

the certification group
enhancing building performance

R# 219384
\$30-00
23/7/07

23 July 2007

Pittwater Council
PO BOX 882
MONA VALE 2103

Dear Sir/Madam,

**Re: Development Application No: N0021/07
Our Construction Certificate No: 138/2007
Premises: 5 Forest Road, Warriewood**

Please find attached a copy of the following:-

- Construction Certificate, stamped approved plans and relevant documentation.
- Notice to Commence Building Work.
- Appointment of a Principal Certifying Authority.

In accordance with the regulations we have enclosed a cheque for the sum of \$30.00 for the submission of the Part 4A certificate.

Should you have any further enquiries please do not hesitate to contact us and we will be pleased to assist you.

**NB:(Please forward receipt for the above \$30.00 fee to The Certification Group P/L.
PO Box 870 Narrabeen NSW 2101)**

Yours faithfully,

Mark Wysman- Director
The Certification Group P/L

Unit 3/6 Wilmette Place Mona Vale NSW 2103 . PO Box 870 Narrabeen NSW 2101
tel 9944 8222 . fax 9944 6330 . email: info@thecgroup.com.au . www.thecgroup.com.au . acn 111 092 632



CONSTRUCTION CERTIFICATE DETERMINATION

Issued under the Environmental Planning and Assessment Act 1979
Section 109C (1) (b), 81A (2) and 81A (4)

CONSTRUCTION CERTIFICATE NO: 138/2007

DETERMINATION

Decision: Approved

Date of Decision: 23 July 2007

SUBJECT LAND

Address: 5 Forest Road, Warriewood

Lot No, DP: Lot 13 DP 1083731

DESCRIPTION OF DEVELOPMENT

Shade Structure

APPLICANT

Name: Marta Maria College

Address: 5 Forest Road, Warriewood

Contact Number: (tel) tel 9997 7044 (Contact Person Mark Suters)

OWNER

Name: Marta Maria College

Address: 5 Forest Road, Warriewood

Contact Number: (tel) tel 9997 7044

PLANS AND SPECIFICATIONS

The development is to be carried out in compliance with the following plans and documentation listed below and endorsed with "The Certification Group" stamp.

DRAWING NUMBER	DATE
Architectural Plan No's: DA-01 & DA-02 (dated Nov 06) prepared by Sunshade Australia and Site plan No AWD-101 prepared by Architecture interiors Project Management (dated 11/01/07)	See Adjoining dates

ATTACHMENTS

Structural Plan No's: S00 Rev A (dated 17.10.06) & 1014-S01 Rev B (dated 25/06/07) prepared by Northrop Consulting Engineers	See Adjoining dates
Form 2 - Geotechnical Risk Management prepared by Paul Stubbs & Todd Halliday	28/06/2007
Specification on shade material & colour prepared by Halifax Vogel Group	Feb 2007
Sydney Water Quick Check Stamp ref 5338403	18/04/2007
Construction Certificate Application Form	16/07/2007

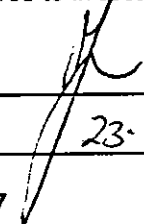
CERTIFICATE

I certify that work completed in accordance with documentation accompanying the application for this certificate (with such modifications as verified by the undersigned as may be shown on that documentation) will comply with the requirements of the Environmental Planning and Assessment Regulation, as are referred to in section 81A(5) of the Environmental Planning and Assessment Act, 1979"

SIGNATURE

DATE OF ENDORSEMENT

CERTIFICATE NO



 _____ 23-7-07

 138/2007

CERTIFYING AUTHORITY

Name of Certifying Authority
 Name of Accredited Certifier
 Registration No
 Contact No
 Address

THE CERTIFICATION GROUP P/L
 Mark Wysman
 BPB 0449 - NSW Building Professionals Board
 PH (02) 9944 8222, FAX (02) 9944 6330
 PO BOX 870 NARRABEEN NSW 2101

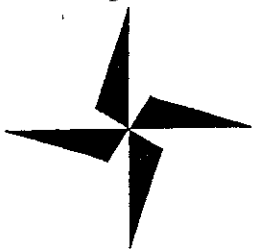
DEVELOPMENT CONSENT

Council
 Development Consent No
 Date of Determination

Pittwater Council
 N0021/07
 26th March 2007

**BUILDING CODE OF AUSTRALIA
 CLASSIFICATION**

10a



the certification group
enhancing building performance

APPLICATION FORM

Made under the Environmental Planning and Assessment Act 1979, Sections 81A(2)(4), 84A, 85A, & 109C (1)(b),
Environmental Planning and Assessment Regulation 2000, clauses 126(1), 139(1), or 157(1)
To complete this form, please place a cross in the boxes and fill out the white sections as appropriate.

Application Sought

- Complying Development Certificate
 Occupation Certificate

- Construction Certificate
 Principal Certifying Authority

Office Use Only
CC: 138/2007
Job: 157/07

Subject Land

Address 5 FOREST ROAD WARRIEWOOD

Lot No, DP, SP, vol/fol. Etc DP 104 2213 LOT 12

Details of the applicant

Name /Company MATER MARIA CATHOLIC COLLEGE

Contact Person _____

Postal Address 5 FOREST ROAD WARRIEWOOD

Postcode N 2102 State NSW

E-mail msuters@mmcc.dbb.catholic.edu.au

Daytime telephone 02 9997 7044

Fax 02 9997 6042

Mobile _____

Applicant Signature As Below

Date _____

Consent of Owner(s)

I/We as the owner/s of the above property authorise for either Mark Wysman, or Wayne Treble to provide Construction Certification and to act as the Principal Certifying Authority for the subject building works, including site inspections and to lodge the Notice of Commencement / Appointment of the Principal Certifying Authority with the relevant Council.

Name(s)/ Company MATER MARIA CATHOLIC COLLEGE ON BEHALF OF TRUSTEES OF ROMAN CATHOLIC CHURCH, DIOCESE OF BROKEN BAY

Address 5 FOREST ROAD WARRIEWOOD

Postcode 2102 State NSW

Phone No 02 9997 7044

Mobile _____

Fax 02 9997 6042

Signature of Registered owner(s). Company stamp or seal to be affixed if applicable

W. Treble

Date 16/7/07



Description of the work proposed

Type of work proposed:

New Building Additions / Alterations

Class of Building under Building Code of Australia 10a.

