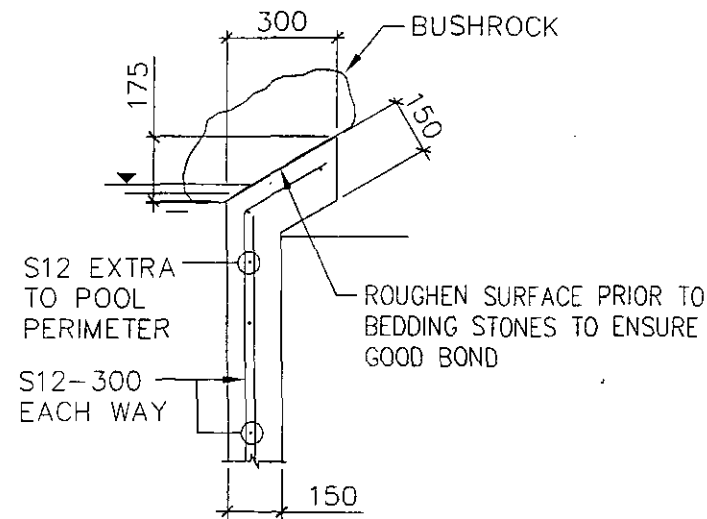
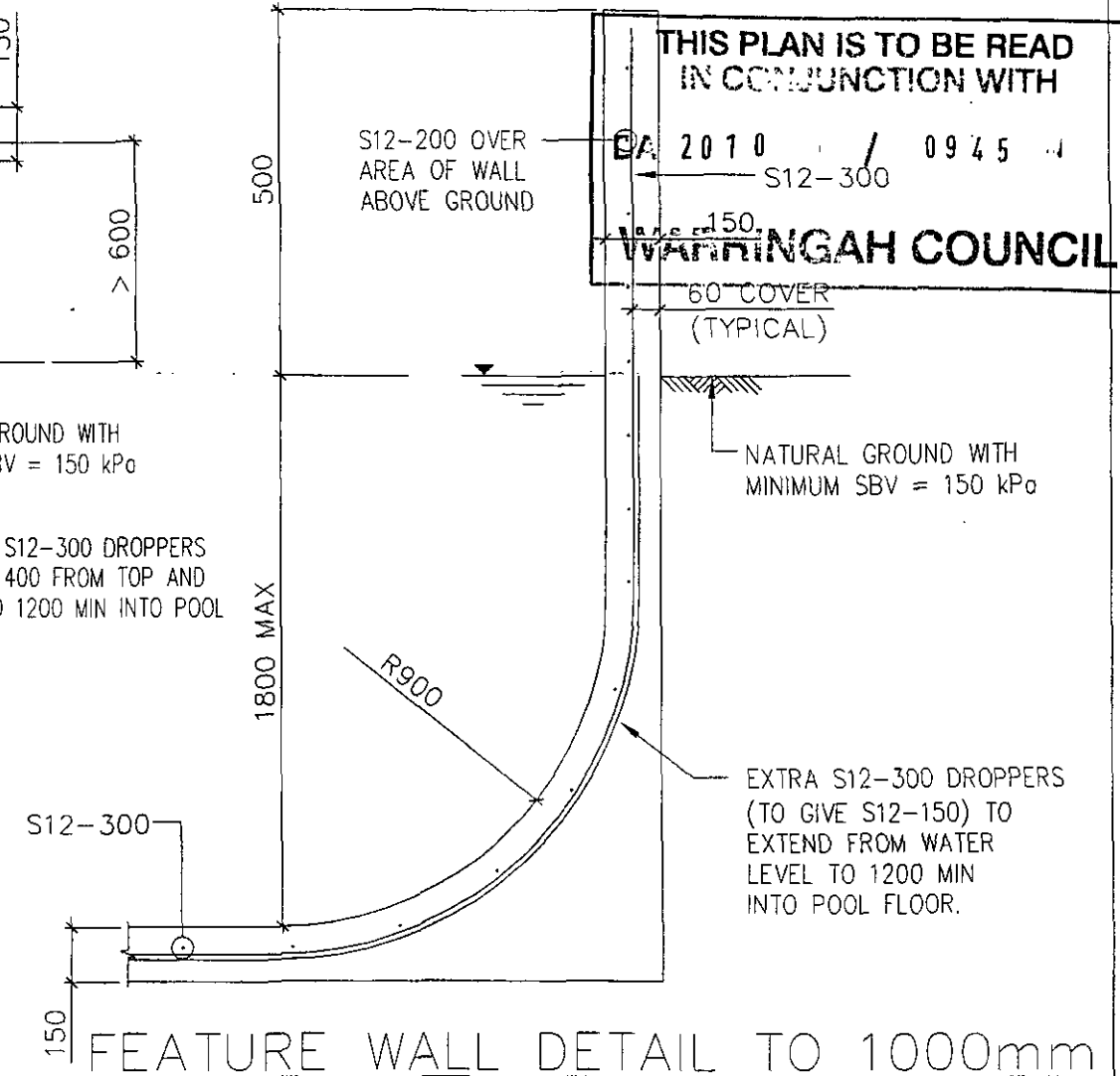
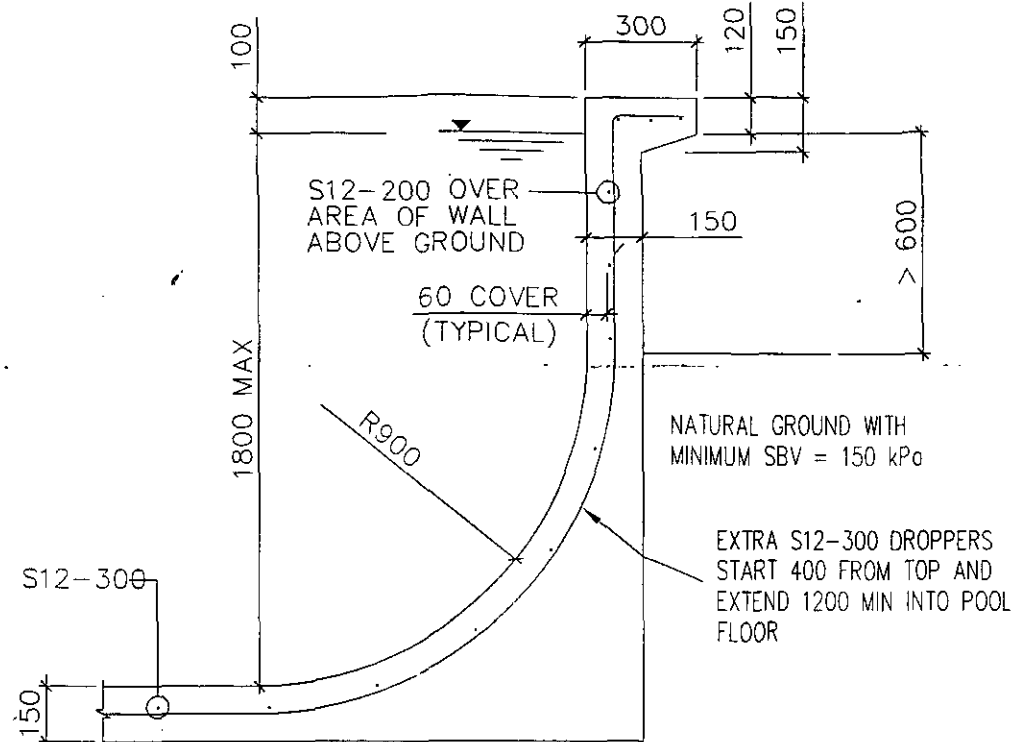
DRAWING/CONTRACT No.

