

CONSENT NO.

38755

SITE ADDRESS

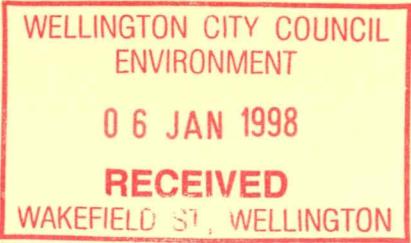
158 OHIO BAY PDE

601st 2/2/98

Refer also to Amended Plans
SR-39797.

ISSUE DATE

4/2/98



Owner advised that the deck shown on
Section E, Sheet 2 is existing, and the
veranda roof is to be constructed above.

W.H.
4/2/98

Contains amended plans 39797

158 OHIO BAY PDE.

38755

SCANNED DOCUMENT
Cover Sheet - [Please use black pen]

scanned

Scanning Code (see below)

APP

Service Request No:

38755

Document Name

(refer Doc#29685
for Doc Naming Help)

Bldg consent.

Document Type

IN CORRESP etc. (refer
PC-DOCS Profile screen

Section Title

Prop., Urban etc
(refer WCC Classifications)

File Series

0600, 1040 etc

File No./Link No

0600

Property Link No or File No
from WCC Classification

Description

Calculations, specifications, Producer Statement
not scanned.

PC DOCS No.

107570

Date:

5/2/98

No. of pages:

8

Allocate to:

Extra Notes:

Scanning Codes for Document Name

Code	Default Value	Document type	Code	Default Value	Document type
LETT	LETTER TO	OUT CORRES	FN	FILE NOTE	FILE NOTE
LETF	LETTER FROM	IN CORRESP	CT	CERTIFICATE OF TITLE	LEGAL
MEMT	MEMO. TO	OUT CORRES	LT	LAND TRANSFER PLAN	PLAN
MEMF	MEMO. FROM	IN CORRESP	SB	SEALED SURVEY PLAN (SB#	PLAN
EMT	E MAIL TO	EMAIL	BC	BUILDING CONSENT	CONSENT
EMF	E MAIL FROM	EMAIL	NOD	NOTICE OF DECISION	CONSENT
FAXT	FAX TO	OUT CORRESP	BSR	BUILDING STATUS REPORT	REPORT
FAXF	FAX FROM	IN CORRESP	BSRA	BDG STATUS RPT	REPORT
				ATTACHMENT	
APP	APPLICATION	IN CORRESP	ATT	ATTACHMENT	IN CORRESP
REC	RECEIPT	IN CORRESS	RFA	RISK FACTOR ASSESSMENT	FORM
LIMA	LIM ATTACHMENT	LIM	SUB	SUBMISSION	IN CORRESP
PLIM	PARTIAL LIM	LIM	FPA	FOOD PREMISES	FORM
SC	SEE COVERSHEET			EVALUATION	
PLIMA	PARTIAL LIM	LIM	PIM	PROJECT INFO.	PIM
	ATTACHMENT			MEMORANDUM	
SIF	SITE INNSPECTION	FORM	PH	PHOTOGRAPHS	REPORT
PIMA	PIM ATTACHMENT	PIM	LIM	LAND INFO. MEMORANDUM	LIM
WOF	BDG WARRANT OF	IN CORRESP	RPE	FOOD-RISK FA/PREMISES	FORM
	FITNESS			EVALUATION	

APPLICATION FOR A PIM &/OR BUILDING CONSENT

Section 3 & 33(2), Building Act 1991

PART A - Complete in all cases

Send or deliver your application to the Environmental Control Business Unit,
PO Box 2199, ground floor 101 Wakefield Street, Wellington. For enquiries,
phone 801 3542.

This application is for a

 PIM Building ConsentSR No. 38755

Cust. ID No. _____

Project Location

Address: 158 Ohlino Bay ParadeSuburb: Island BayLegal description: Lot 12 DP 10394

Property link No: _____ (if known)

Description of work

Ensure that certificate of title/s is included with your application.

Owner &/or applicant details

Owner (if also applicant, tick box)Name: K Mathews & Julie ClarkAddress: 158 Ohlino Bay ParadeSuburb: Island BayPhone (day): KM (801 9616)Cellphone: 025 528179 (Henry Roubel)Fax: 021 664 514 (Kevym)

Applicant

Business name: _____

Name: _____

Address: _____

Suburb: _____

Phone (day): _____

Cellphone: _____

Fax: _____

WELLINGTON CITY COUNCIL
ENVIRONMENT

06 JAN 1998

RECEIVED
WAKEFIELD ST. WELLINGTONCorrespondence/refunds to owner or applicant

Fax: _____

Project details

Project type: New Building AlterationIntended life: Specified as 50 years Relocation DemolitionIntended use: Ancillary Commercial Indefinite but not less than 50 years Industrial Housing Communal residential OutbuildingsProject value (GST inclusive) : \$ 70,000Does the building or site have any cultural heritage significance, or is it on a marae? (refer to District Plan) Yes No

I believe that the information contained in this application is true and correct.

Signed for and on behalf of the owner by the applicant

OR Signed by the owner

X Signature: _____

X Signature: K. S. Mathews

Name: _____

Name: K. S. Mathews

Date: _____

Date: 6/1/98

PART C - Complete in all cases

Floor areas of new buildings and additions to nearest metre;

New building m²

Accessory buildings m²

Total floor area of work (extension) m²

Total floor area of completed building m²

73m² First Floor

The building will contain the following systems:

Emergency systems (please tick appropriate boxes)

Emergency intercommunication
Hazardous substance warning
Emergency lighting
Escape route pressurisation
Riser mains
Automatic backflow preventer
Lifts
Escalator/moving walks

<input type="checkbox"/> Yes	<input type="checkbox"/> No
<input type="checkbox"/> Yes	<input type="checkbox"/> No
<input type="checkbox"/> Yes	<input type="checkbox"/> No
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
<input type="checkbox"/> Passenger	<input type="checkbox"/> Service
<input type="checkbox"/> Yes	<input type="checkbox"/> No

Mechanical ventilation and air conditioning

Air systems for contamination control
 Building maintenance units for access to exterior and interior walls of buildings

Heating, ventilation and air-conditioning

Other systems

Mechanical
 Signs for part D

Electrical
 Yes No

Hydraulic

Electronic

Gas

Fire protection

Automatic sprinkler
Automatic fire doors
Fire alarms

Specialised deluge systems
 Yes
 Manual

Other
 No
 Automatic

SEARCH COPY
DATE 5 JAN 1998

[Land and Deeds-4.

[Form 'B.

NEW ZEALAND.



Vol. 458 Folio 201
Transfer No. 245078
Reference: Application No.
Order for N/C No.

165
REGISTER

Register-book,
Vol. 469, folio 432

CERTIFICATE OF TITLE UNDER LAND TRANSFER ACT.

This Certificate, dated the Sixteenth day of March, one thousand nine hundred and thirty-nine, under the hand and seal of the District Land Registrar of the Land Registration District of WELLINGTON, witnesseth that JOHN JAMES of Wellington Caretaker

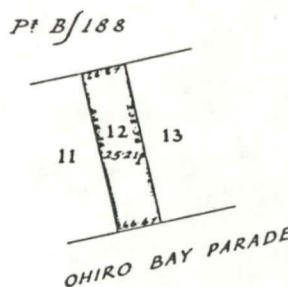
is seized of an estate in fee-simple (subject to such reservations, restrictions, encumbrances, liens, and interests as are notified by memorial under written or endorsed hereon; subject also to any existing right of the Crown to take and lay off roads under the provisions of any Act of the General Assembly of New Zealand) in the land hereinafter described, as the same is delineated by the plan hereon bordered green, be the several admeasurements a little more or less, that is to say: All that parcel of land containing TWENTY-FIVE AND TWENTY-ONE ONE-HUNDREDTHREE PERCHES more or less, situate in the City of Wellington being part of Section 27 of the Ohiro District and being also Lot 12, on Deposited Plan No. 10394.



Assistant District Land Registrar.

Fencing agreement contained in Transfer No. 245078.

Transmission 596741 to Ivy Amelia
Gwendoline James, widow, Walter John
Robert James, Factory Hand, and Lionel
Kitchiner James, Waterside Worker all
of Wellington as Executors - 23.6.1964 eff. 30.6.1964
H. B. Lewis A.L.R.



THIS REPRODUCTION ON A REDUCED SCALE
CERTIFIED TO BE A TRUE COPY OF THE
ORIGINAL REGISTER FOR THE PURPOSES OF
SECTION 215A LAND TRANSFER ACT 1952.

J. B. Shields A.L.R.

907199.1 Transmission to Ivy Amelia
Gwendoline James as survivor - 4.3.1988 at
2.48 p.m.

A.L.R.

907199.2 Transfer to Kerry Douglas Matthews
and Julie Anne Clark both of Wellington,
both Nurses - 4.3.1988 at 2.48 p.m.

A.L.R.

907199.3 Mortgage to Bank of New Zealand -
4.3.1988 at 2.48 p.m.

A.L.R.

WELLINGTON CITY COUNCIL
ENVIRONMENT
06 JAN 1998
RECEIVED
WAKEFIELD ST. WELLINGTON

EQUIVALENT METRIC
AREA IS 638 m²

Scale: 150 Links to an inch.

EJL
JL



Our Ref: W0904

7 April 1997

W.C.C.
RECORDS

Mr Kerry Mathews
158 Owhiro Bay Parade
WELLINGTON

Dear Sir

**158 OWHIRO BAY PARADE
1ST FLOOR ADDITION**

WELLINGTON CITY COUNCIL
ENVIRONMENT
06 JAN 1998
RECEIVED
WAKEFIELD ST. WELLINGTON

We have completed our calculations based on the drawings supplied and now enclose:

- A4 drawing of the bolted steel portal frame
- 1st floor wall bracing schedule
- Producer Statement, PS1 for the design of the portal frame.

We also recommend that where possible, short lengths of wall are increased to 900m in length to stiffen the structure to enable them to be assessed as bracing elements for building consent purposes.

The lintel above the french doors to the bedroom must be a 200 x 100 sawn timber member, supported on a double studs (i.e. 2no. 100 x 50 studs) at each end.

The ceiling above the lounge/dining must be constructed as a diaphragm in accordance with NZS 3604, i.e. it shall consist of sheets of 6mm plywood or equivalent nailed along all edges and to all intermediate frames and the framing must be fixed to all wall bracing elements in accordance with NZS 3604.

Due to the small number of structural details we recommend that you copy this letter to the Architect and ask him to incorporate the details, notes and changes on his drawings.

incorporating
Ian Macallan & Co Ltd

WELLINGTON OFFICE

Level 15
Sovereign Assurance House
142 Lambton Quay
P O Box 2934
Wellington
NEW ZEALAND
PHONE: +64-4-472 3377
FAX: +64-4-472 3423

AUCKLAND OFFICE

Level 5
Gillies Avenue Office Park
27 Gillies Avenue
P O Box 99 220
Newmarket
Auckland
NEW ZEALAND
PHONE: +64-9-524 4400
FAX: +64-9-524 0222

CHRISTCHURCH OFFICE

Level 2
36 Oxford Terrace
P O Box 1647
Christchurch
NEW ZEALAND
PHONE: +64-3-379 2216
FAX: +64-3-365 2151

QUEENSTOWN OFFICE

P O Box 747
Queenstown
NEW ZEALAND
PHONE: +64-3-442 7477
FAX: +64-3-442 7477

- Structural
- Civil
- Electrical
- Mechanical
- Seismic
- Project Management

The original PS1 should be submitted as part of the Building Consent application.

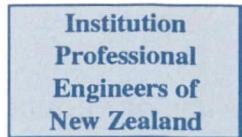
If you have any queries, please contact the undersigned.

Yours faithfully,
AC POWER GROUP



G A J Szakats
PROJECT MANAGER

Encl.



P.I.M. No.....

Building Regulation Clause(s)..... B1 Structural

PRODUCER STATEMENT - PS1 - DESIGN

(Guidance notes on the use of this form are printed on the reverse side)

ISSUED BY: GREGORY A. J. SZAKATS
(Suitably qualified Design Professional)

TO: MR K MATHEWS
(Owner)

TO BE SUPPLIED TO: WELLINGTON CITY COUNCIL
(Territorial Authority)

IN RESPECT OF: ADDITION OF FIRST FLOOR TO HOUSE
(Description of Building Work)

AT: 158 OWHIRO BAY PARADE

..... OWHIRO BAY, WELLINGTON
(Address)

LOT DP SO

AC POWER GROUP LIMITED has been engaged by MR K MATHEWS
(Design Firm) (Owner/Developer/Contractor)

to provide DESIGN OF BRACING TO FIRST FLOOR INCLUDING STEEL PORTAL services in respect of the
(Extent of Engagement)

requirements of Clause(s) B1 structural of the Building Regulations 1992 for

All

Part only as specified

of the building work. The design has been prepared in accordance with NZS3604, NZS3404, NZS3603, NZS4203
(verification method(s)/acceptable solution(s))

(respectively) of the approved documents issued by the Building Industry Authority and the work is described on

A.C. POWER GROUP LIMITED drawings titled
(Design Firm)

and numbered SKETCHES AND BRACING SCHEDULE and the specification and other documents according to which the building is proposed to be constructed.

As an independent design professional covered by a current policy of Professional Indemnity Insurance to a minimum value of \$200,000, I BELIEVE ON REASONABLE GROUNDS that subject to:

(i) the site verification of the following design assumptions GROUND FLOOR WALLS ARE ADEQUATELY
..... BRACED, AND FIRST FLOOR ACTS AS A DIAPHRAGM

and (ii) all proprietary products meeting the performance specification requirements,
the drawings, specifications, and other documents according to which the building is proposed to be constructed
comply with the relevant provisions of the building code.

Date 4 APRIL 1997

[Signature suitably qualified Design Professional]

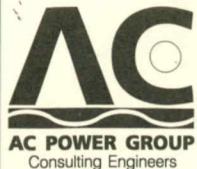
BE (Civil), Mistruct E, MIPENZ
(Professional Qualifications)

P O BOX 2934, wellington
(Address)

ERB/AERB Reg No. 9853

Member ACENZ

IPENZ NZIA

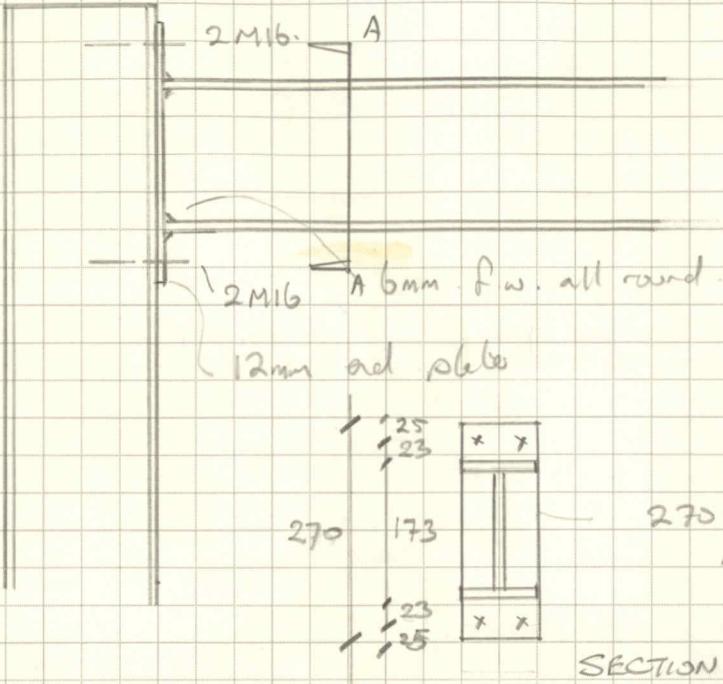


Consulting Engineers

P O Box 2934 TEL + 64 - 4 - 472 3377
 WELLINGTON
 New Zealand
 P O Box 1647 TEL + 64 - 3 - 379 2216
 CHRISTCHURCH
 New Zealand
 P O Box 99 220 FAX + 64 - 3 - 365 2151
 AUCKLAND
 New Zealand
 FAX + 64 - 9 - 524 4400
 FAX + 64 - 9 - 524 0222

Computed: /19 Checked: /19 Sheet No: Job No:
 Project: _____

 Description: _____



SECTION A-A.

24 24
 42

90

195 x 100 x 12 plate

2 M12 BOLTS



TIMBER LINTEL
 OR TOP PLATE

SECTION B-B

1518 OWHIRO BAY PARADE.
BRACING SCHEOULE - SHEET 1.

Please Photocopy

Wall Bracing Calculation Sheet B

Along

Wall or Bracing Line		Bracing Elements Provided		
1	2	3	4	5
Line Label	Minimum BUs Required	Bracing Element No.	Bracing Type	Length Element (m) L
A	120	1 2	1 1	3.6 4.7
B	120	1 2	1 1	4.3 2.4
✓				
✗				
✗				

15.0m

Totals Achieved	
From Sheet A	Totals Required
Wreq/EQreq =	*

*If Wreq/EQreq is 1 or less complete EQ column only
If Wreq/EQreq is 1.5 or more complete W column only
Otherwise complete both W and EQ

Across

Wall or Bracing Line		Bracing Elements Provided		
1	2	3	4	5
Line Label	Minimum BUs Required	Bracing Element No.	Bracing Type	Length Element (m) L
M EXTERNAL WALL	46	1 2	BR4 BR5	0.9 1.42
N		1 2	BR7 BR6	0.9 2.62
O		1	BR7	1.06
P EXTERNAL WALL	46			
Q)			

6.8

Totals Achieved	
From Sheet A	Totals Required
Wreq/EQreq =	*

EQ	750
EQ	622

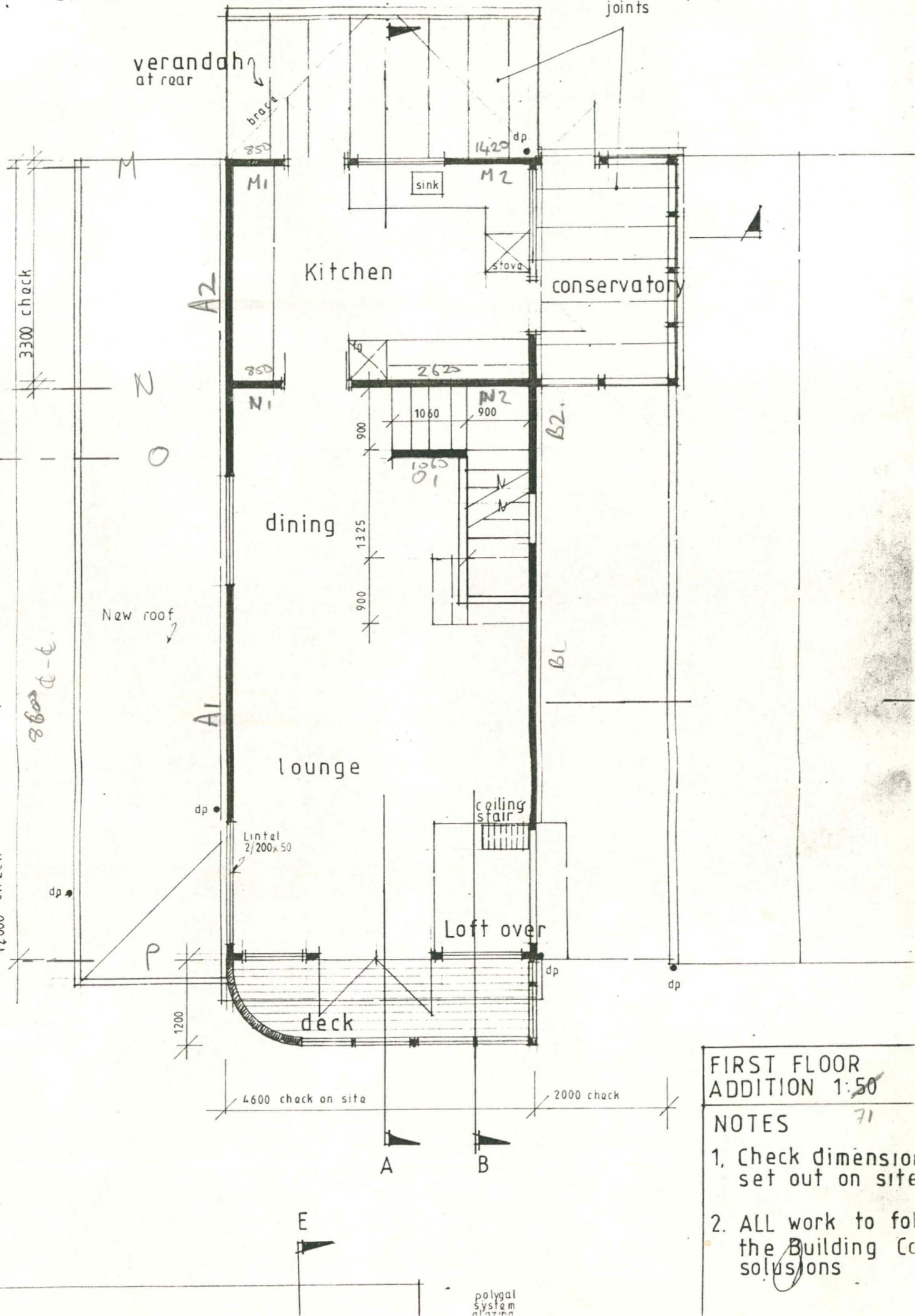
- FRAME
- DIAPHRAGM.

158 OWIHIRO BAY PARADE

BRACING SCHEDULE - PLAN.

ROOF

Place rafters to
suit the polygal sheet
joints



FIRST FLOOR
ADDITION 1:50

NOTES

1. Check dimensions set out on site
2. ALL work to follow the Building Regulations

Please Photocopy

Wall Bracing Calculation Sheet A

Job Details

Name _____	box 1	
Street and Number _____		
Lot and DP Number _____		
City/Town/District _____		
Location of Storey: single/upper of two/lower of two		
Building height to apex 6 m	Roof weight	light/heavy
Roof height above eaves 1 m	Cladding weight	light/heavy
Stud height 3.4 m	Room in roof space	NO
Average roof pitch 20°		
Building length BL = 12 m	Gross Building	74
Building width BW = 6.7 m	Plan Area, GPA = m ²	
Note: When the average roof pitch is over 25 degrees, use the eaves length and width to determine BL and BW.		
Note: For heavy roofs use the roof plan at eaves level to determine GPA.		

Wind Zone				box 2
Region: R1 0	Terrain: Inland 0	Exposure: Sheltered 0	Topography: Gentle 0	
R2 1	Coastal 1	Exposed 1	Moderate 1	
Extreme 3				
Total points _____				
Wind zone: Low (0)	✓ Very high (3)			
Medium (1)	✓ Specific Design (4)			
High (2)				

Earthquake zone			box 3
From figure EQ1 select Earthquake Zone: (A) B C			

BUs required Wind		box 4
From Table W1A/W1B		
W along = 150 BUs/m		
W across = 150 BUs/m		
Total wind load,		
W ALONG:		
W along x BW = BUs		
W ACROSS		
W across x BL = 1005 BUs		
BUs required Earthquake		box 5
From Table EQ1		
E = BUs/m ²		
Note: For a room in the roof space use E+1		
Total earthquake load,		
EQ ALONG and EQ ACROSS:		
E x GPA BUs = BUs		

Please Photocopy

Wall Bracing Calculation Sheet B

Along

Wall or Bracing Line		Bracing Elements Provided			Wind		Earthquake	
1	2	3	4	5	6 W	7 W	6 E	7 E
A		A1	BR7	1.3	145	174		
		A2	BR7	1.2	145	174		
		A3	BR7	2.4	145	348		
B		B1	BR6	2.4	150	360		
		B2	BK7	1.2	145	174		
		C1	BR7	2.4	145	348		
C		C2	BR7	1.2	145	174		
		C3	BR7	1.2	145	174		
D								
E								

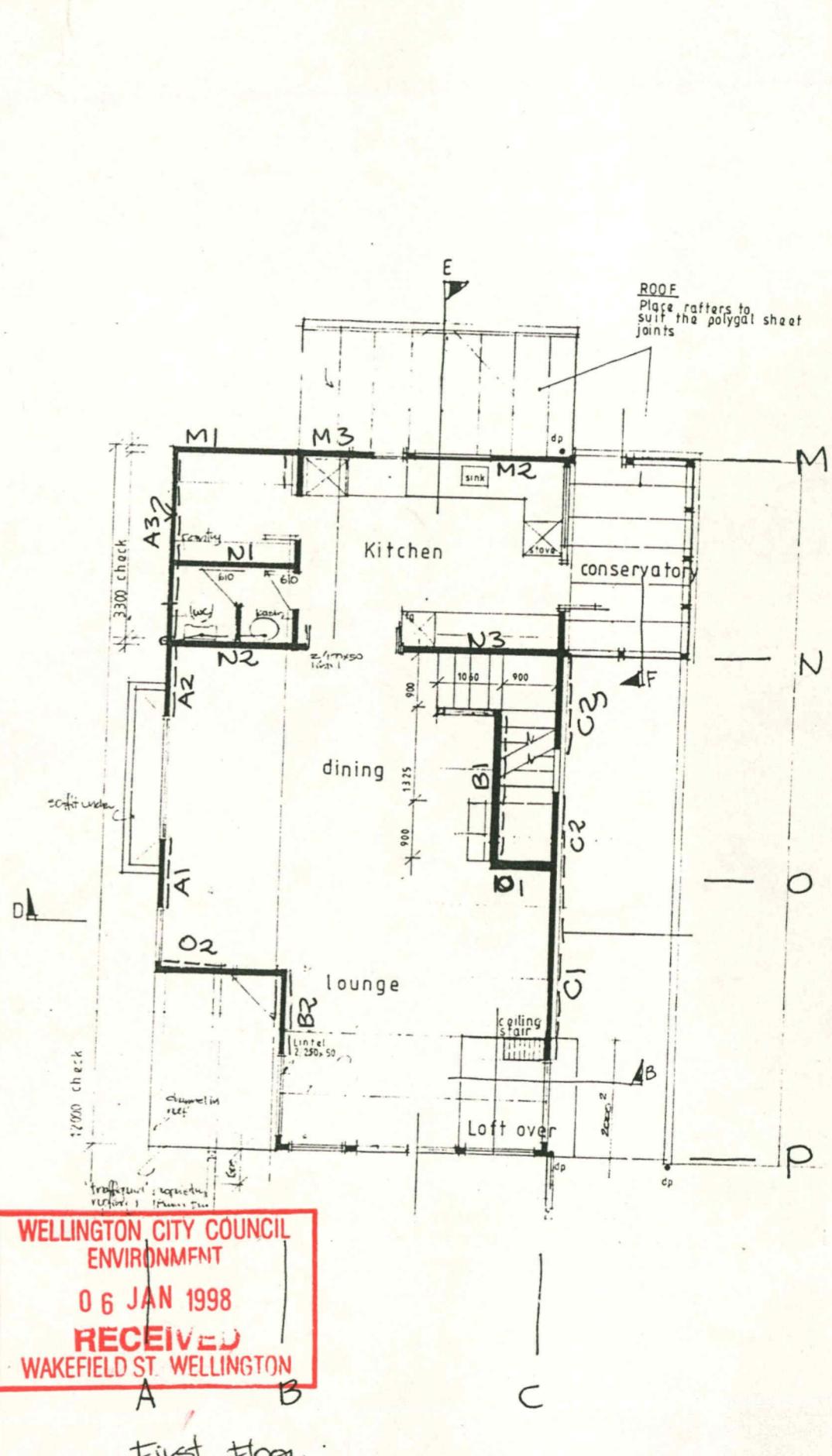
Totals Achieved		W 1926	E
From Sheet A Totals Required		W 1860	E
Wreq/Ereq =			

*If Wreq/Ereq is 1 or less complete E column only
If Wreq/Ereq is 1.5 or more complete W column only
Otherwise complete both W and E

Across

Wall or Bracing Line		Bracing Elements Provided			Wind		Earthquake	
1	2	3	4	5	6 W	7 W	6 E	7 E
M		M1	BR7	2	145	290		
		M2	BR7	1.2	145	174		
		M3	BR7	1.2	145	174		
N		N1	BR6	2	150	300		
		N2	BR6	2	150	300		
		N3	BR6	2.4	150	360		
O		O1	BR6	2	150	300		
		O2	BR7	1.0	145	145		
		O3	BR7	1.0	145	145		
P		P1	BR6	2	150	300		
		P2	BR6	2	150	300		
		P3	BR6	2.4	150	360		
Q		Q1	BR6	2	150	300		
		Q2	BR6	2	150	300		
		Q3	BR6	2.4	150	360		

Totals Achieved		W 1878	E
From Sheet A Totals Required		W 1005	E
Wreq/Ereq =			



Note :

- 1 : amended plan Bracing
- 2 : wall N1 is put in after A3
3. All exterior linings are 7mm ptyto rusticated cedar weatherboards.

