TechnologyOne ECM Document Summary
Printed On 30-Apr-2026

Class	Description	Doc Set Id / Note Id	Version	Date
PUBLIC	BC69120 - Amendment further information letter	2580139	4	12-Jun-2024
PUBLIC	BC38226 - Request for further information	1537257	2	13-Aug-2023
PUBLIC	BC38226 - Code compliance certificate	3133503	1	28-Feb-2017
PUBLIC	BC38226 - Building consent amended with a modification	3133463	1	28-Feb-2017
PUBLIC	LF28037 - Information - BC38226 is amended with a modification to the building code approved	3133457	1	28-Feb-2017
PUBLIC	BC38226 - Final 20 day letter	3113458	1	09-Jan-2017
PUBLIC	BC69120 - As-built drainage plan	2700886	1	13-Nov-2013
PUBLIC	BC69120 - Techrot timber decay analysis (Pt 2 of 2)	2700885	1	12-Nov-2013
PUBLIC	BC69120 - Techrot timber decay analysis (Pt 2 of 2)	2700884	1	12-Nov-2013
PUBLIC	BC69120 - Techrot timber decay analysis (Pt 1 of 2)	2700879	1	12-Nov-2013
PUBLIC	BC69120 - Wood analysis report	2700876	1	12-Nov-2013
PUBLIC	BC69120 - Producer statements and technical literature	2700288	1	12-Nov-2013
PUBLIC	BC69120 - Colour pictures and electrical certificates of compliance	2700286	1	12-Nov-2013
PUBLIC	BC69120 - Code compliance certificate	2700281	1	12-Nov-2013

PUBLIC	BC69120 - Amendment to issue of consent	2618117	1	30-May-2013
PUBLIC	BC69120 - Plans (Pt 2 of 2)	2445452	2	24-May-2012
PUBLIC	BC69120 - Plans (Pt 1 of 2)	2445451	2	24-May-2012
PUBLIC	BC69120 - Specification	2445450	1	24-May-2012
PUBLIC	BC69120 - Issue of consent	2445449	1	24-May-2012
PUBLIC	RC6594054 - Plan deposit notice - DPS 71633	1966600	1	25-May-2010
PUBLIC	RESOURCE CONSENT MONITORING REPORT	1782394	2	10-Mar-2021
PUBLIC	PCC Issued	1782389	2	10-Mar-2021
PUBLIC	Drainage plan	704527	1	23-Feb-2012
PUBLIC	Site plan	704526	1	23-Feb-2012
PUBLIC	Kaharoa water supply - Flow restrictors	704525	1	23-Feb-2012
PUBLIC	Effluent disposal - Non compliance notice	704524	1	23-Feb-2012
PUBLIC	Kaharoa water supply - Progress report	704523	1	23-Feb-2012
PUBLIC	RC6594054 - s224 approval / plan / consent notice	704522	1	23-Feb-2012
PUBLIC	BC961419 - Plans	588302	1	31-Mar-2010

PUBLIC	BC36598 - Plans - Plans	588301	1	31-Mar-2010
PUBLIC	BC13514 - Plans	588300	1	31-Mar-2010
PUBLIC	LF13369 LF13368 LF13367 - Information - Water allocation , planning and building restrictions	588288	1	31-Mar-2010
PUBLIC	RDC services plan	588287	2	31-Mar-2010
PUBLIC	Kaharoa water supply flow restrictors	588286	2	31-Mar-2010
PUBLIC	Water supply application / connection	588285	1	31-Mar-2010
PUBLIC	RC6594054 - s223 approval and plan	588284	2	31-Mar-2010
PUBLIC	RC8006 - Land use decision and approved plans - Reid	588283	1	31-Mar-2010
PUBLIC	BC961419 - New dwelling , garage and implement shed	588282	1	31-Mar-2010
PUBLIC	BC13514 - Bathroom alterations	588281	1	31-Mar-2010
PUBLIC	BC38226 - Convert garage to caregivers quarters	588279	1	31-Mar-2010
PUBLIC	BC36598 - Erect studio and gym	588278	1	31-Mar-2010

12 March 2013
RDC – 344740

Mr D Batenburg
Millennium Architecture
2 Benn Road
RD 5
ROTORUA 3076

Dear Sir

Request for Further Information on PIM / BC Application.

Building Consent Number: 69120 P27041
Project Location: 48 SHARP ROAD
Project Description: Change to strip drains (26/02/2013)

You may or may not be aware that the Building Act 2004 requires a territorial authority to be satisfied on reasonable grounds that the provisions of the Building Act will be met if the building work were properly completed in accordance with the plans and specifications that accompany the building consent application.

As code compliance certificate will be issued against the approved plans and specifications it is now imperative that the plans and specifications clearly reflect code compliance.

Having assessed your plans and specifications, we require the following additional details / amendments to ensure compliance is properly demonstrated and enable building consent to be issued:

1. Please find attached the copy of the plan that was rejected at initial consent application, this was rejected because of the failing to meet E2/AS1 and I did not feel that as an alternative solution that it would meet the intent of E2. (What has changed as this proposed detail looks exactly the same?)

2. Provide additional information in regards to the hard paved surface slopes to the cess pit specifically from where the proposed drainage channels are to be used.

3. Provide the drainage pipes and gradients to soakholes to enable confirmation that the nominated two metre centres will be constructed on site.

4. My understanding is that these drainage channels have been place on site so how are you proposing to connect these new drains. E.g. retrofitting a connector or replacing some drainage channels.

5. Please show any gradients to these drainage channels.

Document Set ID: 2580139
Version: 4, Version Date: 12/06/2024

6. Provide a written rational as to why you feel that if the drainage channel dimensions will comply with both E2 and B2 given that this consent was to repair a leaky home, some thought should be given to the timber weather boards as it will only be 100mm from the base of the drain.

Two copies of all further information is required to be lodged together and shall include a reference clearly indicating how and where this information has been provided and can be found within the documents.

Amended/updated plans that were originally signed by the Design Engineer must be resigned prior to submission to Council.

Further information is required within 28 working days and can be forwarded by mail or lodged with Customer Services. Alternatively you can contact the processing Building Officer 24 hours prior to lodgment and arrange a meeting where each of the outstanding items can be assessed in person.

We appreciate that requests for those items may be frustrating but unless compliance can be clearly demonstrated building consent cannot be issued. We have suspended building consent processing until the above information is provided. Please be assured of our earliest attention to completion of processing and issuing of building consent on receipt of this information.

Yours sincerely

Allan Hoffman
Building Officer

Document Set ID: «2580139
Version: 4, Version Date: 12/06/2024

05/12/2006

Please Quote Building Consent No: 38226

File No: P27041
Doc No: OW-74745

J Hodges
PO Box 473
ROTORUA

Dear Sir/Madam

48 SHARP ROAD

I acknowledge receiving your Building Consent Application dated 6.11.06, to construct a garage into a habitable space but wish to advise that the plans and specifications submitted do not fully comply with the Building Code and/or legislation. Further processing of this Consent will be suspended until amendments or the required additional information is received. The permitted period of suspension will be **up to 20 working days** within which time it is considered all information should have been submitted.

BUILDING

1. Please provide flashing details to all window openings and show compliance with NZBC E2/AS1.

2. Confirm a DPC layer is present under the slab or that a new one will be laid under a topping pad.

3. Confirm the on site effluent treatment system will comply with the Regional Plan. Call EBOP to confirm, phone 0800 ENV BOP.

4. Show ground levels comply with NZS 3604 to perimeter of building where slotted drain is not shown.

All additional information must be lodged together and shall include a reference clearly indicating how and where this information has been provided and can be found within the documents.

On receipt of this information further consideration will be given to the application and if found to be satisfactory the consent will be issued on payment of the required fees.

Should you envisage difficulty in providing additional information within the given time or wish to discuss the matter, Council Officers will be pleased to provide assistance.

Yours faithfully

Colin Wiggins
Building Officer

Document Set ID: 1537257
Version: 2, Version Date: 13/08/2023

RRD0026GDW
Document Number: RDC-705474
Date Registered: 28/2/2017

27 February 2017

REID, MR MICHAEL JAMES
C/O ATTN: MR LEWIS
PO BOX 242
ROTORUA 3040

File Ref: P27041
Building Consent No: 38226

Dear Sir,

CODE COMPLIANCE CERTIFICATE
BUILDING CONSENT NO: 38226

Please find attached your copy of the Code Compliance Certificate that has been issued in relation to the above building consent.

This is an important document and should be retained by you as it specifies the work carried out under the Consent has been completed, and meets the requirements of the Building Code supporting documents.

If in future you should desire to sell your property, your solicitor may ask you to produce this Certificate to prove that your building complies with the Building Code to the extent required by the above Building Consent. A copy is also placed on your property file.

Yours faithfully

KP Shand

Karen Shand
Business Support Advisor
Consent Solutions

Encl.

Document Set ID: 3133503
Version: 1, Version Date: 28/02/2017

Code Compliance Certificate: 38226
Section 95, Building Act 2004

Issued: 27 FEB 2017

ROTORUA LAKES COUNCIL
Te kaunihera o ngā roto o Rotorua

Civic Centre
1061 Haupapa Street
Private Bag 3029
Rotorua Mail Centre
Rotorua 3046
New Zealand

The Building

Property ID:	P27041
Street Address:	48 SHARP ROAD, KAHAROA
Valuation number:	06951 239 02
Legal Description:	Lot 2 DPS71633
Building Name:	RESIDENTIAL
Intended Use:	CONVERT GARAGE TO CAREGIVERS QUARTERS
Description of Work:	CONVERT GARAGE TO CAREGIVERS QUARTERS
Year First Constructed:	2007

The Owner

Name & Address of Owner:
REID, MR MICHAEL JAMES
C/O ATTN: MR LEWIS
PO BOX 242
ROTORUA 3040

Contact Person:
Michael Reid

First point of contact for communications with the building consent authority:
REID, MR MICHAEL JAMES
C/O ATTN: MR LEWIS
PO BOX 242
ROTORUA 3040

Building Work

Building Consent no:	38226
Issued by:	Rotorua District Council (Operating as Rotorua Lakes Council)

Code Compliance

The Building Consent Authority named above is satisfied, on reasonable grounds, that –

(a) the building work complies with the Building Consent.
~~(b) the specified systems in the building are capable of performing to the performance standard set out in the Building Consent~~
~~**Attachment**~~
~~Compliance Schedule~~

Signed for and on behalf of the Council:

Name: Karen Shand Position: Business Support Advisor, Consent Solutions

Signed: _____ Date: 27 February 2017

Document Set ID: 3133503
Version: 1, Version Date: 28/02/2017

ROTORUA LAKES COUNCIL	**Code Compliance Certificate Assessment Checklist**	Ref: CCC 01 Ver: 12 Issued: 21 Nov 2014 RDC-39977 Page 1 of 2

BC No.: 35226. **Date:** 18/2/2017.

Address: 48 Sharp Rd

P = Pass, F = Fail, N/A = Not Applicable – Circle appropriate box

No	Item				Comments / Reasons for Decision
1	Work complies with the approved BC documentation (sect 94(1))	(P)	F	N/A	
2	All the required inspections have been completed	(P)	F	N/A	
3	Check sheets are complete	(P)	F	N/A	
4	Instruction sheets/ ~~NTF~~ complied with	(P)	F	N/A	checked OK.
5	BC conditions have been complied with	(P)	F	N/A	
6	PIM requirements have been complied with	(P)	F	N/A	
7	All documents have BC number on them	(P)	F	N/A	
8	Energy work certificate has been provided (if required) (section 94(3))	(P)	F	N/A	electrical.
9	Specified systems are capable of performing in accordance with performance standards (94(1b))	P	F	(N/A)	domestic.
10	Is a compliance schedule required or requires amending? (Section 100(2))	P	F	(N/A)	
11	Has the territorial authority received any certificates issued by licensed building practitioners that relate to restricted work? (Section 88(1) and (2)) (No of)	P	F	(N/A)	not RBW.
12	TA informed by LBP that building work not carried out in accordance with consent (89)	P	F	(N/A)	
13	Any amendments/ as builts have been issued and whether documentation associated with these has been properly completed.	P	F	(N/A)	none reqd.
14	Photographs of elevations	(P)	F	N/A	07 on file / see notes.
15	Survey certificates – siting, height in relation to boundary, maximum height of building or minimum floor level	P	F	(N/A)	
16	Plumbing statements	P	F	(N/A)	
17	Pile driving	P	F	(N/A)	
18	Foundation observation	P	F	(N/A)	
19	Ground conditions including compaction	P	F	(N/A)	none in BC.
20	Waterproofing	P	F	(N/A)	
21	Structural reviews	P	F	(N/A)	
22	Home heating (fires)	P	F	(N/A)	
23	Glazing	(P)	F	N/A	RCC checked.
24	Drainage SOC also reqd.	(P)	F	N/A	As Built reqd.
25	Roofing SOC	P	F	(N/A)	none reqd
26	Smoke alarms ~~and sprinklers~~	(P)	F	N/A	checked OK.
27	Emergency warning systems	P	F	(N/A)	
28	Fire doors	P	F	(N/A)	
29	Spread of flame	P	F	(N/A)	
30	Backflow	P	F	(N/A)	
31	Lifts (electrical and installation)	P	F	(N/A)	
32	Mechanical ventilation	P	F	(N/A)	none in BC.
33	Exterior plaster systems	P	F	(N/A)	

Document Set ID: 3133503
Version: 1, Version Date: 28/02/2017

No	Item				Comments / Reasons for Decision
34	Producer Statements are correctly formatted?	P	F	(N/A)	none req'd.
35	Statement of Compliance is correctly formatted?	(P)	F	N/A	
36	Form 6 received and complete	(P)	F	N/A	} Acc'l ok.
37	Other On site insp card.	(P)	F	N/A	On file.
38	Other	P	F	(N/A)	
39	Other	P	F	(N/A)	none.
40	Other	P	F	(N/A)	
41	Damage deposit can be released	P	F	(N/A)	} no bonds.
42	Crossing deposit can be released	P	F	(N/A)	

Additional Fees or Refund Applicable	Insp hrs allowed	Insp hrs used	Balance	$	Fees *(circle)*	Refund *(circle)*	(NA)
Reason for refund or additional fees *(wording to applicant)*							

Site Development Form to be sent with CCC	(YES)	NO	Modification / Waiver applies	(YES)	NO
CCC Assessment (If F request info below)	P	(F)	As Built / Supplied Plans in Poly	YES	(NO)

NOTES: Can ① complete amendment form for BZ.
② Have you got photos of new cladding and compliant G/L's. see survey card.

All information and documentation is present and correct. A Code Compliance Certificate can be issued providing all outstanding additional fees and/or development contribution has been paid (Senior Building Inspector or Building Solutions Lead).

Name: E Wilkins Signature:

Date Received *On site inspection date received (this is the date when the clock starts)*	**Date Suspended** *Date when information requested from owner, or when invoice sent for extra inspection fees or development contribution (this is the date when the clock stops)*	**Date Responded** *Date when information received from owner, or invoice is paid (this is the date when the clock re-starts)*	**Date Approved by TL or MBS** *Date approved by delegated Office*	**Date Refused to Issue by TL or MBS** *Date refused to issue by delegated Office*
28/9/07	28/9/07	3/2/17.	20/2/17.	N/A.

Business Support Advisor to Complete (**P**= copies sent for filing with building consent documents) *If not applicable circle* **NA**

Copy of code compliance certificate	(P)	N/A	Copy of Site Development sent to owner	(P)	N/A
Copy of certificate cover letter	(P)	N/A	Copy of compliance schedule	P	(N/A)
All information collated and sent to records	(P)	N/A	Copy of compliance schedule statement	P	(N/A)
Bond refund K Shand	P	(N/A)	Copy of letter refusing to issue CCC	P	(N/A)

Name: _____ Signature: _____

Date Issued by BSA Date: 27-2-17
Date when Business Support Advisor issues CCC

Document Set ID: 3133503
Version: 1, Version Date: 28/02/2017

DESTINATION ROTORUA
ROTORUA DISTRICT COUNCIL

Rotorua District Council
1061 Haupapa Street
Private Bag 3029, Rotorua
P: 07 348 4199
F: 07 349 0993
E: mail@rdc.govt.nz
W: www.rdc.govt.nz

Form 6

APPLICATION FOR CODE COMPLIANCE CERTIFICATE

Section 92, Building Act 2004

THE BUILDING CONSENT

Building consent number: 38226

Issued by [name of building consent authority that granted building consent]: ROTORUA DISTRICT COUNCIL.

*THE OWNER

Name of owner [include preferred form of address, eg, Mr, Miss, Dr, if an individual]:
MR. MICHAEL REID

†Contact person: John Hodges

Mailing address: C/- P.O Box 473
Rotorua

Street address/registered office:

Phone number: Landline: Mobile:

Daytime: 3476338 After hours:

Facsimile number: 349 2013

Email address: hodges@clear.net.nz Website:

The following evidence of ownership is attached to this application: [copy of certificate of title, lease, agreement for sale and purchase, or other document showing full name of legal owner(s) of the building]

‡AGENT

‡Name of agent [only required if application is being made on behalf of the owner]:
HODGES CONSTRUCTION LTD

§Contact person: John Hodges

Mailing address: P.O Box 473
ROTORUA

Street address/registered office: 55 FAIRY SPRINGS RD, ROTORUA

Phone number: Landline: Mobile:

Daytime: 3476338 After hours:

Facsimile number: 349 2013

Email address: Website:

Document Set ID: 3133503
Version: 1, Version Date: 28/02/2017

Relationship to owner [state details of the authorisation from the owner to make the application on the owner's behalf]:

BUILDER

First point of contact for communications with the council/building consent authority [Contact details must be in NZ]:

Full name: HODGES CONSTRUCTION LTD.

Mailing address: P.O. BOX 473
ROTORUA.

Phone number(s): 3476338

Facsimile number(s): 3492013

Email address(es): hodges@clear.net.nz

APPLICATION

All building work to be carried out under the above building consent was completed on: 1 Sept. 2007.

The personnel who carried out the building work are as follows [list names, addresses, phone numbers, and (where relevant) registration numbers]:

Hodges Construction Ltd, Hepburn Electrical, L. Cannon Plumbing, T. Anderson Drainage, B. Mills Painting

The following specified systems are contained on the compliance schedule for the building and, in the opinion of the personnel who installed them, are capable of performing to the performance standards set out in the building consent:

I request that you issue a code compliance certificate for this work under section 95 of the Building Act 2004.
The code compliance certificate should be sent to [state which address, and whether owner or agent]:

Signature of [owner/agent on behalf of and with the authority of the owner]: J Hodges

Name of person signing: J. Hodges

Date: 20/9/07

ATTACHMENTS

The following documents are attached to this application:

- ☐ Certificates from the personnel who carried out the work
- ☐ Certificates that relate to the energy work
- ☐ Evidence that specified systems are capable of performing to the performance standards set out in the building consent

*Delete this section if details have not changed from the building consent.
†Delete if owner is an individual.
‡Delete this section if the application is not being made on behalf of the owner.

Document Set ID: 3133503
Version: 1, Version Date: 28/02/2017

FIELD INSPECTION COMPLIANCE

File No: P2704 Appln No: 38226

Owner: Reid Contractor: Hodges Contr.

Lot/Sec: 2 DPS/Blk: 71633

Site Address: 48 Sharp Rd

Proposed Work: Convert garage to Caregivers qtrs

- ***Please clearly define boundaries before calling for the first inspection.***
- ***Building Consent documentation must be on site at all times.***

Initial Inspection	First		Second		Complies	
	Owner	RDC	Owner	RDC	Owner	RDC
1. Site Formation						
2. ~~Footings/Piles~~						
N/A 3. Bond Beams & Columns						
RAY ✓ 4. Under Floor Plumbing/Drainage						
N/A 5. Concrete Floor						
✓ 6. Pre-wrap (Wind ties & Ext Braces)						
✓ 7. Post-wrap (Weather tape, flashings & cavity battens)						
N/A 8. Half Height Bricks (Ties/Weep Holes)						
N/A 9. Pre-plaster (Stucco, Bricks, EIFS)						
✓ 10. Pre-lining (Moisture & Int Braces)						
RAY ✓ 11. Pre-lining (Plumbing/Drainage)						
RAY ✓ 12. Pre-lining (Insulation)						
N/A ✓ 13. Post-lining (Bracing - Fixing of Gib)						
✓ 14. Drain Test (Plumbing/Drainage)						
N/A 15. Solid Fuel Heaters						
N/A 16. Vehicle Crossing/Damage Deposit						
17. Other (Please Note)						
18. Final Inspection **(All Work To Be Completed)**		19/9/07				28/9/07

Document Set ID: 3133503
Version: 1, Version Date: 28/02/2017

IMPORTANT

THIS CARD MUST BE PRODUCED ON THE SITE AT EVERY INSPECTION EITHER BY THE OWNER OR THEIR AGENT

As the holder of a Building Consent, the **OWNER** or their **AGENT** is required to:
(GIVE 24 HOURS NOTICE FOR ANY INSPECTION ON SITE)

- Footings - reinforcing steel to be in place. Pile excavations complete. No concrete to be poured. ***Note:*** Boundary pegs should also be identified at this stage. (See 4 below).
- Under Floor Drainage - Drains exposed and water test on.
- Concrete Floor Slabs - When moisture barrier and steel is in place.
- Pre-wrap - Building framed, trusses on, all straps and braces installed.
- Wrap Inspection - Wrap around buildings - flashings prior to windows and window wrap. Cavity battens installed.
- Pre-lining Inspection 1 - When the structure is completely closed in and all bracing and straps are fitted.
- Pre-lining - Plumbing/Drainage - When all wastes, vents, hot and cold water pipes installed and under test.
- If applicable, check for correct facilities for Disabled Persons.
- Post-line - When all gib is fixed prior to stopping or trim being fitted.
- Linings and fittings - when all linings are fixed, plumbing fittings in place and before any decoration is done.
- Water Supply - Back flow presenters in place.
- Drains fully laid and ready on test - sewer and stormwater.
- Final -when the building is ready for occupancy, but before occupancy takes place.

For all the above inspections, the OWNER or their AGENT, is required to be on site at the time of the inspection and they shall have a set of the stamped, approved drawings for the job on-site.

PLEASE NOTE: ***Additional charges may be made for the following if the Building Officer arrives and:***

1. The work is not ready for the inspection.
2. Owner/agent/plans not on site.
3. Inspection not cancelled.
4. Boundaries not located or proved/no footing/foundation inspection.

It is important to note that should the necessary inspection not be done, a **CODE COMPLIANCE CERTIFICATE** will not be issued.

Owners should have regard to consequence of occupying or selling a non-complying building.

Document Set ID: 3133503
Version: 1, Version Date: 28/02/2017

Doc No: IT-12403

File No: 37-73-010\14

BUILDING SERVICES

FIELD INSPECTION CARD

RESOURCE CONSENT REQUIRED

Application No: 38226

Date Consent Issued: 20/2006 APPROVED

OWNER: Reid Ph 3476338 Phone:	BUILDER: Hodges Constr. Phone: 3476338
SITE: 48 Sharp Rd	PLUMBER: Les Cameron. Phone:
VALUATION NO: 06951/239.02 FILE NO: P 27041	DRAINLAYER: Phone:
LEGAL DESCRIPTION: Lot/~~Sec:~~ 2	DPS/~~Blk~~: 71633

DESCRIPTION OF PROPOSED WORK: 5 inspections

Convert garage to Care givers qtrs

DATE	INSPECTION REPORTS	TIME
	RESOURCE CONSENT APPROVED. 04/12/06 (2006)	
18/1/07	Convert garage to flats	
Reg	timber framing OK and ceil 14-3Pb	
	insulation in walls and ceiling	
	Plumbing and waste in OK	
	Pb 2 piping and under pressure	PW
	holding OK to continue check	
	on any fire rating	
19/2/07	DRAINAGE 100mm PVC to existing	
	drain 2 GT and AAV at head	
Reg	of WC. connection under water test OK	PW
20/4/07	GARAGE TO SLEEPOUT CONVERSION (FAIL) LOF	11:00am
ISSUED	INSTRUCTION SHEET FOR DETAILS.	
	INSULATION SEEN IN CEILING OK.	
28/9/07	Final - Pass. Paul	10-15
	Work complies with consented	
	documents ok to issue CCC.	
4/10/07	MET JOHN HODGES TO DISCUSS HEIGHT ISSUES TO THE	4:30pm
BAILEY	REAR OF THE DWELLING. DRAINAGE CHANGE TO BE INSTALLED	

Document Set ID: 3133503
Version: 1, Version Date: 28/02/2017

Add'l letter set.

Doc No: IT-12403

File No: 37-73-010\14

DATE	INSPECTIONS	TIME
9-1-17	Final 20 day letter sent C Lomas	
31-01-2017	Emailed Roland a copy of the instruction sheet and also	
	photographs, C Lomas 10:50 am.	
	0274850353. Roland	
1-02-2017	Meet Roland Hssink onsite, Ground levels all ok	
9:50-10:20	cladding is weatherboard now done under another	1 Ch.
Carl L	B.C that has ccc, Gave Roland. Back dating durability	
	form to be filled out,	
3-02-17	Recieved Backdating durability form from Roland	
CL.	this B.C is ok to issue ccc.	
	-Cladding was changed to weatherboards under	
	another B.C 69120 which had ccc issued	
	21-oct 2013.	
	therefore this B.C is completed due to another B.C for the	
	reclad.	
20-02-17	C Lomas Ground levels onsite are 225mm from	
	ffl as sited by Carl onsite no photos were taken as	
	B.C 69120 has photos of the ground levels.	

Document Set ID: 3133503
Version: 1, Version Date: 28/02/2017

DESTINATION ROTORUA

Inspection Checklist: Domestic Final

Ref:TP 04–TF 01.19
Ver: 3
Issued: 27 Aug 07
Doc No: IT-639940
Page 1 of 6

BC N^0 38226

Address 48 SUTHERLAND RD

Contractor on site: JOHN HOLMES

Date Inspected	Inspection Comments / Notes: *(Include comment on any alternative solutions identified, site observation statements, warranties or 'As Laid's to be provided, if applicable)*	Inspector
20/9/07		
BARRY		

PASS If all works comply with the Consented documents and a Code Compliance Certificate can be issued please sign and date below.

Date: 28/9/07 Inspector's signature: [signature]

If Inspection Result = FAIL then complete below FAIL

Notices / Site Instructions

Date Issued:	Site Instruction / N.T.F No.	If site inspection fails, record below reason(s) and reference to any site instruction or notice issued
20/9/07	0390	REF INSPECTION SHEET FOR DETAILS.
BARRY		

Date:	Re-inspections:	Inspector:
28/9/07	Final Pass	Paul

Final Inspection – Domestic- inspection result: 'Pass' ***(Refer to checklist)***

F = Fail = Non-compliance with approved plans & documentation
P = Pass = Compliance with approved plans & documentation.
N/A = Means that Building officer feels that this portion of the prompt sheet is not relevant

Document Set ID: 3133503
Version: 1, Version Date: 28/02/2017

	Building Consent Documentation	Comments	P, F, N/A
1	Has a Form 6 been completed/submitted?		
2	Approved Building Consent documents on site		P
3	Have conditions of PIM been met?		P
4	Have all inspections referenced in BC document been undertaken?		P
5	Check conditions of BC have been fulfilled.		P
6	Check instructions/commentary from previous inspection (have all outstanding instructions been complied with?)		P
7	Sec 269 – Does the application involve any certified building methods or products? If so check registers to ensure that these are current.		N/A
8	Sec 364 – Is the building a household unit being constructed by or on behalf of a property developer for the purpose of sale? If so ensure that a condition is applied requiring the developer to obtain CCC before on-selling or allowing occupation of the property.		N/A
	Kitchen		
9	Is food prep area layout as per the approved plans & specification? *The food preparation surface shall have the minimum dimensions shown in Figure 1, G3/AS1A drainer integral with and draining to the sink is acceptable.*		P
10	Bench top sealed at junction with wall linings		P
11	Is sink provided capable of containing cylinder of 300 mm dia & 125 mm depth? *Utensil washing and food rinsing facilities shall have a sink with free draining surfaces with continuous falls to the outlet. The sink shall be capable of fully containing a solid cylinder of 300 mm diameter and 125 mm depth.*		P
12	Is hot & cold supply provided to sink? *Hot and cold water supply shall be provided to the sink as required by NZBC G12 "Water Supplies".*		P
13	Trap & waste fitted to sink? *Plumbing and drainage for waste water from the sink shall be provided as required by NZBC G13 "Foul Water".*		P
14	Energy supply provided for cooking? *A cooker with an oven and a hot plate, or a wall oven and a separate hob, shall be provided for cooking.*		N/A
15	Has space & power been provided for refrigerator or ventilation for food safe? *The food storage space shall provide for either refrigeration, or ventilation to the outside air.*		P
16	Energy source as specified for cooking		N/A
17	Impervious, easily cleaned wall finishes been provided as per approved plans & specifications? *Wall linings adjacent to appliances and facilities shall have surfaces that can be easily maintained in a hygienic condition. Stainless steel, decorative high pressure laminate, tiles, wallboards with painted or applied impervious coatings or films, are examples of suitable materials for these surfaces.*		P

Document Set ID: 3133503
Version: 1, Version Date: 28/02/2017

Laundry			
18	Are laundering facilities provided as per approved plans & specification? *If no, issue NTF & request amended plans if facilities differ from approved.*		
19	Laundry tub installed adequate? *G2/AS1, cl 1.0.2 A laundry tub shall: a) have a capacity to spill-level of no less than 35 litres, and b) be capable of fully containing a solid cylinder of 400mm diameter and 200mm depth*		
20	Have service connections been provided? *A min of a cold water supply provided for tub or cold water and electric power supply to a washing machine?*	N/A	
21	Is the laundry tub securely fixed?		
22	Is the laundry tub correctly trapped?		
23	Has splash protection been provided to floor and wall linings? *E3/AS1 cl 3.1.1 'Floors' & 3.1.2 'Walls'. Floor and Wall linings and finishes must satisfy the performance for impervious and easily cleaned surfaces in areas exposed to water splash.*		
Wet areas / WCs			
24	Has the specified waterproofing membrane been applied in accordance with the manufacturer's specifications? *Ensure the specified waterproof membrane has been applied in accordance with the manufacturer's technical specification. If required ensure applicator provides a Producer Statement - Construction (PS3)*		N/A
25	Are joints in impervious surfaces as detailed? *Jointing of impervious surfaces as specified i.e. PVC jointer, flexible sealant etc.*		F-A/C
26	Has flexible sealant been provided at the floor/wall junction of the tilled floor? *Refer E3.2(C)'Buildings shall be constructed to avoid the likelihood of damage to building elements being caused by the use of water'.*		N/A
27	Safety glazing as specified for shower screens, doors & windows been installed and clearly labeled. *NZS 4223*		P
28	Shower cubicle watertight?		P
29	Has hot water been tempered to 55 degrees Celsius maximum at all personal hygiene fixture? *Record actual temperature readings:*	48.6°	P
Ventilation			
30	Natural ventilation to occupied space in accordance with the approved plans and specification? *Refer G4, Clause 1.2 'Natural Ventilation'.*		P
31	Is all mechanical ventilation operational and ducted to outside air? *Refer G4, Clause 1.3 'Mechanical Ventilation".*		N/A

Insulation			
32	Is the ceiling insulation installed correctly & as per the approved plans & specification? *If the insulation installed differs from that approved, ensure that the substitution complies & obtain written confirmation from the owner that they have approved the substitution.*		P
33	Is a loose fill insulation barrier / boundary required / provided around flue/s of domestic solid fuel appliance installations? *Check NZS 4721 or AS/NZS 2918 or manufacturer literature.*		N/A
34	Is the ceiling insulation clearance around light fittings appropriate for the type of fitting?	BATTON LIGHTS	N/A
35	Is subfloor insulation protection provided? *Subfloor insulation in exposed locations such as under raised floor of a pole house may require protection.*	CONCRETE FLOOR	N/A
Glazing			
36	Does glazing comply with NZS 4223 Part 3? *Check that all glazing within 2m of floor level is of appropriate size and that safety glass is clearly labeled.*		P
P & D			
37	Are seismic restraints fitted to the water storage cylinder?		P
38	Discharge wastes correctly sized and vented and terminate outside the building clear of openings?	COPPER	P
39	Waste pipe penetrations sealed at the back of gully		N/A
40	Down pipes fixed correctly?	EXISTING	P
41	Overflow relief gully 150mm below lowest fixture trap & FFL and 75mm above finished ground levels		P
42	Drains correctly vented? *Ensure all branch drain 10m or > are vented*	VENT FITTED	P
43	HWC vent protected against frost		P
44	HWC drain to the exterior		P
45	Is the HWC vented to the exterior / or TPRV		P
46	Are all AAV's accessible		P
47	Have all WC pans been securely fixed & sealed?		P
48	Has appropriate mechanical ventilation been provided to all internal laundries, bathrooms, WC's	BATHROOM	P
49	Have all bench tops, vanities baths been sealed to stop water penetration?		P/C
50	Have all shower cubicles been sealed to stop water leaking? *Run shower & check corners*		P

Document Set ID: 3133503
Version: 1, Version Date: 28/02/2017

Stairs / Landings / Handrails			
51	Have complying handrails been installed as per consent documentation? *Ensure handrail provided is graspable & are provided in accordance with the approved plans & specification*		
52	Have light switches been provided for the stairway lighting? Light switches shall be provided at the top & bottom of each stairway.		
53	Does the slip resistance comply? *Slip resistance shall be provided for all walking surfaces such as decks, patios & steps on the approach to the main entrance of the building.*	N/A	
54	Do the stairway type, tread & rise comply with the approved plans & specifications? *Ensure all treads & risers for exterior private steps & stairs comply with main private stairway.*		
55	Barrier installed to all areas where there is a fall height of 1.000 or more can occur from the floor or opening in the exterior envelope of the building, or a change in level. *If yes a barrier is required. Ref NZBC Cl F4*		
Solid Fuel Burner (Free standing/Inbuilt)			
56	Refer Free Standing/Inbuilt sold fuel burner checklist		N/A
Smoke Alarms			
57	Smoke alarms installed <3m of bedroom and in escape paths	HARD WIRED	P
Swimming pool and fencing			
58	Refer swimming pool checklist		N/A
Exterior			
59	Exterior envelope complete and weatherproof		P
60	Flashings to openings complete and weathertight?		P
61	Elevations match consented documents?		P
62	Wall cladding fixings/soakers/scribers completed?		P
63	Brickwork weep holes/ventilation comply?		P
64	Ground/paving heights comply?		N/A
65	Decks/barriers/timber treatment/ thresholds comply?		P
66	Sub floor access/insulation/ ventilation correct?		P
67	Roof cladding/flashing fixings/ roof penetration flashings completed?		P
68	Landscaping completed?		P
69	Retaining wall construction as per approved documentation?		N/A
Effluent Disposal Systems			
70	System installed as per the approved consent?		
71	Producer statement (construction review) supplied from the installer or designer? *If so are they a recognized author?*	N/A	
72	If required, can effluent disposal area be isolated from stock damage, etc? *Measures to keep stock off the disposal area ref to the approved design in the consent documents.*		
Damage Deposit			
73	Is footpath and/or kerb damaged?		N/A
74	Can damage deposit be refunded? *If no, take photographs for evidence*		N/A

Document Set ID: 3133503
Version: 1, Version Date: 28/02/2017

Crossing Deposit			
75	Is crossing formed in accordance with RDC requirements?		N/A
76	Can crossing deposit be refunded? *If no, take photographs for evidence*		N/A
PHOTOGRAPHS (compulsory)			
77	Photographs taken of all exterior elevations!	TAKEN	P
Producer Statements/Certificates			
78	Energy Certificate for Electrical work		P
79	Energy Certificate for Gas work		N/A
	Exterior Plaster:		
80	Installers – PS3		N/A
81	Product/System manufacturer –PS4		
	Plumbing:		
82	Fusiotherm Installers – PS3		N/A
	Drainage		
83	As built plan provided?		
	Tiles/Tanking:		
84	Installers – PS3		
85	Product Manufacturer (Warranty)		
	Structural (including precast elements)		
86	PS3 – Construction		
87	PS4 – Construction Review		
	Geothechical:		
88	PS3 – Construction	N/A	
89	PS4 – Construction Review		
	ST Ratings:		
90	PS3 – Construction		
91	PS4 – Construction Review		
	Glazing:		
92	PS3 – Construction		
93	PS4 – Construction Review		
	Proprietary Systems:		
94	PS3 – Construction		
95	PS4 – Construction Review		

Document Set ID: 3133503
Version: 1, Version Date: 28/02/2017

DESTINATION ROTORUA

ROTORUA DISTRICT COUNCIL

Rotorua District Council
1061 Haupapa Street
Private Bag 3029
Rotorua Mail Centre
Rotorua 3046
New Zealand
P: 07 348 4199
F: 07 346 3143
E: mail@rdc.govt.nz
W: www.rdc.govt.nz

15 January 2009

PFILE: 27041

MR MICHAEL JAMES REID
C/O ATTN: MR LEWIS
PO BOX 242
ROTORUA 3040

Dear Sir/Madam

BUILDING CONSENT NO: 38226 – 48 SHARP ROAD
PROJECT: CONVERT GARAGE TO CAREGIVERS QUARTERS
CONS ISSUED 20 Dec 2006

The building process is not completed until a Code Compliance Certificate (CCC) is issued certifying that the work has been completed in accordance with the approved application. The closure of the process is a very important step.

The Building Act 2004, Section 93(2) allows up to two (2) years from the date of issue (or any further period agreed to with the Territorial Authority) for completion of the work and issue of the CCC.

This consent is at the point where either the CCC needs to be issued or that the building consent file be closed. Unless a response is received within 20 working days from the date of this letter, confirming to our satisfaction that completion of the work is imminent (this is likely to require a written undertaking), Council will close the building consent file relating to the work.

The closure of your file means that all documentation (including this letter) will be placed on the property file and Council will take no further action.

Your urgent attention to this matter would be appreciated.

Yours faithfully

Wendy Dale
Building Services Administration

Document Set ID: 3133503
Version: 1, Version Date: 28/02/2017

INSTRUCTION BOOK
BUILDING SERVICES

NO: 0390

DESTINATION ROTORUA
ROTORUA DISTRICT COUNCIL

Rotorua District Council
1061 Haupapa Street
Private Bag 3029
Rotorua, New Zealand
P: 07 348 4199
F: 07 346 3143
E: mail@rdc.govt.nz
W: www.rdc.govt.nz

P. No: 27041

Building Consent No: 38226

Date Issued: 20/12/06

Instructions:

1.) SCALENT TO BE APPLIED TO VANITY TO WASTE JUNCTION.

2.) WATER GAUGE TO BE FIXED ON SHUT OFF VALVE TO HOT WATER CYL.

3.) ELECTRICAL CERTIFICATE TO BE SUBMITTED FOR C.C.C.

Date Instructions must be complied with: BEFORE CCC CAN BE ISSUED

Signed:

Position: BUILDING INSPECTOR

Date: 20/9/07

Document Set ID: 3133503
Version: 1, Version Date: 28/02/2017

ROTORUA LAKES COUNCIL
Te kaunihera o ngā roto o Rotorua

Civic Centre
1061 Haupapa Street
Private Bag 3029
Rotorua Mail Centre
Rotorua 3046
New Zealand

9 January 2017

REID, MR MICHAEL JAMES
C/O ATTN: MR LEWIS
PO BOX 242
ROTORUA 3040

RDC-692026
File Ref: P27041

Dear Sir/Madam

BC No.: 38226
PROJECT: CONVERT GARAGE TO CAREGIVERS QUARTERS
LOCATION: 48 SHARP ROAD, OFF CENTRAL RD
CONSENT ISSUED: 20 Dec 2006

A check of Council records show that the building consent issued for the above address is more than two years old and therefore Council is required by law to decide whether a code compliance certificate will be issued for this building project.

In order to complete this process, you must arrange a Council inspection within 20 working days from the date of this letter. This can be arranged by phoning 07 349 5646 prior to the 20 working days. Alternatively, you may wish to apply for an "extension of time" (EOT) which attracts a current fee of $90.50. The EOT application form can be downloaded from Council's website www.rotorualakescouncil.nz - Our Services – Building Services – Building Forms – "Application for Extension of Time to Start or Complete Building Work". However, given the elapsed time the building consent has been current the extension will only be approved in extenuating circumstances.

Should there be no response from you by **9th February 2017**, which is 20 working days Council will refuse to issue a code compliance certificate under section 93 of the Building Act 2004 as it will not be possible to confirm that the building work was completed in accordance with the building consent.

Your prompt response to this request is anticipated.

Please contact the undersigned should you require further clarification.

Yours faithfully

Darrell Holder
Building Solutions Lead

P: +64 7 348 4199 | F: +64 7 346 3143 | E: info@rotorualc.nz | W: rotorualakescouncil.nz
Rotorua Lakes Council is the operating name of Rotorua District Council.

INSTRUCTION BOOK
BUILDING SERVICES

NO: 0269

DESTINATION ROTORUA
ROTORUA DISTRICT COUNCIL

Rotorua District Council
1061 Haupapa Street
Private Bag 3029
Rotorua, New Zealand
P: 07 348 4199
F: 07 346 3143
E: mail@rdc.govt.nz
W: www.rdc.govt.nz

P. No: 27041

Building Consent No: 38226

Date Issued: 18/1/07

Instructions: 48 Sharp Rd.

To Hodge Construction Ltd.

You are advised that the landscaping of existing garage wing will need to be either lowered or an alterative solution such as a channel + grate be installed next to external walls where discussed before job is completed and C.C.C. applied for.

Completed.

Date Instructions must be complied with:

Signed:

Position: BUILDING OFFICER

Date: 18/1/07

Document Set ID: 3133503
Version: 1, Version Date: 28/02/2017

BC 38226.

Property File : _____

As Built - Drainage Plan

DESTINATION ROTORUA
ROTORUA DISTRICT

Document Set ID: 3133503
Version: 1, Version Date: 28/02/2017

As Built - Drainage Plan

Drainage Plan for :

Address 48 Sharp

Lot 2 D.P. 71633

Owner Read.

Inspector R. Tuchlwerk Date of Inspection 19/2/07

Drainlayer Anderson Licence No. _____

Building Consent No. 38226.

Note : Plan to be drawn in black and red ballpoint on graph opposite

Plan to include :

1 The correct position of the drains in relation to the building and boundaries.

2 The position of the street frontage

3 Depth of drains at connection point.

4 Both wastewater and stormwater drains to be drawn.

5 Clearly define all inspection openings, with accurate measurements from two points.

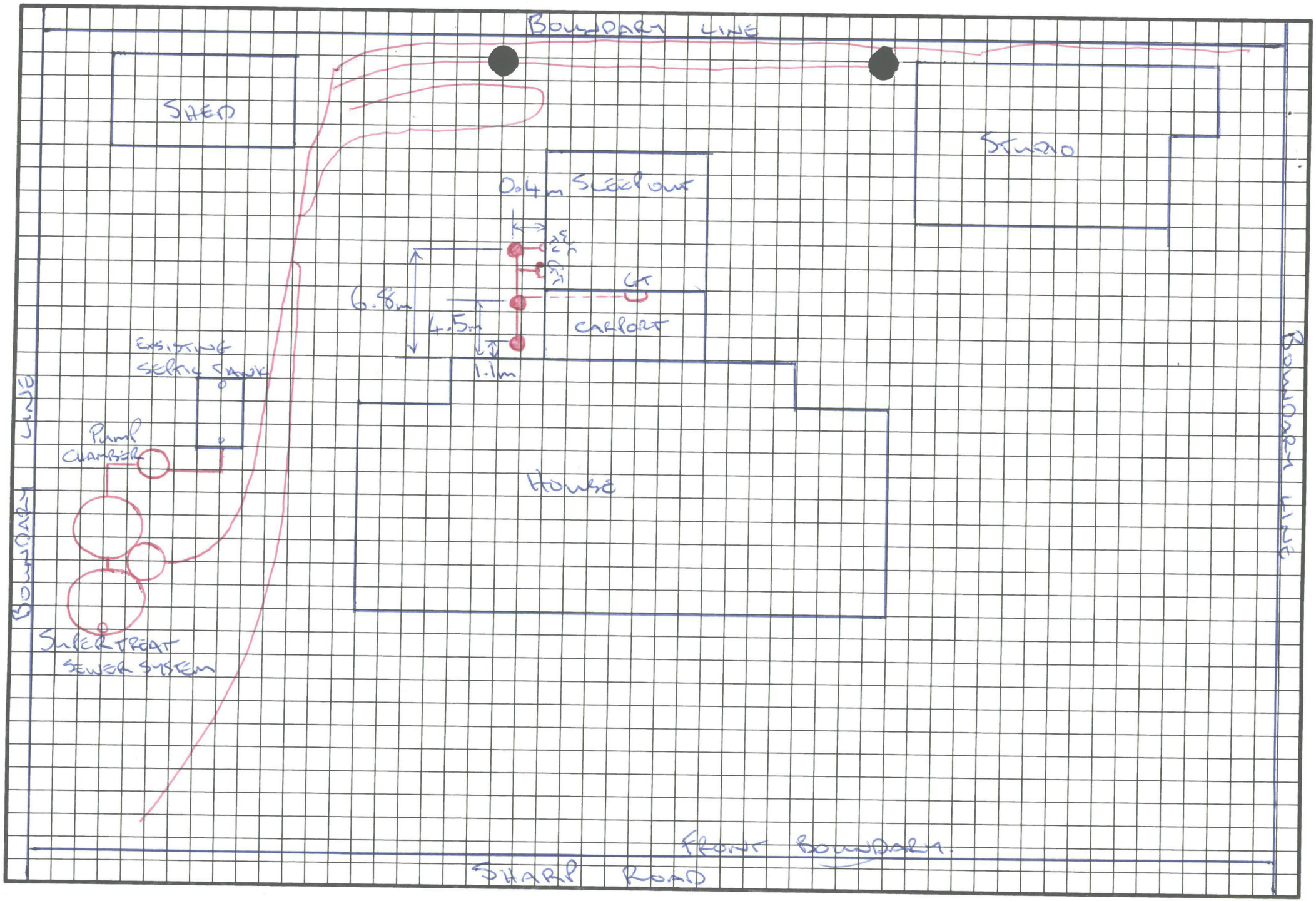
6 Clearly define all buildings and boundaries.

7 Refer to example drain plan back page.

DESTINATION ROTORUA

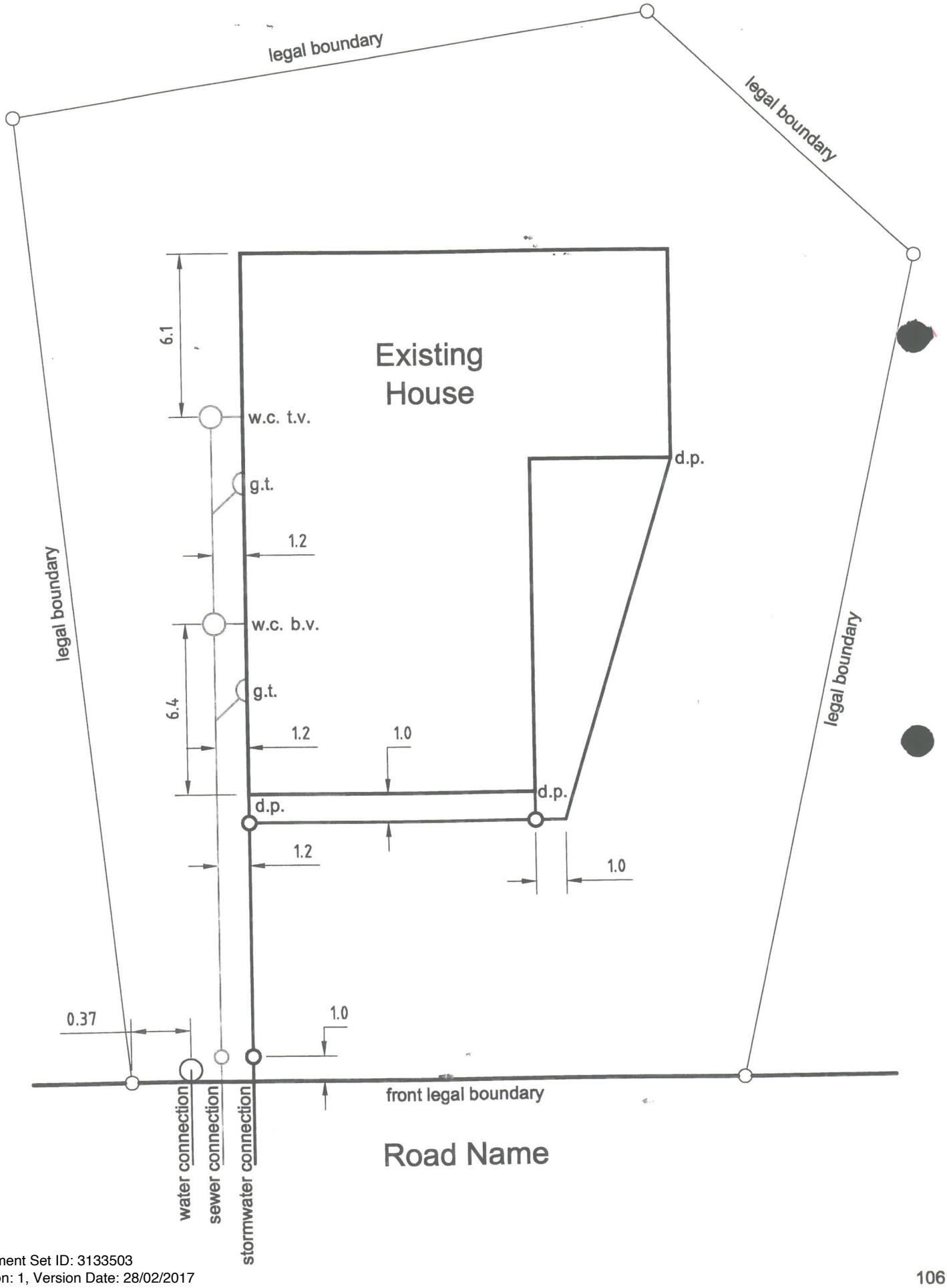
ROTORUA DISTRICT COUNCIL

Document Set ID: 3133503
Version: 1, Version Date: 28/02/2017



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Version: 1, Version Date: 28/02/2017

Plan Example



Document Set ID: 3133503
Version: 1, Version Date: 28/02/2017

EWRB 551

Electrical Certificate of Compliance

No 2480430

No. of attachments

for prescribed electrical work that is carried out on electrical installations and involves the placing or positioning or the replacing or repositioning of conductors (including fittings attached to those conductors).

To be completed whether or not an Inspection is required.

ELECTRICAL WORKERS REGISTRATION BOARD
Safety + Competency

This form is approved by the Electrical Workers Registration Board (PO Box 10 156, Wellington. Freephone: 0800 66 1000) for the purposes of the Electricity Regulations 1997.

CUSTOMER INFORMATION - PLEASE PRINT CLEARLY

Name of customer M Reid Phone:

Address of installation 45 Bldg road (flat)

Postal address of customer (if not as above) Hobbs Construction PO Box 473 Ketua

WORK DETAILS

7 No. of lighting outlets

5 No. of socket outlets

/ No. of ranges

1 No. of water heaters

Was any installation work carried out by the homeowner? Yes / No

Please tick (✓) as appropriate where work includes:

/ Mains

Main earthing system

/ Switchboard

/ Electric lines

Description Install and install flush mounted downlights for 7 new lights in flat plate and wired and installed 5 new socket outlets and water heater connection. All circuits are existing and feed from switch board in existing house.

If necessary attach any pages with sketches of work done

It is recommended that test results be recorded here:

Visual Examination ✓

Earth Continuity ✓

Bonding ✓

Polarity ✓

Insulation Resistance ✓ Mohm

Other

CERTIFICATION OF WORK

I certify that the above electrical work has been carried out in accordance with the requirements of the Electricity Act 1992 and Electricity Regulations 1997.

ELECTRICAL WORKER DETAILS

Name Tony Beek

Registration no. E19858

Company Hepburn Electrical

Signature

Date 20/9/07

Contact Ph No. 07-3478491

CERTIFICATION OF ELECTRIC LINES

(to be completed where a separate electrical worker has installed the electric line portion of the mains)

Name

Registration no.

Company

Signature

Date

Contact Ph No.

INSPECTION DETAILS

Electrical work requiring inspection by a registered electrical inspector

New mains

Switchboard

Earthing system

Installation work in hazardous areas

I certify that the inspection has been carried out in accordance with the requirements of regulation 41 of the Electricity Regulations 1997.

Name

Registration no.

Signature

Date

Daytime Contact Ph No.

TO BE RETAINED BY THE WORKER RESPONSIBLE FOR CERTIFYING THE WORK

Document Set ID: 3133503
Version: 1, Version Date: 28/02/2017

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2 0 SEP 2007
B.C.No. 38226





Document Set ID: 3133503
Version: 1, Version Date: 28/02/2017

BC 38226

PRODUCER STATEMENT OF CONSTRUCTION

Statement of Compliance

ISSUED BY: **ANDERSEN DRAINAGE LTD**
(Contractor)

TO: **Rotorua District Council**
(Principal)

IN RESPECT OF: **CONSTRUCTION OF SUPER TREAT SB440(N12) EFFFLUENT TREATMENT SYSTEM**
(Description of Contract Works)

Hodges Construction Ltd – Sharp Road, Rotorua
(Address)

. **Andersen Drainage Ltd** . . . . . .has contracted to Hodges Construction Ltd (MR REID)
(Contractor) (Principal)

to carry out and complete certain building works in accordance with the approved plans and specifications.

I, **TOM ANDERSEN** a duly authorised representative of **ANDERSEN DRAINAGE LTD**
(Duly Authorised Agent)

(Contractor)

believe on reasonable grounds that **ANDERSEN DRAINAGE LTD** . . . . . .
has carried out and completed (Contractor)

☐ All ☐ Part only as specified in the attached particulars of the building works in accordance with the approved plans and specifications.

T.C. Andersen ..... Date: 19-2-07
(Signature of Authorised Agent on behalf of)

ANDERSEN DRAINAGE LTD
.....
(Contractor)
.....

PO BOX 10054
ROTORUA
.....(Address)

Document Set ID: 3133503
Version: 1, Version Date: 28/02/2017

ROTORUA LAKES COUNCIL
Te kaunihera o ngā roto o Rotorua

Civic Centre
1061 Haupapa Street
Private Bag 3029
Rotorua Mail Centre
Rotorua 3046
New Zealand

27 February 2017

REID, MR MICHAEL JAMES
C/O ATTN: MR LEWIS
PO BOX 242
ROTORUA 3040

File Ref: P27041
Building Consents no: 38226

Dear Sir

Building Consent 38226 is hereby modified as follows:

The building consent is subject to a modification to the Building Code to the effect that Clause B2.3.1 applies from 4 October 2007 instead of the time of issue of the Code Compliance Certificate for all building elements constructed under the original Building Consent. An information note has been created to this effect on Councils property file.

Yours faithfully

Karen Shand
Business Support Advisor
Consent Solutions

Document Set ID: 3133463
Version: 1, Version Date: 28/02/2017

Notification of Waiver or Modification of the Building Code

Under section 68 of the Building Act 2004

TA to complete all relevant white sections of this form. See overleaf for guidance on sections 67-70 and 72 of the Building Act 2004

A. TERRITORIAL AUTHORITY (TA) CONTACT DETAILS	
Name of Territorial Authority: ROTORUA DISTRICT COUNCIL (OPERATING AS ROTORUA LAKES COUNCIL)	
Name of contact person: ED WILKINS	
Phone: 07 349 5646	Email: Edward.wilkins@rotorualc.nz
Address: 1061 Haupapa Street, Rotorua – Private Bag 3029, Rotorua 3046	

B. PARTICULARS OF WAIVER OR MODIFICATION		
Notification details: (please tick relevant box)	Waiver(s) ☐	Modification(s) ☑
Date waiver or modification approved	Date:	Date:1/02/2017
Building Code clause subject to waiver or modification: (provide specific, clause or sub-clause of the Building Code e.g. B2.3.1)	Clause(s) or Sub-clause(s):	Clause(s) or Sub-clause(s): B2.3.1
Address where building work is taking place	48 Sharp Road, Rotorua	

C. STATE REASONS FOR WAIVER OR MODIFICATION	
(Enter text below e.g. Clause B2.3.1 has been modified by way of an amendment to building consent BC0001/2001 so that durability performance requirements' commence from the date when building work was agreed to have been practically completed).	
Durability modification B2.3.1 has been modified to Building Consent No. 38226 Durability performance will commence from 4th October 2007	
Provide details of TA conditions (if any) applied under section 67(2) of the Building Act 2004	I wish to apply for a modification to Building Code clause B2.3.1 and B2.3.2 in that the durability of building elements on this project are measured from the date of substantial completion rather than from the date the code compliance certificate is to be issued. The reason for this application is due to the elapsed time frame between substantial completion and the final inspection and potential granting of code compliance certificate

D. PARTICULARS OF BUILDING	
Building Use(s) from A1 classified use of the Building Code (e.g. Out building or Industrial etc)	A1 Use(s): 2.0.2
Use(s) from the Building (Specified Systems, Change the Use, and Earthquake-prone Buildings) Regulations 2005 (e.g. SR- Sleeping Residential or WL- Working Low)	Use(s):SR

Document Set ID: 3133463
Version: 1, Version Date: 28/02/2017

GUIDANCE ON WAIVERS OR MODIFICATIONS OF THE BUILDING CODE

Waivers and modifications allow TAs to exercise judgement when dealing with unusual building compliance situations. TA staff need to understand the structure of the Building Code to be able to effectively consider applications that include waivers or modifications. A TA that grants a building consent subject to a waiver or modification of the Building Code must notify the Chief Executive of the Department.

This form has been developed to capture information that will assist the Department with its monitoring role under section
169 of the Building Act 2004. Parts A-D of this form are intended to draw out the information required to effectively notify the Chief Executive of the Department of a TAs granting of a waiver or modification.

Notifications to the Chief Executive of a waiver of modification of the Building Code must contain specific detail so that it is clear what was actually being waived or modified by the TA.

- A TA that grants a building consent subject to waiver or modification of the Building Code must notify the Department.
- A waiver or modification of the Building Code may be subject to any conditions the TA considers appropriate.
- A TA cannot grant an application for building consent subject to a waiver or modification of the Building Code relating to access and facilities for people with disabilities.
- A request for a waiver or modification of energy work must be forwarded to the Chief Executive of the Department of Building and Housing for a decision.
- An alternative solution is not a waiver or modification of the Building Code.

CLARIFICATION OF TERMS

What is a Waiver?

A TA can waive the requirement for a particular application for a building consent, or part of an application, to comply with an aspect of the Building Code. In most cases waivers will relate to a particular performance requirement of a specific clause of the Building Code (eg C3.3.2 (d)). However, sometimes it may be appropriate to waive an entire Building Code clause.

What is a Modification?

In relation to an application for a building consent a TA can modify a performance requirement of the Building Code. This
is usually done by modifying a performance requirement of the Building Code so that the functional requirement and objectives of the clause are still met. A common example is the modification of B2.3.1, which relates to the durability of a particular element and when the durability period applies from.

How is the Building Code structured?

Objectives: This states the objective of the relevant clause of the Building Code. The objectives are usually statements about ensuring people are safeguarded, or that people with disabilities can use the building or that other property is protected.

Functional requirements: These are a more in-depth description of what is required to meet the objectives and are more specific to the actual Building Code clause.

Performance (requirements): This is the measurable component and describes what the building needs to meet.

Limits on application: Some objectives, functional requirements and performance requirements do not apply to particular buildings, and these are identified in the Building Code as Limits on application. Limits on application often relate to types of buildings (from Clause A1 of the Building Code) or where such requirements would be incompatible with the use of the building or the part of the building.

Territorial authority staff should refer to the Building Act 2004, in particular:

- Section 67- A Territorial authority may grant a building consent subject to waivers and modifications of the Building code
- Section 68- A Territorial authority must notify the chief executive
- Section 70- Applications relating to energy work
- Section 72- Building consent for building on land subject to natural hazards must be granted in certain cases.

Document Set ID: 3133463
Version: 1, Version Date: 28/02/2017

RECEIVED
02 FEB 2017
B.C. No. 38226

ROTORUA LAKES COUNCIL

Rotorua Lakes Council
1061 Haupapa Street
Private Bag 3029
Rotorua Mail Centre, Rotorua 3046
P: 07 348 4199
F: 07 346 3143
E: info@rotorualc.nz
W: www.rotorualakescouncil.nz

Form 2 Amendment B2 APPLICATION TO AMEND HISTORICAL BUILDING CONSENT Section 45, Building Act 2004

THE BUILDING

Building Consent Number: 38226

Owner:

Street address of building: 48 Sharp Road

CONTACT DETAILS FOR ANY REQUESTS FOR FURTHER INFORMATION

Person:

Address:

Phone : or Mobile:

Email: Fax:

PROJECT

Brief description of the project e.g. Dwelling, Garage etc.

Convert garage to caregivers qtrs.

DESCRIPTION OF AMENDMENT

Back date durability relevant to building elements to date of substantial completion as described below

THE PROPOSED BUILDING WORK WILL AFFECT THE FOLLOWING BUILDING CODE CLAUSES

CLAUSE	MEANS OF COMPLIANCE	PROPOSED INSPECTIONS
NZBC Clause B2	Relevant to performance criteria B2.3.1 and B2.3.2	Council

Document Set ID: 3133463
Version: 1, Version Date: 28/02/2017

WAIVER/MODIFICATION TO NZ BUILDING CODE REQUIRED FOR FOLLOWING PARTS OF CODE

Description of waiver / modification

I wish to apply for a modification to Building Code clause B2.3.1 and B2.3.2 in that the durability of building elements on this project are measured from the date of substantial completion rather than from the date the code compliance certificate is to be issued. The reason for this application is due to the elapsed time frame between substantial completion and the final inspection and potential granting of code compliance certificate.

Date of substantial completion 4-10-2007

Supporting documentation attached as follows e.g. copies of invoices demonstrating when work was substantially completed [please list]

FORMAL DECLARATION

This amendment to this Building Consent is submitted by me as ~~the owner of the property /~~ or as the authorised agent as identified on the original building consent application Form 2
(delete which does not apply)

Name: Peter Allen Lewis

Signature: P.A. Lewis Solicitor Rotorua

Date: 1.2.2017.

COUNCIL USE ONLY

On receipt of evidence demonstrating date of substantial completion, record reasons for decisions and sign below to grant the amendment with the following condition.

As agreed onsite with the builder. Roland Tissink from information on the summary card.

Granted by C Lomas

Signature

Date 20-02-17.

The building consent has been amended and is subject to a modification of Clauses B2.3.1 and B2.3.2 of the New Zealand Building Code. As a condition of this approved amendment the durability periods for building elements put in place in the course of the work carried out under this building consent are to be measured from the date of the substantial completion of the buildings and not from the date of the issue of the Code Compliance Certificate.

☐ MBIE Notified ☐ Information Created on Property File

Document Set ID: 3133463
Version: 1, Version Date: 28/02/2017

Property File Information
Building

ROTORUA LAKES COUNCIL
Te kaunihera o ngā roto o Rotorua

Property File No:	P27041

Parcel ID:	7062/6
Legal Description:	Lot 2 DPS71633
Property Address:	48 SHARP ROAD

Date: 27 Feb 2017

Land Feature Reference: 28037

Land Feature Type: INFO - Building
Consent subject to a modification to Building Code

Explanation:

BUILDING CONSENT 38226 WAS AMENDED AS FOLLOWS:

The Building consent was amended and a modification to the Building Code approved to the effect that Clause B2.3.1 applies from 4 October 2007 instead of the time of issue of the Code Compliance Certificate for all building elements constructed under the original building consent.

Reference:

Refer to Application to Amend Historical Building Consent Form signed on 1 February 2017 and notification of same to Ministry of Business, Innovation & Employment dated 27 February 2017.

RRD0026GCC

Document Number: RDC-705430

Date Registered: 28/2/2017

Initiating Officer		Authorising Officer	
Name:	Carl Lomas	Name:	Edward Wilkins
Position:	BUILDING INSPECTOR	Position:	TEAM LEADER - BUILDING COMPLIANCE
Date:	03/02/2017	Date:	20/02/2017
Signature:		Signature:	

Please contact: Compliance Solutions for further information.

Document Set ID: 3133457
Version: 1, Version Date: 28/02/2017

ROTORUA
LAKES COUNCIL
Te kaunihera o ngā roto o Rotorua

Civic Centre
1061 Haupapa Street
Private Bag 3029
Rotorua Mail Centre
Rotorua 3046
New Zealand

27 February 2017

The Property Owner
48 Sharp Road
KAHAROA

File No: P27041

To Whom It May Concern,

Property Location: 48 SHARP ROAD
Legal Description: Lot 2 DPS71633

Land Feature Reference: 28037

Rotorua Lakes Council has recently identified information in relation to your property at the above address. A Property File Notice has been placed on the Council file for this property. A copy of the notice is attached for your information.

Such notices are necessary to alert Council staff or any other person having an interest in the property to matters that affect or may affect the use of that property.

If you have any queries or concerns regarding this notification, please contact the Customer Centre between 8.00am – 5.00pm Monday – Friday.

Yours faithfully

Karen Shand
Consent Solutions
Business Support Advisor

Document Set ID: 3133457
Version: 1, Version Date: 28/02/2017

ROTORUA LAKES COUNCIL
Te kaunihera o ngā roto o Rotorua

Civic Centre
1061 Haupapa Street
Private Bag 3029
Rotorua Mail Centre
Rotorua 3046
New Zealand

27 February 2017

REID, MR MICHAEL JAMES
C/O ATTN: MR LEWIS
PO BOX 242
ROTORUA 3040

File Ref: P27041
Building Consents no: 38226

Dear Sir

Building Consent 38226 is hereby modified as follows:

The building consent is subject to a modification to the Building Code to the effect that Clause B2.3.1 applies from 4 October 2007 instead of the time of issue of the Code Compliance Certificate for all building elements constructed under the original Building Consent. An information note has been created to this effect on Councils property file.

Yours faithfully

Karen Shand
Business Support Advisor
Consent Solutions

Document Set ID: 3133457
Version: 1, Version Date: 28/02/2017

Notification of Waiver or Modification of the Building Code

Under section 68 of the Building Act 2004

TA to complete all relevant white sections of this form. See overleaf for guidance on sections 67-70 and 72 of the Building Act 2004

A. TERRITORIAL AUTHORITY (TA) CONTACT DETAILS	
Name of Territorial Authority: ROTORUA DISTRICT COUNCIL (OPERATING AS ROTORUA LAKES COUNCIL)	
Name of contact person: ED WILKINS	
Phone: 07 349 5646	Email: Edward.wilkins@rotorualc.nz
Address: 1061 Haupapa Street, Rotorua – Private Bag 3029, Rotorua 3046	

B. PARTICULARS OF WAIVER OR MODIFICATION		
Notification details: (please tick relevant box)	Waiver(s) ☐	Modification(s) ☑
Date waiver or modification approved	Date:	Date:1/02/2017
Building Code clause subject to waiver or modification: (provide specific, clause or sub-clause of the Building Code e.g. B2.3.1)	Clause(s) or Sub-clause(s):	Clause(s) or Sub-clause(s): B2.3.1
Address where building work is taking place	48 Sharp Road, Rotorua	

C. STATE REASONS FOR WAIVER OR MODIFICATION	
(Enter text below e.g. Clause B2.3.1 has been modified by way of an amendment to building consent BC0001/2001 so that durability performance requirements' commence from the date when building work was agreed to have been practically completed).	
Durability modification B2.3.1 has been modified to Building Consent No. 38226 Durability performance will commence from 4th October 2007	
Provide details of TA conditions (if any) applied under section 67(2) of the Building Act 2004	I wish to apply for a modification to Building Code clause B2.3.1 and B2.3.2 in that the durability of building elements on this project are measured from the date of substantial completion rather than from the date the code compliance certificate is to be issued. The reason for this application is due to the elapsed time frame between substantial completion and the final inspection and potential granting of code compliance certificate

D. PARTICULARS OF BUILDING	
Building Use(s) from A1 classified use of the Building Code (e.g. Out building or Industrial etc)	A1 Use(s): 2.0.2
Use(s) from the Building (Specified Systems, Change the Use, and Earthquake-prone Buildings) Regulations 2005 (e.g. SR- Sleeping Residential or WL- Working Low)	Use(s):SR

Document Set ID: 3133457
Version: 1, Version Date: 28/02/2017

GUIDANCE ON WAIVERS OR MODIFICATIONS OF THE BUILDING CODE

Waivers and modifications allow TAs to exercise judgement when dealing with unusual building compliance situations. TA staff need to understand the structure of the Building Code to be able to effectively consider applications that include waivers or modifications. A TA that grants a building consent subject to a waiver or modification of the Building Code must notify the Chief Executive of the Department.

This form has been developed to capture information that will assist the Department with its monitoring role under section
169 of the Building Act 2004. Parts A-D of this form are intended to draw out the information required to effectively notify the Chief Executive of the Department of a TAs granting of a waiver or modification.

Notifications to the Chief Executive of a waiver of modification of the Building Code must contain specific detail so that it is clear what was actually being waived or modified by the TA.

- A TA that grants a building consent subject to waiver or modification of the Building Code must notify the Department.
- A waiver or modification of the Building Code may be subject to any conditions the TA considers appropriate.
- A TA cannot grant an application for building consent subject to a waiver or modification of the Building Code relating to access and facilities for people with disabilities.
- A request for a waiver or modification of energy work must be forwarded to the Chief Executive of the Department of Building and Housing for a decision.
- An alternative solution is not a waiver or modification of the Building Code.

CLARIFICATION OF TERMS

What is a Waiver?

A TA can waive the requirement for a particular application for a building consent, or part of an application, to comply with an aspect of the Building Code. In most cases waivers will relate to a particular performance requirement of a specific clause of the Building Code (eg C3.3.2 (d)). However, sometimes it may be appropriate to waive an entire Building Code clause.

What is a Modification?

In relation to an application for a building consent a TA can modify a performance requirement of the Building Code. This
is usually done by modifying a performance requirement of the Building Code so that the functional requirement and objectives of the clause are still met. A common example is the modification of B2.3.1, which relates to the durability of a particular element and when the durability period applies from.

How is the Building Code structured?

Objectives: This states the objective of the relevant clause of the Building Code. The objectives are usually statements about ensuring people are safeguarded, or that people with disabilities can use the building or that other property is protected.

Functional requirements: These are a more in-depth description of what is required to meet the objectives and are more specific to the actual Building Code clause.

Performance (requirements): This is the measurable component and describes what the building needs to meet.

Limits on application: Some objectives, functional requirements and performance requirements do not apply to particular buildings, and these are identified in the Building Code as Limits on application. Limits on application often relate to types of buildings (from Clause A1 of the Building Code) or where such requirements would be incompatible with the use of the building or the part of the building.

Territorial authority staff should refer to the Building Act 2004, in particular:

- Section 67- A Territorial authority may grant a building consent subject to waivers and modifications of the Building code
- Section 68- A Territorial authority must notify the chief executive
- Section 70- Applications relating to energy work
- Section 72- Building consent for building on land subject to natural hazards must be granted in certain cases.

Document Set ID: 3133457
Version: 1, Version Date: 28/02/2017

RECEIVED
02 FEB 2017
B.C. No. 38226

ROTORUA LAKES COUNCIL

Rotorua Lakes Council
1061 Haupapa Street
Private Bag 3029
Rotorua Mail Centre, Rotorua 3046
P: 07 348 4199
F: 07 346 3143
E: info@rotorualc.nz
W: www.rotorualakescouncil.nz

Form 2 Amendment B2 APPLICATION TO AMEND HISTORICAL BUILDING CONSENT Section 45, Building Act 2004

THE BUILDING

Building Consent Number: 38226

Owner:

Street address of building: 48 Sharp Road

CONTACT DETAILS FOR ANY REQUESTS FOR FURTHER INFORMATION

Person:

Address:

Phone : or Mobile:

Email: Fax:

PROJECT

Brief description of the project e.g. Dwelling, Garage etc.

Convert garage to caregivers qtrs.

DESCRIPTION OF AMENDMENT

Back date durability relevant to building elements to date of substantial completion as described below

THE PROPOSED BUILDING WORK WILL AFFECT THE FOLLOWING BUILDING CODE CLAUSES

CLAUSE	MEANS OF COMPLIANCE	PROPOSED INSPECTIONS
NZBC Clause B2	Relevant to performance criteria B2.3.1 and B2.3.2	Council

Document Set ID: 3133457
Version: 1, Version Date: 28/02/2017

WAIVER/MODIFICATION TO NZ BUILDING CODE REQUIRED FOR FOLLOWING PARTS OF CODE

Description of waiver / modification

I wish to apply for a modification to Building Code clause B2.3.1 and B2.3.2 in that the durability of building elements on this project are measured from the date of substantial completion rather than from the date the code compliance certificate is to be issued. The reason for this application is due to the elapsed time frame between substantial completion and the final inspection and potential granting of code compliance certificate.

Date of substantial completion 4-10-2007

Supporting documentation attached as follows e.g. copies of invoices demonstrating when work was substantially completed [please list]

FORMAL DECLARATION

This amendment to this Building Consent is submitted by me as ~~the owner of the property~~ / or as the authorised agent as identified on the original building consent application Form 2
(delete which does not apply)

Name: Peter Allen Lewis

Signature: P.A. Lewis Solicitor Rotorua

Date: 1.2.2017.

COUNCIL USE ONLY

On receipt of evidence demonstrating date of substantial completion, record reasons for decisions and sign below to grant the amendment with the following condition.

As agreed onsite with the builder. Roland Tissink from information on the summary card.

Granted by C Lomas

Signature

Date 20-02-17.

The building consent has been amended and is subject to a modification of Clauses B2.3.1 and B2.3.2 of the New Zealand Building Code. As a condition of this approved amendment the durability periods for building elements put in place in the course of the work carried out under this building consent are to be measured from the date of the substantial completion of the buildings and not from the date of the issue of the Code Compliance Certificate.

☐ MBIE Notified ☐ Information Created on Property File

Document Set ID: 3133457
Version: 1, Version Date: 28/02/2017

20 June 2023

REID, MR MICHAEL JAMES
C/O ATTN: MR LEWIS
PO BOX 242
ROTORUA 3040

RDC-692026
File Ref: P27041

Dear Sir/Madam

BC No.: 38226
PROJECT: CONVERT GARAGE TO CAREGIVERS QUARTERS
LOCATION: 48 SHARP ROAD, OFF CENTRAL RD
CONSENT ISSUED: 20 Dec 2006

A check of Council records show that the building consent issued for the above address is more than two years old and therefore Council is required by law to decide whether a code compliance certificate will be issued for this building project.

In order to complete this process, you must arrange a Council inspection within 20 working days from the date of this letter. This can be arranged by phoning 07 349 5646 prior to the 20 working days. Alternatively, you may wish to apply for an "extension of time" (EOT) which attracts a current fee of $90.50. The EOT application form can be downloaded from Council's website www.rotorualakescouncil.nz - Our Services – Building Services – Building Forms – "Application for Extension of Time to Start or Complete Building Work". However, given the elapsed time the building consent has been current the extension will only be approved in extenuating circumstances.

Should there be no response from you by **9th February 2017**, which is 20 working days Council will refuse to issue a code compliance certificate under section 93 of the Building Act 2004 as it will not be possible to confirm that the building work was completed in accordance with the building consent.

Your prompt response to this request is anticipated.

Please contact the undersigned should you require further clarification.

Yours faithfully

Darrell Holder
Building Solutions Lead

Document Set ID: 3113458
Version: 1, Version Date: 09/01/2017

DESTINATION ROTORUA
ROTORUA DISTRICT COUNCIL
Private Bag 3029
Rotorua Mail Centre
Rotorua 3046
Fax 07 349 0993

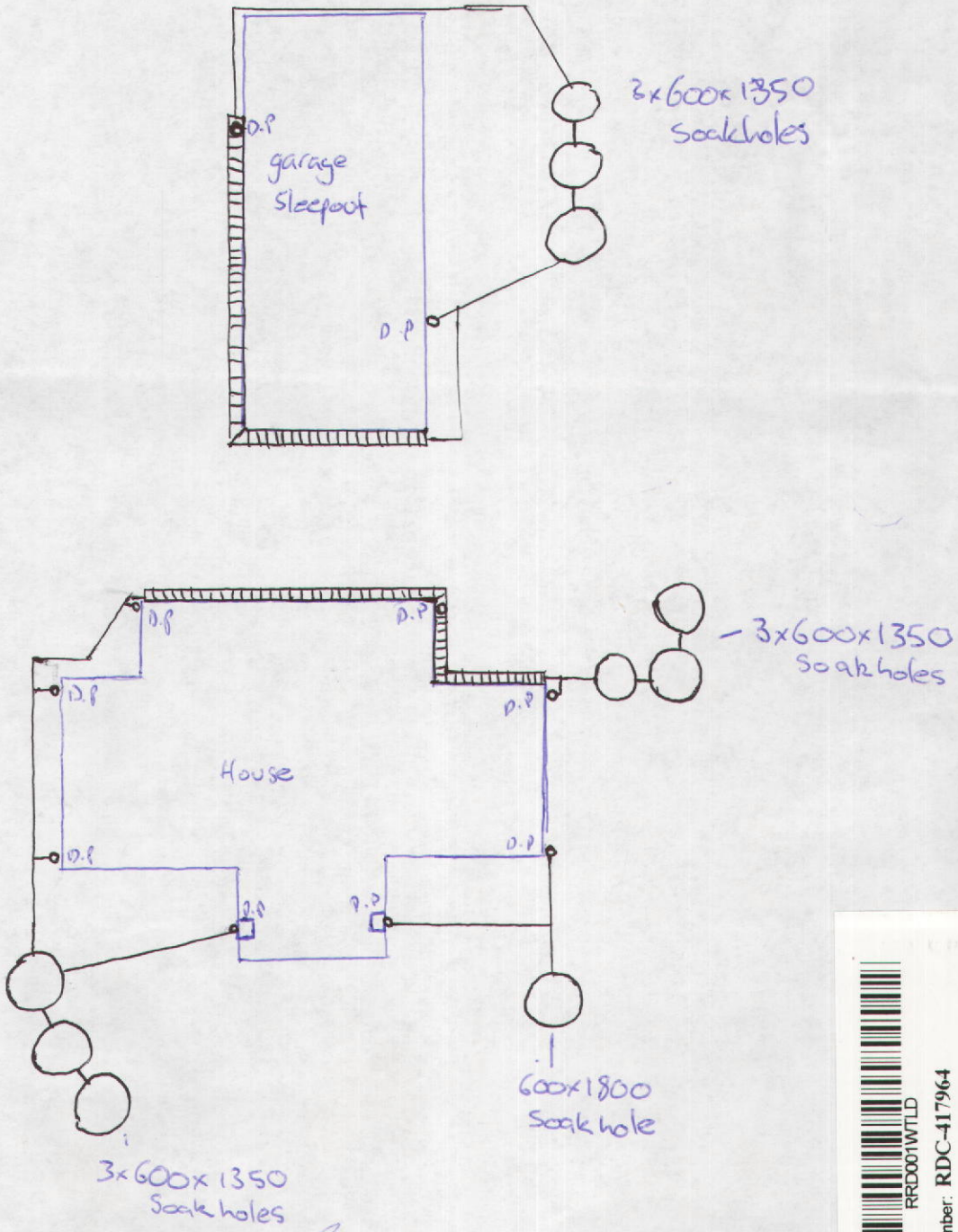
BUILDING UNIT
AS BUILT DRAINAGE PLAN

Inspection Booking Phone 07 349 5646

Street: SHARP RD No: 43	Lot: DPS:
Owner: REID	Drainlayer: michael Sainty
Inspector: —	Reg No: 24741
Date of Inspection: NOT INSPECTED	Consent No: 69120.

DRAINLAYER PLEASE FILL IN ALL DETAILS

The building consent must be onsite for all inspections.



Drainlayer's Signature: _____ Date: _____

RRD001WTLD
Document Number: RDC-417964
Date Registered: 13/11/2013

Document Set ID: 2700886
Version: 1, Version Date: 13/11/2013

III. Framing samples 19 and 20 contained well established decay, including advanced decay in sample 20 that had caused loss of the bulk of the original structural integrity in affected areas. Replacement is typically recommended for framing in this condition, as part of robust remediation practice, and this is likely to be required in this instance – see point 1 of the discussion.

IV. Framing samples 1-18 and 21-26 contained varying degrees of fungal growths, typically highly prolific and with some fungal morphology typical of very recent activity (e.g., homogeneously stained cytoplasm in turgid yeasts, etc.), but no structurally significant decay was detected (superficial decay in some cases). Such wood is typically found in moisture compromised wall cavities and other locations, and/or on the periphery of more seriously affected framing sometimes in need of replacement. H1 boron-treated framing in a similar condition can typically be left in situ, provided that other remediation provisos are applied, although global remediation practice often requires replacement of a proportion of wood in this condition – see points 2 and 3 of the discussion.

V. Results suggested that at least some of samples 1-18 and 21-26 had come very close to conditions conducive to serious decay, e.g., decay nearby is possible, and future serious decay is likely. Presence of boron preservative had probably prevented decay in some cases, i.e., any similarly affected less durable materials, e.g., some types of cladding, untreated wood, etc., may contain decay or other types of water-damage. Moisture hazards often compound suddenly, e.g., the initial 5-10 years of a buildings life is often misleading as a guide to the rate of future water damage which may accelerate suddenly.

VI. The toxigenic mould *Stachybotrys* was detected – see point 15 of the appendix.

VII. Presence of prolific fungal growths and/or decay typically has important implications for the building in general. It is important to establish the limits of fungal infection and/or decay and establish the causes, and apply appropriate remediation – see main body of text. Other remediation considerations may be important depending on the local conditions.

Microscopic Analysis

Wood sections (25 – 100 micrometers thick) were cut from wood fragments using a microtome or razor blade, mounted in glycerol and examined under a compound light microscope using polarised light and bright field illumination. Approximately 5 - 20 sections from approximately 5 - 10 positions across the depth were examined for each wood sample. All sections were stained with lactophenol aniline blue dye prior to examination.

- Key observations are given in the summary table.

BEAGLE CONSULTANCY LTD
Robin Wakeling PhD
BIODETERIORATION CONSULTANT
Wood and Building Materials Specialist
Mobile: 021 666 225
Business: 04 476 2532
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68 Homewood Avenue
Karori, Wellington 6012
robin@beagleconsult.co.nz



RRD001WTLC
Document Number: RDC-417963
Date Registered: 12/11/2013

Document Set ID: 2700885
Version: 1, Version Date: 12/11/2013

Analysis Summary Table *(Wood samples were 8 mm diameter framing cores approximately 40-90 mm deep, and as referenced in your letter dated 14 June 2012)*

No.	Decay & Fungal Analysis	Preliminary Replacement Guide*	Treatment#	Toxigenic Mould$
1	Traces of yeasts	No†	Boron, e.g., H1	None detected
2	**No established decay micromorphology and no incipient brown rot detected.** Very dense fungal growths predominantly typical of mould fungi, yeasts, sapstain and/or soft rot fungi. Fungal growths across the entire depth but with concentrations near the surface and within wood parenchyma (suggestive of predominance of moisture hazard near surface layers). Fungal morphology was in various conditions suggestive of multiple growth phases over a prolonged period including morphology typical of recent activity (yeasts and hyphae with homogeneous cytoplasm, etc.,). Moulds: *Cladosporium, Paecilomyces, Torula, Aureobasidium,* etc. *The results were consistent with exposure to a significant moisture hazard that had come close to conditions conducive to decay but where H1 boron treated radiata pine performs relatively well (compared to untreated framing), although decay nearby or at a later date is not unlikely. Decay in similarly exposed less durable materials was likely*	No†	Boron, e.g., H1	None detected
3	Essentially the same as sample 2 but much less dense fungi and with some secondary mould species variation	No†	Boron, e.g., H1	None detected
4	Pockets of early soft rot in the outer 1-2 mm. Otherwise essentially the same as sample 2 with some secondary mould species variation. Low numbers of spores of *Stachybotrys*	No†	Boron, e.g., H1 (leached?)	Trace
5	Essentially the same as sample 2 with some secondary mould species variation. *Penicillium*	No†	Boron, e.g., H1	None detected
6	Essentially the same as sample 2 but denser fungi and with some secondary mould species variation	No†	Boron, e.g., H1	None detected
7	Essentially the same as sample 2 with some secondary mould species variation	No†	Boron, e.g., H1	None detected
8	Essentially the same as sample 2 with some secondary mould species variation. *Penicillium*	No†	Boron, e.g., H1	None detected
9	Essentially the same as sample 2 but less dense fungi and with some secondary mould species variation	No†	Boron, e.g., H1	None detected
10	Essentially the same as sample 2 but denser fungi and with some secondary mould species variation	No†	Boron, e.g., H1	None detected
11	Essentially the same as sample 2 but less dense fungi and with some secondary mould species variation. *Aspergillus*	No†	Boron, e.g., H1	None detected
12	Essentially the same as sample 2 but less dense fungi and with some secondary mould species variation	No†	Boron, e.g., H1	None detected
13	Essentially the same as sample 2 with some secondary mould species variation	No†	Boron, e.g., H1	None detected
14	Essentially the same as sample 2 with some secondary mould species variation. *Penicillium*	No†	Boron, e.g., H1	None detected
15	Essentially the same as sample 2 with some secondary mould species variation. Low numbers of spores of *Stachybotrys*	No†	Boron, e.g., H1 (leached?)	Trace

BEAGLE CONSULTANCY LTD
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BIODETERIORATION CONSULTANT
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Karori, Wellington 6012
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Document Set ID: 2700885
Version: 1, Version Date: 12/11/2013

No.	Decay & Fungal Analysis	Preliminary Replacement Guide*	Treatment#	Toxigenic Mould$
16	Essentially the same as sample 2 with some secondary mould species variation	No†	Boron, e.g., H1	None detected
17	Essentially the same as sample 2 with some secondary mould species variation	No†	Boron, e.g., H1	None detected
18	Trace of early soft rot in outer 0.2 mm. Otherwise essentially the same as sample 2 but less dense fungi and with some secondary mould species variation	No†	Boron, e.g., H1 (leached?)	None detected
19	Pockets of early soft rot across much of the depth (predominantly in latewood). Low numbers of spores of *Stachybotrys*	Yes	Boron, e.g., H1 (leached?)	Trace
20	Pockets of early to advanced soft rot across the bulk of the depth. *Chaetomium globossum* (soft rot fungus). *Ullocladium*. Low numbers of spores of *Stachybotrys*	Yes	Boron, e.g., H1 (leached?)	Trace
21	Essentially the same as sample 2 but less dense fungi and with some secondary mould species variation. *Penicillium*	No†	Boron, e.g., H1 (leached?)	None detected
22	Essentially the same as sample 2 but denser fungi and with some secondary mould species variation	No†	Boron, e.g., H1	None detected
23	Trace of early soft rot in outer 0.2 mm. Otherwise essentially the same as sample 2 but denser fungi and with some secondary mould species variation. *Penicillium*. Low numbers of spores of *Stachybotrys*	No†	Boron, e.g., H1	Trace
24	Essentially the same as sample 2 but denser fungi and with some secondary mould species variation	No†	Boron, e.g., H1	None detected
25	Essentially the same as sample 2 but denser fungi and with some secondary mould species variation	No†	Boron, e.g., H1	None detected
26	Essentially the same as sample 2 with some secondary mould species variation	No†	Boron, e.g., H1 (leached?)	None detected

Table Key and related definitions intended to give an indication of the scale (1 - 4) of risk etc.

Replacement*: ***preliminary guide (replacement decisions require consideration of site factors and the sampling rationale applied since this may alter the preliminary guide e.g. sometimes a broad-brush replacement approach requires removal of a mixture of decayed and non-decayed wood to ensure removal of a critical mass of infected and/or decayed wood, and in other well understood situations small pockets of decay can be left in situ – see main body of report).***

1. **: Zero risk detected.** No microbiological evidence that replacement is likely to be necessary anywhere in the vicinity of the sample.

2 No† **Qualified no (some replacement may be necessary). Lower immediate risk but potentially serious moisture hazard most likely present: this is likely to compound well within the life of the building.** No evidence of major structural damage and therefore **replacement is probably unnecessary if structural issues are the primary concern**, provided that samples are sufficiently representative and that such wood is not interspersed with more seriously affected framing. Presence of recent fungal growth is a significant concern in general terms because it denotes occurrence of unacceptable moisture elevation that may be worse nearby i.e. there is a possibility of decay nearby and/or its imminent arrival, particularly if any untreated framing is present. This is a particular concern for untreated perishable radiata pine framing. Removal of a proportion of framing in this condition is sometimes a necessary component of the required remediation if it is amongst more seriously affected framing as is often the case and it may highlight a need for **further investigation e.g. to determine the limits of moisture affected wood if not already known – see discussion.**

3. Probably††: **Intermediate risk**. Untreated wood with incipient brown rot decay and/or early soft rot decay typically comes from framing with more serious decay very close by and therefore as a general rule of thumb replacement is typically necessary for untreated framing i.e. under New Zealand leaky building conditions incipient decay typically occurs at

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Document Set ID: 2700885
Version: 1, Version Date: 12/11/2013

the periphery of wood with an advancing front of established and structurally damaging decay whereas discrete pockets of incipient decay that might arise from spore arrival is less common. **This diagnosis also often applies to small discrete decay pockets in H1 boron treated framing although typically there is more latitude to leave such wood in place (e.g. replacement or further investigation is a common recommendation in such cases).**

4. Yes: Higher risk. According to strict remediation practice replacement is necessary except in unusual circumstances e.g. where removal poses drastic problems beyond normal remediation challenges and where an exceptional level of detail of the situation has been established which can enable consideration of an integrated non-replacement approach e.g. where it can be unequivocally shown that decay is highly localised and poses no structural integrity loss problems or ongoing decay problems. Where there is a risk of significant structural loss due to decay it is sometimes possible to compensate without framing removal using bracing techniques with additional framing.)

#Treatment: based on colorimetric qualitative spot test analysis for boron, copper and other metals (e.g. zinc and tin) – see points vi – ix of Appendix. $: refer below and point 15 of the appendix.

- All wood samples were tentatively identified as radiata pine. (*Perishable medium density soft wood which is the dominant structural wood species used in New Zealand. A major advantage of this species is that it is easy to treat with preservative using factory processes thereby making it highly durable. However, if not treated prior to construction then it remains highly susceptible to biodeterioration damage. The effectiveness of remedial preservative treatment varies widely and is not a reliable substitute for NZS3640 compliant framing used in accordance with NZS3602:2003. In some situations it acts as a very valuable additional "top-up" to other more important remediation practice, when applied correctly – see points 10 and 11 of the appendix. Remedial preservative treatment is typically a robust rule of thumb but unfortunately it is sometimes used as a poorly conceived substitute for other robust remediation strategy that often includes inadequate exposure and replacement of framing and other poor treatment practice. Leaky building damage can be seriously compounded by the dangers associated with such inappropriate remedial preservative treatment*).

- Soft rot was similar to Corbett's type 1 cavitation and to a lesser extent type 2 erosion.

- The range of conditions of hyphae in the majority of samples was consistent with multiple growth phases over a prolonged period most likely of several years, including recent activity in some samples.

