

# Notice to council of determination of application COUN for a complying development certificate

NOTICE TO (Insert c	ouncil's details and a	ddress)		
Council name				
Pittwater Council			<u> </u>	
SECTION A. NOTIC	E			
As required by clause 1 determination of the foll	30(4) of the EP&A Regulat owing application for the is	tion 2000 (the Regulation), notic ssue of a complying developme	ce is hereby given of the ent certificate (CDC):	
Applicants name	Diana Lynn Relph C/- Ardomex Pty Ltd			
Development address	Lot 16 DP 6195 - Sec C - No. 24 Grandview Parade Mona Vale NSW 2103			
Date received	07/04/2014	Date determ	Date determined 14/05/201	
SECTION B. Attacl	hments (tick appropri	ate box(es))		,
Application for CDC	Determination of application	Complying Development Certificate	Record of inspection made under clause 129B of the Regulation	Other endorsed documents lodged with the application for the CDC or received under clause 127 of the Regulation
SECTION C. Certif	ying Authority			
Name	<del></del>			
Domenic Di Matteo			Signature	
Accreditation No.			~-	
1869			Date 14/05/2014	



ABN: 92 161 548 625 PO Box 80, Thornleigh NSW 2120 ph: 9473 5488 fax: 9980 2166

#### **COMPLYING DEVELOPMENT CERTIFICATE**

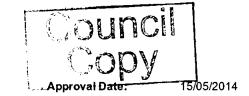
Signature:

Dom Di Matteo

**Complying Development Certificate** 

Number:

XC2014-/00275



The Development is Complying Development and (if carried out as specified in this Certificate) will comply with all Development Standards applicable to the development and with such other requirements prescribed by this Clause 134 of the EP & A Act Regulation concerning the issue of this Certificate. I certify that the proposed development is complying development and if carried out as specified will comply with all development standards applicable to the development and with all requirements prescribed by the Environmental & Assessment Act Regulation 2000 concerning the issue of this Certificate. This Certificate authorises the applicant (or the person having the benefit of this Certificate) to carry out the development in accordance with the conditions set out in the Certificate and the plans and specifications that have been approved.

**Date Application Received:** 

07/04/2014

**Date of Lapse of Certificate:** 

15/05/2019

Application Date:

07/04/2014

Council:

Pittwater Council

Name of Certifying Authority:

Accreditation No:

Accreditation Body:

Dom Di Matteo

1869

**BUILDING PROFESSIONALS BOARD** 

Applicant: Address:

Diana Lynn Relph C/- Ardomex Pty Ltd 18/22 Leighton Place Hornsby NSW 2077

Contact Number:

0405 588 144

Owner:

Diana Lynn Relph

Address:

24 Grandview Parade Mona Vale NSW 2103

Contact Number:

Site Address:

Lot 16 DP 6195 - Sec C - No. 24 Grandview Parade Mona Vale NSW 2103

**Description of Development:** 

Construction of a Secondary Dwelling.

Building Code of Australia Classification: 1a

.. ..

R2

Value of Work:

\$50000.00

**Builder Details** 

Name:

Zoning:

TBA

Licence / Permit Number:

Address:

**Contact Number:** 

Approved Plans and Documents

Plans Prepared By	Drawing Nos.	Dated		
Ardomex Modular Buildings	Dwg: 001A, 001SM - Issue D	27/03/2014		
Ardomex Modular Buildings	Dwg: 001A, 002A, 003A - Issue C1, 001A - Issue D1	15/05/2014		
Ardomex Modular Buildings	Dwg: 001A - Issue D1	08/05/2014		
Ardomex Modular Buildings - Building Specifications	Pages 1 to 20 of 20	23/04/2014		
Compliance Certificate for building Design or Specification	Sheets 1 to 2 of 2	01/05/2012		
Basix Certificate	527387\$	25/02/2014		

Engineer Details	Drawing Nos.	Dated
ANA Civil Pty Ltd - Design Certificate	Sheet 1 of 1	25/02/2014
Versiclad	Dwg: Gen 01, DET - 01 to DET - 13, GA - 01 to GA - 02 - Revision A	01/05/2012
Innovative Construction Engineering Solutions Pty Ltd	Sheets 1 to 8 of 8	01/05/2012
Innovative Construction Engineering Solutions Pty Ltd	Sheets 1 to 3 of 3	01/05/2012
ANA Civil Pty Ltd - Stormwater Certificate	Sheet 1 of 1	21/02/2014

ANA Civil Pty Ltd ANA Civil Pty Ltd Job No. 2014045 - Dwg: 2014045-S1 Job No. 2014045 - Dwg: 2014045-H1 21/02/2014 1802/2014

This Certificate is approved subject to the prescribed conditions listed under Division 2 of the State Environmental Planning Policy (Affordable Rental Housing Code) 2009.

This certificate is approved subject to the conditions contained within Section 136K, 136L, & 136M of the Environmental Planning & Assessment

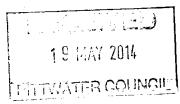
This certificate is approved subject to the conditions contained within Section 136K, 136L, & 136M of the Environmental Planning & Assessment Amendment Regulation 2013, namely 1) The subject development is not authorised to be carried out unless the contribution required by the Local Council's Contribution Plan has been paid as detailed in Section 136H of the EP Act Regulation 2000 (as amended). 2) The subject development is not authorised to be carried out unless a security bond if required by Council has been paid as detailed in Section 136M of the Environment Planning & Assessment Act Regulation 2000 (as amended).





1-3 Thornleigh St, Thornleigh NSW 2120 P: 9473 5488

F: 9980 2166



**APPLICANT: Ardomex Pty Ltd** 

ADDRESS: 24 Grandview Pde, Mona Vale

Please find attached your Complying Development Number XC2014-/00275 for the above address.

Please be advised the Complying Development Certificate has been issued without the Notice of Commencement of Building Work. This means you may not start any work on site prior to receiving a Notice of Commencement of Building Work from D M Certifiers.

To obtain this you must submit your Owner Builder Permit/Home Owners Warranty to our office.

Thankyou

X

**DOMENIC DI MATTEO** 

PRVC 360266.





1-3 Thornleigh St, Thornleigh NSW 2120 P: 9473 5488

F: 9980 2166

# SECTION 1: APPLICATION FORM 1. APPLICATION FOR CONSTRUCTION/COMPLYING DEVELOPMENT CERTIFICATE 2. CONTRACT FOR THE PERFORMANCE OF BUILDING CERTIFICATION WORK 3. PRINCIPAL CERTIFYING AUTHORITY AGREEMENT

Privacy policy – The information you provide in this application will enable your application to be assessed by the certifying authority under the Environmental Planning and Assessment Act 1979. If the information is not provided, your application may not be accepted. The application can potentially be viewed by members of the public. Please contact D M Certifiers if the information you have provided in your application is incorrect or requires modification.

Complying Development Certificate Contract agreement for the performance of the performan	Ormance of Building Certification Work
Engagement as Principal Certify	ring Authority
Date of Receipt of Application: Development Consent No: Name of Consent Authority:	Approval Date: Related Development Consent No:
APPLICANT (This MUST be the Ow Agent) Name/s: Postal Address: 18/22 Leigh Ph:	Mer/Authorised  PTY LTD (BO PIOTROUSKI)  THOM PIACE, HOMSBY NSW 2077  Email: BO@ARDOMEX.COM.AV
LAND TO BE DEVELOPED	Street: GRANDVIEU PO6. DP: 6195 SP:
-sumated cost	O GRANNY FLAT
of works: $950,000$	building: 1A
DETAILS OF BUILDER	
Name: TBA Address:	Licence No: Phone No:
Owners/applicants signature(s): Dated:	1/02/2014
	I - 7 APR 2014

D M Certifiers Pty. Ltd. 1-3 Thornleigh St, Thomleigh, P.O Box 80 Thomleigh NSW 2120 - (02) 9473 5488.



Council

1-3 Thornleigh St, Thornleigh NSW 2120 P: 9980 2155

F: 9980 2166

# INSPECTION REPORT FORM

Applicant:	Inspection Type: Site
	Date Of Inspection: 9.5.14
	Contact on Site: Martin - Ardomex
	Ph: <b>0405 588 144</b> Fax:
Booked By: Katharine	Email:
Address: 24 Grandview Pde, Mona Va	ale
Notes:	
Result:	
The work is satisfactory	
	and proceed with construction
	and request a re-inspection
Contact us immediately price	<del>-</del>
Provide certificate for	
Comments:	
Inspector: Sean Curtis	Date: 9.5.14
Accreditation No: 1796	Signature:
<del></del>	
	V
	V



1-3 Thomleigh St, Thomleigh NSW 2120 P: 9473 5488 F: 9980 2166

#### NOTICE TO NEIGHBOURS - DEMOLITION / BUILDING WORK ABOUT TO COMMENCE

under clause 136AB of the Environmental Planning and Assessment Regulation 2000 Date: ..... Dear neighbour Following the approval of my/our complying development application to demolish the existing dwelling (or state which other building) (and include new development if also proposed) build a new single/two storey dwelling house build a single/two storey addition to the existing dwelling house build a new secondary dwelling build a new group home build a new commercial/industrial building build an addition to the existing commercial/industrial building for my/our property at Lot 16 DP 6195 - Sec C - No. 24 Grandview Parade Mona Vale NSW 2103, I am writing to advise you that I/we expect work to begin on 17/05/2014. Hopefully, you are already aware of these building works following advice of our project sent to all of our neighbours. However, if you do wish to view the building plans, please contact me. Alternatively, the approved complying development certificate (CDC) plans and specifications can be seen at the Council's offices free of charge during their normal office hours. The details of the approved CDC are provided below. Contact details of the Principal Certifying Authority and the principle contractor on site are also provide should you have any concerns about work taking place on my property. Yours sincerely, Applicant's name: Diana Lynn Relph C/- Ardomex Pty Ltd Property address: Lot 16 DP 6195 - Sec C - No. 24 Grandview Parade Mona Vale NSW 2103 Local Government Area: Pittwater Council CDC reference number: XC2014-/00275 Issued by Certifying Authority: Dom Di Matteo Date of Certificate issue: 15/05/2014

**Details of Principal Certifying Authority** Name:

Details of the principal contractor on site

Address:

Dom Di Matteo

Name:

TBA

Name: Address:

Contact No.: 9473 5488

1-3 Thornleigh Street Thornleigh NSW 2120 Address:

Contact No.:

Contact No.:

ABN: 92 161 548 625

LONG
See reve
Surname or Comparation
Given na:

Australia and New Zealand Banking Group Limited

NEWINGTON 4/8 AVENUE OF AMERICAS NSW

s175.00

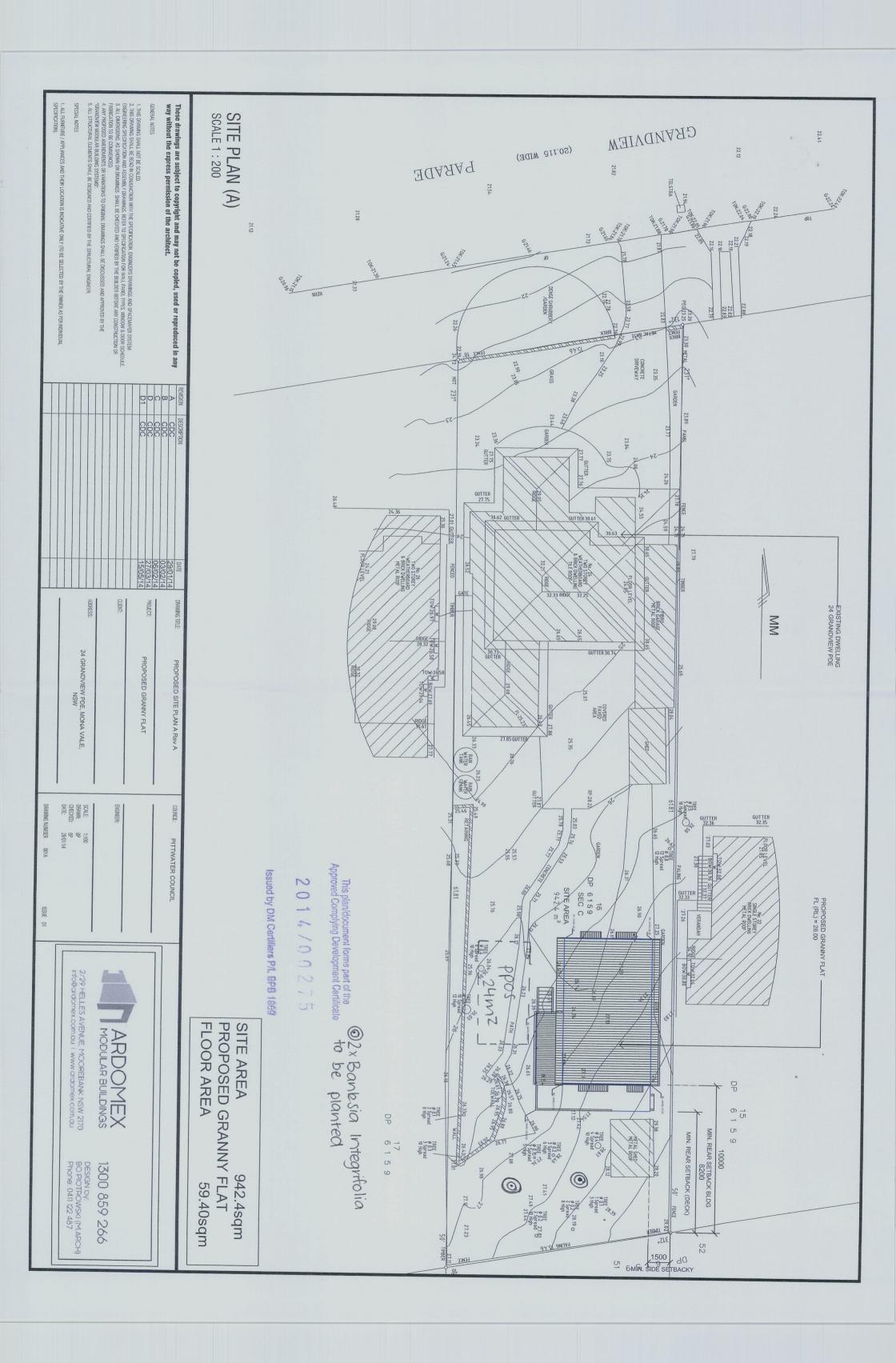


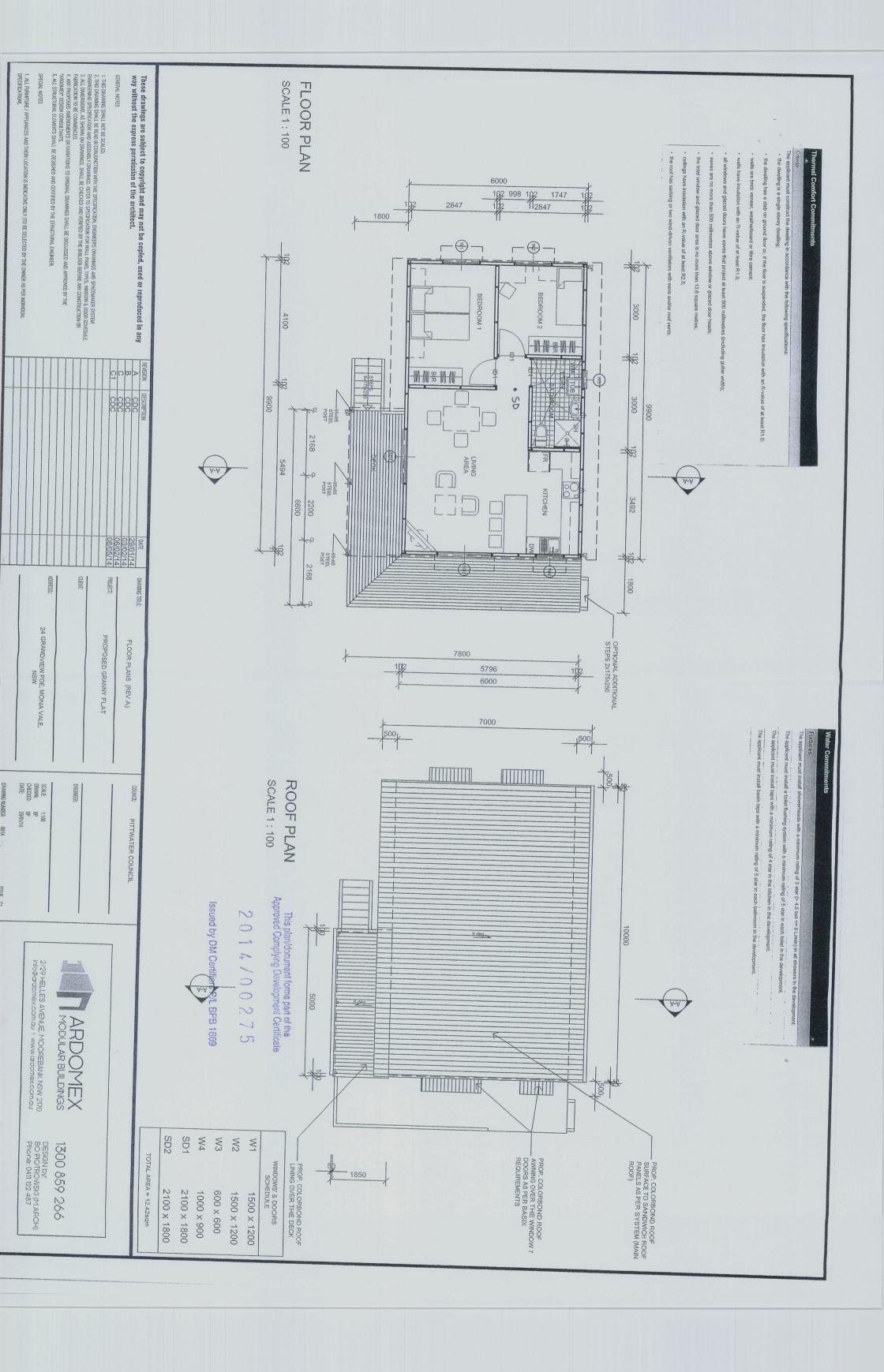
ITALS

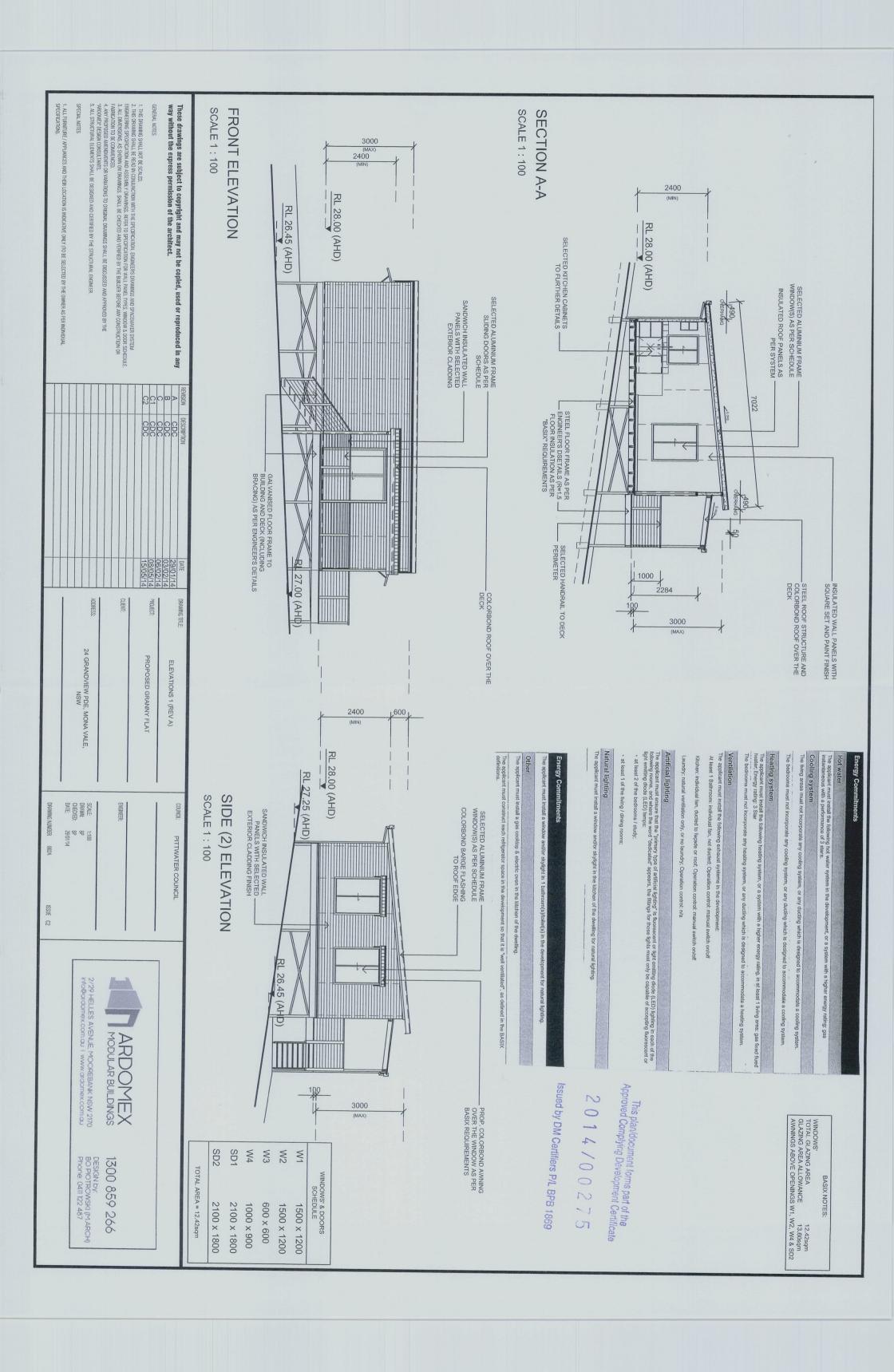
ARDOMEX PTY LTD

POSTAL A No. and 4

H* 0 0 1 0	02 "012"3574 38	49 33108m		
Town/suburb State	MOKNSBY NSW Postcode 2 0	Bus. hours pho	ne 0405	588144
Number and street	24 6 R AND	VIEW PA		
Town/suburb State	MONA VAL NSW Postcode 21			
Estimated start date	21 MOSY201	4 Estimated finish dat	te D 2 / M /	1,2014
Local Council Area  1 DA/CC CDC No. Estimated value of work (see note on back)	PITTWATE XC2014-/	R		.175.
	ove, please provide DA number her er <u>Katharine</u> McL		one 0 2 9 4	735488
Department/Authority  Contract/DA No (circle which)	· · · · · · · · · · · · · · · · · · ·	Contract amount \$ ,		
Levy payable	\$ ,			
Contact person (Print)	-	Phone numb	ber	•
Contact person (Signature)		Da	ite D . M	<b>Y Y</b>
Any false or misleading informa	nation provided on this form may remain provided on this form is true.  Me Lead Signature K	sult in prosecution under Se e and correct to the best of	ection 58A. f my knowledge	5,2014
The state of the s				
	<del></del>			







1. THIS DRAWNIG SHALL NOT BE SCALED.

2. THIS DRAWNIG SHALL BE RAD IN CONJUNCTION WITH THE SPECIFICATION ENGINEERS DRAWNIGS AND SPACEAWER SYSTEM FURDINGS AND SPACEAWER SYSTEM FURDINGS AND SPACEAWER SYSTEM STREET OF THE BUILDER BEFORE ANY CONSTRUCTION OR SCHEDULE.