BHP 10L17613



POOL WALL DETAIL

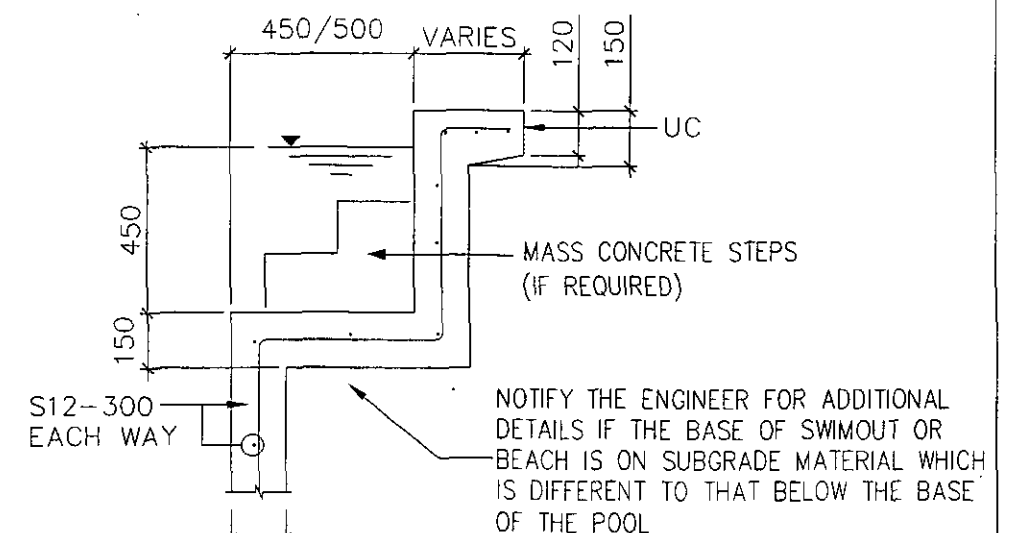
1:20



COPING DETAILS

1:20

1:20
REFER TO THE ENGINEER IF THE FEATURE WALL IS TO BE PART
RETAINING OR IF ITS HEIGHT IS TO EXCEED 1000 ABOVE GROUND.



