PROPOSED FENCE

At: Lot 7 Wakehurst Parkway,
Seaforth N.S.W. 2092

Architect: Zen Scapes

For: Michael Eror

Prepared By:

NORTHERN BEACHES
Consulting Engineers P/L.
A.C.N. 076 121 616 A.B.N. 24 076 121 616
Suite 207, 30 FISHER ROAD
DEE WHY N.S.W. 2099
Ph: (02) 9984 7000 Fax: (02) 9984 7444
e-mail : nb@nbconsulting.com.au
web page : www.nbconsulting.com.au

DRAWING SCHEDULE:

110665

05.07.2011

GENERAL NOTES:

GENERAL

G1. The drawings are to be read together with all Architects drawings and specifications.

G2. Dimensions shall not be obtained by scaling from the drawings. All setting out dimensions shall be verified and discrepancies shall be referred to the Engineer prior to commencement of work.

G3. Care is required during construction so that structural elements are not over stressed and that the works and excavations required therefore are kept stable at all times.

G4. Design, materials and workmanship are to be in accordance with current S.A.A standards and statutory authority regulations except where varied by these documents.

G5. Design live loads are in accordance with AS 1170.1

G6. Builder to ensure stability of existing structures in the vicinity of excavation works.

FOOTINGS

F1. FOUNDATION STRATA IS ASSUMED FOR DESIGN PURPOSES IN ACCORDANCE WITH AS 2870-1996 "RESIDENTIAL SLAB AND FOOTINGS-CONSTRUCTION". SEE FOOTNOTE. CLASSIFICATION TO BE VERIFIED BY A GEOTECHNICAL ENGINEER COMMISSIONED BY THE CLIENT FOR CERTIFICATION OF FOUNDATIONS.

F2. Footings to be constructed and back filled as soon as possible following excavation to avoid softening by rain or drying out by exposure.

F3. Footings must bear into undisturbed natural ground clear of organic material. Refer to details.

F4. If rock or variable bearing strata is encountered during excavation of the footings all footings/piers are to be excavated to similar material of greater bearing capacity.
The Engineer is to be contacted at that time for approval or review.

F5. Footings to be cast in approved material having an allowable capacity as follows:

Sand Foundations:

SA1. Required bearing capacity 100 kPa.
SA2. Trenches must be cleaned of all debris and hand compacted prior to placement of reinforcement.

Clay Foundations:

CL1. Required bearing capacity 150 kPa.
CL2. Trenches must be cleaned of all debris. Soft spots must be cut out and filled as per compacted fill notes, prior to placement of reinforcement.

Shale Foundations:

SH1. Required bearing capacity 400 kPa.
SH2. Excavation for footings into shale must be cast or capped with plain concrete on the same day as excavation.

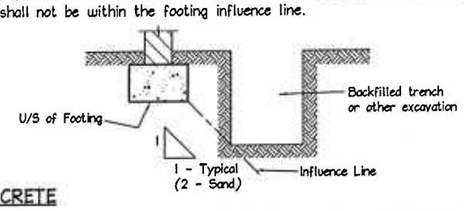
Sandstone Foundations:

SS1. Required bearing capacity 600 kPa.
SS2. Scrape weathered surface to remove cleaved sandstone under footings.

Refer adjacent for assumed Design bearing strata.

F6. Future development of neighboring properties may affect ground water conditions on this site. Consequently, reactivity in subgrade beneath footings may be locally altered therefore putting footing at risk of differential settlement. We recommend that, particularly in clay subgrades, agricultural drainage is installed to the upstream perimeter of the building at a distance from the building which is outside the zone of influence of the footings. The agricultural drain must be installed below the fluctuating seasonal zone which should be identified by geotechnical investigation.

F7. UNLESS OTHER WISE APPROVED. Excavations near new or existing footings shall not be within the footing influence line.



CONCRETE

C1. All workmanship and materials shall be in accordance with AS 3600.

C2. Concrete quality shall be as follows and shall be verified by tests.

C3. All concrete unless otherwise noted shall have a slump of 80mm at point of placement, a max. aggregate size of 20 mm.
No water shall be added to the mix prior to or during placement of concrete. Strength as specified on plans.

C4. Clear concrete cover to reinforcement shall be as follows unless otherwise shown-

ELEMENT	INTERIOR	EXTERIOR	EXTERIOR CAST AGAINST GROUND
FOOTINGS	-	-	50
COLUMNS/PEDESTALS	30 UNO	REFER TO PLAN	-
SLABS/WALLS	25	REFER TO PLAN	40 ON MEMBRANE
BEAMS	25 UNO	REFER TO PLAN	50
BLOCKWORK	55 FROM APPROPRIATE FACE		

C5. Sizes of concrete elements do not include thickness of applied finishes.

C6. All Construction Joints locations shall be approved by the Structural Engineer.

C7. Beam depths are written first and include slab thickness, if any.

C8. No holes or chases other than those shown on the structural drawings shall be made in concrete elements without the prior approval of the engineer.

C9. Shrinkage reducing admixtures such as 'Eclipse' or approved equivalent, if specified, must be added to mix prior to pour.

C10. Water reducing agents, if specified, must be added to mix prior to pour. No extra water is to be added to increase slump.

C11. Where vertical slab/beam surfaces are formed against a masonry (or other) wall, provide 10 mm styrene separation material.

C12. Water must not be added to concrete mix prior to placement of concrete.

C13. Above covers may have to be adjusted if fire rating is a requirement.

REINFORCEMENT

R1. All reinforcement specified is Grade D500 unless noted otherwise.

R2. Reinforcement is represented diagrammatically it is not necessarily shown in true projection.

R3. Top reinforcement is to be continuous over supports.
Bottom reinforcement to be lapped at supports.

R4. Welding of reinforcement shall not be permitted unless shown on the structural drawings.

R5. Pipes or conduits shall not be placed within the zone of concrete cover to the reinforcement without the approval of the engineer.

R6. All reinforcing bars and fabric shall comply with AS 4671-2001.

R7. Reinforcement symbols:
N - Grade 500N deformed bar (D500) Normal Ductility
R - Grade 250N plain round bar (R250) Normal Ductility.
SL - Grade 500L welded deformed ribbed mesh (D500) Square Low Ductility.
RL - Grade 500L welded deformed ribbed mesh (D500) Rectangular Low Ductility.
The number immediately following these symbols is the number of millimeters in the bar diameter.
Example : 8 N12-250
Denotes 8, Grade 500N deformed bars, 12 mm diameter at 250 cts.

