

## A Total Concept

Landscape Architects & Swimming Poor Designers HS West Sweet North Sydney N SWV 2060 Coleman and Color September 2015 Capparation (ACC) 149-1129-201

Proposed Alterations &

COSTOMER

No & Mrs & MOORE

SITE ADDRESS.

No. 8 Gordon Street

CLONTARF N.S. 7 2090

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IMPORTANT: The Specifications set out below are In no way intended to relieve a builder or contractor of his obligation to fully familiarise himself with applicable legislation, current Australian Codes and the Building Code of Australia and they shall be read in conjunction with such legislation and codes. This specification applies to all structural drawings and site instructions Issued for this project by the Consulting Structural Engineer.

### **SPECIFICATIONS**

- G1. These drawings shall be read In conjunction with the contract specifications and drawings. Refer discrepancies
- G2. Dimensions shall not be obtained from these drawings by scaling. Wall, pier and column thicknesses and structural member sizes shown on these drawings shall take precedence over those shown on the Architect's drawings. The Builder shall verify all dimensions and be responsible for the setting out of the building.
- G3. Elements on these drawings are shown in their intended completed state. The builder shall provide any necessary temporary works including propping, bracing, shoring or any other requirements necessary to maintain any parts of the building, adjacent property or site earthworks, excavations and embankments in a stable condition during construction. Unless stated otherwise, temporary works shall be the builder's responsibility.
- G4. The building shall not be built on, or adjacent to, any of the following hazards unless clearly noted otherwise on these drawings:- embankments or batters, water retaining structures, retaining walls, pits. sewers, service trenches, drainage channels, rivers or any potential source of damage to the structure. If any such hazards are encountered the Engineer shall be notified and his decision obtained before commencement of any work.
- G5. The builder shall locate all existing and proposed services and easements on and adjacent to the site and shall be responsible for damage to same. The approval of the Statutory Authorities and the Engineer shall be obtained before the building or any of its parts are constructed over services.
- G6. The builder shall notify adjoining owners and undertake an agreed dilapidation survey of their properties before commencement of work if retaining structures, excavations or piles are proposed near the site boundaries. Adjoining owners' written permission shall be obtained before commencing underpinning or anchoring work.
- G7. No holes or chases shall be made in any structural element unless shown otherwise on these drawings or with the Engineer's written approval.
- G8. The Engineer shall be given two working days notice for inspections.
- G9. Structural work shown on these drawings has been designed for the following live loads: 1.5KPG

End bearing of piers shall be .600.. kPa on ... Rock

All work shall comply with the Geotechnical Engineer's report if provided.

- F2. Approval shall be obtained for the foundation material to footings before pouring concrete.
- F3. Footing excavations and pier holes shall be kept free of water. If the bearing surface deteriorates or the sides of excavations collapse the contractor shall remove loose or weakened material before concrete is poured.
- F4. Organic material, soft spots, top soil and any other deleterious material shall be removed from footing or slab excavations. Proof roll ground with vibrating roller of suitable dead weight and replace any soft spots under slabs with approved fill. Backfilling under slabs on ground shall consist of material acceptable to the Engineer and shall be compacted in layers not exceeding 150mm thickness to a dry density of at least 95 % standard compaction to AS1289 method E1-1 unless otherwise stated in the soils report. Moisture content of filling shall be maintained within ± 2% of optimum. Backfill under footings if required shall be 15 MPa concrete unless noted otherwise. F5. Footings shall be founded below the bottom of proposed or existing adjoining service trenches. Footings at down
- pipes shall be set down to allow turnouts above pad level. The Engineer shall be informed and his written approval obtained for alternative proposals. Excavations shall not be taken below the top of adjoining footings. The Engineer shall be advised and written instructions obtained before deeper excavation is undertaken.

F6. Backfill to service trenches shall be placed in layers not exceeding 100 thick to at least 95 % standard

F7. Drainage on the earth face of retaining walls if not shown on the drawings shall be a 100mp raining. agricultural pipe line in filter sleeve at footing level laid to a minimum fall of 1:120 and connected to storm water drainage at 6m intervals unless noted otherwise. Backfilling shall be 300mm thickness of graded shall be provided at high points.

