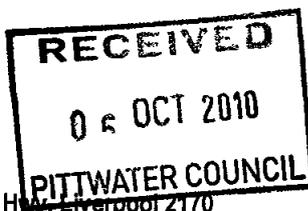


ORIGINAL COPY

Bernie Cohen & Associates Pty Ltd Trading as  
**ESSENTIAL CERTIFIERS**

ACN 100386650  
ABN 84047117254



PO Box 208 Casula Mall NSW 2170 ☐ Level 1, 405 Hume Hwy, Liverpool 2170  
Telephone (02) 9612 5000 ☐ Facsimile (02) 9612 5050

essentialCERTIFIERS

C C No

**CONSTRUCTION CERTIFICATE**

CC2010-01196 1

*This certificate is issued by a Private Certifying Authority and verifies that if the applicant carries out the proposed work in accordance with the plans and specifications that are approved the work will comply with the Environmental Planning and Assessment Regulation 2000*

COUNCIL

PITTWATER

**APPLICANT**

Name Pittwater RSL Club C/- Paynter Dixon Constructions  
Address 320 Liverpool Road, ASHFIELD 2131  
Contact no (telephone/fax) 97975555

**OWNER**

Name Pittwater RSL Club  
Address 80-82 Mona Vale Road, MONA VALE 2103  
Contact no (telephone/fax) 99973833

**SUBJECT LAND**

Address 22 Jubilee Road , MONA VALE 2103  
Lot No 27  
DP - 5055

**DESCRIPTION OF DEVELOPMENT**

Type of Work  Building work  Subdivision

Description Construction of six social (three competition) futsal (mini soccer) courts, associated amenities building & landscaping

30-00 PRVC  
R-289419  
06/10/10

Essential Certifiers Certificate No CC2010-01196 1

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**COUNCIL'S D/A CONSENT**

Development Consent No	N0123/09	N0123/09/S96/1
D A Approval Date	1/02/2010	13/08/2010

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**BUILDING CODE OF AUSTRALIA  
BUILDING CLASSIFICATION**10b

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**BUILDER or OWNER/BUILDER**

Name	Paynter Dixon Constructions P/L
Contractor Licence No	n/a

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**\$ VALUE OF WORK**

Building	\$1,405,464 00
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**DATE C C APPLICATION RECEIVED**

Date Received	6/04/2010
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**DETERMINATION**

Decision	Approved	Amendment
Date of Decision	13/04/2010	13/09/2010

---

**ATTACHMENTS**

- \$30 00 Cheque for Council Submission Fee
- Civil Design Compliance Certificate by Northrop dated 6/9/10
- Structural Design Certificate by Northrop dated 7/9/10
- Set-out & Erosion Control & Levels & Hardscape Plans by Conzept Landscape Architects  
Drg No LPS96 09-58/2G & 09-58/3G dated Aug 2010
- Landscape Plan by Conzept Landscape Architects  
Drg No LPS96 09-58/4H dated Sept 2010
- Structural Plans by Northrop Job No 08622  
Drg No S00 Rev B dated 2/7/10  
Drg No S03 & S04 Rev A dated 22/7/10

**IMPORTANT NOTE** It is the applicant's responsibility to ensure the mandatory PCA site sign supplied herewith, is displayed at this building site throughout construction

---

*Essential Certifiers Certificate No CC2010-01196 1*

---

**PLANS AND SPECIFICATIONS  
APPROVED**

List plan no(s) and specifications  
reference

- Plans by Paynter Dixon Project No PRL 0124  
Drg No A001 Issue A dated 13/7/10  
Drg No A002 Issue C dated 20/7/10

---

**RIGHT OF APPEAL**

*under S109K where the Certifying Authority is a Council an applicant  
may appeal to the Land and Environmental Court against the refusal to  
issue a Construction Certificate or imposition of conditions on the  
consent within 12 months from the date of the decision*

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**ACCREDITATION BODY**

BUILDING PROFESSIONALS BOARD  
10 Valentine Street, Parramatta NSW 2150

---

**CERTIFICATE**

Certificate Final

I certify that the work if completed in accordance with these plans and  
specifications (with such modifications verified by the Certifying  
Authority as may be shown on that documentation) will comply with the  
requirements of the Environmental Planning and Assessment Regulation  
2000 as referred to in Section 81A(5) of the Environmental Planning  
and Assessment Act 1979

---

**CERTIFYING AUTHORITY**

Name of Certifying Authority Essential Certifiers  
Name of Accredited Certifier Christopher Manzi  
Accreditation No BPB0248  
Contact No (02) 9612-5000  
Address Level 1, 405 Hume Highway, Liverpool NSW 2170

**SIGNED**

  
\_\_\_\_\_

---

*Essential Certifiers Certificate No CC2010-01196 1*



COUNCIL COPY

SEP 2010

BY \_\_\_\_\_

essentialCERTIFIERS  
LIVERPOOL

Bernie Cohen and Associates Pty Ltd T/As Essential Certifiers Liverpool  
ABN 84047117254

PO Box 208 Casula Mall NSW 2170  
Level 1 405 Hume Highway  
Liverpool NSW 2170

P 02 9612 5000  
F 02 9612 5050  
E info@essentialcertifiers.com.au  
www.essentialcertifiers.com.au

## CONSTRUCTION CERTIFICATE APPLICATION FORM

Construction Certificate In accordance with Clause 139, Part 8 Division 2 of the Environmental Planning and Assessment Regulations 2000

### PART A – Identification of the Land

Lot No 27 Street No 22 DP No 5055

Street JUBILEE Suburb WARRIEWOOD Postcode \_\_\_\_\_

### PART B – Owners Details

Mr  Mrs  Miss  Other

Surname/s

First names/s

Company/Organisation PITTWATER RSL CLUB

Full Address of Owner 80-82 MONA VALE Rd MONA VALE

Phone 9997 3833 Mobile \_\_\_\_\_

Fax 9999 3535 Email \_\_\_\_\_

### PART C – Applicant Details (Person having Benefit of Development Consent) within the meaning and under the EP&A ACT 1979

Mr  Mrs  Miss  Other

Surname/s FUCILE

First Name/s ANTHONY

Company/Organisation PAYNTER DIXON CONSTRUCTIONS

Full Address of Applicant 320 LIVERPOOL Rd ASHFIELD

Phone 9797 5555 Mobile 0408 292322

Fax 9799 6149 Email \_\_\_\_\_

**Owners Declaration**

We understand that this engagement shall be subject to the Terms and Conditions in the fee proposal (if any)

We as owners/applicants of the land to which the application relates. We consent to the making of the application. We also give consent for officers/certifiers of Essential Certifiers Liverpool to enter the land to carry out inspections relating to this application.

We declare that we will notify Essential Certifiers Liverpool to carry out any critical stage-inspection or make arrangements with the Builder to carry out this function on my/our behalf as a condition of my/our Building contract.

**BRUCE SMITH**

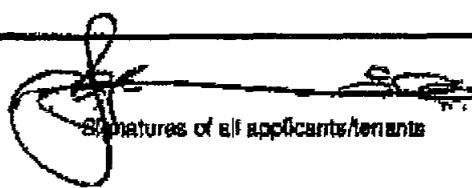
Name of all owners/tenants

**ANTHONY FUCILE**

Name of all applicants

X 

Signatures of all owners/tenants



Signatures of all applicants/tenants

Date

Date

**PART D - Billing Details**

Billing Name **PAYNTER DIXON CONST**

ABN

Billing Address **320 LIVERPOOL Rd ASHFIELD. LOCKED BAG 9 ASHFIELD**

**PART E - Appointment of Agent**

As the owner(s) of the above property, I/we consent to information being provided to the following parties (who act on my/our behalf as an agent) during the course of my/our application

Name of person(s) /company/organisation of Agent

**ANTHONY FUCILE  
PAYNTER DIXON CONSTRUCTIONS**

Agent Address **320 LIVERPOOL ROAD ASHFIELD**

Phone/Fax Agent **97975555 / 9799 6149**

Email

Owner(s)/ Tenants Name:

Signatures of all owners/tenants

Date

X 

**PART F -  Builders Details  Owner Builders Details**

Name **PAYNTER DIXON  
CONSTRUCTIONS**

License No/ Owner Builder Permit No

Address **320 LIVERPOOL Rd ASHFIELD**

Phone **97975555**

Mobile **0408 292 322**

Fax **97996149**

Email

**PART G - Description of Development**

Describe the work to be carried out **SIX SOCIAL (THREE COMPETITION)  
FUTSAL COURTS, ASSOCIATED AMENITIES BUILDING**

Cost of Development \$ **1,405,464**

Your Ref

Number of Stories **—**

Number of Structures **—**

Building Classification **—**

Has development consent been granted for the development?

No

Yes

Consent Number **N0123/09**

Date of Determination **1-2-10**

**Modified 13 Aug 2010**

Council Area

Has a Section 96 Modification been granted for the development?

