INsight building certifiers pty ltd

Construction Certificate
Determination

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

Certificate No 2008/2893

Council	Pittwater
Determination date of issue	Approved 21 October 2008
Subject land Address Lot No, DP No	 87 Alexandra Crescent, Bayview Lot 3 DP 29283
Applicant Name Address Contact No (phone)	 Micheal Fountain Architects 2/5 Narabang Way, Belrose NSW 2085 9450 2070
Owner Name Address Contact No (phone)	 Kate Body 1756 Pittwater Road Bayview NSW 2104 9450 2070
Description of Development Type of Work	 Alterations & Additions to an Existing Dwelling (Excluding Study on basement level, bay window to family room & Spa)
Builder or Owner/Builder Name Contractor Licence No/Permit	 Lars Andersson Constructions Pty Ltd 180321C
Value of Work Building	 $215 353 00

SCANNED
22 OCT 2008
PITTWATER COUNCIL

COUNCIL COPY

Attachments

- Copy of completed Construction Certificate Application Form
- Pittwater Council Receipt no 241389 & 248217 for payment of Long Service Levy

#248278
$30
21/10/08
email reciept

Suite 13/90 Mona Vale Road Mona Vale NSW 2103 PO Box 326 Mona Vale NSW 1660 **ph 9999 0003** fax 9979 1555
email info@insightcert com au **web** www insightbuildingcertifiers com au **ABN** 54 115 090 456

Plans & Specifications certified

The development is to be carried out in compliance with the following plans and documentation listed below and endorsed with *Insight Building Certifiers* stamp

- Architectural Plans & Construction Specifications reference nos CC-001 to CC-004 (inclusive) Issue A prepared by Micheal Fountain Architects Pty Ltd dated 18 July 2008
- Structural Details reference nos 080534-S01, S02 & S03, prepared & endorsed by Northern Beaches Consulting Engineers Pty Ltd dated 1 July 2008
- Completed Form 2 of the Geotechnical Risk Management Policy for Pittwater dated 25 July 2008
- Certificate of Structural Adequacy reference no 080534 prepared by Northern Beaches Consulting Engineers Pty Ltd dated 1 July 2008
- Copy of Sydney Water Approval dated 30 July 2008

Certificate

I hereby certify that the above Plans documents or Certificates satisfy

- The relevant provisions of the Building Code of Australia
- The relevant conditions of this Development Consent

and that work completed in accordance with the documentation accompanying the application for this Certificate (and any modifications as verified by me and shown on that documentation) will comply with the requirements of the Environmental Planning & Assessment Regulation referred to in Section 81A(5) of the Environmental Planning & Assessment Act 1979

Signed

Date of endorsement 21 OCT 2008
Certificate No **2008/2893**

Certifying Authority

Name of Accredited Certifier	Tom Bowden
Accreditation No	BPB0042
Accreditation Authority	Building Professionals Board
Contact No	(02) 9999 0003
Address	13/90 Mona Vale Road Mona Vale NSW 2103

Development Consent

Development Application No	**N0573/06**
Date of Determination	**26 October 2006**

BCA Classification **1a**

Suite 13/90 Mona Vale Road Mona Vale NSW 2103 PO Box 326 Mona Vale NSW 1660 ph 9999 0003 fax 99791555
email info@insightcert com au ABN 54 115 090 456

FAXED

Fax to MFA

Attn Troy / Lorraine

Pages 2

Pittwater Council

OFFICIAL RECEIPT

11/07/2008 Receipt No 241389

To KATE BODY

1756 PITTWATER ROAD
BAYVIEW NSW 2104

Applic	Reference	Amount
GL Re	CL3L-Bull 1 Y N57J 0T	$193 00

Total	$193 00
Amounts Tendered	
Cash	$0 00
Cheque	$193.00
Db/Cr Card	$0 00
Money Order	$0 00
Agency Rec	$0 00
Total	$193 00
Rounding	$0 00
Change	$0 00
Nett	$193.00

Printed 11/07/2008 11 37 26
Cashier LSoane

COUNCIL COPY

Pittwater Council

ABN. 61340837871

TAX INVOICE

OFFICIAL RECEIPT

21/10/2008 Receipt No 248217

To MICHEAL FOUNTAIN ARCHITECTS
215 NARABANG WAY
BELROSE

Qty/ Applic	Reference	mount
GL Receip		
	OLSL-Builders LSL	$561 00
1 X N0573/06		
	Qty 1, CCGST-CCard	$5 10
+GST		
1		
	GST	$0 51
	Total Amount	$566 61
	Includes GST of	$0 51

Amounts Tendered

Db/Cr Card	$566 61
Total	$566 61
Rounding	$0 00
Change	$0 00
Nett	$566 61

Printed 21/10/2008 8 54 46 AM
Cashier AWard

LEVY PAYMENT FORM

FORM NO

OFFICE USE ONLY

PLEASE PRINT ALL DETAILS USING CAPITALS

MICHEAL FOUNTAIN
ARCHITECTS
215 NARABANG WAY BELROSE
NSW

Postcode 2085 Bus hours phone 9450 2070

CLEVELAND CRESCENT
NEW

Postcode 2104

Y Estimated finish date D M Y

WATER
06

215 353 08 Levy payable $ 561.00

DA number here

Business hours phone

Department/Authority

Contract/DA No (circle which)

Contract amount $

Levy payable $

Contact person (Print)

Phone number

Contact person (Signature)

Date D M Y

Any false or misleading information provided on this form may result in prosecution under Section 56A
I hereby declare that the information provided on this form is true and correct to the best of my knowledge

Name DAVE CRUTCH Signature Date 20 M 10 Y 2008

Exemption Approval Certificate No

COUNCIL COPY

Building and Construction Industry Long Service Payments Corporation Locked Bag 3000 Central Coast MC NSW 2252
Tel 13 14 41 Fax (02) 9287 5685 Email levy@lspc nsw gov au www lspc nsw gov au ABN 03 646 090 808

Aug 08/180

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

Development Application for Ms KATE BODY
Name of Applicant

Address of site 87 ALEXANDRA CRESCENT, BAYVIEW

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

I Stewart McHeady (insert name) on behalf of Northern Beaches Consulting P/L (trading or company name)

on this the 25/7/08 (date)

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

Geotechnical Report Details

Report Title GEOTECHNICAL ASSESSMENT AT 87 ALEXANDRA CRESCENT, BAYVIEW
Report Date 15/12/04 *Report Ref No* 18730SRpt2
Author PETER WRIGHT

Structural Documents list

Job No 080534 Drg. No. SD1, SD2 & SD3 dated May 2008
prepared by Northern Beaches Consulting Engineers Pty Ltd

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

Stewart McHeady (name) (signature)

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

We / I prepared and/or technically verified the abovementioned Geotechnical Report as per Form 1 dated 15/12/04 and now certify that ~~I~~ / I have viewed the above listed structural documents prepared for the same development. I am satisfied that the recommendations given in the Geotechnical Report have been appropriate taken into account by the structural engineer in the preparation of these structural documents

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

Signature

Name Paul Stubbs

Chartered Professional Status MIEAust CPEng Chartered Professional Engineer

Membership No Membership No. 130775

For and on behalf of Jeffery and Katauskas Pty Ltd

The Institution of Engineers, Australia

COUNCIL COPY

DIRECTORS
Stewart McGeady Rick Wray

Certificate of Existing Structural Adequacy

Date 1 July 2008 Job No 080534
Client Kate Body Engineer BS/SM

Site 87 Alexander Crescent, Bayview

Brad Seghers of Northern Beaches Consulting Engineers P/L carried out a site inspection at the above residential premises in June 2008 The purpose of the visit was to inspect and comment on the capacity of the existing structure to support the proposed additions and alterations, as per approved architectural plans by MFA Architects dated 13/03/06

The assessment consisted of a walk over style inspection of the building

In summary, the dwelling is considered sound and provides an adequate structure for the proposed works, provided that engineering plans are complied with and that all structural works are certified during construction However, some minor cracking may occur as the building adjusts to the new load distribution This is not expected to adversely affect the buildings overall structural integrity

Note This certification does not cover any defects to the structure that were not accessible at the time of inspection If in the event that defects are uncovered during construction or become apparent after construction is complete, then the engineer should inspect the areas of concern and prepare a specification for remedial works (These works will be carried out at hourly rates)

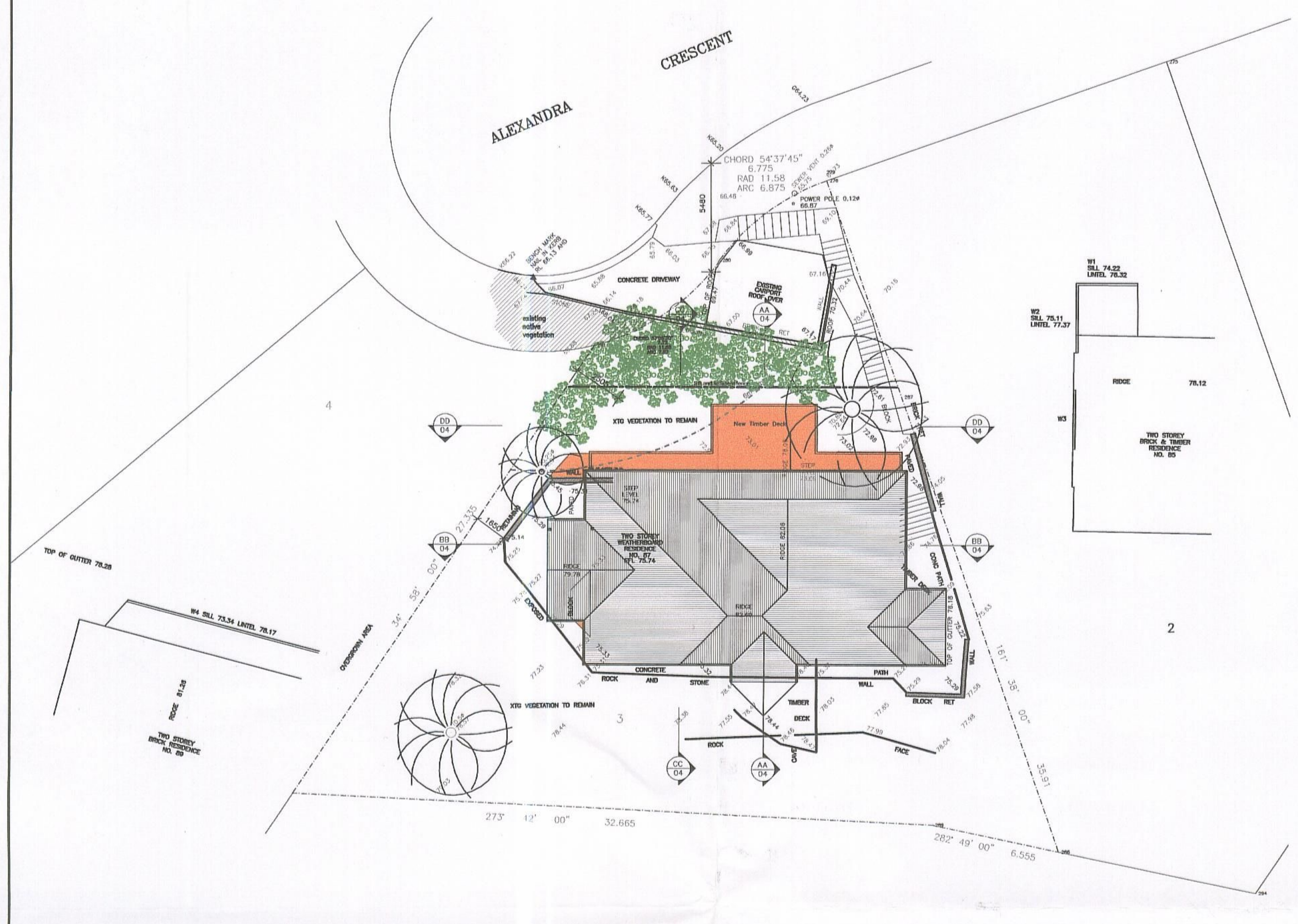
We trust that this certificate meets with your requirements Please contact the author if further clarification is required

NORTHERN BEACHES CONSULTING ENGINEERS P/L

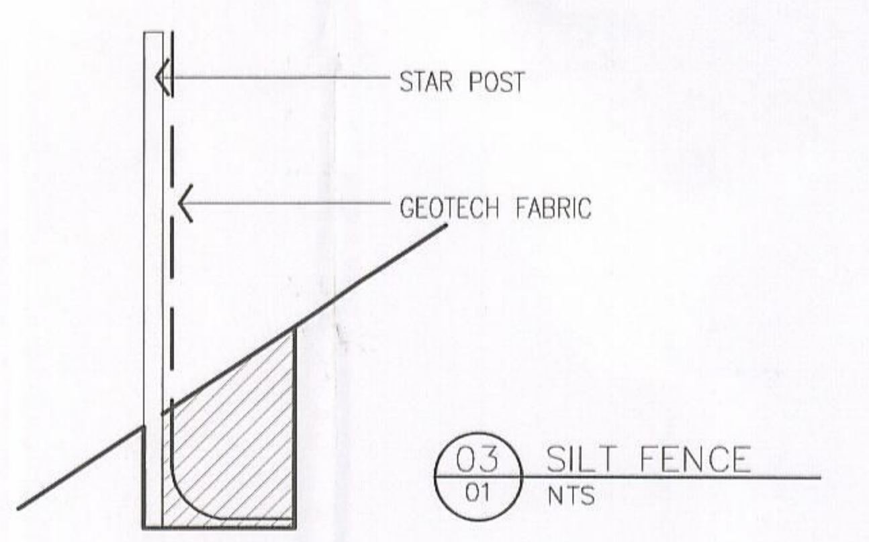
Stewart McGeady
BE Director

COUNCIL

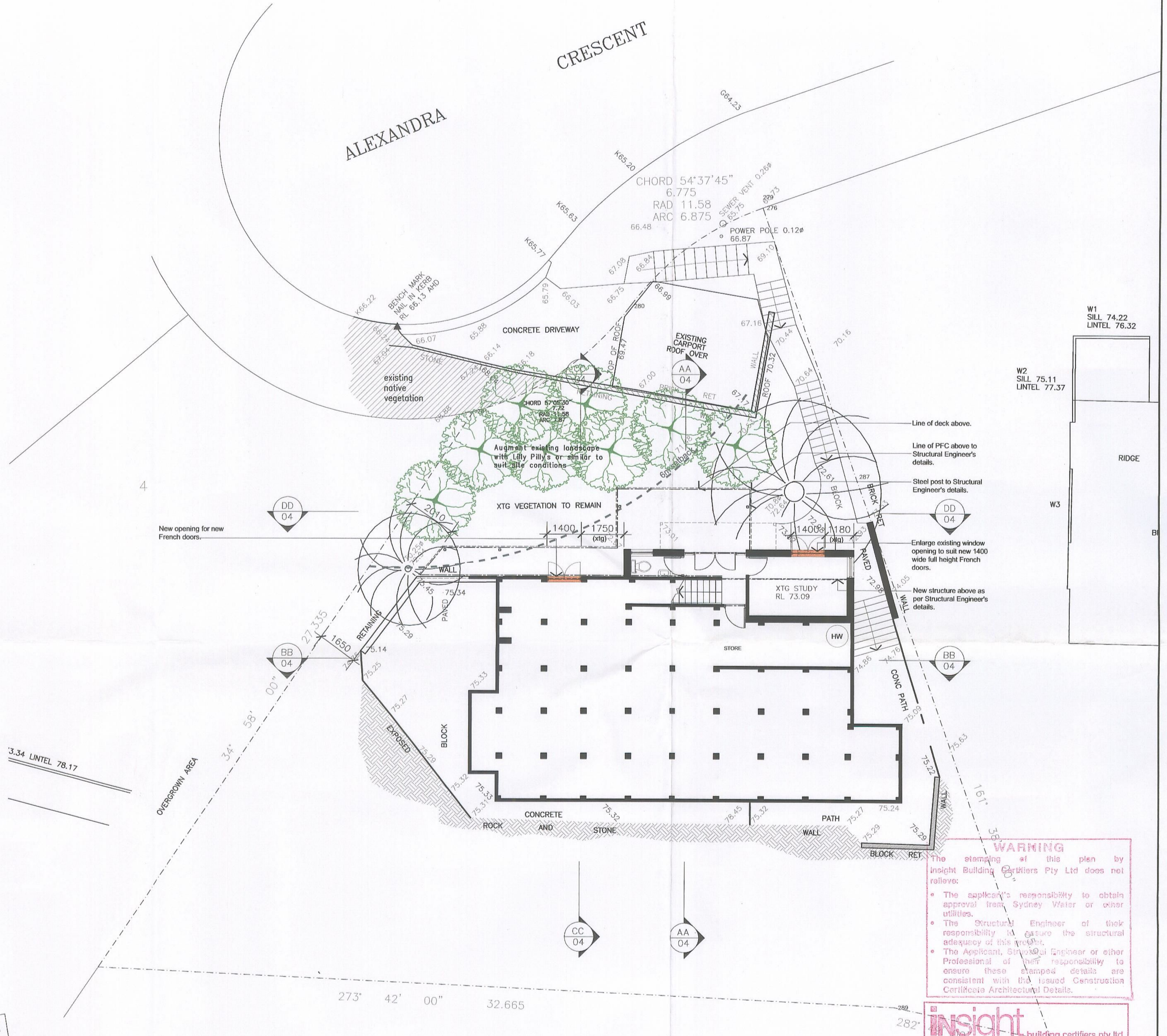
Northern Beaches Consulting Engineers Pty Ltd Structural Civil & Stormwater Engineers ACN 076 121 616 ABN 24 076 12? 616
Suite 207 30 Fisher Road Dee Why NSW 2099 Tel 9984 7000 Fax 9984 7444 Email nb@nbconsulting com au



01 SITE PLAN
01 1:200



03 SILT FENCE
01 NTS



02 BASEMENT PLAN
01 1:100

- ~~Building to incorporate BASIX commitments to comply with the attached BASIX Certificate No. dated~~
- Smoke Alarms to be installed in accordance with AS 3786-1993 'Smoke alarms'
- Termite Management to comply with AS 3660 – 2000 'Termite Management – New Building Work'
- Glazing to comply with AS 1288 – 2006 'Glass in Buildings – Selection & Installation' and AS 2047 – 1999 'Windows in Buildings – Selection & Installation'
- Waterproofing of wet areas to comply with AS 3740 – 2004 'Waterproofing of Wet Areas in Residential Buildings'
- Doors to fully enclosed sanitary compartments to comply with Part 3.8.3 'Facilities' of the Building Code of Australia
- External Glazing & Cladding being of minimal reflectance (maximum of 20%)
- External Finishes being in natural, recessive, non-reflective colours and textures
- Balustrades construction to comply with Part 3.9.2.3 – 'Balustrades' of the Building Code of Australia
- Damp-proof membrane must be 'high impact', 0.2mm thick polyethylene film

WARNING

The stamping of this plan by Insight Building Certifiers Pty Ltd does not relieve:

- The applicant's responsibility to obtain approval from Sydney Water or other utilities.
- The Structural Engineer of their responsibility to ensure the structural adequacy of this project.
- The Applicant, Structural Engineer or other Professional of their responsibility to ensure these stamped details are consistent with the issued Construction Certificate Architectural Details.

insight building certifiers pty ltd
CONSENT NO. N0573/06 DATE 26.10.06
CONSTRUCTION CERT NO. 2008/2893
CONSTRUCTION CERTIFICATE PLANS
T.Bowden 21 OCT 2008
T. Bowden Accreditation No. BPB0042

MFA

FIGURED DIMENSIONS TAKE PRECEDENCE. ALL DIMENSIONS ARE TO BE VERIFIED ON SITE PRIOR TO ORDERING ANY MATERIALS AND/OR BUILDING ELEMENTS AND PRIOR TO COMMENCEMENT OF THE AFFECTED WORKS.
ANY DISCREPANCIES ARE TO BE REPORTED TO THE AUTHOR IMMEDIATELY.
THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION UNLESS IT IS ISSUED FOR CONSTRUCTION AND SO MARKED IN THE AMENDMENT COLUMN, AND IS APPROVED AND SIGNED BY THE PRINCIPAL OF MICHEAL FOUNTAIN ARCHITECTS.