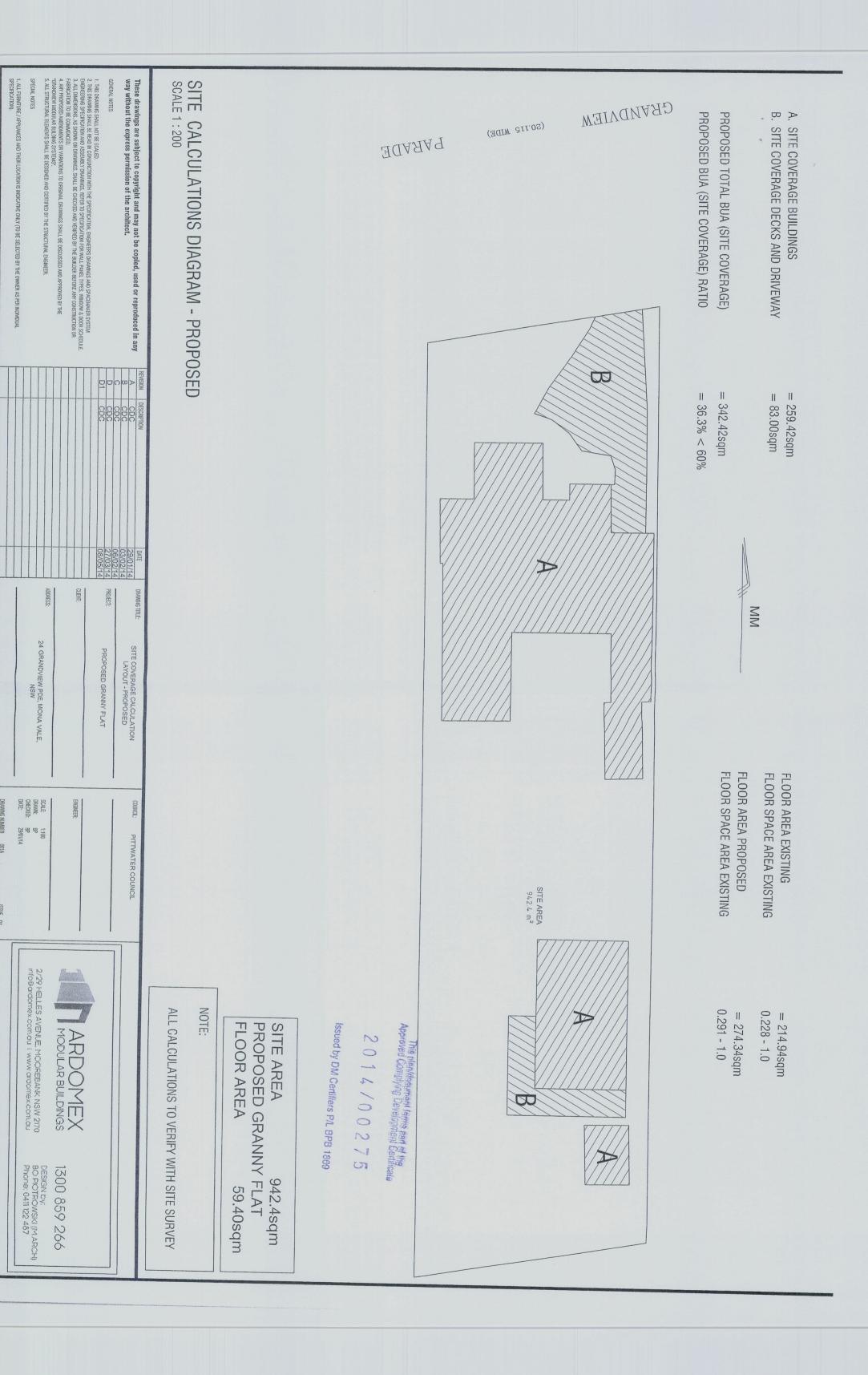
3. ALL DIMERISTONS, A SHOWN ON DRAWNIGS. SHALL BE CHEXED AND VERRIED BY THE BUILDER BEFORE ANY CONSTRUCTION OR FROBICATION TO BE COMMERCED.

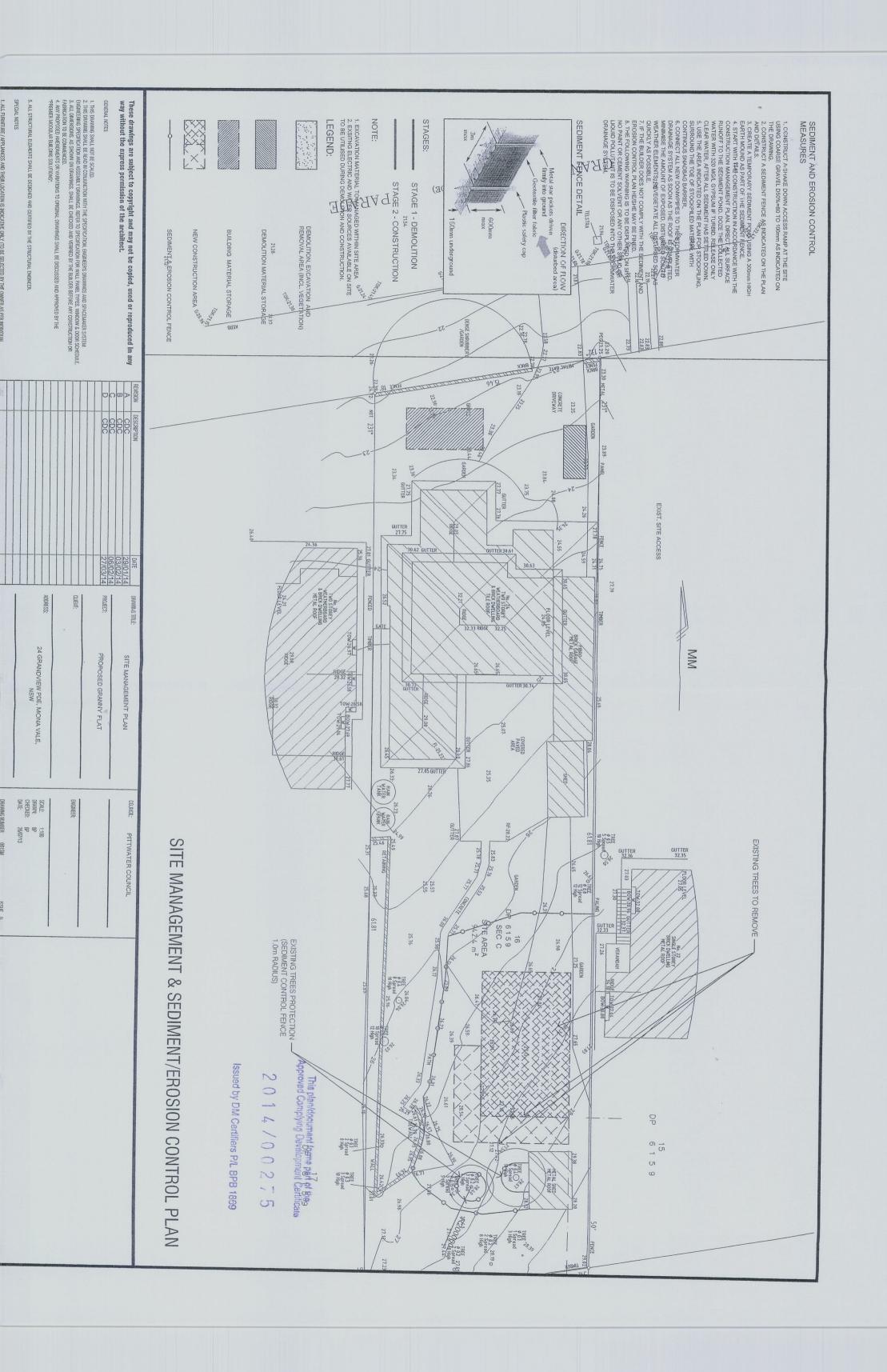
4. ANY PROPOSED AMENIMENTS ON VARIATIONS TO ORIGINAL DRAWNIGS SHALL BE DISCUSSED AND APPROVED BY THE "VADOMICS DESIGN CONSULTANTS." These drawings are subject to copyright and may not be copied, used or reproduced in any way without the express permission of the architect. SPECIAL NOTES SCALE 1:100 REAR (EAST) ELEVATION 3000 (MAX) 2400 S INDICATIVE ONLY (TO BE SELECTED BY THE OWNER AS PER INDIVIDUAL SELECTED ALUMINIUM FRAME SLIDING DOORS AS PER SCHEDULE SANDWICH INSULATED WALL PANELS WITH SELECTED EXTERIOR CLADDING A CDC
B CDC
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C CDC H GALVANISED FLOOR FRAME TO BUILDING AND DECK (INCLUDING BRACING) AS PER ENGINEER'S DETAILS RL 27.25 (AHD) RL 28.00 (AHD) SANDWICH PANELS INSULATED ROOF WITH COLORBOND SURFACE ADORESS: CLIBIT: PROJECT: DRAWING TITLE: 24 GRANDVIEW PDE, MONA VALE, NSW PROPOSED GRANNY FLAT ELEVATIONS 2 (REV A) 3000 SIDE (SOUTH) ELEVATION SCALE 1: 100 SCALE: DRAWN: CHECKED: DATE: BIGINEER: DRAWING NUMBER 1:100 BP BP 29/01/14 PITTWATER COUNCIL COLORBOND BARGE FLASHING TO ROOF EDGE SELECTED ALUMINIUM FRAME WINDOW(S) AS PER SCHEDULE A JAMES AND A MARKET AND A MARK RL 28.00 (AHD) ISSUE C2 This plan/document forms part of the Approved Complying Development Certificate

2014/00275 Issued by DM Certifiers P/L BPB 1869 2/29 HELLES AVENUE, MOOREBANK NSW 2170 info@ardomex.com.au | www.ardomex.com.au SANDWICH INSULATED WALL PANELS WITH SELECTED EXTERIOR CLADDING FINISH ARDOMEX MODULAR BUILDINGS PROP. COLORBOND AWNING OVER THE WINDOW AS PER BASIX REQUIREMENTS W3 W2 SD1 W4 **№**1 DESIGN by: BO PIOTROWSKI (M.ARCH) Phone: 0411 122 487 1300 859 266 TOTAL AREA = 12.42sqm WINDOWS' & DOORS SCHEDULE 2100 x 1800 2100 x 1800 1000 x 900 600 x 600 1500 x 1200 1500 x 1200

BASIX NOTES:

WINDOWS'
TOTAL GLAZING AREA
12.42sqm
GLAZING AREA ALLOWANCE
13.60sqm
AWNINGS ABOVE OPENINGS W1, W2, W4 & SD2





# PROPOSED GRANNY FLAT

ADDRESS OF PROPERTY:
24 Grandview Pde
Mona Vale, NSW
CLIENTS NAME:
Mr & Mrs Relph

DATE: 23 April 2014 (Revision A)

This plan/document forms want of the Approved Complying Development Certificate

2014/00275

Issued by DM Certifiers P/L BPB 1869

# GENERAL BUILDING SPECIFICATIONS

P R O J E C T BY



18: 22 Leighton Pt Hornsby NSW 2077 IntoBardomexicomiau i www.ardomexicomiau 1300 859 266

DESIGN by BO PIOTROWSKI (MIARCH) Phone 0411 122 487

# SPECIFICATION INDEX

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18	"BOXPAN" STRUCTURAL SYSTEM MANUAL BY SPANTEC	

# 01. PRELIMINARIES

#### 01.01 DEFINITIONS

Where used in this specification, the following definitions shall apply to the items listed below:

Principal: Mr & Mrs Relph

Principal Certifying

Authority: First Business Central Pty Ltd

Abs or a.b.s. shall mean as before specified elsewhere in this Specification.

Ahs or a.h.s. shall mean as hereinafter specified elsewhere in this Specification.

Approved shall mean approved by the Principal unless otherwise stated.

Council shall mean Pittwater Council., any of its officers and/or duly appointed representatives.

Directed or selected shall mean directed or selected by the Principal.

Equal to (preceding or following a named product and/or system) shall mean equal in all respects to, in the

sole opinion of the Principal.

General Attendance shall mean electricity, water, scaffolding, attendant labour, storage, protection, taking delivery,

security, use of lifts, hoists etc. and any other facility that may be required for the satisfactory

completion of the Works.

Provide shall mean supply and install.

Subcontract shall mean a Contract between the Subcontractor and a firm approved by the Principal to perform

a section of the Works.

Subcontractor(s) shall include specialised and separate Subcontractor(s) unless expressly directed otherwise.

ARDOMEX shall mean ARDOMEX Pty Ltd

01.02 SITE

The site is located in Mona Vale, 24 Grandview Pde Construction access, materials handling and disposal and parking facilities shall be discussed and agreed with the Building Manager prior to commencement of the work.

The Subcontractor warrants that he has verified all site dimensions and levels, and the existence and location of all services before entering into this Contract.

01.03 MATERIALS, GOODS AND SERVICES

As soon as the Subcontractor is aware of supply and/or delivery difficulties which would or could influence the Programme, it must advise the Principal of the circumstances so that alternatives may be considered.

The above in no way relieves the Subcontractor of its responsibility to obtain the materials, plant, equipment and services required to fulfil the Contract, and at the time they are needed for orderly progress of the Works.

The procurement of import licences, if required, shall be the responsibility of the Subcontractor.

01.04 SHOP DRAWINGS

Shop drawings shall be prepared and submitted for Principal's approval for all work involving fabrication, installation and / or assembly of building components to the extent and applicability to Principal's discretion.

Submit one (1) transparency and one (1) copy to the Principal for examination and, if so required by the Principal, correction and resubmission, at least three (3) weeks before the information on the Drawings is required for fabrication and/or

Relph - Mona Vale project - "ARDOMEX" BUILDING GENERAL SPECIFICATIONS

installation to commence. When circulation of Shop Drawings is required to include Design Consultant(s) submit one (1) transparency and three (3) print copies.

The Principal (and Design Consultants when applicable) shall examine the Shop Drawings for compliance with Design Intent only. This examination shall not diminish the Subcontractor's responsibility for co-ordinating and approving Shop Drawings and for ensuring that they are in Agreement with Contract Documents and correct as to all relevant information.

The Principal (and Design Consultants when applicable) will endorse Shop Drawings to indicate design intent approval, amendments, corrections and the like, but no such endorsements shall constitute an Principal's instruction to carry out Variation work under the Contract unless expressly stated to the contrary.

#### 01.05 SAFETY REQUIREMENTS

The Subcontractor shall comply with the following statutory requirements (and provide evidence of compliance as required):

- Occupational Health and Safety Regulation in Australia, in particular for Construction Work, Certification of Workers and Notification of accidents.
- AS/NZS ISO 14001 Environmental Management.
- AS 4801 Occupational Health and Safety Management Systems.

#### 01.06 Obligations to Prevent Risk of Injury or Damage

The Subcontractor shall:

- Conduct a general hazard identification, risk assessment and control process in relation to the work under the Contract;
- b) conduct a job specific hazard identification and risk assessment and control process at each place where the work under the Contract will be performed;
- c) train, induct and brief all the Subcontractor's employees and agents on safe work practices and their environmental and workplace health and safety obligations and responsibilities before they commence any work under the Contact, as is necessary to enable the employees and agents to perform their work in a safe manner;
- d) maintain:
  - an environmental system consistent with the requirements of AS/NZS ISO 14001 Environmental Management; and
  - a workplace health and safety system consistent with the requirements of AS 4801 Occupational Health and Safety Management Systems. Subcontractors may elect to use any management system framework, structure, or audit tool as required.
- e) ensure that its employees and agents comply with the provisions of all applicable environmental and workplace health and safety legislation regulations, Codes of Practice, New South Wales Work Cover Authority, Environment Protection Authority Guidelines, Australian Standards and Manufacturers' instructions and specifications.

#### 01.07 Powers of the Principal

If the Principal becomes aware that the Subcontractor is:

- a) not executing work under the Contract in compliance with the Subcontractor's environmental or workplace health and safety obligations;
- b) or undertaking work under the Contract in a manner which may endanger the environment or the health or safety of any person;

the Principal shall direct the Subcontractor to immediately remedy that non-compliance or take such action as is reasonably necessary to prevent danger to the environment and/or the health or safety of any person.

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In the event that the Principal is required to issue such a direction, the Principal may direct the Subcontractor to suspend the performance of some or all of the work under the Contract and the Principal shall do so unless satisfied that the non-compliance and/or undertaking of work will be adequately addressed by the issue of directions.

In the event the Principal suspends the performance of some or all work under the Contract, the Principal may by notice in writing to the Subcontractor cease such suspension with effect from a nominated time. Any time so nominated shall be reasonably nominated. Notwithstanding any other provisions of the Contract:

- a) the Proprietor shall not be required to make any payment to the Subcontractor during periods of suspension pursuant to the preceding provisions of this clause;
- b) the Subcontractor shall not be paid for any costs incurred by the Subcontractor as a result of a suspension nor entitled to any extension of time for Practical Completion.

#### 01.08 Subcontractor shall report Incidents

The Subcontractor must immediately notify the Principal of all environmental or workplace health and safety incidents or accidents occurring in the performance of work under the contract, in particular:

- a) All accidents involving injury or death.
- b) All accidents involving loss of time or incidents with accident potential such as equipment failure, structural damage, slides, cave-ins and the like.

#### 01.09 ENVIRONMENTAL PROVISIONS

Comply with the provisions of this clause, the conditions of any Development Consent or Construction Certificate issued for the project and any other Environmental Protection provisions in the Contract and with the requirements of any Statute, Bylaw, Standard and the like related to Environmental Protection.

Observe and make sure that all site personnel observes the Rules and Regulations in force on the Site and comply with all Notices and Instructions issued by the Principal in relation to such Rules and Regulations.

# 01.10 ACTS, STANDARDS, CODES, ETC.

Where referred to in this Specification, all Acts, By-laws, Regulations, Ordinances, Codes, Specifications, Standards, Pamphlets, etc. shall be the latest applicable edition and shall include all corrections to errors, substitutions, amendments and/or revisions thereto.

Standards and other documents adopted by reference in the Building Code of Australia, whether listed hereunder or not, shall form part of the relevant Clauses of this Specification and those of the Specialist Consultants as appended in the

relevant Appendices to this Specification, to the extent that the terms of such Standards or documents are not inconsistent with any express provision of this Contract.

Year of issue for the documents listed below has been expressly excluded, as it is the Subcontractor's responsibility to ensure compliance with current versions of all these.

#### Schedule of Referenced Documents

AS 1170	Minimum design loads on structures (SAA Loading Code).
AS 1191	Acoustics - Method for laboratory measurement of airborne sound transmission loss of building partitions.
AS 1250	The use of steel in structures (SAA Steel Structures Code).
AS 1288	Rules for installation of glass in buildings (SAA Glass Installation Code
AS 1345	Identification of the contents of piping, conduits and ducts.
AS 1428	Design rules for access by the disabled.
AS 1664	Rules for the use of aluminium in structures (SAA Aluminium Structures Code).
AS 1668	The use of mechanical ventilation and air-conditioning in buildings.

