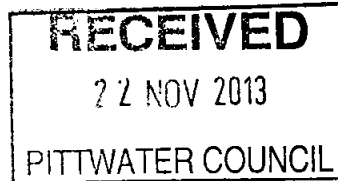


Metro Building Consultancy

Studio 1.05/56 Bowman St
Pyrmont NSW 2009
P: 02 9692 8477
F: 02 8209 4955
admin@metrobc.com.au
www.metrobc.com.au

Ref: 13207 Council CC Letter



18 November 2013

Pittwater Council,
PO Box 882
Mona Vale NSW 1660

Attention: General Manager

Loquat Valley School, 1973 Pittwater Road, Bayview NSW 2104
Registration of a Construction Certificate for alterations to staff room

With regard to the above project please find below details in relation Clause 81A (2) (b1) (i) of the Environmental Planning and Assessment Act 1979 No 203 and please see attached a copy of the Construction Certificate as per Clause 142 (2) of the Environmental Planning and Assessment Regulation 2000.

Name of the principal certifying authority	Sean Moore
Building Professionals Board accreditation number	0764
Principal certifying authority telephone number	02 9692 8477

Please also see attached a cheque for \$36 which I believe to be the registration fee. Please send a receipt to the above address quoting this job number 13207.

If you have any question please do not hesitate to contact this office.

Regards

A handwritten signature in black ink, appearing to read "SMOORE".

Sean Moore
Metro Building Consultancy

\$36 REC: 3521.46 22/11/13

Commercial
Construction Certificate

Under Section 109C(1)(b), 81A(2) & 81A(4) of the Environmental Planning and Assessment Act 1979

Applicant's details

Title	Mr ☒ Ms ☐ Mrs ☐ Other ☐				
First Name	Bruce	Surname	Litchfield	Position	Capital Works Manager
Company / Organisation Name	Sydney Anglican Schools Corporation				
Address	PO Box 465, Hurstville BC NSW 1481				
Phone No	02 8567 4045	Fax No	02 9570 2220	Mobile No	0448820587
Email	blitchfield@sasc.nsw.edu.au				

Owner's details

Title	Mr ☒ Ms ☐ Mrs ☐ Other ☐				
First Name	Bruce	Surname	Litchfield	Position	Capital Works Manager
Company / Organisation Name	Sydney Anglican Schools Corporation				
Address	PO Box 465, Hurstville BC NSW 1481				
Phone No	02 8567 4045	Fax No	02 9570 2220	Mobile No	0448820587
Email	blitchfield@sasc.nsw.edu.au				

Property details

Property address	Detailed description of the development - Building Work
Loquat Valley School	Alterations and additions to existing staff
1977 Pittwater Rd,	room at Loquat Valley School
Bayview NSW 2104	
Existing BCA Classification	Proposed BCA Classification
Class 9b	Class 9b

Development approval (DA) details

Development Consent Number	H0080/13	Date of Consent	27/05/13
Name of the Consent Authority	Pittwater Council		



PITTWATER COUNCIL

ABN61340837871

Telephone 02 9970 1111

Facsimile 02 9970 1200

Postal Address

PO Box 882

Mona Vale NSW 1660

DX 9018, Mona Vale

Business Hours:

8.00am to 5.30pm, Monday to Thursday

8.00am to 5.00pm, Friday

DA No: N0080/13

27 May 2013

SYDNEY ANGLICAN SCHOOL CORPORATION
PO BOX 465
HURSTVILLE BC NSW 1481

Dear Sir/Madam

Development Application for Alterations and additions to existing staff room at LOQUAT VALLEY SCHOOL 1973 PITTWATER ROAD BAYVIEW NSW 2104.

I am pleased to advise that this application has been approved and I attach for your assistance a copy of the Development Consent, the conditions of approval and a copy of the approved plans.

If building works are involved, prior to proceeding with the proposal, it will be necessary for you to lodge a Construction Certificate Application with either Council or an accredited Certifier.

I take this opportunity to direct your attention to Section C of the Consent which details the matters to be satisfied prior to issue of the Construction Certificate.

Additionally, for your reference, please find enclosed Information Sheets that will assist in providing information you will need to consider for the processes following on from receiving this consent.

If there are any matters relating to this approval which require further explanation, please contact me prior to commencing work on the site.

Enquiries relating to the Construction Certificate application should be directed to Council's Customer Service or your private certifier.

Yours faithfully

Nicholas Lawler
PLANNER

Email pittwater_council@pittwater.nsw.gov.au Web pittwater.nsw.gov.au

Mona Vale Customer Service Centre
Village Park 1 Park Street, Mona Vale

Avalon Customer Service Centre
59A Old Barrenjoey Road, Avalon

Support Services
Units 11, 12, 13 + 16/5 Vuko Place, Warriewood

Boondah Depot
1 Boondah Road, Warriewood

Conditions of Approval

This consent is not an approval to commence building work. The works associated with this consent can only commence following the issue of the Construction Certificate.

Note: Persons having the benefit of development consent may appoint either a council or an accredited certifier as the principal certifying authority for the development or for the purpose of issuing certificates under Part 4A of the Environmental Planning and Assessment Act. When considering engaging an accredited certifier a person should contact the relevant accreditation body to ensure that the person is appropriately certified and authorised to act in respect of the development.

A. Prescribed Conditions:

1. All works are to be carried out in accordance with the requirements of the Building Code of Australia.
2. In the case of residential building work for which the *Home Building Act 1989* requires there to be a contract of insurance in force in accordance with Part 6 of that Act, there is to be such a contract in force.
3. Critical stage inspections are to be carried out in accordance with clause 162A of the *Environmental Planning & Assessment Regulation 2000*. To allow a Principal Certifying Authority or another certifying authority time to carry out critical stage inspections required by the Principal Certifying Authority, the principal contractor for the building site or the owner-builder must notify the Principal Certifying Authority at least 48 hours before building work is commenced and prior to further work being undertaken.
4. A sign must be erected in a prominent position on any site on which building work, subdivision work or demolition work is being carried out:
 - a. showing the name, address and telephone number of the Principal Certifying Authority for the work, and
 - b. showing the name of the principal contractor (if any) for any building work and a telephone number on which that person may be contacted outside working hours, and
 - c. stating that unauthorised entry to the work site is prohibited.

2. This approval/consent relates only to the new work nominated on the approved consent plans and does not approve or regularise any existing buildings or structures within the property boundaries or within Council's road reserve.
3. All external glazing is to have a maximum reflectivity index of 25%.
4. Materials and colour schemes are to be in accordance with the sample scheme approved by Council.

C. Matters to be satisfied prior to the issue of the Construction Certificate:

Note: All outstanding matters referred to in this section are to be submitted to the accredited certifier together. Incomplete Construction Certificate applications / details cannot be accepted.

1. Submission of construction plans and specifications and documentation which are consistent with the approved Development Consent plans, the requirements of Building Code of Australia and satisfy all conditions shown in Part B above are to be submitted to the Principal Certifying Authority.

D. Matters to be satisfied prior to the commencement of works and maintained during the works:

Note: It is an offence to commence works prior to issue of a Construction Certificate.

1. Temporary sedimentation and erosion controls are to be constructed prior to commencement of any work to eliminate the discharge of sediment from the site.
2. Adequate measures shall be undertaken to remove clay from vehicles leaving the site so as to maintain public roads in a clean condition.
3. No works are to be carried out in Council's Road Reserve without the written approval of the Council.

1. An Occupation Certificate application stating that the development complies with the Development Consent, the requirements of the Building Code of Australia and that a Construction Certificate has been issued must be obtained before the building is occupied or on completion of the construction work approved by this Development Consent.

F. Matters to be satisfied prior to the issue of Subdivision Certificate:

Nil.

G. Advice:

1. Failure to comply with the relevant provisions of the *Environmental Planning and Assessment Act, 1979* (as amended) and/or the conditions of this Development Consent may result in the serving of penalty notices (on-the-spot fines) under the summary offences provisions of the above legislation or legal action through the Land and Environment Court, again pursuant to the above legislation.
2. The applicant is also advised to contact the various supply and utility authorities, i.e. Sydney Water, Sydney Electricity, Telstra etc. to enquire whether there are any underground utility services within the proposed excavation area.
3. It is the Project Managers responsibility to ensure that all of the Component Certificates/certification issued during the course of the project are lodged with the Principal Certifying Authority. Failure to comply with the conditions of approval or lodge the Component Certificates/certification will prevent the Principal Certifying Authority issuing an Occupation Certificate.
4. In accordance with Section 95(1) of the Act, this consent will lapse if the development, the subject of this consent, is not physically commenced within 5 years after the date from which this consent operates.

Useful information

Owner Builder Permits & Courses

If you would like to be the Owner Builder (Project Manager) for residential work on your property valued above \$5000 you will need to contact the Department of Fair Trading for information and advice to getting an Owner Builder Permit.

TAFE colleges run regular Owner Builder courses.
www.fairtrading.nsw.gov.au or call 13 32 20
www.tafensw.edu.au or call 131 601

Home Warranty Insurance

From 1 February 2012, home warranty insurance is required to be obtained where the contract price is over \$20,000 or, if the contract price is not known, the reasonable market cost of the labour and materials involved is over \$20,000. A Certificate of Insurance must be provided with your Notification of Commencement form.

www.fairtrading.nsw.gov.au

Long Service Levy

For building works valued at \$25,000 and over, a Long Service Levy of 0.35% of building is payable under the Building & Construction Industry Long Service Payments Act 1996. This Levy must be paid prior to the issue of the Construction Certificate.

www.longservice.nsw.gov.au or call 13 14 41

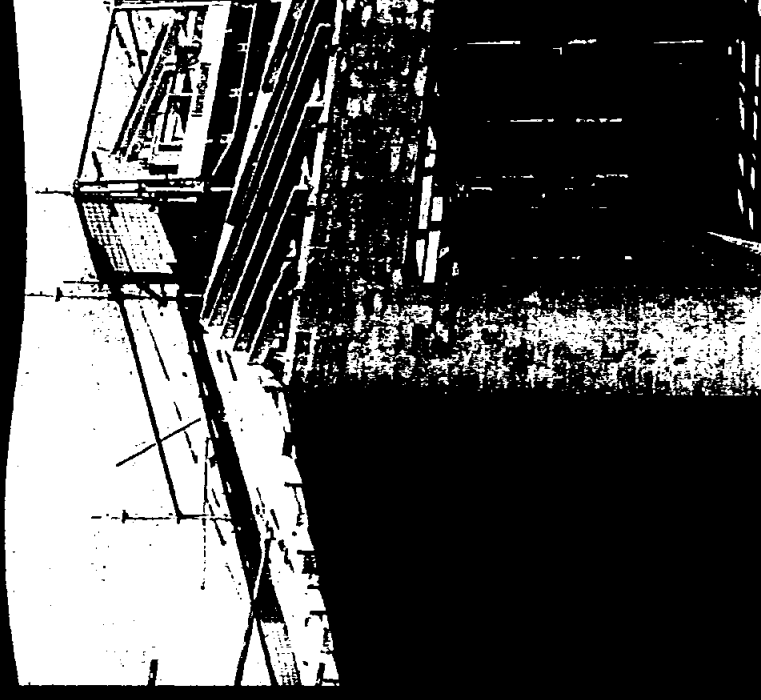
Modifying your Consent

If you need to make a change to the approved plans or conditions of consent, you will need to lodge a Section 96 Modification Application with Council before carrying out any changes to the approved plans.

