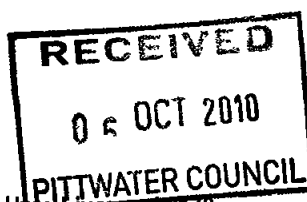


Bernie Cohen & Associates Pty Ltd Trading as  
**ESSENTIAL CERTIFIERS**

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*

---

**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**

  
\_\_\_\_\_





essentialCERTIFIERS  
LIVERPOOL

4 SEP 2010

BY

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 [Signature]

Signatures of all owners/tenants

[Signature]

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 [Signature]



**PART F – ☐ Builders Details ☐ Owner Builders Details**

Name **PAYNTER DIXON  
CONSTRUCTIONS**

License No/ Owner Builder Permit No

Address **320 LIVERPOOL Rd ASHFIELD**

Phone **9797 5555**

Mobile **0408 292 322**

Fax **9799 6149**

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 (m²) 39,240m²

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 m² except if being demolished 7095m²

Gross floor area in m² of proposed addition/s or new building/s If multiple buildings please itemise  
SPORTING FIELD - 3995m²

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



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





Bringing people, ideas & engineering together

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](mailto:sydney@northrop.com.au)

[www.northrop.com.au](http://www.northrop.com.au) ABN 81 094 433 100

7 September 2010

Job Number 08622

Pittwater RSL Club  
82 Mona Vale Road  
Mona Vale, NSW  
2103

**Re Pittwater RSL Futsal Courts, Amenities Block & Office  
Structural Design Certification**

Dear Sirs

We, Northrop Engineers being professional engineers certify that structural drawings numbered S00, S01, S02, S03 and S04 were based on Conzept Architect's Setout and Erosion Control drawing and Paynter Dixon's drawings A001-P1 and A002-P1, and were prepared,

- a) under the supervision of a professional structural engineer certified under NPER, and
- b) in accordance with the relevant structural requirements of the Building Code of Australia
- c) in accordance with Pittwater Council's DA Consent Conditions B1 and C5

Yours faithfully,

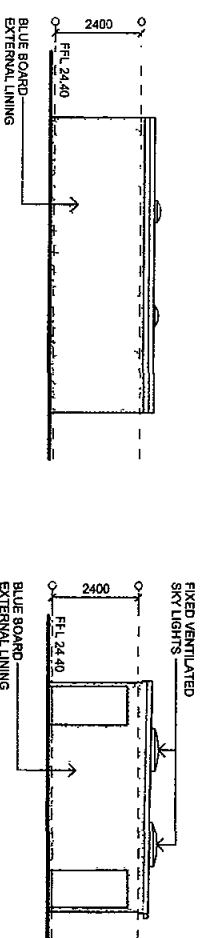
Stephen Maher BEng MIEAust CPEng NPER  
Principal, Structural Engineer  
NORTHROP ENGINEERS



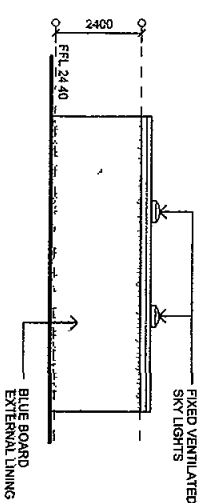
02 CHANGE ROOM PLAN DETAIL



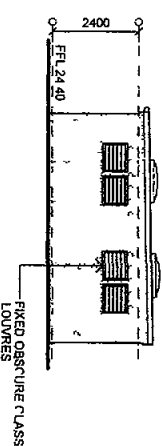
SCALE 1:200



SCALE 1 100



SCALE 1 100



SCALE 1 100



Architectural floor plan of a proposed development, oriented vertically. The plan shows two main sections: "NEW VISITORS CHANGE ROOM" and "NEW HOME CHANGE ROOM". Each section includes a WC, a shower, and a bench. Dimensions are provided for various sections and overall lengths. A north arrow is located at the top. A large "APPROVED DEVELOPMENT" stamp is overlaid on the plan. A note at the bottom left states: "NOTE: THESE PLANS CONJUNCTION WITH". A large "COUNCIL COPY" stamp is on the right side.

**NEW VISITORS CHANGE ROOM**  
CONC  
FTL 28.40

**NEW HOME CHANGE ROOM**  
CONC  
FTL 28.40

**APPROVED DEVELOPMENT**

**NOTE: THESE PLANS CONJUNCTION WITH**

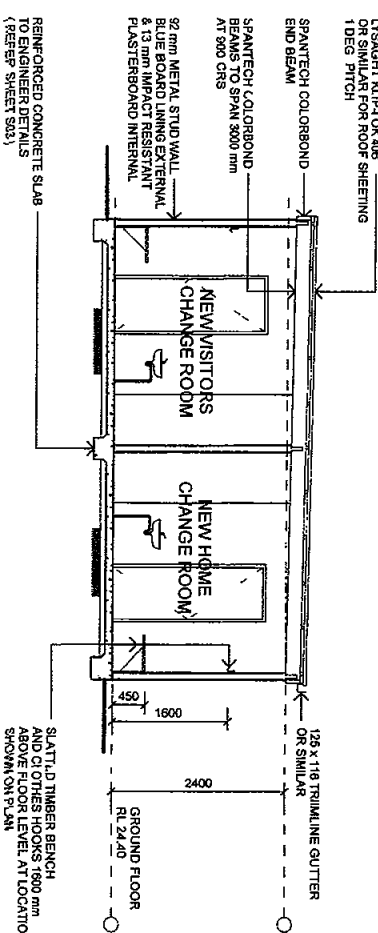
**COUNCIL COPY**

Dimensions: 113, 965, 113, 8165, 5848, 113, 900, 113, 113, 1500, 113, 1368, 113, 1368, 113, 1900, 113, 5360

Labels: WC, TILES, SHOWER, BENCH, SKY LIGHTS OVER, 4 FIXED VENTILATING, SLATED TIMBER BENCH, CLOTHES HOOKS, PAINT WATER, 32 mm METAL STUD WALL, BLUE BOARD EXTERNAL LINING & 13 mm IMPACT RESISTANT PLASTERBOARD INTERNAL, SHOWER AND WC AREAS ARE LINED WITH FC SHEETING 3 mm MINIMUM THICKNESS AND SKIRTING TILE IN WC