6.1.98

Please Photocopy

Wall Bracing Calculation Sheet A

Job Details

box 1

Name			
Street and Number			
Lot and DP Number			
City/Town/District			
Location of Storey:	single/upper of two/lower of two		
Building height to apex	_____m	Roof weight	light/heavy
Roof height above eaves	_____m	Cladding weight	light/heavy
Stud height	_____m	Room in roof space	y/n
Average roof pitch			
Building length BL =	_____m	Gross Building	
Building width BW =	_____m	Plan Area,	GPA = _____m ²
Note: When the average roof pitch is over 25 degrees, use the eaves length and width to determine BL and BW.			
Note: For heavy roofs use the roof plan at eaves level to determine GPA.			

box 2

Wind Zone			
Region:	Terrain:	Exposure:	Topography:
R1	0 Inland	0 Sheltered	0 Gentle
R2	1 Coastal	1 Exposed	1 Moderate
			1 Extreme
Total points _____			
Wind zone:	Low (0)	Very high (3)	
	Medium (1)	Specific Design (4)	
	High (2)		

box 3

Earthquake zone		
From figure EQ1 select Earthquake Zone: A B C		

box 4

BUs required Wind		
From Table W1A/W1B		
W along =	_____BUs/m	
W across =	_____BUs/m	
Total wind load,		
W ALONG:	W along x BW =	_____BUs
W ACROSS	W across x BL =	_____BUs

box 5

BUs required Earthquake		
From Table EQ1		
E =	_____BUs/m ²	
Note: For a room in the roof space use E+1		
Total earthquake load,		
EQ ALONG and EQ ACROSS:		
E x GPA BUs =	_____BUs	

Please Photocopy

Wall Bracing Calculation Sheet B

Along

Wall or Bracing Line		Bracing Elements Provided			Wind		Earthquake	
1	2	3	4	5	6 W	7 W	6 E	7 E
Line Label	Minimum BUs Required	Bracing Element No.	Bracing Type	Length Element (m) L	Rating BU/m W	BUs Achieved (BU/m x L) W	Rating BU/m E	BUs Achieved (BU/m x L) E
A								
B								
C								
D								
E								

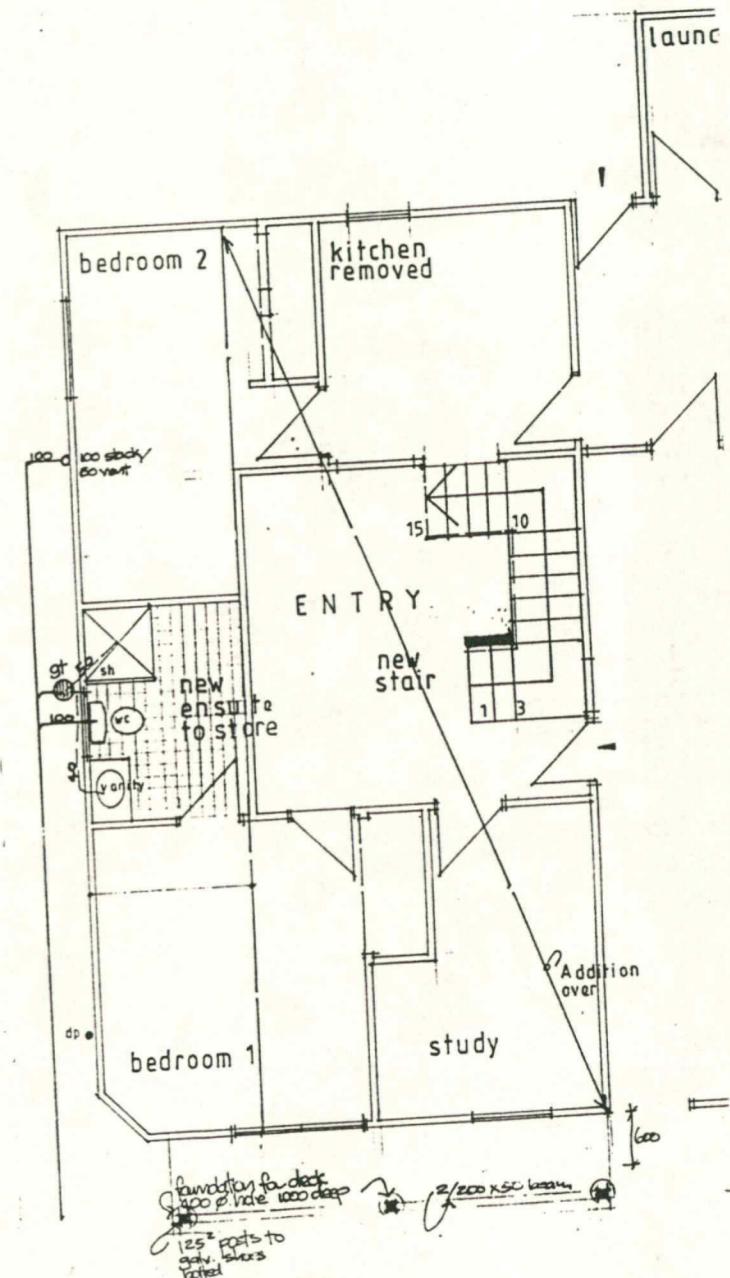
Totals Achieved	W	E
From Sheet A	Totals Required	
Wreq/Ereq =		

*If Wreq/Ereq is 1 or less complete E column only
 If Wreq/Ereq is 1.5 or more complete W column only
 Otherwise complete both W and E

Across

Wall or Bracing Line		Bracing Elements Provided			Wind		Earthquake	
1	2	3	4	5	6 W	7 W	6 E	7 E
Line Label	Minimum BUs Required	Bracing Element No.	Bracing Type	Length Element (m) L	Rating BU/m W	BUs Achieved (BU/m x L) W	Rating BU/m E	BUs Achieved (BU/m x L) E
M								
N								
O								
P								
Q								

Totals Achieved	W	E
From Sheet A	Totals Required	
Wreq/Ereq =		



note:

- 1 Existing construction is 7.5mm ply to outside with rusticated cedar over
- 2 All interior linings are 9.5mm gib bd. (standard)



Existing Ground floor plan.

DUPLICATE RECEIPT

***** W.C.C. Official Receipt *****

Cashier 12

Receipt No. 3876832 06-Jan-1998 14:21

TW \$ 1092.26

Service Request Code: 38755

Service Request Type: Bldg Cons <500K

Property Address: 158 Ohiro Bay Pde,
Happy Valley

Contact Name: K & Julie Matthews &
Clark

=====

Total \$ 1092.26

EFTPOS In \$ 1092.26

-- MATTHEWS & CLARK

=====

Change \$ 0.00

Cashier 12

Receipt No. 3876832 06-Jan-1998 14:21

REG GST NUMBER 53-204-635

Subject to recourse to all documentation
Receipt can be used as a TAX INVOICE

RESOURCE MANAGEMENT CHECKLIST
FOR BUILDING CONSENTS

DATE: 7-1-98

ADDRESS: 158 Ohio Bay Pole SR No.: 38755

AREAS OF NON-COMPLIANCE:

Sunlight Access?

RULE OF D.P.

OTHER COMMENTS:

Work is not to commence
until the resource consent
being applied for under Service
Request 38764 has been
granted

OFFICER: HRJ WJF

DATE: 3/2/98

Issue Form 6A.

4 February, 1998

W.C.C.
RECORDS

K. Matthews & J. Clark
158 Ohiro Bay Parade
Island Bay
Wellington

Service Request No. 38755
Link No. 0600 235135

Dear Sir/Madam

RE: APPROVAL OF BUILDING CONSENT 38755

Service Request Type: Building Consent for less than \$500,000
Site Address: 158 Ohiro Bay Pde Lot 12 DP 10394
Project Description: First Floor extension.

Intended Life: 50 years
Value of Work: \$ 70000

For booking appointments please read note 6

This is to confirm that:

- 1) The building work to which this building consent related **may not** take place because the proposed works fail to comply with either the requirements of the Transitional District Plan, the Proposed District Plan or both. Either:
 - a) the resource consent detailed in "**Item: Resource Management**" must be obtained;
 - or
 - b) the proposal must be amended to comply with the requirements of Transitional District Plan and the Proposed District Plan.

This note is inserted pursuant to Section 35(1)(a) of the Building Act 1991.

- 2) This consent has been processed and issued based on the information submitted. Issuing of this consent will not preclude Council from taking enforcement actions if field inspections demonstrate that the material submitted for the consent is inaccurate or incorrect.

- 3) This consent does not detail all matters which may or could affect this building consent. Please refer to the PIM which has been issued prior to, or in conjunction with this building consent.
- 4) This consent does not constitute authority to undertake the work if you are not the owner of the land and/or building(s) [such as a lessee]. You are still obliged to seek any approvals necessary.
- 5) A portion of the processing fee (please see attached invoice) covers field inspections of work contained within the building consent, based on a field inspection charge out rate of \$70 per hour inclusive of GST. If because of the way you progress construction more inspections are required than covered by the initial fee taken you will be charged for these additional inspections at the rate of \$70 per hour inclusive of GST
- 6) **Request for inspections must be made at least 24 hours in advance of the time required. To book your inspections please phone 8013813 (or 232-5189 for any Tawa, Newlands or Johnsonville inspections). You will be required to give the address, the Service Request number, a contact name and phone number and the type of inspection required.**
- 7) Code Compliance Certificates will not be issued for works where there are outstanding inspections, where it is no longer possible to inspect work undertaken, or where there are outstanding monies to be paid relating to the consent.

ITEM: STRUCTURAL

Foundations on solid ground.

Design Engineer to supervise.

Producer Statement

Dragoslav Bojich

Permissions Team

Phone: 801-3821

ITEM: BUILDING

Section 41 of the Building Act 1991, requires that this consent will lapse and be of no effect if the building work proposed is not commenced within 6 calendar months from the date of issue.

The Contractor shall ensure that the official stamped copy of the plans and specifications as approved for consent purposes by the Wellington City Council are available on the site at all times during the period of the contract and that no deviation from the approved documents

will be permitted until revised drawings and/or specifications have been submitted to and approved by the Environment Control Business Unit.

The Environmental Control Business Unit is to be given 48 hours notice before commencing work and 24 hours notice before carrying out any of the following inspections.

- i. Placing any concrete, placing foundations or timber flooring.
- ii. Wastes in/under slab floor.
- iii. Fitting any external and/or internal linings.
- iv. Testing and plotting any drainage work before backfilling.
- v. On completion.

To arrange for any of the above mentioned inspections please contact the Service Request counter on 801-3542 between the hours of 8.15am and 4.45pm.

The Design Engineer is to supervise the work and comply with the supervision clause below.

All structural work is to be supervised by the Engineer responsible for the design who shall furnish a certificate to the manager on completion of the structural work verifying that the work has been completed in accordance with his plans and specifications as approved in the building consent and that the workmanship is of satisfactory quality.

All of the work is to comply with the requirements of the Building Act 1991.

Survey pegs to be located and boundaries defined to the satisfaction of this department.

b. Foundations into solid ground.

On completion of the work the District Building Officer Compliance Team is to be notified [tel 8013542] as required in the Building Act 1991 - clause 43.1 and the specified form 9 to be completed and returned to Environment Control Business Unit, W.C.C., PO Box 2199, Wellington.

Other approvals required:

Deck safety barriers, including baluster posts, and top rails must comply with the requirements of B1 and F4 of the NZ Building Code.

If new windows are to be aluminium, they are to be manufactured to withstand the wind conditions indicated by Council records as being Specific Design

The 125x125 deck support piles as indicated on Section A of sheet 1 are to be taken down into the concrete footings, or an Engineer's specific design will be required for the galv, 'shoe' brackets.

Any portion of the structure within 1.0m of the boundary is to be fire rated to a Fire Resistant Rating of at least 30mins.

ITEM: PLUMBING

In addition to the plumbing and drainage design details presented in the submitted consent application plans and specifications, the following conditions and/or requirements shall be recognised and complied with on the project site.

The sewer and stormwater drains are to be altered and extended as shown.

The existing plumbing is to be altered and extended as proposed.

New plumbing is to be installed as proposed, and discharge to the sewer drain on site.

INSTALLATION REQUIREMENTS FOR HOT WATER CYLINDERS:

- Hot water cylinders relief valves shall discharge to approved positions in an approved manner and all designed not to cause a danger, nuisance or damage to property or injury to persons, the relief valves shall not dispense into galvanised safe trays:
- The cylinders shall be installed to comply with manufacturers instructions and recommendations and also all relevant verification requirements of the N Z Building Code:
- Provide permanent unrestricted visual and physical access to the cylinder and all attached control and relief valves, and also to the tundish drains from the valves:

WATER TEMPERATURE LIMITATIONS ON USE OF POLYBUTYLENE PIPING:

Where polybutylene pipe is used to pipe hot water from a storage water heater, the water temperature shall be limited by an acceptable and approved method to comply with the pipe manufacturers performance/installation specifications, and also satisfy the intent of N Z B C documents - G12/AS1 paragraphs 5.2.4, 4.13.2 clause 5.2 and tables 5 & 6.

SAFE MAXIMUM WATER TEMPERATURES:

The delivered hot water temperature at any "sanitary fixture" used for personal hygiene shall not exceed:

- a) Forty Five '45' degrees centigrade for early childhood centres, schools and old peoples' homes and;
- b) Fifty five '55' degrees centigrade for all other buildings.

All work to comply with the NZ Building Code and approved documents.

INSPECTIONS:

The Building Services Plumbing Officer to be notified for all the required tests and inspections of plumbing and drainage systems before any work is covered, back filled or otherwise concealed.

R Baumgren

Permissions Team

Phone: 801 3826

ITEM: RESOURCE MANAGEMENT

Other approvals required:

Work is not to commence until Resource Consent approval has been obtained.

Bill Stevens

Permissions Team

Phone: 801 3299

Please ensure the Site Inspection Checklist, enclosed with this letter, is completed by the Building and Plumbing Inspectors.

Issued by, for and on behalf of Wellington City Council.



T.Brooks

Environmental Control Business Unit
Wellington City Council
Telephone 801 3539

4 February, 1998

**W.C.C.
RECORDS**

K. Matthews & J. Clark
158 Ohiro Bay Parade
Island Bay
Wellington

Service Request No: 38755
Link No: 0600 235135

PROJECT INFORMATION MEMORANDUM No.38755

Service Request Type: Building Consent for less than \$500,000
Site Address: 158 Ohiro Bay Pde Lot 12 DP 10394
Project Description: First Floor extension.
Intended Life: 50 years

This Project Information Memorandum is confirmation that the proposed building work may be undertaken, subject to the provisions of the Building Act 1991 and any requirements of the corresponding Building Consent:

No.38755 attached

This Project Information Memorandum includes any relevant:

- A. Information identifying special features of the land. (Please refer to general note No. 4)
- B. Information about the land or building notified to the Council by any statutory organization having the power to classify land and buildings.
- C. Details of existing Stormwater or Wastewater utility systems. (Please refer to general note No. 4)
- D. Details of authorizations other than the Building Consent which must be obtained from the Wellington City Council before the proposed building work may be undertaken. (Please refer to general note No. 5)

A. FEATURES OF THE LAND

Potential Erosion: **No/Yes** Potential Avulsion: **No/Yes** Potential Subsidence: **No/Yes**
Potential Alluvion: **No/Yes** Potential Slippage: **No/Yes** Potential Inundation: **No/Yes**

Presence of hazardous contaminants: **No/Yes**

ITEM: RESOURCE MANAGEMENT

A Features of the land

B Information about the land

D Other authorizations

Resource Consent approval is required for the proposed additions.

Bill Stevens

Permissions Team

Phone: 801 3299

ITEM: BUILDING

A Features of the land

B Information about the land

C Details of existing drains

D Other authorizations

Council records indicate the property is situated within a Specific Design Wind area.

T.Brooks

Permissions Team

Phone: 801 3539

General Notes

1. This Project Information Memorandum is issued pursuant to Section 31, Building Act, 1991 and Clause 5, Building Regulations, 1992.
2. This Project Information Memorandum will lapse if the corresponding Building Consent is not obtained within 2 years of the date of issue of this Project Information Memorandum. (Regulations 5(3))
3. If the owner or a person undertaking building work believes that this Project Information Memorandum is incorrect, the owner or the person shall immediately advise the WCC, in writing, giving relevant details. (Regulations 5(6))

4. The information supplied reflects only what is known by the Council to exist and is considered relevant to the proposed project. Some special features or drain may exist on/near the site unbeknown to the Council.
5. This Project Information Memorandum does not attempt to identify:
I)Authorizations that may be required from other organizations for this project, e.g., approval to connect/alter water, gas, power or telecommunication services, Resource Consents relating to water use, etc
6. This Project Information Memorandum does not imply the submitted design meets the requirements of the Building Code. Compliance with the Building Code will be addressed during processing of the Building Consent.
7. The owner is responsible for ensuring that the Consent documents are drafted in full accordance with the Resource Management Act (District Plan) and the Local Government Act (Bylaws) requirements, or obtain the relevant approvals.
Note: If the Building requires an evacuation scheme, contact the New Zealand Fire Service to check if a warning device is required.

Issued by, for and behalf of Wellington City Council.



T.Brooks
Environmental Control Business Unit
Wellington City Council
Telephone 801 3539

4 February, 1998

K. Matthews & J. Clark
158 Ohiro Bay Parade
Island Bay
Wellington

Service Request No: 38755
Link No: 235135

Form 4a

**W.C.C.
RECORDS**

**Restrictions on Implementing Building Consent
Section 35(1A), Building Act 1991
Resource Consent Required**

Certificate issued by the Wellington City Council.

Building work authorised by Building Consent SR 38755 in respect of the building work at :

Street address: 158 Ohiro Bay Pde

Legal description: Lot 12 DP 10394

is also required to have the following authorisation under the Resource Management Act 1991:

Resource Consent approval for the proposed additions is required to be obtained prior to work commencing.

Note

- Other aspects of the proposal may not comply with the rules of the District Plan and would also require resource consent.
- It is the applicant's responsibility to ensure that all aspects of non-compliance are identified and appropriately assessed in a resource consent application.

Until that authorisation has been obtained **no building work to which the above building consent relates may be undertaken.** Failure to observe the restrictions of this certificate may result in enforcement proceedings under the Resource Management Act 1991.

If you require any further information or assistance in relation to making a resource consent application contact **Bill Stevens on phone: 801 3299**

Signed for and on behalf of the Council.



Terry Brooks
Environmental Control Business Unit
Wellington City Council

Date: 4 February 1998

DUPLICATE RECEIPT

***** W.C.C. Official Receipt *****

Cashier 12

Receipt No. 3973817 17-Feb-1998 12:55

TW \$ 25.00

Service Request Code: 39797

Service Request Type: Bldg Cons Amend

Property Address: 158 Ohiro Bay Pde,

Happy Valley

Contact Name: Martin Meyers

Structural Engineer

=====

Total \$ 25.00

Cheque \$ 25.00

-- U246039 U030502T 0010583-00 U

-- MARTIN MEYERS STRUCTURAL ENGINEER

=====

Change \$ 0.00

Cashier 12

Receipt No. 3973817 17-Feb-1998 12:55

REG GST NUMBER 53-204-635

Subject to recourse to all documentation
Receipt can be used as a TAX INVOICE

Applicant

Martin Meyers Structural Engineer
P O Box 24-120 Wellington

Tax Invoice GST Number 53-204-635

Date: 17-Feb-98
Reference: TW 39797
Amended Plan - Building Consent

Owners**Property Addresses**

1. 158 Ohiro Bay Pde, Happy Valley

Fees Payable

Description	Fee	GST	Total
Amended Plan Fee	\$22.22	\$2.78	\$25.00
Total	\$22.22	\$2.78	\$25.00

Fees Paid

Date	Reference	Amount
17/02/98 12:54:10	3973817	\$25.00
Total		\$25.00

Balance Outstanding: \$0.00

Payment Advice

Please return this section with your payment

Martin Meyers Structural Engineer
P O Box 24-120 Wellington

WELLINGTON CITY COUNCIL
PO BOX 2199 WELLINGTON

17-Feb-98

Reference:	TW 39797
Amount Owing:	\$0.00
AMOUNT PAID:	PLEASE COMPLETE

Building Consent Allocation Sheet (PC Doc's No 102117)

Date: 19/2/98

Address: 158 OHIRO BAY PDE

SR Number: 39797

Project Description: AMENDED PLANS (LINK TO 38755) No of Sets: 2

	PIM	Consent	Signed	Approval given	In Bin	Out of Bin
Structural	Yes	No	Yes	No	DAC.	S E23-2-98 23/2/98
Building	Yes	No	Yes	No	BC	B
D Goods	Yes	No	Yes	No		DG
Vehicle	Yes	No	Yes	No	to joit	V
Health	Yes	No	Yes	No	Cl.	H
Resource	Yes	No	Yes	No	SL ?	R E23/2/98
Plumbing	Yes	No	Yes	No		P
Drainage	Yes	No	Yes	No		D
Trade Waste	Yes	No	Yes	No		TW
Water	Yes	No	Yes	No		W

Conditions of approval:

15 April, 1998

Martin Meyers Structural Engineer
P O Box 24-120
Wellington

Service Request No: 39797
Link No: 0600 235135

Dear Sir/Madam

AMENDED PLANS FOR BUILDING CONSENT NO 38755 158 Ohiro Bay Pde

Service Request Type: Amended Plan - Building Consent
Site Address: 158 Ohiro Bay Pde Lot 12 DP 10394

This is to inform you that your amended plans have been approved subject to the same conditions as Building Consent no **38755**.

The works are to comply with the Resource Consent granted.

Yours sincerely



 Rob Baumgren
Environmental Control Business Unit
Wellington City Council
Telephone 3826

Backlog desktop office review

Date:	9/11/11	WCC follow up	Tim Watson
Attendees:	Jon Astwood <input checked="" type="checkbox"/> Ian Culver <input checked="" type="checkbox"/> Pete Geraghty <input checked="" type="checkbox"/> Tim Watson <input checked="" type="checkbox"/> Richard London <input checked="" type="checkbox"/> John Peterson <input checked="" type="checkbox"/>		
PROJECT	SR 38755 Address 158 Ohiro Bay Pde		
Description	New Dwelling <input checked="" type="checkbox"/>	Additions <input checked="" type="checkbox"/>	Alterations <input checked="" type="checkbox"/>
	Adds & Alts <input checked="" type="checkbox"/>	Commercial <input checked="" type="checkbox"/>	
Contact: Owner / Agent	Heinrich Schulze 0210 653 255 478 4330		
Items for Discussion			
1.	Dwelling Type Residential Building consent approved 4/2/98 Construction dates 3-5/98 Age 13 YRS PS4 Cladding system cedar w/ sh. Roof System BUTYNOL/IRON reg. Decking timber Bathroom membrane unknown, slight/grey		
2.	History Last/final inspection 18/5/98 drainage round window Remedial works required nil Current status on-going (no other outstanding consents)		
3.	Is it the panel's decision that the building based on the requirements of the BA04 section 436 today can demonstrate compliance? Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> (Please tick one)		
4.	Issues: B1 <input checked="" type="checkbox"/> B2 <input checked="" type="checkbox"/> E2 <input checked="" type="checkbox"/> E3 <input checked="" type="checkbox"/> Others		
5.	Should we inspect: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Risk level assessed: Low <input type="checkbox"/> Medium <input checked="" type="checkbox"/> High <input type="checkbox"/> Action to be taken book to area inspector <input type="checkbox"/> send letter "Form WCC 105 Old consent fee letter" with invoice <input type="checkbox"/> allocate to Cat 3 <input type="checkbox"/> or nominated officer <input type="checkbox"/> send letter "Form WCC 106 Backlog CCC refusal letter" <input type="checkbox"/>		

Inspection Diary

Service Request Number: 38755

Service Request Type: Building Consent for less than \$500,000

Address: 158 Ohiro Bay Parade

Project Description: First Floor extension.

Inspection Fee Paid

DIARY NOTES FOR EACH INSPECTION		Time taken	Total time
DATE: 19/03/98	OFFICERS NAME: M Scully	30mins	30mins
DIARY NOTES:	pile holes to verandah at front ok to pour need to check for resource consent - documents not on site		
DATE: 21/4/98	OFFICERS NAME: p robinson	30	1 hour
DIARY NOTES:	pre line max mc 14% ceiling timbers wall max 12% mc		
DATE: 6/5/98	OFFICERS NAME: m pemberton	30	1 hour
DIARY NOTES:	pre line ok soil and waste pipes tested later	30	30
DATE: 18/5/98	OFFICERS NAME: Mike Pemberton	30	2:00
DIARY NOTES:	SS and soil stack tested OK. Received Asbuilt.		
DATE:	OFFICERS NAME:		
DIARY NOTES:			
DATE:	OFFICERS NAME:		
DIARY NOTES:			
DATE:	OFFICERS NAME:		
DIARY NOTES:			
DATE:	OFFICERS NAME:		
DIARY NOTES:			

23 November, 2011

Heinrich Schulze
Dress Circle
Newlands
Wellington
6037

Service Request No. 38755
Property ID: 1045680

And to:

Jan CJ Schnetler & Caroline E Schnetler
78 Bridgewater Drive
Kallaroo
6025
WA
Australia

Dear Sir

Building consent SR 38755

Service Request Type: Building Consent
Site Address: 158 OHIRO BAY PDE, Owhiro Bay
Legal Description: LOT 12 DP 10394
Project Description: **First Floor extension.**
Date Consent issued: 04/02/1998

I refer to your recent communication re the outstanding building consent requesting that the Wellington City Council to consider issuing a Code Compliance Certificate in respect of this outstanding Building Consent. Our records show this building consent was issued more than five years ago.

Before issuing a Code Compliance Certificate the Council needs to be satisfied, on reasonable grounds, that all work done under the consent meets the requirements of the Building Code 1992 at the time the consent was issued. It is the owner's responsibility to request a Code Compliance Certificate immediately after the work is complete. If there is a delay in this request, as has occurred in this case, there is a risk the certificate may not be issued.

If requested, Council officers will undertake an inspection of the building work and may identify items of non-compliance. As the property owner you will be responsible for identifying ways of achieving compliance and arranging for any remedial work to be completed. Any items identified will need to be addressed to the Council's satisfaction.

Council officers need to be satisfied that the durability requirements of the Building Code will continue to be met. This includes, but is not limited to, consideration of profiled roof

claddings, roof and deck membranes, exterior wall claddings, external joinery elements, floor coverings in wet areas and maintenance requirements for the products used.

It is possible that due to the age of the building work and the length of time that has passed since the work was completed, the Council may not be able to be satisfied that the durability requirements of the Building Code can be met. This means a Code Compliance Certificate cannot be issued. Whether the building work at your property falls within this category can only be determined after an inspection by the Council.

