C

MORNINGTON PENINSULA
Shire

BUILDING FILE

Date completed to records 5 / 03 / 03

Permit No C 7476 / 2001 PIN 4927

B

ADDRESS 4 VIEW POINT ROAD McCRAE

571891

CT476/001 8042000

NEPEAN BUILDING PERMITS

Shop 3 /1283 Pt.Nepean Rd. Rosebud P.O.Box 2234 Rosebud 3939
Office phone (03) 5986 2466 Office fax (03) 5986 2045
Mobile:- Jim 0418 592 125 Mobile:- Rob 0419 885 035

PERMIT NO:
200011325/0

PROJECT FILE JOB ID:
200011325/0

49217

OCCUPANCY PERMIT

Building Act 1993 Building Regulations 1994 :- Regulation 9.5

CLIENT DETAILS:-

		address	town	postcode
Owner	Irrelevant & Sensitive		Irrelevant & Sensitive	
home ph		business	fax no	
Agent	DJ & KJ MOUNTAIN	PO BOX 2114	Rosebud	3939
home ph		business	fax no	
Builder	D MOUNTAIN	PO BOX 2114	Rosebud	3939

ENTER 13/3

PROJECT ADDRESS :-

No. 4 lot 50 VIEW POINT ROAD McCrae 3938

Mornington Shire Council

title details PC353964 site area m2:

PROJECT DESCRIPTION

nature of project	Project items(s)	project part(s)
Construction of	**detached dwelling**	**All parts**
project use	**residential**	

total new floor area m2		Project classification:	**1A**
allowable live load:	**1.5 kpa**	No of project works	**1**
persons accomodated for:		no of storeys	**2**

In the case where this permit is issued in relation to building work it is evidence that the building or part of the building to which it applies is suitable for occupation. In the case where this permit is issued in relation to a place of public entertainment it is evidence that the place to which it applies is suitable for occupation for the purpose of the public entertainment for which it is issued. This occupancy permit is not evidence of compliance with the Building Act 1993 or the Building Regulations 1994.

For class 9 buildings the owner must ensure that this permit is displayed in the approved location.

Regulation 11.5 (not applicable to Class 1a or 10 buildings) of the building Regulations 1994 provides that an owner of a building who is required under an occupancy permit or regulation to maintain an essential service must-

(a) maintain records of maintenance checks; and

(b) complete an essential services report in accordance with regulation 11.6 before each anniversary of the date of occupancy permit or determination under regulation 11.4; and

(c) keep all essential service reports and records of maintenance checks on the premises for inspection by the municipal building surveyor or chief officer at any time on request. PENALTY: 5 penalty units

RELEVANT BUILDING SURVEYOR JAMES SHEEDY
Company **NEPEAN BUILDING PERMITS**
Address Shop 3 /1283 Pt.Nepean Rd. Rosebud Registration no BS-1061
phone (03) 5986 2466
phone Irrelevant & Sensitive
fax (03) 5986 2045

SIGNATURE Irrelevant & Sensitive **dated** Wednesday, 5 March 2003

NEPEAN BUILDING PERMITS

Building Inspection records

PROJECT FILE JOB ID:
200011325/0

TO:-

Owner Irrelevant & Sensitive

Builder D MOUNTAIN
PO BOX 2114
Rosebud 3939

No: 4 Lot: 50 VIEW POINT ROAD McCrae
Construction of detached dwelling All parts
project use **residential**

INSPECTION RECORDS

PRE-POLYTHENE SLAB	approval date 17/09/2001
PRE-POUR SLAB	approval date 18/09/2001
STUMP HOLES	approval date 15/10/2001
FRAMEWORK PRIOR TO COVERING	approval date 18/10/2002
OCCUPANCY PERMIT	approval date 28/02/2003

RELEVANT BUILDING SURVEYOR JAMES SHEEDY
NEPEAN BUILDING PERMITS
Shop 3 /1283 Pt.Nepean Rd. Rosebud
Registration no BS-1061
phone (03) 5986 2466
Irrelevant & Sensitive
fax (03) 5986 2045

DATED 05/03/2003

LBSIS
LAKEWOOD BUILDING SURVEYING
AND
INSPECTION SERVICES
ABN No: 54-234-099-517
Tel / Fax. (03) 9789 1919
42 Partridge Crescent Frankston 3199

TO

NEPEAN BUILDING PERMITS & CONSULTANTS

P O Box 2234, ROSEBUD 3939
Phone - (03) 5986 2466 Fax - (03) 5986 2045

Form 14
Building Act 1993
BUILDING REGULATIONS 1994
Regulation 15.7(2)(b)
APPROVED BUILDING INSPECTION REPORT

PROJECT ADDRESS: 4 View Point Rd, McCrae.

PERMIT NO: 1061/20011325/0

DATE: 5/3/03

INSPECTION TYPE:

☐ FOUNDATION ☐ STUMP HOLES ☐ PRE SLAB ☐ STEEL

☐ SUB FLOOR ☐ FRAME ☑ **FINAL**

DESCRIPTION OF BUILDING WORKS INSPECTED √ Satisfactory x Refer notes

	Layout		Bracing roof and walls		Wall and roof cladding		Other matters
	Foundation		Roof frame		Stormwater and site drainage		
	Size/depth		Roof tie down		Fire safety		Permit conditions
	Preparation		Frame construction/fixings		Safe movement and access		Siting
	Reinforcement		Sub floor construction		Health and amenity		Protection works
	Service pipes		Load points		Services		Certificates
	Site excavations				Glazing		

INSPECTION RESULT

☑ **Approved**

Conditions:

1. 5
2. .....

Compliance
I certify that the part of the building work described as: Final, have been inspected by me and complies with the approved documents and plans provided by the relevant building surveyor and the building permit provisions of the Act or Regulations*

Plans provided by **RBS Ref: 1061/**20011325/0 **Dated:** 16/8/200\

No termite treatment certificates were sighted or collected as part of this inspection and do not form part of the approval given.

Inspection Date: 28/2/2003 **Signed Building Practitione** Irrelevant & Sensitive . Registration No: BS 1263
WAYNE T. HARRIS

Notified: ☐ Owner ☐ Builder ☐ Contractor ☐ Report left on site

Wth/lakewood/Standardletters//form14 (20//052002).

FORM 14

BUILDING ACT 1993
BUILDING REGULATIONS 1994
Regulation 15.7(2)

CERTIFICATE OF COMPLIANCE - INSPECTION

To:
RELEVANT BUILDING SURVEYOR — **James Sheedy, BS 1061**
PO Box 2234, Rosebud 3939
Fax: (03) 5986.2045

From:
BUILDING PRACTITIONER

Robert Holmes,	Gregory Alexander	Danny Rea	Peter Fahl
P O Box 2234,	P.O. Box 2234,	PO Box 2234	PO Box 2234
Rosebud 3939	Rosebud 3939	Rosebud 3939	Rosebud 3939
IN-U1157	IN-U1205	IN-U15110	IN-U1291

Property Details:

NO. 4 **LOT NO.**..... **STREET.** View Point Rd

SUBURB. McCrae **MUNICIPAL DISTRICT.** M.P.S.C.

BUILDING DESCRIPTION. DWG GAR

Compliance:
I CERTIFY THAT THE PART OF THE BUILDING WORK DESCRIBED AS (noted below) has been inspected by me and complies with the approved plans, the Building Code of Australia and the Building Regulations 1994.

	Approved Inspection Date	Signed
BLINDING CONCRETE:		
PRE-POLYTHENE SLAB:	17/9/01	PGF
PRE-POUR SLAB:	18/9/01	PGF
FOOTING/TRENCH/PRE-POUR:		
RETAINING WALL REIN:		
STUMP HOLE/PADS:	15/10/01	GA
FRAME:	18/10/02	GA
UPPER FLOOR JOISTS:		
OCCUPANCY/FINAL:		
OTHER:		

Irrelevant & Sensitive

Signed:
Registered Practitioner: Robert Holmes Gregory Alexander Danny Rea Peter Fahl

Inspection Reports/Comments are contained on the inspection cards.

11325

PLUMBING INDUSTRY COMMISSION
Compliance Certificate

221ZH BUILDING ACT 1993

Certifier's Name: BRENDAN HARRIS **Licence N°** 27313 **Certificate N°** **2781884**

INSTALLATION ADDRESS:

Number / Lot / Street: 4 VIEW POINT RD **Address Code:**

Town / Suburb: McCRAE **Post Code:** 3938

Consumer's Name: DICK MOUNTAIN

DATE OF COMPLETION OF PLUMBING WORK:

27-2-03

BELOW GROUND SANITARY DRAINS ☑

Please place a ✓ in this box to confirm that you have lodged an "as-laid" property drainage plan with the relevant Water Agency (where a drainage plan is required by that Agency). 221ZO Building Act 1993.

Where a consent to connect/alter underground sanitary drainage is required to be sought from a Water Agency please enter the Consent N° below.

WATER AGENCY 'CONSENT TO CONNECT' NUMBER:

779658

INSTALLATION DATA

(Circle appropriate number/s and insert any appliance/fixture details below. Rule a line through each work category/number which does not apply to this compliance certificate.)

ROOF PLUMBING (including above ground Stormwater Drainage)	(0)
SANITARY PLUMBING	(1)
SEPTIC TANK INSTALLATION	2
DRAINAGE (Below Ground Sewer)	(3)
DRAINAGE (Below Ground Stormwater)	(4)
COLD WATER PLUMBING	(5)
HOT WATER PLUMBING	(6)
MECHANICAL SERVICES (Includes Duct Fixing & Refrigeration)	7
BACKFLOW PREVENTION (Medium & High Risk Only)	8
RESIDENTIAL & DOMESTIC FIRE SPRINKLER SYSTEMS	90
GREY OR RECLAIMED WATER	91
GASFITTING (Natural Gas Type A installation)	(92)
GASFITTING (LPG Type A Installation)	93
GASFITTING (Other types of Gases)	94

INSTALLATION DETAILS (including Scope of Work)

NEW DWELLING

(NO HEATING)

I certify that the above plumbing work complies in all respects with the plumbing laws (inc. passed all required tests) as defined in Part 12A of the Building Act 1993.
Delete either a) or b) as appropriate:

a) The plumbing work was carried out by me or under my supervision.

b) I have inspected and tested the work started by another licensed plumber. Any necessary completion work was carried out by me or under my supervision.

Irrelevant & Sensitive

Date: 27-2-03

IMPORTANT NOTICE TO CONSUMERS:

All work subject to a Compliance Certificate carries insurance to protect the consumer against defective work of the plumber. You should retain your Certificate for six years as evidence of your cover. For further reference the attached sticker should be fixed to the inside of the property electrical meter box.

THIS COPY MUST BE GIVEN TO THE CONSUMER

PH: 1800 015 129

PLUMBING INDUSTRY COMMISSION COMPLIANCE CERT. N°

2781884

Great Stuff!

INSULFLUF

Conserving Australia's Energy

Guarantee

INSULFLUF AUSTRALIA PTY LTD

Guarantee that the INSULFLUF INSULATION

INSTALLED TO R 2.5 AT # 4 VIEWPOINT ROAD, McCRAE

ON THE MONDAY, 10TH FEBRUARY 2003.
IS MANUFACTURED TO COMPLY WITH THE SPECIFICATIONS OF AS.2462 - 1981.

THE MATERIALS AND WORKMANSHIP OF THE PRODUCT ARE FULLY GUARANTEED FOR THE LIFE OF THE BUILDING IN WHICH THEY ARE INSTALLED.

THE MATERIAL IS GUARANTEED:

- TO CONTAIN NO MINERAL FIBRES (GLASS, ASBESTOS OR ROCK) AND TO BE NON-IRRITANT.
- TO EMIT NO DANGEROUS FUMES.
- TO CAUSE NO STRAIN ON THE CEILING.
- TO PRODUCE NO STAINING ON CEILING BOARDS.
- TO CAUSE NO T.V. INTERFERENCE BY DISTORTION.
- TO BE PRODUCED FROM CELLULOSE FIBRE HAVING THE HIGHEST THERMAL RESISTANCE PER UNIT AREA BY INDEPENDENT TEST.

AND IS FURTHER GUARANTEED THAT UNDER STANDARD CONDITIONS THE MATERIAL:

- ~~IS FIRE RESISTANT.~~
- IS RESISTANT TO VERMIN.
- WILL NOT SETTLE OR BLOW AROUND.
- WILL BE ROT PROOF AND PERMANENT.
- WILL NOT ABSORB MOISTURE OR CAUSE CORROSION TO ADJACENT METAL FITTINGS.
- THERMAL CONDUCTIVITY HAS BEEN TESTED BY THE C.S.I.R.O.

THE ABOVE GUARANTEES ARE FOR NORMAL CONDITIONS BUT ARE EXCLUDED BY ACTS OF GOD OR WAR, FLOOD, FIRE, STORM, RIOTS, CIVIL DESTRUCTION ETC...

For and on behalf of INSULFLUF AUSTRALIA PTY. LTD.

Irrelevant & Sensitive

H.I.A. MEMBER

Certified Product
Australian Standard AS 2462 Lic. 817

STANDARDS AUSTRALIA

No. Mount

PROTECTION OF BUILDINGS FROM SUBTERRANEAN TERMITES—PREVENTION, DETECTION AND TREATMENT OF INFESTATION—

CERTIFICATE OF TERMITICIDE APPLICATION

AUSTRALIAN STANDARD AS 3660—1993

This certificate refers to Clauses 3.7 and 5.5 of AS 3660 and that Standard should be read in conjunction with this certificate.

NAME OF OWNER: Mountian Homes

SITE ADDRESS: 4 Vejw Point Rd. Macrae POSTCODE

TYPE OF TREATMENT PRECONSTRUCTION ☑ EXISTING BUILDING ☐

TERMITICIDE USED Chlorpyrifos	DEVIATION(S) FROM STANDARD APPLICATION 3660:1
CONCENTRATION OF EMULSION 360 g/L	GIVE REASONS
VOLUME OF EMULSION USED 5 L	
AREA PROTECTED 5/Floor&Ext m²	PRICE OF APPLICATION (PEST CONTROL FIRM) $
TOTAL GROUND AREA OF BUILDING m²	

PLAN OF BUILDING SITE SHOWING TREATED AREAS

(Use of Legend codes to indicate plumbing, piers, steps, treated areas)

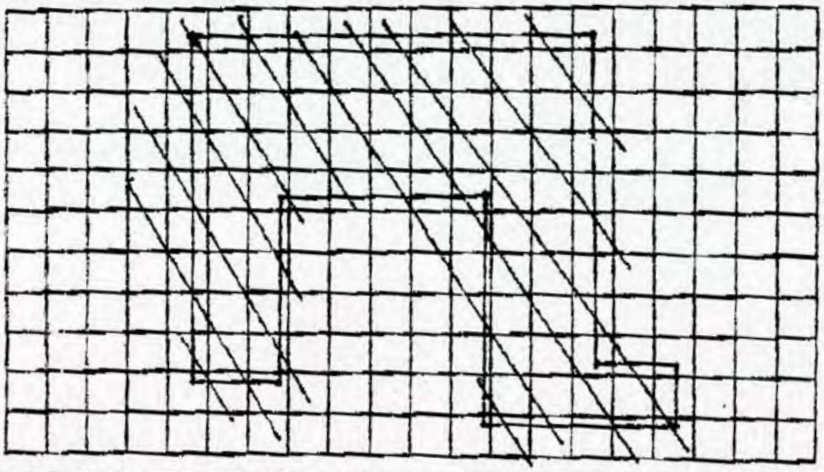
LEGEND:

Plumbing line

Pier

Steps

Treated areas \\\



SITE PREPARATIONS—CERTIFICATION BY BUILDER

I certify that site preparations have been carried out in accordance with the requirements of AS 3660 (see overleaf).

Limitations (please specify)

The builder warrants to provide this certificate to the purchaser as part of the contract of sale.

Builder's name Authorized signatory

TERMITICIDE APPLICATION CERTIFICATION BY PEST CONTROL FIRM

I certify that termiticide application has been carried out in accordance with the requirements of AS 3660.

Limitations (please specify)

PEST CONTROL FIRM—NAME Eagle Pest Control NAME OF APPLICATOR Shane

Address 10 Lehmann Cres Licence No. L001580

Frankston Vic Authorized signatory Irrelevant & Sensitive

Phone No Irrelevant & Sensitive Date 27/1/03.

A certificate of completion referring to this termiticide application is required to confirm that the treatment for prevention of infestation by chemical methods has been completed.

B E N D I G O T R U S S P L A N T
617-623 MIDLAND HIGHWAY, P. O. BOX 56,
EPSOM VIC 3551
PHONE: (054) 48-4300

JOB NO.: 2370R ****** COUNCIL DETAILS ****** **PAGE** 1

DATE : 02SEP02

CLIENT : MOUNTAIN HOMES

ESTIMATOR : ROBYN
Melway :

SITE ADDRESS :
4 VIEW POINT ROAD,
McCRAE

JOB DETAILS - LIMIT STATE DESIGN

Ultimate Wind Speed = 41.0m/s Wind Class.= N2

Group Number	1	2
Roof Material.	Terracotta tile	Terracotta tile
Top Chord Restraint (mm)	350	350
Ceiling Material	10mm Plaster,battened	10mm Plaster,battened
Bottom Chord Restr. (mm)	450	450
Truss Centres (mm) . . .	600	600
Pitch 1 (degrees). . . .	12.00	12.00
Pitch 2 (degrees). . . .	20.00	12.00
Overhang (mm).	450	0
External Pressure Coeff.	-0.90	-0.90
Internal Pressure Coeff.	0.20	0.20
Application (Cap.Factor)	Hous	Hous

TIMBER	Description	Str.Grp.	Jnt.Grp.	Group
DHW3	Dry Hardwood	SD3	JD3	1,2
DMP4	MGP Pine	SD6	JD4	1,2

The trusses for this project have been designed using the DataTRUSS computer system written by MiTek Australia Ltd. The design procedure is in accordance with Australian Standards AS1170.1 & 2, AS1720.1-1997 & AS1649.

These trusses should be erected, fixed and braced in accordance with specifications published by MiTek Australia Ltd.

BENDIGO TRUSS PLANT

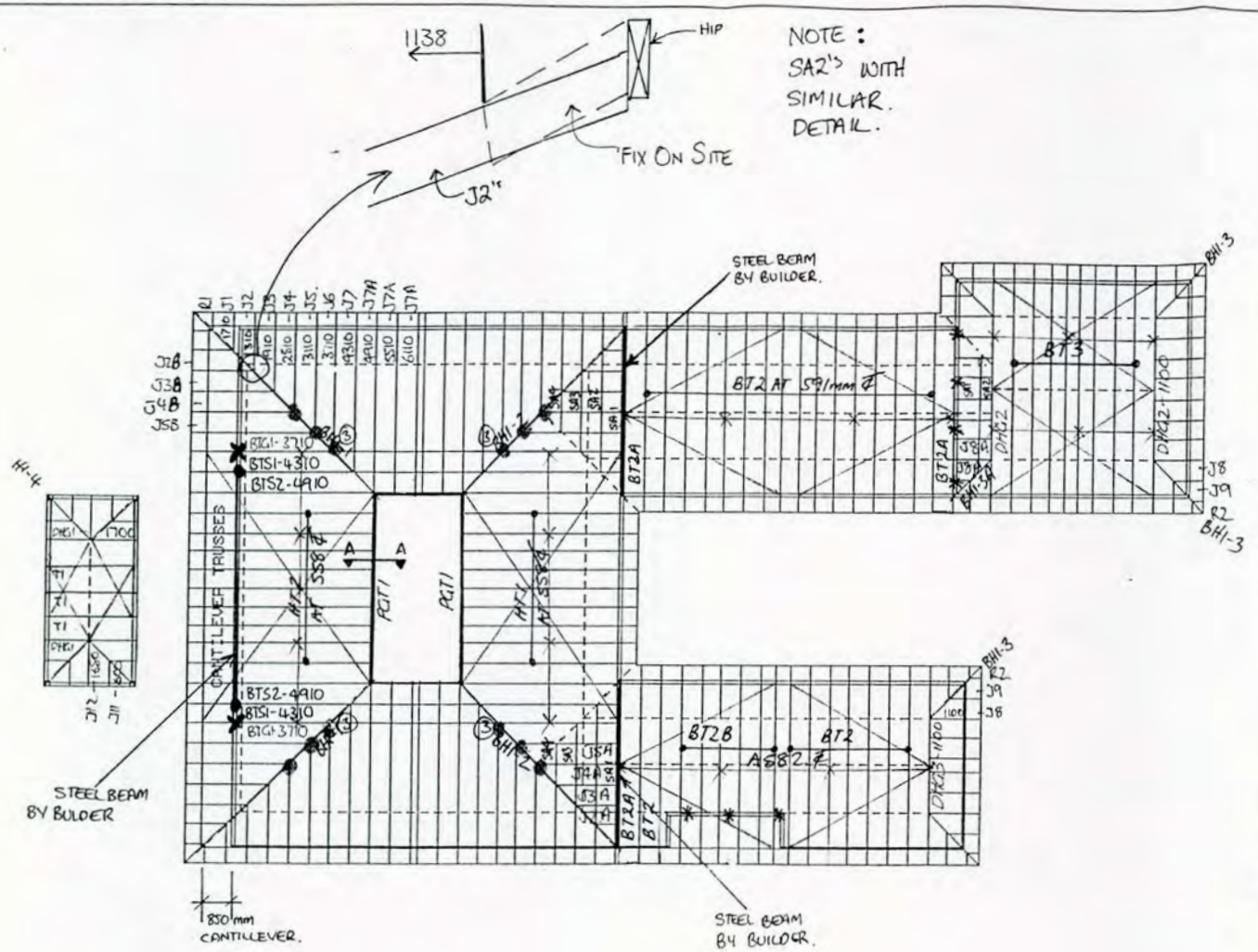
certify that these trusses are manufactured under licence to and in accordance with specifications published by MiTek Australia Ltd.

Signed : _____

Name : GEOFF HOLLAND
Position : BE (CIVIL) RBP EC1268

CLIENT - MOUNTAIN HOMES
ADDRESS - ,
SITE - 4 VIEW POINT ROAD,, McCRAE

BENDIGO TRUSS PLANT, MIDLAND HWY, EPSOM, VIC 3551 PH: (03) 5448 4300
JOB REFERENCE - 2370
DATE - 28AUG



THIS ROOF HAS BEEN DESIGNED AND DETAILED
BY ROBYN

IF YOU HAVE *ANY QUERIES*
PLEASE CALL 5448 4300

NOTES

ALL TRUSSES TO BE ERECTED, FIXED AND BRACED AS PER AS4440.

DIMENSIONS ARE FROM OUTSIDE OF WALL PLATE (PITCHING LINE) TO FACE OF EACH TRUSS.

SEE ENCLOSED SHEET FOR CIRCLED NUMBERS ON LAYOUT.

FIX ALL TRUSSES WITH TRUSSGRIP, UNLESS OTHERWISE NOTED.

● TRIP-L-GRIPS.
X CYCLONE TIE.

____ ARE AT ____mm CENTRES.
____ ARE AT ____mm CENTRES.
____ ARE AT ____mm CENTRES.
____ ARE AT ____mm CENTRES.

—X—X— BOTTOM CHORD TIES.
——— SPEEDBRACE.
* * * LOAD BEARING WALL.
CREEPER CONNECTOR FROM TOP OF JACK TO TOP OF HIP.

ALSO SUPPLIED;
75X25 OBHW VALLEY BOARDS.
75X25 RS PINE SADDLE LEDGERS.
100 OFF 565 mm CEILING TRIMMERS.

ROOFING - Terracotta tile, rstr. at 350
CEILING - 10mm Plaster, battened, rstr. at 450

Max. Spcg. 541 - 600
Standard Overhang 450

MiTek Australia Ltd.

MSC.5002.0001.4352

50 7333

* Amended Building Permit showing Registered Builder change.

8182800

With Compliments

C 7476/2001

Nepean Building Permits & Consultants

3/1283 Point Nepean Road (P.O. Box 2234) Rosebud, Victoria, 3939

Telephone: (03) 5986-2466 Facsimile: 5986-2045

Ausdoc: DX 30051 Rosebud

Email: nbp@elite.net.au

NEPEAN BUILDING PERMITS

Shop 3 /1283 Pt.Nepean Rd. Rosebud P.O.Box 2234 Rosebud 3939
Office phone (03) 5986 2466 Office fax (03) 5986 2045
Mobile:- Jim 0418 592 125 Mobile:- Rob 0419 885 035

BUILDING PERMIT

Building Act 1993 Building Regulations 1994 :- Reg 2.6 **PERMIT NO.**
-1061/ **200011325/0**

TO:		address	town	postcode
Owner	Irrelevant & Sensitive	Irrelevant & Sensitive		
Agent		PO BOX 2114	Rosebud	3939
Builder	D MOUNTAIN	PO BOX 2114	Rosebud	3939

ADDRESS FOR SERVING OR GIVING OF DOCUMENTS:
Address PO BOX 2114Rosebud 3939
Name DJ & KJ MOUNTAIN Ph

PROJECT ADDRESS :
No. 4 Lot 50 VIEW POINT ROAD McCrae 3938
Mornington Shire Council The issuer or provider of the required insurance policy is: HOW
title details PC353964 PlanningPermitNo: P002457 PlanningPermitDate: 10/05/2001

PROJECT DESCRIPTION: Construction of detached dwelling All parts

Total new floor area m2:
Project classification: 1A
No of project works: 1
No of storeys: 2
Project Estimated Value:
BuildingCommissionlevy:
Irrelevant & Sensitive

DWELLING DETAILS:
Existing dwellings: 0
To be constructed: 1
To be demolished: 0
New floor area,m2: 0

IMPORTANT PERMIT DETAILS
An Occupancy Permit is required prior to Occupation
Building work is to commence by: 16-Aug-02 and is to be completed by: 16-Aug-03
Stages of work permitted: As shown on approved plans

MANDATORY INSPECTIONS
PRE-POLYTHENE SLAB
PRE-POUR SLAB
STUMP HOLES
FRAMEWORK PRIOR TO COVERING
UPPER FLOOR JOISTS
OCCUPANCY PERMIT

PRACTITIONERS:
Cain Jeffrey; DB-U 10173
Dawson Wayne; DP-AD 1282
Holmes Peter; EC 1647

FUNCTION AND ENGAGEMENT:
Engaged in various parts of the building works
Prepared documents only
Prepared documents only

MORNINGTON PENINSULA Shire Council
RECEIVED 23 AUG 2002
MAIN FILE 49217
XREF
139
ENTERED
FYI

RELEVANT BUILDING SURVEYOR **JAMES SHEEDY** Registration no BS-1061

SIGNATURE Irrelevant & Sensitive

ISSUED DATE **Thursday, 16 August 2001**
AMENDED: Wednesday, 21 August 2002

Home Owners Warranty

certificate

of Insurance

HIA INSURANCE SERVICES P/L
ABN 84 078 480 967
An associated company of
Aon Risk Services Australia Ltd
GPO BOX 4897 V V
Melbourne VIC 3001
Telephone (03) 9668 0222
Facsimile (03) 9654 3277
CLAIMS ENQUIRY LINE
1800 554 255

D J & K J Mountain Pty Ltd
P O Box 2114
ROSEBUD VIC 3939

RECEIVED
20 AUG 2002
BY: 11325

Certificate No: 202318
Local Authority Copy
Issue Date 20/08/2002

SCHEDULE 2
BUILDING ACT 1993
Section 135
and
Ministerial Order Domestic Building Insurance
Certificate in respect of Insurance
MAJOR DOMESTIC BUILDING WORK

Please note that Aon Risk Services Australia Ltd ABN 17 000 434 720 is arranging the insurance policy as agent of the insurer below.

They also act as agent of the insurer below and not as agent of the insured in dealing with or settling any claim.

A contract of insurance complying with the Ministerial Order for Domestic Building Insurance issued under section 135 of the Building Act 1993, namely:
Type of Insurance
Insurance issued in the name of the building owner as insured
has been issued by: Royal & Sun Alliance Insurance Australia ACN 005 297 807
ABN 48 005 297 807

In Respect Of: Single Dwelling

At: Lot No: 50 Unit No: House No: 4

View Point Road
MCCRAE VIC 3938

Carried Out By: D J & K J Mountain Pty Ltd
ABN:
Practitioner No: DB-U1045
For: Irrelevant & Sensitive

Subject to the Act, the Ministerial Order and the conditions of the insurance contract cover will be provided to the building owner named in the major domestic building contract and to the successors in the title to such building owner.

Building Contract Details

Fixed Price Contract Dated: 06/07/2002

Declared Building Contract Value: $341,700.00
(refer policy for indemnity limit)

Total includes Policy Fees, Stamp Duty and GST.

Engineer Designed Footings:

Municipality: Mornington Peninsula

Special Conditions:

Insurer:

- Royal & Sun Alliance Insurance Australia Ltd

Signed for and on behalf of the Insurer:

Irrelevant & Sensitive

NEPEAN BUILDING PERMITS & CONSULTANTS

MS.5002.0001.4355

Form 1

Building Act 1993

BUILDING REGULATIONS 1994

Regulation 2.1(1)(a)

RECEIVED 25 JUL 2002

APPLICATION FOR A BUILDING PERMIT BY:.....

To the Relevant Building Surveyor; - Nepean Building Permits

- P O Box 2234, ROSEBUD 3939

- Phone - (03) 5986 2466 Fax - (03) 5986 2045

From

Owner/Agent of Owner* O J & K J MOUNTAIN PTY LTD

Postal Address P O BOX 2114 ROSEBUD Postcode 3939

Address for serving or giving of documents

Irrelevant & Sensitive Postcode Irrelevant & Sensitive

Contact Perso Irrelevant & Sensitive Phone 59863965 Fax 59863905

Indicate if the applicant is a lessee or licensee of Crown Land to which this application applies (+tick if applicable) [ ]+

Ownership Details (only if agent of owner listed above)

Owner Irrelevant & Sensitive

Postal Address Irrelevant & Sensitive Postcode Irrelevant & Sensitive

Contact Person Phone Fax

Property Details

Number 4 ~~Street~~/Road VIEW POINT City/Suburb/Town McCRAE Postcode 3938

Lot/s 50 LP/PS Volume Folio

Crown Allotment Section Parish County

Municipal District MORNINGTON Allotment Area (for new dwellings only) m²

Floor Area of New Works m² 253.999

Land owned by the Crown or a public authority (+ tick if applicable) [ ]+

Builder (if known) D MOUNTAIN

Postal Address P O Box 2114 ROSEBUD Postcode 3939

Contact Person H COOK Phone 59863965 Fax 59863905

Please Turn Over →

Building Practitioners and/or Architects

(a) to be engaged in the building work[2]

Name D. MOUNTAIN Category/Class ..... Registration No DB U1045

Name ..... Category/Class ..... Registration No .....