- The toxigenic mould *Stachybotrys* was detected. This mould is very common in leaky buildings – see point 15 of the appendix (presence on wood is rare but very common on paper (wood pulp) containing material like Gib, fibre cement and building wrap and therefore low incidence on wood samples can be misleading as a guide to likelihood of the scale of incidence in a building).



Document Set ID: 2700885
Version: 1, Version Date: 12/11/2013

Wood preservative analysis

i. **Using colorimetric qualitative spot tests, samples 1-26 gave weak to moderately strong positive colour reactions for boron, e.g., wood was most likely treated according to Hazard Class 1 of NZS3640:1992 (replaced by H1.2 of NZS3640:2003). Some samples had a gradation of colour intensity across the core that was indicative of boron loss due to leaching during a prolonged exposure to moisture.**

ii. *Spot tests typically do not detect the majority of the more modern light organic solvent preservatives (LOSP) e.g. the fungicide 3- iodopropynylbutylcarbamate (IPBC) and the insecticide permethrin, used in combination for H1.2 framing (since approximately late 2003 - March 2005, in accordance with NZS3640:2003 and NZS3602:2003, and slightly earlier as H1-plus (probably 2002 as a non-obligatory treatment), or substantially earlier in the case of permethrin used alone for H1 framing in accordance with MP3640:1992). The spot test used for tin is not wholly reliable for small samples or where retention is low. An H3.1 treatment based on tebuconazole, propiconazole and permethrin has been available since 2002 although it has only been used in New Zealand in substantial amounts in the last 2 years (has largely replaced tributyl tin (naphthenate and oxide) today). Triazoles cannot be tested for using spot tests.*

iii. Quantitative preservative analysis was not performed in this instance because it was not of immediate value to the diagnosis. However, in some situations of particular scrutiny it is advantageous to have quantitative analytical data, for example if compliance with the retention requirements of NZS3640:2003 is an issue.

iv. **See Appendix regarding background information.**

Discussion and Conclusions

1. **Framing samples 19 and 20 contained well established decay that may have caused loss of the bulk of the original structural integrity in affected areas. Overall cross sectional integrity of the wood may have been compromised (risk of failure nearby).** According to strict remediation practice and classical remediation empirical wisdom, as a general rule of thumb wood with well-established decay should be replaced with appropriately treated framing (NZS3640:2003 specified H1.2, H3.1 or H3.2 depending on the location). In some situations discrete pockets of well characterised early decay, in non-critical areas, can be left in situ provided that other remediation practice is applied (see point 2). **Replacement is typically recommended for framing in this condition, as part of robust remediation practice, and this is most likely required in this instance. (See points 7 and 8 of the appendix).**

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Document Set ID: 2700885
Version: 1, Version Date: 12/11/2013

Soft rot was associated with a grey-black discoloration in this instance, although wood colour does not always change appreciably for other types of soft rot that more difficult to locate on-site. Sapstained wood can look very similar to stained soft rot in some situations.

2. **Framing samples 1-18 and 21-26 contained varying degrees of fungal growths, much of it prolific and some of it recently active, but no structurally significant decay was detected (traces of highly superficial soft rot in some cases). The bulk of fungal morphology was typical of mould fungi, sapstain fungi and/or soft rot fungi, and yeasts.** Such wood is typically found in moisture compromised wall cavities and other locations, and/or on the periphery of more seriously affected framing sometimes in need of replacement.

   Framing in a similar condition can typically be left in situ provided that the samples were representative of the worst case in the areas sampled, and provided that this does not interfere with any necessary global replacement strategy, and on the basis that all interior wood is dried to below 18% moisture content and ongoing moisture contents are consistent with sound building practice. Where practical, in-situ preservative treatment is typically recommended for all exposed and/or infected wood – see points 10 and 11.

3. **There is an important caveat to the diagnosis for samples 1-18 and 21-26, this being that serious decay is often present nearby wood or other building materials with fungal growths. Results suggested that at least some of these samples had come very close to conditions conducive to serious decay, e.g., decay nearby or future decay is not unlikely. Presence of boron preservative had probably prevented decay in some cases, i.e., any similarly affected less durable materials, e.g., some types of cladding, untreated wood, etc., may contain decay or other types of water-damage. Moisture hazards often compound suddenly, i.e., the initial 5-10 years (or a much longer period in some instances) of the buildings life is often misleading as a guide to the rate of future water-damage which may accelerate suddenly.** It is vital to establish the limits and causes of affected wood which may require extensive removal of cladding and/or other building materials and/or iterative analysis. It is sometimes necessary to remove a proportion of sound wood along with substantially decayed wood during remediation, to ensure that a critical mass of compromised wood is removed or to achieve the most cost effective global replacement approach.

4. Based on observations from New Zealand leaky buildings the condition of samples **19 and 20** was consistent with exposure to at least 5-10 years of elevated moisture conducive to decay (moisture levels typically above 30%) although a longer period, e.g., of more highly intermittent moisture elevation, is much more likely given the overall results. Samples **1-3, 5-18 and 21-26** had been exposed to moisture

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Document Set ID: 2700885
Version: 1, Version Date: 12/11/2013

elevation conducive to prolific fungal growths and probably also marginal, e.g., highly intermittent, moisture conducive to decay, in at least some cases, but not yet deep structurally damaging decay, at least not for treated wood (serious decay may be present nearby) most likely for several years. Results suggested that sample **4** had been exposed to an intermediate and/or a more restricted moisture hazard.

Fungal growth can occur over the range 16 – 30% (and of course at higher moisture contents where it usually occurs with decay in perishable framing) and possibly at even lower values if humidity is very high and/or transient condensation is an issue. Fungal decay requires free moisture, as occurs at moisture contents above the fibre saturation point near 29 - 30%. However, 30% is not a reliable lower limit for decay occurrence and some decay fungi can move into wood and initiate decay at considerably lower moisture content levels.

The only reliable and indisputable facts with respect to wood moisture content effects on decay within the context of leaky building diagnostics, are that decay is inevitable above the fibre saturation point of approximately 30% and that values below this are unreliable as a guide to possible problems (partly due to the transient nature of moisture elevation and the limitations of detection techniques). However, understanding the significance of different moisture contents over the range of the lowest emc values encountered in wood in buildings (around 6% for furniture in a dry room) to the highest (about 22 – 25% such as might be found in a sauna), and for other moisture values of 25 – 30%, can be useful but is not straightforward and confusion often arises – see points 13 and 14 of the appendix. If in doubt, return to the rule of thumb stated here and then apply the *golden rule of thumb* referred to in point 6.

5. **The toxigenic mould *Stachybotrys* was detected. This fungus is very common in leaky buildings. It may be necessary to take precautions to prevent or minimise contact with occupants and others (e.g. remediation workers) – see point 15 of the appendix.**

6. Whilst the principles of remediation science are straight forward the causes of decay in buildings are multivariate and the necessary remediation required varies significantly between sites. Diagnosis of the required remediation requires significant remediation knowledge and its on-site application. Several sampling iterations and analysis are sometimes necessary before an appropriate diagnosis and remedial response can be identified. *Always bear in mind the golden rule: keep looking until a very high degree of confidence exists that all causes of moisture elevation have been accounted for, and the limits of infection and decay have been identified and dealt with appropriately (particularly important for untreated perishable framing). Missing small areas of infection and decay is inevitable in some situations but in the great majority of cases this is not a problem provided that*

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Document Set ID: 2700885
Version: 1, Version Date: 12/11/2013

the golden search rule is diligently applied and provided that the attendant rules of thumb of remediation practice are not compromised along the way to final remediation.

Appendix – Important Background Information

Wood preservative analysis

iv. The limit of detection of the boron spot test used was close to 0.02% BAE, similar to the detection limit for routinely employed quantitative analysis (0.01 – 0.04% depending on condition and size of sample). Spot tests can detect boron in wood with undetectable mean cross-sectional retentions due to the dilution steps carried out during wood preparation prior to analysis.

v. Minimum retentions needed to control decay fungi vary and typically fall within the range 0.1 – 0.5% (5 – 25 times the detection limit). The central 1/9 (11% of the wood volume) has traditionally required a minimum core retention of 0.04 for insect borer and 0.1 for decay fungi, this being a traditional check that adequate penetration was achieved it being correctly assumed that much higher retentions reside nearby in the other 89% of the wood volume. Unfortunately the core retention requirement was left out of H1.2 in 2003, a somewhat controversial omission (it is requirement for H1.1 wet frame).

vi. Typically, buildings constructed prior to the introduction of the new H1.2 boron retention minimum requirements in 2003, contain external framing that does not meet the retention requirements of NZS3640:2003. Observations from approximately 1000 buildings (mostly aged 4 – 10 years) have shown that boron retentions of 0.05 – 0.3% w/w BAE are common although retentions as high 1.5% have been recorded. It is highly unlikely that any house built prior to 2003 contains external wall framing with a **mean** boron retention of 0.4% or above and on this basis it is reasonable to recommend that all framing exposed during remediation is treated.

vii. Rarely, depending on the age of the framing and other factors, the H1 and H1.2 alternative treatments permethrin or IPBC were used for framing. Permethrin is an insecticide only and IPBC is a fungicide only. Since NZS3640:2003 was introduced IPBC has been used with permethrin as an LOSP H1.2 treatment (blue coded framing). However, IPBC was also used in "H1-plus" framing for approximately 18 months prior to 2003 and permethrin only was used as an H1 treatment (insecticide only) according to NZS3640:1992 i.e. since 1992.

viii. There are no spot tests available for IPBC and permethrin and the quantitative analysis necessary is relatively costly, time consuming (typically a 14 day turn around) and typically unnecessary since forthcoming information usually shows that these treatments were not relevant i.e. by a process of elimination.

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Document Set ID: 2700885
Version: 1, Version Date: 12/11/2013

ix. Unlike the more commonly used H1 treatment boron, permethrin is not a fungicide and is therefore of no durability value in the context of leaky buildings and fungal decay. Boron adds resistants to decay in some low to moderate decay hazard situations found in leaky wall cavities but this effect is dependent on boron retention which varies greatly for H1 framing i.e. durability of H1 (and H1.2) boron treated framing varies greatly in leaky buildings.

Decay analysis and remediation

7. **According to strict remediation practice wood with established decay should be replaced with appropriately treated framing (NZS3640:2003 specified H1.2, H3.1 or H3.2 depending on the location).**

8. **Strict adherence to classical remediation practice is typically indicated for wood with well-established decay.** This typically involves removal of all decayed wood and sometimes an additional 1 meter of wood beyond the obviously decayed limit (***along continuous, not discontinuous framing e.g. framing broken by well defined breaks such as between parallel joists well separated by nogs or window frames, or similarly well-separated horizontal framing***). Latitude often exists for substantially less wood removal, particularly for preservative treated wood (not remedial treatment, including treatment applied during construction), and once the limits of decay have been well defined via suitable laboratory analysis or other appropriate methods. However, the 1 meter rule is a tried and tested approach in Europe and North America and provides a solid footing for recommendations in the first instance, or if there is doubt concerning the limits of decay. Where deviations from the rule are taken it may be important to take wood samples either side of the estimated limits of decay for further micromorphological analysis. As a general rule of thumb it is recommended that the 1 meter rule is applied unless there is a significant remediation cost-benefit in not doing so, and having established the limits of decay accurately by thorough analysis, in some cases with further concurrent micromorphological analysis.

9. Whilst 4 weeks is typically an unrealistic timeframe in which to effect remediation, 4 weeks is intended as a guide for the minimum timeframe within which wood should essentially dry out if effective drying conditions have been implemented i.e. if wood has not dried within this timeframe a different strategy is probably required. Once established, decay can advance significantly within a 4 week period if left unchecked. All untreated or poorly treated wood that cannot be dried rapidly prior to remediation or after remediation should also be replaced irrespective of its condition. Effective and rapid drying sometimes requires complete removal of cladding and/or lining and it is vital to explore all possible moisture ingress points as well as areas several meters either side of all possible vertical leakage planes since some fungi can spread long distances over essentially dry materials in some



Document Set ID: 2700885
Version: 1, Version Date: 12/11/2013

situations. Other explorative measures may be indicated depending on the nature of the construction.

10. In-situ wood preservative treatment is recommended for all exposed framing that is not treated to Hazard Class H3.2 or H3.1 and any other suspect areas i.e. areas affected by moisture elevation. Typically, buildings constructed prior to the introduction of the new H1.2 (NZS3640:2003) boron retention minimum requirements in 2003 contains external framing that does not meet the retention requirements of NZS3640:2003. Therefore, in-situ preservative treatment of framing is often a wise precaution for all buildings that have had significant leakage problems irrespective of the extent of decay. However, the decision surrounding the extent of in situ treatment required varies according the local conditions and a pragmatic approach that takes account the ongoing likelihood of recurring leaks is needed.

11. ***Whilst other options may be available, or may be more suitable, the following treatment is a useful benchmark. Two liberal applications (500 mls per 10 linear metres of 100 x 50 mm framing) of Framesaver concentrate (do not dilute) by brush or airless spray is commonly used in New Zealand (typically the default recommendation because wood is often damp) although an LOSP type preservative such as Metalex is more suitable in some situations provided wood is essentially dry. <u>However, because Framsaver has a thick consistency, much more typically gets applied during typical rapid brush strokes, and this is a substantial advantage because the retentions achieved are more realistic.</u> It is typically vital to treat at least 3 faces of exterior framing paying particular attention to the exterior faces. However, treatment of 4 faces if at all possible is recommended.*** Complete removal of cladding and/or lining is often required to allow effective and rapid drying of framing and/or to facilitate discovery of all decay. Removal of cladding to expose exterior faces of external framing is typically the only effective way of allowing sufficient access to framing that is in need of preservative treatment. Typically, it is not possible to treat bottom plates effectively in situ and consequently they need to be removed in some situations. Drilling holes where multiple adjacent framing occurs such as corners improves treatment of occluded faces and deeper wood but is typically impractical as a general method of extensive application (brush and/or airless spray is the most practical application method).

- *There is occasionally a misguided view amongst those of insufficient practical experience of remediation issues in New Zealand that it is acceptable to leave large amounts of deep, well established decay in situ during remediation provided a preservative is applied. This is sometimes incorrectly justified on the basis of limited artificial laboratory studies, where preservative applied to framing with decay at optimal moisture contents for preservative diffusion are maintained, and not surprisingly this allows diffusible preservative to halt decay*



Document Set ID: 2700885
Version: 1, Version Date: 12/11/2013

in mini frame experiments. These conditions rarely occur in buildings where uneven moisture distribution and uneven fungal infection and decay pockets are the norm. (Small isolated pockets of decayed wood can be left in situ in some well understood situations).

- *However, the questionable value of laboratory data to real building conditions is not the primary danger with respect to the inherently misguided nature of leaving large amounts of decayed wood in situ. Leaving extensive deep decay in situ, in most wall cavity situations, is dangerous because it encourages a lack of exploration and lack of identification of all the causative issues. It is also contrary to classical literature and the substantial base of empirical remediation wisdom and practice on which the literature is based. Therefore, those following this practice expose themselves to potential criticism and potential legal liability. It is wise to base ones advice on a long proven robust approach based on decades of sound classical remediation practice, as opposed to more recent advice based on a narrow and limited perspective.*

- *Also, there is a risk that structurally compromised framing will be overlooked and/or left in situ. Concealed decay is not uncommon and its thorough identification and the determination of its significance typically require the application of classical on-site investigation techniques and supportive off-site analysis.*

- *It is sometimes argued that New Zealand conditions are significantly different from situations on which the classical remediation literature is based and that new practice can therefore be applied. Such a view is premature at best considering the track record of New Zealand building practice in recent years and the relatively recent advent of improved practice and the recent introduction of a remediation skill base.*

- *There are also methods of pressure impregnation that can be used to treat framing in-situ. Pressure impregnation has a proven track record for use in buildings and whilst there are relatively few situations in New Zealand where this approach is useful within the context of leaky building remediation, it may have application in highly specific and well understood situations. Radiata pine framing is essentially untreatable by pressure impregnation once it is part of a structure i.e. attempts to force liquid into the wood by pressure is likely to result in seepage and escape of preservative. It is typically vital to remove either the cladding or lining, and sometimes both, if wood is to be treated effectively without gross over-treatment and contamination of surrounding materials and the local area. Over-treatment may damage surrounding materials and may contaminate the living space (immediately or later if any excess dehydrated preservative becomes airborne) or the outside area and this may have health,*

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Document Set ID: 2700885
Version: 1, Version Date: 12/11/2013

safety and eco-toxicity issues. It is therefore essential to keep close track of where preservative goes at all times which is typically not possible if too much of the framing is concealed.

12. In some situations it is possible to leave structural framing containing pockets of decay, in situ. This is typically not recommended, is not undertaken lightly and requires detailed knowledge of the situation. It is sometimes important to derive a method of eliminating active or potentially active decay fungus. This is difficult using surface applied preservative in many situations, the primary purpose of which is to provide future decay protection, not a sterilisation effect. Methods of sterilisation are available but their application requires specialist knowledge and equipment and is only cost effective in some situations e.g. where the cost of replacement exceeds the cost of in situ remediation. It is also vital to ensure that any structural damage left in place does not compromise the function of the affected framing or adjacent features or the overall integrity of the building.

13. Rules of thumb regarding the wood moisture content and decay.

For inspection purposes

i. When investigating an unknown situation it is important not to rely on MC readings in isolation i.e. never take a low value at face value because moisture elevation is often transitory (MC is only one tool in the repertoire).

ii. Always take any value above the expected equilibrium moisture content (emc) value as a warning i.e. including values below 18% (if possible it is useful to obtain a few points of reference from areas that are "known" to be unaffected by poor design/faults etc. to establish the actual emc range). (Preservatives, wood extractives, moulds and sapstain fungi, wood species ect. can have substantial effects on emc.). Active fungal infection, including decay fungi, is very common in wood recorded at moisture values below 18% as measured in leaky buildings in New Zealand.

For remediation and beyond

iii. Moisture must never go above 17% (exceptions arise from extenuating circumstances but these must be well defined).

Caveat rule of thumb

iv. An important qualification is that all moisture content measures and cardinal values used or referred to during investigation and remediation are indicative not absolute (including 18%). ***Once decay is established there is a significant probability that ongoing decay will occur at and close to 18% MC but for uninfected wood the MC conditions required for decay are closer to the fibre saturation point, probably 24 – 30%.*** (Fungi produce



Document Set ID: 2700885
Version: 1, Version Date: 12/11/2013

metabolic water during decomposition of wood and this local moisture may be undetectable with available detectors which pick up the macro-moisture % not the micro-moisture %. Furthermore, moisture conditions in the outer 1 – 5 mm are sometimes different (higher) than in deeper wood in situations that are marginal for decay e.g. where condensation occurs. Whilst references for decay at 18% are rare it nevertheless serves as the lower limit of reported activity (decay at 16% has also been reported but is probably not relevant in the context discussed here). For dry rot which can grow over and through wood that "was" below 18% (i.e. it translocates moisture as it advances) this typically requires RH values above 85% and optimally close to 100%. Moving air and RH values around 75% and below usually retard dry rot growth at low wood MC.)

14. Additional Critical Moisture Value Rules of thumb for leaky building investigation
    - *8 -14%: approximate emc range for framing in wall cavities*
    - *16%: (maximum MC quoted for wall cavity enclosure during construction and minimum moisture quoted in the literature at which fungal (e.g. mould) growth can occur but at which wood decay does not become established)*
    - *20%: widely accepted minimum threshold below which decay is prevented (allows a comfortable safety margin below the fsp above which decay establishment is inevitable)*
    - *20 - 30%: range over which it is difficult to be certain what is occurring partly because of the limitations of detection devices but also because of other factors*
        - *<fsp (approx. 30%) decay establishment unlikely because no free moisture is available but there is significant margin for error in interpretation of MC values between emc and fsp and therefore 30% is substantially too high a lower limit for reliable risk assessment*
        - *16 - 30%: fungal growth often occurs but active wood decay unlikely although it may be imminent or very close by*
        - *>fsp (approx. 30%): decay inevitable*
    - *40 - 70%: common MC range for aggressive decay*
    - *80%: maximum MC sometimes quoted for brown rot*
    - *30 - 400%: range for decay (120 - 400%: at or close to the wood saturation point at which decay stops or proceeds at greatly reduced rates due to shortage or lack of oxygen)*

15. **Presence of the toxigenic mould *Stachybotrys* and possibly other moulds requires that caution is exercised when handling moisture compromised materials.**
Stachybotrys is a toxigenic mould that has been implicated in building sickness syndrome and is common in leaky wall cavities. *Stachybotrys* is a soft rot decay

Document Set ID: 2700885
Version: 1, Version Date: 12/11/2013

fungus and degrades wood fibres and other cellulose containing materials. It is most commonly encountered on gypsum-paper board, fibre-cement board and building paper or any other wood fibre containing material.

Exposure of healthy individuals to small quantities of *Stachybotrys* is unlikely to pose a serious health threat in most cases. However, it is wise to handle the mould (and other moulds) with caution, avoiding direct contact and inhalation of disturbed material. It is known that otherwise healthy individuals, who are regularly exposed to toxigenic moulds found on wood products, can suffer significant health problems. If mould is dry upon discovery airborne spores are more likely to be inhaled. Mouldy material in living spaces should be removed, taking care not to introduce airborne material. Mouldy wall cavity materials also pose a potential threat to occupants since spores can migrate into the living space however the most serious threat occurs when the material is disturbed and therefore removal should be carefully planned and executed.

In New Zealand problems associated with exposure during remediation are usually less than in North America because typically claddings are removed and spore numbers are diluted by external air whereas in N. America mould is often exposed to the internal living space upon removal of linings.

Trichothecence mycotoxins produced by *Stachybotrys* are lipophilic (fat soluble) and can potentially be absorbed through the skin. Therefore gloves, protective disposable clothing and approved breathing apparatus are recommended whenever significant quantities of mouldy material are handled.

The majority of other moulds that occur in buildings are not generally considered to pose as serious a health hazard compared to *Stachybotrys,* but presence of any mould in dwellings can pose a health hazard, especially to those predisposed to pulmonary dysfunction (e.g. asthma sufferers) or those with a lowered immune response (e.g. the very young and very old). Other toxigenic moulds have been isolated from moisture compromised buildings although the bulk of information refers to mould that arises through poor management of ***internal*** moisture as described in the New Zealand building code. *Stachybotrys* can also arise in buildings as a result of poor internal moisture management (e.g. moisture from living activities such as hot water washing, cooking and breathing etc.) but recent evidence suggests it is more commonly associated with ***external*** moisture i.e. moisture that enters during leakage.

This could be related to the preference of *Stachybotrys* for very high moisture contents as are common in leaky wall cavities, as opposed to dew points associated with condensation planes that tend to result in more transient elevated moisture conditions.

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Document Set ID: 2700885
Version: 1, Version Date: 12/11/2013

Other health hazards related to microbial degradation of damp building materials are possible e.g. release of volatile toxins, either directly from microorganisms, or from decomposing building materials. Other microorganisms including actinomycetes, bacteria and yeasts may also pose a health hazard in moisture compromised buildings in some situations.

16. Incipient decay can be significant in some situations, particularly for untreated framing.

    - Early brown rot is sometimes associated with incipient brown rot and can be difficult to detect with 100% reliability but can cause significant strength loss.

    - Wood with incipient decay can subsequently lose structural integrity at a much greater rate than uninfected wood. The rate of decay typically accelerates once the decay fungus has effected colonisation i.e. following the establishment phase. Therefore the window of opportunity for detection and correction of leakage or other moisture management faults prior to onset of damaging decay can be shortened. This effect can persist for several years since the fungus can remain dormant for this period. Application of surface boron to untreated or inadequately treated wood (see point 10) does not completely eliminate this effect and is essentially only useful for reducing the likelihood of reinfection should elevated moisture reoccur. It is also difficult to treat those areas where fungal infection is often most prevalent such as end grain and narrow gaps between adjacent framing members and other areas and interfaces were moisture trapping and channelling occurs.

Yours Sincerely

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Document Set ID: 2700885
Version: 1, Version Date: 12/11/2013

APPENDIX 4 – TECHROT PROFILE

Document Set ID: 2700885
Version: 1, Version Date: 12/11/2013



Techrot was founded by Dr Bernhard Kreber and David Watson in 2012. The company provides a specialist timber rot contracting service to the New Zealand building sector in particular to individuals and companies involved in the remediation of leaky Buildings.

Leaky Building is a term used to describe buildings that have water ingress related decay as a result of either inadequate building design skills or inadequate practical construction knowledge or both. When water ingress has gone unnoticed for some period of time wood decaying fungi can attack timber framing to a point where parts of the building becomes unsafe for occupation. Repairing leaky buildings in the main involves replacing timber framing affected by decay with treated timber and applying a timber treatment to the remainder of the exposed timber frame.

Techrot uses proven technology to provide a holistic approach to leaky buildings by:

- Inspecting exposed timber framing with the scientific methodology and equipment which been used in the preservation of some of Europe's finest and most precious historic buildings for over 20 years by determining the structural integrity of what in some instances could be described as "irreplaceable" timber structural members.
- Precisely distinguishing between timber framing found to require replacement and timber framing capable of retaining by graphically recording every timber member within the survey area clearly and concisely so it can be easily understood by both building professionals and common people
- Treating the retained timber a site applied remedial timber treatment that has been used to control decay and borers in European buildings for over 20 years.
- Keeping a data log of every timber framing survey, and also of all areas where timber treatment has been applied.
- Providing warranties for both our inspection and timber treatment services.

NOTE – Techrot delineates and quantifies the extent of timber decay, treats retained timber and provides certification for its services. However, to maintain its professional independent position as a specialist rot works contractor Techrot DOES NOT remove or replace timber deemed unsuitable for retention or indeed carry out any other general buildings work.

Document Set ID: 2700885
Version: 1, Version Date: 12/11/2013

APPENDIX 5 – CREDENTIALS OF D B WATSON

Document Set ID: 2700885
Version: 1, Version Date: 12/11/2013

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1978—DIPLOMA IN ARCHITECTURE, GLASGOW SCHOOL OF ART/GLASGOW UNIVERSITY
1979—POSTGRADUATE DIPLOMA IN CONSTRUCTION MANAGEMENT, HERIOT WATT UNIVERSITY

PROFESSIONAL MEMBERSHIPS HELD.
ROYAL INSTITUTE OF BRITISH ARCHITECTS –1980-1999
ROYAL INSTITUTE OF ARCHITECTS IN SCOTLAND—1980-1999
MEMBER OF THE BRITISH INSTITUTE OF MANAGEMENT-1980-1999
FELLOW OF THE FACULTY OF BUILDING (CAMBRIDGE)--1988-1999
NEW ZEALAND INSTITUTE OF BUILDING SURVEYORS—2003-2012

TRADE MEMBERSHIPS HELD.
APPROVED APPLICATOR OF BUTYL ROOFING PRODUCTS (CARLISLE SYNTEC USA AND SKELLERUP NZ)—1987 to date
MEMBER OF THE GUILD OF MASTER CRAFTSMEN—1986 -1999
ISO 9002 QUALITY ASSURED BUILDING FIRM—1986 - 1999
MEMBER OF THENATIONAL HOUSE BUILDING COUNCIL (UK)—1985-1999
CERTIFIED ROT TREATMENT CONTRACTOR (SOVEREIGN CHEMICALS UK)—1987 to date

EXPERIENCES
1980—83 EMPLOYED AS AN ARCHITECT FOR A LOCAL AUTHORITY DEPARTMENT OF BUILDING AND HOUSING
1983—85 SELF EMPLOYED ARCHITECT
1985---1998 WORKED AS A SELF EMPLOYED BUILDING CONTRACTOR SPECIALISING IN TIMBER ROT REMOVAL AND BUILDING RENOVATION WORK.
1999—2003 WORKED SELF EMPLOYED IN THE DESIGN AND MANUFACTURE OF RADIATA PINE REMANUFACTURED BUILDING PRODUCTS EXPORTED TO AUSTRALIA AND EUROPE.
2003—2012 WORKED AS AN INDEPENDENT CONSULTANT FOR THE NZ DEPT OF BUILDING AND HOUSING AS A WEATHERTIGHTNESS ASSESSOR.

Document Set ID: 2700885
Version: 1, Version Date: 12/11/2013

APPENDIX 6 – CREDENTIALS OF B KREBER

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Version: 1, Version Date: 12/11/2013

QUALIFICATIONS

Barrister and Solicitor of the High Court of New Zealand (June 2007)
Bachelor of Law, University of Waikato, New Zealand (2006)
Doctor of Philosophy (Wood Science) University of British Columbia, Canada (1995)
Master of Science (Forest Products) Oregon State University, USA (1991)
Vordiplom (Wood Science & Technology) University of Hamburg, Germany (1987)

WORK EXPERIENCES

Company Director from 2010 to present
Barrister sole (November 2009 – present)
Legal Support Services, Sole Trader (January – October 2009)
Policy Analyst, Otago Regional Council (June – December 2008)
Legal Support Service, Sole Trader (July 2007 – May 2008)
Barrister's Clerk, Phoenix Chambers, Rotorua (March – June 2007, casual)
Senior Scientist, Forest Research Institute Ltd, Rotorua (August 1995 – February 2006)
Research Scientist, Forintek Canada Corp.,Vancouver, BC (January 1992 – July 1995)
Graduate Research Assistant, Oregon State University, USA (September 1989- December 1991)
Research Assistant, University of Hamburg, Germany (April - June 1989)
Various employment and training placements (February 1984 – March 1986)
Cabinet maker (apprentice), HolzArt Ltd, Germany (January 1982- January 1984)
Carpenter (apprentice), Paul Stein Ltd, Germany (August 1980 - December 1981)

AWARDS

Brookers Prize for Civil Procedure 2006
James and Wells Intellectual Property Prize 2006
Beattie Rickman Legal Prize for Employment Law 2006
NZ Royal Society International Science & Technology Linkage Fund (2005)
Ansett - Forest Research Awards - Best Commercial Solution (1999)
Science Award of the NZ Forest Research Institute and Ansett New Zealand (1997)
Ron Cockcroft Award - International Research Group on Wood Preservation (1995)
H.R. MacMillan Family Fellowship – Forestry (1993/94)
Wood Award of the Forest Products Society (1993)
VanDusen Graduate Fellowship –Forestry (1992/93)
Mary McDonald Scholarship – Forestry (1990/91)

PUBLICATIONS

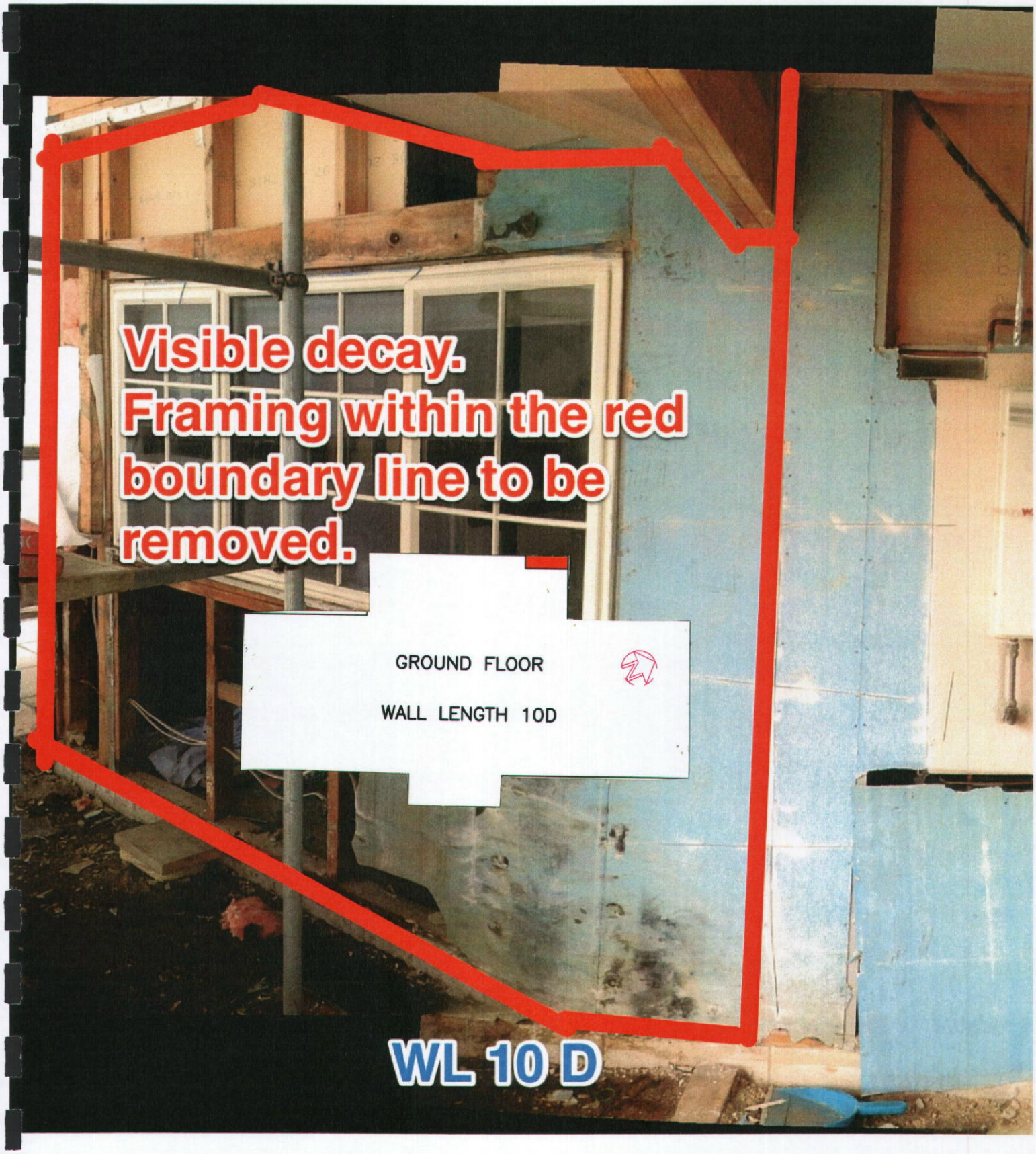
Refereed legal publication	1
Peer refereed international science publications	33
Significant other publications /reports not included above	40 plus
Editor of International Conference Proceeding	2

CURRENT AND PAST PROFESSIONAL MEMBERSHIPS

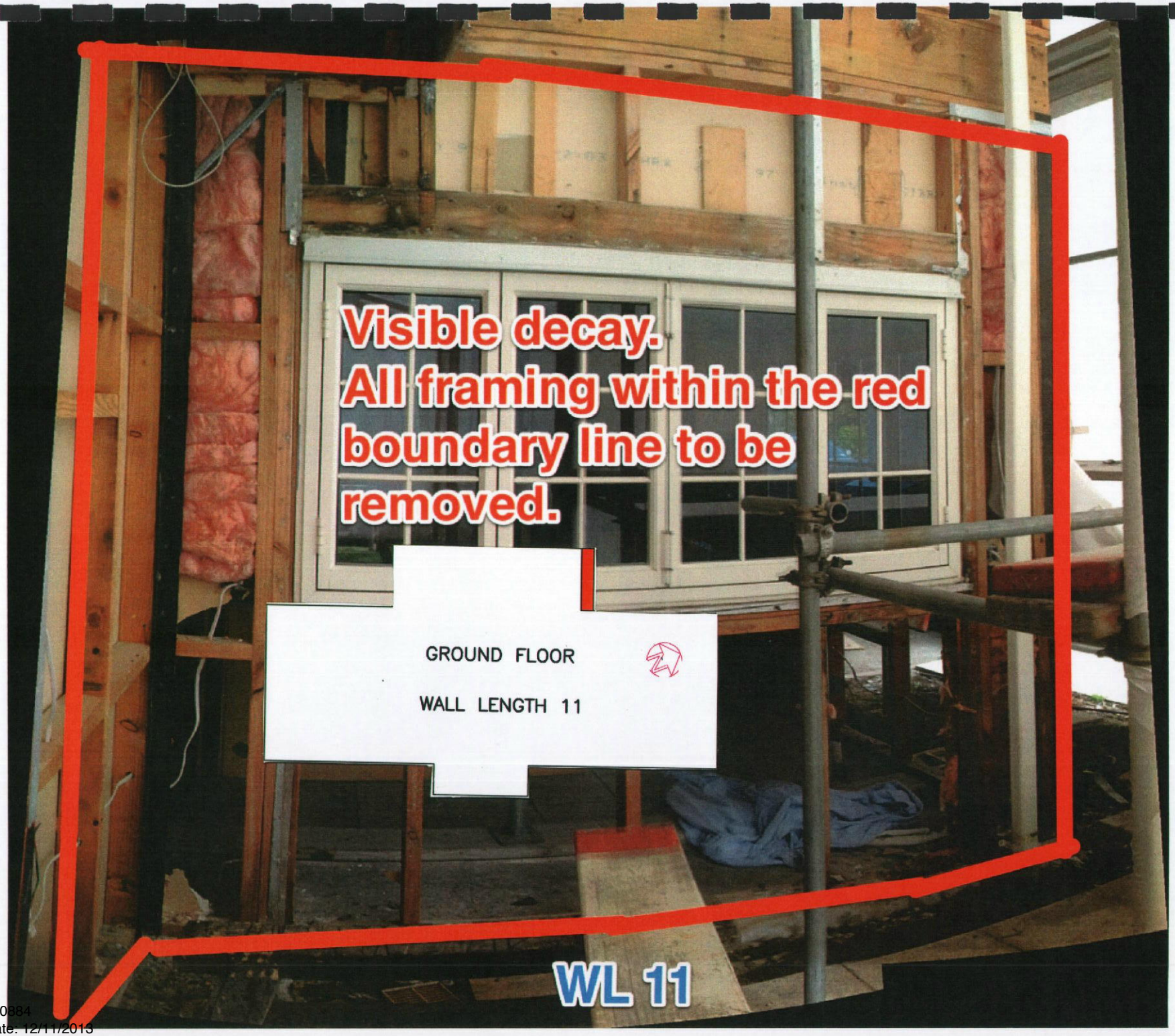
New Zealand Law Society
International Research Group on Wood Preservation
Forest Products Society

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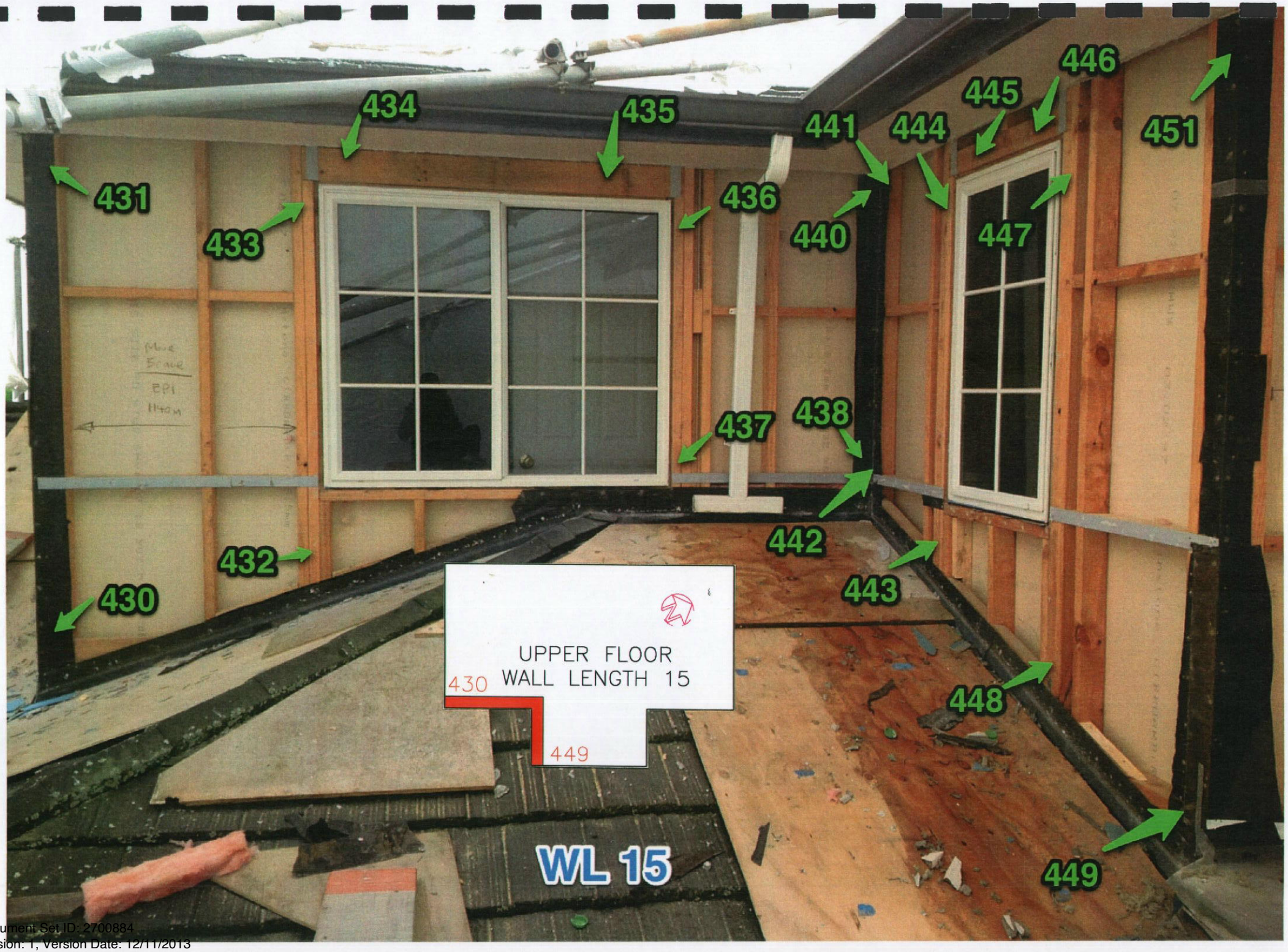
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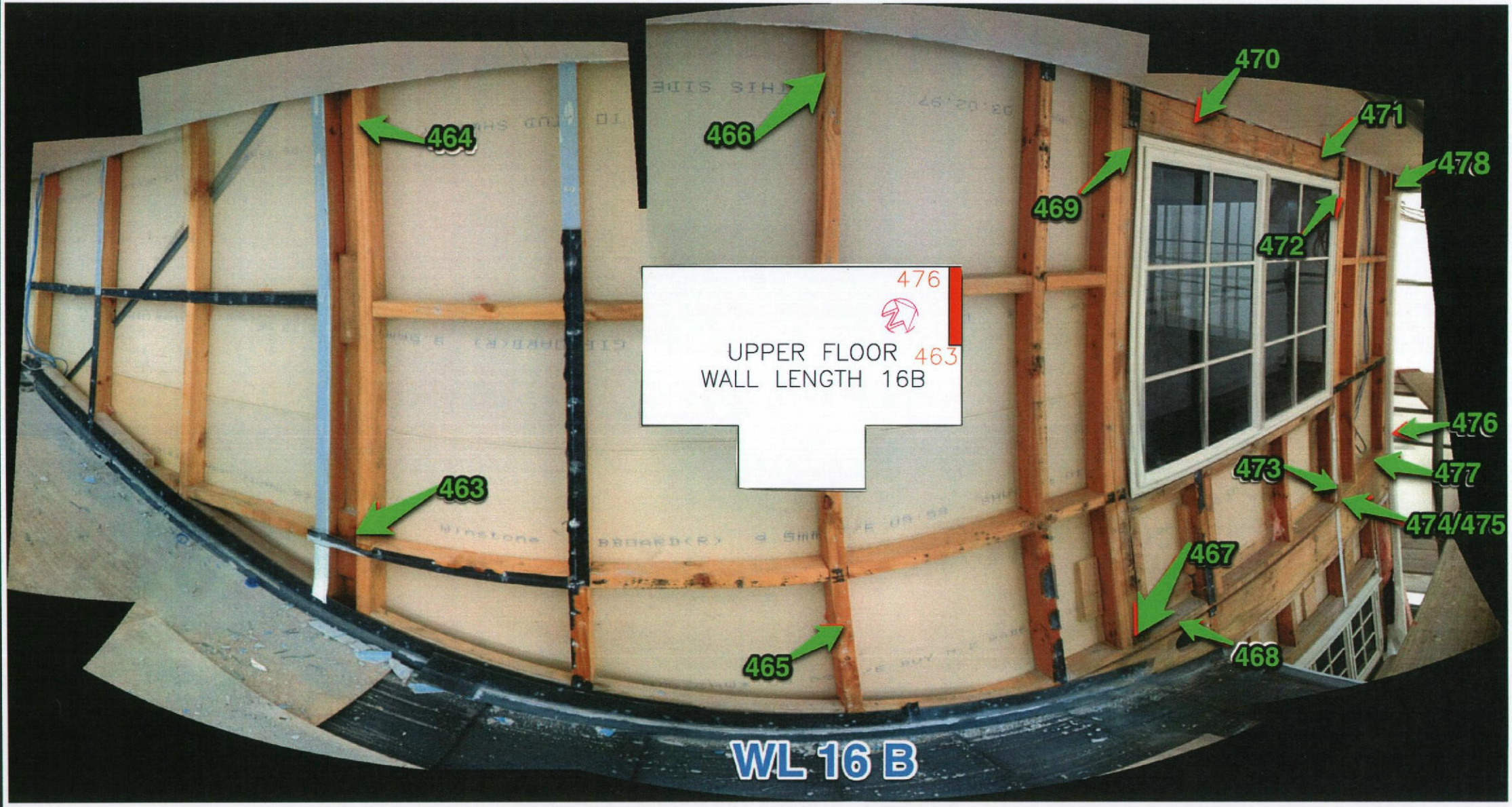
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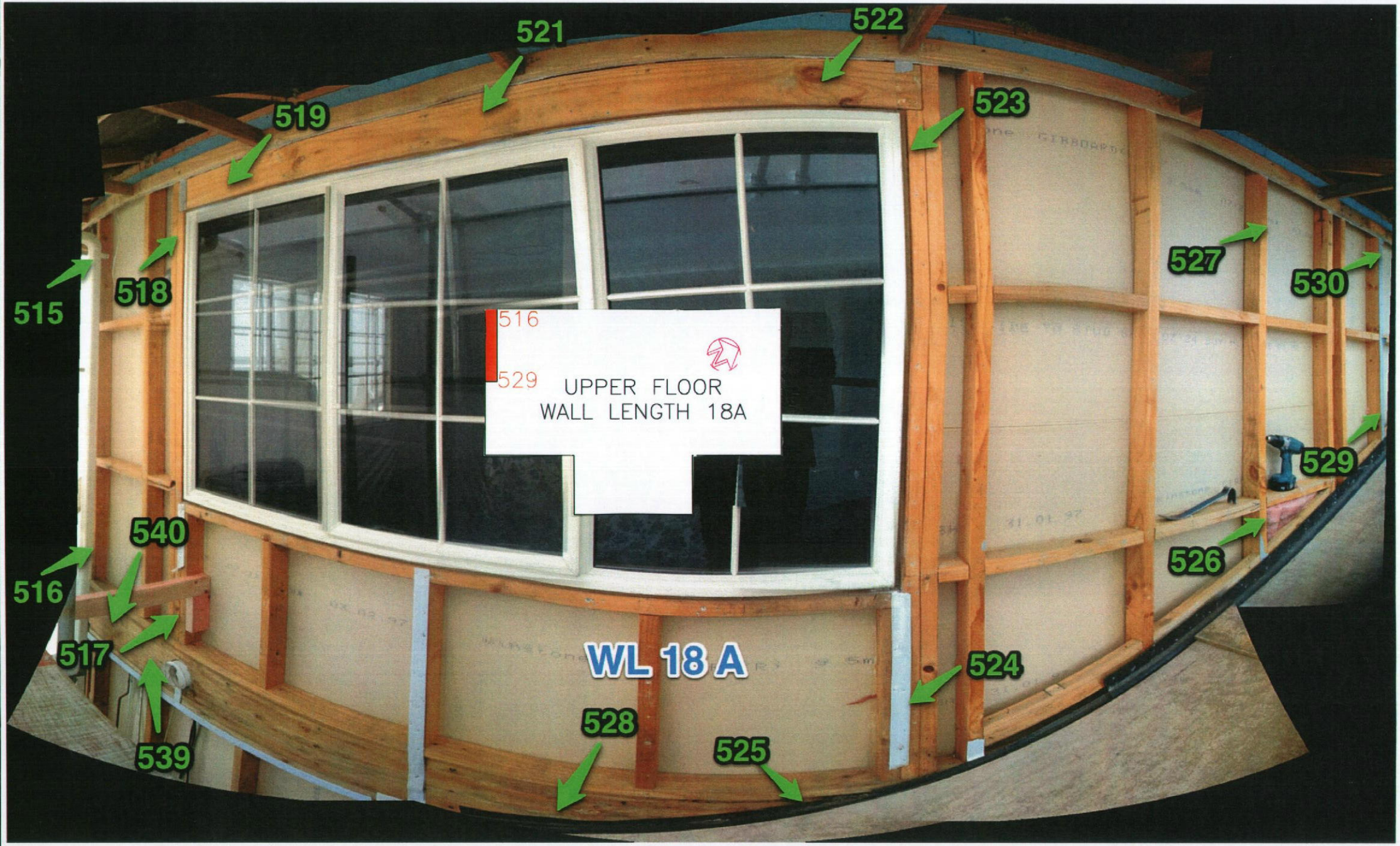
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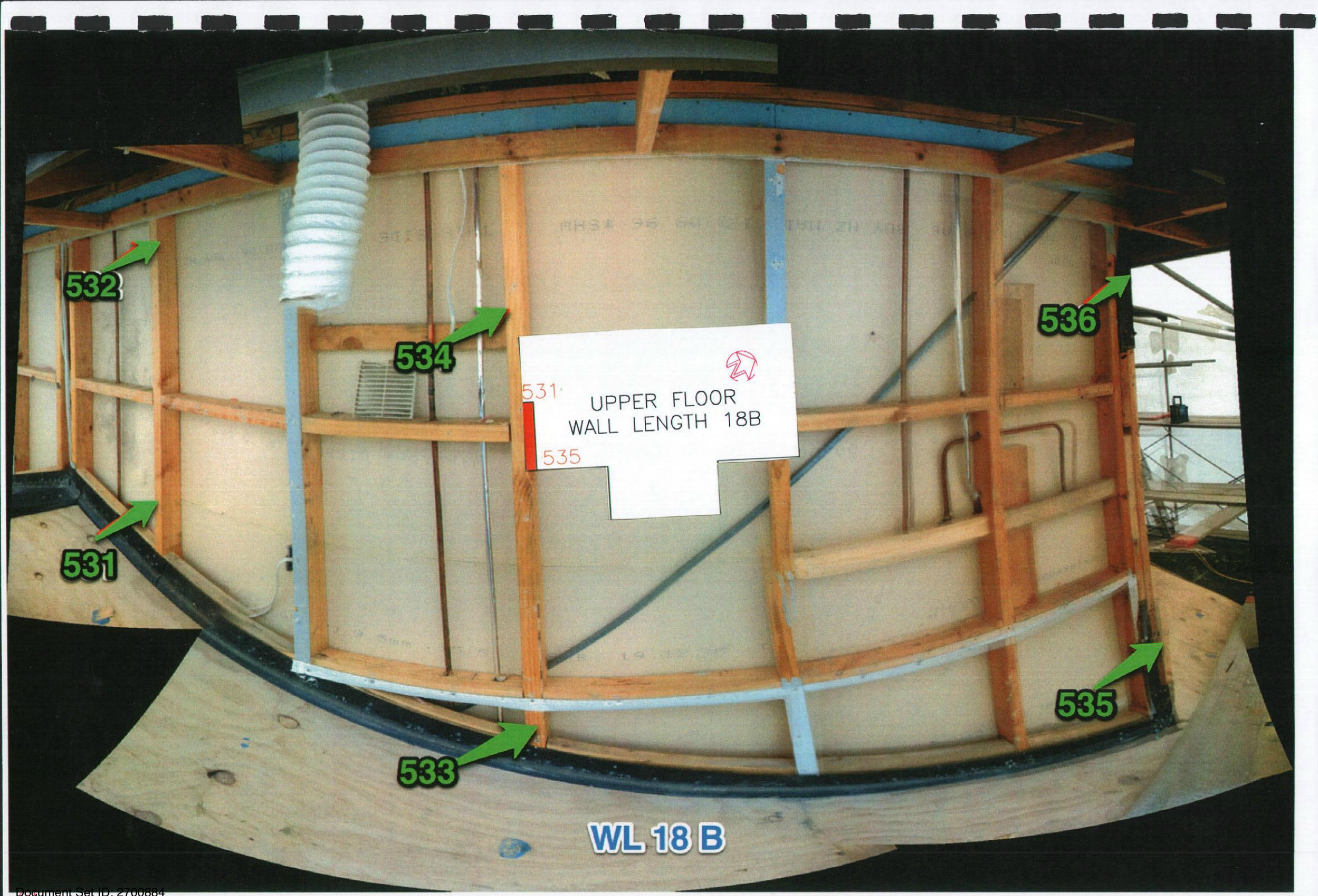
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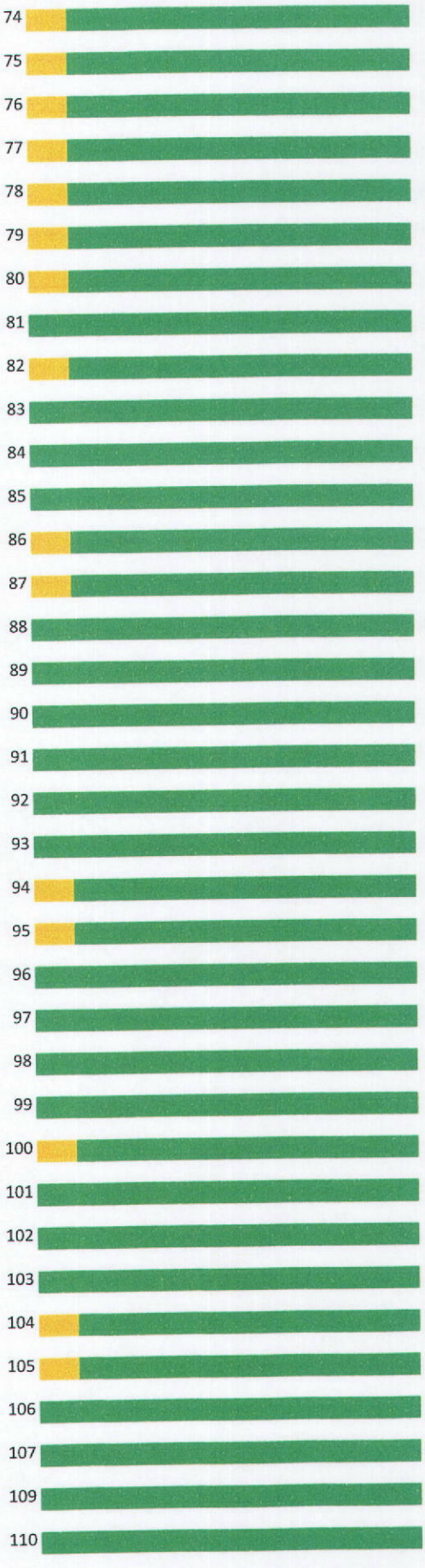
APPENDIX 2 – BAR CHARTS PRODUCED FOR INDIVIDUAL RMD MEASUREMENTS

NOTE – COLOUR CODING USED ON BAR CHARTS

GREEN	Signals that timber is in a typical structural condition for framing of its age and timber treatment level and can be left in place
YELLOW	Shows areas on the RMD measurement that indicate reduced drilling resistance or a timber member that had surface stain due to water ingress but higher resistance levels than expected. Timber can be left in place providing the cause(s) of water ingress are eliminated.
RED	Signals that timber replacement is required based on visual observation, RMD measurement or microscopy analysis.

Document Set ID: 2700884
Version: 1, Version Date: 12/11/2013





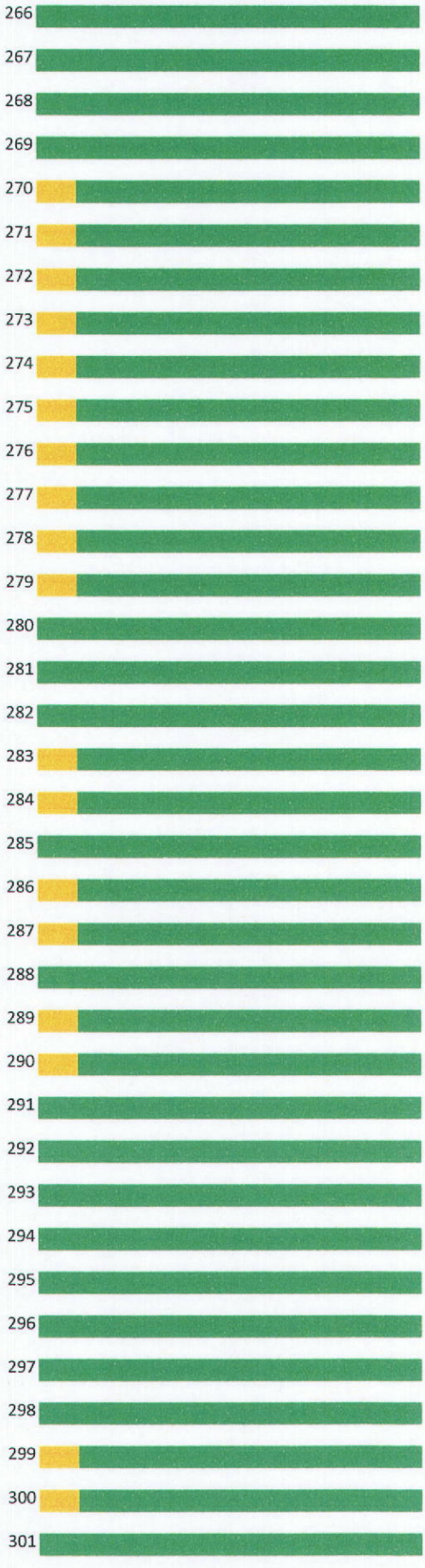
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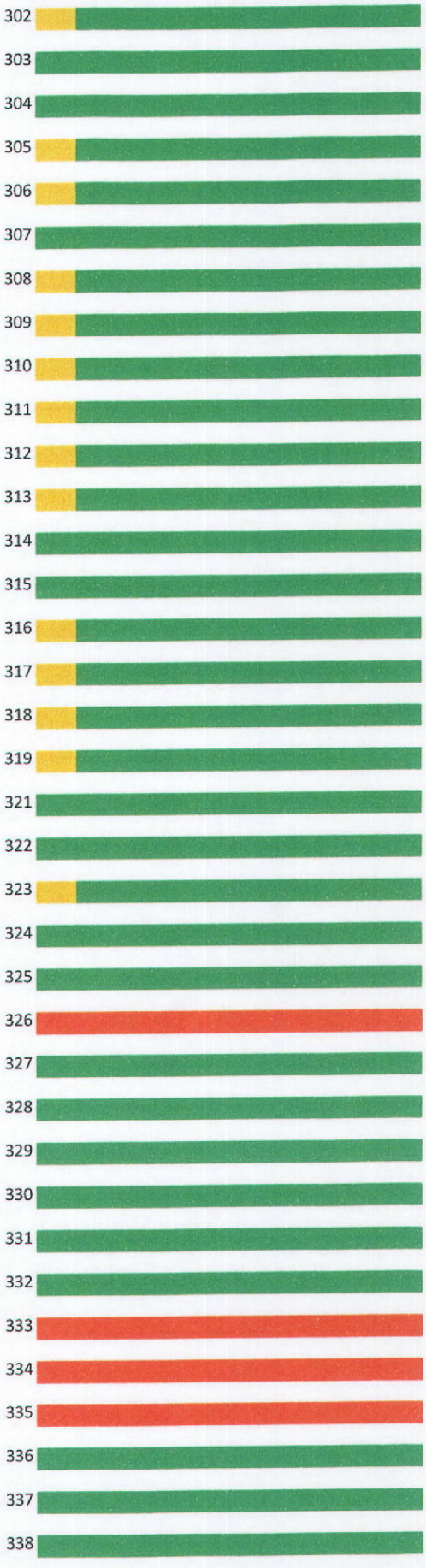


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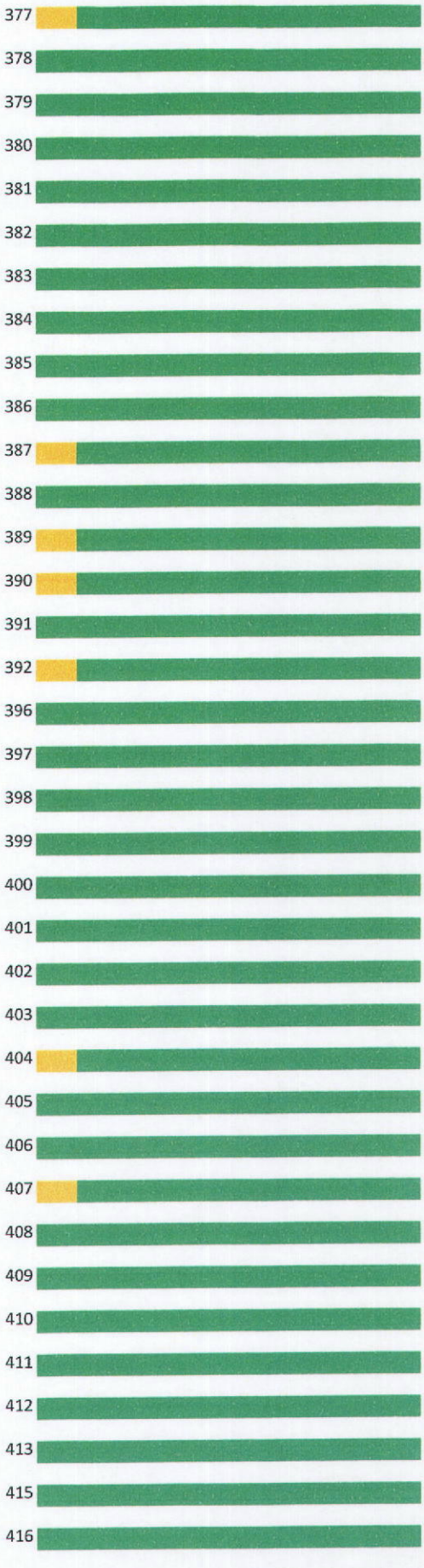
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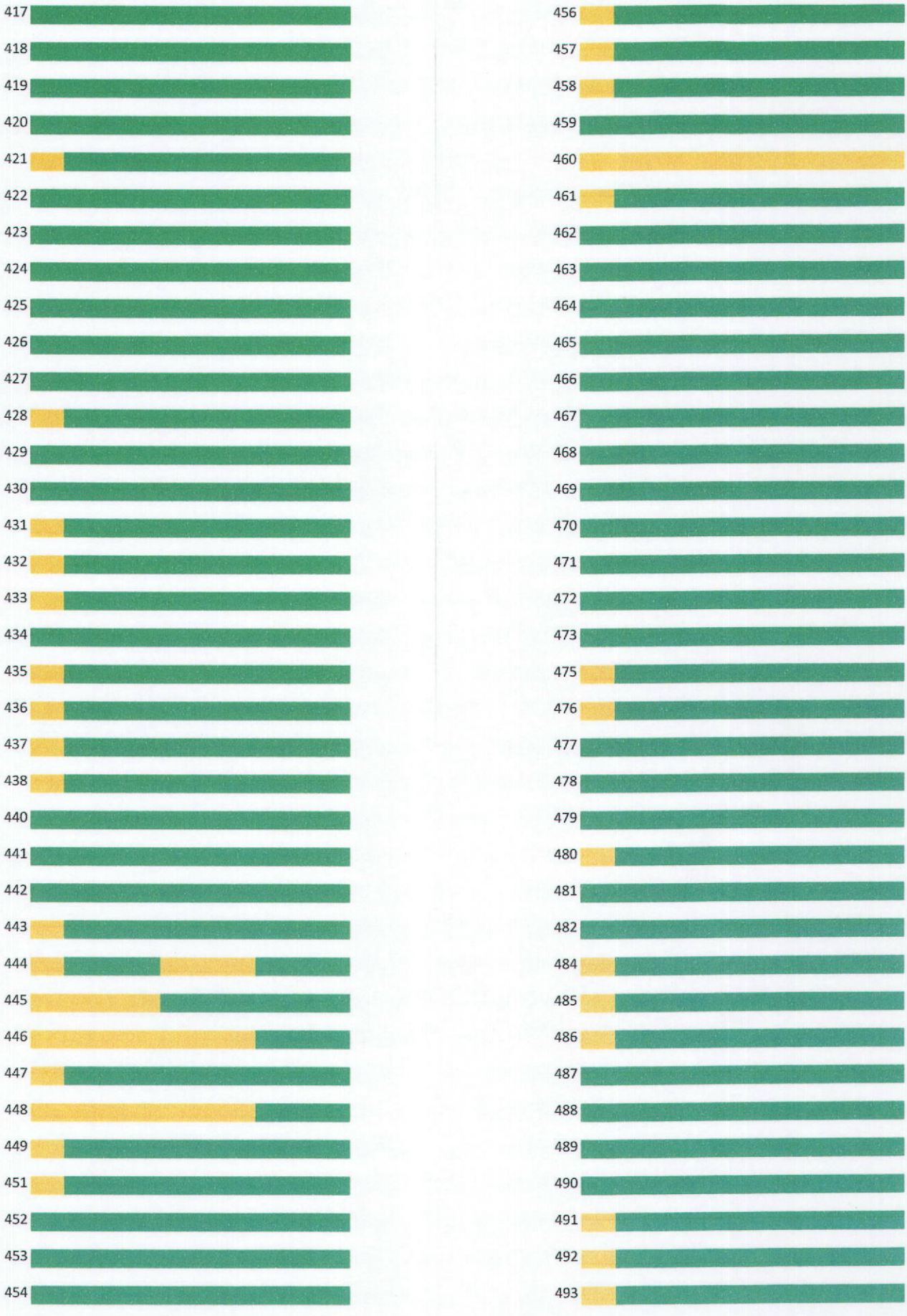


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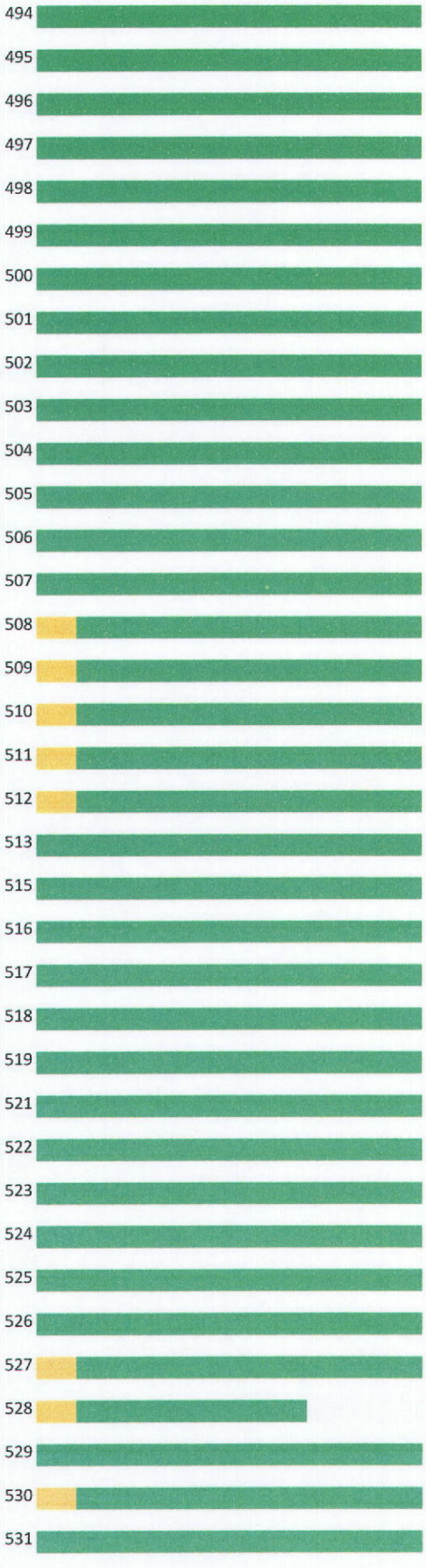




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Version: 1, Version Date: 12/11/2013



Document Set ID: 2700884
Version: 1, Version Date: 12/11/2013



Document Set ID: 2700884
Version: 1, Version Date: 12/11/2013

APPENDIX 3 – BEAGLE CONSULTANCY REPORT

Timber Sample Locations

No.	Second Drill Location	Initial Drill Location
Ts1	552	35
Ts2	553	38
Ts3	554	39
Ts4	555	70
Ts5	556	87
Ts6	557	81
Ts7	558	120
Ts8	559	140
Ts9	560	
Ts10	561	155
Ts11	562	195
Ts12	563	196
Ts13	564	234
Ts14	565	235
Ts15	567	276
Ts16	568/569	319
Ts17	570	319
Ts18	571	540
Ts19	572	333
Ts20	573	344
Ts21	574	357
Ts22	575	370
Ts23	577	392
Ts24	578	543
Ts25	579	546
Ts26	580	550

Document Set ID: 2700884
Version: 1, Version Date: 12/11/2013

BEAGLE CONSULTANCY LTD

Robin Wakeling PhD
BIODETERIORATION CONSULTANT
Wood and Building Materials Specialist

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68 Homewood Avenue
Karori, Wellington 6012
robin@beagleconsult.co.nz



17 June 2012

David Watson
TECHROT LIMITED
48/B Haumoana Street
ROTORUA 3010
david@techrot.co.nz

Dear David,

RE: Wood decay, wood species, fungal, wood preservative and preliminary remediation analysis for 48 Sharp Road, Hamurana, Rotorua

Objective

The Objective of the analysis covered here was to determine the extent of decay and other microbiological activity (e.g. toxigenic mould) present, the type of framing (e.g. wood species and type of preservative treatment) and diagnose its implications for successful remediation.

Executive Summary

I. The fungal morphology, its distribution and the fungal and decay types identified suggested that all of the samples examined had been exposed to moisture conditions that are inconsistent with sound building practice and/or weather-tight design, and that appropriate remediation is needed to correct this. Results were typical of moisture hazard situations where use of H1 boron-treated framing had significantly reduced damage to date but where the moisture hazard present was likely to compound damage eventually. However, if sampling was largely peripheral to more pronounced moisture elevation hazards then more serious decay may already be present in other areas not reported here.

II. Based on colorimetric qualitative spot tests, samples 1-26 were almost certainly treated with boron, e.g., according to Hazard Class 1 of NZS3640:1992 (replaced by H1.2 of NZS3640:2003). Some samples had a gradation of colour intensity across the core that was indicative of boron loss due to leaching during a prolonged exposure to moisture.

Document Set ID: 2700884
Version: 1, Version Date: 12/11/2013

TechRot

Timber Decay Analysis

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Rotorua

THIS DOCUMENT IS NUMBERED 1-69 PAGES

Bernhard Kreber PhD, MSc, LLB
David Watson Dip Arch, Dip C.M.

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Document Number: RDC-417958
Date Registered: 12/11/2013

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Version: 1, Version Date: 12/11/2013

TIMBER DECAY ANALYSIS ON THE EXTERNAL TIMBER FRAMING OF A RESIDENTIAL DWELLING SITED AT 48 SHARP RD, HAMURANA

BY

David Watson and Bernhard Kreber
Techrot Limited, Rotorua

FOR

Tissink Builders Limited, Rotorua

Techrot Limited
48/b Haumoana Street, Rotorua
027 4898 525
bernhard@techrot.co.nz

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Version: 1, Version Date: 12/11/2013

DISCLAIMER

The information provided in this document provides information on the external timber framing condition of the surveyed dwelling as determined on the site survey dates and by laboratory analysis. Therefore, this document provides guidance to Tissink Builders Ltd regarding timber extraction that is required due to loss of structural integrity. While Techrot warrants that the information in this document is true and correct no guarantee is provided regarding the actual timber extraction repair work and site applied timber treatment work. In addition, Techrot will not be liable for any cost, claim or expense by Tissink Builders Ltd or any other party that arise directly or indirectly from water ingress problems at this dwelling..

Document Set ID: 2700879
Version: 1, Version Date: 12/11/2013

I EXECUTIVE SUMMARY

This report provides the results of an independent and professional analysis regarding the external timber framing condition of a dwelling sited at 48 Sharp Road, Hamurana.

On site and laboratory analysis demonstrated that removal of timber framing lengths was found to be warranted on some ground floor elevations (refer to wall length photographs 9, 10A, 10B, 10D and 11).

The majority of the external timber framing can be left in place as it was found in a typical structural condition for framing of its age and timber treatment level (see Beagle Consultancy Report for further explanations regarding timber condition and treatment).

Traces of toxic moulds were found by Beagle Consultancy on some test samples (refer to the Beagle Consultancy report for further explanations regarding toxic moulds).

II INTRODUCTION

Techrot Ltd (Techrot), a specialist timber rot works contractor, was appointed by Tissink Builders Ltd (Tissink) to carry out an investigation on the timber framing condition of a 2 storey dwelling. The brief for this investigation was to provide Tissink with information as to whether external timber framing can be retained or requires replacement due to loss of structural capability.

III INFORMATION RELATING TO THIS INVESTIGATION

ITEMS	DETAILS
Property Address	48 Sharp Road, Hamurana, Rotorua
Construction History	Approximate. 15 years old*
Property Owner	Michael J Reid
Dates of site visit by Techrot	7, 8, 9, 10, 11 and 12 of June 2012#
On-site data acquisition & supervision	David B Watson, Techrot Limited
Off-site data analysis	D B Watson & Bernhard Kreber, Techrot Ltd$
Timber sample microscopy	Beagle Consultancy Ltd
Date of analysis completion	30 June 2012

* = This information was provided by Roland Tissink of Tissink Builders Ltd.
# = On every occasion apart from 9th and 10th of June tradesmen contracted to Tissink were present on site.
$ = Refer to Appendix 5 and 6 for an outline of the credentials of D B Watson and B Kreber.

Document Set ID: 2700879
Version: 1, Version Date: 12/11/2013

IV METHODOLGY

1 Equipment used

To carry out on-site data acquisition Techrot Ltd used a resistance micro drill, specialized computer software, hand tools and a digital camera.

2 Visual examination

An initial inspection was carried out on the exposed external wall timber framing on both ground and upper floor level. Timber framing, which showed obvious signs of decay due to water ingress was registered, quantified and specified for removal because there was clear loss of structural capability.

3 Resistance micro drilling (RMD)

RMD measurements were then carried out on every wall length of the dwelling but not in these areas where visual inspection had clearly shown that removal of timber framing was required. The areas of RMD measurements were, in the main, focused around historically probable water ingress points with relation to the cladding type and included window and door penetrations, base plates, corners and wall heads. At each individual RMD location a measurement was obtained through the entire thickness of the timber framing (e.g. 90 mm). A reference number was then assigned to each RMD measurement and written on the corresponding elevation photograph.

4 Laboratory analysis

After the initial on-site data acquisition (around 500 RMD) a detailed laboratory analysis of all RDM measurements was carried by Techrot to establish both micro patterns (drill resistance) across the depth of each timber member and in different locations of each timber framing length. In addition, RMD measurements were analysed for macro patterns for each elevation and the possible consequences of both orientation and exposure.

5 Test samples for microscopy

The locations that were chosen for taking timber samples for microscopy were based on Techrot's detailed laboratory analysis of all RMD measurements and on visual examinations. This means that these locations were established with accuracy to provide the maximum understanding of the condition of the external wall framing of the dwelling as a whole; therefore they included areas:

i) that were in the close vicinity of visual timber decay; and
ii) where timber showed discolourations due to water ingress; and
iii) RMD measurements were unable to establish with certainty the structural condition of the timber.

After deciding on 26 locations, increment cores (5 mm in diameter) were removed from these areas. These cores were then couriered to Beagle Consultancy Ltd for microscopy analysis. In addition, a further 26 RMD measurements were obtained in the vicinity of each core sample taken for comparative laboratory analysis by Techrot.

Document Set ID: 2700879
Version: 1, Version Date: 12/11/2013

6 Decision on timber removal.

Apart from areas where wood decay was patently obvious either visually or through RMD measurements, Techrot used the conclusions reached by Beagle Consultancy as foundation to specify removal of particular timber framing length.

V RESULTS

A detailed analysis of the timber framing condition demonstrated that removal of timber framing lengths was required on wall length 9, 10A, 10B, 10D and 11. All results are concisely and clearly shown on the elevation photographs (see Appendix 1). In addition bar charts representing the condition across the thickness of each individual timber member based on the actual RMD measurements are included in Appendix 2. The Beagle Consultancy report is included in Appendix 3.

We confirm that as far as can be reasonably ascertained the information contained in this document, which is provided by TECHROT LTD, is true and correct.

Signed at Rotorua on 2nd July 2012

David Watson
Techrot Limited

Bernhard Kreber
Techrot Limited

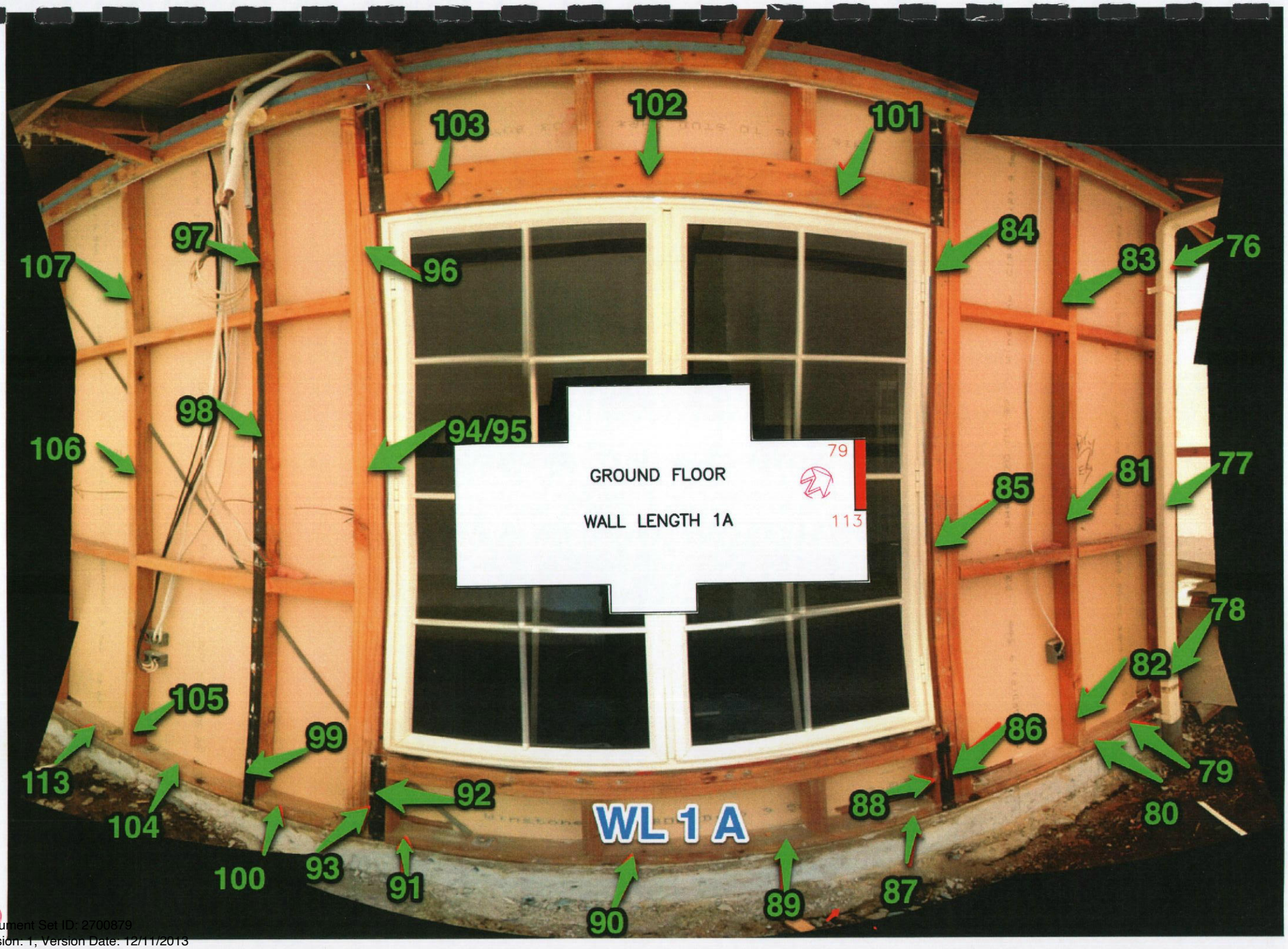
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APPENDIX 1 – ELEVATION PHOTOGRAPHS

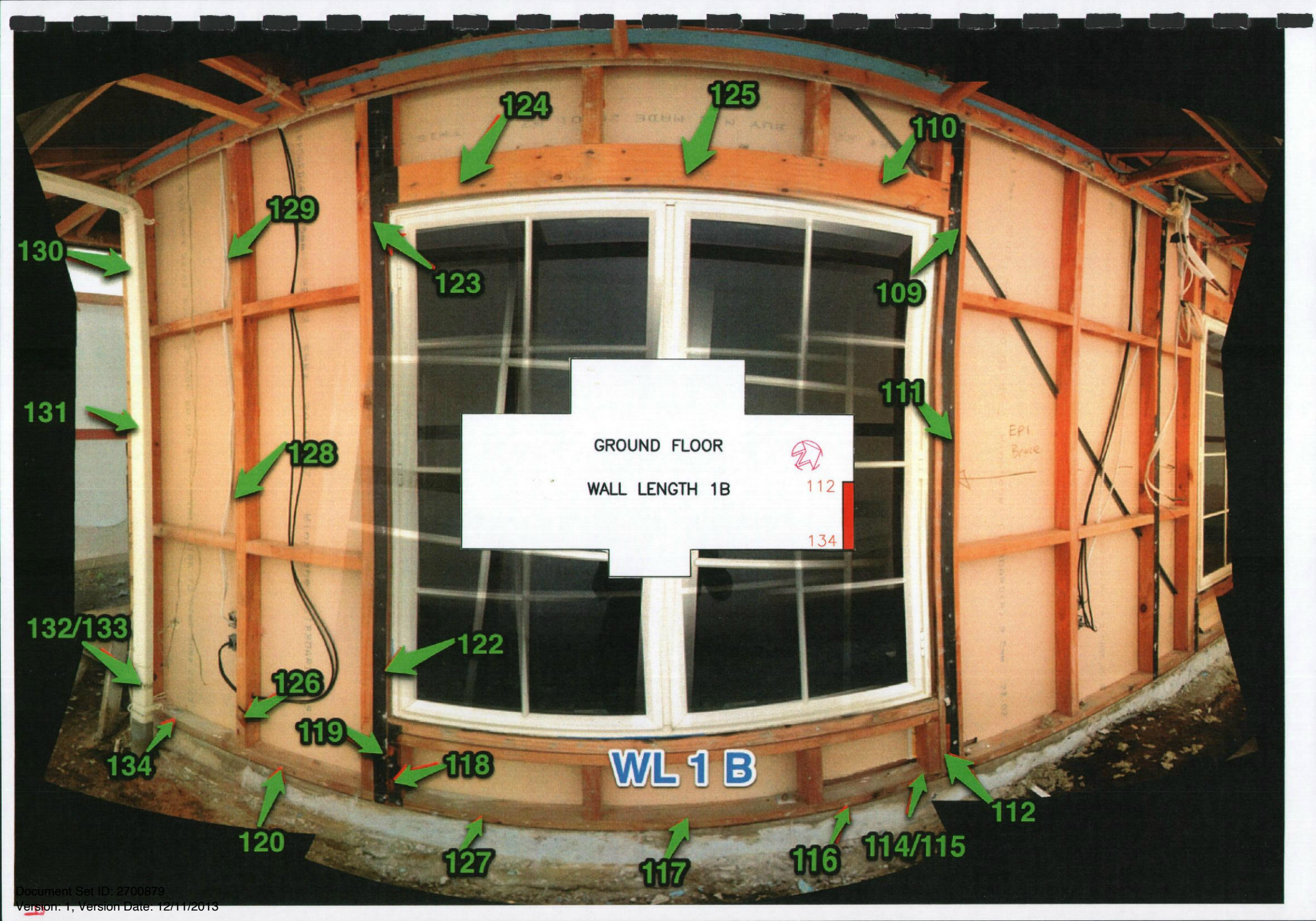
NOTE – COLOUR CODING USED ON ELEVATION PHOTOGRAPHS

GREEN	Signals that timber is in a typical structural condition for framing of its age and timber treatment level and can be left in place
RED	Signals that timber replacement is required based on visual observation, RMD measurement or microscopy analysis.