Scale: 1:500


02 CHANGE ROOM PLAN  
SCALE 1/50



SCALE 1:50

10/0196

Accreditation No BPB0067

	A	ISSUE FOR CONSTRUCTION	13/07/10
	P1	ISSUE FOR INFORMATION	25/05/10
	ISSUE AMENDMENT		
CUSTOMER			DATE
 Paynter Dixon Constructions Pty Limited 120 Liverpool Road Ashfield NSW 2131 Tel (02) 9707 5555 Fax (02) 9790 5149 A/NM 84 037 720 315			
PRODUCT	PROPOSED FUTSAL OFFICE AND CHANGE ROOMS AT PITTPWATER RSL CLUB		
TITLE	82 MONA VALE ROAD MONA VALE NSW 2103		
PROJECT	LOCATION PLAN AND CHANGE ROOM DETAILS		
DRAWN	DESIGNED	CHECKED	
JCG		APPROVED	
PLANTING	16 JUL 110	DRAWING NO.	ISSUE
PRL 0124	A 001	A	

E:\proj\csm11\mona\proj\dwg\p0124.dwg: plot date 13/07/10



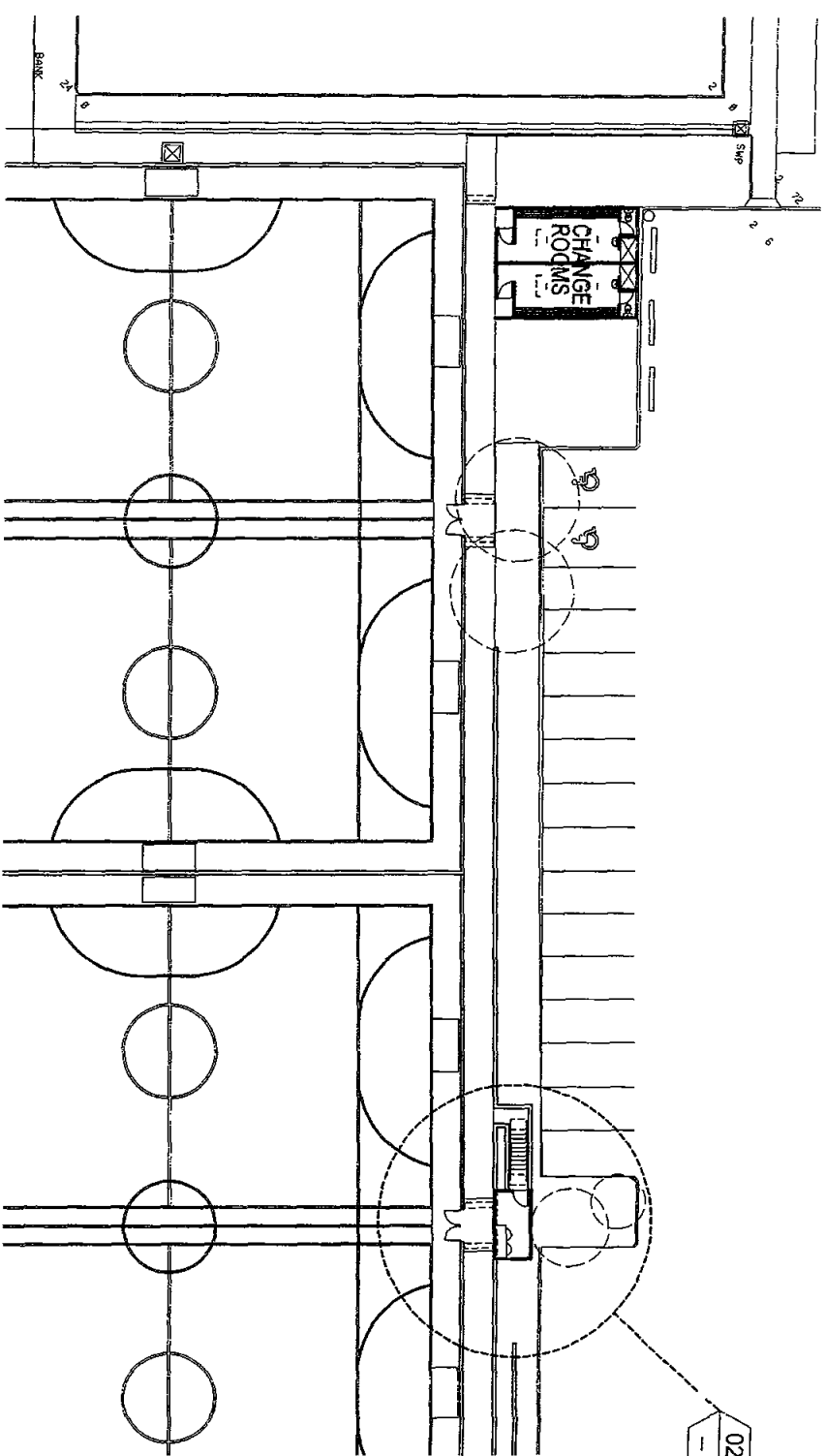
NOTES

1. DRAWINGS ARE THE PROPERTY OF THE CONSULTANT AND ARE NOT TO BE REPRODUCED OR USED IN ANY MANNER WITHOUT THE WRITTEN CONSENT OF THE CONSULTANT.