No

Yes

Modification Number **N0123/09/596/1** Date of Modification **13 AUG 2010**



**essentialCERTIFIERS  
LIVERPOOL**

**SCHEDULE OF DETAILS FOR THE  
AUSTRALIAN BUREAU OF STATISTICS**

**CONSTRUCTION CERTIFICATE NUMBER**

**PARTICULARS OF THE PROPOSAL**

***All New Buildings***

Area of subject site (m<sup>2</sup>) 39,240m<sup>2</sup>

Does the site contain dual occupancy? No ~~Yes~~

Current use of existing building/s on the subject site (if vacant, state vacant) EXISTING RSL CLUB

Floor area of existing building/s in m<sup>2</sup> except if being demolished 7095m<sup>2</sup>

Gross floor area in m<sup>2</sup> of proposed addition/s or new building/s If multiple buildings please itemise  
SPORTING FIELD - 3995m<sup>2</sup>

Proposed use of all parts of the addition/s or new building/s SPORTING FIELD

***Residential Dwellings Only***

Number of pre existing dwellings	Number of dwellings to be demolished
Number of proposed new dwellings	Number of storeys of proposed dwelling

***Materials Used in Building***

*Tick the box alongside which best describes the material/s to be used in the construction of the proposed new work/s*

WALLS		ROOF		FRAME		FLOOR	
<input type="checkbox"/>	Brick Veneer	<input type="checkbox"/>	Aluminium	<input checked="" type="checkbox"/>	Timber	<input type="checkbox"/>	Concrete
<input type="checkbox"/>	Full Brick	<input type="checkbox"/>	Concrete	<input type="checkbox"/>	Steel	<input checked="" type="checkbox"/>	Timber
<input type="checkbox"/>	Single Brick	<input type="checkbox"/>	Concrete Tiles	<input type="checkbox"/>	Other (describe below)	<input checked="" type="checkbox"/>	Other (describe below)
<input type="checkbox"/>	Concrete Block	<input checked="" type="checkbox"/>	Fibrous Cement				ARTIFICIAL
<input type="checkbox"/>	Concrete/Masonry	<input type="checkbox"/>	Fibreglass				SURFACE
<input type="checkbox"/>	Concrete	<input type="checkbox"/>	Masonry Shingle				(GRASS)
<input type="checkbox"/>	Steel	<input type="checkbox"/>	Terracotta Shingle				
<input type="checkbox"/>	Fibrous Cement	<input checked="" type="checkbox"/>	Tiles - other				
<input type="checkbox"/>	Hardiplank	<input type="checkbox"/>	Slate				
<input type="checkbox"/>	Timber/Weatherboard	<input type="checkbox"/>	Steel				
<input type="checkbox"/>	Cladding/Aluminium	<input type="checkbox"/>	Terracotta Tiles				
<input type="checkbox"/>	Curtain Glass	<input type="checkbox"/>	Other (describe below)				
<input type="checkbox"/>	Other (describe below)						



Level 1 Grafton Bond Store 60 Hickson Road Sydney NSW 2000

PO Box H171 Australia Square NSW 1215

T (02) 9241 4188 F (02) 9241 4324 E sydney@northrop.com.au

www.northrop.com.au ABN 81 094 433 100

6 September 2010

Job Number 08622

Pittwater RSL Club  
82 Mona Vale Road  
Mona Vale NSW 2103

**RE PITTWATER RSL – FUTSAL COURTS  
CIVIL DESIGN CERTIFICATE OF COMPLIANCE**

Dear Sir

We Northrop Engineers being professional engineers, certify that based on our professional opinion and in accordance with normal engineering practice, the design of the works shown on Northrop's documentation for the civil components of the project has been carried out by qualified engineers and technical staff generally in accordance with

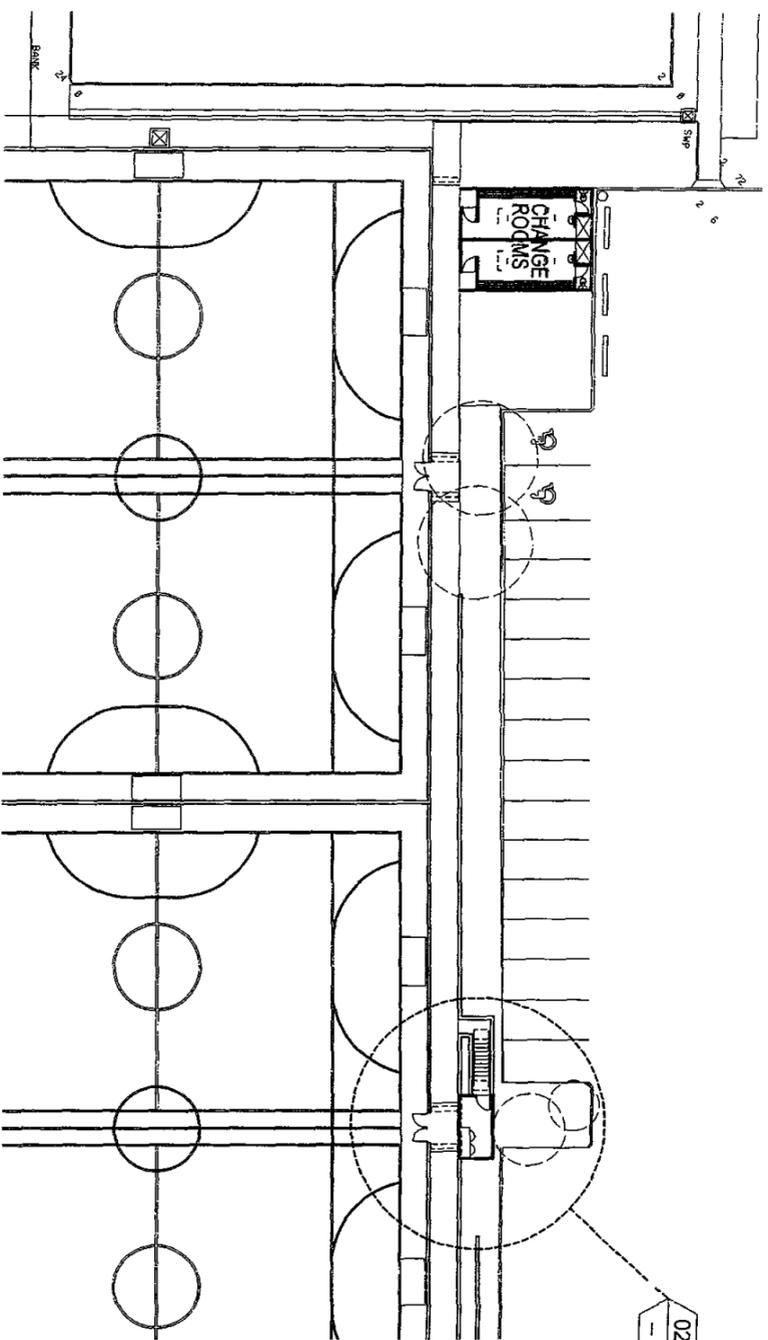
- a) the relevant civil requirements of the following Australian Standards
  - o AS3500 3 2003 Plumbing & Drainage – Part 3 Stormwater Drainage
- b) The consent conditions B2 B4 and C2 relating to stormwater management issued by Pittwater Council dated 01/02/10 (DA N0123/09)
- c) Modification of Development Consent (N0123/09/S96/1) issued by Pittwater Council dated 13 August 2010
- d) the relevant stormwater drainage requirements of the Risk Analysis & Management for Proposed Futsal Courts & Amenities Block at 84 Mona Vale Road Mona Vale report prepared by Jack Hodgson Consultants Pty Ltd dated 11/03/09,

Yours faithfully

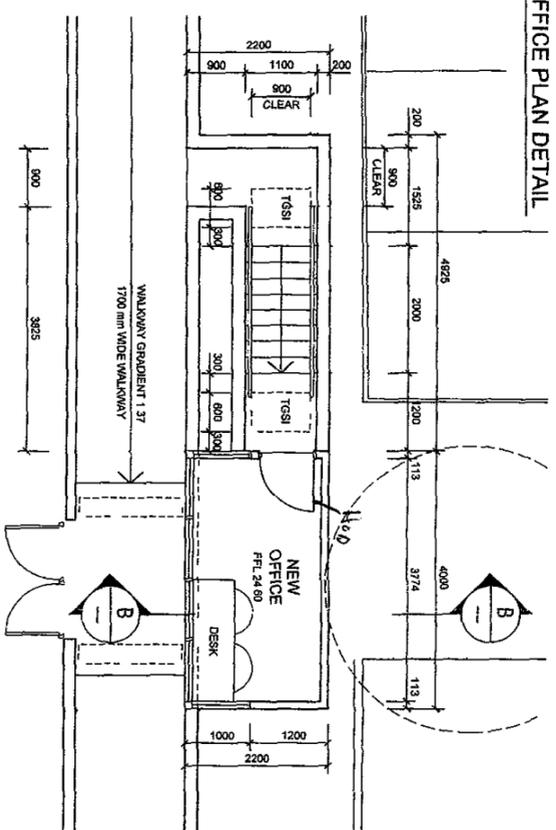
Stephen Fryer  
BE MIEAust CPEng NPER  
Senior Civil Engineer  
**Northrop Consulting Engineers**  
On behalf of Northrop Consulting Engineers Pty Ltd



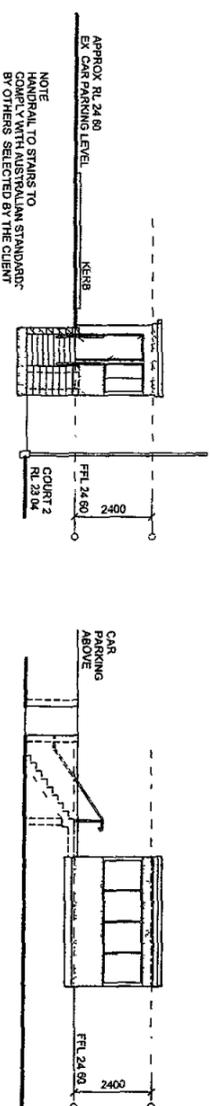




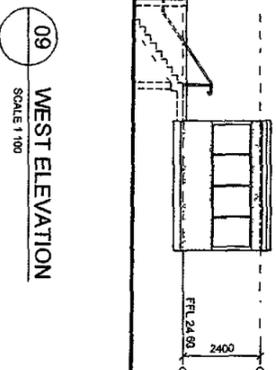
01 LOCATION PLAN  
SCALE 1:200



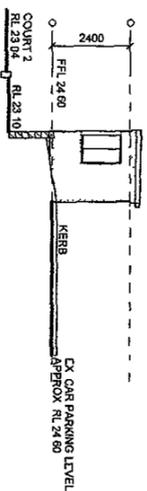
02 OFFICE PLAN  
SCALE 1:100  
PITTWATER COUNCIL  
APPROVED DEVELOPMENT CONSENT PLANS