(If a registered domestic builder carrying out domestic building work attach details of the required insurance)

(b) who were engaged to prepare documents submitted with this application[3]

Name URBAN SOLUTIONS Category/Class ..... Registration No DP-AD282

Name ..... Category/Class ..... Registration No .....

Nature of Building Work*

Construction of a new building	( )	Extension to an existing building	( )
Alterations to an existing building	( )	Change of use of an existing building	( )
Demolition of a building	( )	Removal of a building	( )
Re-erection of a building	( )	Other	( )

Tick if applicable or give other description

Proposed use of building[4] RESIDENTIAL

Owner Builder (if applicable)

I intend to carry out the work as an owner builder [~~Yes~~ / No]

Value of building work

Is there a contract for the building work? [Yes / ~~No~~]

If yes, state the contract price

If no, state the estimated cost of building work *(including the cost of labour and materials) and attach details of the method of estimation*

Irrelevant & Sensitive

Stage of building work

If application is to permit a stage of the building work

Extent of stage .....

Value of building work for this stage $.....

Signature

I, the undersigned, have carefully read and fully understand the 'terms of engagement' specified on the following pages numbered 3 and 4 and accept responsibility for the payment of all fees incurred in the processing of the Building Application

Signature of owner or agent ..... Date 18/07/02

Name of Signatory .....

Please Turn Over →

499911

MSC.5002.0001.4357

C 7476 P001

COUNCIL

MORNINGTON PENINSULA Shire Council

RECEIVED 2002

MAIN FILE

OTHER/S

With Compliments

49217

XREF

FYI

9/9

ENTERED

PLEASE FIND ATTACHED AMENDED PLANS FOR NO 4 VIEWPOINT ROAD MC CRAE. COULD YOU PLEASE FILE THESE WITH THE OTHER PARTS OF THE APPROVAL.

REGARDS

ROB HOLMES

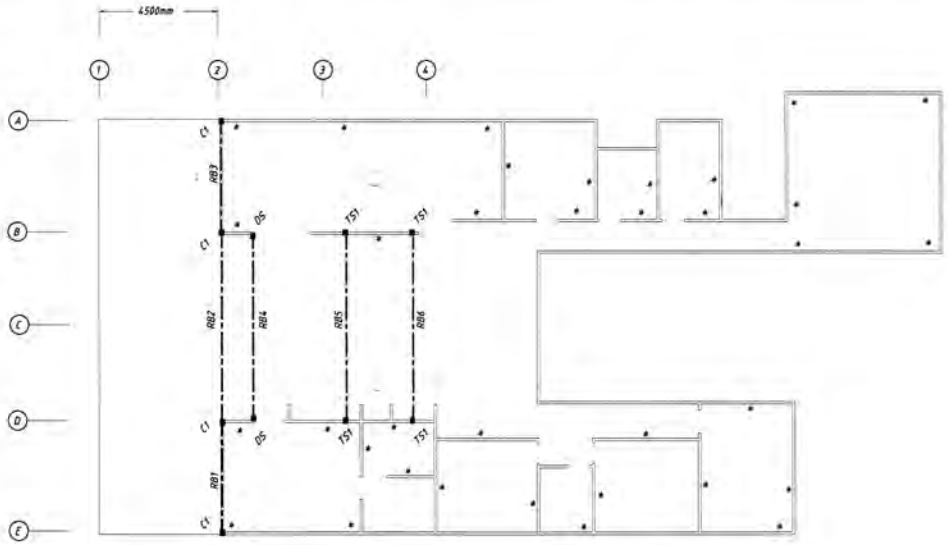
Nepean Building Permits & Consultants

3/1283 Point Nepean Road (P.O. Box 2234) Rosebud, Victoria, 3939

Telephone: (03) 5986-2466 Facsimile: 5986-2045

Ausdoc: DX 30051 Rosebud

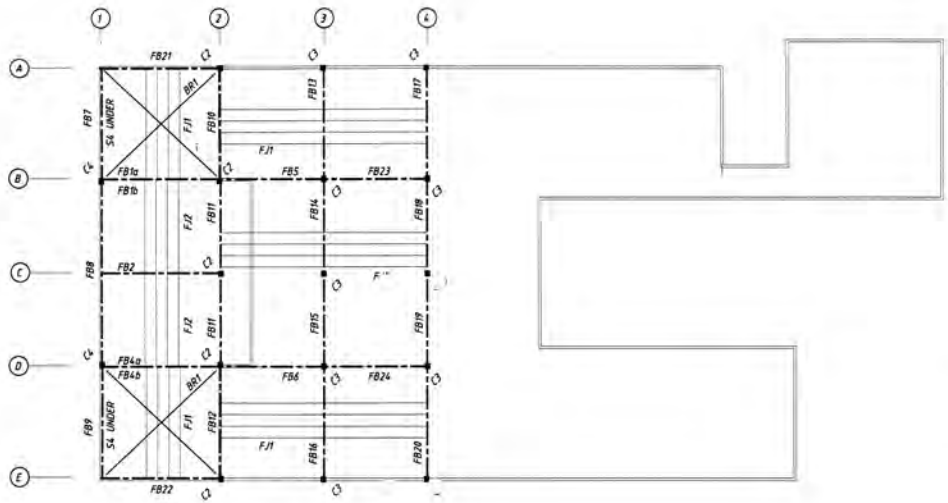
Email: nbp@elite.net.au



ROOF PLAN 1:100

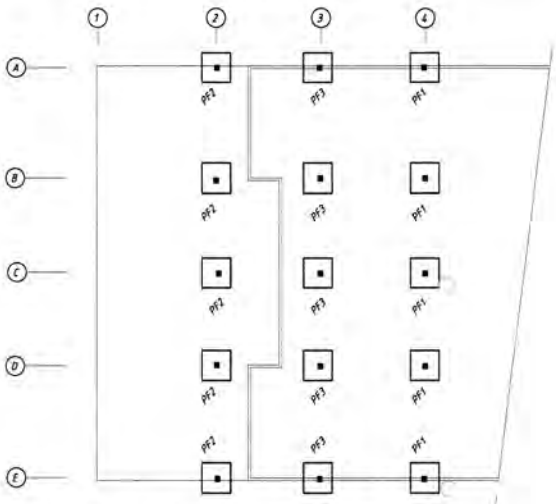
SCHEDULE OF MEMBERS	
MARK No	DESCRIPTION
RB1 - RB3	250PFC - WEB VERTICAL
RB4	200PFC - WEB VERTICAL - TO SUPPORT FOLDING DOOR ONLY
RB5 - RB6	250PFC - WEB VERTICAL
FLOOR JOISTS FJ1	C15019 PURLINS @ 450 CRS THROUGHOUT - BLOCKING @ MAX 1500 CRS
FLOOR JOISTS FJ2	C15019 PURLINS @ 450 CRS (CONTINUOUS OVER THREE (3) SPANS) - BLOCKING @ MAX 1500 CRS
FB1 & FB4	200PFC - WEB VERTICAL
FB1a & FB4a	200PFC - WEB VERTICAL
FB2	200UB25
FB3	NOT USED
FB5 & FB6	200UB25
FB7 & FB9	200PFC - WEB VERTICAL
FB8	250PFC - WEB VERTICAL
FB10 - FB12	200PFC - WEB VERTICAL
FB13 - FB20	200UB25
FB21 - FB22	200PFC - WEB VERTICAL
FB23 - FB24	200UB25
C1	180PFC
C2	150UC37
C3	100 x 6.0 SHS
C4 (STUB)	100 x 6.0 SHS
DS	2No 90 x 45 F5 PINUS STUDS NAILED TOGETHER
TS1	3No 90 x 45 F17 KDHW STUDS NAILED TOGETHER
S1	150 x 6.0 SHS
S2 - S4	100 x 6.0 SHS
BR1 - BR2	20mm Ø TENSIONED ROD BRACING
PF1	900 x 900 x 500 PAD FOOTING - 2No LAYERS F82 FABRIC BOTTOM
PF2	1200 x 1200 x 500 PAD FOOTING - 2No LAYERS F82 FABRIC BOTTOM
PF3	1400 x 1400 x 1000 PAD FOOTING - 2No LAYERS F82 FABRIC BOTTOM
*	TYPE 'B' PANEL BRACE IN ACCORDANCE WITH AS 1684 - 1999

NB. ALL EXPSOED STEEL TO BE HOT DIPPED GALVANISED.



FLOOR PLAN 1:100

NB. REFER SECTIONS ON SHEET 3 OF 3 FOR LOCATION OF STRUTS S1 - S4



FOOTING PLAN 1:100

NOTES: 1. CONCRETE STRENGTH f'c = 20 Mpa @ 28 DAYS
2. PAD FOOTINGS TO BE FOUNDED 100mm INTO NATURAL MOTTLED YELLOW / BROWN SILTY CLAY WITH AN ALLOWABLE BEARING 160kPa.

GENERAL NOTES:

01. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTURAL AND OTHER CONSULTANTS DRAWINGS AND SPECIFICATIONS AND ANY OTHER WRITTEN INSTRUCTIONS ISSUED DURING THE COURSE OF THE CONTRACT.

02. ALL DIMENSIONS MUST BE VERIFIED ON SITE. ANY DISCREPANCY SHALL BE REFERRED IN WRITING TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK. ENGINEERING DRAWINGS MUST NOT BE SCALED.

03. MATERIALS AND WORKMANSHIP ARE TO BE IN ACCORDANCE WITH THE RELEVANT S.A.A. CODES AND THE VICTORIAN BUILDING REGULATIONS.

04. SUBSTITUTION SHALL NOT BE PERMITTED WITHOUT THE PRIOR APPROVAL OF NILSSON NOEL & HOLMES (ENGINEERS) PTY LTD.

FOUNDATIONS:

F1. ALL FOOTINGS SHALL BE BASED ON SOLID NATURAL GROUND WITH A SAFE ALLOWABLE BEARING CAPACITY OF 160 kPa.

REPORT BY: CIVILTEST P/L
REPORT REFERENCE: RM6197-01
REPORT DATED: 16th FEBRUARY 2001

F2. ALL FOUNDATIONS / SLABS MUST BE INSPECTED AND APPROVED BY THE APPOINTED BUILDING SURVEYOR (OR HIS REPRESENTATIVE) PRIOR TO POURING CONCRETE.

CONCRETE:

C1. THE CONCRETE COMPRESSION STRENGTH f'c IS TO AS SPECIFIED BELOW (AT 28 DAYS), OR AS NOTED ON THE DRAWINGS:

f'c = 25 Mpa FOR SLAB-ON-GROUND
f'c = 32 Mpa FOR SUSPENDED SLAB
f'c = 40 Mpa FOR PANEL CONSTRUCTION
f'c = 20 Mpa FOR FOUNDATIONS

TESTING AS REQUIRED BY THE SPECIFICATION FOR THE PROJECT CONTROL. MAXIMUM SLUMP 75mm AND NOMINAL AGGREGATE SIZE 20mm.

C2. CLEAR COVER TO THE REINFORCEMENT TO BE AS STATED BELOW OR AS OTHERWISE NOTED:

	CAST AGAINST FORMWORK AND EXPOSED TO GROUND / WATER	CAST AGAINST FORMWORK AND SHELTERED LOCATION	CAST AGAINST GROUND
PAD FOOTINGS	65		75
PILE CAPS	65		75
STRIP FOOTINGS	50		65
BEAMS	40	25	65
SLABS & WALLS	30	20	65
COLUMNS	50	40	75

FORMWORK MUST CONFORM WITH AS 1580. CONDUITS, PIPES ETC. ARE NOT TO BE PLACED IN CONCRETE COVER.

C3. REINFORCEMENT MUST BE SECURELY FIXED IN POSITION TO PREVENT DISPLACEMENT ON BAR CHAIRS SPACED AT MAXIMUM 1500 mm CENTRES.

C4. CONCRETE: "SEE" SHOWN DO NOT ALLOW FOR FINISHES AND MUST BE REDUCED OR HOLED WITHOUT THE PRIOR APPROVAL OF NILSSON NOEL & HOLMES (ENGINEERS) PTY LTD.

C5. CONCRETE MUST BE MOIST CURED ACCORDING TO SOUND ENGINEERING PRINCIPLES FOR A MINIMUM OF SEVEN (7) DAYS (MEDIATELY AFTER THE CONCRETE IS POURED. CURING COMPOUNDS MAY BE USED AS AN ALTERNATIVE ONLY WITH THE PRIOR APPROVAL OF NILSSON NOEL & HOLMES (ENGINEERS) PTY LTD.

C6. FABRIC IS TO LAPPED 1 SQUARE + 24 mm MINIMUM.

C7. FORMWORK SHALL BE LEFT IN PLACE FOR THE FOLLOWING TIMES UNLESS OTHERWISE NOTED.

(a) BEAM SIDES, VERTICAL WALLS & COLUMNS	4 DAYS
(b) SLABS UP TO 4.5M in SPAN (FORMWORK REMOVED AND SLAB REPROPPED	10 DAYS
(c) REMOVAL OF PROPS UNDER SLABS	21 DAYS
(d) BEAM SOFFITS UP TO 7.5M in SPAN PROPS LEFT UNDER	14 DAYS
(e) REMOVAL OF PROPS TO BEAMS	28 DAYS

C8. PANELS ARE TO BE ADEQUATELY BRACED UNTIL THE FULL ROOF SYSTEM (INCLUDING PURLINS AND BRACING) ARE IN PLACE.

STEELWORK:

S1. WELDS ARE TO BE 6mm CONTINUOUS FILLET LAID DOWN WITH APPROVED COVERED ELECTRODE UNLESS OTHERWISE NOTED. BUTT WELDS MUST DEVELOP THE FULL TENSILE STRENGTH OF THE MEMBER.

S2. BOLTS TO BE 8.8/S UNLESS OTHERWISE NOTED.

S3. GUSSET PLATES TO BE 10 mm THICK UNLESS OTHERWISE NOTED.

S4. ALL STEELWORK OTHER THAN THAT ENCASED BY CONCRETE SHALL BE GIVEN ONE COAT OF APPROVED STEEL PRIMING PAINT - COLOUR BLUE.

S5. THE CONTRACTOR IS TO GROUT UNDER ALL COLUMN / MULLION BASEPLATES USING MINIMUM 25 mm DRY PACK GROUT.

S6. 50 x 50 x 5 mm x CLEATS TO PURLINS TO BE USED WHERE HEIGHT EXCEEDS 300 mm.

BRICKWORK:

B1. ALL BRICKWORK IS TO HAVE THE FOLLOWING PROPERTIES:
(a) UNCONFINED COMPRESSIVE STRENGTH f'uc = 30 Mpa
(b) MORTAR TO BE 1:1:6 (C:L:S) UNLESS OTHERWISE NOTED
(c) MEDIUM DUTY GALVANISED WALL TIES TO BE USED AND MUST COMPLY WITH AS 2699. TIES TO BE PLACED AT MAXIMUM 600 mm SPACING IN EACH DIRECTION AND 300 mm SPACING (AVERAGE) ALONG LINE TO THE ADJACENT SUPPORTS.

B2. BRICKWORK IS TO BE TIED TO COLUMNS BY MASONRY TIES FIXED TO THE COLUMNS CONNECTING EACH LEAF AT MAXIMUM 600 mm SPACING UNLESS OTHERWISE NOTED.

FILLING UNDER SLAB (EARTHWORKS):

E1. THE AREA UNDER THE SLAB SHALL BE STRIPPED OF ALL TOPSOIL AND VEGETATION AND ROLLED (WITH A VIBRATING SHEEPSFOOT ROLLER) TO ACHIEVE A COMPACTED DENSITY OF NOT LESS THAN 95% OF THE STANDARD VALUE. APPROVAL TO THESE WORKS MUST BE SOUGHT FROM THE ENGINEER BEFORE ANY FILLING IS PLACED.

AMENDED APPROVED DOCUMENTS
27 AUG 2002
PHONE: (03) 9800 2400
FAX: (03) 9800 3045

AMENDED
23 AUG 2002
RECEIVED

REV.	DATE	REVISION	AUTH.
D	22/8/02	CHANGES TO PROVIDE FOR GIRDER TRUSS	
C	13/8/02	CHANGES TO REFLECT REVISED ARCHITECTURAL DRAWINGS	
B	1/11/01	CHANGES TO STRUT S1 @ BEAM FB22	
A	21/9/01	CHANGES TO SUPPORT OF BALCONY AT REQUEST OF CLIENT	

DESIGNED: Peter M Holmes
CHECKED: Peter M Holmes
AUTHORISED: Irrelevant & Sensitive

SCALE:	AS SHOWN
DATUM	NA
DATE:	27th APRIL 2001
MMH FILE No:	1020E
DISK No:	2258-6
MELWAY REF:	1159 A10

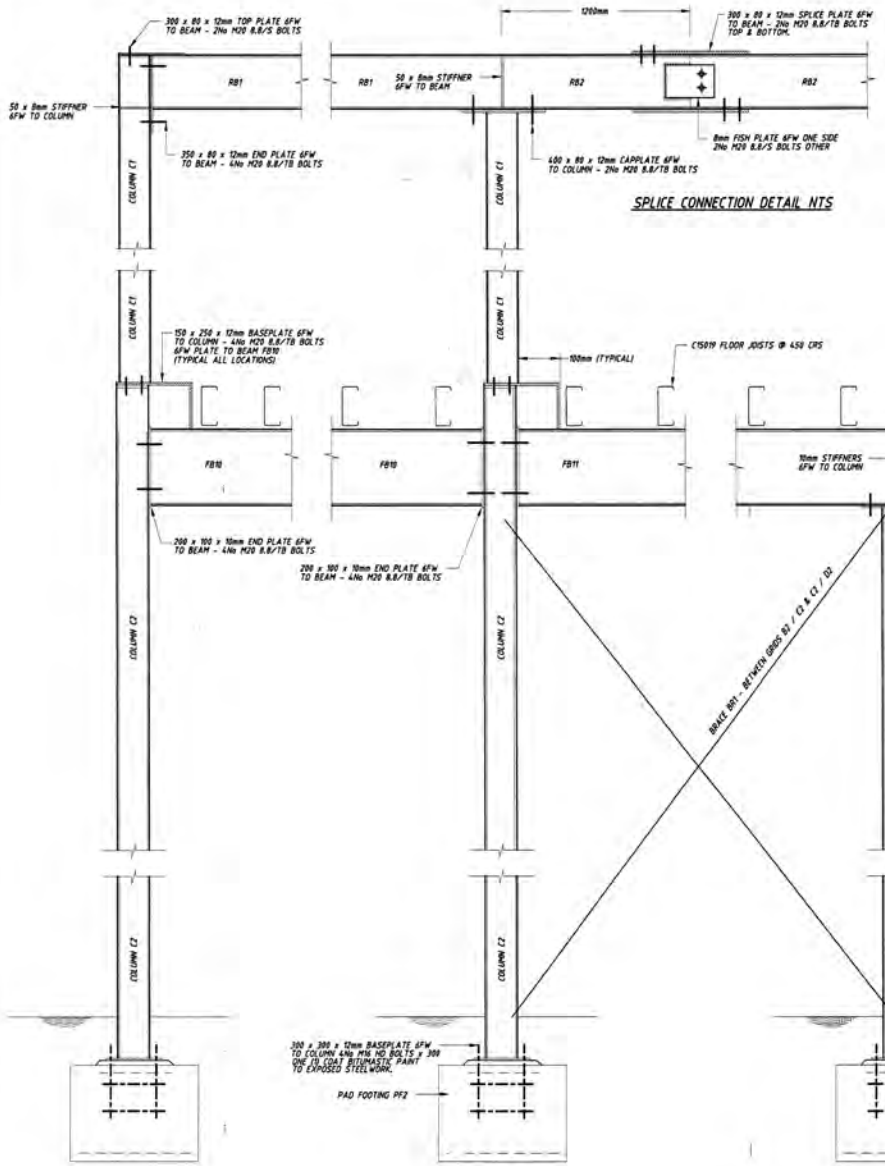
Nilsson, Noel & Holmes (Engineers) Pty. Ltd.
Engineers, Surveyors & Town Planners
6 Merrigal Court, Frankston 3199
(PO Box 595, Frankston 3199)
Telephone (03) 9775 2589
Facsimile (03) 9775 2978
ACN 005 850 135

R & J BENDELL

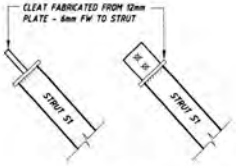
LOT 50 VIEW POINT ROAD, McCRAE

PLANS & STRUCTURAL DETAILS

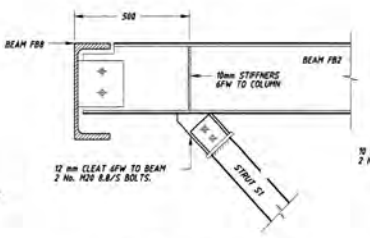
DRAWING No. 1020e001d
SHEET: 1 OF 3
REVISION 'D'



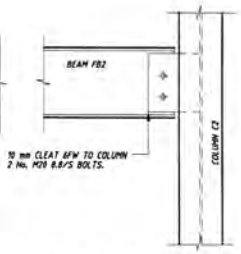
BRACING FRAME GRID '2' CONNECTION DETAILS NTS



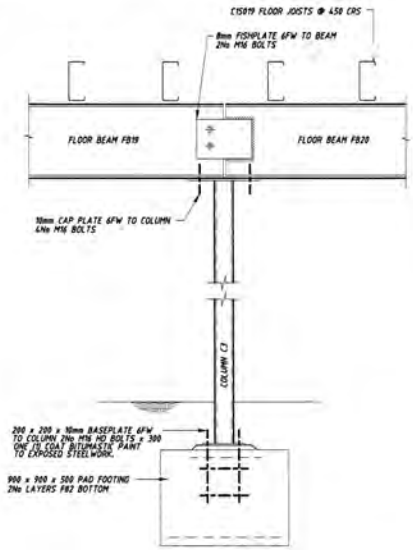
STRUT S1 END DETAILS NTS
(OTHER STRUT CONNECTIONS SIMILAR)



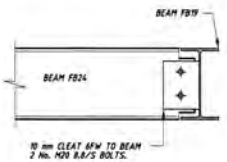
BEAM FB2 / STRUT S1 DETAIL NTS
(OTHER STRUT CONNECTIONS SIMILAR)



BEAM FB2 / COLUMN C2 DETAIL NTS
(OTHER DECK BEAM / COLUMN CONNECTIONS SIMILAR)



FLOOR BEAM / COLUMN C3 DETAIL NTS



BEAM FB24 / FB19 DETAIL NTS
(OTHER BEAM TO BEAM CONNECTIONS SIMILAR)

AMENDED APPROVED DOCUMENTS 27 AUG 2002

AMENDED 23 AUG 2002 RECEIVED

REV.	DATE	REVISION	AUTH.
D	22/8/02	CHANGES TO PROVIDE FOR GIRDER TRUSS	
C	13/8/02	CHANGES TO REFLECT REVISED ARCHITECTURAL DRAWINGS	
B	1/11/01	CHANGES TO STRUT S1 & BEAM FB22	
A	21/9/01	CHANGES TO SUPPORT OF BALCONY AT REQUEST OF CLIENT	

DESIGNED:	Peter M Holmes	SCALE:	AS SHOWN
		DATUM	NA
CHECKED:	Peter M Holmes	DATE:	27th APRIL 2001
		NNH FILE No.	1020E
AUTHORISED:	Irrelevant & Sensitive	DISK No:	Z258-6
		MELWAY REF:	115 A10

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Engineers, Surveyors & Town Planners
6 Herrigal Court, Frankston 3199
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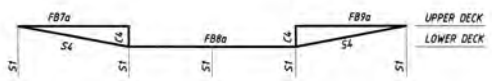
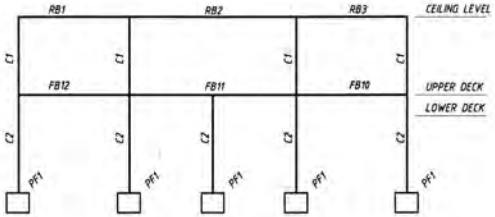
ACN 005 850 135

R & J BENDELL
LOT 50 VIEW POINT ROAD, McCRAE
STRUCTURAL DETAILS

DRAWING No. 1020e002d
SHEET: 2 OF 3
REVISION 'D'



BRACING FRAME 'GRID 1' NTS



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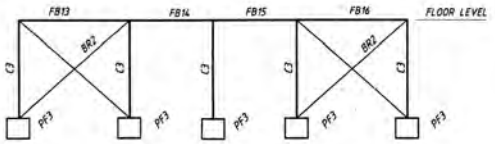

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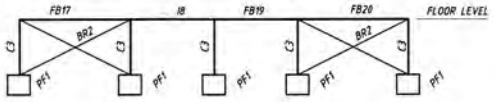
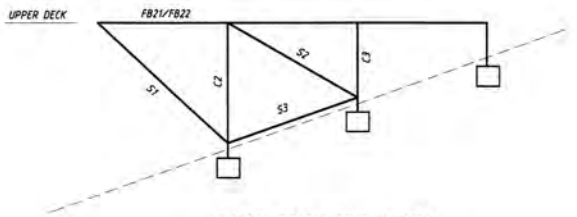
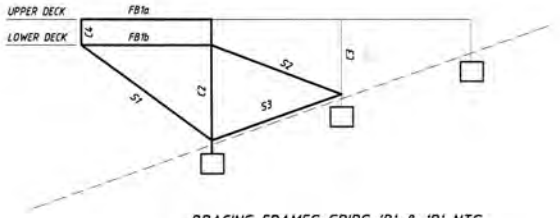


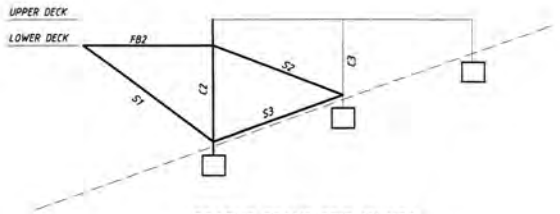
BRACING FRAME 'GRID 4' NTS



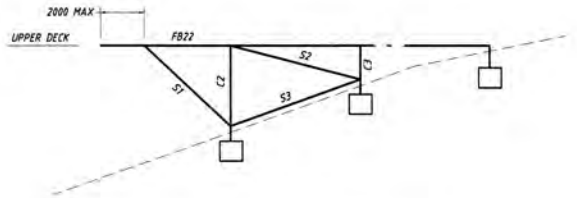
BRACING FRAME GRID 'A' NTS



BRACING FRAMES GRIDS 'B' & 'D' NTS



BRACING FRAME GRID 'C' NTS



BRACING FRAME GRID [illegible] NTS

REV.	DATE	REVISION	AUTH.
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C	13/8/02	CHANGES TO REFLECT REVISED ARCHITECTURAL DRAWINGS	
B	1/11/01	CHANGES TO STRUT S1 & BEAM FB22 (GRID 'E')	
A	21/9/01	CHANGES TO SUPPORT OF BALCONY AT REQUEST OF CLIENT	

DESIGNED: Peter M Holmes
CHECKED: Peter M Holmes
AUTHORISED: Irrelevant & Sensitive

SCALE: AS SHOWN
DATUM: NA
DATE: 27th APRIL 2001
NMH FILE No: 1020E
NSK No: 2258-A
RELWAY REF: MSR A19

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R & J BENDELL
LOT 50 VIEW POINT ROAD, McCRAE

STRUCTURAL DETAILS

DRAWING No. 1020e003d
SHEET: 3 OF 3
REVISION 'D'

(42) C7476/2001 $15

PROCESSED

NEPEAN BUILDING PERMITS

Shop 3 /1283 Pt.Nepean Rd. Rosebud P.O.Box 2234 Rosebud 3939
Office phone (03) 5986 2466 Office fax (03) 5986 2045
Mobile:- Jim 0418 592 125 Mobile:- Rob 0419 885 035

MORNINGTON PENINSULA Shire Council
RECEIVED 20 AUG 2001
MAIN FILE
OFFICER/S 1115

BUILDING PERMIT

Building Act 1993 Building Regulations 1994 :- Reg 2.6

PERMIT NO.
10611200011325/0

TO:		address	town	postcode
Owner	Irrelevant & Sensitive	Irrelevant & Sensitive	Dromana	3936
Agent	J M CAIN	P O BOX 299	Sorrento	3943
Builder	J M CAIN	P O BOX 299	Sorrento	3943

ENTERED 14/9

ADDRESS FOR SERVING OR GIVING OF DOCUMENTS

Address P O BOX 299Sorrento 3943
Name J M CAIN Ph 59858518

PROJECT ADDRESS :
No. 4 VIEW POINT ROAD McCrae 3938

Mornington Shire Council The issuer or provider of the required insurance policy is: DEXTA
title details PC353964 PlanningPermitNo: P002457 PlanningPermitDate: 10/05/2001

PROJECT DESCRIPTION Construction of detached dwelling All parts

				DWELLING DETAILS:	
Total new floor area m2:				Existing dwellings:	0
Project classification:	1A			To be constructed:	1
No of project works:	1	Project Estimated Value:	Irrelevant & Sensitive	To be demolished:	0
No of storeys:	2	BuildingCommissionlevy		New floor area,m2:	0

IMPORTANT PERMIT DETAILS
An Occupancy Permit is required prior to Occupation
Building work is to commence by: 16-Aug-02 and is to be completed by: 16-Aug-03
Stages of work permitted: As shown on approved plans

MANDATORY INSPECTIONS
PRE-POLYTHENE SLAB
PRE-POUR SLAB
STUMP HOLES
FRAMEWORK PRIOR TO COVERING
UPPER FLOOR JOISTS
OCCUPANCY PERMIT

PRACTITIONERS:	**FUNCTION AND ENGAGEMENT:**
Cain Jeffrey; DB-U 10173	Engaged in various parts of the building works
Dawson Wayne; DP-AD 1282	Prepared documents only
Holmes Peter; EC 1647	Prepared documents only

RELEVANT BUILDING SURVEYOR **JAMES SHEEDY** Registration no BS-1061

SIGNATURE Irrelevant & Sensitive ISSUED DATE **Thursday, 16 August 2001**

NEPEAN BUILDING PERMITS & CONSULTANTS

Form 1

Building Act 1993

BUILDING REGULATIONS 1994

Regulation 2.1(1)(a)

APPLICATION FOR A BUILDING PERMIT

To the Relevant Building Surveyor; - Robert Holmes, C/- Nepean Building Permits
- P O Box 2234, ROSEBUD 3939
- Phone - (03) 5986 2466 Fax - (03) 5986 2045

From

~~Owner~~/Agent of Owner* JEFF CAIN

Postal Address P.O. BOX 299 SORRENTO Postcode 3943

Address for serving or giving of documents

'AS ABOVE' Postcode

Contact Person JEFF CAIN Phone 59855518 Fax 59855518

Indicate if the applicant is a lessee or licensee of Crown Land to which this application applies (+tick if applicable) [ ]+

Ownership Details (only if agent of owner listed above)

Owner Irrelevant & Sensitive

Postal Address Irrelevant & Sensitive Postcode 3936

Contact Person RICHARD Phone Irrelevant & Sensitive Fax

Property Details

Number 2 Street/Road VIEW POINT RD City/Suburb/Town MT MARTHA Postcode 3936

Lot/s LP/PS Volume Folio

Crown Allotment Section Parish County

Municipal District Allotment Area (for new dwellings only) m^2

Floor Area of New Works m^2

Land owned by the Crown or a public authority (+ tick if applicable) [ ]+

Builder (if known) J.M. CAIN

Postal Address P.O. Box 299 SORRENTO Postcode 3943

Contact Person JEFF Phone 59855515 Fax 59855515

Please Turn Over →

Building Practitioners and/or Architects

(a) to be engaged in the building work[2]

Name J. M. Cain .... Category/Class DB-U .... Registration No DB-U 10173

Name .... Category/Class .... Registration No ....