R8. Fabric reinforcement to be lapped 1 complete square + 25 mm unless noted otherwise.

R9 All reinforcement shall be firmly supported on bar chairs spaced at a maximum of 750 centres both ways under rod and fabric reinforcement. Reinforcement shall be tied at alternate intersections.

FORMWORK

FW1. Formwork must be cleaned of all debris prior to casting of concrete.

FW2. Minimum stripping times for form work shall be as recommended in AS 3610 - 1990 or as directed by the engineer.

FW3. The finished concrete shall be a dense homogeneous mass, completely filling the form work, thoroughly embedding the reinforcement and free of stone pockets. All concrete elements including slabs on ground and footings shall be compacted with mechanical vibrators.

FW4. Curing of all concrete is to be achieved by keeping surfaces continuously wet for a period of 3 days, followed by prevention of loss of moisture for seven days followed by a gradual drying out . Approved sprayed on curing compounds may be used where no floor finishes are proposed. Polythene sheeting or wet hessian may be used if protected from wind and traffic.

BRICKWORK

BR1. Brickwork is to be constructed to AS 3700.

BR2. Two layers of approved greased metal based slip material shall be used over all load bearing walls that support concrete slabs and placed on smooth brickwork or trowelled mortar finish. Non load-bearing walls shall have 10 mm compressible material and ties to the slab soffit.

BR3. No brickwork shall be constructed on suspended slabs until all propping has been removed from the underside of the slab and the concrete has the specified 28 day cylinder strength verified by tests.

BR4. Control joints to be placed at a maximum of 8m centres or in accordance with AS 3700.

BR5. Exposure grade bricks to be used below damp proof course.

BR6. Vertical control joint material where specified on plan between slabs and brick walls shall be: 10 mm Spandex External UNO.
Bitumastic fibreboard internal UNO.

BR7. Provide stainless steel wall ties below DPC to AS 3700. Provide galvanized wall ties above DPC to AS 3700 & Local Council Specifications.

BR8. Dry Pressed Bricks should always be use for brick retaining walls. In addition we recommend that dry pressed bricks be used for all types of construction where possible. Dry pressed bricks grow only half as much as extruded bricks. Extruded bricks are difficult to fix to and excessive brick growth leads to cracking in walls and render.

BLOCKWORK

BL1. Concrete blocks shall have a minimum compressive strength of 15 MPa and conform to AS 1500. Masonry to be constructed to AS 3700.

BL2. Where cores of hollow blocks are to be filled, properly compacted 20MPa concrete with 10 mm aggregate and 230 mm slump shall be used. Clean out openings must be utilized for all cores.

BL3. Location of actual starters is critical to suit block cores, allow 55 mm cover from the outside face of blockwork. All reinforcement lap lengths to conform to AS 3600.

BL4. Control joints to be placed at a maximum of 8 m centres or in accordance with AS 3700.

BL5. Vertical control joint material where specified on plan between slabs and brick walls shall be: 10 mm Spandex External UNO.
Bitumastic fibreboard internal UNO.

BL6. Retaining walls or any reinforced and concrete core filled block walls to be of Double 'U' Block Construction.

BL7. No blockwork shall be constructed on suspended slabs until all propping has been removed from the underside of the slab and the concrete has the specified 28 day cylinder strength verified by tests. unless approved by the Structural Engineer.

BL8. Max. pour height for unrestrained blockwork is 2000.

STEEL

S1. All Structural steelwork to be Grade 300 or greater.
Design, fabrication and erection to be in accordance with AS 4100.

S2. Materials and workmanship shall comply with AS 1250 - 1981, SAA Steel Structures Code and the specification for Structural Steel.

S3. Rolled steel sections including steel plates shall comply with AS 3678-1990.

S4. Cold formed steel sections shall be Grade 450 Zinc coated in accordance with AS 1538-1988.

S5. Welded and seamless steel hollow sections shall comply with AS 1163 Grade 350.

S6. Bolt Designation:
4.6S - Commercial bolts Grade 4.6, snug tightened.
8.8S - High Strength structural bolts Grade 8.8, snug tightened.
8.8TB - High Strength structural bolts Grade 8.8, fully tightened to AS 1511 and acting as a Bearing Joint.
8.8TF - High Strength structural bolts Grade 8.8, fully tensioned to AS 1511 and acting as a Bearing Joint.
Unless noted otherwise, all bolts will be 8.8S.

S7. Unless shown otherwise, minimum connection shall be 2M16 bolts, 10 thick gusset plates, 6mm continuous fillet welds.

S8. Load indicating washers shall be used in all fully tensioned joints. (8.8TF & 8.8TB).

S9. All welding shall be carried out in accordance with AS 1554 SAA Structural Steel Welding Code.

S10. Unless noted otherwise all welds shall be category SP using E41xx Electrodes. All butt welds shall be complete penetration butt welds category SP.

S11. Grouting of anchor bolt sleeves and base plates shall be completed by the contractor using High Strength, Non-Shrink grout.

S12. Fabrication and erection tolerances for Structural Steelwork shall be in accordance with AS 4100.

S13. Purlin bolts shall be M12 - 4.6S galvanised.

S14. Steel work shall have one of the following grades of corrosion protection:

INTERNAL

a. Thoroughly cleaned wire brushing, followed by two coats of zinc phosphate primer equivalent to Dulux Luxaprime applied by hand using brushes to achieve a total dry film thickness of 70 microns.