SWIMOUT OR BEACH

1:20

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PROPOSED SWIMMING POOL STRUCTURAL DETAILS

FOR Mr E De Martin

AT 24 RAYNER STREET, NARRAWEENA

DATE: 01/06/10

DRAWN: OL10-063

SHEET 4 OF 8

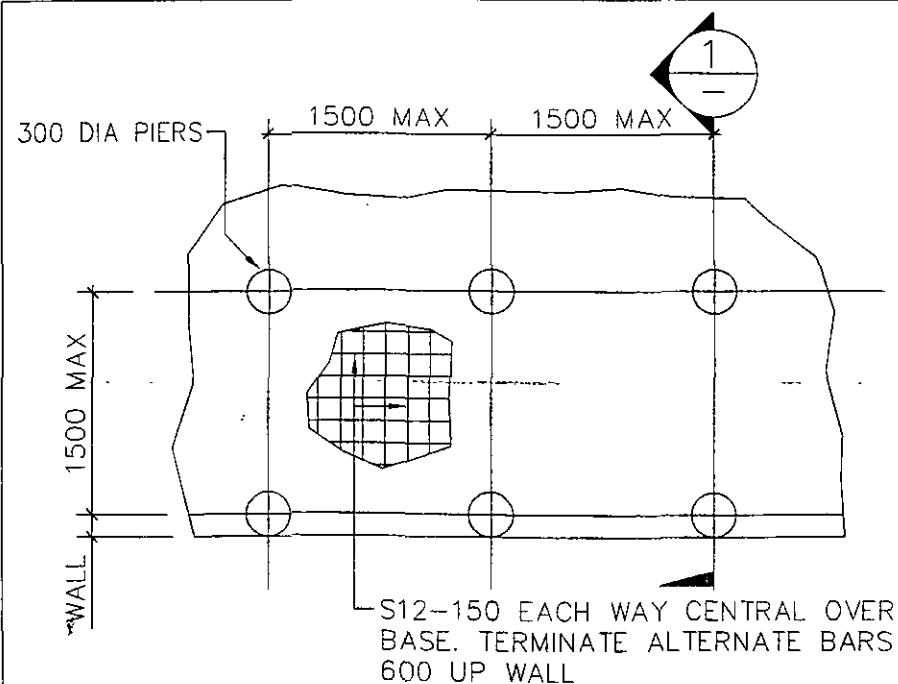
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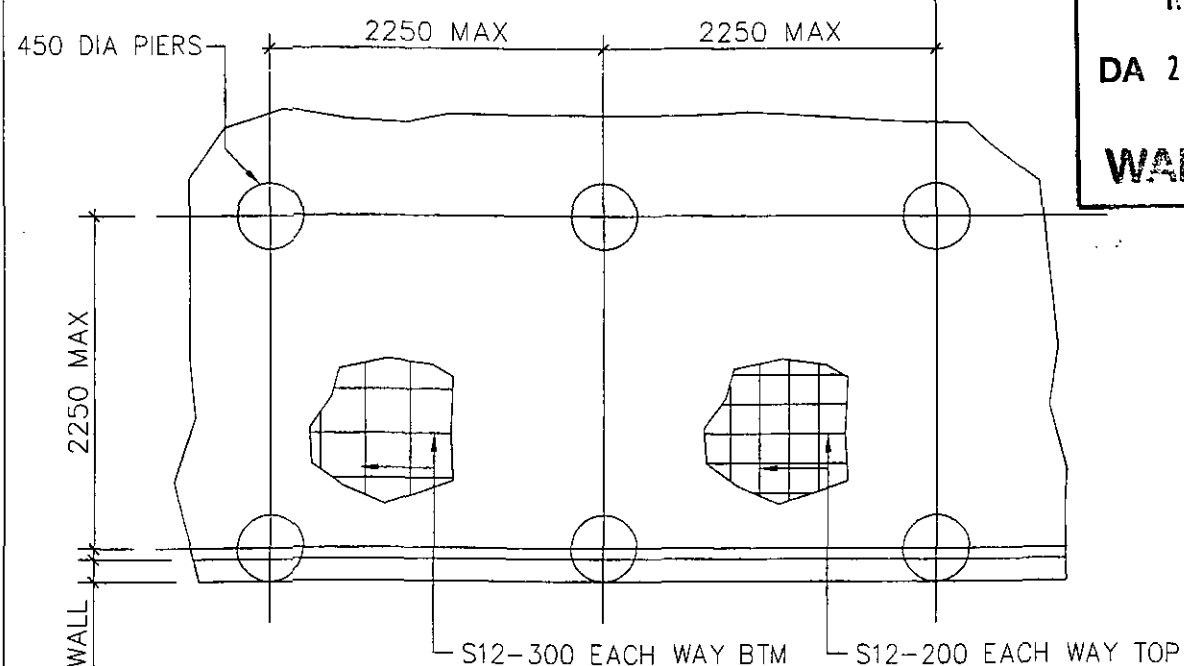
THIS PLAN IS TO BE READ
IN CONJUNCTION WITH

DA 2010 / 0945

WARRINGAH COUNCIL



PART PLAN - OPTION 1



PART PLAN - OPTION 2

SUSPENDED POOL PLANS

PIERS 1:50

$F'_c = 20 \text{ MPa}$

60 COVER TO REINFORCEMENT

PIERS TO BE FOUNDED IN UNIFORM ROCK WITH A SAFE BEARING VALUE OF 800 kPa. REFER TO THE ENGINEER IF DEPTH OF PIERS EXCEEDS 3000