For information about fees and what to lodge with a Section 96 Modification Application please call Council's Assistant Planner Team on 9970 1674 or visit www.pittwater.nsw.gov.au

After Approval

Information & important steps after receiving Development Consent from Council



For more information contact:

 PITTWATER COUNCIL

PO Box 882 Mona Vale 1660
Phone: 02 9970 1111
Email: pittwater_council@pittwater.nsw.gov.au

www.pittwater.nsw.gov.au

Planning & Assessment
Printed on 100% recycled paper

May 2012
EPC 121

SYDNEY WATER
APPROVED

1. Position of structure in relation to Sydney Water's sewer.

2. Connections to Sydney Water sewer/water services may only be made following the issue of a permit to a licensed plumber/drainier.

3. It is the owner's responsibility to ensure that all proposed fittings will drain to Sydney Water's sewer.

4. Any Plumbing and/or Drainage Work to be carried out in accordance with the Sydney Water Act 1994, AS 3500 and the NSW Code of Practice.

5. Gullies, Inspection Shafts and Boundary Traps shall not be placed under any Roof, Balcony, Verandah, Floor or other cover, unless otherwise approved by Sydney Water.

6. Property No. ~~5164073~~ 5164073

Reece, Kirtzwaase
Quick Check Agent on behalf of
SYDNEY WATER

24.9.13

1. Position of structure in relation to Sydney Water sewer/water services may only be made following the issue of a permit to a licensed plumber/drainlayer.
2. Connections to Sydney Water sewer/water services are satisfactory.
3. It is the owner's responsibility to ensure that all proposed fittings will drain to Sydney Water's sewer.
4. Any Plumbing and/or Drainage Work to be carried out in accordance with the Sydney Water Act 1994, AS 3500 and the NSW Code of Practice.
5. Gullies, Inspection Shafts and Boundary Traps shall not be placed under any Roof, Balcony, Verandah, Floor or other cover, unless otherwise approved by Sydney Water.
6. Property No. ~~5164073~~

Reece, Kirrawee
Quick Check Agent on behalf of
SYDNEY WATER

249, 13

[illegible]

Issue	Architectural
PATTON ARCHITECT 489 S. 97th St. Minneapolis, Minnesota 55425 Tel. 612/333-1111 Fax 612/333-1112 1747 Parkview Blvd., Suite 217 Oakdale, Minnesota 55128 E-mail: patrick@pattonarchitect.com	
Project	EXISTING STAFF ROOM 1ST FLOOR 1000 VALLEY AVENUE, SPOKANE FOR SASC
Drawing	SITE PLAN
Code	Scale
100-0.13	1"=20'00"
100-100	1"=8'
121.33	CC05

3

Metro Building Consultancy

Studio 1.05/56 Bowman St, Pyrmont NSW 2009
P: 02 9692 8477 F: 02 8209 4955 E: admin@metrobc.com.au
www.metrobc.com.au



Commercial

Construction Certificate Application Form

Under Section 109C(1)(b), 81A(2) & 81A(4) of the Environmental Planning and Assessment Act 1979

Applicant's details (The applicant must be the benefactor of the DA. The builder cannot be the applicant unless they also own the property.)

Title	Mr ☒ Ms ☐ Mrs ☐ Other ☐				
First Name	Bruce	Surname	Litchfield	Position	Capital Works Manager
Company / Organisation Name	Sydney Anglican Schools Corporation				
Address	PO Box 465, Hurstville BC NSW 1481				
Phone No	02 8567 4045	Fax No	02 9570 2220	Mobile No	0448820587
Email	blitchfield@sasc.nsw.edu.au				
Signature			Date	27.9.2013	

Owner's details & consent (To be completed by each owner)

Title	Mr ☒ Ms ☐ Mrs ☐ Other ☐				
First Name	Bruce	Surname	Litchfield	Position	Capital Works Manager
Company / Organisation Name	Sydney Anglican Schools Corporation				
Address	PO Box 465, Hurstville BC NSW 1481				
Phone No	02 8567 4045	Fax No	02 9570 2220	Mobile No	0448820587
Email	blitchfield@sasc.nsw.edu.au				

Owner's statement – I / we confirm that I am / we are the owner(s) of the land and that I / we consent to the making of the application for a Construction Certificate by the applicant. (Where the owner's consent is granted by a company or person representing the owner's provide proof of authority)

Signature		Date	27.9.2013	Stamp	
-----------	--	------	-----------	-------	--

Office Use	Date of receipt	27/9/13	Received by:	SEAN MAOPE
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Property details

Property address		Detailed description of the development - Building Work	
Loquat Valley School		Alterations and additions to existing staff	
1977 Pittwater Rd,		room at Loquat Valley School	
Bayview NSW 2104			
Lot & DP Number	Lot 1 DP 304830; Lot A DP 360274; Lot 20 DP 635214	Estimated cost of works incl. GST	\$ 18,900
Vol / Fol	-		
Existing BCA Classification	Class 9b	Proposed BCA Classification	Class 9b
For each proposed new building			
No. of storeys (incl underground storeys) in the building	NA	The gross floor area of the building (m ²)	NA
		The gross site area of the land (m ²)	NA

Development consent details

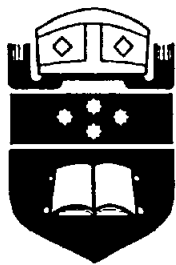
Development Consent Number	H0080/13	Date of Consent	27/05/13
Name of the Consent Authority	Pittwater Council		

Principal contractor's details

Name		Contact person	
------	--	----------------	--

Checklist of information required to accompany the application	Included? Y/N
4 hard copies of the plans, elevations and sections	Y
4 electronic copies (4 disks) of the specifications	NA
The most recent Annual Fire Safety Statement for an existing building	Y
List of proposed fire safety measures for the building	Y

4



SYDNEY ANGLICAN SCHOOLS CORPORATION

ABN 63 544 529 806

Level 1, 420 Forest Road, Hurstville NSW 2220 | PO Box 465, Hurstville BC NSW 1481
Tel: 02 8567 4000 | Fax: 02 9570 2220 | Web: www.sasc.nsw.edu.au

24th September 2013

Metro Building Consultancy
Studio 1.05/56 Bowman Street
PYRMONT NSW 2009

To Whom it May Concern:

RE: Authorisation to Sign on behalf of Sydney Anglican Schools Corporation – Bruce Litchfield

This letter is to confirm that the Sydney Anglican Schools Corporation is the legal owner of the property known as Loquat Valley School located at 1977 Pittwater Road, BAYVIEW, NSW 2104.

I also hereby authorize, under delegation, Bruce Litchfield, the Capital Works Manager for the Sydney Anglican Schools Corporation, to sign on behalf of Sydney Anglican Schools Corporation.

Yours sincerely

Dr Laurie Scandrett
Chief Executive Officer
Under Power of Attorney 4613

Serving Christ by equipping students for His world

6

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Studio 1.05/56 Bowman St, Pyrmont NSW 2009
P: 02 9692 8477 F: 02 8209 4955 E: admin@metrobc.com.au
www.metrobc.com.au



(Commercial - Class 5, 6, 7, 8 or 9 building)

Record of Critical Stage Inspection

Under Section 143B and 143C of the Environmental Planning and Assessment Regulations 2000

The registered number of the development application.

H0080/13 dated 27/05/13 from Pittwater Council

The address of the property at which the inspection was carried out.

Loquat Valley School, 1977 Pittwater Road, Bayview NSW 2104

Type of inspection

Pre Construction Certificate issue Section 143B Environmental Planning and Assessment Regulation 2000 inspection

The date on which the inspection was carried out.

13/11/13

The identity of the certifying authority by who carried out the inspection.

Sean Moore

The accreditation number of the certifying authority.

Building Professionals Board accreditation number 0764

Details of the current fire safety measures in the existing building the subject of the inspection.

No	Fire Safety Measure	Standard of Performance
1.	Fire Blankets	As 2444 (2001)
2.	Fire hydrant systems	AS 2419.1 (1994)
3.	Hose reel systems	AS 2441 (1998)
4.	Portable fire extinguishers	As 2444 (2001)

Details as to whether or not the plans and specifications accompanying the application for the construction certificate adequately and accurately depict the condition of the existing building the subject of the inspection

Yes the plans and specifications accompanying the application for the construction certificate adequately and accurately depict the condition of the existing building

Details as to whether or not any building or subdivision work authorised by the relevant development consent has commenced on the site

Building work authorised by the relevant development consent have not commenced on the site.

Colour Contrast Calculation (for Lab measurement, not on-site measurement)

Job. No. 12133

- 1. Obtain LRV (Light Reflectance Value) from Dulux website <http://www.dulux.com.au/specifier/colour/colour-atlas>
- 2. Input the values in the table below to calculate luminance contrast between colours
- 3. Refer to AS1428.1 Appendix B for further details

Bowman-Sapolinski equation

$$C = 125 \times (Y2 - Y1) / (Y1 + Y2 + 25)$$

	LRV	Colour Name	Colour Code	Remarks
Darker Colour LRV (Y1)	35	Water Worn	PG1A3	
Lighter Colour LRV (Y2)	88	White on White	PCWF8	
Luminance Contrast	45			

Less than 30% luminance contrast ie non compliance



16 September 2013

Sydney Anglican Schools Corporation
C/- Patton Architects
114 Sutherland Road
JANNALI NSW 2226
Att: Belinda Patton

Loquat Valley Anglican School –

alterations and additions for seminar rooms – structural sufficiency certificate

Dear Bruce,

We, Cantilever Consulting Engineers Pty Ltd, are professional structural engineers in accordance with the meaning within the Building Code of Australia. I am a properly qualified person with appropriate insurance and experience. My qualifications and accreditations are listed below.

The proposed alterations and additions are shown on the drawings produced by Patton Architects that indicate .

We certify that we have prepared the structural engineering of the alterations and additions at Loquat Valley Anglican School as shown on the drawings, 00827 - S1.01 in accordance with the following SAA Codes of Practice:

- AS 1684 Residential Timber Framed Construction Code
- AS 1720 Timber Structures Code
- AS 4100 Steel Structures Code
- AS 2783 Use of Reinforced Concrete for Small Swimming Pools
- AS 2312 Protection of Structural Steel Against Corrosion Code

and the structure shown within the site boundary, would be sufficient to carry the relevant loads specified in AS 1170 Parts 0, 1, 2, 3 & 4 SAA Structural Design Actions.

Sincerely,.