EXTERNAL ELEMENTS, & ELEMENTS WITHIN EITHER SKIN OF EXTERNAL CAVITY WALLS GREATER THAN 2 km FROM SEA WATER:

b. Preparation Blast clean to a minimum standard Class 2.5 in accordance with AS 1627 Part 4.
Primer 2-pack epoxy phosphate at dft 75 microns (Dulux Duregon P14).
Barrier Coat 2-pack epoxy micaceous iron oxide, dft 100 microns
Finish Coat 2-pack epoxy high gloss acrylic to dft 75 microns.
(e.g. Dulux Acrathane 1 F)

c. Hot dipped galvanized to AS 4680.
Where the galvanic (Hot Dip Galvanized) coating is compromised by welding, bolting or damage, two pack zinc rick epoxy primer (Dulux Zincanode 202) is to be applied after wire brushing affected area (use 3 coats minimum) or Hot Metal Spray in accordance with AS 4680.
PAINTING OVER HOT DIP GALVANISED STEEL:
Degrease and preparation whip blast. Application of a general purpose epoxy (Dulux Duremax GPE) thickness 125 microns. Application of a high build polyurethane (Dulux Weathermax HBR) thickness 100 microns

EXTERNAL ELEMENTS, & ELEMENTS WITHIN EITHER SKIN OF EXTERNAL CAVITY WALLS LESS THAN 2 km FROM SEA WATER:

d. Preparation blast clean to minimum Class 2.5
Application of a two pack zinc rich epoxy primer (Dulux Zincanode 402) thickness 75 microns. Application of a general purpose epoxy (Dulux Duremax GPE) thickness 125 microns. Application of a high build polyurethane (Dulux Weathermax HBR) thickness 100 microns

S15. Workshop drawings shall be prepared and two copies submitted to the engineer for review prior to fabrication commencement.

TIMBER

T1. All workmanship and materials to be in accordance with AS 1684, AS 1720 and as 3959. All soft wood to be Grade F7 unless noted otherwise. All hardwood to be minimum Grade F14 unless otherwise noted. Exposed timber to be CCA treated (to AS 1604) redried after full impregnation, or durability class 1, 2 or 3.
ALL SOFTWOOD TIMBER FRAMING TO HAVE A MINIMUM TREATMENT PROTECTION OF H2 or T2 TREATED FOR TERMITE PROTECTION UNLESS NOTED OTHERWISE.

T2. All joists deeper than 150 to have blocking over support bearers and at a maximum 3000 centres.

T3. Roof trusses to be designed by the manufacturer to the relevant standards. Pre camber to be an amount equal to dead load deflection unless otherwise noted..

T4. All holes for bolts to be exact size. Washers to be used under all heads and nuts and to be at least 2.5 times the bolt diameter. Bolts to be M16 grade 4.6 unless noted otherwise.

T5. Treat all exposed cut ends with Reseal by Protim to manufacturers specification to achieve required Hazard Level Exposure Classification.

T6. Battens for T & G to be Kiln Dried to 12 %. 38mm minimum, deep treated pine or as recommended by supplier. Flooring to be installed no sooner than 28 days after slab pour.

T7. Hot dip galvanized nails/clouts/screws to be used with all timber connections.

T8. Continuous nailing must not be used for any timber connections.

T9. All exposed CCA treated pine to have an application of penetrating sealer to reduce warping and twist of the timber due to varying moisture content in service.

T10. All Stud walls to be 90x45 F7 Kiln Dried
T2 Treated at 450 Cts and noggings to AS 1684.

COMPACTED FILL

CF1. Only to be used with approval by Engineer & to be certified by a geotechnical Engineer.

CF2. Clear organic material, topsoil and any uncontrolled existing fill under proposed slabs/footings.

CF3. Filling shall be granular material compacted in not more than 200 mm layers to a minimum dry density ratio (AS 1289/E4.2 1982) of 98 percent standard maximum dry density.

CF4. During clearing and excavation for slabs and footings cut out soft spots and fill as above.

INSPECTIONS BY ENGINEER

48 HOURS NOTICE IS REQUIRED BEFORE ANY SITE INSPECTION

1. Bearing strata of all footings prior to concrete pour by Geotechnical Engineer.
2. Any reinforcement prior to concrete pour.
3. Timber and Steel framing prior to cladding or lining.
4. Steel lintels after installation.
5. CONTACT YOUR PCA (Principal Certifying Authority) AS TO REQUIREMENTS FOR MANDATORY CRITICAL STAGE inspections IN ACCORDANCE WITH REVISED EP&A ACT REGULATIONS EFFECTIVE JULY 1, 2004.
6. Inspection by Geotechnical Engineer over 1.5m of vertical cut through Sandstone bed rock to permit identification of defects and remedial measures initiated.

ASSUMED FOUNDATION CLASSIFICATION FOR DESIGN PURPOSES - CLASS 'A'
ASSUMED BEARING STRATA FOR DESIGN PURPOSES - ROCK 600 kPa
CONTRACTOR TO ENGAGE GEOTECHNICAL CONSULTANT TO VERIFY FOUNDATION CLASSIFICATION

A3

Date:	Rev:	Amendment:	By:
-	-	-	-

DOCUMENT CERTIFICATION
Date : JULY 11'
Rick G. Wray
BE(Civil), CPEng, MIEAust., NPER.
(Director Northern Beaches Consulting Engineers)

NORTHERN BEACHES
Consulting Engineers P/L.
A.C.N. 076 121 616 A.B.N. 24 076 121 616
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web page : www.nbconsulting.com.au