(If a registered domestic builder carrying out domestic building work attach details of the required insurance)

(b) who were engaged to prepare documents submitted with this application[3]

Name .... Category/Class .... Registration No ....

Name .... Category/Class .... Registration No ....

Nature of Building Work*

Construction of a new building	( )	Extension to an existing building	(✓)
Alterations to an existing building	( )	Change of use of an existing building	( )
Demolition of a building	( )	Removal of a building	( )
Re-erection of a building	( )	Other	( )

Tick if applicable or give other description

Proposed use of building[4] RESIDENCE.

Owner Builder (if applicable)

I intend to carry out the work as an owner builder [Yes / No] (No circled)

Value of building work

Is there a contract for the building work? [Yes / No]

If yes, state the contract price $.......

If no, state the estimated cost of building work $ Irrelevant & Sensitive

(*including the cost of labour and materials) and attach details of the method of estimation*

Stage of building work

If application is to permit a stage of the building work:

Extent of stage: ....

Value of building work for this stage $.......

Signature

I, the undersigned, accept responsibility for payment of all fees incurred in the processing of this Application for Building Permit.

Signature of owner or agent Irrelevant & Sensitive Date 24th Nov 2000.

Name of Signatory Jeffrey Michael Cain

Please Turn Over →

DEXTA
Innovative Solutions Specialist Service

Acting as agent for:

SUNCORP METWAY Insurance Limited A.C.N. 075 695 966
SUNCORP METWAY Plaza,

Dexta Corporation Limited
A B N 12 084 487 712
Insurance & Risk Services
Managing General Agents
www.dexta.com.au

Offices in:
Adelaide, Melbourne, Perth and Sydney

Builders Warranty Department
Level 7, 461 Bourke Street
Melbourne VIC 3000
GPO Box 5150AA
Melbourne VIC 3001
Phone: 1300 367 032
Fax: (03) 9603 1094

Building Owner's Home Warranty Insurance Certificate No. BAV997-DA000344-00/2/1

Important Notice

This Certificate is issued to comply with the relevant law and MUST be signed by the builder and the Insurer (or its agent). This ORIGINAL CERTIFICATE must be retained as evidence of the insurance, which is provided under an annual policy issued to the builder. The terms, conditions and exclusions of the insurance relevant to the Building Owner are set out in the attached policy wording.

This Certificate is **ONLY VALID** for a contract entered into by:

Jeff Cain

dated between **10 August 2000** and **10 August 2001**

and where the contract value is **less than** Irrelevant & Sensitive

This Certificate applies to one dwelling ONLY and relates to a Major Domestic Building Contract dated 21/07/01

The contract price for the work is $ Irrelevant & Sensitive variations of up to 10% of the contract price are automatically included.

The estimated construction period is from 21/07/01 to 30/1/02.

BUILDING ACT 1993
Section 135
and
Ministerial Order Domestic Building Insurance

Certificate in respect of Insurance

Major Domestic Building Work

A contract of insurance complying with the Ministerial Order for Domestic Building Insurance issued under Section 135 of the Building Act 1993, namely:

Type of Insurance: Insurance issued in the name of the Building Owner as the Insured

has been issued by: Suncorp Metway Insurance Limited (ACN 075 695 966) - 100%

in respect of: NEW DWELLING.

(description of the work)

at: 4 VIEW POINT ROAD McCRAE. (site address)

carried out by: Jeff Cain

for: Mr & Mrs R. BENDALL. (Building Owner)

Subject to the Act, the Ministerial Order and the conditions of the insurance contract, cover will be provided to the building owner named in the major domestic building contract and to the successors in title to such building owner.

Instructions to the Builder

- For contract values over $350,000, contact your Insurance broker.
- Each certificate is individually numbered. DO NOT dispose of spoiled certificates as all certificates MUST be accounted for at policy expiry date.
- This ORIGINAL Certificate MUST BY LAW be given to the homeowner. Use a copy for building permit purposes and for your records.

Irrelevant & Sensitive

Builder's Signature and Date signed 16/08/01

Irrelevant & Sensitive

DEXTA Corporation Ltd (ACN 084 487 712) as agent for and on behalf of the insurer listed above, for the percentage set against its name.

VICTORIA

CERTIFICATE OF TITLE

UNDER THE TRANSFER OF LAND ACT

I certify that the registered proprietor is the proprietor of the estate and interest in the land subject to the encumbrances, caveats and notices described

M. [illegible]

REGISTRAR OF TITLES

LAND

Land in Plan of Consolidation 353964C.
PARENT TITLE(s):
Volume 10134 Folio 537 to Volume 10134 Folio 539
Created by instrument W984842R 17/08/2000

REGISTERED PROPRIETOR

ESTATE FEE SIMPLE
JOINT PROPRIETORS
BENDELL, JAMES RICHARD; 5 WUNDA STREET DROMANA 3936
BENDELL, JENNIFER ELLEN; 5 WUNDA STREET DROMANA 3936
W984842R 17/08/2000

ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988.
Any other encumbrances shown or entered on the plan.

SEE PC353964C FOR FURTHER DETAILS AND BOUNDARIES

END OF CERTIFICATE

PLAN OF CONSOLIDATION

LTO use only
EDITION 1

Plan Number
PC 353964 C

LOCATION OF LAND

Parish: WANNAEUE
Township: —
Section: B
Crown Allotment: —
Crown Portion: 1 (PART)
LTO Base Record: CHART 8A (3730)
Title Reference/s: VOL. 9887 FOL. 973-974
VOL. 9880 FOL. 849
Last Plan Reference: LOT58 LP11038, LOT2 TP1660
Postal Address: 4 VIEW POINT ROAD
(at time of consolidation) McCRAE 3938
AMG Co-ordinates (of approx centre of land in plan) E 319580 N 5753560 Zone: 55

Council Certification and Endorsement

Council Name: SHIRE OF FLINDERS Ref: PS. 4922

1. This plan is certified under section 6 of the Subdivision Act 1988.
2. ~~This plan is certified under section 11(7) of the Subdivision Act 1988~~
~~Date of original certification under section 6 / /~~
3. This is a statement of compliance issued under section 21 of the Subdivision Act 1988.

Council Delegate
~~Council Seal~~
Date / /
~~Re-certified under section 11(7) of the Subdivision Act 1988~~
~~Council Delegate~~
~~Council Seal~~
~~Date / /~~

LTO use only
Statement of Compliance/ Exemption Statement Received ☑
Date 5 / 8 / 93

LTO use only
PLAN REGISTERED
TIME 4.00
DATE 21 / 9 / 93
Assistant Registrar of Titles

Notations

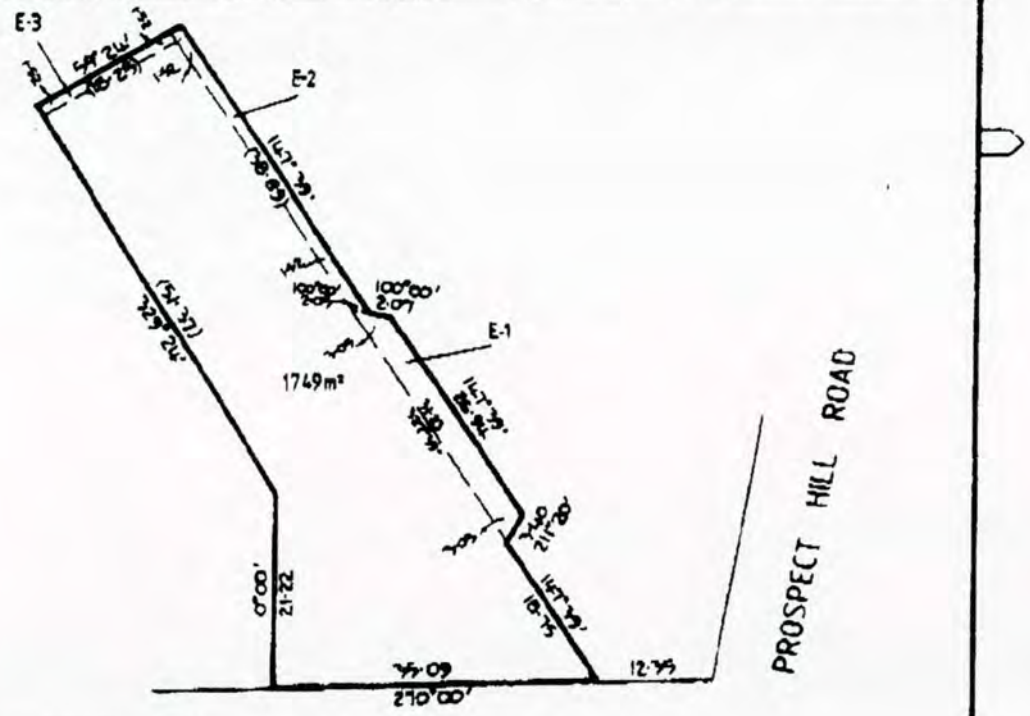
Depth Limitation: DOES NOT APPLY

Easement Information

Legend: A - Appurtenant Easement E - Encumbering Easement R - Encumbering Easement (Road)

Easement Reference	Purpose	Width (Metres)	Origin	Land Benefited/In Favour Of
E-1	SEWERAGE	SEE DIAG.	THIS PLAN	THE MELBOURNE WATER CORPORATION
E-2	DRAINAGE	SEE DIAG.	THIS PLAN	THE SHIRE OF FLINDERS
E-3	DRAINAGE	1.52	LP 11038	LAND IN LP 11038

Survey
This plan is/is not based on survey
This survey has been connected to permanent marks no(s)
in Proclaimed Survey Area No



MARCUS KALKMAN & ASSOCIATES
CONSULTING SURVEYORS & TOWN PLANNERS
1379 NEPEAN HIGHWAY ROSEBUD 3939
TELEPHONE (059) 863255

Sheet 1 of 1 sheets

SCALE
5 0 10 20
LENGTHS ARE IN METRES

ORIGINAL SCALE 1:500 SHEET SIZE A3

LICENSED SURVEYOR (PRINT) MARCUS KALKMAN
SIGNATURE DATE / /
REF 2066 B VERSION 1

DATE / /
COUNCIL DELEGATE SIGNATURE
Original sheet size A3

PC02

CIVIL TEST PTY. LTD.
SOIL TESTING & GEOTECHNICAL CONSULTANTS
A.B.N. 91 006 855 689
A.C.N. 006 855 689

SLOPE STABILITY ASSESSMENT

AT

4 VIEWPOINT ROAD

McCRAE

Report No: RM0197-01

TABLE OF CONTENTS

REPORT No : RM0197-01

CLIENT : Mr Jeff Cain
P O Box 299
SORRENTO VIC 3943

PROJECT LOCATION : 4 Viewpoint Road McCRAE

PROPOSAL:

It is proposed to develop this site with a single storey timber dwelling on a slab and/or strip footings and stumps.

COMMISSION:

To determine whether the proposed works will be detrimental to the slope stability of the site and surrounding areas.

1. INTRODUCTION:

A site investigation has been undertaken to assess the slope stability at 4 Viewpoint Road McCRAE and to determine the implications of further development on the site. Particular attention was made to the effects any proposed earthworks (cut and fill) and the resultant change in site topography will have on the slope stability.

The site investigation of the slope stability includes:

- a site inspection of the existing land and topography
- interpretation of the proposed development and magnitude of the proposed earthworks
- boreholes to determine the soil profile and to confirm the geology of the site
- assessment of the implications of the proposed developments and recommendations with regards to slope stability

2. SITE GEOLOGY:

Geological maps of the area suggest that the site is in an area of Devonian Granodiorite & Granite - CLAYS. The site investigation confirmed this.

3. TOPOGRAPHY:

The site has a slight slope which becomes steep the further north proceeded. On site measurements indicate the slope immediately below the house at the batter is approximately 32°. However this slope stabilizes to between 20° and 24° further down the slope.

The ground cover comprises of natural grasses and native shrubs and trees.

4. SITE INVESTIGATION:

Three bore holes were drilled by mechanical and hand auger at the approximate locations shown on the attached plan. These boreholes revealed that the a mottled pale brown/grey silty SAND FILL overlying a naturally occurring brown silty granitic SAND. This is followed by a dark grey mottled yellow/brown silty CLAY overlying a pale grey mottled minor yellow sandy CLAY. Further down the slope in borehole 3 the soils were found to be predominately silty granitic SANDS.

5. DISCUSSION:

Site observations indicate the measured slope to be approximately 20° however some areas were found to have slopes up to 32°. Considering the geology of the site is in an area of Devonian Granodiorite, this would place the site in a MEDIUM RISK ZONE against landslip.

A risk zone of MEDIUM indicates that future landslip without development would be unlikely. However, instability may be possible due to the gentle slope if good hillside engineering practices are not conducted. Poorly executed earthworks, including excessive site clearance, interference with the natural drainage and large cut and fills, have a major influence on the causes of slope instability.

Property N° 4 and the surrounding areas, show no past signs of slope instability. The lack of signs of instability and the performance of the neighbouring developed lots around N° 4, reaffirms the site has not been prone to slope instability in the past and confirms the risk zone rating of MEDIUM.

The two most common modes of slope failure are:

i) rotational slip surface failure
ii) shallow translational slide failure

5.1 Rotational Slip Surface Failure:

Rotational slip surface failure is essentially a deep seated movement which occurs deep down below the slope when a section of the slope slides along a critical arc which passes usually near the toe of the slope. There are little available corrective actions which can be undertaken to improve the site against rotational failure.

The rotational failure is primarily influenced by the height, angle of the slope and the properties of the soil in the slope. However there are actions which can be taken to ensure that the slope stability is not unnecessarily degenerated by poor construction techniques and engineering practices.

5.2 Shallow Translational Slide Failure:

Shallow translational slide failure occurs when a thin stratum of soil layer usually near the surface creeps down the slope. This "hillside creep" can be sudden and quick, usually resulting in a localised failure, or it can be a slow process occurring over many years which could lead to long term slope failure problems.

The shallow translational slide failure, and to a lesser extent the rotational slip surface failure, can be aggravated by the following man made interferences:

i) the additional weight of the dwelling
ii) the additional weight of fill
iii) changes in the groundwater level or alterations in the surface run-off
iv) deep excavations running across the slope
v) removal of any existing trees and vegetation.

5.2.1 The additional weight of the dwelling will increase the overturning moment on the slope leading to a decrease in the slope stability and increasing the possibility of rotational slip failure.

5.2.2 The additional weight of fill will similarly increase the overturning moment decreasing the slope stability. Fill material will also contribute to hillside creep with its mass under the force of gravity acting to pull the surface soils down the slope.

5.2.3 Construction of the dwelling, the use of extensive paved areas, and the removal of vegetation all have the effect of altering the surface run-off and concentrating ground water in certain areas. If excessive vegetation is removed and surface run-off is allowed to concentrate in certain areas, then there would be a likely long term pore water pressure increase which will in turn reduce the slope stability. If excessive vegetation removal takes place and extensive paved areas are constructed, then drainage measures of the slope will have to be introduced which will be discussed in the recommendations.

5.2.4 Deep excavations for services running across the slope tend to break the cohesion and packing structure of the soil between the interface of the

trench side wall. This can contribute to hillside creep. Any excavations which run across the slope should be kept to a minimum possible depth.

Once service excavations are backfilled they can act as a trap for surface run-off water. In the site's natural state the surface run-off would evenly spread across the site. Once service excavations are constructed they capture this run-off concentrating the build up of water underground, hence reducing the stability of the slope. To reduce the effects of the water build up, the top of any trenches should be backfilled with a compacted clay capping to reduce the ingress of water.

5.2.5 The excessive removal of vegetation above or below the proposed development should be avoided. Excessive removal of vegetation without adopting methods of soil stabilisation, may lead to premature soil erosion which could lead to long term slope instability problems.

Considering the area geology, the soil profile encountered in the bores, the existing and proposed topography of the site, and that the existing site is not suffering any obvious instability in the form of slope slippage, then the site can be classified as a MEDIUM risk category against landslip.

Although the site has a MEDIUM risk to landslip, good engineering practice should be adopted in the development which will be covered by the following recommendations.

6. RECOMMENDATIONS:

6.1 Site Clearing

All natural vegetation should be retained whenever and wherever possible.

6.2 Earthworks - Cuts

Cut batters (unretained) may be up to 1.5 metres in height on this site with batters not steeper than 2.0 metres horizontal to 1.0 metre vertical.

6.3 Earthworks - Fill

Where fill batters are to be constructed, all vegetation and topsoil should be stripped prior to the commencement of placing fill. The fill should be benched into the natural slope. Clean fill materials, free of vegetation and topsoil should be placed in 200mm thick loose layers and well compacted to a minimum density ratio of 95% AS1289 5.1.1 (Standard Compaction) at a moisture content of between 85% and 120% of the optimum moisture content. Fill batters are not recommended steeper than 2.0 metres horizontal to 1.0 metre vertical. If all the above conditions of earthwork - fills are met then the maximum permissible height of fill will be 1.5 metres.

6.4 Retaining Walls

Where cut and fill batters are required steeper than 2.0 horizontal to 1.0 vertical then these should be retained by engineer designed retaining walls. The retaining walls should be constructed as soon as possible after the completed earthworks. As a guide to the design of retaining walls, the one site soils can be assumed to have a bulk wet density of 1.90t/m^3 and an angle of shearing resistance of 30° equating to an active earth pressure Ka = 0.33.

The retaining walls must have an agricultural type drain surrounded by a drainage sock placed behind them. This agricultural drain must be surrounded by a granular material which extends to the top of the wall. Sufficient weepholes should be made to reduce the pore water pressure on the wall.

6.5 Drainage

All cut and fill batters must have a catch drain constructed at the top to prevent any run-off water flow from running down the batters. The water collected in these drains should ideally be discharged into street drainage and/or a council easement drain. However, if either of these alternatives are not possible, then if it is permitted, discharge into a natural water course or soakage pit is recommended. Energy dissipating systems such as beaching or a drop structure may need to be considered if the stability or erosion of the water course is in question.

Owners of the property must take responsibility of the ongoing maintenance of the drainage to ensure the drains are never blocked and the repair of any damaged drains.

6.6 Footings for Proposed Dwelling

6.6.1 Edge Beams

Slab edge beams should be founded at a minimum depth of 200mm in relationship to the existing surface or at least 100mm into the naturally occurring soils.

6.6.2 Strip Footings and Stumps

Strip footings and stumps should be founded at a minimum depth of 750mm below the finished surface level surrounding the structure. However, the founding depth must be at least 100mm into the naturally occurring CLAYS and/or silty granitic SANDS as described in the logs of boring.

7. CONDITIONS OF THE RECOMMENDATION:

7.1 The recommendations made in this report may need to be reviewed should any site works disturb any soil 300mm below the founding depth of the structure.

7.2 Since the soil horizons and layers can vary in depth and thickness over the site, the depths and bearing capacities given above are given as a guide only. If the footings are founded at the minimum depth, as stated and are in the soil as

described in the logs of boring for this site, then the requirements of this report have been met.

7.3 The descriptions of the soils found in the bore holes closely follow those outlined in AS 1726-1993 (Geotechnical Site Investigations). Colour descriptions can vary with soil moisture content. It should be noted therefore, colour and shade descriptions mentioned in this report are made when the soil is in a moist condition.

7.4 This report has been compiled and recommendations made based on the information supplied in the brief to Civiltest Pty Ltd and from the field investigations and observations made including the extent of if any site filling. Every care has been taken within the terms of the brief to ensure that the field investigation is representative of the site. Therefore, if it is found that for any reason information received by Civiltest Pty Ltd is incorrect or conditions on site vary considerably during construction to those described in this report then the comments and recommendations made in this report may need to be amended.

7.5 Finally, no responsibility will be taken for this report if it is altered in any way or not reproduced in full.

8. CONCLUSION:

The site inspection revealed the site to have a slight to steep slope. The geology of the area was found to be Devonian Granodiorite and Granite. Considering the likelihood of the proposed earthworks and the site having a MEDIUM risk category against slope slippage, slope instability of the area after development would be unlikely providing all the recommendations made in the report are adhered to.

This report consists of ten pages and one site plan.

REPORT PREPARED BY:

ALLEN KARLOVIC
B.E. (CIVIL) HONS

REPORT REVIEWED BY:

Irrelevant & Sensitive

S D BUFFINTON
CIVILTEST PTY LTD

14 February, 2001

REF: ADK/dh

APPENDIX A

LANDSLIP RISK ZONES AND IMPLICATIONS FOR DEVELOPMENT

RISK OF INSTABILITY	EXPLANATION	IMPLICATION FOR DEVELOPMENT
VERY LOW	Slopes are sufficiently flat that the risk of instability due to failure of natural slopes is very low.	Good engineering practice should be followed.
LOW	Landslip without development is very unlikely. Typically slopes are less than 20 percent.	Good engineering practices suitable for hillside construction required. Risk after development normally acceptable.
MEDIUM	Areas considered to be of medium risk, but landslip is nevertheless unlikely without development. Includes areas where slopes typically range between 20% and 40% and where there is no history of instability. Instability may be expected if development does not have due regard for site conditions.	Some development restrictions may be required. Good engineering practices suitable for hillside construction required. Risk associated with development in these areas is normally acceptable.
HIGH	Evidence of active or past landslips. Areas where it is considered there is a risk of landslip without development. Significant instability may occur during and after extreme climatic conditions.	Development restrictions and/or geotechnical works required. Geotechnical investigation necessary. Risk after development may be higher than usually accepted.

APPENDIX B

LANDSLIP RISK QUANTIFIED FOR SHALLOW TRANSLATIONAL SLIDE FAILURE AND ROTATIONAL SLIP SURFACE FAILURE

RISK CATEGORY	ASSUMED PROBABILITY OF OCCURRENCE IN FIFTY YEAR PERIOD (%)
VERY LOW	Less than 0.05%
LOW	Less than 0.5%
MEDIUM	0.5% to 5%
HIGH	5% to 39%

In geological time terms, the assumed probability of slope instability occurring is very high in the HIGH RISK ZONE. In all other areas the probability of failure is relatively low especially when compared to other everyday risks that are routinely accepted without thought (e.g. crossing a road).

Building Act 1993

BUILDING REGULATIONS 1994
Regulation 15.7(2)

RECEIVED

Form 13 (CD462W-0199-02)

BY:

CERTIFICATE OF COMPLIANCE – STRUCTURAL DESIGN

TO: THE BUILDING SURVEYOR

FROM: PETER M HOLMES, MIE AUST., CP ENG. *CLASS:* CIVIL ENGINEER

ADDRESS: c/- NILSSON NOEL & HOLMES (ENGINEERS) PTY LTD

PO BOX 595, FRANKSTON, 3199 *PHONE:* (03) 9775 2589

I did prepare the design and I certify that the part of the design described as:

STEEL BEAMS, COLUMNS, BRACING & FOOTINGS

NB: Certification is limited to works as specified above and as detailed in the computations.

FOR: PROPOSED RESIDENCE

LOCATION: LOT 50 VIEW POINT ROAD

McCRAE

complies with the provisions of all relevant Australian Standards & Authority Regulations (including the BCA)

Documentation:

1. Architectural Drawings:	*Reference:*	**2285, SHEETS 1 & 2, ISSUE 'A'**
	Prepared By:	**URBAN SOLUTIONS**
	Dated:	**Sep-00**
2. Structural Computations:	*Reference:*	**1020E, SHEETS 1 - 45**
	Prepared By:	**NNH (ENGINEERS) P/L**
	Dated:	**27-Apr-01**
3. Structural Drawings:	*Reference:*	**1020E, SHEETS 1 & 2**
	Prepared By:	**NNH (ENGINEERS) P/L**
	Dated:	**27-Apr-01**
4. Soil Report:	Reference:	**RM0197-01**
	Prepared By:	**CIVILTEST P/L**
	Dated:	

BUILDING PERMIT ENDORSED PLAN
This is to certify that this document is substantially in accordance with the Building Regulations 1994 and the Building Act 1993.
16 AUG 2001
Building Surveyor: James Sheedy SP 1061
Building Surveyor: Robert Holmes SP 1193
2466 Fax: (059) 86 2045

Signed: Irrelevant & Sensitive

Building Practitioner Registration No: **EC 1647** Date: 15/8/01

NILSSON NOEL & HOLMES (ENGINEERS) PTY LTD

PO BOX 595
FRANKSTON VIC 3199
PH: (03) 9775 2589
FAX: (03) 9775 2978

CLIENT: **BENDELL**

PROJECT: **PROPOSED RESIDENCE**

LOCATION: **LOT 50 VIEW POINT ROAD McCRAE**

We certify that the attached structural computations and associated structural drawings referenced **1020E** and dated **27-Apr-01** comply with the Australian Standards:

- ☐ AS 1170 Parts 1 and 2 Loading Code
- ☐ AS 1250 Steel Structures Code
- ☐ AS 1657 Code for Fixed Platforms, Walkways, Stairways & Ladders
- ☐ AS 1684 National Timber Framing Code
- ☐ AS 1720 Timber Structures Code
- ☐ AS 2783 Concrete Swimming Pools Code
- ☐ AS 2870 Residential Slabs & Footings Code
- ☐ AS 3600 Concrete Structures Code
- ☐ AS 3700 Masonry Code
- ☐ AS 1288 Glass in Building Code

No responsibility will be accepted for the structure beyond the contents of these structural computations, and these computations **must** be reproduced in full and **not** altered in any way.

On behalf of
NILSSON NOEL HOLMES (ENGINEERS) PTY LTD

Irrelevant & Sensitive

Peter M Holmes | MIE Aust, CP Eng
Building Practitioner: EC-1647
Cd460w-0598-03

JOB No: 1020E
DATE: 27-Apr-01
SHEET: 1.

NNH (ENGINEERS) P/L
6 MERRIGAL COURT, FRANKSTON PH: (03) 9775 2589

CLIENT: BENDELL
JOB ADDRESS: LOT 50 VIEW POINT ROAD
McCRAE

LOADING SUMMARY:

1. DEAD LOAD:	Roof:	Concrete tiles on trusses	0.85 kPa
		Roof pitch	20.0
		Therefore DL to beam(s)	0.90 kPa
	Upper Wall:	Stud clad wall	0.50 kPa
	Lower wall:	Stud clad wall	0.50 kPa
	Upper Floor:	Timber floor	0.65 kPa
	Balcony / Deck:	Timber floor	0.65 kPa
2. LIVE LOAD:	Roof:	LL (for A > 14 sq.m.)	0.25 kPa
		LL (for A < 14 sq.m.)	(1.8/A + 0.12) kPa
	Upper Floor:	LL	1.50 kPa
	Balcony / Deck:	LL	3.00 kPa
3. WIND LOAD:	Terrain Category		**1.5**
	Critical wind direction:	West wind critical Vp =	41 m/sec
	Max Height of Structure		10.00 m
	Mz (Height)		1.06
	Ms (shielding)		1.00
	Mt (Topographical)		1.00
	Mi (Importance)		1.00
	Design wind speed:	Vz = Vp.Mz.Ms.Mt.Mi =	43.46 m/sec
	Dynamic Wind Pressure:	qz = 0.60(Vz)^2 x 10^-3 =	1.13 kPa
	Internal pressure coefficient Cpi (uplift):		0.00
	Wind pressure roof coefficeint Cpe (uplift):		-0.90
	Design Roof Wind Load WL:		**-1.02 kPa**

JOB No: 1020E

DATE: 27-Apr-01

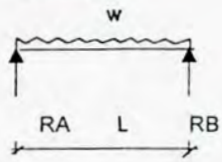
SHEET: 2

NNH (ENGINEERS) P/L
6 MERRIGAL COURT, FRANKSTON
PH: 9775 2589

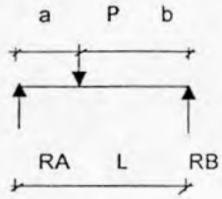
MEMBER REFERENCE: RB4

1. LOADS:

			DL		LL		WL	
Roof Load	Roof Pitch (Deg)	NA	-	-	A (sq.m.) =	0.00	-	-
	No roof loads to beam		0.00	kPa	0.00	kPa	0.00	kPa
Upper Wall Load	Stud clad wall		0.50	kPa	-	-	-	-
Lower Wall Load:	No lower wall load to beam		0.00	kPa	-	-	-	-
Upper Floor Load	No upper floor load to beam		0.00	kPa	0.00	kPa	-	-
Balcony / Deck Load	No balcony load to beam		0.00	kPa	0.00	kPa	-	-
Self Weight			0.30	kN/m	-	-	-	-



LOAD TYPE	DEAD	LIVE	WIND	DIST. 'a' (m)	TOTAL (DL + LL)	TOTAL (DL + WL)
w (kN/m)	**1.80**	**0.00**	**NA**		**1.80**	**NA**
P (kN)	**0.00**	**0.00**	**NA**	**0.00**	**0.00**	**NA**



	SPAN (m)	MOMENTS (kN.m)	'RA' (kN)	'RB' (kN)
DL + LL	**6.60**	**9.80**	**5.94**	**5.94**
DL + WL	**NA**	**NA**	**NA**	**NA**

2. DESIGN:

	K1	K11	K12	BENDING STRESS F'b (Mpa)	BENDING STRESS fb (Mpa)	l/ryy	D/T
No timber beam option	-	-	-	-	-		
No timber beam option	-	-	-	-	-		
200PFC				78	51	277	17

Bending stresses are O.K.