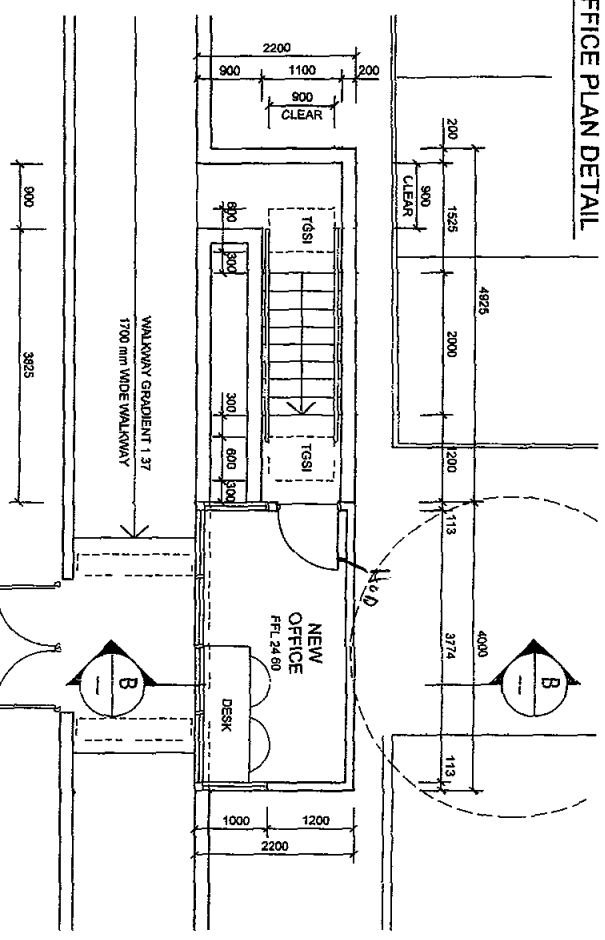
2. CONSULTANT'S LIABILITY IS LIMITED TO THE SERVICES PROVIDED AND DOES NOT EXTEND TO ANY OTHER SERVICES OR TO ANY OTHER PERSONS OR ENTITIES.

3. CONSULTANT'S LIABILITY IS LIMITED TO THE SERVICES PROVIDED AND DOES NOT EXTEND TO ANY OTHER SERVICES OR TO ANY OTHER PERSONS OR ENTITIES.

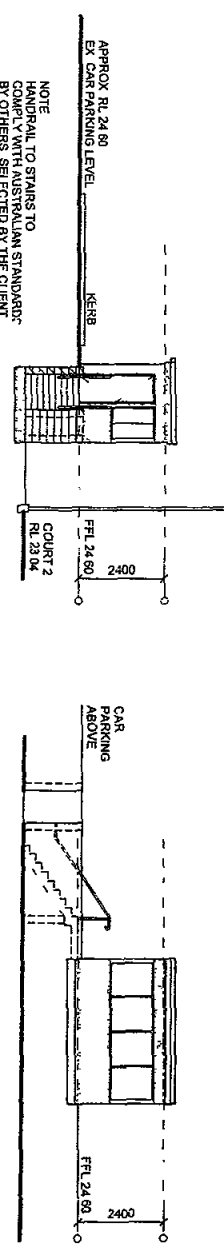
4. CONSULTANT'S LIABILITY IS LIMITED TO THE SERVICES PROVIDED AND DOES NOT EXTEND TO ANY OTHER SERVICES OR TO ANY OTHER PERSONS OR ENTITIES.



01 LOCATION PLAN  
SCALE 1:200

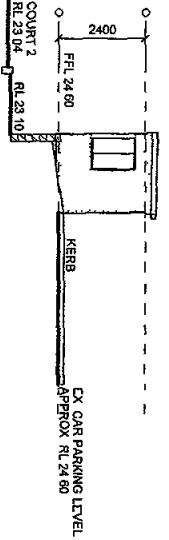


02 OFFICE PLAN  
SCALE 1:100  
PITTWATER COUNCIL  
APPROVED DEVELOPMENT CONSENT PLANS



08 NORTH ELEVATION  
SCALE 1:100

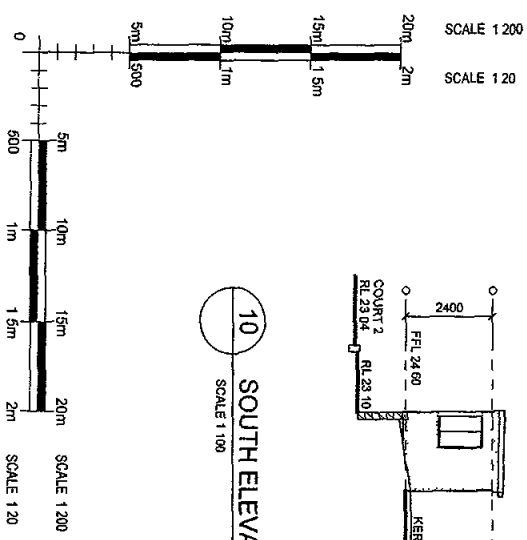
09 WEST ELEVATION  
SCALE 1:100



07 SECTION B-B  
SCALE 1:50

10 SOUTH ELEVATION  
SCALE 1:100


11 EAST ELEVATION  
SCALE 1:100



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

10/01196.1

Officer B Cohen  
Accreditation No BPB0067

PROJECT				
	<b>PAYNTER DIXON</b>			
	Paynter Dixon Constructors Pty Limited 300 Liverpool Road Ashfield NSW 2181 Tel: (02) 9797 6555 Fax: (02) 9799 8149 ABN: 84 097 120 315			
	PROPOSED FUTSAL OFFICE AND CHANGE ROOMS AT PITTMATER RSL CLUB 82 MONA VALE ROAD MONA VALE NSW 2103			
	TITLE			
SCALE	1:200/1:100/1:50 @ A1			DATE
	DRAWN JCO			
	APPROVED			
PROJECT NO		20 JUL 10		ISSUE
PRL 0124		A 002		
ISSUE NO		C		
CADD REFERENCE: E:\P\0124\0124.dwg (mod:002) 2010				



VISIBLE SERVICES ONLY ARE SHOWN  
BUILDER MUST RING DIAL BEFORE YOU DIG  
PRIOR TO CONSTRUCTION

PLANS TO BE READ IN CONJUNCTION WITH THE FOLLOWING REPORTS AND PLANS  
Hydraulic & Civils Plans and details prepared by NORTHROP ENG'S  
Lighting Design & details prepared by HARRON ROSSON Lighting Consultants  
Acoustic Report & details prepared by ACOUSTIC LOGIC CONSULTANCY  
Geotechnical Report & Risk Assessment prepared by JACK HODGSON CONSULTANTS  
Construction programme by PAVENTER DIXON CONSTRUCTIONS Pty Ltd  
DA Conditions and requirements by Pitwater Council