Architect: ZEN SCAPES

Client: MICHAEL ERROR

Project: Lot 7 Wakehurst Parkway SEAFORTH

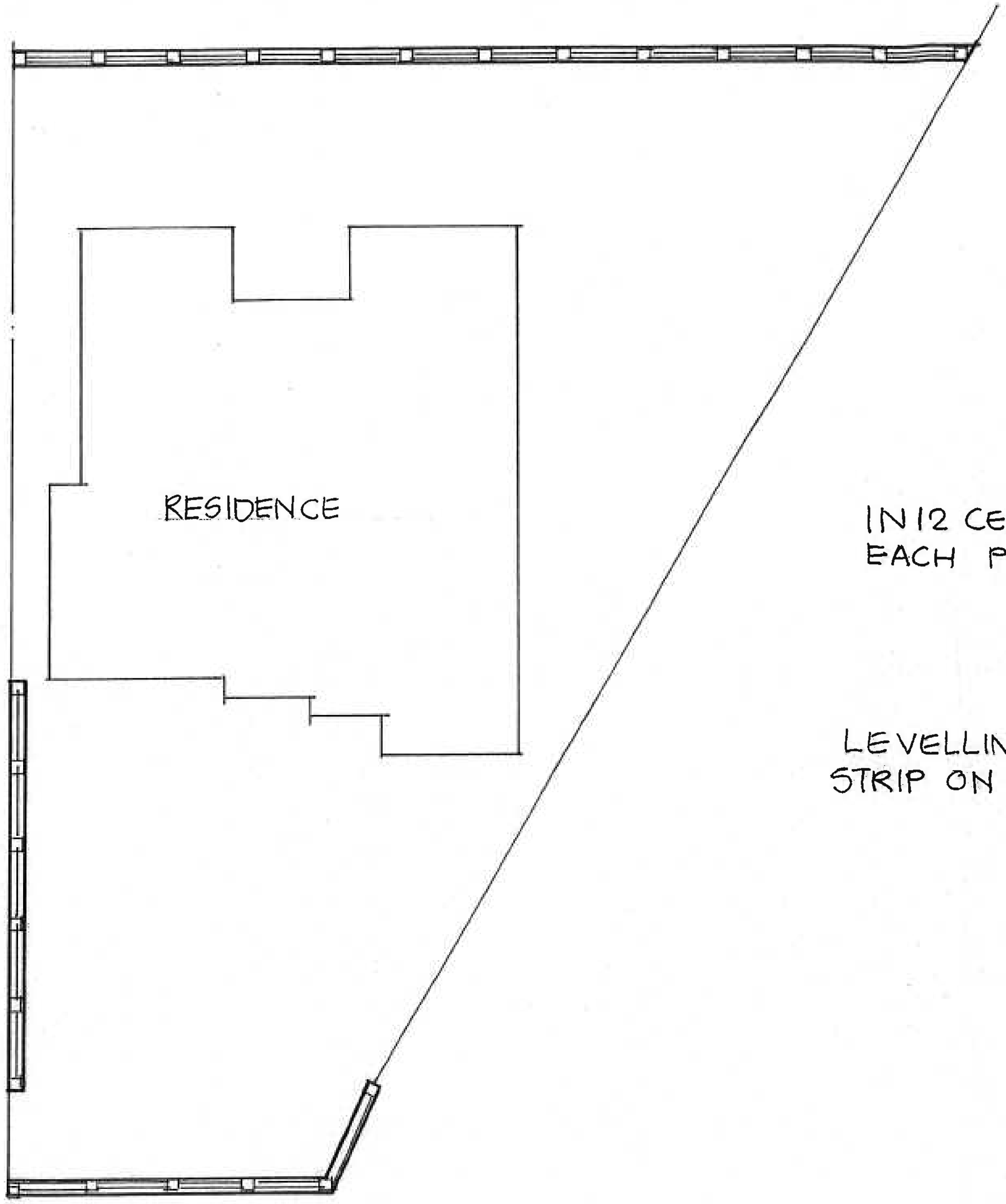
Drawing Title: GENERAL NOTES

Date:	Design:	Drawn:	Checked:
JULY'11	RGW	LFC	RGW

Job No:	Drawing No:	Rev:
110665	S01	

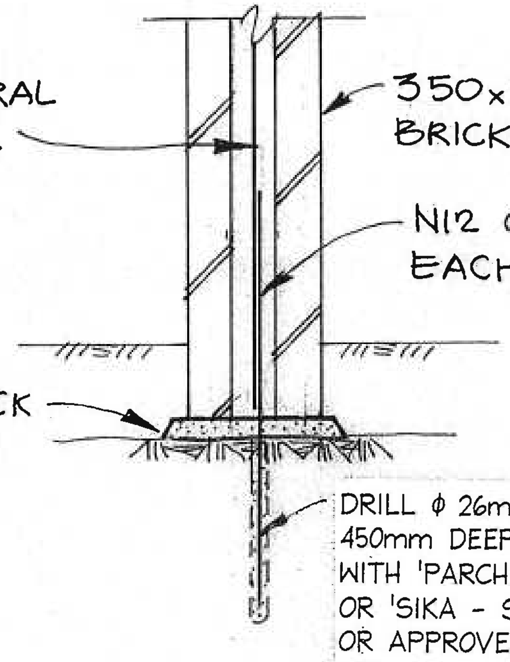
NOTES:

1. ALL DIMENSIONS TO BE VERIFIED ON SITE BY BUILDER BEFORE COMMENCING WITH WORK.
2. FOR GENERAL NOTES REFER TO DRAWING NUMBER: S01.



SITE PLAN

1:200



DRILL ϕ 26mm HOLE
450mm DEEP INTO SEAM FREE ROCK AND GROUT IN BARS WITH 'PARCHEM - LOKFIX S40' EPOXY GROUT OR 'SIKA - SIKADUR 42' EPOXY GROUT OR APPROVED EQUIVALENT.
STARTER BARS TO BE HOT DIP GALVANIZED.
NOTE: ENGINEER TO INSPECT EMBEDMENT PRIOR TO GROUTING STARTER BARS.

FENCE PIER DETAIL 1:20

(ROCK CLOSE TO SURFACE)

IF IN DOUBT ASK

Northern Beaches Consulting Engineers Pty Ltd.