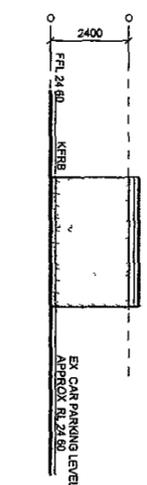
08 NORTH ELEVATION  
SCALE 1:100



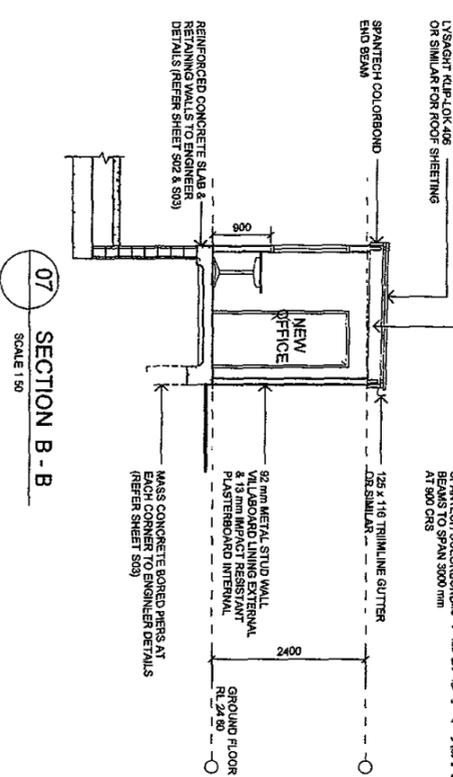
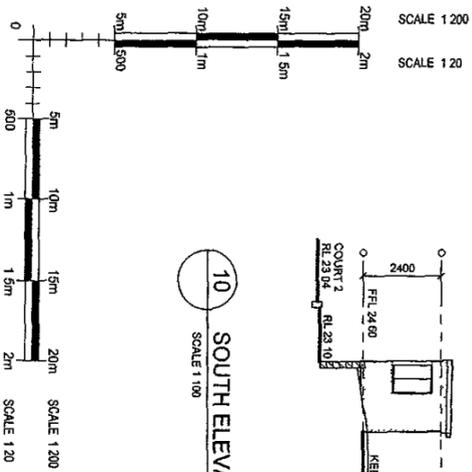
09 WEST ELEVATION  
SCALE 1:100



10 SOUTH ELEVATION  
SCALE 1:100



11 EAST ELEVATION  
SCALE 1:100



07 SECTION B - B  
SCALE 1:50

**NOTE: THESE PLANS MUST BE READ IN CONJUNCTION WITH THE CONDITIONS OF DEVELOPMENT CONSENT**

This is the plan/spec referred to in Essential Certifier's Certificate No **10/01196.1**

Officer B Cohen  
Accreditation No BPB0067

**NOTES**  
CONSENT REFERS TO THE NUMBER OF THE CONSENT GRANTED BY THE LOCAL GOVERNMENT.  
THESE PLANS ARE NOT TO BE USED FOR CONSTRUCTION WITHOUT THE CONSENT.  
CONSENTS ARE VALID FOR 12 MONTHS FROM THE DATE OF ISSUANCE.  
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NO.	REVISION	DATE
C	OFFICE & STAIRS AMENDED	20.07.10
B	PLAN SECTION ELEVATIONS	19.07.10
A	ISSUE FOR CONSTRUCTION	15.07.10
P1	ISSUE FOR INFORMATION	25.05.10
1	ISSUE FOR INFORMATION	25.05.10

**PAYNTER DIXON**  
Paynter Dixon Constructions Pty Limited  
300 Liverpool Road, Ashfield NSW 2181  
Tel: (02) 9797 6555 Fax: (02) 9799 8149  
ABN: 94 097 120 315

PROJECT	PROPOSED FUTSAL OFFICE AND CHANGE ROOMS AT PITTWATER RSL CLUB
TITLE	LOCATION PLAN AND OFFICE DETAILS
SCALE	1:200/1:100/1:50 @ A1
DRAWN BY	JCO
CHECKED BY	APPROVED
PROJECT NO.	20 JUL 110
DATE	20 JUL 110
PROJECT NO.	PRL 0124
ISSUE NO.	A 002
ISSUE DATE	C

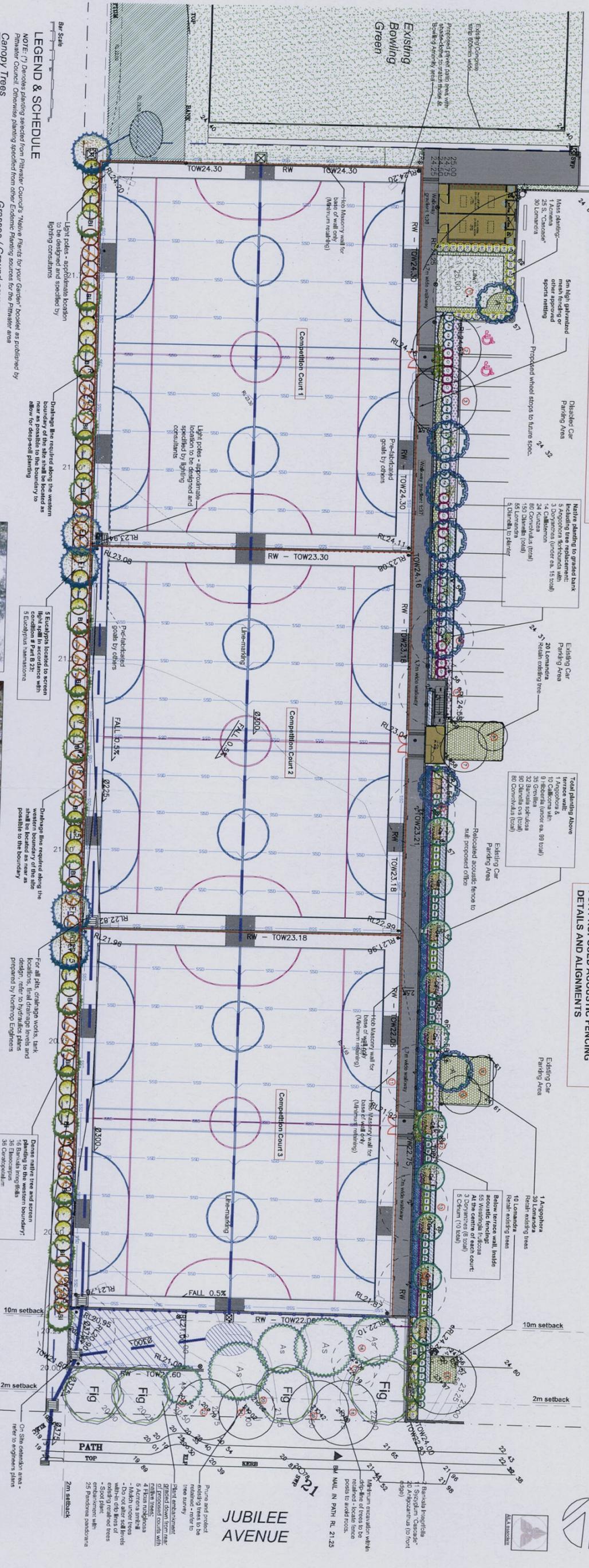




PLANS TO BE READ IN CONJUNCTION WITH THE FOLLOWING REPORTS AND PLANS:

- Hydraulic & Civils Plans and details prepared by NORTHCOE ENGINEERS
- Lighting Design & details prepared by HARRON ROSSON CONSULTANTS
- Acoustic Report and Details prepared by ACOUSTIC LOGIC CONSULTANTS
- Geotechnical Report & Risk Assessment prepared by JACK HOSKINS CONSULTANTS
- Construction Programme by PAVNER DIXON CONSTRUCTIONS Pty Ltd
- DA Conditions and requirements by Pitwater Council

LEVELS REFLECTED FROM HYDRAULIC / CIVIL ENGINEERS PLANS. REFER TO ACOUSTIC ENGINEERS PLANS FOR PROPOSED ACOUSTIC FENCING DETAILS AND ALIGNMENTS

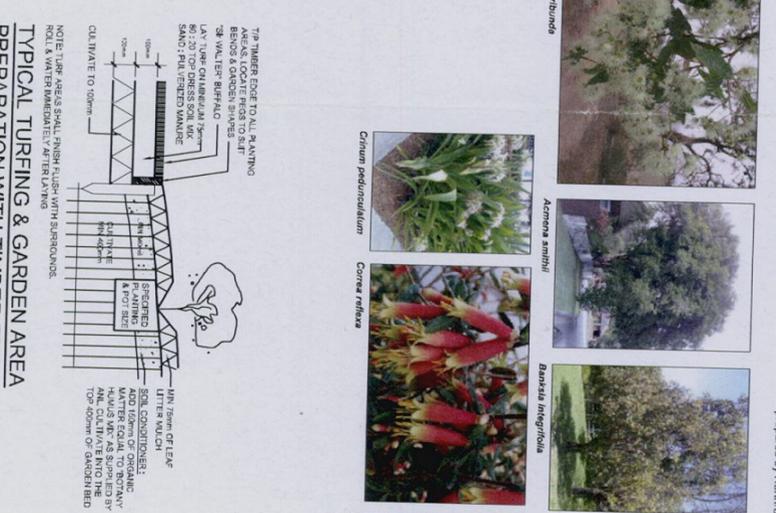
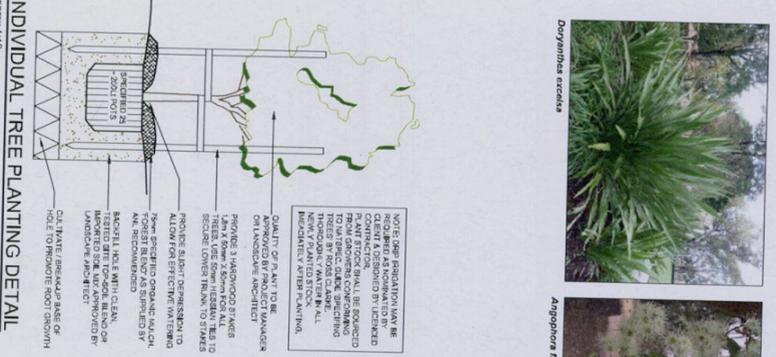