An initial fee of **\$171.35** (incl. GST) is payable prior an inspection being carried out. This fee is based on 3 hours of work at our current charge rate of \$150.00 /hour (= \$450.00.) This is off set against any unused fees paid at the time that the original Building Consent was taken out. There is a previous fee balance of \$278.65 owing on this consent.

If you wish to proceed with obtaining a Code Compliance Certificate an estimate will be made following the inspection, these estimated fees will need to be paid before the Council carries out any further work for you on this Building Consent. You will be charged for any time spent by our officers in inspections or related administration. Additional fees will be charged, and must be paid before a Code Compliance Certificate is issued, if the fees paid at the time of application are not enough to cover the work actually carried out.

If you choose not to proceed with an inspection, the Council will take no further action in relation to this building consent unless it receives information that indicates the building work has become dangerous or insanitary as defined under sections 121 and 123 of the Building Act 2004. A copy of this letter will be placed on the building consent file.

An inspection can be requested by completing the response slip below and forwarding to Building Inspections, Building Consents and Licensing Services, PO Box 2199, Wellington or faxing it to (04) 801-3100.

If you have any further questions regarding this matter please do not hesitate to call.

Yours sincerely,



Tim Watson
Building Consents and Licensing Services
Wellington City Council
Telephone 803 8278

Attn: Tim Watson
Building Consents and Licensing Services
Wellington City Council
Telephone 803 8278

Building Consent SR 38755
Address: 158 OHIRO BAY PDE, Owhiro Bay

I wish to arrange a time for a final inspection of the above building consent.

Included with this response slip is the outstanding fee's payable to the Wellington City Council of **\$171.35** Yes No

I understand that a final inspection may identify items of non-compliance and that it may not be possible to issue a Code Compliance Certificate for this work.

I understand that there could be fees to pay as a result of this inspection.

..... Property owner name (please print) Signature

Daytime contact number.....

Date.....

Post to OR Fax to (04) 801-3100
Building Inspections
Building Consents and Licensing Services
PO Box 2199
Wellington

23 November, 2011

Heinrich Schulze
Dress Circle
Newlands
Wellington
6037

Service Request No. 38755
Property ID: 1045680

And to:

Jan CJ Schnetler & Caroline E Schnetler
78 Bridgewater Drive
Kallaroo
6025
WA
Australia



Dear Sir

Building consent SR 38755

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If you have any further questions regarding this matter please do not hesitate to call.

Yours sincerely,

Tim Watson
Building Consents and Licensing Services
Wellington City Council
Telephone 803 8278

SR 38755

SPECIFICATION AND DRAWINGS FOR HOUSE ALTERATIONS 158 OWHIRO BAY PARADE

DP ... 10394

LOT 12.....

DATE: 6.1.1998

OWNER KERRY MATHEWS 801 9616 W 383 6973H
158 OWHIRO BAY PARADE

DRAWN H. ROMBEL 567 8299 OR 025 528179
6 BALGOWNIE GR. NAENAE

**W.C.C.
RECORDS**

WELLINGTON CITY COUNCIL
ENVIRONMENT
06 JAN 1998
RECEIVED
WAKEFIELD ST. WELLINGTON

Henry

R O M B E L

LIFE STYLE PLANNERS, ARCHITECTS

DESIGNCARE STUDIO

TEL (04) 567 8299

MOBILE 025 528179

FAX (04) 567 8299

6 Balgownie gr L Hutt.

1. PRELIMINARY AND GENERAL

1.01 EXTENT OF WORK

Generally the work content comprises the supply of all materials and labour, paint and machinery necessary for the construction, completion and maintenance of the whole of the work specified or shown on the drawings.

1.02 CONTRACT DOCUMENTS

The following documents form this Contract:

- (a) *Builder's Tender and Building Agreement with the Owner as a separate item.*
- (b) *This Specification including any Addendum's.*
- (c) *Bracing Schedules.*
- (d) *Project Drawings*
- (e) *Engineering Calculation and details..*
- (f) *Owner's responsibility to tender the whole or part of the work and the scope as defined by him*

The owner shall supervise admin. and determine the Scope of Work content of the contract.

1.03 CONDITIONS OF CONTRACT

These conditions shall apply equally to all trades and sections of the work. The Sub Contractor shall co-ordinate the work to fit in with the Main Contractor's schedule.

1.04 ACTS, REGULATIONS, CONSENTS AND FEES

All work shall be carried out by qualified tradesmen, in accordance with good trade practice and completed in accordance with the drawings and this specification. Where otherwise specified in this specification all construction shall comply with:

The Building Act 1991

Building solutions under the Act as mentioned for trades,

Local Authority addendum's in the Building Consent

The Owner shall apply for the Building Consent and pay for all inspection fees and deposits for road damage.

1.05 DRAWINGS AND SPECIFICATIONS

The Contractor shall keep copies of "APPROVED BY COUNCIL" plans and specifications and relevant documents in safekeeping on the site to enable reference to be made to them at all times during working hours. All work shall be finished according to the true intent and meaning of the drawings and specifications taken together, whether they may or may not be the same, as provided below.

Any work deemed to be unsatisfactory shall be removed and made good at the expense of the Contractor.

No scaling of drawings shall take place. Any discrepancies shall be referred back to the Designcare for clarification.

2. EXCAVATIONS

2.01 SET OUT

Set out the whole of the excavations to the layout and overall dimensions as generally indicated on the drawings or required by on-site conditions.

2.02 SITE INSPECTION

Check on site the intension of the drawings. Refer to the specifier if abnormalities will prevent work or a first class finish. It is vital to check existing features on site to gauge the accuracy of the dimensions proposed and ordering materials beforehand.

2.03 UNSTABLE GROUND

Where loose, soft or otherwise unstable ground is encountered, the excavation depth is to be increased until solid ground is reached. Where required by the Building Inspector, any soils Engineering report specifying additional preparation foundations shall be the responsibility of the Owner. An extra to the Contract will be made for such work.

2.04 FOUNDATION EXCAVATIONS

Excavate for all foundations to a solid bearing to a minimum depth of 300mm below adjacent cleared ground excavations are to be level and shall be stepped for sloping ground with minimum depth of 300mm below ground or as shown.

2.05 SERVICES

Where shown, indicated or otherwise required, excavate trenches for sewer, water, telephone, power services, required by the appropriate Territorial and Service Supply Authorities and the Owner.

3. GENERAL

3.01 MATERIALS AND WORKMANSHIP

The work shall be executed with new materials as required, best of their respective kind, to workmanship equal to the best trade practice. Any work substandard shall be altered at the Contractor's expense. Before placing any orders for materials the Contractor must satisfy the owner the items are in strict accordance with the end result expected, to the right size. Produce technical data, samples or shop drawings if asked for.

Where names of manufacturers are stated these are taken as an indication of the quality of the end product expected. The manufacturers specification shall be followed in trade literature in installations, fixing methods and finishing to achieve first class results. Store and handle materials as specified by the manufacturer.

3.02 PREPARATION

Undertake all necessary action and methods to leave a surface entirely suitable to accept the intended finish with first class results. To this end make good all surfaces where work is being carried out following trade practice methods.

Before proceeding with any work, sub-contractors shall inspect the work of any trade against which the work or material is to be placed and report immediately to the Main Contractor or owner and any irregularities or defects which would prevent satisfactory execution of their work. Failure to examine and report will be construed as an acceptance that all preparatory work is satisfactory.

3.03 CLEANING

All trades shall clean up after and during the work.

3.04 INSURANCE

The Owner shall insure the works against losses during the entire work.

The Contractor shall have proof of public liability insurance.

3.05 ELECTRICAL

All electrical work installed shall comply with the current regulations. Registered tradesmen shall only do the work. On completion a Compliance Certificate shall be supplied to the owner.

3.06 HEALTH AND SAFETY

The Contractor shall ensure that the requirements of the Health and Safety in the Employment Act 1992 are complied with.

3.07 SECURITY

The Contractor is entirely responsible for the security of his tools and equipment.

3. CONCRETE WORK

3.01 GENERAL

All general materials and workmanship shall comply with the requirements of NZS3109:1987.

Allow for 24 hours notice of intention to pour concrete for Council Inspectors to check bearing of ground, formwork, reinforcement, service pipes etc., prior to any concrete being placed.

3.02 EXTENT OF WORK

Comprises the setting out, boxing, placing of concrete, reinforcement and embedded items in the foundation, floor slabs, walls, beams and bands, and any other concrete work as required by the drawings.

3.03 CONCRETE MATERIALS

To Ready Mix specifications.

3.04 REINFORCEMENT

Reinforcement foundation walls, footings and beams as shown on the drawings. All main reinforcing rods shall be deformed ("D") rods. Tie rods between main rods may be plain round ("R") bars. All vertical reinforcement to be determined by site measurements.

Reinforcing shall be neatly and accurately bent and placed as shown on the drawings. Tie all laps and crossings with 2mm diameter black iron wire sufficiently cut off to prevent them from projecting beyond the finished face of the concrete. Reinforcing shall be continuous around all corners and through steps in footing and walls. Generally, reinforcing in foundations walls shall be placed in the centre of walls, unless otherwise noted on the drawings.

Provide 75mm cover from natural ground under footings and 50mm cover from the sides of footings. Place concrete or plastic spacers to hold rods in positions and to maintain cover.

Laps in deformed rods shall be a minimum of forty diameters (40 x dia.), and shall be staggered at random. Particular attention shall be given to all starter rods to ensure that they are so placed and bonded to permit the development of their full tensile strength.

4. CARPENTRY

4.01 EXTENT OF WORK

Comprises the supply and fixing of all timber work, lining, sheathings, fittings, finishing's and hardware to the best of trade practice. Provide and fix all necessary beads, stops, fillets, etc., as may be required.

4.02 MATERIALS

All materials shall be new unless otherwise specified and the best of their respective kinds.

All timber used shall be classified as specified in NZS 3631:1988 "New Zealand National Timber Grading as specified in NZS 3602: 1990 - "Code of Practice for Specifying Timber and Wood-based products.

All timbers shall be in straight and in as long lengths as procurable.

All treated timbers shall be in accordance with the NZ Timber Preservation Authorities Regulations.

Exposed exterior and interior finishing timbers unless detailed otherwise, are to be machine dressed.

4.03 TIMBER GRADES

The Contractor shall allow for all timbers as specified below:

Machine dressed timbers shall be thoroughly kiln dried or air seasoned to a moisture content.

General Framing Timbers	Boric Treated No. 1 framing grade pinus Radiata
Exposed beams, rafters, joists, trusses	As specified
Exterior Finishing Timbers	As selected or specified or owner selected
Interior Finishing Timbers	As selected or specified " " "
Exterior Posts and Beams	H3 as selected or specified " " "

4.04 FIXINGS

All timber fixings shall comply with Appendix A (Nailing Schedule) of NZS 3604 unless otherwise stated. All nails in exposed timber work are to be punched below the surface.

All wall plates to be fixed at joints and corners with nail connector plates as specified in NZS 3604.

4.05 DAMP PROOF COURSE

Separate all timber from concrete by a dpc, a bituminous 3 ply fabric.

4.06 PAINT PRIMING

All exposed exterior woodwork including laps, rebates, mitred joints etc., where paint finished shall be primed, and where stain finished, shall have one coat of stain as required prior to fixing.

4.07 FLOOR JOISTS

Floor joists shall be gauged, level, in straight lines, of single length, of the sizes and at the centres indicated, and fixed strictly in accordance as shown on the drawings. Allow for

trimmers and trimming joists as indicated and specified in NZS 3604.

Provide double joists under all bearing walls. Double joists may be separated by 50mm packings at not more than 600mm centres. Non-load bearing walls shall be over joists or may be supported by 100 x 500 blocking between parallel joists, at each end of the wall, at each side of door openings and at not more than 1200mm centres.

Full depth joists as trimmers to the ends of all joists as indicated on drawings, or fix other support as detailed on the drawings or permitted by NZS 3604.

Provide full depth blocking at the mid span of all joists exceeding 2.4m span.

4.08 SHEET FLOORING (FOR TIMBER FLOORS)

20mm flooring particle board flooring as shown on the drawings. Joints in sheet flooring shall be made over supports. Where necessary, provide 75 x 50mm dwangs between joists to support joints. Fix flooring to joists not less than 10mm from edges around all edges of the sheets and at each intermediate joist at centres shown in the Nailing Schedule of NZS 3604. Use only flooring nails.

To the completion of the works, all nails in floor shall be punched for floors to be sanded only.

4.09 BUILDING PAPER

To external timber-framed walls fit building paper of heavy duty type (breather type to NZS 2295: 1988) to extend from the upper floor top to the under side of the lower floor bottom plate. The building paper must be run horizontally, lapped not less than 200mm with the upper sheet lapped over the lower sheet, and be adequately secured to plates, dwangs, studs.

4.10 WALL FRAMING

Frame up for walls and partitions as shown on drawings. Studs shall be cut square at ends or true to angles of gable or frames. All studs shall be continuous for full length from top to bottom plates including plates at roof level on gable. Fix ribbon plate to studs for fixing ceiling joists at gable and frames.

Shall be generally be out of 100 x 50 No. 1 Framing grade Boric treated Radiata Pine.
Top plates shall be as shown on the drawings.

4.11 LINTELS

As shown on the plan drawings

4.12 WALL BRACING

Refer to the Bracing Schedule certified by the engineer.

4.13 ROOF BRACING

As shown on the drawings.

4.14 ROOF FRAMING/CONSTRUCTION

As shown on the drawings. All rafters or trusses shall be fixed to top plates with 2/100 x .75mm skew nails and 2 4mm galvanised "Z" nails as minimum in all crossings.

All trusses used shall be of proprietary manufacture and certified by an approved manufacturer. Transportation, storage and installation shall prevent any damage to the product by using

appropriate means and methods. Provide 100 x 50 ceiling runner as shown fixed above the bottom cords. The manufacturer shall provide all the ceiling battens 150 x 40 to the edges and 70 x 40 at 400mm centres throughout.

Allow to fit one ceiling manhole in the ceiling.

4.15 ROOF PURLINS

As shown on the drawings and to suit the roofing material being specified. Secure with a z nail at each crossing.

4.16 SOFFITS

As specified use PVC mouldings and galvanised nailing only.

4.17 EXTERIOR CLADDINGS, FINISHING TIMBERS

As shown on the drawings. Installation and fixings shall be entirely to the manufacturer's specifications for that material or wall system shown on the elevations.

All fixings and nails shall be galvanised (or ss other for Cedar).

Fascias and bargeboards to roofs shall be of widths to suit. All joints shall be primed except cedar.

4.18 WARDROBES AND CUPBOARDS

As shown on drawings.

4.19 INTERIOR LININGS

As shown on the drawings. The material shown shall be governed by the manufacturer's specifications entirely for installation, storage and finish.

Gibraltar Board - Where shown on the drawings shall be generally 9.5mm standard "Gibraltar Board". Only "Aqualine" shall be used in bathrooms and "Bracelyne" if specified in the Bracing Schedule.

Plaster joints entirely to trades systems.

Refer to the manufacturer's specifications governing Gibraltar Board.

4.20 INTERIOR FINISHING TIMBERS

Provide all skirtings, scotias etc, to complete the work. Schedule of material follows on as selected by the Owner.

4.21 INSULATION

Generally as follows:

Concrete slab dpc -

butt against timbers and 100mm sag minimum

Moiststop 737

Building paper to framing -

Heavy duty

Wall insulation -

Fibreglass batts RI.8 (75mm thick) pressed fully inside of all exterior walls.

Fit also a vapour barrier behind the linings in bathrooms, plastic or aluminium foil

Ceiling Insulation

R2.6 Ceiling Fibreglass batts (100mm thick)

4.22 HARDWARE

As selected by the Owner

4.23 INTERNAL DOORS

As selected otherwise 1980 x 40mm thick hollow core, flush panel doors, paint quality in 30mm thick slim line jambs. Sizes as shown on the drawings and complete with tracks if sliding or folding.

4.24 DOORS AND WINDOWS

Refer to sizes on the Elevations in timber.

All glazing shall conform to NZS Standards.

Bathroom and toilet glazing shall be a selected obscure type.

4.25 KITCHEN FITTINGS

Refer to the plan showing the kitchen layout.

A joiner shall construct a kitchen system based on this layout to match his modular system and manufacture.

5. ROOFING

5.01 EXTENT OF WORK

This trade consists of the supply and fixing by approved fixers, of roofing and accessories.

5.02 METAL ROOF

To roof areas where shown on drawings:

Iron Coloursteel corrugated. Lay as recommended by the manufacturer and fix as recommended for windy conditions

Building Paper Heavy duty Repair all rips.

Purlins As shown on the drawings to suit roof framing at 900mm max. Fix with 100 x 3.75mm nails and a zZ nail at all crossings.

Ridges, Barges

Hip Finish all ridges, hip and barges as required on drawings, with matching coloured material cappings.

Flashings Flash and overflash all projections through roofing.

6 PLUMBING

6.1 STANDARDS

All work shall comply with the solutions of AS/NZS 3500.2:1996
Section 3, Drainage design and Section 8, Single stack system

6.2 WORKMANSHIP/MATERIALS

All work shall be carried out by the qualified tradesman selected to recognised standards of performance.

Co-operate with other trades and discuss on site with the Carpenter concerning all floor penetrations.

The Plumber shall provide all materials, plant and labour.

All materials and fittings used shall comply with the requirements of the relevant current NZ Standards and acceptable by the Local Authority.

All piping laid in concrete shall be doubly wrapped in 'Densotape'. All copper shall be braced with silfos only.

Support all piping with purpose made clips for water services and fully support with g.i. trays and all wastes as required.

6.3 FITTINGS/SERVICES

Water Supply	Existing from toby.
Hot Water Services	Run in copper or polybutylene
Cold Water Services	as above.
Hot Water Cylinder	180l Electric heating existing mains pressure.
Hose Taps	Provide an additional tap to the rear
Traps	"Dux" type to fittings as required.
Wastes	upvc
Vents	Take the required vents through the roof and sealed over the roofing by acceptable methods.
House Fittings	GROUND FLOOR
New Ensuite	wc: Dual flush 'Caroma' tank and Fowler pan Shower: Englefield corner 900 x 900 shower unit with Topless valve and Esiclean trap Vanity: Selected
Laundry	Existing
Kitchen	FIRST FLOOR Twin sink insert ss top in bench. Single lever Greenstyle facet.

Plumb for a dishwasher and provide brass hose connections to dish washer.

Toilet

Basin - Selected

WC - Fowler pan

Caroma dual flush tank

Note that other fittings may be selected of similar standards.

6.4 TESTING

A test shall be arranged before the walls are covered up.

6.5 MAINTENANCE PERIOD

3 months to cover all defects in materials, and installation.

6.6 LAYOUT

Refer to the drawings for the fitting arrangements. Confer with the Carpenter to allow beforehand any allowances or provisions to be made in the first floor joists to run the services.

7. DRAINLAYING

7.1 STANDARDS

All work shall comply with the solution of AS/NZS 3500:2.2:1996 Sections 3, Drainage Design.

7.2 MATERIALS

Sewer - Marley UPVC to NZS/AS1260

SW - Marley UPVC

All materials shall be the best of their respective kind. All joints, connections, inspection junctions, and junctions shall be proprietary type by Marley installed entirely as specified by Marley.

7.3 SITE INSPECTION

The Drainlayer shall confer with the Plumber and arrange with the Contractor before the foundations are laid to fix the exact positions of all connections of wastes and drains and pipes to be cast under and into the concrete slab.

7.4 DRAIN TRENCHES

The excavation of trenches for drains shall be accurately made with base clean and true to grade so that no unnecessary filling is required. Adequate width shall be allowed in accordance with depth of drain to enable laying and jointing to be properly carried out. Trenches shall be kept firm and dry and shall be opened up only in lengths that can be protected, utilised and refilled within a reasonable time.

All drains shall have a minimum cover of 450mm.

7.5 LAYING OF DRAINS

All drains are to be laid with the full length of the pipe bearing on the base. The whole of the drains are to be laid to a regular and even fall and surrounded with selected drainage metal as approved by the Drainage Inspector. Provide all inspections at junctions and change of direction for sewer and SW.

76 LAYOUT

The drawings show the Proposed layout for the additional drainage required.

77 COMPLETION

After approval of the testing has been done back fill. Firstly surround the pipes fully in drainage gravel approx 150mm surround, or in the existing sand excavated.

7.8 AS BUILT

Keep a record of the exact location of the pipes before backfilling with a plan marked up with dimensions.

Please Photocopy

Wall Bracing Calculation Sheet A

Job Details

Name			
Street and Number			
Lot and DP Number			
City/Town/District			
Location of Storey:	single/upper of two/lower of two		
Building height to apex	6 m	Roof weight	light/heavy
Roof height above eaves	1 m	Cladding weight	light/heavy
Stud height	2.4 m	Room in roof space	NO
Average roof pitch	20°	Gross Building	74
Building length BL =	13 m	Plan Area,	GPA = m ²
Building width BW =	6.7 m		
Note: When the average roof pitch is over 25 degrees, use the eaves length and width to determine BL and BW.			
Note: For heavy roofs use the roof plan at eaves level to determine GPA.			

Region:	Terrain:	Exposure:	Topography:
R1	0 Inland	0 Sheltered	0 Gentle
R2	1 Coastal	1 Exposed	1 Moderate
			1 ✓
		Extreme	3
Total points			
Wind zone:	Low (0)	✓ Very high (3)	
	Medium (1)	✓ Specific Design (4)	
	High (2)		

Earthquake zone		
From figure EQ1 select Earthquake Zone:		
<input checked="" type="radio"/> A	B	C

BUs required Wind		
box 4		
From Table W1A/W1B		
W along = 150 BUs/m		
W across = 150 BUs/m		
Total wind load,		
W ALONG:		
W along x BW = BUs		
W ACROSS		
W across x BL = 1005 BUs		

BUs required Earthquake		
box 5		
From Table EQ1		
E = BUs/m		
Note: For a room in the roof space use E+1		
Total earthquake load,		
EQ ALONG and EQ ACROSS:		
E x GPA BUs = BUs		

Please Photocopy

Wall Bracing Calculation Sheet B

Along

Wall or Bracing Line		Bracing Elements Provided			Wind		Earthquake	
1	2	3	4	5	6 W	7 W	6 E	7 E
A		A1	BR7	1.2	145	134		
		A2	BR7	1.2	145	130		
		A3	BR7	2.4	145	340		
B		B1	BR6	2.4	150	360		
		B2	BR7	1.2	145	174		
		C1	BR7	2.4	145	348		
C		C2	BR7	1.2	145	174		
		C3	BR7	1.2	145	174		
D								
E								

Totals Achieved

W 11926 E

From Sheet A Totals Required

W 1860 E

Wreq/Ereq =

*If Wreq/Ereq is 1 or less complete E column only
If Wreq/Ereq is 1.5 or more complete W column only
Otherwise complete both W and E

Across

Wall or Bracing Line		Bracing Elements Provided			Wind		Earthquake	
1	2	3	4	5	6 W	7 W	6 E	7 E
M		M1	BR7	2	145	290		
		M2	BR7	1.2	145	174		
		M3	BR7	1.2	145	174		
N		N1	BR6	2	150	300		
		N2	BR6	2	150	300		
		N3	BR6	2.4	150	360		
O		O1	BR6	2	150	135		
		O2	BR7	1.0	145	145		
			A Portal to front					
P								
Q								

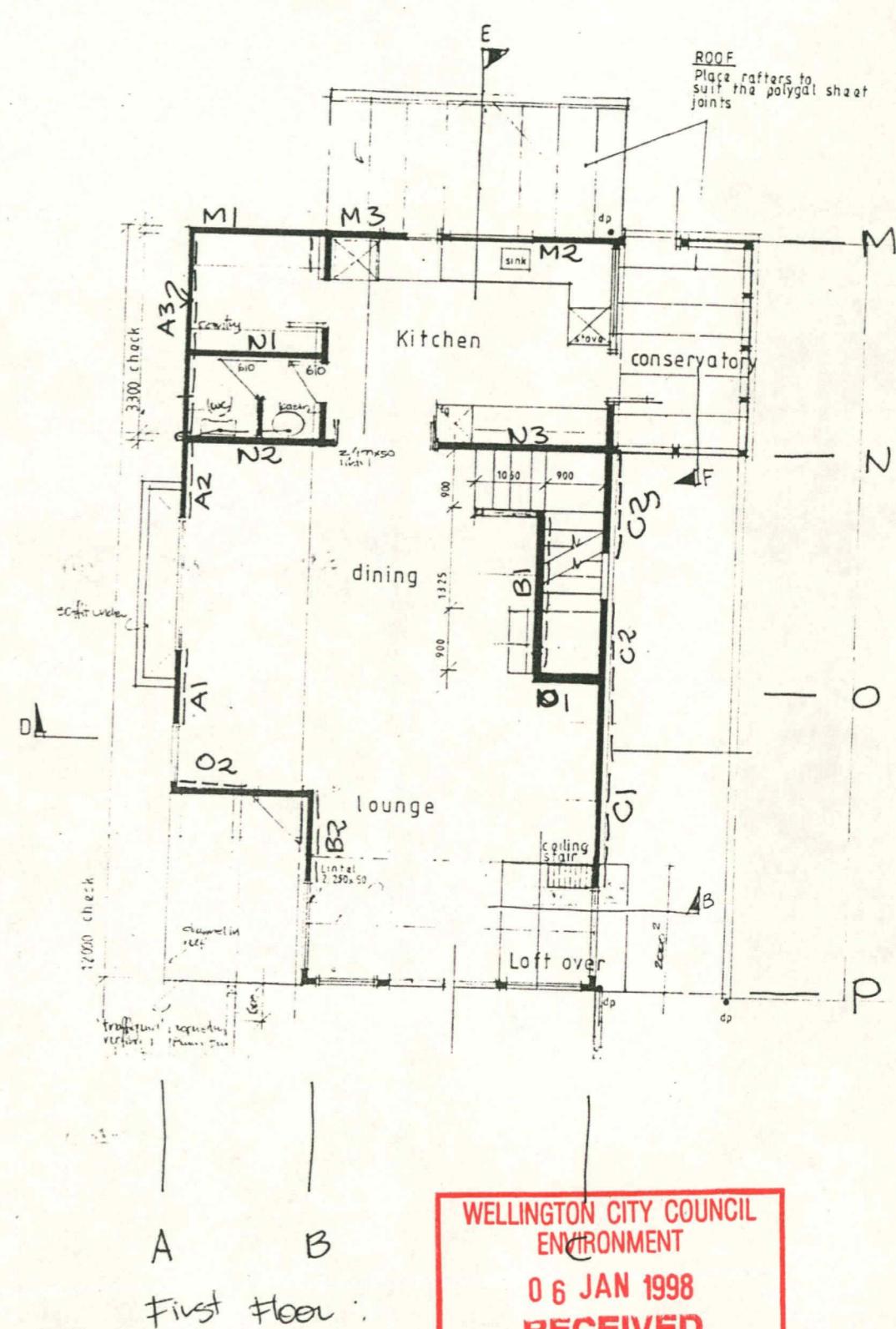
Totals Achieved

W 1878 E

From Sheet A Totals Required

W 1005 E

Wreq/Ereq =



Note :

1 : amended plan Bracing
2 : wall N1 is put in after A3

3. All exterior linings are 7.5mm pty to
rusticated cedar weatherboards.

6.1.98

Please Photocopy

Wall Bracing Calculation Sheet A

Job Details

Name _____	Street and Number _____	
Lot and DP Number _____	City/Town/District _____	
Location of Storey: single/upper of two/lower of two		
Building height to apex _____ m	Roof weight	light/heavy
Roof height above eaves _____ m	Cladding weight	light/heavy
Stud height _____ m	Room in roof space	y/n
Average roof pitch		
Building length BL = _____ m	Gross Building	
Building width BW = _____ m	Plan Area,	GPA = _____ m ²
<p>Note: When the average roof pitch is over 25 degrees, use the eaves length and width to determine BL and BW.</p> <p>Note: For heavy roofs use the roof plan at eaves level to determine GPA.</p>		