A3

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Ph: (02) 9984 7000 Fax: (02) 9984 7444
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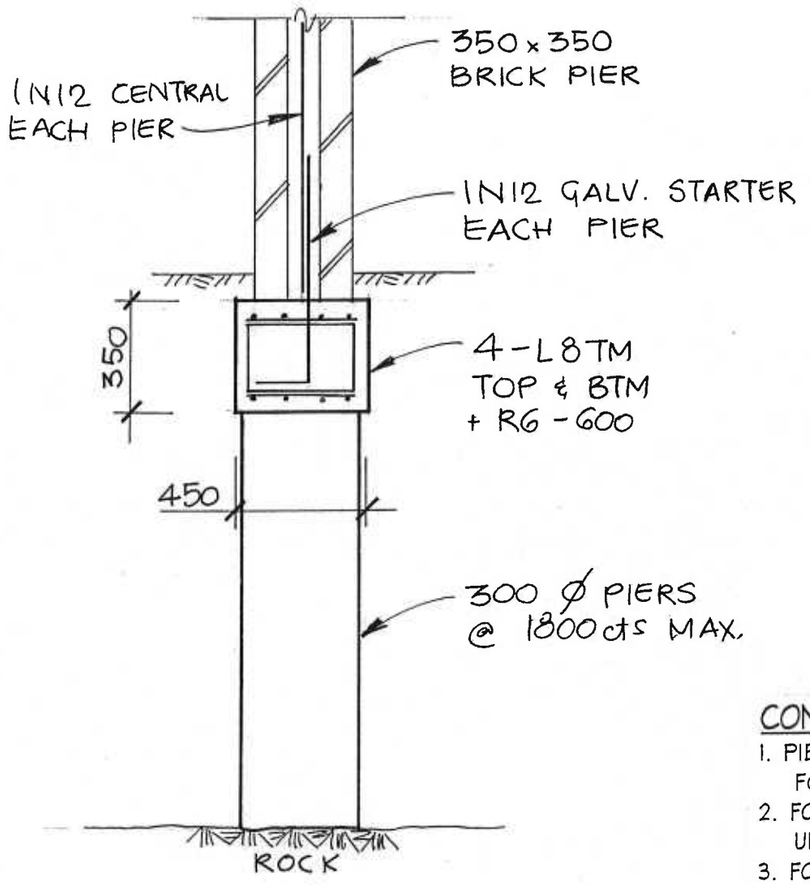
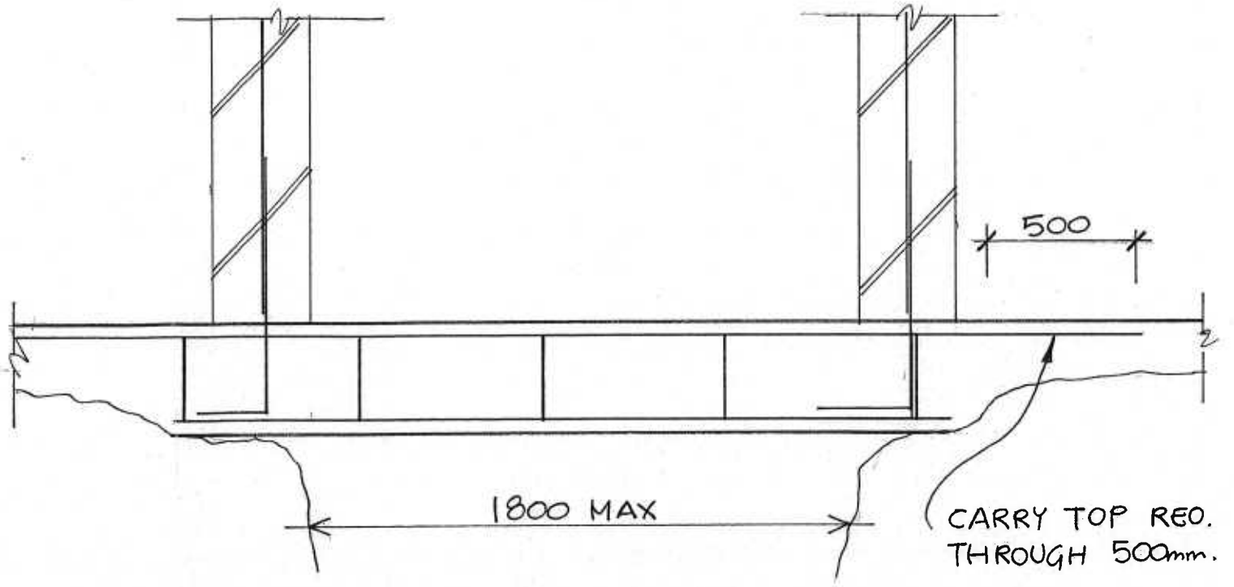
Architect:	Project:	Date:	Design:	Drawn:	Checked:
ZEN SCAPES	LOT 7 WAKEHURST P/WAY SEAFORTH	JULY '11	RGW	LFC	RGW
Client:	**Drawing Title:**	**Job No:**		**Drawing No:**	**Rev:**
MICHAEL EROR	SITE PLAN & DETAIL	110665		S02	

NOTES:

1. ALL DIMENSIONS TO BE VERIFIED ON SITE BY BUILDER BEFORE COMMENCING WITH WORK.
2. FOR GENERAL NOTES REFER TO DRAWING NUMBER: S01.



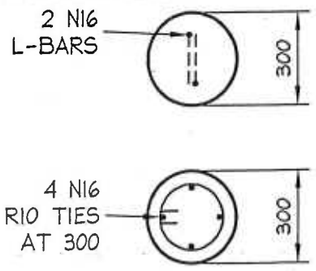
FENCE PIER DETAIL 1:20
(ROCK AT LOW LEVEL)



TYPICAL DETAIL ACROSS VOID IN ROCK
1:20

CONCRETE PIERS:

1. PIERS TO BE 300mm DIAMETER FOUNDED ON SOUND ROCK
2. FOR DEPTH LESS THAN 1200mm UN-REINFORCED.
3. FOR DEPTH GREATER THAN 1200mm AND LESS THAN 1800mm. 2 N16 L-BARS.
4. FOR DEPTH GREATER THAN 1800mm AND LESS THAN 3000mm.. 4 N16, R10 TIES AT 300.
5. FOR DEPTH GREATER THAN 3000mm TO BE CONFIRMED BY ENGINEER