Document Set ID: 2700879
Version: 1, Version Date: 12/11/2013



Document Set ID: 2700879
Version: 1, Version Date: 12/11/2013



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Version: 1, Version Date: 12/11/2013



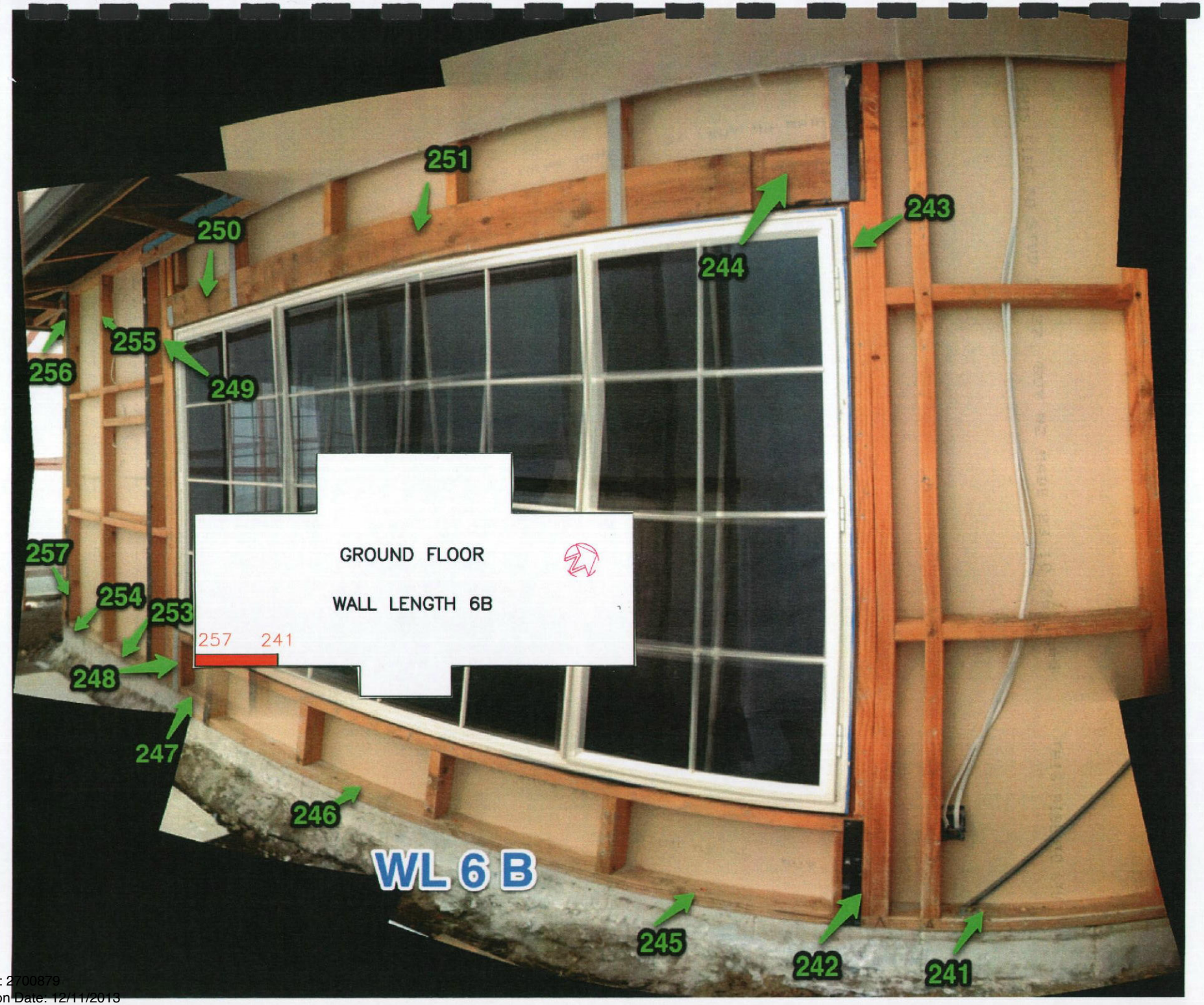
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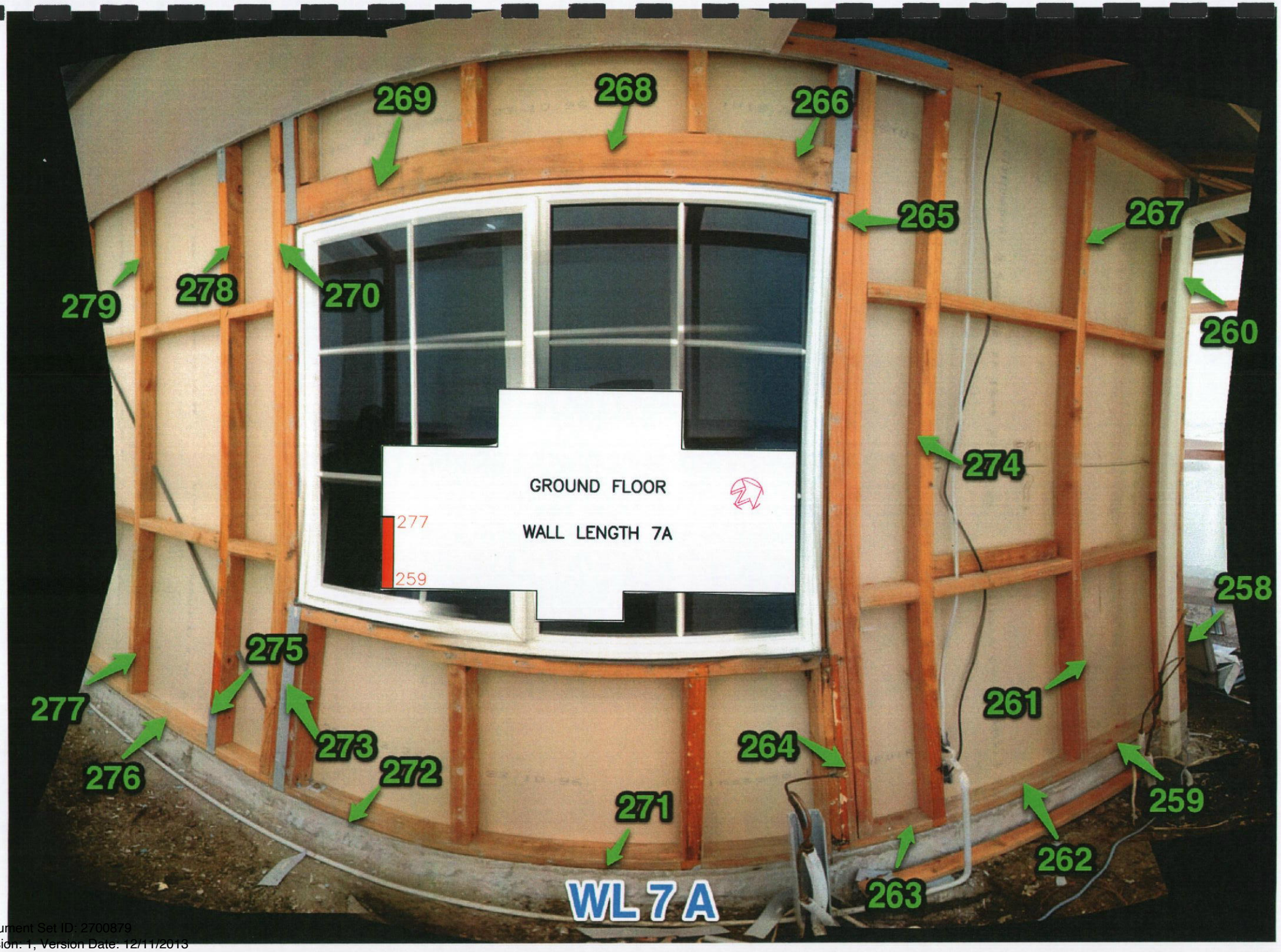
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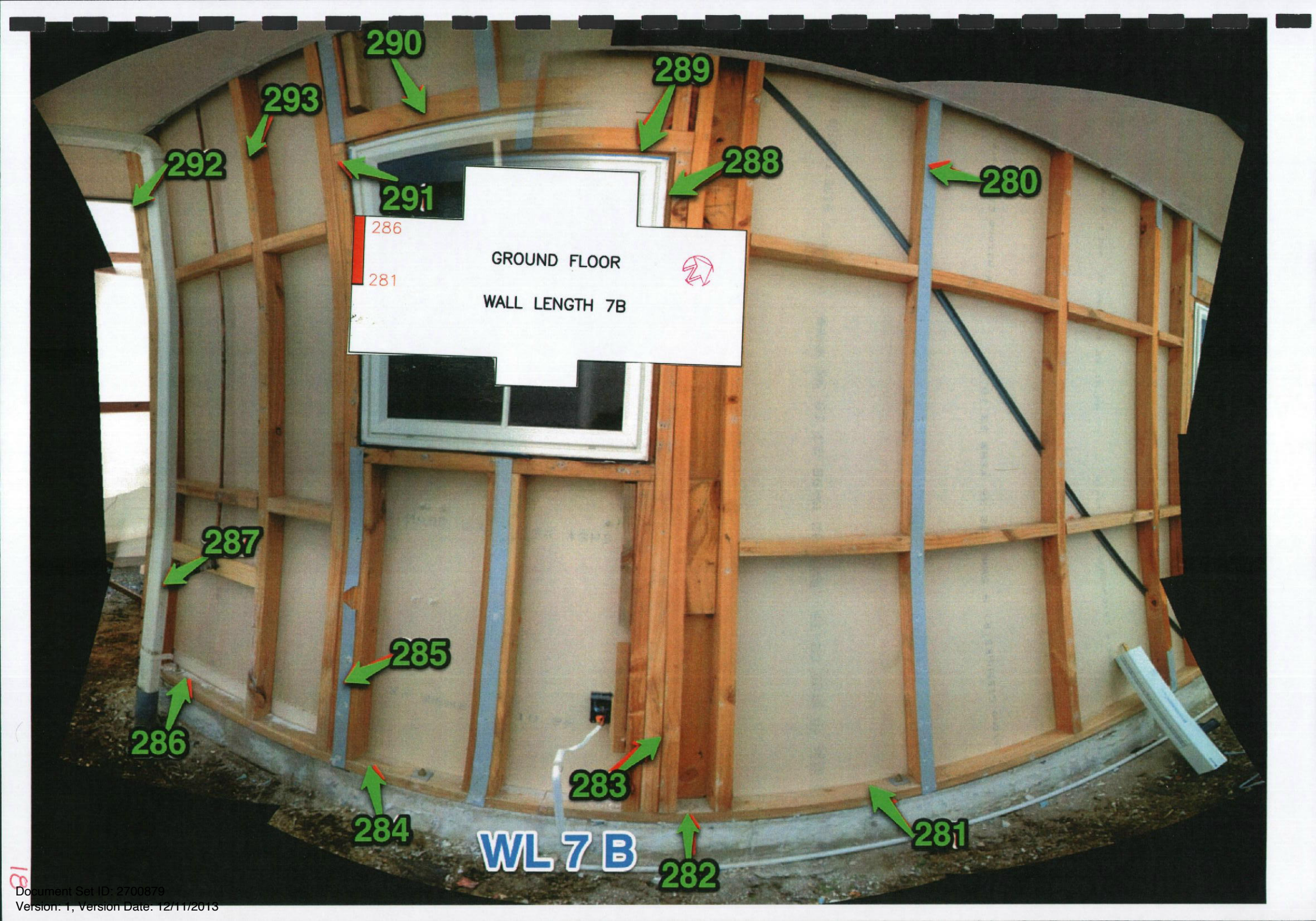
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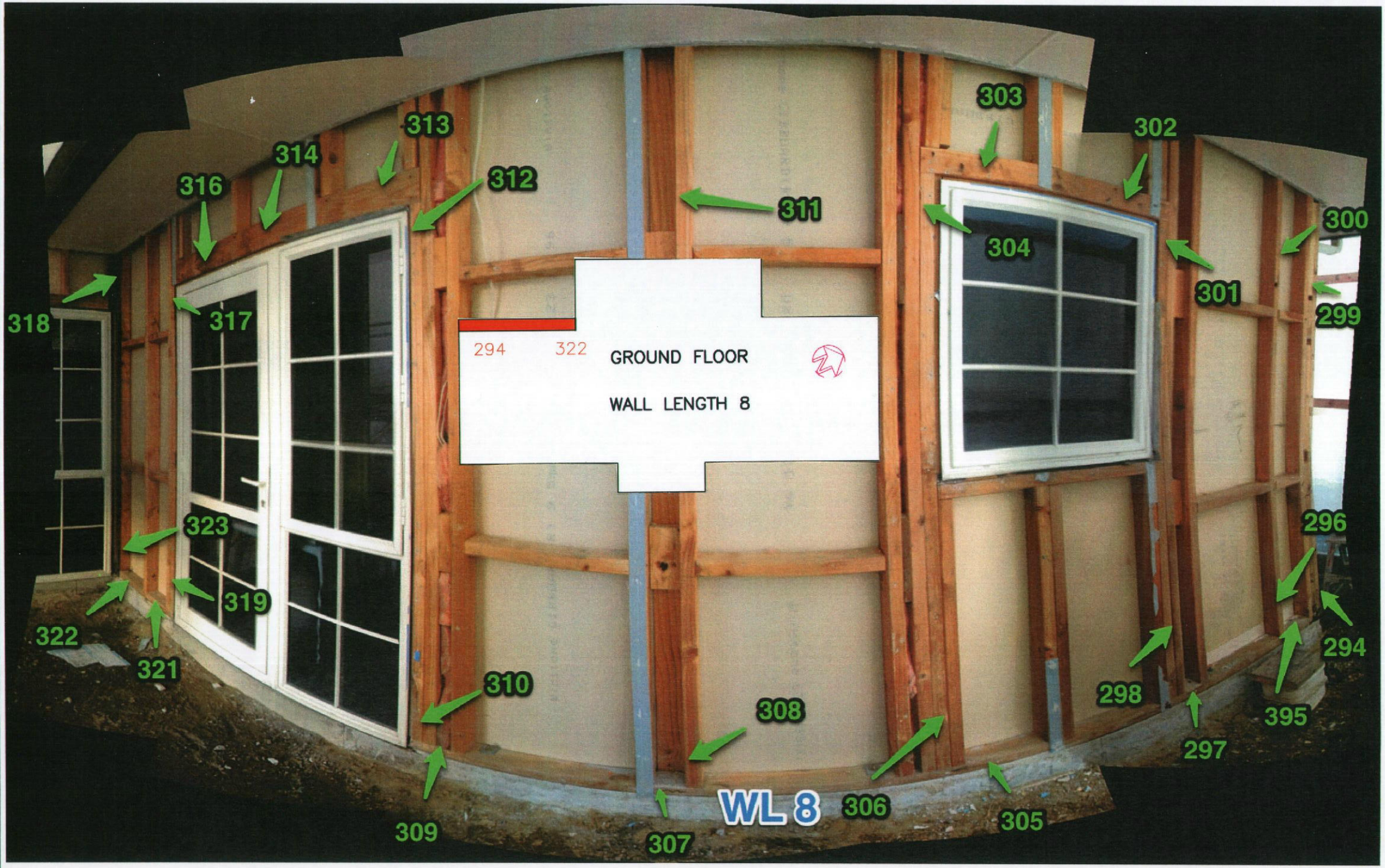
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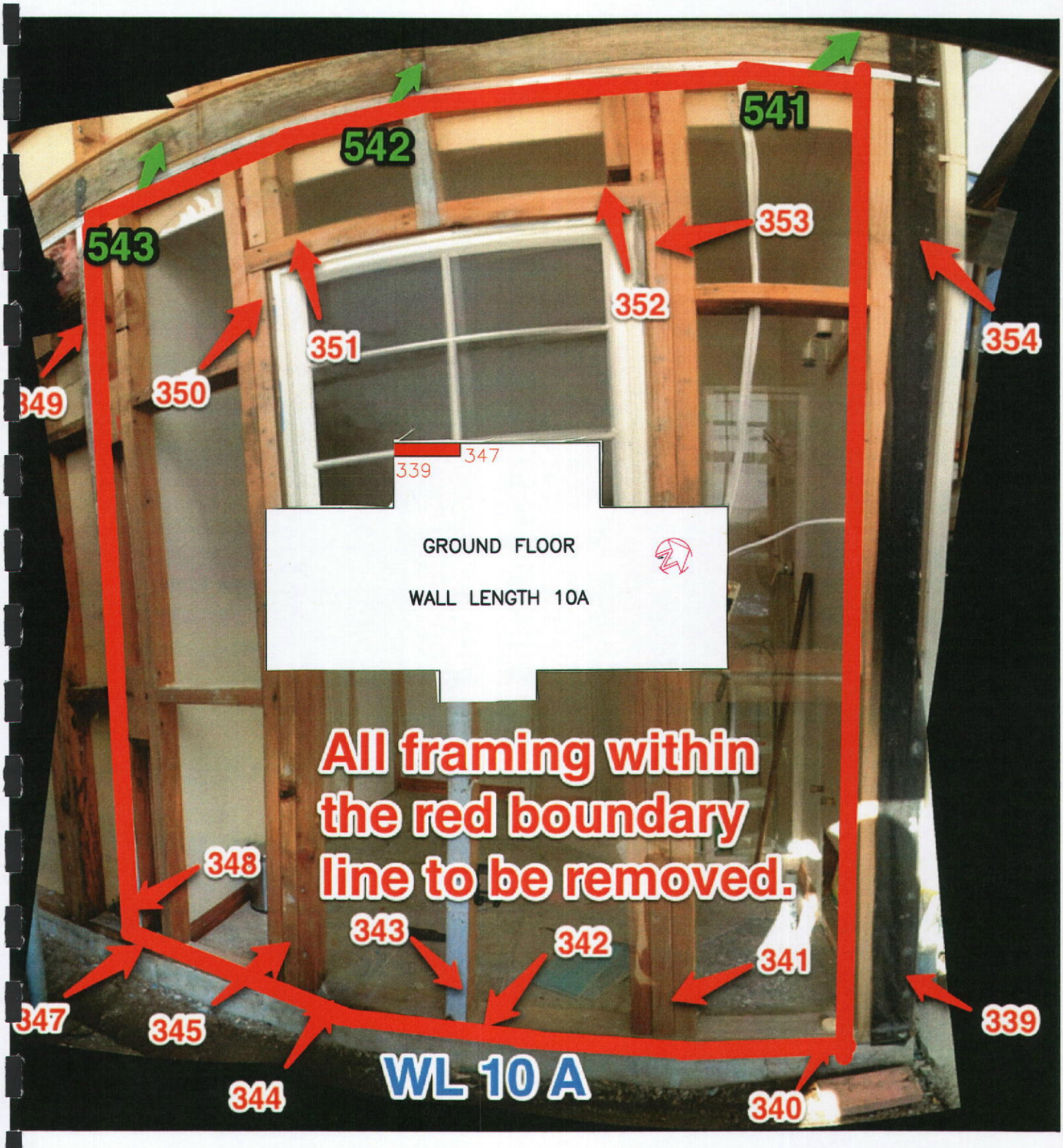
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robin@beagleconsult.co.nz



8 October 2012

Tissink Builders Ltd
11 Sharp Road
RD2 Rotorua
tissbuild@xtra.co.nz

Dear Mr Reid,

RE: Wood decay, wood species, fungal, wood preservative and preliminary remediation analysis for 48 Sharp Road, Rotorua

Objective

The Objective of the analysis covered here was to determine the extent of decay and other microbiological activity (e.g. toxigenic mould) present, the type of framing (e.g. wood species and type of preservative treatment) and diagnose its implications for successful remediation.

Executive Summary

I. The fungal morphology, its distribution and the fungal and decay types identified suggested that all of the samples examined had been exposed to moisture conditions that are inconsistent with sound building practice and/or weather-tight design, and that appropriate remediation is needed to correct this.

II. Colorimetric qualitative preservative analysis showed that wood samples 1, 2 and 4-6 were treated with boron, e.g., wood was most likely treated according to Hazard Class 1 of NZS3640:1992 (replaced by H1.2 of NZS3640:2003). Sample 3 gave a positive colour reaction indicative of tin, i.e., wood was almost certainly treated with a tributyl tin preservative, e.g., according to Hazard Class 3 of MP3640:1992 or H3.1 of NZS3640:2003.

III. Framing samples 1-6 contained varying degrees fungal growths, typically prolific and including recent activity but no structurally significant decay was detected (traces of highly superficial decay in samples 2 and 4). Such wood is typically found in moisture compromised wall cavities and other locations, and/or on the periphery of more seriously affected framing sometimes in need of replacement. H1 boron-treated framing in a similar condition can typically be left in situ, provided that other

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provisos are applied, although global remediation practice often requires replacement of a proportion of wood in this condition – see points 2 and 3 of the discussion.

IV. Results showed that at least some of samples 1-6 been exposed to conditions close to those conducive to serious decay, e.g., serious decay nearby is possible, and future serious decay is likely, e.g., in the absence of suitable remediation. Presence of boron and tributyl tin wood preservative had almost certainly prevented serious decay in some cases, i.e., any similarly affected less durable materials, e.g., some types of cladding, untreated wood, etc., may contain decay or other types of water-damage. Moisture hazards often compound suddenly, e.g., the initial 5-10 years of a buildings life is often misleading as a guide to the rate of future water damage which may accelerate suddenly.

V. The toxigenic mould *Stachybotrys* was detected – see point 15 of the appendix.

VI. Presence of prolific fungal growths and/or decay typically has important implications for the building in general. It is important to establish the limits of fungal infection and/or decay and establish the causes, and apply appropriate remediation – see main body of text. Other remediation considerations may be important depending on the local conditions.

Analysis Summary Table *(Wood samples were 5 mm diameter framing cores approximately 70-90 mm deep, and as described in your letter dated 2 October 2012)*

No.	Decay & Fungal Analysis	Preliminary Replacement Guide*	Treat-ment#	Toxigenic Mould$
1	Essentially the same as sample 3 but much less dense fungi with some secondary mould species variation	No†	Boron, e.g., H1	None detected
2	Soft rot decay in the outer 1-2 mm. Otherwise essentially the same as sample 3 with some secondary mould species variation. Very low numbers of spores of *Stachybotrys*	No†	Boron, e.g., H1	Trace
3	**No established decay micromorphology and no incipient brown rot detected.** Very dense fungal growths predominantly typical of mould fungi, yeasts, sapstain and/or soft rot fungi. Fungal growths across the entire depth. Fungal morphology was in various conditions suggestive of growth over a prolonged period including morphology typical of recent activity (yeasts and hyphae with homogeneous cytoplasm, etc.,). Moulds: *Cladosporium, Penicillium, Torula, Aureobasidium,* etc.	No†	Tin, e.g., H3.1	None detected
4	Traces of soft rot decay in the outer 1mm. Otherwise essentially the same as sample 3 with some secondary mould species variation	No†	Boron, e.g., H1	None detected
5	Essentially the same as sample 3 with some secondary mould species variation	No†	Boron, e.g., H1	Trace
6	Essentially the same as sample 3 with some secondary mould species variation	No†	Boron, e.g., H1	None detected

Table Key and related definitions intended to give an indication of the scale (1 - 4) of risk etc.

Replacement*: ***preliminary guide (replacement decisions require consideration of site factors and the sampling rationale applied since this may alter the preliminary guide e.g. sometimes a broad-brush replacement approach requires***

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11 JUN 2013
B.C. No. 69120

Document Set ID: 2700876
Version: 1, Version Date: 12/11/2013

removal of a mixture of decayed and non-decayed wood to ensure removal of a critical mass of infected and/or decayed wood, and in other well understood situations small pockets of decay can be left in situ – see main body of report).

2. **No**†: **Qualified no. Lower immediate risk but potentially serious moisture hazard most likely present: this is likely to compound well within the life of the building.** No evidence of major structural damage and therefore **replacement is probably unnecessary**, provided that samples are sufficiently representative and that such wood is not interspersed with more seriously affected framing. Presence of recent fungal growth is a significant concern in general terms because it denotes occurrence of unacceptable moisture elevation that may be worse nearby i.e. there is a possibility of decay nearby and/or its imminent arrival, particularly if any untreated framing is present. This is a particular concern for untreated perishable radiata pine framing. Removal of a proportion of framing in this condition is sometimes a necessary component of the required remediation if it is amongst more seriously affected framing as is often the case and it may highlight a need for **further investigation e.g. to determine the limits of moisture affected wood if not already known – see discussion.**

3. Probably††: **Intermediate risk**. Untreated wood with incipient brown rot decay and/or early soft rot decay typically comes from framing with more serious decay very close by and therefore as a general rule of thumb replacement is typically necessary for untreated framing i.e. under New Zealand leaky building conditions incipient decay typically occurs at the periphery of wood with an advancing front of established and structurally damaging decay whereas discrete pockets of incipient decay that might arise from spore arrival is less common. **This diagnosis also often applies to small discrete decay pockets in H1 boron treated framing although typically there is more latitude to leave such wood in place (e.g. replacement or further investigation is a common recommendation in such cases).**

4. Yes: **Higher risk.** According to strict remediation practice replacement is necessary except in unusual circumstances e.g. where removal poses drastic problems beyond normal remediation challenges and where an exceptional level of detail of the situation has been established which can enable consideration of an integrated non-replacement approach e.g. where it can be unequivocally shown that decay is highly localised and poses no structural integrity loss problems or ongoing decay problems. Where there is a risk of significant structural loss due to decay it is sometimes possible to compensate without framing removal using bracing techniques with additional framing.)

#Treatment: based on colorimetric qualitative spot test analysis for boron, copper and other metals (e.g. zinc and tin) – see points vi – ix of Appendix. $: refer below and point 15 of the appendix.

Microscopic Analysis

Wood sections (25 – 100 micrometers thick) were cut using a microtome or razor blade, mounted in glycerol and examined under a compound light microscope using polarised light and bright field illumination. Approximately 10 - 20 sections from approximately 3 - 10 positions across the depth at each of approximately 3 – 10 lateral positions were examined for each wood sample. All sections were stained with lactophenol aniline blue dye prior to examination.

- Key observations are given in the summary table.
- All wood samples were tentatively identified as radiata pine. (*Perishable medium density soft wood which is the dominant structural wood species used in New Zealand. A major advantage of this species is that it is easy to treat with preservative using factory processes thereby making it highly durable. However, if not treated prior to construction then it remains highly susceptible to biodeterioration damage. The effectiveness of remedial preservative treatment varies widely and is not a reliable substitute for NZS3640 compliant framing used in accordance with NZS3602:2003. In some situations it acts as a very valuable additional "top-up" to other more important remediation practice, when applied*

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11 JUN 2013
B.C. No. 69120

Document Set ID: 2700876
Version: 1, Version Date: 12/11/2013

correctly – see points 10 and 11 of the appendix. Remedial preservative treatment is typically a robust rule of thumb but unfortunately it is sometimes used as a poorly conceived substitute for other robust remediation strategy that often includes inadequate exposure and replacement of framing and other poor treatment practice. Leaky building damage can be seriously compounded by the dangers associated with such inappropriate remedial preservative treatment).

- Soft rot was similar to Corbett's type 1 cavitation and type 2 erosion.
- The range of conditions of hyphae in the majority of samples was consistent with multiple growth phases over a prolonged period most likely of several years, including recent activity in most samples.
- The toxigenic mould *Stachybotrys* was detected. This mould is very common in leaky buildings – see point 15 of the appendix (presence on wood is rare but very common on paper (wood pulp) containing material like Gib, fibre cement and building wrap and therefore low incidence on wood samples can be misleading as a guide to likelihood of the scale of incidence in a building).

Wood preservative analysis

i. **Using colorimetric qualitative spot tests, samples 1, 2 and 4-6 gave a strong positive colour reaction for boron, e.g., wood was most likely treated according to Hazard Class 1 of NZS3640:1992 (replaced by H1.2 of NZS3640:2003). Sample 3 gave a positive colour reaction indicative of tin, i.e., wood was almost certainly treated with a tributyl tin preservative, e.g., according to Hazard Class 3 of MP3640:1992 or H3.1 of NZS3640:2003.**

ii. *Spot tests typically do not detect the majority of the more modern light organic solvent preservatives (LOSP) e.g. the fungicide 3- iodopropynylbutylcarbamate (IPBC) and the insecticide permethrin, used in combination for H1.2 framing (since approximately late 2003 - March 2005, in accordance with NZS3640:2003 and NZS3602:2003, and slightly earlier as H1-plus (probably 2002 as a non-obligatory treatment), or substantially earlier in the case of permethrin used alone for H1 framing in accordance with MP3640:1992). The spot test used for tin is not wholly reliable for small samples or where retention is low. An H3.1 treatment based on tebuconazole, propiconazole and permethrin has been available since 2002 although it has only been used in New Zealand in substantial amounts in the last 2 years (has largely replaced tributyl tin (naphthenate and oxide) today). Triazoles cannot be tested for using spot tests.*

iii. Quantitative preservative analysis was not performed in this instance because it was not of immediate value to the diagnosis. However, in some situations of particular scrutiny it is advantageous to have quantitative analytical data, for example if compliance with the retention requirements of NZS3640:2003 is an issue.

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Version: 1, Version Date: 12/11/2013

iv. **See Appendix regarding background information.**

Discussion and Conclusions

1. **Framing samples 1-6 contained varying degrees of fungal growths, typically prolific, some of it recently active, but no structurally significant decay was detected (superficial soft rot decay in samples 2 and 4). The bulk of fungal morphology was typical of mould fungi, sapstain fungi and/or soft rot fungi, and yeasts.** Such wood is typically found in moisture compromised wall cavities and other locations, and/or on the periphery of more seriously affected framing sometimes in need of replacement.

2. **H1 boron-treated framing in a similar condition can typically be left in situ provided that the samples were representative of the worst case in the areas sampled, and provided that this does not interfere with any necessary global replacement strategy, and on the basis that all interior wood is dried to below 18% moisture content and ongoing moisture contents are consistent with sound building practice.** Where practical, in-situ preservative treatment is typically recommended for all exposed and/or infected wood – see points 10 and 11.

3. **There is an important caveat to the diagnosis for samples 1-6, this being that serious decay is often present nearby wood in this condition. Results suggested that at least some of these samples had come very close to conditions conducive to serious decay, e.g., decay nearby or future decay is not unlikely. Presence of boron and tributyl tin wood preservative may have prevented serious decay in some cases, i.e., any similarly affected less durable materials, e.g., some types of cladding, untreated wood, etc., may contain decay or other types of water-damage. Moisture hazards often compound suddenly, i.e., the initial 5-10 years of the buildings life is often misleading as a guide to the rate of future water-damage which may accelerate suddenly.** It is vital to establish the limits and causes of affected wood which may require extensive removal of cladding and/or other building materials and/or iterative analysis. It is sometimes necessary to remove a proportion of sound wood along with substantially decayed wood during remediation, to ensure that a critical mass of compromised wood is removed or to achieve the most cost effective global replacement approach.

4. Based on observations from New Zealand leaky buildings the condition of samples **2 and 4** was consistent with exposure to at least 2-5 years of elevated moisture conducive to decay, most likely superficial or on the periphery of more seriously affected wood (moisture levels typically above 30%) although a longer period, e.g., of more highly intermittent moisture elevation, is also likely. *Decay typically develops in untreated perishable framing within the first year after enclosure for many types of commonly occurring weathertightness deficiencies.* Samples **1, 3, 5 and 6** had been exposed to moisture elevation conducive to prolific fungal growths

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and possibly also at least marginal, e.g., highly intermittent, moisture conducive to decay, in at least some cases, but not yet deep structurally damaging decay, at least not for treated wood (serious decay may be present nearby) most likely for several years. *More refined diagnosis of the duration of decay damage and its commencement is often possible with more site-specific information, e.g., knowledge of the location of the samples is relation to weathertightness deficiencies, although the majority of samples did not have sufficient decay for definitive diagnosis.*

Fungal growth can occur over the range 16 – 30% (and of course at higher moisture contents where it usually occurs with decay in perishable framing) and possibly at even lower values if humidity is very high and/or transient condensation is an issue. Fungal decay requires free moisture, as occurs at moisture contents above the fibre saturation point near 29 - 30%. However, 30% is not a reliable lower limit for decay occurrence and some decay fungi can move into wood and initiate decay at considerably lower moisture content levels.

The only reliable and indisputable facts with respect to wood moisture content effects on decay within the context of leaky building diagnostics, are that decay is inevitable above the fibre saturation point of approximately 30% and that values below this are unreliable as a guide to possible problems (partly due to the transient nature of moisture elevation and the limitations of detection techniques). However, understanding the significance of different moisture contents over the range of the lowest emc values encountered in wood in buildings (around 6% for furniture in a dry room) to the highest (about 22 – 25% such as might be found in a sauna), and for other moisture values of 25 – 30%, can be useful but is not straightforward and confusion often arises – see points 13 and 14 of the appendix. If in doubt, return to the rule of thumb stated here and then apply the *golden rule of thumb* referred to in point 6.

5. **The toxigenic mould *Stachybotrys* was detected. This fungus is very common in leaky buildings. It may be necessary to take precautions to prevent or minimise contact with occupants and others (e.g. remediation workers) – see point 15 of the appendix.**

6. Whilst the principles of remediation science are straight forward the causes of decay in buildings are multivariate and the necessary remediation required varies significantly between sites. Diagnosis of the required remediation requires significant remediation knowledge and its on-site application. Several sampling iterations and analysis are sometimes necessary before an appropriate diagnosis and remedial response can be identified. *Always bear in mind the golden rule: keep looking until a very high degree of confidence exists that all causes of moisture elevation have been accounted for, and the limits of infection and decay have been identified and dealt with appropriately (particularly important for untreated perishable framing). Missing small areas of infection and decay is inevitable in some situations but in the*

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Version: 1, Version Date: 12/11/2013

great majority of cases this is not a problem provided that the golden search rule is diligently applied and provided that the attendant rules of thumb of remediation practice are not compromised along the way to final remediation.

Appendix – Important Background Information

Wood preservative analysis

iv. The limit of detection of the boron spot test used was close to 0.02% BAE, similar to the detection limit for routinely employed quantitative analysis (0.01 – 0.04% depending on condition and size of sample). Spot tests can detect boron in wood with undetectable mean cross-sectional retentions due to the dilution steps carried out during wood preparation prior to analysis.

v. Minimum retentions needed to control decay fungi vary and typically fall within the range 0.1 – 0.5% (5 – 25 times the detection limit). The central 1/9 (11% of the wood volume) has traditionally required a minimum core retention of 0.04 for insect borer and 0.1 for decay fungi, this being a traditional check that adequate penetration was achieved it being correctly assumed that much higher retentions reside nearby in the other 89% of the wood volume. Unfortunately the core retention requirement was left out of H1.2 in 2003, a somewhat controversial omission (it is requirement for H1.1 wet frame).

vi. Typically, buildings constructed prior to the introduction of the new H1.2 boron retention minimum requirements in 2003, contain external framing that does not meet the retention requirements of NZS3640:2003. Observations from approximately 1000 buildings (mostly aged 4 – 10 years) have shown that boron retentions of 0.05 – 0.3% w/w BAE are common although retentions as high 1.5% have been recorded. It is highly unlikely that any house built prior to 2003 contains external wall framing with a **mean** boron retention of 0.4% or above and on this basis it is reasonable to recommend that all framing exposed during remediation is treated.

vii. Rarely, depending on the age of the framing and other factors, the H1 and H1.2 alternative treatments permethrin or IPBC were used for framing. Permethrin is an insecticide only and IPBC is a fungicide only. Since NZS3640:2003 was introduced IPBC has been used with permethrin as an LOSP H1.2 treatment (blue coded framing). However, IPBC was also used in "H1-plus" framing for approximately 18 months prior to 2003 and permethrin only was used as an H1 treatment (insecticide only) according to NZS3640:1992 i.e. since 1992.

viii. There are no spot tests available for IPBC and permethrin and the quantitative analysis necessary is relatively costly, time consuming (typically a 14 day turn around) and typically unnecessary since forthcoming information usually shows that these treatments were not relevant i.e. by a process of elimination.

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Version: 1, Version Date: 12/11/2013

ix. Unlike the more commonly used H1 treatment boron, permethrin is not a fungicide and is therefore of no durability value in the context of leaky buildings and fungal decay. Boron adds resistants to decay in some low to moderate decay hazard situations found in leaky wall cavities but this effect is dependent on boron retention which varies greatly for H1 framing i.e. durability of H1 (and H1.2) boron treated framing varies greatly in leaky buildings.

Decay analysis and remediation

7. **According to strict remediation practice wood with established decay should be replaced with appropriately treated framing (NZS3640:2003 specified H1.2, H3.1 or H3.2 depending on the location).**

8. **Strict adherence to classical remediation practice is typically indicated for wood with well-established decay.** This typically involves removal of all decayed wood and sometimes an additional 1 meter of wood beyond the obviously decayed limit (***along continuous, not discontinuous framing e.g. framing broken by well defined breaks such as between parallel joists well separated by nogs or window frames, or similarly well-separated horizontal framing***). Latitude often exists for substantially less wood removal, particularly for preservative treated wood (not remedial treatment, including treatment applied during construction), and once the limits of decay have been well defined via suitable laboratory analysis or other appropriate methods. However, the 1 meter rule is a tried and tested approach in Europe and North America and provides a solid footing for recommendations in the first instance, or if there is doubt concerning the limits of decay. Where deviations from the rule are taken it may be important to take wood samples either side of the estimated limits of decay for further micromorphological analysis. As a general rule of thumb it is recommended that the 1 meter rule is applied unless there is a significant remediation cost-benefit in not doing so, and having established the limits of decay accurately by thorough analysis, in some cases with further concurrent micromorphological analysis.

9. Whilst 4 weeks is typically an unrealistic timeframe in which to effect remediation, 4 weeks is intended as a guide for the minimum timeframe within which wood should essentially dry out if effective drying conditions have been implemented i.e. if wood has not dried within this timeframe a different strategy is probably required. Once established, decay can advance significantly within a 4 week period if left unchecked. All untreated or poorly treated wood that cannot be dried rapidly prior to remediation or after remediation should also be replaced irrespective of its condition. Effective and rapid drying sometimes requires complete removal of cladding and/or lining and it is vital to explore all possible moisture ingress points as well as areas several meters either side of all possible vertical leakage planes since some fungi can spread long distances over essentially dry materials in some situations. Other explorative measures may be indicated depending on the nature of the construction.

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Version: 1, Version Date: 12/11/2013

10. In-situ wood preservative treatment is recommended for all exposed framing that is not treated to Hazard Class H3.2 or H3.1 and any other suspect areas i.e. areas affected by moisture elevation. Typically, buildings constructed prior to the introduction of the new H1.2 (NZS3640:2003) boron retention minimum requirements in 2003 contains external framing that does not meet the retention requirements of NZS3640:2003. Therefore, in-situ preservative treatment of framing is often a wise precaution for all buildings that have had significant leakage problems irrespective of the extent of decay. However, the decision surrounding the extent of in situ treatment required varies according the local conditions and a pragmatic approach that takes account the ongoing likelihood of recurring leaks is needed.

11. ***Two liberal applications (500 mls per 10 linear metres of 100 x 50 mm framing) of Framesaver concentrate (do not dilute) by brush or airless spray is commonly used in New Zealand (typically the default recommendation because wood is often damp) although an LOSP type preservative such as Metalex is more suitable in some situations provided wood is essentially dry. <u>However, because Framsaver has a thick consistency, much more typically gets applied during typical rapid brush strokes, and this is a substantial advantage because the retentions achieved are more realistic.</u> It is typically vital to treat at least 3 faces of exterior framing paying particular attention to the exterior faces. However, treatment of 4 faces if at all possible is recommended.*** Complete removal of cladding and/or lining is often required to allow effective and rapid drying of framing and/or to facilitate discovery of all decay. Removal of cladding to expose exterior faces of external framing is typically the only effective way of allowing sufficient access to framing that is in need of preservative treatment. Typically, it is not possible to treat bottom plates effectively in situ and consequently they need to be removed in some situations. Drilling holes where multiple adjacent framing occurs such as corners improves treatment of occluded faces and deeper wood but is typically impractical as a general method of extensive application (brush and/or airless spray is the most practical application method).

- *There is occasionally a misguided view amongst those of insufficient practical experience of remediation issues in New Zealand that it is acceptable to leave large amounts of deep, well established decay in situ during remediation provided a preservative is applied. This is sometimes incorrectly justified on the basis of limited artificial laboratory studies, where preservative applied to framing with decay at optimal moisture contents for preservative diffusion are maintained, and not surprisingly this allows diffusible preservative to halt decay in mini frame experiments. These conditions rarely occur in buildings where uneven moisture distribution and uneven fungal infection and decay pockets are the norm. (Small isolated pockets of decayed wood can be left in situ in some well understood situations).*

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Version: 1, Version Date: 12/11/2013

- *However, the questionable value of laboratory data to real building conditions is not the primary danger with respect to the inherently misguided nature of leaving large amounts of decayed wood in situ. Leaving extensive deep decay in situ, in most wall cavity situations, is dangerous because it encourages a lack of exploration and lack of identification of all the causative issues. It is also contrary to classical literature and the substantial base of empirical remediation wisdom and practice on which the literature is based. Therefore, those following this practice expose themselves to potential criticism and potential legal liability. It is wise to base ones advice on a long proven robust approach based on decades of sound classical remediation practice, as opposed to more recent advice based on a narrow and limited perspective.*

- *Also, there is a risk that structurally compromised framing will be overlooked and/or left in situ. Concealed decay is not uncommon and its thorough identification and the determination of its significance typically require the application of classical on-site investigation techniques and supportive off-site analysis.*

- *It is sometimes argued that New Zealand conditions are significantly different from situations on which the classical remediation literature is based and that new practice can therefore be applied. Such a view is premature at best considering the track record of New Zealand building practice in recent years and the relatively recent advent of improved practice and the recent introduction of a remediation skill base.*

- *There are also methods of pressure impregnation that can be used to treat framing in-situ. Pressure impregnation has a proven track record for use in buildings and whilst there are relatively few situations in New Zealand where this approach is useful within the context of leaky building remediation, it may have application in highly specific and well understood situations. Radiata pine framing is essentially untreatable by pressure impregnation once it is part of a structure i.e. attempts to force liquid into the wood by pressure is likely to result in seepage and escape of preservative. It is typically vital to remove either the cladding or lining, and sometimes both, if wood is to be treated effectively without gross over-treatment and contamination of surrounding materials and the local area. Over-treatment may damage surrounding materials and may contaminate the living space (immediately or later if any excess dehydrated preservative becomes airborne) or the outside area and this may have health, safety and eco-toxicity issues. It is therefore essential to keep close track of where preservative goes at all times which is typically not possible if too much of the framing is concealed.*

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Version: 1, Version Date: 12/11/2013

12. In some situations it is possible to leave structural framing containing pockets of decay, in situ. This is typically not recommended, is not undertaken lightly and requires detailed knowledge of the situation. It is sometimes important to derive a method of eliminating active or potentially active decay fungus. This is difficult using surface applied preservative in many situations, the primary purpose of which is to provide future decay protection, not a sterilisation effect. Methods of sterilisation are available but their application requires specialist knowledge and equipment and is only cost effective in some situations e.g. where the cost of replacement exceeds the cost of in situ remediation. It is also vital to ensure that any structural damage left in place does not compromise the function of the affected framing or adjacent features or the overall integrity of the building.

13. Rules of thumb regarding the wood moisture content and decay.

For inspection purposes

i. When investigating an unknown situation it is important not to rely on MC readings in isolation i.e. never take a low value at face value because moisture elevation is often transitory (MC is only one tool in the repertoire).

ii. Always take any value above the expected equilibrium moisture content (emc) value as a warning i.e. including values below 18% (if possible it is useful to obtain a few points of reference from areas that are "known" to be unaffected by poor design/faults etc. to establish the actual emc range). (Preservatives, wood extractives, moulds and sapstain fungi, wood species ect. can have substantial effects on emc.). Active fungal infection, including decay fungi, is very common in wood recorded at moisture values below 18% as measured in leaky buildings in New Zealand.

For remediation and beyond

iii. Moisture must never go above 17% (exceptions arise from extenuating circumstances but these must be well defined).

Caveat rule of thumb

iv. An important qualification is that all moisture content measures and cardinal values used or referred to during investigation and remediation are indicative not absolute (including 18%). ***Once decay is established there is a significant probability that ongoing decay will occur at and close to 18% MC but for uninfected wood the MC conditions required for decay are closer to the fibre saturation point, probably 24 – 30%.*** (Fungi produce metabolic water during decomposition of wood and this local moisture may be undetectable with available detectors which pick up the macro-moisture % not the micro-moisture %. Furthermore, moisture conditions in the outer 1 – 5 mm are sometimes different (higher) than in deeper wood in situations that are

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marginal for decay e.g. where condensation occurs. Whilst references for decay at 18% are rare it nevertheless serves as the lower limit of reported activity (decay at 16% has also been reported but is probably not relevant in the context discussed here). For dry rot which can grow over and through wood that "was" below 18% (i.e. it translocates moisture as it advances) this typically requires RH values above 85% and optimally close to 100%. Moving air and RH values around 75% and below usually retard dry rot growth at low wood MC.)

14. Additional Critical Moisture Value Rules of thumb for leaky building investigation
    - *8 -14%: approximate emc range for framing in wall cavities*
    - *16%: (maximum MC quoted for wall cavity enclosure during construction and minimum moisture quoted in the literature at which fungal (e.g. mould) growth can occur but at which wood decay does not become established)*
    - *20%: widely accepted minimum threshold below which decay is prevented (allows a comfortable safety margin below the fsp above which decay establishment is inevitable)*
    - *20 - 30%: range over which it is difficult to be certain what is occurring partly because of the limitations of detection devices but also because of other factors*
        - *<fsp (approx. 30%) decay establishment unlikely because no free moisture is available but there is significant margin for error in interpretation of MC values between emc and fsp and therefore 30% is substantially too high a lower limit for reliable risk assessment*
        - *16 - 30%: fungal growth often occurs but active wood decay unlikely although it may be imminent or very close by*
        - *>fsp (approx. 30%): decay inevitable*
    - *40 - 70%: common MC range for aggressive decay*
    - *80%: maximum MC sometimes quoted for brown rot*
    - *30 - 400%: range for decay (120 - 400%: at or close to the wood saturation point at which decay stops or proceeds at greatly reduced rates due to shortage or lack of oxygen)*

15. **Presence of the toxigenic mould *Stachybotrys* and possibly other moulds requires that caution is exercised when handling moisture compromised materials.**
Stachybotrys is a toxigenic mould that has been implicated in building sickness syndrome and is common in leaky wall cavities. *Stachybotrys* is a soft rot decay fungus and degrades wood fibres and other cellulose containing materials. It is most commonly encountered on gypsum-paper board, fibre-cement board and building paper or any other wood fibre containing material.

Exposure of healthy individuals to small quantities of *Stachybotrys* is unlikely to pose a serious health threat in most cases. However, it is wise to handle the mould (and

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other moulds) with caution, avoiding direct contact and inhalation of disturbed material. It is known that otherwise healthy individuals, who are regularly exposed to toxigenic moulds found on wood products, can suffer significant health problems. If mould is dry upon discovery airborne spores are more likely to be inhaled. Mouldy material in living spaces should be removed, taking care not to introduce airborne material. Mouldy wall cavity materials also pose a potential threat to occupants since spores can migrate into the living space however the most serious threat occurs when the material is disturbed and therefore removal should be carefully planned and executed.

In New Zealand problems associated with exposure during remediation are usually less than in North America because typically claddings are removed and spore numbers are diluted by external air whereas in N. America mould is often exposed to the internal living space upon removal of linings.

Trichothecence mycotoxins produced by *Stachybotrys* are lipophilic (fat soluble) and can potentially be absorbed through the skin. Therefore gloves, protective disposable clothing and approved breathing apparatus are recommended whenever significant quantities of mouldy material are handled.

The majority of other moulds that occur in buildings are not generally considered to pose as serious a health hazard compared to *Stachybotrys,* but presence of any mould in dwellings can pose a health hazard, especially to those predisposed to pulmonary dysfunction (e.g. asthma sufferers) or those with a lowered immune response (e.g. the very young and very old). Other toxigenic moulds have been isolated from moisture compromised buildings although the bulk of information refers to mould that arises through poor management of ***internal*** moisture as described in the New Zealand building code. *Stachybotrys* can also arise in buildings as a result of poor internal moisture management (e.g. moisture from living activities such as hot water washing, cooking and breathing etc.) but recent evidence suggests it is more commonly associated with ***external*** moisture i.e. moisture that enters during leakage.

This could be related to the preference of *Stachybotrys* for very high moisture contents as are common in leaky wall cavities, as opposed to dew points associated with condensation planes that tend to result in more transient elevated moisture conditions.

Other health hazards related to microbial degradation of damp building materials are possible e.g. release of volatile toxins, either directly from microorganisms, or from decomposing building materials. Other microorganisms including actinomycetes, bacteria and yeasts may also pose a health hazard in moisture compromised buildings in some situations.

BEAGLE CONSULTANCY LTD
Robin Wakeling PhD
BIODETERIORATION CONSULTANT
Wood and Building Materials Specialist
Mobile: 021 666 225
Business: 04 476 2532
Home: 04 476 2523
Fax: 04 476 2534
68 Homewood Avenue
Karori, Wellington 6012
robin@beagleconsult.co.nz

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16. Incipient decay can be significant in some situations, particularly for untreated framing.

   - Early brown rot is sometimes associated with incipient brown rot and can be difficult to detect with 100% reliability but can cause significant strength loss.
   - Wood with incipient decay can subsequently lose structural integrity at a much greater rate than uninfected wood. The rate of decay typically accelerates once the decay fungus has effected colonisation i.e. following the establishment phase. Therefore the window of opportunity for detection and correction of leakage or other moisture management faults prior to onset of damaging decay can be shortened. This effect can persist for several years since the fungus can remain dormant for this period. Application of surface boron to untreated or inadequately treated wood (see point 10) does not completely eliminate this effect and is essentially only useful for reducing the likelihood of reinfection should elevated moisture reoccur. It is also difficult to treat those areas where fungal infection is often most prevalent such as end grain and narrow gaps between adjacent framing members and other areas and interfaces were moisture trapping and channelling occurs.

Yours Sincerely

Robin Wakeling

Robin Wakeling BSc (Hons), MSc, PhD

BEAGLE CONSULTANCY LTD
Robin Wakeling PhD
BIODETERIORATION CONSULTANT
Wood and Building Materials Specialist
Mobile: 021 666 225
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Plumbers, Gasfitters and Drainlayers Board

GASFITTING CERTIFICATE OF COMPLIANCE

Pursuant to the Gas Act 1992 and the Gas (Safety and Measurement) Regulations 2010

ENERGY WORK CERTIFICATE

(Pursuant to the Building Act 2004)

This certificate is not transferable

Level 9, 70 The Terrace
PO Box 10655, Wellington 6143
Tel 04 494 2970, Fax 04 494 2975
www.pgdb.co.nz

Consumer: Michel Reid
Installation Address: 48 Sharp Road
RD 6
Rotorua 3096

Vehicle Registration:
Vessel Registration:

Certificate Number: **714319**
Gas Supplier:
Category: Domestic
Type (Regulation 44(1)): ALTN
Gas Type: LPG
Certification Date: 10 Dec 2012

Test Results: 5 min Duration
3.20kPa test pressure
0.00kPa Loss / Gain
2385.00kPa Working pressure

Other Testing: Ventilation
Test Date: 10 Dec 2012

DESCRIPTION OF GASFITTING TO WHICH THIS CERTIFICATE APPLIES

Qty	Item Type	Item Location	Make/ Model	Input Rate	Flue Type	Flue Location	Vent Type	Vent Location
1	Pipework							
1	Hob	Kitchen	Smeg PGA9S-4	36.3	Unflued	Rangehood	Adventitious	Room Volume144m3+
1	Laundry dryers	Laundry	Maytag LDG7304AGE	20,000btu	Forced Draught Flue (Power)	Rhruogh wall Duct	Adventitious	High & Low vents to thr exterior
2	Water heater continuous flow	Kitchen wall under carport	Bosch YS2420R	180mj	Forced Draught Flue (Power)	External	Natural	External

I certify that:

1. I Certify that all appliances and fittings worked on by me or by persons working under my supervision are safe to connect to a gas supply and that all work carried out was in accordance with all applicable requirements of the Gas Act 1992 and Gas (Safety and Measurement) Regulations 2010.
2. I Certify that the Gasfitting to which this certificate applies does not make other parts of the installation unsafe or otherwise non-compliant with the Gas Act 1992 and Gas (Safety and Measurement) Regulations 2010.
3. I Certify that the Gasfitting work to which this certificate applies does NOT include work on an appliance or fitting imported or manufactured for the consumers use.

Signed:
Certifier
Authorisation No: 10402
Name: Little, Peter John C

Installer(s) supervised by certifier
Authorisation No: 15917
Name: Rika, Richard Manuhuia

Authorisation No:
Name:

Certificate Owner
Authorisation No: 10402
Name: Little, Peter John C
Company: PL Gas Appliances Ltd

RRD001WSTY
Document Number: RDC-417407
Date Registered: 12/11/2013

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Classic Iron

BEAUTY WITH SECURITY

Statement of Compliance

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26th March 2013

Tissink Builders Ltd
11 Sharpe Road
RD6
Rotorua 3069

To Whom It May Concern:

Re: Producer Statement For Balustrade At 48 Sharpe Road, Rotorua

All balustrades constructed by Classic Iron (Tauranga) Ltd, (excluding the supporting structure) are constructed to comply with the specifications set down by clauses B1, B2, F2 and F4 of the current New Zealand Building Code.

I trust this is all the information that you require. Please do not hesitate to contact me if I can be of any further assistance.

Yours faithfully

John Tarrant
Managing Director

Classic Iron (Tauranga) Ltd

CLASSIC IRON (TAURANGA) LIMITED
106 BIRCH AVENUE, TAURANGA, NEW ZEALAND
TELEPHONE: (64) 07 578 5613 FAX: (64) 07 571 1309 EMAIL: sales@classiciron.co.nz WWW. classiciron.co.nz

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Version: 1, Version Date: 12/11/2013

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craftstone

Statement of Compliance

G Marjoribanks

CRAFTSTONE NEW ZEALAND LTD

Producer Statement

Date of Issue: 29 October 2012 Our Ref: 00392732

Craftstone NZ Ltd, is a Registered New Zealand Company and guarantees that the material components of the Craftstone system are manufactured to specification or supplied in their natural form, in accordance with an audited quality control system.

Craftstone NZ Ltd, guarantees for a period of 15 years (from date of completion) that the Craftstone system or systems, as installed, will perform and meet the relevant provisions of the New Zealand Building Code Clauses, namely, B1 Structure; B2 Durability; E2 External Moisture; F2 Hazardous Building Materials, provided that all the material components of the Craftstone system have been prepared and installed in accordance with our written instructions and detail drawings, and the work carried out by an Approved Installer. The system must have been properly maintained and subjected to no more than normal conditions of exposure.

Craftstone NZ Ltd products and systems are dependant upon the correct preparation and application of all the components in strict accordance with the relevant written instructions. On-site application is beyond our control and Craftstone NZ Ltd cannot guarantee workmanship or the correct preparation and application of the Craftstone system. The Installers will, on request, provide a separate guarantee for their workmanship.

Craftstone NZ Ltd will at its discretion, replace, repair or make a contribution to any part of the Craftstone system where failure proves to be due to defective material components, provided notice is given in writing within the guarantee period.

Craftstone NZ Ltd will not accept any responsibility for damage of any kind due to defective building structure, hydrostatic pressure, mechanical or physical abuse or any other abnormal cause.

Guarantee Certificate issued to: Tissink Builders

Related to installation of stone-veneer at: 48 Sharp Rd, Rotorua

Date of Completion: 29 October 2012

Details of work: Basalt schist clad Natural ends applied to 8 Columns.

For and On Behalf of CRAFTSTONE NZ Ltd

Name: HAMISH MUNRO

Signed: Hamish

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WORKMANSHIP GUARANTEE

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11 JUN 2013
B.C. No. 69120

Date of Issue: 29 October 2012

G Marjoribanks

The Approved Installer certifies that this project has been completed with materials that meet the specifications of Craftstone NZ Ltd and that all work has been carried out in accordance with Craftstones' written installation instructions.

The Installer guarantees for a period of five years, that should any defect in the veneer installation system occur due to an installation fault, the Installer will, at their discretion, replace, repair or make a contribution to the rectification of the defect. The system must have been properly maintained and subjected to no more than normal conditions of exposure.

The Installer will not accept any responsibility for damage of any kind due to defective building structure, hydrostatic pressure, mechanical or physical abuse or any other abnormal cause. The system is dependent upon the correct specification of Craftstone NZ Ltd's construction details, as provided in their current Data Sheet Manual. The Installer will accept no responsibility for alternative construction details which are specified, unless they have been agreed to in writing prior to their construction on-site.

Guarantee Certificate issued to: Tissink Builders

Related to installation of stone veneer at: 48 Sharp Rd Rotorua

Date of Completion: 29 October 2012

Details of work: Basalt Schist Clad^ applied to 8 columns
Natural Ends

Installer: NZSCI Ltd of 48 Cradock Street Avondale (address)

being an Approved Installer of Craftstone NZ Ltd, confirm that I have installed:

Craftstone Basalt Schist Clad Natural Ends

at the above residence in accordance with all the Craftstone installation/application requirements and clause E2 of the NZ Building Code.

Signed ..... Date 29-10-2012

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Statement of Compliance

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RADFORD ROOFING LTD

G Marjoribanks

Producer Statement - Construction

(For residential, light commercial or commercial / industrial contracts)

Issued by: Radford Roofing Ltd
P O Box 485 Rotorua

To: ROTORUA DISTRICT COUNCIL

Building Consent Number: 6920

Site Address: 48 Sharp Rd Rotorua

Work being undertaken: waterproofing deck

Work being completed by: Radford Roofing Limited

Product Name: 1:5 Black Butynol

Laid to manufactures specifications: Ardex NZ Ltd

Signature: GARY RADFORD

Dated: 10/5/2013

Registration No: NSN 1027712 NQF Ref 275/7 LBP No: BP 112095
NSN 10377112 NQF Ref 375/1

Qualifications: National Certificate Membrane Roofing
Torch on Membrane Roofing

Address: P O Box 485
Rotorua

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DWELLING



DRAINAGE CHANNEL FITTED AS PER AMENDMENT



80ø OUTLETS FROM STRIP DRAIN ARE @ 2.0m CENTRES

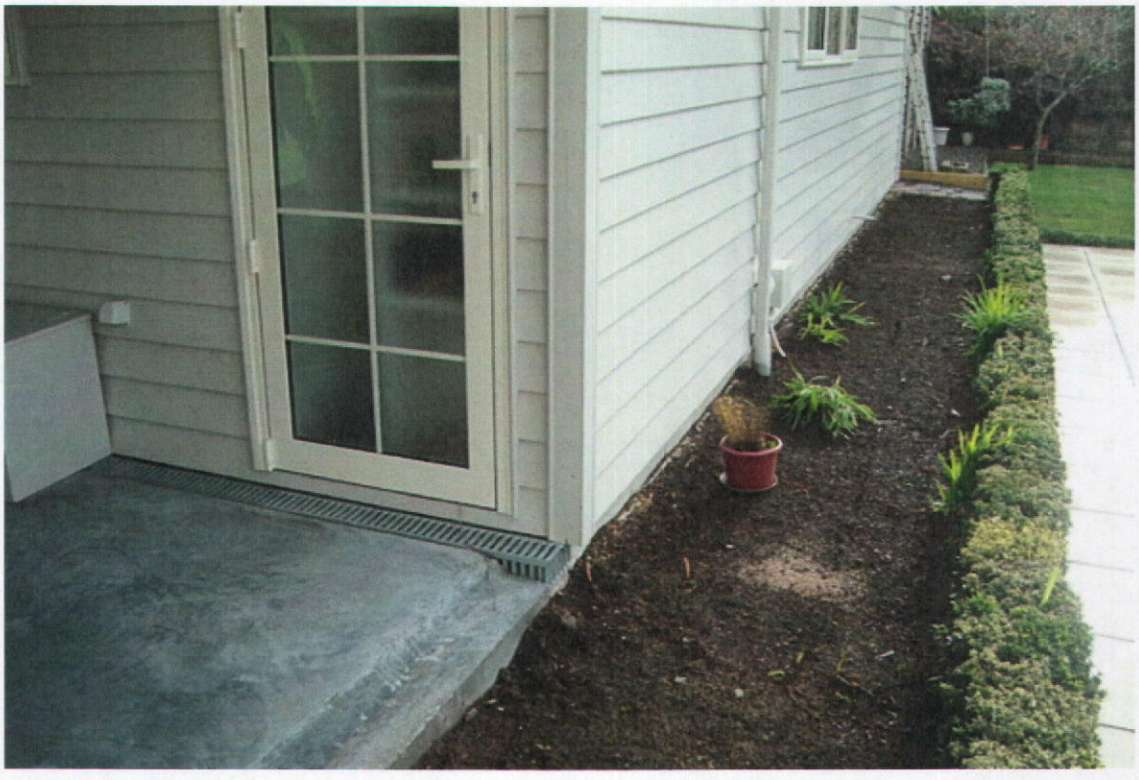
RRD001WSTW
Document Number: RDC-417405
Date Registered: 12/11/2013

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BALK OF SLEEPOUT



225 FROM FLOOR TO GARDENS
170 TO BASE OF STRIP DRAIN.



FRONT OF SLEEP OUT.

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150 TO PAVED AREA WITH SUMP.



225 TO GARDENS - DWELLING

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ELEVATIONS - DWELLING



UPPER STOREY CLADDING / ROOF JOIN.



ELEVATIONS - DWELLINGS



ELEVATIONS - DWELLING

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Version: 1, Version Date: 12/11/2013



ELEVATION - DWELLING



UPPER STOREY CLADDING/ROOF JOIN.



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ELEVATION - DWELLING



UPPER STOREY CLADDING/ROOF JOIN.

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ELEVATIONS - DWELLING



ELEVATION - ATTACHED SLEEPOUT.

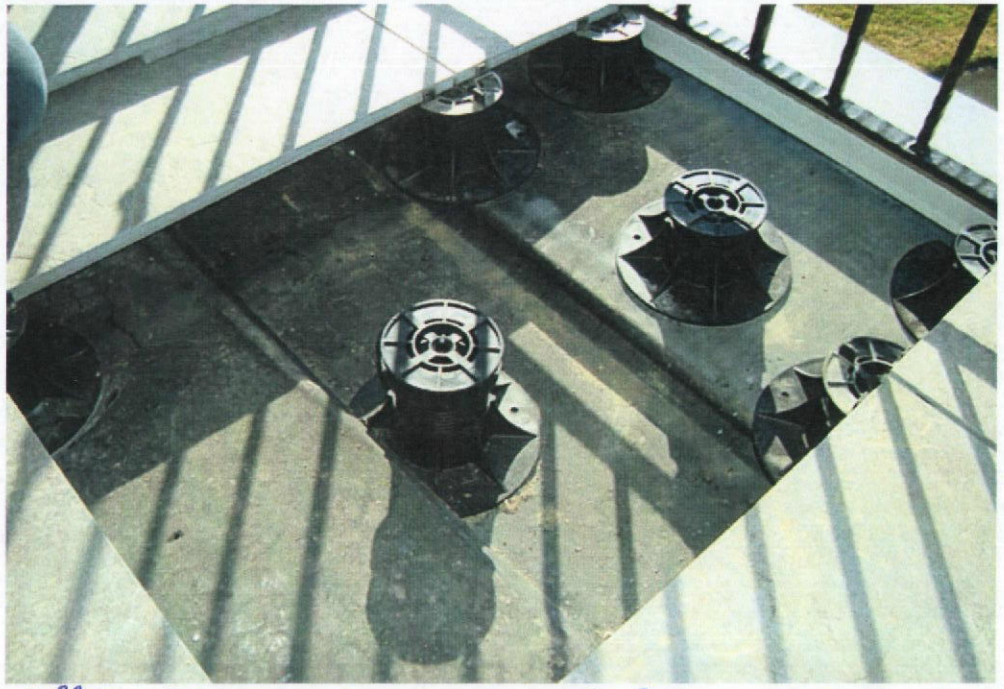


ELEVATIONS - DWELLINGS



DWELLING GROUND LEVELS

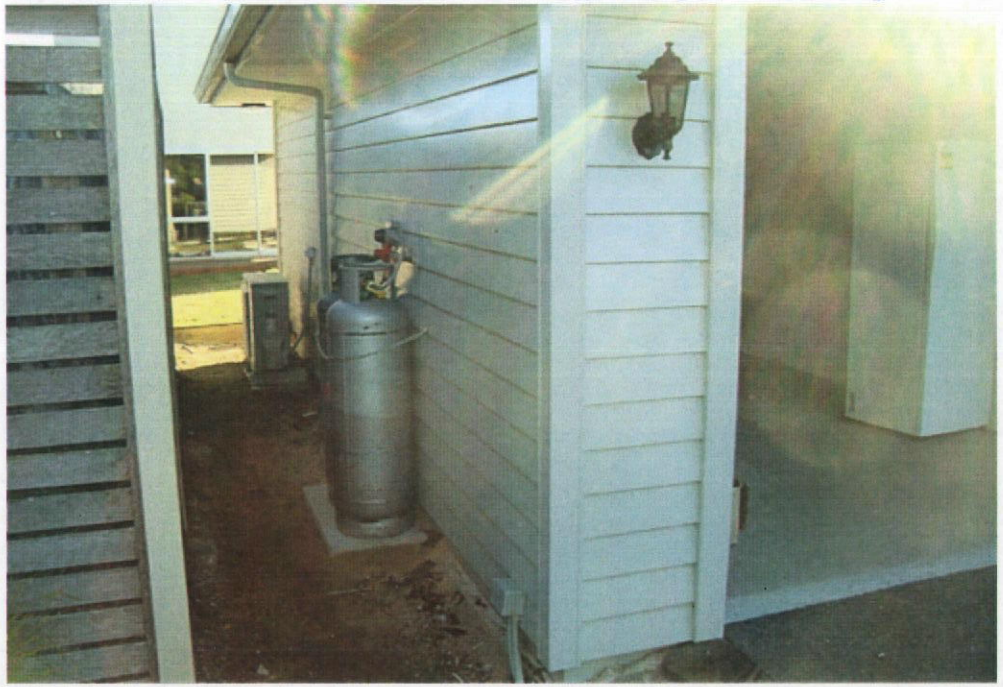
Document Set ID: 2700286
Version: 1, Version Date: 12/11/2013



UPPER DECK - TILES ON SCREW JACKS



UPPER LEVEL DECK BALUSTRADE FIXINGS



ELEVATIONS - SLEEPOUT. WITH MOVED GAS BOTTLES



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B.C. No. 69120

UPPER LEVEL DECK BALUSTRADE FIXINGS

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ELEVATION - ATTACHED SLEEPOUT.



ELEVATIONS - DWELLING



DWELLING GROUND LEVELS



ELEVATIONS - DWELLING.

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Version: 1, Version Date: 12/11/2013

21 October 2013

Mr M J Reid
c/- Mr P A Lewis
PO Box 242
ROTORUA 3040

File Ref: P27041
Building Consent No: 69120

Dear Sir,

CODE COMPLIANCE CERTIFICATE
BUILDING CONSENT NO: 69120

Please find attached your copy of the Code Compliance Certificate that has been issued in relation to the above building consent.

This is an important document and should be retained by you as it specifies the work carried out under the Consent has been completed, and meets the requirements of the Building Code supporting documents.

If in future you should desire to sell your property, your solicitor may ask you to produce this Certificate to prove that your building complies with the Building Code to the extent required by the above Building Consent. A copy is also placed on your property file.

Yours faithfully

Karen Crisp
Administration Officer - Building

Encl.

RRD001WSTR
Document Number: RDC-417400
Date Registered: 12/11/2013
Document Set ID: 2700281
Version: 1, Version Date: 12/11/2013

DESTINATION ROTORUA

ROTORUA DISTRICT COUNCIL

Rotorua District Council
1061 Haupapa Street
Private Bag 3029
Rotorua Mail Centre
Rotorua 3046
New Zealand
P: 07 348 4199
F: 07 346 3143
E: mail@rdc.govt.nz
W: www.rdc.govt.nz

Code Compliance Certificate: 69120

Section 95, Building Act 2004

Issued: 21 OCT 2013

The Building

Property ID:	P27041
Street Address:	48 SHARP ROAD
Valuation number:	06951 239 02
Legal Description:	Lot 2 DPS71633
Building Name:	N/A
Intended Use:	DWELLING (DETACHED)
Description of Work:	RE CLAD EXISTING DWELLING Change to strip drains (26/02/2013)
Year First Constructed:	N/A

The Owner

Name & Address of Owner: REID, MR MICHAEL JAMES
C/O ATTN: MR LEWIS
PO BOX 242
ROTORUA 3040

First point of contact for communications with Council Building Consent Authority:
Rotorua District Council, Private Bag 3029 Rotorua 3046,
Phone: 07 348 4199 Fax: 07 349 0993 Email: mail@rdc.govt.nz.

Building Work

Building Consent no: 69120
Issued by: Rotorua District Council

Code Compliance

The building consent authority named below is satisfied, on reasonable grounds, that –

(a) the building work complies with the building consent.
~~(b) the specified systems in the building are capable of performing to the performance standard set out in the building consent~~
~~**Attachment**~~
~~Compliance Schedule~~

Signed for and on behalf of the Council:

Name: Karen Crisp Position: Building Services Administrator

Signed: _____ Date: 21 OCT 2013

ROTORUA PARTNER SHAPING ROTORUA

Document Set ID: 2700281
Version: 1, Version Date: 12/11/2013

DESTINATION ROTORUA — ROTORUA DISTRICT COUNCIL	**Code Compliance Certificate Assessment Checklist**	Ref: CCC 01 Ver: 11 Issued: 1 Jul 2013 RDC-39977 Page 1 of 2

BC No.: 69120. **P. File No.:** 27041.

Date: 1/7/13. **Address:** 48 Sharp Rd.

P = Pass, F = Fail, N/A = Not Applicable – Circle appropriate box

No	Item				Comments / Reasons for Decision
1	Work complies with the approved BC documentation (sect 94(1))	(P)	F	N/A	ref: Summary card + checksheets.
2	All the required inspections have been completed	(P)	F	N/A	ref: BC conditions.
3	Check sheets are complete	(P)	F	N/A	complete.
4	Instruction sheets/ NTF complied with	(P)	F	N/A	comply.
5	BC conditions have been complied with	(P)	F	N/A	comply.
6	PIM requirements have been complied with	(P)	F	N/A	met.
7	Damage deposit can be released	P	F	(N/A)	none applied.
8	Crossing deposit can be released	P	F	(N/A)	
9	All documents have BC number on them	(P)	F	N/A	correct.
10	Section 75–77 registered if applicable	P	F	(N/A)	assessed @ processing.
11	Section 72–74 registered on title if applicable	P	F	(N/A)	
12	Energy work certificate has been provided (if required) (section 94(3))	(P)	F	N/A	gas coc recd.
13	Specified systems are capable of performing in accordance with performance standards (94(1b))	P	F	(N/A)	dwelling.
14	Is a compliance schedule required or requires amending? (Section 100(2))	P	F	(N/A)	
15	Any warnings or bans have been applied (94(2))	P	F	(N/A)	none.
16	Has the territorial authority received any certificates issued by licensed building practitioners that relate to restricted work? (Section 88(1) and (2))	P	(F)	N/A	req'd.
17	TA informed by LBP that building work not carried out in accordance with consent (89)	P	F	(N/A)	no info recd.
18	Any amendments/ as builts have been issued and whether documentation associated with these has been properly completed.	(P)	F	N/A	As Builts
19	Photographs of elevations	(P)	F	N/A	on file.
20	Survey certificates – siting, height in relation to boundary, maximum height of building or minimum floor level	(P)	F	N/A	RDC.
21	Plumbing statements	P	F	(N/A)	none in BC.
22	Pile driving	P	F	(N/A)	
23	Foundation observation	(P)	F	N/A	RDC.
24	Ground conditions including compaction	(P)	F	N/A	
25	Waterproofing Deck cladding.	P	(F)	N/A	see notes.
26	Structural reviews	P	F	(N/A)	
27	Site welding	P	F	(N/A)	none in BC.
28	Home heating (fires)	P	F	(N/A)	
29	Glazing	(P)	F	N/A	RDC
30	Drainage	P	F	(N/A)	none in BC.
31	Smoke alarms ~~and sprinklers~~	(P)	F	N/A	& fitted.
32	Emergency warning systems	P	F	(N/A)	dwelling.
33	Fire doors	P	F	(N/A)	

Document Set ID: 2700281
Version: 1, Version Date: 12/11/2013

No	Item				Comments / Reasons for Decision
34	Spread of flame	P	F	N/A	
35	Backflow	P	F	N/A	
36	Lifts (electrical and installation)	P	F	N/A	
37	Mechanical ventilation	P	F	N/A	none in BC.
38	List of consultants	P	F	N/A	
39	Exterior plaster systems	P	F	N/A	
40	Producer Statements are correctly formatted?	P	F	N/A	
41	Statement of Compliance is correctly formatted?	P	F	N/A	correct.
42	Form 6 received and complete	P	F	N/A	Rec'd.
43	Development Contribution Paid (suspend/note in screen if not)	P	F	N/A	none applied.
44	Outstanding Fees Applicable	P	F	N/A	see notes.
45	Other	P	F	N/A	none.

Site Development Form to be sent with CCC	YES	NO	Modification / Waiver applies	YES NO
CCC Assessment (If F request info below)	P	F	As Built / Supplied Plans in Poly	YES NO

NOTES: Glenn: RBW: Nomination + Ga ADVICE/REQD REQD Reqd for Gary Radford.
Was Rolland the only LBP carpenter on site? YES ONLY ROLAND
RBW nomination + Ga reqd for Craftstone work. This will be Item of LBP carpenter if deemed cladding.
CRAFTSTONE DECORATIVE ONLY - COVERED BY CARPENTERS GA
* Korero As built fee $127.50 applied. Pd 17.10.13 2944/IR266
- LBP info reqd in Ozone. (Assessment redecked TLamb)

All information and documentation is present and correct. A Code Compliance Certificate can be issued providing all outstanding additional fees and/or development contribution has been paid (Team Leader or Manager Building Services).

Name: E Wilkins Signature:

Date Received	Date Suspended	Date Responded	Date Approved by TL or MBS	Date Refused to Issue by TL or MBS
On site inspection date received (this is the date when the clock starts)	*Date when information requested from owner, or when invoice sent for extra inspection fees or development contribution (this is the date when the clock stops)*	*Date when information received from owner, or invoice is paid (this is the date when the clock re-starts)*	*Date approved by delegated Office*	*Date refused to issue by delegated Office*
10/6/13.	Glenn 17-9-13 5-8-13	2-8-13 17-10-13	21.10.13	N/A

Administration Assistant Building to Complete (P= copies sent for filing with building consent documents) *If not applicable circle* **NA**

Copy of code compliance certificate	P	N/A	Copy of compliance schedule	P	N/A
Copy of compliance schedule statement	P	N/A	Copy of certificate cover letter	P	N/A
All information collated and sent to records	P	N/A	Bond refund	P	N/A
Copy of letter refusing to issue CCC	P	N/A	Copy of Site Development sent to owner	P	N/A

Name: K Crisp Signature:

Date Issued by AAB Date: 21.10.13
Date when Administration Assistant Building issues CCC

Document Set ID: 2700281
Version: 1, Version Date: 12/11/2013

LAKES COAST CLUSTER GROUP

Form 6 APPLICATION FOR CODE COMPLIANCE CERTIFICATE Section 92, Building Act 2004

RDC № 69120

THE BUILDING CONSENT

Building consent number: 69120

Issued by [*name of building consent authority that granted building consent*]: RDC

THE OWNER

Name of owner *[include preferred form of address, eg, Mr, Miss, Dr, if an individual]*:

MR MJ. REID

Contact person *[if the applicant is not an individual]*:

Mailing address: 48 Sharp Rd RD6 Rotorua.

Street address/registered office:

Phone number: Landline: Mobile:

Daytime: 3922322 After hours:

Facsimile number:

Email address: reidmj@truemail.co.th Website [if applicable]:

The following evidence of ownership is attached to this application [*copy of certificate of title, lease, agreement for sale and purchase, or other document showing full name of legal owner(s) of the building*]:

AGENT

[*Only complete this section if the application is being made on behalf of the owner*]

Name of agent: Mr. Peter Lewis

Contact person [*if the agent is not an individual*]:

Mailing address: P.O. Box 242 Rotorua.

Street address/registered office:

Phone number: Landline: Mobile:

Daytime: After hours:

Facsimile number:

Email address: Website [*if applicable*]:

Document Set ID: 2700281
Version: 1, Version Date: 12/11/2013

Relationship to owner [*state details of the authorisation from the owner to make the application on the owner's behalf*]:

Solicitor

First point of contact for communications with the council/building consent authority [*state full name, mailing address, phone number(s), facsimile number(s), and email address(es). Contact details must be in New Zealand*]:

TISSINK BUILDERS LTD.
11 Sharp Rd. RD6
ROTORUA 0274830353

APPLICATION

All building work to be carried out under the above building consent was completed on *[insert date]*: 1/6/13

The licensed building practitioner(s) who carried out or supervised the restricted building work is/are as follows:

Name	Licensing class	Licensed building practitioner number (or registration number if treated as being licensed under section 291 of Building Act 2004)	Particular work carried out or supervised
Roland Tissink	S2	BP 116700	Reclad Building

The personnel who carried out building work other than restricted building work are as follows:
[List names, addresses, telephone numbers, and (where relevant and if not provided above) licensed building practitioner numbers or Plumbers, Gasfitters, and Drainlayers Board registration numbers]

Lewis Plumbing 3439060
Ph. Gas 3462339
Anderson Drainage 3476095

Note: *continue on another page if necessary*

The following specified systems are contained on the compliance schedule for the building and, in the opinion of the personnel who installed them, are capable of performing to the performance standards set out in the building consent:
[list specified systems]

I request that you issue a code compliance certificate for this work under section 95 of the Building Act 2004.
The code compliance certificate should be sent to: *[state which address, and whether owner or agent]*
~~11 Sharp Rd RD6 Rotorua~~.
c/- P Lewis PO Box 242, ROT

Signature of ~~owner~~/agent on behalf of and with the authority of the owner *[delete one]*:

Name of person signing: Peter Allen Lewis
Date: 10.6.2013.

ATTACHMENTS

The following documents are attached to this application:

- ☐ Memoranda (Records of Building Work) from licensed building practitioner(s) stating what restricted building work they carried out or supervised
- ☐ Other documents from the personnel who carried out the work
- ☐ Evidence that specified systems are capable of performing to the performance standards set out in the building consent

Document Set ID: 2700281
Version: 1, Version Date: 12/11/2013

Sent to Peter Lewis

10/10/13

DESTINATION ROTORUA

ROTORUA DISTRICT COUNCIL

Rotorua District Council
1061 Haupapa Street
Private Bag 3029, Rotorua
Telephone: 07 348 4199. Facsimile 07 349 0993

BUILDING – TAX INVOICE

REGISTRATION NO. GST-REG-NO
10-801-397

REID, MR MICHAEL JAMES C/O ATTN: MR LEWIS PO BOX 242 ROTORUA 3040	Invoice No:	280240
	Date:	05 Aug 2013
	Customer No:	154210
	Reference:	BC - 69120

DETAILS	QTY	UNIT	AMOUNT
BUILDING CONSENT ACCOUNT			
ASBUILT PLAN DOCUMENTATION PROCESSING	1.000	110.87	110.87

Payable within 21 days of the invoice date

Payment Due: 26 Aug 2013	INVOICE TOTAL	$110.87
	G.S.T	$16.63
	TOTAL NOW DUE	**$127.50**

For Direct Credit please make payment to: BNZ, Rotorua, 020412 0234516 00 and quote Invoice number **280240** and **BC - 69120** as reference.

REMITTANCE ADVICE: Please detach and return with your payment:

CUSTOMER: 154210
REID, MR MICHAEL JAMES

INVOICE NO: 280240
TOTAL DUE: **$127.50**

PAYMENT MADE: $

Document Set ID: 2700281
Version: 1, Version Date: 12/11/2013

23 September 2013

Mr M J Reid
48 Sharp Rd
RD 6
ROTORUA 3096

Dear Sir

BUILDING CONSENT 69120 – 48 SHARP ROAD

We enclose a copy of invoice 280240 dated 5 August 2013 for $127.50 which still remains outstanding. Once this invoice and the development contribution is paid we will be able to issue the Code Compliance Certificate which is an important document and should be retained by you as it specifies the work carried out under the Consent has been completed, and meets the requirements of the Building Code supporting documents.

If in future you should sell your property, your solicitor may ask you to produce this Certificate to prove that your building complies with the Building Code to the extent required by the above Building Consent. A copy is also placed on your property file. Therefore it is **very important** that the invoice is paid and a Code Compliance Certificate issued.

Yours faithfully

Karen Crisp
Building Services Administrator

Document Set ID: 2700281
Version: 1, Version Date: 12/11/2013

DESTINATION ROTORUA — ROTORUA DISTRICT COUNCIL

Building Consent Authority Inspection Summary Sheet

Ref: IF 02
Ver: 4
Issued: 03 Dec 07
Doc No: IT-639923
Page 1 of 2

PIM/BC No 69120

BUILDING CONSENT NO.	DATE ISSUED: 11.5.2012
RESOURCE CONSENT REQUIRED? YES / NO	DATE ISSUED:
OWNER: REID PH. –	BUILDER: TUSINIC BUILDERS PH. 027483 0353
SITE: 48 SHARP ROAD	PLUMBER: PH. REG. #
VALUATION NO. 06951-239-02	DRAINLAYER:
PROPERTY FILE NO. 2704	PH. REG. #
LEGAL DESCRIPTION:	LOT / SEC: 2
BUILDING CATEGORY: 2CII	DPS / BLK: 71633
CCC Decision Date: 11.5.14	**No of Inspections Allowed For:** 12

DESCRIPTION OF WORK: RECLADDING

P = PASS F = FAIL

DATE:	TIME:	INSPECTOR:	INSPECTION SUMMARY/NOTES:	P/F:
29.6.12	11.45	GLENN	PREWRAP	Pass
	60 MINS		SEE INST SHT 7205. COMPLETED 2.8.12.	
4.7.12	2.35	GLENN	PREWRAP RECHECK	Pass
	35 MINS		ITEM 2 COMPLETED	
			ITEMS 1, 3 & 4 STILL APPLY	
2.8.12	10.15	GLENN	FOOTINGS FOR 6x POST HOLES	Pass
	60 MINS		ENCLOSED DECK	Pass
		NOTE	ALSO REC'D AS-BUILT PLANS	
			FOR FOOTINGS OF 6x POST	
			HOLES & ACTUAL BRACE	
			LAYOUT. THESE ARE A2-B,	
			A3-B, A6-B, A12-B, A11-B, A17-B	
			& A18-B	
		NOTE.	ALSO REC'D A "TIMBER	
			DECAY ANALYSIS' REPORT FROM	
			TECHROT (69 PAGES)	
			INST SHT 7205 COMPLETED.	
15.8.12	9.30	GLENN	WRAP/CAVITY	Pass
	45 MINS.		SEE INST SHT 8717.	

Document Set ID: 2700281
Version: 1, Version Date: 12/11/2013

BC 69120

DATE:	TIME:	INSPECTOR:	INSPECTION SUMMARY/NOTES:	P/F:
10.10.12	11.00	GLENN	PREWRAP - FLAT & GARAGE ONLY	P
	30MINS		- NO CHECKSHEET COMPLETED	
			→ CLADDING REMOVED, NO	
			MAJOR ROT FOUND. ALL	
			EXISTING TIMBER TREATED	
			WITH FRAME SAVER. 2x SMALL	
			AREAS OF BOTTOM PLATE	
			REPLACED WITH H3.1 TIMBER	
			NEW INSULATION FITTED R2.6.	
			ALL WORK CORRECT	
11.10.12	4.00	GLENN	WRAP - CAVITY	PASS GJM
	30MINS		ALL WORK CORRECT.	
11.02.13	9.05	GLENN	FINAL	FAIL GJM
			SEE INST SHT 9642.	
14.2.13	3.30	GLENN	EMAIL SENT TO ROLAND	
			RE GROUND LEVEL COMPLIANCE	
			REQUIREMENTS	
			Change drains to strip.	
			Issued 15/5/13	
10.6.13	3.00	GLENN	FINAL RECHECK	PASS GJM
	30MINS		INST SHT 9642. COMPLETED.	
			NEW DRAINAGE STRIP COMPLIES	
			WITH AMENDMENT.	
			PLEASE NOTE: ALL TIMBER	
			IDENTIFIED IN TECHROT ANALYSIS	
			AS ROTTEN OR DECAYING HAS	
			BEEN REMOVED & REPLACED	
			WITH H3.1 BOTTOM PLATE & H1.2	
			STUDS. ALL OTHER EXISTING	
			TIMBER WAS TREATED WITH 2x	
			COATS OF FRAMESAVER.	
17.7.13	1.00	GLENN	EMAIL SENT TO ROLAND RE	
			ADVICE OF CBP REQUIRED	

AMENDED PLANS
27 FEB 2013
RECEIVED

Document Set ID: 2700281
Version: 1, Version Date: 12/11/2013

SHEET 2.

DESTINATION ROTORUA — ROTORUA DISTRICT COUNCIL

Building Consent Authority Inspection Summary Sheet

Ref: IF 02
Ver: 5
Issued: 22 May 2012
Doc No: IT-639923
Page 1 of 2

BUILDING CONSENT NO. 69120	DATE ISSUED: 11/05/12
RESOURCE CONSENT REQUIRED? YES / NO	DATE ISSUED:
OWNER: REID PH.	BUILDER: TISSINK BUILDERS PH.
SITE: 48 SHARP RD.	PLUMBER: PH. REG. #
VALUATION NO. 06951 - 239 - 02 PROPERTY FILE NO. 27041	DRAINLAYER: PH. REG. #
LEGAL DESCRIPTION:	LOT / ~~SEC:~~ 2
BUILDING CATEGORY: 2CII	DPS / ~~BLK:~~ 71633
CCC Decision Date: 11.5.14	**No.of On-Site Inspections Allowed For:** 12
RBW: (YES) / NO	**Time Allowance (hours):**

DESCRIPTION OF WORK:

P = PASS F = FAIL

DATE	START/FINISH TIME e.g. 8.00–8.45	MINS eg 45	NAME	SUMMARY/NOTES:	P/F
29.7.13	G. Marjoribanks			EMAIL RECD WITH ATTACHED	
				GA & ADVICE OF LBP FOR	
				GARRY RADFORD.	
				EMAIL SENT BACK TO ROCANO	
				AS GA INCORRECTLY COMPLETED	
2.8.13	G Marjoribanks			EMAIL RECD WITH GA FROM	
				GARY RADFORD ATTACHED	

Document Set ID: 2700281
Version: 1, Version Date: 12/11/2013

DATE	START/FINISH TIME e.g. 8.00–8.45	MINS eg 45	NAME	SUMMARY/NOTES:	P/F

DESTINATION ROTORUA

ROTORUA DISTRICT COUNCIL

Project Information Memorandum No: 69120

Section 34, Building Act 2004
Received: 04 Apr 2012
Issued: 10 Apr 2012

Rotorua District Council
1061 Haupapa Street
Private Bag 3029
Rotorua Mail Centre
Rotorua 3046
New Zealand
P: 07 348 4199
F: 07 346 3143
E: mail@rdc.govt.nz
W: www.rdc.govt.nz

Agent
LEWIS, MR PETER ALLEN
PO BOX 242
ROTORUA 3040

Owner
REID, MR MICHAEL JAMES
C/O ATTN: MR LEWIS
PO BOX 242
ROTORUA 3040

Site Information

Property ID:	P27041
Street Address:	48 SHARP ROAD
Valuation number	06951 239 02
Legal Description::	Lot 2 DPS71633

Project Information

Project is for	RE CLAD EXISTING DWELLING
Intended Use	DWELLING (DETACHED)
Intended life:	Indefinite but not less than 50 years
Value of Work:	350,000

Conditions.....

PROJECT INFORMATION MEMORANDUM STATUS

SUBJECT TO THE BUILDING CONSENT BEING ISSUED
The proposed building work may be undertaken, subject to the provisions of the Building Act 2004, and any endorsement of the Building Consent.

SPECIAL FEATURES OF LAND

EARTHQUAKE ZONE 2
The proposed building work is to be sited on land which Council has identified as being Earthquake Zone 2.

EXPOSURE ZONE B
Building elements will be required to be of specific design if within 50mtrs of a bore, steam vent, mud pool or other fume source.

INFORMATION REQUIRED FOR BUILDING CONSENT BUILDING SERVICES

NZ BUILDING CODE
Sufficient details to clearly show how the building work is to comply with the New Zealand Building Code are required. (The use of the Rotorua District Council check list may assist you.)

PERMITTED ACTIVITY

ROTORUA DISTRICT PLAN
The proposed building work is a Permitted Activity under the Rotorua District Plan. No Resource Consent is required.

ROTORUA PARTNER SHAPING ROTORUA

Document Set ID: 2700281
Version: 1, Version Date: 12/11/2013

PERFORMANCE STANDARDS

RURAL A
The activity is permitted subject to compliance with the performance standards and requirements of the Rural A zone.

Signed for and on behalf of the Council:

Name: Ann Kelly Position: Building Services Administration

Signed:  Date: 10 APR 2012

Document Set ID: 2700281
Version: 1, Version Date: 12/11/2013

DESTINATION ROTORUA
ROTORUA DISTRICT COUNCIL

Rotorua District Council
1061 Haupapa Street
Private Bag 3029
Rotorua Mail Centre
Rotorua 3046
New Zealand
P: 07 348 4199
F: 07 346 3143
E: mail@rdc.govt.nz
W: www.rdc.govt.nz

Building Consent No: 69120

Section 51, Building Act 2004
Issued: 11 May 2012

Agent
LEWIS, MR PETER ALLEN
PO BOX 242
ROTORUA 3040

Owner
REID, MR MICHAEL JAMES
C/O ATTN: MR LEWIS
PO BOX 242
ROTORUA 3040

The Building

Property ID:	P27041
Street Address:	48 SHARP ROAD
Valuation number:	06951 239 02
Legal Description:	Lot 2 DPS71633

First point of contact for communications with council building consent authority:
RDC Building Services – Direct Dial 349 5646

Building Work

The following building work is authorised by this consent:

Project is for:	RE CLAD EXISTING DWELLING
Intended Use:	DWELLING (DETACHED)
Intended Life:	Indefinite but not less than 50 years

This building consent is issued under section 51 of the Building Act 2004. This building consent does not relieve the owner of the building (or proposed building) of any duty or responsibility under any other Act relating to or affecting the building (or proposed building).

This building consent also does not permit the construction, alteration, demolition, or removal of the building (or proposed building) if that construction, alteration, demolition, or removal would be in breach of any other Act.

This Building Consent Is Subject To The Following Conditions:

Inspections By Building Consent Authority (Phone Building Services 3495646 To Book Inspections)

✓✓✓ PRE WRAP
✓✓ Wrap/Cavity Battens (all battens, back and kick-out flashings etc installed, wrap sealed and restrained, window support bars).
✓ FOOTINGS
✗ Postline - (all bracing elements and or fire linings/collars installed prior to any plastering completed). ALL BRACES ARE EPI & WERE CHECKED @ PRE WRAP.
✓✓ ENCLOSED DECK
✓ Final Inspection when all building work is complete

ROTORUA PARTNER SHAPING ROTORUA

Document Set ID: 2700281
Version: 1, Version Date: 12/11/2013

Important Endorsements

Section 52 Building Act 2004 (Lapse of Building Consent)
A Building Consent lapses and is of no effect if the building work to which it relates does not commence within 12 months of the date of issue unless prior arrangements are made with the Building Consent Authority.

Completion Of Work
At completion of work authorised by this consent the Building Act requires you to apply for a Code of Compliance Certificate (use Form 6) as soon as practicable after the Building work is completed.

Compliance Schedule

A Compliance Schedule is not required for the building

Attachments

Copies of the following documents are attached to this building consent:-

Project Information Memorandum No 69120

During consent processing Council estimates the number and type of inspections required to complete a project.
Should additional inspections be required to confirm compliance with the approved Building Consent/Building Code, Council reserves the right to seek payment for these prior to the issue of Code Compliance Certificate.

Signed for and on behalf of the Council:

Name: Helen Ferguson Position: Building Services Administration.

Signed: _____ Date: 11 MAY 2012

Document Set ID: 2700281
Version: 1, Version Date: 12/11/2013

Form 6A

Memorandum from licensed building practitioner: Record of building work

RECEIVED
02 AUG 2013
B.C. No. 69120

Section 88, Building Act 2004

THE BUILDING

Street address of building: 48 Sharp Rd.
ROTORUA.

THE PROJECT

Building consent number: 69120

THE OWNER

Name: MICHAEL J. REID

Address: 48 SHARP ROAD, NEONGOTAHA, ROTORUA, BAY OF PLENTY

Phone: 07-3323904 or Mobile:

Email: reidmj13@xtra.co.nz Fax: ~~02~~-07-3323906

RECORD OF WORK THAT IS RESTRICTED BUILDING WORK

Work that is restricted building work	Description	Carried out/ supervised
[Tick]	*[If necessary, describe the restricted building work]*	*[Specify whether you carried out this design work or supervised someone else carrying out this design work]*
Primary structure		
☐ Foundations and subfloor framing	N/A	☐ Carried out ☐ Supervised
☐ Walls	N/A	☐ Carried out ☐ Supervised
Roof	N/A	☐ Carried out ☐ Supervised
☐ Columns and beams	N/A	☐ Carried out ☐ Supervised

Document Set ID: 2700281
Version: 1, Version Date: 12/11/2013

Primary structure cont'd		
Bracing ☐	N/A	☐ Carried out ☐ Supervised
Other ☐	N/A	☐ Carried out ☐ Supervised
External moisture management systems		
Damp proofing ☐	N/A	☐ Carried out ☐ Supervised
Roof cladding or roof cladding system ☑	Enclosed deck Membrane	☑ Carried out ☐ Supervised
Ventilation system for example, subfloor or cavity) ☐	N/A	☐ Carried out ☐ Supervised
Wall cladding or wall cladding system ☐	N/A	☐ Carried out ☐ Supervised
Waterproofing ☐	N/A	☐ Carried out ☐ Supervised
Other ☐	N/A.	☐ Carried out ☐ Supervised
Note: continue on another page if necessary.		

ISSUED BY:

Name: GARRY Radford

LBP number: BP 112095

Class(es) licensed in: Roofing

Plumbers, Gasfitters and Drainlayers Registration Number [if applicable]:

Mailing address:

Street address or registered office:

Phone No: Landline: Mobile:

Daytime: 0274400488 After hours:

Fax:

Email address: Website:

DECLARATION

I GARRY Radford *[name of practitioner]*

carried out or supervised the restricted building work recorded on this form.

Signature:

Date: 24/7/13

Document Set ID: 2700281
Version: 1, Version Date: 12/11/2013

LAKES COAST CLUSTER GROUP

Form 6A

Memorandum from licensed building practitioner: Record of building work

PIM/BC #69120

RECEIVED 11 JUN 2013 B.C. No. 69120

Section 88, Building Act 2004

THE BUILDING

Street address of building: 48 Sharp Rd. Rotorua.

THE PROJECT

Building consent number: 69120

THE OWNER

Name: Mr MJ. Reid

Address: 48 Sharp Rd. RD6 Rotorua.

Phone : 3323322 or Mobile:

Email: Fax:

RECORD OF WORK THAT IS RESTRICTED BUILDING WORK

Work that is restricted building work	Description	Carried out/ supervised
[Tick]	*[If necessary, describe the restricted building work]*	*[Specify whether you carried out this design work or supervised someone else carrying out this design work]*
Primary structure		
Foundations and subfloor framing ☑	N/A	☐ Carried out ☐ Supervised
Walls ☑	Reclad of leaky home some wall framing was replaced.	☐ Carried out ☑ Supervised
Roof ☑	N/A	☐ Carried out ☐ Supervised
Columns and beams ☑	Replace rotten colums to to front of house x6	☐ Carried out ☑ Supervised

Document Set ID: 2700281
Version: 1, Version Date: 12/11/2013

Primary structure cont'd			
Bracing	☑	Some new bracing as required to plan	☐ Carried out ☑ Supervised
Other	☐	N/A	☐ Carried out ☐ Supervised
External moisture management systems			
Damp proofing	☐	N/A	☐ Carried out ☐ Supervised
Roof cladding or roof cladding system	☐	N/A	☐ Carried out ☐ Supervised
Ventilation system for example, subfloor or cavity)	☐	N/A	☐ Carried out ☐ Supervised
Wall claddng or wall cladding system	☑	Replace cladding to entire house with BB. Weatherboard on cavity system	☐ Carried out ☑ Supervised
Waterproofing	☐	N/A	☐ Carried out ☐ Supervised
Other	☐	N/A	☐ Carried out ☐ Supervised

Note: continue on another page if necessary.

ISSUED BY:

Name: Roland Tissink.

LBP number: BP 116700

Class(es) licensed in: S2

Plumbers, Gasfitters and Drainlayers Registration Number [if applicable]:

Mailing address: 11 Sharp Rd. RD6 Rotorua.

Street address or registered office:

Phone No: Landline: Mobile: 0274830353

Daytime: 07.3323061 After hours:

Fax:

Email address: roland@tissink.co.nz Website:

DECLARATION

I Roland Tissink. *[name of practitioner]*

carried out or supervised the restricted building work recorded on this form.