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PROPOSED SWIMMING POOL STRUCTURAL DETAILS

FOR Mr E De Martin

AT 24 RAYNER STREET, NARRAWEENA

DATE: 01/06/10

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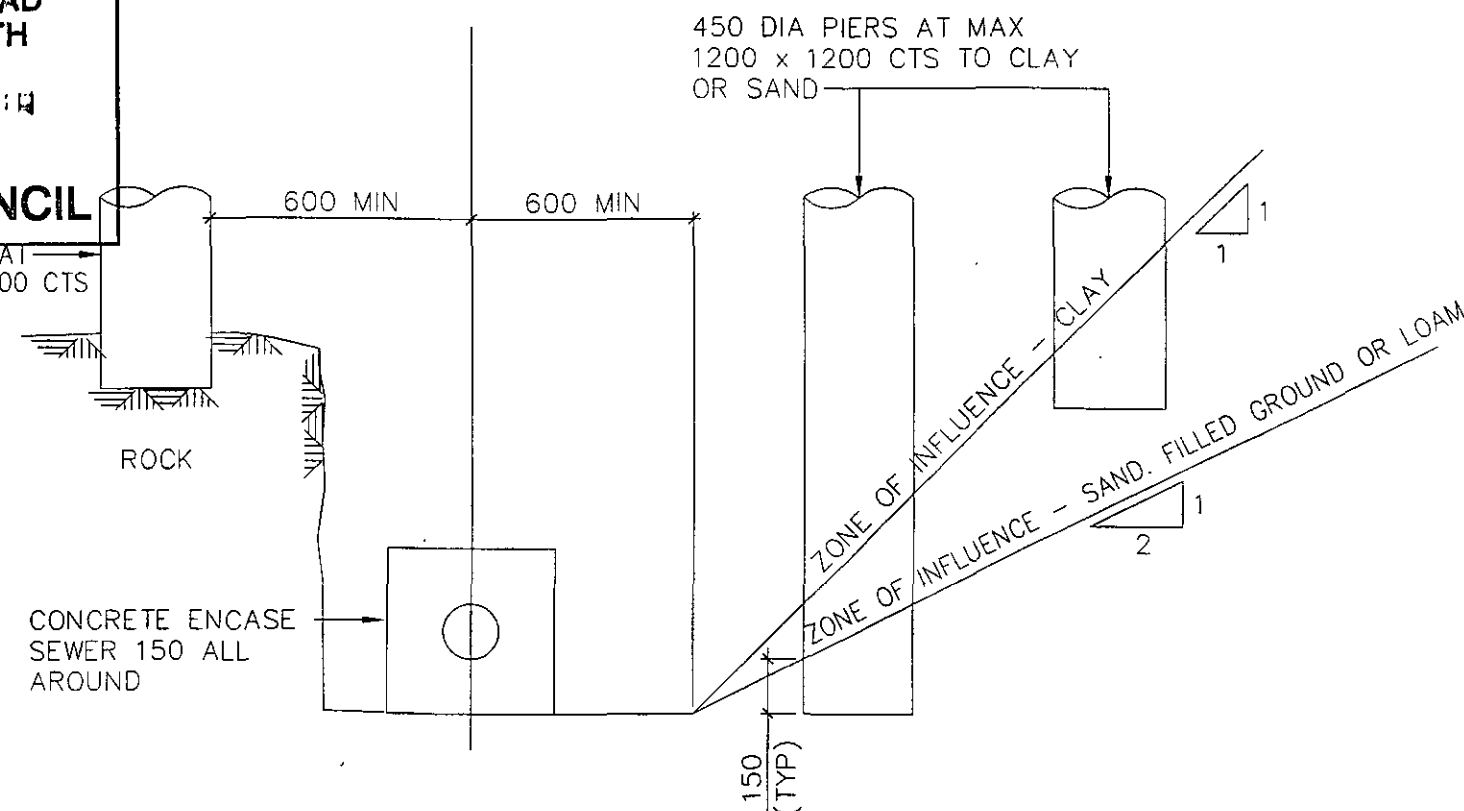
SHEET 5 OF 8

DRAWING/CONTRACT No.

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WARRINGAH COUNCIL

450 DIA PIERS AT
MAX 2000 x 2000 CTS



TYPICAL BUILDING OVER SYDNEY WATER SEWER

1:20

1. CLAY OR SAND TO HAVE A MINIMUM SAFE BEARING VALUE OF 200kPa
2. ROCK TO HAVE A MINIMUM SAFE BEARING VALUE OF 800kPa
3. POOL BASE TO BE AS PER SUSPENDED POOL FOR RELEVANT PIER SPACING

GENERAL

- G1 ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS2783 - 1992.
- G2 THE SETTING OUT DIMENSIONS SHALL BE CHECKED ON SITE PRIOR TO COMMENCING EXCAVATION.
- G3 ANY UNFORSEEN VARIATIONS TO THE ASSUMED SITE CONDITIONS SHALL BE REFERRED TO THE ENGINEER PRIOR TO PROCEEDING.
- G4 THE WALKWAYS AND COPINGS HAVE BEEN DESIGNED FOR A LIVE LOAD OF 4kPa.
- G5 THE ENGINEER SHALL BE NOTIFIED OF ANY PROPOSED VARIATION TO THIS PRIOR TO PLACING THE REINFORCEMENT.
- G6 PRIOR TO EMPTYING THE POOL, THE OWNER SHALL ENSURE THAT ALL EXTERNAL GROUNDWATER HAS BEEN REMOVED FROM THE BASE AND WALLS OF THE POOL.
- G7 THE ENGINEER SHALL BE NOTIFIED IF THE POOL IS OUT OF THE GROUND BY MORE THAN 900.