FOR LIGHT LOADS LEVEL SITE

TYPE 'FPI' FOOTING PIER SECTION
SCALE = 1 : 20

SYDNEY BUILDING APPROVALS CENTRE PTY LTD ACN 076 121 616
DETAILS NOTED

IF IN DOUBT ASK

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Rick G. Wray
BE(Civil), CPEng, MIEAust., NPER.
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Suite 207, 30 FISHER ROAD
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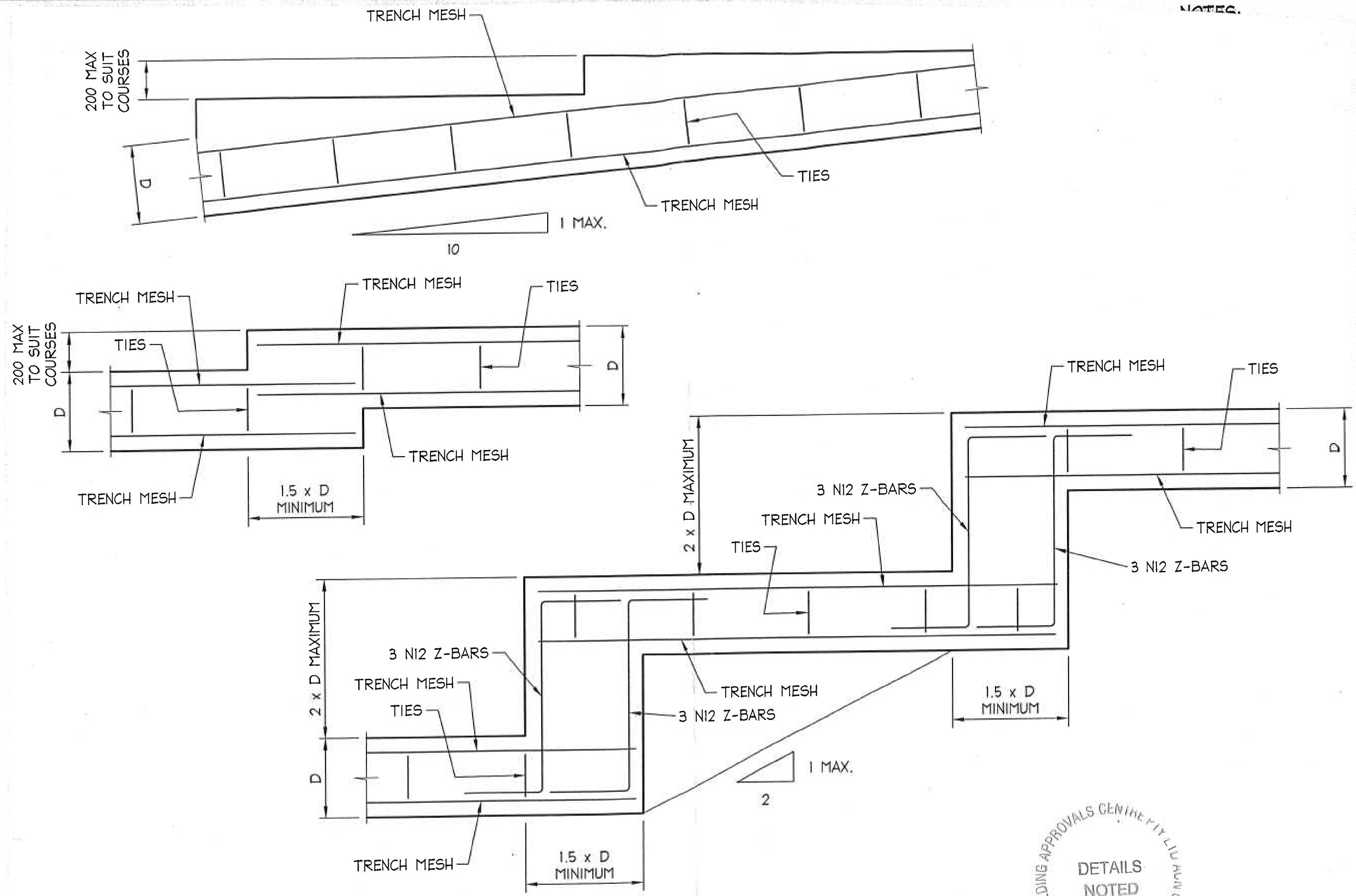
Ph: (02) 9984 7000 Fax: (02) 9984 7444
e-mail : nb@nbconsulting.com.au
web page : www.nbconsulting.com.au

Architect: ZEN SCAPES	Project: LOT 7 WAKEHURST P'WAY SEAFORTH	Date: JULY 11	Design: RGW	Drawn: LFC	Checked: RGW
Client: MICHAEL EROR	Drawing Title: PIER / FOOTING DETAILS	Job No: 110665	Drawing No: S03	Rev:	



TYPICAL FOOTING STEP DETAILS

SCALE = 1 : 20

SYDNEY BUILDING APPROVALS CENTRE PTY LTD ABN 049 882 904
DETAILS NOTED

NB Northern Beaches Consulting Engineers Pty Ltd.

A3

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Rick G. Wray
BE(Civil),CPEng,MIEAust.,NPER.
(Director Northern Beaches Consulting Engineers)

NORTHERN BEACHES
Consulting Engineers P/L.
A.C.N. 076 121 616 A.B.N. 24 076 121 616
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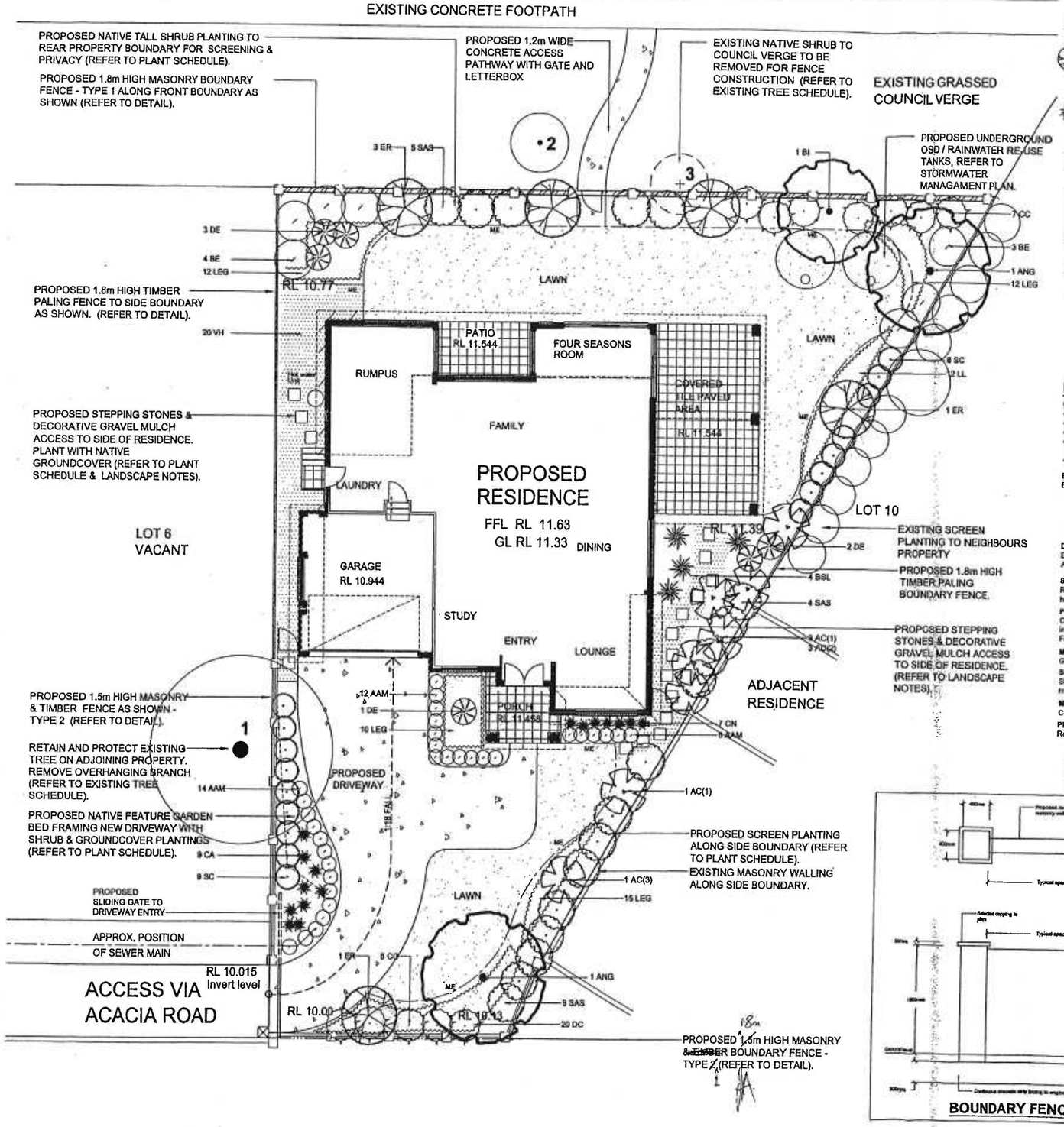
Client:	**Drawing Title:**	**Job No:**		**Drawing No:**	**Rev:**
MICHAEL EROR	FOOTING STEP DETAILS	110665		S04	