# **TRUCTURA**

Project: Mr & Mrs A. MOORE at: No. 6 Gordon Street, CLONTARF NSW 2093

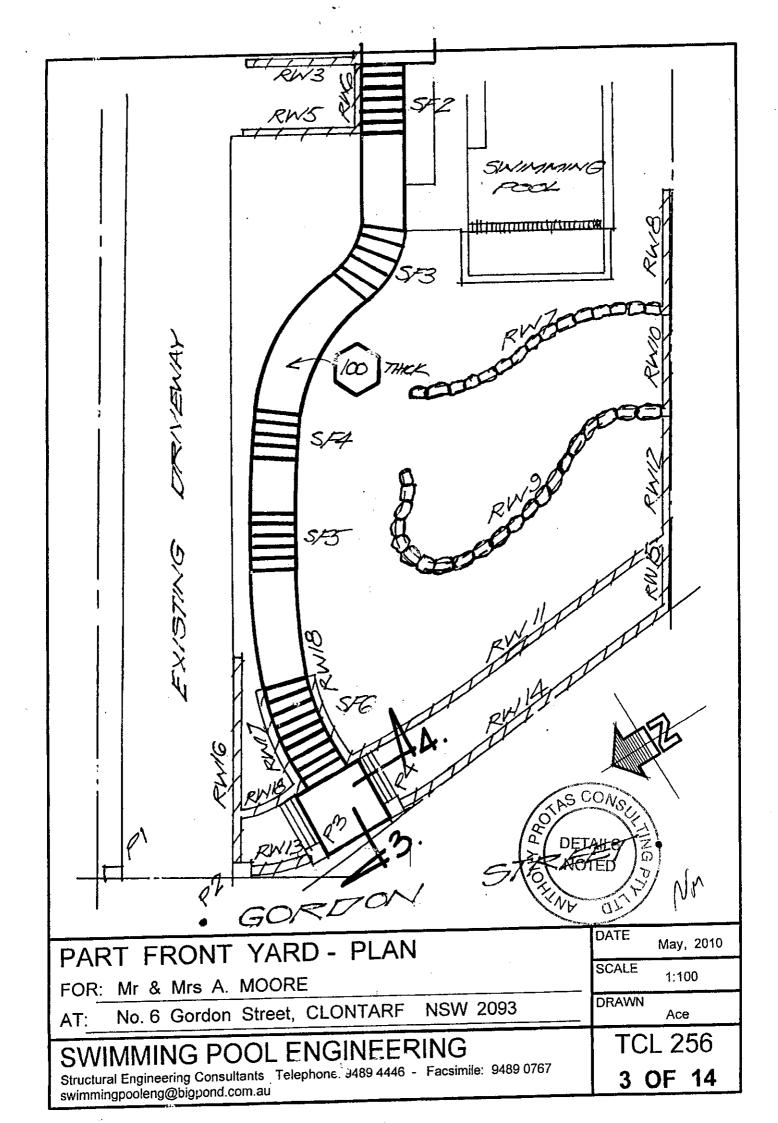
SWIMMING POOL ENGINEERING

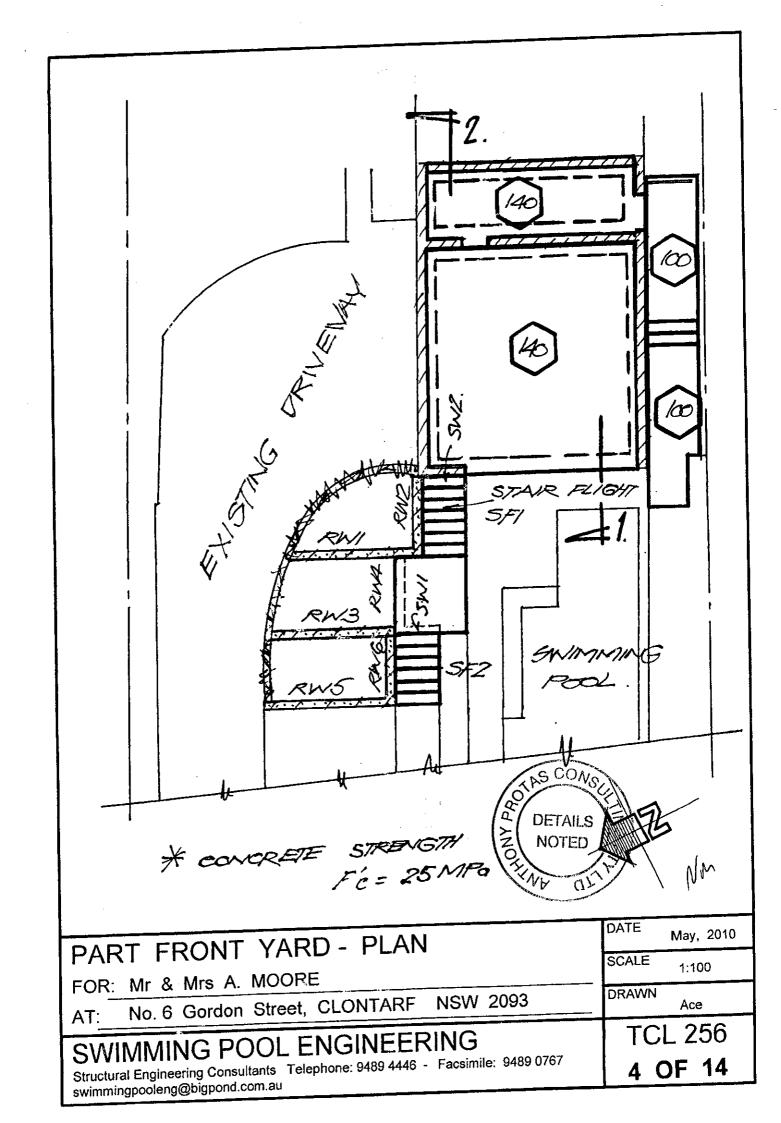
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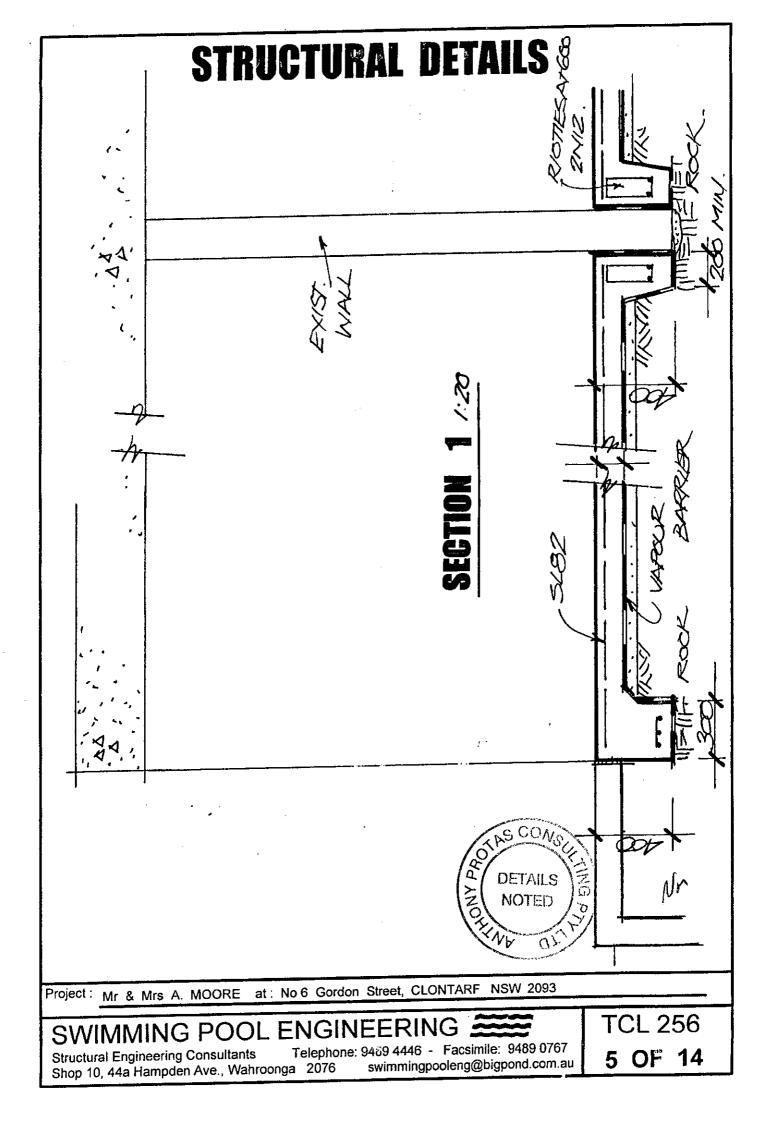
TCL 256

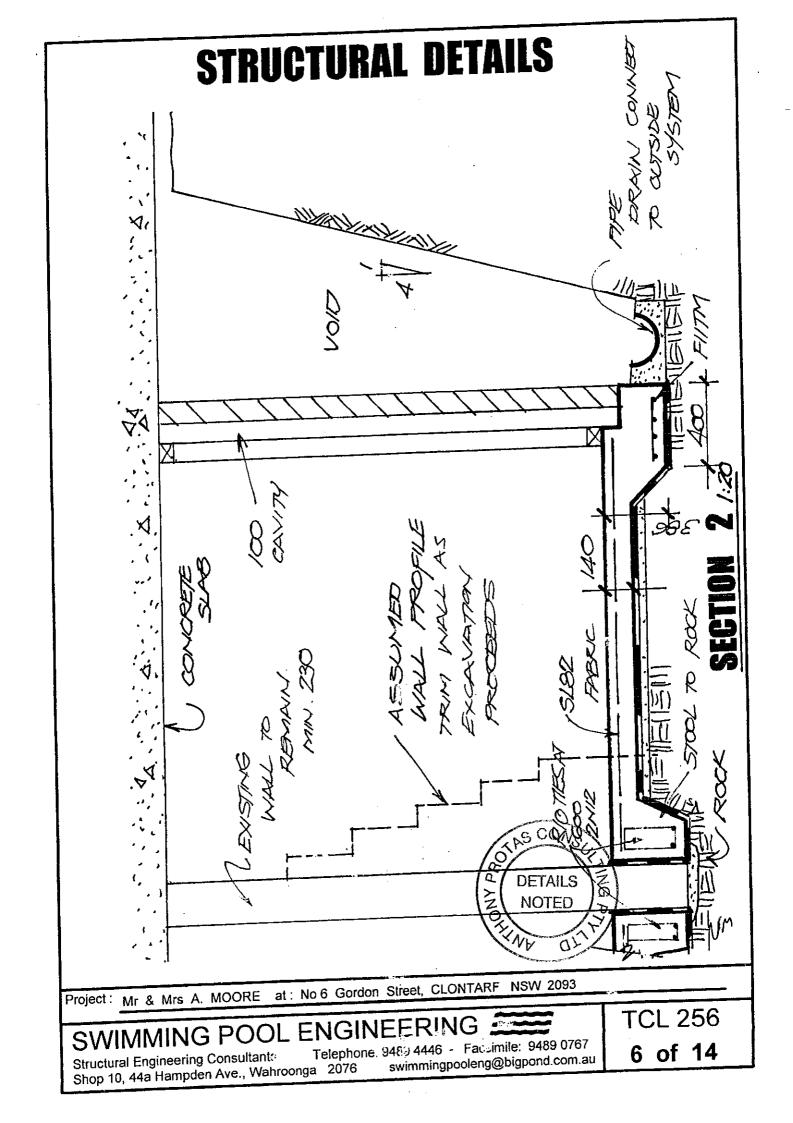
Structural Engineering Consultants Shop 10, 44a Hampden Ave., Wahroonga 2076