CONCRETE

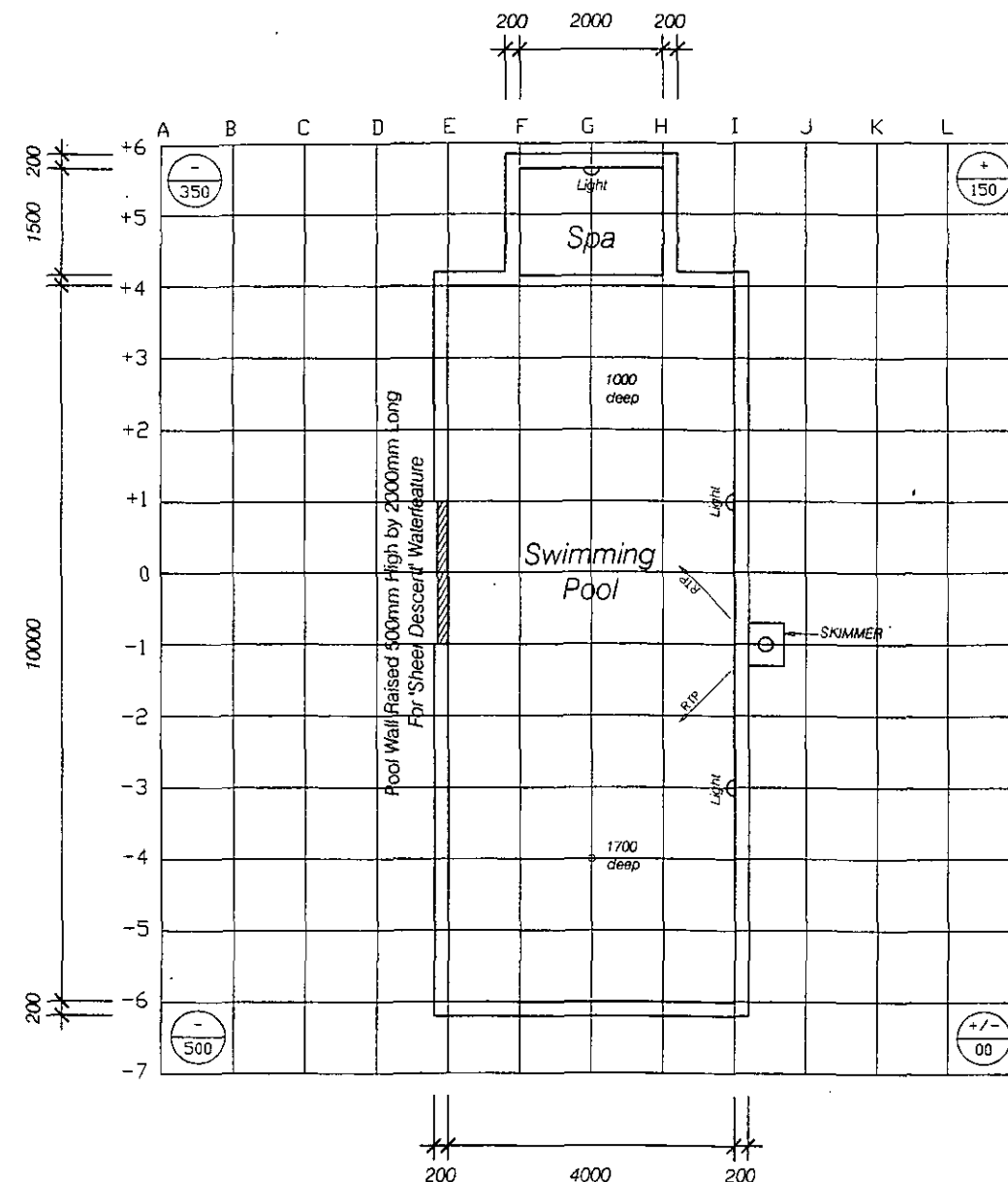
- C1 THE DETAILS PRESENTED ON THE FOLLOWING SHEETS COMPLY WITH THE REQUIREMENTS OF AS2783-1992.
- C2 ALL WORKMANSHIP SHALL BE IN ACCORDANCE WITH AS3600.
- C3 ALL CONCRETE SHALL HAVE A MINIMUM 28 DAY CONCRETE COMPRESSIVE STRENGTH OF 25MPa AND HAVE A MAXIMUM AGGREGATE SIZE OF 10mm AND A MAXIMUM SLUMP OF 80mm UNLESS NOTED OTHERWISE.
- C4 WHERE THE POOL IS LOCATED WITHIN 1km OF LARGE EXPANSES OF SALT WATER THE CONCRETE SHELL SHALL HAVE A MINIMUM 28 DAY CONCRETE COMPRESSIVE STRENGTH OF 32MPa.
- C5 CONCRETE SIZES SHOWN DO NOT INCLUDE FINISH AND MUST NOT BE REDUCED OR HOLED IN ANY WAY WITHOUT THE APPROVAL OF THE ENGINEER. HOWEVER, THE RADIUS OR CONCRETE THICKNESS MAY BE INCREASED.
- C6 UNLESS OTHERWISE NOTED, CLEAR CONCRETE COVER SHALL BE IN ACCORDANCE WITH AS2783-1992.
- C7 CONCRETE COVER SHALL BE MAINTAINED BY THE USE OF APPROVED CHAIRS AT APPROXIMATELY 750 CROSS CENTRES.
- C8 ALL CONCRETE SHALL BE CURED BY THE OWNER FOR A MINIMUM OF 7 DAYS AFTER POURING BY KEEPING ALL EXPOSED SURFACES WET WITH WATER.
- C9 S NOTATION TO REINFORCEMENT DENOTES GRADE 230 DEFORMED BAR.
- C10 UNLESS OTHERWISE NOTED, ALL REINFORCEMENT LAPS SHALL BE A MINIMUM OF 500mm.
- C11 PROVIDE 10mm CONTROL JOINTS IN THE WALKWAY FINISH AT MAXIMUM 4000 CENTRES AND AT POINTS OF RE-ENTRANT CORNERS IN PLAN.
- C12 PROVIDE 10mm CONTROL JOINTS BETWEEN THE PERIMETER EDGE OF THE POOL AND ALL ABUTTING CONCRETE OR MASONRY FINISHES.