Relph - Mona Vale project - "ARDOMEX" BUILDING GENERAL SPECIFICATIONS

AS 1530	Combustibility and flammability test for materials.
A\$ 1905	Components for the protection of openings in fire-resistant walls.
AS 2107	Acoustics - recommended design and reverberation times for building interiors.
AS 2185	Fibrous plaster products.
AS 2293	Emergency evacuation lighting in buildings.
AS 2441	Installation of fire hose reels.
AS 2444	Portable fire extinguishers - Selection and location.
AS 2665	Smoke/heat venting systems - design, installation and commissioning.
AS 3600	Concrete structures.
AS 3610	Formwork for Concrete.
AS 3740	Waterproofing of wet areas within residential buildings.
AS 3786	Smoke alarms.
AS 3999	Thermal insulation - Installation requirements.
ISO 140	Acoustics - Measurement of sound insulation in buildings and building elements.

#### 01.11 NOISE

All noisy work shall be carried out at such time and in such a manner as will suit the convenience and comfort of the building occupants, Council requirements (whether in the Consent Conditions or not) and/or to the approval of the Principal.

No extra money or time will be allowed the Subcontractor owing to noisy work having to be carried out at other than normal working hours, or to the normal working hours having been curtailed by reason of the above paragraph.

All Building Work shall comply with relevant Australian Standards ahs, and the terms of any Development Consent issued by Council.

The Works shall be executed to conform with the following standards:

- AS 2436-1 "Guide to Noise Control on Construction, Maintenance and Demolition Sites" and specifically Section 3 to 6 inclusive.
- AS 1055 'Acoustics Description and Measurement of Environmental Noise' Part 1 General Procedures and Part 2 -Application to Specific Situations.

# 01.12 MAINTENANCE MANUALS

Three (3) copies of Operation and Maintenance Manuals abs are to be supplied prior to issue of Certificate of Practical Completion. These Manuals shall cover not only services as specified elsewhere, but also architectural systems, features and finishes, all to the extent and detail required by the Principal. The format for all Manuals shall be submitted for approval 6 weeks prior to the date for Practical Completion of the Works.

The Subcontractor shall be responsible for the general formatting of the Operation and Maintenance Manuals for its scope of work, including architectural assemblies and finishes, all to the approval of the Principal.

# 01.13 CLEANING UP AND RUBBISH REMOVAL

The Subcontractor to maintain the Works in a clean and tidy condition and remove from the Site daily, and at additional times when particularly requested by the Principal, and legally dispose of all rubbish, reject material and scrap. Crating, packing and wrapping material to be removed immediately to minimise fire hazard.

Clean working conditions must be established and maintained, in particular when finishes are being laid or applied.

Relph - Mona Vale project - "ARDOMEX" BUILDING GENERAL SPECIFICATIONS

#### 01.14 WARRANTIES

The Subcontractor shall obtain, and shall ensure that the Principal will, from the date of Practical Completion, have the benefit of all relevant Warranties applicable to the Subcontract. Note this is a condition precedent to the granting of Practical Completion.

Unless otherwise specified or agreed, Warranties specified in the Contract shall name the Principal as beneficiary and shall be furnished by the Guarantor directly to the Principal.

Supply Warranties for all equipment, finishes, hardware and systems as schedule in the various Trade sections of this Specification for the periods shown. Where no period is indicated, provide warranty period which is standard to the product, service or system.

Warranties will be required to be furnished for (a) supply and fix items and (b) supply only items, as and where nominated above for the periods stated.

#### 01.15 ON COMPLETION

Before issue of the Notice of Practical Completion, the Subcontractor shall hand to the Principal, as applicable to the relevant scope of work:

- a. All Certificates of Compliance issued by Local Authorities.
- Certificates, drainage diagrams and work as executed drawings for all hydraulic, trade waste, mechanical ventilation and air conditioning, fire protection and electrical services.
- c. All as-built drawings, specifications and details in respect of the works.
- d. All Operation and Maintenance Manuals.
- e. All Warranties and Guarantees.

The Subcontractor, upon handing over the Works, shall have carried out and met such particular requirements such that the whole of the Works are ready for immediate occupation including compliance with the Building Code Of Australia approvals as set out under Part 59A thereof in respect of Essential Services final installations.

Provide a completed Certificate of Accreditation for the services listed and pay all costs associated with the issuing of this Certificate. Practical Completion will not be granted until this Certificate has been accepted by the relevant Authorities.

On Practical Completion, the Subcontractor shall have carried out the following work in relation to its scope of work, as applicable:

- a. Removed all rubbish, plant and surplus material, including from ducts, voids and other obscure places.
- b. Replaced damaged, marked or otherwise disfigured parts, fittings and equipment.
- c. Checked and left the work and equipment of all Trades, services and installations in proper condition.
- d. Washed and thoroughly cleaned sanitary fixtures.
- e. Washed cleaned and polished various floor finishes.
- f. Cleaned glass to shine.
- g. Greased doors and windows, checked and oiled hardware, checked operating gear for doors, windows, louvres and other moving parts.
- h. Checked all light, data and power points for operation.
- Handed over keys for each area of the Building fitted with plastic tags having appropriate labelled inserts and placed in proper order in two (2) Telkee cabinets.
- j. Provision is made in appropriate parts of the Specifications to furnish the Principal with operating instructions, maintenance schedules and the like for equipment and services, and "as-built" Drawings of installations.
- k. Lodged with the Principal certificates and/or letters of satisfactory completion of the various Authorities' requirements.

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I. Forwarded to the Principal fire-rating certificates as required for various materials and Works.

02. CONCRETOR (to arrange by Principal and to supply & fix by Subcontractor)

#### 02.01 GENERAL

All concrete to be ready mixed from an approved supplier.20 MPa for concrete in footings, 25 MPa for concrete used elsewhere.

#### 02.02 FOOTINGS

Provide the concrete footings in accordance with Engineers details, Local Authorities requirements and/or Building Code of Australia.

#### 02.03 FILLED OR UNSTABLE GROUND

If because of the nature of the ground, the above is considered unsuitable the footing will be constructed in accordance with details provided by Engineer. The cost of engaging the Engineer and the additional works involved, will borne by the owner. It is advised to the Owner to engage the Engineer, to justify the method for construction and if to be requested by Local Authorities, to prepare the Geotechnical Report.

03. METALWORK (material supplied by ARDOMEX – where applicable)

#### 03.01 SCOPE

This section provides for, in addition to particular Metalwork, all Metalwork specified in conjunction with other items and, in general, all Metalwork required to construct and complete the Work.

#### 03.02 MATERIALS AND WORKMANSHIP (where applicable)

Materials specified in this section shall comply with the relevant SAA Codes and shall be best quality free from manufacturing marks and defects. "BOXPAN" steel structural elements to be used for floor framing as per factory attached specifications and details.

Factory applied finishes where specified shall be adequately protected and any damage shall be made good to the approval of the Principal.

The various manufactured items in this section shall be carried out in the best manner by specialist firms as nominated or approved by the Principal.

All fabrication work shall be neatly cut, framed assemble together as required by manufacturer's and engineer's instruction and specifications. Separate incompatible metals. Provide thermal movement in joints and fastenings as appropriate.

# 03.03 GENERAL

All m.s. bolts and fixings in metalwork shall be treated with rust inhibiting primer. All bolts and fixings in galvanised work shall be galvanised. Galvanising shall be by the hot dipped process. All ungalvanised mild steel metal work shall be thoroughly cleaned and given one (1) shop applied coat of rust inhibiting primer.

#### 03.0.4 STRUCTURAL

All steel structural members to be in accordance with relevant AS, structural engineer's details and specifications.

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#### 04. FLOOR (material supplied by ARDOMEX)

#### 04.01 GENERAL

Install supplied pineboard floor panels on metal floor structure (or concrete slab as an option as per engineer's details and specifications – plastic membrane on concrete slab to be required - wherever applicable).

Install supplied vinyl floor lining as per manufacturer's instruction (use recommended adhesives only).

Install selected floor tiling on concrete slabs (to be arranged by Principal and installed by subcontractor) as an option to auxiliary buildings.

#### 04.02. OTHER FLOOR FINISHES

#### 04.03 GENERAL

Supply, apply and install the various finishes specified in this section of the specification and to the areas scheduled in the Schedule of Finishes, required for the completion of the Works. The firms and/or personnel carrying out the work in this section shall be widely experienced in the class of work required and shall be approved by the Principal.

#### 04.04 MAKING GOOD

If any cracks or drumming sections appear in finished floor before Practical Completion or the expiration of the Defects Liability Period, these shall be cut out, and made good to the satisfaction of the Principal.

#### 04.05 WORKMANSHIP

The Subcontractor shall inspect the surfaces, prior to application of their respective finishes and ensure that the surfaces are fit to receive the applicable application.

Should any surface be unsuitable to receive flooring finishes, the Subcontractor shall make good to Principal's approval. This includes the use of self levelling compounds.

# 04.06 SEPARATION ANGLES BETWEEN DIFFERING FLOOR FINISHES (wherever applicable)

Supply and fix 3mm aluminium angles of heights to suit individual junctions of internal floor finishes. Similarly supply and fix 3mm aluminium angles to other differing internal floor finishes. Note: Locate vertical leg to the centre of each door.

Angles to be set straight and plumb with the top edge level and flush with floor finishes, anchored at 300mm centres using ramset Nylon 4mm dia. plugs and No. 5 gauge brass tapered type wood screws.

#### 04.07 VINYL FLOORING

The Schedule of Finishes and the drawings indicate the extent and selection of vinyl flooring and shall include for:

Vinyl to be by an approved Manufacturer. Vinyl supply and laying to be by an approved Builder employing skilled tradesmen. The Builder shall arrange and be responsible for the following:

- a. Manufacture, storage, deliver, hoisting and stacking of vinyl.
- b. Laying of vinyl to be complete with edgings and fixings.
- c. Protection of vinyl after laying.
- d. Provision of all warranties as required.

Vinyl Generally / Preparation of Floor Surfaces

The Builder shall allow for and include in the Contract the vinyl types nominated for installation in the Schedule of Finishes. The Builder is to allow for waste in handling and fixing, cleaning, protection, provision of samples and other requirements of the Contract documents.

#### Vinvl Samples

Sample type of vinyl showing colour and quality hereinafter specified shall be submitted to the Architect for approval. Samples shall be not less than  $2m \times 2m$ .

#### Vinyl Warranty/Warranties

The Builder shall furnish a formal warranty and/or warranties for a period of not less than ten (10) years against faulty materials and/or workmanship.

Any defect occurring during the warranty/warranties period shall be made good, to the satisfaction of the Architect, by replacement of the defective portions and restoration to original conditions of the work and materials affected by malfunction or replacement of the defective areas.

Additional to the foregoing, the warranty/warranties shall include the following:

- a) That vinyl is in accordance with the specification.
- b) All lengths are colour matched.
- c) Material is colour fast to daylight.

The warranty/warranties shall be executed by all parties concerned on the form(s) provided by the Builder at the time of the signing of the sub-contract between the Builder and the Subcontractor. No work shall commence until such time as the Warranty has been signed.

#### 04.08 INSTALLATION OF VINYL

Allow for determining accurate quantities of vinyl required, making up, supply of samples for testing, packaging, storage, insurance, delivery to the site, hoisting, stacking, laying and complete installation, protection after laying and cleaning on completion. The Builder shall be responsible for confirming accurate quantities of carpet for the project.

The Builder shall submit drawings of the proposed vinyl layout to the Architect for approval. The Drawings shall indicate where seams are to occur, methods of fixing, extent of vinyl runs.

#### 04.09 VINYL MAKING AND LAYING

Seams Approved 'Hot Tape' ( if selecte)d shall be used in accordance with Manufacturer's

instructions and applied with a thermostatically controlled iron as supplied by the respective manufacturer in compliance with AS 2455 (1989) - Textile Floor Coverings - Laying Practice.

Strip Edging All vinyl tiles to eb laid with strip edging to match. Contact manufacturer for specifications.

05. WALLS (material supplied by ARDOMEX)

#### 05.01 GENERAL

SPACEMAKER walls 102mm "sandwich" panels are made from double sided 6mm fibro cement sheets (and /or OSB board on exterior side ready for cladding) and polystyrene foam inside. Thermal Insulation (approximate Mcan R value = 2.6) – as per manufacturer's specifications and certificate.

# 05.02 WALL PANELS INSTALATION

Install walls (internal and external) with supplied SPACEMAKER sandwich insulated 102mm panels as per details and manufacturer's instruction and supplied system manual/details. Set walls in extrusions as per system requirements.

#### 06. ROOF/CEILING

# 06.01 GENERAL

SPACEMAKER "1000" roof/ceiling "sandwich" panels are 112mm thick and with thermal Insulation (approximate Mcan R value = 3.5) as per manufacturer's specifications and certificate.

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#### 06.02 INSTALATION

Attach roof/ceiling panels as per system requirements and supplied manual/details. Secure panels with supplied fixings (seating on bead of silicone and attached to lintel extrusion) as per system manual/details.

#### 06.03 FEATURE CURVED ROOF

#### 06.04 INSTALATION

Install supplied metal members (plates and framing/rafters) on top of SPACEMAKER "1000" roof panels as per structural engineer's drawings and specifications. Cover with selected and supplied "Colorbond" roof sheets. Enclose gable ends with supplied fibro cement lattice panels.

07. ELECTRICIAN (light's fittings supplied by ARDOMEX, wiring, switches and GPO's and any additional equipment/appliances to arrange by Principal and to fix by Subcontractor)

#### 07.01 GENERAL

Provide all labour and material necessary for the proper installation of electricity service in accordance with the appropriate S.A.A. rules and the requirements of the Local Supply Authority. Arrange with the Supply Authority for connection from supply mains to meter board. Should connection of mains be underground or cost will be borne by the Principal. Provide for the proper installation and connect light points as per the Principal advice. Approved switch for each point to be mounted in position advised by the Principal. Provide power points of flush type with switches in positions advised by the Principal. Connect all appliances as indicated on plan in accordance to the Local Authorities requirements. Install smoke detectors system complying with Part 3.7.2 of the BCA, for every accommodation room and Laundry unit. Installation must comply with Australian Standards (AS 3786).Provide smoke detectors with 9V battery back-up.

Note: Connect all smoke detectors in one mutual system for Granny Flat building.

#### 08. WINDOWS AND DOORS (material supplied by ARDOMEX)

#### 08.01 WINDOWS GENERAL

Install selected aluminium frame windows from approved supplier (windows exclusively made for SPACEMAKER building system) and install in accordance with manufacturer's and SPACEMAKER building system instruction and details.

To the locations shown on drawings provide windows in aluminium framing. Natural powder coated finish throughout. Refer also to WINDOWS SCHEDULE.

# 08.01.01 CODES AND STANDARDS

Windows and other glazing assemblies shall be supplied, fabricated and installed in accordance with the following Australian (and other) Standards.

AS 1288	Glass in Buildings - Selection and Installation.
AS 1526	One-part polysulphide-based sealing compounds for the building industry.
AS 1527	Two-part polysulphide-based sealing compounds for the building industry.
AS 1734	Aluminium and aluminium alloys - flat sheet, coiled sheet and plate.
AS 1866	Aluminium and aluminium alloys - extruded rod, bar, solid and hollow shapes.
AS 2208	Safety glazing materials for use in buildings (human impact considerations).
AS 3715	Metal finishing - Thermoset powder coatings for architectural applications.

### 08.01.02 SHOP DRAWINGS

The Subcontractor shall submit all shop drawings to the Principal progressively. The Subcontractor will verify and stamp its endorsement prior to issue to the Principal on all required copies of shop drawings showing dimensions of all components and tolerances required, full scale details of all components and fixings, fully dimensioned details of all fixings and all other information reasonably requested by the Principal.

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The Subcontractor shall allow the Principal three (3) weeks to approve these Shop Drawings, before manufacturing is to commence. Provided, however, that if the Principal determines the Shop Drawings to be insufficient or requests modifications then the Subcontractor revise and re-submit the Shop Drawings promptly and shall allow the Principal an additional two (2) weeks for each and every time they are submitted.

#### 08.01.03 OVERALL GLAZING SYSTEMS WARRANTY

Provide a written undertaking for the whole of the glazing systems as previously described including finishes and sealants, to make good faulty materials and workmanship, and maintain the installations completely weather tight and free of air infiltration for a period of ten (10) years from the Date of Practical Completion.

The undertaking shall cover the making good of work of other trades affected by repair work carried out under the Warranty or by causes arising from faulty materials and workmanship in the work covered by the warranty.

#### 08.01.04 GLASS GENERALLY

Glass shall be selected free from scratches, chips, cracks, bubbles, distortions and other imperfections and shall comply with the requirements of the current Standard BS 952.

Types and thickness of glass shall be in accordance with AS 1288 - 1989.

#### 08.01.05 INSPECTION OFF SITE

Any work fabricated off the site shall be subject to random inspection by the Principal, and reasonable and safe access and facilities shall be provided for this purpose. Inspection shall not relieve the Subcontractor of his responsibility to carry out the work in accordance with the Contract.

#### 08.01.06 COMPLETION

On completion remove all protective coatings including adhered residues, clean and polish all glass to shine, replace any damaged or broken components, e.g. Extrusions, Door Hardware/Furniture, Glass etc. and leave the whole of the Works in good condition.

Do not use cleaning agents such as acids or abrasives. Remove cement, paint or labels without cutting or scratching or otherwise marking the finished surfaces and glazing all to Principal's approval.

#### 08.01.07 WINDOWS AND DOORS SCHEDULE

W1	1500mm (H) x 1200mm (W) sliding	-	1 off
W2	1500mm (H) x 1200mm (W) sliding	-	1 off
W3	600mm (H) x 600mm (W) sliding	-	1 off
W4	1000mm (H) x 900mm (W) sliding	-	1 off
W5	1500mm (H) x 1200mm (W) sliding	-	1 off
SD1	2100mm (H) x 1800mm (W) sliding door	-	1 off
SD2	2100mm (H) x 1800mm (W) sliding door	-	1 off

#### 08.02 DOORS GENERAL

Supply and install doors generally as shown on the drawings for the particular size and type of door in accordance with the requirements hereunder.

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Door Handing:

Refer to the Architectural Drawings for indication of Handing.

Door Size:

Door widths shown below refer to actual door leaf width. Door heights shown in schedule pages hereafter refer to nominal ceiling height, actual door leaf height shall be adjusted to suit selected frame rebate. The Subcontractor shall allow for all normal building tolerances.

Door Types:

Refer to the Architectural drawings.

Frame Profiles:

Timber typical Door Jambs/frames

Hinges:

One and a half (1 ½) pairs of 100 mm pc steel hinges per leaf generally, screw fixed to frame.

Door finishes:

Paint finish to all doors and frames unless noted otherwise (door to be supplied with primer

coat). Refer to Schedule of Finishes for paint type and colour.

Services:

For services provisions to doors such as hold open devices, reed switches, electric strikes or electronic access control systems, refer to the relevant Services specification for extent of

requirements.

#### 08.02.01 HARDWARE WARRANTY

For all hardware items listed in this specification section the Subcontractor shall provide a written unconditional warranty for a period of five (5) years against faulty workmanship and materials directly in favour of the Principal, effective from the Date of Practical Completion.

The warranty shall be in terms which required the Warrantor at no cost to the Principal to replace any materials which may fail or deteriorate or become defective due to material and/or labour defects.

#### 08.02.02 MASTER KEYING

Provide Master Keying system wherever required.

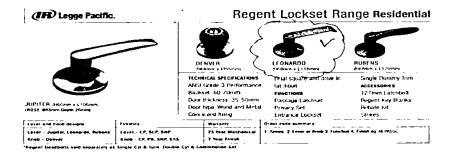
#### 08.02.03 ABBREVIATIONS

The following abbreviations are applicable to all items related to the door schedule ahs. These comprise locking devices, door furniture, closers, accessories, services and seals.

# 08.02.04 Locking devices

Primary lock specified. Individual lock functions shall be scheduled by the Hardware Sub-Contractor and lodged for Principal's approval.

L1 Regent Lockset Range (Residential) stainless steel strike with stainless steel shield plate. Finish: Satin chrome.



L2 Door stoper Finish: Satin chrome.

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#### 08.02.05 Door furniture

F1 Lever furniture Satin chrome finish.

F2 Lever furniture ½ set Satin chrome finish.

09. CUPBOARD FITTINGS – optional (to arrange by Principal and to fix by Subcontractor)

#### 09.01 EXTENT

The extent of work as set out in this section of the specification and the Schedule of Finishes includes the fabrication, supply and installation of cupboard fittings and Joinery items, including but not limited to wall cupboards and work benches, wall cupboards and shelving.

#### 09.02 MATERIALS

Prior to the mass assembly of a cupboard unit, the Subcontractor shall arrange for an inspection of a 'prototype' to be carried out by the Principal. Prior to the mass installation of a cupboard unit, make available one type of each unit on site for inspection by the Principal. The approved prototype will be used as quality benchmark for all other cupboards.

Timbers and composite panels shall be the best quality of their respective section and grade, conforming with the relevant AS specification requirements, all to be in long lengths, straight grained, sawn square, thoroughly seasoned, sound, free from ants, borers, sap, shakes, loose gum veins, knot holes, gum pockets and shall be of specified sizes.