Wind Zone

Region:	Terrain:	Exposure:	Topography:	
R1	0 _____ Inland	0 _____ Sheltered	0 _____ Gentle	0 _____
R2	1 _____ Coastal	1 _____ Exposed	1 _____ Moderate	1 _____
			Extreme	3 _____
Total points _____				
Wind zone:	Low (0)	Very high	(3)	
	Medium (1)	Specific Design	(4)	
	High (2)			

Earthquake zone

From figure EQ1 select Earthquake Zone: A B C

BU's required Wind

From Table W1A/W1B
 W along = _____ BUs/m
 W across = _____ BUs/m
 Total wind load,
 W ALONG:
 W along x BW = _____ BUs
 W ACROSS
 W across x BL = _____ BUs

BUs required Earthquak

From Table EQ1
 $E = \underline{\hspace{2cm}}$ BU/m²
 Note: For a room in the roof space use E+1
 Total earthquake load,
 EQ ALONG and EQ ACROSS:
 $E \times \text{GPA BU} = \underline{\hspace{2cm}}$ BU

Please Photocopy

Wall Bracing Calculation Sheet B

Along

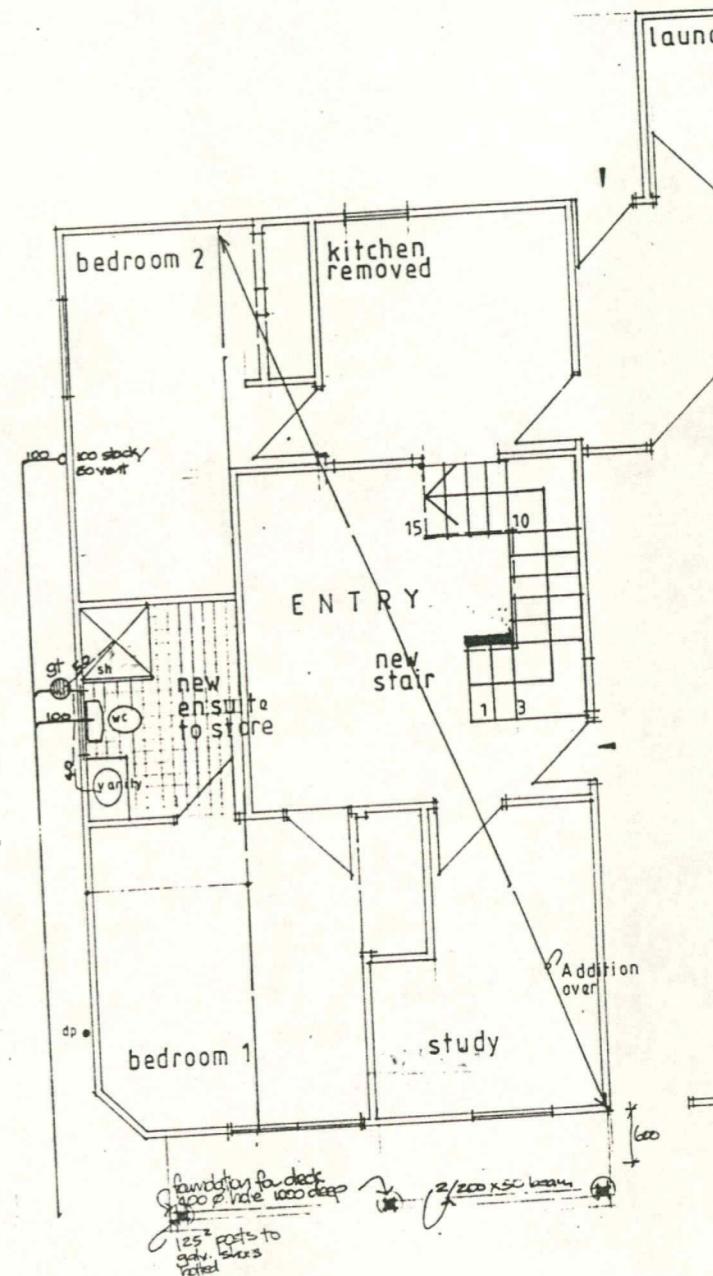
Wall or Bracing Line		Bracing Elements Provided			Wind		Earthquake	
1	2	3	4	5	6 W	7 W	6 E	7 E
Line Label	Minimum BUs Required	Bracing Element No.	Bracing Type	Length Element (m) L	Rating BU/m W	BUs Achieved (BU/m x L) W	Rating BU/m E	BUs Achieved (BU/m x L) E
A								
B								
C								
D								
E								

*If Wreq/Ereq is 1 or less complete E column only
If Wreq/Ereq is 1.5 or more complete W column only
Otherwise complete both W and E

Across

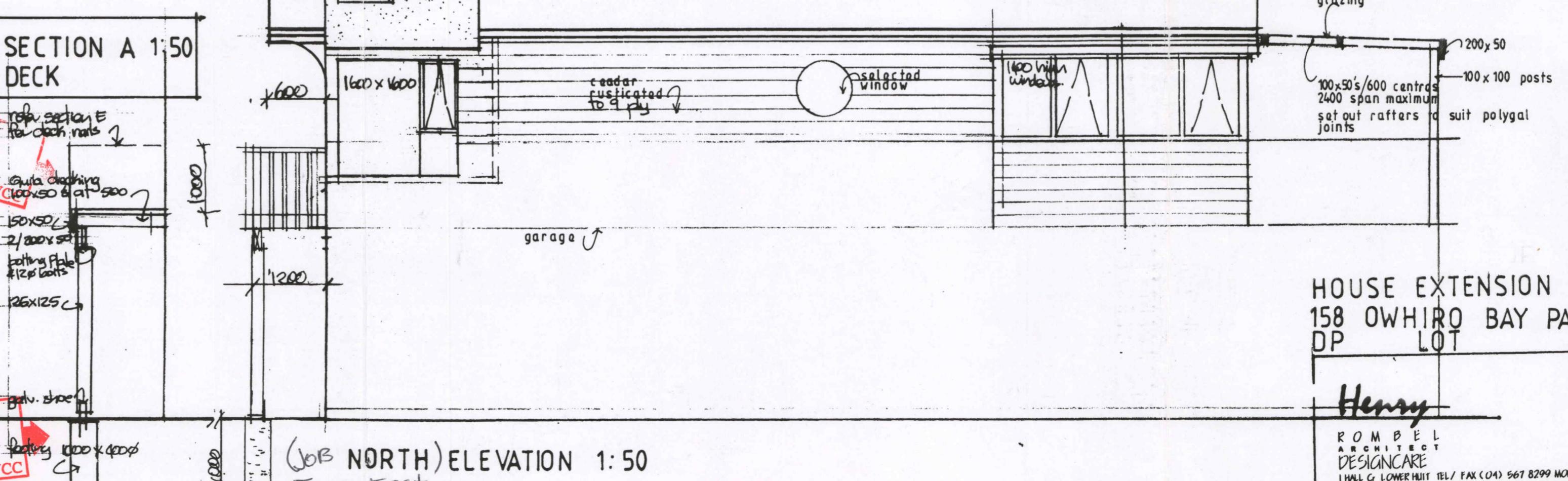
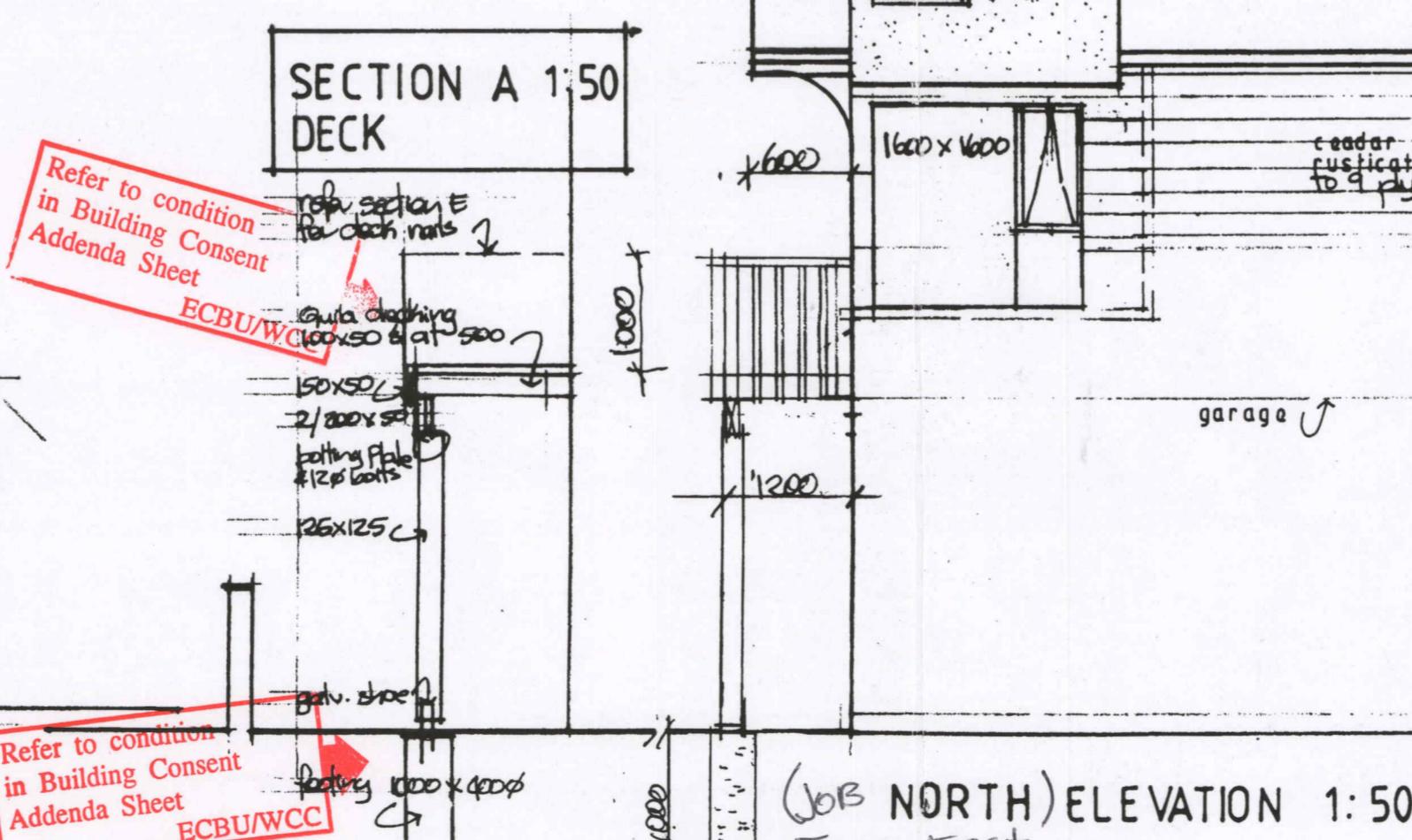
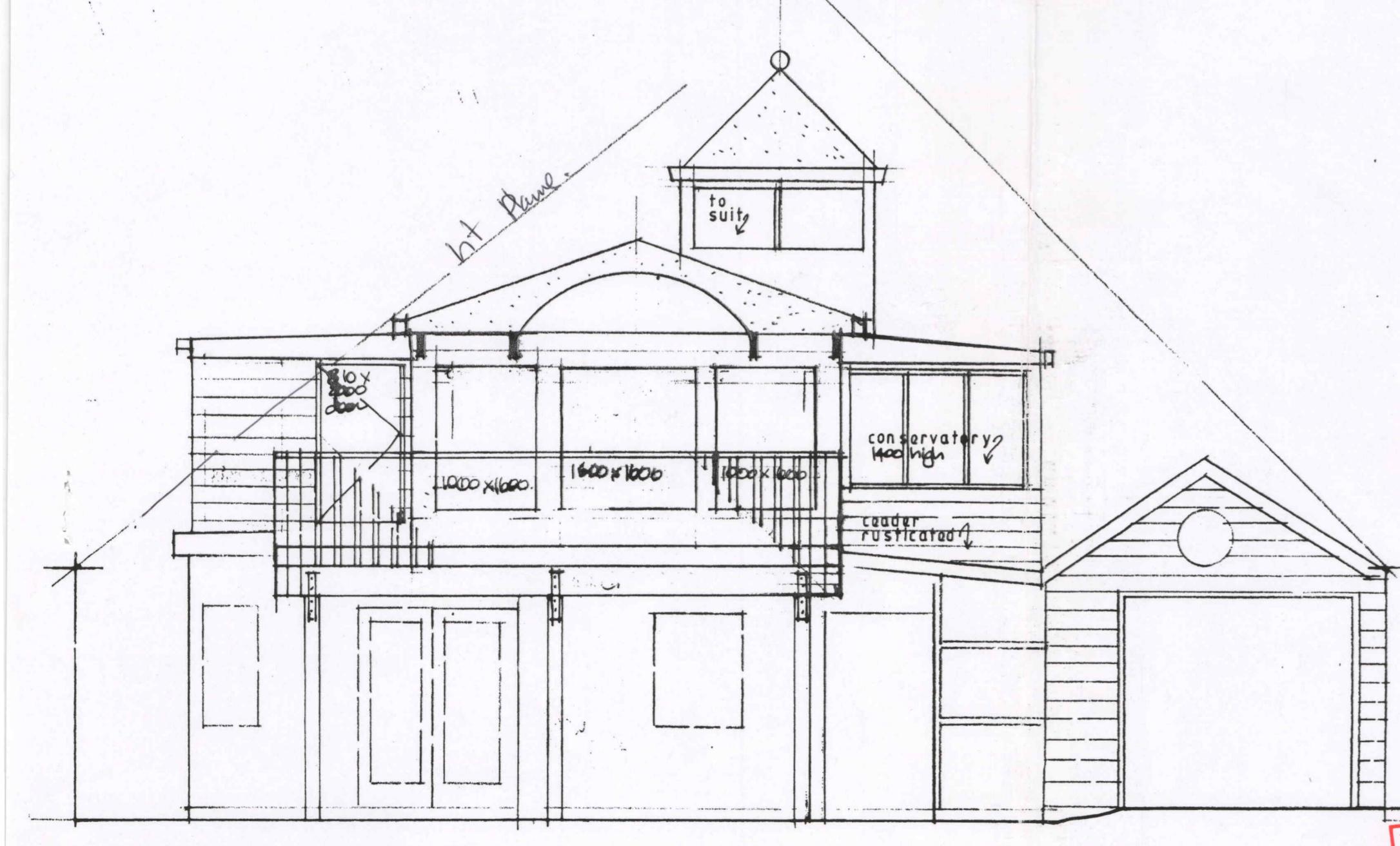
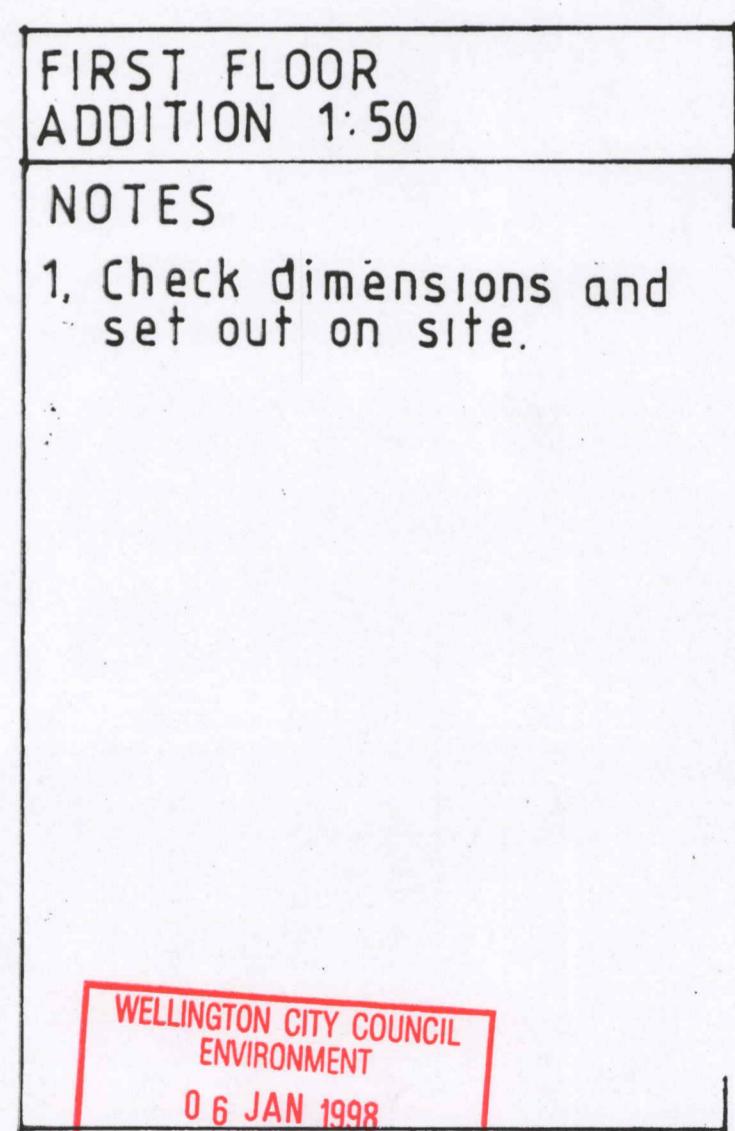
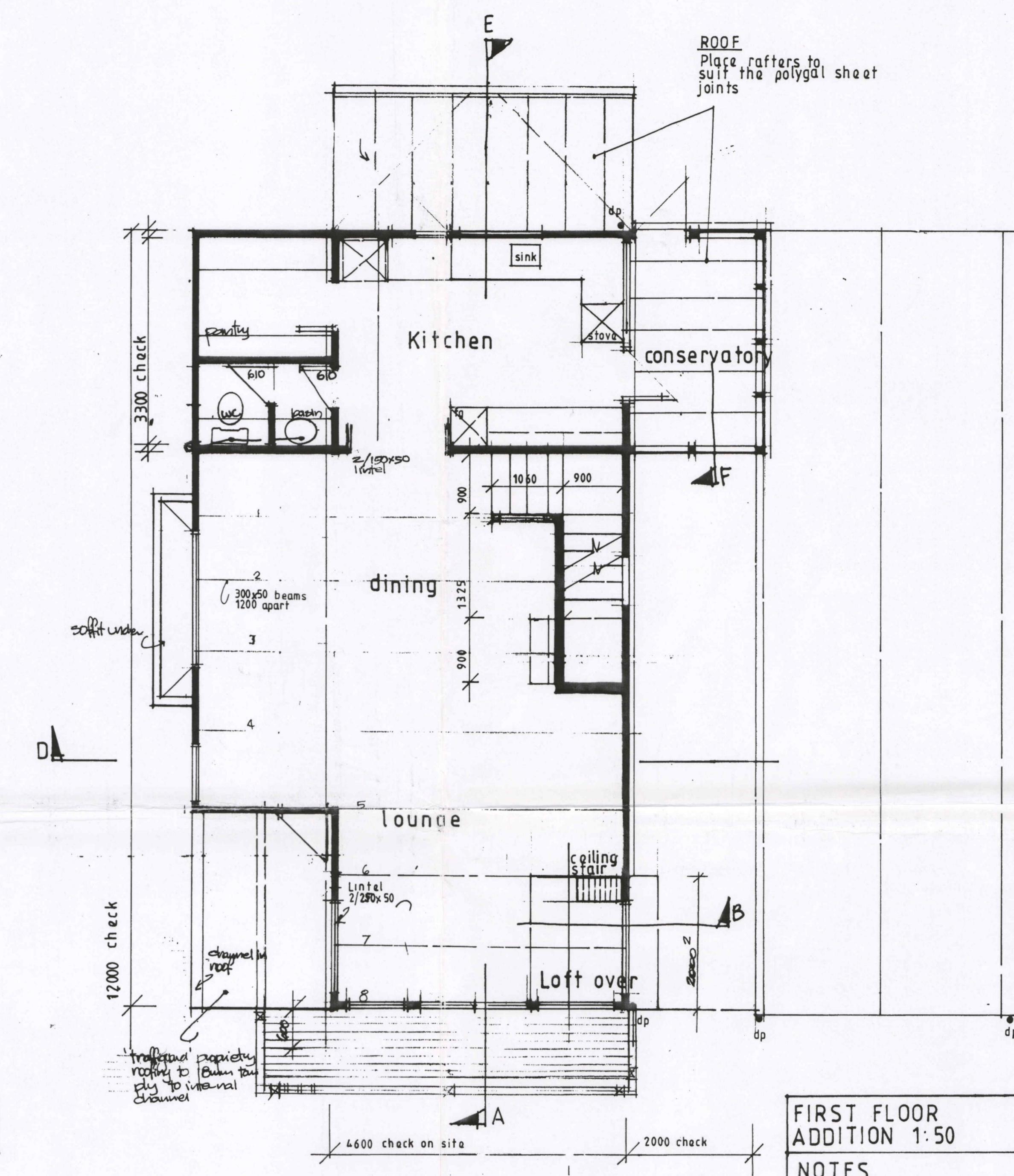
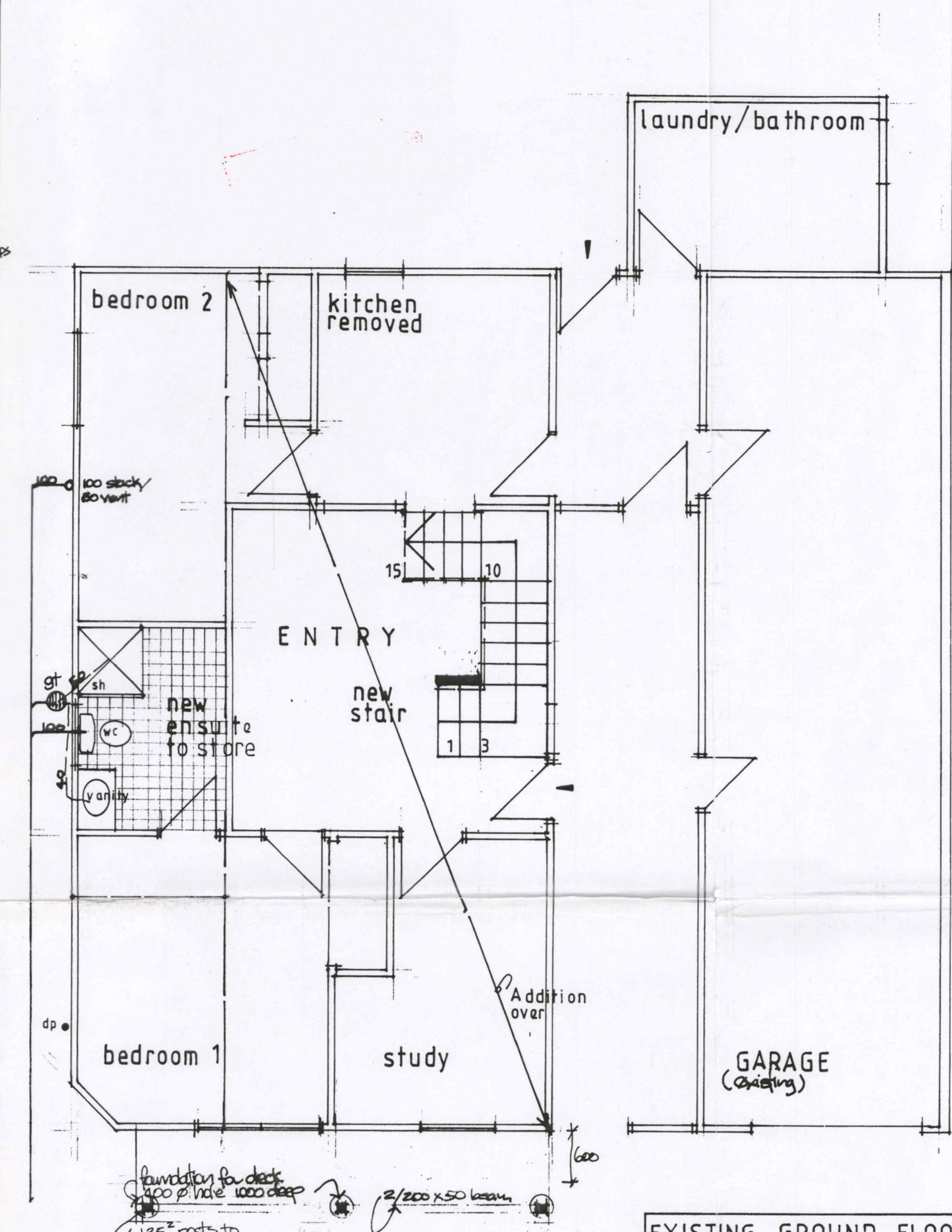
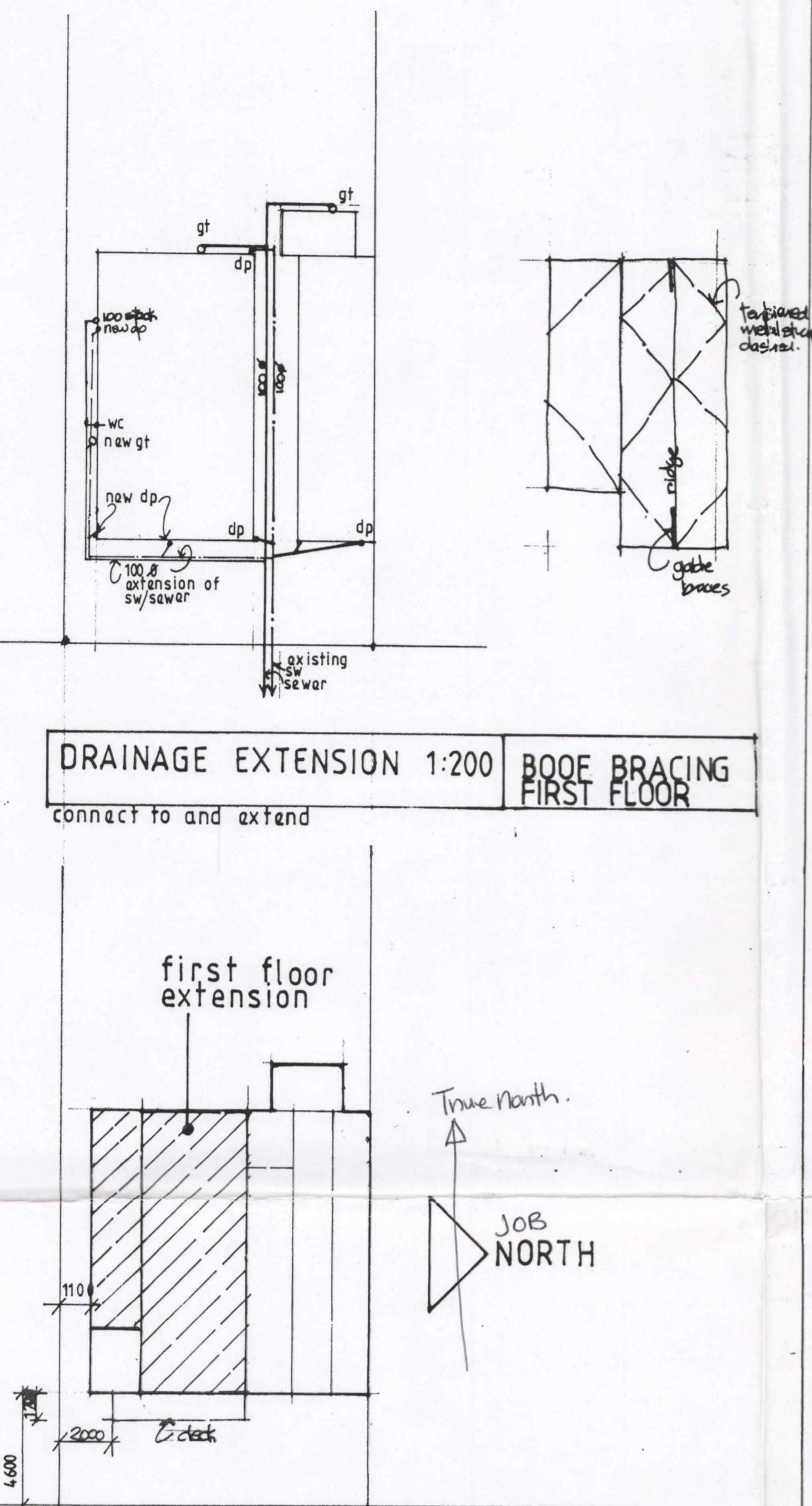
note:

1. Existing construction is 7.5mm ply to outside with rusticated cedar over
2. All interior linings are 9.5mm gib. bd. (standard)

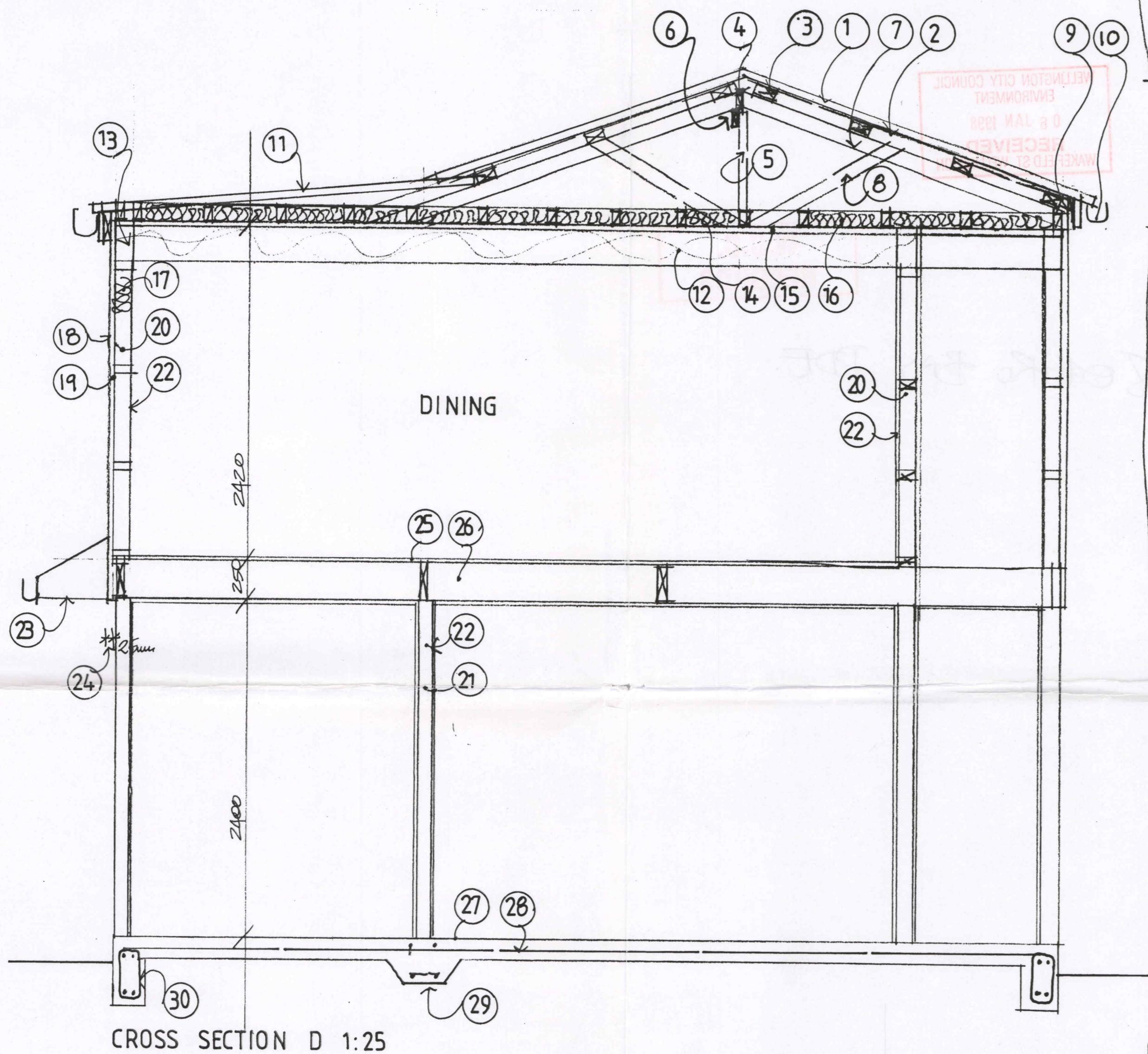


Existing Ground Floor
WELLINGTON CITY COUNCIL
ENVIRONMENT
06 JAN 1998
RECEIVED
WAKEFIELD ST. WELLINGTON

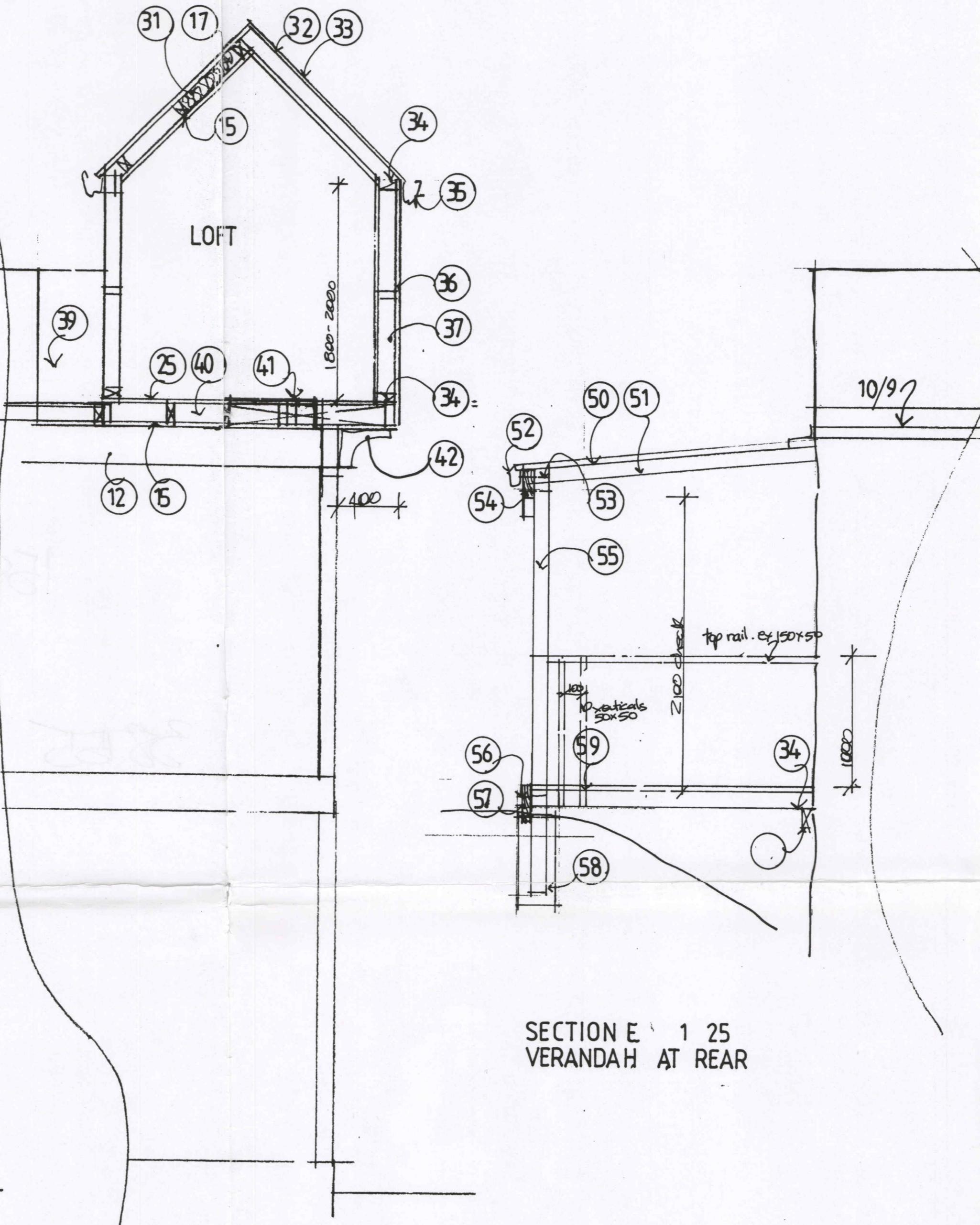
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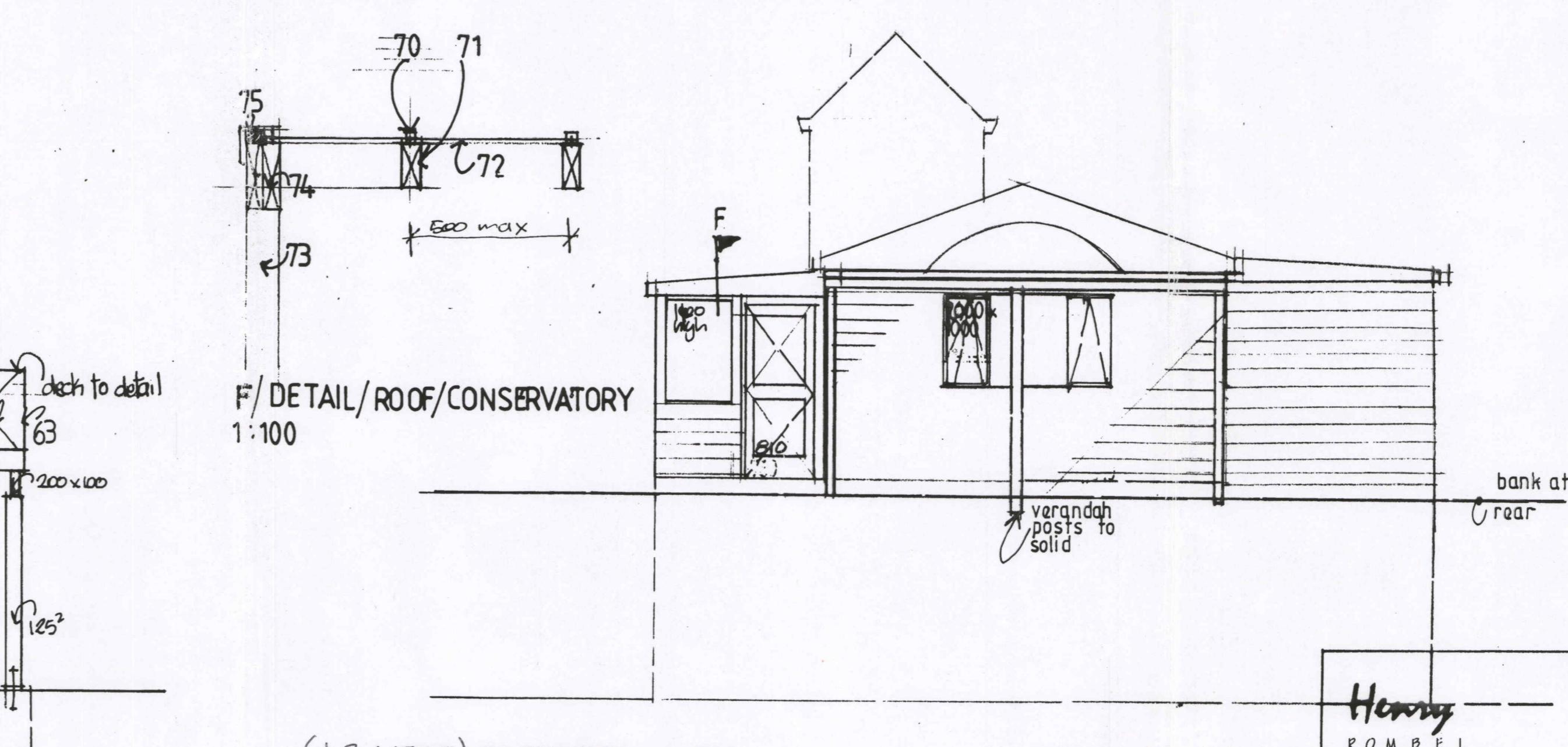
Job. (EAST) ELEVATION 1:50
True south



CROSS SECTION D 1:25



LOFT SECTION B 1:25



(JOB SOUTH) ELEVATION 1:50
True west



(JOB WEST) ELEVATION 1:50
True North

CONSTRUCTION NOTES

FOR SECTION D

FOR SECTION B

1. coloursteel corrugated iron
2. hd building paper to netting
3. 100 x 50 purlins at 900mm centres max. Refer to manufacturers specification for nailing in windy conditions. Double nail and fit a Z nail to each crossing
4. 150 x 50 ridge board
5. 100 x 50 strut off beams
6. brace gable ends with 100 x 50 struts to NZS3604
7. 100 x 50 roof framing. Fit 2 Z nails to each crossing
8. 100 x 50 roofing framing struts
9. pack out the ex. 200 x 25 facias 25mm say
10. pvc Marley spouting system. Stormcloud
11. as for 1 to 5 degree fall. Flash the change of slope
12. 300 x 50 beams at 1200mm centres
13. secure the beams with a stud either side
14. 100 x 50 ceiling joists at 400mm centres
15. t & g selected boarding
16. R2.6 ceiling batts to all ceiling areas
17. Wall batts R1.8 minimum
18. Exterior lining. Rusticated cedar to building paper and 9mm ply
19. a heavy duty building paper
20. 100 x 50 framing at 600 centres to first floor.
21. Note that the framing on ground floor has been installed at 400mm centres
22. 9.5mm Gib. Bd for all walls and ceilings generally.
23. 4.75mm Hardiflex to soffits created
24. project out the top floor 20 - 25 mm
25. 20mm flooring sheet
26. 250 x 50 floor joists at 400mm centres
27. existing concrete slab 100mm thick
28. 665 mesh in centre
29. 100 x 300 floor thickening with 2 D12s under all walls
30. edge beams. 4/D12's with R10's at 600mm centres
31. as for 16
32. 18mm tanalised ply. Use only stainless screws to fix
33. Traffiguard roofing
34. Use 100 x 50 framing to walls and ceiling. Secure all rafters with metal straps
35. as for 10
36. as for 20
37. exterior lining 7.5mm Harditex to building paper and 9mm ply
- 38.
39. Roof structure
40. 100 x 50 floor joists at 400mm centres
41. trap door and ladder to suit loft access chosen
42. decorative timber

SECTION E NOTES

SECTION E NOTES

- 50. clear corrugated roofing fixed according to manufacturers specifications
- 51. 100 x 50 tanalised rafters at 900 centres with 100 x 50 purlins at 900mm centres max.
- 52. as for 10
- 53. 2/M12 bolts
- 54. 200 x 50 lintel for 1850 span
- 55. 100 x 100 posts
- 56. 250 x 50
- 57. as for 53
- 58. concrete footing into rock 400 x 400 x 900
- 59. selected grip tread decking and 100 x 50 joists at 400mm centres for 1800 span max.
- 60. support plate, 100 x 50, 2/Z nail to each joists

DETAIL E/ CONSERVATORY ROOF

DETAIL F/ CONSERVATORY ROOF

- 70. Aluminum low profile 2 part jointer by Alcan
- 71. 100 x 50 rafters at appox500mm centres to suit the glass
- 72. safety glass chosen
- 73. window or walls for house
- 74. 2 150 x 50 /s cut down to fall
- 75. flashing to edge

<i>Henry</i>	DATE	21-3-97	ISSUE
	DRAWN	hr	A
	JOB NO	SHEET	
1 HALL C LOWER HUIT TEL/FAX (04) 567 8299 MOBILE 025 528179		2	

Amended Plans

SR 38755

ROOF BEAM CALCULATIONS

for

HOUSE ALTERATIONS

at

158 OWHIRO BAY PARADE, WELLINGTON



Contents

Page

Producer Statement

Details

Roof Plan	Sk1
Truss Elevation	Sk2
Detail 1	Sk3
Detail 2	Sk4

Calculations

General Notes	1
Loadings	2
Beam Design	3
Ridge Beam Design	6
Truss Design	9



PRODUCER STATEMENT



PRODUCER STATEMENT - PS1 - DESIGN

(Guidance notes on the use of this form are printed on the reverse side)

ISSUED BY: MARION MEYERS

(Suitably qualified Design Professional)

TO: Keely Matthews

(Owner)

WELLINGTON CITY COUNCIL
ENVIRONMENT

IN RESPECT OF: ALTERATIONS TO EXISTING HOUSE

(Description of Building Work)

AT: 158 OWNERS BAY PARADE, WELLINGTON

17 FEB 1998

RECEIVED

WAKEFIELD ST. WELLINGTON

(Address)

LOT SO

Marien Meyers Structures has been engaged by
(Design Firm) ENGINEER (Owner/Developer/Contractor)

to provide STRUCTURAL ENGINEERING DESIGNS services in respect of the
(Extent of Engagement)

requirements of Clause(s) B1 STRUCTURE of the Building Regulations 1992 for

Roof members as shown on
ATTACHED SKETCHES 1 to 4
verification method
(verification method(s)/acceptable solution(s))

(respectively) of the approved documents issued by the Building Industry Authority and the work is described on

Marien Meyers Structures drawings titled 158 OWNERS BAY PARADE
(Design Firm)

and numbered Sketches 1 to 4 and the specification and other documents according to which the building is proposed to be constructed.

As an independent design professional covered by a current policy of Professional Indemnity Insurance to a minimum value of \$200,000, I BELIEVE ON REASONABLE GROUNDS that subject to:

(i) the site verification of the following design assumptions

and (ii) all proprietary products meeting the performance specification requirements,
the drawings, specifications, and other documents according to which the building is proposed to be constructed
comply with the relevant provisions of the building code.

(Signature suitably qualified Design Professional)

RE. MIPENZ.

(Professional Qualifications)

47 Cuba St, Wellington

(Address)

Date. 17 Feb 98

ERB/AERB Reg No. 8863

Member ACENZ

IPENZ NZIA

GUIDANCE ON USE OF PRODUCER STATEMENTS

This producer statement has been prepared by a combined task committee consisting of members of the New Zealand Institute of Architects, Institution of Professional Engineers New Zealand, Association of Consulting Engineers New Zealand, Building Officials Institute of New Zealand, New Zealand Master Builders Federation and New Zealand Contractors Federation.

Four producer statements are available and brief details on the purpose of each are as follows:

Design: Intended for use by the party responsible for the design when the territorial authority carries out a less rigorous review of the documents.

Design Review: Intended for use by a suitably qualified independent design professional where the territorial authority does not undertake an internal review and relies on the independent design professional's review to issue the building consent.

Construction: Intended for the use by the contractor of the building works where the territorial authority requires a producer statement at the completion of construction.

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- (ii) a corporate member of the Institution of Professional Engineers of New Zealand (IPENZ) having a current policy of Professional Indemnity Insurance for a sum not less than \$200,000 or;
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There are several levels of service which a design professional may provide during the construction phase of a project. The territorial authority is encouraged to require that the service to be provided by the design professional is appropriate for the project concerned.

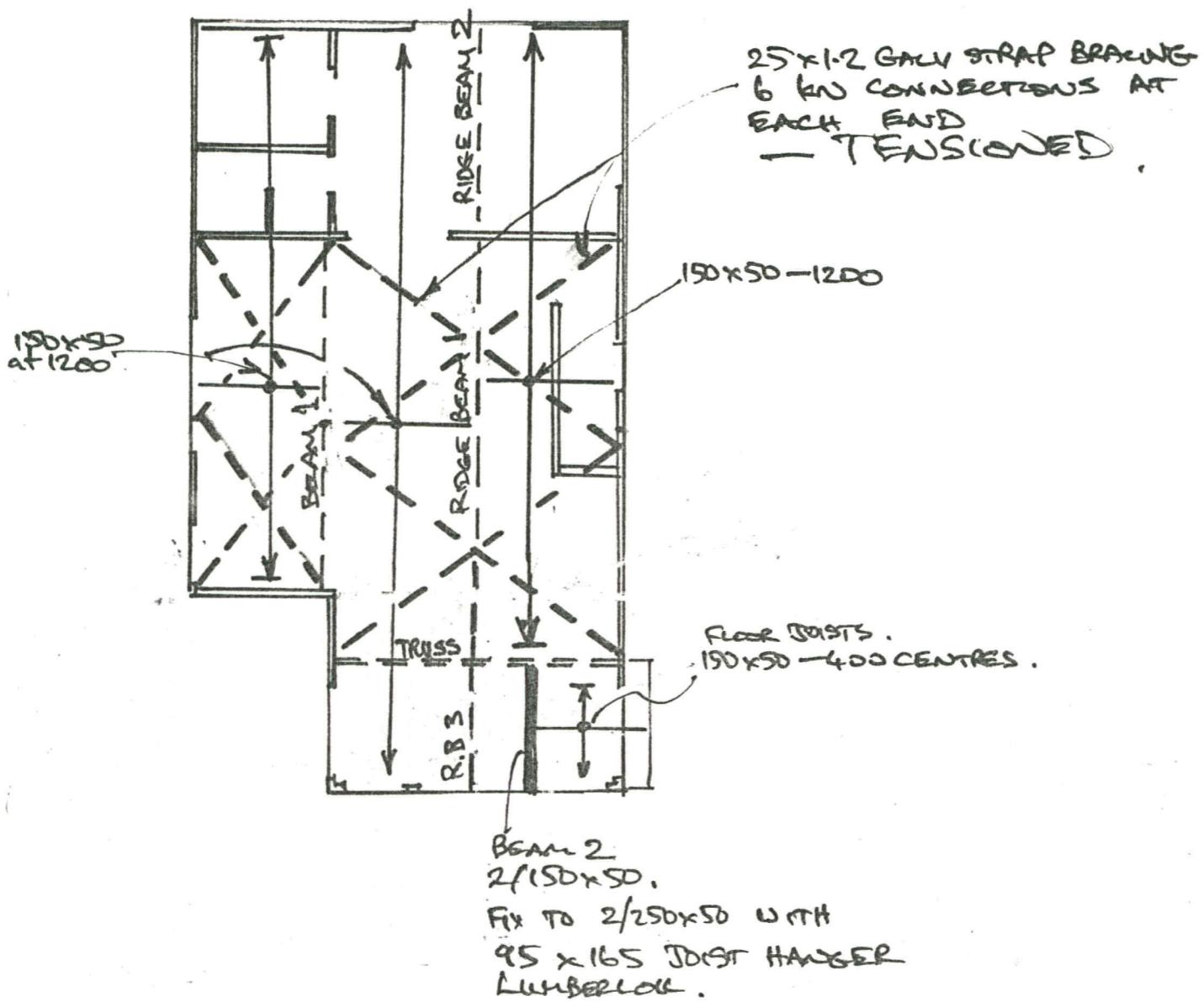
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Attached Particulars

Attached particulars referred to in this producer statement refer to supplementary information appended to the producer statement.

DETAILS



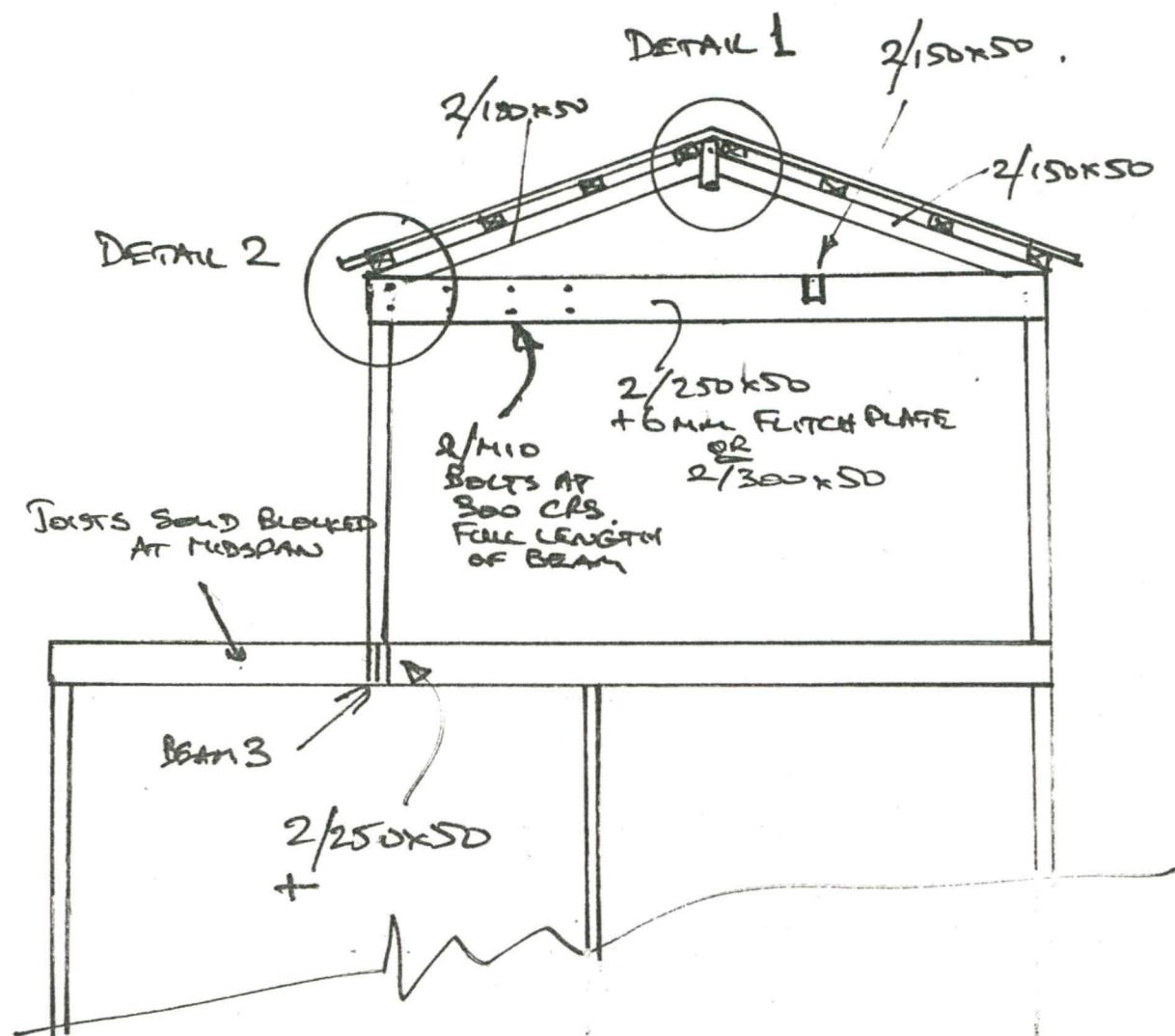
ROOF PLAN

RIDGE BEAM 1 = 2/300x50 + 6mm FERROX PLATE

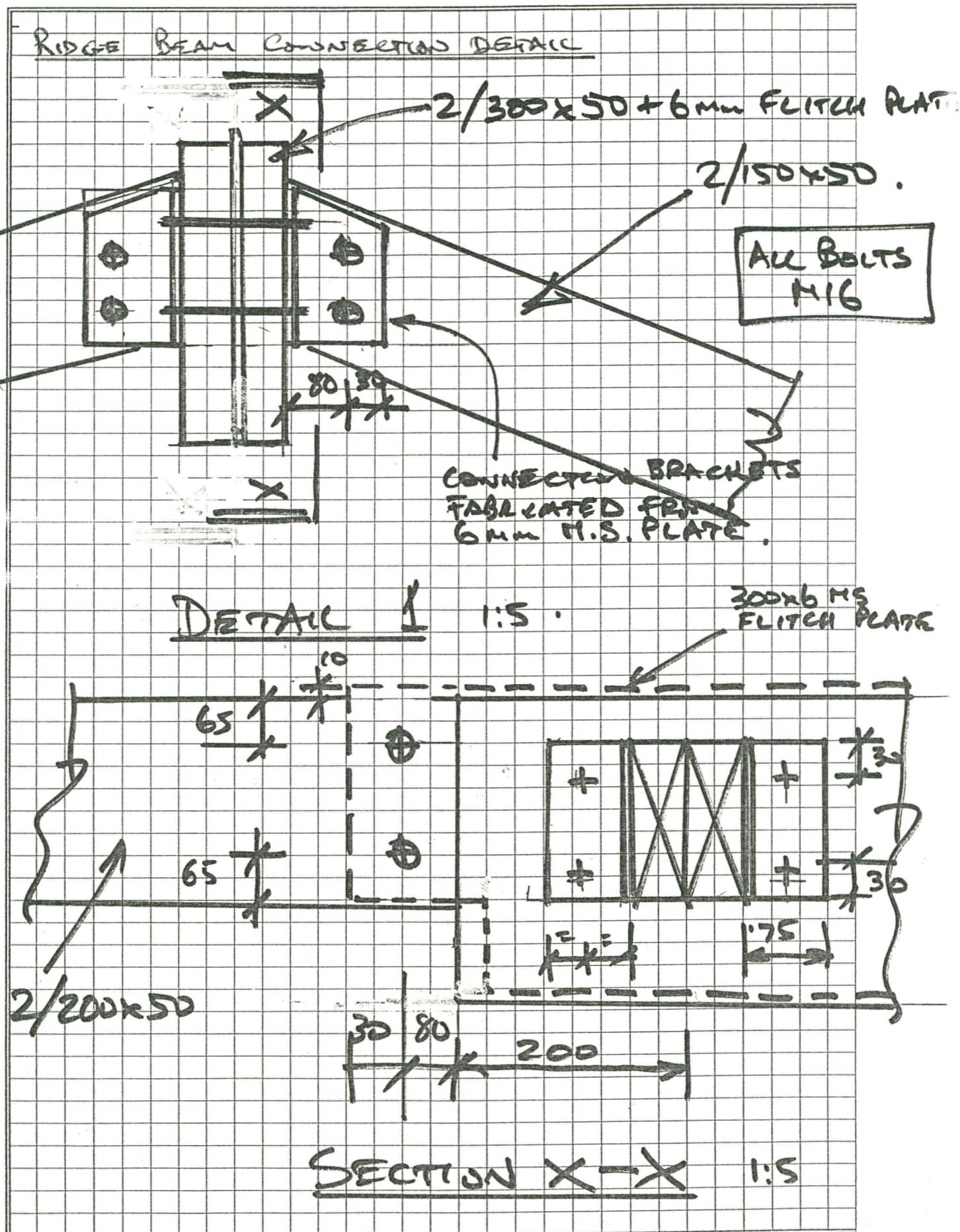
2 = 2/200x50

3 = 2/200x50.