Signature:

Date: 11/2/13

Document Set ID: 2700281
Version: 1, Version Date: 12/11/2013

RDC-260970

ADVICE OF LICENSED BUILDING PRACTITIONER/(S)
Section 87, Building Act 2004

1 THE BUILDING (project location)

Building name (*if applicable*) _____

Building street address: 48 Sharp Rd. Rotorua.

2. THE PROJECT

Building consent number: 69120

3. THE OWNER (must be completed and all details must be the owner's)

AGENTS SIGNATURE

Owner's name (*for individuals, use the preferred form of title, e.g. Mr, Mrs, Ms, Miss, Dr. For companies, trusts and other organisations provide a contact person's name*): M.J. Reid Peter Allen Lewis as solicitor for

Address: 48 Sharp Rd. RD6 Rotorua.

Date: 10/5/12 Landline: 07 332322

Mobile: _____ After Hours: _____

Fax: _____ E-mail: reidmj13@truemail.co.th

4. LICENSED BUILDING PRACTITIONERS ENGAGED TO CARRY OUT/SUPERVISE RESTRICTED BUILDING WORK

Particular work to be carried out or supervised	Name	Licensing class	Licensed building practitioner number (*or registration number if treated as being licensed under section 291 of Act*)
Carpentry	R. Tissink	62	BP116700

Document Set ID: 2700281
Version: 1, Version Date: 12/11/2013

4. LICENSED BUILDING PRACTITIONERS ENGAGED TO CARRY OUT/SUPERVISE RESTRICTED BUILDING WORK (cont.)

Particular work to be carried out or supervised	Name	Licensing class	Licensed building practitioner number (*or registration number if treated as being licensed under section 291 of Act*)

COUNCIL USE ONLY				
LBP(s) checked	Y	All OK	Y	N
Comments				
Date Issued				

Document Set ID: 2700281
Version: 1, Version Date: 12/11/2013

Glenn Marjoribanks

From: Glenn Marjoribanks
Sent: Wednesday, 17 July 2013 12:55 p.m.
To: roland@tissink.co.nz
Subject: BC 69120 48Sharp Road
Attachments: SKMBT_C364013071712430.pdf

Afternoon Roland,

The above building Consent has been in for CCC assessment and has bounced back to me for a couple of reasons.

As it turns out this BC is Restricted Building Work (RBW) as the BC was applied for after the LBP Scheme started.

Council require an Advice of LBP form completed by the Owner or Agent, notifying Council of the LBP's approved for this site. (please find this form attached above)
Please note we have the advice form for you as Carpenter.
The 2 LBP's required on this form are:

- Gary Radford for the Butynol Decking.
- Craft stone applicator for the Stone cladding system to the posts.

Council will also need the Form 6a's form the 2 LBPs named above. (please find this form attached above.)

Please note if Craft stone do not have an LBP to sign off the stone work, then Council will accept a 6a from you the Carpenter signing off the Stone Cladding.

There is also an Invoice coming out for the As-built plans received by Council.

Once this information is received and the Invoice paid, the CCC is ready to be issued.

Your assistance with this matter would be greatly appreciated.

Kind Regards

Glenn Marjoribanks
Building Officer, Inspection
Rotorua District Council | D: 07 351 8196

From: konica_scanner@rdc.govt.nz [mailto:konica_scanner@rdc.govt.nz]
Sent: Wednesday, 17 July 2013 12:44 p.m.
To: Glenn Marjoribanks
Subject: Message from KMBT_C36402621_RDC_BUILDING_GROUNDFLOOR

Document Set ID: 2700281
Version: 1, Version Date: 12/11/2013

Glenn Marjoribanks

From: Glenn Marjoribanks
Sent: Monday, 29 July 2013 6:26 a.m.
To: 'Roland Tissink'
Subject: RE: BC 69120

Morning Roland,

Thank you for the email and attached "advise of LBP" and Form 6a from Garry Radford.
Unfortunately the 6a has been completed incorrectly.

Garry has ticked that he has worked on the "Primary structure - Roof".
He needs to tick the "External Moisture Management Systems – Roof Cladding" and confirm details of what he did on the job.
He also need to complete the information about himself – Mailing address or Street address required please.

Please forward the completed form back to me as soon as you can.

Kind Regards

Glenn Marjoribanks
Building Officer, Inspection
Rotorua District Council | D: 07 351 8196

From: Roland Tissink [mailto:tissbuild@xtra.co.nz]
Sent: Thursday, 25 July 2013 2:17 p.m.
To: Glenn Marjoribanks
Subject: BC 69120

Hi Glenn

BC 69120

Info as required attached
Craft stone do not need to licensed as decorative only, all cladding was installed by Tissink Builders Ltd

Best Regards
Roland Tissink

TISSINK BUILDERS LTD
Registered Master Builders
Liscensed Building Practitioners
11 Sharp Rd
RD6
Rotorua 3096

M: 0274830353
P: 073323061
E: tissbuild@xtra.co.nz
W: www.tissink.co.nz

Document Set ID: 2700281
Version: 1, Version Date: 12/11/2013

LAKES COAST CLUSTER GROUP

ADVICE OF LICENSED BUILDING PRACTITIONER/(S)
Section 87, Building Act 2004

1 THE BUILDING (project location)

Building name (*if applicable*) _____

Building street address: 48 Sharp Rd Rotorua.

2. THE PROJECT

Building consent number: 69120

3. THE OWNER (must be completed and all details must be the owner's)

Owner's name (*for individuals, state the preferred form of title, e.g. Mr, Mrs, Ms, Miss, Dr. For companies, trusts and other organisations provide a contact person's name*): Michael James Reid

Address: 48 Sharp Road, Ngongotaha, Rotorua, Bay of Plenty

Date: 25-07-13 Landline: 07-3323904

Mobile: _____ After Hours: _____

Fax: 07-3323906 E-mail: reidmj3@xtra.co.nz

4. LICENSED BUILDING PRACTITIONERS ENGAGED TO CARRY OUT/SUPERVISE RESTRICTED BUILDING WORK

Particular work to be carried out or supervised	Name, address, email, and phone number of Licensed Building Practitioner	Licensed Building Practitioner number (*or registration number if treated as being licensed under section 291 of Act*)	Licensing class
Roofing Membrane Enclosed Deck.	Name: Garry Radford. Address: P.O Box 485 Email: _____ Telephone: 0274400488	BP 112095	Roofing
	Name: _____ Address: _____ Email: _____ Telephone: _____		
	Name: _____ Address: _____ Email: _____ Telephone: _____		

RECEIVED
29 JUL 2013
B.C. No. 69120.

Document Set ID: 2700281
Version: 1, Version Date: 12/11/2013

4. LICENSED BUILDING PRACTITIONERS ENGAGED TO CARRY OUT/SUPERVISE RESTRICTED BUILDING WORK (cont.)

Particular work to be carried out or supervised	Name, address, email, and phone number of Licensed Building Practitioner	Licensed Building Practitioner number (*or registration number if treated as being licensed under section 291 of Act*)	Licensing class
	Name: Address: Email: Telephone:		
	Name: Address: Email: Telephone:		
	Name: Address: Email: Telephone:		
	Name: Address: Email: Telephone:		
	Name: Address: Email: Telephone:		
	Name: Address: Email: Telephone:		
	Name: Address: Email: Telephone:		

SIGNATURE

Signature of owner/agent on behalf of and with the authority of the owner *[delete one]*:

Name of person signing: Michael V. Reed Date: 25-7-13

COUNCIL USE ONLY

LBP(s) checked	Y	All OK	Y	N
Comments:				

Document Set ID: 2700281
Version: 1, Version Date: 12/11/2013

DESTINATION ROTORUA — ROTORUA DISTRICT COUNCIL	**Inspection Checklist: Pre-Wrap**	Ref: IC 05 Ver: 5 Issued: 27 Sept 2011 Doc No: IT-639951 Page 1 of 3

BC No 69120	**Contact on site** *(Name, company & position)* JULIAN ARLMER TISSINK BUILDERS
Date 29 · 6 · 12	
Inspector G MARJORIBANKS	

Inspection Comments / Notes: *(Include comment on any alternative solutions identified, site observation statements, warranties or 'As Builts's to be provided, if applicable)*

4·7·12 - ITEM 2 COMPLETED GJM

2·8·12 - INST SHT COMPLETED GJM

If Inspection Result = PASS then date and sign here	**Date** 29·6·12	**Signature**
If Inspection Result = FAIL then complete instruction sheet (*record number here and on summary card*)		7205

F = Fail = Non-compliance with approved plans & documentation
P = Pass = Compliance with approved plans & documentation.
N/A = Means that Building officer feels that this portion of the prompt sheet is not relevant

	Pre Wrap				**Comments (reasons for decisions)**
1	Approved Consent documents on site	(P)	F	N/A	ON SITE
2	Previous comments/ instructions	(P)	F	N/A	NIL
	Wind Zone				**Comments (reasons for decisions)**
3	Wind zone	(P)	F	N/A	HIGH WIND ZONE
	Wall Framing				**Comments (reasons for decisions)**
4	Stud size, grade, treatment and height	(P)	F	N/A	90x45 H1.2 SG8 NEW FRAMESAVER (2x COATS) APPLIED TO ALL TIMBER
5	Is the framing setout appropriate for the cladding system? (*480 c nogs for bd & batten or studs at 400c for non rigid backing plaster system etc*)	(P)	F	N/A	
6	Has blocking been installed under top plates to accommodate point loads or has double top plate been fitted? *Check for point loads*	(P)	F	N/A	EXISTING TOP PLATE PACKER
7	Is SED frame in accordance with engineer design? *If engineer is retained to verify design then obtain PS4.*	P	F	(N/A)	
8	Have Nogs been installed behind apron flashing upstand to roof, deck, etc?	(P)	F	N/A	EXISTING + FRAMESAVER
9	Bottom plate fixings including straps etc for bracing of exterior walls	(P)	F	N/A	HANDIBRACS FOR ALL EPS

Document Set ID: 2700281
Version: 1, Version Date: 12/11/2013

Framed Roof					Comments (reasons for decisions)
Rafters					
31	Do rafter spacing, size, spans, grade, treatment, & connections comply with approved documentation?	P	F	N/A	
Ridge Beams					
32	Do ridge beam, spans, supports & fixings comply with consent documentation? *(Give careful attention to spans, support, load paths,connection details).*	P	F	N/A	
Collar Ties & Cleats					
33	Do collar tie & cleats and fixings comply with approved consent?	P	F	N/A	
Ceiling Joists					
34	Do ceiling joists seat by 35mm min or joist hanger fixings completed	P	F	N/A	
35	Do ceiling joist spacing, size, span, grade, & treatment comply with the plans and specifications?	P	F	N/A	
Ceiling Runner/ Strong Back					
36	Does ceiling runner (strong back) spacing, span, size, grade, & treatment comply with documentation?	P	F	N/A	
37	Do strong backs have a minimum landing of 65 mm on top of a packer supported on the top plate & are restrained at each end from twisting?	P	F	N/A	
38	If the end of the strong back is chamfered ensure that depth of the strong back is not less than 50% at point of support.	P	F	N/A	
Under Purlin					
39	Are the under purlin struts correctly supported?	P	F	N/A	
40	Does cantilever of under purlin comply?	P	F	N/A	
41	Do under purlin size, span, fixing, grade, and treatment comply with documentation?	P	F	N/A	
Strutting Beams					
42	Are strutting beams clear of ceiling joists by > 25 mm or as engineer designed?	P	F	N/A	
43	Do strutting beam dimensions, spans, fixings, and & support comply with consent documentation?	P	F	N/A	

Document Set ID: 2700281
Version: 1, Version Date: 12/11/2013

Wall Framing continued					Comments (reasons for decisions)
10	Is DPC fitted under bottom plate?	(P)	F	N/A	D/STAIRS ONLY.
11	Top plate to stud fixings	(P)	F	N/A	4TS TO ALL STUDS/TOP PLATE UPSTAIRS & D/STAIRS
12	Sheet bracing type, treatment, thickness & fixings	P	(F)	N/A	
13	Framing treatment is correct for location / situation	(P)	F	N/A	ALL H1.2 OR FRAME SAVER
Lintels And Sills					**Comments (reasons for decisions)**
14	Lintel/ sill, grade and treatment	(P)	F	N/A	H1.2 SG8
15	Lintel sizes in accordance with consent?	(P)	F	N/A	EXISTING
16	Are lintel fixings for uplift correctly fitted for wind zone?	(P)	F	N/A	TYPE F
17	Sill thickness correct (90mm >2.999M / 135mm > 3.599 / > 4.2m = SED)	P	F	(N/A)	
18	Correct lintel sizing for load points *(check load points are in same position as design)*	(P)	F	N/A	CORRECT
Posts And Beams					**Comments (reasons for decisions)**
19	Beam size, span, grade and treatment	P	F	(N/A)	EXISTING
20	Beam connections to supporting members (*type of fixings*)	P	(F)	N/A	
21	Are beams properly supported? *Have load paths been considered?*	P	(F)	N/A	
22	Do post / footing connections comply? *Check durability of connections*	P	(F)	N/A	
Truss Roof					**Comments (reasons for decisions)**
23	As built truss plan supplied	P	F	(N/A)	EXISTING
24	As built compared to that used in design process	P	F	(N/A)	NOT ALTERED
25	Treatment of trusses	P	F	(N/A)	
26	Layout and fixings for wind zone	(P)	F	(N/A)	2x WIRE DOGS TO ALL TRUSSES
Purlins & Battens & Outriggers					**Comments (reasons for decisions)**
27	Purlin / batten / outrigger spacing, size, span, grade, & treatment?	P	F	(N/A)	NOT ALTERED
28	Purlin / batten / outrigger fixings correct for wind zone	P	F	(N/A)	
Valley Boards					**Comments (reasons for decisions)**
29	Valley board size & treatment *(Must be min. 25mm thick and wide enough to support valley gutter.*	P	F	(N/A)	NOT ALTERED
Roof Bracing					**Comments (reasons for decisions)**
30	Does roof bracing comply with approved documentation? • Plane • Space • Dragon ties • Ceiling plane for heavy hips *(Check connections and location of bracing components).*	P	F	(N/A)	NOT ALTERED

Document Set ID: 2700281
Version: 1, Version Date: 12/11/2013

GARAGE & FLAT ONLY

DESTINATION ROTORUA	**Inspection Checklist: Wrap Cavity Battens**	Ref: IC 06 Ver: 5 Issued:1 July 2010 Doc No: IT-639960 Page 1 of 2

BC No 69120	**Contact on site** *(Name, company & position)* JULIAN ARCHER & BRIAN HARRIS TISSINK BUILDERS
Date 11 · 10 · 12	
Inspector G MARJORIBANKS	

Inspection Comments / Notes: *(Include comment on any alternative solutions identified, site observation statements, warranties or 'As Laid's to be provided, if applicable)*

If Inspection Result = PASS then date and sign here	**Date** 11.10.12	**Signature**
If Inspection Result = FAIL then complete instruction sheet (*record number here and on summary card*)		

F = Fail = Non-compliance with approved plans & documentation
P = Pass = Compliance with approved plans & documentation.
N/A = Means that Building officer feels that this portion of the prompt sheet is not relevant

	Wrap Inspection				**Comments (reasons for decisions)**
1	Approved Consent documents on site	(P)	F	N/A	ON SITE.
2	Previous comments/ instructions	(P)	F	N/A	PREWRAP
3	Protection details for window & door openings *(sill trays, wrap returned around stud, type of flashing tape)*	(P)	F	N/A	CAVITY SYSTEM WRAP RETURNED ALU BAND TAPE
4	Window and door support bars	(P)	F	N/A	FITTED.
5	Internal & external corner junctions *(back flashings etc)* As per consent	P	F	(N/A)	NOT REQD
6	Back and junction flashing details (*change in claddings)* As per consent	P	F	(N/A)	
7	Saddle flashings correctly installed	P	F	(N/A)	
8	Flashings to beam to wall junction	P	F	(N/A)	
9	Building wrap type and installation *(appropriate for types of cladding unlined gable ends etc, type of fixing)* Wrap tight to framing	(P)	F	N/A	WATERGATE PLUS
10	Rigid air barrier where applicable *(Refer NZS 3604:1999, section 11.5.2.6. A rigid or non-rigid 'Wind Barrier' shall be required behind all types of weatherboards in 'High & Very High' wind zones.)*	P	F	(N/A)	NO RAB

Document Set ID: 2700281
Version: 1, Version Date: 12/11/2013

Wrap Inspection cont.					Comments (reasons for decisions)
11	Wrap condition (*free of punctures and sealed around penetrations*)	(P)	F	N/A	REPAIRED WITH ALU BAND
12	Building wrap is restrained at 300mm centres if studs at more than 450C for cavities (*E2 AS 1*)	(P)	F	N/A	FITTED
13	Have building wrap laps been taped when interior linings not fitted?	P	F	(N/A)	BELOW SOFFITS ONLY
14	Apron flashings have appropriate kick out (*discuss with contractor if not fitted*)	P	F	(N/A)	
Cavity Battens					
15	Batten treatment and type	(P)	F	N/A	TIMBER H3.1
16	Batten width and thickness (*double battens behind joins in sheets etc*)	(P)	F	N/A	40 x 20 @ 600 CRS.
17	Batten spacing	(P)	F	N/A	600 CRS.
18	Battens fixings (*Battens fixed at 300c where claddings fixed to battens*)	(P)	F	N/A	
19	Batten Nogs fall and length	P	F	(N/A)	NO NOGS
20	Double studs & battens provided behind sheet joints for *'(Expressed joints' &/or 'Sealant joints')*	P	F	(N/A)	
21	Drainage paths unimpeded (*moisture in cavity draining down back of cladding is directed to the exterior at 1st available instance and is not impeded by other building elements*)	(P)	F	N/A	CORRECT.
22	Cavity closer (*type fitted*)	(P)	F	N/A	FITTED
23	Muleseal to concrete at base of brick cavity	P	F	(N/A)	

Document Set ID: 2700281
Version: 1, Version Date: 12/11/2013

INSTRUCTION BOOK
BUILDING SERVICES

NO: 7205

DESTINATION ROTORUA
ROTORUA DISTRICT COUNCIL

Rotorua District Council
1061 Haupapa Street
Private Bag 3029
Rotorua Mail Centre
Rotorua 3046
New Zealand
P: 07 348 4199
F: 07 346 3143
E: mail@rdc.govt.nz
W: www.rdc.govt.nz

Site Address: 48 SHARP RD.

Building Consent No: 69120

Attention: JULIAN

Inspection Type: PREWRAP.

Instructions:

✓1 - BECAUSE SOME BRACES HAVE CHANGED POSITION, SIZE, ETC PLEASE PROVIDE NEW ACCURATE BRACE PLAN & CALCS FOR UPSTAIRS & DOWNSTAIRS. RECD 2.8.12

✓2 - EPI BRACES TO BE INSTALLED & INSPECTED
* PLEASE TAKE PHOTOS OF BATS BEHIND BRACES PHOTOS SIGHTED
✓* ENSURE S/S NAILS USED TO FIX CCA TREATED BRACES OR GALV CAN BE USED ON COSP PLY. S/S USED

✓3 - NEW POSTS/BEAMS TO BE CHECKED BEFORE WRAPPED. NEW PLANS & FIXING DETAILS RECD. INSPECTED & PLANS RECD

✓4 - NEXT INSPECTION IS WRAP/CAVITY. WITH BATTENS ETC IN PLACE. + PAMBAND
* NOTE INSULATION CAN BE SEEN THRU WRAP.

4.7.12 - EPI BRACES INSTALLED CORRECTLY. GJM

COMPLETED
2.8.12
GJM

Date Instructions complied with: BY WCAP.

Signed: _____ (Print name) G MARSDEN-SMITH

Date: 29.6.12

Document Set ID: 2700281
Version: 1, Version Date: 12/11/2013

Glenn Marjoribanks

From: Glenn Marjoribanks
Sent: Thursday, 14 February 2013 3:30 p.m.
To: 'roland@tissink.co.nz'
Subject: BC 69120 Ground level details, E2/AS1 and NZS2604:2011
Attachments: SKMBT_C353 13021413420.pdf

Afternoon Roland,

Further to our discussion yesterday please find attached details from the Building Consent (69120) and E2/AS1 and NZS3604:2011.

The pages attached are:

1. NZS3604:2011 Section 7.5.2.2 and Figure 7.12 This detail shows the minimum requirements to comply with the ground level.
   The minimum width of the paved surface is 450mm with a slope of no less than 1:25 away from the dwelling.
   The fact that the building we are talking about can have a natural fall away from the paved surface adds extra compliance to the detail.
2. E2/AS1 Figure 17B shows a Level threshold for ground levels. (generally used outside doorways) But there are strict guidelines for this to comply including the maximum length of the drain (3.7m), minimum depth from FFL of 150mm and fall along the channel of 1:200 towards the outlets. The drainage channel is also required to be a minimum of 200mm wide.
3. A copy of the Consented plan showing the drainage channel. This is set at 50mm below the slab and the channel is 150mm deep. This would mean that the base of the channel would be 200mm below FFL. In the emails between Allan Hoffman and Dylan Batenburg (Millennium Architecture), Dylan states that the amended detail is better than the E2 detail. While the detail does not show the channel is 200mm wide, since E2 states a minimum of 200mm, this was assumed. The fact that the base of the channel is 200mm below FFL instead of the 150mm required in E2 confirms it to be a better detail in that dimension.

I hope this clarifies the situation.
If you have any queries please do not hesitate to contact me.

Kind Regards

Glenn Marjoribanks
Building Officer
Rotorua District Council.

From: Building_Copier@rdc.govt.nz [mailto:Building_Copier@rdc.govt.nz]
Sent: Thursday, 14 February 2013 1:43 p.m.
To: Glenn Marjoribanks
Subject: Message from KMBT_C353 C35302452 ROTORUA DISTRICT COUNCIL, BUILD

Document Set ID: 2700281
Version: 1, Version Date: 12/11/2013

NO: 9642

INSTRUCTION BOOK
BUILDING SERVICES

Shaping Rotorua | DESTINATION ROTORUA — ROTORUA DISTRICT COUNCIL

Rotorua District Council
1061 Haupapa Street
Private Bag 3029
Rotorua Mail Centre
Rotorua 3046
New Zealand

P: 07 348 4199
F: 07 346 3143
E: mail@rdc.govt.nz
W: www.rdc.govt.nz

Site Address: 48 SHACO RD

Building Consent No: 69120

Attention: ROLAND. 0274830353.

Inspection Type: FINAL

Instructions:

✓1- FORM 6 REQD RECD

✓2- FORM 6A REQD RECD

✓3- 1x GULLY TO BE LOWERED TO BE ORG & MUST BE 150 BELOW FFL & 25 ABOVE PAVING. CORRECT

✓4- GROUND LEVELS TO BE COMPLETED. DONE AS PER AMENDMENT

✓5- PS1 REQD FOR DECK HANDRAIL + ✓PS3 FOR INSTALLATION. PS3 RECD - PS1 NOT REQD.

✓6- ALL CLADDING PENETRATIONS TO BE COMPLETED

N/A- ELEC CERT REQD IF APPLICABLE NOT APPLICABLE

✓8- GAS CERT REQD. RECD

✓9- BUTYNOL STATEMENT OF COMPLIANCE REQD RECD

✓10- AS BUILT PLAN & DETAILS REQD FOR TIES ON SCREW JACKS ON BUTYNOL DECK. RECD

✓11- INST SHT 8717 STILL APPLIES FOR PHOTOS OF DUCT PENETRATION SEALS. RECD

✓12- CONSENTED PLANS TO BE ON SITE. ON SITE

13- RECALL INSPECTION REQD

10.6.13
COMPLETED.
GJM

Date Instructions complied with: BEFORE CCC PROCESSED

Signed: _____ (Print name) 6 MARJORIE BANKS

Date: 11.02.13

Document Set ID: 2700281
Version: 1, Version Date: 12/11/2013

INSTRUCTION BOOK
BUILDING SERVICES

NO: 8712

DESTINATION ROTORUA
ROTORUA DISTRICT COUNCIL

Rotorua District Council
1061 Haupapa Street
Private Bag 3029
Rotorua Mail Centre
Rotorua 3046
New Zealand
P: 07 348 4199
F: 07 346 3143
E: mail@rdc.govt.nz
W: www.rdc.govt.nz

Site Address: 48 SHARP RD

Building Consent No: 69120.

Attention: JULIAN / ROLAND

Inspection Type: WRAP / CAVITY

Instructions:

1- 2x 150Ø DUCT PENETRATIONS TO BE SEALED AS DISCUSSED. PHOTOS READ REQ

2- DIVERTORS TO BE FITTED. PHOTOS REQD.

DIVERTORS FITTED.

COMPLETED GJM

Date Instructions complied with: ASAP.

Signed: _____ (Print name) G MCGRIGGANICS

Date: 15.8.12

Document Set ID: 2700281
Version: 1, Version Date: 12/11/2013

DESTINATION ROTORUA

Inspection Checklist: Domestic Final

Ref: IC 16
Ver: 9
Issued: 27 Sept 2011
Doc No: IT-639940
Page 1 of 4

BC No 69120	Contact on site *(Name, company & position)* ROLAND TISSINK, BUILDER.
Date 11 · 02 · 13	
Inspector 6 MARJORIBANKS	

Inspection Comments / Notes: *(Include comment on any alternative solutions identified, site observation statements, warranties or 'As Laid's or as Builts to be provided, if applicable)*

10·6·13
INST SHT COMPLETED

If Inspection Result = **PASS** then date and sign	Date 10·6·13	Signature
If Inspection Result = **FAIL** then complete instruction sheet (*record number here and on summary card*)	9642	

F = Fail = Non-compliance with approved plans & documentation
P = Pass = Compliance with approved plans & documentation.
N/A = Means that Building officer feels that this portion of the prompt sheet is not relevant

	Building Consent Documentation				Comments (reasons for decisions)
1	Form 6 + 6A	P	(F)	N/A	
2	Approved Building Consent documents on site	(P)	F	N/A	ON SITE.
3	Check conditions of PIM	(P)	F	N/A	COMPLETED
4	Inspections as scheduled	(P)	F	N/A	COMPLETED
5	Conditions of BC.	(P)	F	N/A	MEET.
6	Building work completed to consent documents	P	(F)	N/A	
7	Sec 269 – Substitutions may involve certified building methods or products,	P	F	(N/A)	NIL
8	Sec 364 – (*If the building a household unit being constructed by or on behalf of a property developer for the purpose of sale? CCC or agreement with form one is compulsory.)*	(P)	F	N/A	PRIVATE DWELLING

Document Set ID: 2700281
Version: 1, Version Date: 12/11/2013

Kitchen					Comments (reasons for decisions)
9	Food preparation and sink provision	(P)	F	N/A	PROVIDED AS PER D/L
10	Impervious, easily cleaned wall finishes	(P)	F	N/A	PAINTED WALLS MARLEY TOPS
11	Bench top junction with wall linings (*sealed*)	(P)	F	N/A	ALL SEALED
12	Hot & cold supply provided to sink	(P)	F	N/A	H & C
13	Trap & waste fitted to sink	(P)	F	N/A	40Ø TRAP/WASTE
14	Energy supply provided for cooking	(P)	F	N/A	GAS BENCH TOP
15	Space & power been provided for refrigerator or ventilation for food safe	(P)	F	N/A	IN BUILT FRIDGE
Laundry					**Comments (reasons for decisions)**
16	Laundry facilities (*washing machine space, tub etc*)	P	F	(N/A)	
17	Tub (*fixing and water trap*)	P	F	(N/A)	NOT
18	Water supply *(cold min)*	P	F	(N/A)	ALTERED
19	Impervious finish (*walls and floor*)	P	F	(N/A)	
Wet areas / WCs					**Comments (reasons for decisions)**
20	Impervious finish (*walls and floor*) (*Statement from water proof membrane installer*)	P	F	(N/A)	
21	Joints in impervious surface finishes (*including flexible sealant at junctions to walls and sealant to base of toilet pans and between vanity tops and walls*)	P	F	(N/A)	NOT ALTERED
22	Safety glazing for shower screens, doors & windows Clearly identified	P	F	(N/A)	
23	Shower cubicle watertight?	P	F	(N/A)	
Ventilation					**Comments (reasons for decisions)**
24	Natural ventilation to occupied space	(P)	F	N/A	YES
25	Mechanical (*ducted to exterior*)	P	F	(N/A)	EXISTING & NOT ALTERED
Insulation					**Comments (reasons for decisions)**
26	Ceiling insulation installed correctly & clear of down lights	(P)	F	N/A	CEILING INSULATION NOT ALTERED - NEW WALL INSERTED
27	Subfloor insulation protection (*Subfloor insulation in exposed locations such as under raised floor of a pole house may require protection*).	P	F	(N/A)	CONCRETE FLOOR
Glazing					**Comments (reasons for decisions)**
28	Glazing to full height windows, doors, landings etc (*appropriate markings*)	P	F	(N/A)	NO FULL HEIGHT GLASS

Document Set ID: 2700281
Version: 1, Version Date: 12/11/2013

P & D					Comments (reasons for decisions)
29	Seismic restraints to the water storage cylinder	P	F	(N/A)	
30	Terminal vents terminate outside the building clear of openings (*Ensure all branch drain 10m or > are vented*)	(P)	F	N/A	2x 80ø TU's
31	Waste pipe penetrations sealed in gullies	(P)	F	N/A	YES
32	Downpipes fixings and spreaders	(P)	F	N/A	CORRECT.
33	HWC vent protected against frost	P	F	(N/A)	NOT ALTERED
34	ORG (*150mm below lowest fixture overflow level and 75mm above finished ground levels 25mm above paving*)	P	(F)	N/A	TO BE 150 BELOW FFL.
35	HWC drain to the exterior	(P)	F	N/A	YES.
36	Hot water supply (*type of system eg infinity, low or mains pressure*)	P	F	(N/A)	
37	Valves to HWC (*list valves fitted-cold water expansion, TPRV, tempering valve, open vent, isolating valve, pressure reducing valve*)	P	F	(N/A)	NOT ALTERED
38	Correct head for HWC	P	F	(N/A)	
30	AAV's accessible	P	F	(N/A)	
40	Water temperature	P	F	(N/A)	
Stairs / Landings / Handrails / Window Openings					**Comments (reasons for decisions)**
41	Handrails to internal and or external stairs	P	(F)	N/A	DETAILS REQD PS1 & PS3. REQD
42	Lighting (switches at the top & bottom of stairway).	(P)	F	N/A	EXISTING
43	Slip resistance (*Slip resistance shall be provided for all walking surfaces such as decks, patios & steps on the approach to the main entrance of the building.*)	(P)	F	N/A	TEXTURED TILES
44	Treads and riser dimensions/ threshold heights	P	F	(N/A)	EXISTING.
45	Barriers (*Installed to all areas where there is a fall height of 1.000 or more can occur from the floor or opening in the exterior envelope of the building, or a change in level*)	P	(F)	N/A	PS1 & PS3 REQD
48	Restriction stays (*to opening widow <760 above floor or a foothold. If there is a fall of 1.0m or more from floor level to limit opening to 100mm max).*	P	F	(N/A)	
Smoke Alarms					**Comments (reasons for decisions)**
47	Smoke alarms with hush buttons installed in every bedroom or within 3.0m of every bedroom door or escape routes and every building level.	(P)	F	N/A	8x HARD WIRED ALARMS
Exterior					**Comments (reasons for decisions)**
48	Exterior envelope status and type (*complete and weatherproof*)	P	(F)	N/A	PENETRATIONS TO BE SEALED/FLUSHED
49	Elevations compared to consented documents?	(P)	F	N/A	AS PER AS-BUILT
50	Flashings to openings complete and weathertight (*meter boxes, pipes, taps etc*)	(P)	F	N/A	CORRECT
51	Parapet flashings correctly installed	P	F	(N/A)	NO PARAPETS
53	Wall cladding fixings/soakers/scribers status	(P)	F	N/A	COMPLETED

Document Set ID: 2700281
Version: 1, Version Date: 12/11/2013

54	Brickwork weep holes/ventilation (*how is it achieved*) Top and bottom	(P)	F	N/A	TIMBER U/BOARD ON CAVITY
55	Ground/paving heights (*record dimensions*)	P	(F)	N/A	INCOMPLETE
56	Decks/barrier heights / threshold dimensions (*complete separate deck checklist for remainder of deck*)	P	(F)	N/A	DETAILS REQD
57	Sub floor access/insulation/ ventilation type	P	F	(N/A)	NIL
58	Roof cladding type /flashing status/ roof penetration flashings types	P	F	N/A	NOT ALTERED
59	Landscaping status (*completed or not*)	P	(F)	N/A	NOT FINISHED
60	Stormwater disposal from hardstand areas? (*confirm formation of cess pit*)	P	(F)	N/A	NOT FINISHED
Effluent Disposal Systems					**Comments (reasons for decisions)**
61	System type	P	F	(N/A)	NOT
62	Statement (construction review) supplied from the installer or designer?	P	F	(N/A)	ALTERED
63	If required, can effluent disposal area be isolated from stock or vehicle damage, etc?	P	F	(N/A)	
Damage Deposit					**Comments (reasons for decisions)**
64	Footpath and/or kerb condition	(P)	F	N/A	NIL
65	Can damage deposit be refunded? *If no, take photographs for evidence*	(P)	F	N/A	YES
Crossing Deposit					**Comments (reasons for decisions)**
66	Is crossing formed in accordance with RDC requirements?	(P)	F	N/A	YES
67	Can crossing deposit be refunded? *If no, take photographs for evidence*	(P)	F	N/A	YES
Overhead Power Lines					**Comments (reasons for decisions)**
68	Overhead power lines have correct clearance to building elements	(P)	F	N/A	NIL
PHOTOGRAPHS (compulsory)					**Comments (reasons for decisions)**
69	Photographs taken of all exterior elevations!	(P)	F	N/A	TAKEN
Producer Statements/Technical Literature/ Certificates					**Comments (reasons for decisions)**
70	Energy Certificate for Electrical work	P	(F)	N/A	
71	Energy Certificate for Gas work	P	(F)	N/A	
72	Exterior Plaster System	P	F	(N/A)	
73	Plumbing (*pressure tests*)	P	F	(N/A)	
74	As built drainage plan	P	F	(N/A)	
75	Membranes	P	(F)	N/A	
76	As builts supplied	(P)	(F)	N/A	REQD
77	Producer statements	P	(F)	N/A	FOR HANDRAIL
78	Survey certificates	P	F	(N/A)	
79	Other	P	F	(N/A)	
80	Other	P	F	(N/A)	
NOTICES					**Comments (reasons for decisions)**
81	***NTF and Instruction Sheets complied with?***	P	(F)	N/A	8717.

Document Set ID: 2700281
Version: 1, Version Date: 12/11/2013

DESTINATION ROTORUA ROTORUA DISTRICT COUNCIL	**Inspection Checklist: Wrap Cavity Battens**	Ref: IC 06 Ver: 5 Issued:1 July 2010 Doc No: IT-639960 Page 1 of 2

BC No 69120	**Contact on site** *(Name, company & position)* JULIAN ARCHER FISSINK BUILDERS
Date 15 · 8 · 12	
Inspector G MARJORIBANKS	

Inspection Comments / Notes: *(Include comment on any alternative solutions identified, site observation statements, warranties or 'As Laid's to be provided, if applicable)*

If Inspection Result = PASS then date and sign here	**Date** 15·8·12	**Signature**
If Inspection Result = FAIL then complete instruction sheet (*record number here and on summary card*)		B717

F = Fail = Non-compliance with approved plans & documentation
P = Pass = Compliance with approved plans & documentation.
N/A = Means that Building officer feels that this portion of the prompt sheet is not relevant

	Wrap Inspection				Comments (reasons for decisions)
1	Approved Consent documents on site	(P)	F	N/A	ON SITE.
2	Previous comments/ instructions	(P)	F	N/A	
3	Protection details for window & door openings (*sill trays, wrap returned around stud, type of flashing tape*)	(P)	F	N/A	WRAP RETURNED. ALU BAND TAPE
4	Window and door support bars	(P)	F	N/A	FITTED
5	Internal & external corner junctions *(back flashings etc)* As per consent	(P)	F	N/A	IN PLACE OVER BATTENS
6	Back and junction flashing details (*change in claddings)* As per consent	P	F	(N/A)	
7	Saddle flashings correctly installed	P	F	(N/A)	
8	Flashings to beam to wall junction	~~P~~	F	(N/A)	
9	Building wrap type and installation (*appropriate for types of cladding unlined gable ends etc, type of fixing)* Wrap tight to framing	(P)	F	N/A	WATERGATE PLUS
10	Rigid air barrier where applicable (*Refer NZS 3604:1999, section 11.5.2.6. A rigid or non-rigid 'Wind Barrier' shall be required behind all types of weatherboards in 'High & Very High' wind zones.)*	P	F	(N/A)	NO RAB

Document Set ID: 2700281
Version: 1, Version Date: 12/11/2013

Wrap Inspection cont.					Comments (reasons for decisions)
11	Wrap condition (*free of punctures and sealed around penetrations)*	(P)	F	N/A	NO HOLES
12	Building wrap is restrained at 300mm centres if studs at more than 450C for cavities *(E2 AS 1)*	(P)	F	N/A	FITTED WHERE NO PLY UNDER WRAP.
13	Have building wrap laps been taped when interior linings not fitted?	P	F	(N/A)	NO GABLES
14	Apron flashings have appropriate kick out (*discuss with contractor if not fitted)*	P	(F)	N/A	
Cavity Battens					
15	Batten treatment and type	(P)	F	N/A	H3.1 TIMBER
16	Batten width and thickness (*double battens behind joins in sheets etc)*	(P)	F	N/A	40 x 25/30.
17	Batten spacing	(P)	F	N/A	600 MAX.
18	Battens fixings *(Battens fixed at 300c where claddings fixed to battens)*	(P)	F	N/A	300 CRS.
19	Batten Nogs fall and length	(P)	F	N/A	5° FALL 50~ GAPS @ ENDS
20	Double studs & battens provided behind sheet joints for *'(Expressed joints' &/or 'Sealant joints')*	(P)	F	N/A	BESIDE WINDOWS
21	Drainage paths unimpeded (*moisture in cavity draining down back of cladding is directed to the exterior at 1st available instance and is not impeded by other building elements)*	(P)	F	N/A	CORRECT.
22	Cavity closer (*type fitted*)	(P)	F	N/A	FITTED
23	Muleseal to concrete at base of brick cavity	P	F	(N/A)	NO BRICKS

Document Set ID: 2700281
Version: 1, Version Date: 12/11/2013

DESTINATION ROTORUA — ROTORUA DISTRICT COUNCIL

Inspection Checklist: Siting, Footings, Foundations

BC No 69120

Date 2 . 8 . 12

Inspector G MARJORIBANKS

Contact on site *(Name, company & position)* ROVAND

Inspection Comments / Notes: *(Include comment on any alternative solutions identified, site observation statements, warranties or 'As Builts's to be provided, if applicable)*

4x 700x700x650 & 2x 600x600x600 FOR FRONT POSTS 90x90 LAMINATED H5. GLUCAM POST.

If Inspection Result = PASS then date and sign here — **Date** 2.8.12 — **Signature**

If Inspection Result = FAIL then complete instruction sheet (*record number here and on summary card*)

F = Fail = Non-compliance with approved plans & documentation
P = Pass = Compliance with approved plans & documentation.
N/A = Means that Building officer feels that this portion of the prompt sheet is not relevant

	Siting/ Footings				**Comments (reasons for decisions)**
1	Approved Consent documents on site	(P)	F	N/A	ON SITE
2	Previous comments/ instructions/ PIM – BC conditions (RC requirements etc)	(P)	F	N/A	READ.
3	Boundary peg locations confirmed or building sited by surveyor (*If not, request boundaries be identified - owner may need to engage a surveyor.*)	P	F	(N/A)	
4	Dimensions to boundaries (*record measurements*)	P	F	(N/A)	
5	Is the floor level in accordance with plans? Check for Moturiki Datum restrictions *If doubt exists instruct owner to establish datum (engage surveyor)(record how height confirmed)*	P	F	(N/A)	
6	Excavations, Slopes, Retaining for site-safe OK	P	F	(N/A)	
7	Pollution control considered to EBOP (discuss with owner or agent)	P	F	(N/A)	
8	Building will be clear of overhead power lines	P	F	(N/A)	
	Footing / Foundation				**Comments (reasons for decisions)**
9	Discuss finished floor levels/150 or 225 above ground	P	F	(N/A)	POST HOLES ONLY
10	Ground bearing capacity (*If no satisfactory, request owner to obtain engineering advice.*)	(P)	F	N/A	FIRM BEARING
11	Pad / post footings / footings details	(P)	F	N/A	AS PER AS-BUILT
12	Foundations status (*clean, square and to correct dimensions as defined in the Consent)(Record dimensions)*	(P)	F	N/A	CLEAN SQUARE & AS PER AS-BUILT

Document Set ID: 2700281
Version: 1, Version Date: 12/11/2013

Footing / Foundation continued					Comments (reasons for decisions)
13	Reinforcing status (*clean, properly supported, correctly lapped & tied with correct cover*)	P	F	N/A	2X R10 THRU POSTS TO TIE INTO CONCRETE
14	Reinforcing steel (*record size, type and grade*)	P	F	N/A	YES
15	Height pegs of (*correct material*)	P	F	N/A	
16	Starters are tied to horizontal rods (*record tied at ? centers*)	P	F	N/A	
17	Foundation is suitable for fire walls if applicable	P	F	N/A	
18	Steel radius bends correct	P	F	N/A	
19	Welded steel (*requires Producer Statement*)	P	F	N/A	
Piles					**Comments (reasons for decisions)**
20	Pile layout (*record centers etc and if anchors or braced piles in correct position*)	P	F	N/A	
21	Pile footing sizes (*Anchor, Brace, Ordinary or othe*)	P	F	N/A	
22	Treatment and size of piles	P	F	N/A	
23	Bearing	P	F	N/A	
24	Point loads (*Undertake an on site check to confirm that all point loads are supported*)	P	F	N/A	
25	Confirm floor height (*NZS 3604 requires 550 mm to u/side of chipbd floor*)	P	F	N/A	
26	Floor heights conform to bracing elements provided (*record max height for each type of pile*)	P	F	N/A	
27	Confirm durability of fixings (*discuss with builder*)	P	F	N/A	
28	Crawl space (*450 mm*)	P	F	N/A	
29	Driven Piles (*engineer report*)	P	F	N/A	
30	Is pile reinforcing necessary (*record details*)	P	F	N/A	
Columns / Insitu					**Comments (reasons for decisions)**
31	Size and grade of steel used	P	F	N/A	
32	Stirrups centres and size	P	F	N/A	
33	Lap measurements	P	F	N/A	
34	Cover of steel	P	F	N/A	
34	Spiral steel to be welded-not tied	P	F	N/A	
35	Steel radius bends correct	P	F	N/A	

Document Set ID: 2700281
Version: 1, Version Date: 12/11/2013

DESTINATION ROTORUA — ROTORUA DISTRICT COUNCIL

Inspection Checklist: Enclosed Decks Before Membrane is Laid

Ref: IC 20
Ver: 3
Issued: 1 July 2010
Doc No: IT-639937
Page 1 of 1

BC No 69120	**Contact on site** *(Name, company & position)* ROLAND TISSINK
Date 2 · 8 · 12	
Inspector G MARJORIBANKS	

Inspection Comments / Notes: *(Include comment on any alternative solutions identified, site observation statements, warranties or 'As Laid's to be provided, if applicable)*

If Inspection Result = PASS then date and sign here	**Date** 2 · 8 · 12	**Signature**
If Inspection Result = FAIL then complete instruction sheet (*record number here and on summary card*)		

F = Fail = Non-compliance with approved plans & documentation
P = Pass = Compliance with approved plans & documentation.
N/A = Means that Building officer feels that this portion of the prompt sheet is not relevant

	Enclosed decks				Comments (reasons for decisions)
1	Approved Consent documents on site	(P)	F	N/A	ON SITE
2	Check previous comments	(P)	F	N/A	READ
3	Are stormwater drainage & overflow relief as per approved the plans & specification?	(P)	F	N/A	AS PER B/L
4	Have barrier/wall junction and door sills been constructed in accordance with details on the approved plans & specification?	(P)	F	N/A	YES.
5	Does the deck membrane extend up face of exterior wall and barrier min 150mm & adequately supported?	(P)	F	N/A	YES
6	Are falls provided to the deck & tops of the barriers in accordance with the approved plans & specifications?	(P)	F	N/A	CORRECT.
7	Junctions with dis-similar materials as detailed on approved plans & specification?	(P)	F	N/A	
8	Underlay substrate has correct treatment?	(P)	F	N/A	H3 PLY.
9	Substrates is Installed to specifications	(P)	F	N/A	YES 50x 8g S/S SCREWS
10	Instalation by liceinced applicator?	(P)	F	N/A	GARY RADFORD
11	Membrane as per consent documents?	(P)	F	N/A	
12	Saddle flashings to handrails are installed	(P)	F	N/A	
13	Threshold height is correct 100mm min at doors	(P)	F	N/A	CORRECT
14	Confirm handrail attachment as per consent	P	F	(N/A)	CORRECT

Document Set ID: 2700281
Version: 1, Version Date: 12/11/2013

DESTINATION ROTORUA — ROTORUA DISTRICT COUNCIL

Processing PIM / TAR / BC / Amendment Master Checklist

Ref: CP 06
Ver: 19
Issued:06/07/2012
IT-641173
Page 1 of 6

CATEGORY	RBW	~~NZSFC~~ CONTRACTOR	INSPECTOR	INSPECTOR
1 B II	NO	AMENDMENT	no change	

PIM/BC Application No. №69120/001 **Valuation No.** 06551 235 02

Owner: REID **Property File No.** P27041

Project Location: 48 SHARP RD

Description of Work: CHANGE TO SMP DRAINS

PIM Issued: — **BC Issued:** —

PIM Tracking Record:

Hazard/Caution/ Information (as noted on file)	n/a minor change					
Processing	**Referral Date** (Building Services)	**Name**	**Signature**	**Date Reviewed**	**Early Notification or PIM suspension**	
Building Services	1/3/13	A Hoffman		1/3/13	Y	N
Admin Assistant – Building	1/3/13	K Crisp		1.3.13	Y	N
~~**Resource Engineer**~~					Y	N
~~**Development Contributions**~~					Y	N
~~**Pollution Control**~~					Y	N
~~**Planning**~~					Y	N
~~**Regulatory/Geothermal**~~					Y	N
~~**Environmental Health**~~					Y	N
~~**Recreation & Community**~~					Y	N

BC Tracking Record

	Date Reviewed	**Name**	**Suspend Consent**		**Approval Signature**	**Date of Approval**
~~**Accessability Review**~~			Y	N		
Building Consent	1/3/13	A Hoffman	(Y)	(N)		2/5/13

Records sent to applicant and TA. Administration to complete on issue (✓ included or x NA)	Plans	Amended ✓	Supporting documentation	✓	Section 37 Notice	
	PIM		Building Consent		Section 36 Notice	
Name H Ferguson	Signature			Date	14/5/13	

ONG. PROC. ALLAN HOFFMAN

AMENDED PLANS
27 FEB 2013
RECEIVED

RRD001USAB

Document Number: RDC-366146

Date Registered: 30/5/2013

Document Set ID: 2618117
Version: 1, Version Date: 30/05/2013

PIM ENDORSEMENTS

300	a	[b]	c	d	e	g	h	i	j	k	l	**340**	a	b	c	f									
	f											**342**	a	b	c	f									
302	a	b	c	d	e	g	h	i	j	k	l	**344**	[a]	b	c	d	e	g	h	i	j	k	l	m	
	m	n	o	p	q	r	s	t	[u]	v	w1		n	o	p	q	r	s	t	u	v	w		f	
	w2	w3	x	y	[z]	f						**346**	a	f											
304	a	b	c	f								**348**	a	b	c	d	e	g	h	i	j	k	l	m	
306	a	b	c	d	e	g	h	i	j	k	l		n	o	p	q	r	s	t	u	v	w	x	y	
	m	n	o	f									z	f											
308	a	b	c	d	e	f						**350**	a	b	c	d	e	g	f						
312	a	b	c	d	e	g	h	i	j	k	l	**352**	a	b	c	f									
	m	n	o	p	q	f						**354**	a	b	c	f									
314	a	b	c	c1	c2	d	d1	e	g	h	i	**356**	a	b	c	d	e	g	h	f					
	j	k	l	m	f							**358**	a	b	c	d	f								
316	a	b	c	c1	c2	d	e	g	h	i	j	**360**	a	b	c	d	f								
	k	f										**362**	a	f											
318	a	b	c	d	e	g	h	i	j	k	f	**364**	a	f											
320	a	b	c	c1	c2	d1	d2	e	g	h	i	**366**	a	b	c	d	f								
	j	f										**368**	a	b	f										
322	a	b	f									**370**	a	b	f										
324	a	b	c	d	e	g	h	i	j	k	f	**372**	a	b	f										
330	a	b	c	d	f							**374**	a	b	f										
336	a	b	f									**376**	a	a1	b	c	d	f							
338	a	b	c	d	e	g	h	l	j	f															

BUILDING SECTION Please record any thing that may be relevant to the processing Building Officer		
PLANNING SECTION (Section 37 Notice) Please record considerations and reasons for decisions		
Zone		
Any notified plan changes / proposed Designations relevant? (*check RDC web site)*	Y	N
Any relevant Planning Land Features that may impact on whether planning consent require.	Y	N
Check all Planning PIM standard statements-(Circle any relevant) *special zoning provisions SP / Scheduled site / Building on uncompleted subdivision / Development / Road widening / Appendix A sites / Service lanes / Special Height controls (airport, Maori Villages) / Airport noise / height issues / reserve contribution required for permitted activity / Hazardous substances / Contamination etc*		
Proposal may affect Marae (*can be on an adjacent site)* (*Liaise with Director Kaupapa Maori*) Outcome.....		
The proposal requires resource consent or other planning consent **(early notification if yes)**	Y	N
No resource consent or other planning consent is required for the proposal • The proposal is a permitted activity and enough info is provided to demonstrate all relevant performance standards are met, site plan sighted, height and day lighting planes checked, all required parking and turning, reserve contribution needs to be picked up for permitted activities etc • Existing use rights apply *(why)*..... • Proposal in accordance with designation..... • Other reason.....		

The proposal requires resource consent under Rule / s..... of the Operative District Plan (*note the rules and reasons why consent required)*

Resource consent has been applied for on..... The consent number is.....

The planner processing the application is .....

The proposal is in accordance with Resource Consent numbered RC..... Which was granted on .....

Please ensure you are familiar with any consent conditions and ensure all are complied with.

The proposal is not in accordance with Resource Consent numbered RC..... Provide details of conditions not met and info required. **(early notification)**	Y	N

The proposal requires outline plan approval as the site is designated for the purpose of .....

There is insufficient information with the application to determine whether resource consent is required of otherwise. The following information is required. **(early notification)**

.....

.....

.....

.....

The proposal may affect an historic place *(let Building know ASAP for section 39 notification)* The site is listed in Appendix A of the District Plan. Number.....The site is registered NZHPT, site.....	Y	N

Free Text

Further Information Reviewed *(record what was supplied, how compliance demonstrated and outcome)*

Name	Signature	Date

RESOURCE ENGINEER Please record considerations and reasons for decisions

Further Information Reviewed *(record what was supplied, how compliance demonstrated and outcome)*

Name	Signature	Date

ENGINEERING POLLUTION CONTROL Please record considerations and reasons for decisions

	Circle	
Grease trap required	Y	N

Further Information Reviewed *(record what was supplied, how compliance demonstrated and outcome)*

Name	Signature	Date

ENGINEERING (Development Contribution Notice) Please record considerations and reasons for decisions

	Circle	
Development contribution applies **(early notification)**	Y	N
Copy of Development contribution notice attached **(early notification)**	Y	N

GEOTHERMAL Please record considerations and reasons for decisions

ENVIRONMENTAL HEALTH Please record considerations and reasons for decisions

Officers will contact the applicant to complete Health application and information booklet	Y	N

RECREATION AND COMMUNITY Please record considerations and reasons for decisions		
The applicant requires the approval of the Parks and Recreational Manager to carry out works proposed in the vicinity of Council vegetation.	Y	N
The applicant requires the approval of the Parks and Recreational Manager to shift / replace Council vegetation that will be effected by the proposal. The applicant shall pay / carry out compensation / remedial work as instructed	Y	N

Building Consent Processing Section:

Building Consent Endorsements / Conditions:

Conditions:

Inspections:

400 see over page

Additional BA Conditions

401 a b **402**

C d f

Important Endorsements

a b c d e g h i j k l

m n o1 o2 oa ob p q r s t

u v w x y

Compliance Schedule SS and CS systems

403 a b c d f

ss1 ss2 ss3/1 ss3/2 ss3/3 ss4 ss5 ss6 ss7 ss8/1

ss8/2 ss8/3 ss9/1 ss9/2 ss10 ss11 ss12 ss13/1 ss13/2 ss13/3 ss14/1

ss14/2 ss15/1 ss15/2 ss15/3 ss15/4 ss15/5 ss16

cs1 cs2 cs3 cs4 cs5 cs6 cs7 cs8/1 cs8/2 cs8/3 cs9

cs10 cs11 cs12 cs13 cs14 cs15 cs16

Attachments

404 a b c d f

Restricted Building Work

405 rbw car bri roo ext fou f

FREE TEXT:

Site Inspection Calculation / Conditions and Fees Sheet

PROCESSING	TIME ALLOCATED	TIME TAKEN (Quantity)	TOTALS in Dollars
Processing Hrs INSPECTOR			850
Processing Fees Paid			8
SUB TOTAL			
Further information			
TOTAL PROCESSING COST			

400 INSPECTIONS (Circle correct letter)	Guide Only – Dependent On Complexity & Size Of Project.		No of Inspections	No of ¼ HR Increments
a. Siting, Footings, Foundations	3	0.75		
a. Retaining Walls	2/3	0.5 – 0.75		
b. Subfloor Bracing &Fixing	2	0.5		
c. Pre-floor P&D	2	0.5		
d. Concrete Floor Building	2	0.5		
e. Pre-Wrap <200-<300->etc (30mins = high)	3	0.75–1.0–1.25		
g. Wrap Only	2	0.5		
g. Wrap/Cavity Battens	3	0.75		
h. ½ High Brick	2	0.5		
i. Bond Beams (One Block- full basement)	2	0.5 – 0.75		
j. Precast Concrete Work	2	0.5		
k. Pre Plaster	3	0.75		
l. Solar water heater	2	0.50		
m. Preline Building	3	0.75		
n. Preline P&D	2	0.5		
o. Wet Areas/Tanking/Basements	2	0.5		
p. Postline (Addition – New Dwelling)	2	0.5 – 0.75		
q. Sanitary & Stormwater Drainage (Alteration / New Conn – New Dwelling)	2	0.5 – 0.75		
r. Enclosed Decks – membrane roofs/gutters	2	0.5		
s. Disconnection drainage	2	0.5		
t. Swimming Pools (Pool fencing)	2	0.5		
u.a. Solid Fuel Heater	2	0.5		
u.b In Built Solid Fuel Heater				
v. Final Inspection (add time for paper work for minor consents ¼ hr)	4/5	1.0-1.25		
w Combined inspections	Complete free text on sheet 5			
x Trade waste				NC
f Free text	Complete free text on sheet 5			
Building officer desk top review (allow 5 min each allocated inspection, dwellings/ commercial only				
CCC Assessment (not required for garages, carports and minor works)				
LBP Process (allow 15 min / LBP Class)				
Other				
TOTAL NUMBER OF INSPECTIONS				
Plus Travel				
TOTAL INSPECTION COST				
RECORD NUMBER AND TOTAL TIME ALLOWANCE FOR INSPECTIONS AND BUILDING CATEGORY ON SITE SUMMARY SHEET (Circle to right)				**Completed**

15 MAY 2013

FILE

MR M J REID
C/O D BATENBURG
2 BENN ROAD
RD 5
ROTORUA 3076

File Ref: P27041
Building Consents no: 69120

Dear Sir

AMENDED PLANS FOR BUILDING CONSENT NO: 69120
ADDRESS: 48 SHARP ROAD

Please find enclosed the approved Amended Plans that were submitted on 27 February 2013 for the above Building Consent.

Please be advised that any additional inspections necessary to confirm compliance with the Building Consent have not been charged. However, any additional inspection costs incurred as a result of this process will be assessed and invoiced prior to issue of Code Compliance Certificate where appropriate.

If you have any further queries, please do not hesitate to contact the Building Services Division.

Yours faithfully

Helen Ferguson
Building Services Administration

Document Set ID: 2618117
Version: 1, Version Date: 30/05/2013

DESTINATION ROTORUA

ROTORUA DISTRICT COUNCIL

Rotorua District Council
1061 Haupapa Street
Private Bag 3029
Rotorua Mail Centre
Rotorua 3046
New Zealand
P: 07 348 4199
F: 07 346 3143
E: mail@rdc.govt.nz
W: www.rdc.govt.nz

12 March 2013
RDC – 344740

Mr D Batenburg
Millennium Architecture
2 Benn Road
RD 5
ROTORUA 3076

Dear Sir

Request for Further Information on PIM / BC Application.

E-MAILED

Building Consent Number: 69120 P27041
Project Location: 48 SHARP ROAD
Project Description: Change to strip drains (26/02/2013)

You may or may not be aware that the Building Act 2004 requires a territorial authority to be satisfied on reasonable grounds that the provisions of the Building Act will be met if the building work were properly completed in accordance with the plans and specifications that accompany the building consent application.

As code compliance certificate will be issued against the approved plans and specifications it is now imperative that the plans and specifications clearly reflect code compliance.

Having assessed your plans and specifications, we require the following additional details / amendments to ensure compliance is properly demonstrated and enable building consent to be issued:

1. Please find attached the copy of the plan that was rejected at initial consent application, this was rejected because of the failing to meet E2/AS1 and I did not feel that as an alternative solution that it would meet the intent of E2. (What has changed as this proposed detail looks exactly the same?)

new plan showing similar detail that had been approved at initial BC stage

2. Provide additional information in regards to the hard paved surface slopes to the cess pit specifically from where the proposed drainage channels are to be used.

sized in accordance with E1/AS and has drainage out lets placed strategically

3. Provide the drainage pipes and gradients to soakholes to enable confirmation that the nominated two metre centres will be constructed on site. to capture any stormwater discharge, okay to issue

4. My understanding is that these drainage channels have been place on site so how are you proposing to connect these new drains. E.g. retrofitting a connector or replacing some drainage channels.

5. Please show any gradients to these drainage channels.

ROTORUA PARTNER SHAPING ROTORUA

Document Set ID: 2618117
Version: 1, Version Date: 30/05/2013

6. Provide a written rational as to why you feel that if the drainage channel dimensions will comply with both E2 and B2 given that this consent was to repair a leaky home, some thought should be given to the timber weather boards as it will only be 100mm from the base of the drain.

Two copies of all further information is required to be lodged together and shall include a reference clearly indicating how and where this information has been provided and can be found within the documents.

Amended/updated plans that were originally signed by the Design Engineer must be resigned prior to submission to Council.

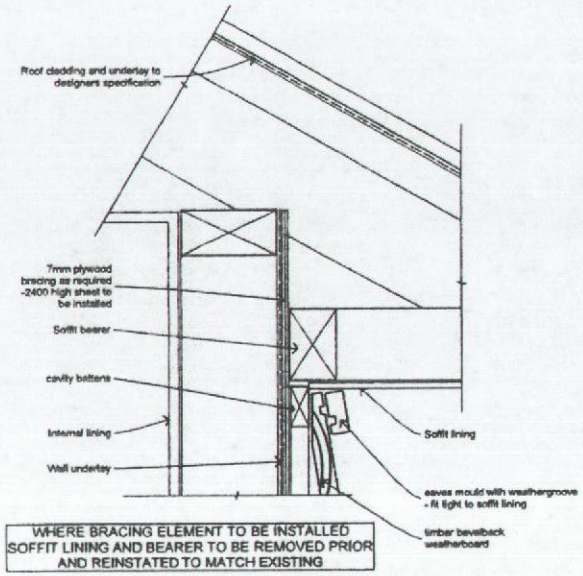
Further information is required within 28 working days and can be forwarded by mail or lodged with Customer Services. Alternatively you can contact the processing Building Officer 24 hours prior to lodgment and arrange a meeting where each of the outstanding items can be assessed in person.

We appreciate that requests for those items may be frustrating but unless compliance can be clearly demonstrated building consent cannot be issued. We have suspended building consent processing until the above information is provided. Please be assured of our earliest attention to completion of processing and issuing of building consent on receipt of this information.

Yours sincerely

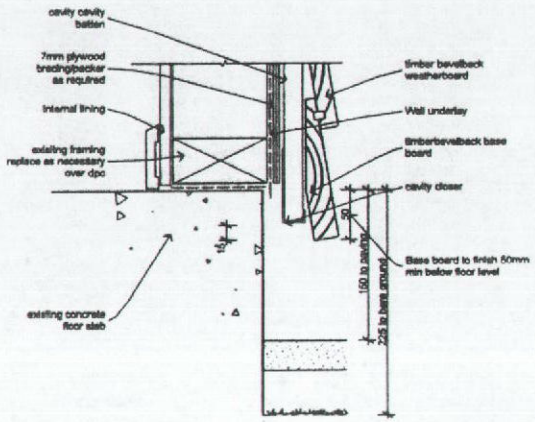
Allan Hoffman
Building Officer

Document Set ID: 2618717«AUTH_NO»:«OP_NO»:«DOCNAME»
Version: 1, Version Date: 30/05/2013

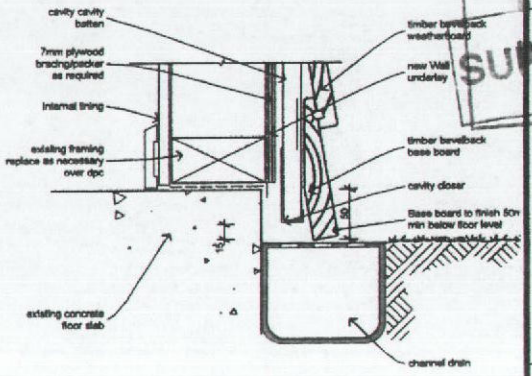


WHERE BRACING ELEMENT TO BE INSTALLED SOFFIT LINING AND BEARER TO BE REMOVED PRIOR AND REINSTATED TO MATCH EXISTING

CLADDING EAVES DETAIL 1/A6
scale 1:5

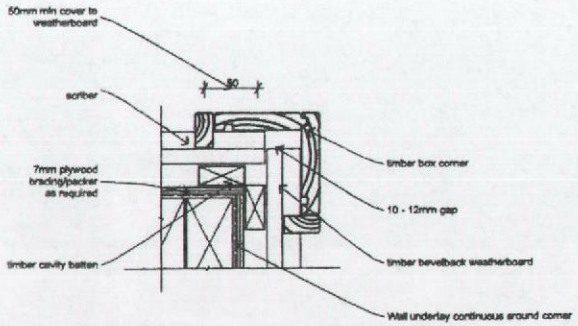


CLADDING BASE DETAIL 2/A6
scale 1:5



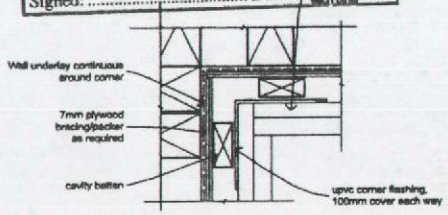
STRIP DRAIN DETAIL AS MAY BE REQUIRED

PIM/BC
SUPERSEDED



EXTERNAL CORNER DETAIL 3/A6
scale 1:5

SUPERSEDED AS ADDITIONAL INFORMATION PROVIDED DURING BUILDING CONSENT PROCESS
A Hoffman
Signed: ..... Date: .....



INTERNAL CORNER DETAIL 4/A6
scale 1:5

MODIFY EXISITNG CONSTRUCTION AS REQUIRED TO REPLICATE DETAILS SHOWN TO COMPLY WITH NZBC CLAUSE E2

ADNZ

A	pricing	12/3/12	db

CLADDING DETAILS

RE-CLAD
48 SHARP ROAD,
HAMURANA

Millennium Architecture
Millennium Architecture Ltd

4/04/2012	dylan	
As shown		

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74391	A8	A

Document Set ID: 2618117
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Allan Hoffman

From: Allan Hoffman
Sent: Wednesday, 6 March 2013 12:11 p.m.
To: Dylan Batenburg (dylan@millarch.co.nz)
Subject: Rollands job

Hi Dylan

I had Rolland phone up asking me about the status of his amendment and I informed him that in all honesty I probably won't get to it until next week but he did say that a number of out lets, drains and soakholes had been already completed, could you gather this information such as sizes, falls and locations and mark it up onto another plan and flick it through to me. Otherwise I will be raising the question anyway.

Allan

Allan Hoffman
Team Leader Processing
Rotorua District Council

DDI: 07 351 8064
Fax: 07 349 0993
E: allan.hoffman@rdc.govt.nz
W: http://www.rdc.govt.nz/

Document Set ID: 2618117
Version: 1, Version Date: 30/05/2013

DESTINATION ROTORUA	**Amendment Processing Checklist**	Ref: CP 14 Ver: 04 Issued: 20 Nov 2012 RDC-50895 Page 1 of 4

For amendments involving the replacement of a cladding system, or the addition or removal of a specified system or component (fire etc) then use an applicable processing checklist

PROCESSING CHECKLIST

Processor Name: A Hoffman **Building Consent No.** 69120

Proposed Intended Use

	Building Act				**Comments/ reason for decision**
1	PIM issues triggered by this amendment?	P	F	N/A	not sent on this procedure
2	Sec 36 - Has a Development Contribution Notice been attached to the PIM?	P	F	N/A	
3	Sec 37 –Notice issued?.	P	F	N/A	
4	Sec 67 - Is the building consent subject to a waiver or modification? *Sign off by TL/ MBS, condition BC, create information notice, advise Chief Executive, MBIE.*	P	F	N/A	will not grant this Amendment if waiver/mod is necessary!
5	Sec 84 –LBP's or Owner Builder/Designer listed for Restricted building Work *(complete separate checklist and create information on property file where owner involved in design or contruction)*	P	F	N/A	already has LBP working on site.
6	Sec 269 - Does the application involve any certified building methods or products?	P	F	N/A	no certified products required
7	Sec 363 COPU required as part of the building consent? • Means of escape • Accessability • Construction and demolition hazards • Specified systems	P	F	N/A	private home
8	If this is an alteration, have records been checked to reconcile proposal against existing?	P	F	N/A	checked - from ga - town details already
9	Complete checklist for alteration/ removal or installation of any specified system	P	F	N/A	has bee rejected

Consideration, decisions and reasons for these where a checklist is not applicable including alternative solutions (*start with reason why checklist not applicable)*

E1 E2 and B2 are the only applicable clauses for this application

E1, o the slope of the external hard paved surface has not been shown * RFI *

o Also missing was the detail of

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Version: 1, Version Date: 30/05/2013

Consideration, decisions and reasons for these where a checklist is not applicable including alternative solutions (*start with reason why checklist not applicable*) **cont .....**

how the stormwater drains are to be disposed
- falls of the gradient of the channels

9.2 - B2 fit together like a glove. the detail is still better than E2/AS1 in regards to finish floor level but it breaks down by not having a limit to the drain length. KFA reason for this as well

Document Set ID: 2618117
Version: 1, Version Date: 30/05/2013

Consideration, decisions and reasons for these where a checklist is not applicable including alternative solutions (*start with reason why checklist not applicable)* **cont .....**

Producer Statements

Acceptance Guidelines

1. PS will be accepted from approved persons recognised as having appropriate technical competence / qualifications / experience / history within their specific discipline.
2. The author's competence will directly relate to the scope of work covered by their statement. If author's acceptability cannot be determined then the statement & all necessary documentation required to determine competence shall be peer reviewed by an approved contractor.

Circle Statement Type: PS 1 – Design PS 2 – Design Review			Comments:			
Circle Category:	PSI	CALCS	SPECS	DRAWINGS	PS2	Producer Statements formatted as below
Structural						
Other						

Producer Statements;

A Producer Statement requires the following as a minimum requirement to be accepted by the Rotorua District Council:

- ☐ A written statement
- ☐ Header with 'Producer Statement'
- ☐ Who is issuing the Producer Statement (suitably qualified and author of Producer Statement)
- ☐ The Producer Statement must be addressed for the attention of the Rotorua District Council
- ☐ Who has completed or designed the work identified (qualifications to undertake the work required)?
- ☐ The product name and specifications for application of product used (where applicable)
- ☐ What parts/clauses of the Building Code the work relates to
- ☐ Full legal description of the site where the work will be undertaken
- ☐ Clearly identifying what part of the building consent work is covered by the Producer Statement
- ☐ Provide the sum of Provisional Indemnity Insurance held
- ☐ The author's name and signature
- ☐ Qualifications
- ☐ Address
- ☐ Registration Number
- ☐ Membership of Professional Organisation
- ☐ Date the Producer Statement was produced.

Document Set ID: 2618117
Version: 1, Version Date: 30/05/2013

Technical Literature Criteria

1. Rotorua District Council will accept technical literature in assessing compliance with the Building Code. Technical literature includes, but is not limited to:
   - Buildable truss plans and associated documentation
   - Appraisal certificates
   - Proprietary product certificates (Solid Fuel Heater, Tanking, Plaster Systems etc.)
   - Certificates for alarm/sprinkler systems

2. Technical literature requires the following as a minimum to be accepted by the Rotorua District Council:

☐ Who has issued the technical literature

☐ Product name

☐ Address of property where work undertaken

☐ Description of application (where applicable)

☐ Date

☐ Name and signature

☐ Registration/license number (where applicable)

☐ Address of author

Alternative Solutions

- Alternative solutions involving structural, geotechnical, fire, weather tight, acoustic, HVAC, energy efficiency and fire design will be peer reviewed by a contractor/specialist
- Before finalizing a decision of whether to accept or refuse an alternative solution the processor will obtain a peer review from their Team Leader/Technical Leader
- In making a decision, the Building Officer may give consideration to (but is not limited to) comparison with acceptable solutions, other documents, standards, best practice guides, publications, expert opinion, determinations, in-service history, product certification – compliance with Building Code objectives. Consideration may also be given to industry guidance provided in BRANZ Bulletin #456 (Dec 2004

Notes on Acceptance of Producer Statement and/or Technical Literature (Reasons for Your Decision to Accept from a particular author):

The following listed and attached checklists have been completed to support justification for issuing the building consent	

GRANTING BUILDING CONSENT

Sign the application form to grant the building consent once satisfied on reasonable grounds that if the building work was to be constructed in accordance with the approved documents, then compliance with the Building Code will be met.

Document Set ID: 2618117
Version: 1, Version Date: 30/05/2013

Form 2 Amendment

APPLICATION TO AMEND BUILDING CONSENT

Section 45, Building Act 2004

(this application must be approved before proposed work is commenced)

AMENDMENT
№ 69120/001

THE BUILDING

Building Consent Number: 69120.

Owner:

Street address of building: 48 SHARP ROAD, HAMURANA.

CONTACT DETAILS FOR ANY REQUESTS FOR FURTHER INFORMATION

Person: DYLAN BATENBURG

Address: 2 BENNETT
LAKE OKAREKA.

Phone: 7/3628775. or Mobile:

Email: dylan@millward.com Fax:

PROJECT

Brief description of the amendment *(full description of amendments to be completed on page 2)*

CHANGE ~~PC~~ TO STRIP DRAINS.

Additional area: 0 m² *(to be completed if original area is increased)*

FORMAL DECLARATION

This amendment to this Building Consent is submitted by me as the owner of the property / or as the authorised agent as identified on the original building consent application Form 2
(delete which does not apply)

Name: DYLAN BATENBURG Signature:

Date: 27.2.17.

Estimated value that this consent will affect the original value of work?

$ 0

[Please identify if the value is increased or decreased clearly! Include GST and labour]

Document Set ID: 2618117
Version: 1, Version Date: 30/05/2013

DOCUMENTS SUBMITTED (Please list all documents submitted to council as an amendment)

PLANS A4-A8. MANUFACTURERS. DOCS.

DESCRIPTION OF AMENDMENT TO APPROVED DOCUMENTS

Please identify on amended plans any changes by outlining with a cloud *[number these accordingly to help with a clear understanding of all work being amended and list below]*	Page number and / or location within specs
1) LOCATION OF STRIP DRAIN.	A4
2) STRIP DRAIN DETAIL.	A8 A8
3)	
4)	
5)	
6)	
7)	
8)	
9)	
10)	

RESTRICTED BUILDING WORK(residential building work affecting structure or weather tightness)

Will the building work include any restricted work? Yes ☐ No ☑ (please ✓)
If Yes, provide the following details of all licensed building practitioners who will be involved in carrying out or supervising the restricted building work *(If these details are unknown at the time of the application, they must be supplied before the building work begins).*

Name	**Licensing class**	**Licensed building practitioner number** (or registration number if treated as being licensed under section 291 of Building Act 2004)	**Particular work carried out or supervised**
AS SUBMITTED.			

Note: Continue on another page if necessary

BUILDING PRACTITIONERS

☑ No change from original building consent application form 2 (please ✓)

(Complete only if there is to be a change in tradesman / LBP's)

Specify Practitioners: _____

Business/name: _____

Address: _____

Phone : _____ Mobile: _____ After hours: _____ Fax: _____

Email: _____ LBP or Reg. No.: _____

Document Set ID: 2618117
Version: 1, Version Date: 30/05/2013

Specify Practitioners: _____

Business/name: _____

Address: _____

Phone : _____ Mobile: _____ After hours: _____ Fax: _____

Email: _____ LBP or Reg. No.: _____

Please attach separate sheets if extra room is required to identify changes from the building consent

THE PROPOSED BUILDING WORK WILL AFFECT THE FOLLOWING BUILDING CODE CLAUSES

(if in doubt use the original building application form for an example or go to www.dbh.govt.nz and search code clauses)

☑ No Building Code Clauses differ from original building consent application form 2 (please ✓)

CLAUSE [Which of the following clauses will be involved in the proposed building work?] *(e.g. NZBC Clause B1 Structure)*	**MEANS OF COMPLIANCE** [Refer to the relevant compliance document(s) or detail of alternative solution in the plans and specifications] *(NZ standard, engineer design or an Acceptable Solution)*	**PROPOSED INSPECTIONS** [State means of inspections. Note PS4 or certificate may be required] *(council, engineer or other)*
NZBC Clause		
NZBC Clause		
NZBC Clause		
NZBC Clause		
NZBC Clause		
NZBC Clause		
NZBC Clause		

NEW CERTIFICATE OF TITLE REQUIRED

Yes ☐ No ☑

WAIVER/MODIFICATION TO NZ BUILDING CODE REQUIRED FOR FOLLOWING PARTS OF CODE

☑ I do not require a modification nor a waiver as part of this application to amend building consent (please ✓)

Description of waiver / modification

_____

_____

_____

Supporting documentation attached as follows [please list]

_____

_____

_____

CHANGE OF USE *NZ Building Act 2004 Section 114, 115*

Will this amendment result in a change of use from the original building consent?

Yes ☐ No ☑ (please ✓)

Will the change of use result in the need to include / remove a specified system?

Yes ☐ No ☑ (please ✓)

If yes please complete COMPLIANCE (Specified Systems) box on page 4

Document Set ID: 2618117
Version: 1, Version Date: 30/05/2013

Please attach separate sheets if extra room is required to identify changes from the building consent

COMPLIANCE *(SPECIFIED SYSTEMS)*

Does this amendment involve an alteration / installation or removal of a specified system?

☑ No change to the specified systems identified in the original building consent (please ✓)

Specified Systems prescribed by Building Act 2004 Compliance Schedule Handbook 25 May 2007	Removed Altered New
SS	
SS	
SS	
SS	

Please attach separate sheets if extra room is required to identify changes from the building consent

COUNCIL USE ONLY

ESTIMATED EFFECT TO VALUE OF ORIGINAL BUILDING COST

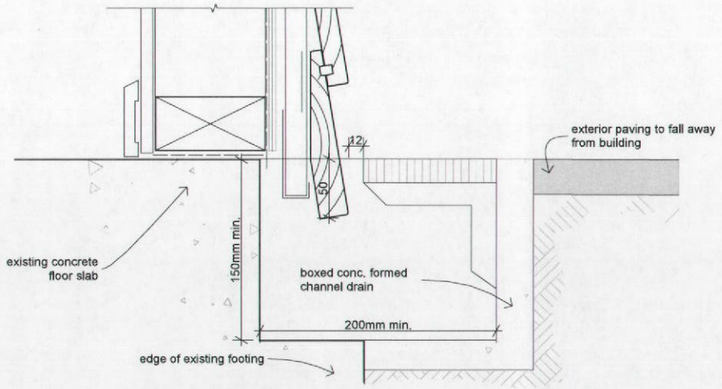
$ _____

Lodgement deposit	$ 85.00	NOT PAID AT LODGEMENT.	
Technical Processing	$ 170.00	Granted by	A Hartman
Industry Levy (DBH)	$		
Industry Levy (BRANZ)	$	Signature	
Inspection	$	Date	21/5/13
Compliance Schedule	$		
Peer Review	$	Issued by	H Ferguson
Other	$	Signature	
Other	$	Date	
Total balance payable	$ 255 –		

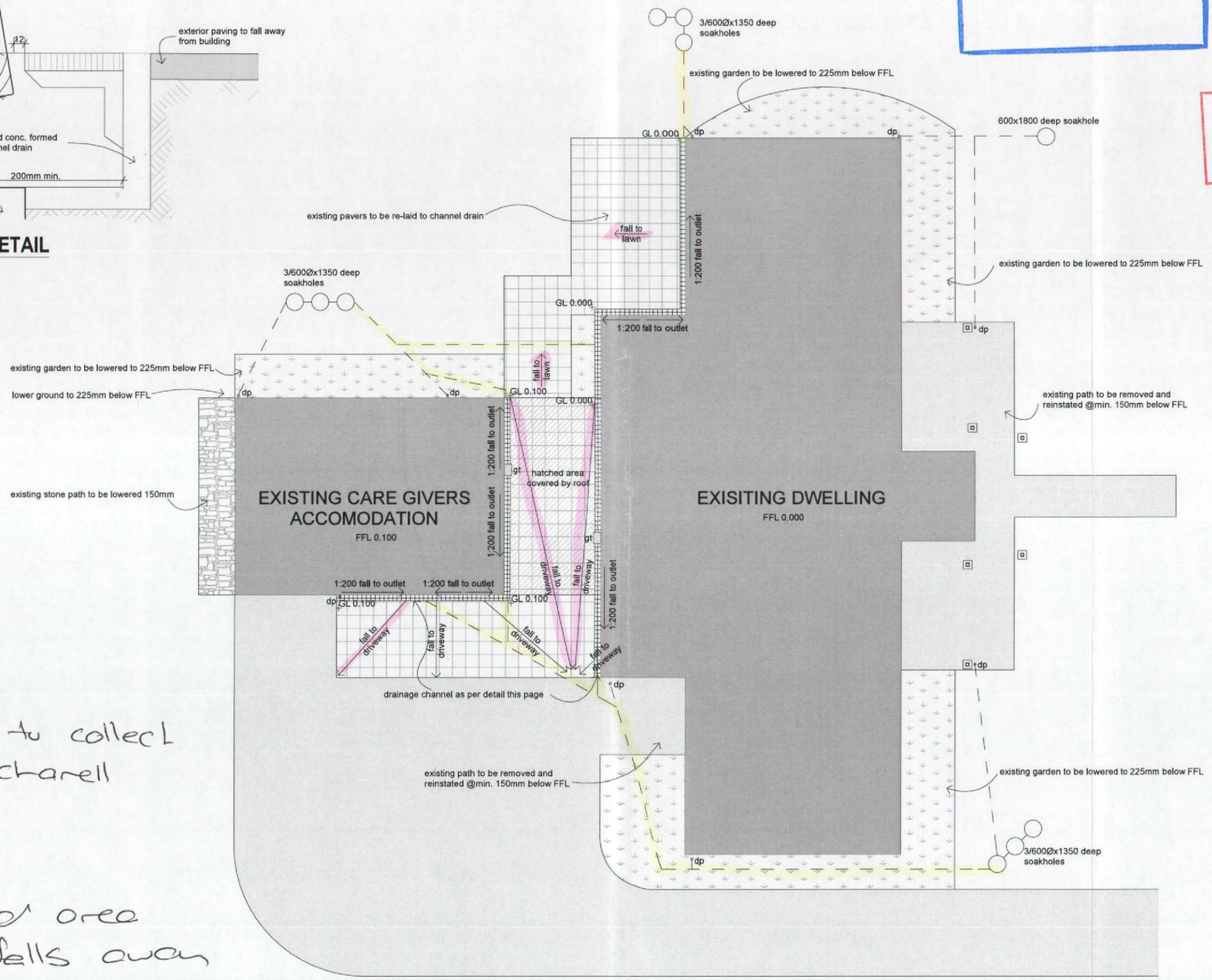
PIM to be reissued Yes ☐ No ☐ *(if PIM to be reissued please sign below)*

Processor's Name: _____ Signature: _____ Date: _____

Document Set ID: 2618117
Version: 1, Version Date: 30/05/2013



CHANNEL DRAIN DETAIL
scale 1:5



SITE FINISHES PLAN
scale 1:150

new drain to collect drainage channell water

hard paed area slopes falls away from building

Note: All aspects of this project are to fully comply with the Building Act, N.Z.S. 3604, The NZ Building Code. Project Specifications and all relevant Manufacturers Details. Millennium Architecture Ltd. accepts no responsibility for variations to materials & products specified. Building contractor to confirm all dimensions on site and notify this office of any variations.

PIM/BC
№ · 69120

COUNCIL COPY

ADNZ
ARCHITECTURAL DESIGNERS NZ INC

rev.	amendments	date	by
D	amendment to strip drain	27/2/13	db
C	as built amendment	13/2/13	db
B	further information	26/4/12	db
A	for consent	12/3/12	db

sheet contents

SITE FINISHES PLAN

project

RE-CLAD
48 SHARP ROAD,
HAMURANA

Millennium Architecture
Millennium Architecture Ltd
ARCHITECTURAL CONSULTANTS

date drawn	drawn by	checked
30/04/2013	dylan	

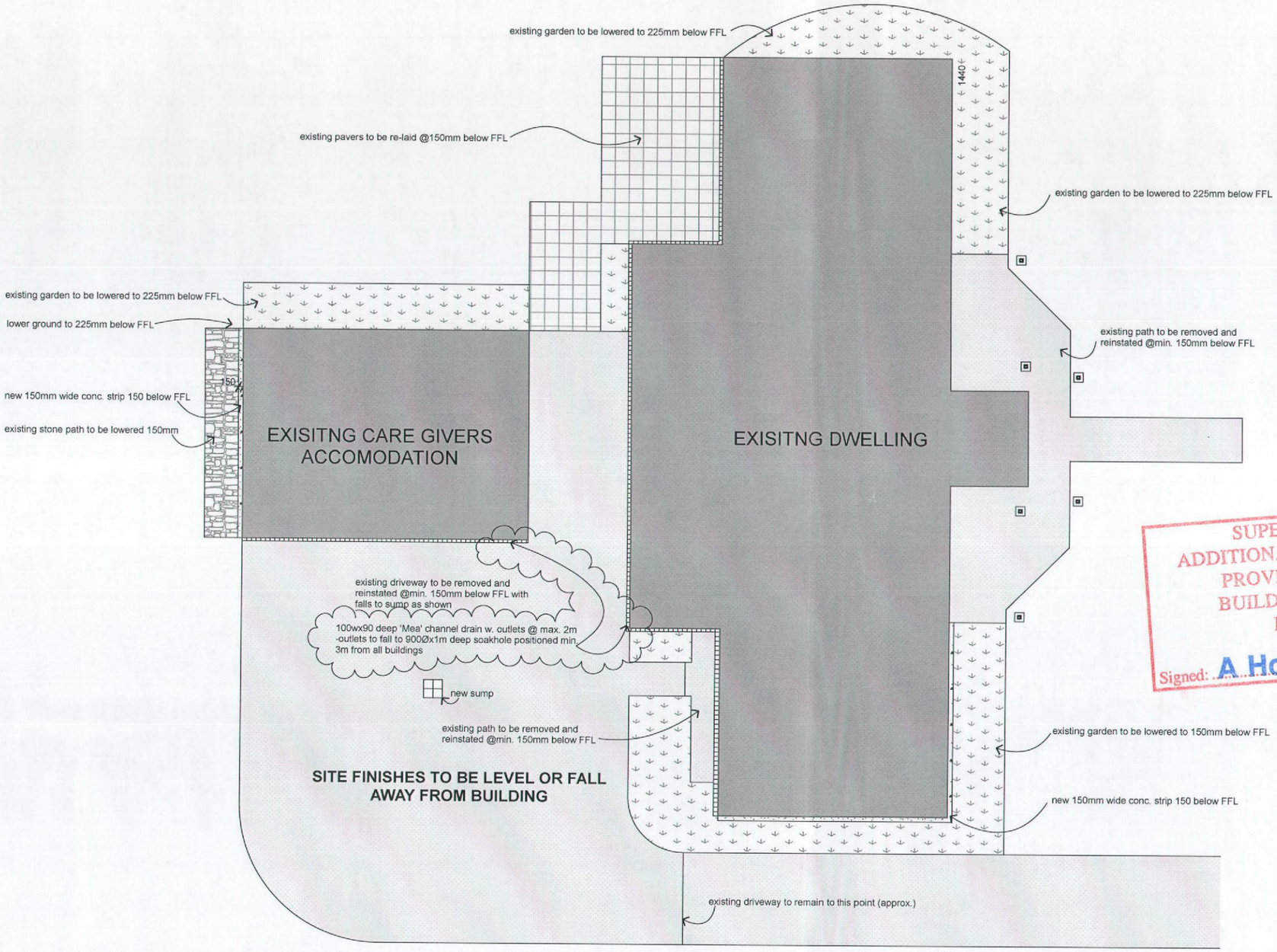
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job number	sheet	of	rev.
74391	A4	18	D

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SITE FINISHES PLAN
scale 1:150

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COUNCIL COPY
SUPERSEDED AS ADDITIONAL INFORMATION PROVIDED DURING BUILDING CONSENT PROCESS
Signed: Date:
AMENDMENT
SUPERSEDED
SUPERSEDED AS ADDITIONAL INFORMATION PROVIDED DURING BUILDING CONSENT PROCESS
Signed: Date:
AMENDED PLANS
27 FEB 2013
RECEIVED
SUPERSEDED AS ADDITIONAL INFORMATION PROVIDED DURING BUILDING CONSENT PROCESS
Signed: A Hoffman Date: 21.5.13

ADNZ ARCHITECTURAL DESIGNERS NZ INC

rev	amendments	date	by
D	amendment to strip drain	27/2/13	db
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sheet contents

SITE FINISHES PLAN

project

RE-CLAD
48 SHARP ROAD,
HAMURANA

Millennium Architecture
Millennium Architecture Ltd
ARCHITECTURAL CONSULTANTS

date drawn	drawn by	checked
27/02/2013	dylan	

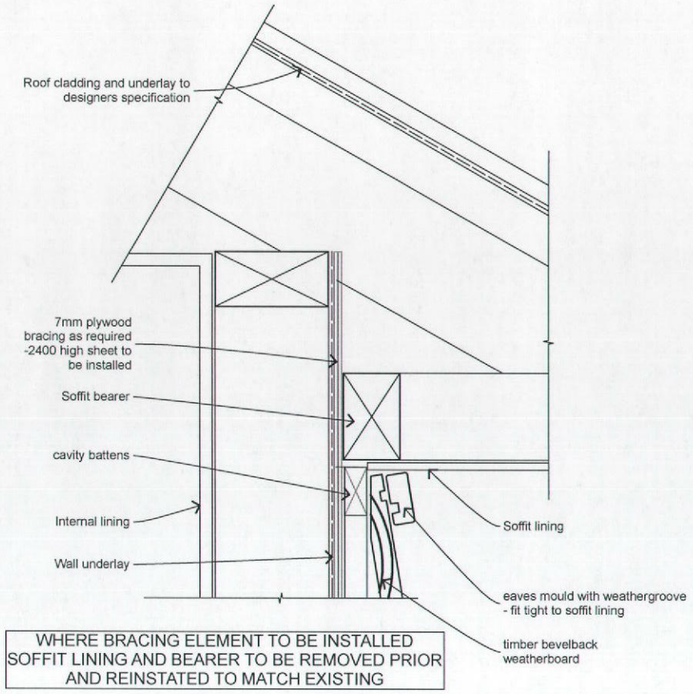
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74391	A4	18	D

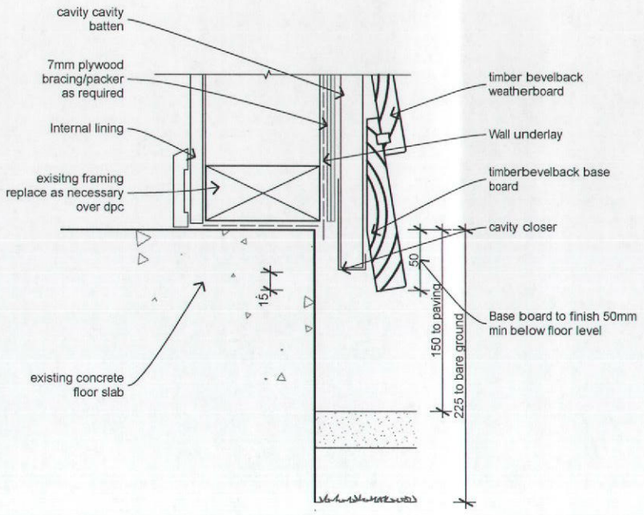
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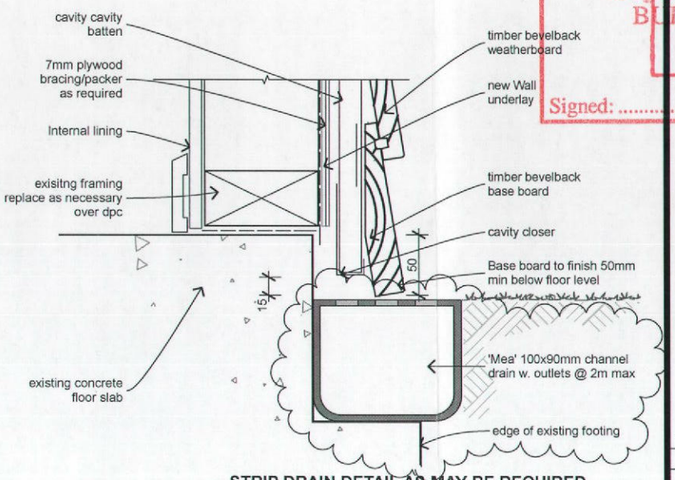


WHERE BRACING ELEMENT TO BE INSTALLED SOFFIT LINING AND BEARER TO BE REMOVED PRIOR AND REINSTATED TO MATCH EXISTING

CLADDING EAVES DETAIL (1 A6)

scale 1:5



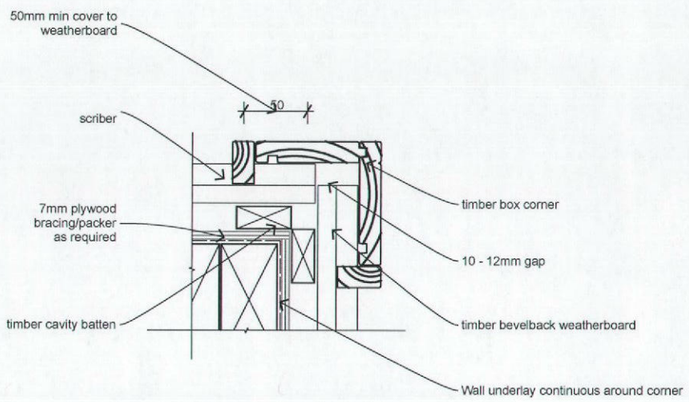


STRIP DRAIN DETAIL AS MAY BE REQUIRED

CLADDING BASE DETAIL (2 A6)

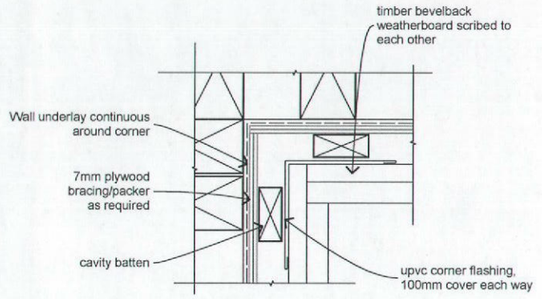
scale 1:5

SUPERSEDED AS ADDITIONAL INFORMATION PROVIDED DURING BUILDING CONSENT PROCESS
Signed: A Hoffman Date: 2/5/13



EXTERNAL CORNER DETAIL (3 A6)

scale 1:5



INTERNAL CORNER DETAIL (4 A6)

scale 1:5

MODIFY EXISITNG CONSTRUCTION AS REQUIRED TO REPLICATE DETAILS SHOWN TO COMPLY WITH NZBC CLAUSE E2

Note: All aspects of this project are to fully comply with the Building Act, N.Z.S. 3604, The NZ Building Code, Project Specifications and all relevant Manufacturers Details.
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AMENDMENT
SUPERSEDED
ADDITIONAL INFORMATION PROVIDED DURING BUILDING CONSENT PROCESS
Signed: ..... Date: .....