Joinery timbers to be abs. butt clear, knot free, kiln dried and reconditioned to an equilibrium moisture content (EMC) between 12% and 15%. Thickness and width tolerances to be abs. Maximum permissible thickness for dressing the face of wrot timbers to be 3 mm.

MDF Generally shall be 18mm thick MDF panels conforming with AS 1859 - 1980. Where used for

internal linings shall be laminated with melamine surface finish conforming with AS 2924 -

1987.

Veneers: Veneers for decorative clear finishes shall be slice cut and finished to not less than a No. 3

abraded surface as specified in AS.1728. All veneers to panels shall be book matched

unless directed otherwise.

Laminated Plastic Sheet: Laminated plastic sheet shall be first quality equal to Formica of selected approved colour

and conforming with AS.2924 - 1987. Unless otherwise specified, finished surface shall be satin or matt and thickness shall be 1.2mm for horizontal surfaces, 1.0mm for vertical surfaces and 1.2mm for bull nosing edges. Fix by gluing in accordance with manufacturer's instructions. Bull nosing (if nominated) of leading edges of bench tops shall be post formed.

Adhesives: Adhesives to be waterproof in accordance with relevant AS Specifications (AS.2131 - 1978,

AS K 88 - 1952 and AS K 89 - 1953).

#### 09.03 ASSEMBLY

Cupboard carcass assembly shall be carried out using an approved inset Knock-Down Fitting System complete with zinc cams and all accessories necessary to carry out the detailed installation.

Inter-Screws for the inter-connection of cupboard modules shall be decorative capped white plastic headed 8mm metal threaded of approved manufacture and of suitable lengths to complete the installations.

Adjustable shelf supports shall be all metal complete with metal support socket of approved manufacture satin chrome finished.

Nail diameters and depths of penetrations shall be in accordance with the requirements of AS.1684 - SAA Timber Framing Code. Fibre Plugs to be made of natural fibrous material impregnated with a waterproof binding agent compressed to a rigid tube.

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#### 09.04 WORKMANSHIP

Perform all operations necessary in first class carpenter's and joiner's work. Properly dress all visible surfaces except where specified 'sawn'. Sawn shall mean visible surfaces are to be freshly sawn and left rough from the saw, but protected from discolouration and damage. Arris visible edges in sawn work.

Back plough wide boards likely to be subject to warping. Provide all accessories necessary for the proper completion of the work. Trim framing where necessary for all openings, including those required by other trades.

09.05 JOINERY – optional (to arrange by Principal and to fix by Subcontractor)

Joinery shall generally be "to detail" carried out as indicated and intended by the detailed Drawing in the best quality by competent Tradesmen.

Allow for all necessary jointing, screwing, gluing and assembling and any other incidental work necessary to complete the installations. Incidental work not included or particularly specified but necessary for proper completion shall be performed.

The Subcontractor shall be responsible for replacement of any structural timbers or joinery, developing defect during and after installation or not conforming with the requirements of the Drawings. Making good of such defect, or defects, shall be in accordance with Principal's instructions.

No installation shall be commenced until such time all wet finishes are cured and dried.

Joinery timber shall generally be to best clear grade of the species specified. Match for colour in polished work.

Unless otherwise specified, prepare joinery for polishing or similar clear finishes. Conceal fastenings where possible. Use the minimum of surface nailing. Punch nail heads below surface and fill with putty coloured to match finish. Adhesives and joinery compounds shall be non-staining and kept free of visible faces.

Scribe internal and mitre external joints. Edge strip all visible edges of veneered work including plywood and solid core, to match veneers. Buff and chamfer laminates where returned around external corners.

# 09.06 WARRANTY

The Subcontractor shall provide a written warranty for all items for period of not less than five (5) years against defective workmanship and materials. Make good promptly and without charge any such defect notified within the warranty period and any damage to the building resulting directly through such defect or its making good.

#### 09.09 MAKING GOOD / ON COMPLETION

On completion all damaged, defective or unsatisfactory parts of the Work shall have been made good by the Subcontractor to the satisfaction of the Principal, regardless of the cause and without extra cost to the Contract.

Unsatisfactory parts will include areas with patched appearance. Painter's materials shall not to be relied upon to conceal obvious patching of surface inconsistencies in the Work, generally.

Remove all surplus materials and rubbish from the Site, legally disposing of same, and leave installations ready for immediate occupation by the Proprietor.

#### 10. PAINTING WORK (to arrange by Principal and to fix by Subcontractor)

## 10.01 SCOPE OF WORKS

Materials and workmanship except where superseded by this Specification shall be in accordance with relevant SAA Codes and AS Specifications particularly AS.2311-1992, The Painting of Buildings.

The Subcontractor shall include for all coatings other than those specifically provided for in other Parts. Finishing coats provided for in other Parts, where applicable, to be carried out in conjunction with painting and surface treatments provided for in this Part.

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Materials selections to the respective areas shall be in accordance with the Schedule of Finishes. The extent of paintings of all internal items comprises the preparation and painting of all ceilings, walls, columns, metalwork, doors and joinery work etc. as noted in the Schedule of Finishes.

All painting shall be carried out by a firm approved by the Principal. The Painting Subcontractor shall examine all surfaces, and if not in proper condition for painting he shall notify the Principal before proceeding with the work. Should painting work commence without inspection, this will be construed to be acceptance of the surfaces as satisfactory and any defects in work resulting from accepting poor surfaces shall be made good and rectified at no cost to the Contract.

Paint shall not be applied to any surface which is not thoroughly dry (except when recommended by Manufacturer) or acceptable. All surfaces to be inspected and where defective made good before work proceeds.

No variation to the quality of paint finish specified will be accepted and the painter shall confer with the firm who supplies the paint materials and comply strictly with their recommendation. The representatives of the suppliers shall have access to the job and to materials being used. All materials are to be delivered to the job in unbroken containers bearing the brand name of the Manufacturer's and shall be subject to inspection and approval by the Principal.

Deliveries to be made well in advance of applications. Materials to be stored in sheds on timber platforms.

#### 10.02 SAMPLES

Samples of each of the finishes and colours specified shall be prepared by the Painter for approval by the Principal prior to commencement. The Subcontractor is to allow for colours on walls, ceilings, joinery etc. to be selected, altered or modified at the direction of the Principal. Allow to prepare a sample of not less than one square metre for each colour.

#### 10.03 PAINT FINISHES

Unless otherwise specified for a particular item of work, materials to be used in this section shall be prepared Trade quality products of Dulux Paints Ltd, or approved equal.

Full Gloss Enamel: Approved best quality high gloss opaque alkyd enamel.

Semi-Gloss Enamel: Approved best quality semi-gloss opaque alkyd enamel.

Low Sheen Acrylic: Approved best quality low sheen acrylic paint.

The manufacturers of the materials hereinbefore specified shall be approved by the Principal.

Undercoats to finishes to be those recommended for use by the Manufacturers of related coat finishes. Prime surfaces in accordance with the Paint Manufacturer's Specification and recommendations.

#### 10.04 WORKMANSHIP

All work to be executed in accordance with approved trade practice. Materials shall be applied evenly and primers well brushed into the pores of the wood and into crevices and quirks. Undercoat when dry shall be thoroughly rubbed down with sandpaper and dusted clean before applying the next coat. Finished surfaces shall be uniform in degree of gloss and colour

and free from brush marks. Surface cracks, flaws, nail holes etc. in woodwork shall be levelled up to the surface of the work with linseed oil type putty after priming coat has been applied.

Prior to commencement of painting, area plus at least 6 metres in the clear all around, to have all debris removed then swept clean and left for a period of four hours after which all dust shall be removed with an approved mechanical/ electrical vacuum cleaner.

No painting to be commenced until such time as the work of other Trades has been completed within area. Preferably and where necessary, lay a floor covering after painting has been completed; when this is not possible the last coat to be applied after the laying of floor covering (exceptions being carpet laying).

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Supply and lay suitable drop sheets in all areas where painting is being done, to protect finished floor, wall and joinery surfaces. Allow to mask and protect, all face brickwork and metal window frames and glass when external painting is being carried out.

Wall and floor finishes to be adequately protected; remove paint splashes without injury to affected area. Any wall, sill joinery, fitments, ceiling and applied floor finish that is damaged by paint splashes shall be made good to the satisfaction of the Principal and all coats involved shall be borne by the Subcontractor.

Where certain colours may require tinting and intermixing, it is only to be done with paints of the same manufacture. Work to be performed by skilled Tradesmen. Materials and intermixing paints on floors of the building will not be permitted. Parts to be painted to be thoroughly cleaned and inspected to ensure surfaces are suitable.

Colour schemes to be strictly adhered to. Notwithstanding this, sample colours will be required to be prepared on work for Principal's approval. Where colours from a manufactured range are used, more than one colour as approved may be required to be used. Intermixing only to be done with paints by the same manufacturer.

Cracks appearing in paintwork before completion or before expiration of maintenance period to be cut out, stopped, pointed up and made good to the satisfaction of the Principal. Walls or ceilings in which they occur to be repainted in required number of coats to the satisfaction of the Principal.

#### 10.05 WARRANTIES

Two (2) separate Warranties shall be provided under the Contract for the following:

Warranty No.1: The Subcontractor shall provide a Warranty for a period of Twelve (12) Months commencing

from the Date of Practical Completion against defects that may occur in the Painting Works which may be attributed to the quality of paint; making good to be at the Subcontractor's

expense - refer also Application Of Finishes/Warranty.

Warranty No. 2: The Subcontractor shall furnish Five (7) years Warranty commencing from the Date of

Practical Completion against defective materials and workmanship.

Any defect appearing during the Warranty Period shall be made good at the Subcontractor's cost together with any damage to the Building and/or its contents resulting directly through such defect or its making good.

10.06 INTERNAL WORK

Primed wall fc panels: Rub down, spackle as necessary and apply two (2) coats washable semi-gloss p.v.a. paint as

per approved colour scheme.

10.07 EXTERNAL WORK

Primed wall fc panels Rub down, spackle as necessary and apply two (2) coats washable semi-gloss p.v.a. paint as

per approved colour scheme.

Metal work (optional) Generally powder coated (supplied extrusions) remaining metal work galvanised members

painted as an option:

Apply one (1) appropriate undercoat and two (2) coats of selected high or semi gloss enamel

as per approved colour scheme.

#### 11. FINISHES SCHEDULE

#### 11.01 GENERAL

All finishes shall be either as nominated or to an equal standard of quality and subject to Builder's approval. Colours shall be selected from the full Dulux palette. Grout colour to wall and floor tiled areas shall be selected to match tile colour to Builder's approval.

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11.02 GENERAL WALL FINISHES (exterior and interior to arrange by Principal and to fix by Subcontractor)

ACCOMMODATION UNIT

Wall paint exterior

Dulux low sheen acrylic weatherproof paint (as per approved colour

scheme).

Wall paint interior

Dulux low sheen acrylic (as per approved colour scheme).

Feature wall(s) paint

powder coated extrusions (as per approved colour scheme).

LAUNDRY UNIT

Wall paint exterior

Dulux low sheen acrylic weatherproof paint (as per approved colour

scheme).

Wall paint interior

Dulux low sheen acrylic (as per approved colour scheme).

11.03 GENERAL ROOF, FASCIA GUTTER FINISHES AND OTHER METALWORK FINISHES (materials supplied by ARDOMEX)

SPACEMAKER "1000" with Colorbond lining (selected Colorbond from colour range)

Colorbond verandah roof (accommodation unit only with selected colour from Colorbond colour range)

Verandah's posts - powder coated or galvanised and painted (colour to match extrusion selected colour)

11.04 WINDOWS FINISHES LEGEND (materials supplied by ARDOMEX)

All windows to be powder coated as per selected colour scheme.

11.05 DOORS FINISHES LEGEND (materials supplied by ARDOMEX)

external door

Dulux water base enamel (as per approved colour scheme).

Internal doors general

Dulux water base enamel (as per approved colour scheme)

11.06 LIGHT AND ELECTRICAL FITTING SCHEDULE (materials supplied by ARDOMEX)

Living Room

Centre room ceiling

Lamp: white fluoro 54W

- 1 off

Bedroom 1 and 2

Centre room ceiling

Lamp: white fluoro

- 1off

Bathroom light

Lamp: white fluoro

- 1 off

Relph – Mona Vale project - "ARDOMEX" BUILDING GENERAL SPECIFICATIONS

- 1 off External light Lamp: TBA Laundry unit Interior light Lamp: white fluoro - 1 off BATHROOM FITTING/ACCESORIES SCHEDULE - Accommodation unit (materials supplied by ARDOMEX) 11.07 Vanity 600 x 450 with acrylic or ceramic vanity top with Fittings: splashback, 2 doors white - 1 off - 1 Off Tapware Basin set Toilet Suite 6/3 dual flush, white. - 1 off Shower screen - 1 off Towel rail - 1 off ' Toilet paper holder - 1 off Mirror (TBA and approved by principal) - 1 off LAUNDRY FITTING/ACCESORIES SCHEDULE - (fittings and appliances arranged by Principal) 11.08 Laundry TUB - 1 off Fittings: - 1 off Tapware Appliances: Washing machine - by client Dryer - by client HWU - 1 off Shelving (storage units) - by client 12. TERMITE CONTROL (to arrange by Principal and to fix by Subcontractor)

## 12.01 GENERAL

Provide appropriate termite control method and treatment to all new building elements according to relevant Australian Standards ie: Termimesh or similar to new concrete slab perimeter and treatment to any structural timber as per A.S.A 3660.1 Provide periodical pest control and required treatment to existing building by Authorised Pest Control Specialist.

13. COMPLETION (by Subcontractor)

#### 13.01 GENERAL

Clean out premises, remove all builder's rubbish, clean all glass fittings, etc., and leave in clean and habitable condition, clean up the site.

Relph - Mona Vale project - "ARDOMEX" BUILDING GENERAL SPECIFICATIONS

#### MATERIAL INCLUSIONS & EXCLUSIONS SCHEDULE 14. ARDOMEX - materials supplied:

<u>General Notes:</u> All proposed members and materials scheduled as selected or similar – subject to approval by principal.

#### **Granny Flat - Inclusion List**

#### STUCTURAL AND EXTERIOR

#### Colour Selection

All metal members

to floor structure & angles

Rods, bolts, nuts, washers and fixings

and brackets

galvanised (as per supplier spec.) galvanised (as per supplier spec.) galvanise (as per supplier spec.)

TBA

Colorbond verandah roof

Roofing panels 1.000 Colorbond 95 mm

with aluminium ceiling

Dune White

Aluminium guttering to perimeter of building

Downpipes 100X 50 Colorbond

TBA TBA

Aluminium powder coated windows

with fly screens

Dune

Colorbond steel other members

Beams

White (TBC) White (TBC)

Posts Rails

White (TBC)

#### NOTE:

Finish painting works to walls, doors or other selected buildings' elements (interior and exterior as per selected and approved "colour scheme") to be carried out on site by builder.

Wall panels ("300"-A, "600"-B, "900"-C, "1200"-D) X 2400 X 102 mm with 6 mm primed to both sides F.C sheets

Proposed exterior colour (DULAX Colour Range) Colour selection

Primed Internal sliding door with door track

White

Deck flooring (treated pine)

TBA

External door, primed

Solid core.

TBA

hinges, locks, door jambs

#### INTERIOR 2.

Wall panels ("300"-A, "600"-B, "900"-C, "1200"-D) X 2400 X 102 mm with 6 mm primed to both sides F.C sheets (final painting works by builder)

Proposed interior colour (DULAX Colour Range) Colour Selection

Proposed selected feature wall colour

TBA

Relph - Mona Vale project - "ARDOMEX" BUILDING GENERAL SPECIFICATIONS

TBA TBA
- 1 off - 1 off
- 1 off
- 1 off - 1 off
- 1 off - 1 off
- 1 off

#### **Exclusion List**

- 1 off

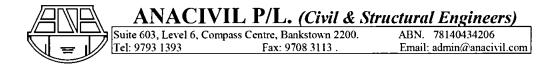
External light

- . Electrical wiring
  . Power points, light switches, smoke alarms
  . TV and internet and cabling
- . Internal fit-out
- . Switchboard
- Plumbing copper feed pipes, PVC waste pipes
  . Laundry fit-out (TUBS, taps, cabinets, washing machines and dryers)
- Hot water units
- . Air conditioning units

# **Builder is required to:**

- . Provide concrete pad footings for an accommodation units and slab for Laundry as per engineer's drawings . Provide all external and sub-floor plumbing connection to each accommodation units and Laundry.
- . Provide all sub-floor power connections
- . Assemble Granny Flat unit in accordance with the drawings and specifications . Fit and connect all P.C. bathroom items

- Paint walls and timber doors internally- primed by supplier
   Paint walls and timber doors externally- primed by supplier
   Path sand driveways with bollard lighting
- Supply power
- . Supply water



February 25, 2014

This plan/document forms part of the Approved Complying Development Certificate

Dear Sir/Madam,

2014/00275

# RE: Structural Design Certificate for Proposed Development at No. 24 Grandview Pde, Mona Vale

This is to certify that our Structural Design (Drawing No. 2014045 S1) for the proposed development at the above address has been prepared in accordance with the following Australian Standards:

- AS 3600 (Concrete Structures)
- AS 2870 (Residential Slabs and Footings)
- AS 1684.4 (Residential Timber-Framed Construction)

We hereby certify that above structure is structurally adequate to support all loads as specified in AS 1170.1 & 2 & 4 (Loading Code).

We hope this certificate meets your requirements. Should you require any help or further explanations, please do not hesitate to contact us.

Yours faithfully,

M. Zaioor

B.S Civil Eng'g (A.U.B).

M.S.Structural Eng'g (UNSW).

M.I.E.(Aust), CPEng.



27 Helles Avenue Moorebank NSW 2170 Ph: 02 9821 2199 Fax: 02 9601 1152 Email: info@versiclad.com.au

Kishore Honavar

Kishore Honavar

MIEAust CPEng - Chartered Professional Engineer, Membership No. 733503

Registered Professional Engineer of Queensland - RPEQ. Member No. 7652

Principal Engineer - Innovative Construction Engineering Solutions Pty Ltd

Drawn by D.C.

Checked by

X.I.