ISSUE	REV	AMENDMENTS	DATE
A		ISSUED FOR CLIENT REVIEW	07.07.08
	2	ISSUED FOR CONSTRUCTION CERTIFICATE	18.07.08

ISSUE	REV	AMENDMENTS	DATE

CLIENT
KATE BODY

PROJECT
ALTERATIONS AND ADDITIONS TO
87 ALEXANDRA CRES.
BAYVIEW, NSW

PRINTED: Jul 18, 2008 11:40am
P:\BODY - Bayview\Cadwork\Drawings\05 Construction Certificate\001 plans 040708.dwg

DRAWING
SITE PLAN AND BASEMENT PLAN

SCANNED
22 OCT 2008
PITTWATER COUNCIL

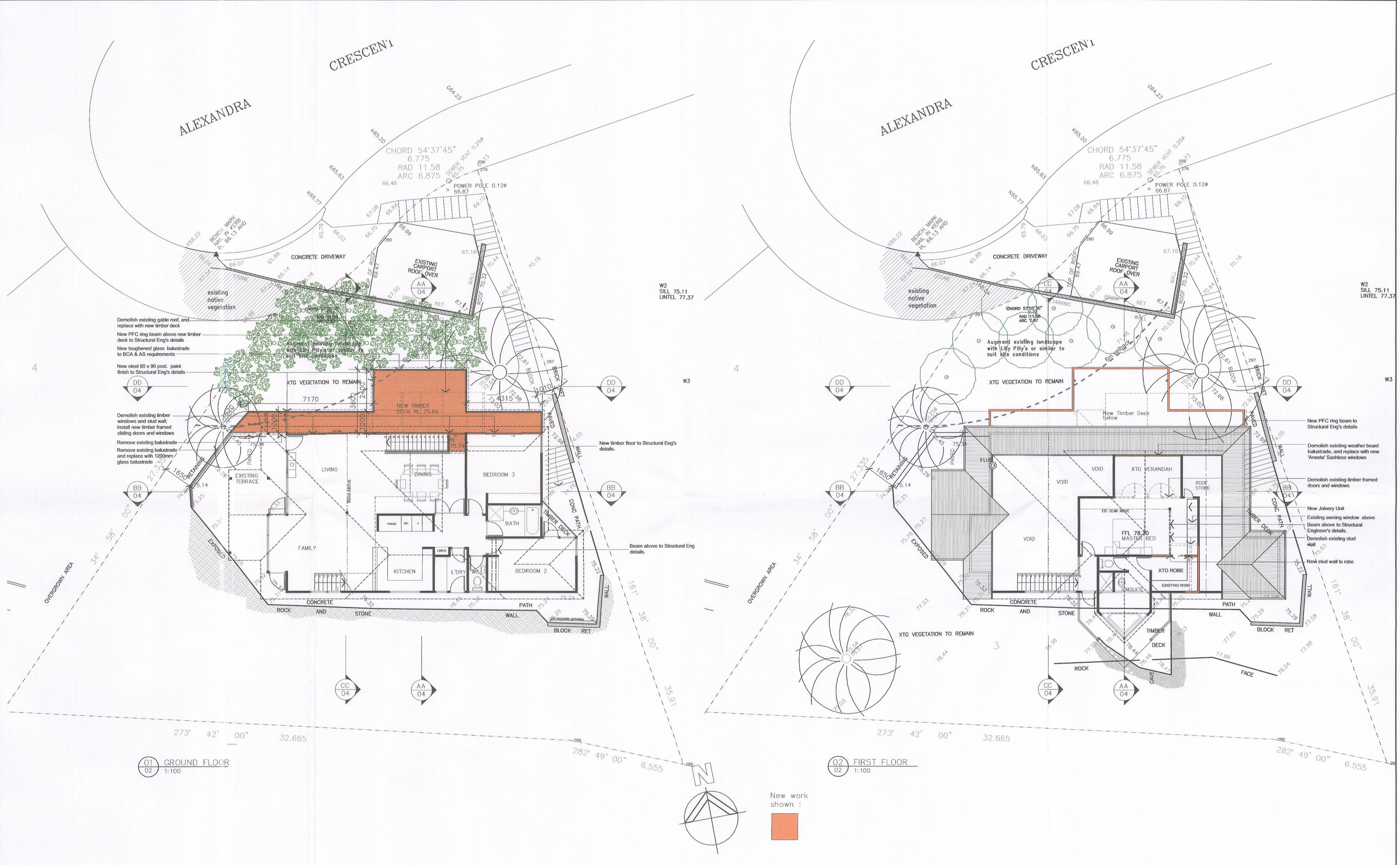
DRAWN	CHKD	APPROVED
L.C.		

SCALE	DATE	CAD FILE No
1:100	04.07.08	P:\ \CADWORK

JOB NO	DRAWING NO	ISSUE
0315	CC-001 PLAN	A

COUNCIL COPY

MFA
MICHEAL FOUNTAIN ARCHITECTS PTY. LTD.
2/5 NARABANG WAY BELROSE NSW 2085
TEL (02) 9450 2070 FAX (02) 9450 2757



THIS DRAWING IS SUBJECT TO COPYRIGHT AND IS NOT TO BE USED OR REPRODUCED FOR PURPOSES OTHER THAN THE CONSTRUCTION OF THE SUBJECT BUILDING ON THE SUBJECT SITE WITHOUT THE CONSENT OF MICHEAL FOUNTAIN ARCHITECT.
FIGURED DIMENSIONS TAKE PRECEDENCE. ALL DIMENSIONS ARE TO BE VERIFIED ON SITE PRIOR TO ORDERING ANY MATERIALS AND/OR BUILDING ELEMENTS AND PRIOR TO COMMENCEMENT OF THE AFFECTED WORKS.
ANY DISCREPANCIES ARE TO BE REPORTED TO THE AUTHOR IMMEDIATELY.
THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION UNLESS IT IS ISSUED FOR CONSTRUCTION AND SO MARKED IN THE AMENDMENT COLUMN, AND IS APPROVED AND SIGNED BY THE PRINCIPAL OF MICHEAL FOUNTAIN ARCHITECTS.

ISSUE	REV	AMENDMENTS	DATE	ISSUE	REV	AMENDMENTS	DATE
A		ISSUED FOR CLIENT REVIEW	04.07.08				
	2	ISSUED FOR CONSTRUCTION CERTIFICATE	18.07.08				

CLIENT
KATE BODY

PROJECT
ALTERATIONS AND ADDITIONS TO
87 ALEXANDRA CRES.
BAYVIEW, NSW

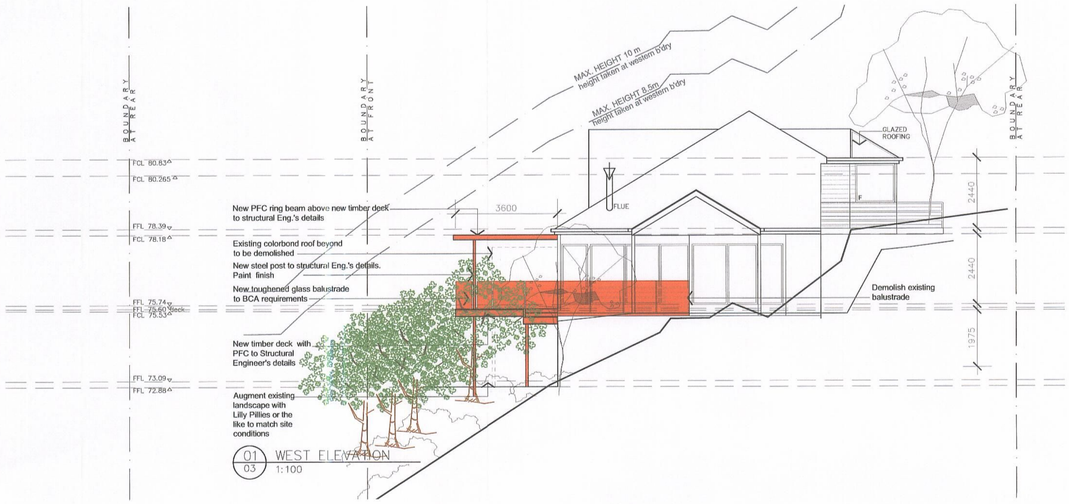
PRINTED: Jul 18, 2008 12:19pm
P:\BODY - Bayview\Cadwork\Drawings\05 Construction Certificate\001 plans 040708.dwg

DRAWING
PROPOSED GROUND AND FIRST FLOOR PLAN

DRAWN	CHKD	APPROVED
L.C.		
SCALE 1 : 100	DATE 04.07.08	CAD FILE No P:\ \CADWORK

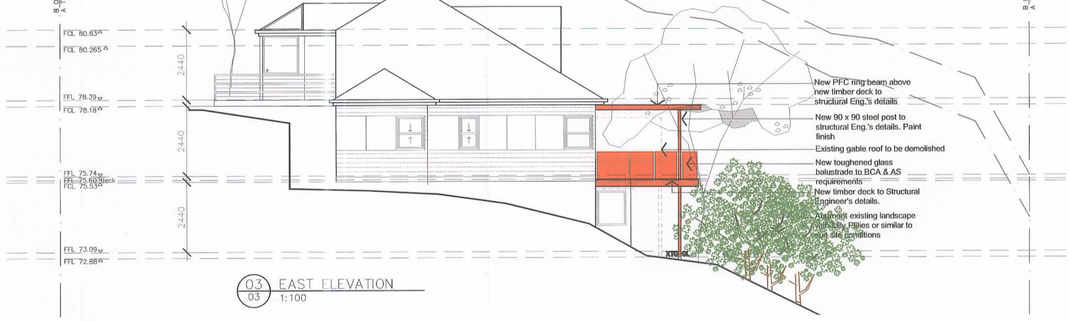
JOB NO	DRAWING NO	ISSUE
0315	CC-002 PLAN	A

MFA
MICHEAL FOUNTAIN ARCHITECTS PTY. LTD.
2/5 NARABANG WAY BELROSE NSW 2085
TEL (02) 9450 2070 FAX (02) 9450 2757

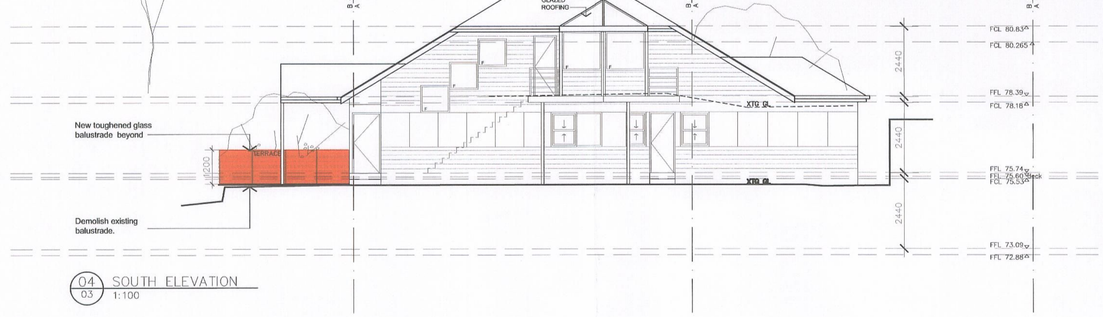


01/03 WEST ELEVATION
1:100

02/03 NORTH ELEVATION
1:100



03/03 EAST ELEVATION
1:100



04/03 SOUTH ELEVATION
1:100

New work shown :

ISSUE	REV	AMENDMENTS	DATE
A	1	ISSUED FOR CLIENT REVIEW	07.07.08
	2	ISSUED FOR CONSTRUCTION CERTIFICATE	18.07.08

ISSUE	REV	AMENDMENTS	DATE

CLIENT
KATE BODY

PROJECT
ALTERATIONS AND ADDITIONS TO
87 ALEXANDRA CRES.
BAYVIEW, NSW

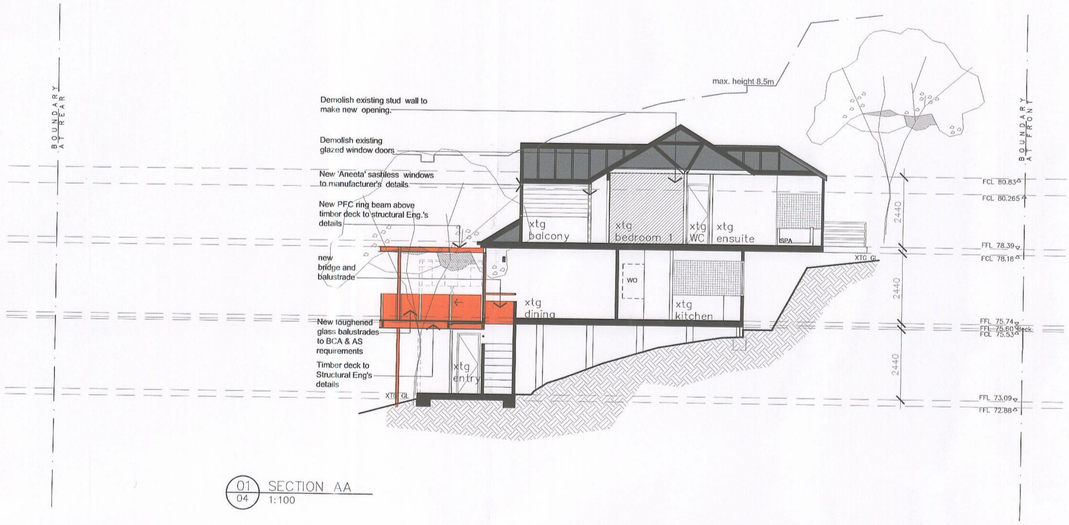
PRINTED: Jul 18, 2008 - 3:10pm
P:\BODY - Bayview\Cadwork\Drawings\05 Construction Certificate\002 elevs & sec 040708.dwg

DRAWING
ELEVATIONS NORTH, SOUTH, EAST & WEST

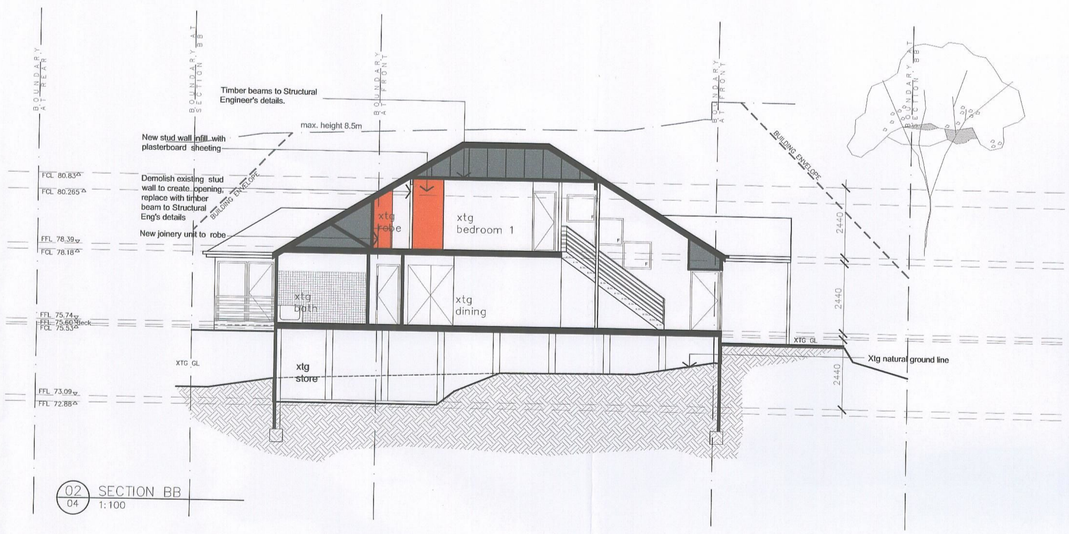
DRAWN	CHKD	APPROVED
L.C.		
SCALE	DATE	CAD FILE No
1:100	03.07.08	P:\CADWORK

JOB NO	DRAWING NO	ISSUE
0315	CC-003 ELEVS	A

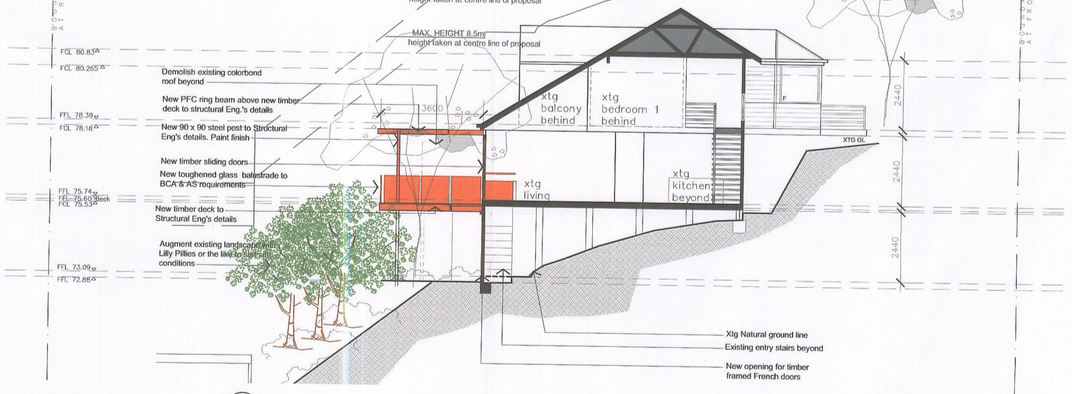
MICHEAL FOUNTAIN ARCHITECTS PTY. LTD.
2/5 NARABANG WAY BELROSE NSW 2085
TEL (02) 9450 2070 FAX (02) 9450 2757



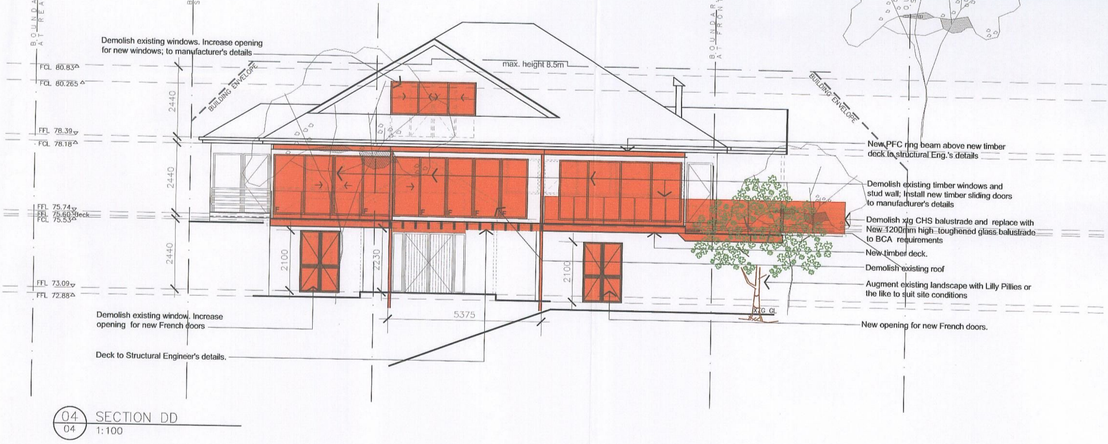
01/04 SECTION AA
1:100



02/04 SECTION BB
1:100



03/04 SECTION CC
1:100



04/04 SECTION DD
1:100

ISSUE	REV	AMENDMENTS	DATE
A	1	ISSUED FOR CLIENT REVIEW	07.07.08
	2	ISSUED FOR CONSTRUCTION CERTIFICATE	18.07.08

ISSUE	REV	AMENDMENTS	DATE

CLIENT: **KATE BODY**

PROJECT: ALTERATIONS AND ADDITIONS TO 87 ALEXANDRA CRES. BAYVIEW, NSW

PRINTED: Jul 18, 2008 - 2:42pm
P:\BODY - Bayview\Cadwork\Drawings\05 Construction Certificate\002 elevs & sec 040708.dwg

DRAWING: **SECTIONS AA, BB, CC & DD**

DRAWN	CHKD	APPROVED
L.C.		
SCALE: 1:100	DATE: 04.07.08	CAD FILE No: P:\CADWORK
JOB NO: 0315	DRAWING NO: CC-004 SECS	ISSUE: A

MICHEAL FOUNTAIN ARCHITECTS PTY. LTD.
2/5 NARABANG WAY BELROSE NSW 2085
TEL (02) 9450 2070 FAX (02) 9450 2757

GENERAL NOTES:

GENERAL

G1. The drawings are to be read together with all Architects drawings and specifications.

G2. Dimensions shall not be obtained by scaling from the drawings. All setting out dimensions shall be verified and discrepancies shall be referred to the Engineer prior to commencement of work.

G3. Care is required during construction so that structural elements are not over stressed and that the works and excavations required therefore are kept stable at all times.

G4. Design, materials and workmanship are to be in accordance with current S.A.A standards and statutory authority regulations except where varied by these documents.

G5. Design live loads are in accordance with AS 1170.1

G6. Builder to ensure stability of existing structures in the vicinity of excavation works.

FOOTINGS

F1. FOUNDATION STRATA IS ASSUMED FOR DESIGN PURPOSES IN ACCORDANCE WITH AS 2870-1996 "RESIDENTIAL SLAB AND FOOTINGS-CONSTRUCTION". SEE FOOTNOTE. CLASSIFICATION TO BE VERIFIED BY A GEOTECHNICAL ENGINEER COMMISSIONED BY THE CLIENT FOR CERTIFICATION OF FOUNDATIONS.

F2. Footings to be constructed and back filled as soon as possible following excavation to avoid softening by rain or drying out by exposure.

F3. Footings must bear into undisturbed natural ground clear of organic material. Refer to details.

F4. If rock or variable bearing strata is encountered during excavation of the footings all footings/piers are to be excavated to similar material of greater bearing capacity.
The Engineer is to be contacted at that time for approval or review.

F5. Footings to be cast in approved material having an allowable capacity as follows:

Sand Foundations:

SA1. Required bearing capacity 100 kPa.
SA2. Trenches must be cleaned of all debris and hand compacted prior to placement of reinforcement.

Clay Foundations:

CL1. Required bearing capacity 150 kPa.
CL2. Trenches must be cleaned of all debris. Soft spots must be cut out and filled as per compacted fill notes, prior to placement of reinforcement.

Shale Foundations:

SH1. Required bearing capacity 400 kPa.
SH2. Excavation for footings into shale must be cast or capped with plain concrete on the same day as excavation.

Sandstone Foundations:

SS1. Required bearing capacity 600 kPa.
SS2. Scrape weathered surface to remove cleaved sandstone under footings.

Refer adjacent for assumed Design bearing strata.

F6. Future development of neighboring properties may effect ground water conditions on this site. Consequently, reactivity in subgrade beneath footings may be locally altered therefore putting footing at risk of differential settlement. We recommend that, particularly in clay subgrades, agricultural drainage is installed to the upstream perimeter of the building at a distance from the building which is outside the zone of influence of the footings. The agricultural drain must be installed below the fluctuating seasonal zone which should be identified by geotechnical investigation.