ADNZ ARCHITECTURAL DESIGNERS NZ INC

rev.	amendments	date	by
D	amendment to strip drain	27/2/13	db
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sheet contents: CLADDING DETAILS

project: RE-CLAD
48 SHARP ROAD,
HAMURANA

Millennium Architecture
Millennium Architecture Ltd
ARCHITECTURAL CONSULTANTS

date drawn	drawn by	checked
27/02/2013	dylan	

sheet scales: As shown

cad file: L:\74391\As built.pln

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job number	sheet	of	rev.
74391	A8	18	D

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MEA®DRIVE drainage systems

clear width 100 mm



SUPERSEDED AS
ADDITIONAL INFORMATION
PROVIDED DURING
BUILDING CONSENT
PROCESS
Signed: A Hoffman Date: 2/5/13

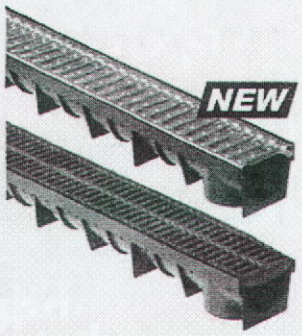
SUPERSEDED

MEA®DRIVE

Document Set ID: 2618117
Version: 1, Version Date: 30/05/2013

MEADRIVE drainage systems

Complete drainage system made of recycled polyethylene (PE), without fall and passable for cars.
System includes PE or galvanized slotted inlay grating cover.
Installation width 130 mm.



MATERIAL GROUP 1D

MEADRIVE
PE channel unit and PE or galvanized grating cover

product description	dimension l x h [mm]	EDP-No. 010...	EAN-code 4001990...	kg/ unit	units/ pallet
MEADRIVE incl. PE grating	1000 x 90	150051	231302	2.1	60
MEADRIVE incl. galvanized slotted grating	1000 x 90	150059	270912	2.25	60

SUPERSEDED AS
ADDITIONAL INFORMATION
PROVIDED DURING
BUILDING CONSENT
PROCESS
Signed: A Hoffman Date: 21/5/13

Accessories

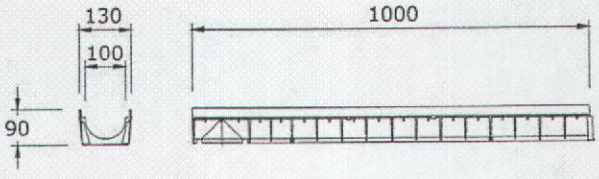


PE end caps

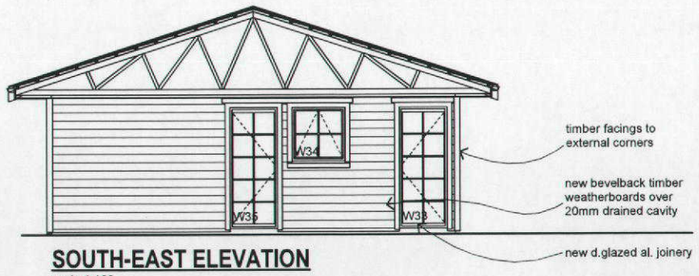
product description	EDP-No. 010...	EAN-code 4001990...	kg/ unit	units/ pallet
MEADRIVE.SE end cap for channel start/end	150053	231319	0.05	1
MEADRIVE.E end cap for channel end with outlet Ø 110	150055	231326	0.1	1
MEADRIVE.A outlet connector outlet Ø 110, odour seal and dirt trap	150057	231333	0.2	1
MEADRIVE OUTLET SET 2 end caps SE, odour seal and dirt trap	150061	280973	0.3	1

MATERIAL GROUP 4D

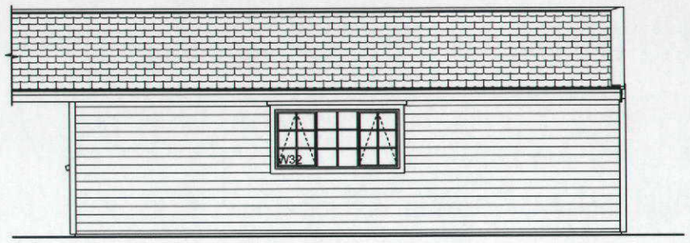
SUPERSEDED



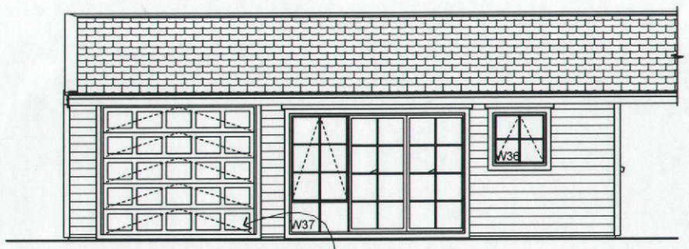
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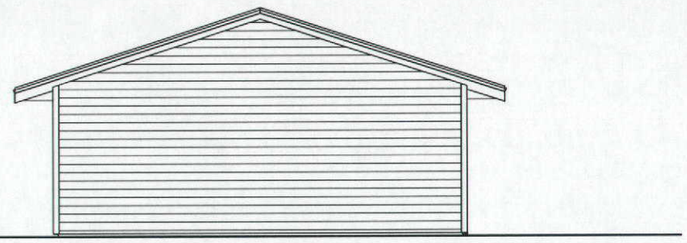
SOUTH-EAST ELEVATION
scale 1:100



NORTH-EAST ELEVATION
scale 1:100



SOUTH-WEST ELEVATION
scale 1:100



NORTH-WEST ELEVATION
scale 1:100

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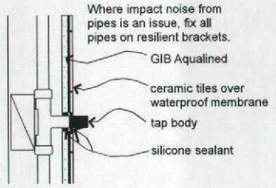
DETAILS PROVIDED AS MAY BE REQUIRED

WATERPROOF MEMBRANE NOTES:

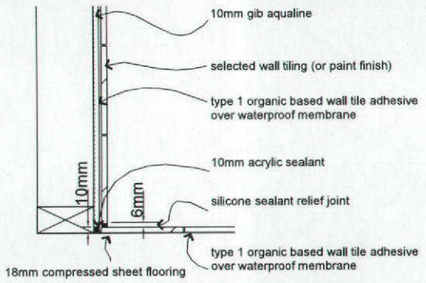
1. in showers and shower over bath situations and the splashback area around the bath, the gib aqualine system is not complete and ready for tiling until coated with a waterprrof membrane over the lining and jointed areas.
2. only insitu waterprrfing materials which are covered by a CSIRO or BRANZ appraisal are recommended. these may be applied by brush or roller methods to the manufacturers recommendations. typically, these types of membranes are not suitable for paint and wall paper finish.
3. waterproof membranes must be fully cured and dry prior to application of floor screeds or tiling adhesives.
4. embeded reinforcing mats in the membrane at all internal corners of the shower (including floor/wall junctions)

TILING NOTES:

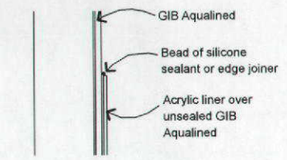
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4. note that the adhesive must be combed in a horizontal direction only.

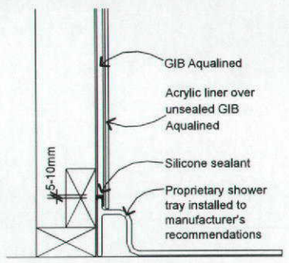


TYPICAL PLUMBING PENETRATION
scale 1:5

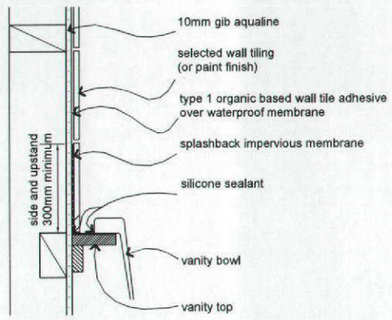


TILED WALL TO FLOOR JUNCTION
scale 1:10

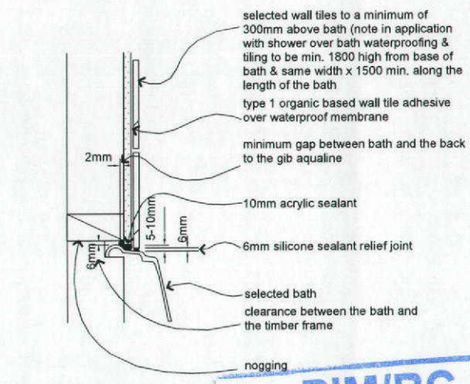




ACRYLIC SHOWER DETAILS
scale 1:10



TYPICAL VANITY TO WALL JUNCTION
scale 1:10



TYPICAL BATH TO WALL JUNCTION
scale 1:10

RIM/BC
№ . . 69120

ADNZ
ARCHITECTURAL DESIGNERS NZ INC

RRD001RPLY
Document Number: RDC-264468
Date Registered: 24/5/2012

rev.	amendments	date	by
B	further information	26/4/12	db
A	for consent	12/3/12	db

sheet contents

ELEVATIONS- CARE GIVER QUARTER'S AND WET AREA DETAILS

project

RE-CLAD
48 SHARP ROAD,
HAMURANA

Millennium Architecture
Millennium Architecture Ltd
ARCHITECTURAL CONSULTANTS

date drawn	drawn by	checked
26/04/2012	dylan	

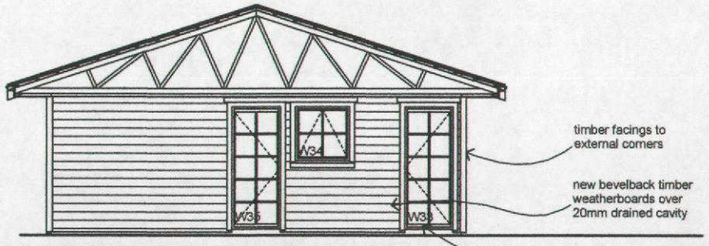
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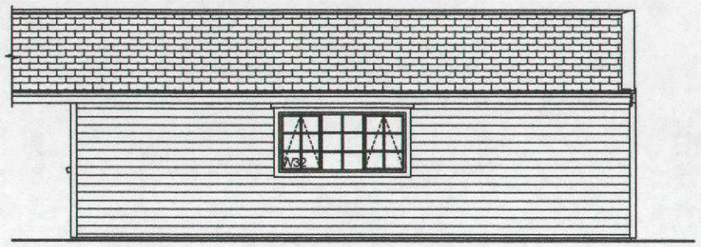
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job number	sheet	of	rev.
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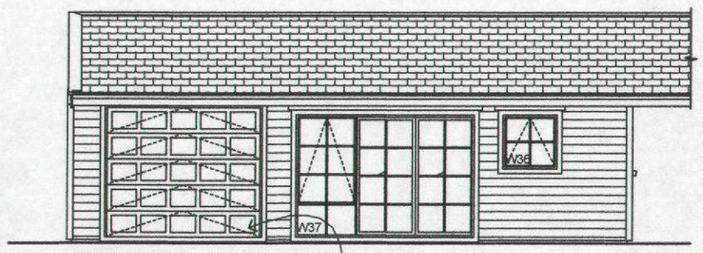
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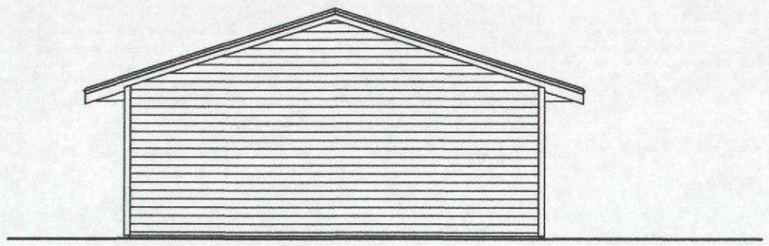
SOUTH-EAST ELEVATION
scale 1:100



NORTH-EAST ELEVATION
scale 1:100



SOUTH-WEST ELEVATION
scale 1:100



NORTH-WEST ELEVATION
scale 1:100

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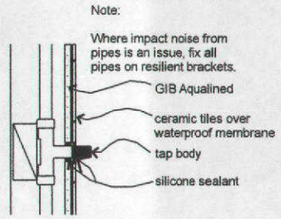
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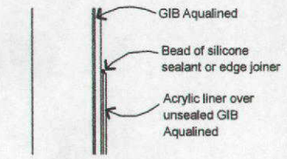
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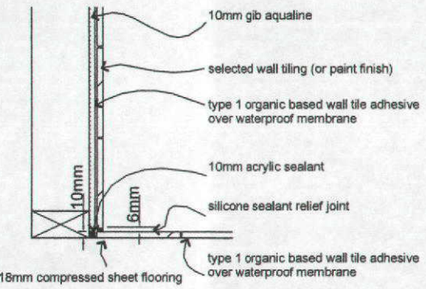
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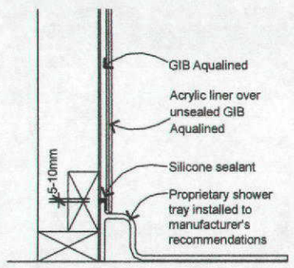


TYPICAL PLUMBING PENETRATION
scale 1:5

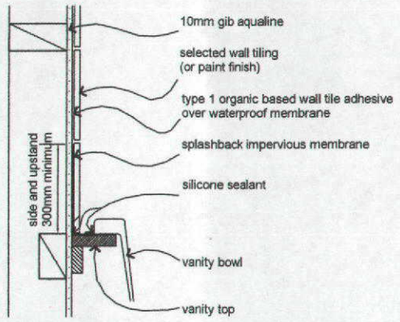




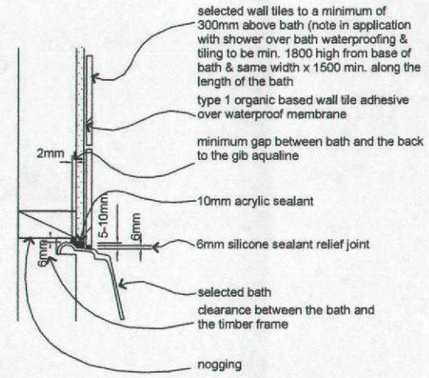
TILED WALL TO FLOOR JUNCTION
scale 1:10



ACRYLIC SHOWER DETAILS
scale 1:10



TYPICAL VANITY TO WALL JUNCTION
scale 1:10



TYPICAL BATH TO WALL JUNCTION
scale 1:10

SUPERSEDED AS ADDITIONAL INFORMATION PROVIDED DURING BUILDING CONSENT PROCESS
Signed: A Hoffman Date: 30/4/12

PIM/BC
No 69120
SUPERSEDED

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ARCHITECTURAL DESIGNERS NZ INC

rev.	amendments	date	by
A	pricing	12/3/12	db

sheet contents

ELEVATIONS- CARE GIVER QUARTER'S AND WET AREA DETAILS

project

RE-CLAD
48 SHARP ROAD,
HAMURANA

Millennium Architecture
Millennium Architecture Ltd
ARCHITECTURAL CONSULTANTS

date drawn	drawn by	checked
4/04/2012	dylan	

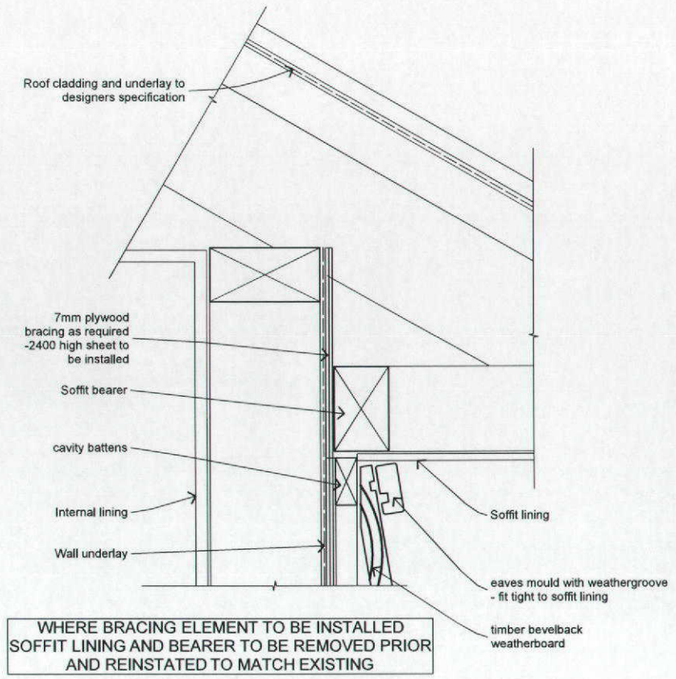
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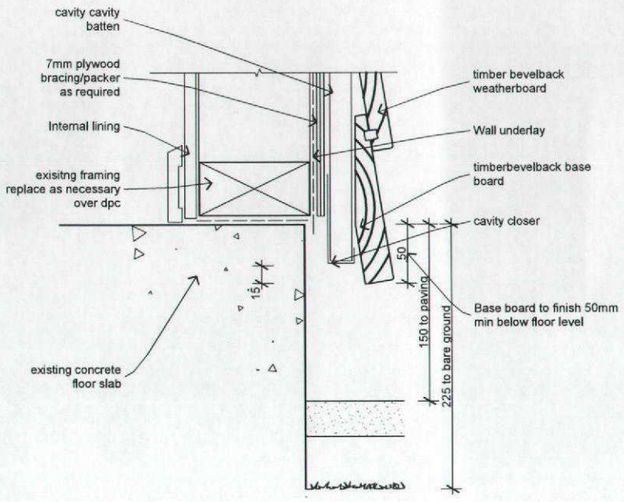
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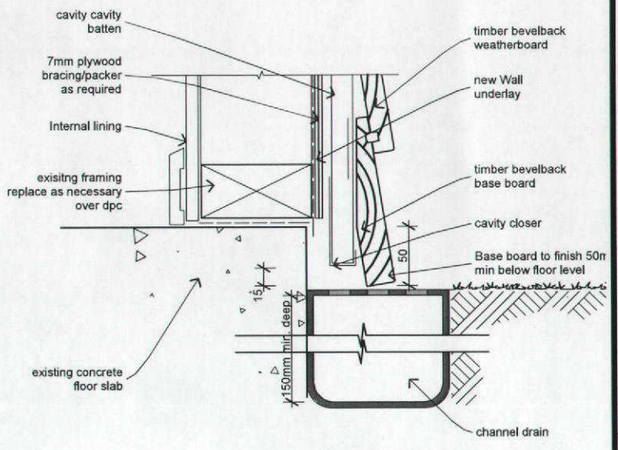


WHERE BRACING ELEMENT TO BE INSTALLED SOFFIT LINING AND BEARER TO BE REMOVED PRIOR AND REINSTATED TO MATCH EXISTING

CLADDING EAVES DETAIL 1 A6

scale 1:5

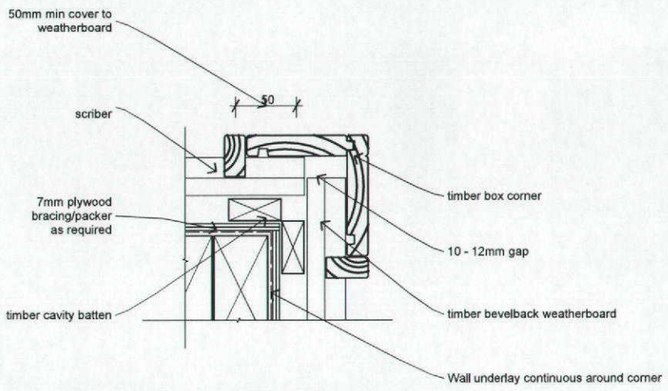




STRIP DRAIN DETAIL AS MAY BE REQUIRED

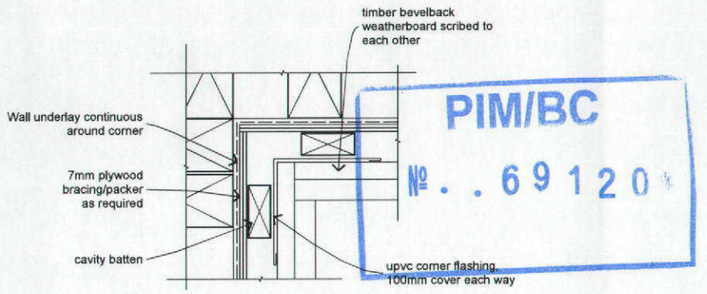
CLADDING BASE DETAIL 2 A6

scale 1:5



EXTERNAL CORNER DETAIL 3 A6

scale 1:5



PIM/BC
№ . . 69120

INTERNAL CORNER DETAIL 4 A6

scale 1:5

MODIFY EXISITNG CONSTRUCTION AS REQUIRED TO REPLICATE DETAILS SHOWN TO COMPLY WITH NZBC CLAUSE E2

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CLADDING DETAILS

project

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Millennium Architecture Ltd
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26/04/2012	dylan	

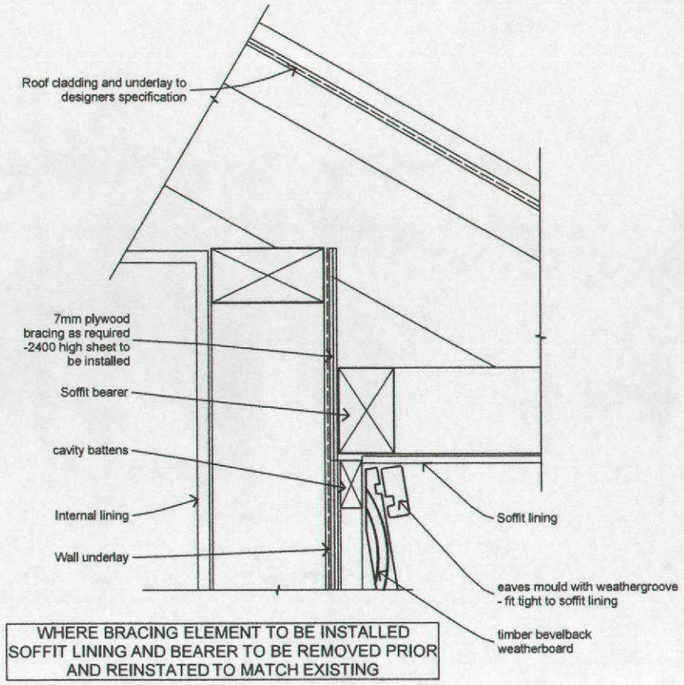
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job number	sheet	of	rev.
74391	A8	-	B

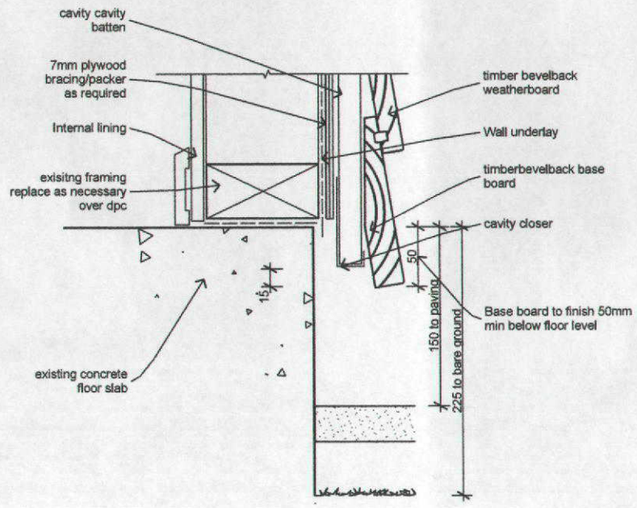
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WHERE BRACING ELEMENT TO BE INSTALLED SOFFIT LINING AND BEARER TO BE REMOVED PRIOR AND REINSTATED TO MATCH EXISTING

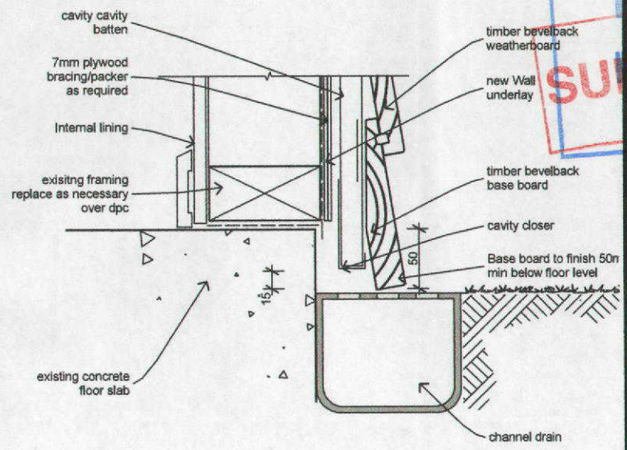
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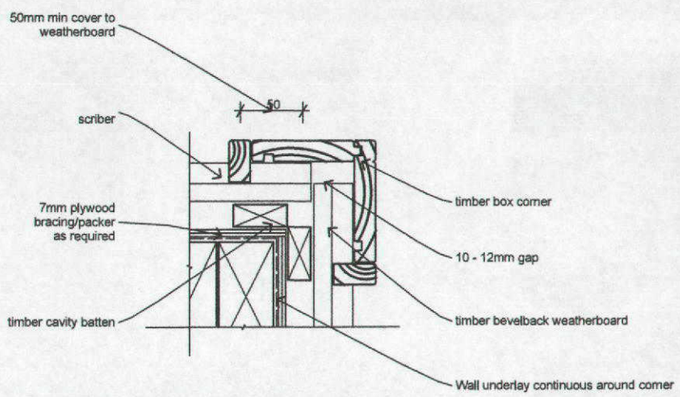


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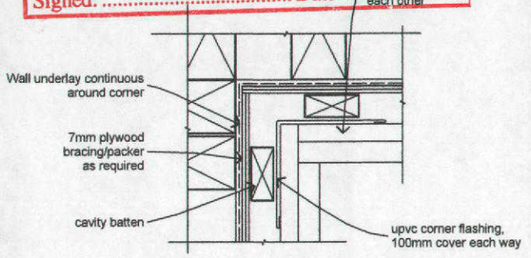


STRIP DRAIN DETAIL AS MAY BE REQUIRED



EXTERNAL CORNER DETAIL 3 A6

scale 1:5



INTERNAL CORNER DETAIL 4 A6

scale 1:5

SUPERSEDED AS ADDITIONAL INFORMATION PROVIDED DURING BUILDING CONSENT PROCESS

Signed: A Hoffman Date:

PIM/BC SUPERSEDED 09/12/0

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rev.	amendments	date	by
A	pricing	12/3/12	db

sheet contents

CLADDING DETAILS

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RE-CLAD
48 SHARP ROAD,
HAMURANA

Millennium Architecture
Millennium Architecture Ltd
ARCHITECTURAL CONSULTANTS

date drawn	drawn by	checked
4/04/2012	dylan	

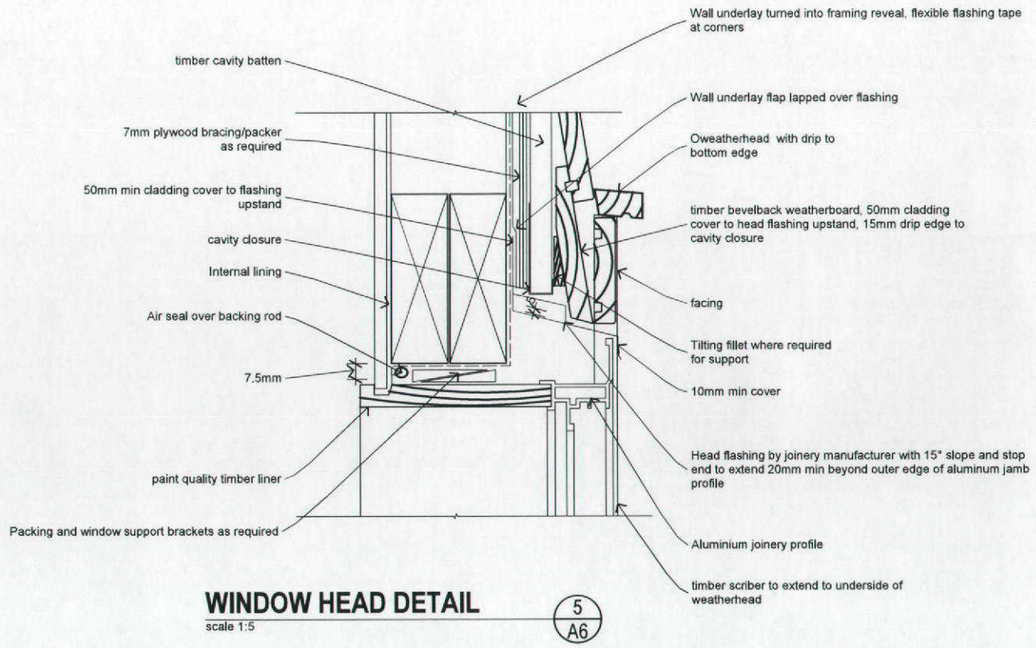
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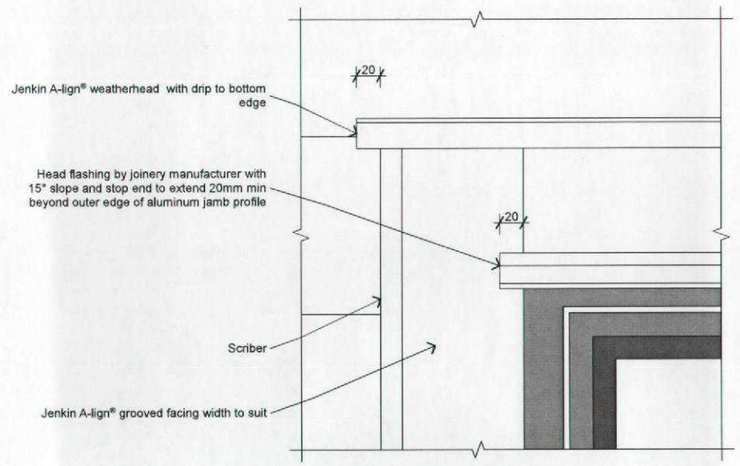
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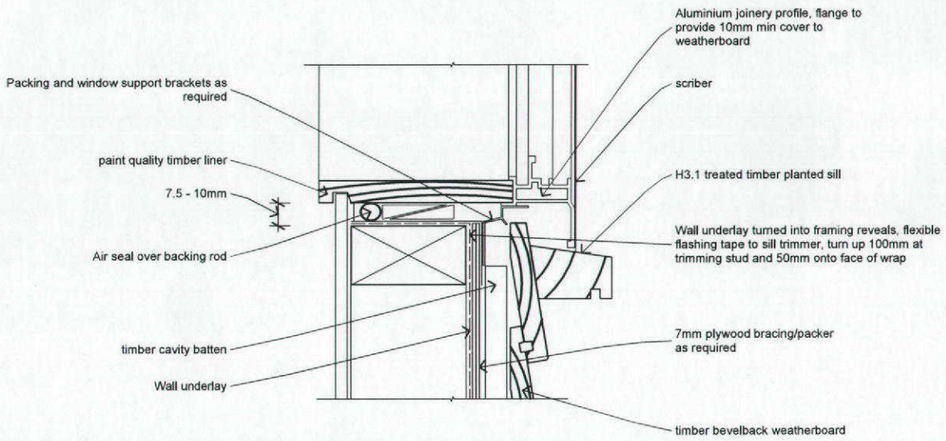
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A6



WINDOW HEAD ELEVATION

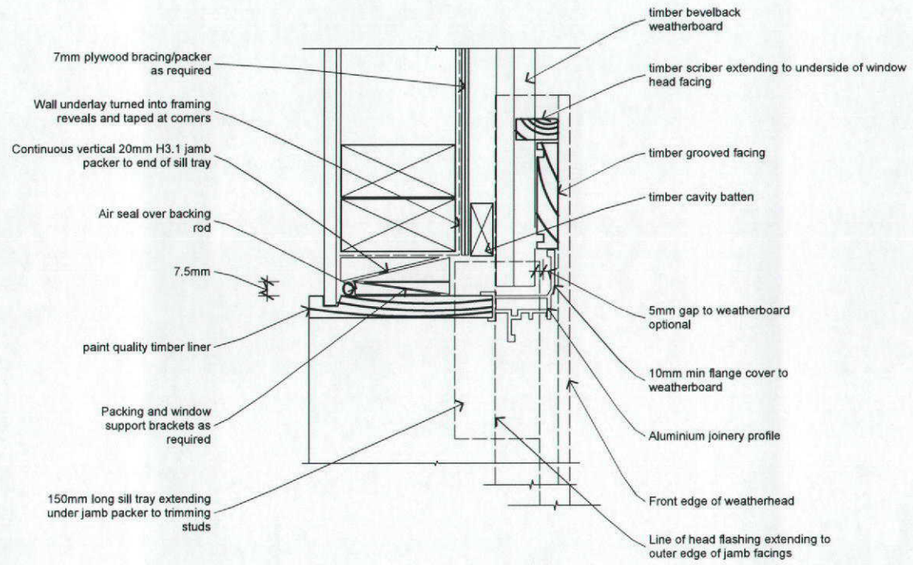
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WINDOW SILL DETAIL

scale 1:5

6
A6



WINDOW JAMB DETAIL

scale 1:5

7
A6

PIM/BC
№ . . 69120

MODIFY EXISITNG CONSTRUCTION AS REQUIRED TO REPLICATE DETAILS SHOWN TO COMPLY WITH NZBC CLAUSE E2

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B	further information	26/4/12	db
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sheet contents

CLADDING DETAILS

project

RE-CLAD
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Millennium Architecture
Millennium Architecture Ltd
ARCHITECTURAL CONSULTANTS

date drawn	drawn by	checked
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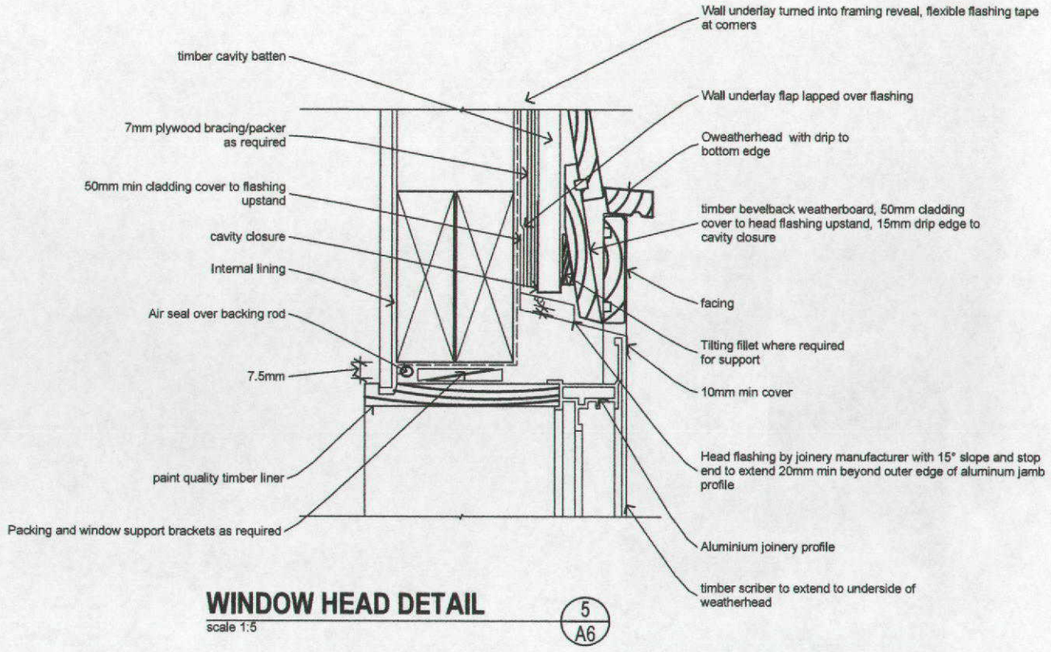
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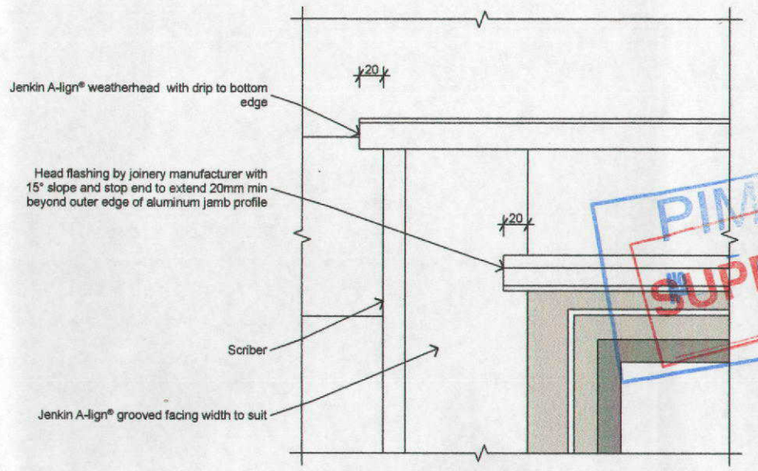
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WINDOW HEAD DETAIL

scale 1:5

5 / A6



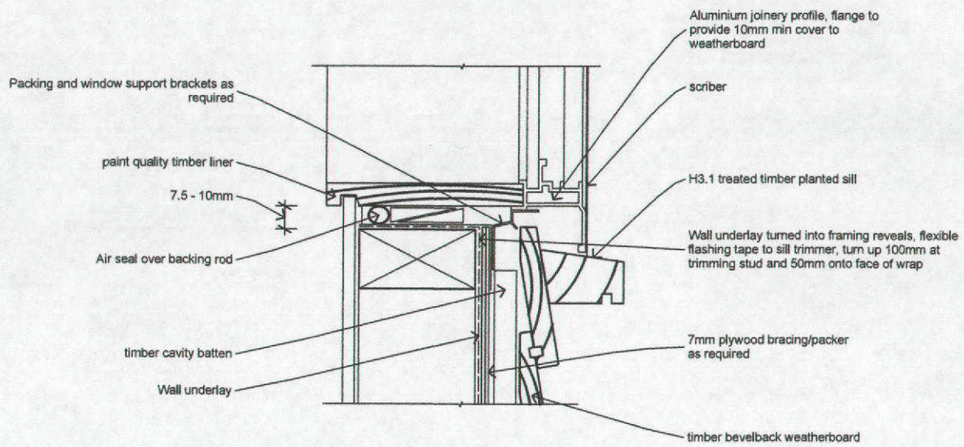
WINDOW HEAD ELEVATION

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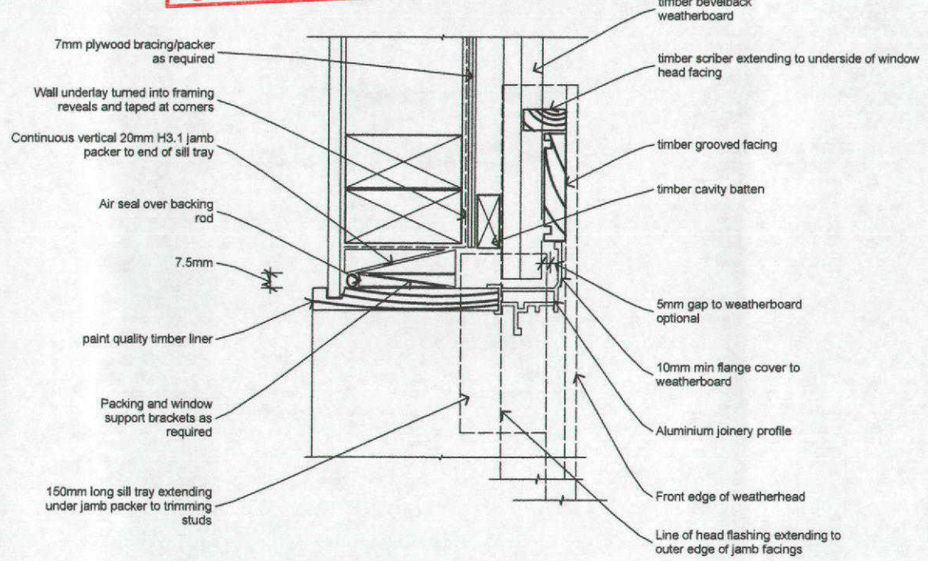
PIM/EC SUPERSEDED



WINDOW SILL DETAIL

scale 1:5

6 / A6



WINDOW JAMB DETAIL

scale 1:5

7 / A6

MODIFY EXISITNG CONSTRUCTION AS REQUIRED TO REPLICATE DETAILS SHOWN TO COMPLY WITH NZBC CLAUSE E2

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CLADDING DETAILS

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Millennium Architecture
Millennium Architecture Ltd
ARCHITECTURAL CONSULTANTS

date drawn	drawn by	checked
4/04/2012	dylan	

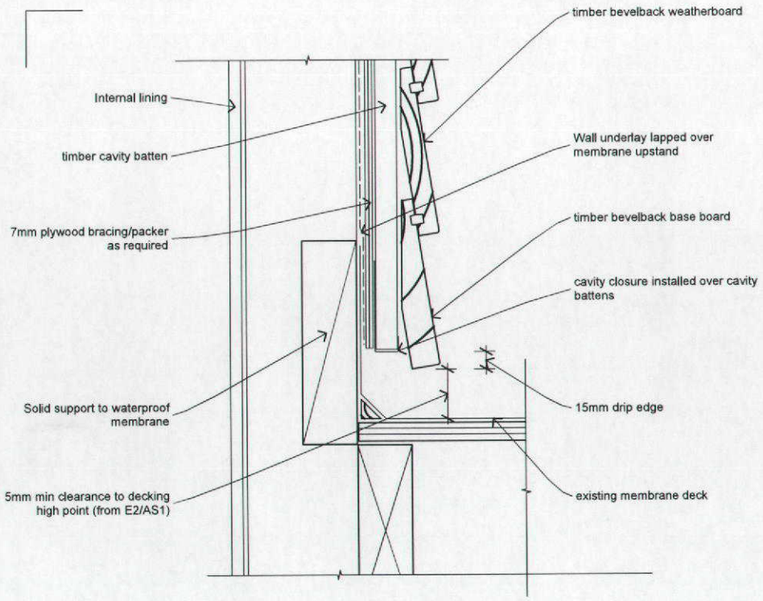
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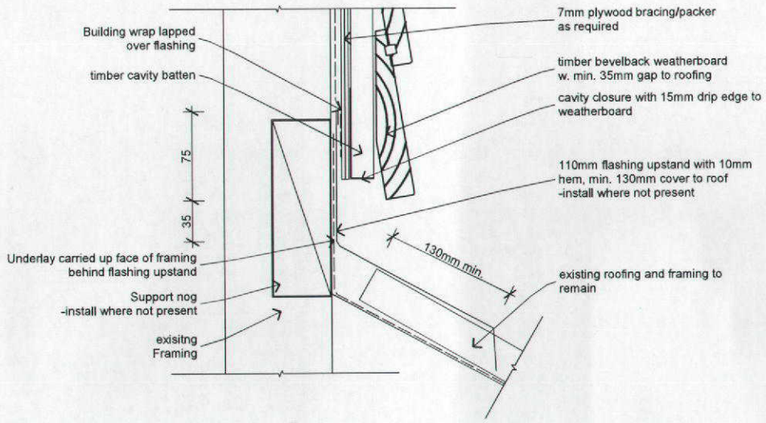
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CLADDING DECK JUNCTION

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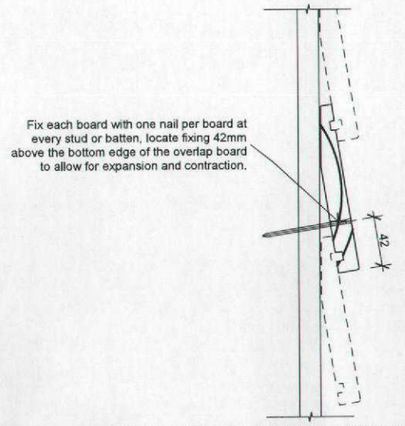


Note: Refer to NZBC Acceptable Solution E2/AS1 Table 7 for apron flashing cover over roofing

APRON JUNCTION

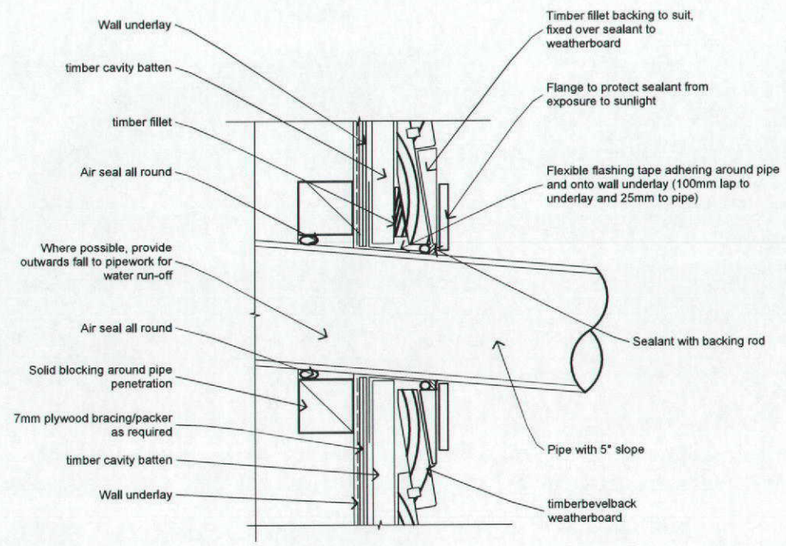
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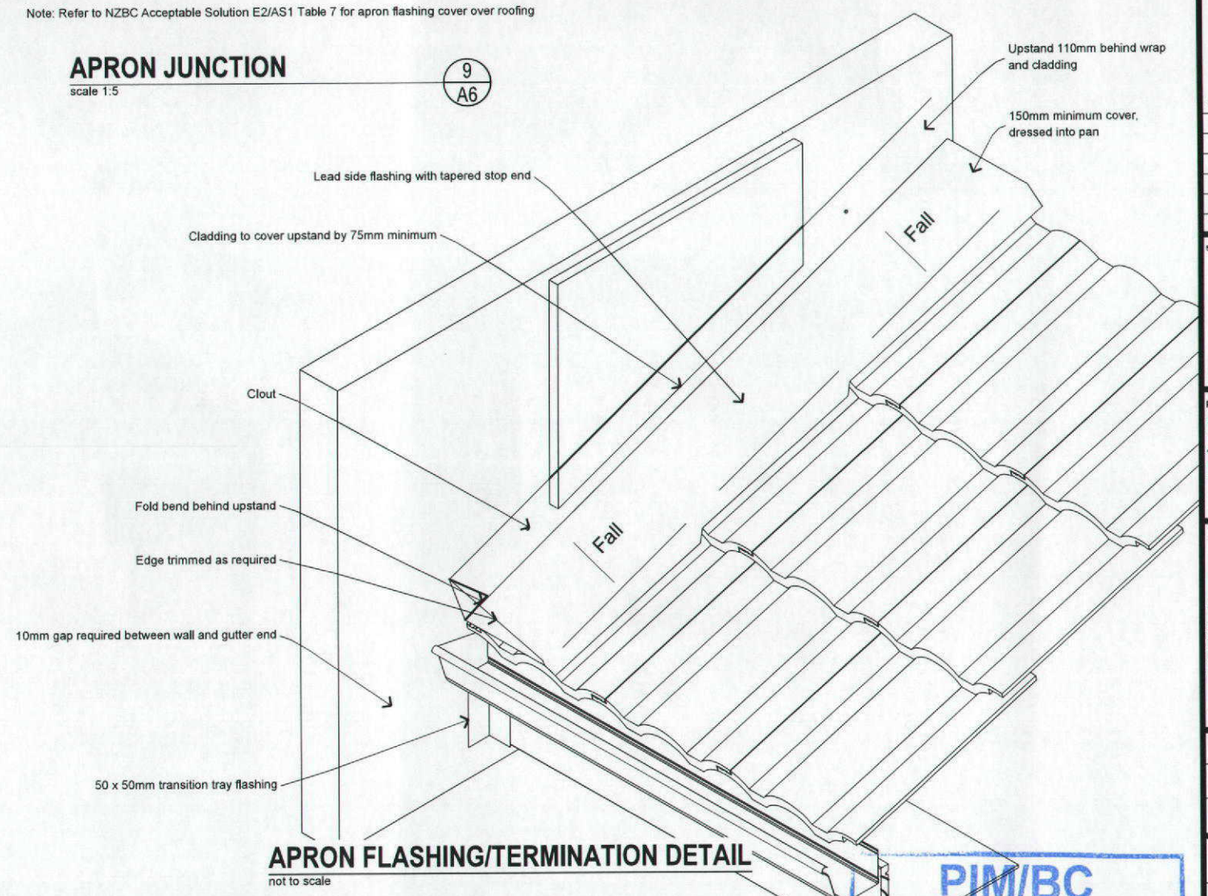
TYPICAL WEATHERBOARD FIXING

scale 1:5



TYPICAL PIPE PENETRATION

scale 1:5



APRON FLASHING/TERMINATION DETAIL

not to scale

MODIFY EXISITNG CONSTRUCTION AS REQUIRED TO REPLICATE DETAILS SHOWN TO COMPLY WITH NZBC CLAUSE E2

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№ . . 69120

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ARCHITECTURAL DESIGNERS NZ INC

rev.	amendments	date	by
B	further information	26/4/12	db
A	for consent	12/3/12	db

sheet contents

CLADDING DETAILS

project

RE-CLAD
48 SHARP ROAD,
HAMURANA

Millennium Architecture
Millennium Architecture Ltd
ARCHITECTURAL CONSULTANTS

date drawn	drawn by	checked
26/04/2012	dylan	

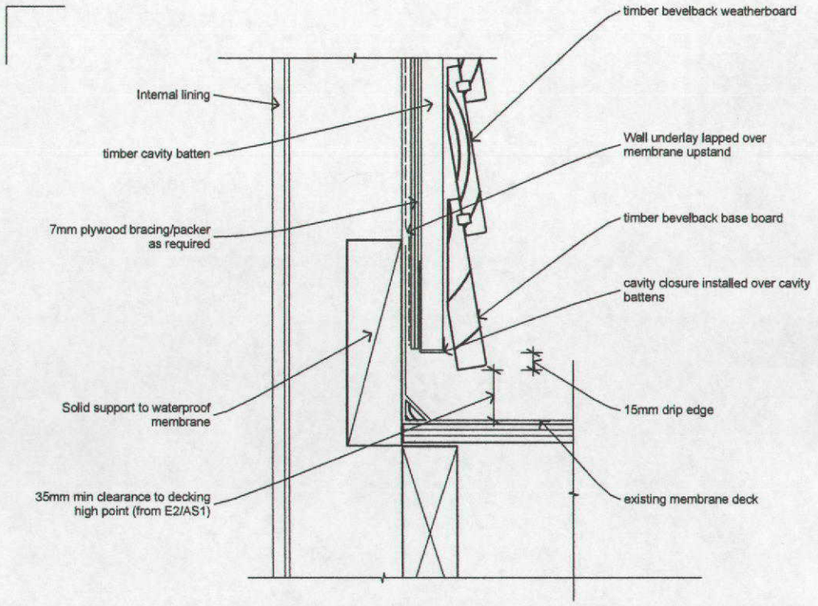
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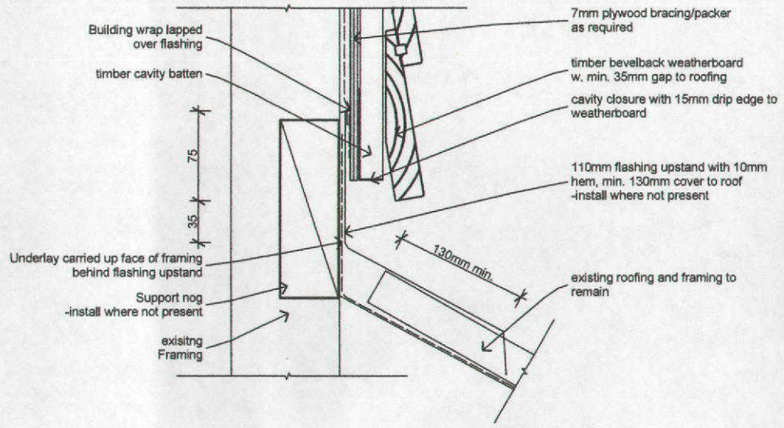
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CLADDING DECK JUNCTION

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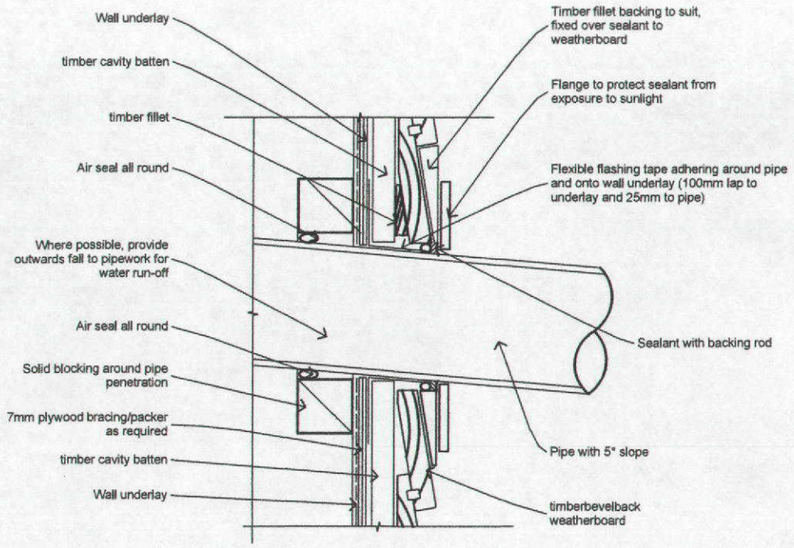


Note: Refer to NZBC Acceptable Solution E2/AS1 Table 7 for apron flashing cover over roofing

APRON JUNCTION

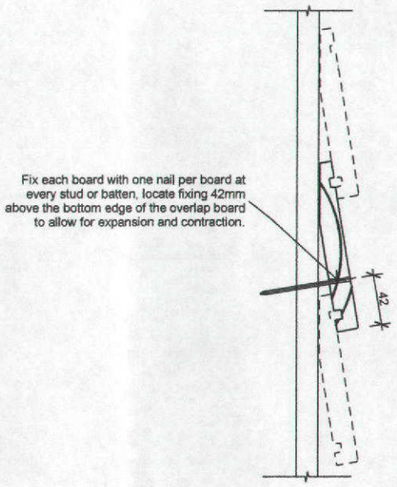
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TYPICAL PIPE PENETRATION

scale 1:5



TYPICAL WEATHERBOARD FIXING

scale 1:5

SUPERSEDED AS ADDITIONAL INFORMATION PROVIDED DURING BUILDING CONSENT PROCESS
Signed A Hoffman Date: 30/4/12

MODIFY EXISITNG CONSTRUCTION AS REQUIRED TO REPLICATE DETAILS SHOWN TO COMPLY WITH NZBC CLAUSE E2

Note: All aspects of this project are to fully comply with the Building Act, N.Z.S. 3604, The NZ Building Code. Project Specifications and all relevant Manufacturers Details.
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SUPERSEDED
PLANS
№ 69120

rev.	amendments	date	by
A	pricing	12/3/12	db

sheet contents

CLADDING DETAILS

project

RE-CLAD
48 SHARP ROAD,
HAMURANA

Millennium Architecture
Millennium Architecture Ltd
ARCHITECTURAL CONSULTANTS

date drawn	drawn by	checked
4/04/2012	dylan	

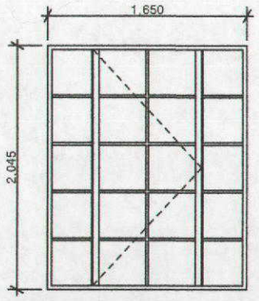
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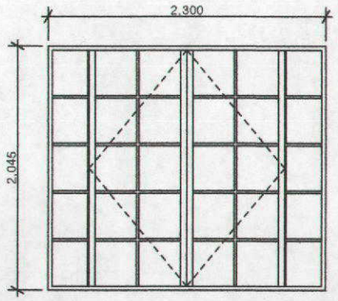
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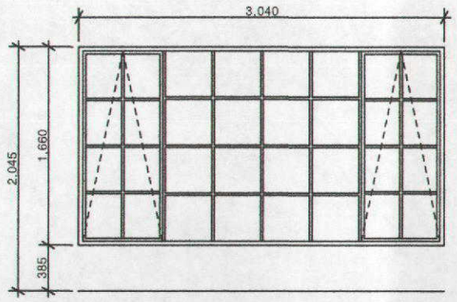
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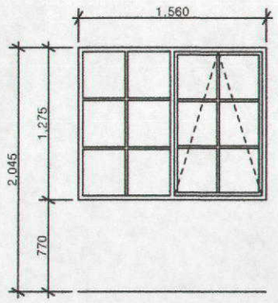
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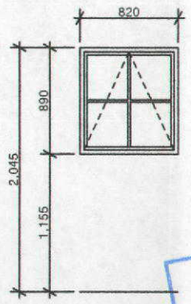
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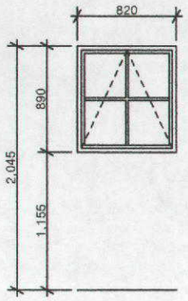
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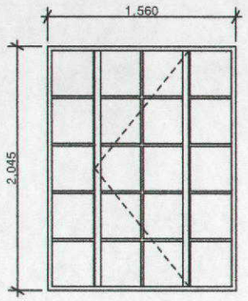
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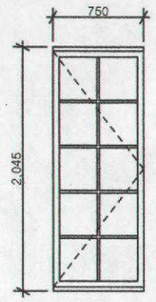
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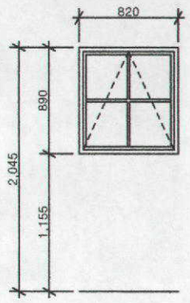
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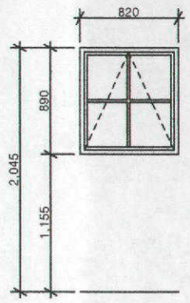
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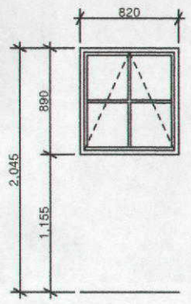
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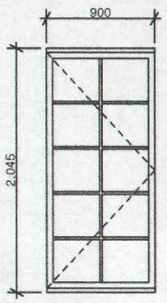
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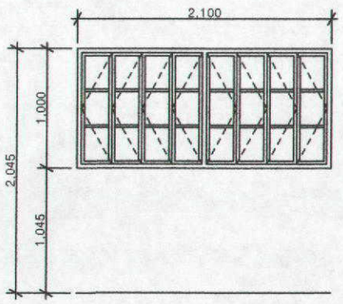
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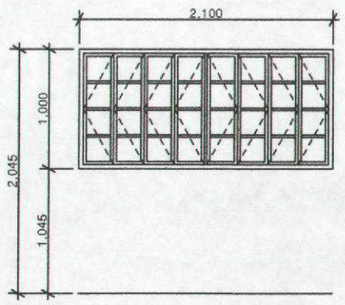
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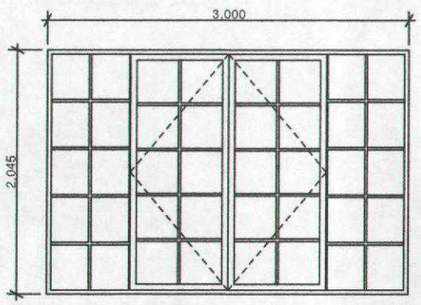
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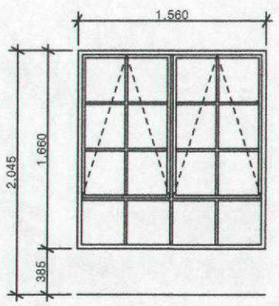
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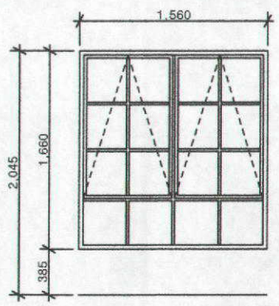
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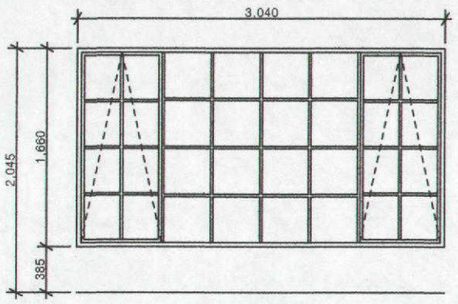
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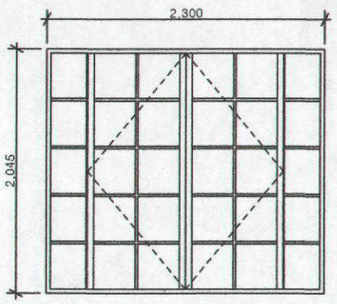
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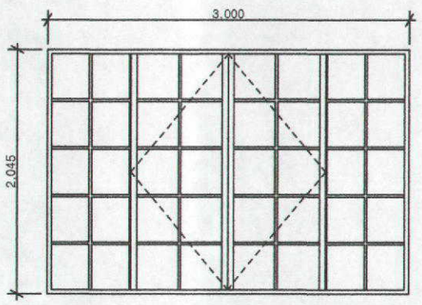
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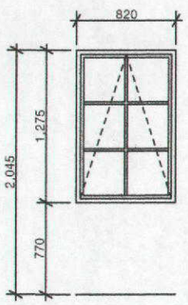
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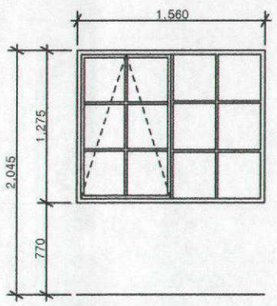
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W20



W21



W22

JOINERY SCHEDULE
scale 1:50

confirm sizes on-site prior to fabrication

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rev	amendments	date	by
A	pricing	12/3/12	db

sheet contents

JOINERY SCHEDULE

project

RE-CLAD
48 SHARP ROAD,
HAMURANA

Millennium Architecture
Millennium Architecture Ltd
ARCHITECTURAL CONSULTANTS

date drawn	drawn by	checked
4/04/2012	dylan	

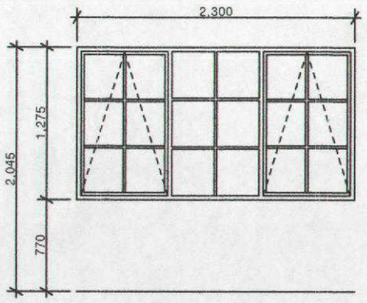
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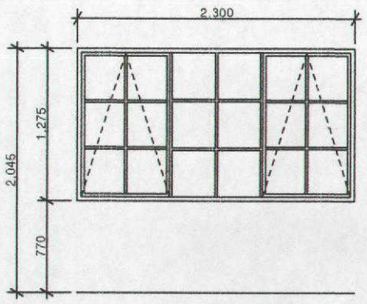
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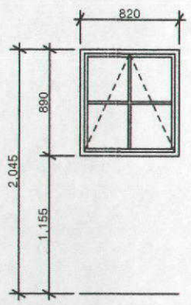
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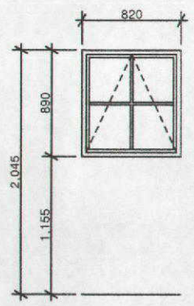
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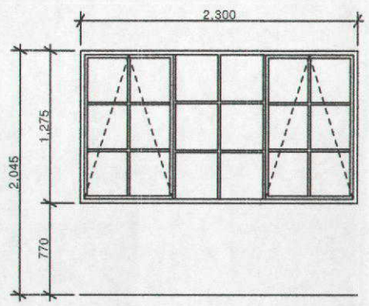
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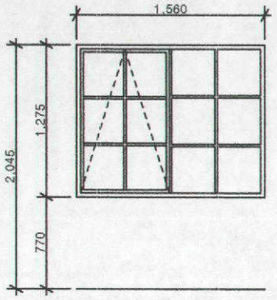
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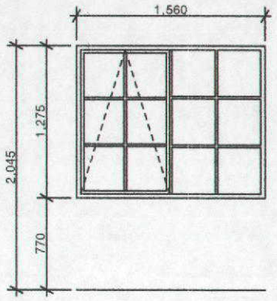
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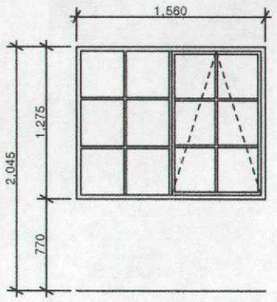
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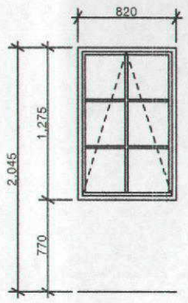
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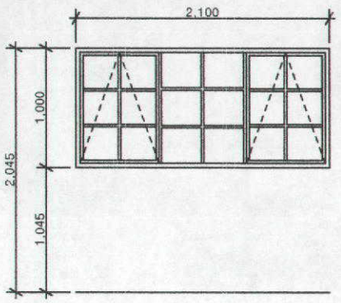
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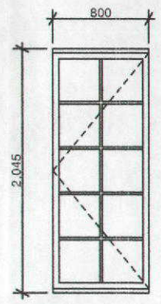
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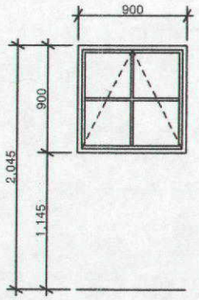
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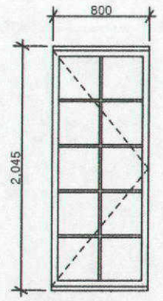
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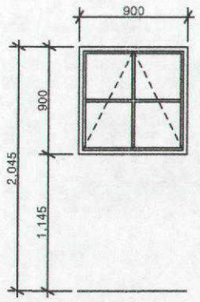
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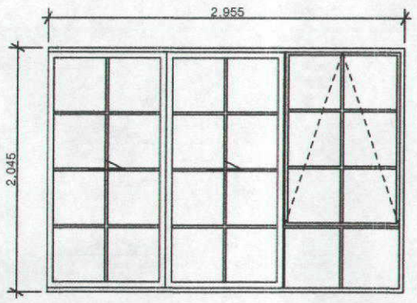
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W35



W36



W37

JOINERY SCHEDULE

scale 1:50

confirm sizes on-site prior to fabrication, confirm configuration of joinery units with contractor

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JOINERY SCHEDULE

project

RE-CLAD
48 SHARP ROAD,
HAMURANA

Millennium Architecture
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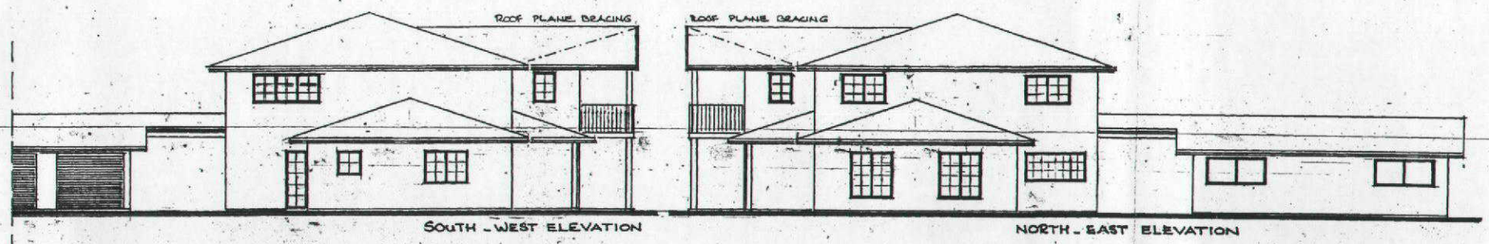
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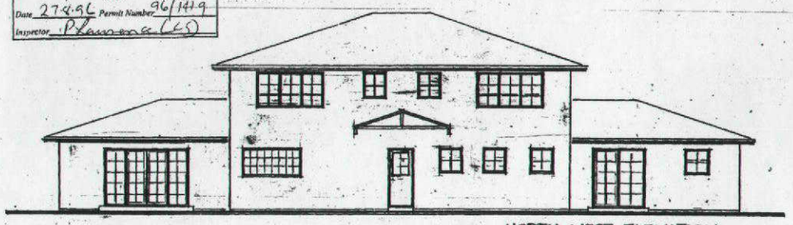
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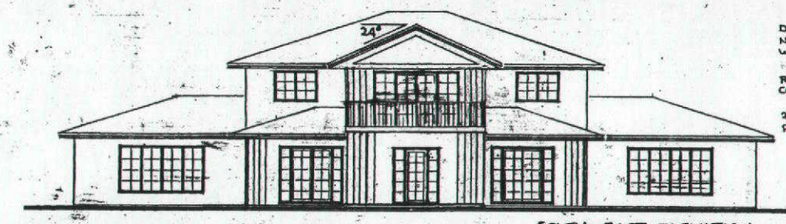
SOUTH - WEST ELEVATION

NORTH - EAST ELEVATION

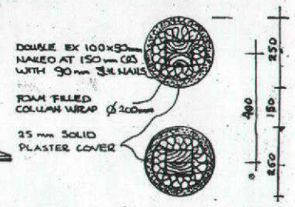
PLANS APPROVED SUBJECT TO ALL REQUIREMENTS OF THE BY-LAWS AND HEALTH DEPT. BEING FULLY COMPLIED WITH
Date 27.9.96 Permit Number 96/1419
Inspector Plumbing (LS)



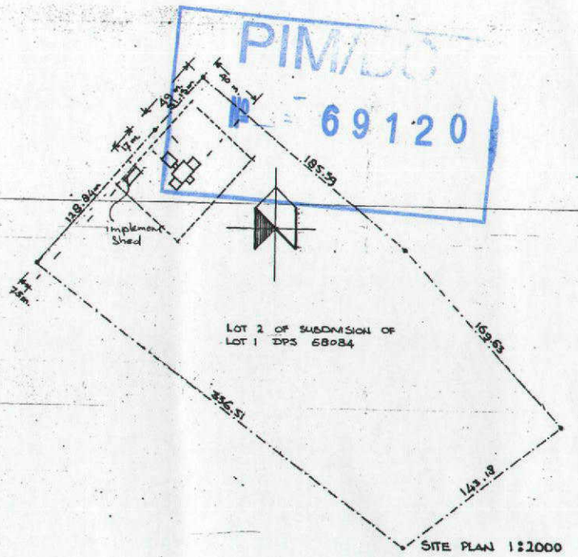
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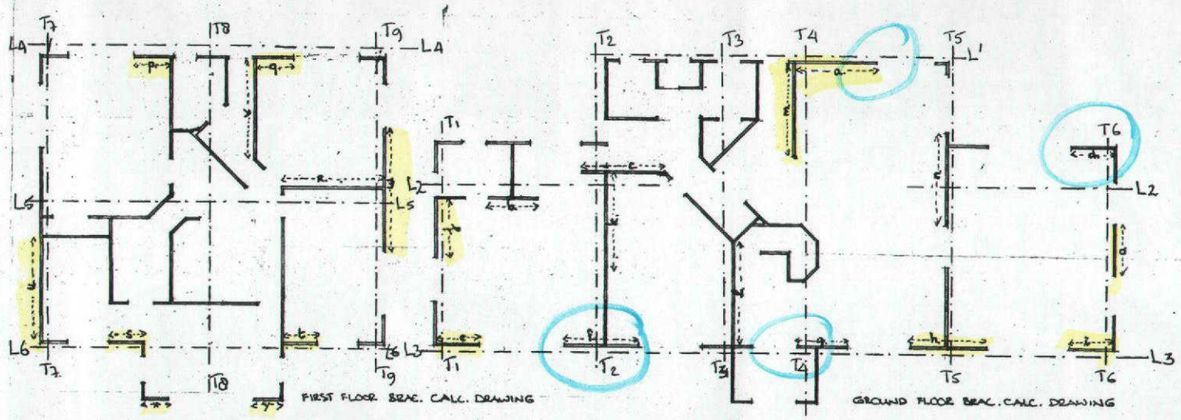
SOUTH - EAST ELEVATION



DOUBLE COLUMN DETAIL
SCALE 1:10



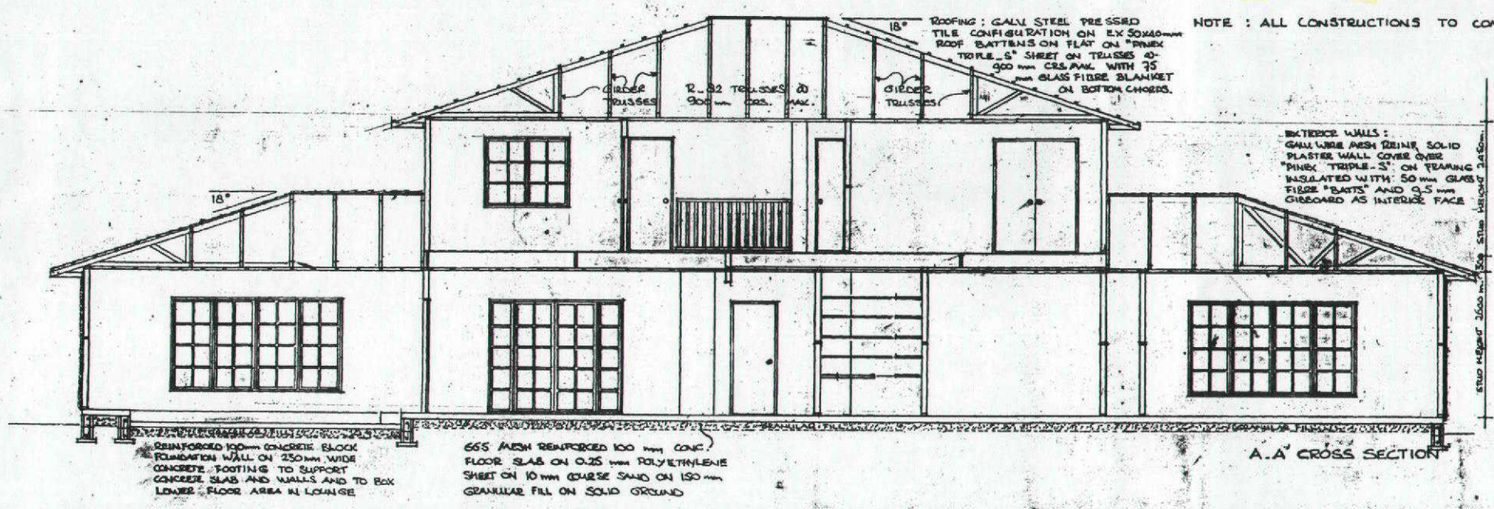
SITE PLAN 1:2000



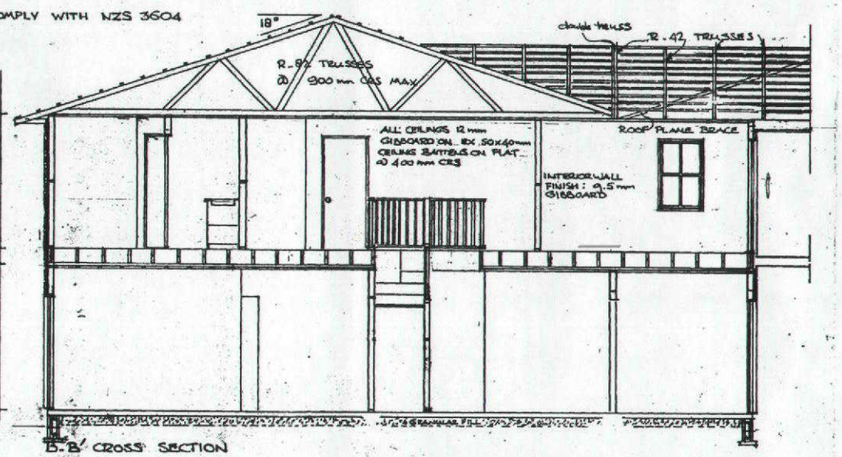
FIRST FLOOR BRAC. CALC. DRAWING

GROUND FLOOR BRAC. CALC. DRAWING

NOTE : ALL CONSTRUCTIONS TO COMPLY WITH NZS 3604



A-A' CROSS SECTION



B-B' CROSS SECTION

Archi-Technics

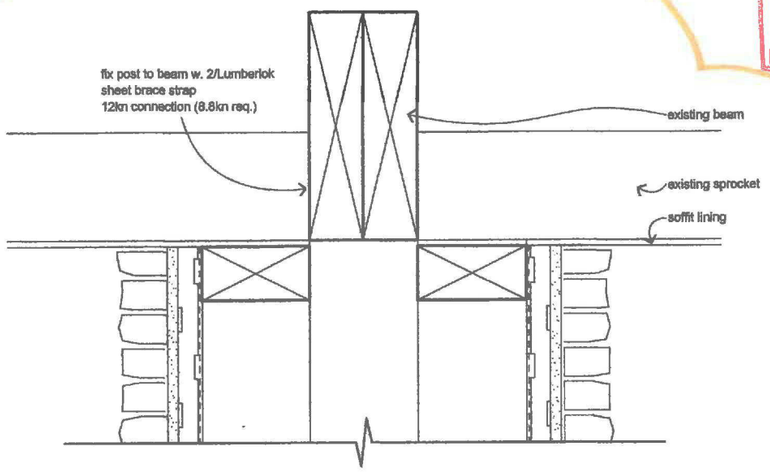
30 OKAWA BAY RD. ROTORUA PH 3624703

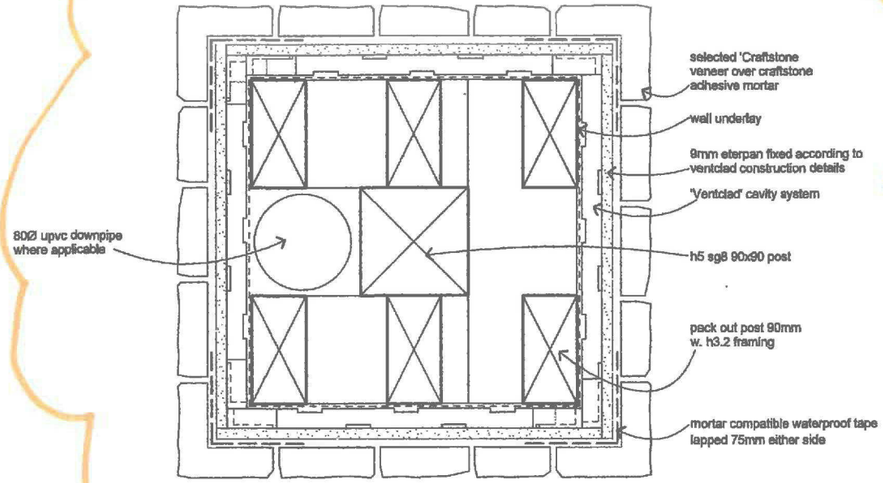
BUILDING PERMIT APPLICATION DRAWING Nº 2 FOR
THE BACHELOR RESIDENCE AT SHARP RD., NGONGOTAHA
SITE PLAN SCALE 1:2000, CROSS SECTIONS SCALE 1:50
ELEVATIONS AND BRACING CALC. DRAWINGS SCALE 1:100
DESIGNED & DRAWN R. KLAZES JULY 1996

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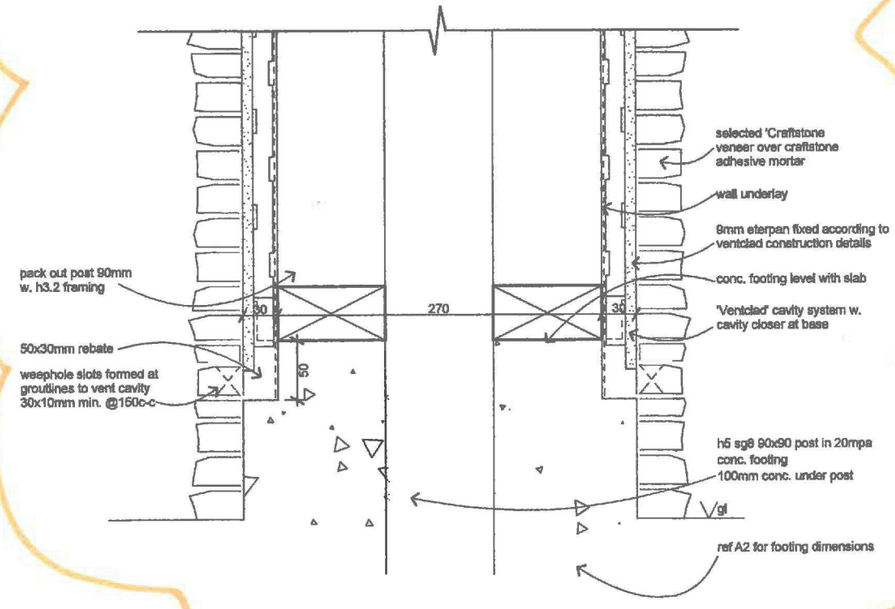
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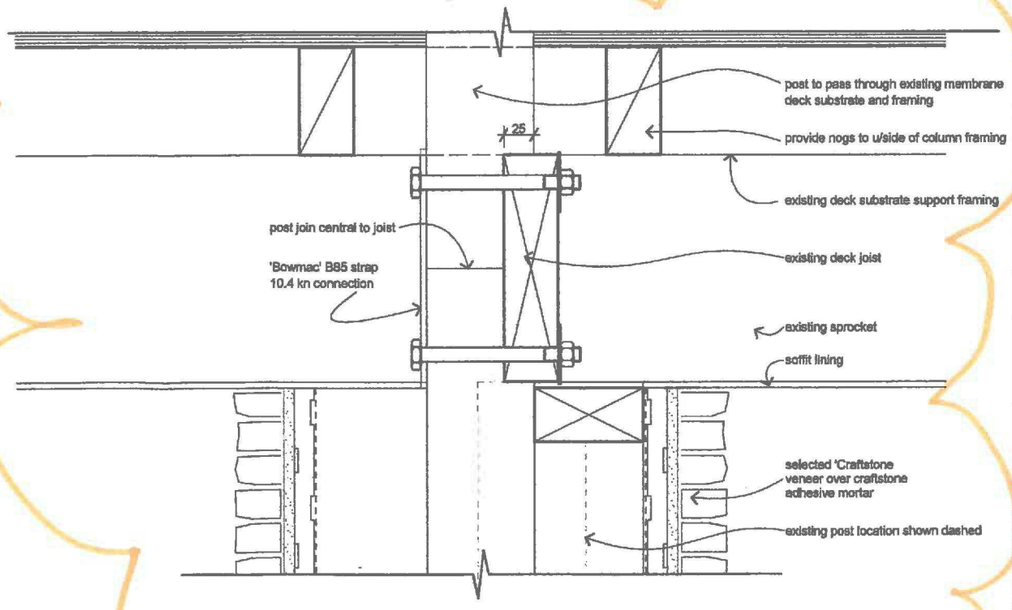


CRAFTSTONE COLUMN DETAIL-PLAN
scale 1:5

NEW POST DETAILS



CRAFTSTONE COLUMN DETAIL 10 A6
scale 1:5



CRAFTSTONE COLUMN DETAIL 11 A6
scale 1:5

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NEW POST CONNECTION DETAILS

NEW POST CONNECTION DETAILS.

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sheet contents
COLUMN DETAILS

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RE-CLAD
48 SHARP ROAD,
HAMURANA

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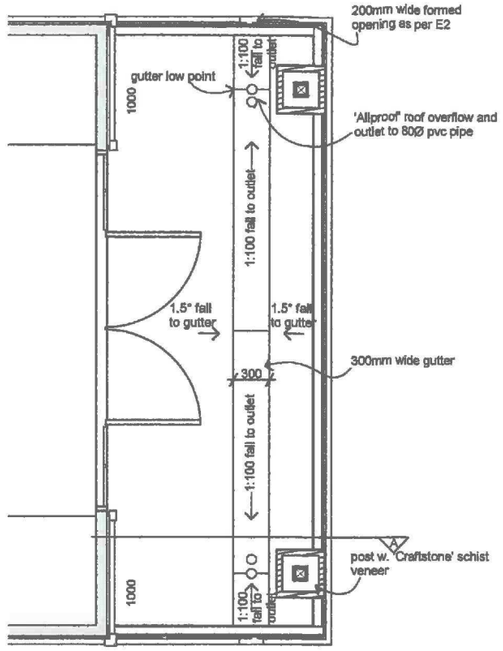
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G Marjoribanks

TILES ON SCREW JACKS INSTEAD OF TIMBER DECKING OVER BUTYNOL.

COMPLIES B2, E2.