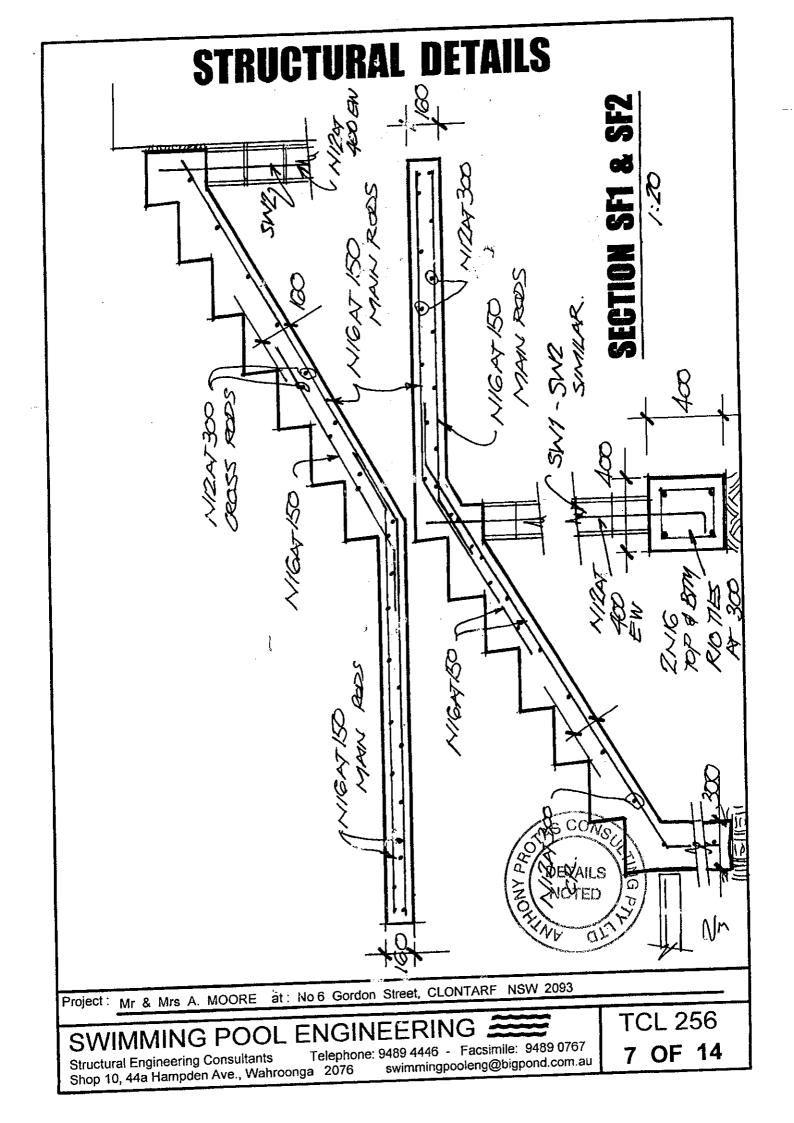
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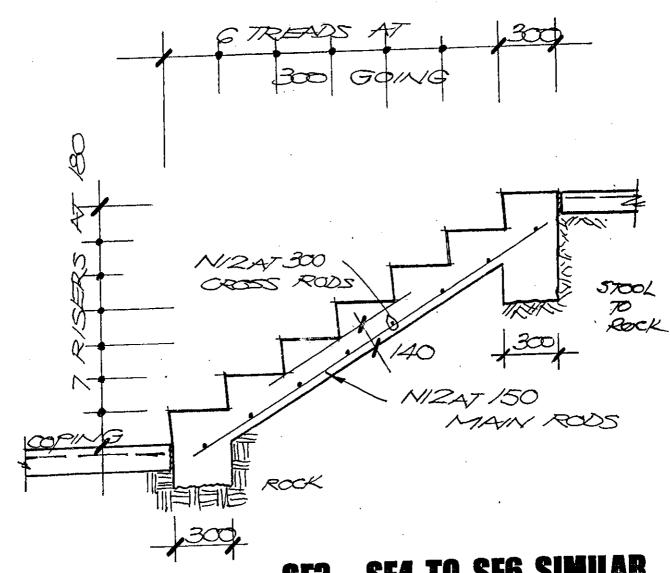








# STRUCTURAL DETAILS



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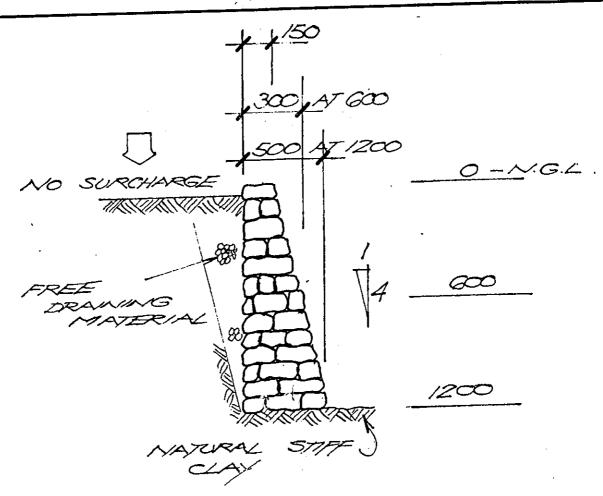
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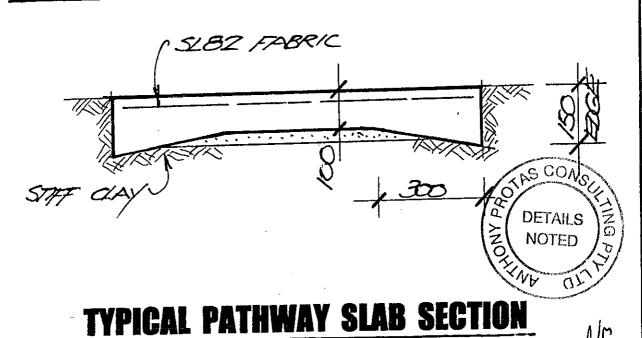
Telephone: 9489 4446 - Facsimile: 9489 0767 Structural Engineering Consultants Shop 10, 44a Hampden Ave., Wahroonga 2076

swimmingpooleng@bigpond.com.au

TCL 256 8 OF 14



# TYPICAL SECTION - DRY PACKED RUBBLE WALL - SECTION - RW7 & RW9 M.T.S.



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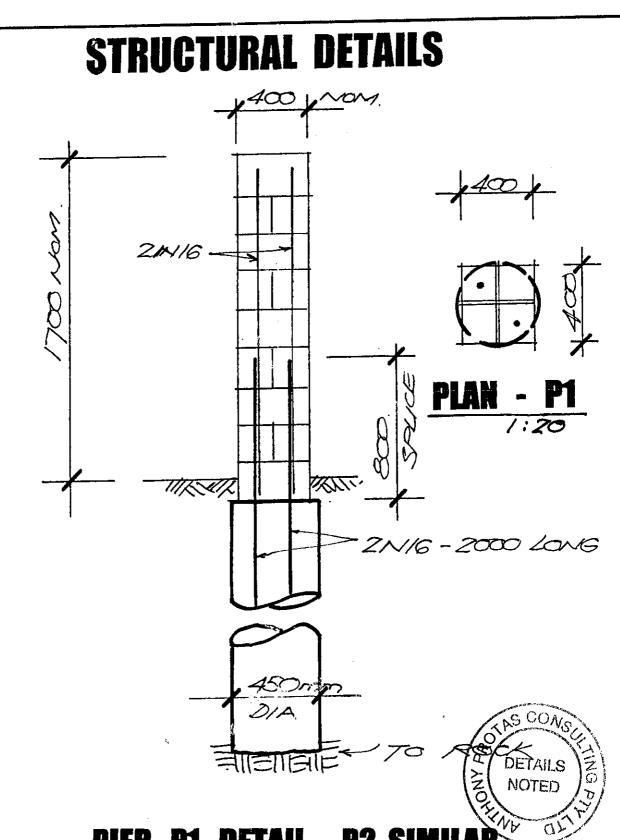
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## SWIMMING POOL ENGINEERING

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TCL 256
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# STRUCTURAL DETAILS 5182 FABRE AS CONS NOTED 5182 7/2 NM at: No 6 Gordon Street, CLONTARF NSW 2093 Mr & Mrs A. MOORE Project: TCL 256 SWIMMING POOL ENGINEERING Telephone: 9489 4446 - Facsimile: 9489 0767 10 OF 14 Structural Engineering Consultants swimmingpooleng@bigpond.com.au Shop 10, 44a Hampden Ave., Wahroonga 2076