FOUNDATION

- F1 THE DESIGN OF THE POOL HAS BEEN BASED ON BEING SUPPORTED BY UNIFORM NATURAL GROUND WITH A MINIMUM SAFE BEARING VALUE OF 150kPa (UNLESS SHOWN AS SUSPENDED ON PIERS). THE BUILDER SHALL NOTIFY THE ENGINEER IF ANY OTHER GROUND CONDITIONS ARE ENCOUNTERED PRIOR TO COMPLETING THE EXCAVATION. THE BUILDER SHALL ALSO NOTIFY THE ENGINEER IF A CLASS 'H' OR 'E' SUBGRADE IS ENCOUNTERED.
- F2 THE EXCAVATION SHALL BE KEPT FREE OF WATER. ANY SOFTENED SUBGRADE MATERIAL SHALL BE REMOVED AND REPLACED WITH COMPACTED GRANULAR FILL PRIOR TO PROCEEDING.
- F3 THE UNDERSIDE OF THE POOL SHALL BE SEPARATED FROM THE SUBGRADE WITH A 200µm POLYTHENE MEMBRANE OVER 50 CRUSHED STONE, COURSE AGGREGATE OR OTHER MATERIAL AS APPROVED BY THE ENGINEER.
- F4 ANY PROPOSED EXCAVATIONS WHICH ARE TO BE WITHIN THE ZONE OF INFLUENCE OF AN EXISTING STRUCTURE SHALL BE REFERRED TO THE ENGINEER PRIOR TO COMMENCEMENT.

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LEVELS SHOWN INDICATE FINISHED STRUCTURAL LEVEL
+ ABOVE - OR BELOW EXISTING GROUND LEVELS



Proposed Concrete Pool - 40.0m² - 47,000 litres
Proposed Concrete Spa - 3.0m² - 2,000 litres

RL 72.45

- PROVIDE 1 SKIMMER
- PROVIDE 3 LIGHTS
- PROVIDE 1 SOLAR COVER
- PROVIDE 3 UMBRELLA HOLDERS
- PROVIDE 2 SWIMJETS
- PROVIDE 6 JETS TO SPA
- PROVIDE 2 TOY PACKS
- PROVISION FOR SOLAR