01/05/12

Job Name

WALL FRAMING USING STRUCTURAL INSULATED PANELS WITH FIBRE CEMENT - FIBRE CEMENT SKINS

**Drawing Title** 

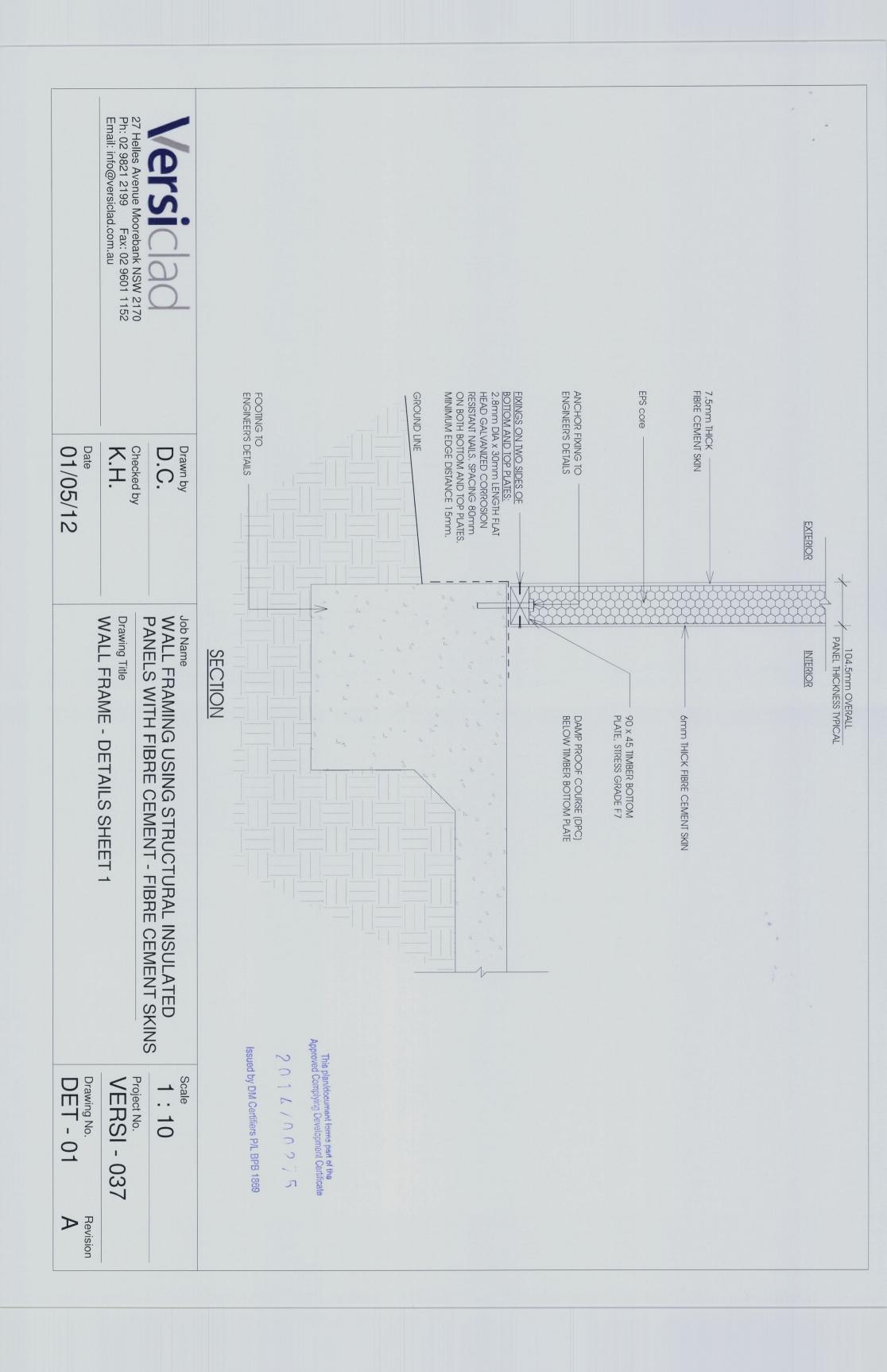
WALL FRAME - ISOMETRIC VIEW

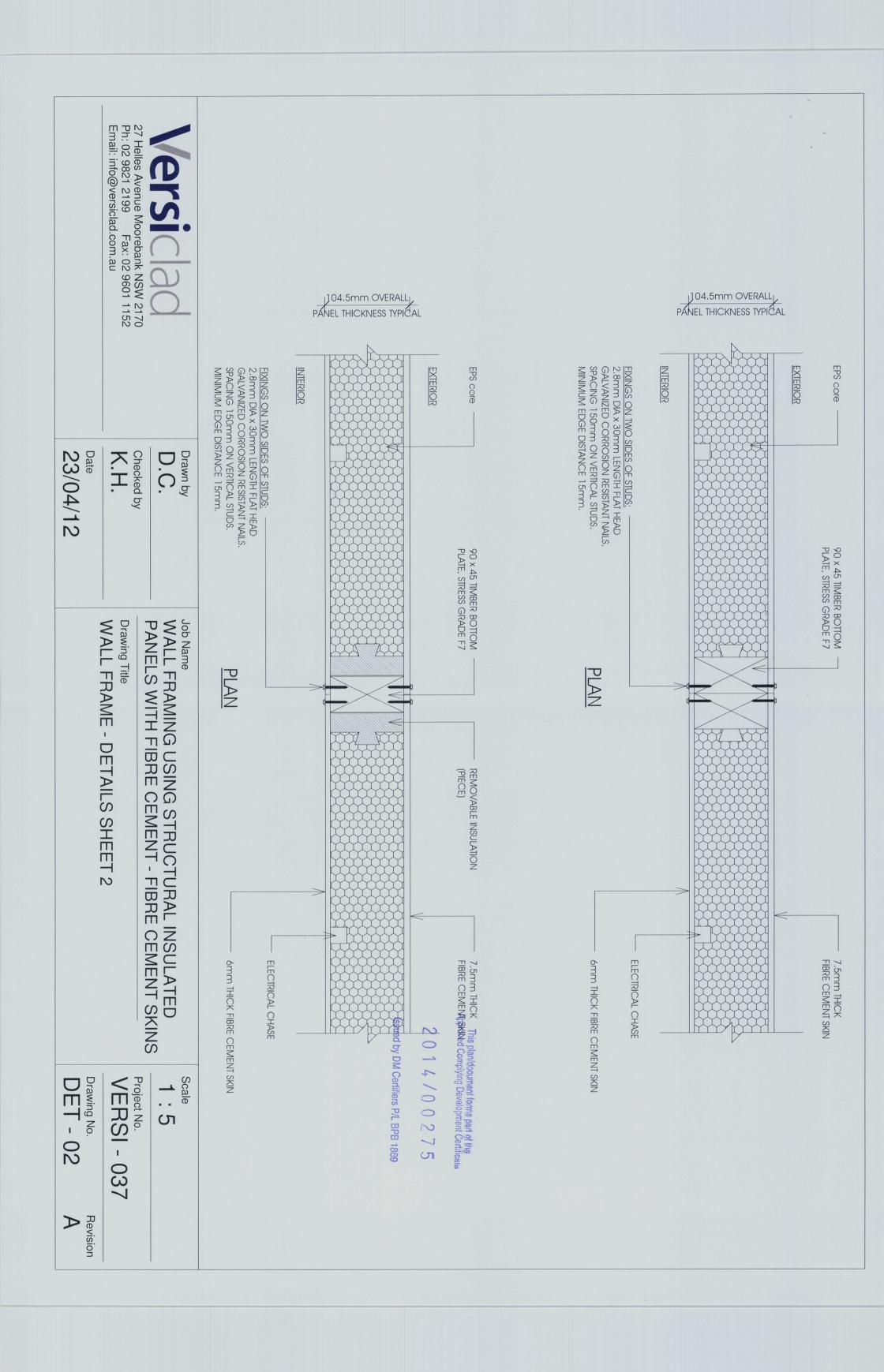
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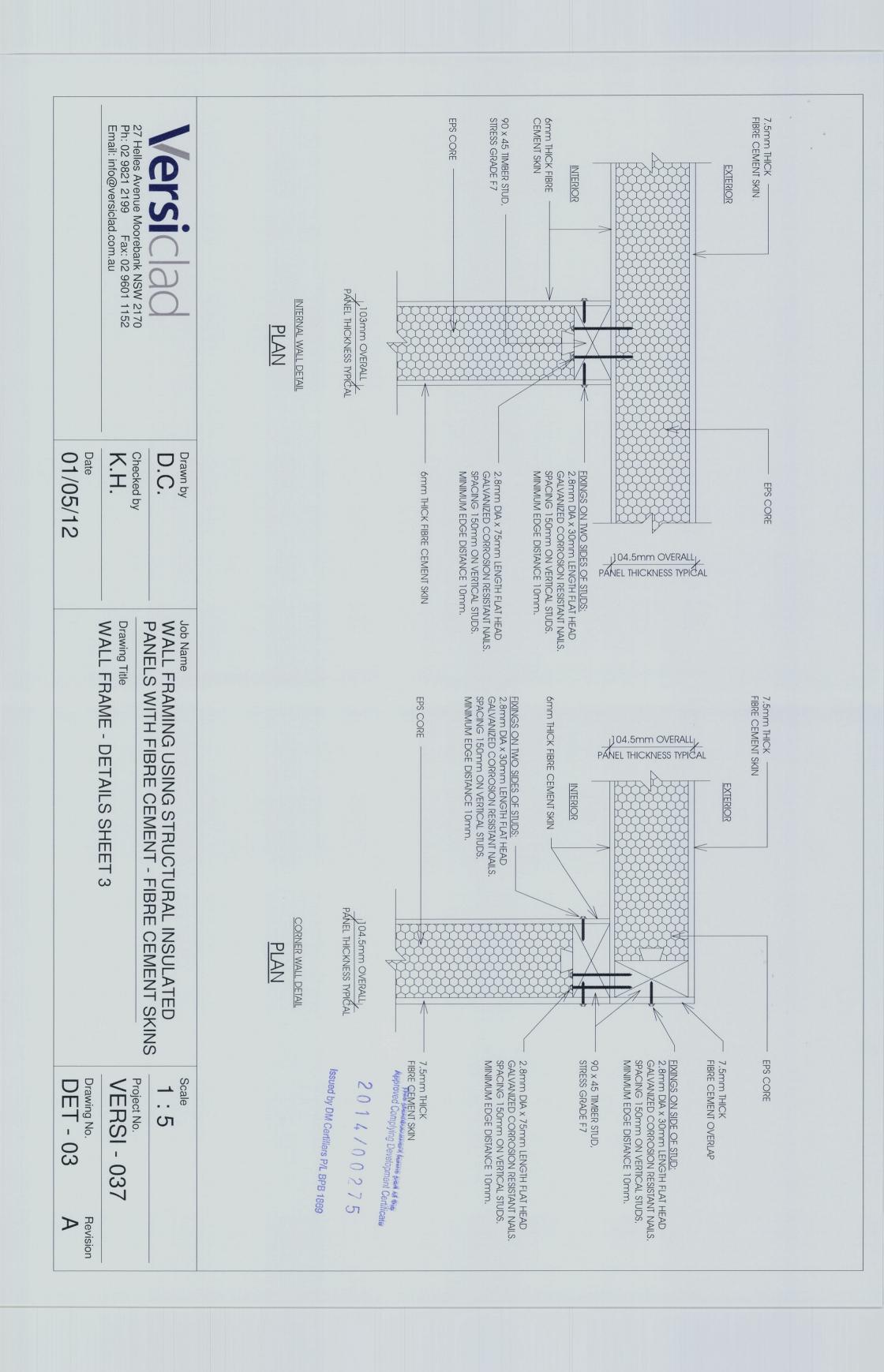
Project No. **VERSI - 037** 

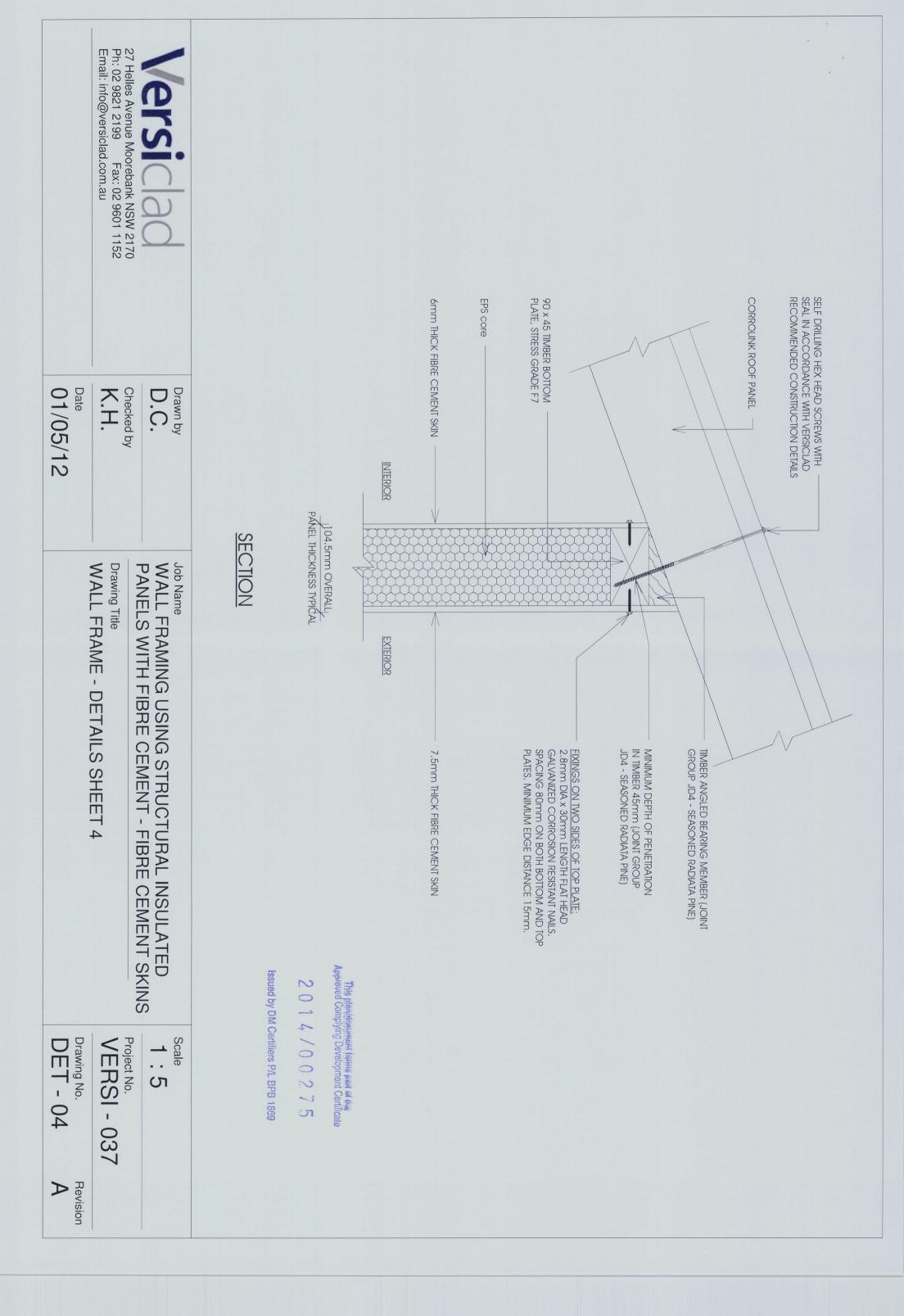
Revision A

Drawing No.
GEN - 01









FOR DETAILS OF FIXINGS OF PANELS TO BOTTOM PLATES, STUDS AND TOP PLATES, REFER:
DET - 01, DET 02 AND DET - 04 Drawn by D.C. PANEL INSTALLED VERSICLAD
FIBRE CEMENT - FIBRE CEMENT
STRUCTURAL INSULATED WALL VERSICIAD
FIBRE CEMENT - FIBRE CEMENT
STRUCTURAL INSULATED WALL PANEL (SIWP) PANEL (SIMP) SEASONITO POR THE PROPERTY OF WALL FRAMING USING STRUCTURAL INSULATED PANELS WITH FIBRE CEMENT - FIBRE CEMENT SP Job Name 22.5 22.5 STUD AND END PANEL 90 x 45 TIMBER EXPOSED SIDE STUD 90 x 45 TIMBER BOTTOM PLATE 90 x 45 TIMBER TOP PLATE ALL STRUCTURAL TIMBER
SHALL BE STRESS GRADE F7
OR HIGHER - BOTTOM PLATES,
STUDS AND TOP PLATES MINIMUM 2 - OFF SKEW NAILS ON STUD EXPOSED SIDE AT BOTTOM. 2.8mm DIA., FLAT HEAD GALVANISED CORROSION RESISTANT NAILS. INSTALL 2 OFF SKEW NAILS AT BOTTOM, THEN INSTALL PANEL AND TOP PLATE EMENT SKINS Issued by DM Certifiers P/L BPB 1869 This plantasement terms pain at the Appreved Complying Development Certificate 2014/00275 1:10

27 Helles Avenue Moorebank NSW 2170 Ph: 02 9821 2199 Fax: 02 9601 1152 Email: info@versiclad.com.au

Checked by X.I.

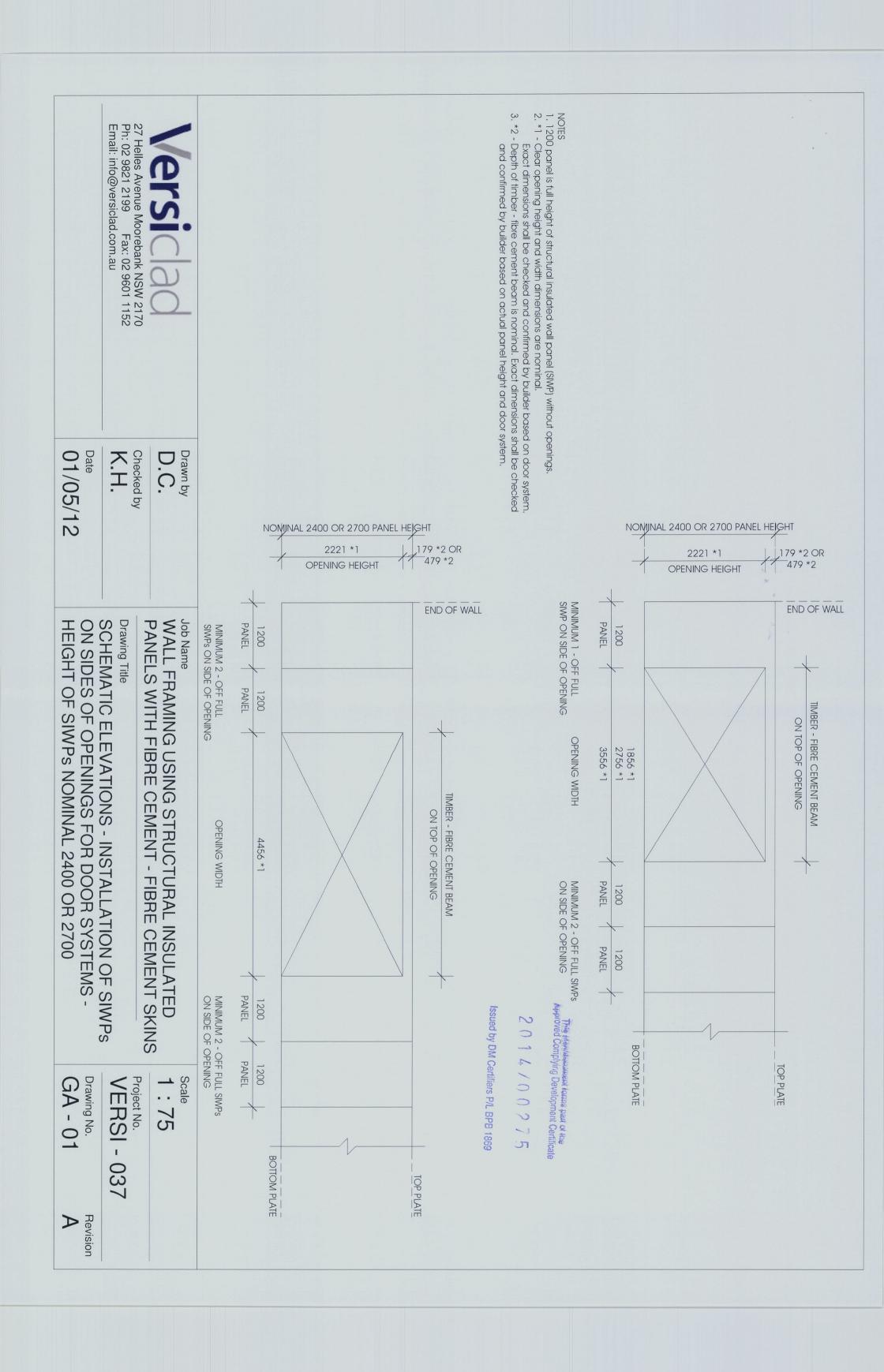
01/05/12

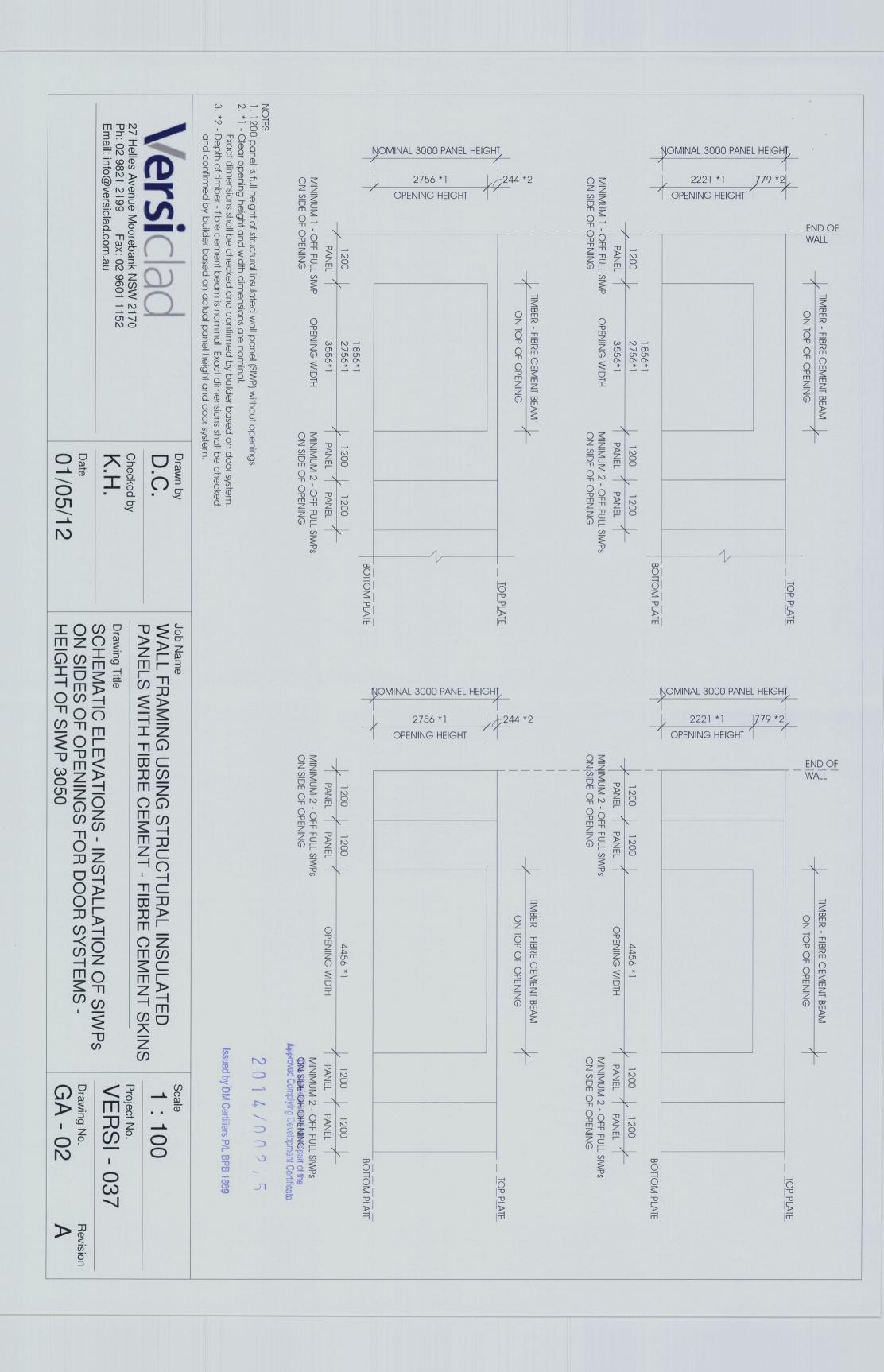
Drawing Title WALL FRAME - DETAILS SHEET 5