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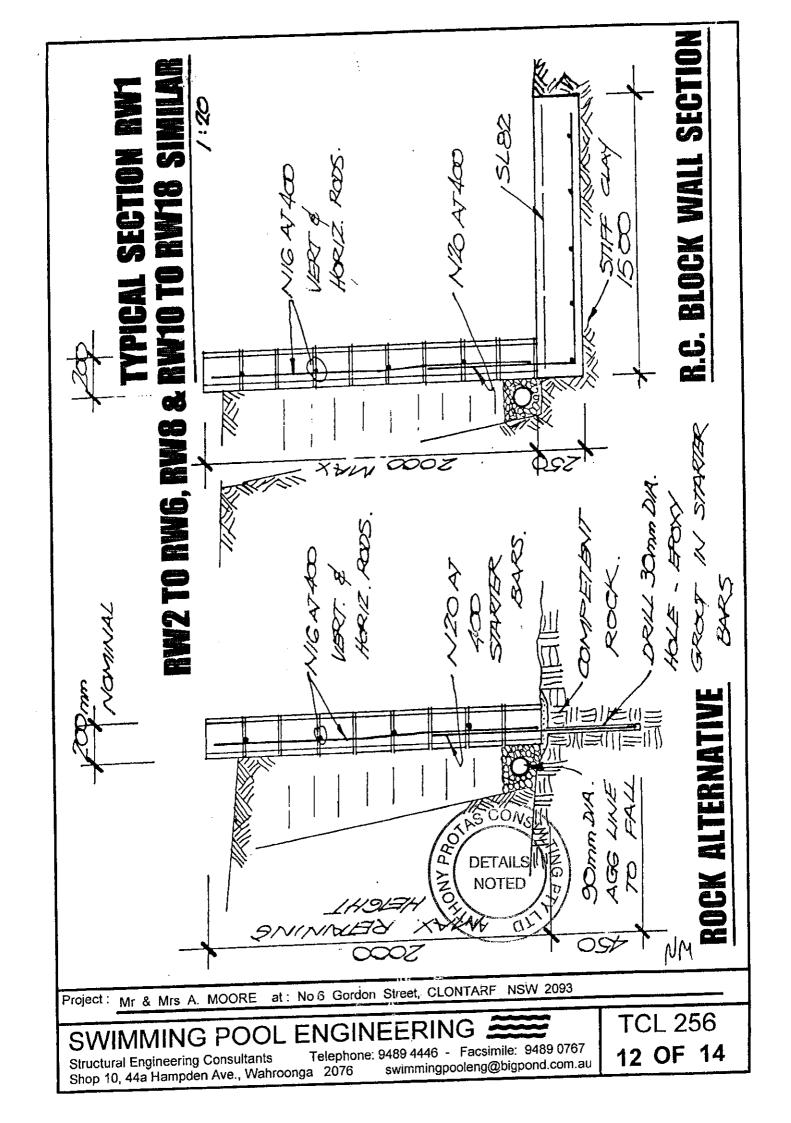
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### REINFORCED CONCRETE BLOCK MASONRY

M1. Blocks shall be Grade 15 and conform to AS/NZS4455. Standard blocks shall not be used. All blocks shall have shallow top grooves for reinforcement. Cleanout blocks shall be provided as the first course.

M2. Starter bars shall be accurately set out to a string line and template securely fixed in position before the base is poured. Extension bars shall be tied to the starter bars in their correct position before filling cores. Horizontal bars shall be placed well clear of vertical bars to allow correct positioning of extension bars.

M3. The blockwork shall be set out from the cast in starter bars to accurately ensure 25mm cover to the bars as measured from the inside face of the blockwork unless shown ciherwize.

M4. Workmanship shall comply with ASSTOO and units shall have fully bedded face shells.

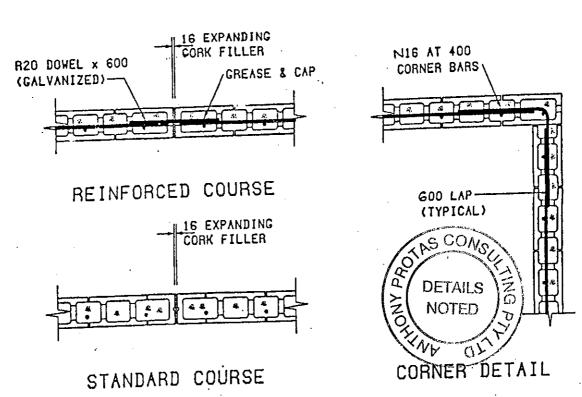
M5. Mortar shall be in accordance with AS3700 and have a 2:1:9 cement:lime:sand mix. Provide waterproof additive such as Radmyx by Radcrete Pacific in mortar to manufacturer specification in retaining walls where waterproofing is required.

M6. Mortar fins shall be removed. Mortar droppings and debris shall be removed before placing vertical reinforcement and filling cores.

M7. Core filling grout shall be Grade 25 in accordance with the requirements of AS3600 and AS3700 with 10mm maximum aggregate size and 230mm slump. Filling height shall not exceed 2.4m and shall be placed with a pencil vibrator. Provide waterproof additive such as Radmyx by Radcrete Pacific in blockmix to manufacturer specification in retaining walls where waterproofing is required.

M8. Continuous agricultural pipe drains shall be provided behind all retaining walls and connected into drainage lines at intervals of 6m u.n.o. and at ends of wall in accordance with Note F7.

M9. Build in control joints at 9m centres unless shown otherwise on the drawings.



TYPICAL CONTROL JOINT DETAILS



PROVIDE CONTROL JOINTS AT 9.0 METRE CENTRES

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Project: Mr & Mrs A. MOORE at: No 6 Gordon Street, CLONTARF NSW 2093

## SWIMMING POOL ENGINEERING

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Telephone: 9489 4446 - Facsimile: 9489 0767 a 2076 swimmingpooleng@bigpond.com.au

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### CONCRETE & REINFORCEMENT

C1. Concrete shall conform to the requirements of AS3600. The maximum size of aggregate shall be 20mm unless shown otherwise. Concrete slump shall not exceed 75mm and shrinkage shall not exceed 630 microstrains at 56 days unless noted otherwise. Cement shall conform to ACSE specifications. Special concrete mixes shall also be in accordance with notes SC1 to SC11.

Symbol Type C2. Reinforcement designations as follows:

- Plain bars to AS/NZS 4671 (250R)
- Deformed bars to AS/NZS 4671 (D500N) N
- Deformed mesh to AS/NZS 4671 (D500L)

The number following the symbol is the Bar/Mesh size in mm.

C3. Minimum laps for deformed bars shall be as follows unless noted otherwise:

[[[[[[]]]]]]]	
ar Diameter	Lap
12	500
16	650
20	800
24	1000
28	1150
32	1300

Mesh 300 (min. 2 crosswires to overlap)

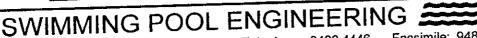
- C4. Concrete shall be fully compacted by high frequency mechanical vibrator.
- C5. Reinforcement shall be supported on steel chairs and maintained in the position shown on the drawings. Chair spacing shall not exceed 800mm for bars and 600mm for fabric.
- C6. Concrete shall be cured for seven days by continuous water spray or weighted plastic membrane and shall at no stage become dry. Curing compounds shall be used only where approved by the Engineer.
- C7. Slabs on ground over backfilled service trenches shall be thickened by 50mm for the full width of the trench plus 500mm bearing each side and have additional bottom reinforcement of at least SL92 Mesh with cover as note C8. In all cases obtain written approval from the Engineer before construction.
- C8. Concrete cover to reinforcement / ties shall be in accordance with the following table unless shown otherwise.

Etement	Formed & Sheltered	Formed & exposed	No formwork
Top reinforcemen	nt		
Slabs & Beams -	20	40	
Simply Supporte	đ		
Slabs Btm Reinfo		41.	40
Up to 2 hr fire rai		41.	
Continuous Stab	s -		
Btm Reinforcem		40	40
Up to 2 hr fire rat		40	
Simply Supporte			
Btm Reinforceme		40	65
Up to 2 hr fire rat		40	
Continuous Bear			
Btm Reinforcem		40	65
Up to 2 hr fire ra	ted 30		
Walls -	ted 40	40	65
Up to 2 hr fire ra	tea 40 50	50	65
3 hr fire rated	50	50	65
4 hr fire rated	<b></b>		
Columns -	ted 35	40	80
Up to 2 hr fire ra	ilea se		

Note: formed & exposed concrete elements within 1 km of the coastline shall be 40MPa concrete with 45 cover to slab reinforcement / beam ties.

- C9. Where concrete slabs bear on masonry, including cored bricks, the bearing surface of the masonry shall be rendered with 1:3 cement: sand mortar to give a level surface and a Swan products or similar metal slip joint laid protected by 0.2mm polythene sheet taped to formwork both cides before placing concrete. Special details shall apply for roof slabs. Refer to the Engineer.
- C10. Formwork shall conform to the requirements of AS1509 and AS1510.
- C11. Distribution bars not shown on the drawings shall be N12 bars at 300mm centres, unless noted otherwise, lapped 500mm where required.
- C12. Penetrations and proposed construction joints not shown on the area drawings shall be approved by the
- C13. No reinforcement shall be cut or welded on site unless approved by the Engineer. At small holes bars shall displaced to either side, e.g. plumbing penetrations. These shall be approved by the Engineer.
- C14 Non loadbearing studwork shall be separated from slabs and beams by 12mm Canelte or as accepted by the Engineer. Suitable approved materials only shall be used in firewalls and smoke barriers.
- C15. Formwork may be stripped when concrete strength has reached 80 % of the design strength or in accordance with AS1509. In both cases the Engineer shall be consulted regarding prevailing temperatures during curing and also requirements for back propping beneath concentrated loads such as stacked bricks. Stripping and back propping to prestressed slabs shall be as directed by the stressing designer.
- C16. Brickwork shall not be built on slabs or beams until all supporting formwork has been removed.