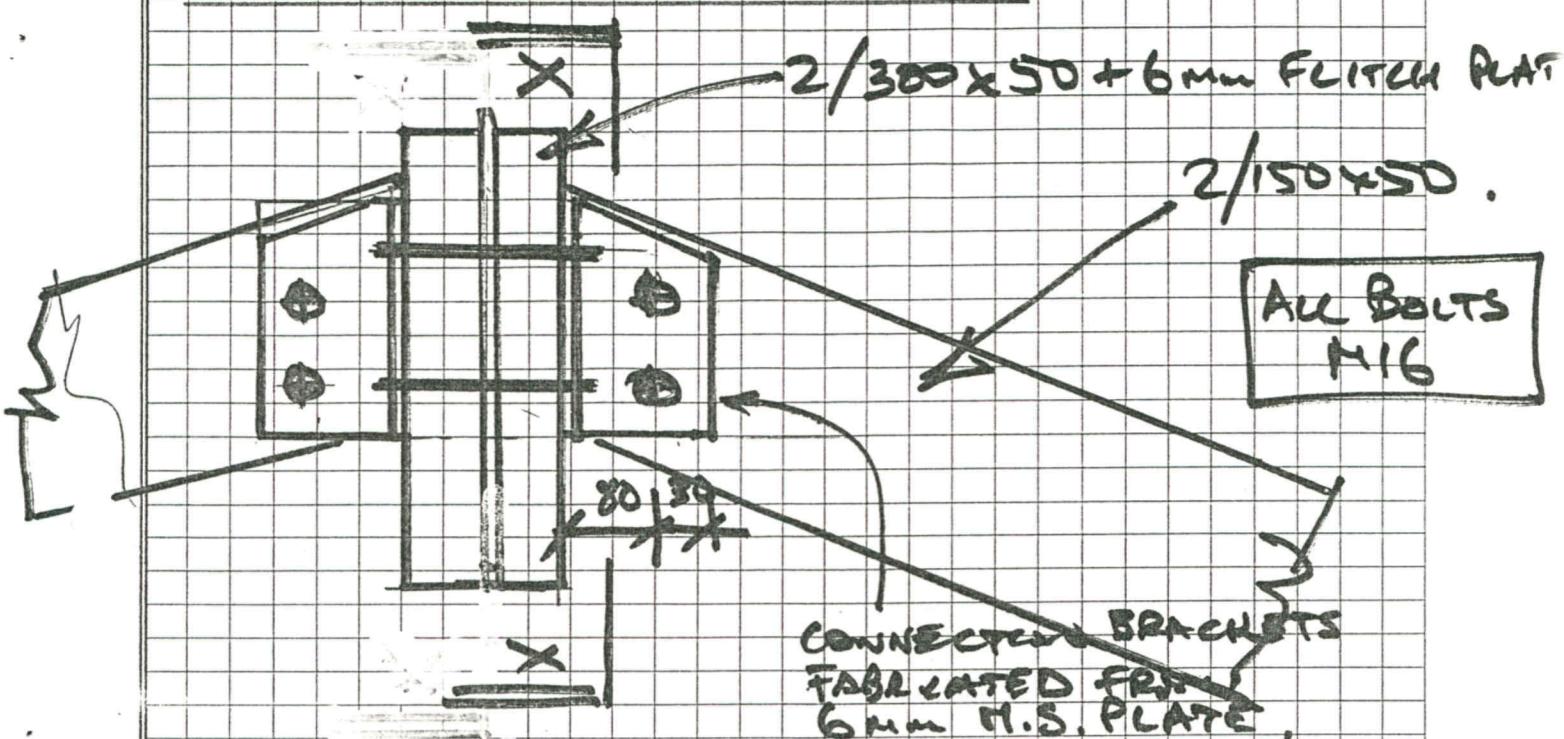
BEAM 1 = 2/300x50



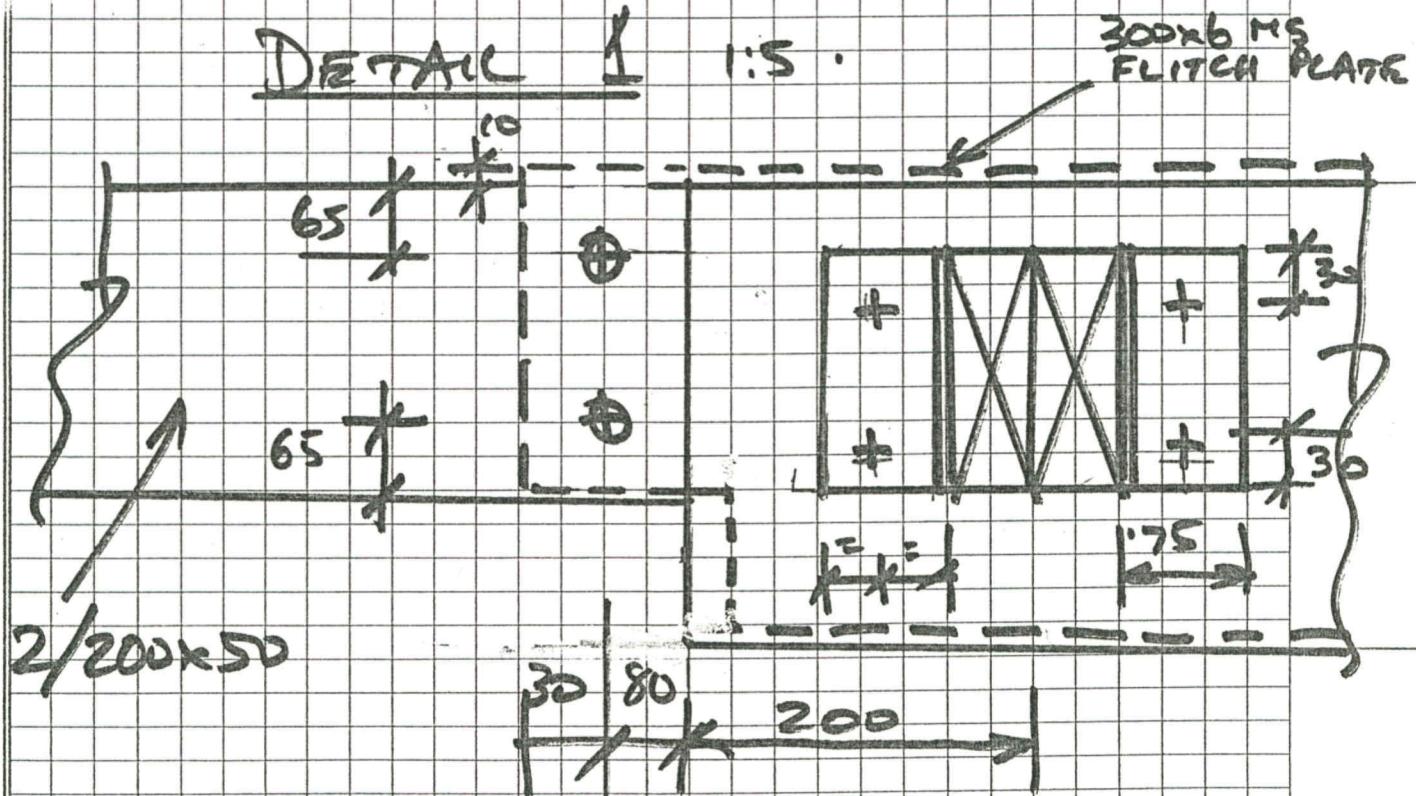
TRUSS ELEVATION



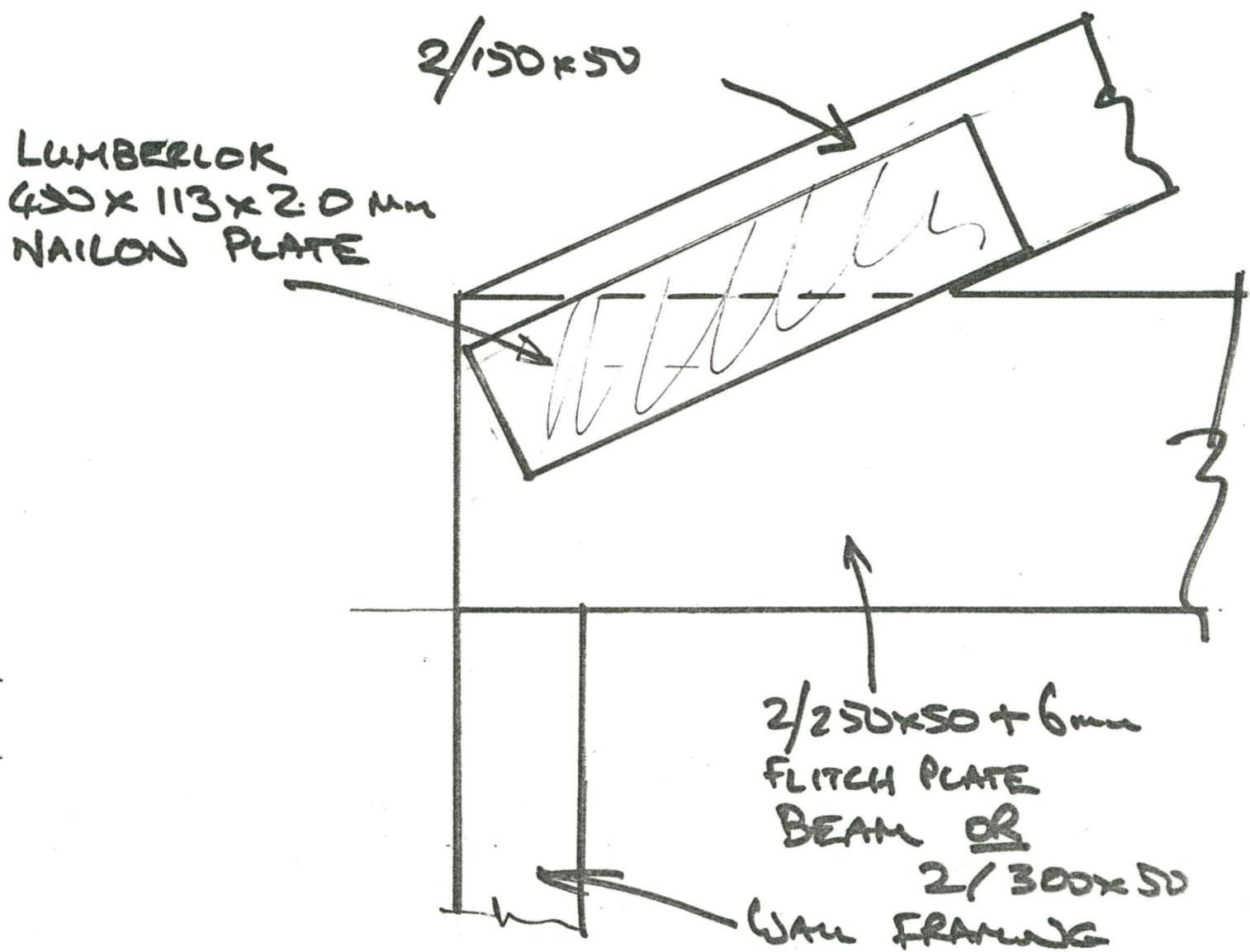
RIDGE BEAM CONNECTION DETAIL



DETAIL 1 1:5



SECTION X-X 1:5



DETAIL 2

NOTE: * LUMBERLOCK PLATES WILL HAVE TO BE ORDERED IN
ADVANCE

* LUMBERLOCK PLATES TO BE FIXED IN COMPLETE ACCORDANCE
WITH MANUFACTURERS SPECIFICATIONS

CALCULATIONS

GENERAL NOTES

These calculations have been carried out in complete accordance with the relevant NZ Standards including the following

- NZS 4203:1992 General Structural Design and Design Loadings
- NZS 3604:1990 Light Timber Framed Buildings
- NZS 3603:1993 Timber Structures
- MP 3640:1992 Minimum Requirements of the NZ Timber Preservation Council
- NZS 4210:1989 Materials and Workmanship

This design assumes that all work is carried out by skilled tradesmen working only on aspects of the project in which they are fully qualified

The design assumes the following material strengths :

- Bolts = Grade 4.6
- Timber Beams to be No1 Framing Grade

Work Covered by This Submission

Please note that an earlier set of calculations covered the wall bracing requirements

These calculations are being submitted due to a late request by the Owner to change the upstairs ceilings to a chapel like structure.

1

Work Carried Out by Engineer in this Submission

The Engineer has carried out the design of the following beams as described on Sketchs 1 to 4.

- Roof Beam 1 supporting the roof
- Ridge Beams 1,2 and 3
- Beam 2 supporting the Loft floor
- Beam 3 supporting the upstairs wall - refer to Sketch 2

LOADINGS :-

DEAD :-

Roof :- Iron = 0.085 kPa
 Purlins = $100 \times 50 - 900$ = 0.030
 RAFTERS = $150 \times 70 - 1200$ = 0.030
 CEILING = $35 \times 50 - 600$ = 0.021
 BATTENS = 15 mm = 0.083
 $\Sigma_{DEAD} = 0.25 \text{ kPa.}$

Slope $\approx 15^\circ$

PLAN LOADINGS $\approx \frac{0.25}{\cos 15} = 0.26 \text{ kPa.}$

Allow 0.30 kPa.

LIVE LOADINGS :- 0.25 kPa.

WIND LOADINGS :- $q = 1.10 \text{ kPa.}$

$$C_{p1} + C_{p2} = (0.9 + 0.3) = 1.2$$

$$\sqrt{q^2} = C_p q = 1.32 \text{ kPa.}$$

LOAD COMBINATIONS :-

$$1.4D = 0.42 \text{ kPa.}$$

$$1.2D + 1.6L = 0.36 \text{ kPa.}$$

$$D + L = -1.07 \text{ kPa.}$$

BEAM 1 :- SPAN = 5.5 m.

$$R_w = \frac{4.5}{2} = 2.3 \text{ m.}$$

$$UDL_s = 1.4D = 0.42 \times 2.3 = 1.0 \text{ kN/m}$$

$$D+U = 1.07 \times 2.3 = 2.5 \text{ kN/m}$$

DESIGN :-

$$M_{max} = 2.5 \times \frac{5.5^2}{8} = 9.5 \text{ kNm.}$$

Assume :- 300x75.

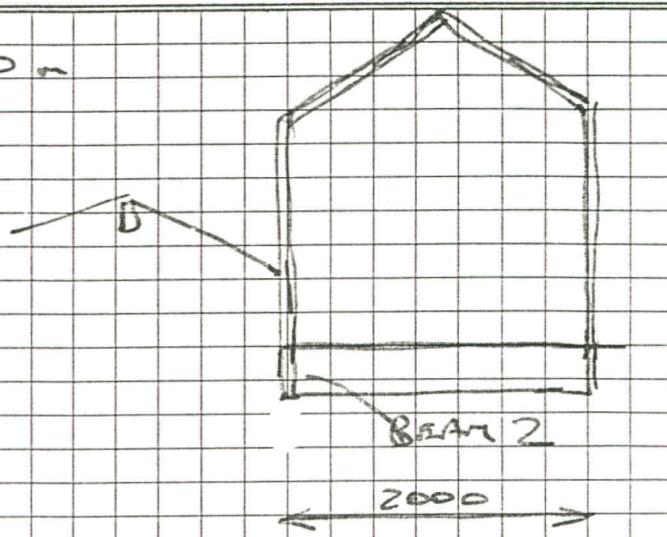
$$\frac{M}{z} = \frac{9.5 \text{ kNm}}{69 \times 2942/6} = 9.5 \text{ MPa.}$$

$$\overline{D}_{2\text{DEAD}} = \frac{5 \times (2 \times 0.30 \times 2.3) 5500^4}{384 \times 8000 \times 69 \times 2942/12} \\ = 14 \text{ mm} \Rightarrow 0.0026 L \Rightarrow 0\%$$

$$D_{max\text{ SCS}} = \frac{5 \times (1.32 \times 2/3 \times 2.3) L^4}{384 EI} = \\ = 20 \text{ mm} \Rightarrow 0.0038 L \\ \Rightarrow \text{Too High}$$

\Rightarrow Go to 300x100

BEAM 2 :- SPAN = 2.0 m



LOADING :-

DEAD

$$\text{Roof} = 1.5 \times 0.30 = 0.45 \text{ kN/m.}$$

$$\text{Wall} = 1 = 0.70 \text{ kN/m.}$$

$$\text{Floor} = 0.50 \times 2.0/2 = 0.50.$$

$$\Sigma \text{DEAD} = 1.65 \text{ kN/m}$$

LIVE

$$1.50 \times \frac{2.0}{2} = 1.50 \text{ kN/m.}$$

LOAD COMB'S :-

$$1.4D = 2.3 \text{ kN/m.}$$

$$1.2D + 1.6L = 4.4 \text{ kN/m.}$$

DESIGN

$$M_{max} = 4.8 \times \frac{2.0^2}{8} = 2.2 \text{ kNm.}$$

Assume 150 x 50

$$\frac{M}{I} = \frac{2.2 \times 10^6 \times 6}{477 \times 150^3} = 13.5 \text{ MPa.} \Rightarrow \text{TOO RISKY.}$$

\Rightarrow Go to 2/150x50.

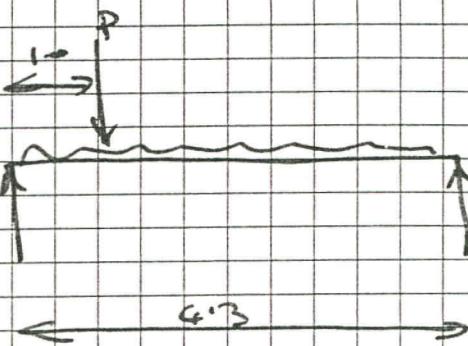
$$\frac{M}{I} = \frac{5 \times (1.50 \times 2) 2000}{384 \times 5} = 3.7 \text{ m.}$$

$$\Rightarrow 0.0018 L$$

\Rightarrow OK.

BEAM 3 :-

SPAN = 4.3 m.

LOADINGS :-

$$\text{DEAD: } \text{Floor } \text{UDL} = 0.5 \times 0.6 = 0.30 \text{ kN/m.}$$

$$\text{Wind } = 0.70.$$

$$\sum \text{DEAD} = 1.0 \text{ kN/m.}$$

$$\text{FROST} = 0.30 \times 2.3 \times 4.4 = 3.0 \text{ kN.}$$

$$\text{Moond } = 2.8 \text{ kN/m.}$$

$$\text{Live: } \text{Floor } = 2.0 \times 0.6 = 1.2 \text{ kN/m.}$$

$$\text{Plants } = 2.8 \text{ kN/m.}$$

LOAD COMB'S :-

$$\text{M.ED } = 6.72 \text{ kNm.}$$

$$\frac{M}{1.204 \text{ kN/m}} = 10.2 \text{ kNm.}$$

Assume 2/250x50.

$$\frac{M}{Z} = \frac{10.2 \text{ kNm}}{96 \times 244^2} = 10.9 \text{ N/mm.}$$

$$\frac{f_k}{f_b} = 0.8 \times 1.0 \times 1.0 \times 17.7 = 14.2 \text{ N/mm.} \Rightarrow \text{OK}$$

$$\Delta_{ED} = 1.82 \text{ mm.}$$

\Rightarrow 2/250x50 is OK. but will need to = solid block at ridge.

RIDGE BEAM 1 SPAN = 6.70 m.

TW = 2.3 m.

LOADINGS :-

$$1.4D = 0.42 \times 2.3 = 1.056 \text{ kN/m.}$$

$$D+L = 1.07 \times 2.3 = 2.4 \text{ kN/m.}$$

DESIGN.

$$M_{max} = 2.5 \times \frac{6.70^2}{8} = 16.0 \text{ kNm.}$$

Assume :- 2/300 x 50 with b = FUTRA PLATE.

$$I = \frac{(94 + 6 \times 25) 298^3}{12} = 517 \times 10^6 \text{ mm}^4$$

$$\frac{M_y}{I} = \frac{16.0 \times 147}{517 \times 10^6} = 3.98 \text{ Nm.}$$

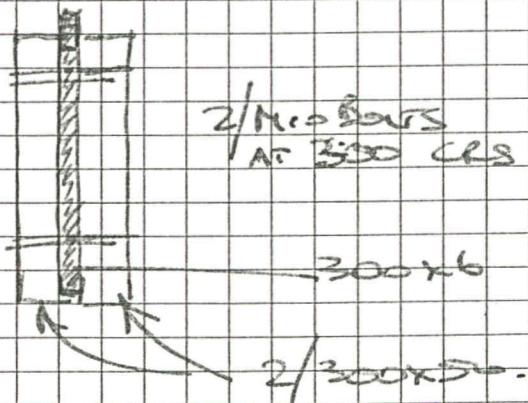
$$\frac{f_s}{f_y} = 3.98 \times 25 = 100 \text{ N/mm.} \Rightarrow \text{OK.}$$

$$\frac{d_{min}}{SLS} = \frac{5 \times (1.32 \times 2/3 \times 2.3) 6700}{386 \times 8000 \times 517 \times 10^6} = 12.8 \text{ mm.}$$

$\Rightarrow 0.0019 \text{ L.}$

$\Rightarrow \text{OK}$ but would not want to go any higher.

$\Rightarrow \text{USE}$



RIDGE BEAM 2

SPAN = 3.2 m.

(Loadings as per Ridge Beam 1).

Design :-

$$M_{max} = 2.5 \times \frac{3.2^2}{8} = \underline{3.2 \text{ kNm.}}$$

Assume :- 250 x 50.

$$\frac{M}{Z} = \frac{3.2 \text{ kNm} \times 6}{67 \times 246^2} = \underline{6.9 \text{ MPa.}}$$

$$\phi k_1 k_{eff}^2 = 0.8 \times 1.0^2 \times 1.7 = \underline{14.2 \text{ MPa.}}$$

$$\frac{1}{Z_{25}} = \frac{5 \times (2 \times 0.3 \times 2.3) 3200}{384 \times 8000 \times 67 \times 246^3 / 12} = 4.1 \text{ mm} \\ \Rightarrow \underline{0.0013L.}$$

$$\frac{1}{Z_{250}} = \frac{5 \times (1.32 \times 2/3 \times 2.3) 3200}{384 \times 8000} = 6.1 \text{ mm.} \\ \Rightarrow \underline{0.0021L.}$$

- Note:- deflections would be too high for
200 x 50

\Rightarrow USE 250 x 50.

Reo

RIDGE BEAM 3 :- Span = 2.00 m.

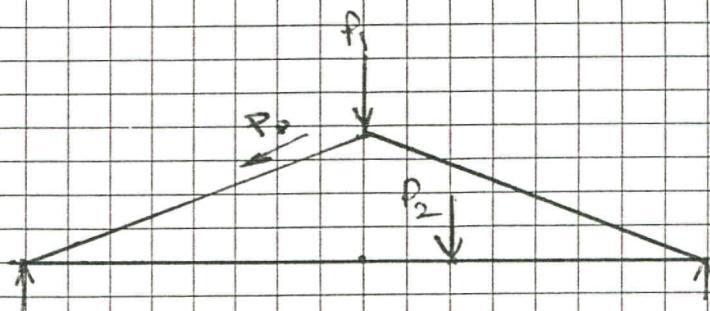
$$M_{max} = 2.5 \times \frac{2.0^2}{8} = \underline{1.25 \text{ kNm}}$$

Assume :- 150 + 50

$$\frac{M}{F} = 7.7 \text{ MPa}$$

$$\frac{I_{gross}}{S_{S5}} = \frac{5 \times (1.32 \times 4/3 + 2.3) 2000}{334 \text{ EI}} = \underline{4.5 \text{ mm}^4}$$
$$= \underline{0.0023 \text{ L}}$$

⇒ 150 + 50 is OK.

Truss - DESIGN .DESIGN PHILOSOPHY :-

- * USE TOP & BOTTOM CHORDS TO CARRY LOADS FROM P1 (ROOF)
- * USE BOTTOM CHORD TO CARRY LOAD FROM UPSTAIRS FLOOR.

LOADINGS :-

$$P_1 \text{ DEAD} = (0.3 \times 2.3) \left(\frac{6.7 + 2.0}{2} \right) = 3.6 \text{ kN.}$$

$$\text{WIND} = (1.07 \times 2.3) \quad \therefore = 10.7 \text{ kN.}$$

$$\text{WSE} = (0.25 \cdot - - - -) = 2.5 \text{ kN.}$$

$$P_2 \text{ DEAD} = 1.65 \times 2.0 \quad \therefore = 1.65 \text{ kN.}$$

$$\text{LSE} = 1.50 \times 2.0 \quad \therefore = 1.50 \text{ kN}$$

TRUSS ACCORD :-LOAD COMB'S:-

$$P_1, \text{ LSE} = 4.2 \text{ kN.}$$

$$P_1, \text{ WSE} = 3.6 \text{ kN.}$$

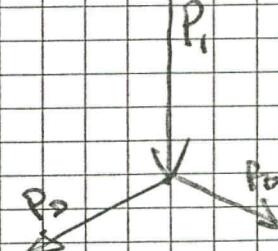
$$P_2 \text{ DEAD} = 2.7 \text{ kN.}$$

$$P_D = \frac{4.2}{1.65} = 12.3 \text{ kN.}$$

Assume $2/150 \times 50$.

$$\frac{P}{A} = \frac{12.3 \times 3}{94 \times 154} = 0.9 \text{ MPa.}$$

$$S_1 = 1200 \div 12 \Rightarrow k_2 = 1.0.$$



$$\phi_{h,k} f_c' = 0.8 \times 0.6 \times 1.0 \times 20.9 = 10.0 \text{ MPa.}$$

DESIGN OF BEAM TO SUPPORT P_2

$$M_{max} = 4.4 \times \frac{4.5}{4.0} = 4.9 \text{ kNm}$$

Assume:- 2/ 0x50

$$\frac{M}{Z} = \frac{4.9 \times 6}{94 \times 244^2} = 5.3 \text{ MPa.} \Rightarrow \text{OK.}$$

$$\frac{f}{f_{allow}} = \frac{\frac{5}{2}(2 + 1.65 \times 10^3) 4500^3}{63 \times 8000 \times 47 \times 244^3 / 12} = 13.8 \text{ mm.} \Rightarrow 0.0031 \text{ L}$$

Acceptable - Just.