Description of the work SHADE STRUCTURE

Construction Cost of Works \$ 17 200

Details of Builder

Contact Person SUNSHADE AUSTRALIA

Name /Company DOC LAWSON

Fax 02 9974 4580 Mobile 02 9974 5019

Daytime telephone _____ Email sales@sunshade.com.au

Builders address 10 BOY 287 AVALON BEACH NSW Postcode 2107

Details of the relevant Development Consent granted

Consent No. N00 21/07 Date the consent was granted 26 MAR 2007

Applicant Checklist

- Complete Application Form – Pages 1 & 2
- Attach supporting documentation as nominated on Page 3
- Complete statistical Return on Page 4

Private Policy

The information you provide in this notice is required under the Environmental Planning and Assessment Act 1979 if you are going to erect a building. If you do not provide the information to the consent authority, you cannot commence the work. The information will be held by the consent authority and by the council (if the council is not the consent authority). Please contact the certification group if the information you have provided in this notice is incorrect or changes.

Date of receipt (To be completed by Certifying Authority)

Date 20.7.07.



STATISTICAL RETURN FOR AUSTRALIAN BUREAU OF STATISTICS

What is the site area of land?

Area in square meters 5.64

Gross floor area of existing building? If no existing building, write NIL

Area in square meters N/A

What is the existing building or site used for at present?

Main Uses EDUCATION

Other Uses _____

Does the site contain dual occupancy?

Yes No

Gross floor area of proposed building?

In square meters N/A

What will the proposed building be used for?

Main Uses shade structure

Other Uses _____

How many dwellings?

N/A

Are pre-existing at this property?

Dwellings _____

Are proposed to be demolished?

Dwellings _____

Are proposed to be constructed?

Dwellings _____

Are attached to an existing building?

Dwellings _____

Are attached to a new building?

Dwellings _____

How many storeys will the building consist of?

Storeys _____

What are the main building materials? (Please tick appropriate boxes)

WALLS

- Full Brick
- Brick Veneer
- Concrete or Stone
- Steel
- Fibrous Cement
- Timber/weatherboard
- Cladding- aluminium
- Curtain glass
- Other
- Unknown

ROOF

- Aluminium
 - Concrete or Slate
 - Tile
 - Fibrous Cement
 - Steel
 - Other
 - Unknown
- N/A

FLOOR

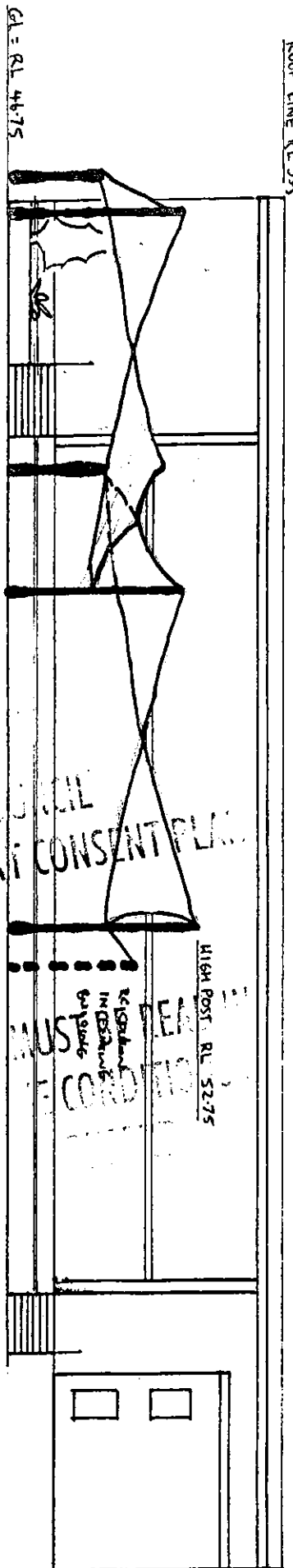
- Concrete or slate
- Timber
- Other
- Unknown

N/A

FRAME

- Timber
- Steel
- Aluminium
- Other
- Unknown

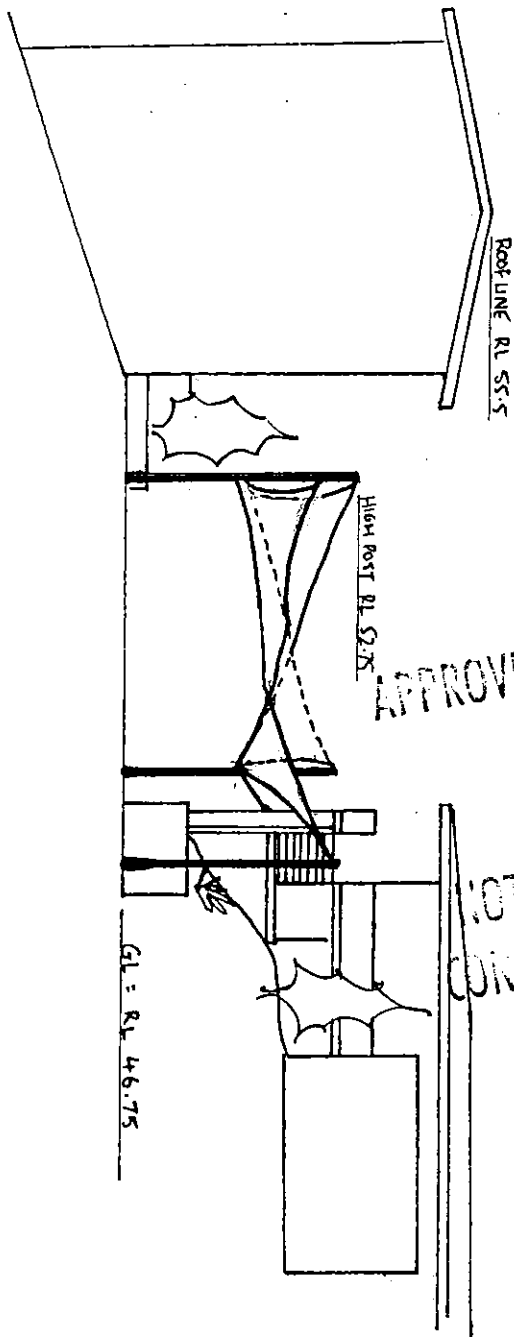
ROOF LINE RL 55.5



NORTH ELEVATION (1:200)