CONCRETE

C1. All workmanship and materials shall be in accordance with AS 3600.

C2. Concrete quality shall be as follows and shall be verified by tests.

C3. All concrete unless otherwise noted shall have a slump of 80mm at point of placement, a max. aggregate size of 20 mm.
No water shall be added to the mix prior to or during placement of concrete. Strength as specified on plans.

C4. Clear concrete cover to reinforcement shall be as follows unless otherwise shown-

ELEMENT	INTERIOR	EXTERIOR	EXTERIOR CAST AGAINST GROUND
FOOTINGS	-	-	50
COLUMNS/PEDESTALS	30 UNO	REFER TO PLAN	-
SLABS/WALLS	25	REFER TO PLAN	40 ON MEMBRANE
BEAMS	25 UNO	REFER TO PLAN	50
BLOCKWORK	55 FROM APPROPRIATE FACE		

C5. Sizes of concrete elements do not include thickness of applied finishes.

C6. All Construction Joints locations shall be approved by the Structural Engineer.

C7. Beam depths are written first and include slab thickness, if any.

C8. No holes or chases other than those shown on the structural drawings shall be made in concrete elements without the prior approval of the engineer.

C9. Shrinkage reducing admixtures such as 'Eclipse' or approved equivalent, if specified, must be added to mix prior to pour.

C10. Water reducing agents, if specified, must be added to mix prior to pour. No extra water is to be added to increase slump.

C11. Where vertical slab/beam surfaces are formed against a masonry (or other) wall, provide 10 mm styrene separation material.

C12. Water must not be added to concrete mix prior to placement of concrete.

C13. Above covers may have to be adjusted if fire rating is a requirement.

REINFORCEMENT

R1. All reinforcement specified is Grade D500 unless noted otherwise.

R2. Reinforcement is represented diagrammatically it is not necessarily shown in true projection.

R3. Top reinforcement is to be continuous over supports.
Bottom reinforcement to be lapped at supports.

R4. Welding of reinforcement shall not be permitted unless shown on the structural drawings.

R5. Pipes or conduits shall not be placed within the zone of concrete cover to the reinforcement without the approval of the engineer.

R6. All reinforcing bars and fabric shall comply with AS 4671-2001.

R7. Reinforcement symbols:
N - Grade 500N deformed bar (D500) Normal Ductility
R - Grade 250N plain round bar (R250) Normal Ductility.
SL - Grade 500L welded deformed ribbed mesh (D500) Square Low Ductility.
RL - Grade 500L welded deformed ribbed mesh (D500) Rectangular Low Ductility.
The number immediately following these symbols is the number of millimeters in the bar diameter.
Example :
8 N12-250, denotes 8, Grade 500N deformed bars, 12 mm diameter at 250 cts.

R8. Fabric reinforcement to be lapped 1 complete square + 25 mm unless noted otherwise.

R9 All reinforcement shall be firmly supported on bar chairs spaced at a maximum of 750 centres both ways under rod and fabric reinforcement. Reinforcement shall be tied at alternate intersections.

FORMWORK

FW1. Formwork must be cleaned of all debris prior to casting of concrete.

FW2. Minimum stripping times for form work shall be as recommended in AS 3610 - 1990 or as directed by the engineer.

FW3. The finished concrete shall be a dense homogeneous mass, completely filling the form work, thoroughly embedding the reinforcement and free of stone pockets. All concrete elements including slabs on ground and footings shall be compacted with mechanical vibrators.

FW4. Curing of all concrete is to be achieved by keeping surfaces continuously wet for a period of 3 days, followed by prevention of loss of moisture for seven days followed by a gradual drying out . Approved sprayed on curing compounds may be used where no floor finishes are proposed. Polythene sheeting or wet hessian may be used if protected from wind and traffic.

BRICKWORK

BR1. Brickwork is to be constructed to AS 3700.

BR2. Two layers of approved greased metal based slip material shall be used over all load bearing walls that support concrete slabs and placed on smooth brickwork or trowelled mortar finish. Non load-bearing walls shall have 10 mm compressible material and ties to the slab soffit.

BR3. No brickwork shall be constructed on suspended slabs until all propping has been removed from the underside of the slab and the concrete has the specified 28 day cylinder strength verified by tests.

BR4. Control joints to be placed at a maximum of 8m centres or in accordance with AS 3700.

BR5. Exposure grade bricks to be used below damp proof course.

BR6. Vertical control joint material where specified on plan between slabs and brick walls shall be: 10 mm Spandex External UNO.
Bituminastic fibreboard internal UNO.

BR7. Provide stainless steel wall ties below DPC to AS 3700. Provide galvanized wall ties above DPC to AS 3700 & Local Council Specifications.

BLOCKWORK

BL1. Concrete blocks shall have a minimum compressive strength of 15 MPa and conform to AS 1500.
Masonry to be constructed to AS 3700.

BL2. Where cores of hollow blocks are to be filled, properly compacted 20MPa concrete with 10 mm aggregate and 230 mm slump shall be used. Clean out openings must be utilized for all cores.

BL3. Location of actual starters is critical to suit block cores, allow 55 mm cover from the outside face of blockwork. All reinforcement lap lengths to conform to AS 3600.

BL4. Control joints to be placed at a maximum of 8 m centres or in accordance with AS 3700.

BL5. Vertical control joint material where specified on plan between slabs and brick walls shall be: 10 mm Spandex External UNO.
Bituminastic fibreboard internal UNO.

BL6. Retaining walls or any reinforced and concrete core filled block walls to be of Double 'U' Block Construction.

BL7. No blockwork shall be constructed on suspended slabs until all propping has been removed from the underside of the slab and the concrete has the specified 28 day cylinder strength verified by tests. unless approved by the Structural Engineer.

BL8. Max. pour height for unrestrained blockwork is 2000.

STEEL

S1. All Structural steelwork to be Grade 300 or greater.
Design, fabrication and erection to be in accordance with AS 4100.

S2. Materials and workmanship shall comply with AS 1250 - 1981, SAA Steel Structures Code and the specification for Structural Steel.

S3. Rolled steel sections including steel plates shall comply with AS 3678 - 1990.

S4. Cold formed steel sections shall be Grade 450 Zinc coated in accordance with AS 1538-1988.

S5. Welded and seamless steel hollow sections shall comply with AS 1163. Grade 350.

S6. Bolt Designation:
4.6S - Commercial bolts Grade 4.6, snug tightened.
8.8S - High Strength structural bolts Grade 8.8, snug tightened.
8.8TB - High Strength structural bolts Grade 8.8, fully tightened to AS 1511 and acting as a Bearing Joint.
8.8TF - High Strength structural bolts Grade 8.8, fully tensioned to AS 1511 and acting as a Bearing Joint.
Unless noted otherwise, all bolts will be 8.8S.

S7. Unless shown otherwise, minimum connection shall be 2M16 bolts, 10 thick gusset plates, 6mm continuous fillet welds.

S8. Load indicating washers shall be used in all fully tensioned joints. (8.8TF & 8.8TB).

S9. All welding shall be carried out in accordance with AS 1554 SAA Structural Steel Welding Code.

S10. Unless noted otherwise all welds shall be category SP using E41xx Electrodes. All butt welds shall be complete penetration butt welds category SP.

S11. Grouting of anchor bolt sleeves and base plates shall be completed by the contractor using High Strength, Non-Shrink grout.

S12. Fabrication and erection tolerances for Structural Steelwork shall be in accordance with AS 4100.

S13. Purlin bolts shall be M12 - 4.6S galvanised.

S14. Steel work shall have one of the following grades of corrosion protection:-

INTERNAL

a. Thoroughly cleaned wire brushing, followed by two coats of zinc phosphate primer equivalent to Dulux Luxaprime applied by hand using brushes to achieve a total dry film thickness of 70 microns.

EXTERNAL ELEMENTS, & ELEMENTS WITHIN EITHER SKIN OF EXTERNAL CAVITY WALLS

b. Preparation Blast clean to a minimum standard Class 2.5 in accordance with AS 1627 Part 4.
Primer 2-pack epoxy phosphate at dft 75 microns
(Dulux Durepon P14).
Barrier Coat 2-pack epoxy micaceous iron oxide, dft 100 microns
Finish Coat 2-pack epoxy high gloss acrylic to dft 75 microns
(e.g. Dulux Acrathane 1 F) in an approved colour.

c. Hot dipped galvanized to AS 4680.
Where the galvanic (Hot Dip Galvanized) coating is compromised by welding, bolting or damage, inorganic zinc-rich paint (minimum 95% zinc content) is to be applied after wire brushing affected area (use 3 coats minimum). or Hot Metal Spray in accordance with AS 4680.

S15. Workshop drawings shall be prepared and two copies submitted to the engineer for review prior to fabrication commencement.

TIMBER

T1. All workmanship and materials to be in accordance with AS 1684, AS 1720 and as 3959. All soft wood to be Grade F7 unless noted otherwise. All hardwood to be minimum Grade F14 unless otherwise noted. Exposed timber to be CCA treated (to AS 1604) redried after full impregnation, or durability class 1, 2 or 3.
ALL SOFTWOOD TIMBER FRAMING TO HAVE A MINIMUM TREATMENT PROTECTION OF H2 or T2 TREATED FOR TERMITE PROTECTION UNLESS NOTED OTHERWISE.

T2. All joists deeper than 150 to have blocking over support bearers and at a maximum 3000 centres.

T3. Roof trusses to be designed by the manufacturer to the relevant standards. Pre camber to be an amount equal to dead load deflection u.n.o.

T4. All holes for bolts to be exact size. Washers to be used under all heads and nuts and to be at least 2.5 times the bolt diameter. Bolts to be M16 grade 4.6 unless noted otherwise.

T5. Treat all exposed cut ends with Reseal by Protim to manufacturers specification to achieve required Hazard Level Exposure Classification.

T6. Battens for T & G to be Kiln Dried to 12 %.
38mm minimum deep treated pine or as recommended by supplier.
Flooring to be installed no sooner than 28 days after slab pour.

T7. Hot dip galvanized nails/clouts/screws to be used with all timber connections.

T8. Continuous nailing must not be used for any timber connections.

T9. All exposed CCA treated pine to have an application of penetrating sealer to reduce warping and twist of the timber due to varying moisture content in service.

DRAWING SCHEDULE:

COMPACTED FILL

CF1. Only to be used with approval by Engineer & to be certified by a geotechnical Engineer.

CF2. Clear organic material and topsoil under proposed slabs/footings.

CF3. Filling shall be granular material compacted in not more than 200 mm layers to a minimum dry density ratio (AS 1289/E4.2 1982) of 98 percent.

CF4. During clearing and excavation for slabs and footings cut out soft spots and fill as above.

INSPECTIONS BY ENGINEER

48 HOURS NOTICE IS REQUIRED BEFORE ANY SITE INSPECTION

1. Bearing strata of all footings prior to concrete pour.
2. Any reinforcement prior to concrete pour.
3. Timber and Steel framing prior to cladding or lining.
4. Steel lintels after installation.
5. CONTACT YOUR PCA (Principal Certifying Authority) AS TO REQUIREMENTS FOR MANDATORY CRITICAL STAGE INSPECTIONS IN ACCORDANCE WITH REVISED EP&A ACT REGULATIONS EFFECTIVE JULY 1, 2004.

ASSUMED FOUNDATION CLASSIFICATION FOR DESIGN PURPOSES - 'A'
ASSUMED BEARING STRATA FOR DESIGN PURPOSES - ROCK, 600kPa
CONTRACTOR TO ENGAGE GEOTECHNICAL CONSULTANT TO VERIFY FOUNDATION CLASSIFICATION

A1

-	-	-
Date:	Rev:	Amendment:

DOCUMENT CERTIFICATION

Date : 1/7/08

Stewart McGeady .....

(Director Northern Beaches Consulting Engineers)

I am a qualified Structural/Civil Engineer.
I hold the following qualifications:
B.E.(Civil), MIEAust, P.Eng
Institute of Engineers Membership No. 194677
I hereby state that this drawing is in compliance with the provisions of the Building Code of Australia and/or relevant Australian/Industry Standards.

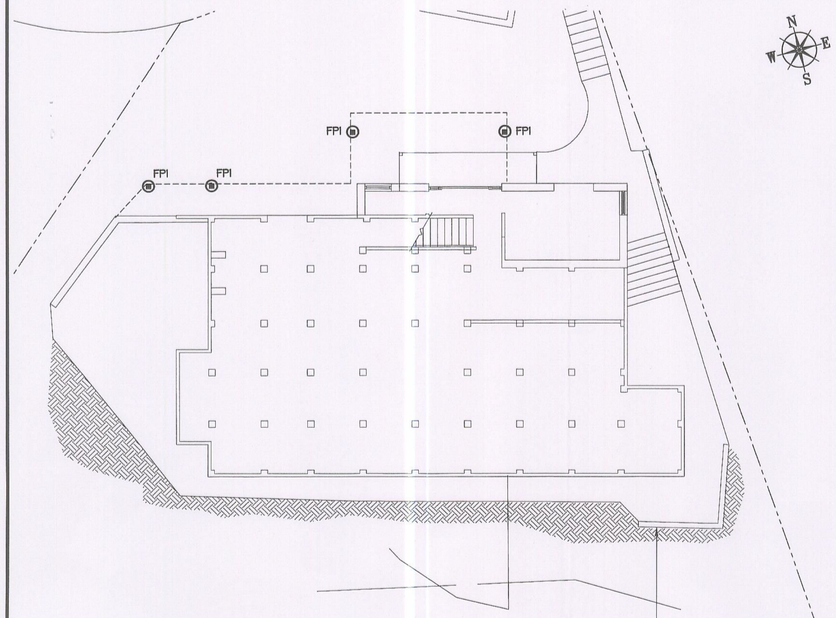
NORTHERN BEACHES Consulting Engineers P/L.
A.C.N. 076 121 616 A.B.N. 24 076 121 616
Suite 207, 30 FISHER ROAD
DEE WHY N.S.W. 2099
Ph: (02) 9984 7000 Fax: (02) 9984 7444
e-mail : nb@nbconsulting.com.au
web page : www.nbconsulting.com.au

Project:
PROPOSED ALTERATIONS
at: 87 ALEXANDER CRESCENT
BAYVIEW
for: KATE BODY

Drawing Title:
GENERAL NOTES
AND DRAWING SCHEDULE

Date:	Design:	Drawn:	Checked:
MAY 08	BS	MC	

Job No:	Drawing No:	Rev:
080534	S01	-



NOTE:
EXISTING RETAINING WALL TO BE EXPOSED/REMOVED IN SECTIONS AND INSPECTED BY A STRUCTURAL AND GEOTECHNICAL ENGINEER SIMULTANEOUSLY TO GIVE RECOMENDATIONS AS STATED IN THE GEOTECHNICAL INVESTIGATION REPORT BY 'JEFFERY KATAUSKAS PTY LTD ' DATED 15/12/04.

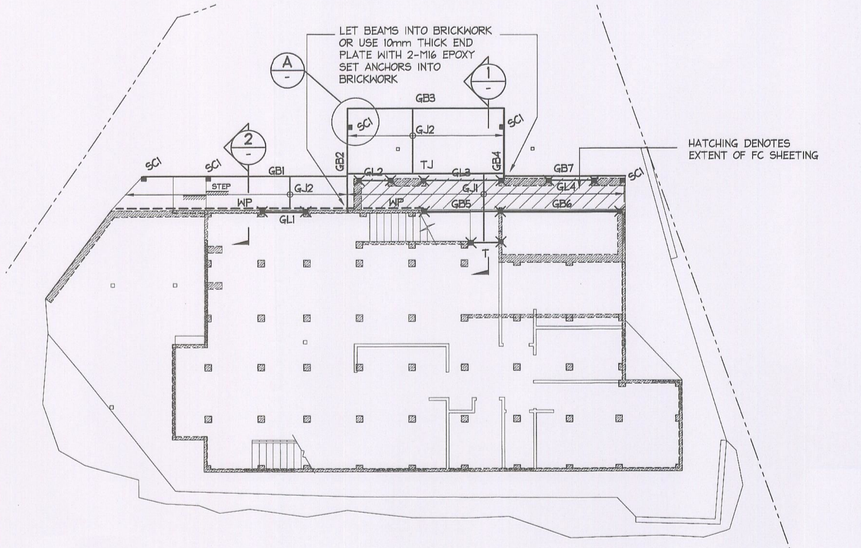
THIS IS NOT INCLUDED IN THE SCOPE OF WORKS AS PER 'NB CONSULTING ENGINEERS' QUOTE DATED 13/04/08 AND CAN BE REQUOTED AFTER THE INSPECTION OR DONE AT HOURLY RATES.

FOOTING PLAN

SCALE = 1 : 100

NOTE:
CONCRETE STRENGTH:
FOOTINGS:
f'c = 25 MPa., COVER = 50 mm

FPI - 400 ϕ CONCRETE PIERS - REFER DETAIL



GROUND FLOOR FRAMING PLAN

SCALE = 1 : 100

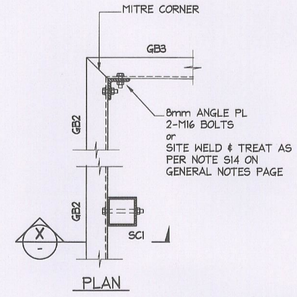
ALL EXTERNAL STEEL TO BE TREATED IN ACCORDANCE WITH S14 b ON DRG. S01

MEMBER SCHEDULE:

GL1 - 100x100 GALINTEL
or 110w x 80d ULTRALINTEL
GL2 - 2/85x8 GALINTEL FLAT BARS } or 2/110w x 80d ULTRALINTEL
GL4 - 2/100x100 GALINTEL
GL3 - 200x63 LVL - INTERNAL SUPPORTING FLOOR JOISTS
+ 150x100 GALINTEL - EXTERNAL SUPPORTING BRICKWORK ONLY
GB1-GB4, GB7 - 250 PFC - FLOOR BEAMS
GB5 - 190x70 F7 KD - FLOOR BEAM
GB6 - 240x63 LVL HYSPAN - FLOOR BEAM
GJ1 - 200x45 LVL HYSPAN - FLOOR JOISTS AT 450 CTS
GJ2 - 240x45 F7 KD H3 TREATED - FLOOR JOISTS AT 450 CTS
TJ - 240x45 F7 KD H3 TREATED - TRIMMER JOIST
WP - 90x70 F7 KD H3 TREATED - WALL PLATE
M12 EPOXY SET ANCHOR BOLTS AT 900 CTS
T - 190x45 F7 KD - TRIMMER
SC1 - 90x90x6 SHS - STEEL COLUMN
X LOAD CONCENTRATION POINT

NOTES:

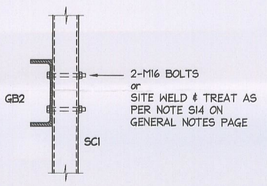
1. ALL DIMENSIONS TO BE VERIFIED ON SITE BY BUILDER BEFORE COMMENCING WITH WORK.
2. FOR GENERAL NOTES AND DRAWING SCHEDULE REFER TO DRAWING NUMBER: S01.



PLAN

DETAIL A

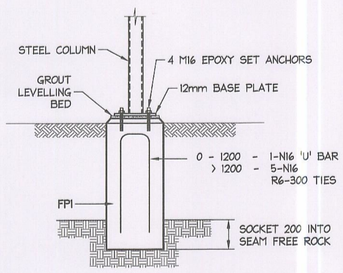
SCALE =1:10



ELEVATION

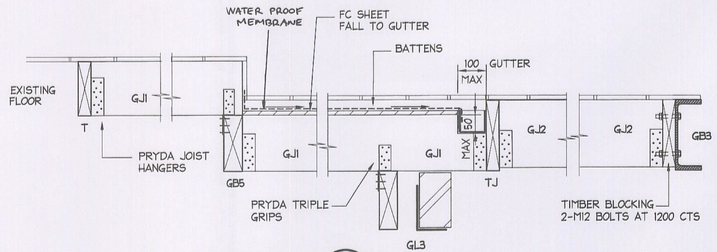
SECTION X

SCALE =1:10



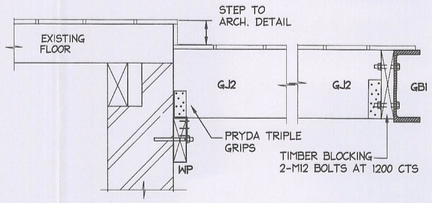
TYPE 'FPI' FOOTING PIER SECTION

SCALE = 1 : 20



SECTION 1

SCALE =1:10



SECTION 2

SCALE =1:10

A1

-	-	-
Date:	Rev:	Amendment:

DOCUMENT CERTIFICATION

Date : 2/7/08
Stewart McGeady .....
(Director Northern Beaches Consulting Engineers)

I am a qualified Structural/Civil Engineer.
I hold the following qualifications:
B.E.(Civil), MIEAust, P.Eng
Institute of Engineers Membership No. 194677
I hereby state that this drawing is in compliance with the provisions of the Building Code of Australia and/or relevant Australian/Industry Standards.