Damian Hadley, Director, BAsc(Hons), CPEng, MIE(Aust), NPER
Cantilever Consulting Engineers Pty Ltd

Our reference: 00827.C2C002

Relevant qualifications and accreditations:	BAsc(Hons), MIE(Aust), CPEng, NPER
Name of Certifier:	Damian Hadley
Company:	Cantilever Consulting Engineers Pty Ltd
Address:	Suite 206 / 3 Gladstone Street, NEWTOWN NSW 2042
Phone Number:	(02) 9565 4292

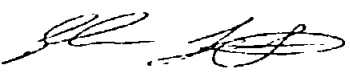
CANTILEVER CONSULTING ENGINEERS ABN 35 144 990 376

Suite 206 Flourmill Studios 3 Gladstone Street Newtown NSW 2042 | (02) 9565 4292 | mail@cantileverengineers.com.au | cantileverengineers.com.au



Annual Fire Safety Statement

Issued under Part 9 of The Environment Planning and Assessment Regulation 2000

Type of Certificate	☒ Annual	☐ Supplementary										
Annual Statement Name Address I, Glenn Sampson of Celsius Fire Services Pty Ltd, 1/70 Gibbes Street, Chatswood, NSW 2067 Certify that: (a) each of the essential fire safety measures specified in this statement has been assessed by a properly qualified person and was found when it was assessed, to be capable of performing: (i) in the case of an essential fire safety measure applicable otherwise by virtue of a fire safety schedule, to a standard no less than specified in the schedule, or (ii) in the case of an essential fire safety measure applicable otherwise than by virtue of a fire safety schedule, to a standard no less than that which the measure was originally designed and implemented, and (b) the building has been inspected by a properly qualified person and was found when inspected, to be in a condition that did not disclose any grounds for a prosecution under division 7 and (c) the information contained in this certificate is, to the best of my knowledge and belief, true and accurate.												
Identification of building	Street Suburb Number/name	Pittwater Road Bayview 1977 – Loquat Valley School										
Date of Assessment	Date this	27 th day of July 2012										
Owners details	Name Address	Loquat Valley School 1977 Pittwater Road, Bayview NSW										
Essential Fire Safety Measures	<table border="1"> <thead> <tr> <th>Existing Measure</th> <th>Standard of Performance</th> </tr> </thead> <tbody> <tr> <td>Fire Blankets</td> <td>AS 2444 (2001)</td> </tr> <tr> <td>Fire Hydrant System</td> <td>AS 2419.1 (1994)</td> </tr> <tr> <td>Fire Hose Reel Systems</td> <td>AS 2441 (1998)</td> </tr> <tr> <td>Portable Fire Extinguishers</td> <td>AS 2444 (2001)</td> </tr> </tbody> </table>	Existing Measure	Standard of Performance	Fire Blankets	AS 2444 (2001)	Fire Hydrant System	AS 2419.1 (1994)	Fire Hose Reel Systems	AS 2441 (1998)	Portable Fire Extinguishers	AS 2444 (2001)	
Existing Measure	Standard of Performance											
Fire Blankets	AS 2444 (2001)											
Fire Hydrant System	AS 2419.1 (1994)											
Fire Hose Reel Systems	AS 2441 (1998)											
Portable Fire Extinguishers	AS 2444 (2001)											
Date of Certificate	Dated this 31 st day of July 2012											
Signature	 Owner/Agent											
A copy of this certificate together with the relevant fire safety schedule must be forwarded to the Council and the Commissioner of the New South Wales Fire Brigades. A copy of this certificate together with the relevant fire safety schedule must be prominently displayed in the building.												

SYDNEY ANGLICAN SCHOOLS CORPORATION

ARCHITECTURAL SPECIFICATION

LOQUAT VALLEY ANGLICAN SCHOOL

1977 PITTWATER ROAD BAYVIEW

ADDITION TO STAFF ROOM

PATTON ARCHITECTS
ABN: 35 075 116 013
1114 Sutherland Road Jannali 2226
Tel: 9589 3719
Mob: 0419 790 065
Nominated Architect: Belinda Patton AB8:6341
NATSPEC Subscriber Number: 06053311

0202 DEMOLITION (INTERIOR AND ALTERATIONS)

1 GENERAL

1.1 RESPONSIBILITIES

General

General: Carry out demolition, as documented.

1.2 CROSS REFERENCES

General

Requirement: Conform to the following worksection(s):

- General requirements.

1.3 STANDARD

General

Demolition: To AS 2601.

1.4 INTERPRETATION

Definitions

For the purposes of this worksection, the following definitions apply:

- Demolition: The complete or partial dismantling of a building or structure, by pre-planned and controlled methods or procedures.
- Dilapidation record: The photographic or video and written record made before commencement of demolition work of the condition of the portion of the existing building being retained, adjacent buildings, and other relevant structures or facilities.
- Dismantle: The reduction of an item to its components in a manner to allow re-assembly.
- Recover: The disconnection and removal of an item in a manner to allow re-installation.

1.5 INSPECTION

Notice

Inspection: Give notice so that inspection may be made of the following:

- Site after removal of demolished materials.
- Services after reconnection or diversion.

1.6 SUBMISSIONS

Authority approvals

Evidence of compliance: Before commencing demolition, submit evidence of the following:

- Requirements of authorities relating to the work under the contract have been ascertained.
- Certification that each person having access to the construction site has completed a WHS induction training procedure which is site-specific.
- Precautions necessary for protection of persons and property have been taken and suitable protective and safety devices provided to the approval of the relevant authority.
- Fees and other costs have been paid.

Investigation and work plan

Work plan: Submit the work plan before demolition or stripping work. Include the check list items appropriate to the project from AS 2601 Appendix A, and the following information:

- The method of protection and support for existing building.
- Locations and details of necessary service deviations and terminations.
- Confirmation of the sequence of work.
- Requirements of AS 2601 Section 2 Planning and execution.

- If the demolition program results in components temporarily cantilevered, provide a certificate from a professional engineer.
- Proposals for the safe use of mobile plant on suspended structural members including provisions for the protection of lower floors in the event of structural failure.

Hazardous materials

Audit: Prepare a Hazardous substances management plan to AS 2601 clause 1.6. Include the following:

- Asbestos or material containing asbestos.
- Flammable or explosive liquids or gases.
- Toxic, infective or contaminated materials.
- Radiation or radioactive materials.
- Noxious or explosive chemicals.
- Tanks or other containers which have been used for storage of explosive, toxic, infective or contaminated substances.

Off site disposal

Disposal location: Submit the locations and evidence of compliance with the relevant authorities for the disposal of material required to be removed from the site.

Records

Dilapidation record: Submit a copy of the dilapidation record for inspection.

2 PRODUCTS

2.1 DEMOLISHED MATERIALS

Demolished materials

Ownership: Ownership of demolished materials is described in the **Demolished material classes** table.

Demolished material classes

Ownership and implementation: Comply with the **Demolished material classes** table.

Demolished material classes table

Class	Requirement	Ownership
Recovered items for re-use in the works	Recover without damage items identified in the Recovered items for re-use in the works schedule	Principal/proprietor
Demolished material for recycling off site	Demolish and deliver for recycling material identified in the Demolished material for recycling off-site schedule	Contractor, except where indicated on drawings.
Demolished for removal	Remove from the site demolished materials identified in the Demolish for removal schedule . Do not burn or bury on site Transit: Prevent spillage of demolishing materials in transit	Contractor

3 EXECUTION

3.1 SUPPORT

Temporary support

General: If temporary support is required, certification for its design and installation is required from a professional engineer engaged by the contractor.

Existing buildings: Until permanent support is provided, provide temporary support for sections of existing buildings which are to be altered and which normally rely for support on work to be demolished.

3.2 PROTECTION

Encroachment

General: Prevent the encroachment of demolished materials onto adjoining property, including public places.

Dust protection

General: Provide dust-proof screens, bulkheads and covers to protect existing finishes and the immediate environment from dust and debris.

Security

General: If a wall or roof is opened for alterations and additions, provide security against unauthorised entry to the building.

3.3 DEMOLITION – BUILDING WORKS

Dilapidation record

Purpose: Use the dilapidation record to assess the damage and making good arising out of demolition work.

Availability: Keep the records of the investigations on site and available for inspection until the date of practical completion of the contract.

Explosives

General: Do not use explosives.

3.4 DEMOLITION – BUILDING SERVICES

General

General: Decommission, isolate, demolish and remove from the site all existing redundant equipment including associated components that become redundant as a result of the demolition.

Breaking down: Disassemble or cut up equipment where necessary to allow removal.

Recovered materials: Recover all components associated with the listed items. Minimise damage during removal and deliver to the locations scheduled.

Re-used components

General: Clean re-used components and test for compliance with current Australian Standards before returning to service. Provide results of compliance tests.

3.5 HAZARDOUS MATERIALS

Hazardous materials removal

Standard: To AS 2601 clause 1.6.2.

3.6 COMPLETION

Notice of completion

General: Give at least 7 working days notice of completion of demolition so that adjacent structures may be inspected following completion of demolition.

Making good: Make good any damage arising out of demolition work. Obtain written acceptance from client of completeness and standard of making good.

Temporary support

General: Clear away at completion of demolition.

4 SELECTIONS

4.1 DEMOLITION

Recovered items for re-use in the works schedule

Item	Location for storage
Any furniture suitably identified	School Hall

Item	Location for storage
Audio visual projectors, speakers and the like	School Hall
Any items identified on drawings	School Hall

0382 LIGHT TIMBER FRAMING

1 GENERAL

1.1 RESPONSIBILITIES

General

General: Provide wall and roof framing, as documented.

1.2 CROSS REFERENCES

General

Requirement: Conform to the following worksection(s):

- General requirements.
- Adhesives, sealants and fasteners.
- Timber products, finishes and treatment.

1.3 STANDARDS

General

Framing: To AS 1684.2, AS 1684.3 or AS 1684.4, as appropriate.

Design: To AS 1720.1.

1.4 INSPECTION

Notice

Inspection: Give notice so that inspection may be made of the following:

- Prefabricated units before installation.
- Fabricated items before priming or water-repellent treatment.
- Timber work after erection but before it is covered.

1.5 TOLERANCES

Floors

Maximum deviation from a 3 m straightedge laid in any direction on the floor framing: 5 mm.

Walls

General: Conform to the Walls tolerances table.

Walls tolerances table

Property	Permitted deviation
Generally: Verticality in 2 m	1:500
Generally: Flatness ¹ in 2 m	3 mm
Features ² : Verticality in 2 m	1:1000
Features ² : Horizontality in 2 m	1:1000

1. Flatness: Measured under a 2 m straightedge laid in any direction on a surface.
2. Features: Conspicuous horizontal or vertical lines including external corners, parapets, reveals, heads, sills.

1.6 SUBMISSIONS

Certification

General: Refer to structural engineer's Construction Notes.

Preservative treatment: Submit a test certificate from an independent testing authority confirming that the required preservative retention has been achieved.

Materials

Identification:

- Certification: Submit a supplier's certificate (which may be included on an invoice or delivery docket) verifying that the timber complies with the specification, including moisture content.
 - Inspection: Submit the inspection authority's certificate verifying that the timber complies with the specification.
- Moisture content: Submit records of moisture content.
- CCA treated timber: If proposed, provide details of treatment.
- Subcontractors**
- Prefabricated items: Submit the name and contact details of the proposed manufacturer.

2 PRODUCTS

2.1 TIMBER

Identification

Method: Identify timber using branding, certification or both.

Branding: Brand structural timber, under the authority of a recognised product certification program applicable to the product. Locate the brand mark on faces or edges which will be concealed in the works. For timbers not covered by the branding provisions of Australian standards or regulations for which branding is required, include the following data:

- Stress grade.
- Method of grading.
- If seasoned, the word, SEASONED or DRY, or an abbreviation of seasoned, such as SEAS or S.
- The certification mark of the product certification program.
- The applicable standard.

Certification: Forest certification, chain of custody and product labelling to the *Timber products, finishes and treatment* worksection.

2.2 SHEET PRODUCTS

Structural plywood

Standard: To AS/NZS 2269.0.

Bond: Type A to AS/NZS 2754.1 (Int).

Identification

Branding: To AS/NZS 2269.0.

Brand mark: Locate the brand mark on faces or edges which will be clearly visible for certification inspections and concealed in the works.

2.3 COMPONENTS

Fasteners

General: Conform to the *Adhesives, sealants and fasteners* worksection.

Installation: Do not split or otherwise damage the timber.

Coating: Before placing bolts in contact with CCA treated timber, coat the shank of the bolt in a grease or bituminous coating.

Damp-proof course

Material: To AS/NZS 2904.

Flashings

Material: To AS/NZS 2904.

3 EXECUTION

3.1 TRANSPORT AND DELIVERY

General

Handling and protection: Do not distort or damage timber or timber products.

Moisture content: Maintain the equilibrium moisture content of seasoned timber.

Protection from weather
General: Provide temporary protection for members until permanent covering is in place.

3.2 WALL FRAMING

Additional support

General: Provide additional support in the form of noggings, trimmers and studs for fixing lining, cladding, hardware, accessories, fixtures and fittings as required.

Maximum spacing of noggings: 1350 mm centres.

Flashings

Location: Provide flashings to external openings to prevent the entry of moisture. Form trays at the ends of sill flashings.

3.3 COMPLETION

Tightening

General: Tighten bolts, screws and other fixings so that joints and anchorages are secure at the date of practical completion.