MUST BE CONDUCTED IN ACCORDANCE WITH THE CONSENT PLAN

NOTE: THESE PLANS ARE TO BE CONJUNCTION WITH THE CONSENT PLAN



EAST ELEVATION (1:200)

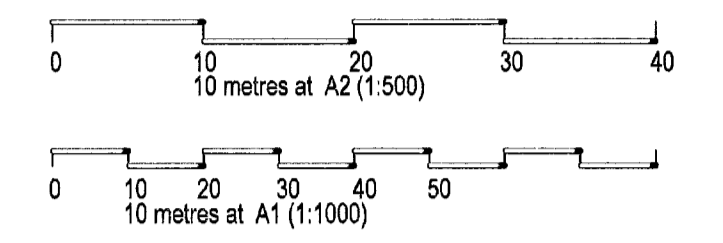
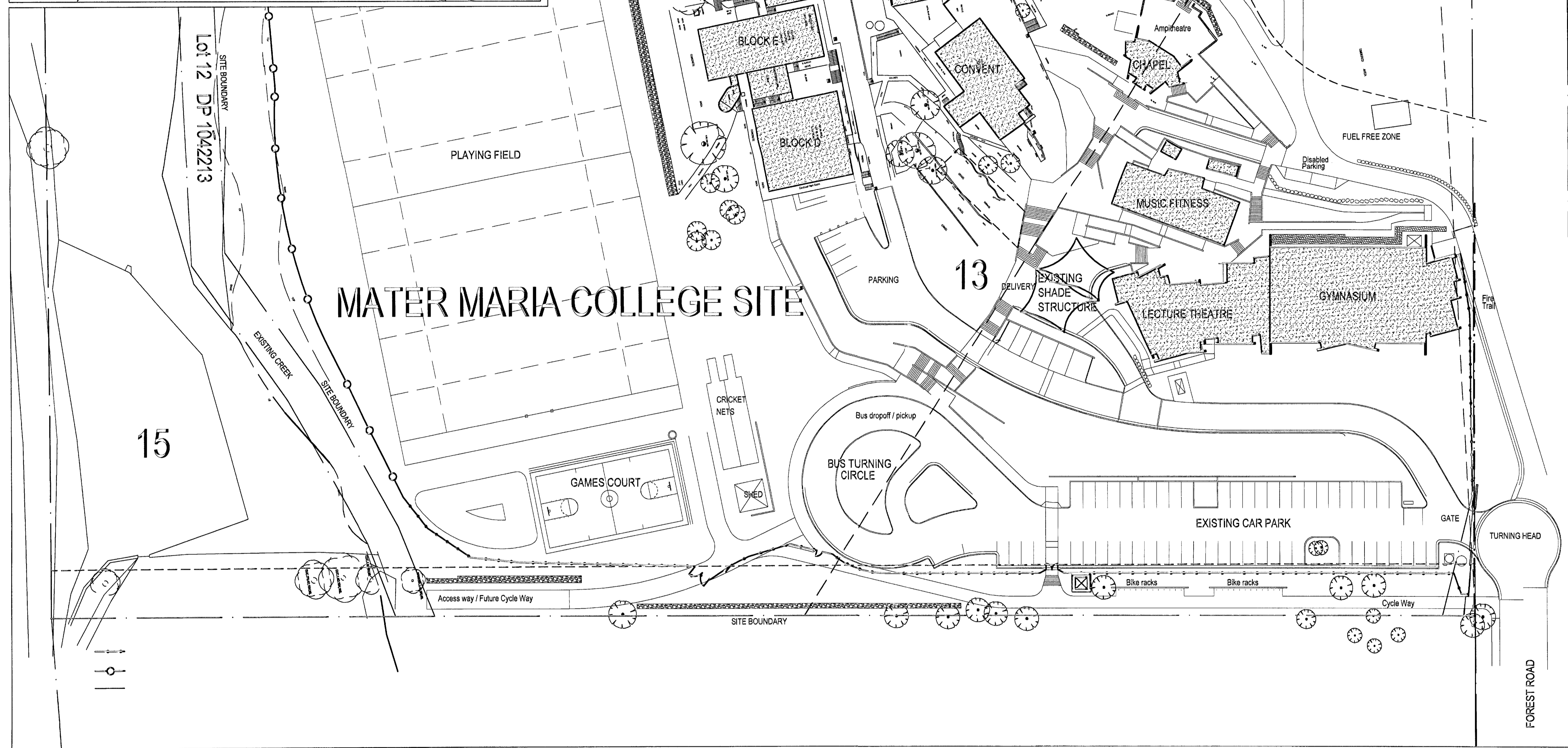
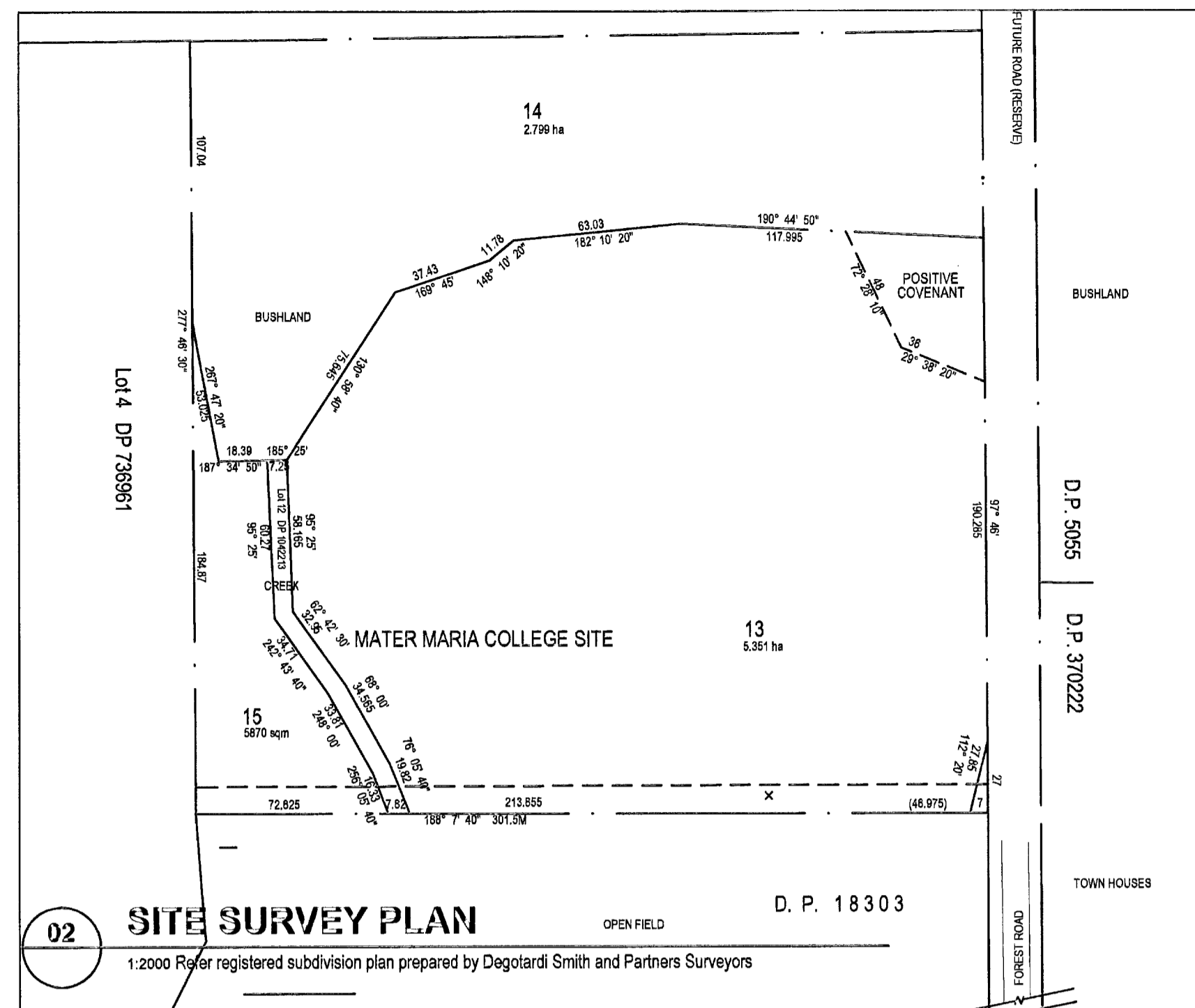
THE CERTIFICATION GROUP PTY LTD
APPROVED CONSTRUCTION CERTIFICATE
DOCUMENTATION.