Mr & Mrs A. MOORE at: No. 6 Gordon Street, CLONTARF NSW 2093



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TCL 256

CONS

**DETAILS** 

NOTED

## A Total Concept

Landscape Architects & Swimming Pool Designers 65 West Street, North Sydney N.S.W. 2060 Telechane (02) 9957-5122 | Facsimile: (02) 9957-5922

# Proposed Concrete Swimming Pod

CLISTOMER:

Mr & Mrs A. MCORE

SITE ADDRESS:

No. 6 Gordon Street,

CLONTARF - N.S.W. 2093

TRUCTURAL DETAILS ONLY

"Copyright - Any attempt to re-produce in whole or to part any of this plan shall result to proceedings deing brought for breach of copyright."

URD, MAP NO. 197



These drawings designed & prepared by:

2010 Project No.

TCL 255

Drawing No. 1 of 9

ERING CONSULTING STRUCTURAL ENGINEERS

10, 44A Hampden Ave. (Cnr. Gladys Ave.). East Warroonga. NSVv 2078 PC Box 46, Webruonga hISW 2076 Telephone 9469 4445 Facsimile 9466 (167 G-mail: swimmingpooleng@bigpond.com

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NOTE: For site plan and swimming pool location refer to drawings prepared by A Total Concept - Landscape Architects & Swimming Pool Designers - Ph: 9957 5122

In our opinion the structural details shown on this set of plans, TCL 255 - 1 to 9 have been designed in accordance with the current Australian Standards and conform with the structural engineering requirements of the Building Code of Australia.

For and on behalf of SWIMMING POOL ENGINEERING

Mr Michael Gergich
MiEAust CPEng
N P E R

Signature Date 3/5/10
Registered on the NPER in the Category of Civil/Structural
National Professional Engineers Register

Accredited Certifier - BPB 0134 Building Professionals Board



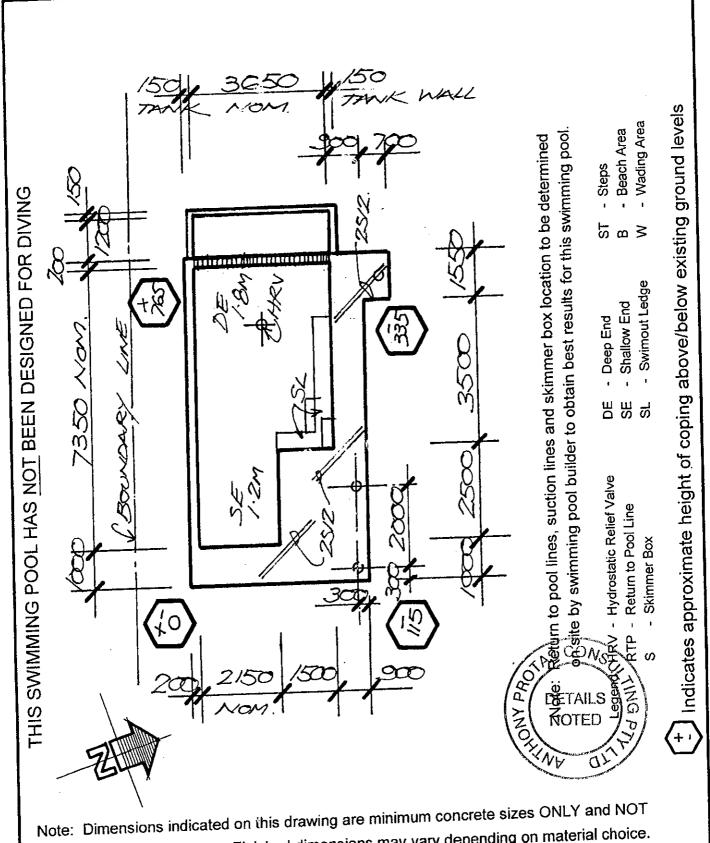
## STRUCTURAL DETAILS ONLY

Project: Mr & Mrs A. MOORE at: No. 6 Gordon Street, CLONTARF NSW 2093

SWIMMING POOL ENGINEERING

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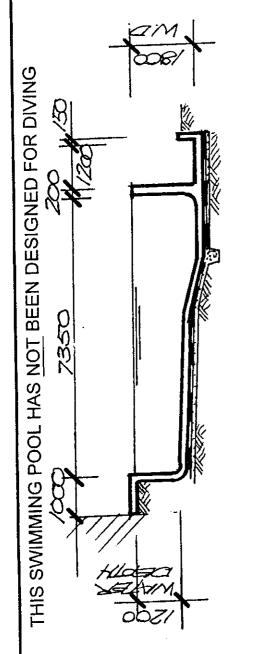
Structural Engineering Consultants Telephone: 9489 4446 - Facsimile: 9489 0767 swimmingpooleng@bigpond.com.au



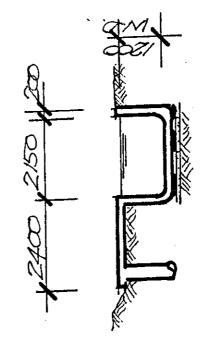
finished dimensions. Finished dimensions may vary depending on material choice.

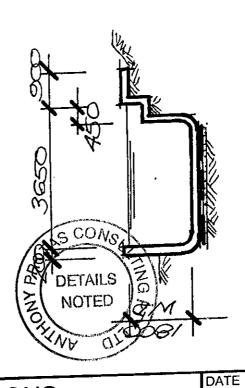
	DATE May, 2010
SWIMMING POOL - PLAN	2041
FOR: Mr & Mrs A. MOORE	1:100
AT: No. 6 Gordon Street, CLONTARF NSW 2093	DRAWN ACE
SWIMMING POOL ENGINEERING	TCL 255
Structural Engineering Consultants Telephone: 9469 4440 - 7 465miller	3 OF 9
swimmingpooleng@bigpond.com.au	