0431 CLADDING

1 PRODUCTS

1.1 MATERIALS

Timber weatherboards
Hardwood: To AS 2796.1.
Softwood: To AS 4785.1.

1.2 COMPONENTS

Flashing material
Standard: To AS/NZS 2904.

2 EXECUTION

2.1 CONSTRUCTION GENERALLY

Substrates or framing

Requirement: Before fixing cladding check and, if necessary, adjust the alignment of substrates or framing.

Fixing

Method: Nail to timber framing.

Accessories and trim

Requirement: Provide accessories and trim necessary to complete the installation.

Metal separation

Requirement: Prevent direct contact between incompatible metals, and between green hardwood or chemically treated timber and aluminium or coated steel, by either:

- Applying an anti-corrosion, low moisture transmission coating to contact surfaces.
- Inserting a separation layer.

2.2 TIMBER WEATHERBOARD CLADDING

Preparation

Preservative treatment: For cladding with a natural or stained finish, finish the boards on both sides before installation by dipping or brushing with water-repellent preservative. Do not apply preservative if this is incompatible with a specified pigmented stain finish.

Cut surfaces: Treat freshly cut surfaces with water repellent before fixing.

Installation

Single lengths: Provide single lengths when installed vertically. Whenever possible provide single lengths of boards when installed horizontally.

Fixing at crossings:

- Seasoned milled weatherboards: 2 fixings.
 - Unseasoned hardwood, sawn weatherboards, or secret nailed profiles: 1 fixing.
- Nailheads: Treat visible nailheads as follows:
- In stained or clear finishes: Drive flush.
 - In opaque finishes: Punch below the surface and fill flush with putty after the surface has been primed.

Joints

End grain joints: Install boards so that butt joints are in compression.

Internal and external corners: Butt against a stop bead of thickness at least that of the cladding.

3 SELECTIONS

3.1 SCHEDULE

Cladding schedule

Property	Location
Cladding	All to match the existing cladding in other areas of the school.
Manufacturer	
Material	
Type	
Roofing colour	
Profile	
Texture	
Thickness	AAC panel thickness
AAC panel thickness	

0451 WINDOWS

1 GENERAL

1.1 STANDARDS

General

Selection and installation: To AS 2047.

Glazing

Glass type and thickness: To AS 1288, if no glass type or thickness is nominated.

2 PRODUCTS

2.1 GENERAL

Standards

Flashings: To AS/NZS 2904.

Aluminium extrusions: To AS/NZS 1866.

Glass

Glass types and quality: To AS/NZS 4667.

Safety glasses: To AS/NZS 2208.

Aluminium frame finishes

Powder coating: To AS 3715:

- Grade: Architectural coating.

2.2 COMPONENTS

Screens

Aluminium framed insed screens: Provide aluminium extruded or folded box frame sections with mesh fixing channel, mitred, staked and screwed at corners. Provide an extended frame section where necessary to adapt to window opening gear.

- Mesh: Bead the mesh into the frame channel with a continuous resilient gasket, so that the mesh is taut and without distortion.

Fixed screens: Provide fixed screens to the window frames with a dipping device which permits removal for cleaning.

2.3 HARDWARE

Hardware documented generically

General: Provide hardware of sufficient strength and quality to perform its function, appropriate to the intended conditions of use, compatible with associated hardware, and fabricated with fixed parts firmly joined.

3 EXECUTION

3.1 INSTALLATION

Preglazing

Window assemblies and glazed doors: Supply inclusive of glazing, shop preglazed.

Windows

General: Install windows so that the frames:

- Are plumb level, straight and true within acceptable building tolerances.
- Are fixed or anchored to the building structure in conformance with the wind action loading requirements.
- Will not carry any building loads, including loads caused by structural deflection or shortening.
- Allow for thermal movement.

Weatherproofing

Flashings and weatherings: Install flashings, weather bars, drips, storm moulds, caulking and pointing so that water is prevented from penetrating the building between frames and the building structure under prevailing service conditions, including normal structural movement of the building.

Fixing

Packing: Pack behind fixing points with durable full width packing.

Prepared masonry openings: If fixing of timber windows to prepared anchorages is by fastening from the frame face, conceal the fasteners by sinking the heads below the surface and filling the sinking flush with a material compatible with the surface finish.

Trim

General: Provide mouldings, architraves, reveal linings, and other internal trim using materials and finishes matching the window frames. Install to make neat and clean junctions between frames and the adjoining building surfaces.

4 SELECTIONS

4.1 SCHEDULE

Window schedule

Location	Type	Pre-finish/colour
Windows to new addition	Refer to drawing.	Refer to drawing.

0471 INSULATION AND SARKING MEMBRANES

1	GENERAL
1.1	INTERPRETATION
Definition	
General:	For the purposes of this worksection the following definition applies:
- Sarking membrane:	Flexible membrane material normally used for waterproofing, vapour proofing or thermal reflectance.
2	PRODUCTS
2.1	INSULATION MATERIALS
Bulk and reflective insulation	
As detailed on drawings	
Sarking membrane	
Standard:	To AS/NZS 4200.1.
3	EXECUTION
3.1	GENERAL
Framed wall thermal break strips	
Product type:	Proprietary item.
Application:	To steel or timber framing with lightweight external cladding.
R-value:	≥ 0.2.
Screw fixing:	Button head screws at 1 m centres.
Adhesive fixing:	Wallboard adhesive walnuts at 1 m centres.
Bulk insulation	
Standard:	To AS 3999.
General:	Make sure batts or blankets are firmly butted with no gaps except as follows:
- Access openings and vents:	Do not obstruct.
- Light fittings:	To AS/NZS 3000 clause 4.5.
Sarking membrane	
Standard:	To AS/NZS 4200.2.
3.2	WALL INSULATION
Bulk insulation to framed walls	
Product type:	Fibre batts.
Batts:	Friction fit between framing members. If support is not otherwise provided, staple nylon twine to the framing and stretch tight.
3.3	ROOF INSULATION
Bulk insulation – metal roofs	
Batts:	Fit tightly between framing members.
Blanket for sound insulation:	Install over the roof support frame, reflective thermal insulation (if any), and mesh support, so that the blanket is in continuous contact with the underside of the metal roofing sheets.
Bulk insulation to Ceiling insulation	
Product type:	Fibre batts.
Batts:	Friction fit between framing members.

0511 LINING

1	PRODUCTS
1.1	MATERIALS AND COMPONENTS
Plasterboard	
Standard:	To AS/NZS 2588.
Fibre cement	
Standard:	To AS/NZS 2908.2.
Wall and ceiling linings:	Type B, Category 2.
Minimum thickness:	4.5 mm.
2	EXECUTION
2.1	CONSTRUCTION GENERALLY
Substrates or framing	
General:	Before fixing linings check and, if necessary, adjust the alignment of substrates or framing.
Ceiling linings	
General:	Do not install until at least 14 days after the timber roof structure is fully loaded.
Accessories and trim	
General:	Provide accessories and trim necessary to complete the installation.
2.2	PLASTERBOARD LINING
Supports	
General:	Install timber battens as follows:
- Where framing member spacing exceeds the recommended spacing.	
- Where direct fixing of the plasterboard is not possible due to the arrangement or alignment of the framing or substrate.	
- Where the lining is the substrate for tiled finishes.	
Installation	
Gypsum plasterboard:	To AS/NZS 2589.
Joints	
Flush joints:	Provide recessed edge sheets and finish flush using perforated paper reinforcing tape.
External corner joints:	Make joints over metallic-coated steel corner beads.
Control joints:	Provide purpose-made metallic-coated control joint beads at not more than 12 m centres in plasterboard linings or 7.2 m centres in fibre cement lining in walls and ceilings and to coincide with structural control joints.
Wet areas:	Install additional supports, flashings, trim and sealants as required.
Joints in tiled areas:	Do not apply a topping coat after bedding perforated paper tape in bedding compound.
2.3	TRIM
General	
General:	Provide timber or medium density fibreboard trim, such as beads, skirtings, architraves, mouldings and stops to make neat junctions between components, finishes and adjacent surfaces. Proprietary items: Provide complete with installation accessories.

3 SELECTIONS

3.1 SCHEDULE

Lining schedule	
Item	Description
Lining -Type	Plasterboard 13mm
Cornice -Type	Plaster cornice to match existing
Skirtings -Type	Timber – to match existing
Architraves -Type	Timber – to match existing

0652 CARPETS

1 PRODUCTS

1.1 MATERIALS

Carpet

Minimum class: Residential Medium use under the Australian Carpet Classification Scheme.

Total VOC limit:

- Generally: 0.5 mg/m².
- Compliance: To the Environmental Classification Scheme operated by the Carpet Institute of Australia.

Wet processed fibreboard (hardboard) underlay

Standard: To AS/NZS 1859.4.

Classification: General purpose medium board, manufactured specifically as flooring underlay.

Thickness: 5.5 mm.

Soft underlay alternatives

Standard: To AS 4288.

Hot-melt adhesive tape

General: Glass fibre and cotton thermoplastic adhesive coated tape 60 mm wide on a 90 mm wide metal foil base and backed with silicon-coated release paper.

Preformed gripper strips

General: Domestic grade plywood carpet gripper strip with 3 rows of rust-resistant angled pins of length appropriate to the carpet type.

Edge strips

Type: cover strip

Material/colour: anodised aluminium

Location: At exposed edges of the carpet and at junctions with different floor finishes or finishes of different thickness. Where edge strips occur at doorways, locate the junctions directly below the closed door.

2 EXECUTION

2.1 GENERAL

Substrates

Cleaning timber surfaces: Remove oil, grease and traces of applied finishes.

Timber substrate correction: Remove projections. If conformance to the a flatness tolerance of 6 mm in 3000 mm, determined using a 3000 mm straight edge placed anywhere in any direction cannot be achieved, fix an underlay in brick pattern with joints avoiding substrate joints.

Fixtures: Remove door stops and other fixtures, and refix in position undamaged on completion of the installation.

Moisture content

General: Do not commence installation of flooring unless:

- Plywood and timber: The moisture content of battens/joints or plywood background has been tested to AS/NZS 1080.1 and values obtained as follows:
 - Air conditioned buildings: 8 to 10%.
 - Intermittently heated buildings: 10 to 12.5%.
 - Unheated buildings: 12 to 15%.

2.2 LAYING CARPET

Standard

General: To AS/NZS 2455.1.

Setting out

General: Lay the carpet in continuous lengths without cross joints in the body of the area. Where unavoidable cross joins at doorways, create the joins directly below the closed doors.

Joints in underlay: Make sure joints in underlay do not coincide with carpet joints. Do not carry underlay over carpet grippers or edge strips.

Seaming methods

Woven carpet: Machine or hand sew.

Tufted carpet: Provide hot-melt adhesive tapes.

Carpet installation

Gripper strip: To AS/NZS 2455.1 clause 3.5.

Direct stick method. To AS/NZS 2455.1 clause 3.6.

2.3 COMPLETION

Maintenance manual

Contents: Submit a maintenance manual containing a technical specification of the carpet installation and setting out the manufacturer's recommendations, for its use, care and maintenance. Include the names and addresses of the suppliers and manufacturers of each component.

Standard: To AS/NZS 3733.

Spares

Spare material: Supply spare matching materials of each type, colour and design of carpet from the same batch for future replacement purposes.

Offcuts: Retain carpet offcuts exceeding 0.5 m² in area and 450 mm in both length and width.

Labelling: Label spare and offcut material appropriately, including the location of the laid area corresponding to each batch. Securely and separately package each batch in a suitable wrapping.

Quantity of spare material: At least 1% of the quantity installed, in full or part length rolls.

Storage locations: to be arranged with client

Cleaning

Progressively clean the work. Remove waste, excess materials and adhesive.