MATER HANA COLLEGE		
FOREST RD. WAREEMOOD		
SHADE STRUCTURE PROPOSAL		
SONSHADE AUSTRALIA ©		
SCALE:	DATE:	DWG:
1:200	NOV '06	

DA-02

This drawing shows design features and elements of a design prepared by Fulon Trotter & Partners and is to be used only for work authorized in writing by the designers. It cannot be copied, directly or indirectly, in whole or in part, nor shall it be used for any other building purposes. Unauthorised use will be considered an infringement of these rights.

Figured dimensions take precedence over scale dimensions. Contractors must verify all dimensions on site before commencing any work or making shop drawings.



DA	Development Application	110107 GI
REV.	DESCRIPTION	DATE INT.

ARCHITECTURE
 INTERIORS
 PROJECT MANAGEMENT
 HEALTH PLANNING

Brisbane
 26 Astor Terrace
 P O Box 353
 Spring Hill QLD 4004

1 07 3291 1511
 f 07 3291 1500

Tweed Heads
 Level 1
 40 Francis Street
 P O Box 389
 Tweed Heads NSW 2485

1 07 5536 6911
 f 07 5536 7174

Sydney
 Level 3
 28 Spring Street
 Bond Junction
 NSW 2022

1 02 9389 8541
 f 02 9389 3143

MATER MARIA COLLEGE
 FOREST ROAD, WARRIEWOOD
 PROPOSED ADDITIONAL SHADE STRUCTURES

PROJECT TITLE
SITE PLAN
SITE SURVEY

CHECKED	ARCHITECT	PARTNER
SCALE	DRAWN	DATE
AS SHOWN	GI	01/07
PROJECT NUMBER	DRAWING NUMBER	
7002-WW-02B	AWD-101	DA

01 SITE PLAN
 1:500

THE CERTIFICATION GROUP PTY LTD
 APPROVED CONSTRUCTION CERTIFICATE DOCUMENTATION

SUN SHADE AUSTRALIA

CONSTRUCTION ISSUE

DRAWN A.Sarkiss DESIGNER M.D'Urso JOB MANAGER T.Halliday JOB VERIFIER T.H

GENERAL

- G1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH SPECIFICATIONS AND OTHER CONSULTANTS DRAWINGS.
- G2. ALL DISCREPANCIES SHALL BE REFERRED TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
- G3. DO NOT SCALE DRAWINGS.
- G4. ALL WORKMANSHIP, TESTING, MATERIALS AND SUPERVISION ARE TO BE IN ACCORDANCE WITH THESE SPECIFICATIONS, THE OCCUPATIONAL HEALTH AND SAFETY ACT 1983 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. UNLESS OTHERWISE SPECIFIED FOR SPECIFIC INSTANCES IN THE DESIGN DRAWINGS, THE ARRANGEMENT, DESIGN AND INSTALLATION OF TEMPORARY WORKS REMAINS THE RESPONSIBILITY OF THE CONTRACTOR. (THE CONSULTING ENGINEER HAS DESIGNED THE PERMANENT STRUCTURE).
- G7. TEMPORARY BRACING AND SUPPORT OF STRUCTURE IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE MAINTAINED DURING ALL STAGES OF CONSTRUCTION.
- G8. THE STRUCTURAL COMPONENTS DETAILED ON THESE DRAWINGS HAVE BEEN DESIGNED IN ACCORDANCE WITH SAA CODES. REFER TO INDIVIDUAL SITE DRAWINGS FOR WIND LOADING DESIGN CRITERIA.