	DEFLECTION dDL (mm)	dDL span/	dLL (mm)	dLL span/	d(d+w) (mm)	d(d+w) span/	SHEAR F's (or Fv) (Mpa)	fs (or fv) (Mpa)
No timber beam option	-	-	-	-	-	-	-	-
No timber beam option	-	-	-	-	-	-	-	-
200PFC	11.6	567	-	-	-	-	96	5

Deflection limits are slightly high but considered O.K. **Shear stress O.K.**

*** ADOPT ANY OF FOLLOWING OPTIONS FOR MEMBER(S):** RB4

No timber beam alternative

No timber beam alternative

200PFC Steel Beam

NNH (ENGINEERS) P/L

6 MERRIGAL COURT, FRANKSTON

PH: 9775 2589

JOB No: 1020E

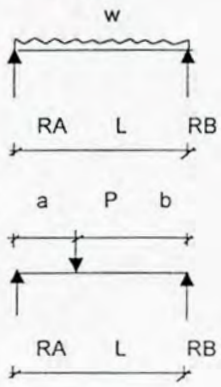
DATE: 27-Apr-01

SHEET: 3.

MEMBER REFERENCE: **RB5 & RB6**

1. LOADS:

			DL		LL		WL	
Roof Load	Roof Pitch (Deg)	NA	-		A (sq.m.) =	26.25	-	-
	Concrete tiles on trusses		0.90	kPa	0.25	kPa	0.00	kPa
Upper Wall Load	Stud clad wall		0.50	kPa	-	-	-	-
Lower Wall Load:	No lower wall load to beam		0.00	kPa	-	-	-	-
Upper Floor Load	No upper floor load to beam		0.00	kPa	0.00	kPa	-	-
Balcony / Deck Load	No balcony load to beam		0.00	kPa	0.00	kPa	-	-
Self Weight			0.30	kN/m	-	-	-	-



LOAD TYPE	DEAD	LIVE	WIND	DIST. 'a' (m)	TOTAL (DL + LL)	TOTAL (DL + WL)
w (kN/m)	**3.98**	**0.94**	**NA**		**4.92**	**NA**
P (kN)	**0.00**	**0.00**	**NA**	**0.00**	**0.00**	**NA**

	SPAN (m)	MOMENTS (kN.m)	'RA' (kN)	'RB' (kN)
DL + LL	**7.00**	**30.14**	**17.22**	**17.22**
DL + WL	**NA**	**NA**	**NA**	**NA**

2. DESIGN:

				BENDING STRESS			
	K1	K11	K12	F'b (Mpa)	fb (Mpa)	I/ryy	D/T
No timber beam option	-	-	-	-	-		
No timber beam option	-	-	-	-	-		
250PFC				139	83	123	17

Bending stresses are O.K.

	DEFLECTION						SHEAR	
	dDL (mm)	dDL span/	dLL (mm)	dLL span/	d(d+w) (mm)	d(d+w) span/	F's (or Fv) (Mpa)	fs (or fv) (Mpa)
No timber beam option	-	-	-	-	-	-	-	-
No timber beam option	-	-	-	-	-	-	-	-
250PFC	13.8	507	3.3	NA	-	-	93	9

Deflection limits are slightly high but considered O.K. **Shear stress O.K.**

* ADOPT ANY OF FOLLOWING OPTIONS FOR MEMBER(S): RB5 & RB6

No timber beam alternative

No timber beam alternative

250PFC **Steel Beam ****

** Provide lateral restraint to steel beam at 3500 mm crs (maximum) as per detail.

Client Irrelevant & Sensitive

Project Job No b20e

Page 4. Date 27/4/01 By PMH

Job Location

Nilsson, Noel & Holmes

6 Merrigal Court Frankston
Telephone : (03) 9775 2589
Facsimile : (03) 9775 2978

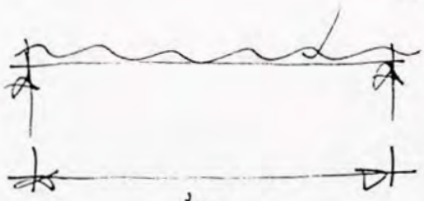
1. Floor Joists

1.1 loadings.

(i) Floor. DL. 0.65 kPa (metal joists)
LL 1.50 "

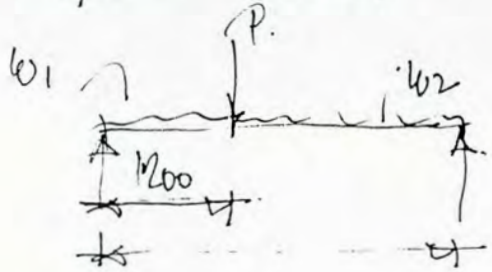
(ii) Deck. DL 0.65 kPa. (metal joists)
LL 3.00 "

A. Floor loading.



w_D. $0.65 \times 0.45 = 0.29$ kN/m.
$w_L = 1.50 \times 0.45 = 0.68$ "
0.97 kN/m.

B Flor/Deck loading.



$w_{1D} = 0.65 \times 0.45 = 0.29$ kN/m
$w_{1L} = 3.00 \times 0.45 = 1.35$ "
1.64 kN/m.

$w_{2D} =$ 0.29
$w_{2L} =$ 0.68
0.97 kN/m.

P = $1.00 \times 0.45 = 0.45$ kN.

BEAM REPORT

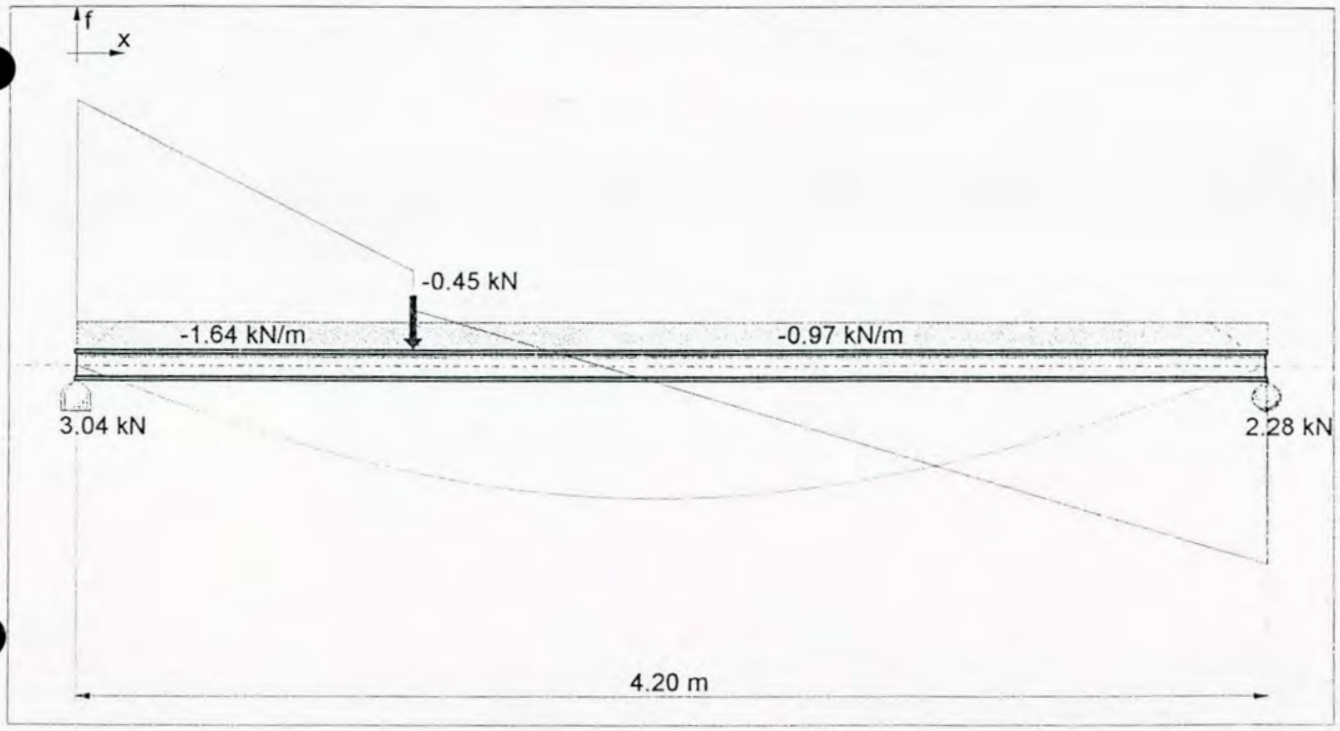
10 May 2001

b/be
5.

Project:
Job Number:
Author:
Comment:

Beam Length	4.20 m		
Moment of Inertia (Ixx)	10.00 10^6 mm^4	Moment of Inertia (Iyy)	1.00 10^6 mm^4
Section Area	2300.00 mm^2	Weight / Unit Length	undefined kg/m
Neutral Axis max X	0.04 m	Neutral Axis max Y	0.08 m
Material density	7810.00 kg/m^3	Young's Modulus	200000.00 MPa
Gravity	-9.81 m/s^2		

Section:
Grade:



Error check

Force Sum	-1.6171E-07 kN
Moment Sum	-6.78611E-07 kNm
Maximum matrix back subsitution error	0 Radians

Maximum Values

Max Shear Force	3.04 kN	0.00 m
Max Moment	2.67 kNm	1.85 m
Max Bending Stress	21.34 MPa	1.85 m
Max Deflection	-2.47 mm	2.05 m

Client BENDELL

Project _____ Job No 6122e

Page 6. Date 27/4/01 By PWH

Job Location _____

Nilsson, Noel & Holmes

6 Merrigal Court Frankston
Telephone : (03) 9775 2589
Facsimile : (03) 9775 2978

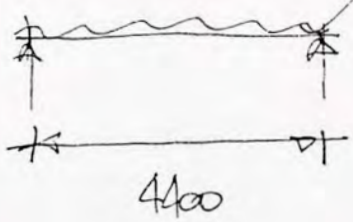
from Beam report $M_{max} = 2.67$ kN.m.

& equivalent $w_{max} = 8M/l^2$

$= 8 \times 2.67 / 4.20^2$

$= 1.21$ kN/m

C. Deck loading.

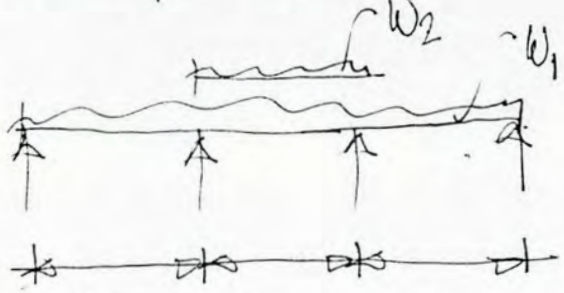


$w_D = 0.29$ kN/m

$w_L = 1.35$

1.64 kN/m.

D. Deck loading - Spa



Client BENDELL

Project _____ Job No 0202e

Page 7. Date 23/4/01 By PWH

Job Location _____

Nilsson, Noel & Holmes

6 Merrigal Court Frankston
Telephone : (03) 9775 2589
Facsimile : (03) 9775 2978

Spa loading to lower deck. :

Spa 3000 L x 2400 W x 1200 D. *

as advised by Jeff Cain (builder).

∴ DDL water (4) = 9.82 × 1.20 = 11.78

Say 12.00 kPa.

Allow loading on central span. :

w_{1D} = 0.29 kN/m.

w_{1L} = 1.35 "

1.64 kN/m.

w_{2D} = 0.29 kN/m.

w_{2L} = 12.00 × 0.45 = 5.40 kN/m

5.69 kN/m.

from Beam Report M_{max} = 2.22 kN.m.

& equiv w_{max} = 2.22 / 0.10 × 2.46² = 3.67 kN/m.

BEAM REPORT

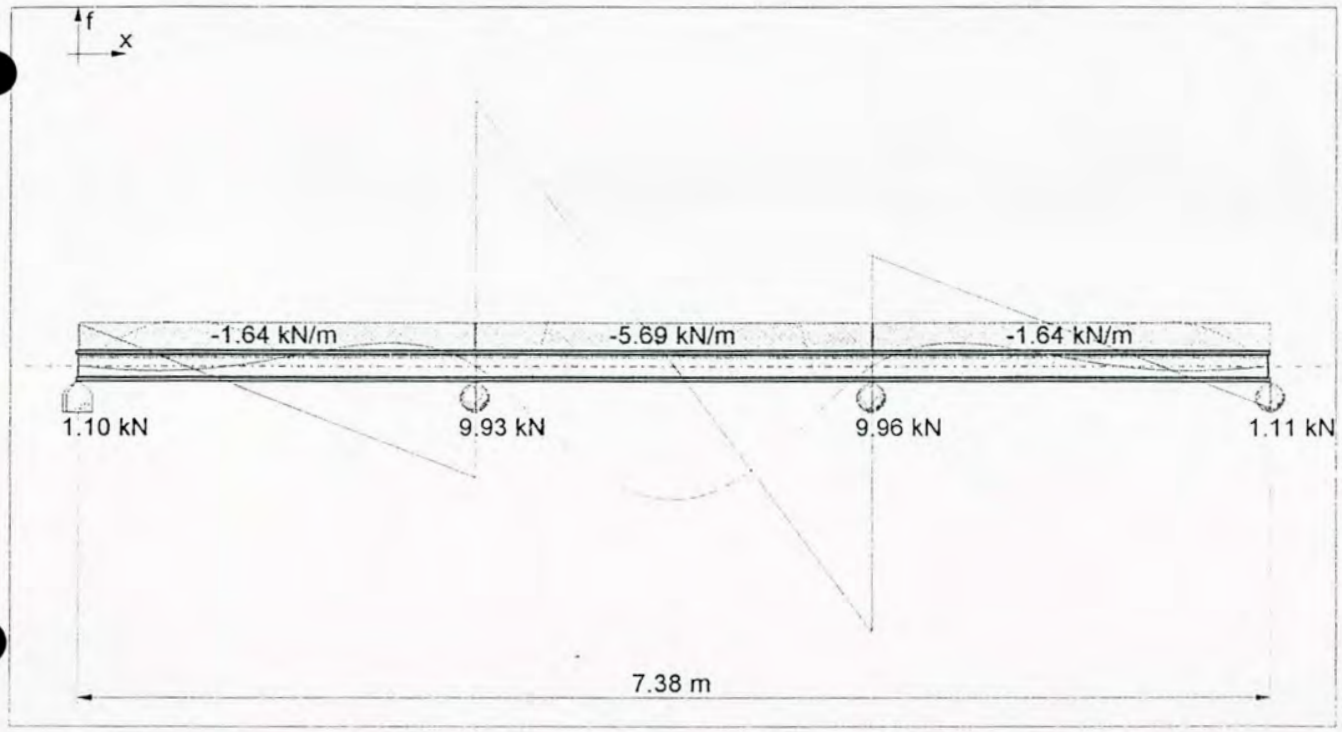
10 May 2001

10 of 8.

Project:
Job Number:
Author:
Comment:

Beam Length	7.38 m		
Moment of Inertia (Ixx)	10.00 10^6 mm^4	Moment of Inertia (Iyy)	1.00 10^6 mm^4
Section Area	2300.00 mm^2	Weight / Unit Length	undefined kg/m
Neutral Axis max X	0.04 m	Neutral Axis max Y	0.08 m
Material density	7810.00 kg/m^3	Young's Modulus	200000.00 MPa
Gravity	-9.81 m/s^2		

Section:
Grade:



Error check

Force Sum	-6.82121E-13 kN
Moment Sum	-6.86295E-12 kNm
Maximum matrix back subsitution error	2.27374E-13 Radians

Maximum Values

Max Shear Force	-7.00 kN	4.92 m
Max Moment	-2.22 kNm	2.46 m
Max Bending Stress	-17.73 MPa	2.46 m
Max Deflection	-0.52 mm	3.69 m

Client Irrelevant & Sensitive

Project _____ Job No 1020c

Page 9. Date 27/4/01 By PWH.

Job Location _____

Nilsson, Noel & Holmes

6 Merrigal Court Frankston
Telephone : (03) 9775 2589
Facsimile : (03) 9775 2978

Summary of design situations :

Span 4200 load 1.21 kN/m.

4400 1.64 "

2460 3.67 "

Try C15019 @ 450 crs.

w_{lim} = 2.76 kN/m > w_{max} ∴ OK

check defn δ = 2.26 kN/m. for δ = span/150.

∴ δ_{max} = Span / 2.26 × 150 / 1.64

= Span/206 (Total load)

for deck – considered OK.

∴ Adopt C15019 purlins @ 450 crs throughout. – to be continuous over 3 spans for support of sag.

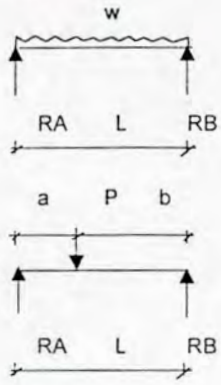
NNH (ENGINEERS) P/L
6 MERRIGAL COURT, FRANKSTON
PH: 9775 2589

JOB No: 1020E
DATE: 27-Apr-01
SHEET: 10.

MEMBER REFERENCE: FB2 & FB3

1. LOADS:

			DL		LL		WL	
Roof Load	Roof Pitch (Deg)	NA	-	-	A (sq.m.) =	0.00	-	-
	No roof loads to beam		0.00	kPa	0.00	kPa	0.00	kPa
Upper Wall Load	No upper wall load to beam		0.00	kPa	-	-	-	-
Lower Wall Load:	No lower wall load to beam		0.00	kPa	-	-	-	-
Upper Floor Load	No upper floor load to beam		0.00	kPa	0.00	kPa	-	-
Balcony / Deck Load	Timber floor		0.65	kPa	3.00	kPa	-	-
Self Weight			0.30	kN/m	-	-	-	-



LOAD TYPE	DEAD	LIVE	WIND	DIST. 'a' (m)	TOTAL (DL + LL)	TOTAL (DL + WL)
w (kN/m)	**1.10**	**9.16**	**NA**		**10.26**	**NA**
P (kN)	**0.00**	**0.00**	**NA**	**0.00**	**0.00**	**NA**

	SPAN (m)	MOMENTS (kN.m)	'RA' (kN)	'RB' (kN)
DL + LL	**4.75**	**28.94**	**24.37**	**24.37**
DL + WL	**NA**	**NA**	**NA**	**NA**

2. DESIGN:

				BENDING STRESS			
	K1	K11	K12	F'b (Mpa)	fb (Mpa)	I/ryy	D/T
No timber beam option	-	-	-	-	-		
No timber beam option	-	-	-	-	-		
200UB25				165	125	77	26

Bending stresses are O.K.

	DEFLECTION						SHEAR	
	dDL (mm)	dDL span/	dLL (mm)	dLL span/	d(d+w) (mm)	d(d+w) span/	F's (or Fv) (Mpa)	fs (or fv) (Mpa)
No timber beam option	-	-	-	-	-	-	-	-
No timber beam option	-	-	-	-	-	-	-	-
200UB25	1.5	NA	12.9	369	-	-	96	21

Deflection limits are slightly high but considered O.K. **Shear stress O.K.**

*** ADOPT ANY OF FOLLOWING OPTIONS FOR MEMBER(S):** FB2 & FB3

No timber beam alternative
No timber beam alternative
200UB25 **Steel Beam ****

** Provide lateral restraint to steel beam at 2375 mm crs (maximum) as per detail.

NNH (ENGINEERS) P/L

6 MERRIGAL COURT, FRANKSTON

PH: 9775 2589

JOB No: 1020E

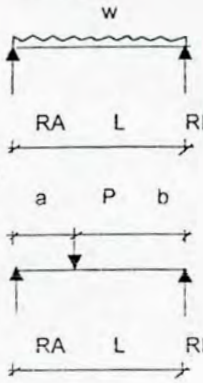
DATE: 27-Apr-01

SHEET: 12

MEMBER REFERENCE: FB1 & FB4

1. LOADS:

			DL		LL		WL	
Roof Load	Roof Pitch (Deg)	NA	-	-	A (sq.m.) =	0.00	-	-
	No roof loads to beam		0.00	kPa	0.00	kPa	0.00	kPa
Upper Wall Load	No upper wall load to beam		0.00	kPa	-	-	-	-
Lower Wall Load:	No lower wall load to beam		0.00	kPa	-	-	-	-
Upper Floor Load	No upper floor load to beam		0.00	kPa	0.00	kPa	-	-
Balcony / Deck Load	Timber floor		0.65	kPa	3.00	kPa	-	-
Self Weight			0.30	kN/m	-	-	-	-



LOAD TYPE	DEAD	LIVE	WIND	DIST. 'a' (m)	TOTAL (DL + LL)	TOTAL (DL + WL)
w (kN/m)	**2.01**	**7.42**	**NA**		**9.43**	**NA**
P (kN)	**0.00**	**0.00**	**NA**	**0.00**	**0.00**	**NA**

	SPAN (m)	MOMENTS (kN.m)	'RA' (kN)	'RB' (kN)
DL + LL	**4.75**	**26.60**	**22.40**	**22.40**
DL + WL	**NA**	**NA**	**NA**	**NA**

2. DESIGN:

	BENDING STRESS						
	K1	K11	K12	F'b (Mpa)	fb (Mpa)	l/ryy	D/T
No timber beam option	-	-	-	-	-		
No timber beam option	-	-	-	-	-		
200PFC				156	139	100	17

Bending stresses are O.K.

	DEFLECTION						SHEAR	
	dDL (mm)	dDL span/	dLL (mm)	dLL span/	d(d+w) (mm)	d(d+w) span/	F's (or Fv) (Mpa)	fs (or fv) (Mpa)
No timber beam option	-	-	-	-	-	-	-	-
No timber beam option	-	-	-	-	-	-	-	-
200PFC	3.5	1362	12.9	369	-	-	96	19

Deflection limits are O.K. **Shear stress O.K.**

* ADOPT ANY OF FOLLOWING OPTIONS FOR MEMBER(S): FB1 & FB4

No timber beam alternative

No timber beam alternative

200PFC Steel Beam **

** Provide lateral restraint to steel beam at 2375 mm crs (maximum) as per detail.

Client Irrelevant & Sensitive

Project _____ Job No 6202

Page 13. Date 27/4/01 By PMH.

Job Location _____

Nilsson, Noel & Holmes

6 Merrigal Court Frankston
Telephone : (03) 9775 2589
Facsimile : (03) 9775 2978

2. Bracing Frame – Roof. (RB1-RB33)

2.1 Loadings.

(i) Roof DL concrete tile 0.85 kPa

LL $LL = 1.8/A + 0.12$ kPa.

(ii) Walls stud ⇒ wd = 0.50 kN/m

(iii) Floor DL 0.65 kPa (timber)

LL 1.50 "

(iv) Deck DL 0.65 kPa (timber)

LL 3.00 "

Allow spa pool 5.0 x 1.50 x 1.0 deep.
on lower deck

(v) Wind Terrain cat 1.5 — worst wind critical

V_p = 41 m/sec.

M_2 = 1.06

& V_2 = 1.06 x 41 = 43.46 m/sec.

$q_2 = 0.60\ V_2^2 \times 10^{-3}$

= 1.13 kPa.

Client Irrelevant & Sensitive

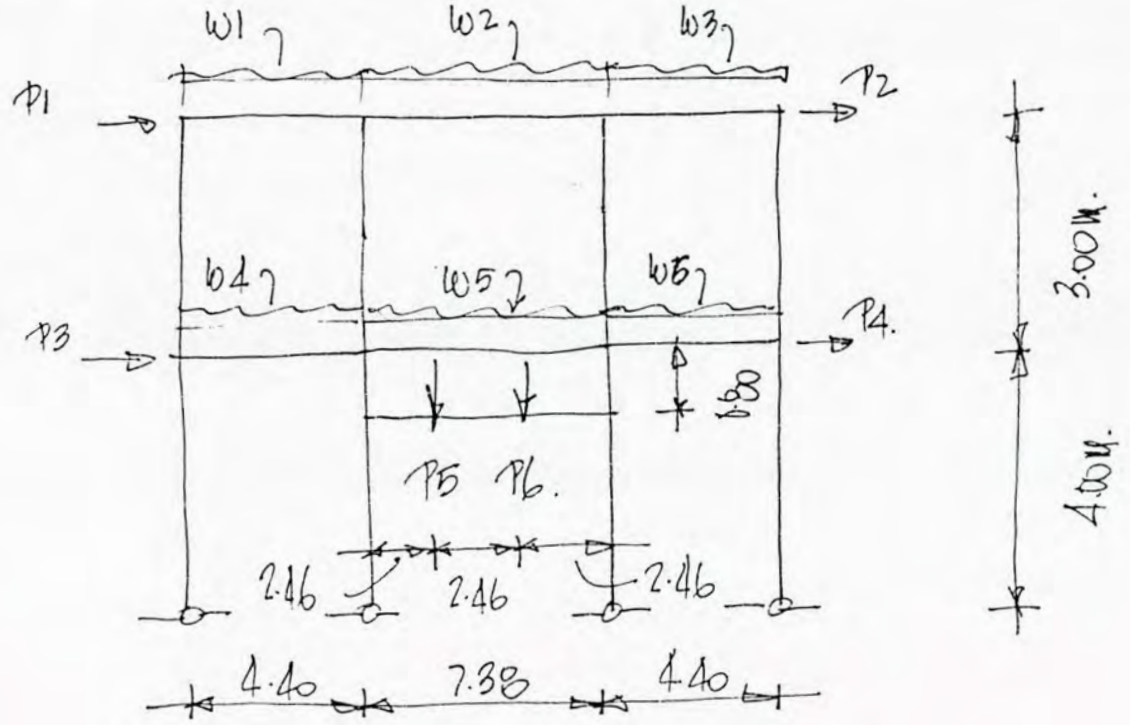
Project _____ Job No 6206

Page 14 Date 27/4/01 By RWH

Job Location _____

Nilsson, Noel & Holmes

6 Merrigal Court Frankston
Telephone : (03) 9775 2589
Facsimile : (03) 9775 2978



$w_{1D} = 0.90 \times 4.00 = 3.60$ kN/m.

$w_{1L} = 0.25 \times 4.00 = 1.00$ "

$w_{1W} = -1.13 \times 0.90 \times 4.00 = -4.07$ "

$w_{2D} = 0.90 \times 2.50 = 2.25$ kN/m

$w_{2L} = 0.25 \times 2.50 = 0.63$ "

$w_{2W} = -1.13 \times 0.90 \times 2.50 = -2.54$ "

$w_{3D} = 3.60$ kN/m

$w_{3L} = 1.00$ "

$w_{3W} = -4.07$ "

Client Irrelevant & Sensitive

Project Job No D20e

Page 15. Date 2/4/01 By PWH

Job Location

Nilsson, Noel & Holmes
6 Merrigal Court Frankston
Telephone : (03) 9775 2589
Facsimile : (03) 9775 2978

$W_{4D} = 0.65 \times 8.9/2 + 0.30 = 3.19$ kN/m.

$W_{4L} = 1.50 \times 4.20/2 + 3.00 \times 1.00 = 4.58$ kN/m.

$W_{5D} = 0.65 \times 2.10 + 0.30 = 1.67$ kN/m.

$W_{5L} = 3.00 \times 2.10 = 6.30$ "

$W_{P6} = 3.19$ kN/m

$W_{E6} = 4.58$ "

$P_1 = +0.70 \times 1.13 \times 4.50 \times 3.70/2 \times 2 = 3.29$ kN.

$P_2 = -0.50 \times 1.13 \times 4.16 = -2.35$ kN.

$P_3 = +0.70 \times 1.13 \times 4.50 \times 5.50/2 \times 2 = 4.33$ kN

$P_4 = -0.50 \times 1.13 \times 6.19 = -3.09$ ".

$P_{5D} = 2.50$ kN.

$P_{5L} = 24.37 - 2.50 = 21.87$ kN.

$P_{6D} = 2.50$ kN

$P_{6L} = 21.87$ kN.

PJ6.