### LEGEND & SCHEDULE

NOTE: (1) Details planting selected from Pitwater Council's 'Native Plants for your Garden' booklet as published by Pitwater Council. Otherwise planting specified from other Endemic Planting sources for the Pitwater area

- Canopy Trees**
- As (*Acacia smithii*) (7.5L Pots) (Native shrub approx. 10m x 10m) Qty Required: 6
  - A (*Angophora floribunda*) (7.5L Pots) (Rough Barked Apple (Native)) (Shrub approx. 10-15m x 6m) Qty Required: 7
  - Fig (*Ficus mookiana*) (10L Pots) (Port Jackson Fig (Native)) (Native shrub approx. 25m x 15m) Qty Required: 4
  - En (*Eucalyptus haemastoma*) (4.5L Pots) (Native shrub approx. 5m, 6m) Qty Required: 5
  - As required in Condition # 3 Part C
- Small Native Trees**
- B (*Banksia integrifolia*) (300mm Pots) (Castal Banksia (Native)) (Native shrub approx. 5.7m x 4m) Qty Required: 18
  - Cs (*Callistemon serrulatus*) (7.5L Pots) (Red Bottlebrush (Native)) (Shrub approx. 4.6m x 5m) Qty Required: 10
  - B (*Banksia integrifolia*) (300mm Pots) (Castal Banksia (Native)) (Native shrub approx. 5.7m x 4m) Qty Required: 18
  - Cs (*Callistemon serrulatus*) (7.5L Pots) (Red Bottlebrush (Native)) (Shrub approx. 4.6m x 5m) Qty Required: 10
  - B (*Banksia integrifolia*) (300mm Pots) (Castal Banksia (Native)) (Native shrub approx. 5.7m x 4m) Qty Required: 18
  - Cs (*Callistemon serrulatus*) (7.5L Pots) (Red Bottlebrush (Native)) (Shrub approx. 4.6m x 5m) Qty Required: 10
- Grasses / Groundcovers**
- W (*Westringia fruticosa*) (200mm Pots) (Native shrub approx. 2m x 1m) Qty Required: 55
  - H (*Hibiscus*) (Native shrub approx. 2m x 1m) Qty Required: 55
- Other Landscape Items**
- Grasses / Ground covers
  - Shrubs
  - Other Landscape Items

- Grasses / Ground covers**
- W (*Westringia fruticosa*) (200mm Pots) (Native shrub approx. 2m x 1m) Qty Required: 55
  - H (*Hibiscus*) (Native shrub approx. 2m x 1m) Qty Required: 55
- Shrubs**
- SC (*Strylingia "Cascaed"*) (200mm Pots) (Native shrub approx. 1.5m x 1m) Qty Required: 24
  - SC (*Strylingia "Cascaed"*) (200mm Pots) (Native shrub approx. 1.5m x 1m) Qty Required: 24
- Other Landscape Items**
- Grasses / Ground covers
  - Shrubs
  - Other Landscape Items



**CONZEPT Landscape Architects**

PO Box 416  
79 Archibon Street,  
CREMORNE 2090  
Phone: 9438 1744  
Fax: 9438 1786  
enquiries@conzeptlandscape.com.au  
Mobile: 0413 881 351

**Landscape Plan PROPOSED FUTSAL (Mini Soccer) COURTS MONA VALE**

Client: Pitwater RSL Club  
Pitwater RSL Club,  
MONA VALE  
Scale: 1:200 @ A1  
Date: Feb 2020  
Drawing # LRS96 09-58 / 4 H

**IRRIGATION**

The client may choose to have an approved automated irrigation system installed to water the trees prior to planting. The system should be designed by a qualified, licensed irrigation specialist to suit the site and the plants to be planted. The system should be designed to provide adequate water to the plants and to be able to be adjusted to suit the needs of the plants. The system should be designed to be able to be adjusted to suit the needs of the plants. The system should be designed to be able to be adjusted to suit the needs of the plants.

# PROPOSED FUTSAL COURTS PITTWATER RSL CLUB MONA VALE

## DRAWING INDEX

- 500 — DRAWING INDEX AND DRAWING SPECIFICATIONS
- 501 — RETAINING WALL KEY PLAN AND DETAILS SHEET 1
- 502 — RETAINING WALL DETAILS SHEET 2
- 503 — AMENITIES & OFFICE SLAB & FOUNDATIONS PLANS & DETAILS
- 504 — AMENITIES & OFFICE ROOF & WALL PLANS & ELEVATIONS

## GENERAL

- G1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH SPECIFICATIONS, OTHER CONSULTANT'S DRAWINGS AND WITH WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT.
- G2. ALL DISCREPANCIES SHALL BE REFERRED TO THE SUPERINTENDENT AND BE RESOLVED BEFORE PROCEEDING WITH THE WORK.
- G3. ALL DIMENSIONS SHOWN SHALL BE VERIFIED BY THE BUILDER ON SITE. ENGINEER'S DRAWINGS SHALL NOT BE SCALED FOR DIMENSIONS.
- G4. ALL WORKMANSHIP, TESTING, MATERIALS AND SUPERVISION ARE TO BE IN ACCORDANCE WITH THESE SPECIFICATIONS, THE OCCUPATIONAL HEALTH AND SAFETY ACT 2000 ENFORCED BY THE WORKCOVER AUTHORITY AND CURRENT RELEVANT AUSTRALIAN STANDARDS.
- G5. PROPRIETARY ITEMS SPECIFIED SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN RECOMMENDATIONS. DO NOT VARY SPECIFIED PROPRIETARY PRODUCTS WITHOUT WRITTEN APPROVAL FROM THE ENGINEER.
- G6. THESE DRAWINGS AND ISSUED WRITTEN INSTRUCTIONS DURING THE COURSE OF THE CONTRACT DEPICT THE COMPLETE STRUCTURE. THEY DO NOT DESCRIBE A WORK METHOD, THE ARRANGEMENT, DESIGN AND INSTALLATION OF TEMPORARY WORKS REMAIN THE RESPONSIBILITY OF THE CONTRACTOR. (REFER ALSO TEMPORARY WORKS NOTES)
- G7. THE DETERMINATION OF A SAFE WORK METHOD REMAINS THE RESPONSIBILITY OF THE CONTRACTOR. ANY ELEMENT OF THE PROJECT THAT POSES AN UNACCEPTABLE SAFETY RISK TO CONSTRUCT SHALL BE REFERRED TO THE ENGINEER.
- G8. NOTES ON ANY DRAWING APPLY TO ALL DRAWINGS IN THE SET U.N.O.
- G9. ALL ARCHITECTURAL FITMENTS SUCH AS GLAZING, PARTITIONS, CEILING ETC. SHOULD ALLOW FOR THE SHORT AND LONG TERM MOVEMENT OF STRUCTURAL ELEMENTS. FOR BEAMS AND SLABS SPANNING LESS THAN 8m AN ALLOWANCE OF AT LEAST 20mm SHOULD BE MADE (CONSULT SPEC. OR ENGINEER WHERE SPANS EXCEED 8m).
- G10. THE BUILDER SHALL PROVIDE CERTIFICATION OF ANY DESIGN AND CONSTRUCT COMPONENT BY A CHARTERED (NPER) ENGINEER.
- G11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ALL SERVICES IN THE VICINITY OF THE WORKS. ANY SERVICES SHOWN ARE PROVIDED FOR INFORMATION ONLY. THE CONTRACTOR SHALL CONFIRM THE LOCATION OF ALL SERVICES PRIOR TO COMMENCING AND SHALL BE RESPONSIBLE FOR THE REPAIR OF ANY DAMAGE CAUSED TO SERVICES, AS WELL AS ANY LOSS INCURRED AS A RESULT OF THE DAMAGE TO ANY SERVICE.
- G12. DESIGN CRITERIA:
- \* DESIGN LOADS
  - SURCHARGE TO WALLS = 5 kPa.
  - BULK DENSITY FOR LATERAL EARTH PRESSURES (DRAINED) = 18 kPa.