FOUNDATIONS

- F1. UNLESS NOTED OTHERWISE, THE FOUNDATIONS HAVE BEEN DESIGNED ON THE BASIS OF 300mm MAXIMUM OF TOP SOIL UNDERLAIN BY STIFF CLAY WITH AN ALLOWABLE BEARING PRESSURE OF 150 kPa.
- F2. A RISE OF 1m AND A RUN OF 1.5m SHALL NOT BE EXCEEDED FOR THE LINE OF SLOPE BETWEEN ADJACENT FOOTINGS OR EXCAVATIONS.
- F3. FOOTINGS SHALL BE LOCATED CENTRALLY UNDER POSTS UNLESS NOTED OTHERWISE.
- F4. WHERE ADDITIONAL EXCAVATION IS REQUIRED DUE TO UNSATISFACTORY FOUNDATION MATERIAL, POUR 10MPa MASS CONCRETE TO THE UNDERSIDE OF FOOTINGS.
- F5. ENSURE THAT THE STABILITY OF ADJACENT BUILDINGS IS MAINTAINED DURING ALL STAGES OF CONSTRUCTION.

CHEMICAL ANCHORS

- CA01. UNLESS NOTED OTHERWISE, CHEMSETS SPECIFIED IN THESE DRAWINGS REFER TO RAMSET CHEMSET INJECTION 801 (GALVANISED).
- CA02. ALTERNATIVE CHEMICAL ANCHORS MAY BE SUBSTITUTED WITH PRIOR PERMISSION FROM THE SUPERINTENDENT.
- CA03. MINIMUM EDGE DISTANCE AND SPACING SETOUT OF THE ANCHORS ARE SPECIFIED ON THESE DRAWINGS. IF THE INSTALLED DISTANCES ARE LESS THAN THAT SPECIFIED NOTIFY THE SUPERINTENDENT FOR INSTRUCTION.
- CA04. CHEMICAL ANCHORS ARE TO BE STRICTLY INSTALLED TO MANUFACTURERS INSTALLATION PROCEDURE.
- CA05. DIAMETER OF HOLES TO MANUFACTURERS SPECIFICATION FOR NOMINATED BOLT/BAR DIAMETER. DRILL HOLES USING A ROTARY PERCUSSION DRILL. DO NOT CORE DRILL HOLES.
- CA06. CLEAN AND DEGREASE BOLTS/BARS PRIOR TO INSTALLATION.
- CA07. ENSURE CHEMICAL IS ALLOWED TO FULLY CURE IN ACCORDANCE WITH MANUFACTURER'S DETAILS PRIOR TO LOADING BOLTS/BARS.

STEELWORK

- S1. FABRICATE AND ERECT STRUCTURAL STEELWORK IN ACCORDANCE WITH AS4100.
- S2. PROVIDE HOLES, CLEATS AND FLING FOR TIMBER FRAMING, FINISHES, ETC. SHOWN ON ARCHITECTURAL DRAWINGS.
- S3. ALL BOLTS, SCREWS, HOLD DOWN BOLTS, MASONRY ANCHORS SHALL BE HOT DIP GALVANISED TO AS1214.
- S4. MINIMUM YIELD STRESS:
 - HOT ROLLED SECTIONS = 300MPa
 - SQUARE HOLLOW SECTIONS = 350MPa
 - RECTANGULAR HOLLOW SECTIONS = 350MPa
 - CIRCULAR HOLLOW SECTION = 350MPa
- S5. SURFACE TREATMENT UNLESS NOTED OTHERWISE:
 - PROTECTED FROM WEATHER - CLASS 1 CLEAN. (MECHANICAL BRUSH ONLY). APPLY 50 MICRONS OF ALKTO PRIMER (SP1-A IN AS/NZS2312).
 - EXPOSED TO WEATHER - LP1, LP2, LP3, LP4, LP5, LP6, GZLP OR GZSELF FINISH TO AS/NZS2312.
 - CONTRACTOR TO PROVIDE DETAILS OF THE SELECTED PAINT SYSTEM.
 - BUILT INTO AN EXTERNAL MASONRY WALL - CLASS 2.5 BLAST CLEAN, FOLLOWED BY 70 MICRONS OF INORGANIC ZINC SILICATE MP1-A AS/NZS 2312 OR GALVANISED WITH MINIMUM COAT OF 600g/sq.m.
 - (IF GALVANISING IS THE FINISHED COATING ADD):
 - SELF FINISH REFERS TO THE STANDARD OF GALVANISING FINISH REQUIRED WHEN AESTHETIC APPEARANCE IS NEEDED. IT IS ADDITIONAL TO THE STANDARD OF FINISH REFERRED TO IN AS/NZS 4680:1999 FOR THE PURPOSES OF DECORATIVE USE. THIS SPECIFICATION SHALL BE PROVIDED TO THE CONTRACTOR PRIOR TO COMMENCEMENT OF GALVANISING.
 - THE SURFACE FINISH OF THE COATING SHALL BE FREE FROM RUINS, DIPS, SPKES, UNEVEN SURFACES AND ROUGHNESS. THE COATING THICKNESS SHALL BE UNIFORM WITH A MAXIMUM DEVIATION OF +/- 10% FROM THE COATING THICKNESS NOMINATED IN AS/NZS 4680:1999. THE APPEARANCE AND SURFACE CONDITION OF THE COATING SHALL TAKE ACCOUNT OF THE NEED FOR VISIBLE UNIFORMITY AND BE ABLE TO COPE WITH HANDLING AND PHYSICAL CONTACT IN PUBLIC AREAS.
 - DAMAGE TO THE COATING THAT DOES NOT EXCEED 0.2sq.m MAY BE REPAIRED USING A ZINC STICK IN ACCORDANCE WITH AS/NZS 4680:1999 WITHIN 48HRS. COMPONENTS CONTAINING AREAS OF DAMAGE EXCEEDING 0.2sq.m SHALL BE STRIPPED AND REGALVANISED. NOTE: REPAIR USING ZINC RICH PAINT IS NOT ACCEPTABLE
 - SPECIAL NOTE: STEEL USED SHALL CONTAIN BETWEEN 0.15 AND 0.22 PERCENT SILICON, AND A MAXIMUM OF 0.05 PERCENT PHOSPHOROUS. TEST CERTIFICATES SHALL BE SUBMITTED TO VERIFY THIS BEFORE FABRICATION.
 - S6. BOLT SYMBOLS:
 - 8.8/S - SNUG FIT
 - 8.8/TF - FULLY TENSIONED FRICTION TYPE (USE LOAD INDICATOR WASHERS)
 - 8.8/TB - FULLY TENSIONED BEARING TYPE (USE LOAD INDICATOR WASHERS)
 - S7. HIGH STRENGTH BOLTS (8.8) ARE NOT TO BE WELDED.
 - S8. UNLESS NOTED OTHERWISE, USE:
 - 10mm GUSSET, FIN AND END PLATES.
 - M16 8.8/S BOLTS.
 - 6mm CONTINUOUS FILET WELDS MADE WITH E4818 MILD STEEL ELECTRODES.
 - ALL WELDS SP CATEGORY