INPUT/ANALYSIS REPORT

Job: 1020E1

Title: BENDELL

Type: Plane frame
Date: 10 May 2001
Time: 1:08 PM

Nodes	22
Members	25
Spring supports	0
Sections	5
Materials	2
Primary load cases	3
Combination load cases	3

Analysis: Linear elastic

LOAD CASES

Case	Type	Analysis	Title
1	P	L	DEAD
2	P	L	LIVE
3	P	L	WIND
4	C	L	DEAD + LIVE
5	C	L	DEAD + WIND
6	C	L	DEAD + LIVE + WIND

Analysis Types:
S - Skipped (not analysed)
L - Linear
N - Non-linear

NODE COORDINATES

Node	X m	Y m	Z m	Restraint
1	0.000	0.000	0.000	111111
2	4.400	0.000	0.000	111111
3	11.780	0.000	0.000	111111
4	16.180	0.000	0.000	111111
11	0.000	4.000	0.000	000000
12	4.400	4.000	0.000	000000
13	11.780	4.000	0.000	000000
14	16.180	4.000	0.000	000000
21	0.000	7.000	0.000	000000
22	4.400	7.000	0.000	000000
23	11.780	7.000	0.000	000000
24	16.180	7.000	0.000	000000
25	2.200	7.000	0.000	000000
26	8.090	7.000	0.000	000000
27	13.980	7.000	0.000	000000
28	2.200	4.000	0.000	000000
29	8.090	4.000	0.000	000000
30	13.980	4.000	0.000	000000
31	11.780	3.200	0.000	000000
32	4.400	3.200	0.000	000000
33	6.860	3.200	0.000	000000
34	9.320	3.200	0.000	000000

MEMBER DEFINITION

Member	A	B	C	Prop	Matl	Rel-A	Rel-B	Length m
21	1	11	-X	21	2	000000	000000	4.000
22	11	21	-X	22	2	000000	000000	3.000
32	12	22	-X	22	2	000000	000000	3.000
42	13	23	-X	22	2	000000	000000	3.000
51	4	14	-X	21	2	000000	000000	4.000
52	14	24	-X	22	2	000000	000000	3.000
53	21	25	Y	10	1	000000	000000	2.200
54	25	22	Y	10	2	000000	000000	2.200
55	22	26	Y	10	2	000000	000000	3.690
56	26	23	Y	10	2	000000	000000	3.690
57	23	27	Y	10	1	000000	000000	2.200
58	27	24	Y	10	2	000000	000000	2.200
59	11	28	Y	10	2	000000	000000	2.200
60	28	12	Y	10	2	000000	000000	2.200
61	12	29	Y	10	2	000000	000000	3.690
62	29	13	Y	10	2	000000	000000	3.690
63	13	30	Y	10	2	000000	000000	2.200

P17

64	30	14	Y	10	2	000000 000000	2.200
65	3	31	-X	20	2	000000 000000	3.200
66	31	13	-X	20	2	000000 000000	0.800
67	2	32	-X	20	2	000000 000000	3.200
68	32	12	-X	20	2	000000 000000	0.800
70	32	33	Y	1	1	000000 000000	2.460
71	33	34	Y	1	1	000000 000000	2.460
72	34	31	Y	1	1	000000 000000	2.460

LIBRARY SECTIONS

Section	Library	Name	Axis	Comment
1	Asw	250PFC	Y	default
10	Asw	200PFC	Y	Beams
20	Asw	150UC30.0	Y	Exterior_columns
21	Asw	150UC30.0	Y	Interior_columns
22	Asw	100X100X6.0SHS	Y	Interior_columns

SECTION PROPERTIES

Section	Ax	Ay	Az	J	Iy	Iz	fact
	m2	m2	m2	m4	m4	m4	
1	4.520E-03	0.000E+00	0.000E+00	2.380E-07	3.640E-06	4.510E-05	
10	2.920E-03	0.000E+00	0.000E+00	1.010E-07	1.650E-06	1.910E-05	
20	3.860E-03	0.000E+00	0.000E+00	1.090E-07	5.620E-06	1.760E-05	
21	3.860E-03	0.000E+00	0.000E+00	1.090E-07	5.620E-06	1.760E-05	
22	2.130E-03	0.000E+00	0.000E+00	5.150E-06	3.040E-06	3.040E-06	

MATERIAL PROPERTIES

Material	E	u	Density	Alpha
	kN/m2		t/m3	/deg C
1	2.000E+08	0.2500	7.850E+00	1.170E-05
2	2.000E+08	0.2500	7.850E+00	1.170E-05

TABLE OF QUANTITIES

MATERIAL 1

Section	Name	Length	Mass	Comment
		m	tonne	
1	250PFC	7.380	0.262	default
		7.380	0.262	

MATERIAL 2

Section	Name	Length	Mass	Comment
		m	tonne	
10	200PFC	32.380	0.742	Beams
20	150UC30.0	8.000	0.242	Exterior_columns
21	150UC30.0	8.000	0.242	Interior_columns
22	100X100X6.0SHS	12.000	0.201	Interior_columns
		60.360	1.427	

CONDITION NUMBER

Maximum condition number: 2.779E+02 at node: 24 DOFN: 1

APPLIED LOADING

CASE 1: DEAD

Node Loads

Node	X Force	Y Force	Z Force	X Moment	Y Moment	Z Moment
	kN	kN	kN	kNm	kNm	kNm
33	0.000	-2.500	0.000	0.000	0.000	0.000
34	0.000	-2.500	0.000	0.000	0.000	0.000

Member Loads

Member	Form	T	A	S	P1	X1	P2	X2
53	UNIF	FY	GL		-3.600			
54	UNIF	FY	GL		-3.600			
55	UNIF	FY	GL		-2.250			
56	UNIF	FY	GL		-2.250			
57	UNIF	FY	GL		-3.600			
58	UNIF	FY	GL		-3.600			
59	UNIF	FY	GL		-3.190			
60	UNIF	FY	GL		-3.190			
61	UNIF	FY	GL		-1.670			
62	UNIF	FY	GL		-1.670			
63	UNIF	FY	GL		-3.190			

RB

64 UNIF FY GL -3.100

Sum of Applied Loads (Global Axes):
FX: 0.000 FY: -93.682 FZ: 0.000

NODE DISPLACEMENTS

CASE 1: DEAD

Node	X-Disp m	Y-Disp m	Z-Disp m	X-Rotn rad	Y-Rotn rad	Z-Rotn rad
1	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
2	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
3	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
4	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
11	0.0000	-0.0001	0.0000	0.00000	0.00000	-0.00061
12	0.0000	-0.0002	0.0000	0.00000	0.00000	-0.00004
13	0.0000	-0.0002	0.0000	0.00000	0.00000	0.00004
14	0.0000	-0.0001	0.0000	0.00000	0.00000	0.00061
21	0.0000	-0.0001	0.0000	0.00000	0.00000	-0.00115
22	0.0000	-0.0003	0.0000	0.00000	0.00000	-0.00049
23	0.0000	-0.0003	0.0000	0.00000	0.00000	0.00049
24	0.0000	-0.0001	0.0000	0.00000	0.00000	0.00115
25	0.0000	-0.0015	0.0000	0.00000	0.00000	0.00034
26	0.0000	-0.0058	0.0000	0.00000	0.00000	0.00000
27	0.0000	-0.0015	0.0000	0.00000	0.00000	-0.00034
28	0.0000	-0.0012	0.0000	0.00000	0.00000	0.00012
29	0.0000	-0.0036	0.0000	0.00000	0.00000	0.00000
30	0.0000	-0.0012	0.0000	0.00000	0.00000	-0.00012
31	0.0000	-0.0001	0.0000	0.00000	0.00000	0.00021
32	0.0000	-0.0001	0.0000	0.00000	0.00000	-0.00021
33	0.0000	-0.0012	0.0000	0.00000	0.00000	-0.00035
34	0.0000	-0.0012	0.0000	0.00000	0.00000	0.00035

MEMBER FORCES

CASE 1: DEAD

Member	Node	Axial kN	Shear-y kN	Shear-z kN	Torque kNm	Moment-y kNm	Moment-z kNm
21	1	-12.388	0.789	0.000	0.000	0.000	1.039
	11	-12.388	0.789	0.000	0.000	0.000	-2.116
22	11	-6.081	0.719	0.000	0.000	0.000	0.970
	21	-6.081	0.719	0.000	0.000	0.000	-1.189
32	12	-18.062	0.221	0.000	0.000	0.000	0.240
	22	-18.062	0.221	0.000	0.000	0.000	-0.423
42	13	-18.062	-0.221	0.000	0.000	0.000	-0.240
	23	-18.062	-0.221	0.000	0.000	0.000	0.182
51	4	-12.388	-0.789	0.000	0.000	0.000	-1.039
	14	-12.388	-0.789	0.000	0.000	0.000	2.116
52	14	-6.081	-0.719	0.000	0.000	0.000	-0.970
	24	-6.081	-0.719	0.000	0.000	0.000	1.189
53	21	-0.719	-6.081	0.000	0.000	0.000	-1.189
	25	-0.719	1.839	0.000	0.000	0.000	3.477
54	25	-0.719	1.839	0.000	0.000	0.000	3.477
	22	-0.719	9.759	0.000	0.000	0.000	-9.281
55	22	-0.941	-8.302	0.000	0.000	0.000	-9.704
	26	-0.941	0.000	0.000	0.000	0.000	5.614
56	26	-0.941	0.000	0.000	0.000	0.000	5.614
	23	-0.941	8.302	0.000	0.000	0.000	-9.704
57	23	-0.719	-9.759	0.000	0.000	0.000	-9.281
	27	-0.719	-1.839	0.000	0.000	0.000	3.477
58	27	-0.719	-1.839	0.000	0.000	0.000	3.477
	21	-0.719	6.081	0.000	0.000	0.000	-1.189
59	11	-0.069	-6.307	0.000	0.000	0.000	-3.085
	28	-0.069	0.711	0.000	0.000	0.000	3.070
60	28	-0.069	0.711	0.000	0.000	0.000	3.070
	12	-0.069	7.729	0.000	0.000	0.000	-6.215
61	12	-4.462	-6.162	0.000	0.000	0.000	-7.538
	29	-4.462	0.000	0.000	0.000	0.000	3.831
62	29	-4.462	0.000	0.000	0.000	0.000	3.831
	13	-4.462	6.162	0.000	0.000	0.000	-7.538
63	13	-0.069	-7.729	0.000	0.000	0.000	-6.215
	30	-0.069	-0.711	0.000	0.000	0.000	3.070
64	30	-0.069	-0.711	0.000	0.000	0.000	3.070
	14	-0.069	6.307	0.000	0.000	0.000	-3.085
65	3	-34.453	-0.461	0.000	0.000	0.000	-0.503
	31	-34.453	-0.461	0.000	0.000	0.000	0.972
66	31	-31.953	-4.614	0.000	0.000	0.000	-2.608
	13	-31.953	-1.614	0.000	0.000	0.000	1.084
67	2	-31.153	0.461	0.000	0.000	0.000	0.503

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	32	-34.453	0.461	0.000	0.000	0.000	-0.972
68	32	-31.953	4.614	0.000	0.000	0.000	2.608
	12	-31.953	4.614	0.000	0.000	0.000	-1.084
70	32	4.153	-2.500	0.000	0.000	0.000	-3.579
	33	4.153	-2.500	0.000	0.000	0.000	2.571
71	33	4.153	0.000	0.000	0.000	0.000	2.571
	34	4.153	0.000	0.000	0.000	0.000	2.571
72	34	4.153	2.500	0.000	0.000	0.000	2.571
	31	4.153	2.500	0.000	0.000	0.000	-3.579

Positive Forces (Member Axes):
Axial - Tension Shear - End A sagging
Torque - Right-hand twist Moment - Sagging

SUPPORT REACTIONS

CASE 1: DEAD

Node	Force-X kN	Force-Y kN	Force-Z kN	Moment-X kNm	Moment-Y kNm	Moment-Z kNm
1	0.789	12.388	0.000	0.000	0.000	-1.039
2	0.461	34.453	0.000	0.000	0.000	-0.503
3	-0.461	34.453	0.000	0.000	0.000	0.503
4	-0.789	12.388	0.000	0.000	0.000	1.039
SUM:	0.000	93.682	0.000	(all nodes		

Max. residual: 5.151E-14 at DOFN: 3 2

(Reactions act on structure in positive global axis directions.)

CASE 2: LIVE

Node Loads

Node	X Force kN	Y Force kN	Z Force kN	X Moment kNm	Y Moment kNm	Z Moment kNm
33	0.000	-21.870	0.000	0.000	0.000	0.000
34	0.000	-21.870	0.000	0.000	0.000	0.000

Member Loads

Member	Form	Y	A	B	P1	M1	P2	M2
53	UNIF	FY	GL		-1.000			
54	UNIF	FY	GL		-1.000			
55	UNIF	FY	GL		-0.630			
56	UNIF	FY	GL		-0.630			
57	UNIF	FY	GL		-1.000			
58	UNIF	FY	GL		-1.000			
59	UNIF	FY	GL		-4.580			
60	UNIF	FY	GL		-4.580			
61	UNIF	FY	GL		-6.300			
62	UNIF	FY	GL		-6.300			
63	UNIF	FY	GL		-4.580			
64	UNIF	FY	GL		-4.580			

Sum of Applied Loads (Global Axes):
FX: 0.000 FY: -143.987 FZ: 0.000

NODE DISPLACEMENTS

CASE 2: LIVE

Node	X-Disp m	Y-Disp m	Z-Disp m	X-Rotn rad	Y-Rotn rad	Z-Rotn rad
1	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
2	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
3	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
4	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
11	0.0003	-0.0001	0.0000	0.00000	0.00000	-0.00081
12	0.0003	-0.0003	0.0000	0.00000	0.00000	-0.00088
13	-0.0003	-0.0003	0.0000	0.00000	0.00000	0.00088
14	-0.0003	-0.0001	0.0000	0.00000	0.00000	0.00081
21	0.0000	-0.0001	0.0000	0.00000	0.00000	-0.00030
22	0.0000	-0.0003	0.0000	0.00000	0.00000	-0.00011
23	0.0000	-0.0003	0.0000	0.00000	0.00000	0.00011
24	0.0000	-0.0001	0.0000	0.00000	0.00000	0.00030
25	0.0000	-0.0006	0.0000	0.00000	0.00000	0.00001
26	0.0000	-0.0018	0.0000	0.00000	0.00000	0.00000
27	0.0000	-0.0006	0.0000	0.00000	0.00000	-0.00001
28	0.0000	-0.0013	0.0000	0.00000	0.00000	0.00001
29	0.0000	-0.0147	0.0000	0.00000	0.00000	0.00000
30	-0.0003	-0.0013	0.0000	0.00000	0.00000	-0.00034
31	0.0002	-0.0003	0.0000	0.00000	0.00000	0.00179
32	-0.0002	-0.0003	0.0000	0.00000	0.00000	-0.00177
33	-0.0001	-0.0092	0.0000	0.00000	0.00000	-0.00304

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34	0.0001	-0.0092	0.0000	0.00000	0.00000	0.00304

MEMBER FORCES

CASE 2: LIVE

Member	Node	Axial kN	Shear-y kN	Shear-z kN	Torque kNm	Moment-y kNm	Moment-z kNm
21	1	-10.070	0.866	0.000	0.000	0.000	1.021
	11	-10.070	0.866	0.000	0.000	0.000	-0.446
22	11	-1.860	0.531	0.000	0.000	0.000	0.899
	21	-1.860	0.531	0.000	0.000	0.000	-0.694
32	12	-4.864	0.479	0.000	0.000	0.000	0.876
	22	-4.864	0.479	0.000	0.000	0.000	-0.562
42	13	-4.864	-0.479	0.000	0.000	0.000	-0.876
	23	-4.864	-0.479	0.000	0.000	0.000	0.562
51	4	-10.070	-0.866	0.000	0.000	0.000	-1.021
	14	-10.070	-0.866	0.000	0.000	0.000	2.115
52	14	-1.860	-0.531	0.000	0.000	0.000	-0.899
	24	-1.860	-0.531	0.000	0.000	0.000	0.694
53	21	-0.531	-1.860	0.000	0.000	0.000	-0.694
	25	-0.531	0.340	0.000	0.000	0.000	0.979
54	25	-0.531	0.340	0.000	0.000	0.000	0.979
	22	-0.531	2.540	0.000	0.000	0.000	-2.189
55	22	-1.010	-2.325	0.000	0.000	0.000	-2.751
	26	-1.010	0.000	0.000	0.000	0.000	1.538
56	26	-1.010	0.000	0.000	0.000	0.000	1.538
	23	-1.010	2.325	0.000	0.000	0.000	-2.751
57	23	-0.531	-2.540	0.000	0.000	0.000	-2.189
	27	-0.531	-0.340	0.000	0.000	0.000	0.979
58	27	-0.531	-0.340	0.000	0.000	0.000	0.979
	24	-0.531	1.860	0.000	0.000	0.000	-0.694
59	11	-0.336	-8.209	0.000	0.000	0.000	-3.344
	28	-0.336	1.867	0.000	0.000	0.000	3.634
60	28	-0.336	1.867	0.000	0.000	0.000	3.634
	12	-0.336	11.943	0.000	0.000	0.000	-11.556
61	12	-47.988	-23.247	0.000	0.000	0.000	-27.684
	29	-47.988	0.000	0.000	0.000	0.000	15.207
62	29	-47.988	0.000	0.000	0.000	0.000	15.207
	13	-47.988	23.247	0.000	0.000	0.000	-27.684
63	13	-0.336	-11.943	0.000	0.000	0.000	-11.556
	30	-0.336	-1.867	0.000	0.000	0.000	3.634
64	30	-0.336	-1.867	0.000	0.000	0.000	3.634
	14	-0.336	8.209	0.000	0.000	0.000	-3.344
65	3	-61.924	-3.921	0.000	0.000	0.000	-4.307
	31	-61.924	-3.921	0.000	0.000	0.000	3.212
66	31	-40.054	48.131	0.000	0.000	0.000	-23.253
	13	-40.054	-48.131	0.000	0.000	0.000	15.252
67	2	-61.924	3.921	0.000	0.000	0.000	4.307
	32	-61.924	3.921	0.000	0.000	0.000	-3.212
68	32	-40.054	48.131	0.000	0.000	0.000	23.253
	12	-40.054	48.131	0.000	0.000	0.000	-15.252
70	32	44.210	-21.870	0.000	0.000	0.000	-31.495
	33	44.210	-21.870	0.000	0.000	0.000	22.305
71	33	44.210	0.000	0.000	0.000	0.000	22.305
	34	44.210	0.000	0.000	0.000	0.000	22.305
72	34	44.210	21.870	0.000	0.000	0.000	22.305
	21	44.210	21.870	0.000	0.000	0.000	-31.495

Positive Forces (Member Axes):
Axial - Tension Shear - End A sagging
Torque - Right-hand twist Moment - Sagging

SUPPORT REACTIONS

CASE 2: LIVE

Node	Force-X kN	Force-Y kN	Force-Z kN	Moment-X kNm	Moment-Y kNm	Moment-Z kNm
1	0.866	10.070	0.000	0.000	0.000	-1.021
2	3.921	61.924	0.000	0.000	0.000	-4.307
3	-3.921	61.924	0.000	0.000	0.000	4.307
4	-0.866	10.070	0.000	0.000	0.000	1.021
SUM:	0.000	143.987	0.000	(all nodes)		

Max. residual: 1.068E-13 at node 1

(Reactions act on structure in positive global axis directions.)

CASE 3: WIND

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Node Loads

Node	X Force kN	Y Force kN	Z Force kN	X Moment kNm	Y Moment kNm	Z Moment kNm
11	4.090	0.000	0.000	0.000	0.000	0.000
14	3.090	0.000	0.000	0.000	0.000	0.000
21	3.290	0.000	0.000	0.000	0.000	0.000
24	2.350	0.000	0.000	0.000	0.000	0.000

Member Loads

Member	Form	T	A	S	F1	X1	F2	X2
53	UNIF	FY	GL		4.070			
54	UNIF	FY	GL		4.070			
55	UNIF	FY	GL		2.540			
56	UNIF	FY	GL		2.540			
57	UNIF	FY	GL		4.070			
58	UNIF	FY	GL		4.070			

Sum of Applied Loads (Global Axes):
FX: 13.060 FY: 54.561 FZ: 0.000

NODE DISPLACEMENTS

CASE 3: WIND

Node	X-Disp m	Y-Disp m	Z-Disp m	X-Rotn rad	Y-Rotn rad	Z-Rotn rad
1	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
2	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
3	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
4	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
11	0.0055	0.0001	0.0000	0.00000	0.00000	-0.00121
12	0.0055	0.0001	0.0000	0.00000	0.00000	-0.00055
13	0.0055	0.0001	0.0000	0.00000	0.00000	-0.00053
14	0.0055	0.0000	0.0000	0.00000	0.00000	-0.00109
21	0.0125	0.0001	0.0000	0.00000	0.00000	0.00091
22	0.0125	0.0002	0.0000	0.00000	0.00000	0.00027
23	0.0125	0.0003	0.0000	0.00000	0.00000	-0.00077
24	0.0125	0.0001	0.0000	0.00000	0.00000	-0.00184
25	0.0125	0.0016	0.0000	0.00000	0.00000	-0.00025
26	0.0125	0.0001	0.0000	0.00000	0.00000	0.00010
27	0.0125	0.0018	0.0000	0.00000	0.00000	0.00059
28	0.0055	-0.0003	0.0000	0.00000	0.00000	0.00046
29	0.0055	0.0001	0.0000	0.00000	0.00000	0.00027
30	0.0055	0.0001	0.0000	0.00000	0.00000	0.00000
31	0.0048	0.0001	0.0000	0.00000	0.00000	-0.00087
32	0.0048	0.0001	0.0000	0.00000	0.00000	-0.00088
33	0.0048	-0.0004	0.0000	0.00000	0.00000	0.00029
34	0.0048	0.0006	0.0000	0.00000	0.00000	0.00030

MEMBER FORCES

CASE 3: WIND

Member	Node	Axial kN	Shear-y kN	Shear-z kN	Torque kNm	Moment-y kNm	Moment-z kNm
21	1	9.739	-2.031	0.000	0.000	0.000	-5.128
	11	9.739	-2.031	0.000	0.000	0.000	2.997
22	11	7.625	-1.770	0.000	0.000	0.000	-3.086
	21	7.625	-1.770	0.000	0.000	0.000	3.086
32	12	19.869	-1.782	0.000	0.000	0.000	-2.507
	22	19.869	-1.782	0.000	0.000	0.000	2.840
12	13	21.098	-1.372	0.000	0.000	0.000	-2.100
	23	21.098	-1.372	0.000	0.000	0.000	2.009
51	4	4.096	-2.168	0.000	0.000	0.000	-5.295
	14	4.096	-2.168	0.000	0.000	0.000	3.378
52	11	5.969	-0.716	0.000	0.000	0.000	-1.225
	24	5.969	-0.716	0.000	0.000	0.000	0.922
53	21	-1.520	7.625	0.000	0.000	0.000	3.086
	25	-1.520	-1.329	0.000	0.000	0.000	-3.840
54	25	-1.520	-1.329	0.000	0.000	0.000	-3.840
	22	-1.520	-10.283	0.000	0.000	0.000	8.933
55	22	0.263	9.586	0.000	0.000	0.000	11.773
	26	0.263	0.213	0.000	0.000	0.000	-6.305
56	26	0.263	0.213	0.000	0.000	0.000	-6.305
	23	0.263	-9.160	0.000	0.000	0.000	10.201
57	23	1.634	11.939	0.000	0.000	0.000	12.210
	27	1.634	2.985	0.000	0.000	0.000	-4.206
58	27	1.634	2.985	0.000	0.000	0.000	-4.206
	24	1.634	-5.969	0.000	0.000	0.000	-0.922
59	11	-4.069	2.114	0.000	0.000	0.000	5.222
	28	-4.069	2.114	0.000	0.000	0.000	0.572

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60	28	-4.069	2.114	0.000	0.000	0.000	0.572
	12	-4.069	2.114	0.000	0.000	0.000	-4.079
61	12	-1.322	0.457	0.000	0.000	0.000	1.698
	29	-1.322	0.457	0.000	0.000	0.000	0.010
62	29	-1.322	0.457	0.000	0.000	0.000	0.010
	13	-1.322	0.457	0.000	0.000	0.000	-1.678
63	13	1.637	1.873	0.000	0.000	0.000	3.638
	30	1.637	1.873	0.000	0.000	0.000	-0.483
64	30	1.637	1.873	0.000	0.000	0.000	-0.483
	14	1.637	1.873	0.000	0.000	0.000	-4.603
65	3	20.771	-4.445	0.000	0.000	0.000	-8.067
	31	20.771	-4.445	0.000	0.000	0.000	0.126
66	31	22.514	-4.331	0.000	0.000	0.000	-0.255
	13	22.514	-4.331	0.000	0.000	0.000	3.210
67	2	19.954	-4.416	0.000	0.000	0.000	-8.037
	32	19.954	-4.416	0.000	0.000	0.000	0.093
68	32	18.212	-4.529	0.000	0.000	0.000	-0.353
	12	18.212	-4.529	0.000	0.000	0.000	3.270
70	32	-0.113	1.742	0.000	0.000	0.000	6.446
	33	-0.113	1.742	0.000	0.000	0.000	2.161
71	33	-0.113	1.742	0.000	0.000	0.000	2.161
	34	-0.113	1.742	0.000	0.000	0.000	-2.125
72	34	-0.113	1.742	0.000	0.000	0.000	-2.125
	31	-0.113	1.742	0.000	0.000	0.000	-6.411

Positive Forces (Member Axes):
Axial - Tension Shear - End A sagging
Torque - Right-hand twist Moment - Sagging

SUPPORT REACTIONS

CASE 3: WIND

Node	Force-X	Force-Y	Force-Z	Moment-X	Moment-Y	Moment-Z
	kN	kN	kN	kNm	kNm	kNm
1	-2.031	-9.739	0.000	0.000	0.000	5.128
2	-4.416	-19.954	0.000	0.000	0.000	8.037
3	-4.445	-20.771	0.000	0.000	0.000	8.067
4	-2.168	-4.096	0.000	0.000	0.000	5.295
SUM:	-13.060	-54.561	0.000	(all nodes)		

Max. residual: 1.192E-12 at node. 1 3

(Reactions act on structure in positive global axis directions.)

CASE 4: DEAD + LIVE

Load Combinations

Case	Factor	
1	1.000	DEAD
2	1.000	LIVE

Sum of Applied Loads (Global Axes):
FX: 0.000 FY: -237.669 FZ: 0.000

NODE DISPLACEMENTS

CASE 4: DEAD + LIVE

Node	X-Disp	Y-Disp	Z-Disp	X-Rotn	Y-Rotn	Z-Rotn
	m	m	m	rad	rad	rad
1	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
2	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
3	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
4	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
11	0.0003	-0.0001	0.0000	0.00000	0.00000	-0.00142
12	0.0003	-0.0003	0.0000	0.00000	0.00000	-0.00092
13	-0.0003	-0.0005	0.0000	0.00000	0.00000	0.00092
14	-0.0003	-0.0001	0.0000	0.00000	0.00000	0.00142
21	0.0000	-0.0002	0.0000	0.00000	0.00000	-0.00145
22	0.0000	-0.0004	0.0000	0.00000	0.00000	-0.00060
23	0.0000	-0.0006	0.0000	0.00000	0.00000	0.00060
24	0.0000	-0.0002	0.0000	0.00000	0.00000	0.00145
25	0.0000	-0.0021	0.0000	0.00000	0.00000	0.00035
26	0.0000	-0.0070	0.0000	0.00000	0.00000	0.00000
27	0.0000	-0.0021	0.0000	0.00000	0.00000	-0.00035
28	0.0003	-0.0026	0.0000	0.00000	0.00000	0.00046
29	0.0000	-0.0183	0.0000	0.00000	0.00000	0.00000
30	-0.0003	-0.0026	0.0000	0.00000	0.00000	-0.00046
31	0.0002	-0.0004	0.0000	0.00000	0.00000	0.00200
32	-0.0002	-0.0004	0.0000	0.00000	0.00000	-0.00200
33	-0.0001	-0.0104	0.0000	0.00000	0.00000	-0.00339
34	0.0001	-0.0104	0.0000	0.00000	0.00000	0.00339

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MEMBER FORCES

CASE 4: DEAD + LIVE

Member	Node	Axial kN	Shear-y kN	Shear-z kN	Torque kNm	Moment-y kNm	Moment-z kNm
21	1	-22.457	1.655	0.000	0.000	0.000	2.059
	11	-22.457	1.655	0.000	0.000	0.000	-4.560
22	11	-7.941	1.250	0.000	0.000	0.000	1.882
	21	-7.941	1.250	0.000	0.000	0.000	-1.882
32	12	-22.926	0.700	0.000	0.000	0.000	1.116
	22	-22.926	0.700	0.000	0.000	0.000	-0.985
42	13	-22.926	-0.700	0.000	0.000	0.000	-1.116
	23	-22.926	-0.700	0.000	0.000	0.000	0.985
51	4	-22.457	-1.655	0.000	0.000	0.000	-2.059
	14	-22.457	-1.655	0.000	0.000	0.000	4.560
52	14	-7.941	-1.250	0.000	0.000	0.000	-1.882
	24	-7.941	-1.250	0.000	0.000	0.000	1.882
53	21	-1.250	-7.941	0.000	0.000	0.000	-1.882
	25	-1.250	2.179	0.000	0.000	0.000	4.456
54	25	-1.250	2.179	0.000	0.000	0.000	1.456
	22	-1.250	12.299	0.000	0.000	0.000	-11.469
55	22	-1.951	-10.627	0.000	0.000	0.000	-12.454
	26	-1.951	0.000	0.000	0.000	0.000	7.153
56	26	-1.951	0.000	0.000	0.000	0.000	7.153
	23	-1.951	10.627	0.000	0.000	0.000	-12.454
57	23	-1.250	-12.299	0.000	0.000	0.000	-11.469
	27	-1.250	-2.179	0.000	0.000	0.000	4.456
58	27	-1.250	-2.179	0.000	0.000	0.000	1.456
	24	-1.250	7.941	0.000	0.000	0.000	-1.882
59	11	-0.405	-14.516	0.000	0.000	0.000	-6.429
	28	-0.405	2.578	0.000	0.000	0.000	6.704
60	28	-0.405	2.578	0.000	0.000	0.000	6.704
	12	-0.405	19.672	0.000	0.000	0.000	-17.771
61	12	-52.450	-29.409	0.000	0.000	0.000	-35.222
	29	-52.450	0.000	0.000	0.000	0.000	19.038
62	29	-52.450	0.000	0.000	0.000	0.000	19.038
	13	-52.450	29.409	0.000	0.000	0.000	-35.222
63	13	-0.405	-19.672	0.000	0.000	0.000	-17.771
	30	-0.405	-2.578	0.000	0.000	0.000	6.704
64	30	-0.405	-2.578	0.000	0.000	0.000	6.704
	14	-0.405	14.516	0.000	0.000	0.000	-6.429
65	3	-96.377	-4.382	0.000	0.000	0.000	-4.810
	31	-96.377	-4.382	0.000	0.000	0.000	9.213
66	31	-72.007	-52.746	0.000	0.000	0.000	-25.861
	13	-72.007	-52.746	0.000	0.000	0.000	16.335
67	2	-96.377	4.382	0.000	0.000	0.000	4.810
	32	-96.377	4.382	0.000	0.000	0.000	-9.213
68	32	-72.007	52.746	0.000	0.000	0.000	25.861
	12	-72.007	52.746	0.000	0.000	0.000	-16.335
70	32	48.363	-24.370	0.000	0.000	0.000	-35.074
	33	48.363	-24.370	0.000	0.000	0.000	24.876
71	33	48.363	0.000	0.000	0.000	0.000	24.876
	34	48.363	0.000	0.000	0.000	0.000	24.876
72	34	48.363	24.370	0.000	0.000	0.000	24.876
	31	48.363	24.370	0.000	0.000	0.000	-35.074

Positive Forces (Member Axes):
Axial - Tension
Shear - End A sagging
Torque - Right-hand twist
Moment - Sagging

SUPPORT REACTIONS

CASE 4: DEAD + LIVE

Node	Force-X kN	Force-Y kN	Force-Z kN	Moment-X kNm	Moment-Y kNm	Moment-Z kNm
1	1.655	22.457	0.000	0.000	0.000	-2.059
2	4.382	96.377	0.000	0.000	0.000	-4.810
3	-4.382	96.377	0.000	0.000	0.000	4.810
4	-1.655	22.457	0.000	0.000	0.000	2.059
SUM:	0.000	237.669	0.000	(all nodes)		

(Reactions act on structure in positive global axis directions.)