Final cleaning: When the installation is complete, clean the carpet as necessary to remove extraneous matter, marks and soiling and to lift the pile where appropriate.

Protection: provide fabric drop sheets. Do not use plastic sheeting. If wheeled traffic is to follow carpet installation protect with hardboard sheets butted and fixed with adhesive tape.

0671 PAINTING

1 GENERAL

1.1 STANDARDS

Painting

General: Comply with the recommendations of those parts of AS/NZS 2311 which are referenced in this worksection.

2 PRODUCTS

2.1 PAINTS

Paint brand

Quality: If the product is offered in a number of levels of quality, provide premium quality lines.

Low VOC emitting paints

VOC limits for low odour/low environmental impact paint types:

- Primers and undercoats: < 65 g/litre.
- Low gloss white or light coloured latex paints for wall areas: < 16 g/litre.
- Coloured low gloss latex paints: < 16 g/litre.
- Gloss latex paints for timber doors and trims: < 75 g/litre.

Combinations

General: Do not combine paints from different manufacturers in a paint system.

Clear timber finish systems: Provide only the combinations of putty, stain and sealer recommended by the manufacturer of the top coats.

Delivery

General: Deliver paints to the site in the manufacturer's labelled and unopened containers.

Putty and fillers

Material: To the recommendation of the paint system manufacturer as suitable for the substrate and compatible with the primer.

Tinting

General: Provide only products which are colour tinted by the manufacturer or supplier.

3 EXECUTION

3.1 PREPARATION

Order of work

Other trades: Before painting, complete the work of other trades as far as practicable within the area to be painted, except for installation of fittings, floor sanding and laying flooring materials.

Protection

General: Before painting, clean the area and protect it against dust entry. Use drop sheets and masking to protect finished surfaces or other surfaces at risk of damage during painting.

Internal and external fixtures and furniture: Remove door furniture, switch plates, light fittings and other fixtures before starting to paint, and refix in position on completion of painting.

Adjacent surfaces: Protect adjacent finished surfaces liable to damage from painting operations.

Wet paint warning

General: Place notices conspicuously and do not remove them until the paint is dry.

Repair

General: Clean off marks, paint spots and stains progressively and restore damaged surfaces to their original condition. Touch up new damaged decorative paintwork or misses with the paint batch used in the original application.

Substrates

General: Prepare substrates to receive the painting systems.

Cleaning: Clean down the substrate surface. Do not cause undue damage to the substrate or damage to, or contamination of, the surroundings.

Filling: Fill cracks and holes with fillers, sealants, putties or grouting cements as appropriate for the finishing system and substrate, and sand smooth.

Unpainted surfaces

Standard: To AS/NZS 2311 Section 3.

Previously painted surfaces

Preparation of a substrate in good condition: To AS/NZS 2311 clause 7.4.

Preparation of a substrate in poor condition: To AS/NZS 2311 clause 7.5.

Preparation of steel substrates with protective coatings: To AS/NZS 2312 Section 10 and AS 1627.1.

3.2 PAINTING

Light levels

General: ≥ 400 lux.

Paint application

Standard: To AS/NZS 2311 Section 6.

Timing: Apply the first coat immediately after substrate preparation and before contamination of the substrate can occur. Apply subsequent coats after the manufacturer's recommended drying period has elapsed.

Priming before fixing

General: Apply one coat of wood primer (2 coats to end grain) to the back of the following before fixing in position:

- External fascia boards.
- Timber door and window frames.
- Bottoms of external doors.
- Associated trims and glazing beads.
- Timber board cladding.

Spraying

General: If the paint application is by spraying, use conventional or airless equipment which does the following:

- Satisfactorily atomises the paint being applied.
- Does not require the paint to be thinned beyond the maximum amount recommended by the manufacturer.
- Does not introduce oil, water or other contaminants into the applied paint.
- Paint with known health hazards: Not permitted on site.

Sanding

Clear finishes: Sand the sealer using the finest possible abrasive (no coarser than 320 grit) and avoid cutting through the colour. Take special care with round surfaces and edges.

Repair of galvanizing

General: For galvanized surfaces which have been subsequently welded, or which have been welded, prime the affected area.

Primer: Organic zinc rich coating for the protection of steel to AS/NZS 3750.9 Type 2.

Tinting

General: Tint each coat of an opaque coating system so that each has a noticeably different tint from the preceding coat, except for top coats in systems with more than one top coat.

Services

General: If not embedded, paint new services and equipment, except chromium, anodised aluminium, GFR, UPVC, stainless steel, non-metallic flexible materials and normally lubricated machined surfaces. Repaint proprietary items only if damaged.

3.3 PAINT SYSTEMS

Paint system description

Generally: The paint system is referred to by its final coat.

Primers and undercoats: Provide primers and undercoats recommended by the manufacturer of the selected final coat as suitable for the substrate and the final coat.

Number of coats: Unless specified as one or two coat systems, each paint system consists of at least 3 coats.

0700 WORK ASSOCIATED WITH SERVICES

1 ELECTRICAL SERVICES

Responsibilities

General: By Head Contractor

Make good plasterboard at:

- 1. Penetrations for:
 - a. Conduits and wiring through walls and beams
 - b. Conduits and wiring through floors for power and communications outlets.
 - c. Riser penetrations through all floors for all risers (electrical, data, telephone).
- 2. Boxing out plant items or ductwork.
- 3. Building in where necessary of sleeves, pipes and brackets supplied by the Electrical Sub-Contractor
- 4. Make good by experienced and trained tradespersons, all chasings, openings in walls, ceilings, floors and the like to approval.
- 5. Timber sirluts and additional supports for surface mounted lights as required.

0902 ELECTRICAL DESIGN AND INSTALL

1 GENERAL

1.1 RESPONSIBILITIES

General

General: Provide the electrical systems summarised as follows:

- Design and install lighting, emergency and exit lights, and thermal detectors as required. Note, light fittings are specified on drawings.
- Design and install power and data for all areas within scope of this project.

Design

Design parameters: As documented.

Fault protection: Automatic disconnection to AS/NZS 3000 clause 2.4.

Maximum demand: Calculation method to AS/NZS 3000 Appendix C.

Electrical performance

Supply system: 400 V, 3-phase, 4-wire, 50 Hz.

1.2 CROSS REFERENCES

General

Requirement: Conform to the following worksection(s):

- *General requirements*.

1.3 STANDARDS

General

Electrical services: To AS/NZS 3000 unless otherwise documented.

Electrical installations

Design guide: To the recommendations of SAA HB 301.

Selection of cables: To AS/NZS 3008.1.1.

Degrees of protection (IP code): To AS 60529.

EMC: To AS/NZS 61000.

Telecommunications systems: To AS/CA S008, AS/ACIF S009, AS/NZS 3080, SAA HB 243 and SAA HB 29.

1.4 CONTRACT DOCUMENTS

General

Requirement: Conform to the *General requirements* worksection.

1.5 INSPECTION

General

Requirement: Conform to the *General requirements* worksection.

1.6 SUBMISSIONS

General

Requirement: Conform to the *General requirements* worksection.

Certification

General: Submit the following:

- Certification of conformance with AS/NZS 3000, for electrical services.
- Certification of conformance with the applicable code or standard.
- Telecommunications cabling: Submit product and installation certification for the installation.

Samples

Lighting: Submit samples of all luminaires and accessories complete with lamp, control gear and three core flex and plug.
Emergency evacuation lighting: Submit samples of all luminaires and exit signs.

Shop drawings

Lighting: Submit shop drawings for the following:

- Proposed design
- Telecommunications cabling: Submit shop drawings showing the following:
 - Layouts of equipment racks.
 - Cross-connect layout.
- Cabling diagram for complete system.
- Cable management system.

Technical data

Submissions: Submit design and technical data for the electrical services, all items of plant and equipment. Include at least the following information in technical submissions:

- Assumptions.
- Calculations, including maximum demand calculations.
- Capacity of all system elements.
- Country of origin and manufacture.

Lighting: Submit technical data for the following:

- Luminaires.
- Lamps.
- Ballasts.
- Power factor correction equipment.
- Lighting control systems.
- All accessories.
- Manufacturers' technical literature.
- Materials used in the construction.
- Model name, designation and number.
- Single line diagram(s), including fault levels at switchboards, cable size and type.
- Size, including required clearances for installation.
- Switchboard layouts.
- Technical data schedules corresponding to the equipment schedules in the contract documents. If there is a discrepancy between the two, substantiate the change.
- Type-test reports.

Telecommunications cabling: Submit technical data including the following:

- System design parameters: Performance.
- Voice and/or data transfer rate.
- Cable type and characteristics.
- Segregation requirements for EMI/EMR.
- Maximum length of cables.
- Cross-connect type and characteristics.
- Cross-connect block.
- Patch cords.
- Fibre optic terminations.
- Patch panel module.
- Cable management for racks.
- Rack.
- Fly leads.

Emergency evacuation lighting: Submit technical data for each type of luminaire and exit sign including the following:

- Maximum luminaire spacing for a given mounting height.
- Luminaire classification to AS 2293.3.

Tests

Lighting efficacy: Confirm the efficacy of the following by a photometric test, carried out for the applicable CCT, from a NATA approved laboratory:

- Light-emitting diode luminaires.
- Light-emitting diode lamp replacement modules.

1.7 WORK ON EXISTING SYSTEMS

Demolition

General: Decommission, isolate, demolish and remove from the site all existing redundant equipment including minor associated components that become redundant as a result of the demolition.

Breaking down: Disassemble or cut up equipment where necessary to allow removal.

Recovered materials: Recover all components associated with the listed items. Minimise damage during removal and deliver to the locations documented.

Existing electrical systems

Condition of existing systems:

- If the existing condition does not conform to the requirements in the contract documents, submit proposals to rectify the deficiencies with related costing, time and other impacts.
- Subject to the rectification works on existing systems, achieve the performance in the contract documents.

2 LIGHTING

2.1 RESPONSIBILITIES

General

Requirement: Provide lighting and control systems, as documented.

Minimum energy performance standards (MEPS)

General: To AS/NZS 4847.2, AS/NZS 4783.2, AS 4934.2.

Self ballasted lamps: To AS/NZS 4847.2.

2.2 STANDARDS

Standards

Energy efficiency for ballasts and lamps: To AS/NZS 4783.2.

2.3 PROPRIETARY LUMINAIRES

General

Requirement: Provide proprietary luminaires complete with lamps, luminaire control equipment, lighting control equipment, and accessories as documented. Provide lamps of the same type from the same brand and country of manufacture.

Self ballasted lamps: To AS/NZS 60968 and AS/NZS 60969.

2.4 FLUORESCENT LAMPS

Standards

Fluorescent lamps: To AS/NZS 4782.1 and AS/NZS 4782.2.

Compact fluorescent lamps: To AS/NZS 4782.1 and AS/NZS 4782.2.

Single capped fluorescent lamps: To AS/NZS 60901.

General

CCT: 4000 K.

Colour rendering: Group 1B to AS/NZS 1680.1.

Linear and circular lamp type: T8 (26 mm diameter) or T5 (16 mm diameter), linear lamps, triphosphor, TL84, as documented.

Compact fluorescent lamps types: Four-pin, non-integrated type.

2.5 FLUORESCENT LAMP BALLASTS

Linear and circular lamp types

General: Provide electronic fluorescent lamp ballasts for fluorescent lamp lighting systems selected for compatibility with the lamp and control method.

Electronic fluorescent lamp ballasts: Conform to the following:

- To AS/NZS 61347.2.3 and AS/NZS 60929.
- Current total harmonic distortion: < 15%.
- Soft start.
- Number of ballasts: Provide separate ballasts for each lamp or integral dual ballasts as an alternative for dual lamp fittings.

Ballast performance measurement – fluorescent lamps: To AS/NZS 4783.1.