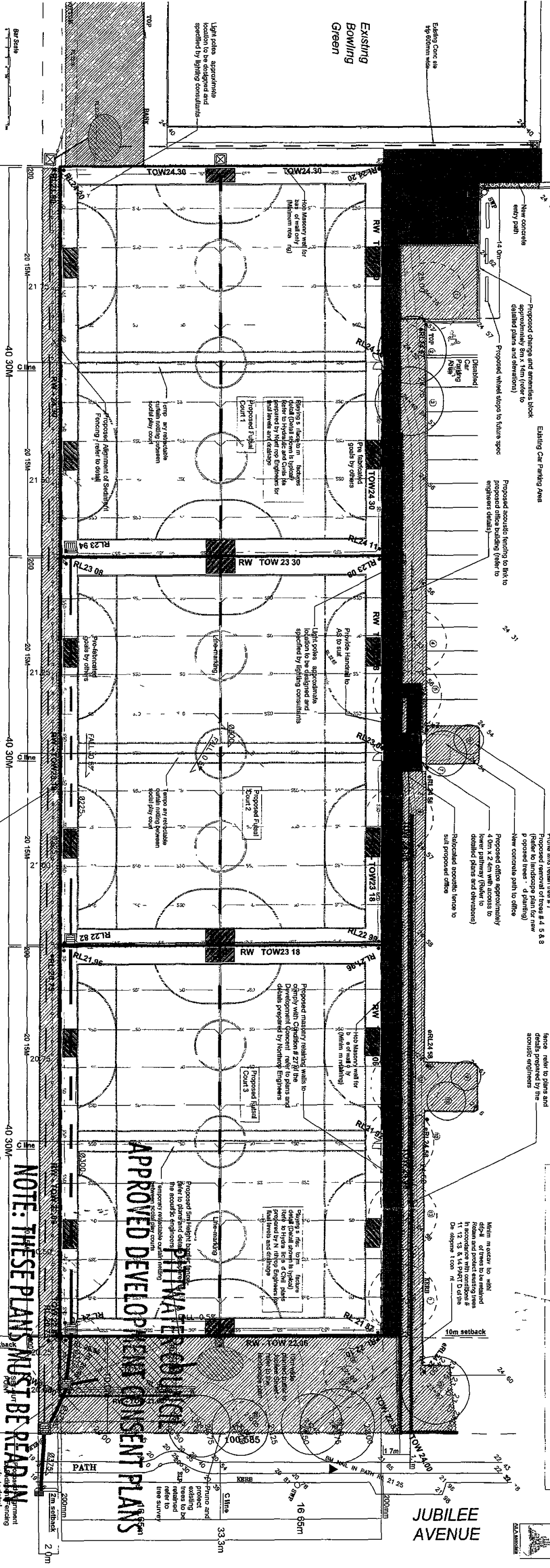
LEVELS REFLECTED FROM HYDRAULIC /  
CIVIL ENGINEERS PLANS  
REFER TO ACOUSTIC ENGINEERS PLANS  
FOR PROPOSED ACOUSTIC FENCING  
DETAILS AND ALIGNMENTS

COUNCIL COPY

LEVELS TO BE CONFIRMED ON-SITE ALL BUILD FATHWORKS STRUCTURAL  
DRAINAGE AND EXCAVATION WORKS SHALL BE DONE IN ACCORDANCE WITH  
PLANS PREPARED BY NORTHROP ENGINEERS NORTHROP TO SET LEVELS FOR  
ALL CIVIL AND HYDRAULIC WORKS REFER TO ENGINEERS DETAILS FOR  
DRAINAGE AND HYDRAULIC DESIGN RETAINING WALL DETAILS FOOTING  
DETAILS ON SITE DETENTION AND ALL CIVILS AND HYDRAULIC DETAILS

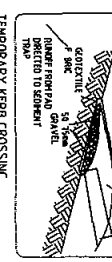
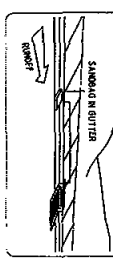


JUBILEE AVENUE



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

Erosion Control Measures



FUTSAL COURT LAYOUT

**Social Play**  
Length Minimum 25m Maximum 42m  
Width Minimum 15m Maximum 25m

**International Games**  
Length Minimum 38m Maximum 42m  
Width Minimum 18m Maximum 25m

**Proposed Courts, Line Marking**

**Social Play / Training**  
W 17.5m x L 30m (plus goals)  
**International / Professional**  
W 22.0m x L 37.0m (plus goals)

KEY

- SET OUT POINT**  
Light poles, approximately location to be determined by lighting consultants. Refer to lighting plans and details prepared by Northrop Engineers.
- Proposed Setback Lines**  
Refer to detail.
- Proposed Alignment of Sediment Fencing**  
Refer to detail.
- New Garden Areas**  
Refer to landscape plan.
- Goals**  
1.5m
- Goals**  
3.0m

**CONCEPT**  
Landscaping Architects

**Set-out & Erosion Control Plan**  
Pitwater RSL Club  
MONA VALE

PO Box 416  
CREMONA 2800  
Phone 3435 1744  
Fax 3435 1758  
enquiries@concept.net.au