CONCRETE

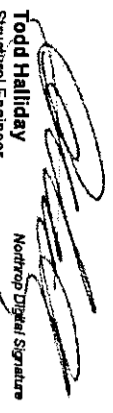
- C1. CARRY OUT ALL CONCRETE WORK IN ACCORDANCE WITH AS3600 AND MATSPEC CONCRETE STANDARDS.
- C2. CONCRETE SHALL OBTAIN A COMPRESSIVE STRENGTH OF 20 MPa AFTER 28 DAYS.
 - SLUMP = 80mm
- C3. HOLD DOWN BOLTS SHALL BE HOT DIPPED GALVANISED.
- C4. U.N.O. CLEAR CONCRETE COVERS SHALL BE:

ENVIRONMENT	COVER
- MEMBERS IN DIRECT CONTACT WITH THE GROUND	50mm
- MEMBERS SEPARATED FROM GROUND BY MEMBRANE	30mm
- MEMBERS IN EXTERIOR ENVIRONMENTS	40mm
- C5. REINFORCEMENT SYMBOLS:
 - S = STRUCTURAL GRADE PLAIN ROUND BAR TO AS1302 (250MPa)MP
 - N = HOT ROLLED DEFORMED BAR TO AS/NZS 4571 (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.
- C6. MINIMUM CONCRETE COVER TO STEEL POSTS IN FOOTINGS SHALL BE 100mm.

THE CERTIFICATION GROUP PTY LTD
APPROVED CONSTRUCTION CERTIFICATE
DOCUMENTATION.

WARNING
PLEASE NOTE: A comprehensive check of the Structural Design has not been carried out. The stamping of this STRUCTURAL PLAN by The Certification Group P/L does not relieve the Structural Engineers responsibility to certify the structural adequacy of this development including any variations that may occur during construction.

ISSUE	AMENDMENT	DATE	VERIFIED	APPROVED
A	For Construction	17.10.06	T.H	T.H


Todd Halliday
Structural Engineer
BE ME Studios MIEAust CPENG NPER 975270

NORTHROP ENGINEERS
CONSULTING ENGINEERS
GRAFTON BOND STORE
60 Hickson Road
Sydney, NSW 2000
Australia
P.O. Box 1171
Sydney - Wollongong
Newcastle - Tarragal
Canberra
ABN 82 064 775 089
Email: sydney@northrop.com.au

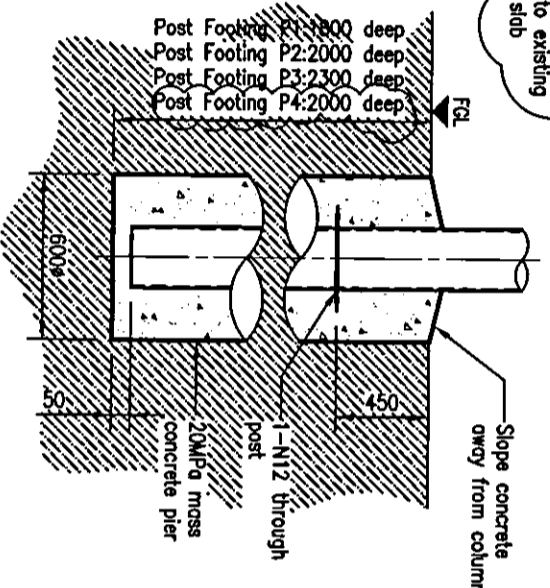
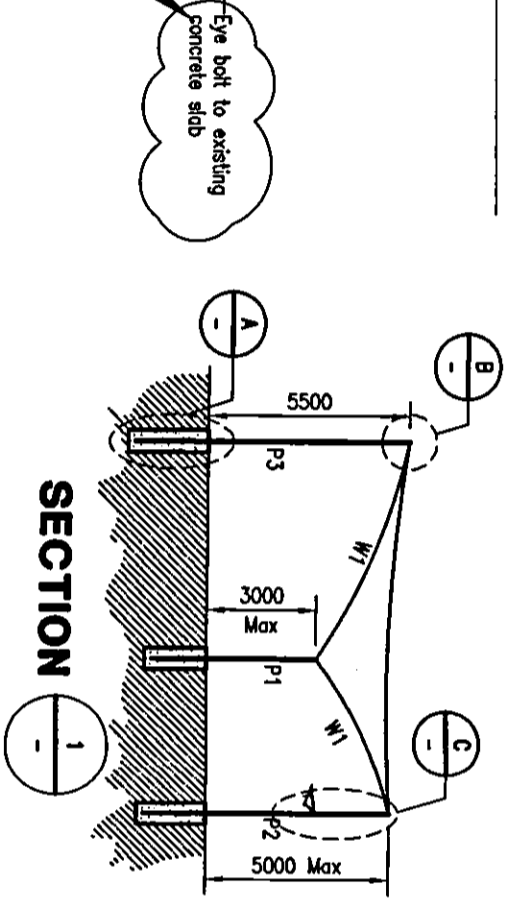
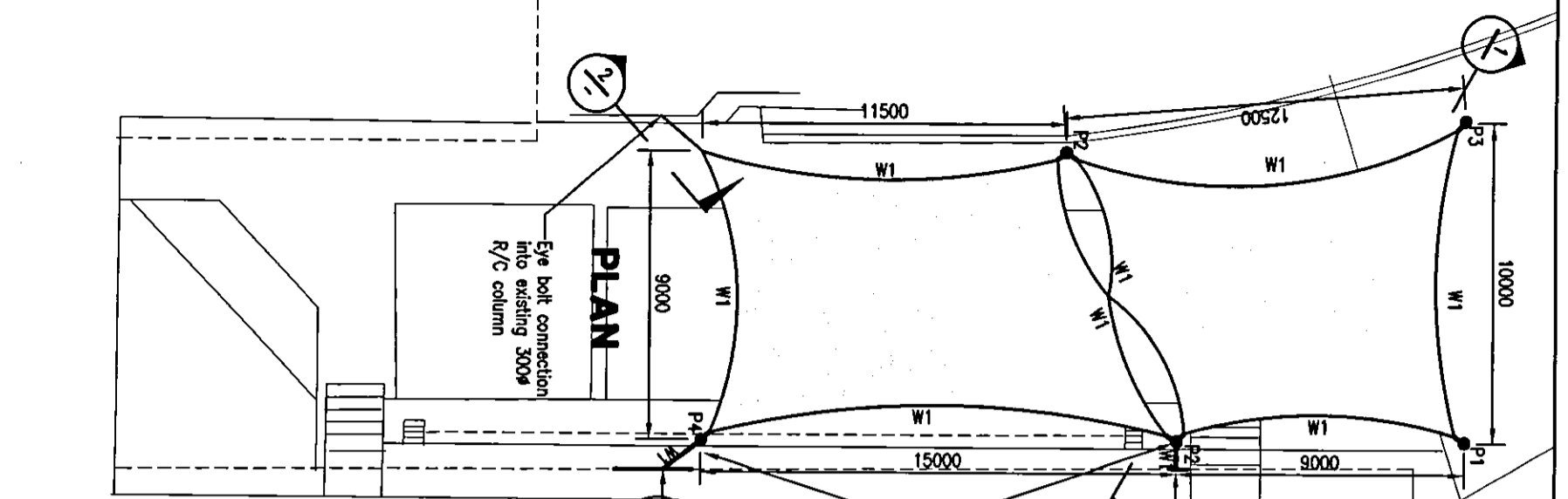
SUN SHADE AUSTRALIA
Tel: 9794 5019 Fax: 9794 4580
www.sunshade.com.au