NORTHERN BEACHES Consulting Engineers P/L.
A.C.N. 076 121 616 A.B.N. 24 076 121 616
Suite 207, 30 FISHER ROAD
DEE WHY N.S.W. 2099
Ph: (02) 9984 7000 Fax: (02) 9984 7444
e-mail : nb@nbconsulting.com.au
web page : www.nbconsulting.com.au

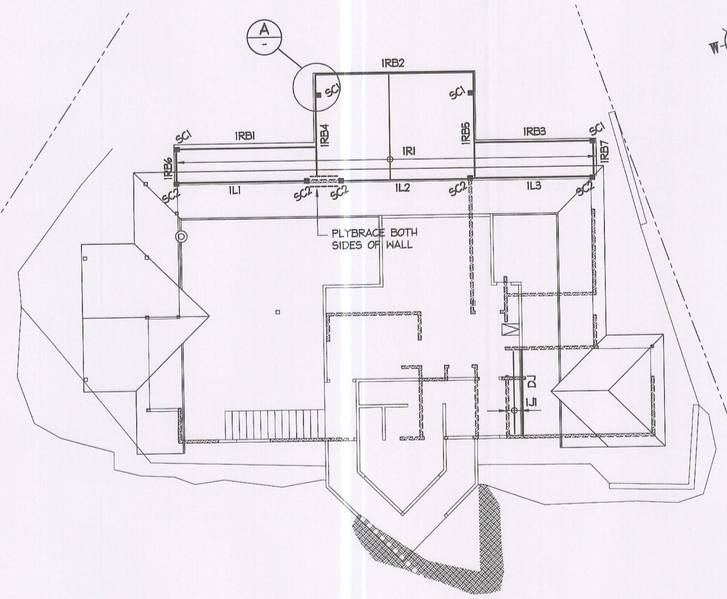
Project:
PROPOSED ALTERATIONS
at: 87 ALEXANDRA CRESCENT
BAYVIEW
for: KATE BODY

Drawing Title:
FOOTING & GROUND FLOOR FRAMING
PLANS & DETAILS

Date:	Design:	Drawn:	Checked:
MAY 08	BS	MC	
Job No:		Drawing No:	Rev:
080534		S02	-

NOTES:

1. ALL DIMENSIONS TO BE VERIFIED ON SITE BY BUILDER BEFORE COMMENCING WITH WORK.
2. FOR GENERAL NOTES AND DRAWING SCHEDULE REFER TO DRAWING NUMBER: S01.

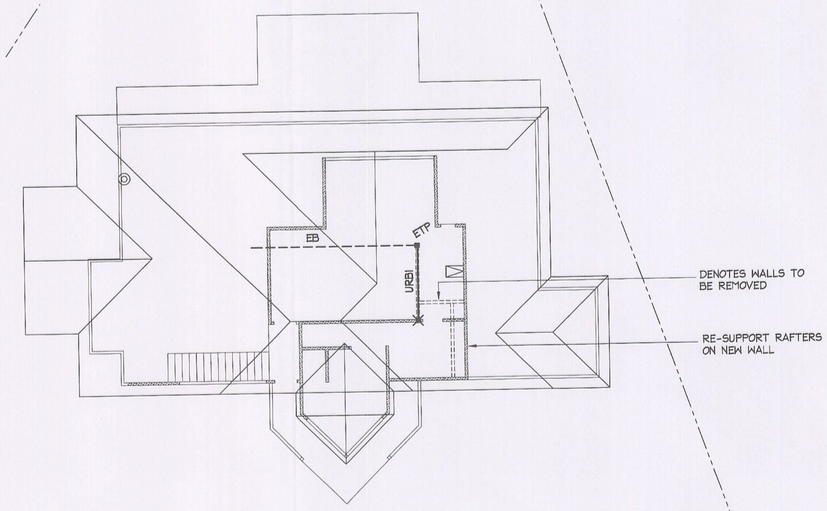


FIRST FLOOR FLOOR & LOWER ROOF FRAMING PLAN

SCALE = 1 : 100

MEMBER SCHEDULE:

LJI - 140x45 F7 KD - FLOOR JOISTS AT 450 CTS FOR ROBE EXTENSION
DJ - DOUBLE JOIST GLUE & NAIL LAMINATED
SC1,SC2 - 90x90x6 SHS - STEEL COLUMN
IRB1-IRB7 - 180 PFC - ROOF BEAM
IR1 - 140x45 F7 KD - RAFTERS AT 450 CTS
or 170x45 F7 KD - RAFTERS AT 600 CTS
IL1-IL3 - 180 PFC - LINTELS



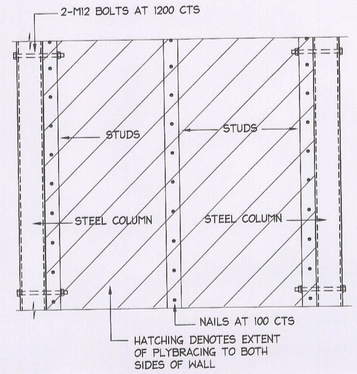
UPPER ROOF FRAMING PLAN

SCALE = 1 : 100

MEMBER SCHEDULE:

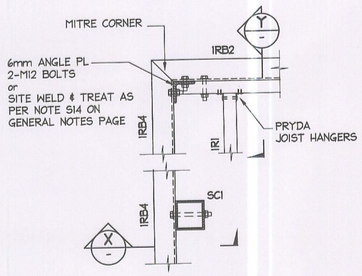
EB - EXISTING BEAM
ETP - EXISTING TIMBER POST OR DOUBLE STUD TO REMAIN
URB1 - 190x70 F7 KD - ROOF BEAM
LOAD CONCENTRATION POINT

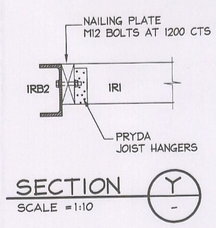
ALL EXTERNAL STEEL TO BE TREATED IN ACCORDANCE WITH S14 b ON DRG. S01

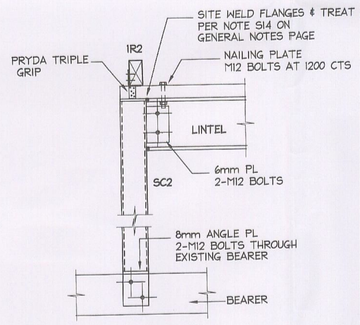


WALL BRACING DETAIL

SCALE = 1 : 10

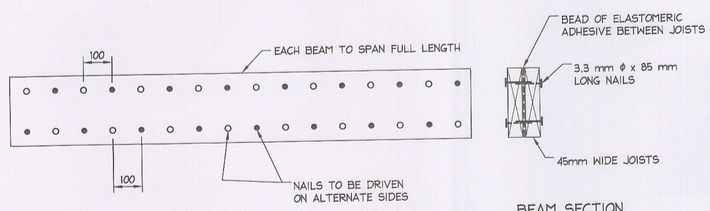






SC2 TO LINTEL CONNECTION

SCALE = 1 : 10

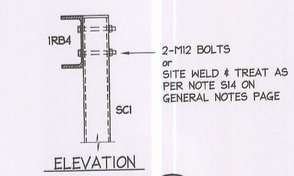


BEAM ELEVATION

BEAM SECTION

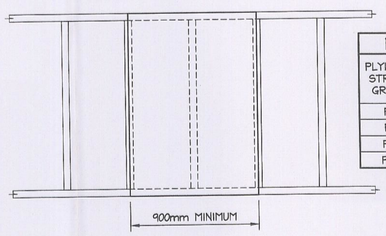
TYPICAL GLUE AND NAIL LAMINATED BEAMS/JOISTS DETAILS

SCALE = 1 : 10



PLYWOOD BRACING:

FIX PLYWOOD PANELS WITH GALVANISED FLATHEAD NAILS Ø2.8mm x 30mm LONG MINIMUM OR EQUIVALENT AT 50mm CENTRES ALONG TOP AND BOTTOM PLATES, 150mm CENTRES ALONG VERTICAL EDGES AND 300mm CENTRES ALONG INTERMEDIATE STUDS.
NAILS SHALL BE LOCATED A MINIMUM OF 7mm FROM PANEL EDGES. POWER DRIVEN GALVANISED NAILS OR COATED STAPLES MAY BE USED WHERE THEY PROVIDE AT LEAST THE EQUIVALENT STRENGTH TO HAND DRIVES Ø2.8mm x 30mm LONG GALVANISED CLOUTS OR FLATHEAD NAILS. IN THE CASE OF POWER DRIVEN STAPLES, STAPLE SPACING SHALL BE 35mm CENTRES AT TOP AND BOTTOM PLATES, 100mm CENTRES AT VERTICAL PLYWOOD EDGES AND 200mm CENTRES ALONG INTERMEDIATE STUDS.



PLYWOOD THICKNESS		
PLYWOOD STRESS GRADE	PLYWOOD THICKNESS MAXIMUM STUD SPACING	
	450mm	600mm
F8	7.0mm	9.0mm
F11	6.0mm	7.0mm
F14	4.0mm	6.0mm
F27	4.0mm	4.5mm

NOTES:

1. FOR PLYWOOD THICKNESS REFER TO TABLE.
2. FOR POWER DRIVEN NAILS AND STAPLES REFER ABOVE.
3. PANEL EDGES SHALL BE SUPPORTED BY STUDS.
4. NOGGINGS HAVE BEEN OMITTED FOR CLARITY.

EACH 900 mm PANEL EQUALS FOUR TYPE A BRACING UNITS AS PER AS1684.4-2006

WALL PLY BRACING DETAILS

SCALE = 1 : 20

A1

Date:	Rev:	Amendment:
-	-	-

DOCUMENT CERTIFICATION

Date : 2/7/08
Stewart McGeady .....
(Director Northern Beaches Consulting Engineers)

I am a qualified Structural/Civil Engineer.
I hold the following qualifications:
B.E.(Civil), MIEAust, P.Eng
Institute of Engineers Membership No. 194677
I hereby state that this drawing is in compliance with the provisions of the Building Code of Australia and/or relevant Australian/Industry Standards.

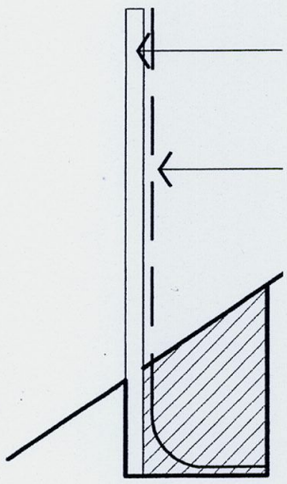
NORTHERN BEACHES Consulting Engineers P/L.
A.C.N. 076 121 616 A.B.N. 24 076 121 616
Suite 207, 30 FISHER ROAD
DEE WHY N.S.W. 2099
Ph: (02) 9984 7000 Fax: (02) 9984 7444
e-mail : nb@nbconsulting.com.au
web page : www.nbconsulting.com.au

Project:
PROPOSED ALTERATIONS
at: 87 ALEXANDRA CRESCENT
BAYVIEW
for: KATE BODY

Drawing Title:
FIRST FLOOR & ROOF FRAMING PLANS & DETAILS

Date:	Design:	Drawn:	Checked:
MAY 08	BS	MC	
Job No:		Drawing No:	Rev:
080534		S03	-

01/01 SITE PLAN
1:200



SYDNEY WATER
APPROVED

1. Position of structure in relation to Sydney Water's assets is satisfactory.
2. Connections to Sydney Water sewer/water services may only be made following the issue of a permit to a licensed plumber/drainer.
3. It is the owner's responsibility to ensure that all proposed fittings will drain to Sydney Water's sewer.
4. Any Plumbing and/or Drainage Work to be carried out in accordance with the Sydney Water Act 1994, AS 3500 and the NSW Code of Practice.
5. Gullies, Inspection Shafts and Boundary Traps shall not be placed under any Roof, Balcony, Verandah, Floor or other cover unless otherwise approved by Sydney Water.
6. Property No. 3395712

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

Per: Reece 30/07/08

MFA

COUNCIL COPY

insight building certifiers pty ltd

APPLICATION FOR A CONSTRUCTION CERTIFICATE

COPY

30 JUL 2008

BY:

Construction Certificate ☐

Modified Construction Certificate ☐

1. Applicant's details

It is important that we are able to contact you if we need more information. Please give us as much details as possible

Mr ☐ Mrs ☐ Ms ☐ Dr ☐ Other MICHEAL FOUNTAIN ARCHITECTS

Given Names (or ACN) | Family Name (or Company)

Postal Address (we will post all mail to this address)

2/5 NARABANG WAY, BELROSE NSW 2085

Post Code 2085

Daytime telephone 02 9450 2070 | Alternate no. | Mobile no.

2. Owner's consent

Every owner of the land must sign this form. If the owner is a company the form must be signed by an authorised director and the common seal must be stamped on this form. If the property is a unit under the strata title or a lot in a community title, then in addition to the owner's signature, the common seal of the body corporate must be stamped on this form over the signature of the owner and signed by the Chairman or Secretary of the Owners Corporation or the appointed Managing Agent.

Owner(s)

KATE BODY

Address

1756 PITTWATER ROAD, BAYVIEW 2104

As owner(s) of the land to which this application relates, I/We consent to this application. I/We also consent for the Principal Certifying Authority and/or Accredited Certifier to enter the land to carry out inspections relating to this application.

Signature(s) Body

Without the owner's consent we will not accept the application. This is a very strict requirement for all applications. If you are signing on the owner's behalf as the owner's legal representative, you must state the nature of your legal authority and attach documentary evidence (eg, power of attorney, executor, trustee, company director, etc).

3. Location of property

Unit/Street no. 87 | Street name ALEXANDRA CRES.

Suburb BAYVIEW | Post code 2104

Legal Property Description (these details are shown on your rate notices, property deeds, etc)

Lot no. 3 | DP no. 20283

COUNCIL COPY

4. Description of work

What type of work do you propose to carry out?

Please describe briefly everything that you want approved.

Alterations and additions to an existing dwelling (Excluding Study on basement level, Bay window of family Room and Spa)

5. Estimated cost of work

The estimated cost of the development or contract price may be subject to review

Estimated cost of work $215,000

6. Development Consent

Council Consent no. N0573/06

Date of Determination 26 OCT 06

7. Building Code of Australia classification

This can be found on the development consent

BCA Classification CLASS 1a

8. Builder's details

If known, to be completed in the case of residential building work

Name Lars Andersson Constructions

Licence no. 180321C

Owner/builder permit no.

9. Applicant's declaration

I apply for a Construction Certificate to carry out building works as described in this application. I declare that the above Development Consent is valid and that no building works associated with this application have commenced. To the best of knowledge, all the information in this application and checklist is true and correct.

Signature

Date 30 JULY 2008

SUBMISSION REQUIREMENTS

A. GENERAL

Are the plans submitted with the Construction Certificate Application in accordance with the Development Consent?

Yes ☑ No ☐

Have all the conditions of Development Consent relating to the issue of the Construction Certificate been fully complied with?

Yes ☑ No ☐

If you have answered NO to either of the above questions, then you will need to speak with the Accredited Certifier BEFORE LODGING YOUR APPLICATION.

B. ALL PROPOSALS (has the following required information been submitted?)

Yes	No	Not Applicable	In the case of an application for a Construction Certificate for building work:
☑	☐	☐	Three (3) copies of detailed architectural plans and specifications
☑	☐	☐	The plan for the building must consist of a general plan drawn to a scale not less than 1:100 and a site plan drawn to a scale not less than 1.200. The general plan of the building is to: a) show a plan of each floor section b) show a plan of each elevation of the building c) show the levels of the lowest floor and of any yard or unbuilt on area belonging to that floor and the levels of the adjacent ground d) indicate the height, design, and full construction details e) indicate the provision for fire safety and fire resistance (if any)
☑	☐	☐	Where the proposed building work involves any alteration or addition to, or rebuilding of, an existing building, all copies of the general plan are to be coloured or otherwise marked to the satisfaction of the Council to adequately distinguish the proposed alteration, addition or rebuilding with a separate letter listing the proposed changes being submitted.
☑	☐	☐	3 copies of a specification: a) to describe the construction and materials of which the building is to be built and the method of drainage, sewerage and water supply b) state whether the materials proposed to be used are new or second hand and give particular
☑	☐	☐	Where the proposed building work involves a modification to previously approved plans and specifications the general plans must be coloured or otherwise marked to the satisfaction of the Accredited Certifier to adequately distinguish the modification.
☐	☐	☑	If the proposed building work involves a modification to previously approved plans and specification which were subject of a Development Consent, has the original Development Consent been modified by Council?
☐	☐	☑	Except in the case of an application for, or in respect of domestic building work: a) a list of any fire safety measures that are proposed to be implemented in the building or on the land on which the building is situated, and b) if the application relates to a proposal to carry out any alteration or rebuilding of, or addition to, an existing building, a separate list of such of those measures as are currently implemented in the building or on the land on which the building is situated. This list must specify the standard of design of each of those fire safety measures to which they were originally installed. c) This list must describe the extent, capability and basis of design of each of the measures concerned.
☐	☐	☑	Copy of BASIX Certificate & Schedule of BASIX Commitments.
☐	☐	☑	Copy of signed BASIX Compliance Statement.
☑	☐	☐	All other documentation to satisfy conditions of Development Consent.

HOME BUILDING ACT 1989 (as amended) OWNER/BUILDER REQUIREMENTS

Applicants for work at a residential property with a value of work over $12,000 require insurance as specified in the Home Building Act 1989.

Owner Builders require Property Owner Builder's Permit issued by the Department of Fair Trading for all projects over $5,000. In addition to this permit all projects valued in excess of $12,000 may also require a contract of insurance under the provisions of the Home Building At 1989 as amended. This requirement will take effect should the property owner offer the property for sale in the ensuing period of 7 years.

Enquiries on any matters relevant to this section should be taken up with the Department of Fair Trading at Level 21, Astra House, 227 Elizabeth Street, Sydney (ph: 133220).

LONG SERVICE LEVY (applies to all classes of buildings)

A Long Service Levy at 0.35% of the cost of works is payable on projects valued $25,000 or more. This sum can be paid directly to the Long Service Payments Corporation or to Council acting as an agent to the Corporation. Partial exemption from the levy may be granted to non profit organizations, churches and to owner/builders. The levy may also be paid in instalments. Application forms for these exemptions are available from Council but all enquiries in this regard should be address to the Long Service Payments Corporation.

THE CONSTRUCTION CERTIFICATION CANNOT BE ISSUED UNLESS THE LONG SERVBICE LEVY AND HOME BUILDING ACT 1989 INSURANCE (APPLICABLE TO RESIDENTIAL PROPERTIES) HAVE BEEN PAID, OR EVIDENCE OF THE EXEMPTION PROVIDED TO COUNCIL.

PARTICULARS OF THE PROPOSAL

What is the area of the land (m^2)? 675.94m^2	Gross floor area of building (m^2) as proposed: 318.00m^2
What are the current uses of all or parts of the building(s)/land? RESIDENCE	Location: 87 ALEXANDRA CRES Use: BAYVIEW
Does the site contain a dual occupancy? NO	What is the gross floor area of the proposed addition or new building (sq metres)? 21.70m^2
What are the proposed uses of all parts of the building(s land? RESIDENCE	Number of pre-existing dwellings: 1
Number of dwellings to be demolished: NIL	How many dwellings proposed? NIL
How many storeys will the building consist of? 3 ~~- SUBFLOOR~~ ~~- GROUND~~ ~~- MEZZANINE~~	Will the new building be attached to the existing building? N/A Will the new building be attached to any new building? N/A

MATERIALS TO BE USED

The following information must be supplied for the Australian Bureau of Statistics:

Place a tick (√) in the box which best describes the materials the new work will be constructed of:

WALLS		FLOOR		ROOF		FRAME	
Brick veneer	☐	Concrete	☐	Aluminium	☐	Timber	☑
Full brick	☐	Timber	☑	Concrete		Steel	☑
Single brick	☐	Other	☐	Concrete tile	☐	Other	☐
Concrete block	☐	Unknown	☐	Fibrous cement	☐	Unknown	☐
Concrete/masonry	☐			Fibreglass	☐		
Concrete	☐			Masonry/terracotta shingle	☐		
Steel	☐			Tiles	☐		
Fibrous cement	☐			Slate	☐		
Hardiplank	☐			Steel	☐		
Timber/weatherboard	☑			Terracotta tile	☐		
Cladding-aluminium	☐			Other	☐		
Curtain glass	☐			Unknown	☐		
Other	☐						
Unknown	☐						

BODY RESIDENCE

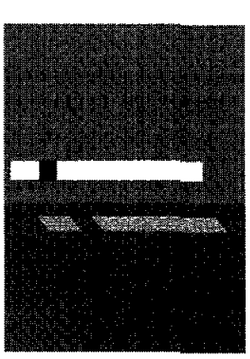
Specification For Construction Certificate

Description

ALTERATIONS TO EXISTING RESIDENCE

87 ALEXANDRA CRES
BAYVIEW NSW

Revision	Date	Approved by
A	00/07/08	



Micheal Fountain Architects Pty Ltd
Unit 2/5 Narabang Way
Belrose NSW 2085

Ph 02 9450 2070
Fax 02 9450 2757

TABLE OF CONTENTS

0171 GENERAL REQUIREMENTS

1 GENERAL

1 1 APPLICABILITY

General

Requirement Adopt *General requirements* as appropriate, in all worksections

1 2 GENERAL

Signs

General Provide a signboard displaying the lot number the builder s name address and licence number and the BCA accreditation authority address and contact details, if required

Refer to Appendix 1 Development Application Consent

Occupied premises

General For the parts of the site which are occupied premises

- Allow occupants to continue in secure possession and occupancy of the premises for the required period
- Make available safe access for occupants
- Arrange work to minimise nuisance to occupants and ensure their safety
- Protect occupants against weather dust dirt water or other nuisance, by such means as temporary screens

Period of occupation Full Duration of Contract

Survey marks

Care Preserve and maintain the survey marks in their true positions

Rectification If the owner's survey marks are disturbed or obliterated immediately give notice and rectify the disturbance or obliteration