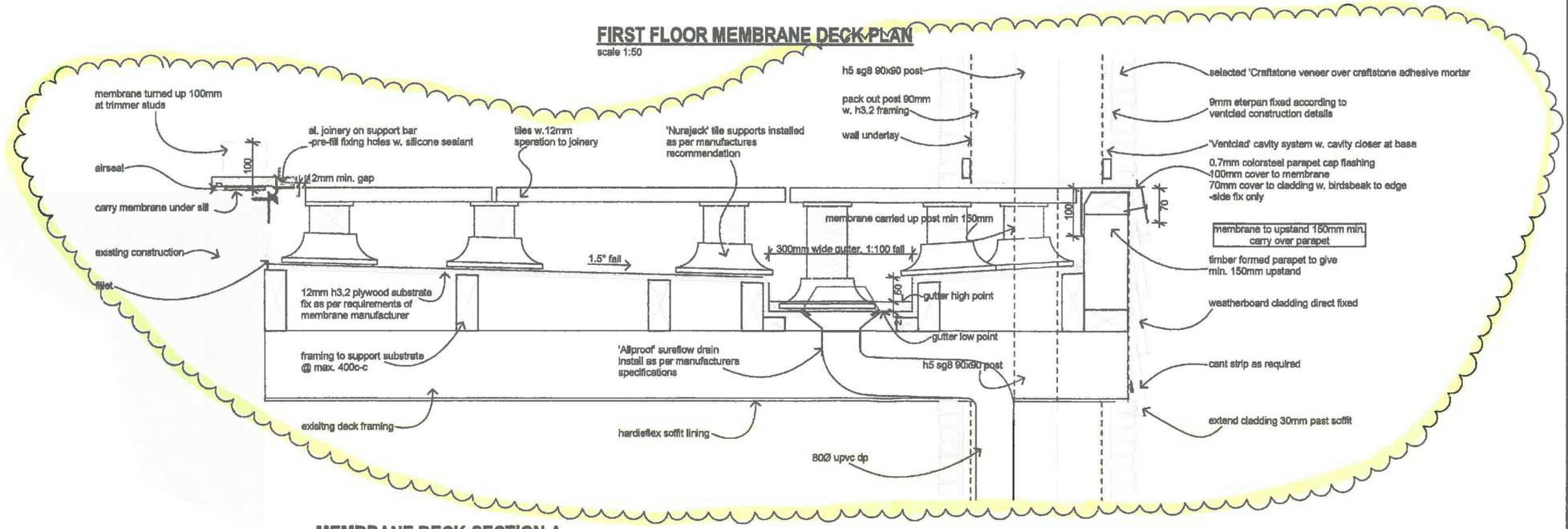


FIRST FLOOR MEMBRANE DECK PLAN

scale 1:50

MEMBRANE DECK-SECTION A

scale 1:10



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B	further information	26/4/12	db
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DECK DETAILS

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48 SHARP ROAD,
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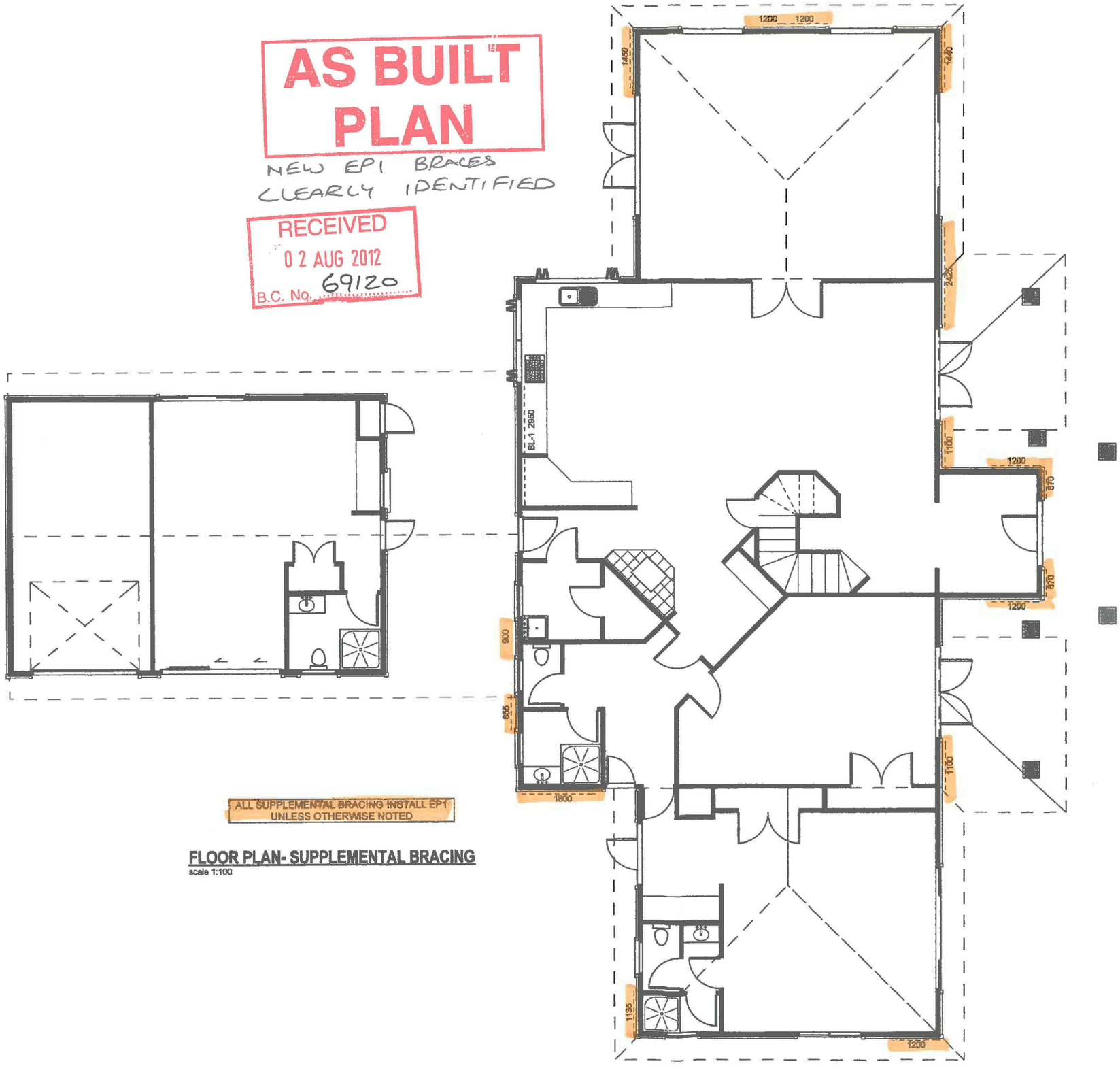
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AS BUILT PLAN

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ALL SUPPLEMENTAL BRACING INSTALL EP1 UNLESS OTHERWISE NOTED

FLOOR PLAN- SUPPLEMENTAL BRACING

scale 1:100

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GROUND FLOOR SUPPLEMENTAL BRACING

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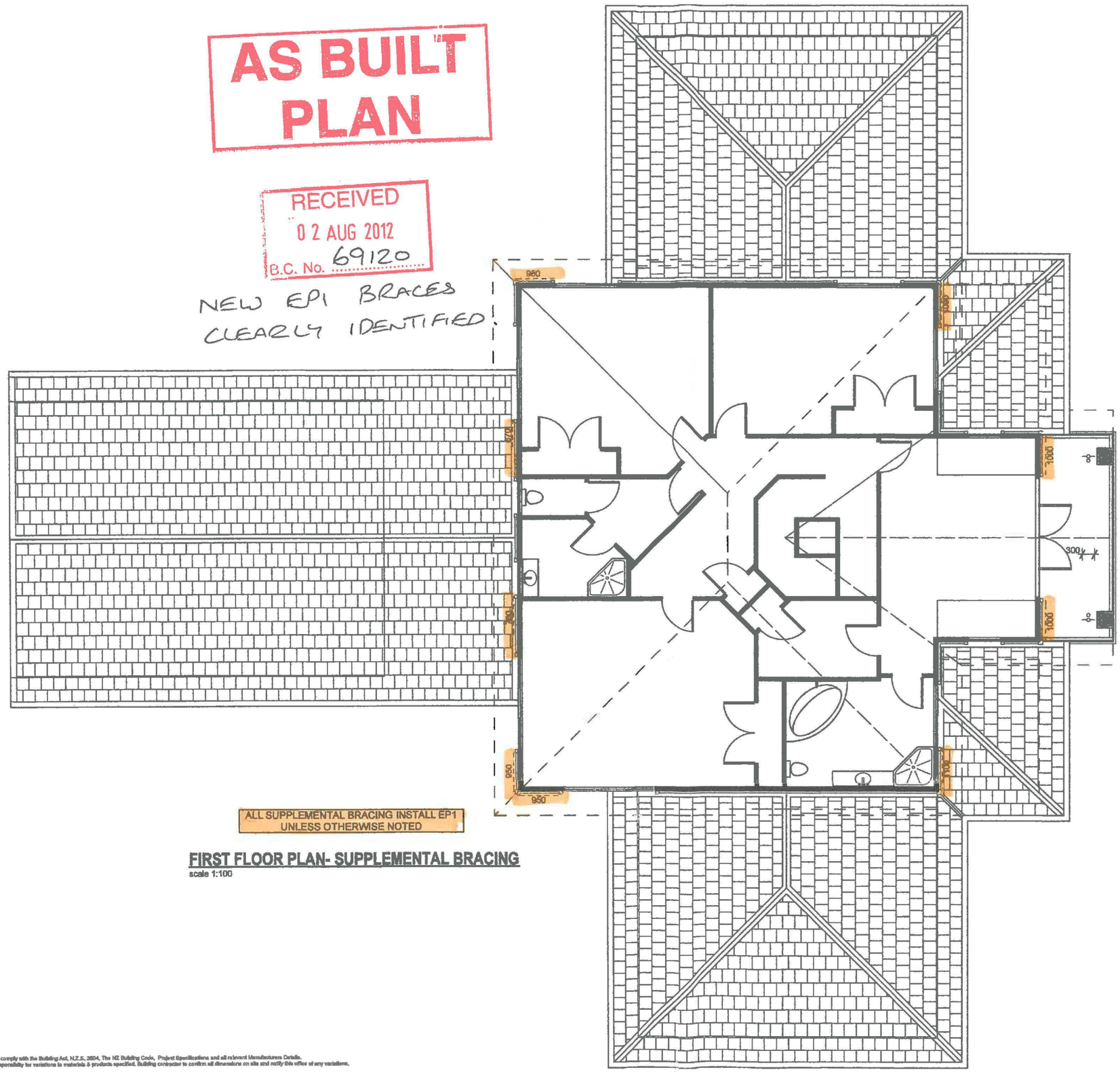
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ALL SUPPLEMENTAL BRACING INSTALL EP1 UNLESS OTHERWISE NOTED

FIRST FLOOR PLAN- SUPPLEMENTAL BRACING
scale 1:100

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FIRST FLOOR SUPPLEMENTAL BRACING

project

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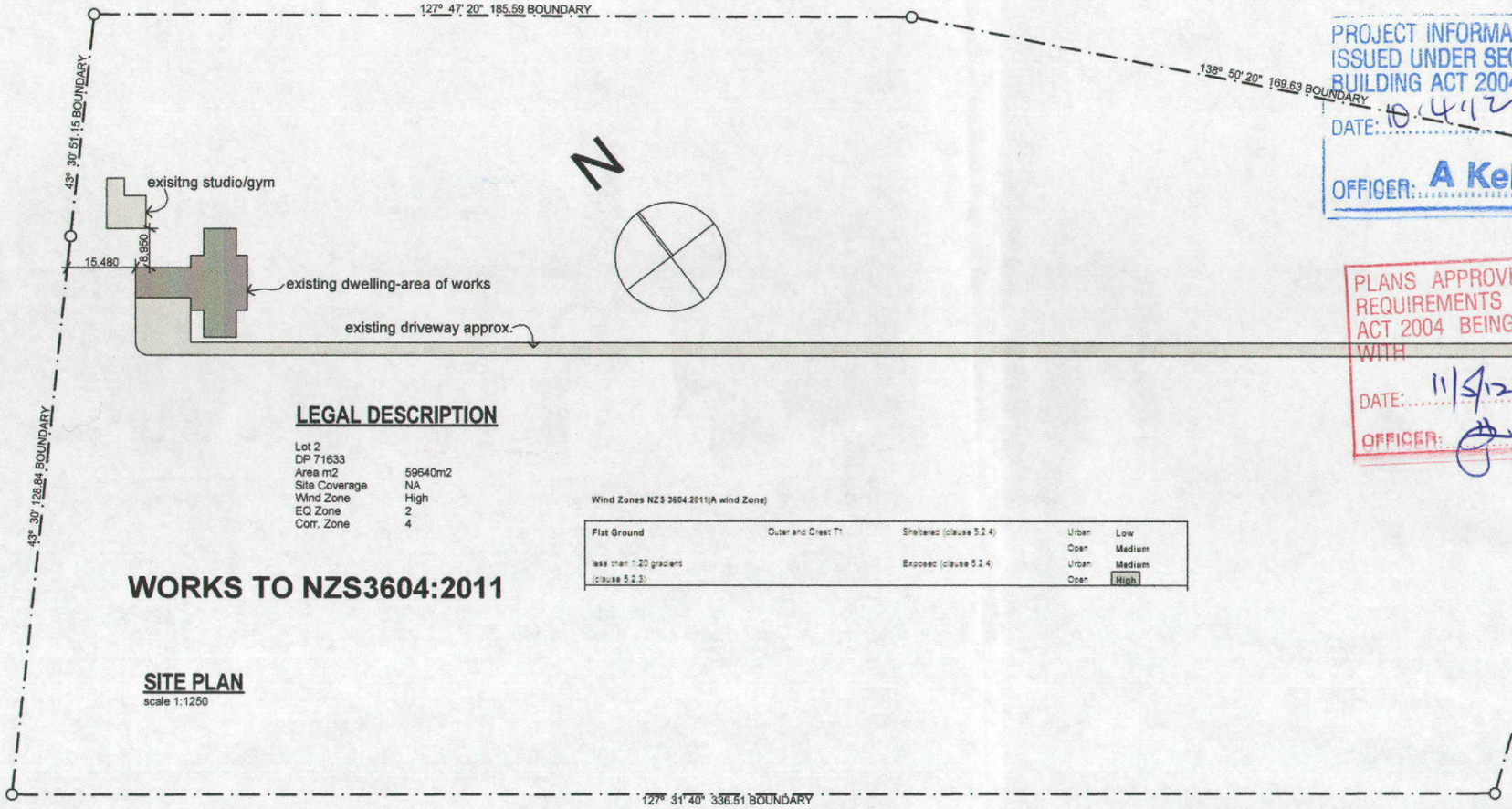
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74391	A18	-	B

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PROJECT INFORMATION MEMORANDUM
ISSUED UNDER SECTION 32 OF THE BUILDING ACT 2004
DATE: 10/4/12 P.I.M. No: PIM/BC 69
OFFICER: A Kelly

PLANS APPROVED SUBJECT TO ALL REQUIREMENTS OF THE BUILDING ACT 2004 BEING FULLY COMPLIED WITH
DATE: 11/5/12 CONSENT No: PIM/BC 69120
OFFICER: H Ferguson

LEGAL DESCRIPTION

Lot 2
DP 71633

Area m2	59640m2
Site Coverage	NA
Wind Zone	High
EQ Zone	2
Corr. Zone	4

WORKS TO NZS3604:2011

Wind Zones NZS 3604:2011(A wind Zone)

Flat Ground	Outer and Crest T1	Sheltered (clause 5.2.4)	Urban	Low
			Open	Medium
less than 1:20 gradient (clause 5.2.3)		Exposed (clause 5.2.4)	Urban	Medium
			Open	High

SITE PLAN
scale 1:1250

DOCUMENTATION BASED ON WORKS REQUIRED FOLLOWING VISUAL INSPECTION MARCH 2012. MILLENNIUM ARCHITECTURE TO BE ADVISED OF WORKS REQUIRED FURTHER TO THAT DOCUMENTED

TIMBER TREATMENT NOTES:	
timber location	**min treatment**
external rafters, beams, pine decking, deck joists & bearers	H3.2
stuctural plywood bracing ply roof substrate	H3 CCA
paint finished exterior posts & beams paint finished fascia's cavity battens valley boards window jamb liners enclosed balcony ply	H3.1
wall framing skillion roof framing with lined soffits confined chimney framing enclosed external ballustrade framing enclosed lintels & posts supporting enclosed balcony roof framing & ply under 10 degrees	H1.2
intermediate floor framing low risk internal wall framing ceiling framing	H1.1 OR UNTREATED

STEEL FIXINGS PROTECTION NOTES:	
fixing type	**minimum protection**
framing in "sheltered & exposed" area's (for definition of sheltered & exposed refer to nzs 3604 table 4.1)	galvanized steel
framing in "closed in area's" including roof spaces (for definition of closed in area's refer to nzs 3604 table 4.1)	mild steel
non structural cladding (15 year durability)	galvanized steel*
cladding that acts as structural bracing (50 year durability)	galvanized steel*
connections within 600mm from the ground	type 304 stainless steel
external connections 600mm above ground	type 304 stainless steel
any external steel item within 50m of a bore mudpool, steam vent or other fume source	type 316 stainless steel or hot dip galvanized steel & epoxy powder coating
INSULATION SCHEDULE	
location	**specification**
exterior walls	R 2.2 min

FLASHING TAPE SYSTEMS	
tape brand	**appraisal cert**
thermokraft aluband window sealing tape and corner mouldings	B.E.A.L. cert C403
protecto sill system protecto tape	branz cert 444 branz cert 450
tyvek weatherization system	branz cert 455
weatherseal seamless flexible flashing tape	branz cert 492

BUILDING WRAP NOTES:

all building wraps must meet the requirements as set out in NZBC E2 table 23 "Wall Wrap"

building wrap to have polypropylene tape at 300mm centres horizontally where wrap fixings exceed 450mm centres, alternatively additional cavity battens may be used to acheive same result, fixings are to prevent wall insulation causing bulges in cavity
where building wraps are used in situations where there is no air barrier (no internal linings) such as gable ends the building wrap must meet the requirements set out in NZBC E2 'Air Barrier'

building wrap system	**appraisal cert**
thermakraft watergate plus	branz cert 695

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Sheet Index

	Content
A1	SITE PLAN AND PROJECT SCHED...
A2	EXISTING GROUND FLOOR PLAN
A3	EXISTING FIRST FLOOR PLAN
A4	SITE FINISHES PLAN
A5	BRACE FIXING DETAILS
A6	ELEVATIONS-HOUSE
A7	ELEVATIONS- CARE GIVER QUAR...
A8	CLADDING DETAILS
A9	CLADDING DETAILS
A10	CLADDING DETAILS
A11	JOINERY SCHEDULE
A12	JOINERY SCHEDULE

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sheet contents

SITE PLAN AND PROJECT SCHEDULE

project

RE-CLAD
48 SHARP ROAD,
HAMURANA

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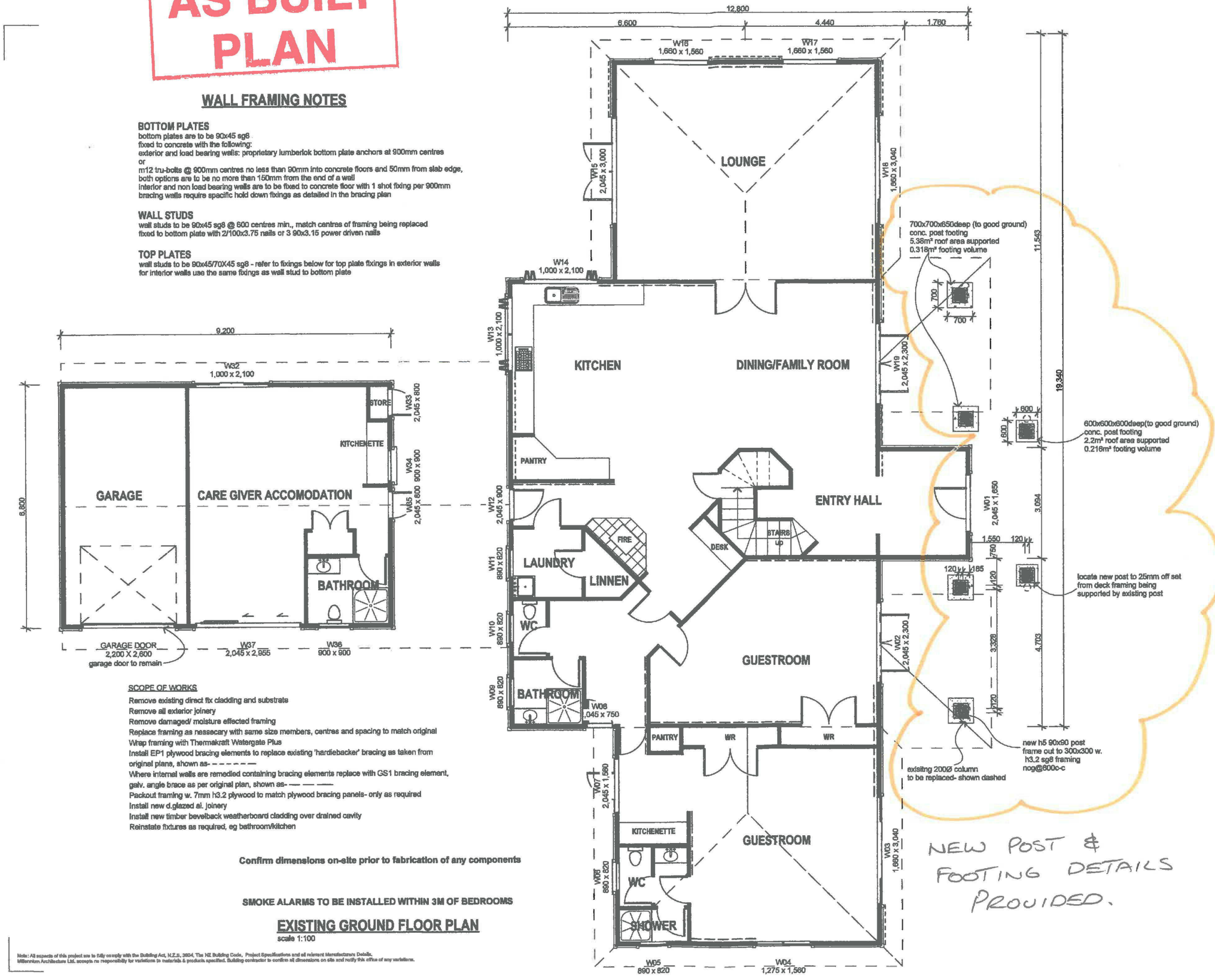
AS BUILT PLAN

WALL FRAMING NOTES

BOTTOM PLATES
bottom plates are to be 90x45 sg8
fixed to concrete with the following:
exterior and load bearing walls: proprietary lumberlok bottom plate anchors at 900mm centres
or
m12 tru-bolts @ 900mm centres no less than 90mm into concrete floors and 50mm from slab edge,
both options are to be no more than 150mm from the end of a wall
interior and non load bearing walls are to be fixed to concrete floor with 1 shot fixing per 900mm
bracing walls require specific hold down fixings as detailed in the bracing plan

WALL STUDS
wall studs to be 90x45 sg8 @ 600 centres min., match centres of framing being replaced
fixed to bottom plate with 2/100x3.75 nails or 3 90x3.15 power driven nails

TOP PLATES
wall studs to be 90x45/70X45 sg8 - refer to fixings below for top plate fixings in exterior walls
for interior walls use the same fixings as wall stud to bottom plate



NEW POST & FOOTING DETAILS PROVIDED.

SCOPE OF WORKS

Remove existing direct fix cladding and substrate
Remove all exterior joinery
Remove damaged/ moisture effected framing
Replace framing as nessecary with same size members, centres and spacing to match original
Wrap framing with Thermakraft Watergate Plus
Install EP1 plywood bracing elements to replace existing 'hardiebacker' bracing as taken from original plans, shown as- - - - - - -
Where internal walls are remedied containing bracing elements replace with GS1 bracing element, galv. angle brace as per original plan, shown as- — — —
Packout framing w. 7mm h3.2 plywood to match plywood bracing panels- only as required
Install new d.glazed al. joinery
Install new timber bevelback weatherboard cladding over drained cavity
Reinstate fixtures as required, eg bathroom/kitchen

Confirm dimensions on-site prior to fabrication of any components

SMOKE ALARMS TO BE INSTALLED WITHIN 3M OF BEDROOMS

EXISTING GROUND FLOOR PLAN
scale 1:100

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EXISTING GROUND FLOOR PLAN

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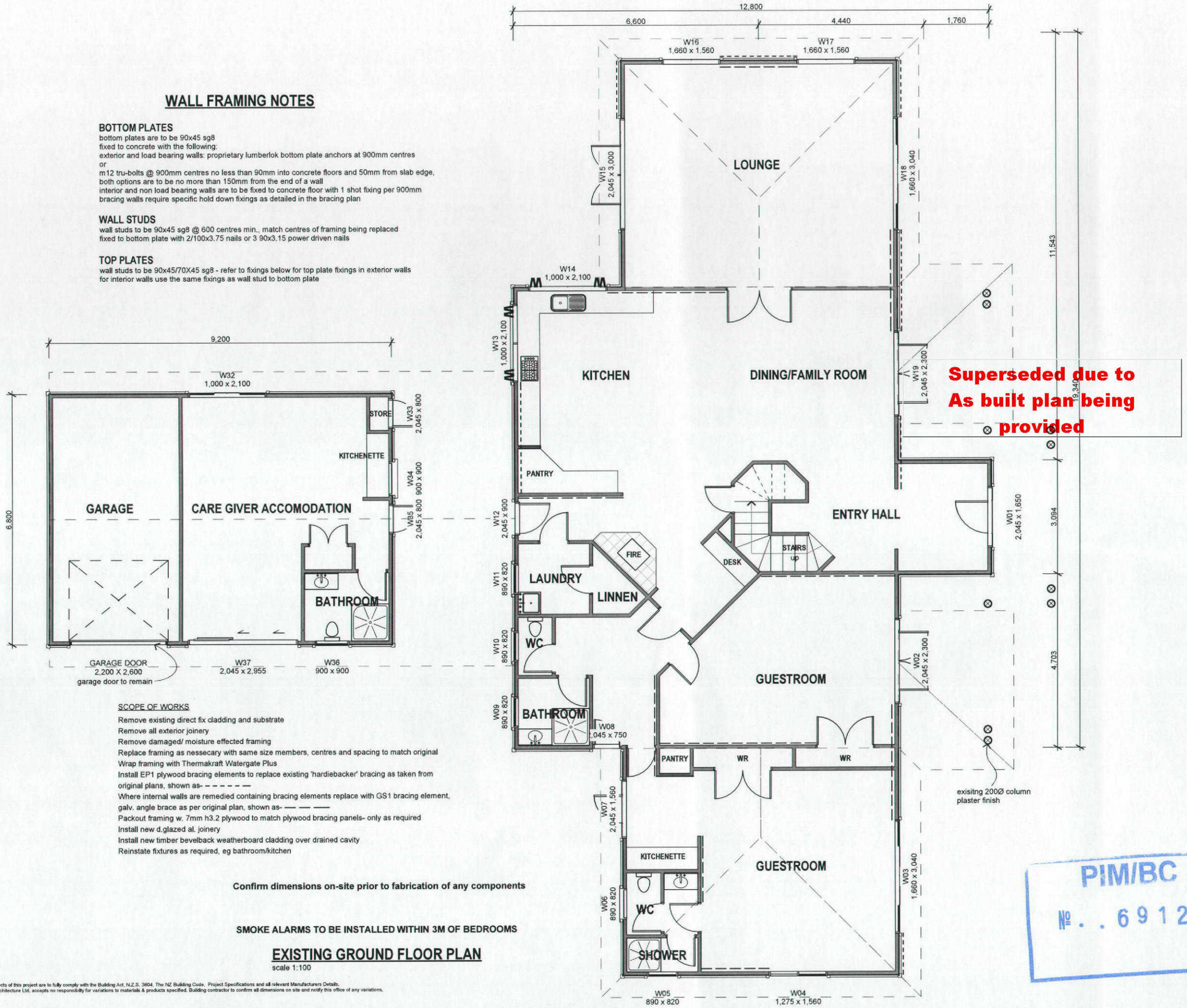
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Superseded due to
As built plan being
provided

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EXISTING GROUND FLOOR PLAN
scale 1:100

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sheet contents
EXISTING GROUND FLOOR PLAN

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RE-CLAD
48 SHARP ROAD,
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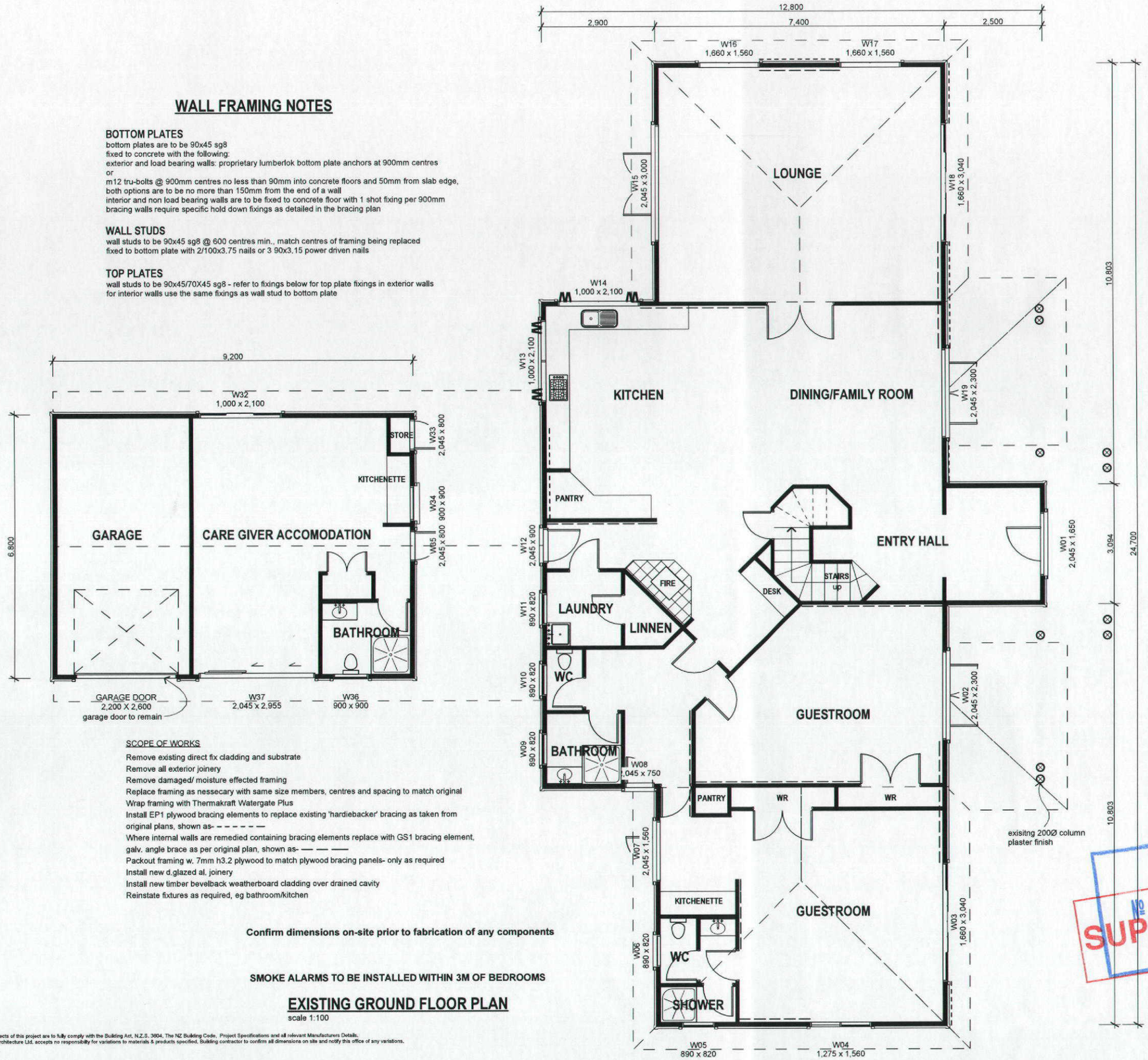
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m12 tru-bolts @ 900mm centres no less than 90mm into concrete floors and 50mm from slab edge,
both options are to be no more than 150mm from the end of a wall
interior and non load bearing walls are to be fixed to concrete floor with 1 shot fixing per 900mm
bracing walls require specific hold down fixings as detailed in the bracing plan

WALL STUDS
wall studs to be 90x45 sg8 @ 600 centres min., match centres of framing being replaced
fixed to bottom plate with 2/100x3.75 nails or 3 90x3.15 power driven nails

TOP PLATES
wall studs to be 90x45/70X45 sg8 - refer to fixings below for top plate fixings in exterior walls
for interior walls use the same fixings as wall stud to bottom plate



SCOPE OF WORKS

Remove existing direct fix cladding and substrate
Remove all exterior joinery
Remove damaged/ moisture effected framing
Replace framing as nessecary with same size members, centres and spacing to match original
Wrap framing with Thermakraft Watergate Plus
Install EP1 plywood bracing elements to replace existing 'hardiebacker' bracing as taken from original plans, shown as- – – – – –
Where internal walls are remedied containing bracing elements replace with GS1 bracing element, galv. angle brace as per original plan, shown as- — — —
Packout framing w. 7mm h3.2 plywood to match plywood bracing panels- only as required
Install new d.glazed al. joinery
Install new timber bevelback weatherboard cladding over drained cavity
Reinstate fixtures as required, eg bathroom/kitchen

Confirm dimensions on-site prior to fabrication of any components

SMOKE ALARMS TO BE INSTALLED WITHIN 3M OF BEDROOMS

EXISTING GROUND FLOOR PLAN

scale 1:100

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EXISTING GROUND FLOOR PLAN

project

RE-CLAD
48 SHARP ROAD,
HAMURANA

Millennium Architecture
Millennium Architecture Ltd

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26/04/2012	dylan	

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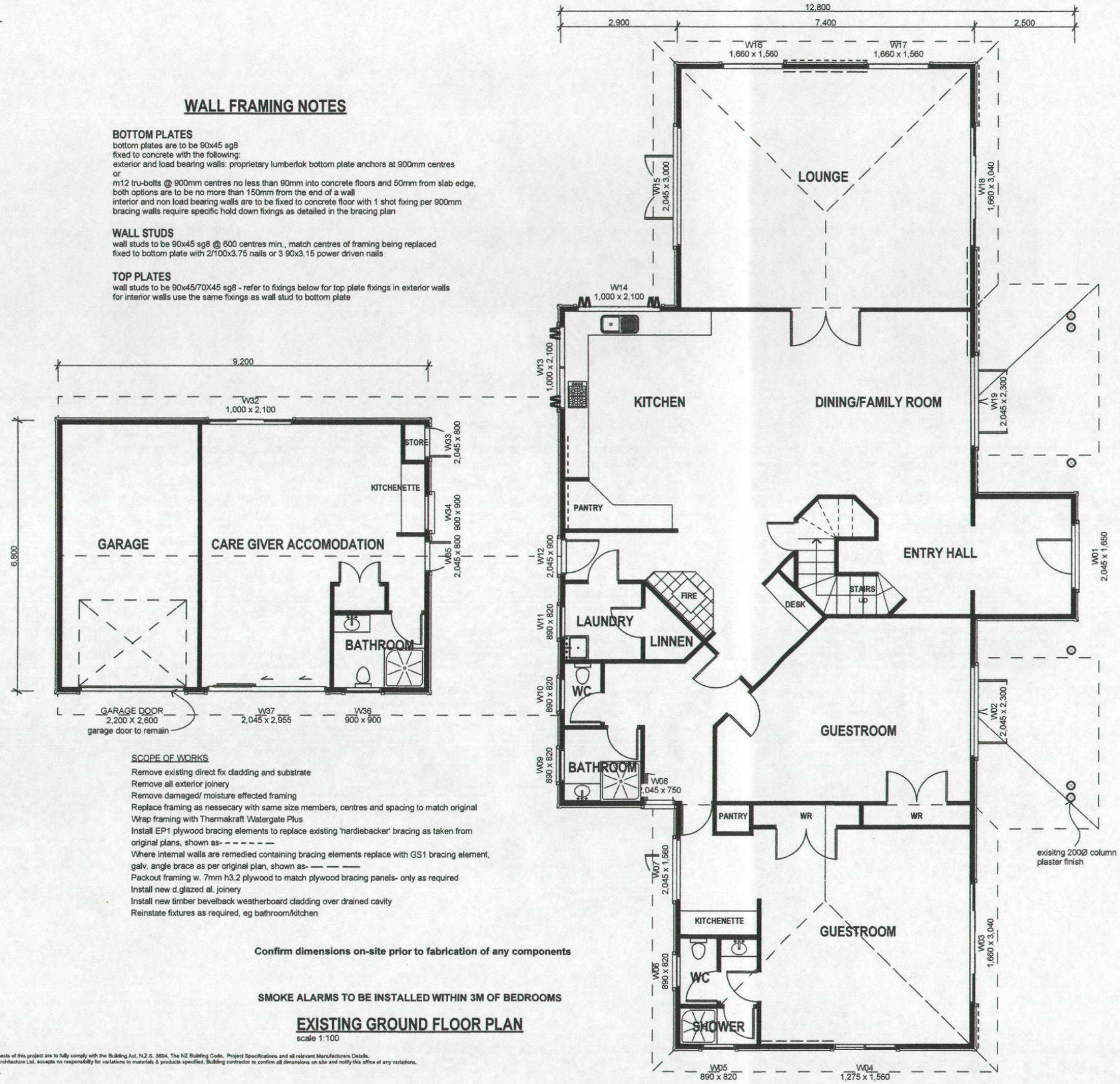
Document Set ID: 2445451
Version: 2, Version Date: 24/05/2012

WALL FRAMING NOTES

BOTTOM PLATES
bottom plates are to be 90x45 sg8
fixed to concrete with the following:
exterior and load bearing walls: proprietary lumberlok bottom plate anchors at 900mm centres
or
m12 tru-bolts @ 900mm centres no less than 90mm into concrete floors and 50mm from slab edge,
both options are to be no more than 150mm from the end of a wall
interior and non load bearing walls are to be fixed to concrete floor with 1 shot fixing per 900mm
bracing walls require specific hold down fixings as detailed in the bracing plan

WALL STUDS
wall studs to be 90x45 sg8 @ 600 centres min., match centres of framing being replaced
fixed to bottom plate with 2/100x3.75 nails or 3 90x3.15 power driven nails

TOP PLATES
wall studs to be 90x45/70X45 sg8 - refer to fixings below for top plate fixings in exterior walls
for interior walls use the same fixings as wall stud to bottom plate



SCOPE OF WORKS
Remove existing direct fix cladding and substrate
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Install new d.glazed al. joinery
Install new timber bevelback weatherboard cladding over drained cavity
Reinstate fixtures as required, eg bathroom/kitchen

Confirm dimensions on-site prior to fabrication of any components

SMOKE ALARMS TO BE INSTALLED WITHIN 3M OF BEDROOMS

EXISTING GROUND FLOOR PLAN
scale 1:100

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EXISTING GROUND FLOOR PLAN

project
RE-CLAD
48 SHARP ROAD,
HAMURANA

Millennium Architecture
Millennium Architecture Ltd
ARCHITECTURAL CONSULTANTS

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4/04/2012	dylan	

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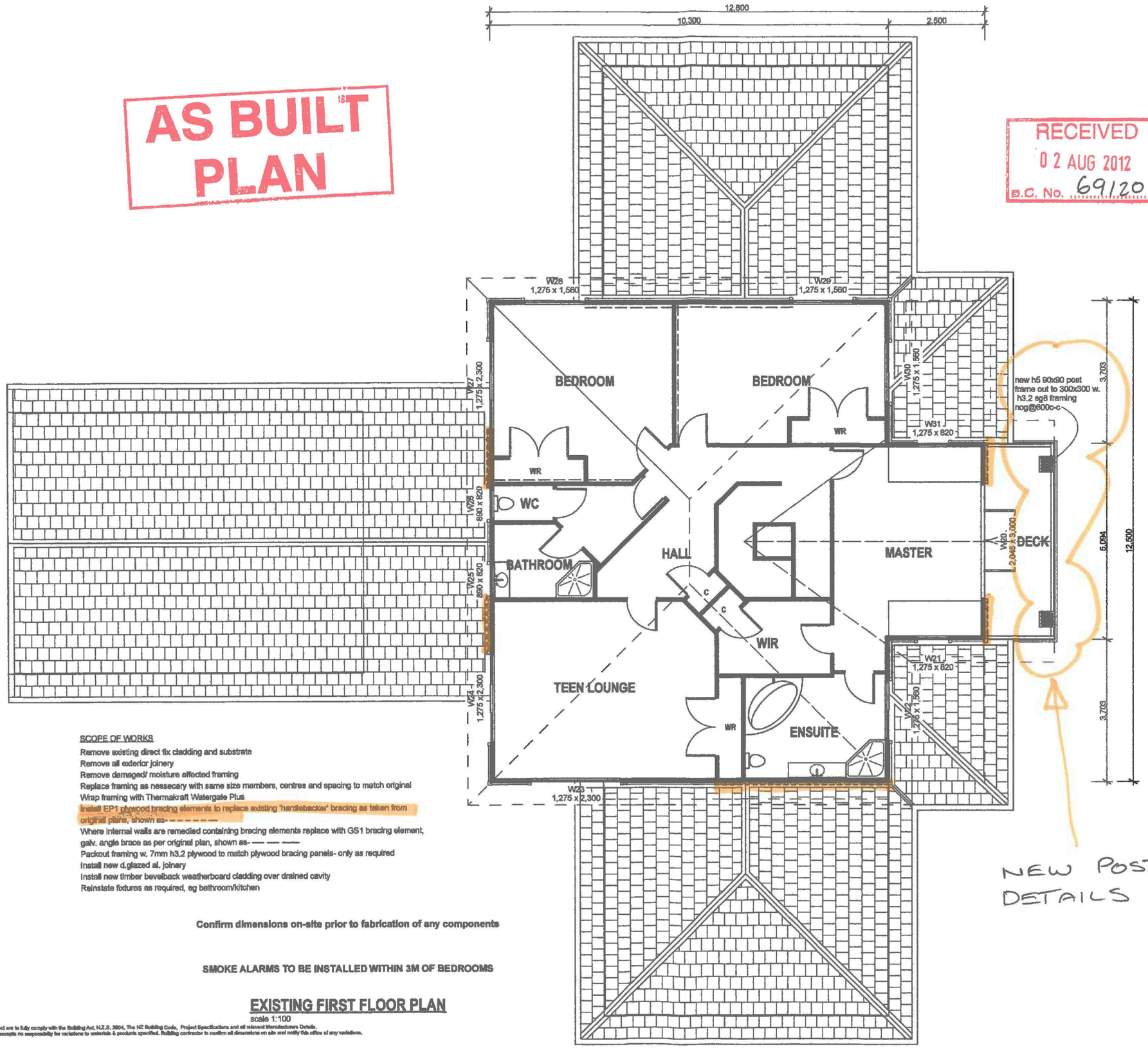
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AS BUILT PLAN

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SCOPE OF WORKS

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Remove all exterior joinery
Remove damaged/ moisture effected framing
Replace framing as nessecary with same size members, centres and spacing to match original
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SMOKE ALARMS TO BE INSTALLED WITHIN 3M OF BEDROOMS

EXISTING FIRST FLOOR PLAN

scale 1:100

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EXISTING FIRST FLOOR PLAN

project

RE-CLAD
48 SHARP ROAD,
HAMURANA

Millennium Architecture
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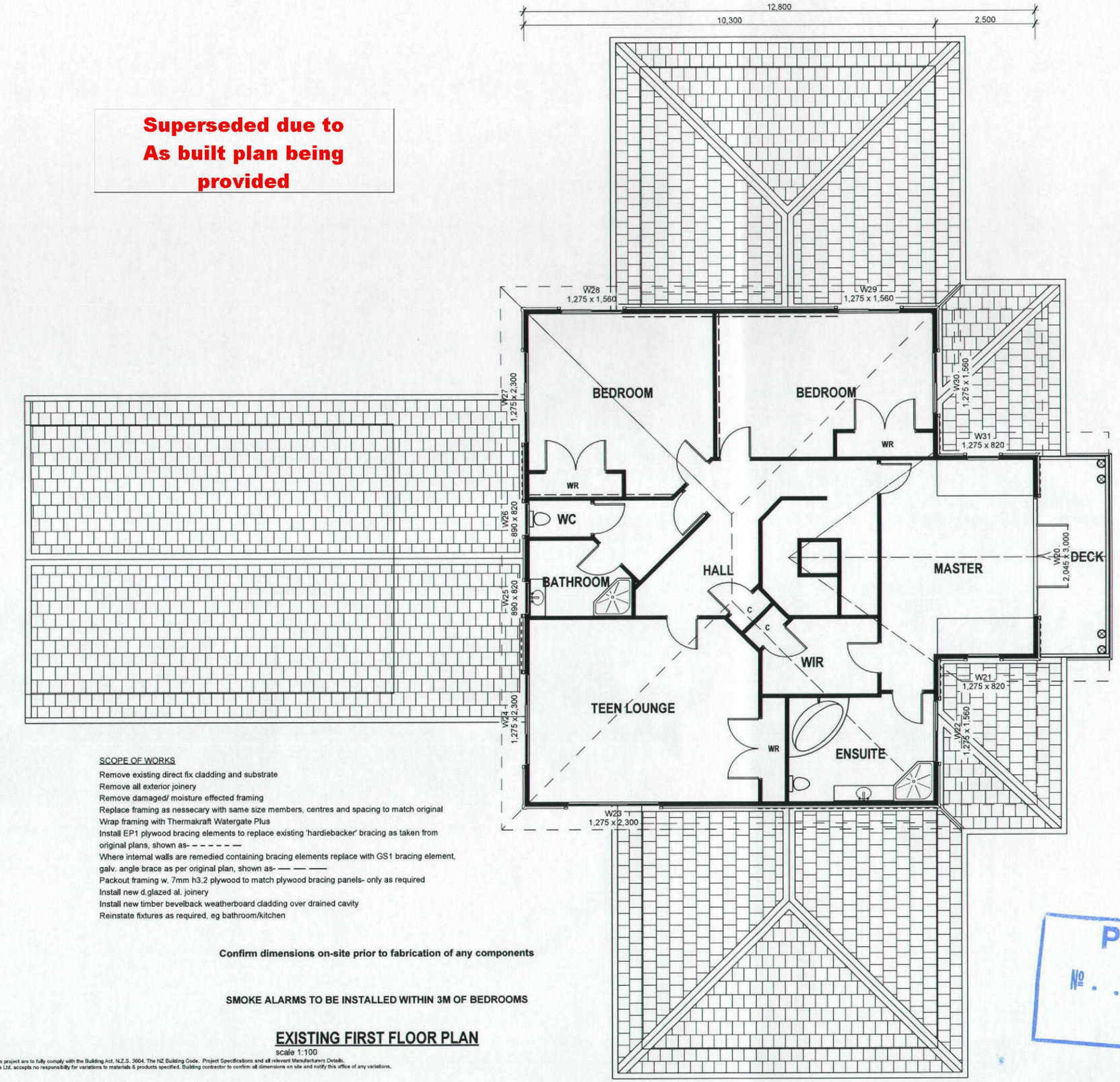
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SCOPE OF WORKS

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EXISTING FIRST FLOOR PLAN

scale 1:100

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EXISTING FIRST FLOOR PLAN

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48 SHARP ROAD,
HAMURANA

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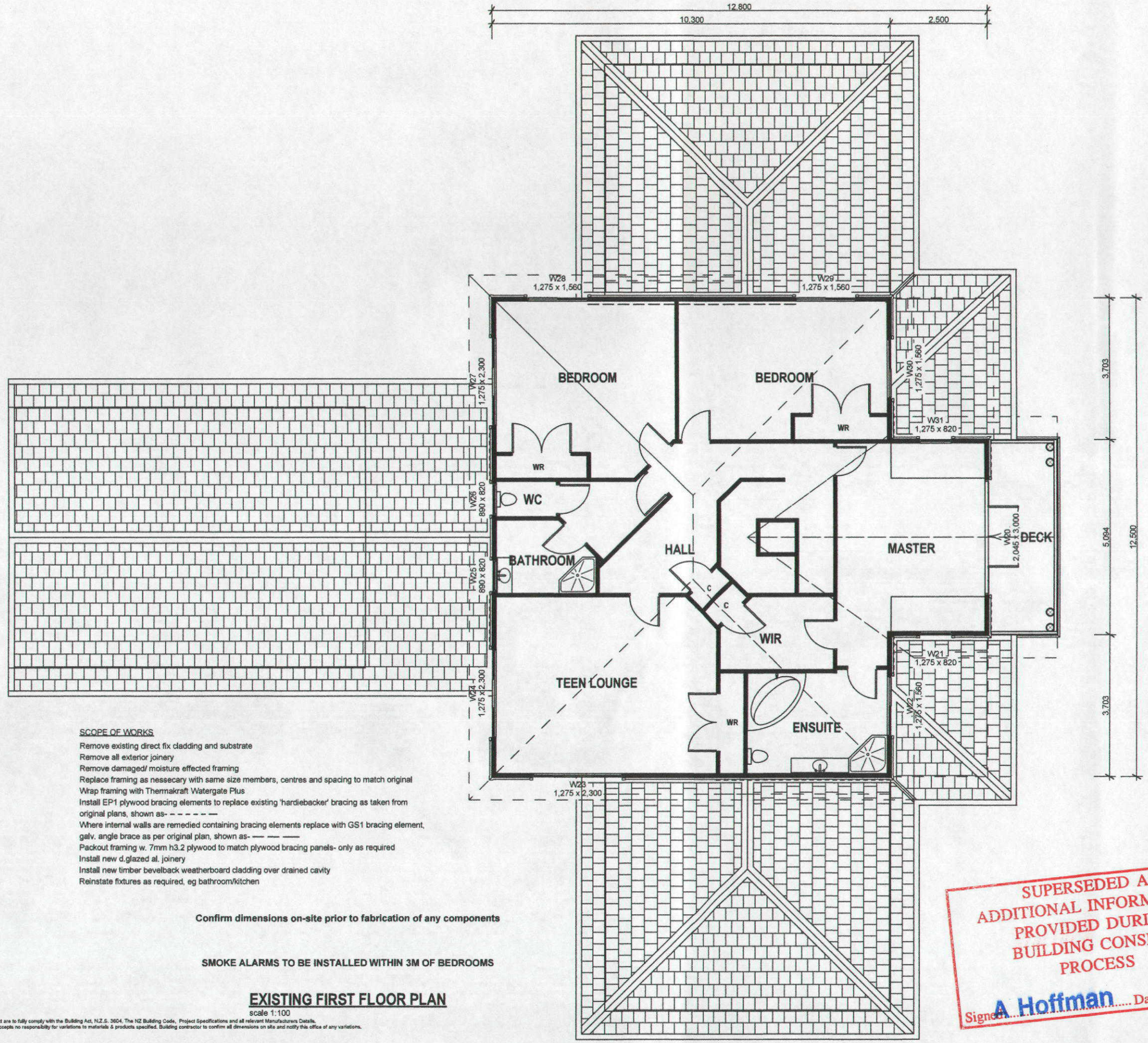
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EXISTING FIRST FLOOR PLAN

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RE-CLAD
48 SHARP ROAD,
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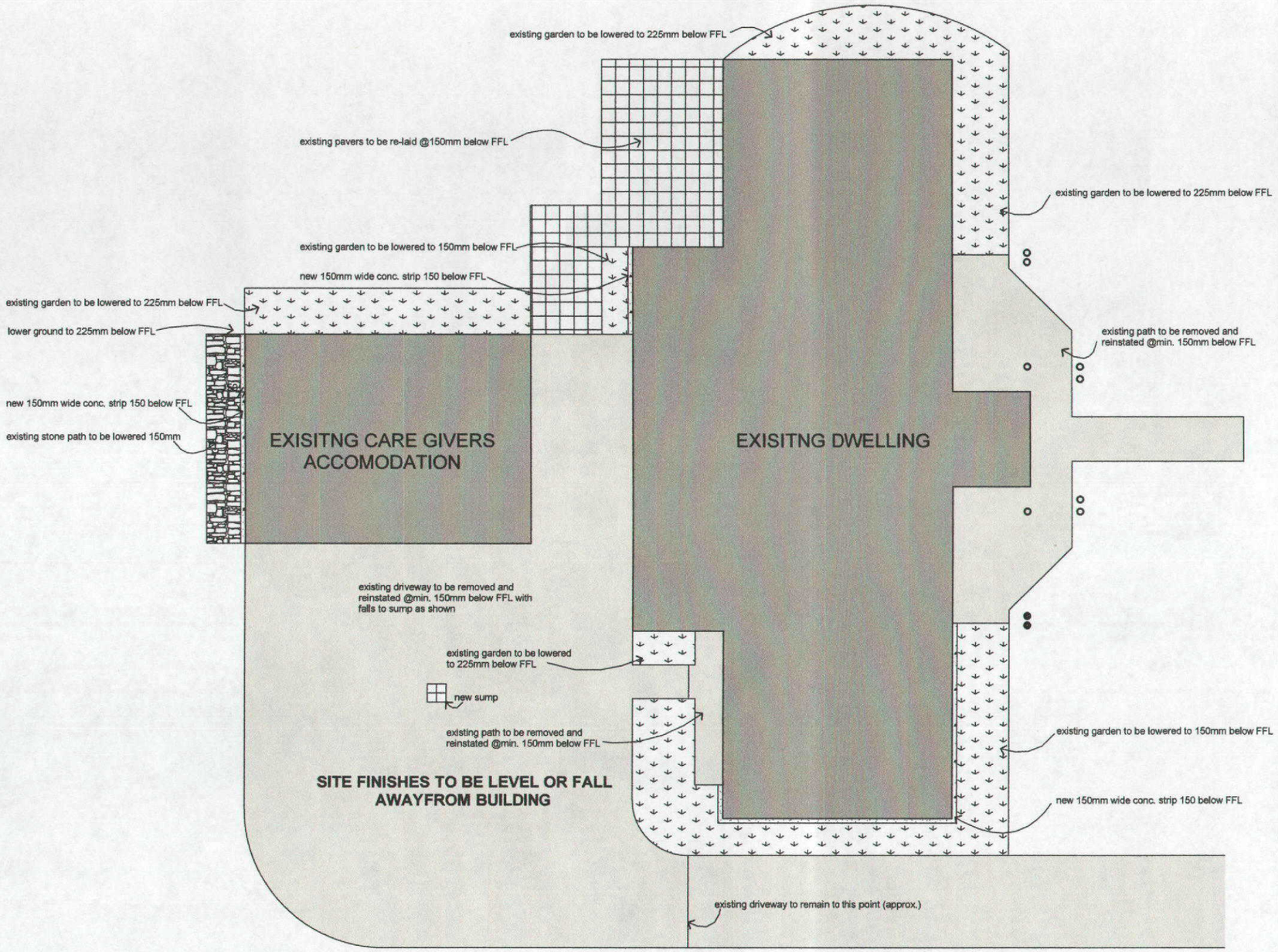
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Document Set ID: 2445451
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SITE FINISHES PLAN
scale 1:150

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SITE FINISHES PLAN

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Ecoply® Bracing Specification – EP1

July 2011

Single sided structural plywood brace

Specification No.	Minimum Wall Length	Lining Requirements	Bracing Wind	Bracing Earthquake
EP1	0.6 m	7mm Ecoply®, Ecoply Barrier or Shadowclad® one side	125	130

Framing

Wall framing must comply with:

- NZBC B1 - Structure: AS1 Clause 3 Timber (NZS3604:2011)
- NZBC B2 - Durability: AS1 Clause 3.2 Timber (NZS3602)

Framing dimensions and height are as determined by the NZS3604 stud and top plate tables for load bearing and non load bearing walls. Kiln dried verified structural grade timber must be used. Machine stress graded timber, such as Laserframe®, is recommended.

Bottom Plate Fixing

Use GIB Handibrac® hold-down connections at each end of the bracing element. Refer to manufacturer installation instructions supplied with the connectors for correct installation instructions and bolt types to be used for either concrete or timber floors. Within the length of the bracing element, bottom plates are fixed in accordance with the requirements of NZS 3604.

Lining

One layer of 7mm Ecoply plywood, Ecoply Barrier or Shadowclad exterior wall cladding fixed directly to framing or over cavity battens. If part sheets are used, ensure nailing at required centres is carried out around the perimeter of each sheet or part sheet. A 2-3mm expansion gap should be left between sheets.

Fastening the Ecoply®

Fasteners

Fasten with 50 x 2.8 mm galvanised or stainless steel flat head nails for direct fix, or 60 x 2.8 mm over cavity battens. Place fasteners no less than 7 mm from sheet edges.

Fasteners for H3.2 CCA treated Ecoply

Where fasteners are in contact with H3.2 CCA treated timber or plywood, fasteners shall be a minimum of hot dip galvanised

In certain circumstances stainless steel fasteners may be required. Refer to table 8 of the Ecoply Specification and Installation Guide for these circumstances and further fastener selection advice.

Stainless steel fasteners must be annular grooved

Fastening Centres

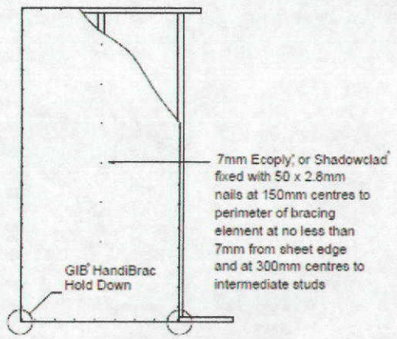
Fasteners are placed at 150 mm centres around the perimeter of each sheet and 300 mm centres to intermediate studs.

Where more than one sheet forms the bracing element each sheet must be nailed off independently.

Fastening to Cavity Battens

The brace element may be fixed over cavity battens.

The cavity battens must be a minimum of 40 x 20mm nailed in staggered formation at 150mm centres to studs around the perimeter of the brace element, and nailed to the intermediate studs within the element at 300mm centres. A minimum of 50mm x 2.8mm flat head galvanised or annular grooved stainless steel nails must be used.



Ecoply® Bracing Systems are designed to meet the requirements of the New Zealand Building Code and have been tested and analysed using the P21 method referenced in NZS3604:2011 listed as an acceptable solution B1/AS1 Structure. Testing was carried out using Ecoply, Shadowclad and Laserframe SG8 timber framing manufactured by Carter Holt Harvey Limited trading as Carter Holt Harvey Woodproducts New Zealand, and GIB® products manufactured by Winstone Wallboards Ltd. Substituting materials may compromise performance of the system. GIB® and GIB HandiBrac® are registered trade marks of Fletcher Building Holdings Ltd.

0800 746 399
www.chhwoodproducts.co.nz

ecoply
Proven Durable Strong

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ECOPLY BRACING SPECIFICATION: EP1

GIB EzyBrace® System Specification – GS1-N

JUNE 2011

Specification Code	Minimum Length (m)	Lining requirement
GS1-N	0.4	Any 10mm or 13mm GIB® Standard Plasterboard to one side only

WALL FRAMING
Wall framing to comply with;

- NZBC B1 - Structure; AS1 Clause 3 Timber (NZS 3604:2011)
- NZBC B2 - Durability AS1 Clause 3.2 Timber (NZS 3602)

Framing dimensions and height as determined by NZS 3604 stud and top plate tables for load bearing and non-bearing walls. The use of kiln dried stress graded timber is recommended.

BOTTOM PLATE FIXING

Timber Floor
Pairs of hand driven 100 x 3.75mm nails at 600mm centres; or
Three power driven 90 x 3.15 nails at 600mm centres.

Concrete floor
INTERNAL WALL BRACING LINES
In accordance with the requirements of NZS 3604:2011 for internal wall plate fixing or 75 x 3.8mm shot fired fasteners with 16mm discs spaced at 150mm and 300mm from end studs and 600mm centres thereafter.
EXTERNAL WALL BRACING LINES
In accordance with the requirements of NZS 3604 for external plate fixing.

WALL LINING
Any 10mm or 13mm GIB® Plasterboard lining.
Sheets can be fixed vertically or horizontally.
Sheet joints shall be touch fitted.
Use full length sheets where possible.

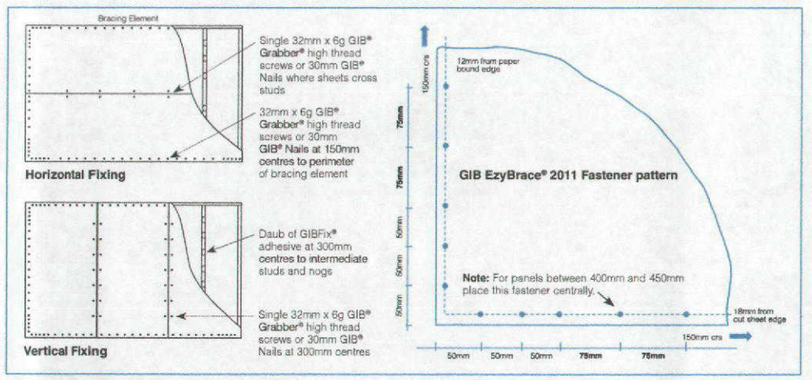
PERMITTED SUBSTITUTION
For permitted GIB® Plasterboard substitutions refer to Page 21 in GIB Ezybrace® Systems 2011.

FASTENING THE LINING

Fasteners
32mm x 6g GIB® Grabber® high thread screws; or 30mm GIB® Nails.

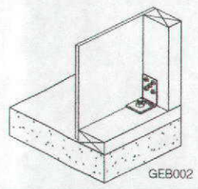
Fastener centres
50,100,150, 225, 300mm from each corner and 150mm thereafter around the perimeter of the bracing element.
For vertically fixed sheets place fasteners at 300mm centres to intermediate sheet joints.
For horizontally fixed sheets place single fasteners to the sheet edge where it crosses the stud.
Use daubs of GIB Fix® adhesive at 300mm centres to intermediate studs.
Place fasteners no closer than 12mm from paper bound sheet edges and 18mm from any sheet end or cut edge.

JOINTING
All fastener heads stopped and all sheet joints paper tape reinforced and stopped in accordance with the GIB® Site Guide.



Concrete Floor

External walls



Position GIB HandiBrac® as close as practicable to the internal edge of the bottom plate

Hold-down fastener requirements

A mechanical fastening with a minimum characteristic uplift capacity of 15kN.

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sheet contents
BRACE FIXING DETAILS

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RE-CLAD
48 SHARP ROAD,
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AS BUILT PLAN



SOUTH-EAST ELEVATION
scale 1:100

BUILDING ENVELOPE RISK MATRIX		
South East Elevation		
Risk Factor	**Risk Severity**	**Risk Score**
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Medium risk	1
Roof/wall intersection design	Low risk	0
Eaves width	Medium risk	1
Envelope complexity	Low risk	0
Deck design	High risk	4
Total Risk Score:		7



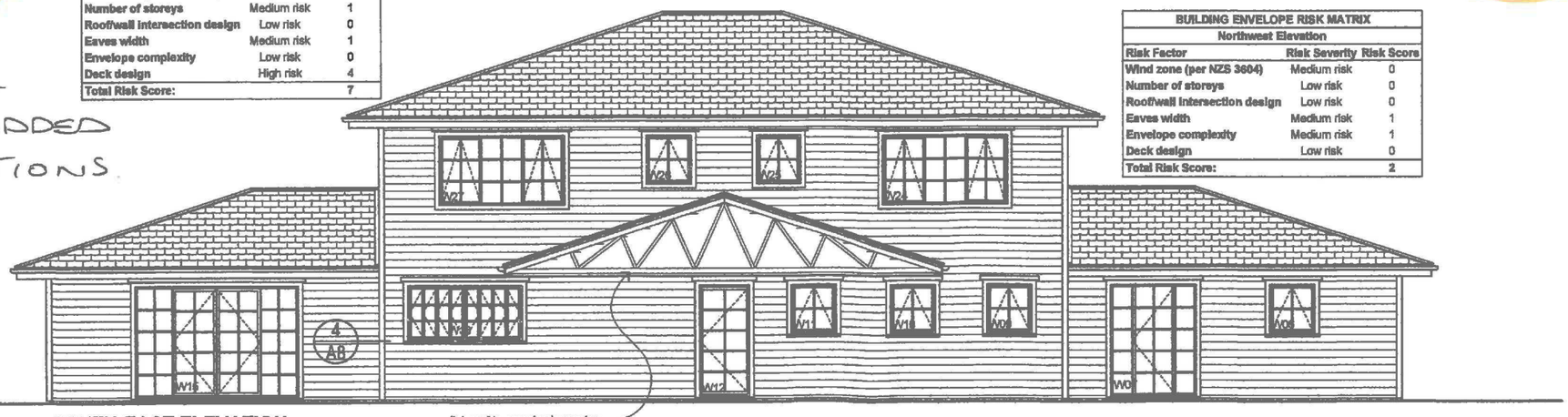
NORTH-EAST ELEVATION
scale 1:100



SOUTH-WEST ELEVATION
scale 1:100

BUILDING ENVELOPE RISK MATRIX		
North East/South West Elevation		
Risk Factor	**Risk Severity**	**Risk Score**
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Medium risk	1
Roof/wall intersection design	Low risk	0
Eaves width	Medium risk	1
Envelope complexity	Low risk	0
Deck design	High risk	4
Total Risk Score:		7

NEW STONE COLUMNS ADDED TO ELEVATIONS



SOUTH-EAST ELEVATION
scale 1:100

BUILDING ENVELOPE RISK MATRIX		
Northwest Elevation		
Risk Factor	**Risk Severity**	**Risk Score**
Wind zone (per NZS 3604)	Medium risk	0
Number of storeys	Low risk	0
Roof/wall intersection design	Low risk	0
Eaves width	Medium risk	1
Envelope complexity	Medium risk	1
Deck design	Low risk	0
Total Risk Score:		2

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ELEVATIONS-HOUSE

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RE-CLAD
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SOUTH-EAST ELEVATION
scale 1:100

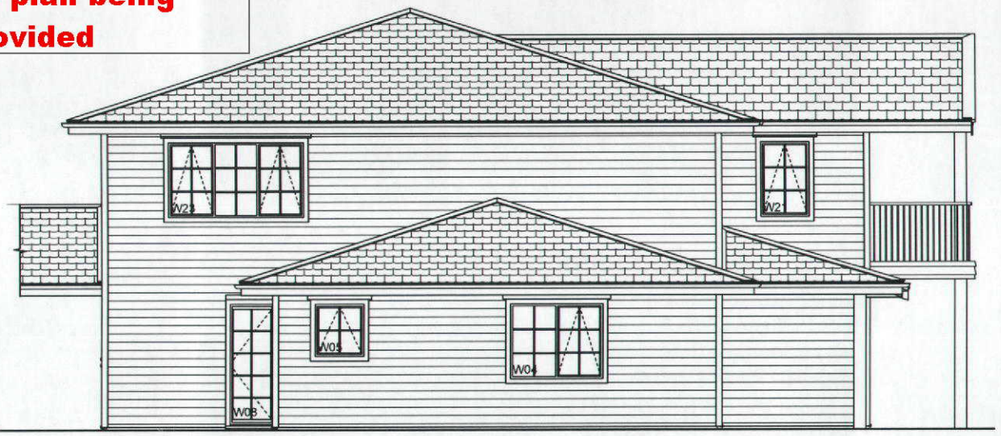
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Risk Factor	**Risk Severity**	**Risk Score**
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Deck design	High risk	4
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Superseded due to As built plan being provided



NORTH-EAST ELEVATION
scale 1:100

BUILDING ENVELOPE RISK MATRIX		
North East/South West Elevation		
Risk Factor	**Risk Severity**	**Risk Score**
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Medium risk	1
Roof/wall intersection design	Low risk	0
Eaves width	Medium risk	1
Envelope complexity	Low risk	0
Deck design	High risk	4
Total Risk Score:		7



SOUTH-WEST ELEVATION
scale 1:100



BUILDING ENVELOPE RISK MATRIX		
Northwest Elevation		
Risk Factor	**Risk Severity**	**Risk Score**
Wind zone (per NZS 3604)	Medium risk	0
Number of storeys	Low risk	0
Roof/wall intersection design	Low risk	0
Eaves width	Medium risk	1
Envelope complexity	Medium risk	1
Deck design	Low risk	0
Total Risk Score:		2

SOUTH-EAST ELEVATION
scale 1:100

PIM/BC
No. 691201

Note: All aspects of this project are to fully comply with the Building Act, N.Z.S. 3604, The NZ Building Code, Project Specifications and all relevant Manufacturers Details.
Millennium Architecture Ltd. accepts no responsibility for variations to materials & products specified. Building contractor to confirm all dimensions on site and notify this office of any variations.

ADNZ
ARCHITECTURAL DESIGNERS NZ INC

rev.	amendments	date	by
B	further information	26/4/12	db
A	for consent	12/3/12	db

sheet contents
ELEVATIONS-HOUSE

project
RE-CLAD
48 SHARP ROAD,
HAMURANA

Millennium Architecture
Millennium Architecture Ltd
ARCHITECTURAL CONSULTANTS

date drawn	drawn by	checked
26/04/2012	dylan	

sheet scales: As shown

cad file: L:\74391\As built.pln

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job number	sheet	of	rev.
74391	A6	-	B

Document Set ID: 2445451
Version: 2, Version Date: 24/05/2012



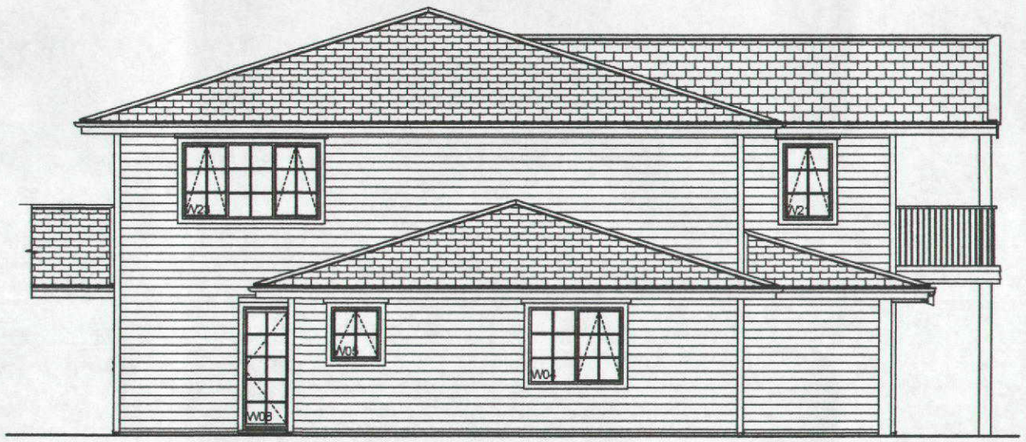
SOUTH-EAST ELEVATION
scale 1:100

BUILDING ENVELOPE RISK MATRIX		
South East Elevation		
Risk Factor	**Risk Severity**	**Risk Score**
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Medium risk	1
Roof/wall intersection design	Low risk	0
Eaves width	Medium risk	1
Envelope complexity	Low risk	0
Deck design	High risk	4
Total Risk Score:		**7**



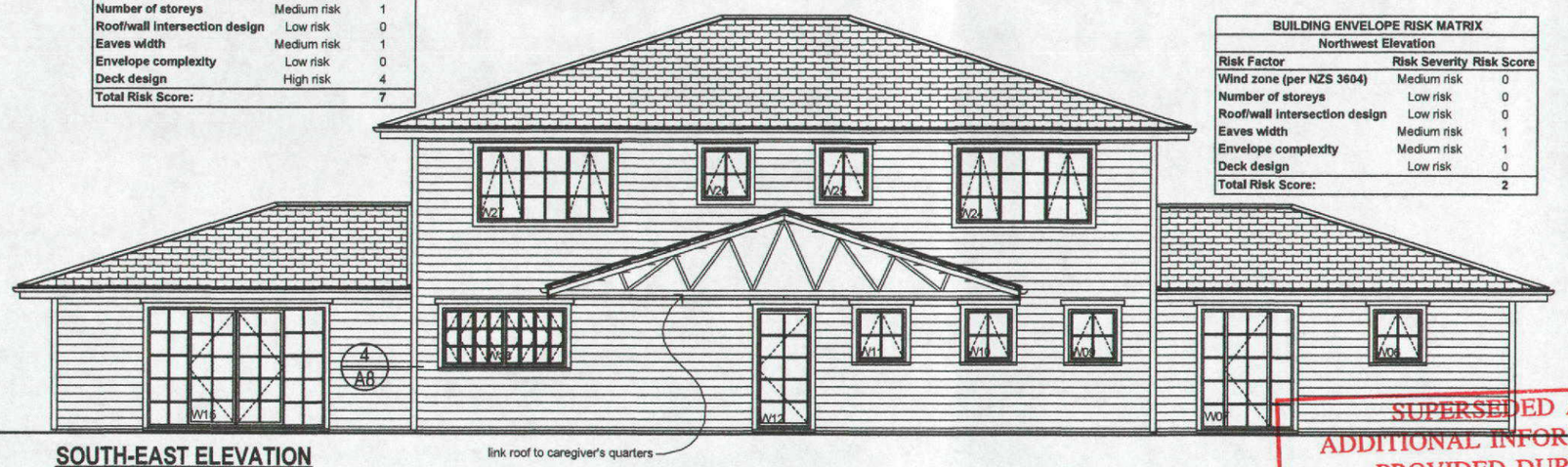
NORTH-EAST ELEVATION
scale 1:100

BUILDING ENVELOPE RISK MATRIX		
North East/South West Elevation		
Risk Factor	**Risk Severity**	**Risk Score**
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Medium risk	1
Roof/wall intersection design	Low risk	0
Eaves width	Medium risk	1
Envelope complexity	Low risk	0
Deck design	High risk	4
Total Risk Score:		**7**



SOUTH-WEST ELEVATION
scale 1:100

BUILDING ENVELOPE RISK MATRIX		
Northwest Elevation		
Risk Factor	**Risk Severity**	**Risk Score**
Wind zone (per NZS 3604)	Medium risk	0
Number of storeys	Low risk	0
Roof/wall intersection design	Low risk	0
Eaves width	Medium risk	1
Envelope complexity	Medium risk	1
Deck design	Low risk	0
Total Risk Score:		**2**



SOUTH-EAST ELEVATION
scale 1:100

Note: All aspects of this project are to fully comply with the Building Act, N.Z.S. 3604, The NZ Building Code, Project Specifications and all relevant Manufacturers Details.
Millennium Architecture Ltd. accepts no responsibility for variations to materials & products specified, Building contractor to confirm all dimensions on site and notify this office of any variations.

PIM/BC
SUPERSEDED

SUPERSEDED AS ADDITIONAL INFORMATION PROVIDED DURING BUILDING CONSENT PROCESS
Signed: A Hoffman Date: 30/4/12

ADNZ
ARCHITECTURAL DESIGNERS NZ INC

rev.	amendments	date	by
A	pricing	12/3/12	db

sheet contents
ELEVATIONS-HOUSE

project
RE-CLAD
48 SHARP ROAD,
HAMURANA

Millennium Architecture
Millennium Architecture Ltd
ARCHITECTURAL CONSULTANTS

date drawn	drawn by	checked
4/04/2012	dylan	

sheet scale: As shown

cad file: L:\74391\As built.pln

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job number	sheet	of	rev.
74391	A6	-	A

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SPECIFICATION

of work to be done and materials to be used in carrying out the works shown on the accompanying drawings

Re-Clad 48 Sharp Road
(project name)

48 Sharp Road, Hamurana
(project address)

Michael Reid
(owners name)

Job Number: 74391

Date: 30/03/2012

RRD001RPLV

Document Number: RDC-264466

Date Registered: 24/5/2012

Document Set ID: 2445450
Version: 1, Version Date: 24/05/2012

1012 TABLE OF CONTENTS

1012	TABLE OF CONTENTS	2
1234	DOCUMENTATION	3
1237	WARRANTIES	7
1250	TEMPORARY WORKS & SERVICES	10
1256	WASTE MANAGEMENT	14
1270	CONSTRUCTION	17
2110	DEMOLITION MINOR	21
3820	CARPENTRY	23
4161T	THERMAKRAFT UNDERLAYS, FOILS AND DPC - RESIDENTIAL	26
4230	WALL CLADDING	30
4521	ALUMINIUM WINDOWS AND DOORS	34
5113G	GIB® PLASTERBOARD LININGS	42
6700	PAINTING GENERAL	46

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Document Set ID: 2445450
Version: 1, Version Date: 24/05/2012

1234 DOCUMENTATION

1. GENERAL

This general section relates to documentation required by the Territorial Authority/Building Consent Authority for compliance with the New Zealand Building Code. It also includes documentation relating to:

- Substitutions
- Manufacturers documents

Building Consent Authority documentation

1.1 BUILDING CONSENT

Obtain the original or copies of the building consent forms and documents from the owner and keep them on site. Liaise with the BCA for all notices to be given and all inspections required during construction to ensure compliance. Return the consent form and documents to the owner on completion.

1.2 BUILDING CONSENT COMPLIANCE

It is an offence under the Building Act 2004

- to carry out any work not in accordance with the building consent.
- to carry out Restricted Building Work by anyone other than a Licensed Building Practitioner licensed for that type of work.

The resolution of matters concerning building code compliance to be referred to the contract administrator for a direction in writing and then to the BCA for consent.

Where any alteration is requested by the territorial authority or any other authority, do not undertake such alteration until the matter has been referred to the Contract administrator for direction.

1.3 PROJECT PERSONNEL

Provide names and contact detail of the contractor's key personnel and tradespersons who are involved with the project. Provide the names in the form required in the general section of the specification. Review the list once a month and reissue it if changes have been made.

1.4 LICENSED BUILDING PRACTITIONERS

Provide names and contact detail of LBP's. Provide names, LBP numbers, areas of practice and contact information. Provide this information to the BCA before commencing work on the Restricted Building Work. Provide the names in the form required in the general section of the specification. Review the list once a month and reissue it if changes have been made.

Include the following as applicable:

- Site LBP
- Carpenter

Also provide names and contact details of the following (as applicable)

- Registered drainlayer
- Registered plumber
- Registered gasfitter
- Registered electrician

1.5 PRODUCER STATEMENTS

When producer statements verifying construction are required, provide copies to both the Building Consent Authority and the Contract administrator. Provide producer statements in the form required by the BCA.

1.6 RECORD OF WORK

Where Restricted Work is carried out by a LBP, on completion provide a Record of Work. Provide copies to both the BCA and the Contract Administrator.

Compliance information

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Version: 1, Version Date: 24/05/2012

1.7 DOCUMENTATION REQUIRED FOR CODE COMPLIANCE

Information may be required either as a condition of the contract documents or as a condition of the building consent may include the following: -

- Applicators approval certificate from the manufacturer / importer / distributor
- Manufacturer's, importer's or distributors warranty
- Installer / applicator's warranty
- LBP Record of Work
- Producer Statement - Construction from the applicator / installer
  Producer Statement - Construction review from an acceptable suitably qualified person

Refer to the general sections for the requirements for compliance information to be provided by the contractor.

Refer to the building consent for the requirements for compliance information to be provided by the contractor.

Obtain required documents from the relevant parties for delivery to the contract administrator after the final inspection has been carried out by the Building Consent Authority.

Substitutions

1.8 ACCEPTABLE PRODUCT/MATERIAL SUPPLIERS

Where a product or material supplier is named in SELECTIONS, the product/material must be provided by the named supplier. Where more than one named supplier, any one of the named suppliers will be acceptable.

1.9 NO SUBSTITUTIONS

Where specifically stated in a section, substitutions are not permitted to any of the specified systems, components and associated products listed in that section.

1.10 PROPOSED SUBSTITUTIONS

A substitution may be proposed where specified products are not reasonably available. A substitution may also be proposed by the Contractor where the Contractor considers a proposed substitution to be an alternative to the specified product. Except where a specified product is not available, the Contract administrator is not bound to accept any substitutions. Where branded work sections are included in this specification, substitution of those products or systems will not be allowed.

1.11 NOTIFICATION OF SUBSTITUTIONS

Notify proposed substitution of specified products. Notification to include but not be limited to:

- Product identification
- Manufacturer's name, address, telephone and facsimile numbers, website and email address
- Detailed comparison between the properties and characteristics of the specified product and the proposed substitution
- Statement of NZBC compliance including durability
- Details of manufacturer warranties

plus an assessment of

- Any changes required to the programme including any extension of time required
- Any consequential effects of the proposed substitution
- Allowance for time and cost for re-design and documentation (if applicable)
- Allowance for time and cost for obtaining an amendment to the Building Consent (if applicable)
- Any change in cost associated with the proposed substitution

and if requested

- All current manufacturer's literature on the product
- Accreditations and appraisals available
- Reference standards
- Product limitations

Document Set ID: 2445450
Version: 1, Version Date: 24/05/2012

1.20 PROVIDE AS BUILT DRAWINGS

Provide as built drawings where specified in the work sections and as required by the BCA.

Operation and maintenance

1.21 PROVIDE OPERATION AND MAINTENANCE INFORMATION

Unless addressed elsewhere in this specification provide operation and maintenance documentation necessary for the principal to operate and maintain the works. Provide documentation no later then the date of practical completion or the date on which the principal takes occupation of the works. This documentation is to include: -

- A complete list of subcontractors' names, addresses and telephone numbers noting which portions of the contract each provided
- A complete list of equipment and appliances including serial numbers, manufacturer's names and sources of supply
- Copies of all manufacturer's product literature containing maintenance requirements/instructions
- Final As-Built drawings (as required by the work sections)
- Originals of all warranties and guarantees properly executed.

Submit in final form in a hard cover, "clear view" loose-leaf binder, with contents index, contractor's name, date of practical completion and titled on the binding edge "Operation and maintenance information for (project name)".

ocument Set ID: 2445450
ersion: 1, Version Date: 24/05/2012

- Samples
- List of existing installations in the vicinity of the project

1.12 ACCEPTANCE OF SUBSTITUTIONS
The Contract administrator must advise of acceptance of substitutions in writing.

Amendment to issued Building Consent

1.13 CONTRACTOR AMENDMENTS TO BUILDING CONSENT
Where the contactor has sought acceptance of a substitution or a variation which is for the contractor's own convenience and the substitution or variation requires an amendment to the Building Consent, the contractor must apply for and obtain the required amendment.

The contractor must:
- Obtain approval for substitutions from the Contract administrator.
- Prepare and provide to the BCA all documentation required for the amendment.
- Pay all fees and other costs associated with this amendment.
- Where the amendment affects other approved plans, also amend those plans.

1.14 PRINCIPALS AMENDMENTS TO BUILDING CONSENT
Where the principal is proposing a substitution or a variation which requires an amendment to the Building Consent, the contractor must provide to the principal information that the contractor has that is required for the amendment.

The principal will:
- Prepare and provide to the BCA all documentation required for the amendment.
- Pay all fees and other costs associated with this amendment.
- Where the amendment affects other approved plans, also amend those plans.

Manufacturer's documents

1.15 BRANDED WORK SECTIONS
Branded sections may be included in this specification relating to specific products and systems to be installed as part of the contract works. Where branded sections are included, substitutions to the branded products and systems will not be allowed.

1.16 CROSS REFERENCED WORK SECTIONS
If any related work is cross referenced to a generic work section, but only the equivalent branded section is included in the specification, use that branded section. Confirm with the Contract administrator if there is any doubt.

1.17 MANUFACTURER'S AND SUPPLIER'S REQUIREMENTS
Manufacturers and supplier's requirements, instructions, specifications or details mean those issued by them for their particular material, product or component and are the latest edition.

1.18 MANUFACTURER'S AND SUPPLIER'S DOCUMENTS
Refer to individual sections for a detailed list of manufacturer's and supplier's documents relating to work on this project. Retain current copies of the documents listed, and all other relevant manufacturer's technical literature, on site. Make this information available to all personnel and ensure they are familiar with requirements for handling, storing, preparing for, fixing and finishing all products before commencing work. Provide a copy of all listed manufacturer's literature to the Contract administrator.

1.19 ONGOING MAINTENANCE REQUIREMENTS
Refer to individual sections for details of manufacturer's and supplier's requirements for ongoing maintenance necessary to ensure continuing compliance with the durability requirements of the NZBC. Provide a copy of literature detailing ongoing maintenance and inspection requirements to the Contract administrator.

As built drawings

Document Set ID: 2445450
Version: 1, Version Date: 24/05/2012

- Commence the warranties from the date normally applicable.
- Maintain their effectiveness for the times stated.

Submissions

1.5 REVIEW BY CONTRACTOR
Obtain the warranties from the installers and suppliers at the earliest possible date and review to ensure that they are correctly filled out and executed. Where warranties are executed as a deed, ensure that a duplicate copy is provided for execution by the Principal/Owner. Keep safe and secure until required for submission.

1.6 WARRANTIES - REQUIRED BY BUILDING CONSENT AUTHORITY
Obtain copies of warranties required for submission to the BCA as a condition of the Building Consent. Keep safe and secure until required at the time of the BCA final inspection and Code Compliance Certificate. Provide to the BCA in the form they require.

1.7 WARRANTIES - REQUIRED BY CONTRACT
Obtain copies of warranties listed in the contract documents for submission to the Contract Administrator/Owner. Provide all warranties at the same time. Present the warranties to the Contract Administrator in a "clear view" document book suitably labelled with the project name and details. If the project has an operations and maintenance documentation provision, present the warranties with the operations and maintenance information.

1.8 TIME FOR SUBMISSION
Refer to the contract conditions for any requirement relating to the time for submission for warranties

NZIA SCC Contracts	Submit all warranties no later than the date of the contractors advice of achieving practical completion.
NZS 3910 Contracts	Submit all warranties before the end of the defects liability period.
NZS 3915 Contracts	Submit all warranties before the end of the defects liability period.

Guarantees - Contractor

1.9 MASTER BUILD SERVICES LTD 7 YEAR GUARANTEE
Provide a Master Build New Homes Alterations & Additions Guarantee including all costs in the contract price and covering loss of deposit, non-completion and defects in materials and workmanship and structural defects under the terms of the guarantee offered by Master Build Services Ltd. Execute with all three signatories: owner, registered master builder and Master Build Services Ltd, before commencing the contract works.
The current guarantee was introduced in March 2005. There are no options.
Master Build Services provides for

1.10 MASTER BUILD SERVICES LTD 10 YEAR CLASSIC GUARANTEE
Provide a Master Build 10 Year Classic New Homes Alterations & Additions Guarantee including all costs in the contract price and covering defects in materials and workmanship, and structural defects including rot and fungal decay under the terms of the guarantee offered by Master Build Services Ltd. Execute with all three signatories: owner, registered master builder and Master Build Services Ltd, before commencing the contract works.

1.11 MASTER BUILD SERVICES LTD 10 YEAR PREMIUM GUARANTEE
Provide a Master Build 10 Year Premium New Homes Alterations & Additions Guarantee including all costs in the contract price and covering loss of deposit, non-completion, defects in materials and workmanship, and structural defects including rot and fungal decay under the terms of the guarantee offered by Master Build Services Ltd. Execute with all three signatories: owner, registered master builder and Master Build Services Ltd, before commencing the contract works.

ocument Set ID: 2445450
ersion: 1, Version Date: 24/05/2012

1237 WARRANTIES

1. GENERAL

This general section refers to the requirements for warranties as listed, either in this work section and/or in specific work sections. It includes: -

- Warranties for parts of the work required by the Principal in a required form
- Installer/applicator warranties for parts of the work in the installer/applicator's standard form
- Manufacturer/supplier warranties provided with products, appliances and the like in the suppliers standard form
- Guarantees provided by contractors in the contractor's standard form

Warranties

1.1 PROVIDE WARRANTIES

Provide executed warranties in favour of the principal in respect of, but not limited to, materials, components, service, application, installation and finishing called for in that specified section of work. The terms and conditions of the warranty in no case negate the minimum remedies available under common law as if no warranty had been offered. Failure to provide the warranty does not reduce liability under the terms of the warranty called for in that specified section of work.

- Conform to the 1237WA WARRANTY AGREEMENT form included in the specification/conditions of contract.
- Commence warranties from the date of practical completion of the contract works (unless otherwise stated).
- Maintain their effectiveness for the times stated.
- Provide executed warranties prior to practical completion.

1.2 WEATHERTIGHTNESS AND WATERTIGHTNESS WARRANTY

A warranty is required from the contractor for a minimum period of 2 years, covering the weathertightness of the complete building envelope and the watertightness of all liquid supply and disposal systems and fittings. This general warranty is in addition to any specific warranties required.

1.3 WARRANTIES - INSTALLER/APPLICATOR

Where installer/applicator warranties are offered covering execution and materials of proprietary products or complete installations, provide such warranties to the contract administrator. These warranties may be provided in lieu of the warranties that are otherwise required provided that these warranties are subject to similar conditions and periods.

Provide warranties in favour of the principal. The terms and conditions of such warranties in no case negate the minimum remedies available under common law as if no warranty had been offered. Failure to provide the warranty does not reduce liability for execution and materials for that part of the work.

- Conform to the installer/applicator standard form. Where the installer/applicator does not have a standard form, use the 1237WA WARRANTY AGREEMENT included in the contract documents.
- Commence the warranties from the date normally applicable for the work.
- Maintain their effectiveness for the times stated.

1.4 WARRANTIES - MANUFACTURER/SUPPLIER

Where warranties are offered covering materials, equipment, appliances or proprietary products, provide all such warranties to the contract administrator.

Provide warranties in favour of the principal. The terms and conditions of such warranties in no case negate the minimum remedies available under common law as if no warranty had been offered. Failure to provide the warranty does not reduce liability for execution and materials for that part of the work.

- Conform to the manufacturer/suppliers standard form.

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Document Set ID: 2445450
Version: 1, Version Date: 24/05/2012

1250 TEMPORARY WORKS & SERVICES

1. GENERAL

This general section relates to temporary works and services required for the construction of the contract works. It includes:
- Temporary works and services including temporary fencing and hoardings
- Scaffolding and shoring
- General care and protection

Temporary works

1.1 COMPLY WITH NEW ZEALAND BUILDING CODE

Refer to New Zealand Building Code clauses and approved document paragraphs for the criteria and/or methods that must be used in this section to establish compliance with the code.

1.2 COSTS RELATING TO TEMPORARY WORKS

Pay all rates/fees in respect of temporary works.

1.3 MAINTENANCE OF TEMPORARY WORKS

Maintain alter, adapt and move temporary works and services as necessary. Clear away when no longer required and make good.

1.4 SAFEGUARD THE SITE, THE WORKS AND MATERIALS

Take all precautions to prevent unauthorised access, including access outside working hours, to the site, the works and adjoining property. Safeguard the site, the works, materials and plant from damage and theft.

1.5 SITE FENCING

Provide and maintain a site fence, 2 metres high from ground level on the side accessible to the public. Construct to comply with NZBC F5/AS1 Construction and demolition hazards. Construct as required for public areas and as shown on the drawings. Construct the fence with:
- galvanized chain link netting with a 50mm x 50mm maximum grid size
- posts at 2.5 metre centres maximum
- gap at the bottom of the fence no greater than 100mm

1.6 SITE HOARDINGS

Provide and maintain hoardings, 2 metres high from ground level on the side accessible to the public. Construct to comply with NZBC F5/AS1 Construction and demolition hazards. Construct as required for public areas and as shown on the drawings. Construct hoardings with continuous cladding of:
- close butted timber at least 19mm thick; or
- 6mm exterior grade plywood on studs at 600mm centres maximum; or
- 9mm exterior grade plywood on studs at 1 metre centres maximum; or
- continuous metal cladding suitably supported to provide strength and rigidity

1.7 SITE FENCING - NON PUBLIC AREAS

Provide and maintain a 1 metre high site fence to non public areas. Construct using:
- warratah stakes at 1.5 metre centres fitted with safety caps
- plastic safety mesh

1.8 PROVIDE SEDIMENT AND SILT RUN OFF PROTECTION

Provide appropriate measures to prevent or minimise sediment generation and silt run off. Comply with territorial and other authority requirements relating to carrying out earthworks.

Prevent silt run off by:
- exposing only as much ground as required at any time
- providing run off channels, contour drains or earth bunds to divert clean water away from the site on to stable sealed or grassed ground
- capture silt by the use of silt fences, vegetation buffer strips, sediment ponds or earth bunds.

ocument Set ID: 2445450
ersion: 1, Version Date: 24/05/2012

1.12 CBANZ GUARANTEE

Provide a Certified Builders HomeFirst Builders Guarantee. Complete the guarantee application. Before commencing the contract works, execute with the signatures of the owner and the Certified Builder, and forward to CBA Guarantee Ltd along with a copy of the Building Consent, payment schedule and the fee payable.

Warranties schedule

1.13 SCHEDULE OF WARRANTIES

Provide the Warranties and Guarantees listed in this section:

Additionally the following work sections have Warranty requirements, refer to these sections for details:

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Document Set ID: 2445450
Version: 1, Version Date: 24/05/2012

- 17mm CD plywood screw fixed to occupied side of wall only
- paint plywood white, occupied side only

1.13 DUST SCREENS
Provide and maintain full height temporary dust screens as shown on the drawings. Construct the screens from;
- flexible membrane with taped joints
- timber battens for fixing membrane to edges of building fabric
- paint plywood white, occupied side only

Temporary services

1.14 WATER
Provide clean, fresh water for the works and make arrangements for distributing about the site.

1.15 ELECTRICITY
Nominate the person to install and be responsible for the complete temporary electrical installation. The name and designation of the person responsible is to be displayed prominently and close to the main switch or circuit breaker.

Inspect and overhaul the installation at such intervals as are prescribed by the network utility operator but not exceeding three monthly intervals.

1.16 TELEPHONE
Provide on site temporary telephone facilities.

1.17 FACSIMILE
Provide on site temporary facsimile facilities.

1.18 COMPUTER
Provide on-site temporary computer facilities complete with an email and internet connection capable of sending, receiving and printing site communications.

Scaffolding and shoring

1.19 GENERAL SCAFFOLDING
Provide as necessary general scaffolding for the efficient execution of the works. Placement, erection and structure to be by certified suppliers/erectors and approved by the Labour Department OSH inspectors before being used. Comply with the SARNZ publication: "Best practice guidelines for scaffolding in New Zealand."

Care and protection

1.20 PROTECT EXISTING BUILDINGS
Protect existing buildings and other designated features which are to remain in position during the execution of the works.

1.21 PROTECT ACCESS ROUTES
Protect access routes through the building and areas adjacent to the work area that are to remain in place. These include lifts and stairs. Comply with all fire egress requirements at all times.

1.22 PROTECT EXISTING SERVICES
Protect existing services and parts of service systems that are to remain in place during the execution of the works. Provide temporary caps or covers to prevent the ingress of dust and other contaminants into the systems, ducts, pipes etc.

1.23 MAKE GOOD EXISTING SERVICES
Make good all damage to existing roads, footpaths, grounds, sewers or other services, caused in carrying out the contract works.

Document Set ID: 2445450
Version: 1, Version Date: 24/05/2012

Provide sediment control by:
- earth bunds constructed across the slope to control and detain run off
- silt fences constructed using filter fabric stretched between posts at a maximum of 1 metre spacing.

Pump water from trenches and other areas of the site using methods to prevent sediment entering any drain or watercourse. Filter dirty water before discharging into drainage system.

1.9 PROVIDE CONCRETE WASHWATER RUN OFF PROTECTION

Provide appropriate measures to prevent cement/concrete washwater or slurry run off to; drains or waterways, landscaped areas new or remaining and adjoining public or private properties. Comply with territorial and other authority requirements relating to cement/concrete washwater.

Control run off from:
- Cement/concrete based material production, placing and finishing.
- Hosing down and cleaning of, tools and equipment, fresh material, and spilt or surplus material, pumps and mixers etc.
- Wet cutting or grinding.
- Slab watering etc.
- Water cleaning of new concrete elements, fresh used formwork etc.