WAKEHURST PARKWAY



LEGEND

- EXISTING TREES AND SHRUBS TO BE RETAINED AND PROTECTED DURING CONSTRUCTION WORKS (Refer to Existing Tree Schedule)
- PROPOSED TREES TO BE REMOVED (Refer to Existing Tree Schedule)
- PROPOSED NATIVE TREE AND PALM PLANTING (Refer to Plant Schedule and Landscape Notes)
- PROPOSED SHRUB AND GROUNDCOVER PLANTING (Refer to Plant Schedule and Landscape Notes)
- PROPOSED LAWN AREAS
- PROPOSED DRIVEWAY (Refer to Architects Detail)
- PROPOSED TILE PAVED AREA (Refer to Architects Detail)
- STEPPING STONE PAVERS (Refer to Landscape Notes)
- ME — PROPOSED MASONRY EDGING TO GARDEN BEDS

PLANT SCHEDULE

CODE	BOTANICAL NAME	COMMON NAME	POT SIZE	SPACING (m)	No.	MATURE HEIGHT (m)	MATURE WIDTH (m)
TREES / PALMS							
ANG	*Angophora costata*	Smooth-barked Apple	25L	As shown	2	12.0m	7.0m
AC(1)	*Archontophoenix cunninghamiana*	Bangalow Palm	45L	As shown	4	8.0m	-
AC(2)	*Archontophoenix cunninghamiana*	Bangalow Palm	25L	As shown	3	8.0m	-
AC(3)	*Archontophoenix cunninghamiana*	Bangalow Palm	multi-trunk	As shown	1	8.0m	-
BI	*Banksia integrifolia*	Coastal Banksia	25L	As shown	1	10.0m	5.0m
ER	*Elaeocarpus reticulatus*	Blueberry Ash	25L	As shown	5	8.0m	4.0m
SHRUBS							
AAM	*Acmena 'Alynns Magic'*	Dwarf Lilly Pilly	5L	0.5m	32	0.5m	0.5m
BE	*Banksia ericifolia*	Heath Banksia	5L	As shown	7	4.0m	3.0m
CC	*Callistemon citrinus*	Crimson Bottlebrush	5L	1.2m	13	2.5m	2.0m
CA	*Correa alba*	White Correa	5L	0.75m	9	1.0m	1.5m
BSL	*Blechnum cartilegum*	Griffle Fern	5L	As shown	4	0.8m	0.6m
CN	*Cordyline 'Negra'*	Black Cordyline	5L	0.75m	7	1.5m	0.75m
DE	*Doryanthes excelsa*	Gymea Lily	6L	As shown	6	2.0m	1.5m
SAS	*Syzygium 'Aussie Southern'*	Dwarf Lilly Pilly	25L	1.0m	14	4.0m	1.5m
SC	*Syzygium 'Cascade'*	Dwarf Lilly Pilly	25L	1.0m	17	2.5m	1.0m
GROUNDCOVERS / NATIVE GRASSES							
DC	*Dianella caerulea*	Native Flax Lilly	2.5L	3/m2	20	0.7m	0.7m
LEG	*Liriope 'Evergreen Giant'*	Giant Liriope	2.5L	3/m2	49	0.5m	0.5m
LL	*Lomandra longifolia*	Lomandra	2.5L	2/m2	12	0.7m	0.7m
VH	*Viola hederacea*	Native Violet	2.5L	2/m2	20	0.1m	1.0m

EXISTING TREE SCHEDULE

No.	BOTANICAL NAME	COMMON NAME	HEIGHT	SPREAD (Ø mm)	TRUNK	EXISTING CONDITION	PROPOSED ACTION
1	*Angophora costata*	Smooth-barked Apple	6.0m	8.0m	650	Good	On adjoining prope
2	*Casuarina sp.*	She-oak	3.0m	2.0m	200	Fair	Prune overhanging
3	*Leptospermum sp.*	Tea Tree	2.0m	2.0m	50	Poor	Retain & Protect Remove & Replace

LANDSCAPE NOTES (GUIDELINES)

GENERAL

- THIS DRAWING HAS BEEN PREPARED FOR DEVELOPMENT APPLICATION PURPOSES ONLY.
- FOR EXISTING AND PROPOSED LEVELS, REFER TO ARCHITECTS DRAWINGS AND SURVEY PLAN.
- FOR LANDSCAPE AREA CALCULATIONS, REFER TO ARCHITECTS DRAWINGS.
- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL, ENGINEERING AND OTHER CONSULTANTS DRAWINGS AND SPECIFICATIONS.
- DO NOT SCALE FROM THIS DRAWING.