Prior applications and approvals

List of applications made and approvals received

Development Application	*Consent No 573/06*
Construction Certificate	*Pending*

Site restrictions

Restricted hours of work	*In accordance with the Development Application Consent*
	See Appendix 1

Energy efficiency

1 3 STANDARDS

Current editions

General Use referenced Australian or other standards (including amendments), BCA state and territory variations which are current three months before the date of the contract except where other editions or amendments are required by statutory authorities

1 4 INTERPRETATION

Definitions

General For the purposes of this document the definitions given below apply

- Owner Means the same as principal or proprietor'
- Builder Means the same as contractor'
- Metallic-coated Steel which has been coated with zinc, zinc-iron alloy or aluminium-zinc alloy via a continuous hot-dip process

- Professional engineer Means a person who is listed on the National Professional Engineers Register (NPER) in the relevant discipline at the relevant time
- Proprietary Means identifiable by naming the manufacturer, supplier installer, trade name, brand name, catalogue or reference number
- Provide Means supply and install
- Required Means required by the contract documents, the local council or statutory authorities
- Supply Means supply only', do not install

1 5 CONTRACTS AND FINANCE

Payment and adjustment of contract sum

General At commencement of the building work submit a schedule of anticipated progress claims which will be made throughout the contract

Progress claims breakdown With each progress claim, submit a statement of amounts claimed in respect of each section designated in the specification

1 6 AUTHORITIES AND ESTABLISHMENT

Existing services

General Attend to existing services as follows

- If the service is to be continued, repair, divert or relocate as required If such a service crosses the line of a required trench, or will lose support when the trench is excavated, provide permanent support for the existing service
- If the service is to be abandoned cut and seal or disconnect and make safe

Existing services provided *power and ablutions*

1 7 BUSHFIRE PROTECTION

General

Conformance In areas designated as bushfire prone, comply with statutory requirements

Standard To AS 3959

Level of construction [complete/delete]

2 PRODUCTS

2 1 MANUFACTURERS' OR SUPPLIERS' RECOMMENDATIONS

General

Requirement Provide, including select, store and handle proprietary products or systems in accordance with the current published recommendations and instructions of the manufacturer or supplier

Corrosion resistance Conform to the corrosivity category applicable to the building location

2 2 TIMBER

Moisture content

General Make milled products from timbers seasoned

- To within 3% of the equilibrium moisture content appropriate to the timber and its intended conditions of use
- With no more than 3% difference between any 2 pieces in any one group

Acclimatisation

General Acclimatise timber fitouts by stacking them for two weeks in the in-service conditions with air circulation to all surfaces after the following construction operations are complete

- Airconditioning operational
- Lighting operational
- Site drainage and stormwater works are complete
- Space fully enclosed and secure

- Wet work complete and dry

Unseasoned timber

General If unseasoned timber is provided or variation in moisture content is likely make allowance for shrinkage, swelling and differential movement

Recycled timber

Type or species [complete/delete]

Source [complete/delete]

Durability

General Provide timbers with natural durability appropriate to the conditions of use or preservative-treated timbers of equivalent durability

Minimum requirement To the **Natural and treated timber durability table**

- Natural durability class of heartwood To AS 5604
- Preservative treatment To the AS 1604 series

Natural and treated timber durability table

Exposure	**Natural timber**	**Treated timber**	**Remarks**
	***Required* durability class to AS 5604**	***Required hazard* class to AS 1604 series**	
Inside above ground Completely protected from the weather Well ventilated	Class 4	H1	Treated timber resistant to lyctids Untreated timber must be protected from termites
Inside above ground Protected from wetting with nil leaching Well ventilated	Class 3	H2	Treated timber resistant to borers and termites Untreated timber must be protected with a finish
Above ground, exposed to weather Periodic moderate wetting and leaching	Class 2	H3	Treated timber resistant to borers, termites and moderate decay Applicable to weatherboards fascias pergolas (above ground), window joinery, framing and decking
In-ground	Class 1	H4 (Severe wetting and leaching)	Treated timber resistant to borers, termites and severe decay Applicable to fence posts greenhouses, pergolas (in-ground) and landscaping timbers
		H5 (Extreme wetting and leaching and/or critical uses)	Applicable to retaining walls, piling, house stumps building poles, cooling tower fill

2 3 STEEL

Durability

General Provide steel products with inherent durability appropriate to the conditions of use or proprietary metallic and/or organic coatings of equivalent durability

Internal engineer designed steel members Remove mill scale, rust, moisture and oil Coat with a zinc phosphate primer to the manufacturer's instructions

Built-in products Below damp proof course to be Stainless steel 316 or engineered polymer

Minimum external requirements for corrosive environments Conform to the **Stainless and metallic coated steel table**

Stainless and metallic coated steel table

External environment includes cavity wall and roof spaces not protected from moisture penetration by sheathing or sarking	**Heavy steel members including lintels more than 3 2 mm thick**	**Wall ties, connectors and accessories less than 3 2 mm thick and above damp proof course**	**Steel cladding, lining, trims and flashings**
Low corrosivity -More than 10 km from salt water with breaking surf -More than 1 km from salt water without breaking surf	Galvanize after fabrication 300g/m^2	Galvanize after fabrication 300g/m^2 Metallic-coated sheet Z600/AZ200 Galvanized wire 470g/m^2	Metallic-coated sheet AZ150
Medium corrosivity -1 – 10 km from salt water with breaking surf -100 – 1000 m from salt water without breaking surf -Non-heavy industrial areas	Galvanize after fabrication 600g/m^2	Galvanize after fabrication 470g/m^2 Galvanized wire 470g/m^2	Metallic-coated sheet AZ200
High corrosivity Severe marine -200 – 1000 m from salt water with breaking surf -0 – 100 m from salt water without breaking surf -Heavy industrial areas	Stainless steel 316 or 316L	Stainless steel 316 or engineered polymer	Metallic-coated sheet AZ200 plus organic coating

Galvanizing

General Galvanize mild steel components (including fasteners) to AS 1214 or AS/NZS 4680, as appropriate, if

- Exposed to weather
- Embedded in masonry
- Exposed to or in air spaces behind external leaves of masonry walls
- In contact with chemically treated timber

2 4 PROTECTIVE COATINGS

General

Environment To AS/NZS 2312 clause 2 3

Coating designation to AS/NZS 2312 Table 6 3

CCA (copper chrome arsenic) treated timber

Greasing Before placing bolts or other metal components in contact with CCA-treated timber, paint contact surfaces or coat in grease or a bituminous coating

Unseasoned timber

General Do not fix in contact with steel framing without fully painting the contact surfaces of timber and steel

2 5 FASTENERS

Self drilling screws

Corrosion resistance To AS 3566 2 Table 1 and the **Corrosion resistance table**

Corrosivity category [complete/delete]

Corrosion resistance table

Environmental corrosivity level	**Corrosion resistance class**	
	Internal	**External**
Low	1	3

Environmental corrosivity level	Corrosion resistance class	
	Internal	External
Medium	2	4
High	3	Stainless steel 316

2 6 VAPOUR BARRIER

General

Vapour barrier To AS 2870 clause 5 3 3

Minimum thickness 0 2 mm

3 EXECUTION

3 1 WALL CHASING

Holes and chases

General Make holes and chases required in masonry walls so that the structural integrity of the wall is maintained Do not chase walls nominated as fire rated or acoustic Parallel chases or recesses on opposite faces of a wall shall not be closer than 600 mm to each other

Chasing of blockwork Only in core-filled hollow blocks or in solid blocks which are not designated as structural and shall be to the **Concrete blockwork chasing table**

Concrete blockwork chasing table

Block thickness (mm)	Maximum depth of chase (mm)
190	35
140	25
90	20

3 2 FIXING

General

Suitability If equipment and services are not suitable for fixing to non-structural building elements fix directly to structure and trim around penetrations in non-structural elements

Fasteners

Sufficiency Use proprietary fasteners capable or transmitting the loads imposed, and sufficient to ensure the rigidity of the assembly

3 3 FOOTPATH CROSSING

General

Requirement Provide a footpath and kerb crossing to local authority requirements

3 4 COMPLETION

General

Removal of temporary work, services and plant Remove temporary work services and construction plant within 10 working days after occupation of the works

Rectification Clean and repair damage caused by the installation or use of temporary work and services and restore existing facilities used during construction to original condition

Final cleaning Remove rubbish and surplus material from the site and clean the work throughout prior to the final progress payment

Warranties Register with manufacturers, as necessary, and provide copies of manufacturers warranties

Instruction manuals Provide the manufacturers instruction manuals

Operation Ensure moving parts operate safely and smoothly

Surveyor s certificate Provide a certificate which confirms that the work including boundary fences, has been correctly located

Services layout Provide a plan which shows the location of underground services

Authorities' approvals Provide evidence of approval of the local authority or principal accredited certifier and statutory authorities whose requirements apply to the work

Keys Provide two keys for each set of locks keyed alike and two keys for each lock keyed to differ

0184 TERMITE MANAGEMENT

1 GENERAL

1 1 STANDARD

General

Standard To AS 3660 1

Chemical soil barriers – reticulation systems Provide evidence that the system has been type tested to AS 3660 1 Appendix E

Termite barrier notice Provide a durable notice permanently fixed in a prominent location to BCA clause 3 1 3 2(b) or B1 4 (i)(ii)

2 SELECTIONS

2 1 SCHEDULE

Termite barriers schedule

Termite barrier designation	**TB1**	**TB2**	**TB3**
Location	*Suspended timber Floors*		
Slab			
Slab penetrations			
Slab control joints and footing/slab joints			
Under slabs			
Building perimeters			
Under suspended floors	*Cap and Strip Shields*		
Timber poles and posts	SS Boot		

0201 DEMOLITION

1 GENERAL

1 1 STANDARD

Demolition
Standard To AS 2601
Conform to all relevant conditions in Appendix 1 Development Consent

1 2 RECORDS

General
Dilapidation record Submit a copy of the dilapidation record for inspection
Adjoining owners Submit to each owner of each adjacent property a copy of the part of the record relating to that property, and obtain their written agreement to the contents of the record, prior to commencement of demolition

2 PRODUCTS

2 1 DEMOLISHED MATERIALS

General
Removal Except for items to be salvaged for reuse in the works and are to be retained and materials to be recycled on site, take possession of demolished materials and remove them from the site Do not burn or bury demolished materials on the site
Recycling Where possible, dismantle building components for off site recycling

Stockpiling Conform to the conditions in Appendix 1 Development Consent

3 EXECUTION

3 1 SUPPORT

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

3 2 PROTECTION

Weather protection
General If walls or roofs are opened for alterations and additions, or the surfaces of adjoining buildings are exposed provide temporary covers to prevent water penetration
Re-use Provide covers to protect existing plant equipment and materials intended for re-use

Security
General If walls or roofs are opened for alterations or additions, provide security against unauthorised entry

3 3 DEMOLITION

Asbestos removal
Method Use wet removal methods recommended in the Code of Practice for the Removal of Asbestos (NOHSC 2002) including Part 4 for insulation and lagging and Part 9 for asbestos cement
Monitoring Have dust monitoring performed by an independent testing authority

Dilapidation record

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

Making good Make good any damage arising out of demolition work Obtain written acceptance from the owner of each adjoining property of completeness and standard of making good

4 SELECTIONS

4 1 SCHEDULES

Recovered items for re-use in the works schedule- TBC

Item	Location for re-use

Recovered items for delivery to the principal schedule TBC

Item	Deliver to

Demolished material for recycling in the works schedule- TBC

Material

Demolished material for recycling off-site schedule -TBC

Material

Dismantle for relocation schedule TBC

Item	Location for storage	Location for re-assembly

Demolish for removal schedule - TBC

Item

0221 SITE MANAGEMENT

Conform to applicable conditions in Appendix 1 Development Application Consent

1 EXECUTION

1 1 TREE PROTECTION

Trees to be retained

Marking Mark trees which are required to be retained using suitable non-injurious easily visible and removable means of identification Remove the identification on completion

Work near trees

Protection Protect from damage trees which are required to be retained

Work under trees Do not remove topsoil from or add topsoil to the area within the dripline of the trees

Harmful materials Keep the area within the dripline free of construction material and debris

Hand methods Use hand methods to locate, expose and cleanly remove the roots on the line of excavation

Conform to all site management conditions noted by Council Refer to Appendix 1 Development Application Consent

Certification

Contractor to engage a suitably qualified arborist in accordance with the Development Consent requirements and forward certification and recommendations for management the to Principal Certifying Authority See Appendix 1

1 2 ENVIRONMENTAL PROTECTION

Erosion control

General Plan and carry out the work so as to avoid erosion, contamination, and sedimentation of the site, surrounding areas, and drainage systems

Conform to all site management conditions noted by Council Refer to Appendix 1 Development Application Consent

Dewatering

General Keep groundworks free of water Prevent water flow over freshly laid work

1 3 SITE CLEARING

Extent

General Clear only the areas to be occupied by structures, paving or landscaping

Clearing and grubbing

Clearing Remove everything on or above the site surface, including rubbish, scrap, grass vegetable matter and organic debris, scrub, trees noted for removal, timber stumps, boulders and rubble

Turf Remove turf to a depth just sufficient to include the root zone

Grubbing Grub out or grind stumps and roots over 75 mm diameter to a minimum depth of 500 mm below subgrade under construction, and 300 mm below the finished surface in unpaved areas

Surplus material

Removal Take possession of surplus material and remove it from the site

Do not stockpile on the site Conform to the conditions in Appendix 1 Development Consent

0222 EARTHWORK

Refer to Structural Engineer's Specifications
Conform to applicable conditions in Appendix 1 Development Application Consent

1 GENERAL

1 1 STANDARD

Groundworks for slabs and footings
Standard To AS 2870

1 2 INTERPRETATION

Definitions
General For the purposes of this worksection the definitions given below apply

- Rock Monolithic material with volume greater than 0 5 m^3 which cannot be removed until broken up by mechanical means such as rippers or percussion tools
- Bad ground Ground unsuitable for the work including fill liable to subsidence, ground containing cavities, faults or fissures, ground contaminated by harmful substances and ground which is or becomes soft wet or unstable
- Line of influence A line extending downward and outward from the bottom edge of a footing, slab or pavement and defining the extent of foundation material having influence on the stability or support of the footings, slab or pavement
- Subgrade The trimmed or prepared portion of the formation on which the pavement, footing or slab is constructed

1 3 NOTICE

As found site conditions
General If rock or bad ground is encountered advise immediately and obtain instructions before carrying out any further work in the affected area

1 4 EXPLOSIVES

General
Prohibition Do not use explosives

2 EXECUTION

2 1 REMOVAL OF TOPSOIL

General
Extent Remove the topsoil layer of the natural ground which contains substantial organic matter over the areas to be cut, filled and to be occupied by structures and paving or landscaping

Maximum depth 200 mm

Topsoil stockpiles
General Stockpile site topsoil required for re-use Protect stockpiles from contamination by other excavated material, weeds and building debris

2 2 EXCAVATION

Extent

Site surface Excavate over the site to give correct levels and profiles required as the basis for structures, paving and landscaping Make allowance for compaction or settlement

Footings *Excavate for footings to the required sizes and depths Confirm that the bearing capacity is* adequate

Crawl space Provide a clear space under timber or steel bearers

- Minimum clearance 400 mm

Bearing surfaces

General Provide even plane bearing surfaces for loadbearing elements including footings Step for level changes Make the steps to the appropriate courses if supporting masonry

Reinstatement

Requirement If excavation exceeds the required depth or deteriorates, reinstate with fill to the correct depth, level and bearing value

Existing footings

Requirement If excavation is required below the line of influence of an existing footing use methods which maintain the support of the footing and ensure that the structure and finishes supported by the footing are not damaged

Grading

General Grade the ground surface externally and under suspended floors to drain ground or surface water away from buildings without ponding

2 3 SURFACE PREPARATION

General

Preparation Before placing fill (including topsoil fill) ground slabs or load-bearing elements, remove loose material debris and organic matter and compact the ground to achieve the required density

2 4 PLACING FILL

General

Placement Place fill in layers to BCA 3 2 2 and compact each layer to achieve the required density

Moisture content If necessary to achieve the required density or moisture content, adjust the moisture content of the fill before compaction

Base preparation under ground slab vapour barrier Blind the surface with sufficient sand to cover any hard projections Wet the sand just before placing the vapour barrier

0331 BRICK AND BLOCK CONSTRUCTION

1 GENERAL

1 1 CROSS REFERENCES

Associated worksection
Associated worksection Conform to the following
- *Termite management*

1 2 STANDARD

General
Materials and construction To AS 3700

2 PRODUCTS

2 1 MATERIALS

Masonry units
Standard To AS/NZS 4455
Type To match existing
Manufacturer To match existing
Size To match existing
Colour To match existing
Feature colour To match existing

Masonry durability
Requirement Conform to AS 3700 Table 5 1

Mortar materials
Sand Fine aggregate with a low clay content and free from efflorescing salts selected for grading and colour for facework
Proportions Conform to the BCA clause 3 3 1 6 and Table 3 3 1 2
Mortar colour To match existing
Mortar joints To match existing

2 2 COMPONENTS

Wall ties
Standard To AS/NZS 2699 1
Non-seismic areas Type A
Seismic areas Type B

Flashings and damp-proof courses
Standard To AS/NZS 2904

3 EXECUTION

3 1 GENERAL

Cutting
Cutting Set out masonry with joints of uniform width and the minimum cutting of masonry units

Joints
Externally Tool to give a dense water-shedding finish

Internally If wall is to be plastered, do not rake more than 10 mm to give a key

Rods

Construct masonry to the following rods

- 75 mm high units 7 courses to 600 mm
- 90 mm high units 6 courses to 600 mm
- 190 mm high units 3 courses to 600 mm

Bond

Type Stretcher bond

Perpends

General Keep perpends in alternate courses vertically aligned and fill them completely with mortar

Wall chasing

Holes and chases Make holes and chases required in masonry walls so that the structural integrity of the wall is maintained Do not chase walls nominated as fire rated or acoustic Parallel chases or recesses on opposite faces of a wall shall not be closer than 600 mm to each other

Chasing of blockwork Only in core-filled hollow blocks or in solid blocks which are not designated as structural and shall be to the **Concrete blockwork chasing table**

Concrete blockwork chasing table

Block thickness (mm)	Depth of chase (maximum mm)
190	35
140	25
90	20

Colour mixing

Distribution In facework distribute the colour range of units evenly to prevent colour concentrations and banding

Sills and thresholds

General Solidly bed masonry sills and thresholds and lay them so that the top surfaces drain away from the building

Appearance

Cleaning Clean progressively to remove mortar smears stains and discolouration Do not use an acid solution Do not erode joints if using pressure spraying

Chimneys and fireplaces

Guidance For construction refer to Clay Brick and Paver Institute Technical Notes CBPI Tech 05

3 2 SUBFLOOR WORK

Bearer piers

Provide engaged or free standing unreinforced masonry piers to support bearers at 1800 mm maximum centres and to the **Bearer pier table**

Bearer pier table

Type	Minimum size (mm)
Engaged	230 x 110 bonded or tied to walls
Freestanding up to 1500 mm high	230 x 230
Freestanding 1500 to 2700 mm high	350 x 350

Access openings

General In internal walls leave door-width openings beneath doorways to give access to underfloor areas

Air vent location

General Provide air vents to give adequate cross ventilation to the space under suspended ground floors

Cavity walls Provide matching vents in the internal leaves located as near as practicable to the air vents in the external leaves

Location Below damp-proof course to internal and external walls

Minimum provision 6000 mm^2 net ventilation area per linear metre of wall

Underpinning

Requirement Install underpinning while maintaining the building undamaged

Grouting Pack dry mix M4 mortar between underpinning and existing structure within 24 and 48 hours of completion of each panel of underpinning

3 3 DAMP-PROOF COURSES

Location

General Provide damp-proof courses as follows

- Walls adjoining infill floor slabs on membranes In the course above the underside of the slab in internal walls and inner leaves of cavity walls Project 40 mm and dress down over the membrane turned up against the wall
- Cavity walls built off slabs on ground In the bottom course of the outer leaf, continuous horizontally across the cavity and up the inner face bedded in mortar turned 30 mm into the inner leaf 1course above
- Masonry veneer construction In the bottom course of the outer leaf, continuous horizontally across the cavity Fastened to the inner frame 75 mm above floor level
- At timber floors In the first course below the level of the underside of ground floor timbers in internal walls and inner leaves of cavity walls

Height Not less than

- 150 mm above the adjacent finished ground level
- 75 mm above the finished paved or concrete area
- 50 mm above the finished paved or concreted area and protected from the direct effect of the weather

Installation

General Lay in long lengths Lap the full width of angles and intersections and 150 mm at joints Step as necessary, but not more than 2 courses per step for brickwork and 1 course per step for blockwork Sandwich damp-proof courses between mortar

Junctions Preserve continuity of damp-proofing at junctions of damp-proof courses and waterproof membranes

3 4 CAVITY WORK

Cavity clearance

General Keep cavities clear at all times

Cavity fill

General Fill the cavity with mortar to 1 course above adjacent finished (ground) level Fall the top surface towards the outer leaf

Cavity width

General Provide minimum cavity widths in conformance with the following

- Masonry walls 50 mm
- Masonry veneer walls 40 mm between the masonry leaf and the loadbearing frame and 25 mm minimum between the masonry leaf and sheet bracing