Small project with relatively large exposed ground areas - prevent run off by:
- directing small amounts of washwater onto the area of ground closest to the work.
- for larger amounts provide run off channels, and small soak pits
- very small amounts of washwater with no aggregate and only a small amount of sand may be spread over existing lawns.

Large project and those without suitable ground area - prevent run off by:
- plan and implement washwater control measures based on the expected volumes, allow for the timely removal and safe disposal of liquids and solids.
- control the volumes of water used for washing down, the more water used the bigger the problem.
- Control the flow of washwater so that it is directed to proper catchments.
- providing watertight bunds, pits or tanks, filtered washwater is not to be discharged to drains.

Spilt or surplus material:
- if possible allow to set and either use or dispose of as hardfill.
- pre-made concrete items, either use or dispose of as hardfill.

Pump washwater away from drains, waterways and adjoining property.

Temporary works - Existing Buildings

1.10 OCCUPIED BUILDINGS

Buildings which remain occupied during the construction must have temporary works agreed with the occupier/owner in advance.

1.11 PARTITIONS

Provide and maintain full height temporary partitions, dust sealed and with appropriate access doors, as shown on the drawings.
Construct the partitions from;
- timber or steel stud framing to suit the height
- 17mm CD plywood screw fixed to occupied side of wall only
- paint plywood white, occupied side only

1.12 SCREENS

Provide and maintain 2.0m high temporary screens with appropriate access doors, as shown on the drawings.
Construct the screens from;
- timber or steel stud framing

Document Set ID: 2445450
Version: 1, Version Date: 24/05/2012

1256 WASTE MANAGEMENT

1. GENERAL
This general section relates to the implementation of a site waste management plan.

1.1 DOCUMENTS REFERRED TO
Documents referred to in this section are:

REBRI Resource Guides
Website: http://www.rebri.org.nz/

Documents listed above and cited in the clauses that follow are part of this specification. However, this specification takes precedence in the event of it being at variance with the cited document.

1.2 ABBREVIATIONS
The following abbreviations are used in this specification:
REBRI Resource Efficiency in the Building and Related Industries

Requirements

1.3 WASTE MANAGEMENT PLAN
Prepare and submit a waste management plan in line with the guidelines provided in the REBRI Guides. http://www.rebri.org.nz/
The submitted plan to include the following factors:
- site planning and material storage
- waste management
- purchasing
- recycling
- salvage.

1.4 RECORD KEEPING
Maintain a record of waste materials, recycled, reused and disposed of by the project using the REBRI Waste Management Plan and REBRI C&D Waste Transfer Form or a form generated by the contractor containing the same information.
- For each material recycled from the project, include the amount (in cubic metres or tonnes), or in the case of reuse, state quantities by number, type and size of items, and the destination (i.e. recycling facility, used building materials yard).
- For each material land filled, include the amount (in cubic metres or tonnes) of material and the identity of the landfill, clean fill and/or transfer station.

If requested, submit to the Contract Administrator the REBRI Waste Management Plan, REBRI C&D Waste Transfer Forms or bills, invoices and other documentation confirming that all materials have been received at the required locations.

1.5 ENSURE
Ensure all site management and staff, subcontractors, material and product suppliers and waste disposal companies are made aware that this is a REBRI project and provide access to or copies of the waste management plan.

Equipment

1.6 CONTAINERS
Provide appropriately sized and sited containers for the storage of reusable, recyclable and waste products. Clearly label each container.

Conditions

1.7 STORAGE
Store all materials so they are not damaged prior to use.

1.8 PLANNING
Plan the measurement and ordering of materials and components to minimise waste.

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ocument Set ID: 2445450
ersion: 1, Version Date: 24/05/2012

1.24 PROTECT EXISTING TREES

Protect existing trees, fences, gates, walls, gardens and other designated site features which are to remain in position during the execution of the works.

Construct a temporary fence at the outer edge of the drip line of trees to be protected. Comply with territorial authority requirements.

1.25 EXISTING FIRE SYSTEMS

Maintain the integrity of the systems at all times. If work requires de-activation of a system, give notice to the: - fire service

Follow their instructions and reinstate the system to their requirements.

1.26 CONSTRUCTION KEYING AND SECURITY

Provide locksets with temporary keying, or install with the cylinders removed.

1.27 TEMPORARY STORAGE

Provide temporary storage areas and protective covers and screens. Fillet stack and protect all framing and structural members from moisture and contamination. Completely protect finishing materials from the weather and damage and store in accordance with the manufacturer's requirements. Protect fabricated elements from the weather and damage, and store in accordance with suppliers' requirements.

1.28 PERIODIC SITE CLEANING

Carry out periodic site cleaning during the contract period. Place waste material in appropriate storage pending removal from the site.

1.29 PERIODIC RUBBISH REMOVAL

Maintain on site appropriate means for the storage and removal of construction waste material. Where required or appropriate provide for the separate storage of recyclable waste and other materials requiring special disposal. Keep food waste separate from construction waste.

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Document Set ID: 2445450
Version: 1, Version Date: 24/05/2012

Application

1.9 DEMOLITION
- Sort concrete and concrete block waste for recycling as aggregate, sub-base material or fill.
- Sort brick waste for reuse as whole bricks, or re-use as crushed brick for landscape cover, sub-base material or fill.
- Sort asphalt material by type for milling and recycling.

1.10 DISMANTLING/REUSE
- Dismantle, store and protect items, elements and components for reuse on site.
- Dismantle, store and protect items, elements and components for recycling off site.
- Dismantle store and protect items, elements and components for return to the owner.

1.11 SITE CLEARING
- Sort asphalt material by type for milling and recycling.
- Grind, chip or shred vegetation for mulching and composting on site.
- Grind, chip or shred vegetation for off site mulching and composting.
- Separate and recycle steel reinforcing and other metals.
- Provide suitable on-site locations for the disposal of excavated rock, soil and vegetation.

1.12 CONCRETE
- Plan for maximum re-use of concrete formwork.
- Separate and recycle concrete.
- Provide a suitable on-site location for the disposal of excess concrete.

1.13 WOOD
- Separate and recycle wood offcuts and waste.
- Separate timber for reuse
- Provide a suitable storage area for sizeable off-cuts for use as spacers or blocking.
- Separate CCA treated timber from untreated timber.
- Chip untreated timber for mulching and composting on site.
- Chip untreated timber for off site mulching and composting.

1.14 PLASTERBOARD
- Include for both horizontal fitting of sheets and customised sheet lengths.
- Retain larger off-cuts for use around doors, windows or built-in items.

1.15 PLUMBING
- Select plumbing materials with a high recycled content.
- Ensure that reusable packaging materials are returned to the vendors.
- Retain PVC off-cuts for use as stubs.
- Separate and recycle plastics.

1.16 ELECTRICAL
- Select electrical materials with a high recycled content.
- Ensure that reusable packaging materials are returned to the vendors.
- Separate and recycle metals and wire.
- Separate and recycle plastics.

1.17 MECHANICAL
- Select mechanical materials with a high recycled content.
- Ensure that reusable packaging materials are returned to the vendors.
- Separate and recycle metals and wire.
- Separate and recycle plastics.

Completion

1.18 CLEANING
All cleaning materials used on the project to be biodegradable and non-toxic.

Document Set ID: 2445450
Version: 1, Version Date: 24/05/2012

1.7 DAMAGE AND NUISANCE
Take all precautions to prevent damage and nuisance from water, fire, smoke, dust, rubbish and all other causes resulting from the construction works.

Set-out and tolerances

1.8 SURVEY INFORMATION
Locate and verify survey marks and datum points required to set out the works. Record and maintain their position. Re-establish and replace disturbed or obliterated marks.

1.9 SET-OUT AND DATUM
Set out the work to conform with the drawings. Establish a permanent site datum to confirm the proposed building ground floor level and its relationship to all other existing and new building levels.

1.10 CHECK DIMENSIONS
Check all dimensions both on drawings and site, particularly the correlation between components and work in place. Take all dimensions on drawings to be between structural elements before linings or finishes, unless clearly stated otherwise.

1.11 TOLERANCES
All work to be level, plumb, and true to line and face. Unless otherwise specified in specific work sections of this specification, tolerances for structural work shall comply with the following:

Concrete construction:	To NZS 3109 Concrete construction Clause 3.9 Tolerances for reinforcement Table 5.1 Tolerance for precast components Table 5.2 Tolerance for in situ construction To NZS 3114 Concrete surface finishes
Masonry construction:	To NZS 4210 Masonry construction: Materials and workmanship Clause 2.6.5 Tolerances Table 2.2 Maximum tolerances
Structural steelwork:	To NZS 3404:1997 Steel structures standard Section 14.4 Tolerances (after fabrication) Section 15.3 Tolerances (erection)
Timber framing:	To NZS 3604 Timber-framed buildings Clause 2.2 Tolerances Table 2.1 Timber framing tolerances

Refer to work sections for tolerance requirements for finishes.

Execution

1.12 EXAMINE PREVIOUS WORK
Before commencing any part of the work carefully examine the previous work on which it may depend. Report in writing to the contract administrator defects that may affect the quality of the proposed work and obtain instructions. Commencing work on any part means that previous work is accepted as being satisfactory for work of the required standard.

1.13 WORKER QUALIFICATIONS
All work to be level, plumb, and true to line and face. Employ only experienced workers familiar with the materials and techniques specified.

1.14 MINIMISE DELAYS DUE TO WEATHER
Use appropriate techniques and methods to prevent damage and minimise delays due to weather.

Materials

cument Set ID: 2445450
rsion: 1, Version Date: 24/05/2012

1270 CONSTRUCTION

1. GENERAL

This GENERAL section relates to common requirements for construction issues including:

-
- Quality assurance
- Noise and nuisance
- Set out
- Common execution requirements
- Common materials requirements
- Supply of spare materials
- Common requirements for samples and tests
- Final presentation and cleaning
- Commissioning

Quality control and assurance

1.1 QUALITY ASSURANCE

Carry out and record regular checks of material quality and accuracy, including:

- Concrete quality and finish.
- Dimensional accuracy of structural column locations (following completion of foundations).
- All perimeter columns and frames for plumb.
- Levels of all floors relative to the site datum.
- Framing timber moisture content.

Where any material, quality or dimension falls outside specified or required tolerances, obtain written direction from the contract administrator. Where building consent approval is affected, confirm remedial action with the Building Consent Authority.

Provide all materials, plant, attendances, supervision, inspections and programming to ensure the required quality standards are met by all project personnel.

Noise and nuisance

1.2 LIMIT CONSTRUCTION NOISE

Minimise the effects of noise generation by including in the planning of the work such factors as placing of plant, programming the sequence of operations and other management functions. Limit construction noise to comply with the requirements of NZS 6803, the requirements of the Resource Management Act sections 326, 327 and 328 and the Health and Safety in Employment Regulations clause 11.

1.3 ACCEPTABLE NOISE LEVELS

Refer to NZS 6803 Tables 2 and NZS 6803, tables 3 for the upper limits of construction work noise in residential and industrial areas over the various time periods, particularly 0730 to 1800 hours. Note also the allowed adjustments and exemptions in NZS 6803, 6. Do not exceed these limits.

1.4 ADDITIONAL NOISE CONSTRAINTS

As well as complying with the preceding clauses comply with the following on this contract:

~

1.5 INCONVENIENCE TO OTHERS

When the works are to be carried out in or around occupied premises, ascertain the nature and times of occupation and use. Carry out the works in a manner to minimise inconvenience, nuisance and danger to occupants and users.

1.6 DIRT AND DROPPINGS

Remove dirt and droppings deposited on public or private thoroughfares from vehicles servicing the site to the satisfaction of the appropriate authorities and the contract administrator.

Document Set ID: 2445450
Version: 1, Version Date: 24/05/2012

Spares

1.26 SPARES
Collect, protect and store safely all spare materials required under the contract. Give the contract administrator an inventory of all spares.

Final presentation and cleaning

1.27 REMOVE TEMPORARY PROTECTION
Remove all temporary markings, coverings, labels and protective wrappings unless instructed otherwise.

1.28 REPLACE DAMAGED MATERIALS
Replace all materials or component damaged during the works to the standard of and integral with the original.

1.29 COMPLETE ALL SERVICES
Ensure all services are complete and operational, with all temporary labelling removed, required labelling fixed and service instructions provided.

1.30 CLEANING BY CONTRACTOR
Clear the contract works of all construction materials, waste, dirt and debris. Clean the contract works including:

- Wipe all surfaces to remove construction dust
- Clean out service ducts and accessible concealed spaces
- Clean out all gutters and rainwater heads
- Wipe dust from both sides of glass. Take particular care when removing paint or cementitious materials to not damage the glass.
- Remove adhesive residue left by labels and other temporary protection/markings
- Clean out the interior of all cabinetry
- Wash down external concrete including driveways and concrete masonry. Take care when waterblasting to not cause damage to the surface or allow water to enter the building.
- Remove rubbish and building material from the area immediately adjacent to the contract works

1.31 CLEANING BY COMMERCIAL CLEANER
Use a commercial cleaning firm to clean the whole of the interior of the building, including all appliances, equipment, fittings, surfaces and finishes to leave it without any blemish. Cleaning to include:

- Clean and wash down all external surfaces to remove dirt, debris and marking.
- Clean all interior surfaces including cabinetwork, joinery, sanitary and hardware items.
- Vacuum or polish all floor finishes.
- Clean and polish all glass, both sides.

Commissioning

1.32 MOVING PARTS
Adjust, ease and lubricate all doors, windows, drawers, hardware, appliances, controls and all moving parts to give easy and efficient operation.

1.33 TESTS AND CERTIFICATION
~

1.34 SECURITY AT COMPLETION
Remove any temporary lock cylinders and complete final keying prior to handing over keys to the principal on completion of the works. Leave the works secure with all accesses locked. Account for all keys/cards/codes and hand to the principal along with an itemised schedule, retaining a duplicate schedule signed by the principal as a receipt.

Document Set ID: 2445450
Version: 1, Version Date: 24/05/2012

1.15 NEW PRODUCTS AND MATERIALS
Materials and products to be new unless stated otherwise, of the specified, and complying with all cited documents.

1.16 COMPATIBILITY OF MATERIALS AND FINISHES
Ensure all parts of a construction or finish are compatible and their individual use approved by the manufacturers and suppliers of other parts of the system. Source all parts of a system from a single manufacturer or supplier.

1.17 STORING PRODUCTS AND MATERIALS
Take delivery of and store products, materials and components in accordance with codes of practice and the product manufacturer's or supplier's stated requirements. Maintain the proper condition of any protective packaging, wrappings or supports during delivery, unloading and storage.

1.18 HANDLING PRODUCTS AND MATERIALS
Handle products, materials and components in accordance with codes of practice and the manufacturer's or supplier's stated guidelines. Avoid distortion and any contact with potentially damaging surfaces or conditions.

1.19 SUBSTRATE CONDITIONS
Ensure substrate conditions are within the manufacturer's or supplier's stated guidelines both before and during the installation of any material, product or system. Obtain written instructions on the necessary action to rectify unsatisfactory conditions.

1.20 INSTALLING PRODUCTS AND MATERIALS
Install in accordance with the manufacturer's or supplier's technical literature. Ensure that all installers are familiar with the required substrate conditions and the manufacturer's or supplier's specified preparation, fixing and finishing techniques.

1.21 COMPLY WITH STANDARDS
Comply with the relevant and/or cited Standard for any material or component. Obtain certificates of compliance when requested by the contract administrator.

1.22 CONDITION OF MATERIALS AND COMPONENTS
To be in perfect condition when incorporated into the work.

1.23 INCOMPATIBLE MATERIALS AND METALS
Separate incompatible materials and metals with separation layers, sleeves or gaskets of plastic film, bituminous felt or mastic or paint coatings, installed so that none are visible on exposed surfaces.

Samples and tests

1.24 SAMPLES AND PROTOTYPES
Where specified in the work sections, submit samples, prepare sample panels, and construct prototypes for review as to appearance, form and conformance with the drawings and specifications. Submit all information required to assist the review process, including technical data, manufacturer's literature, independent appraisals and producer statements.

Timing for the provision and review of samples, sample panels and prototypes to be included in the contract programme. Allow a minimum of 10 working days for each review. Proceed only after instructions to proceed have been issued in writing by the contract administrator.

In situ work may be incorporated in the finished work if so confirmed, otherwise allow to remove completely and replace.

1.25 CONTROL STANDARD
Obtain the contract administrator's confirmation of material, component and work samples which then become the quality control standard. Remove from the site any rejected samples. Retain confirmed samples with care on site for comparison throughout the contract. Remove from the site when no longer required.

Document Set ID: 2445450
Version: 1, Version Date: 24/05/2012

2. PRODUCTS

2.1 ELEMENTS FOR SALVAGE OR RE-USE
Carefully dismantle, remove and store on site where directed. Protect from damage and weather until required.

3. EXECUTION

3.1 DEMOLITION GENERALLY
Comply with the requirements of the OSH publication: Approved code of practice for demolition. Submit a written demolition plan to the requirements of clause 4.8, Demolition plan (method statement).

3.2 PROTECT
Protect retained parts of existing buildings, the site and site structures, trees and shrubs. Take care in the cutting away and stripping out to reduce the amount of making good.

3.3 SUPPORT
Support and brace the existing structure during the cutting of new openings or the replacement of structural parts. Prevent debris from overloading any part of the structure. Do not remove supports until the new work is strong enough to support the existing structure. Ensure all work remains structurally stable and sound.

3.4 TEMPORARY SCREENS
Erect approved screens wherever penetration of weather, dust and dirt needs to be prevented. Adjust screens as work proceeds.

3.5 SITE SAFETY
Prevent access by unauthorised persons. Illuminate and protect all holes, unsafe buildings and other hazards. Leave site and buildings safe at the close of each day's work.

3.6 FLAMMABLE OR EXPLOSIVE CONDITIONS
Prevent fire or explosion and arrange to alert the appropriate authority where any danger exists.

3.7 SALVAGE
Carefully dismantle and store safely all salvage items where directed; for removal, use on the site, or until completion of the works.

3.8 REINSTATE AND MAKE GOOD
Reinstate and make good demolition damage to adjoining properties, existing work, services, or property.

3.9 TAKE AWAY
Take away from the site all plant and equipment, temporary access works and demolished materials and elements. Leave the site completely clean and tidy.

4. SELECTIONS

4.1 ELEMENTS FOR DEMOLITION AND DISPOSAL

Element/component	Location
Existing cladding	

4.2 ELEMENTS FOR SALVAGE AND DELIVERY TO OWNER
Salvage the following elements and deliver to the owner.

Element/component	Location	Delivery requirements
Existing joinery	-confirm w. owner	

Document Set ID: 2445450
Version: 1, Version Date: 24/05/2012

2110 DEMOLITION MINOR

1. GENERAL
This section relates to the demolition of existing buildings and structures in whole or in part, to the extent necessary to carry out the new work.

1.1 DOCUMENTS
Documents referred to in this section are:

NZBC F5/AS1	Construction and demolition hazards
NZS 6803	Acoustics - Construction noise
OSH	Approved code of practice for demolition
OSH	Guidelines for the management and removal of asbestos

Health and Safety in Employment Act 1992

1.2 QUALIFICATION
Carry out demolition only under the supervision of a suitably experienced person and using only experienced operators and drivers. Use only experienced, certified, construction blasters for explosives demolition.

1.3 NOISE
Refer to NZS 6803, tables 2 and 3 for the allowable upper limits of construction work noise in residential, commercial and industrial areas over the various time periods. Use silenced and noise insulated plant to ensure compliance with these requirements.

1.4 NUISANCE
Take all precautions necessary to minimise nuisance caused by dust, dirt, rubbish and water.

1.5 HEALTH AND SAFETY
Comply with the Health and Safety in Employment Act in general, NZBC F5/AS1 and OSH Approved code of practice for demolition, section 1.2.

1.6 BUILDING CONSENT REQUIREMENTS
Demolition work to be carried out to building consent requirements

1.7 INSPECTIONS
Inspection of the demolition work to take place at each of the stages as scheduled in the building consent. Confirm a written programme to facilitate these inspections, including notification when each stage of the work is ready for inspection. Allow 48 hours advanced notice for the inspections.
Obtain and pay for any required inspections which are additional to the building consent.

1.8 SURVEY
Before commencing work, carry out a thorough survey and examination of all buildings or structures to be demolished in order to ensure the extent, sequence, technique and method of demolition proposed can be safely and efficiently carried out.
Take photographs of the works, adjacent buildings and sites, before commencing work. Provide a set of these photographs as a record of existing condition.

1.9 SERVICES
Before commencing demolition, arrange with all utility network operators to disconnect services and remove fittings and equipment. Pay all fees and charges for this work.

1.10 MATERIAL
Material from the demolition becomes the property of the contractor except where expressly provided otherwise. Remove redundant materials from the site as work proceeds.

1.11 SALVAGE
Designated items remain the property of the owner.

1.12 BURNING OF MATERIALS
Burning of materials is not permitted on site.

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Document Set ID: 2445450
Version: 1, Version Date: 24/05/2012

2.7 CORROSION RISKS
Use stainless steel fixings, connectors, etc in all zones, with the timber treatments CuAz (Preservative code 58) and ACQ (Preservative code 90).

2.8 DPC
Refer to 4161 UNDERLAYS, FOIL AND DPC section

3. EXECUTION

3.1 EXECUTION GENERALLY
To NZS 3603 and NZS 3604 except as varied in this specification. Execution to include those methods, practices and processes contained in the unit standards for the National Certificate in Carpentry and the National Certificate in Joinery (cabinetry, exterior joinery, stairs).

3.2 SEPARATION
Separate all timber framing timbers from concrete, masonry and brick by: -
- a full length bituminous damp-proof membrane overlapping timber by at least 6mm; or
- a 12mm minimum free draining air space

3.3 ATTENDANCE
Provide and fix blocks, nogs, openings and other items as required by other trades.

3.4 MOISTURE CONTENT
Maximum allowable equilibrium moisture content (EMC) for non air-conditioned or centrally heated buildings for framing to which linings are attached.

Framing at erection:	24% maximum
Framing at enclosure:	20% maximum
Framing at lining:	16% maximum
Timber strip flooring:	10% at time of laying

3.5 SET-OUT
Set out framing in accordance with the requirements of NZS 3604 and as required to support sheet linings and claddings.

3.6 FRAMING WALLS
Frame to required loading and bracing complete with lintels, sills and nogs, all fabricated and fastened to NZS 3604, section 8, **Walls**.

3.7 FRAMING CEILINGS
Frame to required loading and bracing complete with runners and battens set out to support ceiling lining. All fabricated and fastened to NZS 3604, section 13, **Ceilings**. Trim for openings in ceilings and hatches to NZS 3604 section 13.3, **Openings in ceilings**. Provide blocking for water tanks located in the ceiling space to NZS 3604, section 13.4, **Water tanks in roof space**.

3.8 INSTALLING WALL UNDERLAYS
Refer to 4161 UNDERLAYS, FOIL AND DPC section

3.9 FIT JAMB BATTENS
For walls with direct fix cladding, fit and fix 20mm jamb battens over the wall underlay, to the jambs of window and door rough openings, to NZBC E2/AS1, fig 17A. Cut around sill flashings.

3.10 FIT CAVITY BATTENS
Fit and fix 20mm cavity battens over wall underlay or rigid air barrier, fully nail to timber studs to the requirements of the manufacturer or to NZS 3604. Fit and fix related flashings. Fit and fix cavity closers to base of walls, open horizontal (or raking) junctions and over openings (windows, meters etc).

3.11 DPC TO LOSP TREATED TIMBER
Refer to 4161 UNDERLAYS, FOIL AND DPC section.

ocument Set ID: 2445450
ersion: 1, Version Date: 24/05/2012

3820 CARPENTRY

1. GENERAL

This section relates to the supply and erection of light timber framing, floors, flooring underlays and decking.

1.1 RELATED WORK

Refer to ~ for ~.
Refer to 4161 UNDERLAYS, FOIL AND DPC for underlays, foils and DPC.

1.2 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

NZBC B2/AS1	Durability
AS/NZS 1328.1	Glued laminated structural timber - Performance requirements and minimum production requirements
AS/NZS 1860.1	Particleboard flooring - Specifications
AS/NZS 2269.0	Plywood - Structural - Specification
AS/NZS 2904	Damp-proof courses and flashings
AS/NZS 2918	Domestic solid fuel burning appliances - Installation
NZS 3602	Timber and wood-based products for use in building
NZS 3603	Timber structures standard
NZS 3604	Timber-framed buildings
NZS 3622	Verification of timber properties
NZS 3640	Chemical preservation of round and sawn timber
AS/NZS 4347	Damp-proof courses and flashings - Methods of test
FTMA	Frame and Truss Manufacturers Association of New Zealand Inc - Code of Practice

***A copy of** NZS 3604 **Timber-framed buildings, must be held on site.**

1.3 DIMENSIONS

All timber sizes except for battens are actual minimum dried sizes.

2. PRODUCTS

2.1 TIMBER FRAMING, TREATED

Species, grade and in service moisture content to NZS 3602, NZBC B2/AS1 and treatment to NZS 3640, NZBC B2/AS1. Structural grade (SG) to NZS 3604, NZS 3622 with properties to NZS 3603.

2.2 PLYWOOD

Structural plywood to AS/NZS 2269.0 for bracing, bracketing, sarking and floors.

2.3 NAILS

Type to NZS 3604, section 4, **Durability**, and of the size and number for each particular types of joint as laid down in the nailing schedules of NZS 3604, sections 6-10.

2.4 BOLTS AND SCREWS

Bolts and screws of engineering and/or coach type complete with washers, to the requirements of NZS 3604, section 4, **Durability**, and of the number and form required for each particular junction to NZS 3604, sections 6-10.

2.5 NAIL PLATES

Comply with the requirements of NZS 3604, section 4, **Durability**, and of the number and form required for each particular junction to NZS 3604, sections 6-10. Plates to the plate manufacturer's design for the particular locations as shown on the drawings.

2.6 CONNECTORS

Comply with the requirements of NZS 3604, section 4, **Durability**, and of the number and form required for each particular junction to NZS 3604, sections 6-10. Connectors and structural brackets to the connector manufacturer's design for particular locations shown on drawings.

Document Set ID: 2445450
Version: 1, Version Date: 24/05/2012

4161T THERMAKRAFT UNDERLAYS, FOILS AND DPC - RESIDENTIAL

1. GENERAL

This section relates to the application of **Thermakraft** Industries (NZ) Ltd, DPC, DPM, underfloor foil insulation, wall underlays and roofing underlays:
- for use in residential applications

1.1 RELATED WORK
Refer to ~ for ~

1.2 ABBREVIATIONS AND DEFINITIONS
Refer to the general section 1232 INTERPRETATION & DEFINITIONS for abbreviations and definitions used throughout the specification.

The following abbreviations apply specifically to this section:

NZMRM	New Zealand Metal Roofing Manufacturers Inc.

The following definitions apply specifically to this section:

Wall underlay	the same meaning as defined in NZBC E2/AS1, covering kraft based and synthetic wall underlays, sometimes called, wall wraps, building wraps or building papers.

Documents

1.3 DOCUMENTS
Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

NZBC E2/AS1	External moisture
NZS/AS 1530.2	Methods for fire tests on building materials, components and structures - Test for flammability of materials
NZS 2295	Pliable, permeable building underlays
AS/NZS 2904	Damp-proof courses and flashings
NZS 3604	Timber-framed buildings
AS/NZS 4389	Safety Mesh
AS/NZS 4534	Zinc and zinc/aluminium-alloy coatings on steel wire
NZMRM	NZ Metal Roof and Wall Cladding - Code of Practice

1.4 MANUFACTURER/SUPPLIER DOCUMENTS
Thermakraft documents relating to this part of the work:
Thermakraft product manual and technical data sheets.
BRANZ Appraisal 356 - Thermakraft **Cover-Up™** Breather-Type Building Wrap
BRANZ Appraisal 329 - **Supercourse 500** Damp-Proof Course and Concealed Flashing
BRANZ Appraisal 560 - **Mirrablack** Damp Proof Course and Concealed Flashing
BRANZ Appraisal 549 - **Diflex 130** Building Wrap
BRANZ Appraisal 614 - **Aluband™/Aluminium** Window Sealing System
BRANZ Appraisal 651 - Thermakraft Covertek 407 Fire Retardant Self-Supporting Roof Underlay
BRANZ Appraisal 695 - **Watergate-Plus** Fire Retardant Wall Underlay
BRANZ Appraisal 710 - Thermakraft Covertek 403 Absorbent Breathable Roof Underlay
BRANZ Appraisal 711 - Thermakraft Covertek 403 Fire Retardant Absorbent Breathable Wall Underlay

Manufacturer/supplier contact details

Web:	www.thermakraft.co.nz
Telephone:	0800 806 595

1.5 MANUFACTURER'S WARRANTY
Warrant this work under normal environmental and use conditions against failure of materials and execution. Thermakraft Industries Ltd warrant performance of products if design and installation complies with relevant technical literature, NZBC, and recognised industry Codes of Practice. Copy of Thermakraft Product Warranty available on request.

ocument Set ID: 2445450
ersion: 1, Version Date: 24/05/2012

3.12 DPC TO TIMBER
Refer to 4161 UNDERLAYS, FOIL AND DPC section.

3.13 INSTALL PROPRIETARY FIREPLACE
Prepare for the installation as detailed and as required by the manufacturer. Install strictly in accordance with AS/NZS 2918 and the manufacturer's stated and detailed requirements.

4. SELECTIONS

4.1 EXTERIOR WALL FRAMING

Member	Species	Grade	Treatment
Exterior walls:	Radiata pine	SG8	H1.2
	Douglas fir	SG8	H1.2
Parapets:	Radiata pine	SG8	H1.2
	Douglas fir	SG8	H1.2
Enclosed decks and balconies:	Radiata pine	SG8	H1.2
Cantilevered joists enclosed decks and balconies:	Radiata pine	SG8	H3.2
Wall battens:	Radiata pine	Merchantable	H3.1
Jamb battens:	Radiata Pine	Merchantable	H3.1

4.2 CAVITY BATTENS

Cavity battens	Species	Grade	Treatment
Timber - Non Structural:	Radiata pine	Merchantable	H3.1

4.3 EXTERIOR FINISHING TIMBERS

Member	Species	Grade	Treatment
Weatherboards:	Radiata pine	Dressing	H3.1
Fascia/barge/cover boards:	Radiata pine	Dressing	H3.1
Exterior trim:	Radiata pine	Dressing	H3.1

4.4 INTERIOR FRAMING

Member	Species	Grade	Treatment
Non structural walls:	Radiata pine	SG8	H1.2
	Douglas fir	SG8	H1.2
Structural and braced walls:	Radiata pine	SG8	H1.2
	Douglas fir	SG8	H1.2

4.5 PLYWOOD

Member	Brand/type	Treatment
Plywood bracing:	EP1	H3

4.6 INTERIOR FINISHING TIMBERS

Member	Species	Grade
Architraves:	Radiata pine	Dressing
Skirtings:	Radiata pine	Dressing
Cornices:	Radiata pine	Dressing

4.7 DPC
Refer to 4161 UNDERLAYS, FOIL AND DPC section.

Document Set ID: 2445450
Version: 1, Version Date: 24/05/2012

3.3 INSPECTION
Before starting work, check that the building construction phase will allow work of the required standard. Carry out remedial work identified before laying underlay.

Application - DPC/ DPM

3.4 DPC TO LOSP TREATED TIMBER
Lay Supercourse 500 / MirraBlack DPC under LOSP or CCA treated bottom plate of all timber framed walls on concrete, in a single layer with 50mm overlaps at joints to provide a waterproof barrier.

3.5 DPC TO TIMBER / STEEL
Lay DPC under the bottom plate of all timber / steel framed walls on concrete, in a single layer with 50mm overlaps at joints to provide a waterproof barrier. Refer to SELECTIONS for type.

Application - wall underlay

3.6 WALL UNDERLAY
Fix horizontally to outside face of framing in true alignment, with succeeding sheets overlapping 150mm to NZBC E2/AS1, 9.1.7, **Wall underlay** and refer to **Thermakraft** industries for requirement for fastenings. Fix to **Thermakraft** Industries Technical Data specifications. Scribe neatly around penetrations and openings to leave no gaps. For gaps around Poly Butyl pipe systems , refer to pipe manufacturer's technical specifications. Keep clean, undamaged and without visible weather deterioration until closed in.

Completion

3.7 CLEAN UP
Clean up as the work proceeds.

3.8 LEAVE
Leave work to the standard required by following procedures.

3.9 REMOVE
Remove debris, unused materials and elements from the site.

4. SELECTIONS
Substitutions are not permitted to the following, unless stated otherwise.

4.1 DPC

Location:	As required under bottom plates
Type:	**Supercourse 500™**
Jointing tape:	AluBand 50mm

4.2 WALL UNDERLAYS - ABSORBENT CLADDING

Location:	~
Type:	**Thermakraft Cover-Up™** polyolefin fire retardant, woven, breather type membrane
Tape:	AluBand 50mm

4.3 WALL UNDERLAYS - DIRECT FIX NON ABSORBENT CLADDING

Location:	~
Type:	**Thermakraft Watergate-Plus™** absorbent non-woven, breathable film coated polyolefin building membrane
Tape:	AluBand 50mm

Accessories

ocument Set ID: 2445450
ersion: 1, Version Date: 24/05/2012

Requirements

1.6 NO SUBSTITUTIONS
Substitutions are not permitted to any specified materials, or associated products, components or accessories.

1.7 INSTALLATION SKILL LEVELS
Installers to be experienced in the installation of **Thermakraft** products and familiar with **Thermakraft** Industries technical literature and the related documents listed in this design i.e. NZMRM NZ Metal Roof and Wall Cladding - Code of Practice.

2. PRODUCTS

Materials

DPC

2.1 EMBOSSED POLYETHYLENE
Supercourse 500, hi-impact polyethylene film to AS/NZS 2904 and embossed on both sides. Thickness 500 microns minimum, manufactured for use as a damp-proof course and concealed flashings around doors and windows and to BRANZ Appraisal 329.

Wall underlays

2.2 SYNTHETIC BREATHER TYPE FILM COATED WALL UNDERLAY
Watergate-Plus™, absorbent breathable spun bonded non-woven polyolefin type building membrane, coated with a water resistant vapour permeable film. A fire retardant membrane, with Flammability Index of ≤ 5, when tested to NZS/AS 1530.2. The product has a BRANZ Appraisal 695.

Accessories

2.3 WINDOW AND DOOR SEALING TAPE
Thermakraft Aluband™/Window Sealing Tape system consists of synthetic faced reinforced bituminous window sealing tape, **Thermakraft Aluband™** Corner Moulding™ piece, used in conjunction with the **Thermakraft Aluband™** Hand Tool to ensure good adhesion and a tight fit into corners. See **Thermakraft** Data Sheet 312 for installation details and BRANZ Appraisal 614.

2.4 AIR SEAL BACKING ROD
P.E.F. Thermakraft WindowWorm Backing Rod, a cylindrical flexible closed cell polyethylene material available in various diameters and used in conjunction with foam sealants. Refer to SELECTIONS for sizes.

2.5 STUD STRAPS - POLYETHYLENE
Thermastrap 201 & 203, 19mm wide polyethylene straps.

3. EXECUTION

Conditions

3.1 GENERAL REQUIREMENTS
Design application and installation of **Thermakraft** Building products to NZBC E2/AS1, BRANZ Appraisals, **Thermakraft** Technical Literature and Industry Codes of Practice.

3.2 STORAGE
Store building underlays and accessory materials, under conditions that ensure no deterioration or damage. Store rolls in an upright position on a smooth floor and protected from sunlight, UV radiation and moisture.

Document Set ID: 2445450
Version: 1, Version Date: 24/05/2012

4230 WALL CLADDING

1. GENERAL

This section relates to the supply and installation of exterior cladding, including:
- associated flashings
- timber fascias
- timber barges
- timber trims
- timber beads
- timber facings

1.1 RELATED WORK
Refer to 4161 UNDERLAYS, FOIL AND DPC for underlays, foils and DPC.

Documents

1.2 DOCUMENTS
Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

NZBC B2/AS1	Durability
NZBC E2/AS1	External moisture
AS/NZS 1491	Finger jointed structural timber
AS/NZS 2269.0	Plywood - Structural - Specification
AS/NZS 2908.2	Cellulose-cement products - Flat sheets
NZS 3602	Timber and wood-based products for use in building
NZS 3604	Timber-framed buildings
NZS 3617	Profiles of weatherboards fascia boards and flooring
NZS 3631	New Zealand timber grading rules
BRANZ BU 441	Sealed joints in external claddings - 2. Sealants

Performance

1.3 PERFORMANCE
Accept responsibility for the weathertight performance of the completed cladding system, including all penetrations.

2. PRODUCTS

2.1 WALL UNDERLAYS
Refer to 4161 UNDERLAYS, FOIL AND DPC section.

2.2 EXTERIOR CAVITY WALL BATTENS
Radiata pine battens, minimum 20mm thickness, width and height to match timber framing studs. Treatment to NZBC B2/AS1 and NZS 3602, table 1, reference 1D.10, Requirements for wood-based building components to achieve a 50-year durability performance.

2.3 EXTERIOR CAVITY CLOSER/VERMIN-PROOFING
Perforated uPVC, aluminium or stainless steel trays with upstands. Upstand one side 10mm and the other 75mm. Length and width to suit cavity.

2.4 STRUCTURAL PLYWOOD
Structural plywood to AS/NZS 2269.0.

2.5 TIMBER WEATHERBOARD
Dressing grade to NZS 3631, to NZS 3617 for profile and treated to NZS 3602, table 2, reference 2.A1, Requirements for wood-based building components to achieve a 15-year durability performance.

2.6 FIBRE-CEMENT SOFFIT LINING
Cellulose cement autoclaved sheets to AS/NZS 2908.2.

Document Set ID: 2445450
Version: 1, Version Date: 24/05/2012

4.4 WINDOW/DOOR SEALING SYSTEM
Location: to all joinery
Type: **Thermakraft Aluband™ Window Sealing Tape**

4.5 AIR SEAL BACKING ROD
Location: to all joinery
Type: **P.E.F. Thermakraft WindowWorm**
Size: ~mm

4.6 STUD STRAPS
Location: as required
Type: **Thermakraft 201/203**, 25mm wide polyethylene tape

Document Set ID: 2445450
Version: 1, Version Date: 24/05/2012

capping moulds. Refer to the cladding manufacturer's literature for fixing details and NZS 3604 for fixings durability requirements for specific provisions.

3.10 INSTALL EXTERIOR TIMBER FINISHINGS
Install timber fascias, barge boards, facings, beads, trim and enclosures level, true to line and face, with all end grain sealed and joints mitred.

3.11 INSTALL FLASHINGS
Install flashings, covers and soakers as detailed on the drawings and to NZBC E2/AS1.

3.12 USE OF SEALANTS
Selection and use of sealants to follow BRANZ BU 441 Sealed joints in external claddings - 2. Sealants.

3.13 COMPLETE
Ensure the work is complete with all flashings, finishings and trim properly installed so the cladding system is completely weathertight.

3.14 REPLACE
Replace damaged or marked elements. Remove unused materials from the site.

4. SELECTIONS

4.1 WALL WRAPS
Refer to 4161 UNDERLAYS, FOIL AND DPC section

4.2 CAVITY BATTENS
Timber species: radiata pine
Treatment: H3.1

4.3 CAVITY CLOSER/VERMIN-PROOFING
Material: upvc/al.

4.4 PLYWOOD
Location: Ref A2/A3
Brand: CHH EP1
Thickness: 7mm

4.5 TIMBER WEATHERBOARD
Location: ref A2/A3
Size/profile: client selected
Treatment: h3.1
Priming: pre-primed

4.6 FIBRE-CEMENT SOFFIT LINING
Brand/type: hardie soffit
Thickness: 4.5mm(to match existing)
Finish: paint finish

4.7 EXTERIOR FINISHING TIMBER
Species and grade: radiata pine, dressed
Treatment: H3.1
Location: ref A6/A7
Priming: pre-primed

~

4.8 FLASHINGS

Location	Material/thickness	Base metal thickness	Finish

ocument Set ID: 2445450
ersion: 1, Version Date: 24/05/2012

2.7 PVC JOINTERS
To suit sheet thickness.

2.8 NAILS, SCREWS AND FASTENINGS
Metal, size and pattern, to cladding manufacturer's requirements and complying with the relevant aspects of NZS 3604, section 4, Durability.

2.9 FLASHINGS
To NZBC E2/AS1, 4.0 **Flashings**. Material, grade and colour as detailed and scheduled. Ensure that materials used for flashings are compatible with the window frame materials and fixings and cladding materials and fixings.

3. EXECUTION

3.1 MOISTURE CONTENT
Maximum allowable moisture content to NZS 3602 for:
Equilibrium moisture content (EMC)
- Framing: 20% at closing in
- Weatherboards: 14% at time of fixing
- Exterior joinery and trim: 14%

3.2 EXECUTION METHODS AND PRACTICES
To NZS 3604 except as varied in this specification. Execution to include those methods, practices and processes contained in the unit standards for the National Certificate in Carpentry and the National Certificate in Joinery (cabinetry, exterior joinery, stairs).

3.3 FIX WALL UNDERLAYS
Refer to 4161 UNDERLAYS, FOIL AND DPC section

3.4 PENETRATIONS
Confirm that exterior wall openings have been prepared ready for the installation of all window and door frames and other penetrations through the cladding. Required preparatory work includes the following:
- wall underlay/rigid air barrier to openings finished and dressed off with flashing tape ready for the installation of window and door frames and other penetrations
- claddings neatly finished off to all sides of openings
- installation of flashings (those required to be installed prior to installation of penetrating elements).

3.5 INSTALL DRAINED CAVITY
20mm Minimum thickness drained cavity to NZBC E2/AS1: 9.0 Wall claddings, where required. Fix vertical cavity battens to wall framing studs. The battens are fixed by the cladding fixings which will penetrate the wall framing studs over the wall underlay. Seal the top of the cavity. Install cavity closer/vermin-proofing at base of walls, open horizontal (or raking) junctions, over openings (windows, meters etc). Do not use horizontal cavity battens. Use cavity spacers where fixing is required between cavity battens.

3.6 INSTALL PLYWOOD
Install to the plywood manufacturer's requirements. Refer to the plywood manufacturer's literature for fixing details and NZS 3604 for fixings durability requirements for specific provisions.

3.7 PRIME OR SEAL TIMBER WEATHERBOARDS AND TRIM
Prime or seal all front and back faces, edges and end grain before fixing weatherboards and exterior trim, to the finish and quality specified in painting sections.

3.8 INSTALL TIMBER WEATHERBOARDS
Install level, true to line and face, to NZBC E2/AS1: 9.4 Timber weatherboards. Refer to NZS 3604 for fixings durability requirements for specific provisions.

3.9 INSTALL FIBRE CEMENT SOFFITS WITH JOINTERS AND CAPPING MOULDS
Cut sheets dry and scribe fit to fully support all edges and joints. Nail and drill for and insert fasteners to the sheet manufacturer's requirements. Fit complete with jointers and

Document Set ID: 2445450
Version: 1, Version Date: 24/05/2012

1.11 CERTIFICATION
Provide evidence of a certificate by a laboratory accredited by International Accreditation of New Zealand that the windows and doors offered comply with the requirements of NZS 4211.

Performance

1.12 PERFORMANCE - WINDOWS AND DOORS
To NZS 4211, including:
- deflection, opening sashes, air infiltration, water penetration, ultimate strength, torsional strength of sashes, marking.

Refer to SELECTIONS.

1.13 PERFORMANCE - STRUCTURAL/WEATHER-TIGHTNESS
The structural and weather-tight performance of the completed joinery, the glazing and infill panels is the responsibility of the window manufacturer.

Performance - Wind (design by contractor)

1.14 DESIGN PARAMETERS - NON SPECIFIC DESIGN
Design the installation to the wind zone parameters of NZS 3604, table 5.1.
Refer to SELECTIONS for wind zone.

1.15 DESIGN PARAMETERS - SPECIFIC DESIGN
Design the installation to the wind pressure parameters of AS/NZS 1170.2 Refer to SELECTIONS for ULS and SLS

Finishes

1.16 CERTIFY COATINGS - POWDER COATING
Certify on request, compliance with this specification and support with control and sampling records. Test for film thickness to BS 3900, part C5, method No. 4, using method (b) or to AS/NZ 1580.108.1 for certifying thickness and method (a) where any dispute arises as to the thickness provided.
The coating should be applied by an applicator who can certify that the coating has been applied in accordance with the specification.

2. PRODUCTS

Materials

2.1 WINDOWS
Refer to SELECTIONS for type and finish.

2.2 DOORS
Refer to SELECTIONS for type and finish.

2.3 ALUMINIUM EXTRUSIONS
Alloy designation to comply with AS/NZS 1866. Branded and extruded for anodising or powder coating.

2.4 ALUMINIUM SHEET AND STRIP
Complying with AS/NZS 1734 of suitable thickness. Rolled for anodising or powder coating.
Alloy designation: 5251 - H16 or 5005 - H16

2.5 STAINLESS STEEL SHEET AND STRIP
Type: 316 austenitic steel
Finish grade: 2B (satin lustre)

2.6 GLASS
Refer to the glazing section for glass types and installation.

ocument Set ID: 2445450
ersion: 1, Version Date: 24/05/2012

Refer to the general section for the required form of 1237WA WARRANTY AGREEMENT and details of when completed warranty must be submitted.

1.5 WARRANTY - INSTALLER
Provide an installer/applicator warranty:
2 years: For installation

- Provide this warranty in the installer/applicator standard form.

Refer to the general section 1237 WARRANTIES for additional requirements.

Requirements

1.6 SAMPLES
~

1.7 QUALIFICATIONS
Work to be carried out by tradesmen experienced, competent and familiar with the materials and techniques specified.

1.8 COMPLIANCE
Windows and doors to be manufactured and installed to NZBC E2/AS1.

1.9 SHOP DRAWINGS AND INSTALLATION DETAILS
Shop drawings to show the general arrangement of the aluminium joining including, but not be limited to:
Construction details (minimum scale 1:5) showing the interface between joinery elements and the building structure including: -
- Jointing details and method of fixing between individual elements and between this installation and adjacent work
- Interaction between claddings and linings
- Flashing details
- Sealants and air seals
- Non standard fixing details including bracketing

And where required the following:
- Design calculations
- Producer Statement in the form PS1 Producer Statement Design
- Rebate sizes
- Dimensions of all typical elements and of any special sizes and shapes
- Provision for the exclusion and/or drainage of moisture
- Provision for adjustment of fixings to ensure true alignment of windows and doors
- Sealant types and full size sections of all sealants and backing rods
- Provision for thermal movement
- Provision for seismic movement and movement under wind loads
- Sequence of installation
- Glazing specification and details

Where requested provide the following additional information
- Information of Professional Indemnity Insurance held by the person proving the shop drawings

Refer to the general section 1235 SHOP DRAWINGS for the requirements for submission and review and the provision of final shop drawings.

Complete shop drawing review before commencing fabrication.

1.10 SEISMIC SUB-FRAMES
Where required units to have seismic sub-frames. Refer to NZS 1170.5. Refer to SELECTIONS for requirements

Document Set ID: 2445450
Version: 1, Version Date: 24/05/2012

4521 ALUMINIUM WINDOWS AND DOORS

1. GENERAL

This section relates to the manufacture, supply, and installation of ~:
- aluminium windows
- aluminium doors and frames
- hardware and furniture
- overhead glazing
- flashings

1.1 RELATED WORK

Refer to glazing sections for glass types

1.2 ABBREVIATIONS AND TERMS

PVF^2	Polyvinylidene Fluoride
SLS	Serviceability limit state
ULS	Ultimate limit state
WANZ	Windows Association of Zealand
PQAS	Powder Coating Quality Assurance System

Documents

1.3 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

NZBC E2/AS1	External moisture
NZBC F4/AS1	Safety from falling
NZBC H1/VM1	Energy efficiency
NZBC H1/AS1	Energy efficiency
AS/NZ 1580	Methods of test for paints and related materials - Determination of dry film thickness on metallic substrates - Non destructive methods
AS/NZS 1170.2	Structural design actions - Wind loads
NZS 1170.5	Structural design actions - Earthquake actions - New Zealand
AS/NZS 1734	Aluminium and aluminium alloys - flat sheets, coiled sheet and plate
AS/NZS 1866	Aluminium and aluminium alloys - Extruded rod, bar, solid and hollow shapes
NZS 3604	Timber-framed buildings
AS 3715	Metal finishing - Thermoset powder coatings for architectural applications
BS 3900	Methods of tests for paints, Part C5: Determination of film thickness
NZS 4211	Performance of windows
NZS 4223.3	Glazing in buildings - Human impact safety requirements
AS/NZS 4680	Hot-dip galvanized (zinc) coatings on fabricated ferrous articles
WANZ	Window installation system - An Alternative Solution for the installation of windows and doors
WANZ	Powder Coating Quality Assurance System (PQAS)
WANZ	SFA 3503-03:2005 Anodising Standard
BRANZ BU 337	Protecting Window Glass from Surface Damage
AAMA 2604.05	Performance requirements and test procedures for high performance organic coatings on aluminium extrusions and panels

US Federal Specification

TT-S-001543A	Sealing compound, silicone rubber base (for caulking, sealing and glazing in buildings and other structures)
TT-S-00230C	Sealing compound, elastomeric type, single component (for caulking, sealing and glazing in buildings and other structures)

Warranties

1.4 WARRANTY - MANUFACTURER/SUPPLIER

Provide a material manufacturer/supplier warranty:

5 years:	For fabrication

ocument Set ID: 2445450
ersion: 1, Version Date: 24/05/2012

Internal	Upvc		
External	0.55 colorsteel		p.coated

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Document Set ID: 2445450
Version: 1, Version Date: 24/05/2012

Finishes

2.19 POWDER COATED ALUMINIUM
Polyester powder organic coating in accordance with WANZ Powder Coating Quality Assurance System and AS 3715.

3. EXECUTION

Conditions - generally

3.1 DO NOT DELIVER
Do not deliver to site any elements which cannot be unloaded immediately into suitable conditions of storage.

3.2 UNLOAD WINDOW JOINERY
Unload, handle and store elements in accordance with the window manufacturer's requirements.

3.3 AVOID DISTORTION
Avoid distortion of elements during transit, storage and handling.

3.4 PREVENT DAMAGE
Prevent prefinished surfaces rubbing together, and contact with mud, plaster and cement. Keep paper and cardboard wrappings dry.

3.5 PROPRIETARY ELEMENTS
Fix in accordance with the window manufacturer's requirements.

3.6 PROTECTIVE COVERINGS
Retain protective coverings and coatings to BRANZ BU 337 and keep in place during the fixing process. Provide protective coverings and coatings where required to prevent marking of surfaces visible in the completed work and to protect aluminium joinery from following trades. Remove protection on completion.

3.7 ADDITIONAL PROTECTION
Supply and fix additional protection as necessary to prevent marking of surfaces which will be visible on completed work.

Conditions - fixings and fastenings

3.8 SUPPLY OF FIXINGS
Use only fixings and fastenings recommended by the manufacturer of the component being fixed and to comply with the ULS wind pressure stated in SELECTIONS. Ensure fixings and fastenings exposed to the weather are of aluminium, or Type 316 stainless steel or if not exposed to the weather may they be hot-dip galvanized steel with a coating weight of 610 g/m² complying with AS/NZS 4680.

3.9 INSTALLATION FIXING
To NZBC E2/AS1, 9.1.10.8, **Attachments for windows and doors**. Fix windows/doors through reveal to frame with a pair of 75 x 3.15mm minimum galvanised jolt head nails or a pair of 8 gauge x 65mm minimum stainless steel screws. Fix at a maximum of 450 centres along all reveals and a maximum of 150mm from reveal ends. Ensure fixings do not penetrate metal flashings.
Install packers between reveals and framing at fixing points, except at the head.

Assembly

3.10 FABRICATION
Fabricate frames as detailed on shop drawings. Install glazing, hinges, stays and running gear as scheduled. Provide temporary bracing and protection. Temporarily secure all opening elements for transportation.

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Document Set ID: 2445450
Version: 1, Version Date: 24/05/2012

2.7 REVEALS - TIMBER PAINTED
Timber reveals for paint finish with all sides primed grooved for wall linings or flush finished for architraves.

2.8 FLASHINGS GENERALLY
To NZBC E2/AS1, 9.1.10 **Windows and Doors.** Material, grade and colour of head flashings to match the window frames. Ensure that materials used for head, jamb and sill flashings are compatible with the window frame materials and fixings and cladding materials.

Materials - overhead glazing

2.9 OVERHEAD GLAZING SYSTEM
Overhead purpose made aluminium glazing bars, other system components, flashings and hardware.
Refer to SELECTIONS

Components - for cavity systems

2.10 WANZ CAVITY CLOSER
Flashing device (unperforated) to close the cavity above the window or door unit to direct water that occasionally penetrates the wall cladding into the cavity spaces adjacent to the window.

2.11 STANDARD CAVITY CLOSER
A perforated device constructed from either aluminium or PVC to close the cavity above the window or door unit, between the cladding and head flashing, to provide ventilation in accordance with NZBC E2/AS1 to the spaces above the window or door.

2.12 WANZ SUPPORT BAR
Extruded aluminium support bar with built in drainage and ventilation to NZBC E2/AS1, to provide continuous support to the window unit. Size to suit cladding type.

Components

2.13 GLAZING GASKETS
Thermoplastic rubber. Do not stretch glazing gaskets during installation. Measure and cut gaskets 5-10% over length before installation.

2.14 HARDWARE AND FURNITURE
Hinges, stays, catches, fasteners, latches, locks and furniture as offered by the window and door manufacturer. Refer to SELECTIONS for type and finish. Key alike all lockable window hardware able to be keyed alike.

2.15 SAFETY STAYS
Stainless steel non releasable restrictors to limit window opening to NZBC F4/AS1, Table 2, Acceptable opening sizes for barriers.

Sealants

2.16 STRUCTURAL SEALANT
Silicone chemically curing sealant specifically formulated and tested or approved equivalent with not less than a ± 40% movement factor complying with US Federal Specification TT S 001543A.

2.17 WEATHERING/INSTALLATION SEALANT
Building sealant used in accordance with manufacturer's instructions for weather sealing aluminium frames to the cladding, complying with US Federal Specification TT S 0011534A, or a one-part polyurethane moisture curing, elastic joint sealant of medium modulus (± 25% movement) to US Federal Specification TT S 00230C.

2.18 FOAM TAPE
Foam tape to NZBC E2/AS1, 9.1.10.7 **Closed cell foam tape.**

Document Set ID: 2445450
Version: 1, Version Date: 24/05/2012

Application - jointing and sealing

3.22 SEAL FRAMES ON SITE
Seal frames to each other and to adjoining structure and finishes, all as required by the window manufacturer and to make the installation weathertight. In very high and extra high or greater wind zones, seal between the window head and the head flashing. Do not seal the junction between the sill member and the cladding or sill flashing which must remain open.

3.23 PREPARE JOINTS
Ensure joints are dry. Remove loose material, dust and grease. Prepare joints in accordance with the sealant manufacturer's requirements, using required solvents and primers where necessary. Mask adjoining surfaces which would be difficult to clean if smeared with sealant.

3.24 BACK UP
When using back-up materials do not reduce depth of joint for sealant to less than the minimum required by the manufacturer of the sealant. Insert polyethylene rod or tape back-up behind joints being pointed with sealant.

3.25 SEALANT FINISH
Tool sealant to form a smooth fillet with a profile and dimensions required by the sealant manufacturer. Remove excess sealant from adjoining surfaces, using the cleaning materials nominated by the sealant manufacturer and leave clean.

Completion - cleaning

3.26 REMOVE TRADE DEBRIS
Remove trade debris by appropriate means on a floor by floor basis as each floor is completed and again before any work is covered up by others. Arrange for general removal.

3.27 TRADE CLEAN
Trade clean window frames, operable windows and doors, glass and other related surfaces inside and out at the time of installation to remove marks, dust and dirt, to enable a visual inspection of all surfaces.

Completion

3.28 PROTECTIVE COVERINGS
Retain protective coverings and coatings and keep in place during the fixing process. Provide protective coverings and coatings where required to prevent marking of surfaces visible in the completed work and to protect aluminium joinery from following trades.

3.29 SAFETY
Indicate the presence of transparent glasses for the remainder of the contract period, with whiting, tape or signs compatible with the glass type. Indicators other than whiting must not be applied to the glass surface. Masking tape must not be used for this purpose.

3.30 IN SITU TOUCH-UP TO POWDER COATED ALUMINIUM
In situ touch-up of polyester or fluoropolymer coated aluminium is only permitted only to minor surface scratching. Otherwise replace all damaged material.

3.31 REMOVE
At the appropriate stage of the project, remove safety indicators and protective coverings and wipe down all joinery thoroughly.

3.32 REPLACE
Replace damaged, cracked or marked elements.

3.33 MANIFESTATIONS
Apply manifestations to comply with NZS 4223.3, 303.1 Manifestations.

Document Set ID: 2445450
Version: 1, Version Date: 24/05/2012

3.11 TIMBER / PVC REVEALS
Before fixing to aluminium frames, ensure that timber reveals which are being painted have been primed on all surfaces.

3.12 HARDWARE GENERALLY
Factory fit all required and scheduled hardware. Account for all keys and deliver separately to the site manager.

3.13 SAFETY STAYS
Factory fit safety stays to all windows scheduled for safety stays and to all windows where safety stays are required to comply with NZBC F4/AS1 4.0, Opening windows.

Installation - windows and doors

3.14 CORROSION PROTECTION
Before fixing, apply suitable barriers of bituminous coatings, stops or underlays between dissimilar metals in contact, or between aluminium in contact with concrete.

3.15 CONFIRM PREPARATION OF EXTERIOR WALL OPENINGS
Confirm that exterior wall openings have been prepared ready for the installation of all window and door frames. Do not proceed with the window and door installation until required preparatory work has been completed.

Required preparatory work includes the following:
- wall underlay/building wrap to openings finished and dressed off ready for the installation of window and door frames to NZBC E2/AS1:9.1.5 **Wall underlays to wall openings.**
- Full height 20mm jamb battens to NZBC E2/AS1 figure 72A (direct fix only)
- claddings neatly finished off to all sides of openings
- installation of flashings (those which are required to be installed prior to frames).

3.16 INSTALLATION
Fix to comply with the reviewed shop drawings and installation details including flashings and bedding compounds, pointing sealants and weathering sealants.

3.17 INSTALLATION CAVITY CONSTRUCTION
Install to WANZ Installation System details and drawings including WANZ cavity closers, sill support bars and support angles

3.18 INSTALL FLASHINGS
Install flashings to heads, jambs and sills of frames as supplied and required by the window manufacturer and as detailed on the drawings. Finish head flashings to match window finish.

Place all flashings so that the head flashing weathers the jamb flashings, which in turn weathers over the upstand of the sill flashing. Ensure that sill flashings drain to the outside air.

Except where window/door frames are recessed, ensure that head flashings over-sail unit by 30mm minimum at each end.

3.19 COMPLETE AIR SEAL
To NZBC E2/AS1:9.1.6 Air seals. Form an air-tight seal by means of a proprietary expanding foam or sealants used with backing rods, applied between the window / door reveal and structural framing to a depth of 10 - 20mm, to provide a continuous air tight seal to the perimeter of the window or door.

3.20 FIX HARDWARE
Fix all sash and door hardware and furniture as scheduled.

3.21 INSTALL OVERHEAD GLAZING SYSTEM HARDWARE
Install selected accessories and hardware. Install and complete all operating systems.

Document Set ID: 2445450
Version: 1, Version Date: 24/05/2012

5113G GIB® PLASTERBOARD LININGS

1. GENERAL

This section relates to the supply, fixing and jointing of GIB® plasterboard linings and accessories to timber and steel framed walls and ceilings to form:
- standard systems
- superior finish quality systems
- bracing systems
- fire rated garage boundary wall systems
- wet area systems

1.1 RELATED SECTIONS

Refer to 5171G GIB® PLASTERBOARD FIRE & SOUND LININGS for performance wall linings

1.2 ABBREVIATIONS

The following abbreviations are used throughout this part of the specification:

AWCINZ	Association of Wall and Ceiling Industries New Zealand

Documents

1.3 DOCUMENTS REFERRED TO

Documents referred to in this section are:

NZBC E2/AS1	External moisture
AS 1397	Steel sheet and strip - hot-dipped, zinc-coated, or aluminium/zinc-coated
AS/NZS 2588	Gypsum plasterboard
AS/NZS 2589	Gypsum linings - Application and finishing
NZS 3604	Timber-framed buildings
AS/NZS 4600	Cold-formed steel structures

BRANZ technical paper P21: A wall bracing test and evaluation procedure

NASH	Residential and Low-Rise Steel Framing Part 1 2010 Design Criteria

Documents listed above and cited in the clauses that follow are part of this specification. However, this specification takes precedence in the event of it being at variance with the cited document.

1.4 MANUFACTURER'S DOCUMENTS

Manufacturer's and supplier's documents which refer to work in this section are:

GIB® Site Guide (Jan 2010)
GIB Aqualine® Wet Area Systems (March 2007)
GIB® Ezybrace® Systems (June 2011)
BRANZ Appraisal 294 - GIB® Ezybrace® Systems
BRANZ Appraisal 427 - GIB Aqualine® Wet Area Systems

Copies of the above literature are available at

Web:	www.gib.co.nz
Telephone:	0800 100 442

Requirements

1.5 NO SUBSTITUTIONS

Substitutions are not permitted to any specified GIB® systems, GIB® system components, GIB® plasterboard, associated GIB® products or GIB® accessories.

1.6 INSTALLER WORK SKILLS AND QUALIFICATIONS

GIB® plasterboard fixers and plasterers to be experienced competent workers, familiar with GIB® plasterboard lining systems installation and finishing techniques. Submit evidence of experience on request. For example:
- National Certificate of Interior Systems; or
- Certified Business member of AWCINZ.

Performance

Document Set ID: 2445450
Version: 1, Version Date: 24/05/2012

4. SELECTIONS

Performance

4.1 THERMAL PERFORMANCE
R-value: ~0.26 (as determined from NZBC H1/VM1 or H1/AS1)

Performance - Wind (design by contractor)

4.2 DESIGN PARAMETERS - NON SPECIFIC DESIGN
Building wind zone high (refer to NZS 3604, table 5.1)

Window and door system

4.3 WINDOW AND DOOR REVEALS - TIMBER
Timber species: radiata pine
Finish: paint

Finishes

4.4 ORGANIC POWDER COATING FINISH
Type: Polyester organic powder coating
System integrity: ~
Thickness: Average of 80 microns with a minimum of 50 microns
Colour: ~

4.5 FLASHINGS
Material/type: 0.55 colorsteel
Pattern: Formed to suit details provided

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Document Set ID: 2445450
Version: 1, Version Date: 24/05/2012

2.10 ACOUSTIC SEALANT
GIB Soundseal® ultra low VOC water based highly flexible acoustic sealant.

2.11 GAP FILLER
GIB® Gap Filler ultra low VOC multi-purpose acrylic flexible filler

3. EXECUTION

Conditions

3.1 STORAGE
Store GIB® plasterboard sheets and accessories in dry conditions stored indoors out of direct sunlight in neat flat stacks on either an impervious plastic sheet or clear of the floor with no sagging and avoiding damage to ends, edges and surfaces. Reject damaged material. Refer to GIB® Site Guide (Jan 2010).

3.2 LEVELS OF PLASTERBOARD FINISH
Provide the selected plasterboard surfaces to the pre decorative levels of finish specified in AS/NZS 2589.

3.3 CONFIRM LEVELS OF PLASTERBOARD FINISH ACCEPTANCE
Before commencing work, agree in writing upon the surface finish assessment procedure towards ensuring that the quality of finish expectations are reasonable and are subsequently obtained and acceptable.

Do not apply decorative treatment until it is agreed in writing by the contractor, subcontractors and decorator that the specified plasterboard Level of Finish has been achieved.

"Levels of plasterboard finish" is a tool for specifying the required quality of finish when installing and flush stopping GIB® plasterboard prior to the application of a range of decorative finishes under various lighting conditions. Refer to AS/NZS 2589.

3.4 SUBSTRATE
Do not commence work until the substrate is plumb, level and to the standard required by the sheet manufacturer's requirements. Refer to GIB® Site Guide (Jan 2010).

3.5 TIMBER FRAME MOISTURE CONTENT
Maximum allowable moisture content to AS/NZS 2589 for timber framing at lining: 18% or less for plasterboard linings. Refer to NZBC E2/AS1 and GIB® Site Guide (Jan 2010).

3.6 PROTECTION
Protect surfaces; cabinetwork, fittings, equipment and finishes already in place from the possibility of water staining and stopping damage. Refer to GIB® Site Guide.

Application

3.7 LINING WALLS AND CEILINGS GENERALLY
Form to GIB® Site Guide (Jan 2010). Ensure bulk insulation thickness shall not exceed that of the wall framing.

3.8 BOARD ORIENTATION
Minimise joints by careful sheet layout using the largest sheet sizes possible, and generally fixing horizontally. Where part sheets are required for various stud heights they should be positioned so the cut sheet is as low as possible to keep joints below eye level.

3.9 FORM WET AREA SYSTEMS
Form to GIB Aqualine® Wet Area Systems.

3.10 FORM BRACING SYSTEMS
Form to GIB® Ezybrace® Systems (June 2011).

3.11 FORM CONTROL JOINTS
Form control joints to GIB® Site Guide.

ocument Set ID: 2445450
ersion: 1, Version Date: 24/05/2012

1.7 INSPECTIONS AND ACCEPTANCE
Allow for inspection of the finished plasterboard surface:
- before applying sealer and
- before applying finish coatings or decorative papers,
so that after assessment of the type and/or angle of illumination and its effect on the completed decorative treatment, group approval and acceptance of the surface can be given.

1.8 BRACING REQUIREMENTS
Provide braced wall systems using GIB® Ezybrace® Systems (June 2011) or GIB® Ezybrace® Software (2011) to meet the requirements of NZS 3604 when tested to BRANZ Technical paper P21. Alternatively use GIB® Ezybrace® for Steel Frame Housing (NASH) Software 2011 to meet the requirements of NASH Residential and Low-Rise Steel Framing Part 1 2010 Design Criteria. Refer to drawings for location and type.

2. PRODUCTS

Materials

2.1 GIB® PLASTERBOARD
Gypsum plaster core encased in a face and backing paper formed for standard and water resistance use to AS/NZS 2588. Refer to SELECTIONS for location, type, thickness and finish.
GIB® Standard plasterboard
GIB Braceline® & GIB® Noiseline dual purpose wall bracing & noise control plasterboard

2.2 CORNICE
GIB-Cove® plasterboard cornice. Refer to SELECTIONS for profile and size.

Components

2.3 CEILING BATTENS
GIB® Rondo® metal ceiling battens, batten joiners and perimeter channel.

2.4 SCREWS
GIB® Grabber® drywall screws.

2.5 NAILS
GIB® Nails (gold passivated).
Size: 30mm, 40mm

2.6 METAL ANGLE TRIMS
GIB® galvanized steel slim angle trims.

Accessories

2.7 ADHESIVE
Timber frame and/or steel frame:
GIBFix® One ultra low VOC water based wallboard adhesive
GIBFix® All-Bond solvent based wallboard adhesive

2.8 JOINTING COMPOUND

Bedding compound:	GIB Tradeset®, GIB Lite Blue®, GIB MaxSet®, GIB ProMix® All Purpose, GIB Plus 4®
Finishing compound:	GIB ProMix® All Purpose, GIB® Trade Finish®, GIB® Trade Finish® Lite, GIB ProMix® Lite, GIB® U-Mix, GIB Plus 4®
Cove:	GIB-Cove® Bond

2.9 JOINTING TAPE
GIB® paper jointing tape.

Document Set ID: 2445450
Version: 1, Version Date: 24/05/2012

6700 PAINTING GENERAL

1. GENERAL
This section relates to the general matters related to painting work

1.1 RELATED WORK
Refer to 6711 PAINTING EXTERIOR for exterior paint systems.
Refer to 6721 PAINTING INTERIOR for interior paint systems.

1.2 ABBREVIATIONS
The following abbreviations are used throughout this part of the specification:

APAS	Australian Paint Approval Scheme
MPNZA	Master Painters New Zealand Association Inc.
VOC	Volatile organic compound

Documents

1.3 DOCUMENTS
Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

AS/NZS 2311	Guide to the painting of buildings
AS/NZS 2312	Guide to the protection of structural steel against exterior atmospheric corrosion by the use of protective coatings
OSH	Guidelines for the provision of facilities and general safety in the construction industry
OSH	Guidelines for the management of lead-based paint
MPNZA	Specification manual
MPNZA	Painters hazard handbook

Health and Safety in Employment Act 1992

Requirements

1.4 NO SUBSTITUTIONS
Substitutions are not permitted to any specified manufacturer's system, or associated components and products.

1.5 QUALIFICATIONS
Painters to be a member of MPNZA and experienced competent workers, familiar with the materials and the techniques specified.

1.6 CONTROL SAMPLES
Prepare samples of the finished work as scheduled, including preparation and colour as specified. Obtain written approval of the appearance before proceeding. Refer to SELECTIONS for requirements.

1.7 HEALTH AND SAFETY
Refer to the requirements of the Health and Safety in Employment Act and OSH: Guidelines for the provision of facilities and general safety in the construction industry. If the elimination or isolation of potential hazards is not possible then minimise hazards in this work on site by using the proper equipment and techniques as required in the MPNZA Painters hazard handbook. Supply protective clothing and equipment. Inform employees and others on site of the hazards and put in place procedures for dealing with emergencies.

Refer to OSH: Guidelines for the management of lead-based paint for the required procedures and precautions when:
- treating/removing lead-based paint
- burning off paint
- sanding off paint
- using solvent based paint removers.

ocument Set ID: 2445450
ersion: 1, Version Date: 24/05/2012

3.12 INSTALL COVES
Install to GIB-Cove® literature using GIB-Cove® Bond.

Finishing

3.13 FINISHING GENERALLY
To GIB® Site Guide (Jan 2010) and AS/NZS 2589.

Completion

3.14 REPLACE
Replace damaged sheets or elements.

3.15 CLEAN DOWN
Clean down completed surfaces to remove irregularities and finally sand down with fine paper to the sheet manufacturer's requirements, to leave completely smooth and clean.

3.16 REMOVE
Remove debris, unused materials and elements from the site.

3.17 LEAVE
Leave work to the standard required by following procedures.

Document Set ID: 2445450
Version: 1, Version Date: 24/05/2012

1.8 MATERIAL SAFETY DATA SHEET
Obtain from each paint manufacturer the material safety sheet for each product used. Keep sheets on site and comply with the required safety procedures.

Warranties

1.9 WARRANTY
Warrant this work under normal environmental and use conditions against failure.
2 years: Warranty period

Refer to the general section 1237WA WARRANTY AGREEMENT for the required format and details of when completed warranty must be submitted.

Performance

1.10 MANUFACTURER'S INSPECTION
Allow the paint manufacturers to inspect the work in progress and to take samples of their products from site if requested.

1.11 INSPECTION OF WORK
Inspection of the whole of the work at each of the stages scheduled may be made. Agree a programme that will facilitate such inspection, including notification when each part and stage of the work is ready for inspection.

2. PRODUCTS

Materials

2.1 PAINT TYPES
Use the manufacturer's complete system and only the products specified.

2.2 MATERIALS GENERALLY
Use only the Manufacturer's products which are guaranteed for their consistency and performance under ISO 9001 and APAS approval, prepared, mixed and applied as directed in the Manufacturer's specification sheets, specification manuals and product data sheets.

2.3 THINNERS AND ADDITIVES
Only use thinners or additives within the stated limits for the particular situations specified.

Accessories

2.4 FILLERS
For recommendations on; fillers, stopping, paint strippers, cleaning agents, etching solutions, mould inhibitors, rust inhibitors, knotting and other commodities used for the surface preparation, refer to the manufacturer of the specified coating.

3. EXECUTION

Conditions

3.1 EXECUTION
To conform to manufacturer's requirements and those methods, practices and techniques contained in AS/NZS 2311, the MPNZA Specification manual, and OSH Guidelines for the provision of facilities and general safety in the construction industry.

3.2 PREPARE
Prepare surfaces to the coating manufacturer's requirements.

3.3 COATED SURFACES
Ensure that substrate surfaces are able to achieve the specified finish.

ocument Set ID: 2445450
ersion: 1, Version Date: 24/05/2012

3.4 PRE-PRIMED SURFACES
Sand down any breakdown or damage of the primer to a sound surface and immediately re-prime.

3.5 BRUSH DOWN
Brush down surfaces immediately before application, to remove dust, dirt and loose material.

3.6 COMPATIBILITY
Check that materials are as required by the paint manufacturers for the particular surface and conditions of exposure, and that they are compatible with each other. Use paint from the same manufacturer for each paint system. If not compatible, obtain instructions before proceeding.

3.7 TREATED SURFACES
Where surfaces have been treated with preservatives or fire retardants, check with the treatment manufacturer that coating materials are compatible with the treatment and do not inhibit its performance. If they are not compatible, obtain instructions before proceeding.

3.8 ANCILLARY SURFACES
The coatings listed in schedules and elsewhere are of necessity simplified. Coat ancillary exposed surfaces to match similar or adjacent materials or areas, except where a fair-faced natural finish is required or items are completely prefinished. In cases of doubt obtain instructions before proceeding.

3.9 HARDWARE
Do not paint hinges or hardware that cannot be removed. If items can be removed, carefully remove hardware, fixtures and fittings before commencing work. Set aside where they cannot be damaged or misplaced and replace on completion.

3.10 PROTECTION
Use dropsheets, coverings and masking necessary to protect adjoining fixtures, fittings and spaces from paint drops, spots, spray and damage.

Preparation - unpainted and pre-primed timber and wood based products

3.11 MOISTURE CONTENT
Ensure moisture content at the time of application is near to the equilibrium moisture content pertaining to the particular locality in which the timber is used, without any excessive moisture content gradient between core and surface.

3.12 PREPARING DRESSED TIMBER
Ensure dressed timber is smooth, free from raised or woolly grain, planing burrs or other machining defects. Slightly round or ease sharp edges to ensure they can be properly coated. Sand timber to bring up to a smooth finish along the direction of the grain. Sand timber back to new condition timber that has been weathered.

3.13 PREPARING PRE-PRIMED TIMBER
Check pre-prime coat for damage, powdering, weathering or loss of adhesion. Where primer is sound, thoroughly brush along the direction of the grain to remove dust and dirt. If there is doubt, sand back and re-prime.

3.14 TIMBER SPECIES
Check that the preparation and paint system is suitable for the timber species.

3.15 PREPARING DAMAGE AND DEFECTS
Scrape clean loose or soft material holes, depressions, resin or gum pockets, knot holes, surface splits, checks, or any localised decay. Apply primer and/or sealer specified and fill these areas with linseed oil putty or other appropriate filler.

3.16 FIXINGS
Take timber fixings below the painted or clear finished surface. Leave corrosion resistant timber fixings flush with clear finished surfaces.

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Document Set ID: 2445450
Version: 1, Version Date: 24/05/2012

as necessary to remove the deposits. Wipe over with a clean absorbent cloth.

Prepare coatings which have chalked by sanding, brushing, waterblasting or other methods as appropriate.

Lightly sand glossy surfaces to ensure good adhesion of the coatings.

Preparation - painted surfaces in poor condition

3.25 PREPARING PAINTED TIMBER

Completely remove blistered, flaked, excessively chalked and cracked (due to exposed end grain and knots) paint to give a sound base for repainting. Scrape out damaged or decayed timber and where the area is extensive, arrange to cut out and replace with treated timber, primed (including end grain) before fixing.

Scrape clean loose or soft material, holes and depressions in timber due to damage or defects such as resin or gum pockets, knot holes and surface splits. Remove and replace sprung or loose corroded nails.

Where necessary strip paint back to the original timber surface, using the most appropriate of the following methods:

- burning off using a blowtorch to soften paint without charring, before scraping off with a broad knife
- using an electrically heated hot air stream to soften paint, before scraping off with a broad knife
- sanding using orbital and/or belt sanders
- paint removers used to the manufacturer's requirements
- hand scraping.

Follow OSH guidelines for minimising the hazards of stripping.

3.26 PREPARING PAINTED GYPSUM PLASTER

Remove flaked paint completely from powdery, loose and other unsatisfactory plaster surfaces. Treat powdery surfaces with a solution of 150 millilitres of concentrated phosphoric acid and clean water to make 1 litre. Apply the solution, allow to stand 10 minutes and wash down with clean water. Remove loose, weak and drummy plaster and replaster. Allow to cure before proceeding with coatings as for unpainted work.

Confirm that the cause of any efflorescence has been eliminated before wiping it away with a dry rag and making good the damaged surface.

Fill small cracks and damaged surfaces with gypsum plaster or cellulose gypsum compound to just proud of the surface and lightly sand smooth and flush when dry.

3.27 PREPARING PAINTED PLASTERBOARD AND FIBROUS PLASTER

Fill cracks, pores, irregularities and damaged surfaces with the appropriate filler to the paint manufacturer's requirements, trowelled smooth, allowed to dry and lightly sanded to a smooth flush surface. Treat any staining of paint films on plaster as required by the coating manufacturer.

Application - before applying final coatings

3.28 OFF-SITE WORK

Carry out off-site preparation and coating under cover, in a suitable environment and with adequate lighting. Store items both before and after coating in a clean, dry area, protected from the weather and mechanical damage, properly stacked and spaced to permit air circulation and to prevent sticking of surfaces.

3.29 PRIMING JOINERY

Before priming preservative treated timber ensure that any cut surfaces have been retreated. Liberally coat end grain, allow to soak in and then recoat. Ensure LOSP. treated joinery has dried sufficiently to lose odour.

ocument Set ID: 2445450
ersion: 1, Version Date: 24/05/2012

3.17 CLEANING

Remove grease and oil by wiping down with solvent or water-based degreasing agent. Remove resin by wiping down with solvent or water-based degreasing agent or heating and scraping. Remove sanding dust. Bad staining may be untreatable and require replacement of timber, discuss with paint manufacturer and main contractor.

Preparation - gypsum plaster

3.18 PREPARING GYPSUM PLASTER

Fill and sand small crevices and cracks. Surface moisture content not to exceed 12% at time of coating.

Preparation - unpainted linings

3.19 PREPARING FIBROUS PLASTER

Check for and remove release agents and other contaminants by washing with clean water or solvent and allow to dry. Fill cracks and surface imperfections with patching plaster and lightly sand smooth. Remove dust.

3.20 PREPARING PLASTERBOARD

Check that joints are prepared to a smooth level surface finish. Fill cracks and surface imperfections with the sheet manufacturer's required stopping compound and lightly sand smooth. Remove dust.

Preparation - painted surfaces generally

3.21 SURFACE PREPARATION

Refer to the Manufacturer's specification sheets and product data sheets. Carry out the preparatory work required by them for each of the substrates.

For interior surfaces such as paper faced plasterboard use the Manufacturer's recommended finishing compound as an aid to achieving a Level 5 finish.

3.22 MOULD

Sterilise surface mould by washing or sponging the whole surface with a one part sodium hypochlorite household bleach to three parts clean water solution. Allow bleach to act for 30 minutes and wash off with clean water. Wash cloths and sponges regularly in clean water. Reapplication may be necessary. Treat with anti-mould solution to the treatment manufacturer's requirements.

3.23 GAP FILLING

Fill cracks, holes, indented and damaged surfaces with putty, plaster filler, wood filler, or plastic wood, as appropriate and in accordance with the paint manufacturer's requirements. Allow to dry or set before sanding back level with the surface. Prime coat or seal the timber before using putty. Wet cement or gypsum base plasters before applying filler. Use only Portland cement base types, or water-insoluble organic-based gap fillers in exterior or wet areas.

Preparation - painted surfaces in good condition

3.24 PREPARING SURFACES

Wash down surfaces with either:
- a chlorine based solution; or
- 5-10 millilitres of ordinary household detergent to 1 litre of warm water; or
- a solution of 30 grams of trisodium phosphate to 1 litre of water

Replace solutions frequently and finally wipe over a second time with a clean absorbent cloth.

For surfaces containing heavy smoke and grease deposits, wash down with either:
- mineral turpentine; or
- a 5% solution of ammonia; or
- a 1:40 solution of sugar soap and water

Document Set ID: 2445450
Version: 1, Version Date: 24/05/2012

3.42 DEFECTIVE WORK
Correct defective work immediately and re-coat as required, following precisely the paint system specified.

3.43 EACH COAT
Each coat of paint and the completed paint system to have the following qualities and properties:
- uniform finish, colour, texture, sheen and hiding power
- the specified number of coats applied
- no blemishes such as runs, sags, crinkling, fat edges, entrained paint skins, hairs, dust, bare or starved patches, cracks, brush marks, ladder marks and blistering
- proper covering of corners, crannies, thin edges, cracks, end grain and other difficult places of application

Completion

3.44 CLEAN
Clean adjoining surfaces, glass and fittings of any paint contamination. Clean off glass indicators at completion of the building works. Clean glass inside and out to a shining finish.

3.45 CLEAN EQUIPMENT
Use the Manufacturer's environmental wash system for the cleaning of water-based paint and plasters from brushes, rollers, plastering or spray equipment to separate the solids from the water component for safe disposal.

3.46 LEAVE
Leave the whole of this work uniform in gloss and colour, of correct thickness, free from painting defects, clean and unmarked and to the standard required by following procedures.

3.47 REMOVE
Remove dropsheets, coverings and masking to leave surrounding surfaces and areas clean, tidy and undamaged. Remove debris, unused materials and elements from the site.

3.48 REPLACE HARDWARE
Replace hardware without damage to it or the adjoining surface. Leave properly fitted and in working order.

4. SELECTIONS

4.1 SELECTIONS
Refer to 6711 PAINTING EXTERIOR and 6721 PAINTING INTERIOR for selections.

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ersion: 1, Version Date: 24/05/2012

3.30 CONCEALED JOINERY SURFACES
Apply off-site coatings to all surfaces including those which will be concealed when incorporated into the building.

3.31 CONCEALED METAL SURFACES
Apply primer to suit the coating system to all metal surfaces which will be concealed when incorporated into the building.

3.32 DOORS
Prime or seal and paint all six faces of doors before hanging.

3.33 BEAD GLAZING
Before glazing apply the first two coats, or the primer and one undercoat, to rebates of stained, varnished or painted joinery and beads.

3.34 PUTTY GLAZING
Follow putty manufacturers recommendations for application, drying, and painting. Ensure that the putty is fully protected by the coating system as soon as it is sufficiently hard.

Application - generally

3.35 PAINTING GENERALLY
Comply with the paint manufacturer's requirements and any additional requirements in this specification.

3.36 MIXING
Thoroughly mix paints. Lift any settled pigment and ensure the paint is homogenous.

3.37 ENVIRONMENT
Paint exterior surfaces only in favourable weather conditions:
- warm dry days without frost or heavy dews
- avoid painting in direct sunlight any surfaces that absorb heat excessively
- as far as possible apply paint in the temperature range 15°C to 25°C
- do not paint if temperatures fall outside the range of 10°C and 35°C unless paints with the necessary temperature tolerance have been specified
- do not apply solvent borne paint if moisture is present on the surface

3.38 SEQUENCE OF OPERATIONS
Painting work to generally follow the following sequences:
- complete surface preparation before commencing painting
- apply paint in the specified sequence using the specified paint
- allow full drying time between coats to the paint manufacturer's requirements
- do not expose primers, undercoats and intermediate coats beyond manufacturers stated instructions before applying the next coat
- finish broad areas before painting trim
- ensure batch numbers of tins are matched for whole areas
- internally, paint ceilings before walls and walls before joinery, trim and other items

3.39 PAINT APPLICATIONS
Select brush, roller, or pad and apply paint to the requirements of the paint manufacturer and to obtain a smooth even coating of correct thickness, uniform gloss and colour.

3.40 DRYING TIME
Before handling or applying the next coat of paint, give each coat the full drying time as required by the paint manufacturer. Ensure that surfaces are dry and that condensation does not occur before the paint reaches surface-dry condition.

3.41 LIGHTLY SAND
Lightly sand primers, sealers, undercoats and intermediate coats to remove dust pick-up, protruding fibres and coarse particles. Remove dust immediately before applying the next coat.

Document Set ID: 2445450
Version: 1, Version Date: 24/05/2012

DESTINATION ROTORUA — ROTORUA DISTRICT COUNCIL

Processing PIM / TAR / BC / Amendment Master Checklist

Ref: CP 06
Ver: 18
Issued:09/03/2012
IT-641173
Page 1 of 6

CATEGORY	RBW	NZSFC	CONTRACTOR	INSPECTOR	INSPECTOR
2 CII	Yes	PIM/BC		Glen	Berry

PIM/BC Application No. № 69120 **Valuation No.** 06951-239-02

Owner: REID **Property File No.** 27041

Project Location: 48 SHARP ROAD

Description of Work: RECLADDING

PIM Issued: 10.4.12 **BC Issued:** 11.5.12

PIM Tracking Record:

Hazard/Caution/ Information (as noted on file)	Buildings Planning restricte					
Processing	**Referral Date (Building Services)**	**Name**	**Signature**	**Date Reviewed**	**Early Notification or PIM suspension**	
Building Services	5/4/12	A Hoffman		5/4/12	Y	(N)
Admin Assistant – Building	5/4/12	H Ferguson		5/4/12	Y	N
~~**Resource Engineer**~~					Y	N
~~**Pollution Control**~~					Y	N
~~**Development Contributions**~~					Y	N
Planning	5/4/12	L Clemens		10/4/12	Y	(N)
~~**Regulatory/Geothermal**~~					Y	N
~~**Environmental Health**~~					Y	N
~~**Recreation & Community**~~					Y	N

BC Tracking Record

	Date Reviewed	Name	Suspend Consent		Approval Signature	Date of Approval
Accessability Review			Y	N		
Building Consent	18/4/12	DLC	Y	(N)		30/4/12

Records sent to applicant and TA. Administration to complete on issue (✓ included or x NA)	Plans	✓	Supporting documentation	✓	Section 37 Notice	
	PIM	✓	Building Consent	✓	Section 36 Notice	
Name H Ferguson	Signature			Date	11/5/12	

RRD001RPLU

Document Number: RDC-264465

Date Registered: 24/5/2012

Received by Customer Services
04 APR 2012
Received by Building Services
Date 4.4.12

PIM ENDORSEMENTS

300	a	[b]	c	d	e	g	h	i	j	k	l	**340**	a	b	c	f									
	f											**342**	a	b	c	f								
302	a	b	c	d	e	g	h	i	j	k	l	**344**	[a]	b	c	d	e	g	h	i	j	k	l	m
	m	n	o	p	q	r	s	t	[u]	v	w1		n	o	p	q	r	s	t	u	v	w		f
	w2	w3	x	y	[z]	f						**346**	(a)	f										
304	a	b	c	f								**348**	a	(b)	c	d	e	g	h	i	j	k	l	m
306	a	b	c	d	e	g	h	i	j	k	l		n	o	p	q	r	s	t	u	v	w	x	y
	m	n	o	f									z	f										
308	a	b	c	d	e	f						**350**	a	b	c	d	e	g	f					
312	a	b	c	d	e	g	h	i	j	k	l	**352**	a	b	c	f								
	m	n	o	p	q	f						**354**	a	b	c	f								
314	a	b	c	c1	c2	d	d1	e	g	h	i	**356**	a	b	c	d	e	g	h	f				
	j	k	l	m	f							**358**	a	b	c	d	f							
316	a	b	c	c1	c2	d	e	g	h	i	j	**360**	a	b	c	d	f							
	k	f										**362**	a	f										
318	a	b	c	d	e	g	h	i	j	k	f	**364**	a	f										
320	a	b	c	c1	c2	d1	d2	e	g	h	i	**366**	a	b	c	d	f							
	j	f										**368**	a	b	f									
322	a	b	f									**370**	a	b	f									
324	a	b	c	d	e	g	h	i	j	k	f	**372**	a	b	f									
330	a	b	c	d	f							**374**	a	b	f									
336	a	b	f									**376**	a	a1	b	c	d	f						
338	a	b	c	d	e	g	h	l	j	f														

BUILDING SECTION Please record any thing that may be relevant to the processing Building Officer		
PLANNING SECTION (Section 37 Notice) Please record considerations and reasons for decisions		
Zone Rural A		
Any notified plan changes / proposed Designations relevant? (*check RDC web site)*	Y	(N)
Any relevant Planning Land Features that may impact on whether planning consent require.	Y	(N)
Check all Planning PIM standard statements-(Circle any relevant) *special zoning provisions SP / Scheduled site / Building on uncompleted subdivision / Development / Road widening / Appendix A sites / Service lanes / Special Height controls (airport, Maori Villages) / Airport noise / height issues / reserve contribution required for permitted activity / Hazardous substances / Contamination etc*		
Proposal may affect Marae (*can be on an adjacent site) (Liaise with Director Kaupapa Maori*) Outcome.....		
The proposal requires resource consent or other planning consent **(early notification if yes)**	Y	(N)
No resource consent or other planning consent is required for the proposal (•) The proposal is a permitted activity and enough info is provided to demonstrate all relevant performance standards are met, site plan sighted, height and day lighting planes checked, all required parking and turning, reserve contribution needs to be picked up for permitted activities etc • Existing use rights apply *(why)*..... • Proposal in accordance with designation..... • Other reason.....		

The proposal requires resource consent under Rule / s..... of the Operative District Plan (*note the rules and reasons why consent required)*

Resource consent has been applied for on..... The consent number is.....

The planner processing the application is .....

The proposal is in accordance with Resource Consent numbered RC..... Which was granted on .....

Please ensure you are familiar with any consent conditions and ensure all are complied with.

The proposal is not in accordance with Resource Consent numbered RC..... Provide details of conditions not met and info required. **(early notification)**	Y	N

The proposal requires outline plan approval as the site is designated for the purpose of .....

There is insufficient information with the application to determine whether resource consent is required of otherwise. The following information is required. **(early notification)**

.....

.....

.....

.....