VISIBLE SERVICES ONLY ARE SHOWN  
BUILDER MUST RING DIAL BEFORE YOU DIG  
PRIOR TO CONSTRUCTION

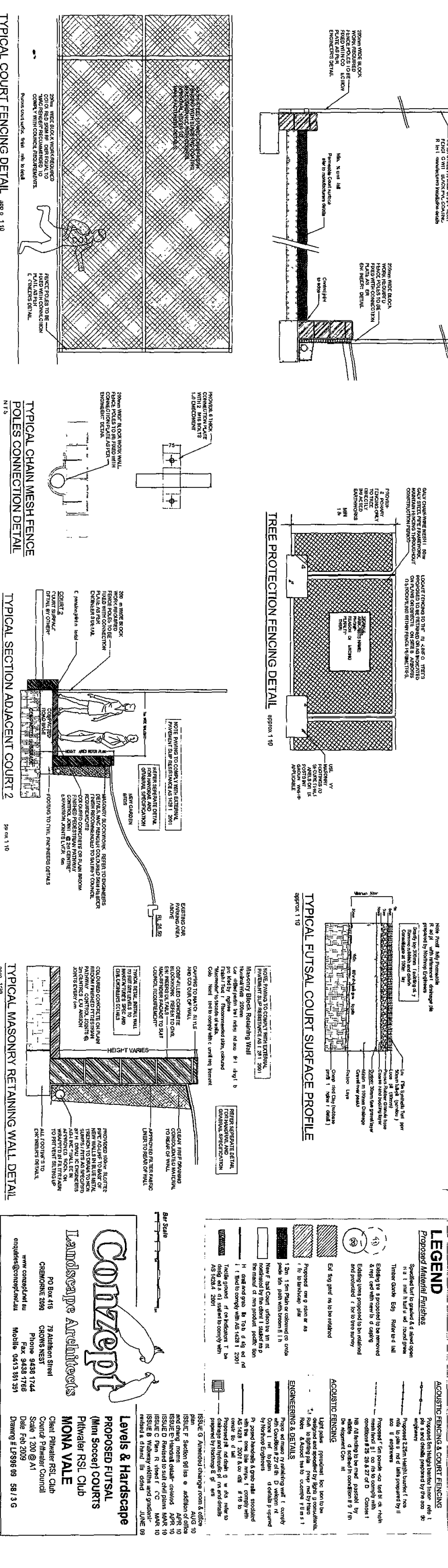
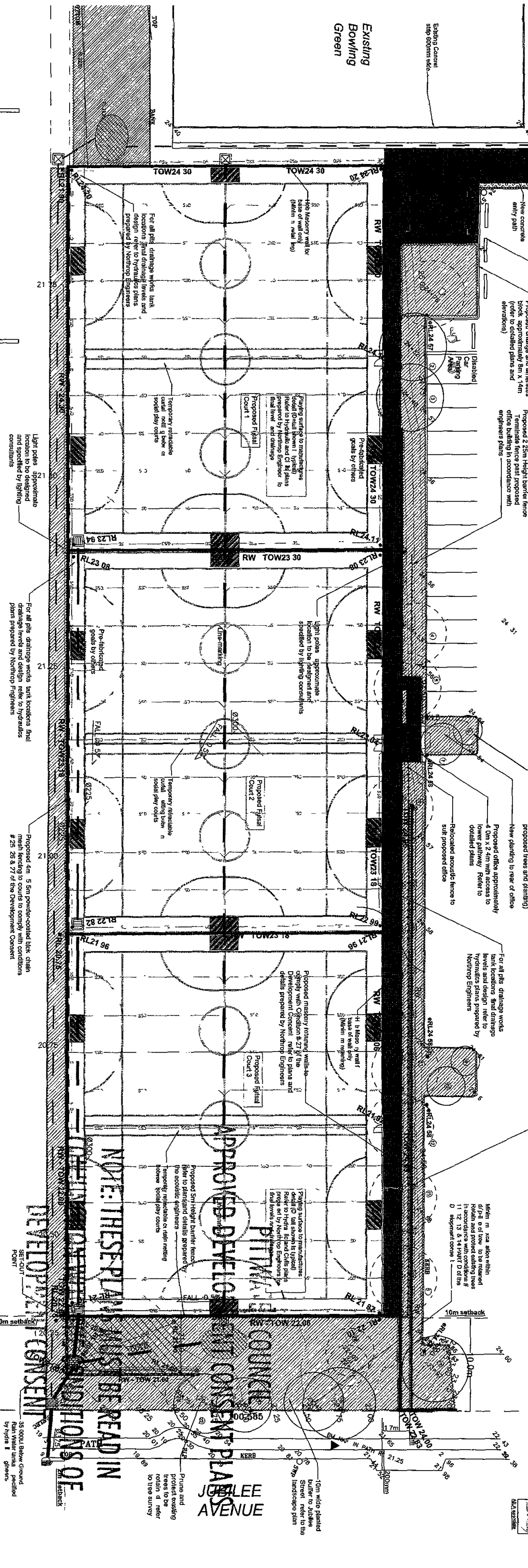
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Geotechnical Report & Risk Assessment prepared by JACK HODGSON CONSULTANTS  
Construction Programme by PANTHER DIXON CONSTRUCTIONS Pty Ltd  
DA Conditions and requirements by Pitwater Council

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

Existing Car Parking Area

Existing Car Parking Area

LEVELS TO BE CONFIRMED ON-SITE ALL BULK EARTHWORKS  
STRUCTURAL DRAINAGE AND EXCAVATION WORKS SHALL BE  
DONE IN ACCORDANCE WITH PLANS PREPARED BY  
NORTHROP ENGINEERS NORTHROP TO SET LEVELS FOR ALL  
CIVIL AND HYDRAULIC WORKS REFER TO ENGINEERS  
DETAILS FOR DRAINAGE AND HYDRAULIC DESIGN RETAINING  
WALL DETAILS FOOTING DETAILS ON SITE DETENTION AND  
ALL CIVILS AND HYDRAULIC DETAILS



**Concept**  
Landscape Architects

PO Box 419  
CRENSHAW 2080  
www.conceptlandscapes.com.au  
enquiries@conceptlandscapes.com.au

79 Albion Street  
CRENSHAW 2080  
Phone 9438 1744  
Fax 9438 1766  
Mobile 0413 881 351

**Levels & Hardscape**  
PROPOSED FUTSAL  
(Mini Soccer) COURTS  
MONA VALE  
Client: Pitwater RSL Club  
Scale: 1:200 @ A1  
Date: Feb 2009  
Drawing # LPS99 68 1/3 G