Openings

Do not close the cavity at the jambs of external openings

3 5 FLASHINGS

Location

General Provide flashings as follows

- Floors Full width of outer leaf immediately above slab continuous across cavity and up the inner face bedded in mortar, turned 30 mm into the inner leaf 2 courses above for brick and 1 course for block Where the slab supports the outer skin and is not rebated, bed the flashing in a suitable sealant

- Under sills 30 mm into the outer leaf bed joint 1 course below the sill, extending up across the cavity and under the sill in the inner leaf or the frame Extend at least 150 mm beyond the reveals on each side of the opening
- Over lintels to openings Full width of outer leaf immediately above the lintel continuous across cavity, 30 mm into the inner leaf 2 courses above for brick and 1 course for block or turned up against the frame and fastened to it Extend at least 150 mm beyond the ends of the lintels
- At abutments with structural frames or supports Vertical flash in the cavity from 150 mm wide material, wedged and grouted into a groove in the frame opposite the cavity
- At jambs Full height flashing extending 75 mm beyond the closure into the cavity, interleaved with the sill and head flashing at each end Fix to jambs
- At roof abutments with cavity walls Cavity flash immediately above the roof and over-flash the roof apron flashing

Installation

General Sandwich flashings between mortar except where on lintels

Pointing Point up joints around flashings to fill voids

Weepholes

Location Provide weepholes to external leaves of cavity walls in the course immediately above flashings and cavity fill, and at the bottoms of unfilled cavities

Form Open perpends

Maximum spacing 1200 mm

Weephole guards Provide access barrier

Type To match existing

Clearance for timber frame shrinkage

General In seasoned timber frame masonry veneer construction, leave the following clearances between window frames and masonry sills and between roof frames and the masonry veneer

- Single storey frames and ground floor windows (not for slab on ground) 10 mm
- Two storey frames and upper floor windows 20 mm

Additional clearance Accommodate additional shrinkage of unseasoned floor timbers and framing

3 6 WALL TIES

Wall tie application

Classification To AS/NZS 2699 1

Type To BCA clause 3 3 3 2

Spacing To BCA Figure 3 3 3 1

Corrosion protection To BCA Table 3 3 3 1

3 7 REINFORCED AND GROUTED BLOCKWORK

Cleaning core holes

General Provide purpose-made cleanout blocks or machine cut a cleaning hole at the base of each grouted core

Location Locate on the side of the wall which is to be rendered or otherwise concealed

Cleaning Rod cores to dislodge mortar fins protruding from the blocks and mortar droppings from reinforcement Remove through the clean-out blocks

Grouting

Commencement Do not commence until grout spaces have been cleaned out and the mortar joints have attained sufficient strength to resist blow-outs

Height of lift Limit the height of individual lifts in any pour to ensure that the grout can be thoroughly compacted to fill all voids and ensure bond between grout and masonry

Compaction Compact by vibration or by rodding

Topping up On the completion of the last lift, top up the grout after 10 min to 30 min, and vibrate or rod to mix with the previous pour

3 8 CONTROL OF MOVEMENT

Ageing of bricks and concrete

Minimum age of clay bricks 7 days

Minimum age of concrete supports to clay bricks 28 days

Joints

General Provide joints as follows

- Contraction joints for concrete and calcium silicate masonry
  - Maximum length of continuous wall 6 m
  - Minimum width of control joint 10 mm
- Expansion joints for clay brickwork
  - Maximum length of continuous wall 6 m
  - Width of vertical joint ≥ 10 mm ≤ 20 mm
  - Width of horizontal joint ≥ 15 mm ≤ 20 mm

Flexible ties and anchors

Requirement If ties or anchors extend across control joints provide ties or anchors which maintain the stability of the masonry without impairing the effectiveness of the joint

Joint material

Installation Clean the joints thoroughly and insert an easily compressible backing material before sealing

Sealant depth Fill the joints with a gun-applied flexible sealant for a depth of at least the joint width

Sealant type External UV stable

3 9 LINTELS

General

Cold-formed lintels Proprietary cold-formed flat-based type designed to AS/NZS 4600

Steel flats and angles Sizes to BCA Figure 3 3 3 5

Material Mild steel galvanized to AS/NZS 4680

Corrosion protection To AS/NZS 2699 3, and BCA clause 3 4 4 4

Installation

General Do not cut on site Keep lintels 10 mm clear of heads of frames Pack mortar between any vertical component and supported masonry units For angles install with the long leg vertical

Propping To prevent deflection or excessive rotation temporarily prop lintels until the masonry reaches its required strength

3 10 BAGGING

Joints

Preparation Cut joints flush before bagging

Dry bagging

Application Apply laying mortar to the surface using a hessian bag or similar Flush up irregularities, but leave a minimum amount of mortar on the surface

0382 LIGHT TIMBER FRAMING

1 GENERAL

Conform to Structural Engineer's Documents

1 1 CROSS REFERENCES

Associated worksections

Associated worksections Conform to the following

- *Termite management*, for termite risk reduction
- *Earthwork,* for clearance for masonry bearer supports
- *Brick and block construction* for clearance for timber frame movements
- *Waterproofing – wet areas*, for waterproofing of wet areas
- *Painting* for priming timber before fixing

1 2 STANDARDS

General

Residential timber framed construction To AS 1684 4 or AS 1684 3 as appropriate

Design To AS 1720 1

1 3 SUBMISSIONS

Preservative treatment

CCA treated timber If proposed to be used provide details

Framing

Design Where the structural drawings define performance criteria, submit independent design, documentation and certification from a professional engineer

Reactions Provide location and magnitude of reactions to be accommodated by the support structure

Floor and wall frame member sizes Submit a schedule of proposed member sizes certified as meeting stated project, AS 1684 and AS 1720 1 requirements for span, spacings and loadings

Shop drawings Submit shop detail drawings or product design guide certified by a professional engineer stating that the design has been carried out in accordance with documented project and standards requirements for the configurations and loadings

Roof trusses Prepare drawings to show

- On a plan the truss layout
- On elevations, the arrangement of members allowing for the accommodation of in-roof services and the size and section type of each member
- The method of assembly, connection holding down and bracing

Wall frames If wall framing is to be pre-fabricated, prepare drawings to show

- On plan the wall layout
- On elevations, the arrangement of members, and the size and section type of each member
- The method of assembly, connection holding down and bracing

2 PRODUCTS

2 1 COMPONENTS

Strapping

Steel straps Metallic-coated steel to AS 1397 minimum size 25 x 1 mm or 30 x 0 8 mm

3 EXECUTION

3 1 GENERAL

Timber fasteners

Metal washers Provide washers to the heads and nuts of all bolts and coach screws

Connectors Press connector plates fully into the frame members Knots not permitted in plate area

Joints

General No gaps greater than 2 mm

Priming

Steel Before fixing, prime steel which is not galvanized or metallic-coated

Fabrication

Length Cut members accurately to length so that they fit firmly against abutting members

Service holes Form holes by drilling

Prefabricated frames

General Protect frames from damage or distortion during storage, transport and erection Provide temporary protection for members until permanent covering is in place

Installation

Hold down and bracing Provide details demonstrating conformance with AS 1684

Certification

General For components for which independent design certification has been required, provide independent certification for the erected components confirming compliance with the design intent

3 2 FLOOR FRAMING

General

Protection If floor framing is for ground floor construction ensure that it is protected from moisture

Construction loads If construction loading exceeds design loading provide additional support so as to avoid overstressing of members

3 3 WALL FRAMING

Timber wall framing

Requirement Provide gauged timbers for studs noggings and plates in double-faced walls

Wall studs

General Provide studs in single lengths without splices Place a stud under or within 40 mm from each structural load point from roof or ceiling (except for openings) Provide multiple studs at points of concentrated load

Maximum stud spacing 600 mm

Heads to openings

General Provide lintels appropriate to load and span

Additional support

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

Maximum spacing of noggings 1350 mm centres

Vermin barriers

General Provide vermin barriers as follows

- Brick veneer barrier Close nail 10 mm steel wire mesh to the underside of the bottom plate of external stud walls, extending across the cavity for building into brickwork

Damp-proof course

General Provide damp-proof courses under the bottom plate of stud walls built off slabs or masonry dwarf walls as follows

- External walls (not masonry veneer) Turn up at least 75 mm on the inside and tack Project 10 mm beyond the external slab edge or dwarf wall and turn down at 45°

- Walls of bathrooms shower rooms and laundries Turn up at least 150 mm on the wet' side and tack to studs

Installation Lay in long lengths Lap full width at angles and intersections and at least 150 mm at joints

Junctions Preserve continuity of damp-proofing at junctions of damp-proof courses sarkings and waterproof membranes

Flashings

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

Masonry veneer construction Extend across cavities and build into brickwork

Prefabricated walling

Assembly Factory assemble wall frames

Bracing Provide details of bracing

Certification Obtain certification from a professional engineer for design and the erected frames

3 4 ROOF FRAMING

General

Pitched roofs Construct framing for flat or pitched roofs where the ceiling follows the roof line, consisting of rafters or purlins supporting ceiling, lining and roof covering

Strutted framing Construct traditional timber pitched roof framing consisting of rafters supported at intermediate points by a system of underpurlins strutted off walls or strutting beams and braced by collar ties, and ceiling joists supported by walls and ceiling hanging beams

Additional support Provide a frame member behind every joint in fibre cement or plasterboard sheeting or lining

Battens Requirement Supply and fix battens suitable for span, spacing and roofing

Antiponding Fix appropriate members to the tops of trusses at the rear of fascias, to prevent sagging of and ponding on the sarking

Wall plates

Fixing Fix timber wall plates to masonry, with either straps or bolts

Nailing strips

Requirement Where timber joists rafters or purlins bear on steel members, provide 50 mm thick nailing strips bolted to the flange of the steel member

3 5 ROOF TRIM

Fascia, valley gutter and barge boards

Minimum thickness

- Fixed at up to 600 mm centres 19 mm
- Fixed at 600 – 900 mm centres 32 mm

3 6 COMPLETION

Cleaning

General On completion of framing remove debris from any gaps between members

0383 FLOORING AND DECKIN

Conform to Structural Engineer's requirements

1 GENERAL

1 1 CROSS REFERENCES

Associated worksections
Associated worksections Conform to the following
- *Termite management* for termite risk reduction
- *Resilient finishes* for finishes
- *Painting* for priming timber before fixing

1 2 STANDARD

General
Flooring and decking To AS 1684 4

2 PRODUCTS

2 1 MATERIALS

Particleboard flooring
Material To AS/NZS 1860 1

Fibre cement flooring
Compressed sheets To AS/NZS 2908 2 Type A, Category 5

Plywood flooring
Standard To AS/NZS 2269, bond type A tongue and grooved

Decking
Treated softwoods To AS 4785

Hardwoods To AS 2796

3 EXECUTION

3 1 GENERAL

Particleboard flooring
Installation To AS 1860 2

Junctions Sand junctions lightly to a smooth level surface

Battens on concrete slabs
Framing fixed direct Fix seasoned battens to the concrete slab so that their top surfaces are aligned

Framing fixed on resilient pads Fix seasoned battens on resilient pads to the concrete slab

3 2 FIXING

Sheet flooring
Fibre-cement flooring Fix sheeting to the supports with adhesive and non-corrosive countersunk screws Fill the screw holes with sealant before fixing After fixing, stop the screw heads with the same sealant finished slightly below the sheet surface

Particleboard and plywood flooring Fix sheeting to the supports with adhesive and nail

Plywood underlay Fix at 45° to the direction of strip flooring

Timber decking

Installation Lay in long lengths (minimum 3 spans) double nailed at each bearing with galvanized nails driven flush Stagger joints and make them over joists Leave 4 mm between edges of boards

Arrises Chamfered or rounded

Finishing Apply the first 2 coats all round before fixing

3 3 COMPLETION

Protection

General Protect surfaces as follows

- Floors With hardboard or used carpet taped at all butt joints Do not cover with sheet plastic
- Stair treads Full timber or plywood casing

0431 CLADDING

1 GENERAL

1 1 CROSS REFERENCES

Associated worksections

Associated worksections Conform to the following

- *Insulation and sarking membranes* for wall sarking requirements

2 PRODUCTS

2 1 MATERIALS

Flashing material

Standard To AS/NZS 2904

Hardboard cladding

Standard To AS/NZS 1859 4

Exterior cladding Exterior hardboard

Sheltered exterior cladding Tempered hardboard

Plank cladding Proprietary system of hardboard planks 9 5 mm thick

- Joints and edges UPVC extrusions
- External corners Preformed metal joining pieces
- Internal corners Scribe

Fibre cement cladding

Standard To AS/NZS 2908 2 Type A Category 3

Plank cladding Proprietary system of single-faced fibre cement planks 7 5 mm thick

- Joints and edges UPVC extrusions
- Corners Preformed metal joining pieces

Sheet cladding Single-faced fibre cement sheets 6 mm thick

- Joints, corners and edges UPVC extrusions

Eaves lining Proprietary system of single-faced fibre cement sheets 4 5 mm thick

2 2 COMPONENTS

Fasteners

Steel nails To AS 2334

Hot-dip galvanizing To AS/NZS 4680

3 EXECUTION

3 1 TIMBER WEATHERBOARD CLADDING

Preparation

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

Cut surfaces Treat freshly cut surfaces with water repellent before fixing

Installation

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

Fixing at crossings

- Seasoned milled weatherboards 2 fixings
- Unseasoned hardwood sawn weatherboards or secret nailed profiles 1 fixing

Nailheads Treat visible nailheads as follows

- In stained or clear finishes Drive flush
- In opaque finishes Punch below the surface and fill flush with putty after the surface has been primed

Joints

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

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

3 2 FIBRE CEMENT CLADDING

General

Eaves lining fixings Nail at minimum 200 mm centres to battens at maximum 600 mm centres

Minimum batten size For rafter overhang

- 300 – 600 mm 50 x 38 mm
- 600 – 1500 mm 75 x 38 mm

4 SELECTIONS

4 1 SCHEDULE

Cladding schedule

Type Timber Weather board to match existing

Finish For paint finish to match existing

0451 WINDOWS AND GLAZED DOORS

1 GENERAL

1 1 CROSS REFERENCES

Associated worksections

Associated worksections Conform to the following

- *Lining* for architraves
- *Painting* for priming of frames and doors before installation

1 2 STANDARD

Glass

Selection and installation To AS 1288

Windows including louvres

Selection and installation To AS 2047

2 PRODUCTS

2 1 MATERIALS

Flashings

Standard To AS/NZS 2904

Metal finishes

Zinc plating To AS 1789 at least Fe/Zn8

Anodising To AS 1231, at least class AA20

Thermoset powder coating To AS 3715

2 2 COMPONENTS

Louvre window assemblies

Description Provide louvre blades mounted in a metal surround frame or subframe and able to withstand the permissible-stress-design wind pressure for that location without failure or permanent distortion of members and without blade flutter

Adjustable louvres Provide louvre blades clipped into blade holders pivoted to stiles or coupling mullions, linked together in banks, each bank operated by an operating handle incorporating a latching device or by a locking bar

Screens

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

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

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

Hinged screens Hinge at the top to give access to opening sash

Roll up screens Provide a proprietary retractable insect screen comprising aluminium frame with baked enamel finish, fibreglass mesh beaded into the frame and a retraction system including tension spring, nylon bearings, positive self-locking device and plastic sealing strip at sill

Sliding screens Provide a matching aluminium head guide, sill runner, and frame stile sections for screens not part of the window frame

- Hardware Nylon slide runners and finger pull handle Provide pile strip closers against sash where necessary to close gaps

External glazing systems

General summary

- Refer to Windows and Doors Drawing Schedule

Safety

Security grilles To AS 5039

Security screen doors To AS 5040

Bushfire screens To BCA Table 3 7 4 1

3 EXECUTION

3 1 GENERAL

Standards

Windows To AS 2047

Security screen door and window grill installation To AS 5039

Preglazing

General If possible preglaze doors and windows

Weatherproofing

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

Fixing

Packing Pack behind fixing points with durable full width packing

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

Trim

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

3 2 SLIDING INTERNAL DOORS

Accessories

General Provide overhead track supports and head and jamb linings appropriate to the arrangement of the door and removable pelmets at the head to allow access to the wheel carriages for adjustment

Wheel carriages Fully adjustable precision ball race type providing smooth, quiet operation

4 SELECTIONS

4 1 SCHEDULE

Windows and glazed doors schedule- TBC

Location	Type	Manufacturer	Pre-finish / Colour
Windows and sliding external doors Glass			
Louvres External louvres -Sun control louvres			
Security screen and window grilles			

Location	Type	Manufacturer	Pre-finish / Colour
Bush fire screens			

0453 DOORS AND HATCHES

1 GENERAL

1 1 CROSS REFERENCES

Associated worksections

Associated worksections Conform to the following

- *Lining* for architraves
- *Painting* for priming of frames and doors before installation

1 2 INTERPRETATION

Definition

General For the purposes of this worksection the definition given below applies

- Doorset An assembly comprising a door or doors and supporting frame, guides and tracks including the hardware and accessories necessary for satisfactory operation

2 PRODUCTS

2 1 MATERIALS

Flashings

Standard To AS/NZS 2904

2 2 DOORS

Door thickness

Generally 35 mm

External doors and doors over 900 mm wide 40 mm

Door construction

Flush doors To be of balanced construction

Medium density fibreboard doors Board designated by the manufacturer as having a moisture resistance which is suitable for the exposure of the door

Tolerance

Squareness The difference between the lengths of diagonals of a door ≤3 mm

Twist The difference between perpendicular measurements taken from diagonal corners ≤3 mm

Nominal size (mm)

- Height +0, -2
- Width +0 -2

Safety

Security screen doors To AS 5040

Bushfire screens To BCA Table 3 7 4 1

2 3 DOOR FRAMES

Aluminium

General Assembled from aluminium sections, including necessary accessories such as buffers pile strips strike plates fixing ties or brackets and cavity flashing, with suitable provision for fixing nominated hardware

Timber frames

Hardwood To AS 2796 1

- Grade Select

Softwood To AS 4785 1
- Grade Select
  Bare faced tenons on jambs
  Full let-in jambs

3 EXECUTION

3 1 GENERAL

Installation
Windows To AS 2047
Security screen door grilles installation To AS 5039

Preglazing
If possible, preglaze doors and windows

Ceiling access
General Trim an opening and provide a loose access panel of minimum size 600 x 400 mm

Under floor access
Requirements Provide a frame and a door, minimum size 720 mm wide x 600 mm high complete with padbolt

Priming
General Prime timber door leaves on top and bottom edges before installation

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

Fixing
Packing Pack behind fixing points with durable full width packing

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

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

3 2 SLIDING INTERNAL DOORS

Accessories
Face mounted Provide overhead track supports and head and jamb linings appropriate to the arrangement of the door, and removable pelmets at the head to allow access to the wheel carriages for adjustment

Wheel carriages Fully adjustable precision ball race type providing smooth, quiet operation

Cavity sliding door assemblies Proprietary item

4 SELECTIONS

4 1 SCHEDULE

Doors schedule - TBC

Location	Type	Manufacturer	Pre-finish/Colour
Main entrance door -Glass -Seals			
Other external doors			

Location	Type	Manufacturer	Pre-finish/Colour
-Glass -Seals			
Security screen doors			
Bushfire screens			
Timber internal doors			

0455 DOOR HARDWARE

1 PRODUCTS

1 1 COMPONENTS

Locksets

External doors Push-button key and knob set and a double - cylinder dead bolt to each door

Internal doors

- Generally Passage sets
- Bathrooms showers and toilets Privacy sets
- Sliding patio doors and windows Key-lockable surface mounted bolts

Door lockset mounting heights 1000 mm above finished floor to centreline of spindle

2 EXECUTION

2 1 GENERAL

Keying

Requirement Key doors (excluding garage doors) alike and key windows alike

Hinges

Requirement Provide 3 hinges for external doors and door leafs over 2040 mm in height and 600mm in width conform to the **Hinges table**

Hinges table

Thickness of door (mm)	Size of door (mm x mm)	Number of hinges (per door leaf)	Size of hinges (steel)
35 mm	2040 x 920	3	100 x 70 x 2 5 mm
40 mm	2040/2400 x 1020	4	100 x 80 x 2 5 mm

Door stops

Fixing Fix on the floor, skirting or wall, as appropriate, to prevent the door or door furniture striking the wall or other surface

0467 GLASS COMPONENTS

1 GENERAL

1 1 CROSS REFERENCES

Associated worksection

Associated worksection Conform to the following

- *Windows and glazed doors*

1 2 SUBMISSIONS

Balustrade design

Certification Submit a professional engineers certificate confirming compliance with clause 3 6 of AS/NZS 1170 1

Sealant compatibility

Compatibility statements Submit statements from all parties to the installation that certify the compatibility of sealants and glazing systems to all substrates

2 PRODUCTS

2 1 MIRRORS

Reflective surface

Type Silver layer deposited on the glass or glazing plastic

Protective coatings Electrolytic copper coating at least 5 µm thick and 2 coats of mirror backing and edge sealing paint having a total dry film thickness of at least 50 µm

2 2 GLASS BALUSTRADES

General

Glass Grade A safety glass to AS 1288 Section 7

Frame Proprietary system to BCA clause 3 9 2

3 EXECUTION

3 1 FIXING MIRRORS

Mirror Fixing

Mirror fixing to AS 1288

Backed mirrors

Backing 9 mm waterproof plywood

Adhesive fixing to backing Non-acidic silicone adhesive at the rate recommended by the manufacturer

Installation to backing Clean the back of the glass panel and apply wallnuts of adhesive together with double sided adhesive tape for temporary support, and affix directly to the backing