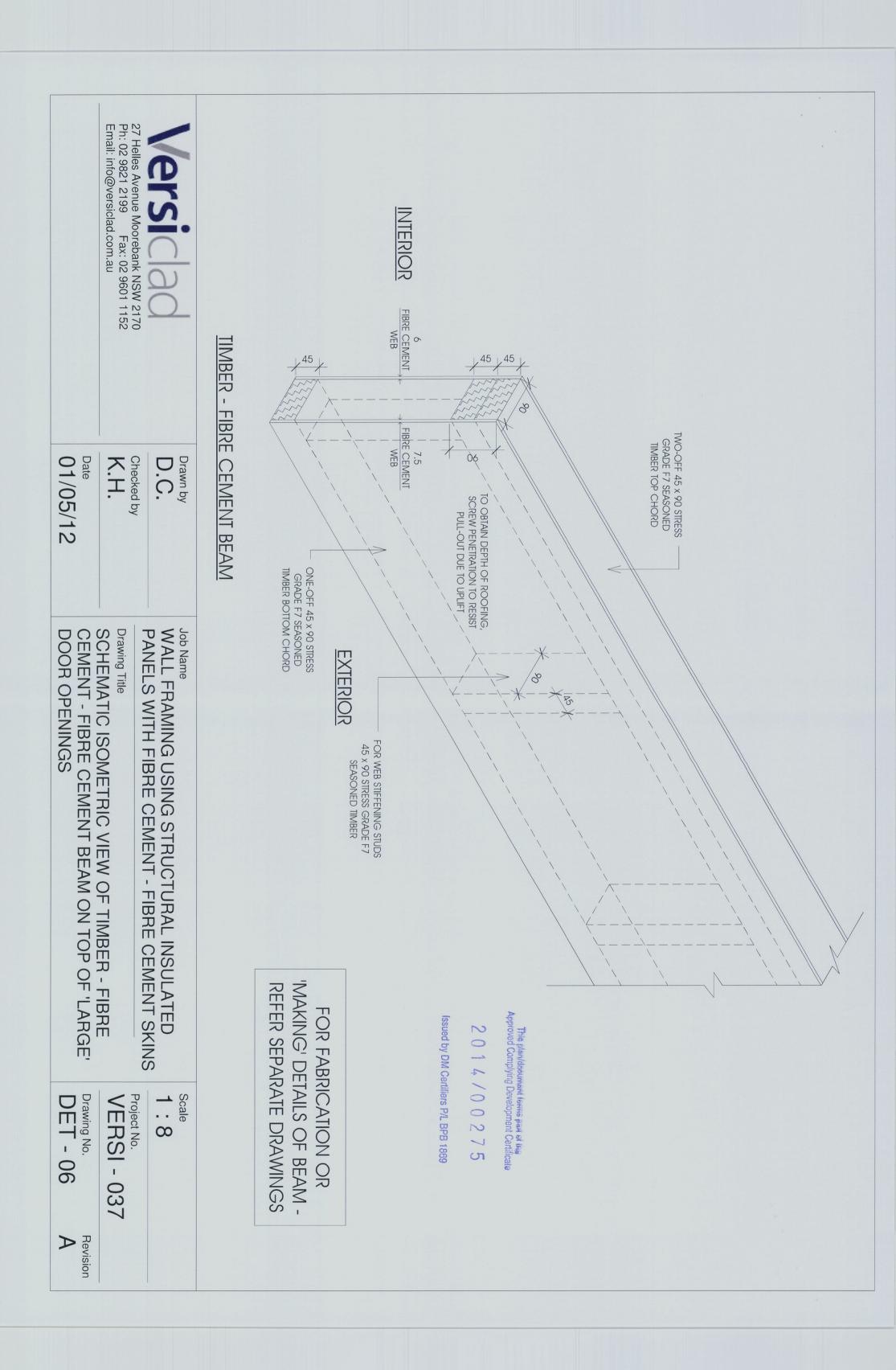
Drawing No. VERSI - 037

 $\triangleright$ Revision

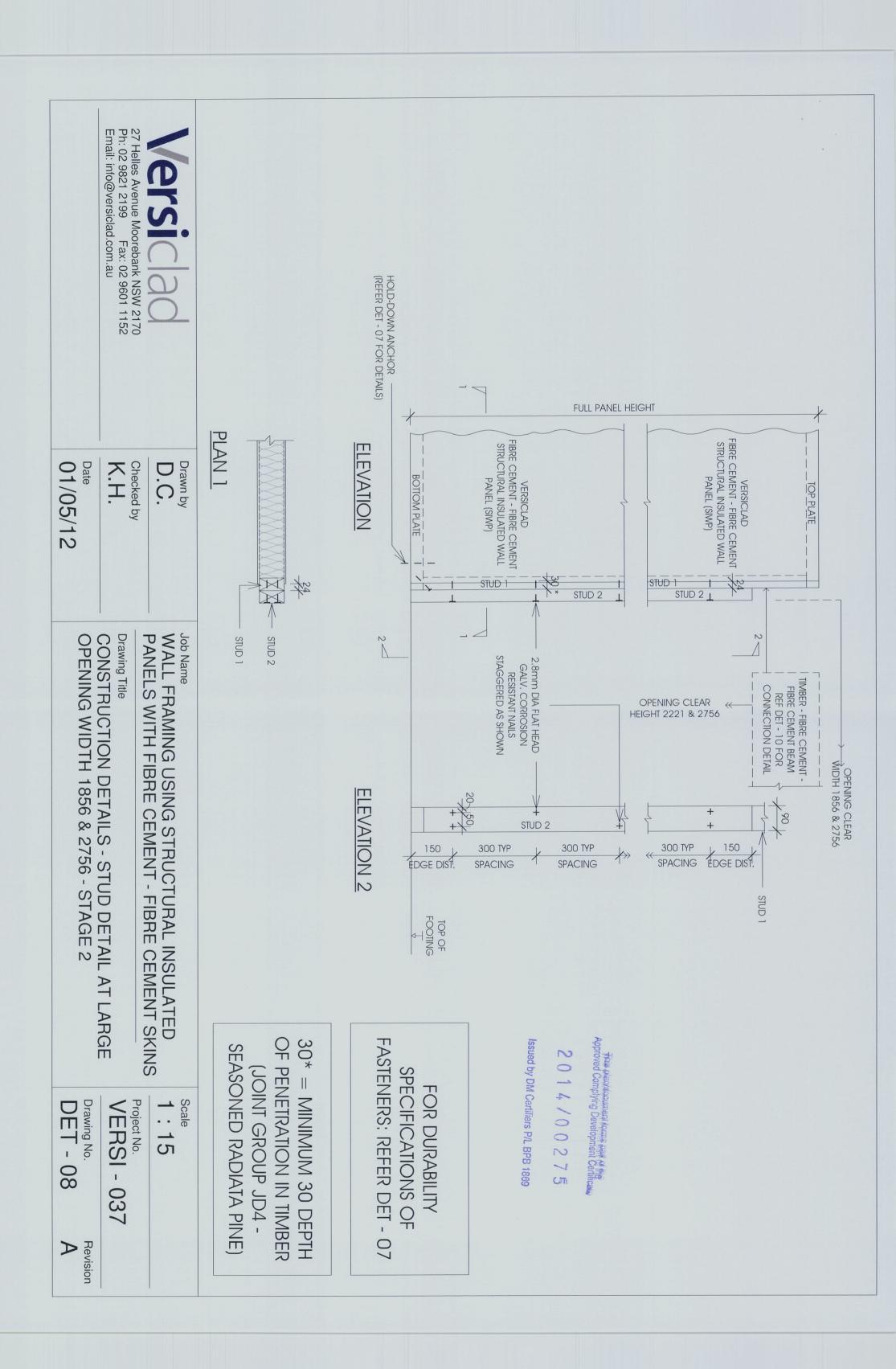
**DET - 05** 

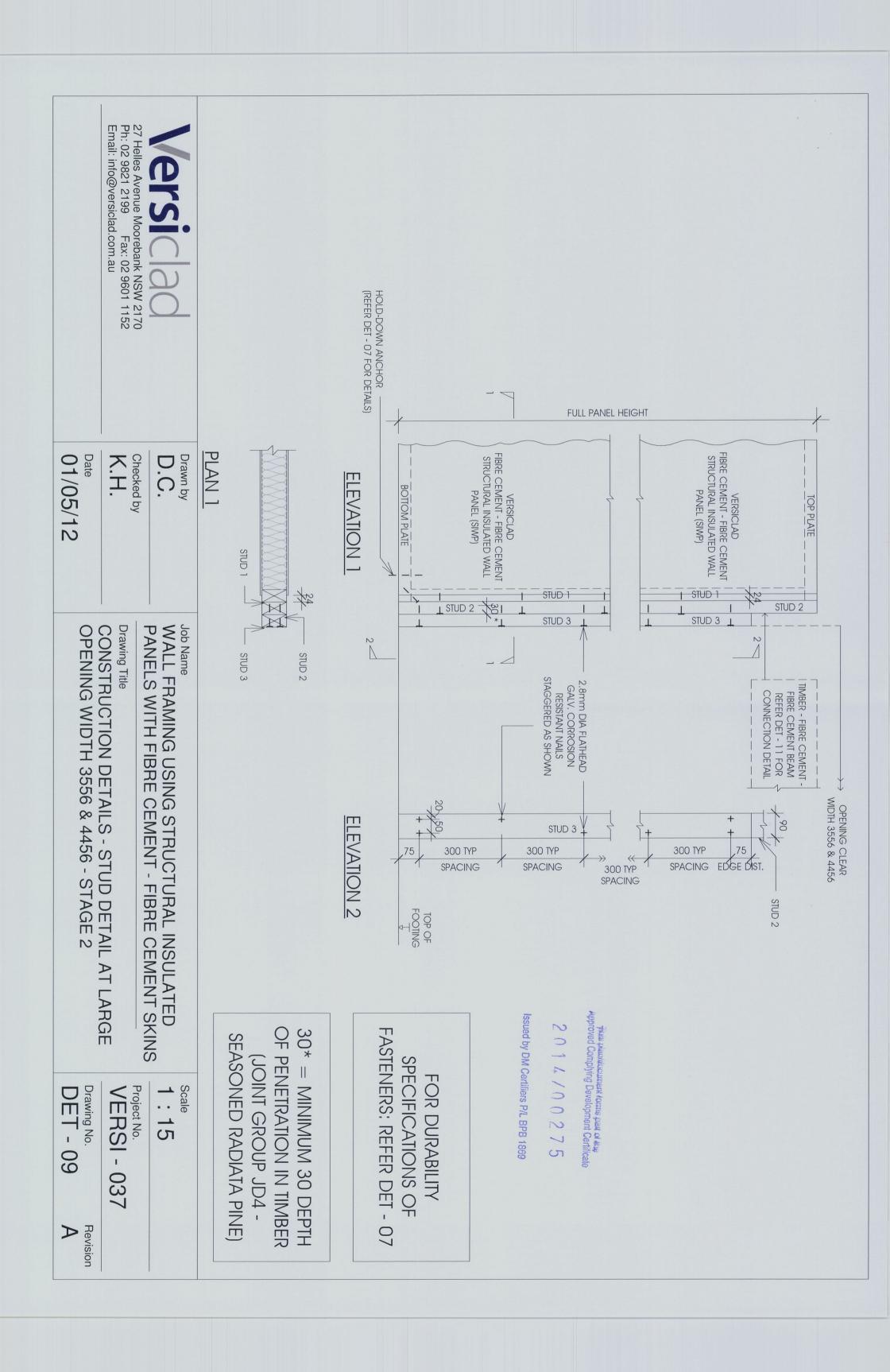


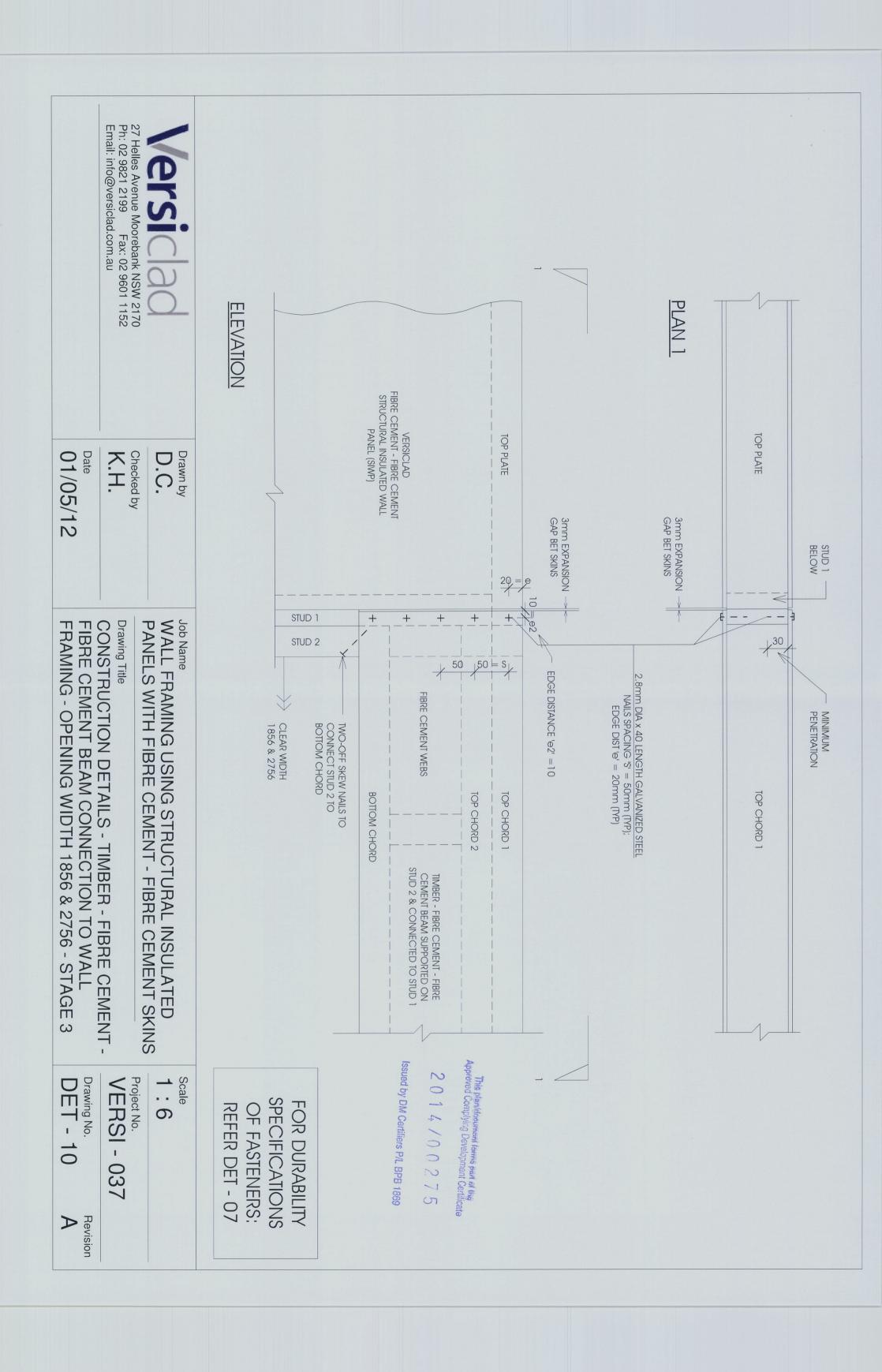


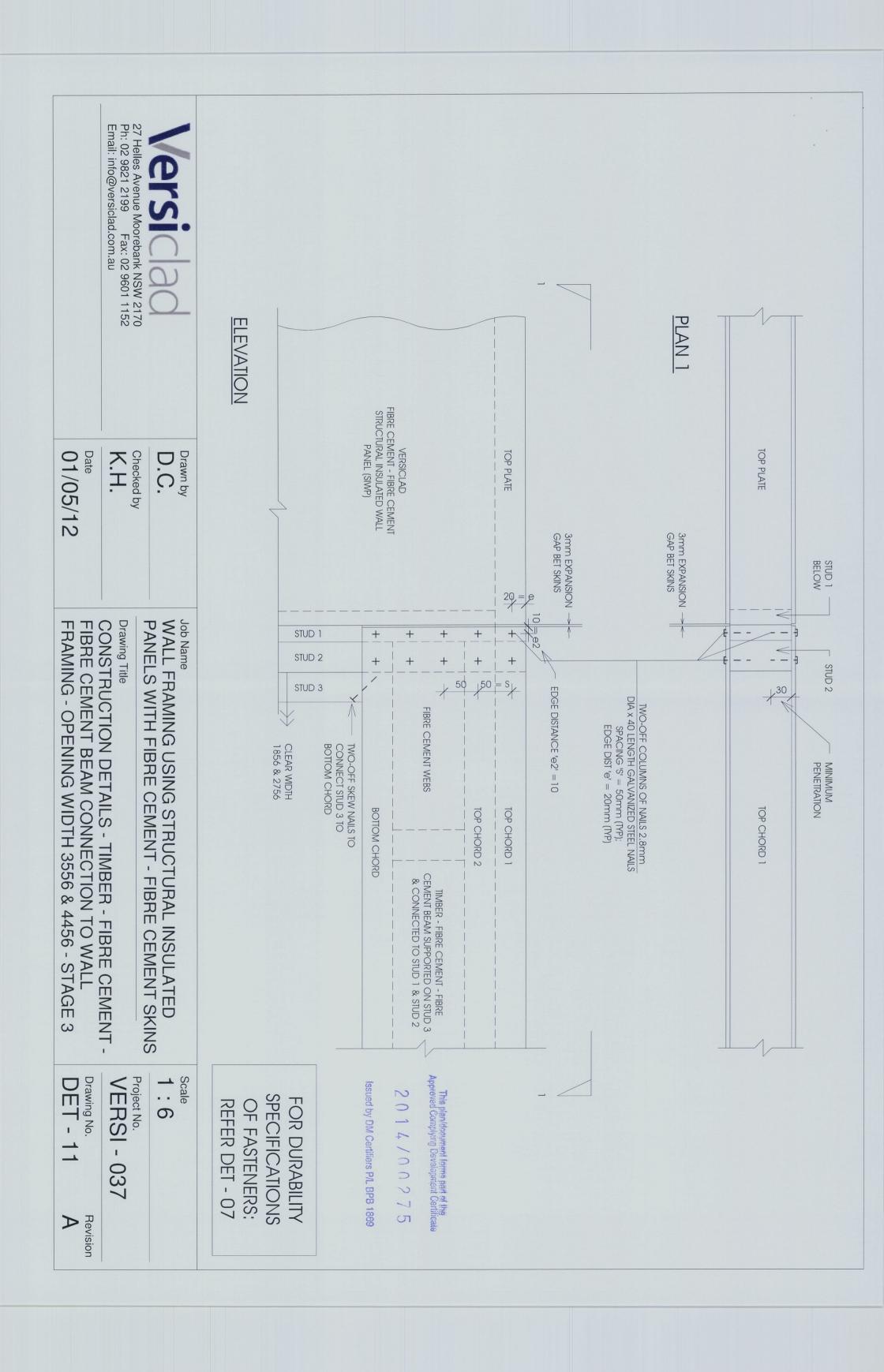


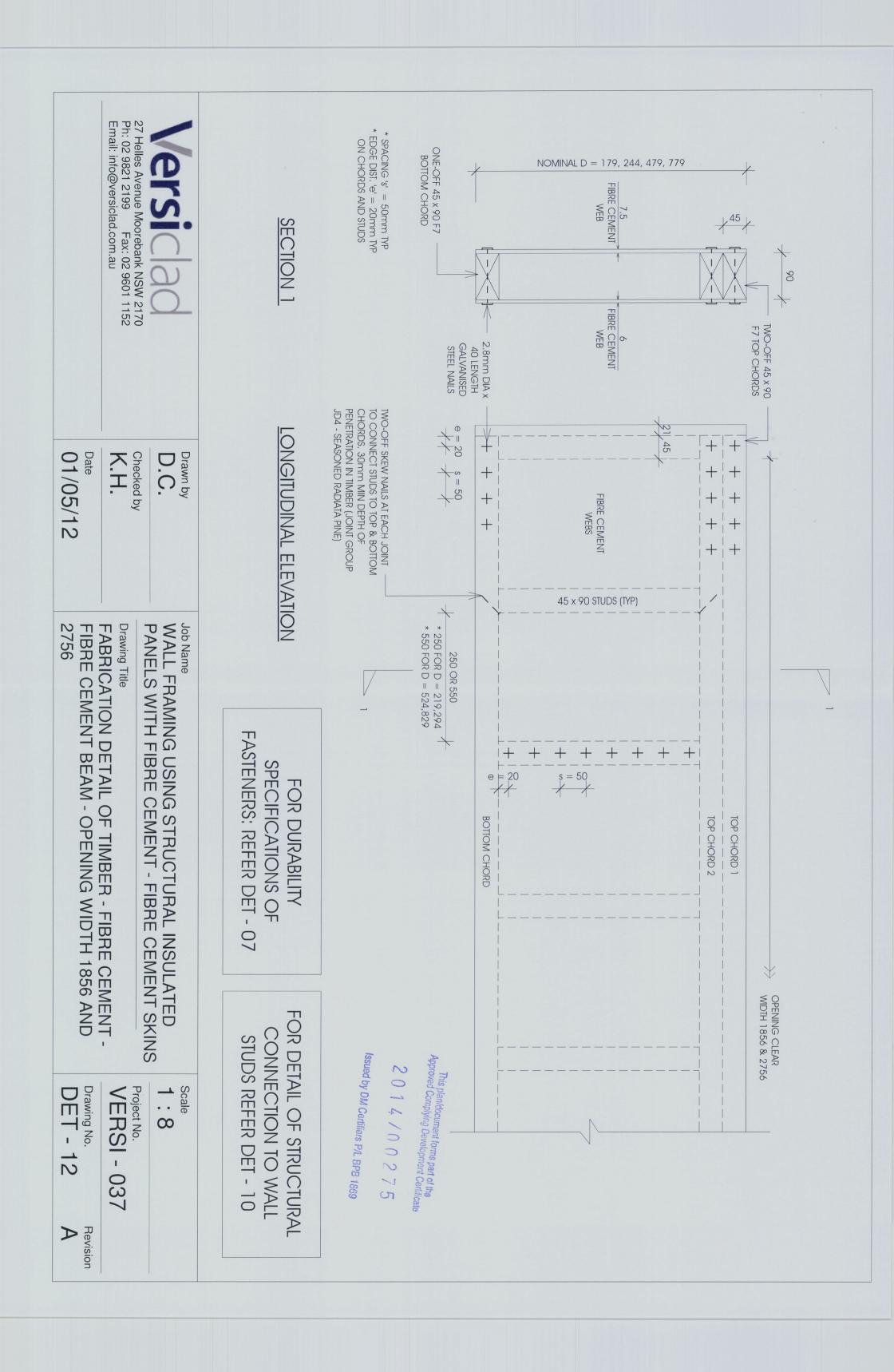
### 27 Helles Avenue Moorebank NSW 2170 Ph: 02 9821 2199 Fax: 02 9601 1152 Email: info@versiclad.com.au PLAN 1 TYPICAL AT EVERY SIDE OF OPENING - STRUCTURAL HOLD-DOWN ANCHOR INTO FOOTING TO RESIST WIND UPLIFT ON ROOF, ULTIMATE LIMIT STATE (ULS) CAPACITY OF ANCHOR = $17 \, \text{kN}$ Date Checked by Drawn by X.I. D.C. 01/05/12 FULL PANEL HEIGHT VERSICIAD FIBRE CEMENT - FIBRE CEMENT STRUCTURAL INSULATED WALL VERSICLAD FIBRE CEMENT - FIBRE CEMENT STRUCTURAL INSULATED WALL PANEL (SIWP) PANEL (SIWP) BOTTOM PLATE **Drawing Title** CONSTRUCTION DETAILS - STUD DETAIL PANELS WITH FIBRE CEMENT - FIBRE C Job Name TOP PLATE OPENING FOR WIDTHS 1856, 2756, 3556, WALL FRAMING USING STRUCTURAL IN STAGE 1: STUD 1 150 MA END OF PANEL gnis STUD 1 STUD 1 45 724 END OF STUD 1 50 90 STUD 2 - OFF SKEW NAILS ON STUD EXPOSED SIDE AT BOTTOM. 2.8mm DIA, FLAT HEAD GALV CORROSION RESISTANT This plan/legeliment forms best of the NAILS. EACH NAIL 30mm MIN DEPTHARPHOUSE COMPLYING Development Certificate OF PENETRATION IN BOTTOM PLATE MINIMUM PENETRATION IN BOTTOM PLATE TOP OF FOOTING EMENT SKINS SULATED AT LARGE Issued by DM Certifiers P/L BPB 1869 HOT-DIP GALVANIZED FASTENERS. 2. AS NOMINAL OR MINIMAL SPECIFICATION ADOPT: AUSTRALIA. STRUCTURE IN ATMOSPHERIC CORROSIVITY ZONE IN 1. DURABILITY OF ALL FASTENERS $\Theta G$ NAILS AND HOLDOWN ANCHORS SHALL BE BASED ON LOCATION OF ADOPT: STAINLESS STEEL FASTENERS 3. IN COASTAL AND/OR INDUSTRIAL ENVIRONMENTS BOTTOM PLATE, STUD 1 AND TOP PLATE - REFER DET - 01, 014/00 DET - 02 AND DET - 04 FOR FIXING SIMP TO VERSI - 037 Drawing No. **DET - 07** 1:10 $\triangleright$ Revision

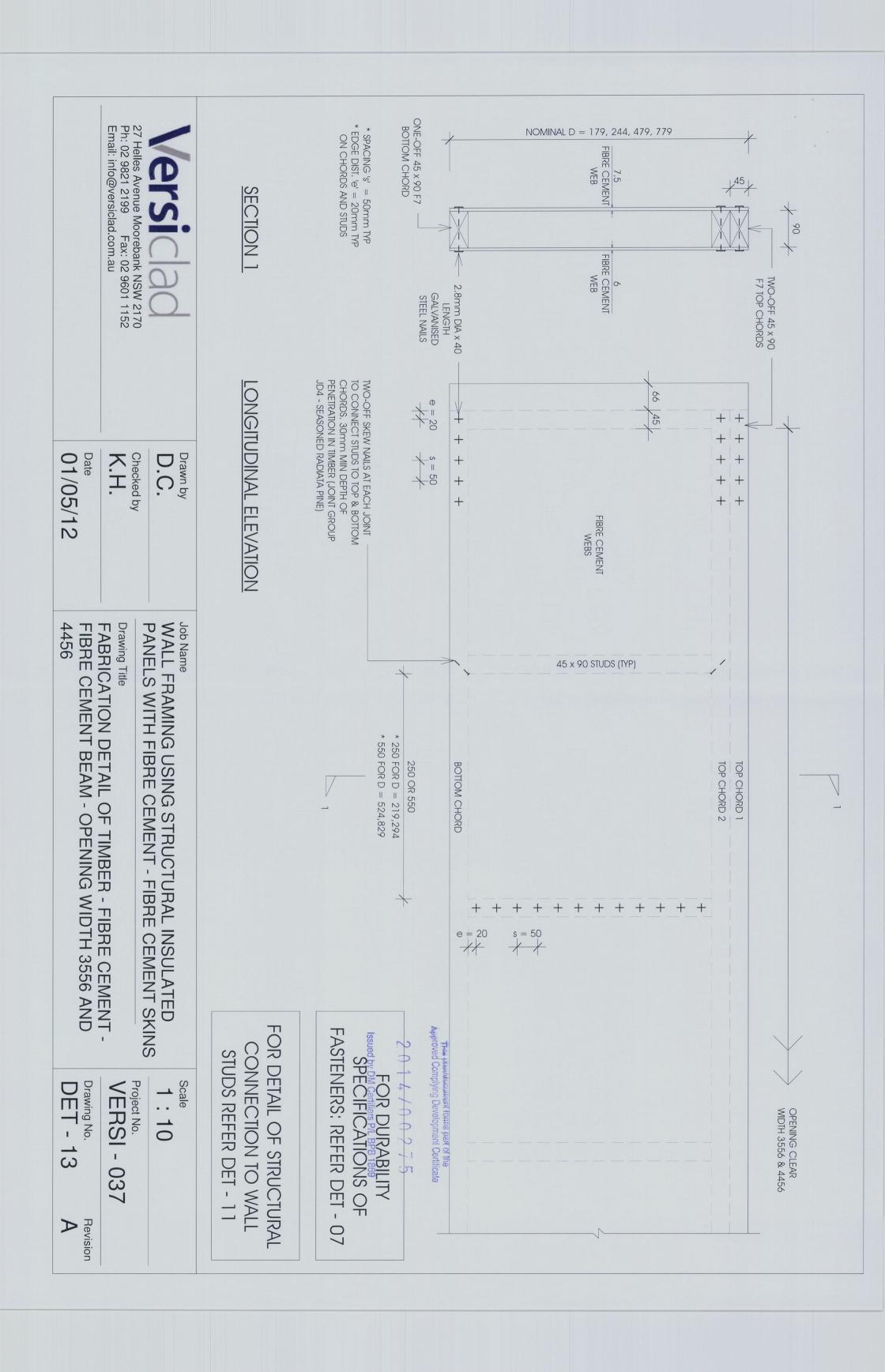














Leading Edge Civil-Structural Engineering – Innovative Construction Methods

### INNOVATIVE CONSTRUCTION ENGINEERING SOLUTIONS PTY LTD

ABN: 23 132 828 598

6, Koombala Grove, Cordeaux Heights, NSW 2526, Australia Telephone: 0422 524 409 Fax: 02 42 727 870

This plan/document forms part of the Approved Complying Development Certificate

1<sup>st</sup> May 2012

2014/00275

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Ref: VERSI-037/ST-V1-RevA

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- 2. This document dated 1<sup>st</sup> May 2012 supersedes all previous document(s).

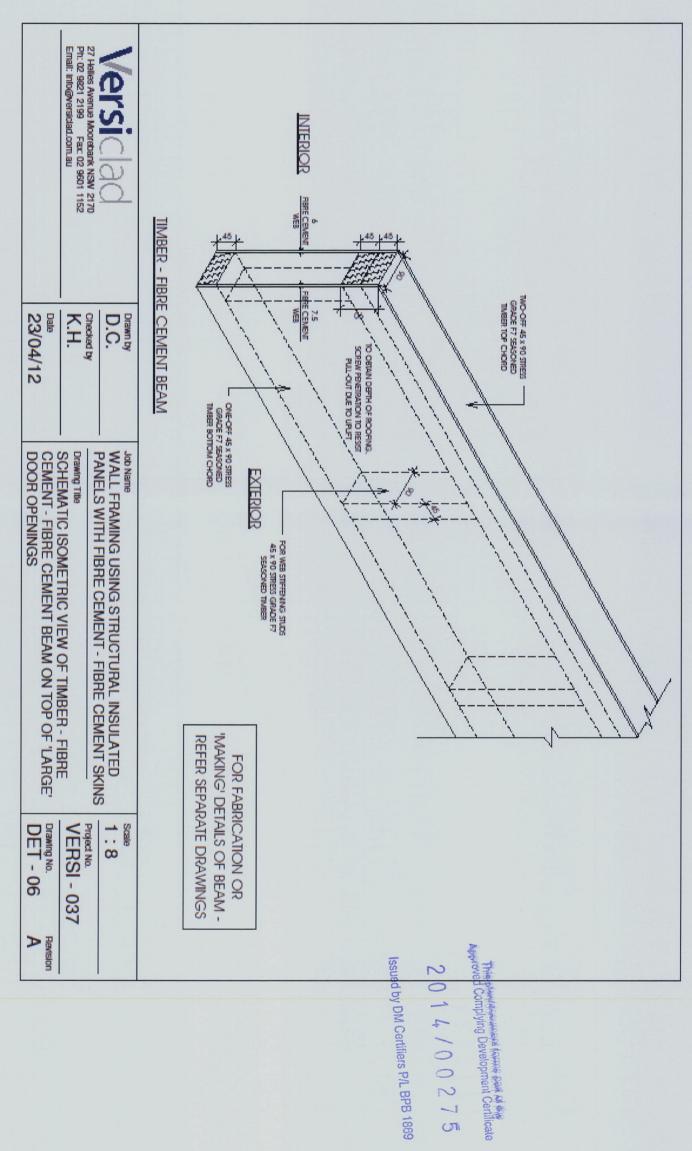
VERSICLAD timber F7 - Fibre Cement beam spanning over openings –

Span Table for non-cyclonic wind regions in typical fully enclosed lowrise (maximum two storeys) residential, commercial and light-industrial type buildings



Leading Edge Civil-Structural Engineering - Innovative Construction Methods

Figure 1:



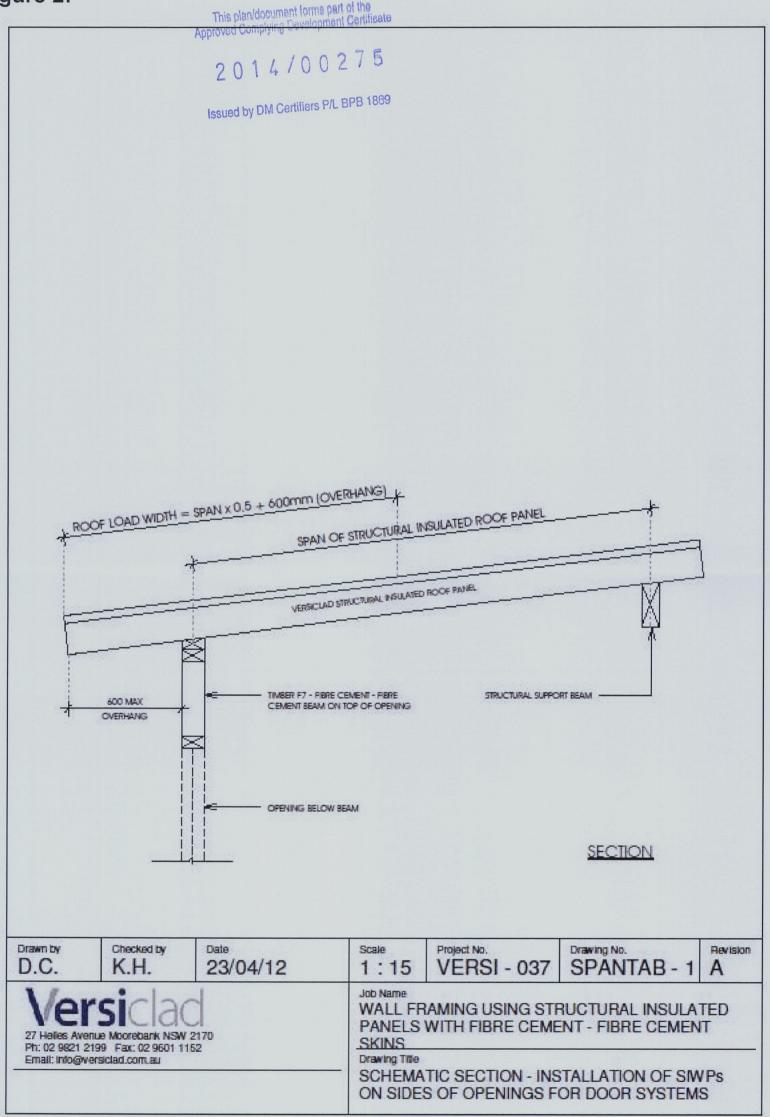
VERSI-037\_SpanTableF7-FibreCementBeam\_V1\_RevA\_010512.doc / pdf

Sheet 2 of 8

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### Figure 2:



VERSI-037\_SpanTableF7-FibreCementBeam\_V1\_RevA\_010512.doc / pdf

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### Table 1: SPAN TABLE for **SPACEMAKER** Structural Insulated Roof Panel (SIRP)

Issued by DM Certifiers P/L BPB 1869 Refer: Figure 2

Nominal Beam Depth (mm)	Opening width 1856 mm	Opening width 2756 mm	Opening width 3556 mm	Opening width 4556 mm
179	N3 (1)	N3	N3	N2 (2)
244	N3	N3	N3	N3
479	N3	N3	N3	N3
779	N3	N3	N3	N3

- (1) N3 

  Timber F7 Fibre Cement beam 179 mm overall depth over opening width 1856 mm may be used to support VERSICLAD SPACEMAKER Structural Insulated Roof Panels for spans up to and including Wind Class N3, i.e., for Wind Class N1, N2 and N3
- (2) N2 

  Timber F7 Fibre Cement beam 179 mm overall depth over opening width 4556 mm may be used to support VERSICLAD SPACEMAKER Structural Insulated Roof Panels for spans up to and including Wind Class N2, i.e., for Wind Class N1 and N2



2014/00275

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**Table 2:** SPAN TABLE for **CORROLINK** Structural Insulated Roof Panel (SIRP) Refer: Figure 2

Nominal Beam Depth (mm)	Opening width 1856 mm	Opening width 2756 mm	Opening width 3556 mm	Opening wid	dth 4556 mm
				Panel core thickness 65, 85,115, 150 mm	Panel core thickness 200 mm
179	N3 (1)	N3	N3	N2 (2)	N1 (3)