CASE 5: DEAD + WIND

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Load Combinations

Case	Factor	
1	1.000	DEAD
3	1.000	WIND

Sum of Applied Loads (Global Axes):
FX: 13.060 FY: -39.120 FZ: 0.000

NODE DISPLACEMENTS

CASE 5: DEAD + WIND

Node	X-Disp m	Y-Disp m	Z-Disp m	X-Rotn rad	Y-Rotn rad	Z-Rotn rad
1	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
2	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
3	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
4	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
11	0.0055	0.0000	0.0000	0.00000	0.00000	-0.00182
12	0.0055	-0.0001	0.0000	0.00000	0.00000	-0.00059
13	0.0054	-0.0001	0.0000	0.00000	0.00000	-0.00049
14	0.0054	0.0000	0.0000	0.00000	0.00000	-0.00018
21	0.0125	0.0000	0.0000	0.00000	0.00000	-0.00024
22	0.0125	-0.0001	0.0000	0.00000	0.00000	-0.00022
23	0.0125	0.0000	0.0000	0.00000	0.00000	-0.00028
24	0.0125	0.0000	0.0000	0.00000	0.00000	-0.00008
25	0.0125	0.0001	0.0000	0.00000	0.00000	0.00009
26	0.0125	0.0006	0.0000	0.00000	0.00000	0.00013
27	0.0125	0.0003	0.0000	0.00000	0.00000	0.00024
28	0.0055	-0.0015	0.0000	0.00000	0.00000	0.00023
29	0.0055	-0.0035	0.0000	0.00000	0.00000	0.00027
30	0.0054	-0.0009	0.0000	0.00000	0.00000	0.00025
31	0.0049	-0.0001	0.0000	0.00000	0.00000	-0.00066
32	0.0048	-0.0001	0.0000	0.00000	0.00000	-0.00110
33	0.0048	-0.0016	0.0000	0.00000	0.00000	-0.00006
34	0.0048	-0.0006	0.0000	0.00000	0.00000	0.00065

MEMBER FORCES

CASE 5: DEAD + WIND

Member	Node	Axial kN	Shear-y kN	Shear-z kN	Torque kNm	Moment-y kNm	Moment-z kNm
21	1	-2.649	-1.243	0.000	0.000	0.000	-4.089
	11	-2.649	-1.243	0.000	0.000	0.000	0.882
22	11	1.544	-1.051	0.000	0.000	0.000	-1.255
	12	1.544	-1.051	0.000	0.000	0.000	1.897
32	12	1.807	-1.561	0.000	0.000	0.000	-2.266
	22	1.807	-1.561	0.000	0.000	0.000	2.417
42	13	3.037	-1.593	0.000	0.000	0.000	-2.347
	23	3.037	-1.593	0.000	0.000	0.000	2.732
51	4	-8.291	-2.957	0.000	0.000	0.000	-6.334
	14	-8.291	-2.957	0.000	0.000	0.000	5.494
52	14	-0.111	-1.435	0.000	0.000	0.000	-2.195
	24	-0.111	-1.435	0.000	0.000	0.000	2.111
53	21	-2.239	1.544	0.000	0.000	0.000	1.897
	25	-2.239	0.510	0.000	0.000	0.000	-0.363
54	25	-2.239	0.510	0.000	0.000	0.000	-0.363
	26	-2.239	-0.557	0.000	0.000	0.000	-0.548
55	22	-0.678	1.283	0.000	0.000	0.000	2.070
	26	-0.678	0.213	0.000	0.000	0.000	-0.691
56	26	-0.678	0.213	0.000	0.000	0.000	-0.691
	27	-0.678	-0.857	0.000	0.000	0.000	0.197
57	23	0.915	2.179	0.000	0.000	0.000	2.929
	27	0.915	1.145	0.000	0.000	0.000	-0.728
58	27	0.915	1.145	0.000	0.000	0.000	-0.728
	28	0.915	0.111	0.000	0.000	0.000	-2.111
59	11	-4.138	-4.193	0.000	0.000	0.000	2.137
	28	-4.138	2.825	0.000	0.000	0.000	3.642
60	28	-4.138	2.825	0.000	0.000	0.000	3.642
	12	-4.138	5.813	0.000	0.000	0.000	-10.291
61	12	-5.784	-5.705	0.000	0.000	0.000	-5.841
	29	-5.784	0.457	0.000	0.000	0.000	3.841
62	29	-5.784	0.457	0.000	0.000	0.000	3.841
	13	-5.784	6.619	0.000	0.000	0.000	-9.217
63	13	1.568	-5.856	0.000	0.000	0.000	-2.577
	30	1.568	1.162	0.000	0.000	0.000	2.587
64	30	1.568	1.162	0.000	0.000	0.000	2.587
	14	1.568	8.180	0.000	0.000	0.000	-7.689
65	3	-13.682	-4.906	0.000	0.000	0.000	-8.570
	31	-13.682	-4.906	0.000	0.000	0.000	7.127

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66	31	-9.439	-8.945	0.000	0.000	0.000	-2.963
	13	-9.439	-8.945	0.000	0.000	0.000	4.294
67	2	-14.499	-3.955	0.000	0.000	0.000	-7.533
	32	-14.499	-3.955	0.000	0.000	0.000	5.121
68	32	-13.741	0.085	0.000	0.000	0.000	2.255
	12	-13.741	0.085	0.000	0.000	0.000	2.187
70	32	4.040	-0.758	0.000	0.000	0.000	2.867
	33	4.040	-0.758	0.000	0.000	0.000	4.731
71	33	4.040	1.742	0.000	0.000	0.000	4.731
	34	4.040	1.742	0.000	0.000	0.000	0.446
72	34	4.040	4.242	0.000	0.000	0.000	0.446
	31	4.040	4.242	0.000	0.000	0.000	-9.990

Positive Forces (Member Axes):
Axial - Tension Shear - End A sagging
Torque - Right-hand twist Moment - Sagging

SUPPORT REACTIONS

CASE 5: DEAD + WIND

Node	Force-X kN	Force-Y kN	Force-Z kN	Moment-X kNm	Moment-Y kNm	Moment-Z kNm
1	-1.243	2.649	0.000	0.000	0.000	4.089
2	-3.955	14.499	0.000	0.000	0.000	7.533
3	-4.906	13.682	0.000	0.000	0.000	8.570
4	-2.957	8.291	0.000	0.000	0.000	6.334
SUM:	-13.060	39.120	0.000	(all nodes)		

(Reactions act on structure in positive global axis directions.)

CASE 6: DEAD + LIVE + WIND

Load Combinations

Case	Factor	
1	0.750	DEAD
2	0.750	LIVE
3	0.750	WIND

Sum of Applied Loads (Global Axes):
FX: 9.795 FY: -137.331 FZ: 0.000

NODE DISPLACEMENTS

CASE 6: DEAD + LIVE + WIND

Node	X-Disp m	Y-Disp m	Z-Disp m	X-Rotn rad	Y-Rotn rad	Z-Rotn rad
1	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
2	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
3	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
4	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
11	0.0044	0.0000	0.0000	0.00000	0.00000	-0.00197
12	0.0040	-0.0003	0.0000	0.00000	0.00000	-0.00115
13	0.0038	-0.0003	0.0000	0.00000	0.00000	0.00029
14	0.0038	-0.0001	0.0000	0.00000	0.00000	0.00025
21	0.0094	-0.0001	0.0000	0.00000	0.00000	-0.00041
22	0.0091	-0.0003	0.0000	0.00000	0.00000	-0.00021
23	0.0094	-0.0003	0.0000	0.00000	0.00000	-0.00013
24	0.0094	-0.0001	0.0000	0.00000	0.00000	-0.00029
25	0.0094	-0.0004	0.0000	0.00000	0.00000	0.00008
26	0.0091	-0.0003	0.0000	0.00000	0.00000	0.00010
27	0.0094	-0.0002	0.0000	0.00000	0.00000	0.00017
28	0.0044	-0.0021	0.0000	0.00000	0.00000	0.00069
29	0.0041	-0.0136	0.0000	0.00000	0.00000	0.00020
30	0.0038	-0.0016	0.0000	0.00000	0.00000	-0.00007
31	0.0038	-0.0002	0.0000	0.00000	0.00000	0.00085
32	0.0035	-0.0002	0.0000	0.00000	0.00000	-0.00216
33	0.0036	-0.0081	0.0000	0.00000	0.00000	-0.00233
34	0.0037	-0.0074	0.0000	0.00000	0.00000	0.00277

MEMBER FORCES

CASE 6: DEAD + LIVE + WIND

Member	Mid	Axial kN	Shear-y kN	Shear-z kN	Torque kNm	Moment-y kNm	Moment-z kNm
21	1	-9.539	-0.282	0.000	0.000	0.000	-2.301
	11	-9.539	-0.282	0.000	0.000	0.000	-1.172
22	11	-0.237	-0.390	0.000	0.000	0.000	-1.187
	21	-0.237	-0.390	0.000	0.000	0.000	0.903
32	12	-2.293	-0.812	0.000	0.000	0.000	-1.043
	22	-2.293	-0.812	0.000	0.000	0.000	1.392

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42	13	-1.371	-1.554	0.000	0.000	0.000	-2.417
	23	-1.371	-1.554	0.000	0.000	0.000	2.245
51	4	-13.771	-2.868	0.000	0.000	0.000	-5.516
	11	-13.771	-2.868	0.000	0.000	0.000	7.974
52	14	-1.479	-1.474	0.000	0.000	0.000	-2.320
	24	-1.479	-1.474	0.000	0.000	0.000	2.103
53	21	-2.077	-0.237	0.000	0.000	0.000	0.903
	22	-2.077	0.637	0.000	0.000	0.000	0.462
54	25	-2.077	0.637	0.000	0.000	0.000	0.462
	22	-2.077	1.512	0.000	0.000	0.000	-1.902
55	22	-1.266	-0.781	0.000	0.000	0.000	-0.511
	26	-1.266	0.160	0.000	0.000	0.000	0.636
56	26	-1.266	0.160	0.000	0.000	0.000	0.636
	23	-1.266	1.101	0.000	0.000	0.000	-1.690
57	23	0.288	-0.270	0.000	0.000	0.000	0.555
	27	0.288	0.604	0.000	0.000	0.000	0.188
58	27	0.288	0.604	0.000	0.000	0.000	0.188
	24	0.288	1.479	0.000	0.000	0.000	-2.103
59	11	-3.355	-9.302	0.000	0.000	0.000	-0.905
	28	-3.355	3.519	0.000	0.000	0.000	5.457
60	28	-3.355	3.519	0.000	0.000	0.000	5.457
	12	-3.355	16.339	0.000	0.000	0.000	-16.387
61	12	-40.329	-21.714	0.000	0.000	0.000	-25.143
	29	-40.329	8.343	0.000	0.000	0.000	14.286
62	29	-40.329	8.343	0.000	0.000	0.000	14.286
	13	-40.329	22.400	0.000	0.000	0.000	-27.675
63	13	0.924	-13.349	0.000	0.000	0.000	-10.600
	30	0.924	-0.529	0.000	0.000	0.000	4.666
64	30	0.924	-0.529	0.000	0.000	0.000	4.666
	14	0.924	12.292	0.000	0.000	0.000	-8.274
65	3	-56.704	-6.620	0.000	0.000	0.000	-9.658
	31	-56.704	-6.620	0.000	0.000	0.000	11.527
66	31	-37.120	-42.808	0.000	0.000	0.000	-19.587
	13	-37.120	-42.808	0.000	0.000	0.000	14.659
67	2	-57.317	-0.025	0.000	0.000	0.000	-2.420
	32	-57.317	-0.025	0.000	0.000	0.000	-2.420
68	32	-40.346	36.162	0.000	0.000	0.000	19.131
	12	-40.346	36.162	0.000	0.000	0.000	-9.799
70	32	36.187	-16.971	0.000	0.000	0.000	-21.471
	33	36.187	-16.971	0.000	0.000	0.000	20.277
71	33	36.187	1.307	0.000	0.000	0.000	20.277
	34	36.187	1.307	0.000	0.000	0.000	17.063
72	34	36.187	19.584	0.000	0.000	0.000	17.063
	21	36.187	19.584	0.000	0.000	0.000	-31.114

Positive Forces (Member Axes):
Axial - Tension Shear - End A sagging
Torque - Right-hand twist Moment - Sagging

SUPPORT REACTIONS

CASE 6: DEAD + LIVE + WIND

Node	FX	FY	FZ	MX	MY	MZ
	kN	kN	kN	kNm	kNm	kNm
1	-0.282	9.539	0.000	0.000	0.000	2.301
2	-0.025	57.317	0.000	0.000	0.000	2.420
3	-8.278	56.791	0.000	0.000	0.000	8.458
4	-2.000	13.771	0.000	0.000	0.000	5.516
SUM:	-9.790	137.331	0.000	(all nodes)		

(Reactions act on structure in positive global axis directions.)

Nilsson Noel & Holmes (Engineers) P/L
Job: 1020E1
BENDELL

10 May 2001
01:08 PM

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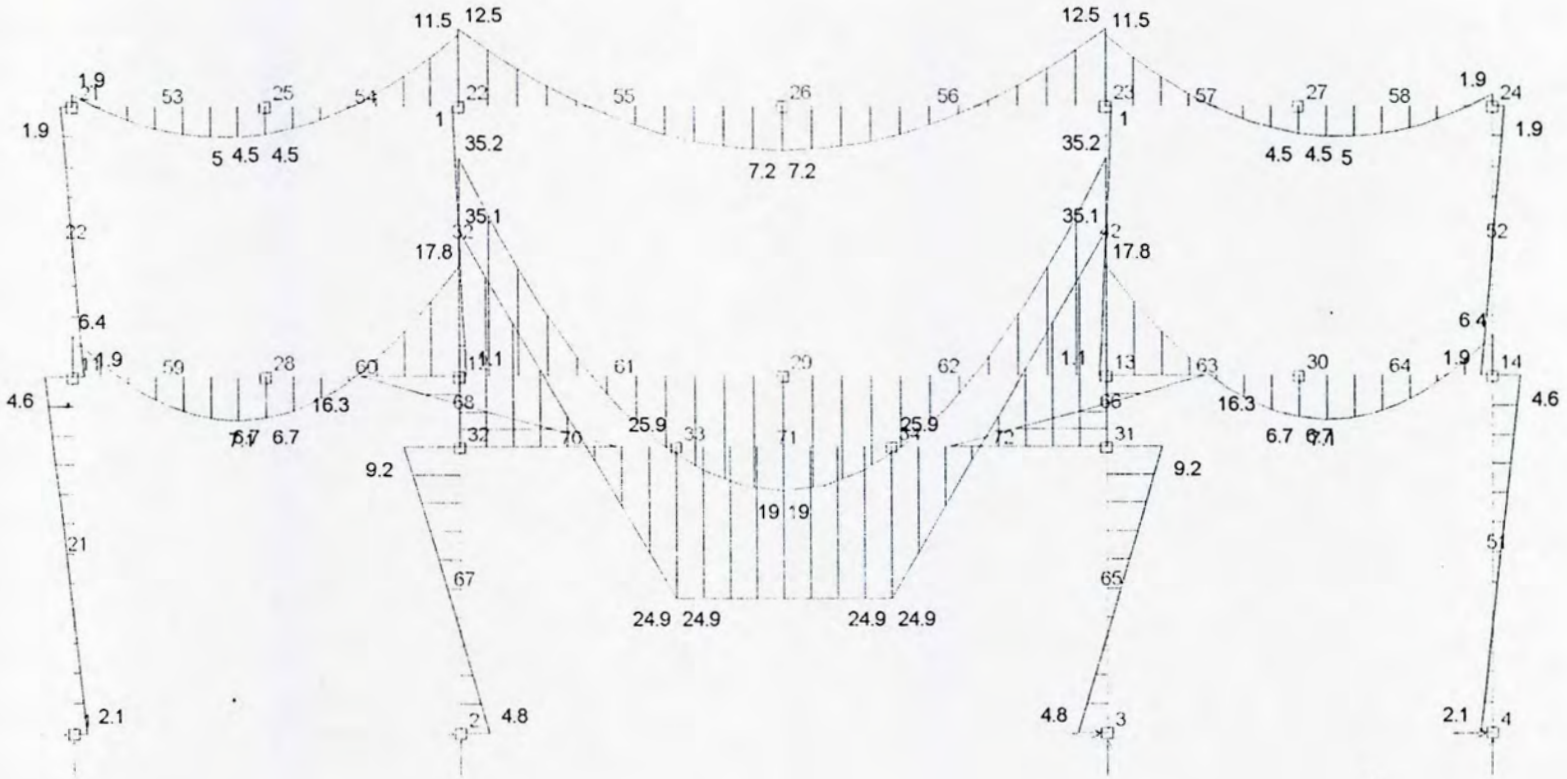
Load Cases:
—— 4 C DEAD + LIVE



Y
Z X
theta: 270 phi: 0

MOMENTS - DL + LL

Bending Moment, Mz

Microstran [V7.00.01c]

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Nilsson Noel & Holmes (Engineers) P/L
Job: 1020E1
BENDELL

10 May 2001
01:06 PM

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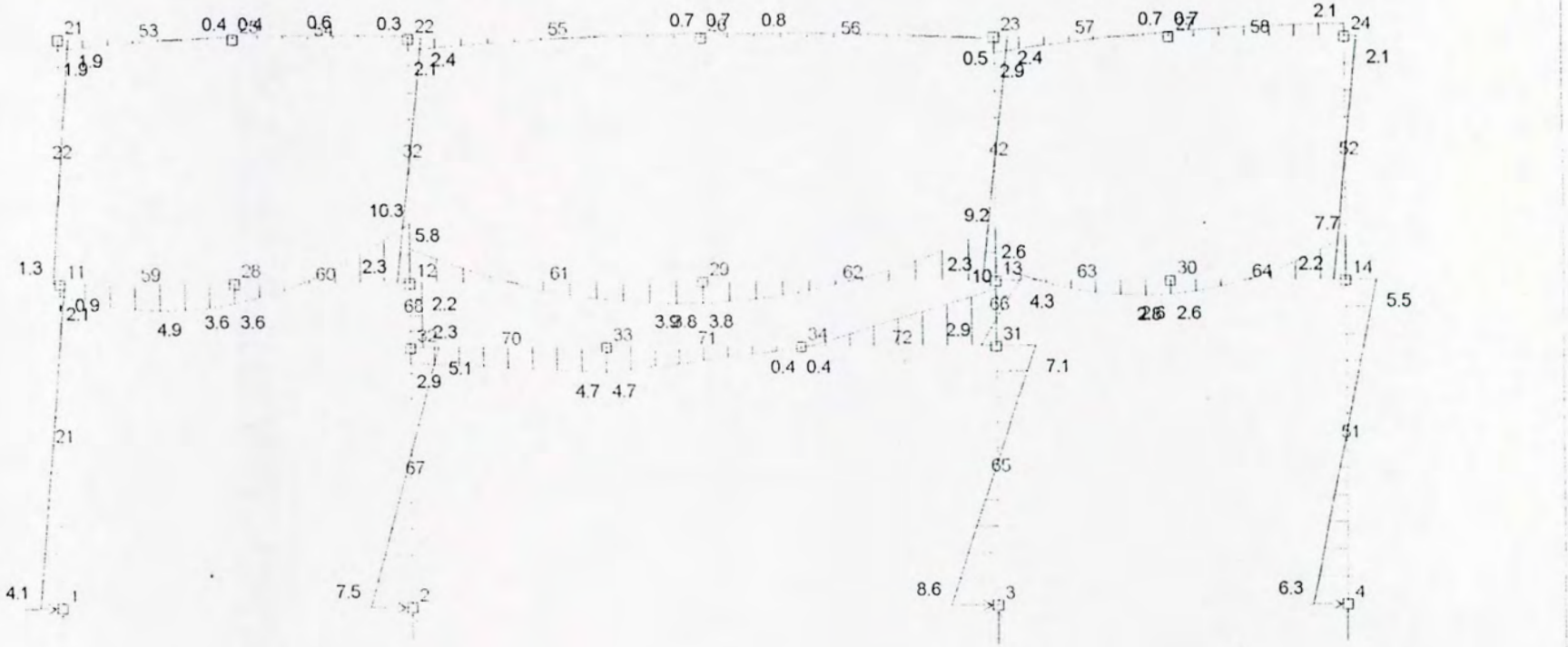
Load Cases:
—— 5 C DEAD + WIND



Y
Δ
Z ⟶ X
theta: 270 phi: 0

MOMENTS - DL + WL

Bending Moment, Mz

Microstran [V7.00.01c]

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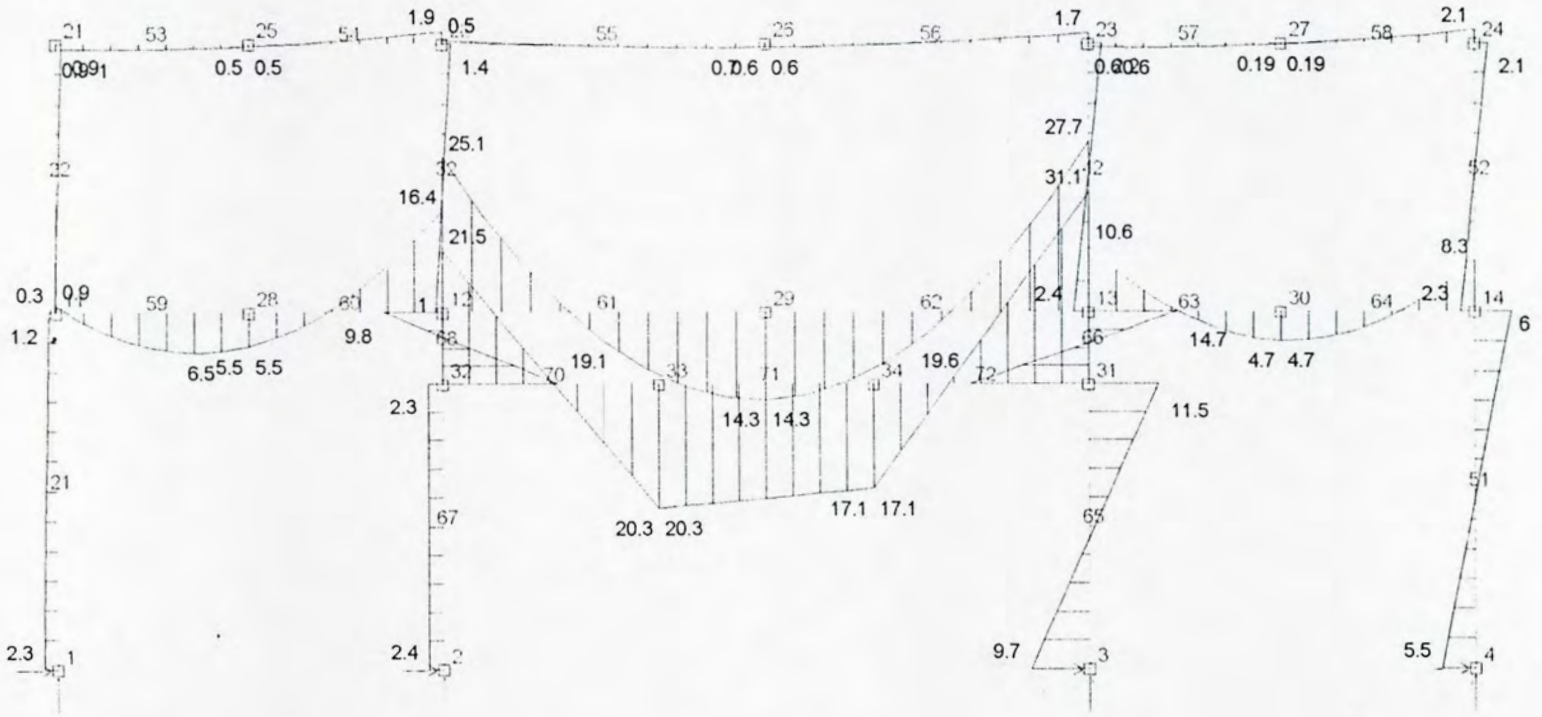
Nilsson Noel & Holmes (Engineers) P/L
Job: 1020E1
BENDELL

10 May 2001
01:04 PM

P29

Load Cases:
6 C DEAD + LIVE + WIND



Y
Z X
theta: 270 phi: 0

MOMENTS - DL + LL + WL

Bending Moment, Mz

Microstran [V7.00.01c]

C:\Mswin\Data\1020E1

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Project _____ Job No 1020e

Page 30 Date 3/4/01 By PMH.

Job Location _____

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2.2. Roof Beams RB1 - RB2

From computer analysis M_{max} -ve = 125 kN.m.
& M_{max} +ve = 72 kN/m.

Trial section 200PFC.

(i) -ve Bending.

- full restraint provided
⇒ ϕ = 165 MPa
& $f_b = M/Z = 12.50 \times 10^3 / 191 \times 10^3$
= 65 MPa < ϕ.
∴ OK.

(ii) +ve Bending

assume no restraint
$\ell_{ty} = 7380 \times 080/23.8 = 248.$ $D/T = 16.7$
⇒ ϕ = 86 MPa
$f_b = M/Z = 72 \times 10^3/191$
= 38 MPa < ϕ. ∴ OK.

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Page 31 Date 2/4/01 By PMH.

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(iii) Check Deflection

from computer analysis

Δ_{max} = 7.6mm. (span/971)

∴ O.K.

Adopt 200PFC for steel beams RB1 – RB3.

2.3 Design of Columns C1

from computer analysis M_{max} = 242 kNm.

Try 100×6.0 SHS. P_{max} = 22.93 kN.

(i) Bending.

full restraint at critical section

$\Rightarrow \phi b$ = 210 MPa

$f_b = M/Z = 242\times10^3/607$

= 40 MPa $< \phi b$.

∴ O.K.

(ii) Axial Compression

ℓ_e = 3000/27.5 = 109.

$\Rightarrow f_{ac}$ = 120 MPa.

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Project Job No 6202

Page 32 Date 27/4/01 By PWH

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$f_{ac} = P/A = 2299 \times 10^3 / 2130 = 11$ MPa $< f_{ac}$

$\therefore$ OK.

combined stresses not critical by observation.

4. Adopt 100×60 SHS for columns C1

24 Floor beams FB10, FB12, FB7 & FB9

from computer analysis

$M_{max} = 171$ kNm. (DL+LL)

$= 139$ " (DL+WL)

(i) Check Bending

full restraint @ critical section

Try 200 PFC

$\Rightarrow f_y = 165$ MPa

& $f_b = M/Z = 171 \times 10^3 / 191$

$= 93$ MPa $< f_y$.

$\therefore$ OK.

(ii) Check Deflection

$\delta_{max} = 26$ mm (span/1690)

$\therefore$ OK.

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OK. Adopt 200PFC for steel beams FB10, FB12, FB7 & FB9.

25 Beams FB11a., FB11b & FB8.

from computer analysis

M_{max} = -35.1 kN.m. or + 19.03 kN.m.

Assume full restraint in both situations

(i) Check Bending.

Try 250PFC

Z_x = 165 mm^3

$f_b = M/Z = 35.1 \times 10^3 / 361$

= 97 MPa < f_b.

∴ OK.

(ii) Check Deflection

S_{max} = 18.3 mm

(span/403)

Considered OK.

OK. Adopt 250PFC for beams FB11a, FB11b & FB8.

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2.6. Columns C2

M_{max} = 25.86 kNm.) DL+LL.
P_{max} = 72.00 kN.

Try 150UC30.

(i) Bending.

full restraint at critical section
$\Rightarrow f_b$ = 165 MPa
$f_b = M/Z = 25.86 \times 10^3 / 221$
= 117 MPa < f_b.
∴ OK.

(ii) Axial Compression

$l_{ey}/r_y = 4000/30.2 = 105$
$\Rightarrow f_{ac}$ = 21 MPa

$f_{ae} = P/A = 72.00 \times 10^3 / 3820$
= 19 MPa < f_{ac}.
∴ OK.

(iii) Combined Stresses $f_{ae}/f_{ac} = 19/74 = 0.25 > 0.15$.

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$\therefore \frac{f_{ac}}{F_{ac}} + \frac{C_m f_{bc}}{\left(1 - \frac{f_{ac}}{0.6 F_{ac}}\right) F_{bc}}$ $C_m = 0.85$

$F_{bc} = 195 MPa.$

$\therefore 0.25 + \frac{0.85 \times 117}{\left(1 - \frac{19}{0.6 \times 195}\right) \times 165} = 0.97 < 1.00$

$\therefore$ OK.

$\therefore$ Adopt 150UC30 for steel column C2

JOB No: 1020E

DATE: 27-Apr-01

SHEET: 36.