# DIAGRAMMATIC POOL SECTIONS









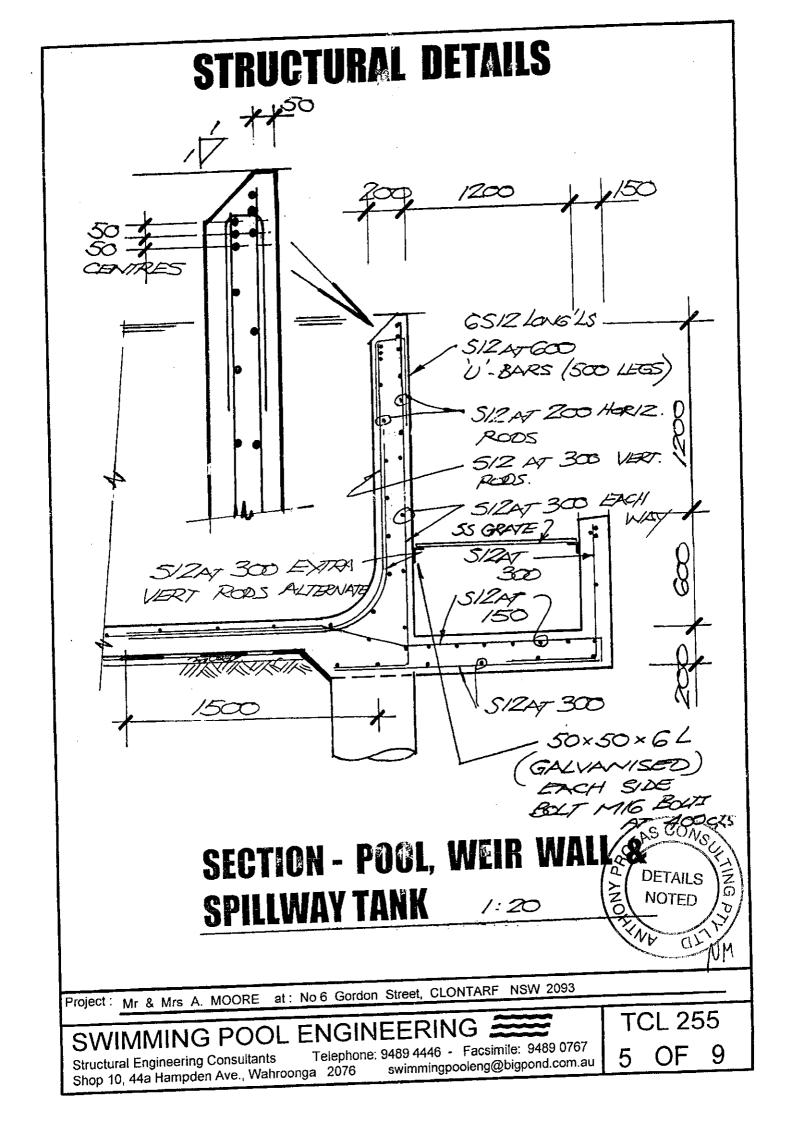
DEEP END SECTION

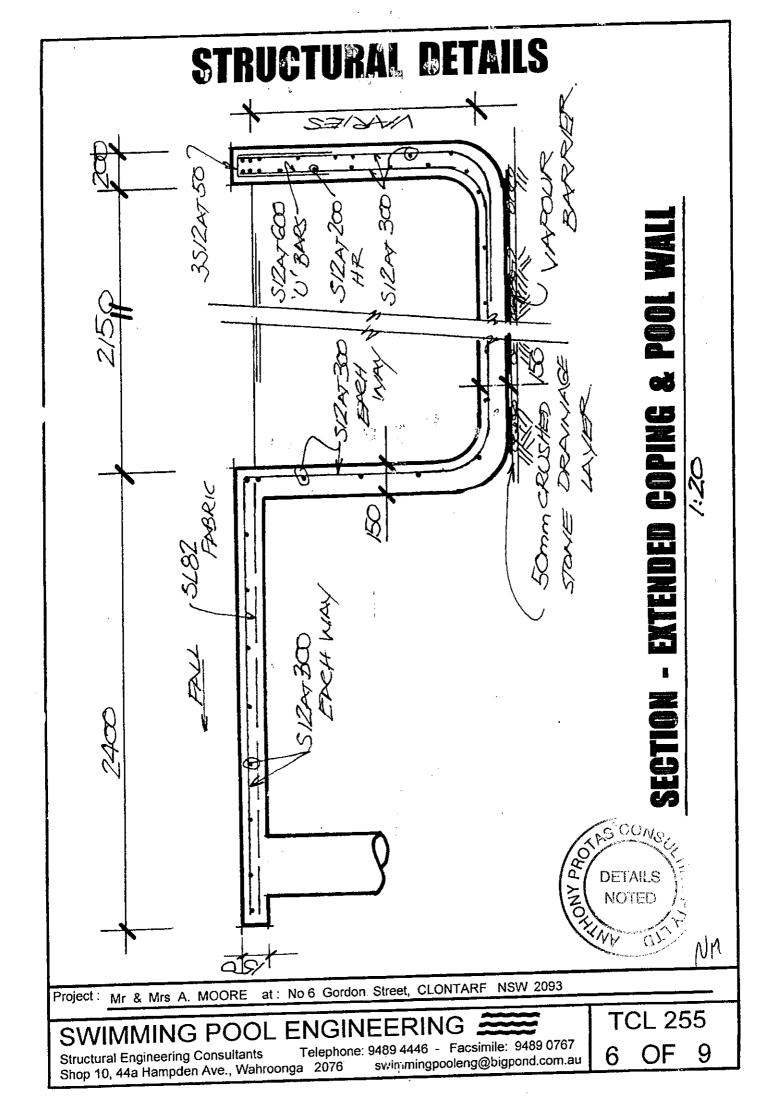
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SWIMMING FOOL - OLO HOMO	
FOR: Mr & Mrs A. MOORE	
AT: No.6 Gordon Street, CLONTARF NSW 2093	DRAWN
SWIMMING POOL ENGINEERING	
Structural Engineering Consultants Telephone: 9489 4446 - Facsimile: 9489 0767 swimmingpooleng@bigpond.com.au	
swimmingpooleng@bigpon	

TCL 255 4 OF 9

May, 2010

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## SWIMMING POOL GENERAL NOTES

- All workmanship and materials to be in accordance with the requirements of the current Australian Standards, the Building Code of Australia and by Laws and Ordinances of the relevant building Authority. This design G1 complies with AS2783 - 1992 Concrete Swimming Pools Code and AS3600 - 1992 Concrete Structures.
- Overall dimensions are to be checked and verified on site by the builder. Dimensions shown are concrete sizes and do NOT include finishes. Any discrepancies or variations are to be referred to the engineer. G2 Contract documents - pool size dimensions prevail.
- Walkways have been designed for a distributed load of 3kPa and a line load of .3Kn/m. No additional load shall be applied without approval from the engineer. G3
- During construction the structure shall be maintained in a stable condition and NO part shall be overstressed.
- The walls of the pool have been designed to project a matthe above natural ground or sound G4 DO NOT SCALE THESE DRAWINGS G5 supporting material.

### **FOUNDATIONS**

- Foundation material shall be uniform and have a minimum safe bearing capacity of : 300 kPa on Stiff Clay - 4880 kPa on Rock **F1** 400 kPa on Sand
- Any variation in foundation conditions or material from that assumed in F1 above shall be referred to a F2 Geotechnical Engineer or the Structural Engineer.
- Excavation shall not be made within 2m of any existing structure without prior approval or recommendations for shoring or underpinning from the Structural Engineer. F3

### REINFORCEMENT

- All reinforcing steel to be fixed by an approved method and supported on appropriate sized chairs. Chair spacing shall not exceed 800mm for bars and 600mm for fabric. R1
- R2
- R denotes plain round grade 250 bars Reinforcement symbols S - denotes deformed grade 250 bars
  - SL denotes grade 450 welded wire fabric N - denotes deformed grade 500 bars -

The number immediately following the symbol above is the bar diameter in millimetres

### CONCRETE

The mix shall be proportioned to produce a minimum 28 day compressive strength according to it's exposure classification and suitable for pneumatic application. C1 Concrete shall have an exposure classification as follows:

A1 - 25 MPa Inland, more than 50km from large expanses of water -B1 - 25 MPa Near Coastal, 1km to 50km from large expanes of sait water -B2 - 32 MPa Coastal, within 1km of large expanses of sall water -- 40 MPa In Tidal or Splash Zone, of salt water (sea water pool) -C

NO Fly Ash shall be added to the 25Mpa Concrete mix. Fly ash may be added to a ARS CONSU maximum 40kg/m3 to the 40MPa concrete mix. Engineer to approve the mix. C2

Concrete cover shall be as follows unless noted otherwise: C3

50mm from water face Walls and floor

- 60mm from earth face

Faces exposed to aggresive water - 70mm

- 40mm from finished surface Cantilevered walkways

- 50mm ali round Pipes and conduit

Concrete shall be moist cured for 7 days after placement by use of a soaker hose to provide constant wetting or cover with plastic and keep moist. C4

EMPTYING POOL - Pool to be fitted with a hydrostatic relief valve to safeguard against possible flotation due to build up of water pressure under the pool when swimming pool is empty. Always seek approval from the swimming pool builder or structural engineer before emptying the pool.