244	N3	N3	N3	N3	N3
479	N3	N3	N3	N3	N3
779	N3	N3	N3	N3	N3

- (2) N2 

  Timber F7 Fibre Cement beam 179 mm overall depth over opening width 4556 mm may be used to support VERSICLAD CORROLINK Structural Insulated Roof Panels for spans up to and including Wind Class N2, i.e., for Wind Class N1 and N2
- (3) N1 

  → Timber F7 Fibre Cement beam 179 mm overall depth over opening width 4556 mm may be used to support VERSICLAD CORROLINK Structural Insulated Roof Panels for spans for Wind Class N1

Leading Edge Civil-Structural Engineering – Innovative Construction Methods

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### Table 3: SPAN TABLE for DOUBLE CORROLINK Structural Insulated Roof Panel (SIRP)

Refer: Figure 2

Nominal Beam	Opening width	Opening width	Opening width	Opening width
Depth (mm)	1856 mm	2756 mm	3556 mm	4556 mm
179	N3 (1)	N3	N2 (2)	N1 (3)
244	N3	N3	N3	N2
479	N3	N3	N3	N3
779	N3	N3	N3	N3

- N3 Timber F7 Fibre Cement beam 179 mm overall depth over opening width 1856 mm may be used to support VERSICLAD DOUBLE CORROLINK Structural Insulated Roof Panels for spans up to and including Wind Class N3, i.e., for Wind Class N1, N2 and N3
- Timber F7 Fibre Cement beam 179 mm overall depth over (2) opening width 3556 mm may be used to support VERSICLAD DOUBLE CORROLINK Structural Insulated Roof Panels for spans up to and including Wind Class N2, i.e., for Wind Class N1 and N2
- Timber F7 Fibre Cement beam 179 mm overall depth over (3) N1 □ opening width 4556 mm may be used to support VERSICLAD DOUBLE CORROLINK Structural Insulated Roof Panels for spans for Wind Class N1

2014/002/3

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**Table 4:** SPAN TABLE for **VERSALINK** Structural Insulated Roof Panel (SIRP) Refer: Figure 2

1	Nominal Beam	Opening width	Opening width	Opening width	Opening width
	Depth (mm)	1856 mm	2756 mm	3556 mm	4556 mm
	179	N3 (1)	N3	N3	N2 (2)
	244	N3	N3	N3	N3
	479	N3	N3	N3	N3
	779	N3	N3	N3	N3

- (1) N3 

  ☐ Timber F7 Fibre Cement beam 179 mm overall depth over opening width 1856 mm may be used to support VERSICLAD VERSALINK Structural Insulated Roof Panels for spans up to and including Wind Class N3, i.e., for Wind Class N1, N2 and N3
- (2) N2 

  Timber F7 Fibre Cement beam 179 mm overall depth over opening width 4556 mm may be used to support VERSICLAD VERSALINK Structural Insulated Roof Panels for spans up to and including Wind Class N2, i.e., for Wind Class N1 and N2

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**Table 5:** SPAN TABLE for **MULTIDEK** Structural Insulated Roof Panel (SIRP) Refer: Figure 2

Nominal Beam	Opening width	Opening width	Opening width	Opening width
Depth (mm)	1856 mm	2756 mm	3556 mm	4556 mm
179	N3 (1)	N3	N2 (2)	N1 (3)
244	N3	N3	N3	N2
479	N3	N3	N3	N3
779	N3	N3	N3	N3

- (1) N3 

  ☐ Timber F7 Fibre cement beam 179 mm overall depth over opening width 1856 mm may be used to support VERSICLAD MULTIDEK Structural Insulated Roof Panels for spans up to and including Wind Class N3, i.e., for Wind Class N1, N2 and N3
- (2) N2 

  Timber F7 Fibre cement beam 179 mm overall depth over opening width 4556 mm may be used to support VERSICLAD MULTIDEK Structural Insulated Roof Panels for spans up to and including Wind Class N2, i.e., for Wind Class N1 and N2
- (3) N1 

  ☐ Timber F7 Fibre Cement beam 179 mm overall depth over opening width 4556 mm may be used to support VERSICLAD MULTIDEK Structural Insulated Roof Panels for spans for Wind Class N1



This plan/document farms part of the Approved Complying Development Certificate Leading Edge Civil - Structural Engineering — Innovative Construction Methods

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6, Koombala Grove, Cordeaux Height, NSW 2526, Australia

Telephone: 0422 524 409

Fax: 02 42 727 870

1<sup>st</sup> May 2012

Ref: VERSI-037/SIWP-FC/SC-V1

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2. This document dated 1<sup>st</sup> May 2012 supersedes all previous document(s).

Versiclad Pty Ltd 27, Helles Avenue Moorebank, NSW 2170

Attention:

Mr. Adam Shacallis

Sub: VERSICLAD Structural Insulated Wall Panels (SIWP) 104.5 mm Overall Thickness, With Fibre Cement Skins: – Structural Certificate

This is to certify that the VERSICLAD structural insulated wall panel (SIWP) 104.5 mm overall thickness, with Fibre Cement skins can meet structural performance requirements as documented below, based on a theoretical structural assessment.