SCALE 1:100
0 1 2 3 4 5 10
P O O L P L A N

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PROPOSED SWIMMING POOL STRUCTURAL DETAILS

FOR Mr E De Martin

AT 24 RAYNER STREET, NARRAWEENA

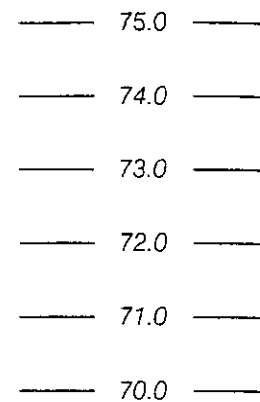
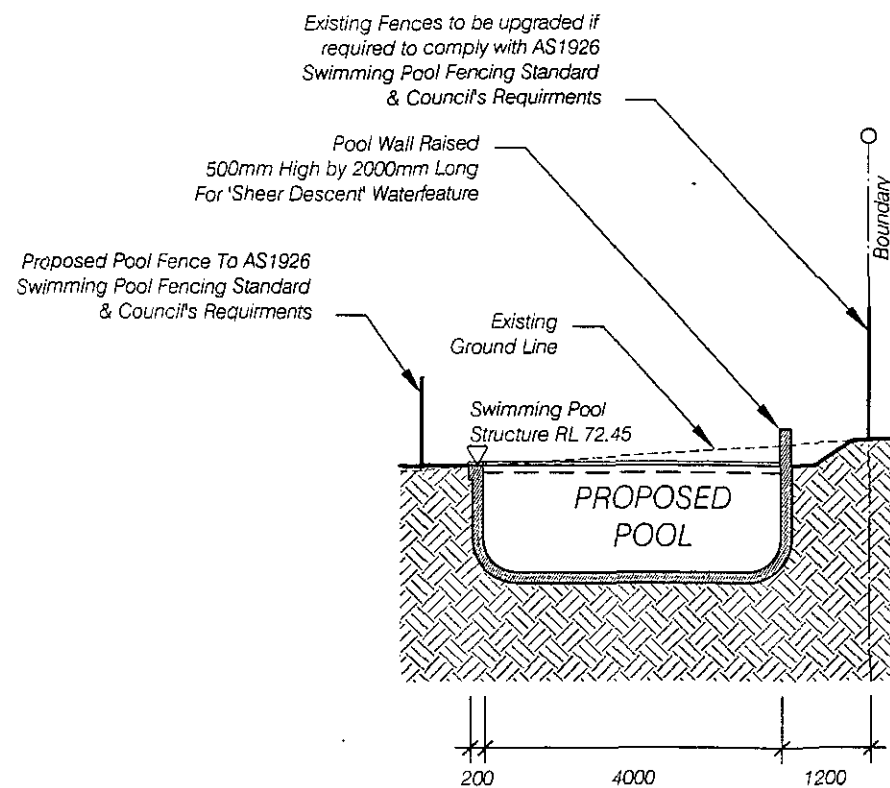
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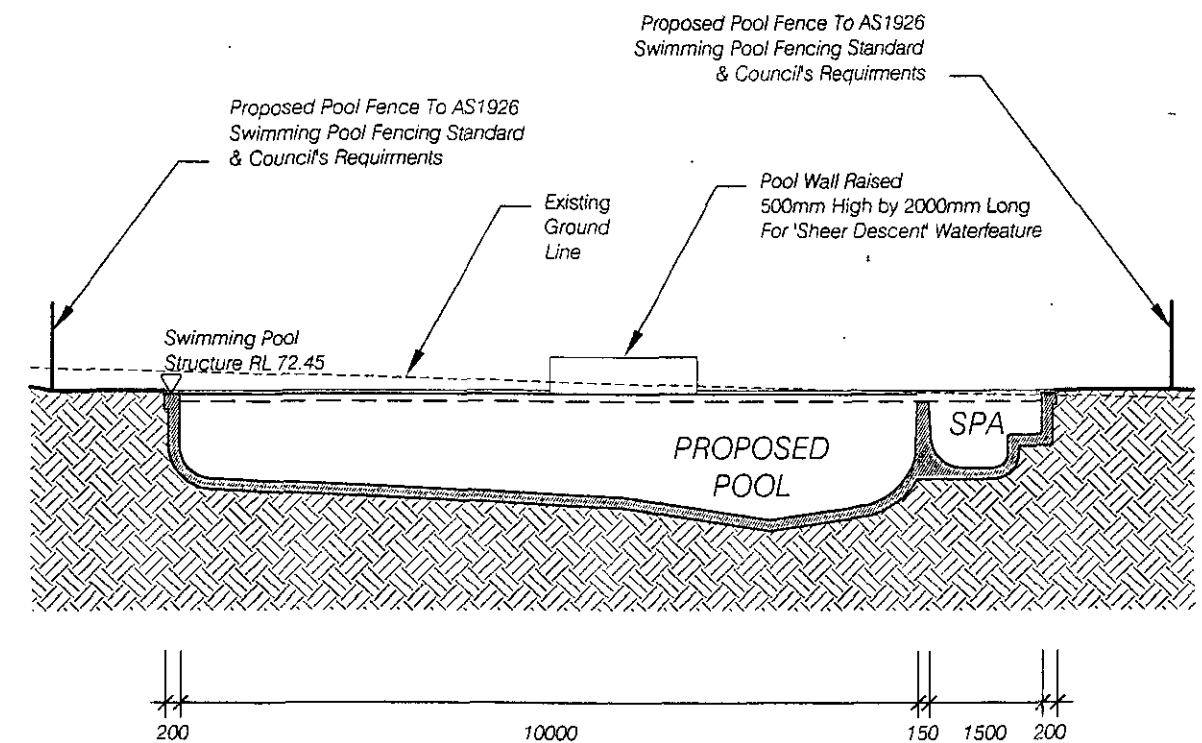
SHEET 6 OF 8

DRAWING/CONTRACT No.

BHP 10L17613



POOL SHELL APPROXIMATE ONLY, REFER ENGINEER'S DETAIL & SPECIFICATION !



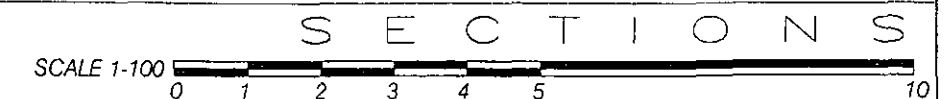
Section X

1 - 100 @ A3

Section Y

1 - 100 @ A3

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PROPOSED SWIMMING POOL

FOR Mr E De Martin

AT 24 RAYNER STREET, NARRAWEENA

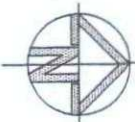
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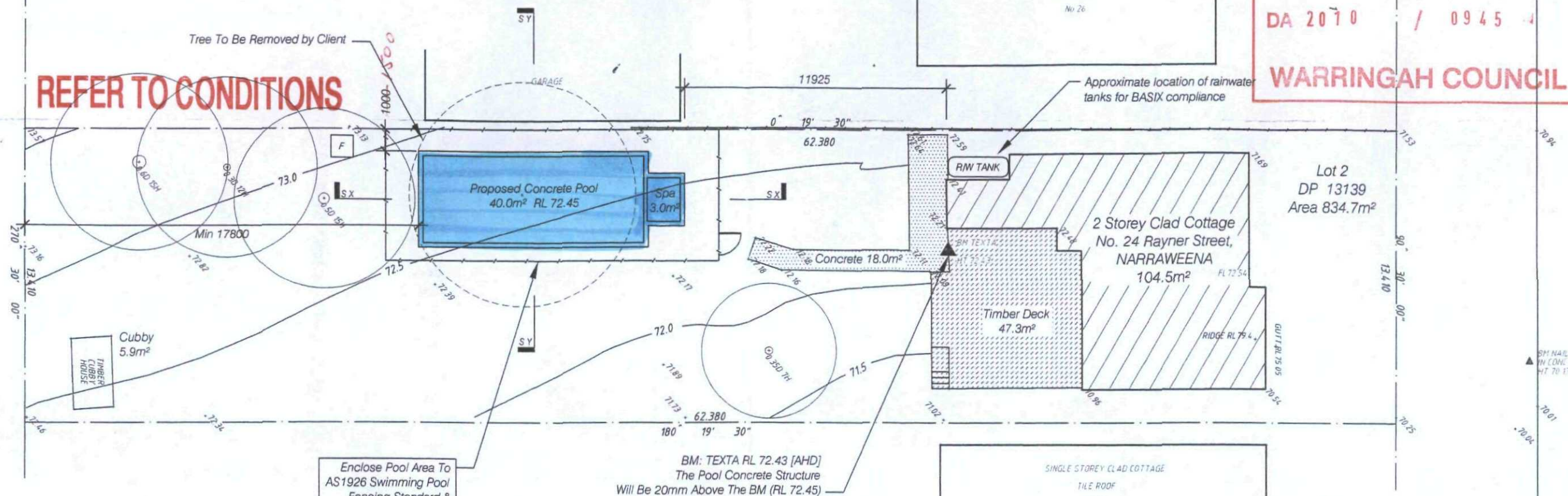
SHEET 7 OF 8