PROJECT
**SUNSHADE AUSTRALIA
STRUCTURES**

DRAWING TITLE
STRUCTURAL NOTES

JOB NUMBER
06444
DRAWING NO.
S00
DATE: Oct 06
DRAWN: Aramseen
REV
A

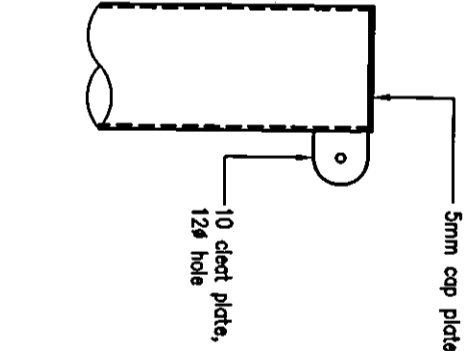
ALL DIMENSIONS TO BE VERIFIED ON SITE BEFORE MAKING SHOP DROPS ON COMINGING ANY WORK DRAWING NOT TO BE USED FOR CONSTRUCTION UNLESS VERIFICATION SIGNATURE HAS BEEN ADDED. THE COPYRIGHT REMAINS WITH NORTHROP ENGINEERS.



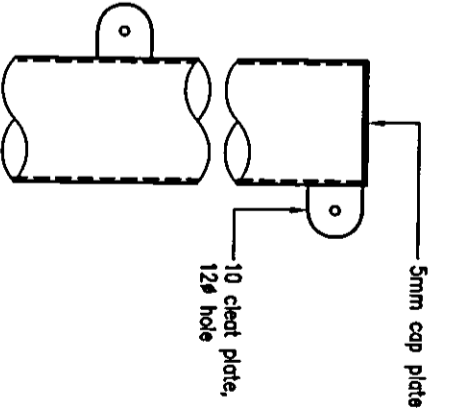
DETAIL A

Eastern Retainings Reduced to avoid existing Retaining Wall Footing W1 Cables added to reduce additional Loads on Retaining Wall

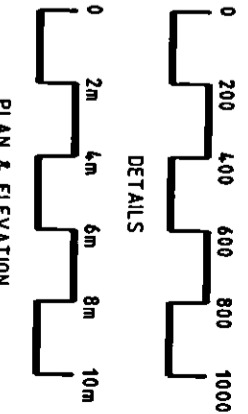
DETAIL B



DETAIL C



SECTION 2



MEMBER SCHEDULE		
MARK	SIZE	COMMENTS
POSTS		
P1	168.3 x 6.4 CHS GR350	Max Height 3000
P2	219.1 x 4.8 CHS GR350	Max Height 5500
P3	273.1 x 6.4 CHS GR350	Max Height 6000
P4	273.1 x 6.4 CHS GR350	Max Height 6000
WIRES		
W1	6mm GR2070	

- NOTES**
- This drawing is to be read in conjunction with 06444 S00.
 - Basic Criteria:
U.L.S. Design Wind Speed - 40m/s.
Region - A
Terrain Category - 3.
 - Assumed Foundation Conditions:
Stiff Clay or Compacted Fill.
150kPa allowable Bearing Capacity.
300mm Topsoil.
 - The foundations for this Structure have been designed for a 100 year design life.
 - This drawing is to be read in conjunction with Geotechnical engineering Report By Jeffrey & Katsikas Pty Ltd No. 15427512.rpt dated 21 December 2006
 - Foundations are to be inspected by a Geotechnical Engineer

Todd Halliday
Structural Engineer
BE MEAWET Engng NPER 975270

THE CERTIFICATION GROUP PTY LTD
APPROVED CONSTRUCTION CERTIFICATE
DOCUMENTATION.