Compact fluorescent lamps (CFL lamp types)

General: Provide electronic fluorescent lamp ballasts for CFL lighting systems selected for compatibility with the lamp and control method.

Electronic fluorescent lamp ballasts: To AS/NZS 61347.2.3 and AS/NZS 60929.

Current total harmonic distortion: < 15%.

Number of ballasts: Provide separate ballasts for each lamp or integral dual ballasts as an alternative for dual lamp fittings.

Ballast performance measurement – fluorescent lamps: To AS/NZS 4783.1.

Fluorescent lamp power factor correction

General: Provide power factor correction on all luminaires to a minimum power factor of 0.9 lagging.

2.6 WIRING

Flexible cords

Recessed luminaires: Provide external flexible cord in conformance with the following:

- Length: ≥ 1.5 m.
- Cross sectional area: 0.75 mm².
- Type: 3-core V75 (minimum) PVC/PVC, connected to a 10 A 3-pin moulded plug to AS/NZS 3112 or multi-pin plug, as documented.

2.7 LIGHTING CONTROL

General

Requirement: Provide the following as documented:

- Lighting switches.

2.8 SUPPORTS

General

General: Install luminaires on proprietary supports by means of battens, trims, noggings, roses and packing material.

Suspended luminaires

Rods: Steel pipe suspension rods fitted with gimbal joints.

Chains: Electroplated welded link chain.

Levelling wire: Stainless steel.

Levelling: Adjust the suspension system length so that the lighting system is level and even.

Horizontal tolerance: ± 3 mm between luminaires within the one space.

Surface mounted luminaires

General: Fit packing pieces to level luminaires and prevent distortion of luminaire bodies. Provide packing strips to align end to end luminaires.

Fixing: Conform to the following:

- Generally: Provide 2 fixings at each end of fluorescent luminaires.
- Luminaires less than 150 mm: A single fixing at each end in conjunction with 1.6 mm backing plates may be used.

- Provide battens and support for the fitting.

- Do not direct fix into plasterboard.

Recessed luminaires

General: Install recessed luminaires in trimmed openings in the suspended ceiling.

Standard: To AS 2946.

2.9 COMPLETION

General

Requirement: Before the date of practical completion carry out the following:

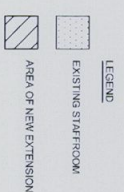
- Verify the operation of all luminaires.
- Adjust aiming and controls for all luminaires under night time conditions.
- Replace lamps which have been in service for a period greater than 50% of the lamp life as published by the lamp manufacturer.

METRO BUILDING CONSULTANCY

Accredited Certifier: Sean Moore – BPB Accreditation No.: 0764

CEILING NO: _____
Date: _____

Studio 1.05, 56 Bowman St, Pyrmont NSW 2009
Telephone: (02) 9692 8477 Fax: (02) 8209 4955



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THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS
AND CONDITIONS ON SITE BEFORE THE COMMENCEMENT OF
WORKS. ALL DISCREPANCIES SHOULD BE REPORTED TO THE
ARCHITECT FOR INSTRUCTION.

PATTON ARCHITECTS

Issue	Amendment	Date
-------	-----------	------

ABN 35 075 116 013
Nominated Architect: Belinda Potton
Arch Reg. No: 6341

114 SUTHERLAND ROAD JANNALU NSW 2226
TELEPHONE: 02 9589 3719
EMAIL: post@pottonarchitects.com.au

Project
PROPOSED ADDITION TO EXISTING STAFFROOM
LOQUAT VALLEY PREPARATORY SCHOOL
1977 PITTWATER RD., BAYVIEW

Drowning SITE PLAN			
Date	Scale	Drawn By	
15.03.13	1:200	BP	
Job No	Dwg No	Issue	
12133	DA01	-	

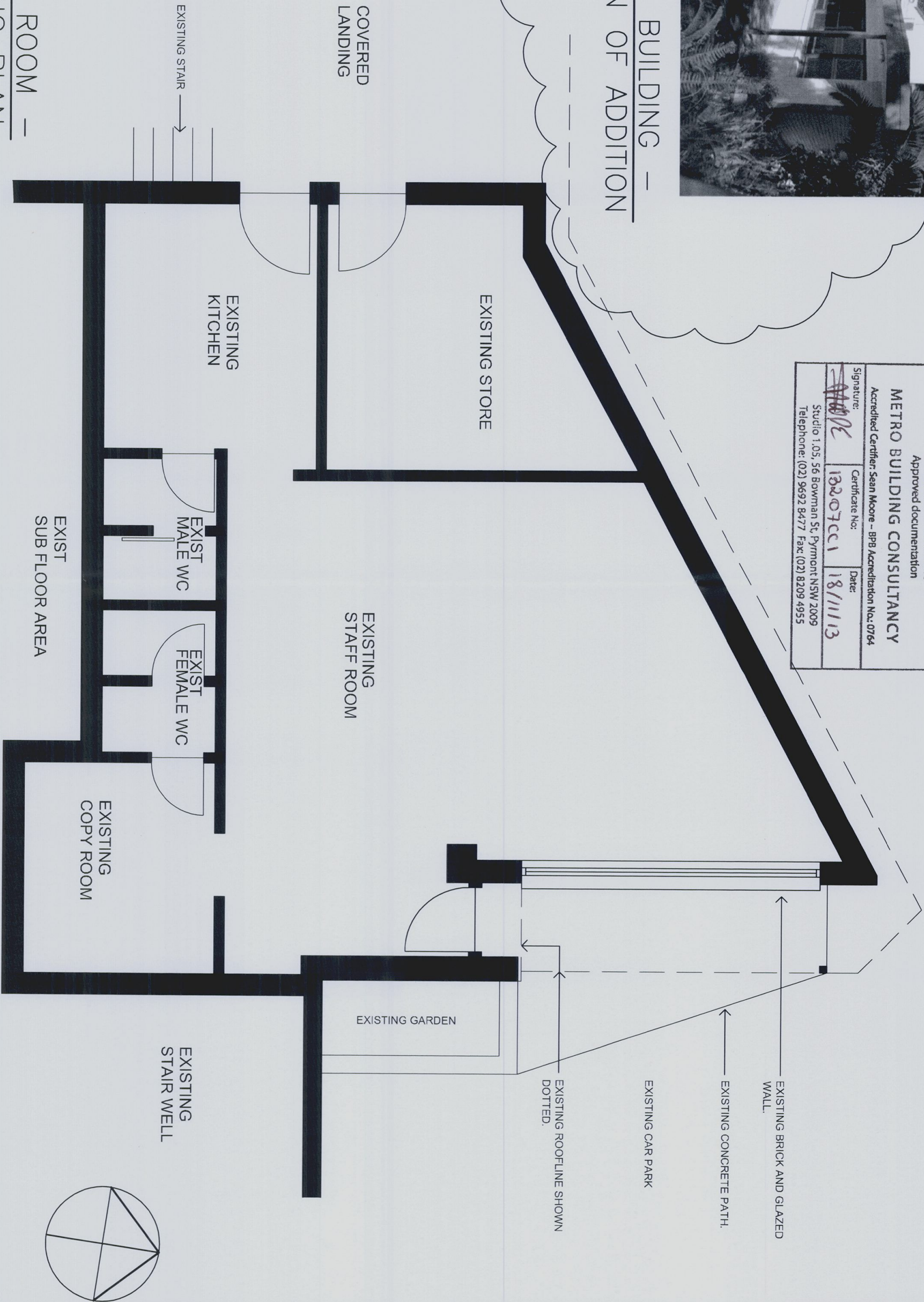


2 EXISTING BUILDING –
– LOCATION OF ADDITION

NOTE: FINISHES OF PROPOSAL TO
MATCH EXISTING IN PHOTO BELOW.

Construction Certificate Approved documentation			
METRO BUILDING CONSULTANCY			
Accredited Certifier: Sean Moore – BPB Accreditation No: 0764			
Signature: 	Certificate No: 13207CC1	Date: 18/11/13	
Studio 1.05, 56 Bowman St, Pyrmont NSW 2009 Telephone: (02) 9692 8477 Fax: (02) 8209 4955			

1 STAFF ROOM –
– EXISTING PLAN



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on site prior to commencement of work.

AMT	DATE	DESCRIPTION	DWN	AUTH
A	22.10.13	PHOTO ADDED		

AMT	DATE	DESCRIPTION	DWN	AUTH

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www.pattonarchitects.com.au

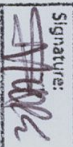
CONSTRUCTION CERTIFICATE

PROJECT		DWG No.	DWG No.
LOQUAT VALLEY ANGLICAN SCHOOL		CC01	12133
1977 PITTWATER ROAD, BAYVIEW		SHEET SIZE	AMENDMENT
DRAWING TITLE		A3	A
STAFF ROOM ADDITION		DRAWN BY	DATE
- EXISTING PLAN		BP	23.08.13
			SCALE
			1:50

Construction Certificate
Approved documentation

METRO BUILDING CONSULTANCY

Accredited Certifier: Sean Moore – BPS Accreditation No: 0764

Signature: 