DRAWING/CONTRACT No.

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REFER TO CONDITIONS



THIS PLAN IS TO BE READ
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RAYNER STREET

Legend

- Boundary
- To Be Removed
- Existing Spot Heights
- Paving
- Existing Tree

NOTE- FENCE LOCATIONS HAVE
NOT BEEN DETERMINED IN
RELATION TO BOUNDARIES

IDENTIFY & MARK THE LOCATION OF ALL
ABOVE & BELOW GROUND SERVICES
PRIOR TO COMMENCING ANY WORK.
TAKE ALL REQUIRED PRECAUTIONS TO
PREVENT DAMAGE TO SERVICES

BM: TEXTA RL 72.43 [AHD]
The Pool Concrete Structure
Will Be 20mm Above The BM (RL 72.45)

Sound Proof Filter Box

POOL OVERFLOW TO BE PUMPED
TO SEWER TO COUNCIL'S &
SYDNEY WATER'S REQUIREMENTS

SITE CALCULATIONS

Site -	834.7m ²
PROPOSED SITE COVERAGE	
Residence -	104.5m ²
Decking -	47.3m ²
Paved Areas -	18.0m ²
Cubby -	5.9m ²
Proposed Pool -	40.0m ²
Proposed Spa -	3.0m ²
Proposed Pool Coping -	6.7m ²

PROPOSED IMPERVIOUS AREAS
(not including Deck, Pool)
182.4m² (21.9%)

PROPOSED SOFT LANDSCAPE AREA
(including Pool, not including areas <2m)
617.6m² (74.0%)

AREA WITHIN 6m OF REAR BOUNDARY
80.5m²

BUILT UPON AREA WITHIN 6m OF REAR
BOUNDARY
5.9m² (7.3%)

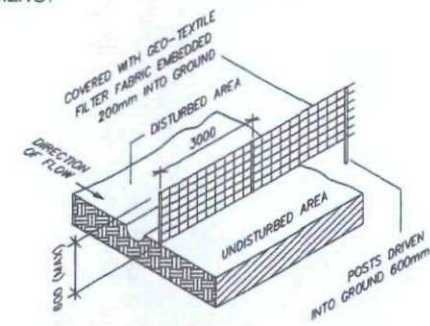
NOTES TO SILT & SEDIMENT CONTROL FENCE CONSTRUCTION

SOURCE: GUIDELINES FOR EROSION & SEDIMENT CONTROL ON BUILDING SITES
HAWKESBURY-NEPEAN CATCHMENT MANAGEMENT TRUST WINDSOR, AUSTRALIA

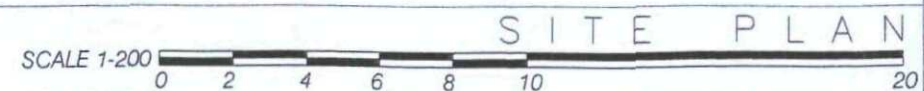
- CONSTRUCT SEDIMENT FENCE ALONG CONTOURS OF SITE
- DRIVE 1.5m POSTS INTO THE GROUND. PROVIDE UPHILL RETURNS AT EITHER END
- CONNECT THE GEOTEXTILE FABRIC TO THE POSTS IN A SECURE MANNER
- CONSTRUCT A TRENCH ALONG THE UPSLOPE SIDE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE BURIED
- BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT ON BOTH SIDES
- MAINTAIN THE FENCE REGULARLY TO ENSURE EFFICIENCY

OSD CALCULATION

(NOT INCLUDING DECKS, POOLS, SPAS)
Site Area = 834.7m²
(a) Existing Impervious Area = 175.7m²
To Be Retained = 175.7m²
Proposed Impervious Area = 6.7m²
(b) Total Post Development Impervious Area
= 182.4m² / 21.9%
(c) $834.5 \times 0.35 = 292.1m^2 + 50m^2 = 342.1m^2$
OSD IS NOT REQUIRED



SEDIMENT FENCE DETAIL
NOT TO SCALE



SITE PLAN

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APPROVED *[Signature]* DATE 01/06/10

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PROPOSED SWIMMING POOL STRUCTURAL DETAILS
FOR Mr E De Martin
AT 24 RAYNER STREET, NARRAWEENA

DATE: 01/06/10
DRAWN: OL10-063
SHEET 1 OF 8
DRAWING/CONTRACT No.
BHP 10L17613