# PROPOSED FUTSAL COURTS PITTWATER RSL CLUB MONA VALE

## DRAWING INDEX

- 800 — DRAWING INDEX AND DRAWING SPECIFICATIONS
- 801 — RETAINING WALL KEY PLAN AND DETAILS SHEET 1
- 802 — RETAINING WALL DETAILS SHEET 2
- 803 — AMENITIES & OFFICE SLAB & FOUNDATIONS PLANS & DETAILS
- 804 — 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.
  - 120 8.8 S BOLTS.
  - 6mm CONTINUOUS FILLET WELDS MADE WITH E48XX MILD STEEL ELECTRODES.
  - ALL WELDS SP CATEGORY.
- S5. NO PAINT ON WATING 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 A51214.
- S9. MINIMUM YIELD STRESS:
- HOT ROLLED SECTIONS = 300MPa.
  - SQUARE HOLLOW SECTIONS = 350MPa.
  - RECTANGULAR HOLLOW SECTIONS = 350MPa.
  - CIRCULAR HOLLOW SECTIONS = 250MPa.
  - PLATE = 250MPa.
- S10. COLD FORMED SECTIONS TO CONFORM WITH:
- AS/NZS4600, AS1397, AS1594 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.
  - LIPS, BRIDGING, BRACKETS AND PURLIN BOLTS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- S11. SURFACE TREATMENT UNLESS NOTED OTHERWISE:
- PROTECTED FROM WEATHER - AS/NZS2312-1252.
  - EXPOSED TO WEATHER - AS/NZS2312-HD6000 OR PURS OR ACC6.
  - BUILT INTO AN EXTERNAL MASONRY WALL - AS/NZS2312-HD6000 OR CHS 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 HIP, VALLEYS AND PENETRATIONS.
- S13. FIX CROSS BRACING TO PURLINS AT 3000 MAXIMUM CTS WITH M12 BOLTS OR M6 HOOKS.
- S14. ALL BURIED STEELWORK TO BE ENCASED IN CONCRETE WITH A MINIMUM COVER OF 50mm TO STEELWORK.
- S15. BOLT SYMBOLS:
- 8.8/S - SHUB 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

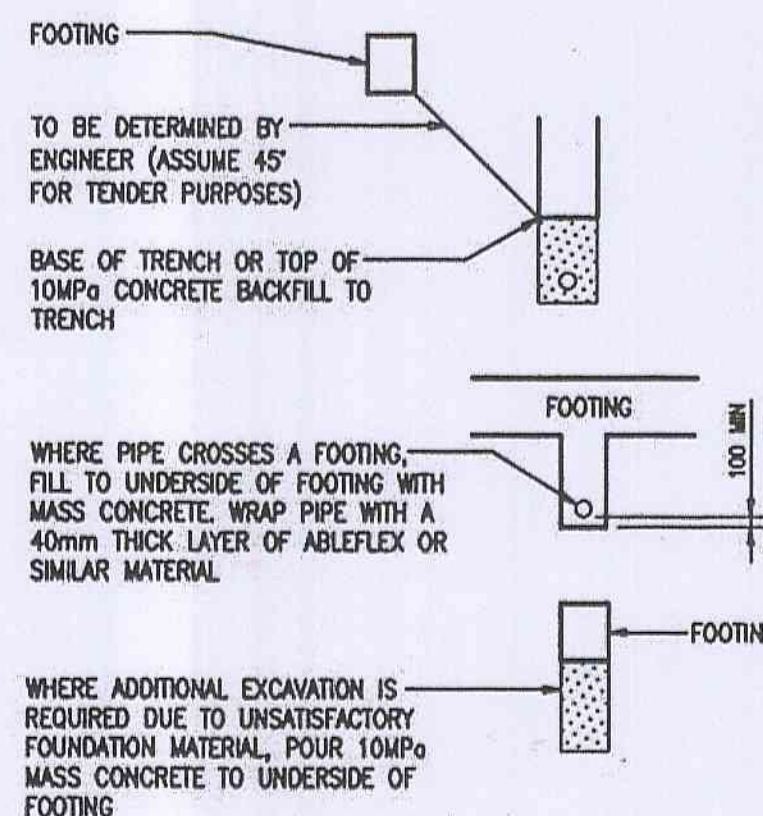
- C1. CARRY OUT ALL CONCRETE WORK IN ACCORDANCE WITH AS3600 AND NATSPEC CONCRETE STANDARDS.
- C2. CONCRETE PROPERTIES:
- | ELEMENT  | STRENGTH GRADE | MAX 56 DAY DRYING SHRINKAGE |
|--|----------------|-----------------------------|
| - STRIP FOOTINGS   | N25MPa         |                             |
| - 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 UNITS 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   | 7mm            |                             |
- 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                       |
| - GRAB 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:
- | ELEMENT               | OFF FORM. | MACHINE FLOAT. | WOOD FLOAT. | STEEL TROWEL. |
|-----------------------|-----------|----------------|-------------|---------------|
| - FLOOR SLABS (U.N.O) |           |                |             |               |
| - SLABS TO BE TILED   |           |                |             |               |
| - STAIRS              |           |                |             |               |
- 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

- CB1. 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.
- CB2. THE CHARACTERISTIC UNCONFINED COMPRESSIVE STRENGTH OF THE MASONRY UNITS SHALL BE A MINIMUM OF 20 MPa.
- CB3. BED UNITS IN FRESHLY PREPARED MORTAR, UNIFORMLY MIXED CEMENT, LIME AND SAND IN THE RATIO OF 1:1:6, CONFORMING TO AS 3700.
- CB4. NO CUTTING, CHASING OR RAKING OF JOINTS IN EXCESS OF 5mm UNLESS AUTHORISED BY THE ENGINEER FOR EVERY LOCATION.
- CB5. 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.
- CB6. 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 TIES SHALL BE FIXED USING A SCREW TYPE FIXING AND SHALL NOT BE WELDED. TIES TO STEEL SHALL BE ABBEY TREMOR TIES OR APPROVED EQUIVALENT.
- CB7. 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.
- CB8. WHERE MASONRY ADJOINS STRUCTURAL STEEL, OR PASSES A RETURN WALL ON THE INNER SKIN PROVIDE MEDIUM DUTY TIES AT 300 MAX. CENTRES. SHOT FIX TIES TO STEELWORK, ENSURE WALLS WILL BE CONCEALED.
- CB9. LOADBEARING WALLS SHALL BE TOPPED WITH M.E.T. GRAPHITE GREASED SUP JOINT OVER TOP COURSE OF BRICKWORK.
- CB10. 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 400mm CENTRES.
- CB11. 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.
- CB12. ALL UNITS SUPPORTING BRICKWORK ARE TO BE HOT DIP GALVANISED WITH MINIMUM COATING MASS OF 600g/m<sup>2</sup>.
- CB13. NO AIR ENTRAINING AGENTS (BYCOL, ETC) ARE TO BE USED WITHOUT PRIOR WRITTEN PERMISSION FROM NORTHROP ENGINEERS.