SWIMMING POOL ENGINEERING

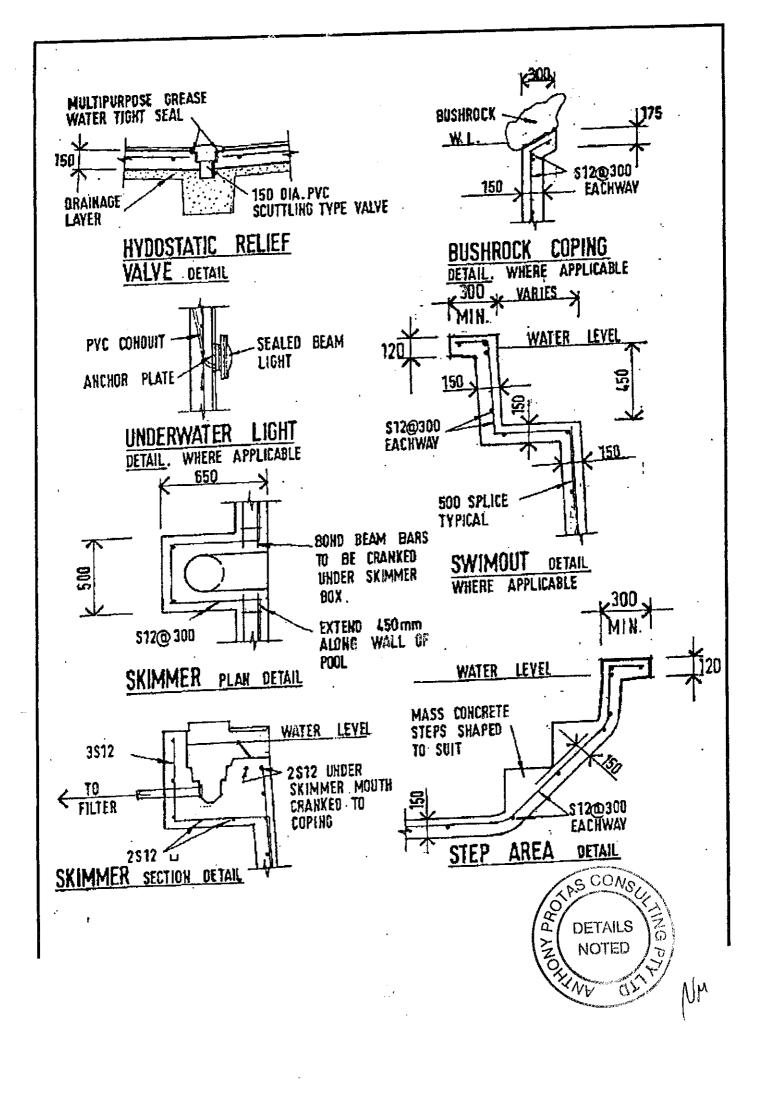
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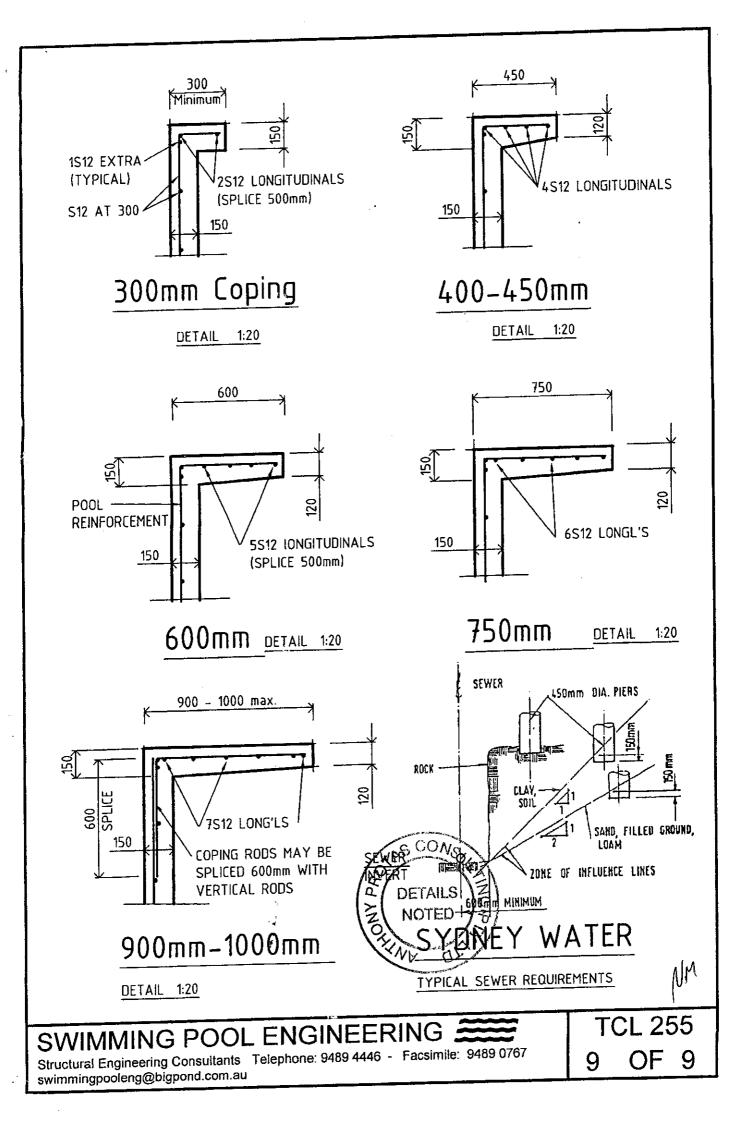


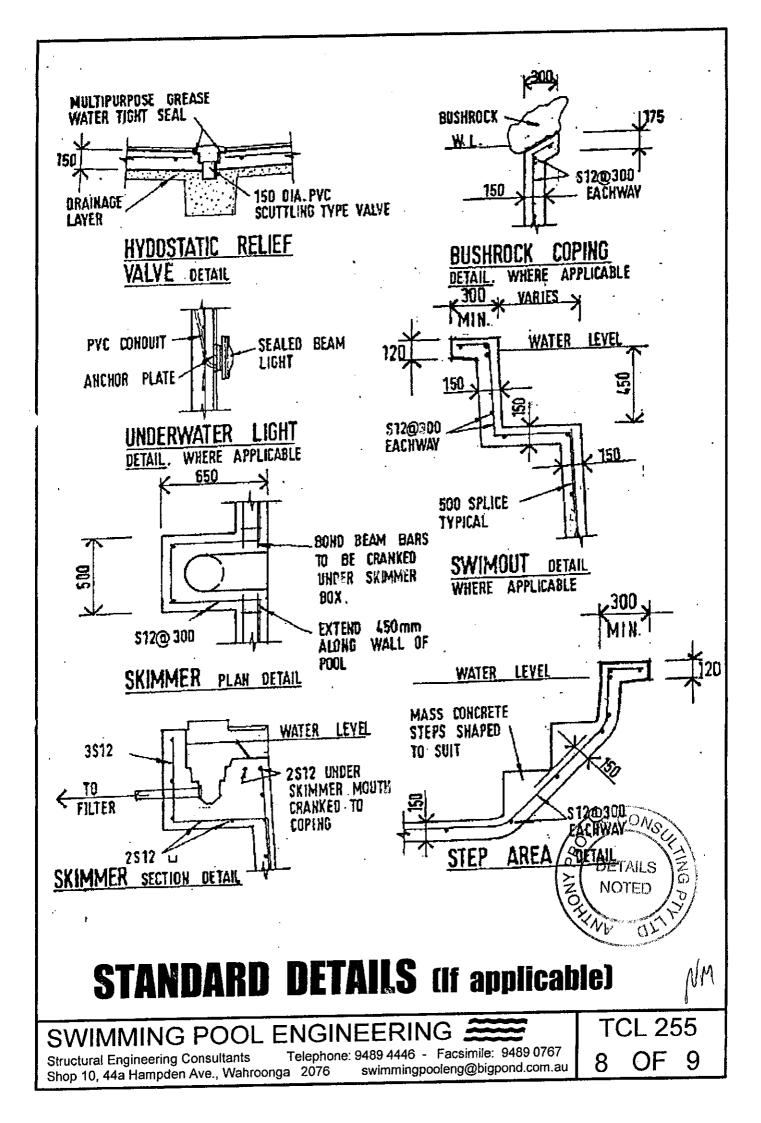
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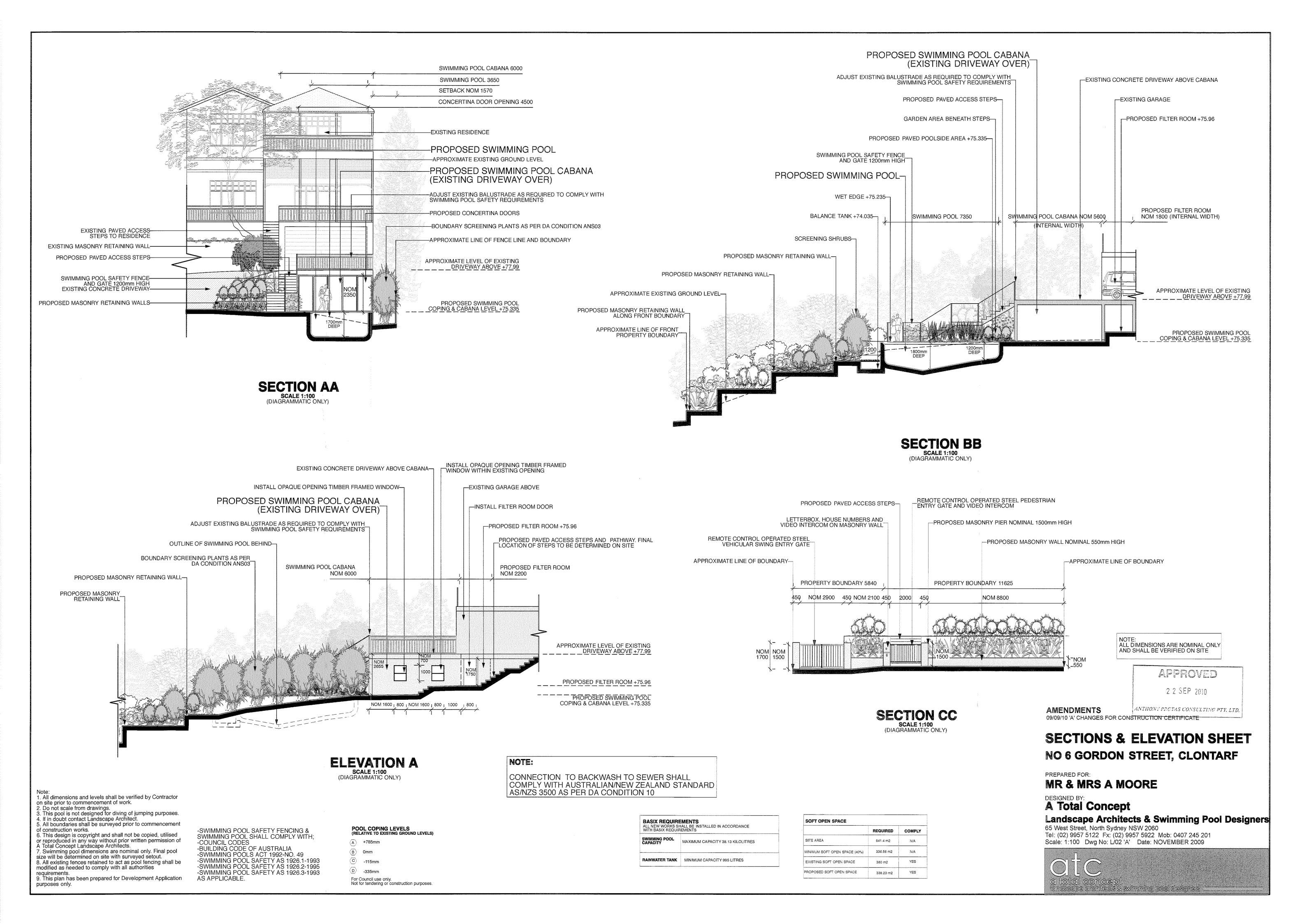
be made in concrete embedments of pipes other than those members without prior written approval of the Engineer. CAUTION TO FENCING CONTRACTORS uctural drawings shall