## STEELWORK

- S1. FABRICATE AND ERECT STRUCTURAL STEELWORK IN ACCORDANCE WITH AS4100.
- S2. PROVIDE HOLES, CLEATS AND FIXING FOR TIMBER FRAMING, FINISHES, ETC. SHOWN ON ARCHITECTURAL DRAWINGS.
- S3. FABRICATOR SHALL PREPARE SHOP DRAWINGS AND SUBMIT THEM TO THE BUILDER FOR HIS APPROVAL. BUILDER SHALL LODGE TWO HARD COPIES OF APPROVED DRAWINGS TO NORTHROP ENGINEERS PTY LTD FOR REVIEW AND COMMENT PRIOR TO FABRICATION.
- S4. UNLESS NOTED OTHERWISE, USE:
- 10mm GUSSET, FIN AND END PLATES.
  - I20 R/S BOLTS.
  - 6mm CONTINUOUS FILLET WELDS MADE WITH E48X3 MILD STEEL ELECTRODES.
  - ALL WELDS SP CATEGORY.
- S5. NO PAINT ON WELDING SURFACES WITH TF OR TB BOLTING UNLESS APPROVED BY ENGINEER.
- S6. BOLTS TO BE INSTALLED WITH ONE HARDENED WASHER UNDER THE TURNED PART.
- S7. TF AND TB BOLTING BY "PART TURN" METHOD WITH LOAD INDICATING WASHERS.
- S8. ALL BOLTS, SCREWS, HOLD DOWN BOLTS, MASONRY ANCHORS SHALL BE HOT DIP GALVANISED TO AS1214.
- S9. MINIMUM YIELD STRESS:
- HOT ROLLED SECTIONS = 300MPa.
  - SQUARE HOLLOW SECTIONS = 350MPa.
  - RECTANGULAR HOLLOW SECTIONS = 350MPa.
  - CIRCULAR HOLLOW SECTION = 250MPa.
  - PLATE = 250MPa.
- S10. COLD FORMED SECTIONS TO CONFORM WITH:
- AS/NZS4600, AS1397, AS1584 AND AS1595.
  - MINIMUM YIELD STRESSES.
  - PURLINS AND GIRTS 450MPa, OTHER SECTIONS 350MPa.
  - SURFACE TREATMENT - HOT DIPPED ZINC COATING, AT LEAST 600g/sqm (ONLY IF EXPOSED TO ATMOSPHERE) U.N.O.
  - LAPS, BRIDGING, BRACKETS AND PURLIN BOLTS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- S11. SURFACE TREATMENT UNLESS NOTED OTHERWISE:
- PROTECTED FROM WEATHER - AS/NZS2312-1/2S2.
  - EXPOSED TO WEATHER - AS/NZS2312-H06000 OR P105 OR ACC6.
  - BUILT INTO AN EXTERNAL MASONRY WALL - AS/NZS2312-H06000 OR CH5 OR ACC6.
- S12. UNLESS OTHERWISE DETAILED FABRICATOR SHALL PROVIDE C10015 TRIMMER PURLINS ALONG WITH GENERAL PURPOSE BRACKETS TO SUPPORT EDGE OF ROOF SHEETING AT ALL HIPS, VALLEYS AND PENETRATIONS.
- S13. FIX CROSS BRACING TO PURLINS AT 3000 MAXIMUM CTS WITH M12 BOLTS OR M6 HOOKS.
- S14. ALL BURST STEELWORK TO BE ENCASED IN CONCRETE WITH A MINIMUM COVER OF 50mm TO STEELWORK.
- S15. BOLT SYMBOLS:
- 8/8/S - SHU6 FIT.
  - 8/8/TF - FULLY TENSIONED FRICTION TYPE (USE LOAD INDICATOR WASHERS).
  - 8/8/TB - FULLY TENSIONED BEARING TYPE (USE LOAD INDICATOR WASHERS).
- S16. HIGH STRENGTH BOLTS (8.8) ARE NOT TO BE WELDED.
- S17. STEELWORK TO BE CONCRETE ENCASED SHALL BE FREE FROM ALL LOOSE RUST, LOOSE MILL SCALE, DIRT, OIL, GREASE, ETC. AND REINFORCED WITH F41 FABRIC OR EQUIVALENT BLACK IRON WIRE. 3mm DIA.
- S18. THE BUILDER IS TO PROVIDE CERTIFICATION TO THE ENGINEER THAT ALL HIGH STRENGTH BOLTS (GRADE 8.8) COMPLY WITH THE REQUIREMENTS OF AS1252.

## CONCRETE

- C1. CARRY OUT ALL CONCRETE WORK IN ACCORDANCE WITH AS3600 AND NATSPEC CONCRETE STANDARDS.
- C2. CONCRETE PROPERTIES:
- | ELEMENT                                | STRENGTH GRADE | MAX 56 DAY DRYING SHRINKAGE |
|--|----------------|-----------------------------|
| - STRIP FOOTINGS                       | N25MPa         |                             |
| - BORED PIERS                          | N25MPa         |                             |
| - MAXIMUM AGGREGATE SIZE = 20mm U.N.O. |                |                             |
| - SLUMP = 75mm.                        |                |                             |
- C3. CONCRETE PROPERTIES FOR SLABS AND BEAMS SHALL BE VARIED FROM NORMAL CLASS AS FOLLOWS:
- MINIMUM CEMENT CONTENT 250kg/m<sup>3</sup>.
  - MAXIMUM 56 DAY SHRINKAGE STRAIN = AS NOMINATED ABOVE.
  - PRIOR TO COMMENCEMENT CONCRETE SUPPLIER TO PROVIDE DRYING SHRINKAGE TEST RESULTS FROM PRODUCTION ASSESSMENT AS EVIDENCE THAT SPECIFIED DRYING SHRINKAGE LIMITS CAN BE ACHIEVED USING NORMAL MIX DESIGN.
- C4. CONSOLIDATE BY VIBRATION.
- C5. CONSTRUCTION JOINTS NOT SHOWN REQUIRE WRITTEN APPROVAL FROM THE ENGINEER.
- C6. SUBMIT FOR APPROVAL THE FOLLOWING TO THE ENGINEER:
- CURING PROCEDURE (PVA MEMBRANES NOT PERMITTED).
  - STRIPPING PROCEDURE.
  - DETAILS AND LOCATION OF CAST IN SERVICES.
  - CONDUITS, PENETRATIONS AND CONSTRUCTION JOINT LOCATIONS.
- C7. FOR TENDER PURPOSES ASSUME MINIMUM STRIPPING TIMES AND EXTENT OF BACK PROPPING AS PER AS 3610-1995 SECTION 5.0.
- C8. ALL REINFORCEMENT LAPS AS PER SECTION 13, AS3600.
- C9. HOLD DOWN BOLTS SHALL BE HOT DIPPED GALVANISED.
- C10. U.N.O., ALL MASONRY ANCHORS INTO CONCRETE SHALL BE RAMSET TRUEBOLTS (LONGEST VERSION) OR APPROVED EQUIVALENT. BOLTS SHALL BE GRADE 316 STAINLESS STEEL WHERE THEY ARE EXPOSED TO THE WEATHER AND ADJOINING NON FERROUS OR PREPARED MEMBERS.
- C11. U.N.O. CLEAR CONCRETE COVERS SHALL BE:
- | ENVIRONMENT  | COVER |
|--|-------|
| - SURFACES OF MEMBERS CAST AGAINST, AND IN CONTACT WITH THE GROUND                       | 50mm  |
| - SURFACES OF MEMBERS CAST AGAINST, AND IN CONTACT WITH THE GROUND SEPARATED BY MEMBRANE | 30mm  |
| - SURFACES OF MEMBERS IN ABOVE GROUND EXTERIOR ENVIRONMENTS                              | 40mm  |
| - SURFACES OF MEMBERS IN INTERIOR ENVIRONMENTS   | 20mm  |
| - SURFACES OF MEMBERS IN WATER   | 75mm  |
- C12. ALL PENETRATIONS TO HAVE 2/N12 TRIMMER BARS TOP AND BOTTOM TO EACH FACE U.N.O. EXTEND TRIMMERS 700 BEYOND PENETRATION.
- C13. SETDOWNS OR FALLS IN FLOOR SURFACES ARE NOT PERMITTED UNLESS SHOWN ON DRAWINGS.
- C14. FORMWORK:
- | ELEMENT                        | FORMWORK CLASS (AS3600) |
|--------------------------------|-------------------------|
| - INGROUND FOOTINGS            | 5                       |
| - RETAINING WALLS              | 5                       |
| - RETAINING WALLS EXPOSED FACE | 3                       |
| - COLUMNS                      | 2                       |
| - LIFT WALLS                   | 2                       |
| - BEAMS AND SLABS              | 2                       |
| - STAIRS                       | 2                       |
| - GRAND TREATED SURFACES       | 3                       |
- C15. PROVIDE UPWARD CAMBER TO FORMWORK OF REINFORCED CONCRETE CANTILEVERS OF 5mm PER 1000 PROJECTION BEYOND COLUMN OR WALL FACE.
- C16. SURFACE FINISHES:
- | COLUMNS AND WALLS   | OFF FORM.      |
|---------------------|----------------|
| - FLOOR SLABS (UNO) | MACHINE FLOAT. |
| - SLABS TO BE TILED | WOOD FLOAT.    |
| - STAIRS            | STEEL TROWEL.  |
- C17. REINFORCEMENT SYMBOLS:
- S = STRUCTURAL GRADE DEFORMED BAR TO AS1302 (250MPa).
  - R = STRUCTURAL GRADE ROUND BAR (250MPa).
  - N = HOT ROLLED DEFORMED BAR TO AS/NZS 4671 (500MPa).
  - SL = LOW DUCTILITY SQUARE MESH (500 MPa).
  - RL = LOW DUCTILITY RECTANGULAR MESH (500 MPa).
  - L = LOW DUCTILITY TRENCH MESH (500 MPa).
- THE NUMBER FOLLOWING THE SYMBOL IS THE NOMINAL BAR DIAMETER IN MILLIMETRES CLASS L REINFORCEMENT SHALL NOT BE USED U.N.O.