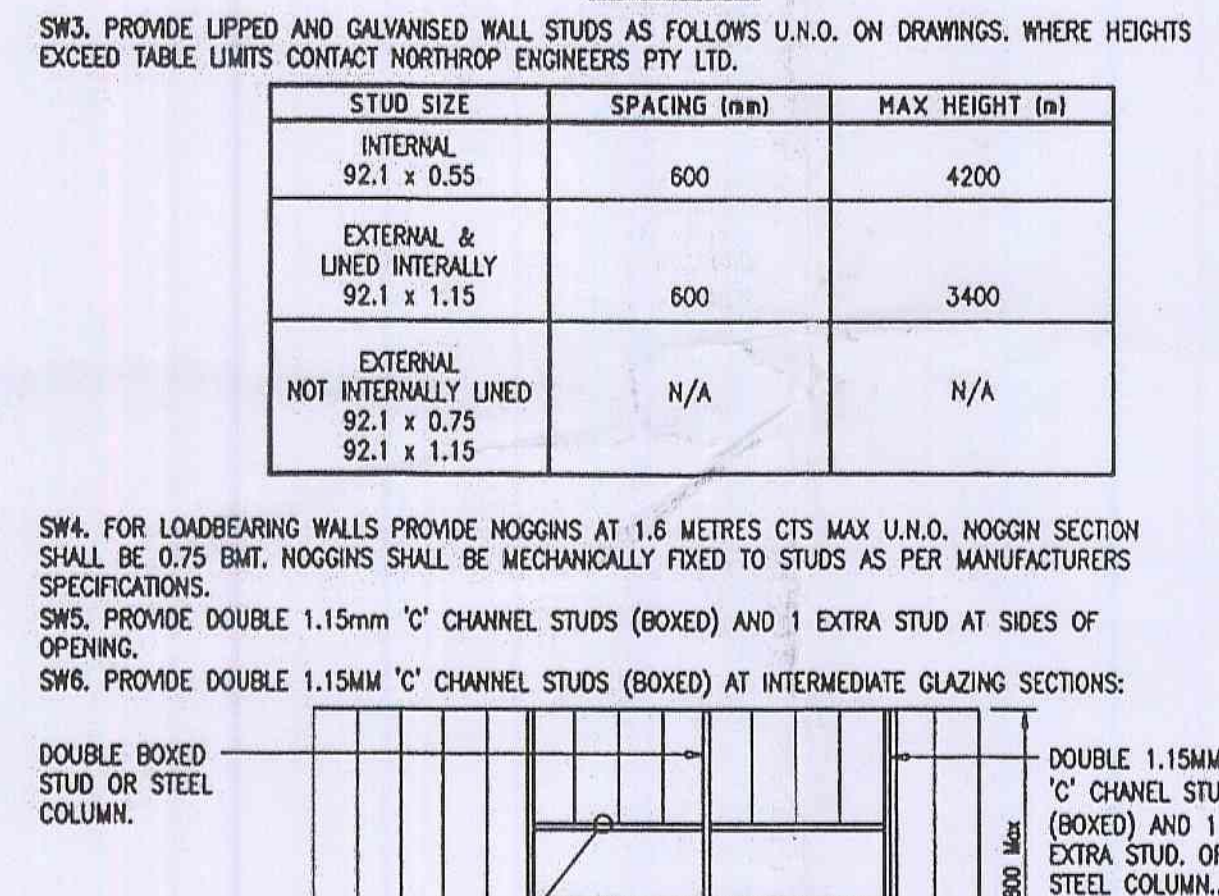
## FOUNDATIONS

- 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 FOUNDATION 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 DETRITUS 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:



## METAL STUD WALLS

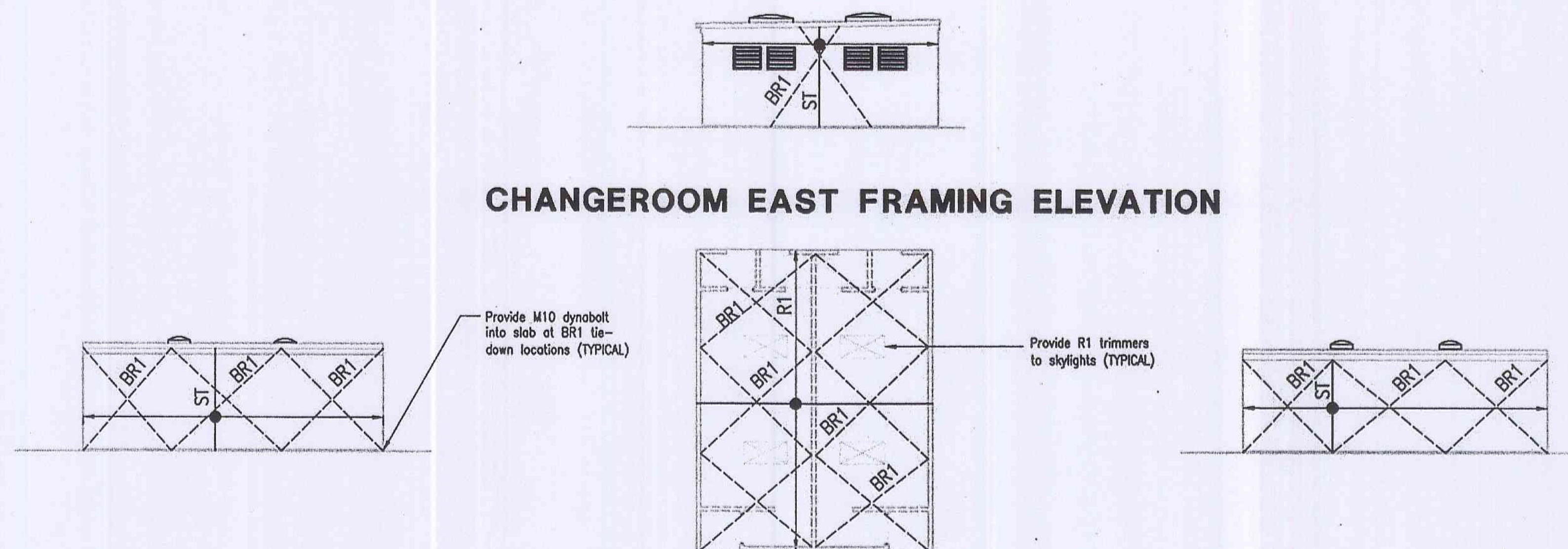
- SW1. ALL DESIGN, WORKMANSHIP AND MATERIALS TO AS/NZS4600.
- SW2. PROVIDE BRACING IN WALLS AS PER THE PLANS, USING 40 x 1.0 GALVANISED STRAP BRACING FIXED TO THE STUD WALLS, OR NOGGING SECTIONS. FIX STRAP TO EACH STUD BY 1 TEK SCREW (4.8mm DIAMETER). USE TECO TENSIONERS TO TIGHTEN STRAPS.
- SW3. PROVIDE 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 92.1 x 0.55                                 | 600          | 4200           |
| EXTERNAL & UNID INTERNALLY 92.1 x 1.15               | 600          | 3400           |
| EXTERNAL NOT INTERNALLY UNID 92.1 x 0.75 92.1 x 1.15 | N/A          | N/A            |
- SW4. FOR LOADBEARING WALLS PROVIDE NOGGINS AT 1.6 METRES CTS MAX U.N.O. NOGGIN SECTION SHALL BE 0.75 BMT. NOGGINS SHALL BE MECHANICALLY FIXED TO STUDS AS PER MANUFACTURERS SPECIFICATIONS.
- SW5. PROVIDE DOUBLE 1.15mm 'C' CHANNEL STUDS (BOXED) AND 1 EXTRA STUD AT SIDES OF OPENING.
- SW6. PROVIDE DOUBLE 1.15mm 'C' CHANNEL STUDS (BOXED) AT INTERMEDIATE GLAZING SECTIONS:





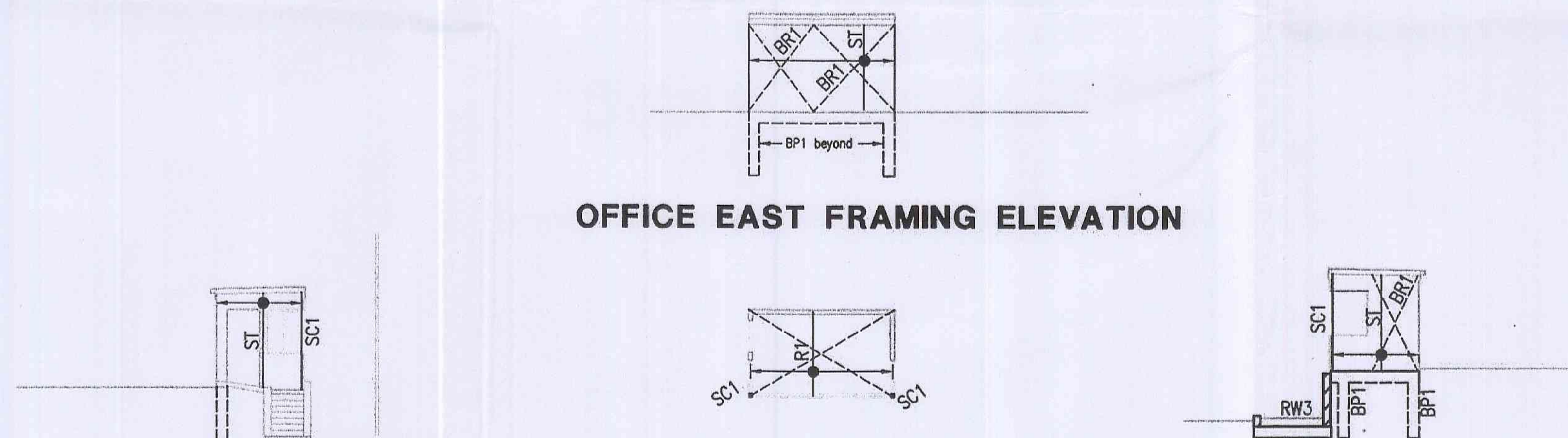
JOB NUMBER	
08622	
DRAWING NUMBER	REVISION
S03	A





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

CHANGEROOM WEST 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 HYSpan 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. 10/11/11  
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.

ESSENTIAL CERTIFIERS LIVERPOOL  
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  
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  <b>PITTWATER RSL</b>	BUILDER   <b>PAYNTER DIXON</b>	 REFER SHEET FOR SCALE NOTATION  *Drawing not to be used for construction unless specification signature has been added	 <b>NORTHROP</b> Bringing people, ideas & engineering together Sydney The Grafton Bond Store 60 Hickson Road, Sydney, N.S.W. 2000 Ph (02) 9241 4188 P.O. Box H171 Fax (02) 9241 4524 Australia Square, N.S.W. 1215 Email <a href="mailto:info@northrop.com.au">info@northrop.com.au</a> AS/NZS 9194 433 100	PROJECT  <b>PITTWATER RSL FUTSAL COURTS</b>	DRAWING TITLE  <b>AMENITIES &amp; OFFICE ROOF &amp; WALL PLANS &amp; ELEVATIONS</b>	JOB NUMBER  <b>08622</b>
1	FOR TENDER	SM	JL	1/7/10	DRAWING NUMBER							REVISION
A	FOR CONSTRUCTION	POH	JL	22/7/10	<b>S04</b>							<b>A</b>