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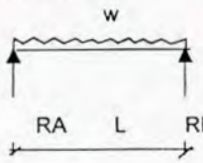
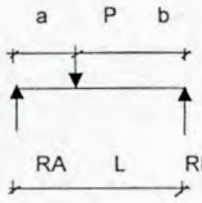
MEMBER REFERENCE: FB21 & FB22

1. LOADS:

			DL		LL		WL	
Roof Load	Roof Pitch (Deg)	NA	-	-	A (sq.m.) =	0.00	-	-
	No roof loads to beam		0.00	kPa	0.00	kPa	0.00	kPa
Upper Wall Load	No upper wall load to beam		0.00	kPa	-	-	-	-
Lower Wall Load:	No lower wall load to beam		0.00	kPa	-	-	-	-
Upper Floor Load	No upper floor load to beam		0.00	kPa	0.00	kPa	-	-
Balcony / Deck Load	No balcony loads to beam(s)		0.00	kPa	3.00	kPa	-	-
Self Weight			0.30	kN/m	-	-	-	-



LOAD TYPE	DEAD	LIVE	WIND	DIST. 'a' (m)	TOTAL (DL + LL)	TOTAL (DL + WL)
w (kN/m)	**1.73**	**6.60**	**NA**		**8.33**	**NA**
P (kN)	**0.00**	**0.00**	**NA**	**0.00**	**0.00**	**NA**



	SPAN (m)	MOMENTS (kN.m)	'RA' (kN)	'RB' (kN)
DL + LL	**4.75**	**23.49**	**19.78**	**19.78**
DL + WL	**NA**	**NA**	**NA**	**NA**

2. DESIGN:

	BENDING STRESS						
	K1	K11	K12	F'b (Mpa)	fb (Mpa)	l/ryy	D/T
No timber beam option	-	-	-	-	-		
No timber beam option	-	-	-	-	-		
200PFC				144	123	122	17

Bending stresses are O.K.

	DEFLECTION						SHEAR	
	dDL (mm)	dDL span/	dLL (mm)	dLL span/	d(d+w) (mm)	d(d+w) span/	F's (or Fv) (Mpa)	fs (or fv) (Mpa)
No timber beam option	-	-	-	-	-	-	-	-
No timber beam option	-	-	-	-	-	-	-	-
200PFC	3.0	1582	11.5	415	-	-	96	16

Deflection limits are O.K. **Shear stress O.K.**

*** ADOPT ANY OF FOLLOWING OPTIONS FOR MEMBER(S):** FB21 & FB22

No timber beam alternative

No timber beam alternative

200PFC Steel Beam **

** Provide lateral restraint to steel beam at 2900 mm crs (maximum) as per detail.

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JOB No: 1020E

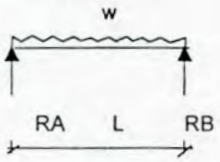
DATE: 27-Apr-01

SHEET: 37

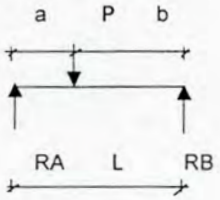
MEMBER REFERENCE: **FB5 - FB6 & FB23 - FB24**

1. LOADS:

			DL		LL		WL	
Roof Load	Roof Pitch (Deg)	NA	-	-	A (sq.m.) =	13.13	-	-
	Metal deck on rafters		0.46	kPa	0.26	kPa	0.00	kPa
Upper Wall Load	Brick Veneer wall		2.70	kPa	-	-	-	-
Lower Wall Load:	No lower wall load to beam		0.00	kPa	-	-	-	-
Upper Floor Load	Timber floor		0.65	kPa	1.50	kPa	-	-
Balcony / Deck Load	No balcony load to beam		0.00	kPa	0.00	kPa	-	-
Self Weight			0.30	kN/m	-	-	-	-



LOAD TYPE	DEAD	LIVE	WIND	DIST. 'a' (m)	TOTAL (DL + LL)	TOTAL (DL + WL)
w (kN/m)	**1.79**	**0.68**	**NA**		**2.47**	**NA**
P (kN)	**11.81**	**3.41**	**NA**	**2.10**	**15.22**	**NA**



	SPAN (m)	MOMENTS (kN.m)	'RA' (kN)	'RB' (kN)
DL + LL	**4.20**	**22.62**	**12.80**	**12.80**
DL + WL	**NA**	**NA**	**NA**	**NA**

2. DESIGN:

				BENDING STRESS			
	K1	K11	K12	F'b (Mpa)	fb (Mpa)	I/ryy	D/T
No timber beam option	-	-	-	-	-		
No timber beam option	-	-	-	-	-		
200UB25				118	97	135	26

Bending stresses are O.K.

	DEFLECTION						SHEAR	
	dDL (mm)	dDL span/	dLL (mm)	dLL span/	d(d+w) (mm)	d(d+w) span/	F's (or Fv) (Mpa)	fs (or fv) (Mpa)
No timber beam option	-	-	-	-	-	-	-	-
No timber beam option	-	-	-	-	-	-	-	-
200UB25	5.4	778	1.7	NA	-	-	96	11

Deflection limits are slightly high but considered O.K. **Shear stress O.K.**

* ADOPT ANY OF FOLLOWING OPTIONS FOR MEMBER(S): FB5 - FB6 & FB23 - FB24

No timber beam alternative

No timber beam alternative

200UB25 **Steel Beam**

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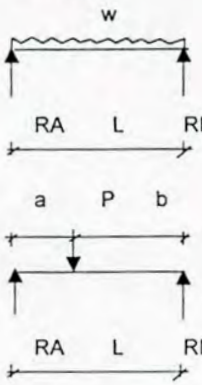
JOB No: 1020E
DATE: 27-Apr-01
SHEET: 38.

MEMBER REFERENCE: FB13 - FB20

1. LOADS:

			DL		LL		WL	
Roof Load	Roof Pitch (Deg)	NA	-	-	A (sq.m.) =	0.00	-	-
	No roof loads to beam		0.00	kPa	0.00	kPa	0.00	kPa
Upper Wall Load	Stud clad wall		0.50	kPa	-	-	-	-
Lower Wall Load:	No lower wall load to beam		0.00	kPa	-	-	-	-
Upper Floor Load	Timber floor		0.65	kPa	1.50	kPa	-	-
Balcony / Deck Load	No balcony load to beam		0.00	kPa	0.00	kPa	-	-
Self Weight			0.30	kN/m	-	-	-	-



LOAD TYPE	DEAD	LIVE	WIND	DIST. 'a' (m)	TOTAL (DL + LL)	TOTAL (DL + WL)
w (kN/m)	**4.23**	**6.30**	**NA**		**10.53**	**NA**
P (kN)	**0.00**	**0.00**	**NA**	**0.00**	**0.00**	**NA**

	SPAN (m)	MOMENTS (kN.m)	'RA' (kN)	'RB' (kN)
DL + LL	**4.40**	**25.48**	**23.17**	**23.17**
DL + WL	**NA**	**NA**	**NA**	**NA**

2. DESIGN:

BENDING STRESS

	K1	K11	K12	F'b (Mpa)	fb (Mpa)	I/ryy	D/T
No timber beam option	-	-	-	-	-		
No timber beam option	-	-	-	-	-		
200UB25				165	110	15	26

Bending stresses are O.K.

DEFLECTION **SHEAR**

	dDL (mm)	dDL span/	dLL (mm)	dLL span/	d(d+w) (mm)	d(d+w) span/	F's (or Fv) (Mpa)	fs (or fv) (Mpa)
No timber beam option	-	-	-	-	-	-	-	-
No timber beam option	-	-	-	-	-	-	-	-
200UB25	4.4	1006	6.5	675	-	-	96	20

Deflection limits are O.K. **Shear stress O.K.**

*** ADOPT ANY OF FOLLOWING OPTIONS FOR MEMBER(S):** FB13 - FB20

No timber beam alternative
No timber beam alternative
200UB25 **Steel Beam ****

** Provide lateral restraint to steel beam at 450 mm crs (maximum) as per detail.

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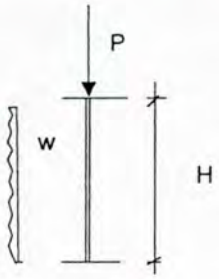
JOB No: 1020E
DATE: 27-Apr-01
SHEET: 39

COLUMN REFERENCE: C1

1. LOADS:

			DL		LL		WL	
Roof Load	Roof Pitch (Deg)	NA	-	-	A (sq.m.) =	13.13	-	-
	Concrete tiles on trusses		0.90	kPa	0.26	kPa	1.03	kPa
Upper Wall Load	Stud clad wall		0.50	kPa	-	-	-	-
Lower Wall Load:	No lower wall load to beam		0.00	kPa	-	-	-	-
Upper Floor Load	Timber floor		0.65	kPa	1.50	kPa	-	-
Balcony / Deck Load	No balcony load to beam		0.00	kPa	0.00	kPa	-	-



Max Axial Loads	P (DL)	=	18.83 Kn
	P (LL)	=	17.28 Kn
	P (WL)	=	0.00 Kn
Max Lateral wind load	w (WL)	=	NA
Max height of column H		=	4000 mm
Distance between lateral restraints (xx)		=	4000 mm
Distance between lateral restraints (yy)		=	4000 mm
P max (DL + LL)		=	**36.11 kN**
P max (DL + WL)		=	**NA**
Vertical load eccentricity (steel column only)		=	**100 mm**
Induced moments due to eccentricity		=	**3.61 kN.m.**

2. TIMBER COLUMN:

COMPRESSION

K1	g13	S3	Rho	Rho.S3	k12	Fac (Mpa)	fac (Mpa)
NA	NA	NA	NA	NA	NA	NA	NA

Not Applicable

BENDING

K1	K11	K12	F'b (Mpa)	fb (Mpa)
NA	NA	NA	NA	NA

Not Applicable

COMBINED

fac/Fac + fb/Fb

NA

Not Applicable

SHEAR

Fs (Mpa)	fs (Mpa)
NA	NA

Not Applicable

3. STEEL COLUMN:

BENDING STRESSES

Fb (Mpa)	fb (Mpa)
210	59

Bending stresses O.K.

Effective length factor	l/r(min)
1.00	107

COMPRESSION

Fy (Mpa)	Fac (Mpa)	fac (Mpa)
350	81	17

Compressive stress O.K.

COMBINED STRESSES
fac/Fac + fb/Fb
(refer AS 1250)
0.29 < 1.00
Combined stresses O.K.

APPROVED SECTION(S) FOR COLUMN(S): C1

No timber option providied

100X6.0SHS steel column

JOB No: 1020E
DATE: 27-Apr-01
SHEET: 40.

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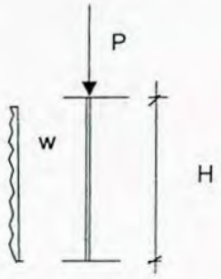
COLUMN REFERENCE: DS

1. LOADS:

			DL		LL		WL	
Roof Load	Roof Pitch (Deg)	NA	-	-	A (sq.m.) =	0.00	-	-
	No roof loads to beam		0.90	kPa		kPa	0.00	kPa
Upper Wall Load	Stud clad wall		0.50	kPa	-	-	-	-
Lower Wall Load:	No lower wall load to beam		0.00	kPa	-	-	-	-
Upper Floor Load	No upper floor load to beam		0.00	kPa	0.00	kPa	-	-
Balcony / Deck Load	No balcony load to beam		0.00	kPa	0.00	kPa	-	-



Max Axial Loads	P (DL)	=	5.94	Kn
	P (LL)	=	2.00	Kn
	P (WL)	=	0.00	Kn
Max Lateral wind load	w (WL)	=	NA	
Max height of column H		=	3000	mm
Distance between lateral restraints (xx)		=	3000	mm
Distance between lateral restraints (yy)		=	3000	mm
P max (DL + LL)		=	**7.94**	**kN**
P max (DL + WL)		=	**NA**	
Vertical load eccentricity (steel column only)		=	**NA**	
Induced moments due to eccentricity		=	**NA**	

2. TIMBER COLUMN:

COMPRESSION

K1	g13	S3	Rho	Rho.S3	k12	Fac (Mpa)	fac (Mpa)
1.65	1.00	33.33	0.95	31.67	0.20	1.3	1.0

Compressive stress O.K.

BENDING

K1	K11	K12	F'b (Mpa)	fb (Mpa)
NA	NA	NA	NA	NA

Not Applicable

COMBINED

fac/Fac + fb/Fb

NA

Not Applicable

SHEAR

Fs (Mpa)	fs (Mpa)
NA	NA

Not Applicable

3. STEEL COLUMN:

BENDING STRESSES

Fb (Mpa)	fb (Mpa)	Effective length factor
NA	NA	NA

Not Applicable

COMPRESSION

l/r(min)	Fy (Mpa)	Fac (Mpa)	fac (Mpa)
NA	NA	NA	NA

Not Applicable

COMBINED STRESSES

fac/Fac + fb/Fb
(refer AS 1250)
NA < 1.00
Not Applicable

APPROVED SECTION(S) FOR COLUMN(S): DS

F5 Pinus timber **2 No:** **90** **x** **45** **mm**

No Steel Column Option Provided

NNH (ENGINEERS) P/L
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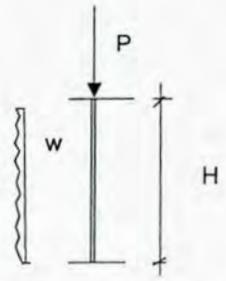
PH: 9775 2589

JOB No: 1020E
DATE: 27-Apr-01
SHEET: 41

COLUMN REFERENCE: TS1

1. LOADS:

			DL		LL		WL	
Roof Load	Roof Pitch (Deg)	NA	-	-	A (sq.m.) =	13.13	-	-
	Concrete tiles on trusses		0.90	kPa	0.26	kPa	0.00	kPa
Upper Wall Load	No upper wall load to beam		0.00	kPa	-	-	-	-
Lower Wall Load:	No lower wall load to beam		0.00	kPa	-	-	-	-
Upper Floor Load	No upper floor load to beam		0.00	kPa	0.00	kPa	-	-
Balcony / Deck Load	No balcony load to beam		0.00	kPa	0.00	kPa	-	-



Max Axial Loads	P (DL)	=	11.88 Kn
	P (LL)	=	3.38 Kn
	P (WL)	=	0.00 Kn
Max Lateral wind load	w (WL)	=	NA
Max height of column H		=	3000 mm
Distance between lateral restraints (xx)		=	3000 mm
Distance between lateral restraints (yy)		=	3000 mm
P max (DL + LL)		=	**15.26 kN**
P max (DL + WL)		=	**NA**
Vertical load eccentricity (steel column only)		=	**NA**
Induced moments due to eccentricity		=	**NA**

2. TIMBER COLUMN:

COMPRESSION

K1	g13	S3	Rho	Rho.S3	k12	Fac (Mpa)	fac (Mpa)
1.65	1.00	33.33	1.13	37.67	0.14	3.0	1.3

Compressive stress O.K.

	BENDING				**COMBINED**	**SHEAR**	
K1	K11	K12	F'b (Mpa)	fb (Mpa)	fac/Fac + fb/Fb	Fs (Mpa)	fs (Mpa)
NA	NA	NA	NA	NA	NA	NA	NA
	Not Applicable				**Not Applicable**	**Not Applicable**	

3. STEEL COLUMN:

BENDING STRESSES

Fb (Mpa)	fb (Mpa)	Effective length factor
NA	NA	NA

Not Applicable

COMPRESSION

l/r(min)	Fy (Mpa)	Fac (Mpa)	fac (Mpa)
NA	NA	NA	NA

Not Applicable

COMBINED STRESSES
fac/Fac + fb/Fb
(refer AS 1250)
NA < 1.00
Not Applicable

APPROVED SECTION(S) FOR COLUMN(S): TS1

F17 KDHW **3 No:** **90** **x** **45** **mm**

No Steel Column Option Provided

Client Irrelevant & Sensitive

Project Job No 6202e

Page 42 Date 27/4/01 By PMH.

Job Location

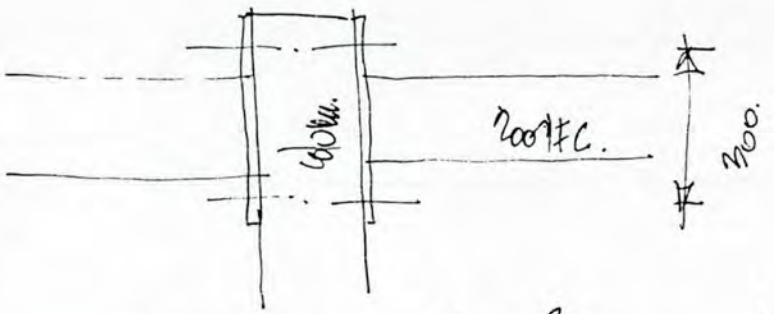
Nilsson, Noel & Holmes

6 Merrigal Court Frankston
Telephone : (03) 9775 2589
Facsimile : (03) 9775 2978

9. Connections

9.1 Beams RB1-RB3 / Column C1

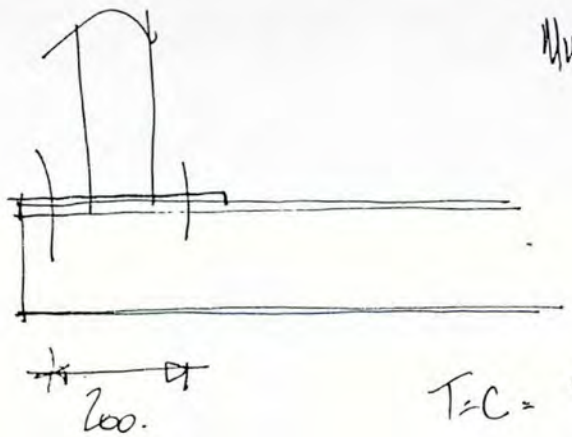
$M_{max} = 1.09$ kN.m.



$T=C = M/d = 1.090 \times 10^3 / 200 = 6.33$ kN.

4 No. 2 M16 bolts & 12mm end plate Gr 300 to beam.

9.2 Column C1 to Floor Beam.



$M_{max} = 2.3$ kN.m.

$T=C = 2.30 \times 10^3 / 200 = 11.50$ kN.

4 No. 2 M16 bolts & 12 mm base plate Gr 300 to column.

Client Irrelevant & Sensitive

Project _____ Job No 6206

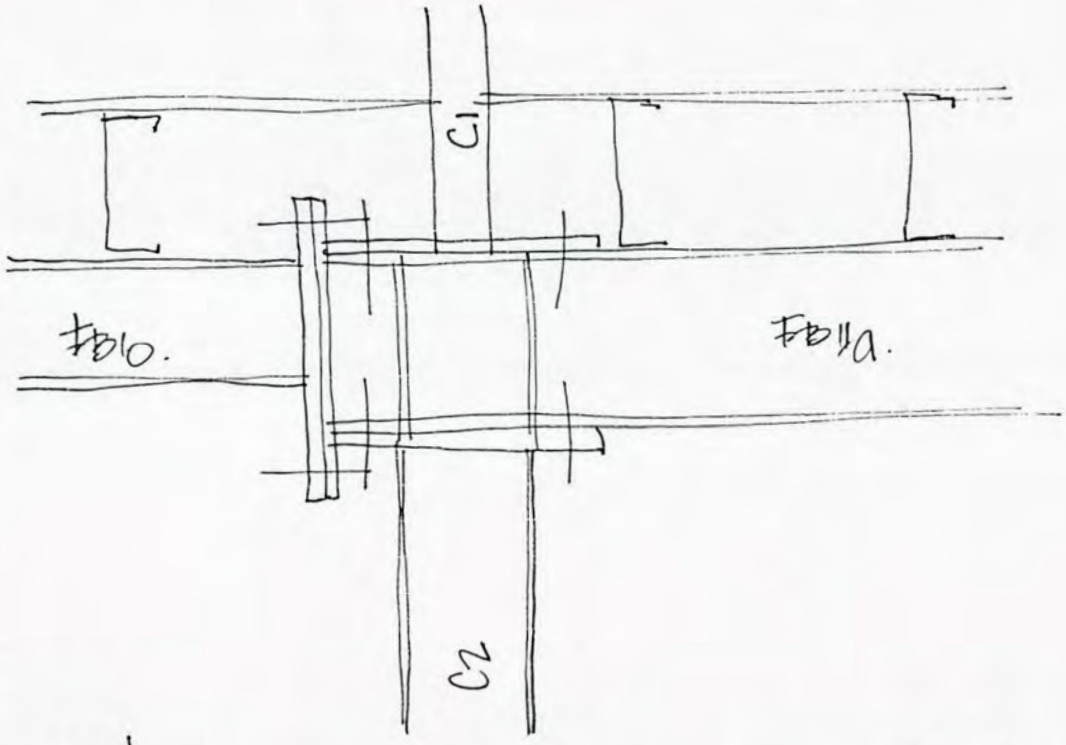
Page 43 Date 29/4/01 By PWH

Job Location _____

Nilsson, Noel & Holmes

6 Merrigal Court Frankston
Telephone : (03) 9775 2589
Facsimile : (03) 9775 2978

9.3 Beam FB10/FB11a., columns C1 & C2.



Manually FB10/FB11a. ⇒ 35-2-17.8. = 17.4kN.m.

C2/FB11a. ⇒ 35.1 kN.m.

(1) FB10/FB11a.

$T=C = 17.4\times10^3/300 = 58$kN.

4 No. 20ø M20 8.8/TB Bolts & 16mm end plate GTW all around to beam.

Client Irrelevant & Sensitive

Project _____ Job No 1020e

Page 44 Date 22/4/01 By Rmk.

Job Location _____

Nilsson, Noel & Holmes

6 Merrigal Court Frankston
Telephone : (03) 9775 2589
Facsimile : (03) 9775 2978

(11) FB11a / C2

$T.C = 35.10 \times 10^3 / 250$

$= 140.40 kN$

$T/bolt = 70.20 kN.$

~~Adopt~~ 4/20 M20 8.8/TB bolts.

$$\epsilon = \sqrt{\frac{Pf.\ b.2}{Fy.\ w.}}$$

$$= \sqrt{\frac{70.20 \times 2 \times 1615 \times 50 \times 2}{250 \times 10^3 \times 150.}}$$

$= 21 mm$, say 22mm.

~~Adopt~~ 22mm end plate GFW to end of beams.

9.4 Column C2 / ~~Footing~~.

$M_{max} = 9.7 kN.m.$

~~Adopt~~ 4/ 16mm ø MS 4D bolts & 12mm base plate GFW to column.

MSC.5002.0001.4422

Client Irrelevant & Sensitive

Project ______ Job No 6202

Page 45 Date 27/4/01 By [signature]

Job Location ______

Nilsson, Noel & Holmes

6 Merrigal Court Frankston
Telephone : (03) 9775 2589
Facsimile : (03) 9775 2978

10. Footings.

Refer report by Geotest P/L dated 14/2/01
Reference: RUI 0197-01

Recommendations: site classification 'CLASS M'
Allowable bearing 140kPa

10.1 Pad PF1

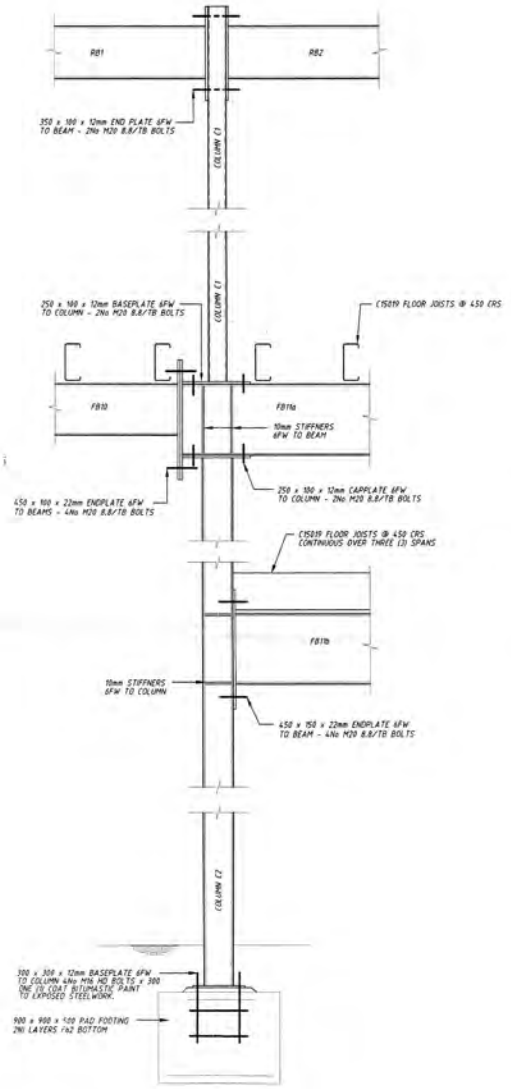
P_{max} C2 = 72.00 + 0.90×0.90×0.90×24.00
= 81.72kN.

Try pads 900×900
f_c 81.72/0.90^2 = 101kPa < f_p.
∴ OK.

10.2 Pads PF2

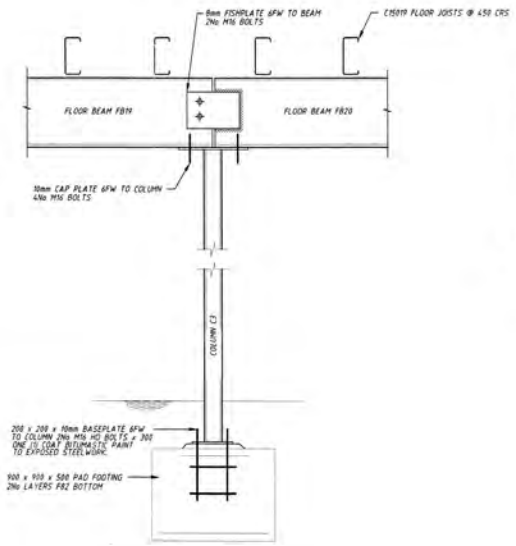
P_{max} = 23.17×2 + 12.80×2 + 0.90^2×0.50×24.00
= 71.94kN

∴ Adopt 900×900×500 pads with 2N? layers F82 bottom, 50 cover

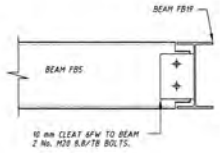


BRACING FRAME '1' CONNECTION DETAILS NTS

(NB: OTHER BRACING FRAME SIMILAR)



FLOOR BEAM / COLUMN C3 DETAIL NTS



BEAM FB5 / FB19 DETAIL NTS

(OTHER BEAM TO BEAM CONNECTIONS SIMILAR)

BUILDING PERMIT ENDORSED PLAN
This is to certify that this document is substantially in accordance with the Building Regulations 1994 and the Building Act 1993.
16 AUG 2001
Building Surveyor: James Shandy SP 1061
Building Surveyor: Robert Holmes SP 1153
Phone: (03) 90 2486 Fax: (03) 95 2910

NB: ALL EXPSOED STEEL TO BE HOT DIPPED GALVANISED.

AMENDED 14 JUN 2001
RECEIVED

REV.	DATE	REVISION	AUTH.

DESIGNED:	Peter M Holmes	SCALE:	AS SHOWN
		DATUM:	NA
CHECKED:	Peter M Holmes	DATE:	27th APRIL 2001
		NNH FILE No:	1020E
AUTHORISED:	P M HOLMES	DISK No:	Z250-6
		MELWAY REF:	M59 A10

Nilsson, Noel & Holmes (Engineers) Pty. Ltd.
Engineers, Surveyors & Town Planners
6 Merrigal Court, Frankston 3199
(PO Box 595, Frankston 3199)
Telephone (03) 9775 2589
Facsimile (03) 9775 2978
ACN 005 850 135

R & J BENDELL

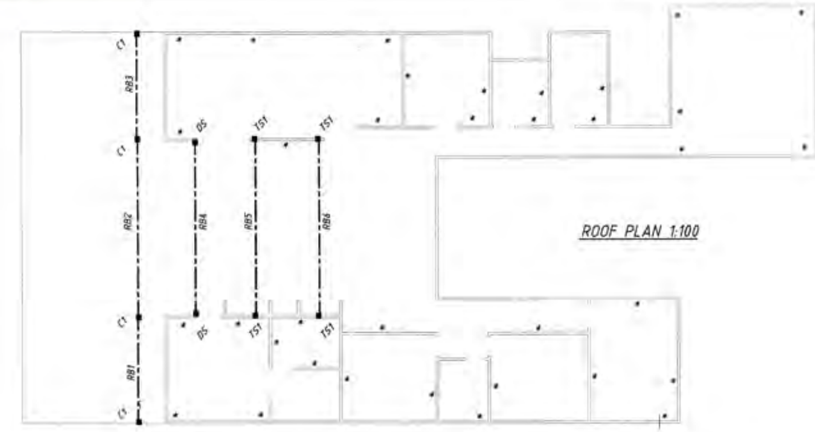
LOT 50 VIEW POINT ROAD, McCRAE

STRUCTURAL DETAILS

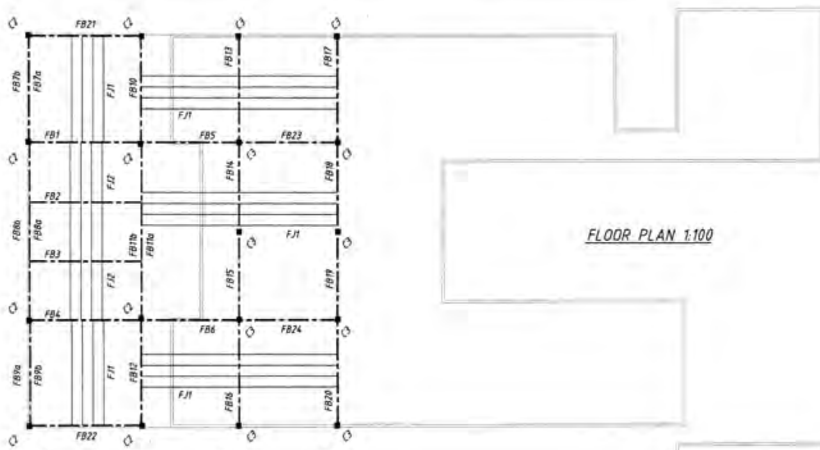
DRAWING No. 1020e002

SHEET: 2 OF 2

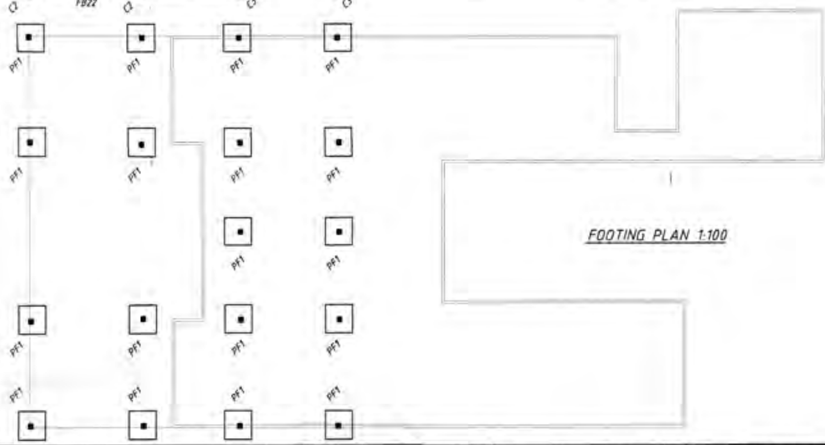
REVISION '-'



ROOF PLAN 1:100



FLOOR PLAN 1:100

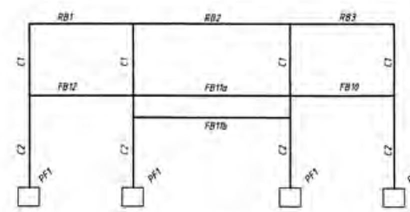


FOOTING PLAN 1:100

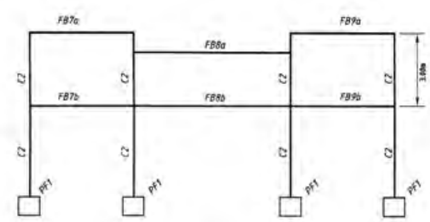
SCHEDULE OF MEMBERS	
MARK No	DESCRIPTION
RB1 - RB4	200PFC - WEB VERTICAL
RB5 - RB6	250PFC - WEB VERTICAL
FLOOR JOISTS FJ1	C15019 PURLINS @ 450 CRS THROUGHOUT - BLOCKING @ MAX 1500 CRS
FLOOR JOISTS FJ2	C15019 PURLINS @ 450 CRS (CONTINUOUS OVER THREE (3) SPANS) - BLOCKING @ MAX 1500 CRS
FB1 & FB4	200PFC - WEB VETICAL
FB2 - FB3	200UB25
FB5 & FB6	200UB25
FB7a & FB7b	200PFC - WEB VERTICAL
FB8a & FB8b	250PFC - WEB VERTICAL
FB9a & FB9b	200PFC - WEB VERTICAL
FB10 & FB12	200PFC - WEB VERTICAL
FB11a & FB11b	250PFC - WEB VERTICAL
FB13 - FB20	200UB25
FB21 - FB22	200PFC - WEB VERTICAL
FB23 - FB24	200UB25
C1	100 x 4.0 SHS
C2	150UC30
C3	100 x 4.0 SHS
DS	2No 90 x 45 F5 PINUS STUDS NAILED TOGETHER
TS1	3No 90 x 45 F17 KDHW STUDS NAILED TOGETHER
PF1	900 x 900 x 500 PAD FOOTING - 2No LAYERS F82 FABRIC BOTTOM
*	TYPE 'B' PANEL BRACE IN ACCORDANCE WITH AS 1684 - 1999

NB: ALL EXPSOED STEEL TO BE HOT DIPPED GALVANISED.