Connections :-

Nuts Req. :-

Assume 3.5φ FH NUTS THROUGH 2mm NAC100 PLATE

length of Rate Available each side of joint = 220mm
 refer to manufacturer data

$$\text{Allowable load} = 220 \times 130 \times 10^2 = 28.6 \text{ kN}$$

per plate

— Use 1 plate per side

$$\Rightarrow \text{Capacity} = 2 \times 28.6 = 57.2 \text{ kN} \rightarrow \text{OK.}$$

Max Tension :-

$$\text{Max Tension} = \frac{7.3}{2 \times \text{Fact 2.0}} = \frac{22.5 \text{ kN}}{2} = 11.3 \text{ kN.}$$

Assume 2 M12 Bolts.

$$\text{Allowable load/Bolt} = 0.7 \times 10.4 = 7.3 \text{ kN.}$$

$$\text{Bolts Required} = \frac{11.3}{7.3} = 1.6 \text{ M12 Bolts (Req'd)}$$

— Add a 6mm furrow plate, or go to 2/300x50

Henry

ROMBEL

LIFE STYLE PLANNERS, ARCHITECTS

DESIGNCARE STUDIO
6 Balgownie Cr Nae Nae
TEL (04) 567 8299
MOBILE 025 528179
FAX (04) 567 8299

21.1.98

Dragoslav Bojich
Environmental Control Business Unit
WCC

RE: 58 Ohiro Bay Rd.
Service no: 38755

**W.C.C.
RECORDS**

Regards your letter dated 9.1.98 the previous engineer was not available but Martin Meyers
evaluated the project and the calculations are enclosed for the record.

Call me for any other concerns

Thanks

Henry Bawden

**WELLINGTON CITY COUNCIL
ENVIRONMENT**
22 JAN 1998
RECEIVED
WAKEFIELD ST. WELLINGTON

WELLINGTON CITY COUNCIL

PO Box 2199, 101 Wakefield Street, Wellington, New Zealand. Ph 64-4-499 4444



9 January, 1998

K. Matthews & J. Clark
 158 Ohiro Bay Pde
 Island Bay
 Wellington

Service Request No. 38755
 Link No. 0600 235135

Dear Sir/Madam

**REQUEST FOR FURTHER INFORMATION PURSUANT TO SECTION 34(2) OF THE
 BUILDING ACT 1991**

Service Request Type: Building Consent for less than \$500,000
 Site Address: 158 Ohiro Bay Pde Lot 12 DP 10394
 Project Description: First Floor extension.

This is to inform you that processing of your building consent has been suspended pending receipt of the further information requested below.

Please provide:

- structural calculations,
- structural details,
- architectural drawings showing all structural elements.

Yours sincerely

Dragoslav Bojich
 Environmental Control Business Unit
 Wellington City Council
 Telephone: 801-3821



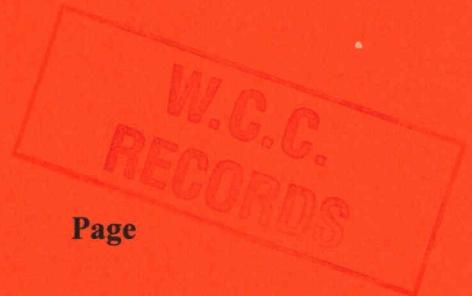
WALL BRACING CALCULATIONS

for

HOUSE ALTERATIONS

at

158 OWHIRO BAY PARADE, WELLINGTON



Contents

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Producer Statement

Details

Wall Bracing Plan- Ground Floor	Sk1
Wall Bracing Plan- First Floor	Sk2

Calculations

General Notes	1
Wind Loadings	2
Earthquake Loadings	5
Wall Bracing Design Calculations	7 to 12

Appendix

Winstones Wall bracing Information	A1 to A5
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PRODUCER STATEMENT



PRODUCER STATEMENT - PS1 - DESIGN

(Guidance notes on the use of this form are printed on the reverse side)

ISSUED BY: MAEWS MEYERS

(Suitably qualified Design Professional)

TO: MR. K. MATHEOS

(Owner)

IN RESPECT OF: BUILDING ALTERATIONS

(Description of Building Work)

AT: 158 Owniro Bay Parade

Wellington

(Address)

LOT DP SO

MAEWS MEYERS Structural has been engaged by
~~Engineering~~ (Design Firm) (Owner/Developer/Contractor)

to provide STRUCTURAL ENGINEERING DESIGN services in respect of the
(Extent of Engagement)

requirements of Clause(s) Be Structural of the Building Regulations 1992 for

All

Part only as specified

WALL BRACING ONLY

of the building work. The design has been prepared in accordance with RELEVANT NZ. STANDARDS
(verification method(s)/acceptable solution(s))

(respectively) of the approved documents issued by the Building Industry Authority and the work is described on

MAEWS MEYERS Structural ENGINEER drawings titled 158 Owniro Bay Parade
(Design Firm)

and numbered Sketches 1 & 2 and the specification and other documents according to which the
DATED 20 JAN 98 building is proposed to be constructed.

As an independent design professional covered by a current policy of Professional Indemnity Insurance to a minimum value of \$200,000, I BELIEVE ON REASONABLE GROUNDS that subject to:

(i) the site verification of the following design assumptions

EXISTING WALL PAVING AS PER CALCULATIONS

and (ii) all proprietary products meeting the performance specification requirements,
the drawings, specifications, and other documents according to which the building is proposed to be constructed
comply with the relevant provisions of the building code.

[Signature]
(Signature suitably qualified Design Professional)

BE, R. PENZ

(Professional Qualifications)

Date 20 JAN 98

ERB/AERB Reg No. 8843

Member ACENZ

IPENZ NZIA

This form to accompany Form 3 of the Building Regulations 1992 for the application of a Building Consent.

GUIDANCE ON USE OF PRODUCER STATEMENTS

This producer statement has been prepared by a combined task committee consisting of members of the New Zealand Institute of Architects, Institution of Professional Engineers New Zealand, Association of Consulting Engineers New Zealand, Building Officials Institute of New Zealand, New Zealand Master Builders Federation and New Zealand Contractors Federation.

Four producer statements are available and brief details on the purpose of each are as follows:

Design: Intended for use by the party responsible for the design when the territorial authority carries out a less rigorous review of the documents.

Design Review: Intended for use by a suitably qualified independent design professional where the territorial authority does not undertake an internal review and relies on the independent design professional's review to issue the building consent.

Construction: Intended for the use by the contractor of the building works where the territorial authority requires a producer statement at the completion of construction.

Construction Review: Intended for use by the design professional required by the building consent to undertake construction monitoring of the building works.

The producer statements system is intended to provide territorial authorities with reasonable grounds for the issuing of a Building Consent or Code Compliance Certificate without having to duplicate design or construction checking by others.

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A suitably qualified design professional should have recognised qualifications and experience for the work undertaken and should be either:

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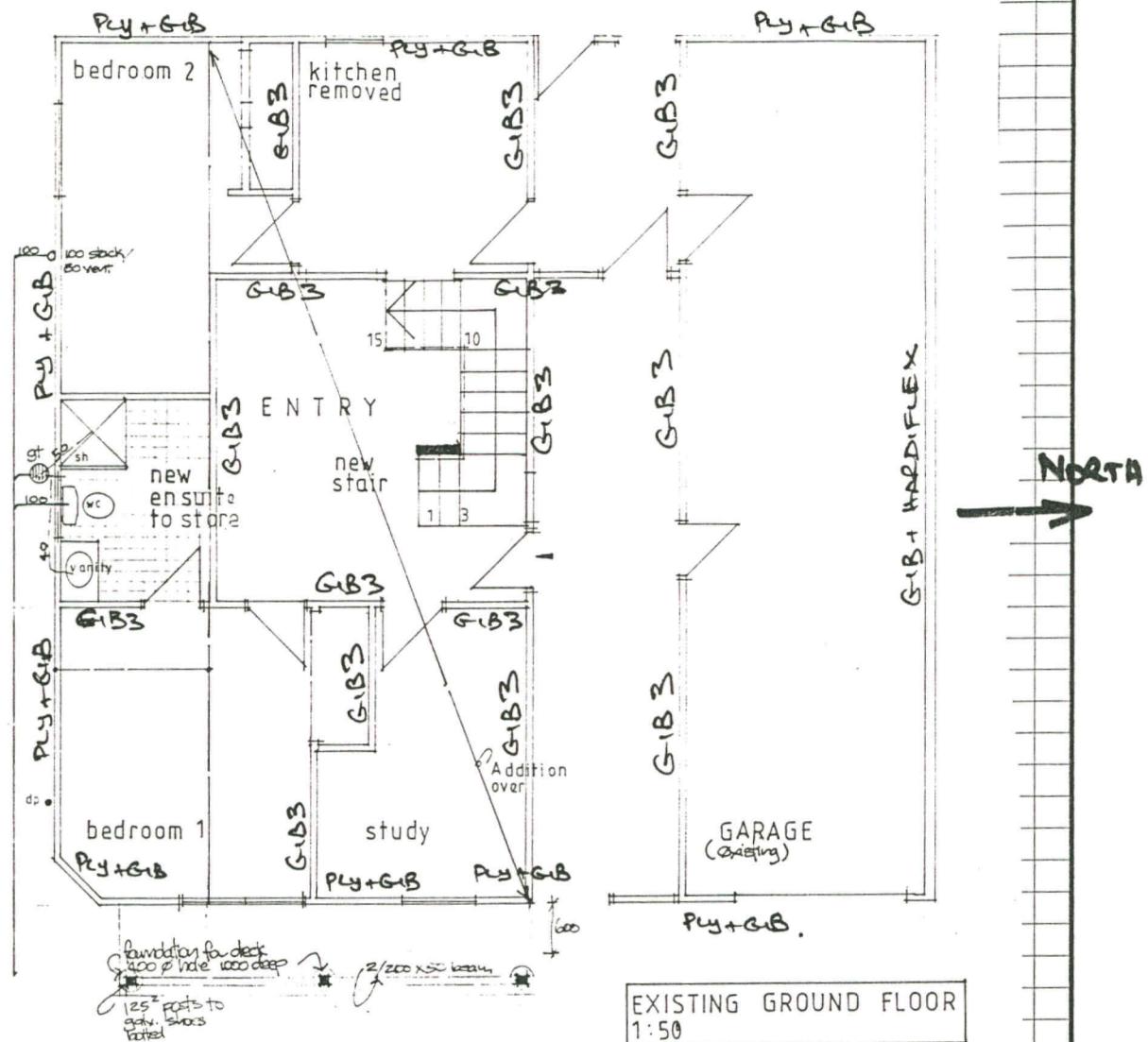
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Attached Particulars

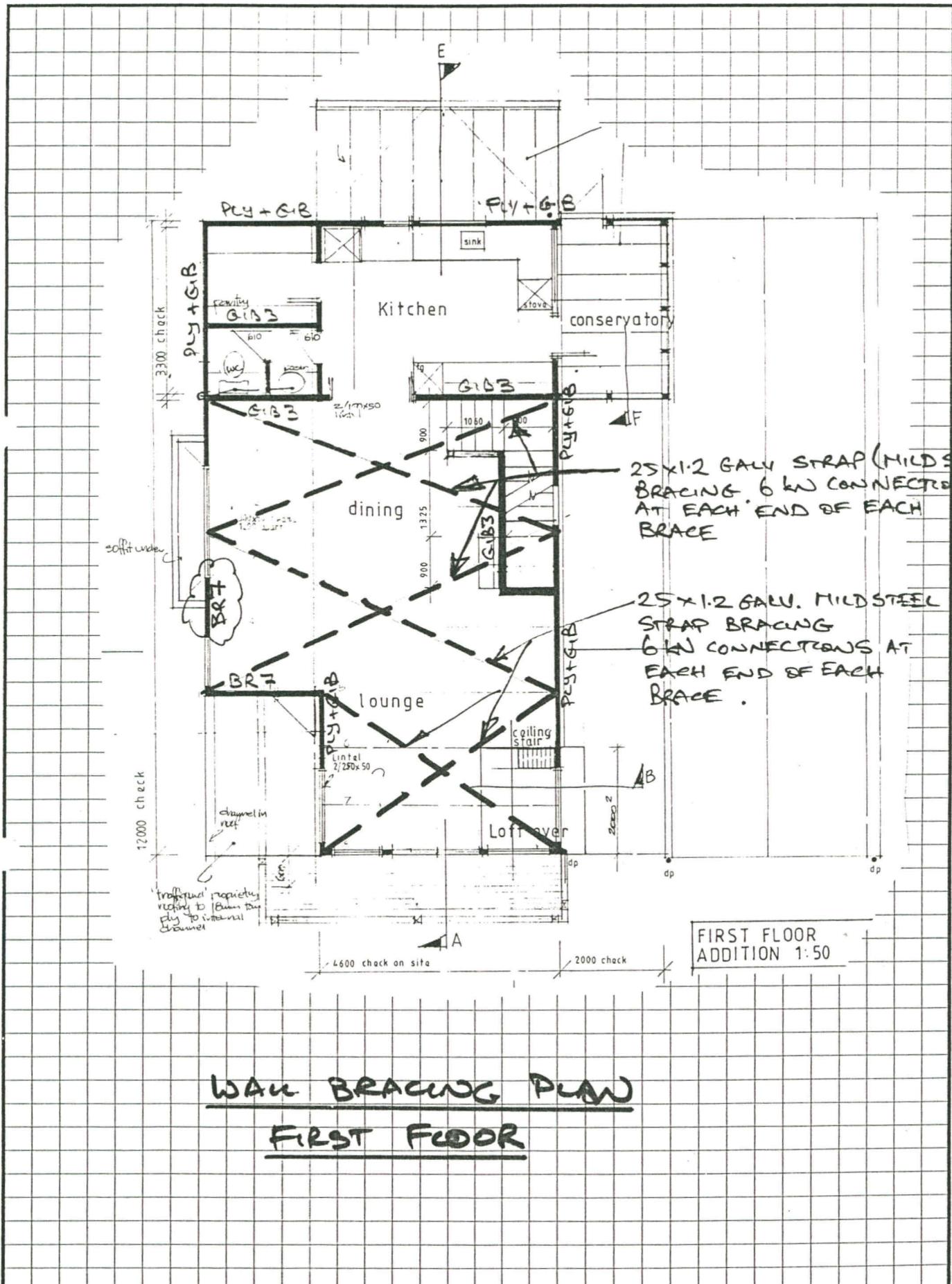
Attached particulars referred to in this producer statement refer to supplementary information appended to the producer statement.

DETAILS



WALL BRACING PLAN

Ground Floor



CALCULATIONS

GENERAL NOTES

These calculations have been carried out in complete accordance with the relevant NZ Standards including the following

- NZS 4203:1992 General Structural Design and Design Loadings
- NZS 3604:1990 Light Timber Framed Buildings
- NZS 3603:1993 Timber Structures
- MP 3640:1992 Minimum Requirements of the NZ Timber Preservation Council
- NZS 4210:1989 Materials and Workmanship

This design assumes that all work is carried out by skilled tradesmen working only on aspects of the project in which they are fully qualified

The design assumes the following material strengths :

- Bolts = Grade 4.6
- Timber Beams to be No1 Framing Grade

Building Description

The existing building is single storey.

The existing walls are timber framed. The exterior walls are lined internally with gib and externally with plywood under the weatherboarding. The interior walls are gib lined.

New Structure

The new upper floor will be timber framed with a lightweight roof.

The new walls will be of similar construction to the lower level.

Design Assumptions

The Engineer has assumed the existing interior walls to be equivalent to Gib 3 and the exterior walls which are plyed and gibbed to have capacity under Wind & EQ of 100BU/m.

Nailing of plywood and gibboard shall be as follows:

All gibboard and plywood clouts at 150 centres around edges of sheets and 300 centres to intermediate framing

Clouts to be galvanised 40mm *2.5 mm diameter flat head clouts

WIND LOADINGS :-

$$V = 40 \text{ m/s.}$$

$$M_{0s} = 0.93$$

$$M_2 = 0.91$$

$$M_3 = 1.0$$

$$M_4 = 1.1$$

$$M_r = 1.0$$

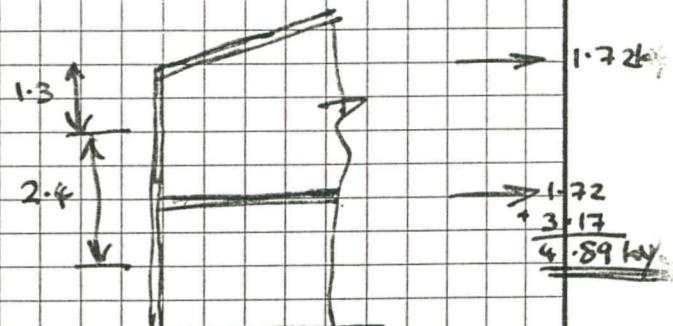
$$V_z = 46 \times 0.93 \times 0.91 \times 1.0 \times 1.1 = 42.8 \text{ m/s}$$

$$q = 1.10 \text{ kPa.}$$

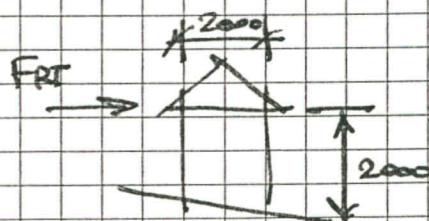
LATERAL LOADING COEFFICIENTS

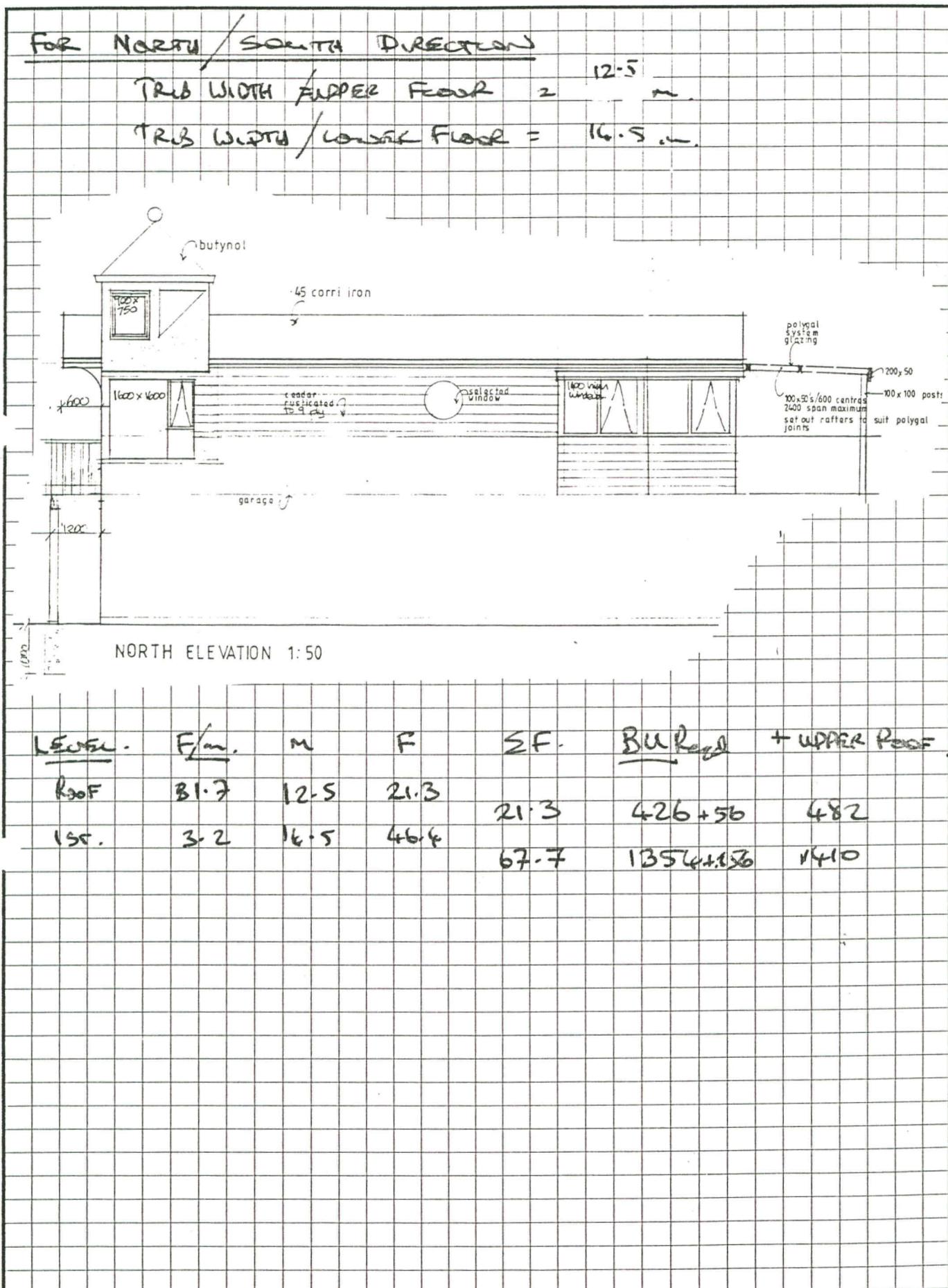
Building As A Whole: $C_p = 1.2$.

$$F_2 = \frac{(1.2 \times 1.10)}{1.3} = 1.72 \text{ kN/m} \quad F_2 \rightarrow$$

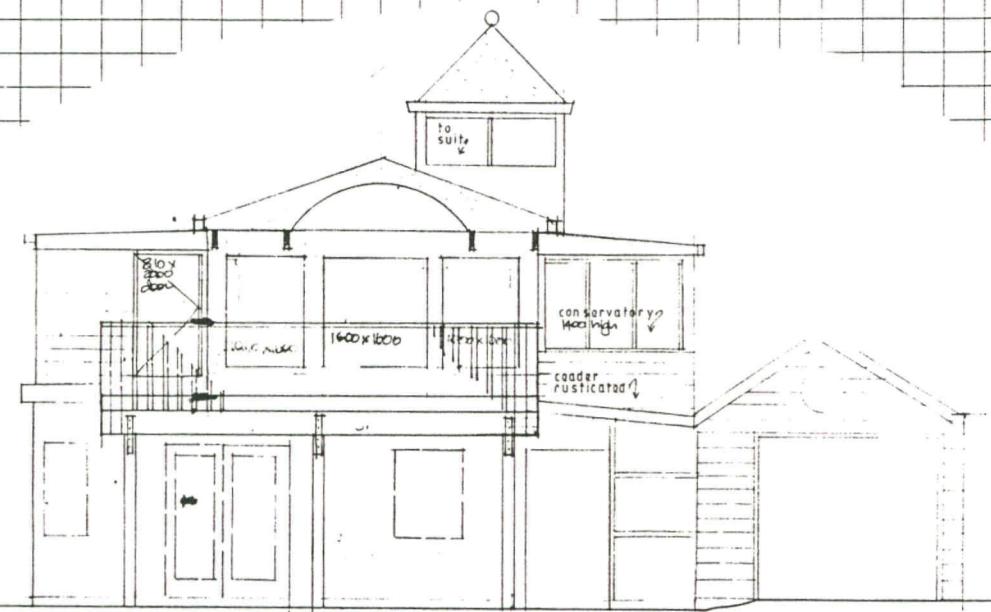
FOR VIEWING PLATFORM

$$F_{RF} = \frac{(1.2 \times 1.10)}{2} \times 2.0 \times 2.0 = 2.64 \text{ kN.}$$





For EAST / WEST Directions



EAST ELEVATION 1:50

TRB U.DTTS :-

Roof :- 8.5 m

1ST 12-0 m.

level.	F/in.	m	F	ΣF	Re lax
Upper floor	1.3	2.0	2.6	26	52
Roof	1.7	8.5	14.4	17.0	340
1st	3.2	12.0	38.4	55.4	1108

EQ LOADINGS

$$\text{Roof: } W_T = 0.30 \times 6.7 \times 12.0 = 24.1 \text{ kN.}$$

$$\text{Walls: } \frac{0.30}{2} = 20.1 \text{ kN.}$$

$$\sum W_T = 44.2 \text{ kN}$$

1st Floor

$$F_{x1st} = 0.30 \times 6.7 \times 12.0 = 40.2 \text{ kN.}$$

$$\text{Walls: } 0.30$$

$$= 40.2 \text{ kN.}$$

$$\text{Structure: } (0.6 \times 1.5) 6.7 \times 12.0 = 48.2$$

$$\sum W_T = 128.6 \text{ kN.}$$

LEVEL.	h_x	W_x	$W_x h_x$	F_x	$\sum F_x$	Bu_{2nd}
Roof	5.0	44.2	221	16.9	16.9	338
1st.	2.5	128.6	321.5	24.6	41.5	829
			$\sum W_x h_x = 542.5$			

$$F_x = \frac{V}{\sum W_x h_x} \times W_x h_x = \frac{0.24 \times (44.2 + 128.6)}{542.5} \times W_x h_x$$

$$= 0.076 \times W_x h_x$$

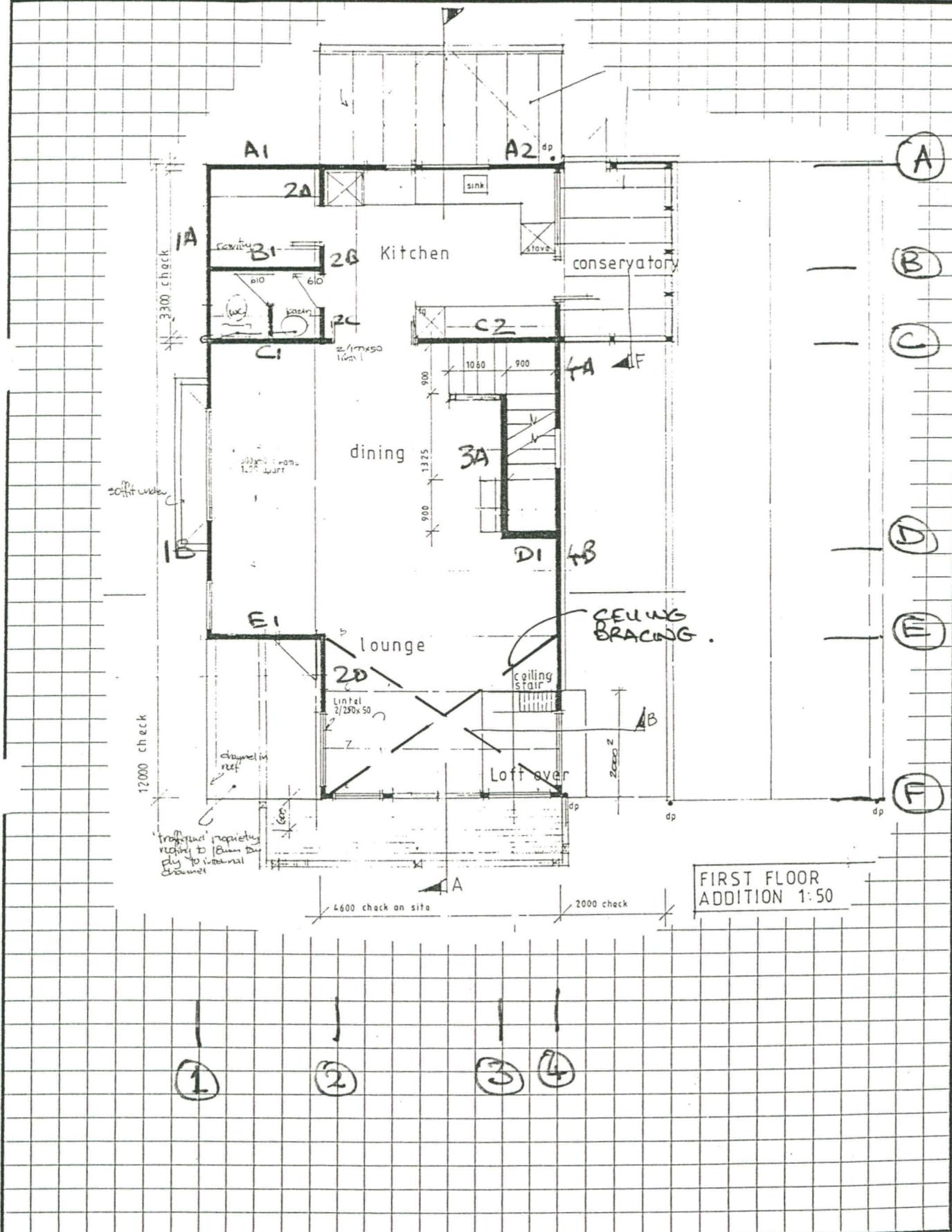
$$cd = C_u \times S_p \times R \times Z \times L_s$$

$$= 0.30 \times 0.67 \times 1.0 \times 1.2 \times 1.0$$

$$= 0.24$$

<u>Summary of Breezes Req^{ts}</u>			
<u>Level</u>	<u>EQ</u>	<u>N → S</u>	<u>W.V.W</u>
U. Roof → Roof		56	52
Roof → 1st	338	482	340
1st → Gnd.	829	1410	1108