## CLAY BRICK MASONRY

- C81. MASONRY CONSTRUCTION IS TO CONFORM TO AS2700:
- MORTAR CLASSIFICATION = M3.
  - DURABILITY CLASSIFICATION OF BUILT IN COMPONENTS = R3.
  - DURABILITY GRADE OF EXTERNAL MASONRY UNITS = GENERAL PURPOSE.
- C82. THE CHARACTERISTIC UNCONFINED COMPRESSIVE STRENGTH OF THE MASONRY UNITS SHALL BE A MINIMUM OF 20 MPa.
- C83. BED UNITS IN FRESHLY PREPARED MORTAR, UNIFORMLY MIXED CEMENT, LIME AND SAND IN THE RATIO OF 1:1:6, CONFORMING TO AS 3700.
- C84. NO CUTTING, CHASING OR RAKING OF JOINTS IN EXCESS OF 5mm UNLESS AUTHORISED BY THE ENGINEER FOR EVERY LOCATION.
- C85. EXPANSION/CONTRACTION JOINTS SHALL BE PROVIDED IN ACCORDANCE WITH THE REQUIREMENTS OF THE BCA BUT GENERALLY AT A MAXIMUM SPACING OF 5m (ONLY IF BRICKWORK IS REQUIRED TO BE "ARTICULATED", OTHERWISE PROVIDE AT MAXIMUM OF 8-10m) AND 2.5m FROM A CORNER U.N.O.
- C86. MASONRY TIES SHALL BE GALVANISED WITH A MINIMUM COATING MASS OF 470g/m<sup>2</sup> PER SIDE OR GRADE 316 STAINLESS STEEL AND OF MEDIUM DUTY CLASSIFICATION U.N.O. AND APPROPRIATE FOR CAVITY WIDTH. ANY FACE FIXED SHALL BE FIXED USING A SCREW TYPE FIXING AND SHALL NOT BE WELDED. TIES TO STEEL SHALL BE ABBEY TREMOR TIES OR APPROVED EQUIVALENT.
- C87. SPACING OF MASONRY TIES:
- ADJACENT TO WINDOWS AND RETURN WALLS.
  - 300mm VERTICAL AND HORIZONTAL.
  - SOLID MASONRY, 400mm VERTICAL AND HORIZONTAL.
  - OTHERWISE, 600mm VERTICAL AND HORIZONTAL.
- C88. WHERE MASONRY ADJOINS STRUCTURAL STEEL, OR PASSES A RETURN WALL ON THE INNER SIDE PROVIDE MEDIUM DUTY TIES AT 300 MAX. CENTRES. SHOT FIX TIES TO STEELWORK, ENSURE WALLS WILL BE CONCEALED.
- C89. LOADBEARING WALLS SHALL BE TOPPED WITH M.E.T. GRAPHITE GREASED SUP JOINT OVER TOP COURSE OF BRICKWORK.
- C90. NON-LOADBEARING WALLS SHALL FINISH 20mm SHORT OF SLAB SOFFIT AND SHALL BE FASTENED TO THE SLAB SOFFIT USING BRUNSWICK MFA - 4 SLIDING TIES OR APPROVED EQUIVALENT AT 460mm CENTRES.
- C91. U.N.O. ALL MASONRY ANCHORS INTO CLAY MASONRY SHALL BE HILTI HIT-HY20 CHEMICAL INJECTION ANCHORS OR APPROVED EQUIVALENT & ANCHORS EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANISED STEEL OR GRADE 316 STAINLESS STEEL.
- C92. ALL UNTELS SUPPORTING BRICKWORK ARE TO BE HOT DIP GALVANISED WITH MINIMUM COATING MASS OF 600g/m<sup>2</sup>.
- C93. NO AIR ENTRAINING AGENTS (BYCOL, ETC) ARE TO BE USED WITHOUT PRIOR WRITTEN PERMISSION FROM NORTHROP ENGINEERS.

## METAL STUD WALLS

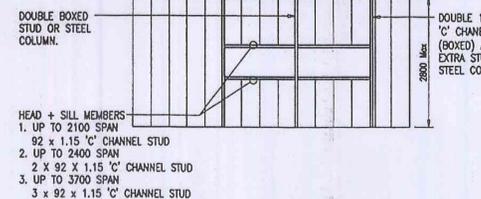
- MW1. ALL DESIGN, WORKMANSHIP AND MATERIALS TO AS/NZS4600.
- MW2. PROVIDE BRACING IN WALLS AS PER THE PLANS, USING 40 x 1.0 GALVANISED STRAP BRACING FIXED TO THE STUD WALLS, OR NOGGING SECTIONS. FIX STRAP TO EACH STUD BY 1 TEK SCREW (4.8mm DIAMETER). USE TECO TENSIONERS TO TIGHTEN STRAPS.
- 
- MW3. PROVIDE LIPPED AND GALVANISED WALL STUDS AS FOLLOWS U.N.O. ON DRAWINGS. WHERE HEIGHTS EXCEED TABLE LIMITS CONTACT NORTHROP ENGINEERS PTY LTD.
- | STUD SIZE   | SPACING (mm) | MAX HEIGHT (m) |
|---|--------------|----------------|
| INTERNAL<br>92.1 x 0.55                                     | 600          | 4200           |
| EXTERNAL & LINED INTERNALLY<br>92.1 x 1.15                  | 600          | 3400           |
| EXTERNAL NOT INTERNALLY LINED<br>92.1 x 0.75<br>92.1 x 1.15 | N/A          | N/A            |
- MW4. FOR LOADBEARING WALLS PROVIDE NOGGING AT 1.6 METRES CTS MAX U.N.O. NOGGING SECTION SHALL BE 0.75 BMT. NOGGING SHALL BE MECHANICALLY FIXED TO STUDS AS PER MANUFACTURERS SPECIFICATIONS.
- MW5. PROVIDE DOUBLE 1.15mm 'C' CHANNEL STUDS (BOXED) AND 1 EXTRA STUD AT SIDES OF OPENING.
- MW6. PROVIDE DOUBLE 1.15mm 'C' CHANNEL STUDS (BOXED) AT INTERMEDIATE GLAZING SECTIONS:
- 
- MW7. UNLESS NOTED OTHERWISE, STUD WALLS ARE NON LOAD BEARING. ALLOW FOR DEFLECTION OF STUDS WITHIN TOP TRACK AT 20mm.
- MW8. FIX BOTTOM TRACK OF BRACED PANELS TO CONCRETE FLOOR AS PER MW2. FOR ALL OTHER FIXINGS REFER TO MANUFACTURERS SPECIFICATION.

## TIMBER - GENERALLY

- T1. ALL WORK IN ACCORDANCE WITH AS1720 AND AS1684. RADATA, HARDWOOD, OREGON AND CYPRESS PINE TO BE IN ACCORDANCE WITH AS2082 AND AS2858 AS APPROPRIATE.
- T2. PRESERVATIVE TREATMENT:
- ALL TIMBERS TO HAVE THE NECESSARY PRESERVATIVE TREATMENT APPROPRIATE TO THE SPECIES AND USAGE AS SPECIFIED IN AS1604-1997.
  - ALL TREATED TIMBERS TO HAVE MARKINGS THAT ARE TO REMAIN VISIBLE DURING THE FRAMING INSPECTION.
- T3. TERMITES PROTECTION:
- ALL CONSTRUCTION WORK SHOULD BE IN ACCORDANCE WITH AS3660. 1-2000 PROTECTION OF BUILDINGS FROM SUBTERRANEAN TERMITES PART 1: NEW BUILDINGS. IF THE REQUIREMENTS IN THIS CODE ARE UNABLE TO BE MET, NORTHROP ENGINEERS RECOMMENDS THE USE OF TERMITE RESISTANT STRUCTURAL TIMBER IN ACCORDANCE WITH AS1604-1997 AS SHOWN BELOW:
- | ENVIRONMENT             | HAZARD LEVEL     |
|-------------------------|------------------|
| - INTERIOR ABOVE GROUND | HAZARD LEVEL H2. |
| - EXTERIOR ABOVE GROUND | HAZARD LEVEL H3. |
| - EXTERIOR IN GROUND    | HAZARD LEVEL H5. |
- T4. THE IMPERFECTIONS PERMITTED BY THE GRADING RULES SHALL APPLY TO ERECTED TIMBER. TIMBER WILL BE REJECTED IF IMPERFECTION LIMITS ARE EXCEEDED.
- T5. UNLESS NOTED OTHERWISE USE:
- M12 4.6/S GALV. BOLTS WITH 55dia X 3.0 GALV. WASHERS UNDER HEAD AND NUT.
  - M12 4.6/S GALV. COACH SCREWS WITH 55dia X 3.0 GALV. WASHERS 75mm MIN. EMBEDMENT INTO SECOND MEMBER.
  - 3.15mm GALVANISED NAILS WITH 35mm MIN. EMBEDMENT INTO SECOND MEMBER.
  - 14 GAUGE (6.4mm THREAD DIAMETER) GALVANISED, BUGLE HEADED WITH 50mm MIN. EMBEDMENT INTO SECOND MEMBER.
  - 12 GAUGE (5.6mm THREAD DIAMETER) TYPE 17 POINT GALVANISED TIMBER TEK SCREWS, 50mm MIN. INTO SECOND MEMBER.
  - GALV. CONNECTOR PLATES COMPLYING WITH AS1649.
  - MAINTAIN TIMBER EDGE DISTANCES AS PER AS1720.
- T6. ALL TIMBER SHALL BE PROTECTED FROM THE ELEMENTS DURING FABRICATION AND CONSTRUCTION BY THE APPLICATION OF AN APPROVED WATERPROOF TIMBER PRESERVATIVE. PROPOSALS SHALL BE SUBMITTED TO THE ENGINEER.
- T7. ALL EXPOSED LINES OF BOLTS SHALL BE EVENLY AND EQUALLY SPACED UNO. AND SHALL ALIGN WITH ADJACENT EXPOSED BOLT GROUPS.
- T8. ALL ACCESSIBLE BOLTS ARE TO BE RETIGHTENED AND ALL NAILS REDRIVEN AS CLOSE TO COMPLETION OF CONTRACT AS POSSIBLE AND AGAIN AT THE END OF THE DEFECTS LIABILITY PERIOD. ALL OTHER BOLTS SHALL BE TIGHTENED IMMEDIATELY PRIOR TO BEING BUILT-IN.
- T9. WE SUPPORT THE ENVIRONMENT AND RECOMMEND THE USE OF SUSTAINABLE TIMBER OR RECYCLED TIMBER.
- T10. DOWNS SPECIAL NOTE:
- TIMBER SPECIFICATION TO THE HAZARD LEVELS NOMINATED IN T3 ABOVE.
  - IRRESPECTIVE OF WHETHER TERMITE PROTECTION HAS BEEN INSTALLED.