EXISTING TREE PROTECTION MEASURES

Ensure the protection of all existing trees to be retained, indicated on the plan, from any damage during construction works. Take necessary precautions to:

- Prior to commencement of any construction works, install protective fencing. Maintain in place and in good order for the duration of the construction period.
- Storage / stockpiling of materials, soil or any debris shall not be carried out within the drip-line of existing trees.
- Rectify immediately any damage to, or destruction of, existing trees.
- Where excavation is necessary within the drip-line of trees, hand methods shall be used to preserve root systems intact and to minimise damage.
- Where it is necessary to cut tree roots, use a saw such that the cutting does not unduly disturb the remaining root system.

DRAINAGE

Ensure adequate drainage to all garden beds, gravel and lawn areas. Install 100mm agricultural pipe with 'sock' as required in garden beds and behind all retaining walls. Encase in 300 x 300mm of blue metal and cover with filter cloth. Agricultural pipes to drain to junction pits. Pits to connect to the new stormwater system. Ensure paved areas are free draining. Install pits if required and connect to stormwater (Refer to Hydraulic Engineering drawings).

SITE PREPARATION

Remove unwanted matter including stones exceeding 50mm, loose sticks and branches, damaged roots and building rubbish. Remove existing weeds / grass from all proposed garden bed areas. Where required, spray areas with an approved herbicide. Cultivate garden beds by hand to a depth of 200mm. Grade garden bed surfaces accordingly.

PLANTING

Carry out planting as per Landscape Plan and Plant Schedule. No substitutes will be accepted without approval by the landscape architect. Do not plant during extreme weather conditions. Thoroughly water plants before planting begins, immediately after planting and thereafter to maintain growth rates free of stress.
Fertilise exotic plants with 'Osmocote' 'Plus' 8-9 month slow release fertiliser, and native plants with 'Osmocote' zam Phosphorus 5-6 month slow release fertiliser. Apply as per manufacturer's instructions.

MULCH

Generally, all garden bed areas are to be mulched to 100mm depth using fine Native Leaf Litter mulch, as supplied by Australian Native Landscapes Pty Ltd.

STEPPING STONES

Stepping stones are to be 500 x 500 x min. 45mm to match selected pavers for paved areas. Install stepping stones on 50mm depth mortar bed on compacted subgrade. Space stepping stones at comfortable walking steps and backfill with mulch and planting as specified.

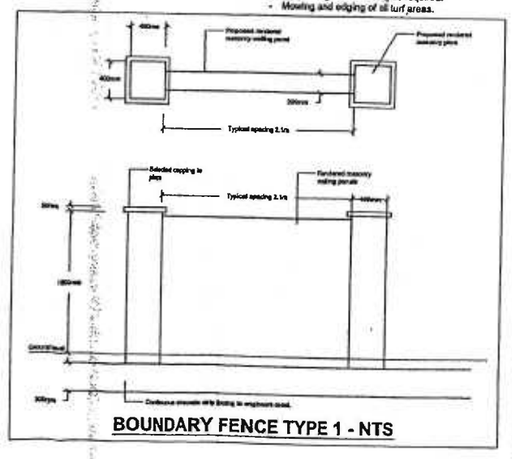
MASONRY EDGE

Construct brick edging to lawn areas as shown on plan. Select bricks to match proposed house bricks. Lay bricks on concrete haunch with 10mm mortar joints.

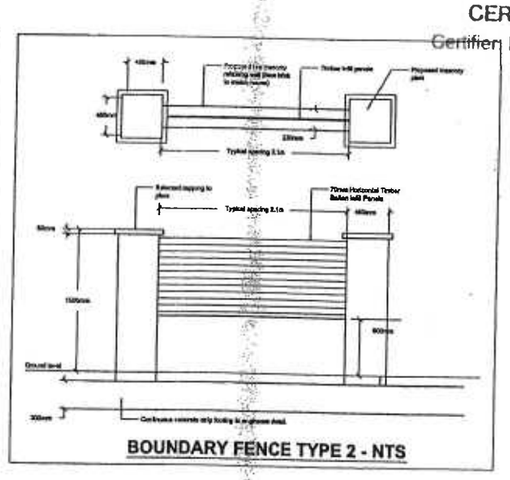
PLANT ESTABLISHMENT / MAINTENANCE PERIOD

Regular maintenance is to be carried out, including the following works:

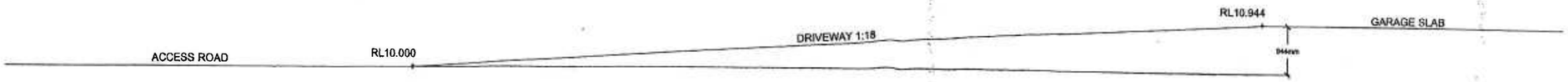
- Watering - to maintain healthy growth, adjusted on a regular basis to suit seasons.
- Weeding to all garden and gravel areas.
- Pest and disease control.
- Topping-up mulched areas as required.
- Tip pruning and fertilising as required.
- Mowing and edging of all turf areas.



BOUNDARY FENCE TYPE 1 - NTS



BOUNDARY FENCE TYPE 2 - NTS



These plans relate to Development Consent No: 281/09 - 596(1)(1)

The plans are NOT for construction.

SYDNEY BUILDING APPROVALS CENTRE PTY LTD CONSTRUCTION CERTIFICATE No: CC 3529/10

Certifier: P RUCK Accreditation No: BPB 0352

Date: 15/9/11

N

0 1 2 3 4 5 (m)

PLAN CERTIFICATION

I, Ian Andrews, the undersigned, am a Registered landscape architect (RLA), suitably qualified to certify this component of the project.

15/9/10

IAN ANDREWS DATE

ZenScapes Landscape Architects
PO Box 531, COLLAROY NSW 2097
P 0414 851 357 E info@zenscapes.com.au

CLIENT:	MR M & MRS C EROR
PROJECT:	LOT 7 WAKEHURST PARKWAY SEAFORTH (ACCESS VIA ACACIA RD)
DRAWING:	LANDSCAPE PLAN
DATE: 15/9/10	DRAWN: LS

Manly Council

This plan is sheet ....1.. of .....1..... sheet/s referred to in Council's
Notice of Determination letter dated ....10/8/11.......... in respect
Of Development Application No. 281/09 - S96(1A)
Signed: ....

This plan is to be read in conjunction with conditions contained within the Notice of Determination that may change the form of the development or the manner in which the development proceeds.
These plans are not for construction. Where demolition, site works or building works are proposed a Construction Certificate is to be obtained prior to commencement of work.
A copy of the approved Development Application Plans and Construction Certificate must be kept on site for the duration of the works.