Screw fixing

Mirror and backing Fix direct to wall plugs with dome-headed chromium-plated screws in each corner and at 900 mm maximum centres around perimeter Provide polyethylene sleeves and washers to prevent contact between screw and glass Do not over-tension the screws

Fixing backed and unbacked mirrors

Screw fixing Fix direct to wall plugs with dome-headed chromium-plated screws in each corner and at 900 mm maximum centres around perimeter Provide polyethylene sleeves and washers to prevent contact between screw and glass Do not over-tension the screws

Frame fixing Proprietary aluminium frames to mirror perimeter corners mitred If unbacked bed glass edges in a continuous resilient gasket Attach the frame to the substrate with concealed screw fixings Seal the frame to the substrate with paintable sealant which will not react with the mirror coating Do not allow the sealant to contact the mirror back

Bead fixing Rebated timber beads to mirror perimeter, corners mitred If unbacked bed glass edges in a continuous resilient gasket Screw fix the beads to the substrate

Clip fixing Fix direct to wall plugs with chromium-plated fixed clip and spring clip fixings at 900 mm maximum centres around perimeter If unbacked, provide polyethylene or cork washers to prevent contact between clips and mirror back

3 2 GLASS BALUSTRADES

Framed

Post fixing TBC

Frameless

Side fixings TBC

Pocket fixing

- Pocket size TBC
- Pocket set-back from concrete face TBC
- Glazing and seating materials TBC

4 SELECTIONS

4 1 SCHEDULE

Glass components schedule- TBC

Type	Description
Mirrors	
Balustrades	

0471 INSULATION AND SARKING MEMBRANES

1 GENERAL

1 1 INTERPRETATION

Definition

General For the purposes of this worksection the definition given below applies

- Sarking membrane Flexible membrane material normally used for waterproofing vapour retarding or thermal reflective insulation

1 2 ENERGY EFFICIENCY

Commitment to energy efficiency required by authorities

Requirements TBC

2 PRODUCTS

2 1 MATERIALS

Bulk insulation

Cellulosic fibre (loose fill) To AS/NZS 4859 1 Section 5

Mineral wool blankets and cut pieces To AS/NZS 4859 1 Section 8

Polyester To AS/NZS 4859 Section 7

Polystyrene (extruded rigid cellular sheets) To AS 1366 4

Polystyrene (moulded rigid cellular sheets) To AS 1366 3

Wool To AS/NZS 4859 1 Section 6

Reflective insulation

Standard To AS/NZS 4859 1 Section 9

Sarking membrane

Standard To AS/NZS 4200 1

Floor insulation

Material Bulk insulation

Sarking Perforated material

3 EXECUTION

3 1 GENERAL

Bulk insulation

Standard To AS 3999

Batts Fit tightly between framing members If support is not otherwise provided secure nylon twine to the framing and stretch tight

Loose fill Provide boxing to retain loose fill at external edges, cavities and penetrations, and to prevent spilling

Sarking installation

Standard To AS/NZS 4200 2

Wall sarking

General Provide vapour-permeable sarking behind cladding which does not provide a permanent weatherproof seal including the following

- Boards fixed vertically or diagonally

- Boards or planks fixed in exposed locations where wind-driven rain can penetrate the joints
- Unpainted or unsealed cladding

Installation Apply to the outer face of external stud walls from the top plate down over the bottom plate and flashing Run across the studs and lap at least 150 mm at joints At top seal across the wall cavity

Roof sarking

Location Provide sarking under tile and shingle roofs

Anti-ponding boards Provide 4 5 mm fibre-cement anti - ponding boards to eaves of tile roofs below 20° pitch

Ridge ventilation Finish sarking at least 50 mm clear of ridges

Vapour barrier

Requirement Where the sarking also forms a vapour barrier seal the laps and penetrations to form a continuous air tight seal and seal to the walls

4 SELECTIONS

4 1 SCHEDULE

Insulation schedule

Location	Type	Thickness	R-value	R_w rating
Roof	TME	TME	TME	TME
Ceiling	TME	TME	TME	TME
Walls	TME	TME	TME	TME
Pipes	TME	TME	TME	TME

0511 LINING

1 GENERAL

1 1 CROSS REFERENCES

Associated worksections

Associated worksections Conform to the following

- *Waterproofing – wet areas* for waterproofing of wet areas

1 2 STANDARDS

Plasterboard

Standard To AS/NZS 2588

Fibre cement

Standard To AS/NZS 2908 2

Wall and ceiling linings Type B Category 2

2 EXECUTION

2 1 SHEET LINING

Supports

General Install timber battens or proprietary cold-formed galvanized steel furring channels as follows

- Where framing member spacing exceeds the recommended spacing
- Where direct fixing of the sheeting is not possible due to the arrangement or alignment of the framing or substrate
- Where the lining is the substrate for tiled finishes

Installation

Plasterboard To AS/NZS 2589

- Finish Level 4

Wet areas To AS 3740

- Fixing Do not use adhesive fixing alone

Joints

Flush joints Provide recessed edge and setting compound and finish flush with perforated reinforcing tape

External corner joints Make joints over zinc-coated steel corner beads

Control joints Install purpose-made zinc-coated control joint beads at not more than 12 m centres and to coincide with structural movement joints

Wet areas Install additional supports, flashings, trim and sealants as required

Joints in tiled areas Do not apply a topping coat after bedding perforated paper tape in bedding compound

2 2 TONGUE AND GROOVE LINING

Installation

Stained or clear finished boards Select board to give a random pattern At corners return the same board to give a continuous grain pattern

Fixing Nail twice to each crossing except for secret nailed profiles

Nailheads Treat visible nailheads as follows

- In stained or clear finishes Drive flush
- In opaque finishes Punch below surface and fill flush with putty after the surface has been primed

Joints

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

Internal corners Scribe

External corners Mitre

2 3 TRIM

General

General Provide timber or medium density fibreboard trim, such as beads skirtings architraves mouldings and stops where necessary to make neat junctions between components finishes and adjacent surfaces

3 SELECTIONS

3 1 SCHEDULE

Lining schedule

Item	Description
Lining -Type	TME
Cornice Type Sheet thickness	TME
Skirtings Type	TME
Architraves Type	TME

0551 JOINERY

1 GENERAL

1 1 CROSS REFERENCES

Associated worksections

Associated worksections Conform to the following

- *Windows and glazed doors* for reveal and jamb linings
- *Doors and hatches* for timber doors

2 PRODUCTS

2 1 MATERIALS

Joinery timber

Hardwood To AS 2796 3

Seasoned cypress pine To AS 1810

Softwood To AS 4785 3

Finished sizes For milled timbers actual dimensions which are at least the required dimensions except for dimensions qualified by a term such as 'nominal or out of' to which industry standards for finished sizes apply

Plywood

Interior use generally To AS/NZS 2270

Interior use, exposed to moisture To AS/NZS 2271

Non-structural glued laminated timber

Standard AS 5067

Wet processed fibreboard (including hardboard)

Standard To AS/NZS 1859 4

Particleboard

Standard To AS/NZS 1859 1

Dry processed fibreboard (including medium density fibreboard)

Standard To AS/NZS 1859 2

Decorative overlaid wood panels

Standard To AS/NZS 1859 3

Timber veneers Slip matched and flitch batched and falling within the visual range of the approved samples

Certification

General Brand panels under the authority of a recognised certification program applicable to the product Locate the brand on faces or edges which will be concealed in the works

Plywood certified formaldehyde emission To AS/NZS 2098 11

Level E1

Wood panel certified formaldehyde emission level to AS/NZS 4266 16 E1

High-pressure decorative laminate sheets

Standard To AS/NZS 2924 1

High-pressure decorative laminate sheet application table

Classes Provide classes as follows

Class to AS/NZS 2924 1	Application
HGS or HGP	Kitchen work-tops

Class to AS/NZS 2924 1	Application
VGS or VGP	Kitchen front panels
VLS	Other vertical locations

Thickness (minimum)
- For horizontal surfaces fixed to a continuous background 1 2 mm
- For vertical surfaces fixed to a continuous background 0 8 mm
- For post formed laminate fixed to a continuous background 0 8 mm
- For vertical surfaces fixed intermittently (e g to studs) 3 0 mm

For edge strips 0 4 mm

2 2 DOMESTIC KITCHEN ASSEMBLIES

Standard
General To AS/NZS 4386 1

2 3 WARDROBE, CUPBOARD AND DRAWER UNITS

Plinths, carcasses, drawer fronts, shelves and doors
Material Melamine overlaid high moisture - resistant particleboard or melamine overlaid high moisture-resistant medium density fibreboard

Bench and cupboard units TBC

Minimum thickness 16 mm

Finish Decorative laminated sheet or veneer if necessary
- To conceal fasteners
- To provide selected colours

Drawer fronts Rout for drawer bottoms

Adjustable shelves Support on proprietary pins in holes bored at equal spacing of 32 mm centres vertically

Drawer and door hardware
Hinge types Concealed metal hinges with the following features
- Adjustable for height, side and depth location of door
- Self-closing action
- Hold-open function
- Nickel plated

Slides Metal runners and plastic rollers with the following features
- 30 kg loading capacity
- Closure retention
- White thermoset powder coating or nickel plated

Hardware
Handles TMC

Locks TMC

Stainless steel
Stainless steel Grade 304 fine linished finish

3 EXECUTION

3 1 GENERAL

Basics
Construction Build components square and install plumb

Joints Provide materials in single lengths whenever possible If joints are necessary, make them over supports

Fasteners and adhesives

General Provide fasteners adhesives or both to transmit the loads imposed and ensure the rigidity of the assembly, without causing discolouration or damage to the finished surfaces

Installation Secure plinths and carcasses to floors walls, or both at not more than 600 mm centres

Visibility Do not provide visible fixings except in the following locations

- Inside cupboards and drawer units
- Inside open units, in which case provide proprietary caps to conceal fixings

Finishing

Junctions with structure Scribe plinths, benchtops, splashbacks ends of cupboards, kickboards and returns to follow the line of structure

0652 CARPETS

1 GENERAL

1 1 CROSS REFERENCES

Associated worksections

Associated worksections Conform to the following

- *Concrete* for substrates
- *Flooring and decking* for substrates

2 PRODUCTS

2 1 MATERIALS

Wet processed fibreboard (hardboard) underlay

Standard To AS/NZS 1859 4

Classification General purpose medium board manufactured specifically as flooring underlay

Thickness 5 5 mm

Edge strip

Type TME

Material/colour TME

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

Hardboard underlay

Standard To AS/NZS 1859 4, standard hardboard Type RD manufactured as flooring underlay

Soft underlay alternatives

Standard To AS 4288

Needled underfelt Felt composed of 60% animal fibre and 40% jute reinforced with polypropylene scrim with a minimum mass of 50 g/m^2, or hessian fabric with a minimum mass of 150 g/m^2

Synthetic foam underlay High density synthetic latex flat cushion foam sandwiched between reinforced carrier fabric

Rubber underlay Heavy-duty natural rubber waffle pattern with a backing of reinforcing fabric, either hessian spun nylon or polyester

Hot-melt adhesive tape

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

Carpet

Minimum class Residential Medium use under the Australian Carpet Classification Scheme

Manufacture TME

Colour TME

Total VOC limit

- Generally 0 5 mg/m^2
- Compliance To the Environmental Classification Scheme operated by the Carpet Institute of Australia

3 EXECUTION

3 1 GENERAL

Substrate preparation

Prepare the substrate including the following

- Stripping and cleaning Remove deleterious and loose material, including existing floor coverings
- Repairs Make good to the surface finish as necessary Fill depressions with a suitable filler, and remove high spots and projections If necessary lay a steel-trowelled underlay to concrete substrate
- Fixtures and fittings Remove door stops and other fixtures, and refix in position undamaged on completion of the installation
- Basic sanding Produce an even plane sanded surface on strip flooring to be covered with carpet Lightly sand the junctions of sheet flooring

Moisture content

General Do not commence installation of flooring unless

- Concrete substrate The moisture content of the concrete has been tested to AS/NZS 2455 1 Appendix B and values obtained as follows

  ≤ 5 5% when tested by the electrical resistance test

  ≤ 70% when tested by the hygrometer test
- Plywood and timber the moisture content of battens/joists or plywood background has been tested to AS/NZS 1080 1 and values obtained as follows

  Airconditioned buildings 8 to 10%

  Intermittently heated buildings 10 to 12 5%

  Unheated buildings 12 to 15%

3 2 LAYING CARPET

Standard

General To AS/NZS 2455 1

Setting out

General Lay the carpet in continuous lengths without cross joins in the body of the area Where unavoidable cross joins at doorways create the joins directly below the closed door

Joints in underlay Ensure joints in underlay do not coincide with carpet joints Do not carry underlay over carpet grippers or edge strips

Seaming methods

Woven carpet Machine or hand sew

Tufted carpet Provide hot-melt adhesive tapes

Fixing

Gripper strip Provide preformed gripper strip and tackless edge strip Space fixings at 150 mm maximum centres

Permanent stick method Immediately after laying and again one hour later roll the carpet from the centre diagonally towards each edge using a 65 kg multi - wheeled roller Do not roll foam-backed carpet

0655 TIMBER FLOORING

1 GENERAL

1 1 CROSS REFERENCES

Associated worksections
Associated worksections Conform to the following
- *Concrete* for substrates
- *Flooring and decking* for substrates

1 2 TOLERANCES

Tolerances
Maximum deviation of the finished floor surface 3 mm under a 3 m straight edge laid in any direction

2 PRODUCTS

2 1 GENERAL

Adhesive
Ventilation Provide adequate ventilation appropriate for moisture curing

Acoustic underlay
General Closed cell foam sheeting perforated to receive adhesive beads

2 2 STRIP FLOORING

Recycled timber
Appearance To be re-sawn and finished to eliminate weathering stains and expose fresh timber

New timber
General Conform to the **Grading table**

Grading table

Product	Standard	Grade
Hardwood	AS 2796 2	High Feature Grade if available for the species selected otherwise Select Grade
Seasoned cypress pine	AS 1810	1
Softwood – pinus ssp	AS 4785 2	Appearance
Softwood – other	AS 4785 2	Select
Compressed fibre cement sheets	AS/NZS 2908 2	Type A Category 5
Particleboard flooring	AS/NZS 1860 1	Class 1 flooring
Plywood flooring	AS/NZS 2269	Type Bond type A

Identification
General Identify timber using branding or certification

3 EXECUTION

3 1 PREPARATION

Storage

General Deliver timber flooring to site in unbroken wrapping or containers and store so that its moisture content is not adversely affected Do not store on the background until the moisture content of the background is suitable for the installation of the floor Do not store in areas of wet plaster

Substrates

General Ensure substrates are as follows

- Clean and free of any deposit or finish which may impair adhesion or location and functioning of movement joints
- If solid or continuous

  Excessive projections are removed

  Voids and hollows > 10 mm with abrupt edges are filled with a cement sand mix not stronger than the substrate nor weaker than the bedding

  Depressions < 10 mm are filled with a latex modified cementitious product with feathering eliminated by scabbling the edges

Flatness < 3 mm deviation of the surface under a 3 m straight edge laid in any direction with no abrupt variations greater than 1mm over 250 mm

Moisture content

General Do not commence installation of flooring unless

- Concrete substrate The moisture content of the concrete has been tested to AS/NZS 2455 1 Appendix B and values obtained as follows

  ≤ 5 5% when tested by the electrical resistance test

  ≤ 70% when tested by the hygrometer test
- Plywood underlays or timber flooring products The moisture content has been tested to AS/NZS 1080 1 and values obtained as follows

  Airconditioned buildings 8 to 10%

  Intermittently heated buildings 10 to 12 5%

  Unheated buildings 12 to 15%

Conformance If these values are not achieved allow for acclimatisation

3 2 SUPPORT FIXING – STRIP FLOORING

Battens for strip flooring on concrete slabs

General Ensure support members are in full lengths without splicing

Framing fixed direct Fix seasoned battens to the concrete slab so that their top surfaces are aligned

- Battens 70 x 35 mm seasoned timber
- Spacing of fasteners < 600 mm

Framing fixed on resilient pads Fix seasoned battens on resilient pads to the concrete slab so that their top surfaces are aligned

- Pad spacing 400 mm centres

Vapour barrier under battens 200 µm high-impact resistant polyethylene Lap 300 mm, seal the laps with pressure-sensitive tape and return up the vertical surfaces and trim at the level of the flooring

Strip flooring on steel joists

General Screw fix seasoned battens to the steel joists so that their top surfaces are aligned

3 3 SUPPORT FIXING – SHEET UNDERLAY

Battens for sheet underlay on concrete slabs

Framing fixed direct Fix seasoned battens to the concrete slab in conformance so that their top surfaces are aligned

- Battens 70 x 35 mm seasoned timber

- Spacing of fasteners < 600 mm

Framing fixed on resilient pads Fix seasoned battens on resilient pads to the concrete slab so that their top surfaces are aligned

- Pad spacing 400 mm centres

Vapour barrier under battens 200 µm high-impact resistant polyethylene Lap 300 mm seal the laps with pressure-sensitive tape and return up the vertical surfaces and trim at the level of the flooring

Sheet underlay battens table

Plywood stress grade	Plywood thickness	Batten spacing
F11	13 mm	450 mm
F14	12 5 mm	450 mm
F11	18 5 mm	600 mm
F14	17 mm	600 mm

3 4 UNDERLAY FIXING

Acoustic underlay

General Apply the bonded acoustic underlay nominated to the manufacturer s instructions

Floors on steel joists

General Screw fix plywood underlay to the steel joists so that their top surfaces are aligned

3 5 FLOOR FIXING

Room environment

General During fixing and stabilising, operate the heating system of radiant heated or airconditioned rooms at 1 5°C above normal maximum temperature

Adhesive

General Use a urethane elastomer adhesive in addition to nails as follows

- Continuously supported flooring 4 mm beads at 300 mm spacing at right angles to run of flooring
- Intermittently supported flooring 6 mm bead along each joist or batten

Nailing

General Ensure the boards are in contact with the joists at the time of nailing, particularly where boards are machine nailed Skew nail in a uniform pattern If nails are to be less than 10 mm from ends of sheets or boards, pre-drill nail holes 0 – 1 mm undersize

Secret nailing Do not use boards of more than 85 mm cover width, and use one nail or staple skewed at 45° Do not cramp more than one board at a time

Sinking Punch nails 3 mm below finished surfaces and fill the sinking flush with a material tinted to match the flooring which is compatible with the floor finish

Top nailing For boards more than 65 mm cover width, use two nails skewed 10 degrees in opposite directions Do not cramp more than 800 mm width of boards at one time

Strip flooring

Installation Lay in straight and parallel lines with each board firmly butted to the next and firmly bedded on the subfloor Cramp sufficient only to bring the boards together and no more than 800 mm of flooring at any one time

Adhesive Apply adhesive in addition to nailing over softwood joists or underlay

Set-out Locate joints in boards so that they are evenly and symmetrically distributed and as follows

- Butt joints Centrally on supports
- End-matched joints Not in adjacent boards
- Minimum number of spans across supports 2

Movement control joints

Perimeters Provide 12 mm wide joints against vertical building elements

Between underlay sheets 6 mm

Floors under 6 x 6 m Partially cramp strip flooring to allow a 1 mm gap every 600 mm or 1 5 mm every metre

Floors over 6 x 6 m Additionally, divide floors into maximum dimensions of 6 m with joints 4 mm wide filled with a flexible sealant compatible with the applied finish

3 6 COMPLETION

Protection

General Provide protection as follows

- Floors With hardboard taped at all butt joints Do not cover with sheet plastic
- Stair treads Full timber or plywood casing

Spare flooring products

General Supply an extra 5% of flooring products to be stored on site as spares

Storage location TBC

4 SELECTIONS

4 1 SCHEDULES

Strip flooring schedule -TBC

Property	Code		
	A	B	C
Species or group			
Recycled			
Profile			
Fixing -Surface nailed			
-Secret nailed			
Size (width x thickness, mm)			
Ends -Butt			
-End joined T&G			
Resilient mounts -Product			
-Manufacturer			
Moisture content			

Underlay schedule

Property	Code		
	A	B	C
Acoustic underlay -Product -Adhesive			

0656 FLOOR SANDING AND FINISHING

1 GENERAL

1 1 CROSS REFERENCES

Associated worksections

Associated worksections Conform to the following

Painting for applied finishes to external decking and clear and opaque finishes to timber items and internal floors

1 2 STANDARD

Floor sanding and finishing

General To AS 4786 2

2 PRODUCTS

2 1 FINISH

Filler

General Non-oil based and compatible with the coating system

Coating system

Proprietary floor finish system Feast Watson Floor Seal

Quality Provide premium quality lines

Combinations

- Do not combine clear finishes from different manufacturers in a coating system
- Provide only the combinations of filler stain and sealer recommended by the manufacturer of the top coats

Delivery Deliver all products to the site in the manufacturer s labelled and unopened containers

3 EXECUTION

3 1 PREPARATION

Lighting

General Provide supplementary lighting to allow close examination of the entire process

Substrate

General Do not commence sanding until

- Adhesives have cured
- Floor heating has been switched off for 48 hours
- Filler has dried as indicated by the colour fading

Ensure substrates are clean and free of any deposit which may impair the following

- Application of the coating system
- Adhesion of resilient finishes

Preparation

General Punch nails 3 mm below the surface Remove tacks Fill open grained timber with materials compatible with those used in subsequent finishing operations

3 2 SANDING

Basic sanding – general

General Remove irregularities caused by cupping or mismatching of the flooring materials with a drum type sanding machine and coarse abrasives

Basic sanding – strip flooring

General First cut at 45° to the length of the boards, second cut at 90° to the first cut, and third cut parallel to the length of the boards