ISSUE	AMENDMENT	DATE	VERIFIED	APPROVED
A	For Construction	05.12.06	T.H	T.H
B	For Construction	25.06.07	T.H	T.H

NORTHROP CONSULTING ENGINEERS
GRAFTON ROAD STORE
80 Grafton Road
Sydney, NSW 2000
Phone: (02) 9241 4333
Fax: (02) 9241 4333
Email: sydney@northrop.com.au

SUN SHADE AUSTRALIA
P.O. Box 1171
Australia Square 215
Sydney - Westmead
Newcastle - Terrigal
Canberra

PROJECT
**SUNSHADE AUSTRALIA
WATER MARIA
COLLEGE**
5 FOREST RD, WARRIEWOOD

DRAWING TITLE
**STRUCTURAL NOTES,
PLAN, DETAILS AND
ELEVATIONS**

JOB NUMBER
06444
DRAWING NO.
1014-S01
DATE: Nov '06
DRAWN: Ardmisen
REV B

GEOTECHNICAL RISK MANAGEMENT POLICY FOR PITTWATER
FORM NO. 2 - To be submitted with detailed design for construction certificate

Development Application for SHADE STRUCTURE @ MATEA MARIA CATHOLIC COLLEGE
 Name of Applicant

Address of site FOREST ROAD, WARRIEWOOD

Declaration made by Structural or Civil Engineer in relation to the Incorporation of the Geotechnical issues into the project design

I, TODD HALLIDAY on behalf of NORTHROP ENGINEERS
 (insert name) (trading or company name)

on this the 28/06/2007
 (date)

certify that I am a Structural ~~or Civil~~ Engineer as defined by the Geotechnical Risk Management Policy for Pittwater. I am authorised by the above organization/company to issue this document and to certify that the organization/company has a current professional indemnity policy of at least \$2million. I also certify that I have prepared the below listed structural documents in accordance with the recommendations given in the Geotechnical Report for the above development


Geotechnical Report Details:

Report Title: GEOTECHNICAL ASSESSMENT # 15427 SLIPT
 Report Date: 21 DECEMBER 2006
 Author: L.S. SPEECHLEY

Structural Documents list:

1014-SOI B Job # 06444
500 A

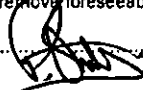
We are ~~am~~ also aware that Pittwater Council relies on the processes covered by the Geotechnical Risk Management Policy, including this certification as the basis for ensuring that the geotechnical risk management aspects of the proposed development have been adequately addressed to achieve an "Acceptable Risk Management" level for the life of the structure taken as at least 100 years unless otherwise stated and justified.


Todd Halliday (name)  (signature)

Declaration made by Geotechnical Engineer or Engineering Geologist in relation to Structural Drawings

~~We~~ ^{We} prepared and/or technically verified the abovementioned Geotechnical Report as per Form 1 dated 21/12/06 and now certify that ~~I~~ have viewed the above listed structural documents prepared for the same development. ~~I am~~ ^{We are} satisfied that the recommendations given in the Geotechnical Report have been appropriate taken into account by the structural engineer in the preparation of these structural documents.

~~We are~~ ^{We are} aware that Pittwater Council relies on the processes covered by the Geotechnical Risk Management Policy, including this certification as the basis for ensuring that the geotechnical risk management aspects of the proposed development have been adequately addressed to achieve an "Acceptable Risk Management" level for the life of the structure taken as at least 100 years unless otherwise stated and justified in the Report and that reasonable and practical measures have been identified to remove foreseeable risk.

Signature 
 Name
 Chartered Professional Status
 Membership No.



Paul Stubbs
 MIEAust CPEng
 Chartered Professional Engineer
 Membership No. 130775

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 DOCUMENTATION.

industrial materials

Extrablock Datasheet

Description: Extrablock is designed for use in tension structures, sails, awnings & umbrellas. Manufactured using 16 gauge monofilament and tape, Extrablock has high tensile strength and near equal elongation in warp, weft & bias directions.

* Fire Retardancy comes standard in Sunblaze, Silver, Forest Green & True Blue while all colors have exceptionally high UVR & UPF levels. *- colours nominated*

Application: Tension Structures, Sails, Roll Up & Fixed Awnings, Umbrellas

Weight: 330gsm

Roll Width: 3mtrs

Roll Length: 32mtrs center folded and 50 & 32mtr layflat rolls

Colors: Sunblaze, Cream, Beige, Silver, Forest Green & True Blue
(Available soon: Black, Charcoal & Latte)

Construction: 16 Gauge Mono Yarn & Tape in HDPE

UVR Levels: Sunblaze 97.6, Cream 95.4, Beige 95.3, Silver 97.3, Forest Green 95.7, True Blue 97.1

UPF Levels: Sunblaze 41, Cream 21, Beige 21, Silver 37, Forest Green 23, True Blue 34

Shade Cover: Sunblaze 94.9, Cream 81.4, Beige 86.8, Silver 97.5, Forest Green 93, True Blue 94.5

* **FR AS1530.2:** Flammability 1, Spread Factor 0, Heat Factor 1

FR AS1530.3: Ignitability - 13, Spread of Flame - 7, Heat Evolved - 2, Smoke - 5

C.F.R: Meets California Fire Marshalls requirements, Title 19, Section 1237

UV Warranty: 10 Years

Burst Strength: Mean 3000 KPa, AS2001.2.4 -1990

Strip Tensile Test: Warp 18 kN/m, Weft 26 kN/m, ASTM D 4595-86

Tear Strength: Warp 200N, Weft 196N, ASTM D 1424

Elongation: At Break Warp 68%, Weft 58%, ASTM D 4595-86

Break Force: (Grab test) Warp 979N, Weft 1228N, AS2001.2.3.2 - 2001

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Product Performance and Suitability: All of the descriptive information and recommendations for use of this product shall only be used as a guide. Furnishing such information in no event constitute a warranty of any kind. Buyers shall independently test and determine the suitability of the material for the purpose for which it is intended. No one is authorized to give any warranty, guarantee or make any representation in addition or contrary to the above.
(Feb 2007)

Halifax Vogel Group in Australia & New Zealand

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**SYDNEY WATER
APPROVED**

1. Position of structure in relation to Sydney Water's assets is satisfactory.
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. 5338403

Reece, Mona Vale
Quick Check Agent on behalf of
SYDNEY WATER

Per: REECE

18/4/07