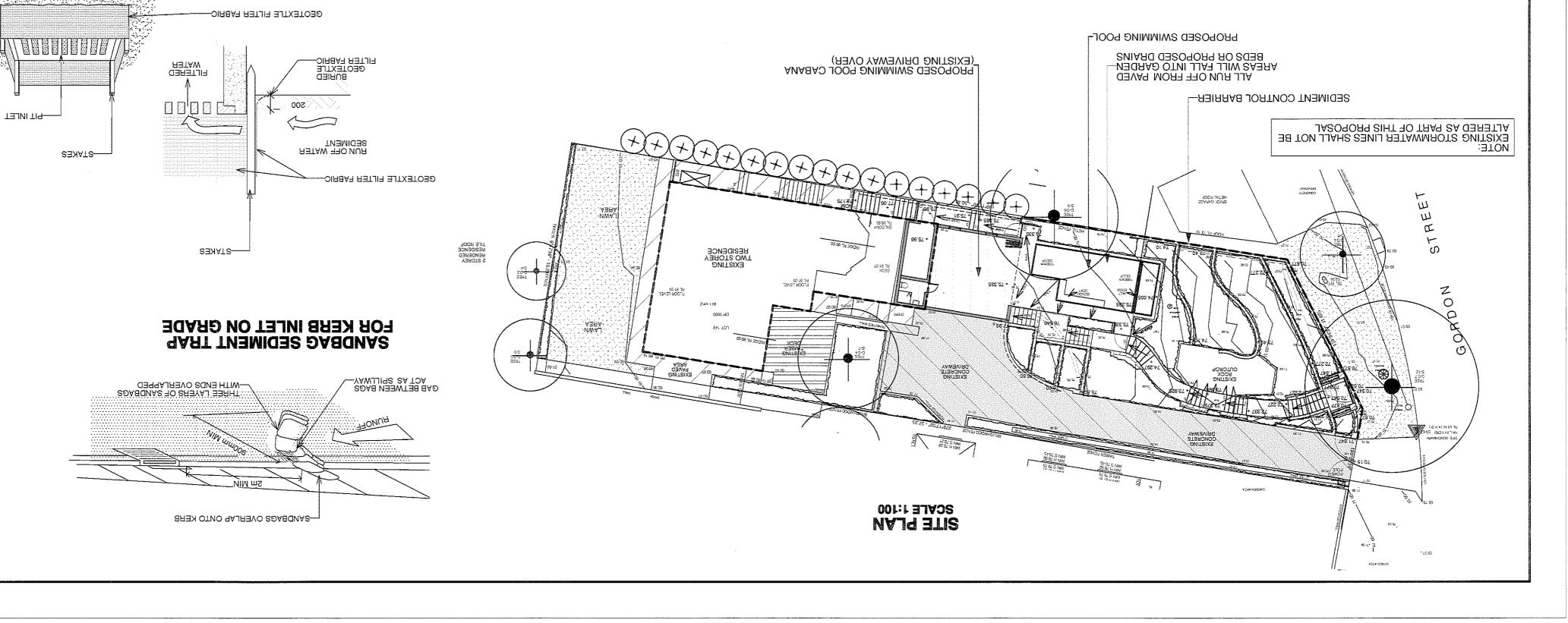
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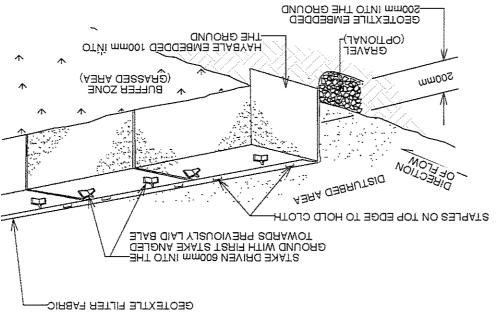




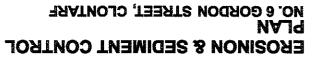


-MEMBRANE TO BE 'BIDIM' W2W OR APPROVED EQUIVALENT

### FABRIC SUROUND GEOTEXTILE FILTER



## SEDIMENT FILTER STRAW BALE AND GEOTEXTILE



MR & MRS A MOORE

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Tel: (02) 9957 5122 Fx. (02) 9957 5922 Mbb: 0407 245 201
Scale: Wa Dwg No: U04 Date NOVEMBER 2009 1qeonoO IstoT A

NOTED

DETAILS

## SEDIMENT FENCE

SACKFILL TO RESTORE PRIOR AMAT GNA BNARBMBM ABBA UNDISTURBED POSTS DRIVEN 600mm INTO A∃ĤA DISTURBED BETWEEN STAKES & BYS BY STAPLE FIX MEMBRANE TO STAKES WITH 3x GAL CLOUTS. TURN DOWN 50mm OVER TOP STRAND AND FIX WITH COUNTINUOUS TIE WIRE LOOPED AT 100mm CENTRES.

STIRING IS GAUGE WIRE TAUTLY-

SEDIMENT CONTROL BARRIER

**LEGEND** 

2. If in doubt contact the Landscape Architect. . Do not scale from drawings.

3. All boundaries shall be surveyed prior to commencement of

4. This plan is for DA purposes only.

3. An overflow pipe shall be installed to swimming pool with contaminated collected waters directed to the appropriate disposal system.

4. All down pipes shown on plan are existing

1. Existing stormwater drainage lines will not be effected by this proposal. All falls from pool coping and poolside paved sreas shall be directed towards surrounding gardens.

DEVICES ARE MINIPINED IN GOOD WORKING ORDER AND OPERATE

EFFECTIVELY.

REPLICEMENT BETWEE STELL STORM OR OFFRENCE AND RECOURS.

S. CLEAN BEHIND FRICE EACH MALOR STORM OR OTHERWISE AS DIRECTED

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AS INTERPRETABLE AND THE SITE.

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T. L. WORK SHELL BE GENERALLY CARRIED OUT IN ACCORDANCE WITH:

A. ALL WORK SHELL BE GENERALLY CARRIED OUT IN ACCORDANCE FINDS

B. EPA REQUIREMENTS

B. EPA REQUIREMENTS

B. EPA REQUIREMENTS

B. EPA REQUIREMENTS

B. THE SUPERINTENDENT AND THE LOCAL AUTHORITY

B. MHEN STORMWATER PITS ARE CONSTRUCTED, PREVENT SITE RUNOFF

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**GENERAL NOTES:**