## FOUNDATIONS

- F1. ASSUMED ALLOWABLE BEARING CAPACITY:
- STRIP FOOTINGS = 100kPa.
  - BORED PIERS = 100kPa.
- F2. A GEOTECHNICAL REPORT HAS BEEN CARRIED OUT, REFER TO REPORT NO. 24989A.
- F3. THE SLAB AND FOOTINGS HAVE BEEN DESIGNED USING AS2870 AS A REFERENCE GUIDE. CLASS II HAS BEEN ADOPTED. ENGINEER TO BE CONTACTED DURING EXCAVATION TO CONFIRM.
- F4. OBTAIN ENGINEER'S WRITTEN APPROVAL OF FOUNDING MATERIAL BEFORE PLACING CONCRETE OR THE CONTRACTOR IS TO ENGAGE A QUALIFIED (NPER) GEOTECHNICAL ENGINEER TO APPROVE THE FOUNDATION MATERIAL. SUBMIT CERTIFICATE IN WRITING TO THE CONSULTING ENGINEER PRIOR TO CONCRETING FOUNDATIONS.
- F5. ENSURE STABILITY OF ADJACENT BUILDINGS IS MAINTAINED DURING ALL STAGES OF CONSTRUCTION.
- F6. DO NOT ALLOW EXCAVATED MATERIAL TO STOCKPILE STAND WITHIN 1500mm OF FOOTING TRENCHES OR PITS. NO EARTH OR DEBRIS IS TO FALL INTO THE FOOTING TRENCHES BEFORE OR DURING CONCRETE PLACEMENT.
- F7. THE UNDERSIDE OF FOUNDATIONS SHALL CONFORM TO THE FOLLOWING REGARDLESS OF NOMINATED LEVELS:
- 
- TO BE DETERMINED BY ENGINEER (ASSUME 45° FOR TENDER PURPOSES)
- BASE OF TRENCH OR TOP OF 100MPa CONCRETE BACKFILL TO TRENCH
- WHERE PIPE CROSSES A FOOTING, FILL TO UNDERSIDE OF FOOTING WITH MASS CONCRETE. WRAP PIPE WITH A 40mm THICK LAYER OF ABLEFLEX OR SIMILAR MATERIAL
- WHERE ADDITIONAL EXCAVATION IS REQUIRED DUE TO UNSATISFACTORY FOUNDATION MATERIAL, POUR 100MPa MASS CONCRETE TO UNDERSIDE OF FOOTING



ESSENTIAL CERTIFIERS LIVERPOOL

Structural Details C.C. No. 10/10/11

WARNING: A comprehensive check of the Structural Design has not been carried out & the approval of the drawings by Essential Certifiers does not relieve the Structural Engineer of their responsibility to ensure the structural adequacy of the project.

Registered Professional Engineer 2886430

Mr Stephen Maher

MIE Aust SP Eng NPER

Signature: \_\_\_\_\_ Date: 6/9/10

Registered on the NPER in the area of practice of Structural

National Professional Engineers Register

## CONSTRUCTION ISSUE

ISSUE	AMENDMENT	VERIFIED	APPROVED	DATE	CLIENT	ARCHITECT	PROJECT	DRAWING TITLE	JOB NUMBER
1	CONSTRUCTION CERTIFICATE ISSUE		S.M.	30.03.10	PITTWATER RSL CLUB	CONCEPTS LANDSCAPE ARCHITECTS	PROPOSED FUTSAL COURTS PITTWATER RSL CLUB MONA VALE	DRAWING INDEX AND DRAWING SPECIFICATION	08622
2	TENDER ISSUE		S.M.	16.04.10					
A	CONSTRUCTION ISSUE	S.C.	S.M.	23.04.10					
B	RE-ISSUED FOR CONSTRUCTION	S.C.	S.M.	02.07.10					
<p>Drawing not to be used for construction unless verification signature has been added</p> <p>Client Approval of this drawing commences with building completion signature by the client</p>									



PROJECT: PROPOSED FUTSAL COURTS PITTWATER RSL CLUB MONA VALE

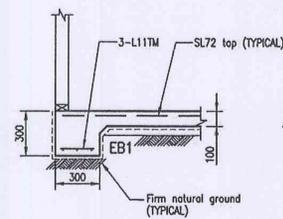
DRAWING TITLE: DRAWING INDEX AND DRAWING SPECIFICATION

JOB NUMBER: 08622

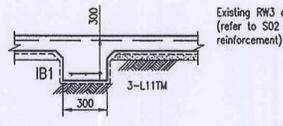
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REVISION: B

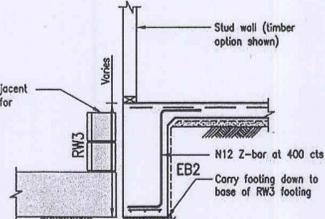
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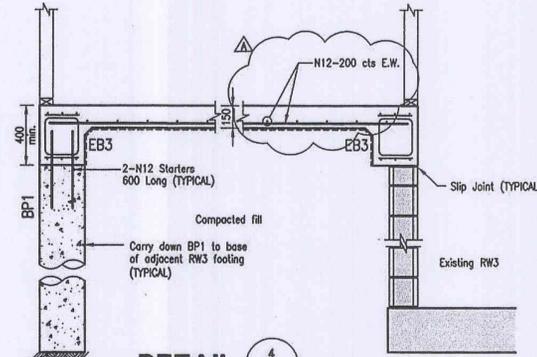
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TYPICAL EB1



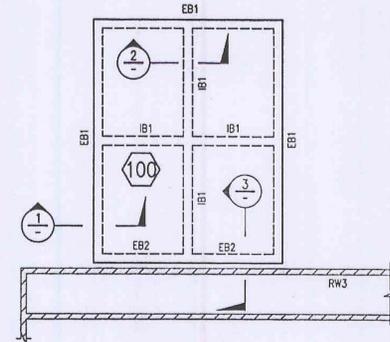
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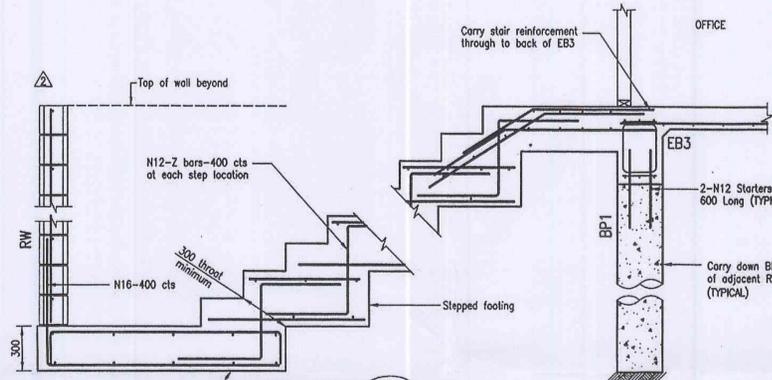
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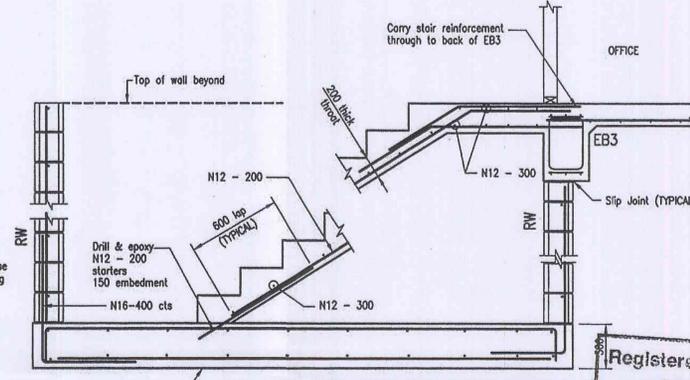
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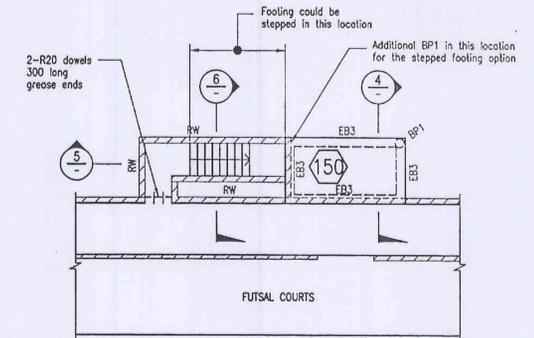
CHANGE ROOM CONCRETE PLAN  
SCALE 1:100



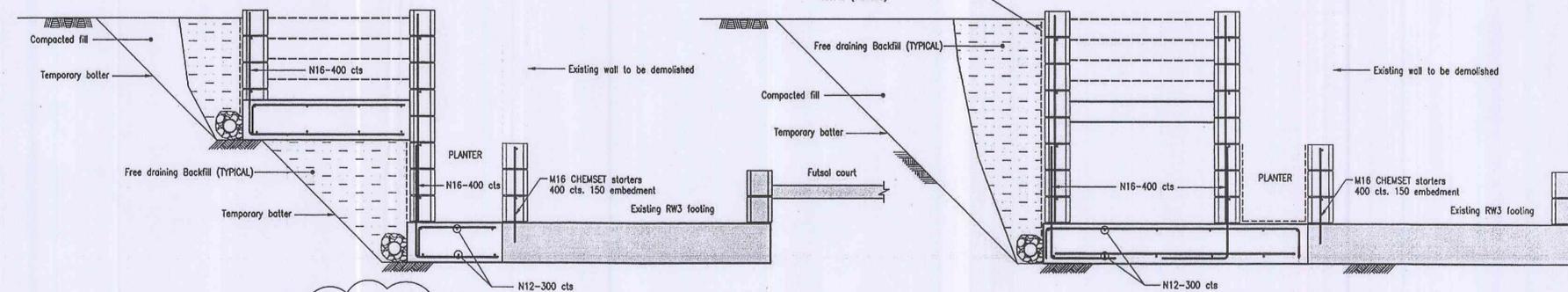
DETAIL 5  
1:20  
STEPPED FOOTING OPTION



DETAIL 5  
1:20  
SINGLE FOOTING OPTION



OFFICE CONCRETE PLAN  
SCALE 1:100



DETAIL 6  
1:20  
STEPPED FOOTING OPTION

DETAIL 6  
1:20  
SINGLE FOOTING OPTION

Registered Professional Engineer 2806430  
Mr Stephen Maher  
MIEAust CREng  
NPER  
Signature: [Signature] Date: 6/9/10  
Registered on the NPER in the area of practice of  
Structural  
National Professional Engineers Register

MARK	SIZE	COMMENTS
<b>BORED PIERS</b>		
BP1	300 Diameter	Mass Concrete Bored Pier
<b>FOOTING BEAMS</b>		
EB1	300 Wide x 300 Deep	Concrete edge beam with 3-L11TM bottom
EB2	300 Wide x depth varies	Concrete edge beam with 3-L11TM bottom
EB3	300 Wide x 400 Deep	Concrete edge beam with 3-L12TM top + bottom, R10-900
IB1	300 Wide x 300 Deep	Concrete internal beam with 3-L11TM bottom
<b>RETAINING WALLS</b>		
RW1		Refer to S01 & S02
RW3		Refer to S01 & S02

**LEGEND**

- (200) Denotes Slab Thickness.
- [Symbol] Denotes Reinforced Concrete Block Walls.
- [Symbol] Denotes Reinforced Concrete Block Walls.
- [Symbol] Denotes Loadbearing Walls Under.