NOTES: 1. CONCRETE STRENGTH f'c = 20 Mpa @ 28 DAYS
2. PAD FOOTINGS TO BE FOUNDED 100mm INTO NATURAL MOTTLED YELLOW / BROWN SILTY CLAY WITH AN ALLOWABLE BEARING 140kPa.



BRACING FRAME 1 NTS



BRACING FRAME 2 NTS

GENERAL NOTES:

G1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTURAL AND OTHER CONSULTANT'S DRAWINGS AND SPECIFICATIONS AND ANY OTHER WRITTEN INSTRUCTIONS ISSUED DURING THE COURSE OF THE CONTRACT.

G2. ALL DIMENSIONS MUST BE VERIFIED ON SITE. ANY DISCREPANCY SHALL BE REFFERRED IN WRITING TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK. ENGINEERING DRAWINGS MUST NOT BE SCALED.

G3. MATERIALS AND WORKMANSHIP ARE TO BE IN ACCORDANCE WITH THE RELEVANT S.A.A. CODES AND THE VICTORIAN BUILDING REGULATIONS.

G4. SUBSTITUTION SHALL NOT BE PERMITTED WITHOUT THE PRIOR APPROVAL OF NILSSON NOEL & HOLMES (ENGINEERS) PTY LTD.

FOUNDATIONS:

F1. ALL FOOTINGS SHALL BE BASED ON SOLID NATURAL GROUND WITH A SAFE ALLOWABLE BEARING CAPACITY OF 140 kPa.

REPORT BY: CIVILTEST PTY LTD
REPORT REFERENCE: RM0197-01
REPORT DATED: 16th FEBRUARY 2001

F2. ALL FOUNDATIONS / SLABS MUST BE INSPECTED AND APPROVED BY THE APPOINTED BUILDING SURVEYOR (OR HIS REPRESENTATIVE) PRIOR TO POURING CONCRETE.

CONCRETE:

C1. THE CONCRETE COMPRESSION STRENGTH f'c IS TO AS SPECIFIED BELOW (AT 28 DAYS), OR AS NOTED ON THE DRAWINGS.

f'c = 25 Mpa FOR SLAB-ON-GROUND
f'c = 32 Mpa FOR SUSPENDED SLAB
f'c = 40 Mpa FOR PANEL CONSTRUCTION
f'c = 20 Mpa FOR FOUNDATIONS

TESTING AS REQUIRED BY THE SPECIFICATION FOR THE PROJECT CONTROL. MAXIMUM SLUMP 75mm AND NOMINAL AGGREGATE SIZE 20mm.

C2. CLEAR COVER TO THE REINFORCEMENT TO BE AS STATED BELOW OR AS OTHERWISE NOTED.

	CAST AGAINST FORMWORK AND EXPOSED TO GROUND / WATER	CAST AGAINST FORMWORK AND SHELTERED LOCATION	CAST AGAINST GROUND
PAD FOOTINGS	65		75
PILE CAPS	65		75
STRIP FOOTINGS	50		65
BEAMS	40	25	65
SLABS & WALLS	30	20	65
COLUMNS	50	40	75

FORMWORK MUST CONFORM WITH AS 1509. CONDUITS, PIPES ETC. ARE NOT TO BE PLACED IN CONCRETE COVER.

C3. REINFORCEMENT MUST BE SECURELY FIXED IN POSITION TO PREVENT DISPLACEMENT ON BAR CHAIRS SPACED AT MAXIMUM 1000 mm CENTRES.

C4. CONCRETE SIZES SHOWN DO NOT ALLOW FOR FINISHES AND MUST BE REDUCED OR HOLED WITHOUT THE PRIOR APPROVAL OF NILSSON NOEL & HOLMES (ENGINEERS) PTY LTD.

C5. CONCRETE MUST BE MOIST CURED ACCORDING TO SOUND ENGINEERING PRINCIPLES FOR A MINIMUM OF SEVEN (7) DAYS IMMEDIATELY AFTER THE CONCRETE IS POURED. CURING COMPOUNDS MAY BE USED AS AN ALTERNATIVE ONLY WITH THE PRIOR APPROVAL OF NILSSON NOEL & HOLMES (ENGINEERS) PTY LTD.

C6. FABRIC IS TO LAPPED 1 SQUARE + 25 mm MINIMUM.

C7. FORMWORK SHALL BE LEFT IN PLACE FOR THE FOLLOWING TIMES UNLESS OTHERWISE NOTED.

(a) BEAM SIDES, VERTICAL WALLS & COLUMNS — 4 DAYS
(b) SLABS UP TO 4.50 m SPAN (FORMWORK REMOVED AND SLAB REPROPPED — 10 DAYS
(c) REMOVAL OF PROPS UNDER SLABS — 21 DAYS
(d) BEAM SOFFITS UP TO 7.50 m SPAN PROPS LEFT UNDER — 14 DAYS
(e) REMOVAL OF PROPS TO BEAMS — 28 DAYS

C8. PANELS ARE TO BE ADEQUATELY BRACED UNTIL THE FULL ROOF SYSTEM (INCLUDING PURLINS AND BRACING) ARE IN PLACE.

STEELWORK:

S1. WELDS ARE TO BE 6mm CONTINUOUS FILLET LAID DOWN WITH APPROVED COVERED ELECTRODE UNLESS OTHERWISE NOTED. BUTT WELDS MUST DEVELOP THE FULL TENSILE STRENGTH OF THE MEMBER.

S2. BOLTS TO BE 8.8/S UNLESS OTHERWISE NOTED.

S3. GUSSET PLATES TO BE 10 mm THICK UNLESS OTHERWISE NOTED.

S4. ALL STEELWORK OTHER THAN THAT ENCASED BY CONCRETE SHALL BE GIVEN ONE COAT OF APPROVED STEEL PRIMING PAINT - COLOUR BLUE.

S5. THE CONTRACTOR IS TO GROUT UNDER ALL COLUMN / MULLION BASEPLATES USING MINIMUM 25 mm DRY PACK GROUT.

S6. 50 x 50 x 5 mm ∠ CLEATS TO PURLINS TO BE USED WHERE HEIGHT EXCEEDS 300 mm.

BRICKWORK:

B1. ALL BRICKWORK IS TO HAVE THE FOLLOWING PROPERTIES.
(i) UNCONFINED COMPRESSIVE STRENGTH f'uc = 10 Mpa
(ii) MORTAR TO BE 1:1:6 (C:L:S) UNLESS OTHERWISE NOTED
(iii) MEDIUM DUTY GALVANISED WALL TIES TO BE USED AND MUST COMPLY WITH AS 2699. TIES TO BE PLACED AT MAXIMUM 600 mm SPACING IN EACH DIRECTION AND 300 mm SPACING (AVERAGE) ALONG LINE TO THE ADJACENT SUPPORT.

B2. BRICKWORK IS TO BE TIED TO COLUMNS BY MASONRY TIES FIXED TO THE COLUMNS CONNECTING EACH LEAF AT MAXIMUM 600 mm SPACING UNLESS OTHERWISE NOTED.

FILLING UNDER SLAB (EARTHWORKS):

E1. THE AREA UNDER THE SLAB SHALL BE STRIPPED OF ALL TOPSOIL AND VEGETATION AND ROLLED (WITH A VIBRATING SHEEPSFOOT ROLLER) TO ACHIEVE A COMPACTED DENSITY OF NOT LESS THAN 95% OF THE STANDARD VALUE. APPROVAL TO THESE WORKS MUST BE SOUGHT FROM THE ENGINEER BEFORE ANY FILLING IS PLACED.

16 AUG 2001
Building Surveyor: James Sheedy
Building Surveyor: Robert Holmes

AMENDED
14 JUN 2001
RECEIVED

REV.	DATE	REVISION	AUTH.

DESIGNED:	Peter M Holmes
CHECKED:	Peter M Holmes
AUTHORISED:	Irrelevant & Sensitive

SCALE:	AS SHOWN
DATUM:	NA
DATE:	27th APRIL 2001
NNH FILE No:	1020E
DISK No:	2258-6
MELWAY REF:	M159 A10

Nilsson, Noel & Holmes (Engineers) Pty. Ltd.
Engineers, Surveyors & Town Planners
6 Merrigal Court, Frankston 3199
(PO Box 595, Frankston 3199)
Telephone (03) 9775 2589
Facsimile (03) 9775 2978
ACN 005 850 135

R & J BENDELL
LOT 50 VIEW POINT ROAD, McCRAE
PLANS & STRUCTURAL DETAILS

DRAWING No: 1020e001
SHEET: 1 OF 2
REVISION: '-'

Contractors must verify all dimensions and levels at the job before commencing any work or making any shop drawings.

All works to be in accordance with the Building Code of Australia and all Australian Standards.

Timber Framing Schedule

ROOF FRAMING

MAXIMUM PW. 4000

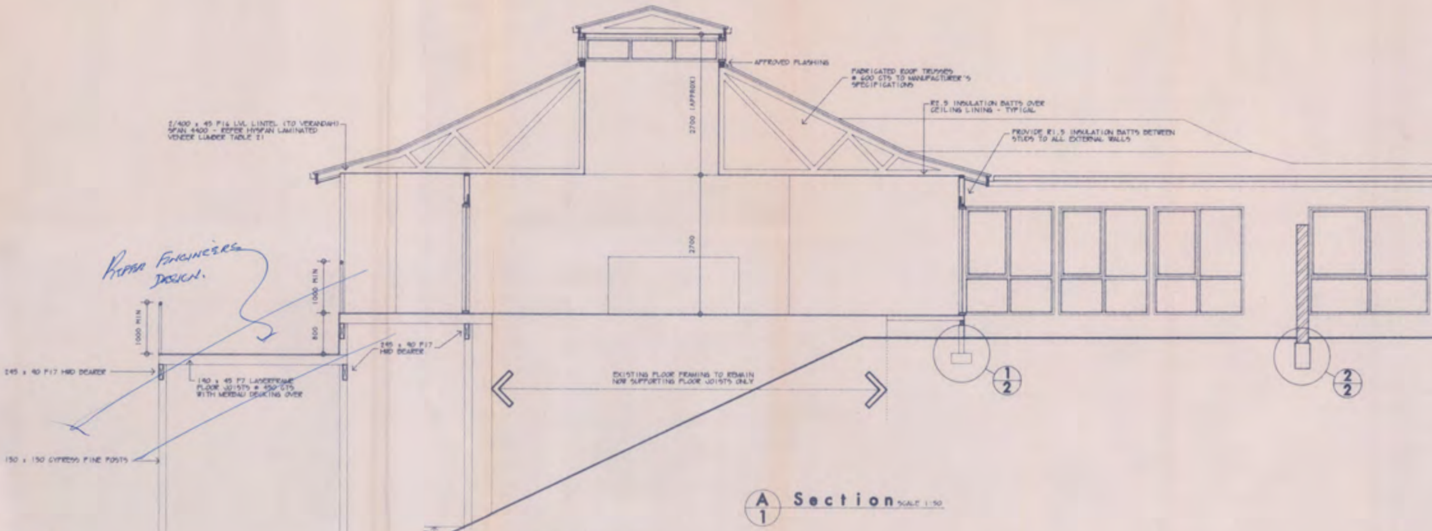
ROOF BATTENS 25 x 50 F8 HWD @ 330 CTS SPAN 600
TRUSSES FABRICATED TO MANUFACTURER'S DESIGN @ 600 CTS

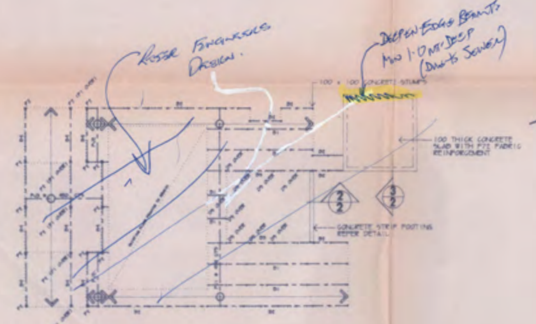
WALL FRAMING

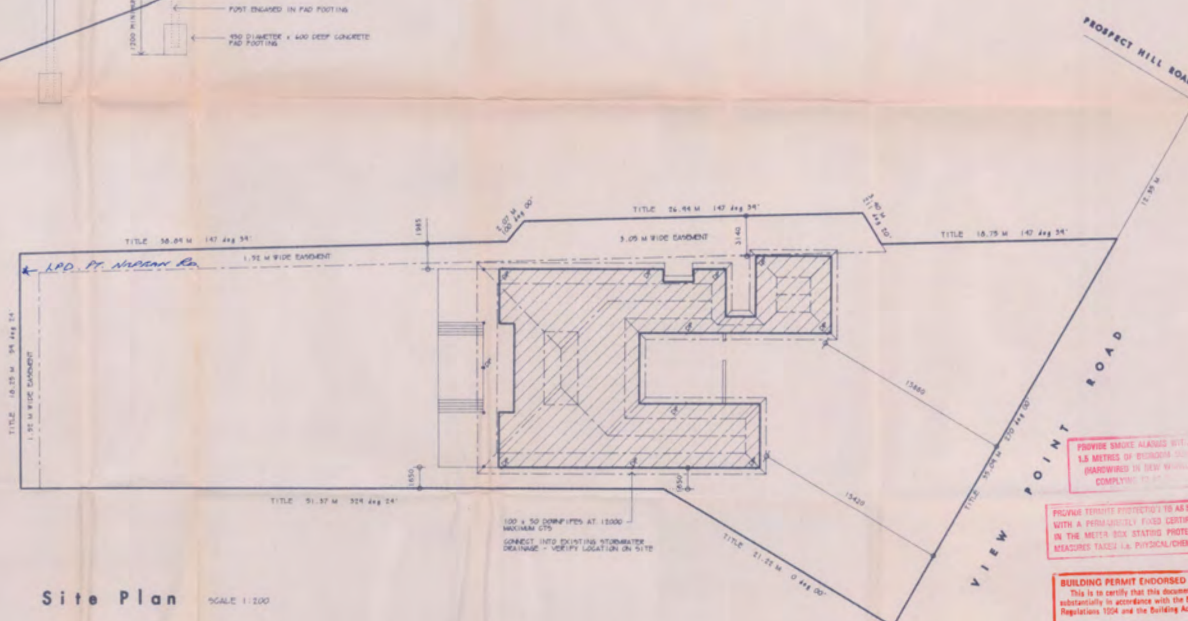
TOP PLATES 70 x 90 F5 RAD
LINTELS 90 x 45 F5 RAD OPENINGS UP TO 600
150 x 38 F8 HWD 600 - 1100
200 x 38 F8 HWD 1100 - 1550
220 x 35 F17 HWD 1550 - 2350
240 x 70 F17 HWD 2350 - 3100
290 x 90 F17 HWD 3100 - 3750
LINTELS SUPPORTING TRUNCATED GIRDER TRUSSES TO HAVE AN EXTRA ~~25 MM~~ 50mm MIN DEPTH
STUDS (COMMON) 90 x 35 F5 RAD @ 450 CTS
STUDS (GABLE ENDS) @ 450 CTS
90 x 35 F5 RAD UP TO 2700 HIGH
90 x 45 F5 RAD UP TO 3000 HIGH
90 x 70 F5 RAD UP TO 3300 HIGH
90 x 90 F5 RAD UP TO 3600 HIGH
90 x 35 F17 HWD UP TO 3300 HIGH
90 x 45 F17 HWD UP TO 3600 HIGH
90 x 70 F17 HWD UP TO 3900 HIGH
90 x 90 F17 HWD UP TO 4200 HIGH
NOGGINGS 90 x 35 F5 RAD @ 1350 CTS
JAMB STUDS 90 x 70 F5 RAD OPENINGS UP TO 1500
D5 90 x 90 F5 RAD 1500 - 2100
90 x 70 F17 HWD 2100 - 4200
90 x 90 F17 HWD 4200 - 4800
P1 100 x 100 CYPRESS PINE POST
BOTTOM PLATES 70 x 90 F5 RAD

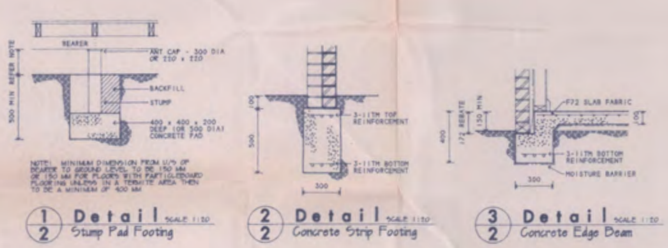
FLOOR FRAMING

FLOORING 19 MM SHEET FLOORING
FLOOR JOISTS FJ1 90 x 35 F17 HWD @ 450 CTS SPAN 2000 CONT
FJ2 190 x 35 F17 HWD @ 450 CTS SPAN 4200
FJ3 190 x 45 F5 LASERFRAME @ 450 CTS SPAN 4000
BEARERS B1 90 x 70 F17 HWD @ 1800 CTS SPAN 1900 CONT
SUPPORTING FLOOR JOISTS ONLY
B2 90 x 70 F17 HWD @ 1800 CTS SPAN 1500 CONT
SUPPORTING LOAD-BEARING WALLS
B3 120 x 70 F17 HWD @ 1800 CTS SPAN 1900 CONT
SUPPORTING LOAD-BEARING WALLS
B4 295 x 90 F17 HWD @ 3600 CTS SPAN 4400
STUMPS 100 x 100 CONCRETE @ 1500/1800 CTS
P2 150 x 150 CYPRESS PINE POSTS









PROVIDE SMOKE ALARMS WITHIN 1.5 METRES OF BEDROOM DOORS (HARDWIRED IN NEW WORKS) COMPLYING TO AS 3786

PROVIDE TERMITE PROTECTION TO AS 3660-1 WITH A PERMANENTLY FIXED CERTIFICATE IN THE METER BOX STATING PROTECTION MEASURES TAKEN i.e. PHYSICAL/CHEMICAL.

BUILDING PERMIT ENDORSED PLAN
This is to certify that this document is substantially in accordance with the Building Regulations 1994 and the Building Act 1993.
16 AUG 2001
Building Surveyor: James Sheedy SP 1061
Building Surveyor: Robert Holmes SP 1193
Phone: (059) 86 2466 Fax: (059) 86 2045

Project: **PROPOSED RESIDENCE at Lot 50 View Point Road, McCrae**

Site Plan & Sections

NUMBER	REVISION	DATE

Builder: JEFF CAIN MASTER BUILDER
P.O. Box 249 Sorrento Vic 3943
Tel: (03) 5984 2222
Mob: 0414 777 981

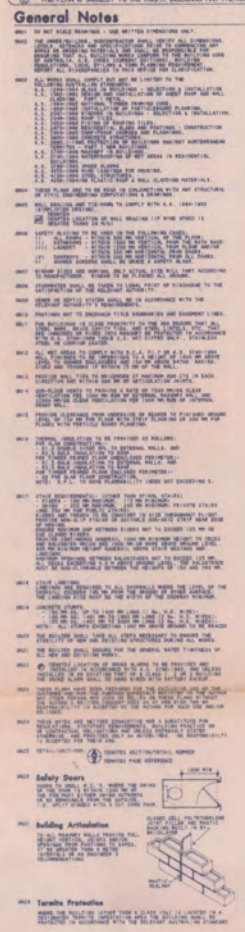
urban solutions
P.O. Box 1313, 1 Rendix Court, Mornington, Victoria. 3931
Phone: (03) 5975 3366
Fax: (03) 5978 3345
NO: DP-AD:1343

Date:	SEPT 00
Scale:	1:200/50
Design:	W.A.D
Drawn:	W.A.Dawson
Revision:	
Job No:	2285-02

Contractors must verify all dimensions and levels at the job before commencing any work or making any shop drawings.

All works to be in accordance with the Building Code of Australia and all Australian Standards.

General Notes



Window Schedule

W1	2100 x 1800	W16	2100 x 1800
W2	2100 x 1800	W17	2100 x 1800
W3	2100 x 1800	W18	2100 x 1800
W4	2100 x 1800	W19	2100 x 1800
W5	2100 x 1800	W20	2100 x 900
W6	2100 x 1800	W21	2100 x 1800
W7	2100 x 1800	W22	1000 x 600
W8	2100 x 1800	W23	2100 x 1800
W9	2100 x 1800	W24	450 x 1850
W10	2100 x 2400	W25	450 x 1850
W11	2100 x 2400	W26	450 x 1850
W12	1500 x 2100	W27	450 x 2650
W13	2100 x 1800	W28	450 x 1850
W14	1200 x 900	W29	450 x 1850
W15	1200 x 900	W30	450 x 1850
		W31	450 x 2650

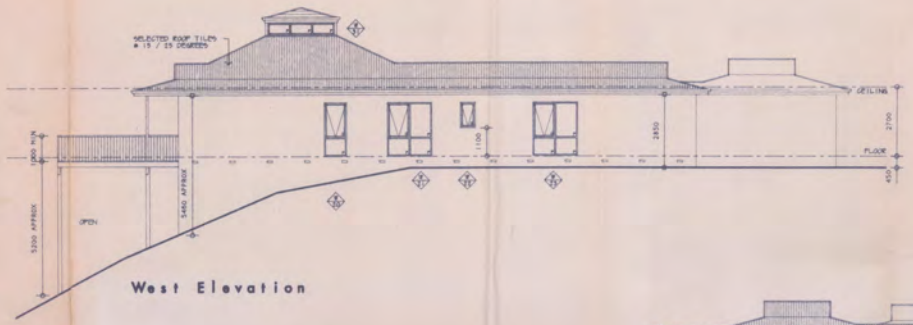
Wind Classification

MASS OF ROOF:	60	kg/m2
ROOF LOAD WIDTH (RLW):	4100	mm
WIND SPEED:	33	m/s

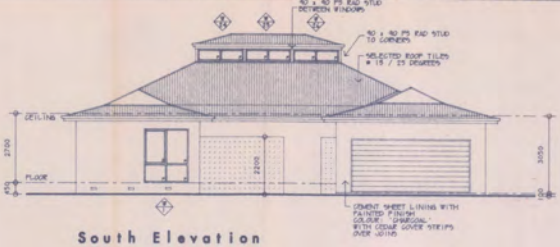
Soil Classification — Class M

NOTE:-

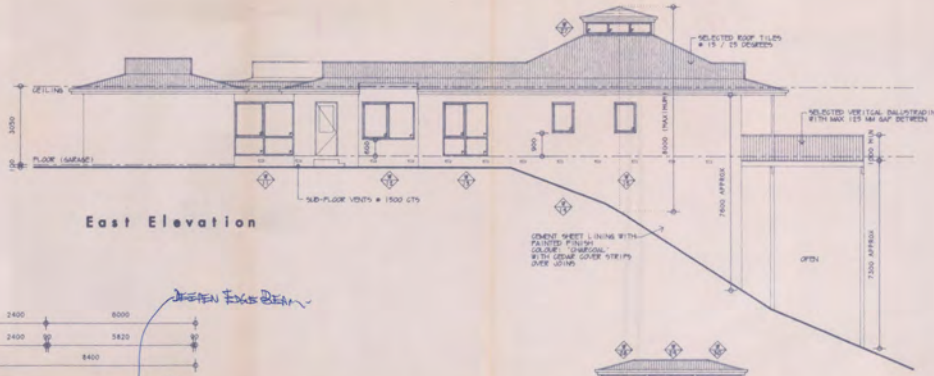
PLANS SHALL BE READ IN CONJUCTION WITH THE SOIL REPORT FOOTINGS TO BE FOUNDED AT THE MINIMUM DEPTH INDICATED IN THE SOIL REPORT.



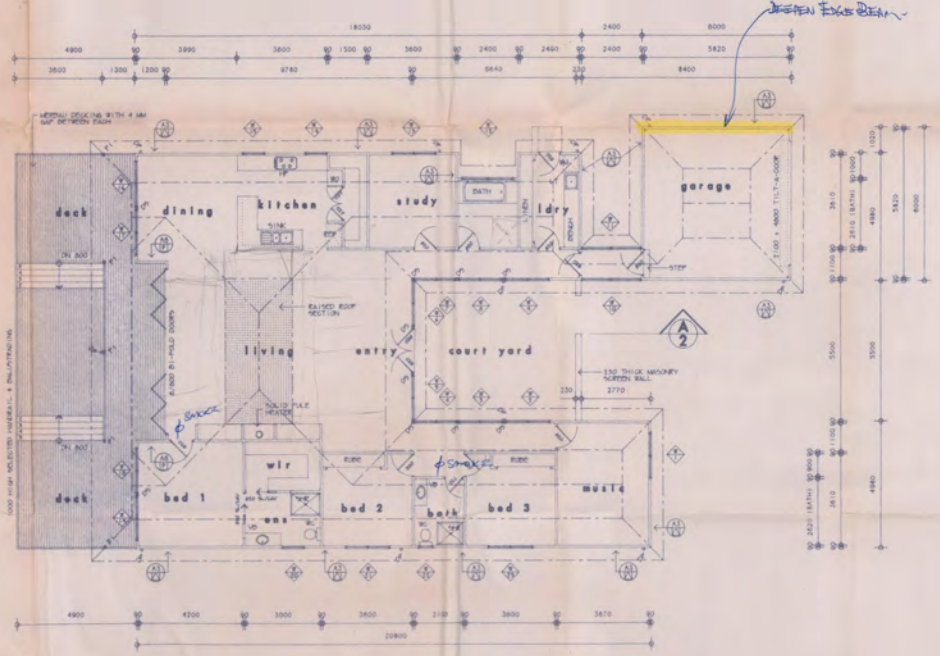
West Elevation



South Elevation



East Elevation



Floor Plan

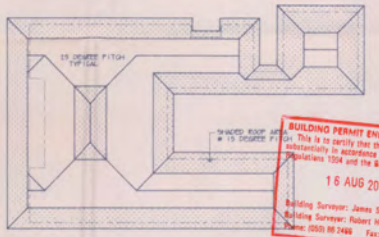
AREAS: HOUSE: 247.145 sq.m (26.60 SQS)
GARAGE: 34.200 sq.m (3.68 SQS)
DECK: 85.304 sq.m (9.01 SQS)

A2 BRACING UNIT TYPE
BRACING DIAGRAM

North Elevation

PROVIDE TERMITE PROTECTION TO AS 3660.1 WITH A PERMANENT BLUE CERTIFICATE IN THE METER BOX DETAILING PROTECTIVE MEASURES TAKEN i.e. PHYSICAL/CHEMICAL.

PROVIDE SMOKE ALARMS WITHIN 3.0 METRES OF BEDROOM DOORS (HARDWIRED IN NEW WORKS) COMPLYING TO AS 3786.



Roof Plan SCALE 1:200

BUILDING PERMIT ENDORSED PLAN
This is to certify that this document is substantially in accordance with the Building Regulations 1994 and the Building Act 1993.
16 AUG 2001
Building Surveyor: James Shandy SP 1081
Building Surveyor: Robert Holmes SP 1103
Phone: (059) 88 2486 Fax: (059) 88 2045

Project:
PROPOSED RESIDENCE at Lot 50 View Point Road, McCrae

Plans and Elevations

NUMBER	REVISION	DATE

Builder:
JEFF CAIN MASTER BUILDER
P.O. Box 249 Sorrento Vic 3943
Tel: (03) 5984 2222 Mob: 0414 777 981

urban solutions
P.O. Box 1213, 3 Bendix Court, Mornington, Victoria, 3931
email: peace@ex.com.au
Phone: (03) 5975 5588 Fax: (03) 5978 2245

Date: SEPT '00
Scale: 1:100
Design: W.A.D.
Drawn: W.A.Dawson
Revision:
Job No: 2285-01