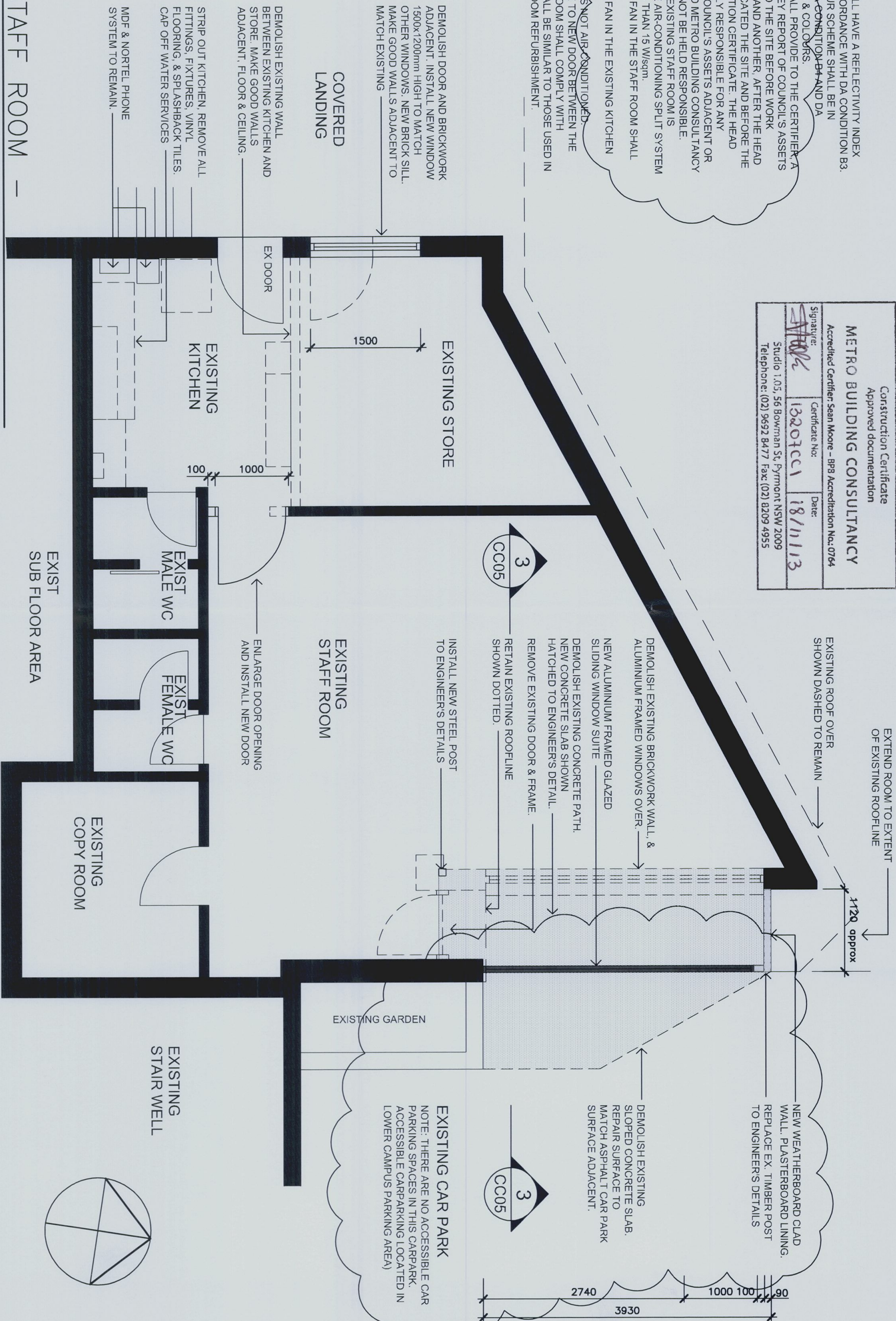
Certificate No: 13207cc1

Date: 18/11/13

Studio 1.05, 56 Bowman St, Pyrmont NSW 2009

Telephone: (02) 9692 8477 Fax: (02) 8209 4955

- NOTES:
- * ALL NEW GLAZING SHALL HAVE A REFLECTIVITY INDEX LESS THAN 25% IN ACCORDANCE WITH DA CONDITION B3.
 - * MATERIALS AND COLOUR SCHEME SHALL BE IN ACCORDANCE WITH DA CONDITION B4 AND DA APPROVED MATERIALS & COLOURS.
 - * THE CONTRACTOR SHALL PROVIDE TO THE CERTIFIER A PHOTOGRAPHIC SURVEY REPORT OF COUNCIL'S ASSETS ADJACENT OR NEAR TO THE SITE BEFORE WORK COMMENCES ON SITE, AND ANOTHER, AFTER THE HEAD CONTRACTOR HAS VACATED THE SITE AND BEFORE THE ISSUE OF THE OCCUPATION CERTIFICATE. THE HEAD CONTRACTOR IS SOLELY RESPONSIBLE FOR ANY DAMAGE CAUSED TO COUNCIL'S ASSETS ADJACENT OR NEAR TO THE SITE, AND METRO BUILDING CONSULTANCY (THE CERTIFIER) WILL NOT BE HELD RESPONSIBLE.
 - * IT IS NOTED THAT THE EXISTING STAFF ROOM IS AIR-CONDITIONED. THE AIR-CONDITIONING SPLIT SYSTEM HAS AN INPUT OF LESS THAN 15 W/sqm.
 - * THE EXISTING CEILING FAN IN THE STAFF ROOM SHALL REMAIN.
 - * THE EXISTING CEILING FAN IN THE EXISTING KITCHEN AREA SHALL REMAIN.
 - * THE EXISTING STORE IS NOT AIR-CONDITIONED.
 - * THE DOOR HARDWARE TO NEW DOOR BETWEEN THE KITCHEN AND STAFF ROOM SHALL COMPLY WITH AS1428.1 2009 AND SHALL BE SIMILAR TO THOSE USED IN THE STAGE 1 CLASSROOM REFURBISHMENT.



1 STAFF ROOM - DEMOITION & NEW WORKS PLAN

AMT	DATE	DESCRIPTION	DWN	AUTH
A	22.10.13	GENERAL REVISIONS		
B	25.10.13	STEP RAAMP DELETED, NOTES ADDED		
C	5.11.13	GLAZED DOOR DELETED, NOTES CHANGED		

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AMT	DATE	DESCRIPTION	DWN	AUTH

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CONSTRUCTION CERTIFICATE

PROJECT		DWG No.	DWG No.
LOOUAT VALLEY ANGLICAN SCHOOL		CC02	12133
1977 PITTWATER ROAD, BAYVIEW		SHEET SIZE	AMENDMENT
DRAWING TITLE		A3	C
STAFF ROOM ADDITION -DEMOLITION & NEW WORKS PLAN		DRAWN BY	SCALE
		BP	1:50
		DATE	
		19.08.13	

Construction Certificate
Approved documentation

METRO BUILDING CONSULTANCY

Accredited Certifier: Sean Moore – BPG Accreditation No: 0764

Signature:

Certificate No: 13207CC1

Date: 18/11/13

Studio: 1.05, 56 Bowman St, Pyrmont NSW 2009

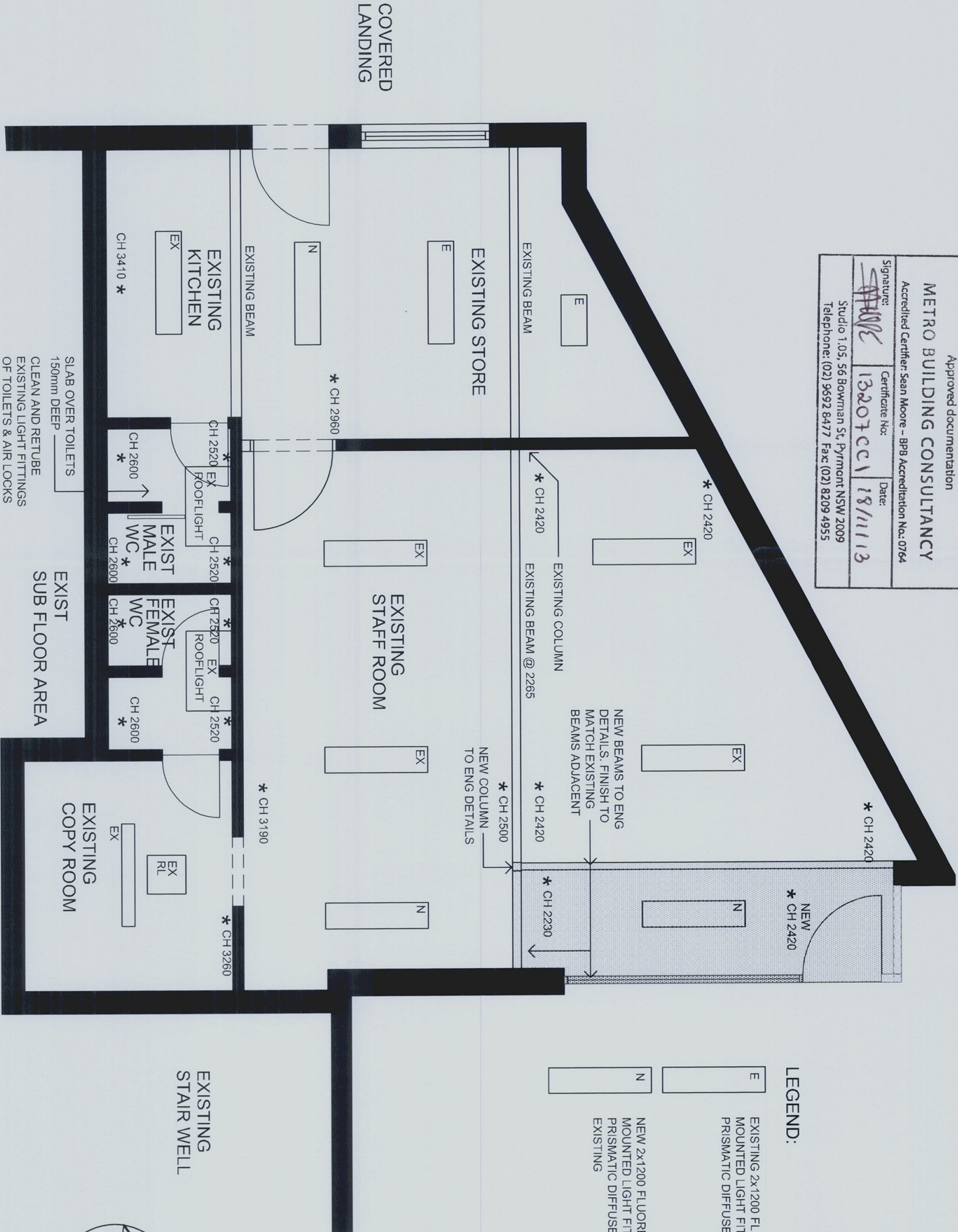
Telephone: (02) 9592 8477 Fax: (02) 8209 4955

LEGEND:

- E

EXISTING 2x1200 FLUORESCENT CEILING
MOUNTED LIGHT FITTING WITH
PRISMATIC DIFFUSER TO REMAIN
- N

NEW 2x1200 FLUORESCENT CEILING
MOUNTED LIGHT FITTING WITH
PRISMATIC DIFFUSER TO MATCH
EXISTING



1 STAFF ROOM –
REFLECTED CEILING PLAN

AMT	DATE	DESCRIPTION	DWN	AUTH

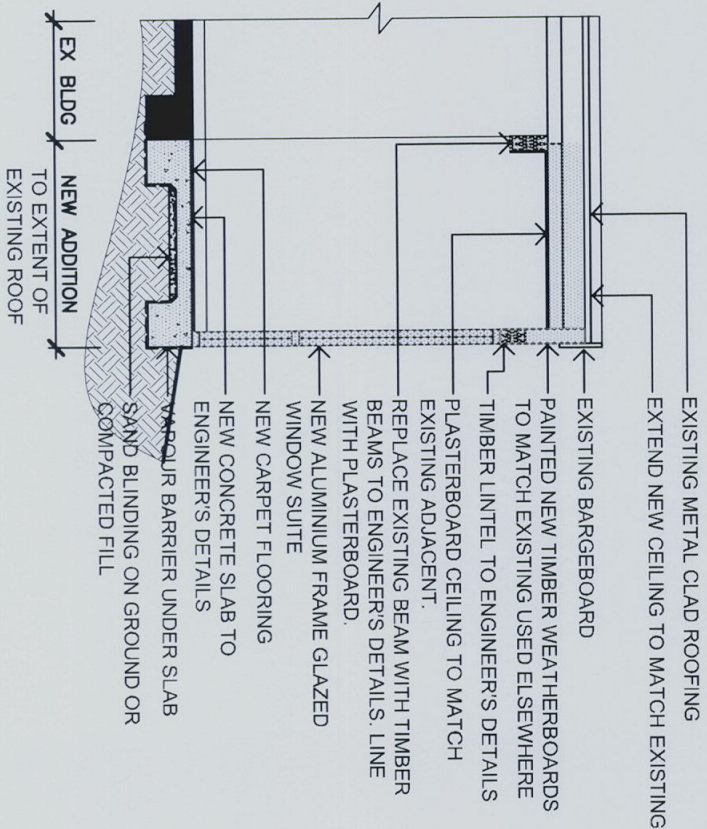
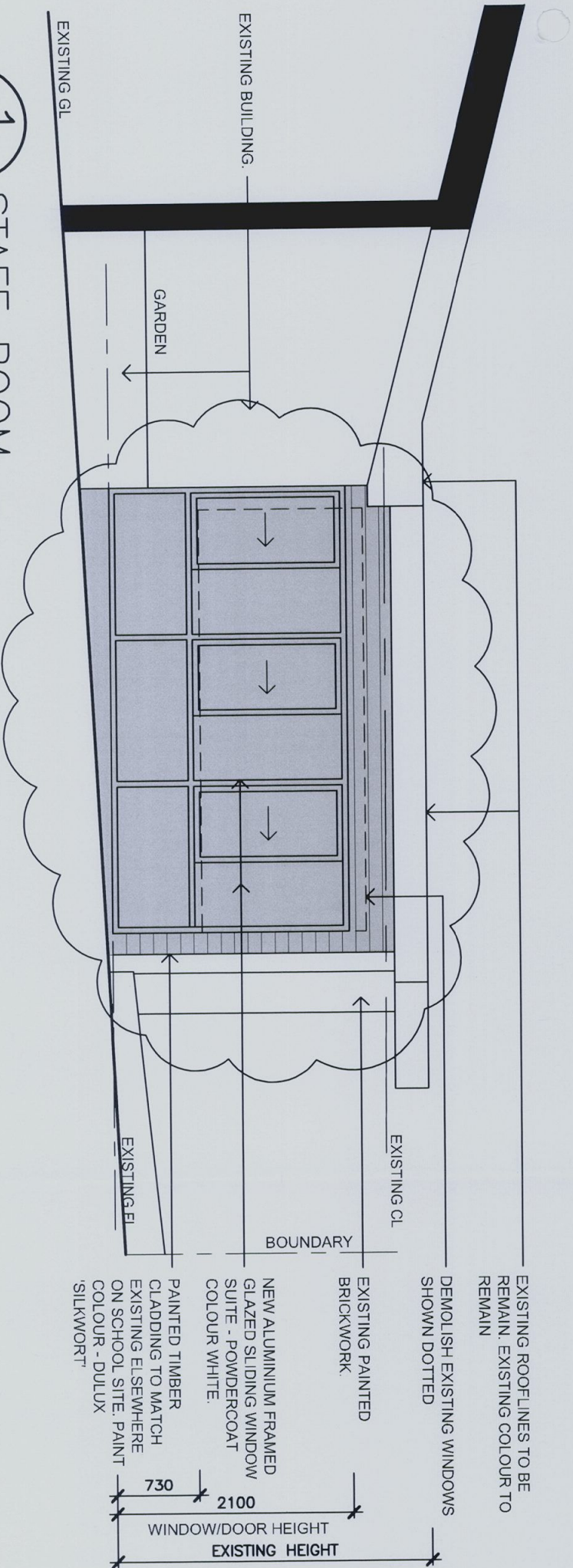
AMT	DATE	DESCRIPTION	DWN	AUTH