The structural assessment is based on:

1) National Construction Code Series [1.1], [1.2]

2) Australian Standards [2.1], [2.2], [2.3], [2.4], [2.5], [2.6, [2.7];

3) Product literature and manuals [3.1], [3.2]; and

4) Structural analysis and design calculations [4].

### **Structural Performance Requirements:**

1. Wall height (vertical span) = 3 m for Wind Class N3 in accordance with AS 4055 [2.4]

### 2. Bracing capacity or racking resistance for wall height up to 3 m: [3.4]

A typical bracing system - Brace System Type #1, with Fibre Cement skins connected or fastened to timber bottom plate, studs and top plate in accordance with Manufacturer's specifications is as follows:-

- 2.1) Ultimate Limit State (ULS) bracing capacity = 3.4 kN/m obtained with following specifications:
- 1) Timber joint group JD3 [2.5]
- 2) Fasteners Galvanized corrosion resistant 2.8 mm diameter x 30 mm length flat head nails or their gun-driven equivalents
- 3) Fastener spacing centres:
  - a) 80 mm on top and bottom plates; and
  - b) 150 mm on vertical studs
- 4) Fastener edge distances:
  - a) 15 mm minimum on top and bottom plates; and
  - b) 8 mm minimum on vertical studs.

 $VERSI-037\_SIWPWithFibreCementSkins\_StructuralCertificate\_V1\_010512.doc\ /\ pdf\ Sheet\ 1\ of\ 3$ 

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Construction details: Wall framing using structural insulated panels with Fibre 3. Cement skins: Typical construction details

Table 1: Drawings List: Project No. VERSI-037 and drawing numbers:

S. No.	Drawing No.	Revision or Rev	Date on drawing
1.	GEN-01	A	1.5.12
2.	DET-01	A	1.5.12
3.	DET-02	A	1.5.12
4.	DET-03	A	1.5.12
5.	DET-04	A	1.5.12
6.	DET-05	A	1.5.12

4. Construction details: Wall framing using structural insulated panels with Fibre Cement skins: Typical construction details of timber F7- Fibre Cement beam over wall openings

Drawings List: Project No. VERSI-037 and drawing numbers: Table 2:

S. No.	Drawing No.	Revision or Rev	Date on drawing
1.	GA-01	A	1.5.12
2.	GA-02	A	1.5.12
3.	DET-06	A	1.5.12
4.	DET-07	A	1.5.12
5.	DET-08	A	1.5.12
6.	DET-09	A	1.5.12
7.	DET-10	A	1.5.12
8.	DET-11	A	1.5.12
9.	DET-12	A	1.5.12
10.	DET-13	A	1.5.12

5. Timber F7 - Fibre Cement beam spanning over openings - Span Table for non-cyclonic wind regions in typical fully enclosed low-rise (maximum two storeys) residential, commercial and light-industrial type buildings – Refer document [4], [5]

MIEAust CPEng - Chartered Professional Engineer 733503;

Registered Professional Engineer of Queensland - RPEQ 7652;

Principal Engineer - Innovative Construction Engineering Solutions Pty Ltd

VERSI-037\_SIWPWithFibreCementSkins\_StructuralCertificate\_V1\_010512.doc / pdf Sheet 2 of 3

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### References:

### [1] Building Code of Australia:

- [1.1] National Construction Code Series, Volume One, Building Code of Australia, Class 2 to Class 9 Buildings, Australian Building Codes Board, ACT 2601.
- [1.2] National Construction Code Series, Volume Two, Building Code of Australia, Class 1 and Class 10 Buildings, Australian Building Codes Board, ACT 2601.

### [2] Australian Standards for structural design actions:

- [2.1] Australian/New Zealand Standard AS/NZS1170.0:2002, Structural design actions General principles.
- [2.2] Australian/New Zealand Standard AS/NZS1170.1:2002, Structural design actions Permanent, imposed and other actions.
- [2.3] Australian/New Zealand Standard AS/NZS1170.2:2002, Structural design actions, Part 2: Wind actions.
- [2.4] Australian Standard AS 4055-2006, Wind loads for housing.
- [2.5] Australian Standard AS 1720.1-2010, Timber structures Part 1: Design methods.
- [2.6] Australian Standard AS 1366.3 1992 Rigid cellular plastics sheets for thermal insulation Part 3: Rigid cellular polystyrene Moulded (RC/PS-M)
- [2.7] Australian/New Zealand Standard AS/NZS 2908.2:2000 Cellulose-cement products, Part 2: Flat sheets

### [3] Product literature and manuals

- [3.1] Gyprock® Plasterboard & CSR Fibre Cement Bracing Systems, GYP545. September 2002.
- [3.2] Structural Bracing, Design Manual, James Hardie®, April 2006.

### [4] Structural analysis and design calculations held on file.

VERSICLAD timber F7 – Fibre Cement beam spanning over openings – Span Table for non-cyclonic wind regions in typical fully enclosed low-rise (maximum two storeys) residential, commercial and light-industrial type buildings, Ref: VERSI-037/ST-V1RevA, dated 1<sup>st</sup> May 2012.

### Building Act 1975 s10 & s50 Building Regulation s46 & s48

### Compliance Certificate for building Design or Specification

15

NO Ap	iprov	is pl	an/e	leeu plyir	mer ig D	nt fo	rms lopn	part nent	of th	ne tifica
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A Compliance Certificate states building work complies with the building assessment provisions.

To be used for all classes of building and structures to certify a material, system, method of building or building element complies with the BCA or a provision of the QDC.

RESTRICTION: A building certifier (class B) can only give a compliance certificate about whether building work complies with the BCA or a provision of the QDC. A building certifier (Class B) can not give a certificate regarding QDC boundary clearance and site cover provisions.

### 1. Property description

This section need only be completed if details of street address and property description are applicable.

EG. In the case of (standard/generic) pool design/shell manufacture and/or patio and carport systems this section may not be applicable.

The description must identify all land the subject of the application.

The lot & plan details (eg. SP / RP) are shown on title documents or a rates notice.

If the plan is not registered by title, provide previous lot and plan details.

Street address (include no., street, suburb / locality & postcode)

Not Applicable

Postcode

Lot & plan details (attach list if necessary)

Not Applicable

In which local government area is the land situated?

Not Applicable

### 2. Description of component/s certified

Clearly describe the extent of work covered by this certificate.

VERSICLAD Structural Insulated Wall Panels (SIWP) 104.5 mm Overall	
Overall Thickness, With Fibre Cement - OSB Skins: - Structural Certificate	

### 3. Basis of certification

Detail the basis for giving the certificate and the extent to which tests, specifications, rules, standards, codes of practice and other publications, were relied upon.

Refer: Structural certificate document – VERSI-037/SIWP-FC/SC-V1
dated 1 <sup>st</sup> May 2012

VERSI-037\_SIWPWithFibreCementSkins\_Form15StructCertV1\_010512.doc / pdf Sheet 1 of 2
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Construction Engineering Solutions Pty Ltd and shall not be transmitted and / or reproduced in any way whatsoever, without the written consent of Versiclad Pty Ltd and Innovative Construction Engineering
Solutions Pty Ltd.

LOCAL GOVERNMENT USE ONLY

Date received Reference Number/s Approved form 15
Version 1, 08/06

<b>4. Reference documentation</b> Clearly identify any relevant documentation,	Refer: Structural certificate document – VERSI-037/SIWP-FC/SC-V1
e.g. numbered structural engineering plans.	dated 1 <sup>st</sup> May 2012.
This plan/document forms part of the Approved Complying Development Certificate  2014/00275	
Issued by DM Certifiers P/L BPB 1869	
5. Building certifier reference number	Building certifier reference number
	NOT APPLICABLE
6. Competent person details  A competent person for building work, means a person who is assessed by the building certifier for the work as competent to practise in an aspect of the building and specification design, of the building work because of the individual's skill, experience and qualifications in the aspect. The competent person must also be registered or licensed under a law applying in the State to practice the aspect.  If no relevant law requires the individual to be licensed or registered to be able to give the help, the certifier must assess the individual as having appropriate experience, qualifications or skills to be able to give the help.  If the chief executive issues any guidelines for assessing a competent person, the building certifier must use the guidelines when assessing the person.	Name (in full)  Kishore Sadanand Honavar  Company name (if applicable)  Innovative Construction Engineering solutions PL  Phone no. business hours  02 42 727 870  Email address  kishore@conenggsol.com.au  Postal address  6, Koombala Grove  Cordeaux Heights  NSW Postcode 2526  Licence or registration number (if applicable)  Registered Professional Engineer of Queensland, RPEQ: 7652
7. Signature of competent person This certificate must be signed by the individual assessed by the building certifier as competent.	I certify that the item/s described above, if installed or carried out under the certificate, including any referenced documentation, will comply with the <i>Building Act 1975</i> .  Signature  Date  1st May 2012

VERSI-037\_SIWPWithFibreCementSkins\_Form15StructCertV1\_010512.doc / pdf Sheet 2 of 2

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### ANA CIVIL P/L. (Civil & Structural Engineers)

Suite 603, Level 6, Compass Centre, Bankstown 2200. Tel: 9793 1393 Fax: 9708 3113. A.B.N. 78 140 434 206 Email: admin@anacivil.com

February 21, 2014.

Dear Sir/Madam,

### RE: Stormwater Drainage Certificate for the proposed granny flat at No.24 Grandview Pde, Mona Vale.

This is to certify that our hydraulic design (Drawing No. 2014045 H1) for the proposed granny flat at the above address has been prepared is in accordance with the Australian Rainfall & Runoff, the relevant Council Codes and AS 3500 (National Plumbing and Drainage Code).

The above design will not divert or impede natural surface water runoff causing nuisance to adjoining properties.

We hope this certificate meets your requirements. Should you require any help or further explanations, please do not hesitate to contact us.

Yours faithfully,

M. Zaioor

B.S Civil Eng'g (A.U.B). M.S.Structural Eng'g (UNSW).

M.I.E.(Aust), CPEng.

This plan/document forms part of the Approved Complying Development Certificate

2014/00275

Issued by DM Certifiers P/L BPB 1869

# **BASI** \*Certificate

Building Sustainability Index www.basix.nsw.gov.au

### Single Dwelling

Certificate number: 527387S

This certificate confirms that the proposed development will meet the NSW government's requirements for sustainability, if it is built in accordance with the commitments set out below. Terms used in this certificate, or in the commitments, have the meaning given by the document entitled "BASIX Definitions" dated 29/06/2009 published by the Department of Planning. This document is available at www.basix.nsw.gov.au

Director-General

Date of issue: Tuesday, 25 February 2014

To be valid, this certificate must be lodged within 3 months of the date of issue.



This plan/document forms part of the Applicacing Centificate Applicacing Centificate

2014/00275

Issued by DM Certifiers P/L BPB 1869

(नळ्डअड्मात्तवार्)		
Project name	Relph	
Street address	24 Grandview Parade Mona Vale 2103	a Vale 2103
Local Government Area	Pittwater Council	
Plan type and plan number	deposited 6159	
Lot no.	16	
Section no.	•	
Project type	separate dwelling house	
No. of bedrooms	2	
मि <b>्</b> ध्वाड्याः		
Water	<b>√</b> 40	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	<b>√</b> 43	Target 40

Certificate Prepared by

Name / Company Name: Design Consultancy

ABN (if applicable): 13 577 179 030

BASIX

Department of Planning www.basix.nsw.gov.au

Version: 6.27 / CASUARINA 2 20 4

Certificate No.: 527387S Tuesday, 25 February 2014

page 1/7

मि <b>ट्रा</b> धाराधारम्	
Project name	Relph
Street address	24 Grandview Parade Mona Vale 2103
Local Government Area	Pittwater Council
Plan type and plan number	Deposited Plan 6159
Lot no.	16
Section no.	1
<b>Нојва</b> кура	
Project type	separate dwelling house
No. of bedrooms	2
<b>මැතු</b> මෙන්න	
Site area (m²)	100
Roof area (m²)	70
Conditioned floor area (m2)	54
Unconditioned floor area (m2)	S
Total area of garden and lawn (m2)	20

्रेड्डड्डिंग्याहामाम्याहान्याहान्याहान्य	eds	
Assessor number	n/a	
Certificate number	n/a	
Climate zone	n/a	
Area adjusted cooling load (MJ/m².year)	n/a	
Area adjusted heating load (MJ/m².year)	n/a	
(E)(F)(E)		
none	n/a	
<i>मि</i> ळ[धंस) <b>डका</b> @		
Water	<b>√</b> 40	Target 40
Thermal Comfort	Pass	Target Pass
Energy	<b>√</b> 43	Target 40

Water Commitments  Show the state of the sta	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Fixtures			
The applicant must install showerheads with a minimum rating of 3 star (> 4.5 but <= 6 L/min) in all showers in the development.		<	<u> </u>
The applicant must install a toilet flushing system with a minimum rating of 5 star in each toilet in the development.		•	•
The applicant must install taps with a minimum rating of 4 star in the kitchen in the development.		•	
The applicant must install basin taps with a minimum rating of 5 star in each bathroom in the development.		•	

Department of Planning

Certificate No.: 527387S

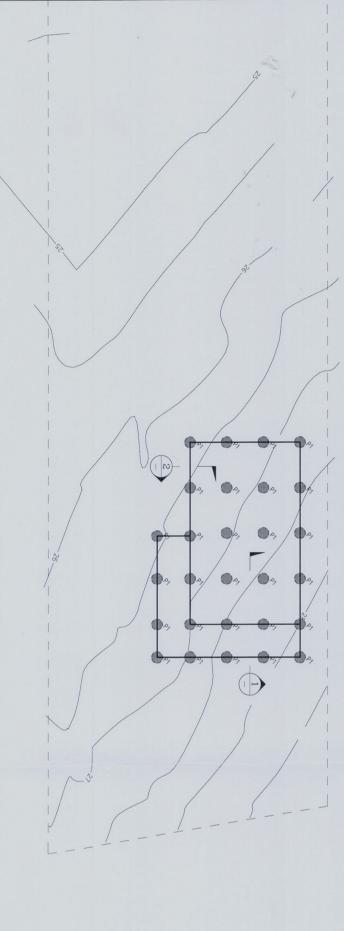
In these commitments, "applicant" means the person carrying out the development.

development application is to be lodged for the proposed development). Commitments identified with a 🥜 in the "Show on DA plans" column must be shown on the plans accompanying the development application for the proposed development (if a

certificate / complying development certificate for the proposed development. Commitments identified with a 🖌 in the "Show on CC/CDC plans and specs" column must be shown in the plans and specifications accompanying the application for a construction

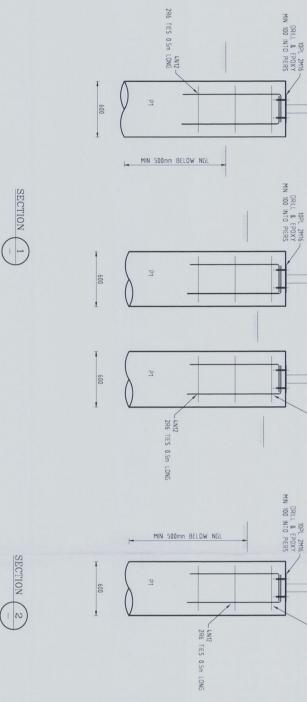
Department of Planning

Tuesday, 25 February 2014



FOOTING & GROUND FLOOR PLAN

Issued by DM Certifiers P/L BPB 1869



P1 Ø600 CONCRETE PIERS
4N12
2R6 TIES 0.5m LONG

Covercyment Certificate

75

C2. CONCRETE FOR TRENCHES, PADS AND ON GROUND SLAB IS 25MPA.

C4. MESH LAP IS 2 FULL SQUARES, LAP IS 450mm ON N12, 600mm ON N16, 1000mm ON N20 AND 1250mm ON N24.

06. FILL UNDER ON-GROUND SLAB TO BE WELL COMPACTED IN MAXIMUM LAYERS OF 150mm BY REPEATED ROLLING WITH AN EXCAVATOR.

C12. ALL REINFORCEMENT SHALL BE SECURELY SUPPORTED IN ITS CORRECT POSITION DURING CONCRETING BY APPROVED BAR CHAIRS, SPACERS OR SUPPORT BARS.

ACCORDANCE WITH AS 1684.4-2006 ALL TIMBER WORK TO BE CARRIED OUT IN dential timber-framed construction)

& THE NSW TIMBER FRAMING MANUAL.

## ANACIVII PTY. LTD (CML & STRUCTURAL ENGNEERS) Level 6, Suite 603, Compass Centre, Bankstown 2200, (as: necessar) Tel: 9783 1383 Fax: 9708 3113. Email: admin@anacivil.com

PROPOSED NEW DEVELOPMENT AT No. 24 GRANDVIEW PARADE

MONA VALE

Drawn by THENG Checked by M.ZAIOOR

21/2/2014

STRUCTURE DETAILS

Scale
1:100, 1:20 @ A1
Job No.
2014045
Drawing No.
2014045-51

Rev.

GENERAL NOTES

G.1. THESE DRAWNAS SHALL BE READ IN CONJUNCTION WITH ALL
ARCHITECTIPAL AND OTHER CONSULTANTS DRAWINGS AND
DESCRIPCATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS
DESCRIPCATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS
DESCRIPCATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTION
DESCRIPCATIONS AND WITH SUCH OTHER PROTECT FOR
DECISION BEFORE PROCEEDING WITH THE CONTRACT; ALL
DISCREPANCES SHALL BE REFERRED TO THE ARCHITECT FOR
DECISION BEFORE PROCEEDING WITH THE WORK
AS MAY BE ISSUED DURING THE CONTRACTOR BEFORE CONSTRUCTION
AND FABRICATION IS COMMENCED. THE ENGINEERS DRAWINGS
SHALL NOT BE SOLLED.

G.3. DURING CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE
FOR MANITAMING THE STRUCTURE IN A STABLE CONDITION AND
ENSURING NO PART SHALL BE OVERSTRESSED UNDER CONSTRUCTION
ACTIVITIES.

G.4. WORKMANSHIP AND MATERIALS ARE TO BE IN ACCORDANCE
WITH THE RELEVANT CURRENT SAA CODES INCLUDING ALL
AMENDMENTS, AND THE LOCAL STATUTORY AUTHORITIES. EXCEPT
WHERE WARRED BY THE CONTRACT DOCUMENTS.

G.5. THE APPROVAL OF A SUBSTITUTION SHALL BE SOUGHT FROM THE
ENGINEER BUT IS NOT AM AUTHORISATION FOR AN EXTRA. ANY
EXTRA NUOVED MUSTS BE TAKEN UP WITH THE ACCHITECT BEFORE
THE WORK COMMENCES.

G.6. THE CONTRACTOR SHALL NOTIFY THE ENGINEER FORTY BIGHT (48) HOURS BEFORE
THE WORK COMMENCES.

G.6. THE CONTRACTOR SHALL NOTIFY THE ENGINEER FORTY BEHALL ALLOW TWO (2)
HOURS AFTER THE COMPACTION OF REINFORCEMENT FOR THE ENGINEERS
INSPECTION. CONCRETE SHALL NOT BE OFFICIAL OF THE RINFORCEMENT IS
NASPECTION. CONCRETE SHALL NOT BE OFFICED UNTIL THE REINFORCEMENT IS
NASPECTION. CONCRETE SHALL NOT BE OFFICED UNTIL THE REINFORCEMENT IS
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NASPECTION. CONCRETE SHALL NOT BE OFFICED UNTIL THE REINFORCEMENT IS
NASPECTION. CONCRETE SHALL NOT BE OFFICED OFFICED.

G. ALL NON INDUSTRIES ON THE FLOOR.

G. ALL NON INDUSTRIES AND BEAMS BY 20MM UNLESS OTH

FOOTING NOTES

F1. SITE IS ASSUMED TO BE M SITE AS PER AS2870 BEFORE ANY CONCRETE IS PLACED BEASING SHALL BE VERRIFIED BY A QUALIFIED ENGINEER 200kPa CAPACITY & CLASSIFICATION

CONCRETE NOTES

C1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 3600.

C3. COVER TO FOOTINGS IS 65mm, 20mm TO INTERIOR SLABS AND 30mm TO VERANDAHS AND COLUMNS.

C5. CONCRETE IS CURED BY WATERING IT THREE TIMES A DAY FOR 5 DAYS.

C7. ON-GROUND SLAB IS MINIMUM 130mm THICK REINFORCED WITH SU72 MESH TOP AND BOTTOM IN AREA WHERE CONN-PACTED FILL BYGEED'S 500mm.

C8. FORMWORK TO REMAIN IN POSITION FOR A MINIMUM OF 14 DAYS WHERE SLABS AND BEAMS TO SUPPORT BRICK WORK, FORMWORK TO BE REMOVED PRIOR TO SUPPORT BRICK WORK.

C9. BEAM DEPTHS ARE WRITTEN FIRST AND INCLUDE SLAB THICKNESS.

C10. CONSTRUCTION JOINTS SHALL BE PROPERLY FORMED AND USED ONLY WHERE SHOWN OR SPECIFICALLY APPROVED BY THE BYGINEER.

C11. WELDING OF REINFORGEMENT SHALL NOT BE PERMITTED WITHOUT THE APPROVAL OF THE ENGINEER.

C13. FORMWORK SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH AS1509.