Boundary areas Bring to the same surface condition as the main sanded area, using disc sanding

Inaccessible areas Hand scrape to produce an even plane surface

Basic sanding – parquet

Uneven or hard flooring First cut at 45° to the direction of the grain of the wood, second cut at 90° to the first cut, third cut at 45° to the first cut, and fourth cut at 90° to the third cut

Boundary areas Bring to the same surface condition as the main sanded area, using disc sanding

Inaccessible areas Hard scrape to produce an even, plane surface

Stopping and filling

General Select a colour to produce an average match with the final coated timber in tone, colour and texture

Fill minor cracks and stop punched nails with a putty knife

Fill deeper holes in layers > 6 mm allowing each fill to dry Ensure cavities are filled slightly above the surface without air pockets

Flood fill porous timber with the cloth application of water based filler diluted to a creamy consistency

Finish sanding – strip flooring

General After basic sanding cut twice parallel to the length of the boards using increasingly fine abrasives If hard surfaces show excessive scratching apply an initial cut at 90° to the grain direction

Boundary areas Bring to the same surface condition as the main sanded area, using disc sanding

Inaccessible areas Hand scrape to produce the same surface condition as the main sanded area

Water based coating system For a water based coating system use a final grade of paper of minimum F220 screen back

Finish sanding – parquet

General After basic sanding cut twice parallel to the fourth basic sanding cut, then cut twice again in that direction using increasingly fine abrasives

Boundary areas Bring to the same surface condition as the main sanded area

Inaccessible areas Hand scrape to produce the same surface condition as the main sanded area

For a water based coating system use a final grade of paper of minimum F220 screen back

Cleaning

General After each sanding operation remove all dust by all of the following

- Removal from cracks by hand
- Vacuum cleaning
- Tack rag cleaning

3 3 COATING SYSTEM

'Wet paint' warning

General Place notices conspicuously and do not remove them until the coating system has cured and hardened

Application

General Apply the coating system in accordance with the manufacturer s printed instructions Maintain a wet edge throughout the whole area

Sanding

General Fine sand between coats only within the depth of the finish, and remove dust

Finishing cork floors

After sanding, finish with 3 coats of clear floor sealer

Timber floor coating system

Coating If edge bonding of strip flooring is known to occur apply a sealer compatible with the final coat

Final coats 2 coats of water based polyurethane applied with a continuous wet edge and to the manufacturer s instructions

3 4 COMPLETION

Cleaning

General Vacuum clean the area and protect with fabric drop sheets Do not use plastic sheeting

0671 PAINTING

1 GENERAL

1 1 STANDARD

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

2 PRODUCTS

2 1 PAINTING MATERIAL

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

Low VOC emitting paints
VOC limits for low odour/low environmental impact paint types

- Primers and undercoats < 5 g/litre
- Low gloss white or light coloured latex paints for wall areas < 5 g/litre
- Coloured low gloss latex paints < 16 g/litre
- Gloss latex paints for timber doors and trims < 75 g/litre

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

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

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

Tinting
General Provide only products which are colour tinted by the manufacturer or supplier Alternatively add tinters or stainers only if this is without detriment to the durability or aesthetic performance of the product

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

Autoclaved aerated concrete walls
General Do not apply oil-based paints

3 EXECUTION

3 1 PREPARATION

Standards
General To AS/NZS 2311 Sections 3

Protection of steelwork To AS/NZS 2312 Sections 4

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

Clear finishes Complete clear timber finishes before commencing opaque paint finishes in the same area

Protection

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

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

'Wet paint' warning

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

Repair

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

Substrate preparation

General Prepare substrates to receive the painting systems

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

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

Clear finish Provide filler tinted to match the substrate

Clear timber finish systems Prepare the surface so that its attributes will show through the clear finish without blemishes, by methods which may involve the following

- Removal of bruises
- Removal of discolourations including staining by oil grease and nailheads
- Bleaching where necessary to match the timber colour sample
- Puttying
- Fine sanding (last abrasive no coarser than 220 grit) to show no scratches across the grain

3 2 PAINTING

Standard

General To AS/NZS 2311 Section 6

Protection of steelwork To AS/NZS 2312 Section 8

Light levels

General During preparation of surfaces painting, and inspection maintain light levels ro allow close examination of the entire process

Paint application

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

Quality

General Ensure each coat of paint or clear finish is uniform in colour, gloss thickness and texture, and free of runs, sags, blisters or other discontinuities

Priming before fixing

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

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

Spraying

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

- Satisfactorily atomises the paint being applied

- Does not require the paint to be thinned beyond the maximum amount recommended by the manufacturer
- Does not introduce oil water or other contaminants into the applied paint

Paint with known health hazards Not permitted on site

Sanding

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

Repair of galvanizing

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

Primer Organic zinc rich coating for the protection of steel

Tinting

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

Services

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

3 3 PAINT SYSTEMS

Paint system description

Generally The paint system is referred to by its final coat

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

Selection Provide paint that conform to the **Paint final coat table**

Paint final coat table

Final coat	Applicable Australian Standard
Interior	
Flat latex	AS 3730 1
Floor varnish – moisture cured	AS 3730 27
Floor varnish – two pack isocyanate cured	AS 3730 27
Low gloss latex	AS 3730 3
Semi gloss latex	AS 3730 2
Gloss latex	AS 3730 12
Exterior	
Full gloss solvent - borne	AS 3730 6
Flat latex	AS 3730 8
Low gloss latex	AS 3730 8
Gloss latex	AS 3730 10
Stain, lightly pigmented	AS 3730 28
Latex stain, opaque	AS 3730 16
Semi gloss latex	AS 3730 9
Paving	
Paving paint, semi gloss	AS 3730 29
Paving paint, gloss	AS 3730 29

4 SELECTIONS

4 1 SCHEDULES

Exterior painting schedule TBC

Windows and external doors painting schedule- TBC

Interior painting schedule- TBC

REFERENCED DOCUMENTS

AS/NZS 1080		Timber Methods of test
AS/NZS 1080 1	1997	Moisture content
AS 1163	1991	Structural steel hollow sections
AS/NZS 1170		Structural design actions
AS/NZS 1170 1	2002	Permanent imposed and other actions
AS 1214	1983	Hot dip galvanized coatings on threaded fasteners (ISO metric coarse thread series)
AS 1231	2000	Aluminium and aluminium alloys – Anodic oxidation coatings
AS 1288	2006	Glass in buildings – Selection and installation
AS 1324		Air filters for use in general ventilation and airconditioning
AS 1324 2	2003	Methods of test
AS 1366		Rigid cellular plastics sheets for thermal insulation
AS 1366 3	1992	Rigid cellular polystyrene – Moulded (RC/PS – M)
AS 1366 4	1989	Rigid cellular polystyrene – Extruded (RC/PS E)
AS/NZS 1367	2007	Coaxial cable systems for the distribution of analogue television and sound signals in single and multiple unit installations
AS 1379	2007	Specification and supply of concrete
AS 1397	2001	Steel sheet and strip – Hot dipped zinc coated or aluminium/zinc-coated
AS/NZS 1546		On site domestic wastewater treatment units
AS/NZS 1546 1	1998	Septic tanks
AS/NZS 1546 2	2001	Waterless composting toilets
AS/NZS 1546 3	2001	Aerated wastewater treatment units
AS/NZS 1547	2000	On site domestic wastewater management
AS 1562		Design and installation of sheet roof and wall cladding
AS 1562 1	1992	Metal
AS 1562 3	2006	Plastic
AS/NZS 1571	1995	Copper – Seamless tubes for airconditioning and refrigeration
AS 1604		Specification for preservative treatment
AS 1604 1	2005	Sawn and round timber
AS/NZS 1604 2	2004	Reconstituted wood based products
AS/NZS 1604 3	2004	Plywood
AS 1627	Various	Metal finishing Preparation and pretreatment of surfaces
AS 1657	1992	Fixed platforms walkways stairways and ladders Design construction and installation
AS 1668		The use of mechanical ventilation and air conditioning in buildings
AS 1668 2	2002	Ventilation design for indoor air contaminant control
AS 1672		Limes and limestones
AS 1672 1	1997	Limes for building
AS/NZS 1677		Refrigerating systems
AS/NZS 1677 2	1998	Safety requirements for fixed applications
AS 1684		Residential timber framed construction
AS 1684 3	2006	Cyclonic areas
AS 1684 4	2006	Simplified – Non cyclonic
AS 1720		Timber structures
AS 1720 1	1997	Design methods
AS 1789	2003	Electroplated zinc (electrogalvanized coatings on ferrous articles (batch process)
AS 1810	1995	Timber Seasoned cypress pine - Milled products
AS/NZS 1859		Reconstituted wood based panels – Specifications
AS/NZS 1859 1	2004	Particleboard
AS/NZS 1859 2	2004	Dry processed fibreboard
AS/NZS 1859 3	2005	Decorative overlaid wood panels
AS/NZS 1859 4	2004	Wet processed fibreboard
AS/NZS 1860		Particleboard flooring
AS/NZS 1860 1	2002	Specifications
AS 1860 2	2006	Installation
AS 1926		Swimming pool safety
AS 1926 1	2007	Fencing for swimming pools
AS 1926 2	2007	Location of fencing for private swimming pools
AS 2047	1999	Windows in buildings – Selection and installation
AS 2049	2002	Roof tiles
AS 2050	2002	Installation of roofing tiles
AS 2070	1999	Plastics materials for food contact use
AS 2082	2007	Timber - Hardwood Visually stress graded for structural purposes
AS/NZS 2098		Methods of test for veneer and plywood
AS/NZS 2098 11	2005	Determination of formaldehyde emissions for plywood
AS 2159	1995	Piling – Design and installation
AS/NZS 2179		Specifications for rainwater goods accessories and fasteners
AS/NZS 2179 1	1994	Metal shape or sheet rainwater goods and metal accessories and fasteners
AS/NZS 2201		Intruder alarm systems
AS/NZS 2201 1	2007	Client s premises Design installation commissioning and maintenance
AS/NZS 2208	1996	Safety glazing materials in buildings
AS/NZS 2269	2004	Plywood – Structural

AS/NZS 2270	2006	Plywood and blockboard for interior use
AS/NZS 2271	2004	Plywood and blockboard for exterior use
AS/NZS 2311	2000	Guide to the painting of buildings
AS/NZS 2312	2002	Guide to the protection of structural steel against atmospheric corrosion by the use of protective coatings
AS 2327		Composite structures
AS 2327 1	2003	Simply supported beams
AS 2334	1980	Steel nails – Metric series
AS 2358	1990	Adhesives – For fixing ceramic tiles
AS 2423	2002	Coated steel wire fencing products for terrestrial aquatic and general use
AS 2427	2004	Smoke/heat release vents
AS/NZS 2455		Textile floor coverings – Installation practice
AS/NZS 2455 1	2007	General
AS/NZS 2588	1998	Gypsum plasterboard
AS/NZS 2589	2007	Gypsum linings – Application and finishing
AS 2601	2001	The demolition of structures
AS 2663		Textiles – Fabrics for window furnishings
AS 2663 1	1997	Uncoated fabrics
AS 2663 2	1999	Coated curtain fabrics
AS 2665	2001	Smoke/heat venting systems – Design installation and commissioning
AS/NZS 2699		Built in components for masonry construction
AS/NZS 2699 1	2000	Wall ties
AS/NZS 2699 3	2002	Lintels and shelf angles (durability requirements)
AS/NZS 2712	2002	Solar and heat pump water heaters Design and construction
AS/NZS 2728	2007	Prefinished/prepainted sheet metal products for interior/exterior building applications – Performance requirements
AS 2796		Timber – Hardwood – Sawn and milled products
AS 2796 1	1999	Product specification
AS 2796 2	2006	Grade description
AS 2796 3	1999	Timber for furniture componenets
AS 2858	2004	Timber Softwood Visually graded for structural purposes
AS 2870	1996	Residential slabs and footings – Construction
AS/NZS 2904	1995	Damp proof courses and flashings
AS/NZS 2908		Cellulose cement products
AS/NZS 2908 2	2000	Flat sheets
AS/NZS 2918	2001	Domestic solid fuel burning appliances – Installation
AS/NZS 2924		High pressure decorative laminates – Sheets made from thermosetting resins
AS/NZS 2924 1	1998	Classification and specifications
AS/NZS 3000	2007	Wiring rules
AS/NZS 3008		Electrical installations – Selection of cables
AS/NZS 3008 1 1	1998	Cables for alternating voltages up to and including 0 6/1 kV – Typical Australian installation conditions
AS/NZS 3017	2007	*Electrical installations – Testing and inspection guidelines*
AS/NZS 3080	2003	Telecommunications installations Generic cabling for commercial premises (ISO/IEC 11801 2002 MOD)
AS 3439		Low voltage switchgear and controlgear
AS 3439 3	2002	Particular requirements for low voltage switchgear and controlgear assemblies intended to be installed in places where unskilled persons have access for their use – Distribution
AS/NZS 3500		Plumbing and Drainage
AS/NZS 3500 1	2003	Water services
AS/NZS 3500 2	2003	Sanitary plumbing and drainage
AS/NZS 3500 3	2003	Stormwater drainage
AS/NZS 3500 4	2003	Heated water services
AS/NZS 3500 5	2000	Domestic installations
AS 3566		Self drilling screws for the building and construction industries
AS 3566 2	2002	Corrosion resistance requirements
AS 3600	2001	Concrete structures
AS 3610	1995	Formwork for concrete
AS 3660		Termite management
AS 3660 1	2000	New buildings
AS/NZS 3666		Air handling and water systems of buildings – Microbial control
AS/NZS 3666 1	2002	Design installation and commissioning
AS 3700	2001	Masonry structures
AS 3705	2003	Geotextiles Identification marking and general data
AS 3715	2002	Metal finishing – Thermoset powder coatings for architectural applications of aluminium and aluminium alloys
AS 3727	1993	Guide to residential pavements
AS 3730		Guide to the properties of paints for buildings

AS 3730 1	2006	Latex Interior Flat
AS 3730 2	2006	Latex Interior Semi gloss
AS 3730 3	2006	Latex Interior Low gloss
AS 3730 6	2006	Solvent borne Exterior - Full gloss enamel
AS 3730 8	2006	Latex Exterior Low gloss
AS 3730 9	2006	Latex Exterior Semi gloss
AS 3730 10	2006	Latex Exterior – Gloss
AS 3730 12	2006	Latex Interior Gloss
AS 3730 16	2006	Latex Timber finish Exterior
AS 3730 27	2006	Floor varnish Two pack Isocyanate cured
AS 3730 28	2006	Wood stain - Solvent borne Exterior
AS 3730 29	2006	Solvent borne Exterior/interior Paving paint
AS 3740	2004	Waterproofing of wet areas within residential buildings
AS 3743	2003	Potting mixes
AS 3799	1998	Liquid membrane forming curing compounds for concrete
AS 3818		Timber Heavy structural products Visually graded
AS 3818 2	2004	Railway track timbers
AS/NZS 3823		Performance of electrical appliances –Airconditioners and heat pumps
AS/NZS 3823 1 1	1998	Non ducted airconditioners and heat pumps – Testing and rating for performance
AS/NZS 3823 1 2	2001	Test methods – Ducted airconditioners and air to air heat pumps – Testing and rating for performance
AS/NZS 3823 2	2005	Energy labelling and minimum energy performance standard (MEPS) requirements
AS 3958		Ceramic tiles
AS 3958 1	2007	Guide to the installation of ceramic tiles
AS 3958 2	1992	Guide to the selection of a ceramic tiling system
AS 3959	1999	Construction of buildings in bushfire prone areas
AS 3972	1997	Portland and blended cements
AS 3999	1992	Thermal insulation of dwellings – Bulk insulation – Installation requirements
AS 4100	1998	Steel structures
AS/NZS 4200		Pliable building materials and underlays
AS/NZS 4200 1	1994	Materials
AS/NZS 4200 2	1994	Installation requirements
AS 4254	2002	Ductwork for air handling systems in buildings
AS 4256		Plastic roof and wall cladding materials
AS 4256 2	2006	Unplasticized polyvinyl chloride (uPVC) building sheets
AS 4256 3	2006	Glass fibre reinforced polyester (GRP)
AS 4256 4	2006	Unplasticized polyvinyl chloride (uPVC) wall cladding boards
AS 4256 5	2006	Polycarbonate
AS/NZS 4266		Reconstituted wood based panels Methods of test
AS/NZS 4266 16		Formaldehyde emission - Dessicator method
AS 4285	2007	Skylights
AS 4288	2003	Soft underlays for textile floor coverings
AS 4373	2007	Pruning of amenity trees
AS/NZS 4386		Domestic kitchen assemblies
AS/NZS 4386 1	1996	Kitchen units
AS 4419	2003	Soils for landscaping and garden use
AS 4440	2004	Installation of nailplated timber trusses
AS/NZS 4455	1997	Masonry units and segmental pavers
AS 4454	2003	Composts soil conditioners and mulches
AS/NZS 4505	1998	Domestic garage doors
AS 4552	2005	Gas fired water heaters for hot water supply and/or central heating
AS/NZS 4586	2004	Slip resistance classification of new pedestrian surface materials
AS/NZS 4600	2005	Cold formed steel structures
AS/NZS 4680	2006	Hot dip galvanized (zinc) coatings on fabricated ferrous articles
AS/NZS 4692		Electric water heaters
AS/NZS 4692 1	2005	Energy consumption performance and general requirements
AS/NZS 4692 2	2005	Minimum Energy Performance Standard (MEPS) requirements and energy labelling
AS 4766	2006	Polyethylene storage tanks for water and chemicals
AS/NZS 4782		Double capped fluorescent lamps – performance specifications
AS/NZS 4782 2	2004	Minimum Energy Performance Standard (MEPS)
AS/NZS 4783		Performance of electrical lighting equipment – Ballasts for fluorescent lamps
AS/NZS 4783 2	2002	Energy labelling and minimum energy performance standards requirements
AS 4785	Various	Timber - Softwood - Sawn and milled products
AS 4785 1	2002	Product specification
AS 4785 3	2002	Timber for furniture components
AS 4786		Timber flooring
AS 4786 2	2005	Sanding and finishing
AS 4809	2003	Copper pipe and fittings – Installation and commissioning
AS/NZS 4858	2004	Wet area membranes
AS/NZS 4859		Materials for the thermal insulation of buildings
AS/NZS 4859 1	2002	General criteria and technical provisions
AS 5039	2003	Security screen doors and security window grilles
AS 5040	2003	Installation of security screen doors and window grilles
AS 5067	2003	Timber Non structural glued laminated Performance and production requirements
AS 5601	2004	Gas Installation Code

AS 5604	2005	Timber – Natural durability ratings
AS 6002	1999	Domestic electric meter enclosures
AS/NZS ISO 9001	2000	Quality management Systems
AS/NZS ISO/IEC 15018	2005	Information technology Generic cabling for homes
AS/NZS 60598		Luminaires
AS/NZS 60598 1	2003	General requirements and tests
AS/ACIF S009	2006	Installation Requirements for Customer Cabling (Wiring Rules)
SAA HB 29	2007	Communications Cabling Manual Module 2 Communications Cabling Handbook
SAA HB 40		The Australian Refrigeration and Air Conditioning Code of Good Practice
SAA HB 40 2	2001	Reduction of Emissions of Fluorocarbons in Residential Airconditioning Applications
SAA HB 230	2006	Rainwater tank design and installation handbook
SAA HB 252	2007	Communications Cabling Manual Module 3 Residential communications cabling handbook
SAA HB 301	2001	Electrical installations designing to the Wiring Rules
ACADS BSG Camel		Manual for calculating cooling and heating loads – electronic method
AIRAH DA09	1998	Load estimation and psychrometrics
ASHRAE	2005	ASHRAE fundamentals handbook
ASTM C534	2007	Standard Specification for Preformed Flexible Elastomeric Cellular Thermal Insulation in Sheet and Tubular Form
BCA 3 1 3 2(b)		Acceptable construction – Site preparation – Termite risk management – Installation of termite barriers
BCA	3 3 1 6	Acceptable construction – Masonry – Unreinforced masonry – Mortar mixes
BCA Figure 3 3 3 1		Typical brick ties spacings in cavity and veneer construction
BCA Table 3 3 3 1		Corrosion protection for wall ties
BCA 3 3 3 2		Acceptable construction – Masonry – Masonry accessories – Wall ties
BCA Figure 3 3 3 5		Lintels supporting roofs and masonry walls
BCA 3 4 2 2		Acceptable construction – Framing – Steel framing – General
BCA 3 4 4 4		Acceptable construction Framing Structural steel members Corrosion protection
BCA Table 3 7 4 1		Acceptable solutions Fire safety Bushfire areas Construction for medium high and extreme categories of bushfire attack
BCA 3 8 1 2		Acceptable construction Health and amenity Wet areas
BCA 3 9 2		Acceptable construction – Safe movement and access – Balustrades
BCA B1 4(i)		Structure Structural provisions Determination of structural resistance of materials and forms of construction Termite risk management
Carrier		Manual for calculating cooling and heating loads – manual method
Carrier E20		Manual for calculating cooling and heating loads – electronic method
CBPI Techniques 05	1992	Open fireplace design and construction
CBPI TN 21A	1985	Design of Free Standing Walls
NASH Standard	2005	Residential and low rise steel framing Part 1 Design criteria
NOHSC 2002	2005	Asbestos Code of Practice for the safe removal of Asbestos [NOHSC 2002 (1988)] 2nd edition
Trane Trace		Software for calculating cooling and heating loads

APPENDIX 1 DEVELOPMENT APPLICATION CONSENT N0573/06