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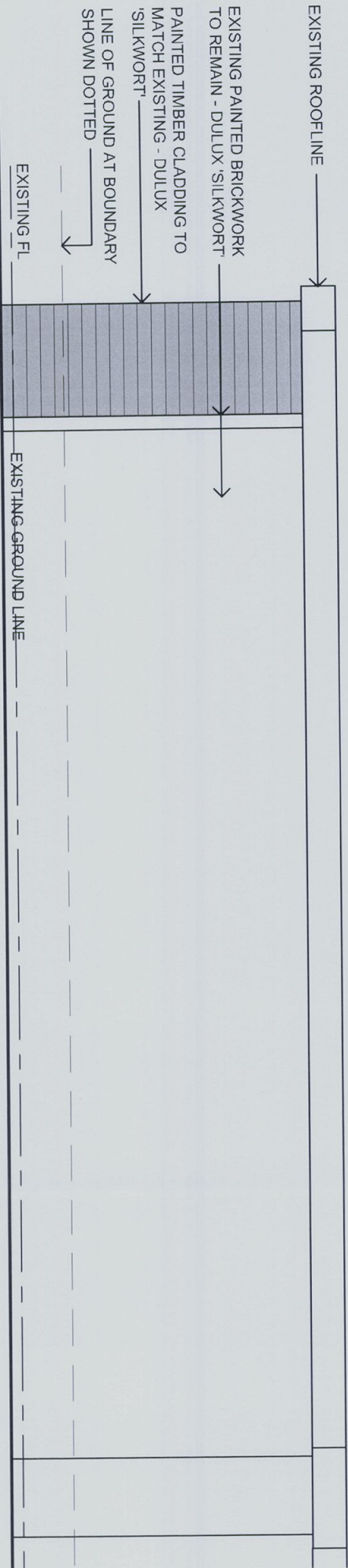
CONSTRUCTION CERTIFICATE

PROJECT		DWG No.	DWG No.	
LOQUAT VALLEY ANGLICAN SCHOOL 1977 PITTWATER ROAD, BAYVIEW		CC03	12133	
DRAWING TITLE		SHEET SIZE		AMENDMENT
STAFF ROOM ADDITION - REFLECTED CEILING PLAN		A3		
DRAWN BY		DATE	SCALE	
BP		19.08.13	1:50	



1 STAFF ROOM -
EAST ELEVATION

3 STAFF ROOM -
SECTION



2 STAFF ROOM -
NORTH ELEVATION

Construction Certificate

Approved documentation

METRO BUILDING CONSULTANCY

Accredited Certifier Sean Moore - BPP Accreditation No: 0764

Signature:

Certificate No:

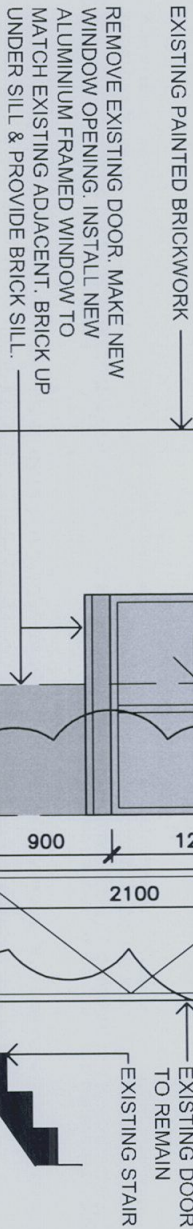
13207cc1

Date:

18/11/13

Studio 1.05, 56 Bowman St, Pymont NSW 2009

Telephone: (02) 9692 8477 Fax: (02) 8209 4955



4 STAFF ROOM -
WEST ELEVATION

CONSTRUCTION CERTIFICATE

AMT	DATE	DESCRIPTION	DWN	AUTH
A	22.10.13	GENERAL REVISIONS		
B	25.10.13	STEP RAMP REMOVED		
C	5.11.13	DOOR DELETED WINDOW EXTENDED		

AMT	DATE	DESCRIPTION	DWN	AUTH

PATTON Architects

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PROJECT		DWG No.	DWG No.
LOQUAT VALLEY ANGLICAN SCHOOL		CC04	12133
1977 PITTWATER ROAD, BAYVIEW		SHEET SIZE	AMENDMENT
DRAWING TITLE		A3	C
STAFF ROOM ADDITION		DRAWN BY	SCALE
ELEVATIONS		BP	19.08.13 1:50

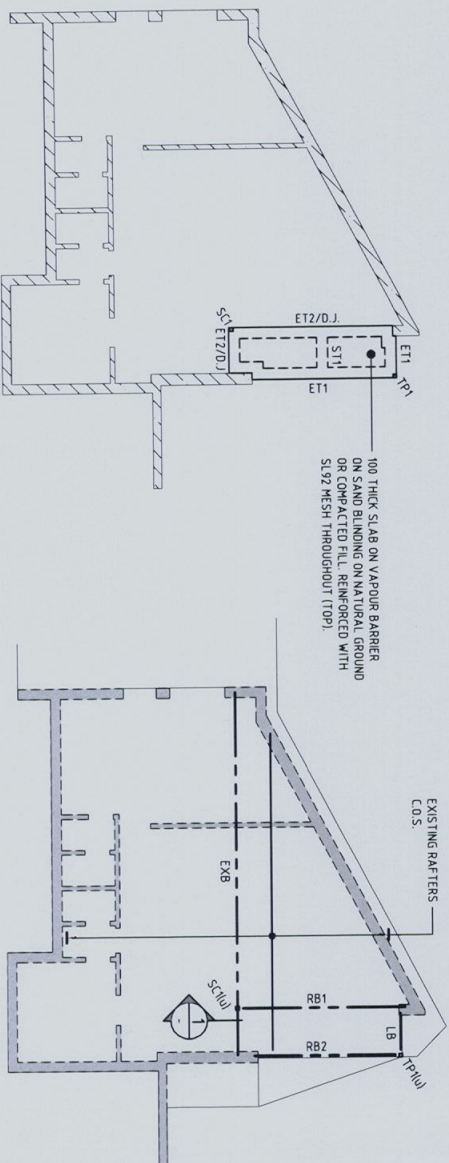
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TENDER ISSUE
NOT FOR CONSTRUCTION



MEMBER SCHEDULE		
MARK	SIZE	DESCRIPTION
SC1	100 x 100 x 6.0 SHS	STEEL COLUMN
TP1	90 x 90 FT SEASONED PINE	TIMBER POST
RB1	27240 x 42 LVL 15	TIMBER BEAM
RB2	2770 x 42 LVL 15	TIMBER BEAM
LB	-	LINTEL BEAM
EXB	-	EXISTING BEAM

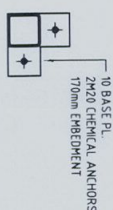
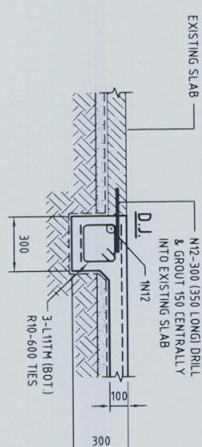
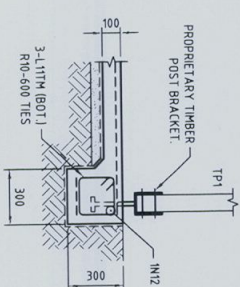


SEMINAR ROOM GROUND

NOTE:
ALL CONCRETE PROFILES i.e. STEPS, HOBS,
RECESSES, ETC. TO ARCHITECTS DETAILS

SEMINAR ROOM ROOF PLAN

NOTE:
ALL TIMBER CONSTRUCTION, BRACING AND
TIE-DOWNS TO AS1684 - RESIDENTIAL
TIMBER-FRAMED CONSTRUCTION CODE



SC1 BASEPLATE DETAILS

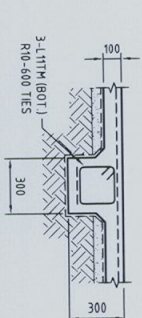
SCALE 1:10

ET1 - EDGE THICKENING DETAIL

SCALE 1:20

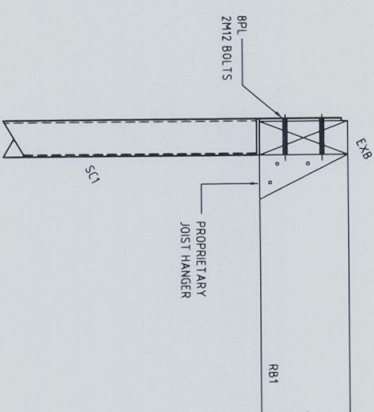
ET2 - EDGE THICKENING DETAIL

SCALE 1:20



ST1 - SLAB THICKENING DETAIL

SCALE 1:2



SECTION

SCALE 1:100



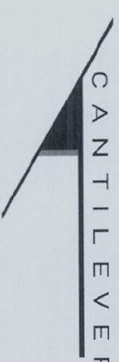
Construction Certificate Approved documentation	
METRO BUILDING CONSULTANCY	
Accredited Certifier: Sean Moore – BPS Accreditation No.: 0764	
Signature: 	Certificate No: 13207CC1
Date: 18/11/13	Studio 1.05, 56 Bowman St, Pyrmont NSW 2009 Telephone: (02) 9692 8477 Fax: (02) 8209 4955

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LOQUAT VALLEY ANGLICAN SCHOOL
1977 PITTSWATER ROAD
BAYVIEW N.S.W. 2104

SYDNEY ANGLICAN SCHOOLS CORP



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Suite 206 Thecurtil Studios 3 Gloucester Street Newtown NSW 2042 Australia
[02] 9565 4292 | mail@cantiliverengineers.com.au | cantiliverengineers.com

SEMINAR ROOM GROUND
PLAN, SECTIONS AND DETAILS

STRUCTURAL DRAWING

ENGINEER	DRAWN	DATE	SCALE
D.H.	M.E.	MAY '13	1:100 UN

JOB NUMBER	DRAWING NUMBER	REVISION

00827 S1.01 A

CERTIFIED