Structural Details C.C. No. 19/16-1  
WARNING: A comprehensive check of the Structural Design has not been carried out & the approval of the drawings by Essential Certifiers does not relieve the Structural Engineer of their responsibility to ensure the structural adequacy of the project.

**CONSTRUCTION ISSUE**

ISSUE	AMENDMENT	VERIFIED	APPROVED	DATE	CLIENT
1	FOR TENDER		JL	2/7/10	PITTWATER RSL
A	FOR CONSTRUCTION		JL	22/7/10	

BUILDER  
**PAYNTER DIXON**

AWARDS FOR EXCELLENCE WINNER  
BRISBANE 2008  
REFER SHEET FOR SCALE NOTATION

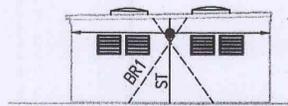
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PROJECT  
**PITTWATER RSL  
FUTSAL COURTS**

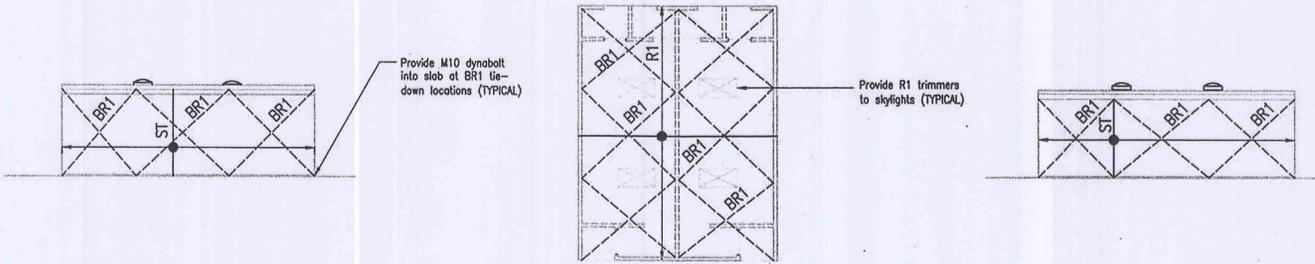
DRAWING TITLE  
**AMENITIES & OFFICE  
SLAB & FOUNDATIONS  
PLANS & DETAILS**

JOB NUMBER  
**08622**  
DRAWING NUMBER  
**S03**  
REVISION  
**A**  
DRAWING SHEET SIZE • A1

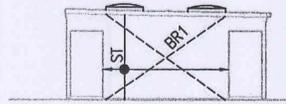
DESIGNED: Jonathan Lew DRAWN: Jonathan Lew VERIFIED: Phil O'Hara JOB MANAGER: Stephen Maher



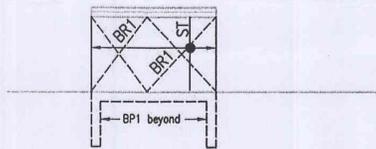
**CHANGEROOM EAST FRAMING ELEVATION**



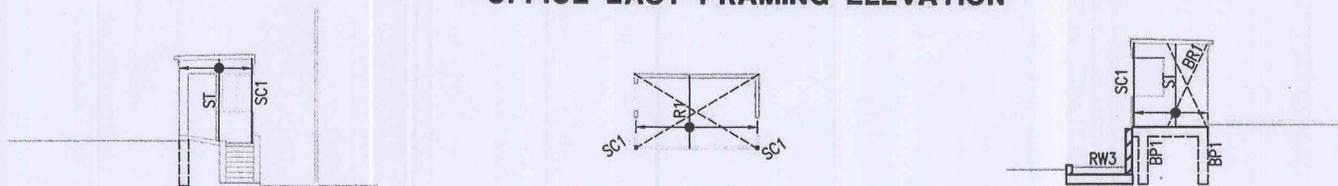
**CHANGEROOM NORTH FRAMING ELEVATION    CHANGE ROOM ROOF FRAMING PLAN    CHANGEROOM SOUTH FRAMING ELEVATION**



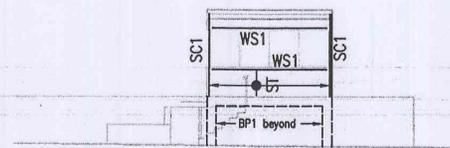
**CHANGEROOM WEST FRAMING ELEVATION**



**OFFICE EAST FRAMING ELEVATION**



**OFFICE NORTH FRAMING ELEVATION    OFFICE ROOF FRAMING PLAN    OFFICE SOUTH FRAMING ELEVATION**



**OFFICE WEST FRAMING ELEVATION**

MEMBER SCHEDULE		
MARK	SIZE	COMMENTS
COLUMNS		
SC1	90x90x3 SHS	Steel column Duragal Grade 450
STUDS		
ST	92x1.15 BMT	Steel stud option
ST	90x35 MGP10	Timber stud option
ROOF BEAMS		
R1	F10011 FIRMLOK	LYSAGHT COLOURBOND Steel Rafter option 900 cts
R1	130x36 HYPAN LVL	Timber Rafter option 900 cts
WALL STIFFENERS/BRACING		
BR1	30X0.8 GALSTRAP	Fold at end and fix after fold with 2-2.8 dia. screws
WS1	90x90x3 SHS	Duragal Grade 450

**NOTES:**

- Provide additional noggins at timber bench support points
- Provide double studs at door ways and window openings (TYPICAL)
- Noggings not shown on elevations
- R1 to load bearing walls:
  - provide framing anchor and 4 screws each face
- WS1 to SC1:
  - provide a universal connector bracket and 4 screws each face
- Refer to S00 for fixing specifications
- All other connections in accordance with S00
- See S00 for studs at sides of openings

ESSENTIAL CERTIFIERS LIVERPOOL  
Structural Details C.C. No. 10/10/1  
WARNING: A comprehensive check of the Structural Design has not been carried out & the approval of the drawings by Essential Certifiers does not relieve the Structural Engineer of their responsibility to ensure the structural adequacy of the project.

ESSENTIAL CERTIFIERS LIVERPOOL  
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Registered Professional Engineer 2886430  
**Mr Stephen Maher**  
MIEAust CPEng  
Signature: *[Signature]* Date: 6.9.10  
Registered on the NPER in the area of practice of Structural  
National Professional Engineers Register

**FOR CONSTRUCTION**

ISSUE	AMENDMENT	VERIFIED	APPROVED	DATE	CLIENT	BUILDER	PROJECT	DRAWING TITLE	JOB NUMBER								
1	FOR TENDER	SM	JL	1/7/10	PITTWATER RSL	PAYNTER DIXON	PITTWATER RSL FUTSAL COURTS	AMENITIES & OFFICE ROOF & WALL PLANS & ELEVATIONS	08622								
A	FOR CONSTRUCTION	POH	JL	22/7/10													
<table border="0"> <tr> <td> <small>*Drawing not to be used for construction unless manufacturer signature has been added +The copyright of this drawing remains with Paynter Dixon Pty Ltd.</small> </td> <td> <small>REFER SHEET FOR SCALE NOTATION</small> </td> <td> <p><b>NORTHROP</b> Sydney Bringing people, ideas &amp; engineering together</p> </td> <td> <small>AWARDS FOR EXCELLENCE WINNER BRISBANE 2009</small> </td> </tr> <tr> <td> <small>The Crafton Bond Store 80 Hickson Road, Sydney, N.S.W. 2000</small> </td> <td> <small>Ph (02) 9241 4198 Fax (02) 9241 4324 Email sydney@northrop.com.au</small> </td> <td> <small>P.O. Box H171 Australia Square, N.S.W. 1215</small> </td> <td> <small>ABN 81 094 433 100</small> </td> </tr> </table>										<small>*Drawing not to be used for construction unless manufacturer signature has been added +The copyright of this drawing remains with Paynter Dixon Pty Ltd.</small>	<small>REFER SHEET FOR SCALE NOTATION</small>	<p><b>NORTHROP</b> Sydney Bringing people, ideas &amp; engineering together</p>	<small>AWARDS FOR EXCELLENCE WINNER BRISBANE 2009</small>	<small>The Crafton Bond Store 80 Hickson Road, Sydney, N.S.W. 2000</small>	<small>Ph (02) 9241 4198 Fax (02) 9241 4324 Email sydney@northrop.com.au</small>	<small>P.O. Box H171 Australia Square, N.S.W. 1215</small>	<small>ABN 81 094 433 100</small>
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									<small>DRAWING NUMBER</small> <b>S04</b> <small>REVISION</small> <b>A</b> <small>DRAWING SHEET SIZE</small> = A1								

DRAWN: Jonathan Lew    DESIGNED: Jonathan Lew    JOB MANAGER: Stephen Maher    VERIFIER: Stephen Maher