WALL BRACING TO BE PROVIDED — FIRST FLOOR



WALL BRACING

LEVEL Roof to First Floor

DIRECTION ~~North to South~~
EAST to WEST

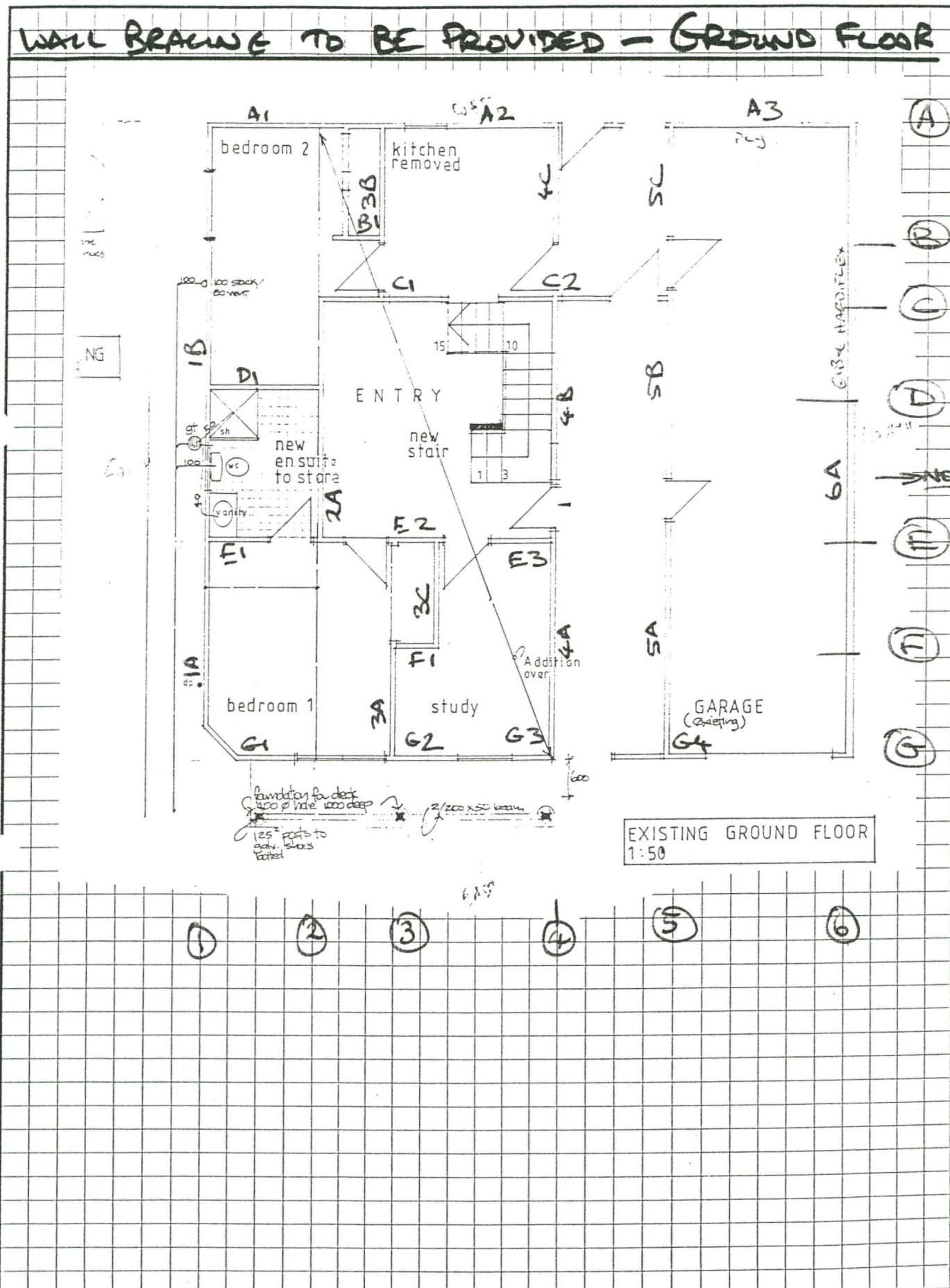
BU REQD WIND = 340 BU
BU REQD EQ = 338 BU

WALL BRACING

LEVEL Roof to First Floor

DIRECTION North to South

BU REQD WIND = 482 BU
BU REQD EQ = 338 BU



WALL BRACING

LEVEL First to Ground Floor

DIRECTION North to South

BU REQD WIND = 1410 BU
BU REQD EQ = 829 BU

WALL BRACING

LEVEL First to Ground Floor

DIRECTION EAST TO WEST

BU REQD WIND = 1108 BU
BU REQD EQ = 829 BU

APPENDIX

Design Steps 4 and 5 – BUs achieved – wind BUs achieved – earthquake

The next step is to place the specified and tested systems listed in tables 1, 2 and 3 on the bracing lines.

Table 1 lists the ratings that can be achieved with standard Gib® wall linings. Often standard Gib® will represent the majority of the building's total wall bracing system. Gib Braceline® is used where higher ratings are needed.

Table 2 contains longer wall bracing elements lined with Gib Braceline®, without end-stud strapping.

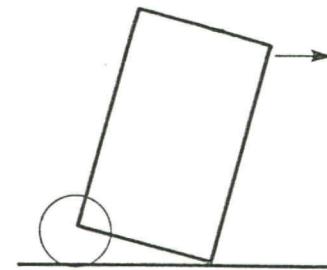
Table 3 mainly lists wall bracing elements of short length lined with Gib Braceline®. Narrow panels have a tendency to "tip" under load and therefore require the end-studs to be strapped securely against uplift.

You will notice that each type of wall bracing element has a rating for wind and one for earthquake. This is because;

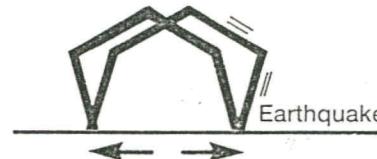
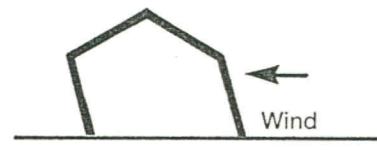
Wind fluctuates in strength, but it is the maximum gust that can be expected during the lifetime of a building that determines the wind loading. Wind gusts represent a short duration load in one direction. When a panel is tested it is the ultimate load achieved which is used to calculate BU rating for wind.

An earthquake will toss a building backwards and forwards. This type of loading is represented in the test when the panel is subjected to a number of extreme load cycles. The load that a panel can resist after these cycles is used to decide the rating for earthquake.

Because the load cycles will cause some damage, the earthquake rating is commonly lower than the wind rating for the same panel. It is therefore necessary to check both wind and earthquake ratings achieved against the totals required. Unless,



End-stud straps stop narrow panels from 'tipping'



Total required W divided by Total required E = 1 or less, check EQ only

Total required W divided by Total required E = 1.5 or more, check W only

These rules apply to Gib® systems only and may be used to simplify the completion of your bracing schedule.

Table 1: Standard 9.5mm Gib® wall system

(see page 18 for fixing details)

NZS 3604 : 1990 Ratings in bracing units per metre of element length

Type	Primary Bracing Element	Secondary Bracing Element	Wind	Earthquake
GIB 1	9.5mm Standard Gib® lining on one face, not less than 1.8m long	Diagonal Brace	55	50
	1.8m and less than 2.4m			
	2.4m and longer			
GIB 2	9.5mm Standard Gib® lining on both faces, not less than 1.8m long	Diagonal Brace	75	60
	1.8m and less than 2.4m			
	2.4m and longer			
GIB 3	9.5mm Standard Gib® lining on both faces, not less than 1.2m in length	N/A	65	60

DEFINITION: A diagonal brace is a galvanised steel angle brace with the minimum dimensions of 19 x 19 x 1.0mm.

Table 2: Gib Braceline® wall systems

(see page 17 for fixing details)

NZS 3604 : 1990 Ratings in bracing units per metre of element length

Type	Primary Bracing Element	Secondary Bracing Element	Wind	Earthquake
BR1	Gib Braceline® lining on one face 1.8m – 2.4m 2.4m and longer	Diagonal Brace Diagonal Brace	70 90	60 75
BR2	Gib Braceline® lining on one face, vertically fixed 1.8m-2.4m 2.4m and longer	N/A	75 85	60 60
BR3	Gib Braceline® lining on one face, horizontal fixing 1.8m-2.4m 2.4m and longer	N/A	60 95	45 65

DEFINITION: A diagonal brace is a galvanised steel angle brace with the minimum dimensions of 19 x 19 x 1.0mm.

Table 3: Gib Braceline® sheet brace panels

(see page 16 for fixing details)

NZS 3604 : 1990 Ratings in bracing units per metre of element length

Type	Primary Bracing Element	Secondary Bracing Element	Wind	Earthquake
BR4	Gib Braceline® lining on one face, not less than 0.9m long and a maximum of 1.2m in length	Metal strap of 6kN capacity fixed to both wall end studs	100	85
BR5	Gib Braceline® lining on one face, not less than 1.2m long and a maximum of 2.4m in length	Metal strap of 6kN capacity fixed to both wall end studs	115	85
BR6	Gib Braceline® lining on one face, 9.5mm Standard Gib® on the other, (fixed as a braced wall) not less than 1.2m long and a maximum of 2.4m in length	2 metal straps of 6kN capacity fixed to both ends of the wall or alternative 12kN capacity connection	150	110
BR7	Gib Braceline® lining on one face and 7.5mm ply on the other. Not less than 0.9m long and a maximum of 2.4m in length	Metal strap of 6kN capacity fixed to both wall end studs	145	145
BR8	Gib Braceline® lining on one face and 4.75mm Hardboard on the other. Not less than 0.9m long and a maximum of 2.4m in length	Metal strap of 6kN capacity fixed to both wall end studs	120	95
BR9	Gib Braceline® on one face min length 0.6m max length 1.2m	Both wall end studs require a fixing of 6kN capacity to the floor framing	110	95

FOR WALL HEIGHTS OTHER THAN 2.4 METRES multiply the ratings by '2.4 / wall height', except that this factor shall not be greater than 1.33.

For example: A GIB 3 bracing element which is 2.7m high, has a Bracing Unit rating per metre of its length equal to,

$$(2.4 \text{ divided by } 2.7) \times 65 = 0.88 \times 65 = 57 \text{ BU/m (W)}$$

$$(2.4 \text{ divided by } 2.7) \times 60 = 0.88 \times 60 = 53 \text{ BU/m (EQ)}$$

If this wall was 2.1m high, the rating would be,

$$(2.4 \text{ divided by } 2.1) \times 65 = 1.14 \times 65 = 74 \text{ BU/m (W)}$$

$$(2.4 \text{ divided by } 2.1) \times 60 = 1.14 \times 60 = 68 \text{ BU/m (EQ)}$$

Gib Braceline® Wall Bracing System

Product Description

Gib Braceline® is a 9.5mm thick tapered edge high density internal lining for wall bracing applications including sheet bracing.

- Face paper coloured blue for easy identification
- Foil backed for vapour resistance and thermal insulation (optional).
- Recessed studs not required.
- Quick and easy to install.

Sheet Sizes and Weight

Thickness	Width	Length
9.5mm	1200mm	2400
		2700
		3000

Maximum Weight
8.5 kg/m²

Framing

General framing requirements such as grade, preservative treatment, spacings and installation shall comply with the provisions of NZS 3604:1990. The framing call dimensions for external bracing walls shall be no less than 100 x 40mm. The framing call dimension for internal bracing walls shall be no less than 75 x 40mm, except that the call dimensions for BR9 framing shall in no case be less than 100 x 40mm.

Kiln-dried and machine stress-graded 35mm wide framing may be used for Gib® bracing applications. Reference must be made to the manufacturer's instructions and associated independent appraisals.

Lining and Fixing

Gib Braceline® shall be fastened with 30mm x 2.5mm galvanised Gib Clouts®. The clouts shall be used in conjunction with 15mm galvanised steel washers in the locations specified overpage. Gib Clouts® should be driven at right angles to the lining so that they and the washers are finally seated in a slight dimple or recess.

Vertical Fixing

Use full height sheets. Insert clouts/washers at 150mm centres around the perimeter of the bracing element. Double nail Gib Clouts® (no washers) at 300mm centres to intermediate studs. Double nails to be 50-60mm apart.

Horizontal Fixing

Insert clouts/washers at 150mm centres around the perimeter of the bracing elements. Insert single nails (no washers) to each stud at the point where the horizontal joint crosses the stud and double nail (no washers) at 300mm centres to intermediate studs. Double nails to be 50-60mm apart.

Nogs

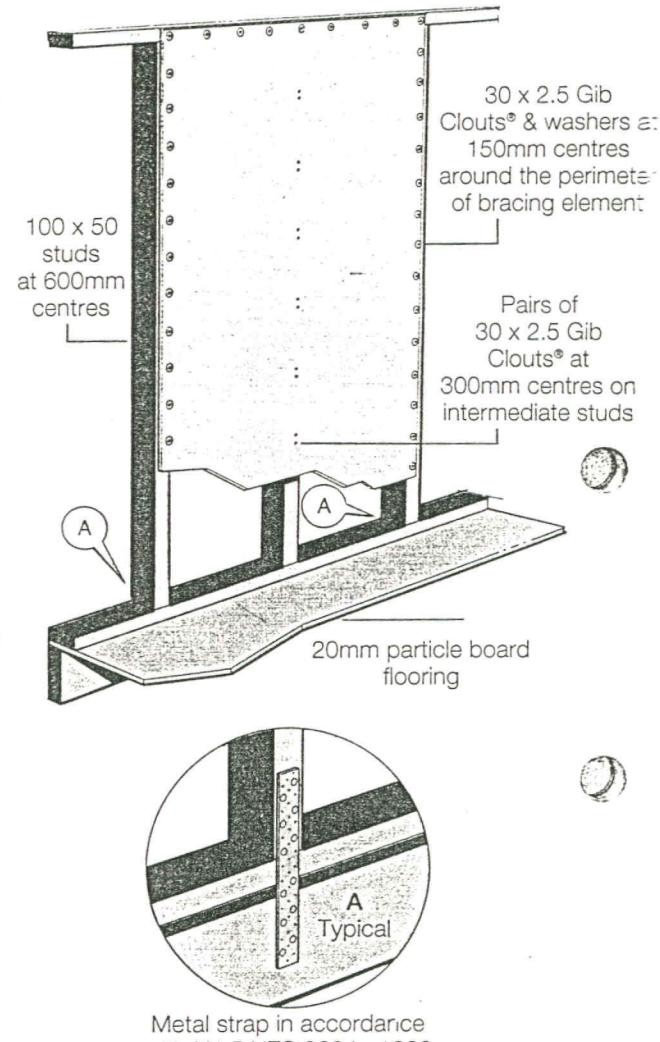
Wall bracing tests on Gib Braceline® and 9.5mm Standard Gib® systems were undertaken without noggs. Noggs are not considered to add to the bracing performance of the wall.

Timber Movement

Gib Braceline® sheets shall be fixed leaving a 10mm gap at the floor line to allow for movement of framing members.

Jointing

All joints shall be tape reinforced and finished in accordance with the publications, "Gib Board® Fixing and Jointing Instructions 1992" and "Gib Board® Stopping and Finishing Systems 1992".



Metal strap in accordance with K4.5 NZS 3604 : 1990

Sheet Brace Panels (Table 3) (Not including BR9)

A3

Fire Resistance Ratings

Gib Braceline® can be substituted for 9.5mm Gib Fyreline® in fire rated walls.

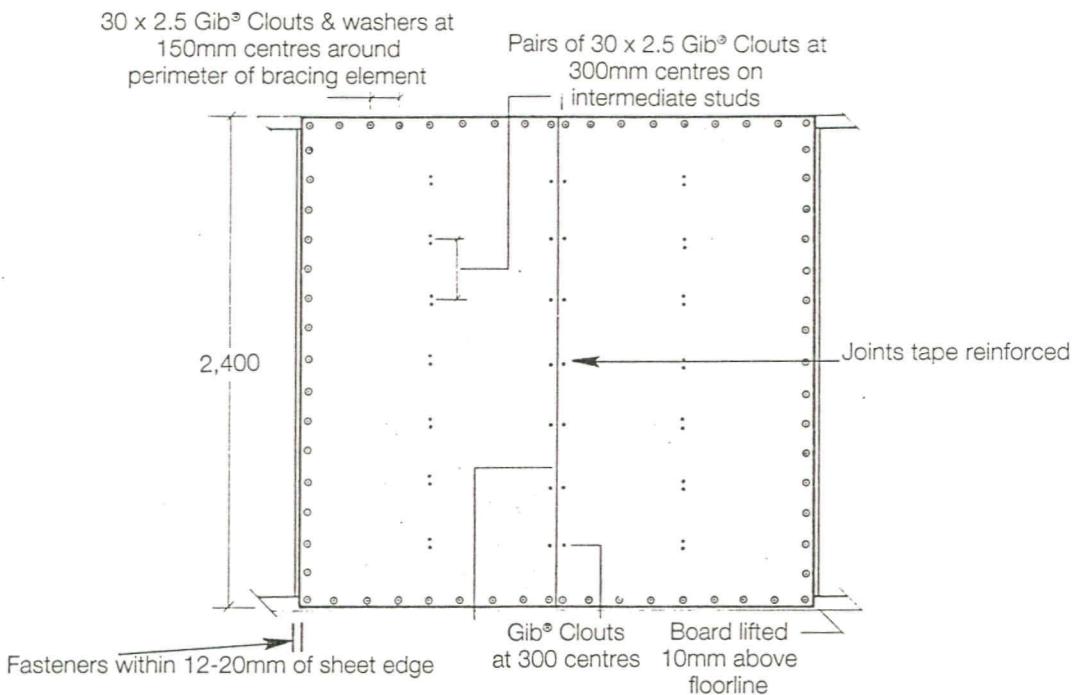
Plywood

7.5mm Standard Construction Plywood manufactured to NZS 3614 and AS 2269. Minimum grade, C-D. Minimum treatment level, untreated. Fixing shall be 30 x 2.5mm Gib® Clouts at 150mm centres around sheet perimeters and at 300mm centres to intermediate framing.

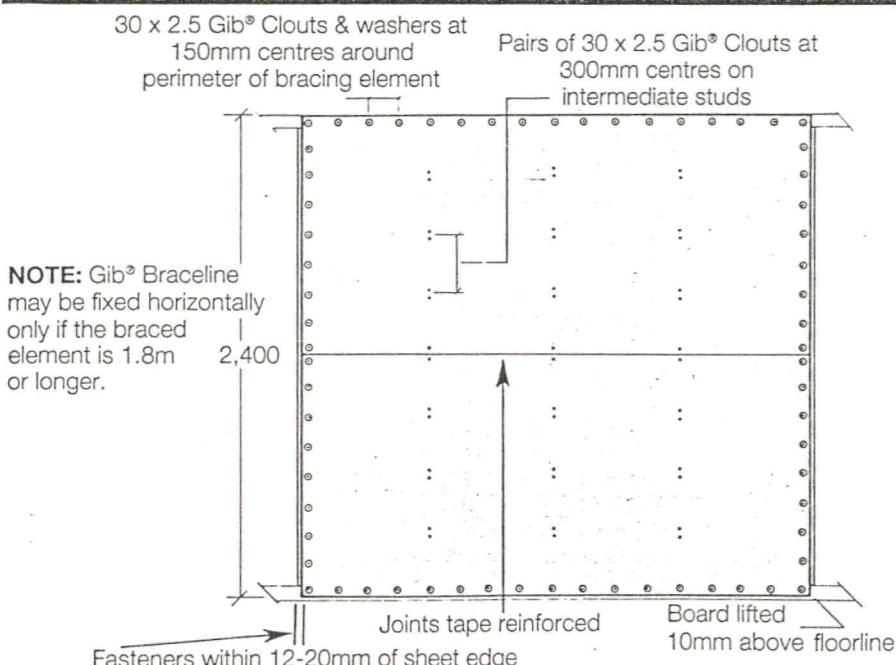
Hardboard

4.75mm Standard Hardboard or 4.75mm Oil Tempered Hardboard as manufactured by Fletcher Wood Panels Limited. Fixing shall be 30 x 2.5mm Gib® Clouts at 150mm centres around sheet perimeters and at 300mm centres to intermediate framing.

Vertical Fixing (Table 2)



Horizontal Fixing (Table 2)



Standard Gib® Wall Bracing System

Product Description

Standard Gib® is a 9.5mm thick tapered edge internal lining suitable for wall bracing applications.

- Foil backed for vapour resistance and thermal insulation (optional)

Framing

General framing requirements such as grade, preservative treatment, spacings and installation shall comply with the provisions of NZS 3604:1990. The minimum call dimensions for external bracing walls shall be no less than 100 x 40mm. The framing call dimension for internal bracing walls shall be no less than 75 x 40mm.

Kiln-dried and machine stress-graded 35mm wide framing may be used for Gib® bracing applications. Reference must be made to the manufacturer's instructions and associated independent appraisals.

Fixing Type

Standard 9.5mm Gib® wall bracing systems shall be fastened with 30 x 2.5mm galvanised Gib® Clouts. Gib Fix® adhesive may be used as an alternative fixing to intermediate studs as illustrated below.

Fixing with 30mm x 6g bugle head gypsum drywall screws is permitted **provided the calculated Bracing Unit rating for the element is reduced by 10%**. Screws are required at 150mm centres around the perimeter of a bracing element. Fixing to intermediate framing must be with single screws or Gib® Fix adhesive at 300mm centres.

Vertical Fixing

Insert Gib Clouts® at 150mm centres around the perimeter of the bracing element. Nail sheet edges within the braced element at 300mm centres and double nail intermediate studs at 300mm centres.

As an alternative to nailing to intermediate studs, apply daubs of Gib Fix® adhesive at 300mm centres to intermediate studs.

Horizontal Fixing

Insert Gib Clouts® at 150mm centres around the perimeter of the bracing element. Insert single clouts to each stud at the point where the horizontal joint crosses the stud and double nail at 300mm centres to intermediate studs.

As an alternative to nailing to intermediate studs, apply daubs of Gib Fix® adhesive at 300mm centres to intermediate studs.

Nogs

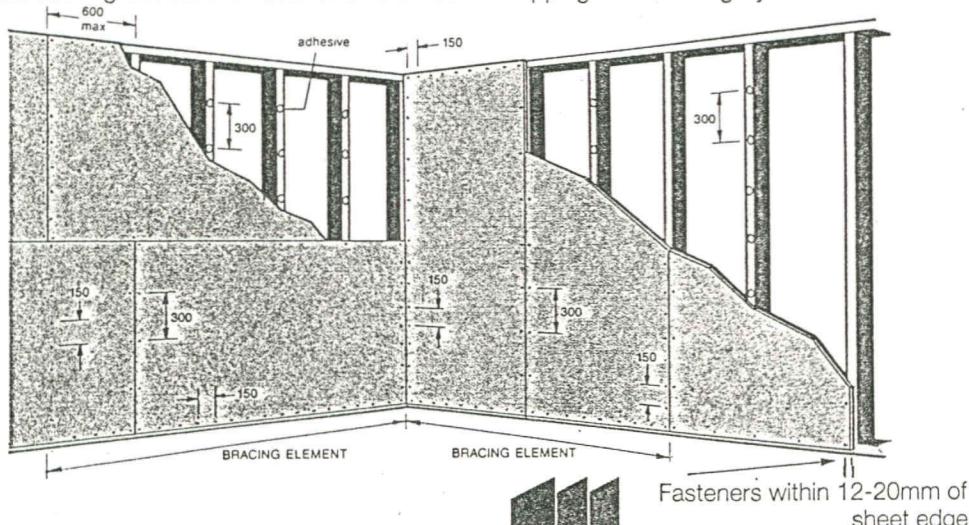
Wall bracing tests on Gib Braceline® and Standard Gib® were undertaken with out noggs. Nogs are not considered to add to the bracing performance of the wall.

Timber Movement

Gib® sheets shall be fixed leaving a 10mm gap at the floor line to allow for movement of framing members.

Jointing

All joints shall be tape reinforced and finished in accordance with the publication "Gib Board® Fixing and Jointing Instructions 1992" and "Gib Board® Stopping and Finishing Systems 1992".



SITE REPORT

Number	128736
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Date	17/12/12	SR or BCA	38755	Inspection no	5	Doc	5210993
Time	1 HR	Owner name		M. Nicholls			
Project description				First Floor			
Site address				158 Ohoro Bay Pde			
				Work completed as % <input type="checkbox"/> 20 <input type="checkbox"/> 40 <input type="checkbox"/> 60 <input type="checkbox"/> 80			
				Documents on site <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			

BUILDING/PLUMBING (circle appropriate type and inspection)								Other	<i>Site visit</i>					
Site	Found	Piles	PreSlab	Subfloor	Drainage	PreWrap	PreClad	Weathertight	PreLine	PostLine	Block	Brick	Ret.Wall	Final

Work to be carried out or supervised	Name	Licensing Class	LBP number
<i>N/A</i>			

THE FOLLOWING ITEMS REQUIRE REMEDIAL OR ADDITIONAL WORK WHICH IS TO BE COMPLETED BEFORE THE NEXT INSPECTION

Site visit to discuss the old consent process with owner Matt Nicholls

After the discussion with myself, Pete Gereghty & Jason Allen (WCC officers) Matt wished to take some time to consider his options.

No inspection was carried out.

Agreed (print name)	Matthew Nicholls	Sign	<i>Matthew Nicholls</i>	Date	17/12/12
Officer name	TIM WATSON	Officer sign	<i>THW</i>	Date	17/12/12
Additional Insp. Sheet No					
Information entered into date base (tick)			Initial	Date	

SCANNED
REF.