The proposal may affect an historic place *(let Building know ASAP for section 39 notification)* The site is listed in Appendix A of the District Plan. Number.....The site is registered NZHPT, site.....	Y	N

Free Text

Further Information Reviewed *(record what was supplied, how compliance demonstrated and outcome)*

Name	Signature	Date

RESOURCE ENGINEER Please record considerations and reasons for decisions

Further Information Reviewed *(record what was supplied, how compliance demonstrated and outcome)*

Name	Signature	Date

ENGINEERING POLLUTION CONTROL Please record considerations and reasons for decisions

	Circle	
Grease trap required	Y	N

Further Information Reviewed *(record what was supplied, how compliance demonstrated and outcome)*

Name	Signature	Date

ENGINEERING (Development Contribution Notice) Please record considerations and reasons for decisions

	Circle	
Development contribution applies **(early notification)**	Y	N
Copy of Development contribution notice attached **(early notification)**	Y	N

GEOTHERMAL Please record considerations and reasons for decisions

ENVIRONMENTAL HEALTH Please record considerations and reasons for decisions

Officers will contact the applicant to complete Health application and information booklet	Y	N

RECREATION AND COMMUNITY Please record considerations and reasons for decisions		
The applicant requires the approval of the Parks and Recreational Manager to carry out works proposed in the vicinity of Council vegetation.	Y	N
The applicant requires the approval of the Parks and Recreational Manager to shift / replace Council vegetation that will be effected by the proposal. The applicant shall pay / carry out compensation / remedial work as instructed	Y	N

Building Consent Processing Section:
Building Consent Endorsements / Conditions:

Conditions:-

Inspections:

400 see over page

Additional BA Conditions **Important Endorsements**

401 a b 402 [a] b c d e g h i j k l

C d f m n o oa ob p q r s t u

v w x [y]

Compliance Schedule SS and CS systems

403 a (b) c d f

ss1 ss2 ss3/1 ss3/2 ss3/3 ss4 ss5 ss6 ss7 ss8/1

ss8/2 ss8/3 ss9/1 ss9/2 ss10 ss11 ss12 ss13/1 ss13/2 ss13/3 ss14/1

ss14/2 ss15/1 ss15/2 ss15/3 ss15/4 ss15/5 ss16

cs1 cs2 cs3 cs4 cs5 cs6 cs7 cs8/1 cs8/2 cs8/3 cs9

cs10 cs11 cs12 cs13 cs14 cs15 cs16

12

Attachments

404 (a) (b) c d f

Restricted Building Work

405 car bri roo ext fou f

FREE TEXT: PIM 69120

Site Inspection Calculation / Conditions and Fees Sheet

PROCESSING	TIME ALLOCATED	TIME TAKEN (Quantity)		TOTALS in Dollars
Processing Hrs INSPECTOR				1180.00
Processing Fees Paid				600.00
SUB TOTAL				1200
Further information	3/4			120.00
TOTAL PROCESSING COST				

400 INSPECTIONS (Circle correct letter)	Guide Only – Dependent On Complexity & Size Of Project.		No of Inspections	No of ¼ HR Increments
a. Siting, Footings, Foundations	3	0.75		
a. Retaining Walls	2/3	0.5 – 0.75		
b. Subfloor Bracing &Fixing	2	0.5		
c. Pre-floor P&D	2	0.5		
d. Concrete Floor Building	2	0.5		
e. Pre-Wrap <200-<300->etc	3	0.75–1.0–1.25		
g. Wrap Only	2	0.5		
(g.) Wrap/Cavity Battens	3	0.75 (1)	3	4
h. ½ High Brick	2	0.5		
i. Bond Beams (One Block- full basement)	2	0.5 – 0.75		
j. Precast Concrete Work	2	0.5		
k. Pre Plaster	3	0.75		
l. Solar water heater	2	0.50		
m. Preline Building	3	0.75		
n. Preline P&D	2	0.5		
o. Wet Areas/Tanking/Basements	2	0.5		
(p.) Postline (Addition – New Dwelling)	2	0.5 – 0.75 (2)	3	4
q. Sanitary & Stormwater Drainage (Alteration / New Conn – New Dwelling)	2	0.5 – 0.75		
r. Enclosed Decks – membrane roofs/gutters	2	0.5		
s. Disconnection drainage	2	0.5		
t. Swimming Pools (Pool fencing)	2	0.5		
u.a. Solid Fuel Heater	2	0.5		
u.b In Built Solid Fuel Heater				
(v.) Final Inspection (add time for paper work for minor consents ¼ hr)	4/5	1.0-1.25 (3)	3	4
w Combined inspections	Complete free text on sheet 5			
x Trade waste				NC
f Free text	Complete free text on sheet 5			
Building officer desk top review (allow 5 min each allocated inspection, dwellings/ commercial only				4
CCC Assessment (not required for garages, carports and minor works)				2
Other				
TOTAL NUMBER OF INSPECTIONS (12)	42 x 40.00 =			1680.00
Plus Travel	12 x 40.00			480.00
TOTAL INSPECTION COST				2160.00
RECORD NUMBER OF INSPECTION AND BUILDING CATEGORY ON SITE SUMMARY SHEET (Circle to right)				**Completed**

Allan Hoffman

From: Allan Hoffman
Sent: Thursday, 19 April 2012 10:39 a.m.
To: 'Jason Douglas'
Subject: 48 Sharp Road BC 69120
Attachments: SKMBT_C353 12041908450.pdf

Hi Jason

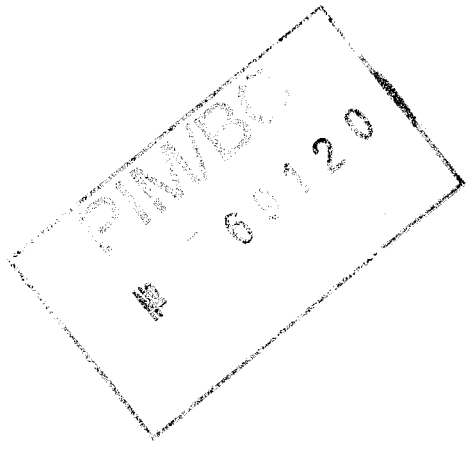
1) Can you look at the two attached plans and mark all bracing onto the new version, I cannot find any bracing calcs within Council so I am to assume it can be checked on site but due to not having all existing braces indicated on your plan the onsite builder may miss it.

2) A kick out flashing detailneeds to be shown/included where a roof ends within in a wall
provided to new page A10 rev b

3) Are the new windows to be double glazed? if not please provide the reason why not
new double glazed joinery

4) I cannot see anywhere on page A4 where a strip drain is to be used but the strip drain detail supplied will not meet the Linear manufacturers generic details, please have Manufacturers approve this detail in writing. (2/A6)
strip drain is now better than the detail included in E2/AS1 page 56.

5) Can a proposed building programme be provided, this will allow a better evaluation of inspections (and associated fees) e.g. down stairs wall east & south, then moving onto north and west before finally moving to first floor all walls.
proposal recieved by builder he suggested that 10-12 inspections are required.



Allan Hoffman

From: Dylan Batenburg [dylan@millarch.co.nz]
Sent: Monday, 30 April 2012 8:41 a.m.
To: Allan Hoffman
Subject: RE: 48 Sharp Road BC 69120
Attachments: Working Drawings 26.04 rev B.pdf

Hi Mate,

I hope we have better luck with this one.

Cheers

Dylan

Fr Allan Hoffman [mailto:Allan.Hoffman@rdc.govt.nz]
Sent: Monday, 30 April 2012 7:58 a.m.
To: Dylan Batenburg
Subject: RE: 48 Sharp Road BC 69120

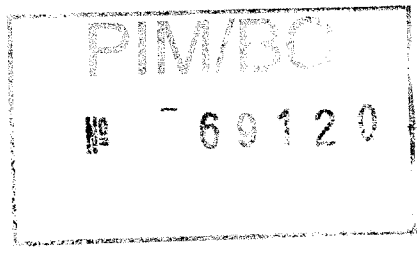
Hi Dylan

Sorry mate I cant open your PDF document?

Allan

From: Dylan Batenburg [mailto:dylan@millarch.co.nz]
Sent: Thursday, 26 April 2012 10:07 a.m.
To: Allan Hoffman
Cc: jason@millarch.co.nz; 'Roland Tissink'
Subject: RE: 48 Sharp Road BC 69120

Hi A[redacted]n,



Please see attached, amended plans.

1. All braces as per original plan shown on plan, **A2/A3**
2. Kick out flashing detail added, **A10**
3. Windows to be double glazed, noted in scope of works **A2/A3** and on elevations **A6**
4. Strip drain detail modified to better represent E2 detail, figure 17b, note that weatherboards are timber not linear.
5. Building programme to be provided by project manager (Roland Tissink), I will advise Roland.

Any further information please do not hesitate to get in touch with Jason, Roland or myself. Please add plan printing charge to consent fee.

Regards

Dylan

Doc Id: 2445449
Version: 1, Version Date: 24/05/2012

From: Jason Douglas [mailto:jason@millarch.co.nz]
Sent: Thursday, 19 April 2012 3:05 p.m.
To: dylan@millarch.co.nz
Subject: FW: 48 Sharp Road BC 69120

From: Allan Hoffman [mailto:Allan.Hoffman@rdc.govt.nz]
Sent: Thursday, 19 April 2012 10:39 a.m.
To: Jason Douglas
Subject: 48 Sharp Road BC 69120

Hi Jason

1) Can you look at the two attached plans and mark all bracing onto the new version, I cannot find any bracing calcs within Council so I am to assume it can be checked on site but due to not having all existing braces indicated on your plan the onsite builder may miss it.

2) A kick out flashing detailneeds to be shown/included where a roof ends within in a wall

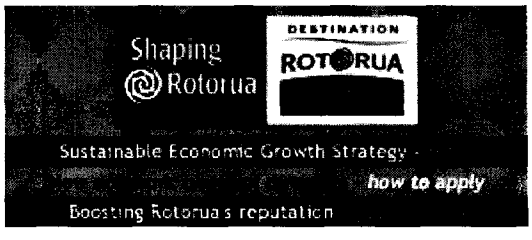
3) Are the new windows to be double glazed? if not please provide the reason why not

4) I cannot see anywhere on page A4 where a strip drain is to be used but the strip drain detail supplied will not meet the Linear manufacturers generic details, please have Manufacturers approve this detail in writing. (2/A6)

5) Can a proposed building programme be provided, this will allow a better evaluation of inspections (and associated fees) e.g. down stairs wall east & south, then moving onto north and west before finally moving to first floor all walls.



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P27041

Allan Hoffman

From: Roland Tissink [tissbuild@xtra.co.nz]
Sent: Monday, 30 April 2012 8:38 a.m.
To: Allan Hoffman; dylan@millarch.co.nz
Subject: FW: 48 Sharp Road BC 69120
Attachments: SKMBT_C353 12041908450.pdf



Hi Allan

Re: 48 Sharp Rd BC69120

Additional info required - Response to Q5- Building program

We intend to scaffold the entire building and cover with shrink-wrap for all weather/dry working conditions. This should allow demolishing the existing solid plaster cladding and assessing any water ingress and / or damage to the structure as necessary. We will work from the top storey one wall at a time down to lower section also one wall at a time, and temporary cover as we go, and then install the building wrap etc and construct cavity, new window joinery and weatherboards.

Building inspections would be required for virtually every elevation. As the project is quite involved and keeping in the mind that the house is still in use and needs to be keep secure and dry throughout the construction period. So I would think that at least 10 – 12 inspections would be needed. Maybe this would be better to work out the inspections as we go on an hourly basis.

Best Regards
Roland Tissink

TISSINK BUILDERS LTD
Registered Master Builders

2009 Master Builders National New homes winner(Category 450-650K)
2009 Master Builders Rotorua Supreme winner

p: **0274830353**
h: **07-3323061**
f: **07-3323062**
e: tissbuild@xtra.co.nz
w: www.tissink.co.nz

-----Original Message-----
From: Dylan Batenburg [mailto:dylan@millarch.co.nz]
Sent: 26 April 2012 10:09 a.m.
To: 'Roland Tissink'
Cc: jason@millarch.co.nz
Subject: FW: 48 Sharp Road BC 69120

Hi Roland,

Can you please provide information as requested on point 5, and forward to Allan at RDC

Cheers

Dylan

From: Jason Douglas [mailto:jason@millarch.co.nz]
Sent: Thursday, 19 April 2012 3:05 p.m.
To: dylan@millarch.co.nz
Subject: FW: 48 Sharp Road BC 69120

From: Allan Hoffman [mailto:Allan.Hoffman@rdc.govt.nz]
Sent: Thursday, 19 April 2012 10:39 a.m.
To: Jason Douglas
Subject: 48 Sharp Road BC 69120

Hi Jason

1) Can you look at the two attached plans and mark all bracing onto the new version, I cannot find any bracing calcs within Council so I am to assume it can be checked on site but due to not having all existing braces indicated on your plan the onsite builder may miss it.

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DESTINATION ROTORUA	**Amendment Processing Checklist**	Ref: CP 14 Ver: 03 Issued: 22 June 2011 RDC-50895 Page 1 of 4

For amendments involving the replacement of a cladding system, or the addition or removal of a specified system or component (fire etc) then use an applicable processing checklist

PROCESSING CHECKLIST

Processor Name: A Hoffman | **Building Consent No.** 69120

Proposed Intended Use

	Building Act				**Comments/ reason for decision**
1	PIM issues triggered by this amendment?	(P)	F	N/A	None issued 10/4/12
2	Sec 36 - Has a Development Contribution Notice been attached to the PIM?	(P)	F	N/A	no sent to Engineers
3	Sec 37 –Notice issued?.	(P)	F	N/A	Permitted activity
4	Sec 67 - Is the building consent subject to a waiver or modification? *If so provide explanation for basis, & advise Chief Executive, Dept. of Building & Housing.*	P	F	(N/A)	to code compliant buildings
5	Sec 84 – LBP's listed for Restricted building Work?	(P)	F	N/A	on DBH list for design
6	Sec 269 - Does the application involve any certified building methods or products?	(P)	F	N/A	yes timber cladding
7	Sec 363 COPU required as part of the building consent? • Means of escape • Accessability • Construction and demolition hazards • Specified systems	P	F	(N/A)	private dwelling only being reclad
8	If this is an alteration, have records been checked to reconcile proposal against existing?	(P)	F	N/A	checked PIM
9	Complete checklist for alteration/ removal or installation of any specified system	P	F	(N/A)	Domestic Dwelling

Consideration, decisions and reasons for these where a checklist is not applicable (*start with reason why checklist not applicable*)

code clauses considered B1, B2, E2

B1 RFI due to comparing original brace layout to that proposed brace. Emailed him the request to duplicate this requirement

{B2} Products that are to be used are
{E2} all Plant approved to meet both of

Document Set ID: 2445449
Version: 1, Version Date: 24/05/2012

these code clauses.

have completed various sections of the habitable building checklist in relation to proposed work.

new windows are to be placed into existing openings, so all new installation details are as per new EE, WANZ WK requirements

H1 has been raised but not requiring any as per section 121 existing building

Producer Statements
Acceptance Guidelines 1. PS will be accepted from approved persons recognised as having appropriate technical competence / qualifications / experience / history within their specific discipline. 2. The author's competence will directly relate to the scope of work covered by their statement. If author's acceptability cannot be determined then the statement & all necessary documentation required to determine competence shall be peer reviewed by an approved contractor.

Circle Statement Type: PS 1 – Design PS 2 – Design Review			Comments:			
Circle Category:	PSI	CALCS	SPECS	DRAWINGS	PS2	Producer Statements formatted as below
Structural						
Other						

Document Set ID: 2445449
Version: 1, Version Date: 24/05/2012

Producer Statements;
A Producer Statement requires the following as a minimum requirement to be accepted by the Rotorua District Council:

- ☐ A written statement
- ☐ Header with 'Producer Statement'
- ☐ Who is issuing the Producer Statement (suitably qualified and author of Producer Statement)
- ☐ The Producer Statement must be addressed for the attention of the Rotorua District Council
- ☐ Who has completed or designed the work identified (qualifications to undertake the work required)?
- ☐ The product name and specifications for application of product used (where applicable)
- ☐ What parts/clauses of the Building Code the work relates to
- ☐ Full legal description of the site where the work will be undertaken
- ☐ Clearly identifying what part of the building consent work is covered by the Producer Statement
- ☐ Provide the sum of Provisional Indemnity Insurance held
- ☐ The author's name and signature
- ☐ Qualifications
- ☐ Address
- ☐ Registration Number
- ☐ Membership of Professional Organisation
- ☐ Date the Producer Statement was produced.

Technical Literature Criteria

1. Rotorua District Council will accept technical literature in assessing compliance with the Building Code. Technical literature includes, but is not limited to:
   - Buildable truss plans and associated documentation
   - Appraisal certificates
   - Proprietary product certificates (Solid Fuel Heater, Tanking, Plaster Systems etc.)
   - Certificates for alarm/sprinkler systems
2. Technical literature requires the following as a minimum to be accepted by the Rotorua District Council:

- ☐ Who has issued the technical literature
- ☐ Product name
- ☐ Address of property where work undertaken
- ☐ Description of application (where applicable)
- ☐ Date
- ☐ Name and signature
- ☐ Registration/license number (where applicable)
- ☐ Address of author

Alternative Solutions

- Alternative solutions involving structural, geotechnical, fire, weather tight, acoustic, HVAC, energy efficiency and fire design will be peer reviewed by a contractor/specialist
- Before finalizing a decision of whether to accept or refuse an alternative solution the processor will obtain a peer review from their Team Leader/Technical Leader
- In making a decision, the Building Officer may give consideration to (but is not limited to) comparison with acceptable solutions, other documents, standards, best practice guides, publications, expert opinion, determinations, in-service history, product certification – compliance with Building Code objectives. Consideration may also be given to industry guidance provided in BRANZ Bulletin #456 (Dec 2004

Document Set ID: 2445449
Version: 1, Version Date: 24/05/2012

Notes on Alternative Solutions/ Acceptance of Producer Statement and/or Technical Literature (Reasons for Your Decision to Accept from a particular author):

Exterior Cladding					**Comments/ reason for decision**
78	Risk matrix assessed	(P)	F	N/A	linear cavity up to 20
79	Type of cladding/ claddings	(P)	F	N/A	" " " "
80	Building wrap specified appropriate & compatible with cladding.(*air barrier*) *Refer E2, Table 23.*	(P)	F	N/A	shown on plans not needing to be of Ar barrie
81	Construction details for the drained cavity system	(P)	F	N/A	all linear details included from manufacture-
82	Have drainage paths been considered?	(P)	F	N/A	↳
83	Flashing details provided for window & door openings	(P)	F	N/A	
84	Internal and external corner details are provided	(P)	F	N/A	
85	Junctions between differing claddings are detailed	(P)	F	N/A	roof and membrane decks to remain as before
86	Have parapets/enclosed deck barrier junctions/flashings been detailed?	P	F	(N/A)	no parapets
87	Construction/movement/shrinkage joints been detailed relevant to cladding	P	F	(N/A)	not required for linear
88	Wall/soffit junctions	(P)	F	N/A	As to E2 (AS1
89	Brick ties, lintels & shelf angle size and treatment	P	F	(N/A)	no bricks
90	Are all fixings relevant for bracing & or corrosion zone?	(P)	F	N/A	all fixings have been assumed to meet Manufacture
91	Timber profiles have appropriate weather grooves	(P)	F	N/A	back corners/ sill plates
92	All plaster/coating systems are a complete and approved system (*endorse BC to ensure statement provided on completion*)	P	F	(N/A)	no plaste systems
Enclosed decks					**Comments/ reason for decision**
93	Timber treatment, grade, size span & spacing (*2 kpa*)	P	F	N/A	no change to
94	Substrate and falls	P	F	N/A	existing deck
95	Threshold/ upstand details	P	F	N/A	has been shown
96	Stormwater drainage & overflow relief	P	F	N/A	within documentation
97	Membrane/ tanking type and traffic protection				↓
98	Flashing details for the barrier/wall junction	P	F	N/A	

The following listed and attached checklists have been completed to support justification for issuing the building consent	

GRANTING BUILDING CONSENT

Sign the application form to grant the building consent once satisfied on reasonable grounds that if the building work was to be constructed in accordance with the approved documents, then compliance with the Building Code will be met.

Document Set ID: 2445449
Version: 1, Version Date: 24/05/2012

DESTINATION ROTORUA

ROTORUA DISTRICT COUNCIL

Rotorua District Council
1061 Haupapa Street
Private Bag 3029
Rotorua Mail Centre
Rotorua 3046
New Zealand
P: 07 348 4199
F: 07 346 3143
E: mail@rdc.govt.nz
W: www.rdc.govt.nz

10 APR 2012

File Ref: P27041
Building Consent No: 69120

LEWIS, MR PETER ALLEN
PO BOX 242
ROTORUA 3040

Dear Sir/Madam

PROJECT INFORMATION MEMORANDUM NO: 69120

Address of Project: **48 SHARP ROAD**

Please find enclosed your Project Information Memorandum.

Your Project Information Memorandum (PIM) conditions are usually related to land use issues and council utilities, i.e., sewer, water, storm-water, roading, etc, and also issues related to the Resource Management Act and the District Plans. It does not refer to structural or Building Code issues (these are addressed in your Building Consent).

You will need to meet all the conditions of your PIM before starting your building work.

Please note:

"Your Project Information Memorandum is not a 'Building Consent' and is not an authority to commence building work."

That authority is contained within the conditions of the Building Consent.

Should you have trouble understanding any of the conditions of your PIM then you should phone Council on (07) 348 4199 and ask to speak with the relevant division of Council (i.e. Planning, Engineering, Health etc) and seek clarification from them.

Yours faithfully

D Holder
Building Services Manager

Encl.

Document Set ID: 2445449
Version: 1, Version Date: 24/05/2012

ROTORUA PARTNER SHAPING ROTORUA

DESTINATION ROTORUA

ROTORUA DISTRICT COUNCIL

Project Information Memorandum No: 69120

Section 34, Building Act 2004
Received: 04 Apr 2012
Issued: 10 Apr 2012

Rotorua District Council
1061 Haupapa Street
Private Bag 3029
Rotorua Mail Centre
Rotorua 3046
New Zealand
P: 07 348 4199
F: 07 346 3143
E: mail@rdc.govt.nz
W: www.rdc.govt.nz

Agent
LEWIS, MR PETER ALLEN
PO BOX 242
ROTORUA 3040

Owner
REID, MR MICHAEL JAMES
C/O ATTN: MR LEWIS
PO BOX 242
ROTORUA 3040

Site Information

Property ID:	P27041
Street Address:	48 SHARP ROAD
Valuation number	06951 239 02
Legal Description::	Lot 2 DPS71633

Project Information

Project is for	RE CLAD EXISTING DWELLING
Intended Use	DWELLING (DETACHED)
Intended life:	Indefinite but not less than 50 years
Value of Work:	350,000

Conditions.....

PROJECT INFORMATION MEMORANDUM STATUS

SUBJECT TO THE BUILDING CONSENT BEING ISSUED
The proposed building work may be undertaken, subject to the provisions of the Building Act 2004, and any endorsement of the Building Consent.

SPECIAL FEATURES OF LAND

EARTHQUAKE ZONE 2
The proposed building work is to be sited on land which Council has identified as being Earthquake Zone 2.

EXPOSURE ZONE B
Building elements will be required to be of specific design if within 50mtrs of a bore, steam vent, mud pool or other fume source.

INFORMATION REQUIRED FOR BUILDING CONSENT BUILDING SERVICES

NZ BUILDING CODE
Sufficient details to clearly show how the building work is to comply with the New Zealand Building Code are required. (The use of the Rotorua District Council check list may assist you.)

PERMITTED ACTIVITY

ROTORUA DISTRICT PLAN
The proposed building work is a Permitted Activity under the Rotorua District Plan. No Resource Consent is required.

Document Set ID: 2445449
Version: 1, Version Date: 24/05/2012

ROTORUA PARTNER SHAPING ROTORUA

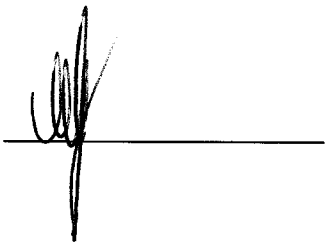
PERFORMANCE STANDARDS

RURAL A
The activity is permitted subject to compliance with the performance standards and requirements of the Rural A zone.

Signed for and on behalf of the Council:

Name: Ann Kelly

Position: Building Services Administration

Signed: 

Date: 10 APR 2012

Document Set ID: 2445449
Version: 1, Version Date: 24/05/2012

DESTINATION
ROTORUA
ROTORUA DISTRICT COUNCIL

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W: www.rdc.govt.nz

11 MAY 2012

LEWIS, MR PETER ALLEN
PO BOX 242
ROTORUA 3040

File Ref: P27041
Building Consent No: 69120

Dear Sir/Madam,

BUILDING CONSENT

Address of Project: 48 SHARP ROAD

Please find enclosed your Building Consent and its relevant Plans and Specifications.

You should take time to read the Conditions that are attached to your Building Consent and Plans, including the stamps on those plans.

Your should also be aware that in some instances although you have received your Building Consent, there may still be outstanding issues regarding land use, etc. You will need to finalise these before you undertake any building work.

However, if you have received your Resource Consent (if required), your Project Information Memorandum and have satisfied all the Conditions set out in those documents, then you are free to start your building work.

Remember, you need to arrange for all the inspections that have been estimated and are listed as Conditions to your Building Consent. You will need to give Council a minimum of 48 hours notice of requiring an inspection. Remember also that you or your agent/builder, etc, needs to also attend and/or be on site for any inspection.

"Please remember also to quote your Building Consent No. 69120 when making any inspection bookings." The direct dial number for inspections is 3495646.

We wish you well with your project and look forward to working alongside you to achieve a satisfactory completion of your project.

Please feel free to phone Council's Building Services should you require further information.

Yours faithfully

D.Holder
Building Services Manager

Document Set ID: 2445449
Version: 1, Version Date: 24/05/2012

ROTORUA PARTNER
SHAPING ROTORUA

DESTINATION
ROTORUA
ROTORUA DISTRICT COUNCIL

Rotorua District Council
1061 Haupapa Street
Private Bag 3029
Rotorua Mail Centre
Rotorua 3046
New Zealand
P: 07 348 4199
F: 07 346 3143
E: mail@rdc.govt.nz
W: www.rdc.govt.nz

Building Consent No: 69120

Section 51, Building Act 2004
Issued: 11 May 2012

Agent
LEWIS, MR PETER ALLEN
PO BOX 242
ROTORUA 3040

Owner
REID, MR MICHAEL JAMES
C/O ATTN: MR LEWIS
PO BOX 242
ROTORUA 3040

The Building

Property ID:	P27041
Street Address:	48 SHARP ROAD
Valuation number:	06951 239 02
Legal Description:	Lot 2 DPS71633

First point of contact for communications with council building consent authority:
RDC Building Services – Direct Dial 349 5646

Building Work

The following building work is authorised by this consent:

Project is for:	RE CLAD EXISTING DWELLING
Intended Use:	DWELLING (DETACHED)
Intended Life:	Indefinite but not less than 50 years

This building consent is issued under section 51 of the Building Act 2004. This building consent does not relieve the owner of the building (or proposed building) of any duty or responsibility under any other Act relating to or affecting the building (or proposed building).

This building consent also does not permit the construction, alteration, demolition, or removal of the building (or proposed building) if that construction, alteration, demolition, or removal would be in breach of any other Act.

This Building Consent Is Subject To The Following Conditions:

Inspections By Building Consent Authority (Phone Building Services 3495646 To Book Inspections)

Wrap/Cavity Battens (all battens, back and kick-out flashings etc installed, wrap sealed and restrained, window support bars).

Postline - (all bracing elements and or fire linings/collars installed prior to any plastering completed).

Final Inspection when all building work is complete

ROTORUA PARTNER SHAPING ROTORUA

Document Set ID: 2445449
Version: 1, Version Date: 24/05/2012

Important Endorsements

Section 52 Building Act 2004 (Lapse of Building Consent)
A Building Consent lapses and is of no effect if the building work to which it relates does not commence within 12 months of the date of issue unless prior arrangements are made with the Building Consent Authority.

Completion Of Work
At completion of work authorised by this consent the Building Act requires you to apply for a Code of Compliance Certificate (use Form 6) as soon as practicable after the Building work is completed.

Compliance Schedule

A Compliance Schedule is not required for the building

Attachments

Copies of the following documents are attached to this building consent:-

Project Information Memorandum No 69120

During consent processing Council estimates the number and type of inspections required to complete a project.
Should additional inspections be required to confirm compliance with the approved Building Consent/Building Code, Council reserves the right to seek payment for these prior to the issue of Code Compliance Certificate.

Signed for and on behalf of the Council:

Name: Helen Ferguson Position: Building Services Administration.

Signed: _____ Date: 11 MAY 2012

Document Set ID: 2445449
Version: 1, Version Date: 24/05/2012

RDC-238683

LAKES COAST CLUSTER GROUP

Form 2 APPLICATION FOR PROJECT INFORMATION MEMORANDUM AND/OR BUILDING CONSENT

Section 33 or 45, Building Act 2004

P270+1

PIM No - 6912

1. THE BUILDING [If item is not applicable put N/A in the space]

Street address of building: 48 SHARP ROAD HAMURANA.

[If no street address – details of nearest intersection]

Legal description of land where building is located: Lot 2 DP 71633

Site area: ____ m² Sec ____ Block ____

Building name: DWELLING. Valuation No: 06951-239-02

Location of building within site/block number: [Include nearest street access]

Number of levels: [Above & below ground] 2 Level/Unit No:

Floor area: 340 (sq m) [Indicate area affected by the building work]

Current, lawfully established, use: DWELLING Year First Constructed:

[Add no. of occupants per level and per use if more than 1]

OFFICE USE ONLY:

Consent/PIM Number:

Compliance Schedule No:

Date received:

Received
4 APR 2012
Rotorua District Council
Customer Centre

2. OWNER

Name of Owner: Michael James Reid

Contact person: Peter Hewis

Mailing address: Box 242 Rotorua

Street address/registered office: 1108 Pukaki Street Rotorua

Phone No: Landline:

Mobile: Daytime:

After hours: Facsimile:

Email:

Website

THE FOLLOWING EVIDENCE OF OWNERSHIP IS ATTACHED:

- ☐ Certificate of Title
- ☐ Lease Agreement
- ☐ Agreement for Sale and Purchase
- ☐ Other document

3. AGENT [Only required if application is being made on behalf of the owner]

Name of Agent: Peter Allen Lewis

Contact person: Peter Allen Lewis

Mailing address: Box 242 Rotorua

Street address/registered office: 1108 Pukaki Street Rotorua

Phone No: Landline: 3495758

Mobile: Daytime:

After hours: Facsimile: 3478150

Email: peter@wgl.co.nz

Website

Relationship to owner: [State details of the authorisation from the owner to make the application on the owner's behalf] Solicitor.

FIRST POINT OF CONTACT for communications with the Council / Building Consent Authority: ☐ Owner ☐ Agent

Or: (if different to above details) Name: Roland Tissink Email: tissbuild@xtra.co.nz

Mailing Address: 11 Sharp Rd RD6 Rotorua 3096 Phone: 027 483 0353 Facsimile: —

To be completed in lieu of Authorisation Letter

I, ____ as the owner of the above property, authorise ____ to act as my agent. Signature ____ Date ____

Document Set ID: 2445449
Version: 1, Version Date: 24/05/2012

4. APPLICATION (Tick if applicable)

I request that you issue a (for the building work described in this application)

- ☐ Project Information Memorandum (PIM)
- ☑ Project Information Memorandum (PIM) and Building Consent
- ☐ Building Consent The existing PIM No [if applicable] is: _____
- ☐ Amendment to an existing Building Consent. The existing BC No is: _____

State the reference number if this application involves a National Multiple Use Approval: _____

Name: Peter Lewis Signature: _____ Date: 4 April 2012.

If you do not want information contained in this application to be made available for purposes of marketing please tick the box ☐

The signature is that of the ☐ Owner OR the ☐ Agent on behalf of and with the approval of the Owner

5. THE PROJECT

DESCRIPTION OF BUILDING WORK: (Provide sufficient information below to enable scope of work to be fully understood)

RE-CLAD EXISTING DWELLING.

Current use of building: DWELLING. [e.g. home, implement shed, office]

Will the building work result in a change of use of the building? ☐ Yes ☑ No If Yes, provide details of the new use of the building:

Intended life of the building if less than 50 years: _____ [Years]

List Building Consents previously issued for this project (if any): _____

Estimated value of the building work on which the building levy will be calculated (including goods and services tax):

$ 350K. [State estimated value as defined in section 7 of the Building Act 2004]

6. RESTRICTED BUILDING WORK [residential building work affecting structure or weathertightness]

Will the building work include any restricted work? ☑ Yes ☐ No

If Yes, provide the following details of all licensed building practitioners who will be involved in carrying out or supervising the restricted building work *(If these details are unknown at the time of the application, they must be supplied before the building work begins)*:

Name	Licensing Class (designers, carpenters, roofers, bricklayers and blocklayers, external plasterers, foundations)	Licensing Building Practitioner Number (or registration number if treated as being licensed under section 291 of the Building Act 2004)
JASON DOUGLAS	DESIGN	BP 112208

Note: Continue on another page if necessary

7. PROJECT INFORMATION MEMORANDUM [Do not fill in this section if the application is for a building consent only]

The following matters are involved in the project: [Tick the matters relevant to the project]

- ☐ Subdivision
- ☐ Alterations to land contours [e.g. digging out the site for a building platform]
- ☐ New or altered connections to public utilities [e.g. Council sewer, stormwater or water mains]
- ☐ New or altered locations and/or external dimensions of buildings
- ☐ New or altered access for vehicles
- ☐ Building work over or adjacent to any road or public place
- ☐ Disposal of stormwater and wastewater
- ☐ Building work over any existing drains or sewers or in close proximity to wells or water mains
- ☐ Other matters known to the applicant that may require authorisations from the Territorial Authority: [Specify]

Document Set ID: 2445449
Version: 1, Version Date: 24/05/2012

8. BUILDING CONSENT

The following plans and specifications are attached to this application:

PLANS A1-A12, SPECIFICATION.

THE BUILDING WORK WILL COMPLY WITH THE BUILDING CODE AS FOLLOWS:

Building Code Clause *Tick relevant clauses*	Means of Compliance *Tick relevant compliance path(s) for each clause selected*				
	Acceptable Solution	NZS 4121 Accessible Design	Verification Method	Alternative Solution [Supporting documents listed below]	Waiver/ Modification [Supporting documents listed below]
☑ B1 Structure	☐ AS1NZS1170 ☑ B1/AS ☑ NZS3604 ☐ NZS4229 ☐ Other		☐ B1/VM1 ☐ Other	☐	☐
☑ B2 Durability	☑ B2/AS1		☐ B2/VM1	☐	☐
☐ C1-4 Fire Safety Clauses	☐ C/AS1		☐ C/VM1	☐	☐
☐ D1 Access routes	☐ D1/AS1	☐		☐	☐
☐ D2 Mechanical installation for access	☐ D2/AS1 ☐ D2/AS2 ☐ D2/AS3	☐		☐	☐
☐ E1 Surface water	☐ E1/AS1 ☐ AS3500		☐ E1/VM1	☐	☐
☑ E2 External moisture	☑ E2/AS1 ☐ E2/AS2 ☐ SED ☐ E2/AS3		☐ E2/VM1	☐	☐
☐ E3 Internal moisture	☐ E3/AS1 ☐ Other			☐	☐
☐ F1 Hazardous agents on site	☐ F1/AS1		☐ F1/VM1	☐	☐
☐ F2 Hazardous building materials	☐ F2/AS1			☐	☐
☐ F3 Hazardous substances and processes	☐ F3/AS1		☐ F3/VM1	☐	☐
☐ F4 Safety from falling	☐ F4/AS1			☐	☐
☑ F5 Construction and demolition hazards	☑ F5/AS1			☐	☐
☐ F6 Visibility in escape routes	☐ F6/AS1			☐	☐
☑ F7 Warning systems	☑ F7/AS1			☐	☐
☐ F8 Signs	☐ F8/AS1	☐		☐	☐
☐ G1 Personal hygiene	☐ G1/AS1	☐		☐	☐
☐ G2 Laundering	☐ G2/AS1	☐		☐	☐
☐ G3 Food preparation and prevention of contamination	☐ G3/AS1	☐		☐	☐
☐ G4 Ventilation	☐ G4/AS1		☐ G4/VM1	☐	☐
☐ G5 Interior environment	☐ G5/AS1	☐		☐	☐
☐ G6 Airborne impact sound	☐ G6/AS1		☐ G6/VM1	☐	☐
☐ G7 Natural light	☐ G7/AS1		☐ G7/VM1	☐	☐
☐ G8 Artificial light	☐ G8/AS1		☐ G8/VM1	☐	☐
☐ G9 Electricity	☐ G9/AS1		☐ G9/VM1	☐	☐
☐ G10 Piped services	☐ G10/AS1		☐ G10/VM1	☐	☐
☐ G11 Gas as an energy source	☐ G11/AS1			☐	☐
☐ G12 Water supplies	☐ G12/AS1 ☐ G12/AS2		☐ G12/VM1	☐	☐
☐ G13 Foul water	☐ G13/AS1 ☐ G13/AS2 ☐ AS3500 ☐ G13/AS3		☐ G13/VM1 ☐ G13/VM4	☐	☐
☐ G14 Industrial liquid waste	☐ G14/AS1		☐ G14/VM1	☐	☐
☐ G15 Solid waste	☐ G15/AS1			☐	☐
☐ H1 Energy efficiency	☐ H1/AS1		☐ H1/VM1	☐	☐

Document Set ID: 2445449
Version: 1, Version Date: 24/05/2012

9. WAIVER/MODIFICATION TO NZ BUILDING CODE REQUIRED FOR FOLLOWING PARTS OF CODE:

Supporting documentation attached as follows [please list]:

_____

_____

_____

_____

10. COMPLIANCE SCHEDULE

The specified systems for the building are as follows: [specified systems are defined in regulations]

Any system installed from below to be accompanied by procedures for inspection and routine maintenance. [***Council to vet and verify in first column.***] There are no specified systems in the building ☑		COUNCIL	Applicant to complete: Existing	New	Altered	Added	Removed
Specified Systems Prescribed by Building Act 2004 Compliance Schedule Handbook 25 May 2007							
ss1	Automatic systems for fire suppression	☐	☐	☐	☐	☐	☐
ss2	Automatic or manual emergency warning systems for fire or other dangers (other than a warning system for fire that is entirely within a household unit and services only that unit)	☐	☐	☐	☐	☐	☐
ss3	Electromagnetic or automatic doors and windows						
	ss3/1 Automatic doors	☐	☐	☐	☐	☐	☐
	ss3 Access controlled doors	☐	☐	☐	☐	☐	☐
	ss3/3 Interfaced fire or smoke doors or windows	☐	☐	☐	☐	☐	☐
ss4	Emergency lighting systems	☐	☐	☐	☐	☐	☐
ss5	Escape route pressurisation systems	☐	☐	☐	☐	☐	☐
ss6	Riser mains for use by fire services	☐	☐	☐	☐	☐	☐
ss7	Automatic back-flow preventers connected to a potable water supply	☐	☐	☐	☐	☐	☐
ss8	Lifts, escalators, travelators, or other systems for moving people or goods within buildings						
	ss8/1 Passenger carrying lifts	☐	☐	☐	☐	☐	☐
	ss8/2 Services lifts	☐	☐	☐	☐	☐	☐
	ss8/3 Escalators and moving walks	☐	☐	☐	☐	☐	☐
ss9	Mechanical ventilation or air conditioning systems	☐	☐	☐	☐	☐	☐
ss10	Building maintenance units providing access to exterior and interior walls of buildings	☐	☐	☐	☐	☐	☐
ss11	Laboratory fume cupboards	☐	☐	☐	☐	☐	☐
ss12	Audio loops or other assistive listening systems						
	ss12/1 Audio loops	☐	☐	☐	☐	☐	☐
	ss12/2 FM radio frequency systems and infrared beam transmission systems	☐	☐	☐	☐	☐	☐
ss13	Smoke control systems						
	ss13/1 Mechanical smoke control	☐	☐	☐	☐	☐	☐
	ss13/2 Natural smoke control	☐	☐	☐	☐	☐	☐
	ss13/3 Smoke curtains	☐	☐	☐	☐	☐	☐
ss14	Emergency power systems for a system or feature specified in any of specified systems 1-13	☐	☐	☐	☐	☐	☐
	ss14/1 Emergency power systems	☐	☐	☐	☐	☐	☐
	ss14/2 Signs in relation to any specified systems 1-13	☐	☐	☐	☐	☐	☐

Document Set ID: 2445449
Version: 1, Version Date: 24/05/2012

COMPLIANCE SCHEDULE *[Continued]*

		COUNCIL	Applicant to complete: Existing	New	Altered	Added	Removed
ss15	Other fire safety systems or features						
*	ss15/1 Systems for communicating spoken information intended to facilitate evacuation	☐	☐	☐	☐	☐	☐
*	ss15/2 Final exits	☐	☐	☐	☐	☐	☐
*	ss15/3 Fire separations	☐	☐	☐	☐	☐	☐
*	ss15/4 Signs for communicating information intended to facilitate evacuation	☐	☐	☐	☐	☐	☐
*	Ss15/5 Smoke separations	☐	☐	☐	☐	☐	☐
ss16	Cable cars	☐	☐	☐	☐	☐	☐

*Only include where one or more of ss1-6, 9 or 13 are included.

11. ATTACHMENTS

The following documents are attached to this application: [Tick as applicable]

- ☑ Plans and specifications (list) A1-A12, SPECIFICATION.
- ☐ Memoranda from licensed building practitioner(s) who carried out or supervised any design work that is restricted building work
- ☐ Project Information Memorandum
- ☐ Development contribution notice
- ☐ Certificate attached to Project Information Memorandum
- ☐ Other information relevant to this application: [Please specify]: _____

12. CONTACTS (involved in this project)

DESIGNER:
Name: MILLENNIUM ARCHITECTURE
Address: 2 BENN RD, LAKE OKAREKA
Email: dylan@mill
Telephone: 3628775 Reg No: _____

ENGINEER:
Name: _____
Address: _____
Email: _____
Telephone: _____ Reg No: _____

BUILDER:
Name: Tissink Builders Ltd.
Address: 11 Snap Rd. RD6 ROTORUA
Email: tissbuild@xtra.co.nz.
Telephone: 0274830353 Reg No: _____

GAS FITTER:
Name: _____
Address: _____
Email: _____
Telephone: _____ Reg No: _____

DRAINLAYER:
Name: _____
Address: _____
Email: _____
Telephone: _____ Reg No: _____

PLUMBER:
Name: _____
Address: _____
Email: _____
Telephone: _____ Reg No: _____

ELECTRICIAN:
Name: _____
Address: _____
Email: _____
Telephone: _____ Reg No: _____

OTHER:
Name: _____
Address: _____
Email: _____
Telephone: _____ Reg No: _____

Document Set ID: 2445449
Version: 1, Version Date: 24/05/2012

COUNCIL USE ONLY

ESTIMATED TOTAL VALUE OF WORK

$ 350 000 GST inclusive Project floor area 340 . - m²

FEE PAYABLE

Consent deposit		
Project Information Memorandum	$ 206	✓
Building Administration	$ 152	✓
Technical Processing	$ 600	✓
Inspection Fee	$	
Industry Levy (DBH)	$ 703.50	✓
Industry Levy (BRANZ)	$ 350.00	✓
Development Contribution		
	$	
	$	
Certificate of Title	$ 15	✓
Producer Statements	$	
Compliance Schedules	$	
Rural Number	$	
Vehicle Crossing	$	
Street Damage	$	
Water Connection	$	
Sewer Connection	$	
Other(s)	$	
Total consent deposit	$ 973.00	
Inspections	$ 2160.00	✓
Processing		
Peer Review		
~~NZFS~~ photo copying	12.00	✓
Total balance payable	$ 3225.50	
Lodgement deposit	$ 973 -	
Date paid	4/4/12	
Receipt No.	2012.265640	
Consent fee balance	$	
Date paid		
Receipt No.		

PIM/BC
№ 89120

Granted by A Hoffman

Signature

Date 30-4-12

Issued by H Ferguson

Signature

Date 11/5/12

Please complete
Forward any refunds or further invoices to:

Cat 11 Okay [illegible] 4/4/12

Document Set ID: 2445449
Version: 1, Version Date: 24/05/2012

LAKES COAST CLUSTER GROUP

Form 2A

Memorandum from licensed building practitioner: Certificate of design work

PIM/RC
69121

Section 30C or section 45, Building Act 2004

THE BUILDING

Street address of building: 48 SHARP ROAD
HAMURANA

THE OWNER

Name: MR M. REID
Address: 48 SHARP RD
ROTORUA
Phone : 3322322 or Mobile:
Email: reidmj13@truemail.co.th Fax:

IDENTIFICATION OF DESIGN WORK THAT IS RESTRICTED BUILDING WORK

I carried out or supervised the following design work that is restricted building work:

Design work that is restricted building work	Description	Carried out/ supervised	Reference to plans and specifications
[Tick]	*[If appropriate, provide details of the restricted building work]*	*[Specify whether you carried out this design work or supervised someone else carrying out this design work]*	*[If appropriate, specify references]*
Primary structure			
Foundations and subfloor framing ☒		☒ Carried out ☒ Supervised	
Walls ☒		☒ Carried out ☒ Supervised	
Roof ☒		☒ Carried out ☒ Supervised	
Columns and beams ☒		☒ Carried out ☒ Supervised	

Document Set ID: 2445449
Version: 1, Version Date: 24/05/2012

Primary structure cont'd				
Bracing	☑	REPLACE HARDI-BACKER WITH PLY/GIB. SYSTEM.	☑ Carried out ☑ Supervised	
Other	☒		☒ Carried out ☑ Supervised	
External moisture management systems				
Damp proofing	☒		☑ Carried out ☒ Supervised	
Roof cladding or roof cladding system	☒		☒ Carried out ☑ Supervised	
Ventilation system for example, subfloor or cavity)	☒		☒ Carried out ☑ Supervised	
Wall classing or wall cladding system	☑		☑ Carried out ☑ Supervised	
Waterproofing	☒		☒ Carried out ☒ Supervised	
Other	☒		☒ Carried out ☑ Supervised	
Fire safety systems				
Emergency warning systems, evacuation and fire service operation systems, suppression or control systems, or other	☒		☑ Carried out ☑ Supervised	

Note: The design of fire safety systems is only restricted building work when it involves small to medium apartment buildings as defined by the Building (Definition of Restricted Building Work) Order 2011.

Note: continue on another page if necessary.

Are waivers or modifications of the building code required? ☐ Yes ☑ No

If Yes, provide details of the waivers or modifications below:

Clause *[List relevant clause numbers of building code]*	**Waiver/modification required** *[Specify nature of waiver or modification of building code]*

Note: continue on another page if necessary.

Document Set ID: 2445449
Version: 1, Version Date: 24/05/2012

ISSUED BY:

Name: JASON DOUGLAS

LBP or registration number: BP 112208

The practitioner is a: ☑ Design LBP ☐ Registered architect

☐ Chartered professional engineer

Mailing address: 2 BENN ROAD

ROTORUA

Street address or registered office:

Phone No: Landline: 3628775 Mobile: 021356723

Daytime: After hours:

Fax:

Email address: jason@millarch.co.nz Website: millarch.co.nz

DECLARATION

I JASON DOUGLAS *[name of practitioner]*

certify that the design work that is restricted building work recorded on this form:

(a) complies with the building code; or

(b) complies with the building code subject to any waiver or modification of the building code recorded on this form.

Signature:

Date: 2/4/12

Document Set ID: 2445449
Version: 1, Version Date: 24/05/2012

Peter Lewis

From: Michael J. Reid [reidmj13@truemail.co.th]
Sent: Tuesday, 3 April 2012 12:22 p.m.
To: Peter Lewis
Subject: Re: REID Building Consent

PIM/BC
No 69120

Dear Peter,

Thank you for your email.

Please sign. I have told my bank that this expense is on its way so they are well aware. The contract can be signed and perhaps I can visit New Zealand by October. Please would you tell your colleague Murray McKechnie that I am having these awful problems with my home and cannot travel to New Zealand for several months until the repairs have been completed. Earlier, I had mentioned May 22nd, but this is now out of the question.

Kind regards,
Michael

Sent from my iPad

On 3 Apr 2012, at 04:48, "Peter Lewis" <Peter@mql.co.nz> wrote:

> Good morning Michael
>
> I am happy to sign this on your behalf but I need your confirmation to go ahead.
>
> Kind regards
>
> Pete Lewis
> DDI: 07-3495758
>
> The information contained in this document is legally privileged and confidential and is intended for the addressee only. If you are not the addressee, you are hereby notified the use or dissemination of this information and the copying of this document is strictly prohibited. If you are not the addressee, please notify us immediately by replying to this message. Thank you.
>
> **From:** Roland Tissink [mailto:tissbuild@xtra.co.nz]
> **Sent:** Friday, 30 March 2012 8:27 a.m.
> **To:** Peter Lewis; Michael J. Reid
> **Subject:** REID Building Consent
>
> Hi Michael & Peter
>
> The working drawings are now complete (attached) and ready to be submitted for building consent. Peter; are you able to sign the building consent form as Michael's agent? I can meet with you anytime that suits. let me know.
>
> At the moment the round columns in the front of the house will remain as they are. There a number of options if you wish to change, we could include the handrail balustrade to the top balcony which is in desperate need of repair/replacement.
>
> I suggest the driveway levels around the carport area be altered to suit the new ground clearances, I have spoken to your landscaper about this and seems to be the most logical solution.

Document Set ID: 2445449
Version: 1, Version Date: 24/05/2012

COMPUTER FREEHOLD REGISTER
UNDER LAND TRANSFER ACT 1952

Search Copy

R.W. Muir
Registrar-General
of Land

Identifier	**SA57C/387**
Land Registration District	**South Auckland**
Date Issued	20 November 1995

Prior References
SA54C/697

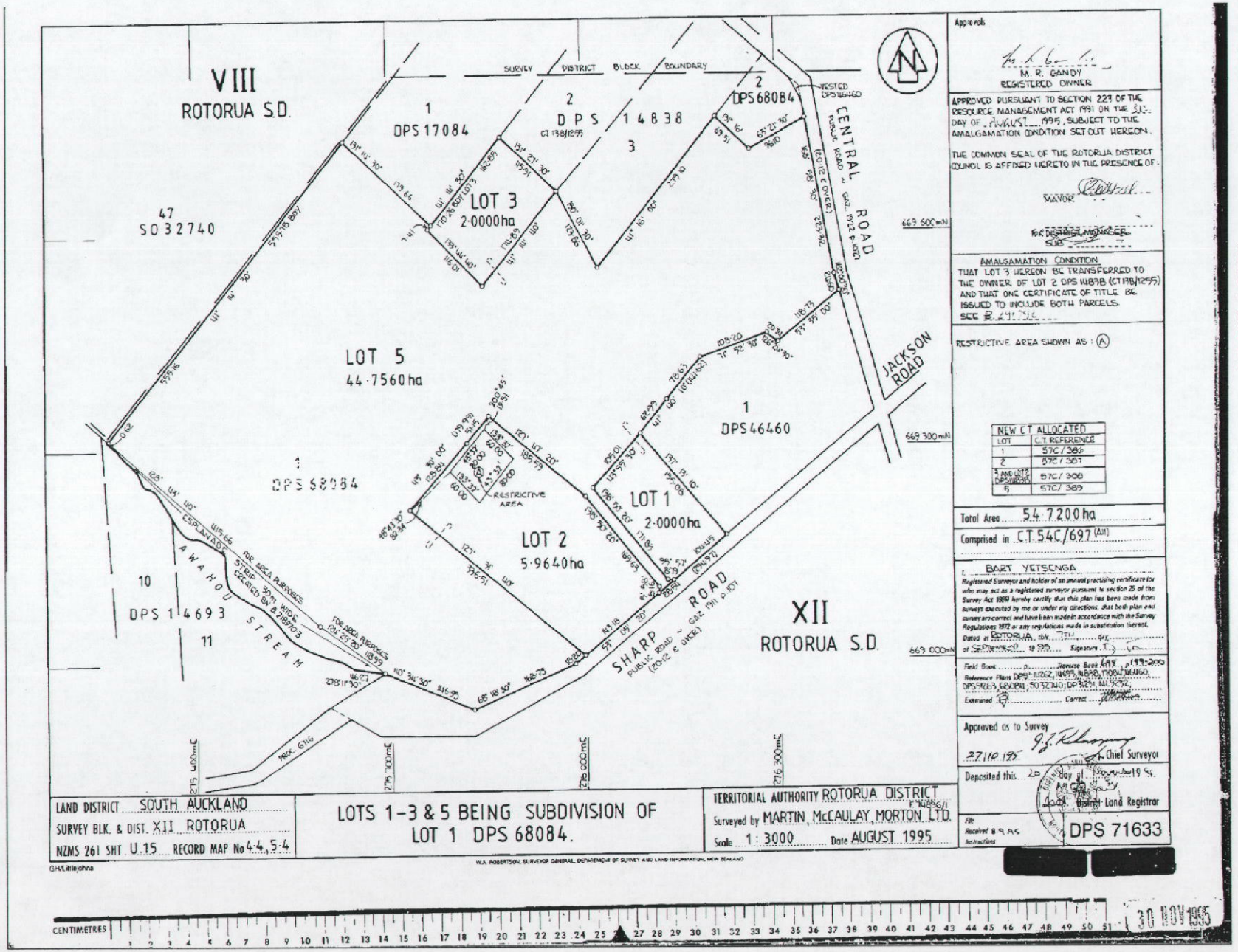
Estate	Fee Simple
Area	5.9640 hectares more or less
Legal Description	Lot 2 Deposited Plan South Auckland 71633

Proprietors
Michael James Reid

Interests
B309362.2 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 20.11.1995 at 2.10 pm
Land Covenant in Transfer B363444.3 - 26.8.1996 at 9.04 am

Document Set ID: 2445449
Version: 1, Version Date: 24/05/2012

Transaction Id
Client Reference 41-10-10-0720



Search Copy Dated 5/04/12 7:57 am, Page 2 of 2
Register Only

Document Set ID: 2445449
Version: 1, Version Date: 24/05/2012

Rotorua District Council Services Plan

Generated on: 4/04/2012 1:56:47 p.m.

Rating Parcel
06951*239*02*

Certificate of Title:
SA57C/387

Legal Parcel

7062/6 - LOT 2 DPS 71633 - P27041
48 SHARP ROAD

PIM/BC 60120

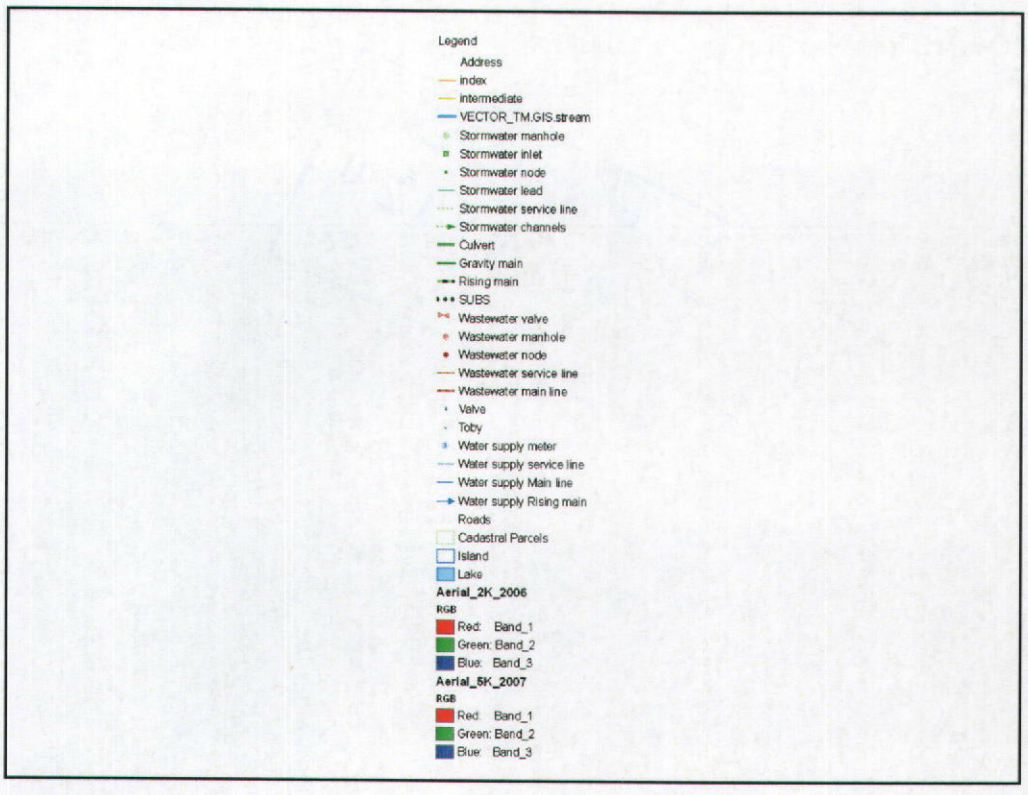


Caution: This plan is for the purpose of indicating RDC assets of water, sewerage and stormwater services only. It is not to be used as a site plan for building purposes.
All services are indicated in good faith, however additional services may have been installed that do not appear on this plan.
Position measurements are subject to reasonable tolerances and depth of cover may have changed after installation. Service locations were not recorded relative to one another and display is indicative only. Verify locations prior to excavating with machinery. A Road Opening Notice is required for excavation work within the road reserve.
All valves, hydrants and manholes must be kept clear and accessible at all times. Failure to do so may affect Council or Fire Service response for maintenance or emergency purposes.
Warning: Check for other underground services.
Refer to disclaimer in the LIM document for further data limitations.

Scale: 1:2500

0 25 50 75 100 125
Meters

Document Set ID: 2445449
Version: 1, Version Date: 24/05/2012



Document Set ID: 2445449
Version: 1, Version Date: 24/05/2012

DESTINATION ROTORUA — ROTORUA DISTRICT COUNCIL

Habitable Building Vetting Checklist

For initial completion by the applicant

PIM/BC #69120

Ref: CV 01
Ver:9
Issued 28 Feb 2012
RDC-66524
Page 1 of 3

Copies Rqd	ADMINISTRATION CHECKLIST *To be completed by Customer Service Centre*	Complete
2	Geyserview printout (contour plan) checked with Applicant for Correctness	✓
1	Green PIM/BC Master cover has been completed	✓
1	Site Inspection Card completed	✓
1	Applicant Inspection card complete	✓
1	Form 6 (Application for Code Compliance Certificate) attached to Applicant Inspection Card	✓
	Form 2 administratively complete and front cover signed appropriately	✓

Document	Description	Applicant to Complete		Plan/ Spec No.	RDC USE ONLY		
Address	48 SHARP RD HAMURANA	S	N/A	N/A	P	F	N/A
Building Consent Application Form 2 completed and signed		S	N/A	N/A	P	F	N/A
If this project involves "restricted building work" has the design been carried out by a Licensed Designer?		Y	N		P	F	N/A
If this project is "restricted building work" has Form 2A (Certificate of Design Work) been provided?		Y	N		P	F	N/A
Have all Licensed Building Practitioner's been identified?		Y	N		P	F	N/A
Documents							
Please refer to RDC website "How do I apply for a building Consent" if you are not sure how to complete this document or don't know what to provide.							
	Two sets of plans specifications, reports, calculations, producer statements etc	S	N/A		P	F	N/A
	All plans drawn to clearly to recognize metric scale (no pencil or red ink)	S	N/A		P	F	N/A
	Separate A3 (minimum size) floor plan for works >10k	S	N/A		P	F	N/A
	Current certificate of title no more than 6 months old	S	N/A		P	F	N/A
	Has site assessment of soil conditions been provided to 3604:2011?	S	N/A		P	F	N/A
	To what standard has this building been designed?	S	N/A	2011	P	F	N/A
	Show how wind zone was determined	S	N/A		P	F	N/A
	Bracing calculations	S	N/A		P	F	N/A
	E2 Risk Matrix for each elevation	S	N/A		P	F	N/A
	H1 Assessment (calculation method)	S	N/A		P	F	N/A
	Buildable truss layout	S	N/A		P	F	N/A
	Bracing fixings	S	N/A	A5	P	F	N/A
	Specific design calculations and producer statement	S	N/A		P	F	N/A
	Tanking specifications and appraisal certificates (e.g. wet area showers, membrane roofing, basements)	S	N/A		P	F	N/A
	Exterior cladding specification	S	N/A		P	F	N/A
	Job specific specifications (non generic)	S	N/A		P	F	N/A
	Has calculation for wind zone been provided?	S	N/A		P	F	N/A
	To what standard has this building been designed?	S	N/A	2011.	P	F	N/A
Site Plan (Recommended Scale 1:100 1:200 1:500 1:1000)							
	Distances to boundaries indicated for proposed work	S	N/A	A1.	P	F	N/A
	Accurate site plan showing street name, boundary dimensions and north point	S	N/A	A1	P	F	N/A
	Locations of all existing / proposed buildings, distances between them and any existing services	S	N/A	A1.	P	F	N/A

Document Set ID: 2445449
Version: 1, Version Date: 24/05/2012

	Alterations to land contours (cut and fill)	S	N/A		P	F	N/A
	Easements and public drains	S	N/A		P	F	N/A
	New SS and stormwater drainage (inc gradients, inspection points, vents and drain sizes)	S	N/A		P	F	N/A
	Invert levels for drainage lateral	S	N/A		P	F	N/A
	Finished floor level (datum)	S	N/A		P	F	N/A
	Contours provided	S	N/A		P	F	N/A
	Vehicle Crossing	S	N/A	A1	P	F	N/A
	Overhead power lines in relation to building		N/A				
Floor Plans (Recommended Scale 1:20 1:50 1:100)							
	Dimensions of proposed building work	S	N/A	A2/A3	P	F	N/A
	Contain all walls, doors and fixtures for each room	S	N/A	A2/A3	P	F	N/A
	Bracing layout with unique identifier	S	N/A		P	F	N/A
	Indication of use of rooms	S	N/A	A2/A3	P	F	N/A
	Dimensions of windows and doors	S	N/A	A2/A3	P	F	N/A
	Lintel sizes and grade (MSG)	S	N/A		P	F	N/A
	Plumbing fixtures	S	N/A	A2/A3	P	F	N/A
	Ventilation to enclosed spaces (e.g. laundry in cupboard, enclosed toilet etc)	S	N/A		P	F	N/A
	Surface finishes to wet areas (walls and floor to laundry, kitchen and bathroom)	S	N/A		P	F	N/A
	Smoke alarm(s) location	S	N/A	A2/A3	P	F	N/A
Elevations (Recommended Scale 1:20 1:50 1:100)							
	Cladding types clearly indicated and their locations	S	N/A	A6/A7	P	F	N/A
	Windows (safety windows where appropriate)	S	N/A		P	F	N/A
	Roof (roofing material)	S	N/A		P	F	N/A
	Day lighting angles indicated	S	N/A		P	F	N/A
	Ground levels at building and boundary	S	N/A		P	F	N/A
	Roof pitch and material	S	N/A		P	F	N/A
Pile Plan (Recommended Scale 1:20 1:50 1:100)		S	N/A		P	F	N/A
	Location and type of piles	S	N/A		P	F	N/A
	Subfloor bracing calculations	S	N/A		P	F	N/A
	Foundation sizes and concrete strength	S	N/A		P	F	N/A
	Connection details, types and centers	S	N/A		P	F	N/A
	Anchor or brace piles (sub floor bracing for decks at more than 2m from the building	S	N/A		P	F	N/A
	Treatments (including MSG where appropriate)	S	N/A		P	F	N/A
Timber Floor (Recommended Scale 1:20 1:50 1:100)							
	Joists and bearers including connections and spacing	S	N/A		P	F	N/A
	Size, treatments and grading (e.g. MSG 8)	S	N/A		P	F	N/A
	Flooring material and thickness	S	N/A		P	F	N/A
	Insulation and enclosing of perimeter	S	N/A		P	F	N/A
	Ventilation of subfloor space	S	N/A		P	F	N/A
	Access to subfloor space	S	N/A		P	F	N/A
Slab Foundation (Recommended Scale 1:20 1:50 1:100)							
	Size and depth of foundations	S	N/A		P	F	N/A
	Reinforcing and concrete strength	S	N/A		P	F	N/A
	Floor thickness and any thickenings	S	N/A		P	F	N/A
	Construction joints/ saw cuts	S	N/A		P	F	N/A

Document Set ID: 2445449
Version: 1, Version Date: 24/05/2012

	DPM and fill	S	N/A		P	F	N/A
Blockwork (Recommended Scale 1:20 1:50 1:100)							
	SED/ NZS 3604 or 4229	S	N/A		P	F	N/A
	Reinforcing and concrete strength	S	N/A		P	F	N/A
	Control joints	S	N/A		P	F	N/A
Cross Section Walls (Recommended Scale 1:20 1:50 1:100)							
	Stud sizes, centers and height	S	N/A		P	F	N/A
	Timber treatment and grading (e.g. MSG 8)	S	N/A		P	F	N/A
	Bottom plate fixings	S	N/A		P	F	N/A
	Top plate to stud fixings relevant to wind zone	S	N/A		P	F	N/A
	Cavity construction details	S	N/A		P	F	N/A
Roof (Recommended Scale 1:20 1:50 1:100)							
	Roof material and underlay	S	N/A		P	F	N/A
	Truss fixings and centers	S	N/A		P	F	N/A
	Formed roof construction details including sizes, centers	S	N/A		P	F	N/A
	Purlin fixings (relevant to wind zone) and centers	S	N/A		P	F	N/A
	Space or plane bracing	S	N/A		P	F	N/A
	Ceiling batten sizing and spacing	S	N/A		P	F	N/A
	Timber treatment and grading (e.g. MSG 8)	S	N/A		P	F	N/A
Stormwater (Recommended Scale 1:20 1:50 1:100)							
	On-site disposal (soak hole size & depth)	S	N/A		P	F	N/A
	Internal/ external gutter sizing and details	S	N/A		P	F	N/A
	Down pipe sizing and spacing (calculation?)	S	N/A		P	F	N/A
Flashings/ wrap/ envelope penetrations (Recommended Scale 1:20 1:50 1:100)							
	Barge, ridge, hip and valley	S	N/A		P	F	N/A
	External and internal corners	S	N/A	A8	P	F	N/A
	Junctions between differing claddings detailed	S	N/A		P	F	N/A
	Wrap details and restraints	S	N/A	A8-A10	P	F	N/A
	Window and door wrap/ flashing details (head, sill, jamb)	S	N/A	A9	P	F	N/A
Plumbing and Drainage (Recommended Scale 1:20 1:50 1:100)							
	Drain gradients sizing and venting	S	N/A		P	F	N/A
	Inspection bends, junctions etc	S	N/A		P	F	N/A
	Waste gradients sizing and venting	S	N/A		P	F	N/A
	Overflow relief gully	S	N/A		P	F	N/A
	Specifications for hot water heating system	S	N/A		P	F	N/A
Fire Walls (within 1m of boundary)							
	Design for fire wall	S	N/A		P	F	N/A
On Site Effluent							
	EBOP discharge approval granted or using an EBOP approved effluent disposal system	S	N/A		P	F	N/A
	Environment Waikato TP58 form completed or an advanced effluent disposal system specified	S	N/A		P	F	N/A
Other Vetting Checklists Completed							
		S	N/A		P	F	N/A

RDC

S = Supplied (2 copies) P = Pass

N/A = Not Applicable F = Not supplied – further information required N/A= Not Applicable

Document Set ID: 2445449
Version: 1, Version Date: 24/05/2012

FILE 06951/229.02

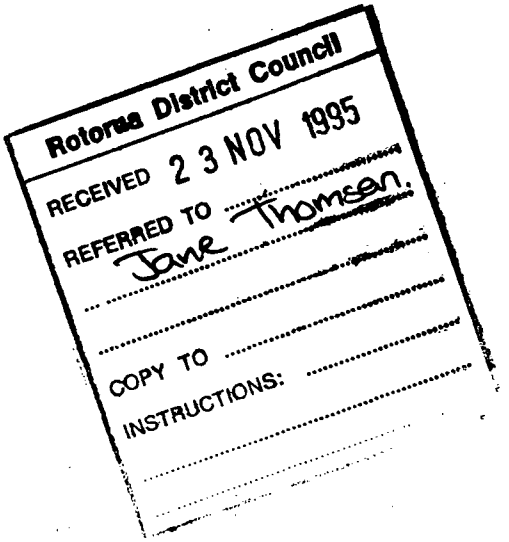
65-94-054 6526015

3068

P12012

LAND TITLES OFFICE

In reply please quote
S.71633



Department of Survey & Land Information
Te Puna Korero Whenua

South Auckland Land Titles Office
Westpac House
Cnr Victoria and Alma Streets
Private Bag 3049
DX GX 10069
Hamilton
Phone 0-7-838 2959
Fax 0-7-834 1965

22 November 1995

District Executive Officer
Rotorua District Council
DX JP 30031
ROTORUA

Dear Sir

Plan Number S.71633 lodged on behalf of MR Candy was deposited on 20th November 1995.

LAND - CT 54C/697
Lots 1-3 and 5 being a subdivision of Lot 1 DPS.68084.

Yours faithfully

K Lockhart
for DISTRICT LAND REGISTRAR

Document Set ID: 1966600
Version: 1, Version Date: 25/05/2010

RESOURCE CONSENT MONITORING REPORT

DATE: 13 September 2023 File Ref: 6206208
Doc No: RDC-1109161

FROM: GRAZIELLA CAFATSAKIS, RESOURCE MANAGEMENT COMPLIANCE OFFICER
TO: CHRIS CRAIG, TEAM LEADER

SUBJECT: RESOURCE CONSENT MONITORING REPORT RC8006

This report relates to the inspection of the following resource consent to ascertain if the conditions of consent are being complied with:

Consent No:	RC8006	**Property File No(s):**	P27041
Monitoring No:	993		
Consent Holder:	MR MICHAEL JAMES REID		
Agent:	J HODGES CONSTRUCTION LIMITED		
Type of Consent:	LAND USE CONSENT - NON COMPLYING		
Activity:	CONVERT GARAGE INTO SUBSIDIARY HOUSEHOLD UNIT UNDER 40M2		
Location of Activity:	48 SHARP ROAD		
Legal Description(s):	LOT 2 DPS71633		
Decision date:	04 DEC 2006		
Lapsing date:	03 DEC 2011		
Planner:			
Document Ref:	OW-74551 DECISON IT-628906 PLANNERS REPORT D-237092 SCANNED DECN/PLANS		

At the time of the inspection all of the conditions of consent were being complied with as outlined in the attached documentation.

RECOMMENDATION:

It is recommended that a Planning Compliance Certificate (PCC) be issued as required by condition 1 and sent to the consent holder (copy attached).

Further that the monitoring database be updated to indicate a PCC has been issued and at this time no further inspections are deemed necessary.

Graziella Cafatsakis Date: 10/03/21
Resource Management Compliance Officer

Document Set ID: 1782394
Version: 2, Version Date: 10/03/2021

Document Set ID: 1782394
Version: 2, Version Date: 10/03/2021

13 September 2023

File no: 6206208
Doc no: RDC-1109157
Enquiries to: **Kurt Williams**

C/O HOLLAND BECKETT
PRIVATE BAG 12011
TAURANGA MAIL CENTRE
TAURANGA 3143

Dear Sir / Madam,

PLANNING CONSENT COMPLIANCE CERTIFICATE

This letter has been sent to you in your capacity as the Consent Holder of the following resource consent:

Consent No:	RC8006	**Property File No:**	P27041
Consent Holder:	MR MICHAEL JAMES REID		
Agent:	J HODGES CONSTRUCTION LIMITED		
Type of Consent:	LAND USE CONSENT - NON COMPLYING		
Activity:	CONVERT GARAGE INTO SUBSIDIARY HOUSEHOLD UNIT UNDER 40M2		
Location of Activity:	48 SHARP ROAD		
Legal Description:	LOT 2 DPS71633		
Decision Date:	04 DEC 2006		

As at the date of this letter Council confirms that all conditions of the above original resource consent have been complied with to the satisfaction of the Council. Please be advised that all conditions must continue to be met on an on-going basis.

Kind Regards

Graziella Cafatsakis
Monitoring & Compliance Officer

Plans **MUST** show dimensions and distances from section boundaries in metric units

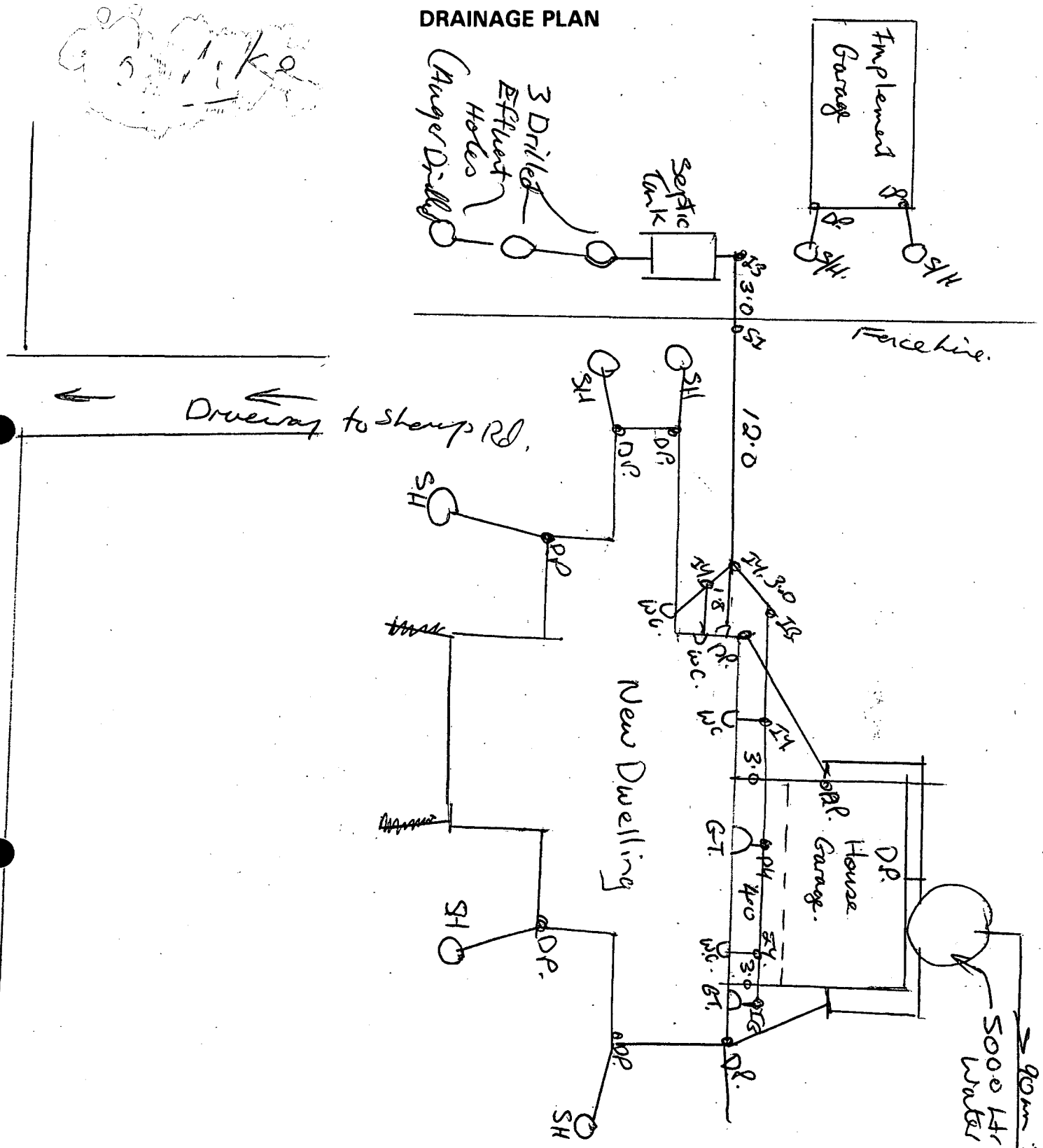
Rotorua District Council

FILE

P27041

NEW SEWERAGE DRAINS — RED
STORMWATER — DOTTED BLACK
OLD DRAINS — FULL BLACK

DRAINAGE PLAN



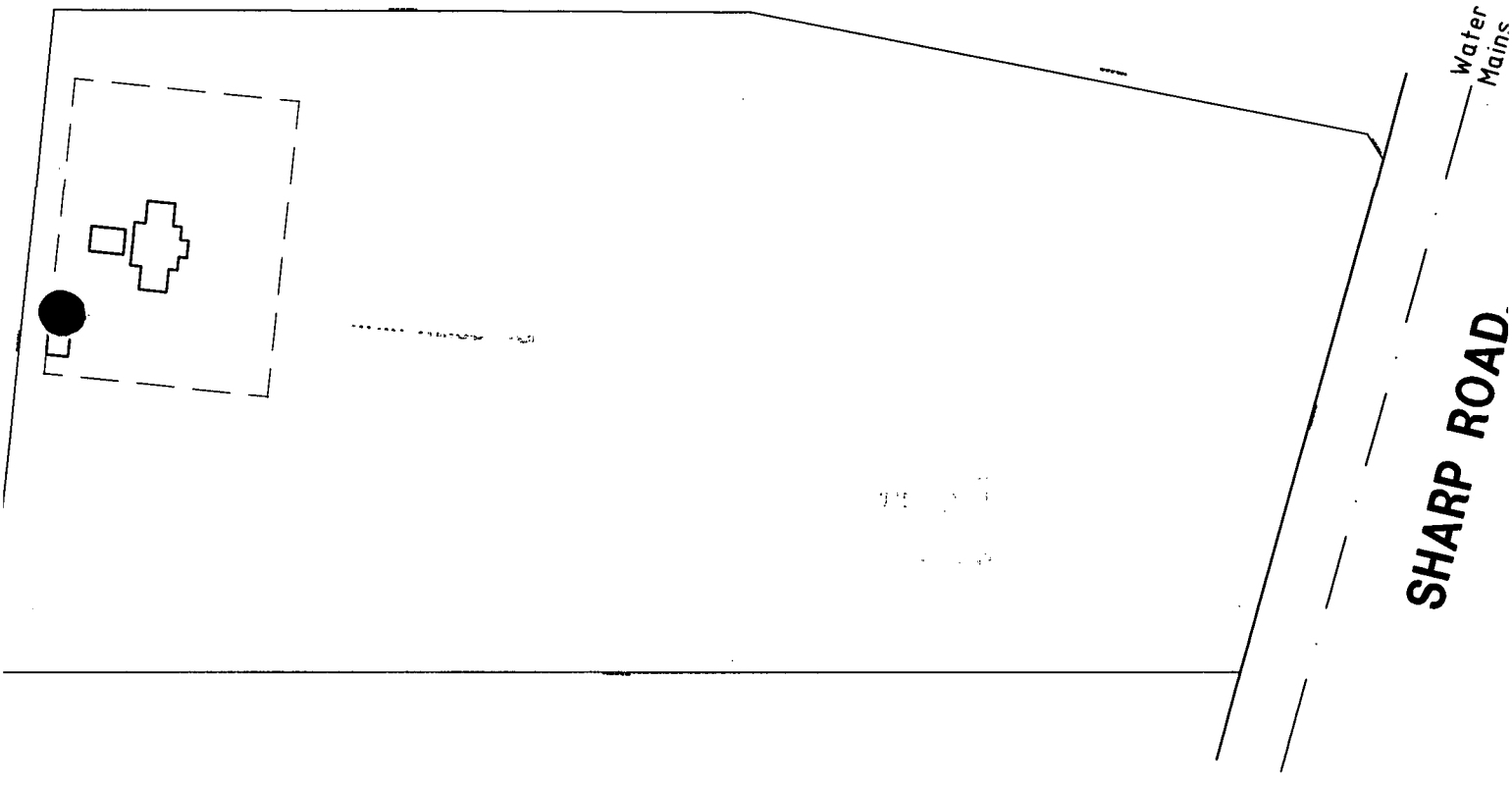
OWNER Leonara Batchelor LOT _____ SEC. _____ BL. _____

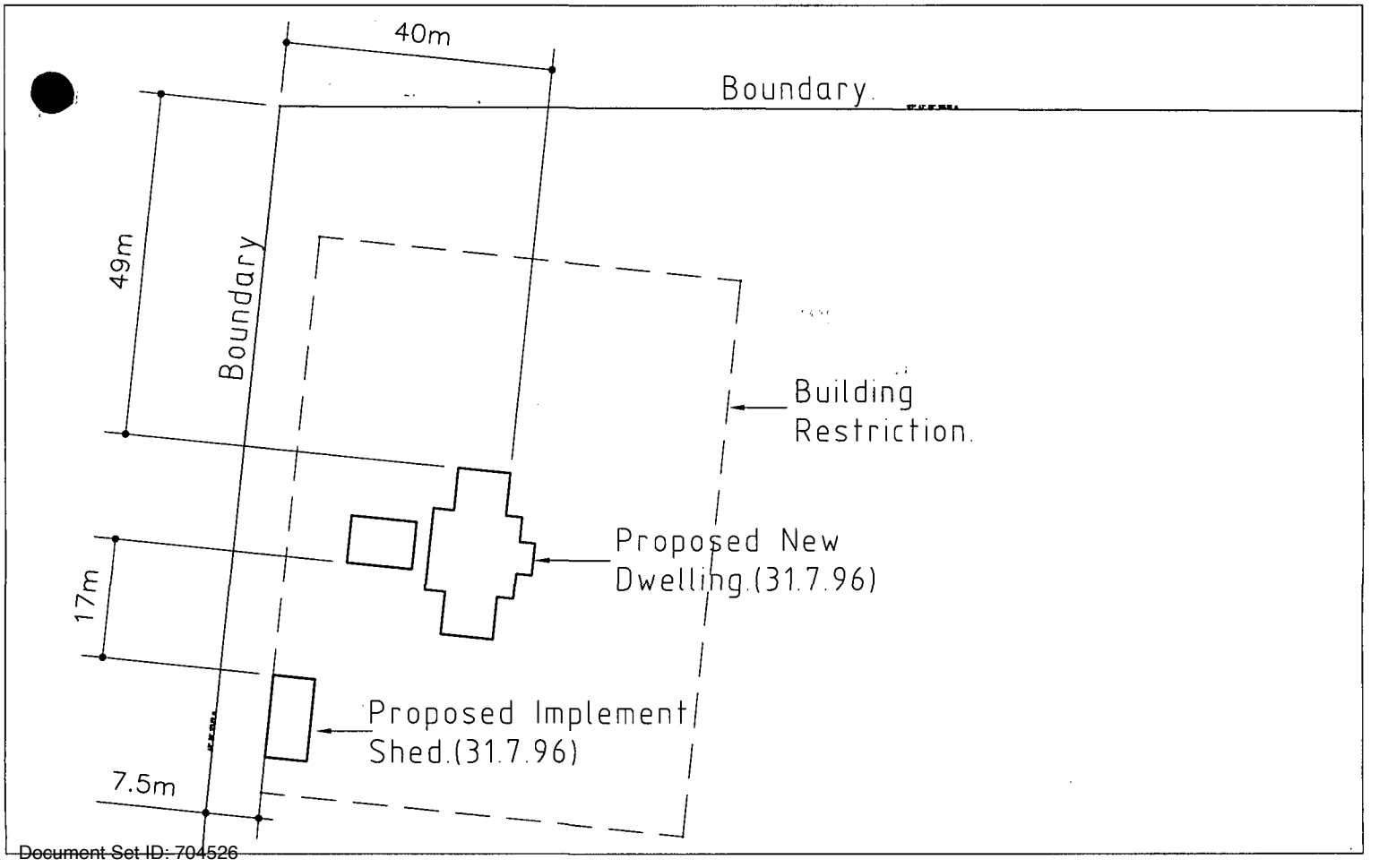
NO. STREET Sharp Rd Hahuroa.

SIGNATURE OF DRAINLAYER _____ DATE 23-4 79

Document Set ID: 704527
Version: 1, Version Date: 23/02/2012

Valuation No.	6951/239-02
Lot No.	2
D.P.	S71633
Blk	
S.Blk XII	ROTORUA **S.D.**
Street No.	**Scale 1 :** 500





Document Set ID: 704526
Version: 1, Version Date: 23/02/2012

FILE

24 July 2001

Please Quote: 8702010
(P: 27041)
Doc No: 179753v1

L F BATCHELOR
48 SHARP ROAD
KAHAROA R D 2
ROTORUA 3221

Dear Sir or Madam

KAHAROA WATER SUPPLY - FLOW RESTRICTORS

Further to previous correspondence in October 1999 and June 2000 regarding the installation of correctly-sized flow restrictors, I can now advise that the second stage of this work will commence during the first week of October 2001 and be carried out over a 3-4 week period.

Your flow restrictor will be replaced with a correctly sized one during this time. Details of yourrestrictor size and other details are as follows:

Water Account No:	4207
Property Location:	48 SHARP ROAD
Existing Restrictor Size (litres per minute):	4
New Restrictor Size (litres per minute):	1.9
Recommended Minimum On-Site Storage litres):	1300

Please note that the on-site storage volume stated is the recommended minimum for typical household use and is equivalent to the greater of either 12 hours of your allocated flow or 1,000 litres. If your peak demand requirement is likely to be high, you should consider more storage.

With regards to sourcing storage tanks and/or pumping equipment, there are a number of different manufacturers and merchants of these, however Council is unable to recommend particular makes of these over any others. If you are yet to make arrangements to obtain this equipment, suppliers can be found in the Yellow Pages under Tank Manufacturers, Water Pumps & Reticulation, and Water Storage. Some of these are already familiar with the general requirements of the Kaharoa Supply.

We will not be issuing any further advice of this upcoming work, therefore I encourage you to ensure that you have any necessary pumps and/or storage tanks installed and operational prior to October 2001. If you require any further clarification or information, please contact either myself or Kim Lockie, Ph 348 4199.

Yours faithfully

Eric Cawte
Utilities Operations Manager

Document Set ID: 704525
Version: 1, Version Date: 23/02/2012

FILE

22 April 1997

Please Quote: P27041 ?

Doc No: 56460

LF & RR Batchelor
PO Box 4057
ROTORUA

Dear Sir/Madam

EFFLUENT DISPOSAL: SHARP ROAD

Recently I did the drainage inspection on your property at Sharp Road. It was noted that a conventional septic tank has been installed.

This is in contravention of the Building Consent 96/1419 which was approved on the condition a B10 Cycle tank is fitted, I refer to your letter dated 19 August 1996.

You are therefore required to install the Bio-cycle or similar system, the reason being the number of persons that can possibly use the dwelling at one time.

If you have any queries, please contact the writer.

Yours faithfully

S. Allpress
Building Officer

Document Set ID: 704524
Version: 1, Version Date: 23/02/2012

FILE

15 October 1999

Please Quote: 27041

Doc No: 125363

ROTORUA DISTRICT COUNCIL

Private Bag RO 3029
Rotorua
New Zealand
Telephone 07-348 4199
Fax 07-346 3143
E-mail mail@rdc.govt.nz

Address all communications to:
District Manager
Rotorua District Council

BATCHELOR, LEON FRANCIS
48 SHARP ROAD, RD2
KAHAROA
ROTORUA

Dear Sir/Madam

KAHAROA WATER SUPPLY - PROGRESS REPORT

Further to our previous correspondence and advice, the network investigation of the Kaharoa Water Supply has been completed and the report complete with a summary of the results and proposals are attached. Council agreed to the proposals at the June 1999 Works Committee meeting.

A recommendation that will affect many users is that correctly sized restrictors will be installed throughout the scheme over a two year period, starting from June 2000.

Details of your water allocation from the scheme, existing restrictor size, proposed correctly sized restrictor and date of installing the correctly sized restrictor are given below:

Water account number	: 4207
Valuation number	: 06951/239.02
Rateable area (ha)	: 5.96
Original land use	: dairy
Water allocation (l/min)	: 1.85
Existing restrictor size (l/min)	: 4
Correctly sized restrictor (l/min)	: 1.9
Date of installing correctly sized restrictor	: June 2000
Recommended minimum on-site storage requirement (litres)	: 1,300

The above data represents the status of your property to date. If there are any subdivision proposals relating to the above properties being processed the allocations will change accordingly. Please contact the undersigned if there are any discrepancies or you require advise for on-site storage requirements for subdivisions once the allocations have been finalised.

Storage Requirements

One of the main original design requirements of the scheme was for secondary (on-farm or on-site) storage to provide at least 12 hours of the scheme's 24 hour storage requirements. The primary or network storage has been designed to ultimately provide 12 hours storage. Users are therefore recommended to provide on-site storage of at least 12 hours of their allocation for their own emergency storage purposes.

Document Set ID: 7084528
Version: 1, Version Date: 23/02/2012

The correctly sized restrictor will supply a user with the required water over 24 hours at a steady flow. In practise a household or enterprise will have certain periods where there will be a peak demand period. A typical household has a peak demand between 7.00 to 9.00 a.m. and 6.00 to 9.00 p.m. On-site storage will be required for peak demand periods where the restrictor flow is less than the peak demand flow. A typical flow from a household tap is 15 l/min and for 2 or more taps running is 22 l/min. The minimum restrictor flow is 1.4 l/min. The minimum on-site storage to cater for peak demands for a typical household should be 1 000 litres.

From the above it is recommended that all users have secondary or on-site storage. The recommended minimum on-site storage requirements for a typical household will be the maximum of 12 hours of their allocation or 1 000 litres. See the recommended storage in the box on page 1.

It should be noted that users with enterprises other than a typical household should calculate their peak demand requirements and ensure they have sufficient on-site storage.

On-site Pressure Pump

The provision of on-site storage will in most cases result in a reduction in system pressure for a user. In fact the available pressure will be the difference between the level of the tap and the water level in the storage facility. Ideally the on-site storage facility (i.e. a tank) should be at least 5 to 10 metres higher than the household taps (giving 5 to 10 metres head of pressure).

A garden sprinkler typically requires an operating pressure of 15 to 30 metres head.

If this is not possible due to the topography of the plot of land then it is recommended to install a small pump fitted with a pressure vessel and pressure switch. This arrangement will allow the pump to switch on and off automatically when household taps are used without burning out the electric pump motor.

Summary

It is recommended that all users make preparations to have secondary or on-site storage and if extra pressure is required, install a small pump fitted with a pressure vessel and pressure switch. This should be carried out as soon as possible to ensure a system storage of at least 24 hours but at least before the date for the flow restrictor change.

We will contact you with a more exact date for the change, approximately 3 months before it is programmed to occur.

If you want any further advise, please feel free to contact the undersigned. However the offer will not include detail on site design but we may be able to direct you to people who can assist in this regard.

Yours faithfully

Adrian Vosloo
Utilities Planning Manager

Document Set ID: 704523
Version: 1, Version Date: 23/02/2012

FILE

PZ7041

15 October 1999

Please Quote: 870201

Doc No: 125363

BATCHELOR, LEON FRANCIS
48 SHARP ROAD, RD2
KAHAROA
ROTORUA

Dear Sir/Madam

KAHAROA WATER SUPPLY - PROGRESS REPORT

Further to our previous correspondence and advice, the network investigation of the Kaharoa Water Supply has been completed and the report complete with a summary of the results and proposals are attached. Council agreed to the proposals at the June 1999 Works Committee meeting.

A recommendation that will affect many users is that correctly sized restrictors will be installed throughout the scheme over a two year period, starting from June 2000.

Details of your water allocation from the scheme, existing restrictor size, proposed correctly sized restrictor and date of installing the correctly sized restrictor are given below:

Water account number	: 4207
Valuation number	: 06951/239.02
Rateable area (ha)	: 5.96
Original land use	: dairy
Water allocation (l/min)	: 1.85
Existing restrictor size (l/min)	: 4
Correctly sized restrictor (l/min)	: 1.9
Date of installing correctly sized restrictor	: June-2000
Recommended minimum on-site storage requirement (litres)	: 1,300

The above data represents the status of your property to date. If there are any subdivision proposals relating to the above properties being processed the allocations will change accordingly. Please contact the undersigned if there are any discrepancies or you require advise for on-site storage requirements for subdivisions once the allocations have been finalised.

Storage Requirements

One of the main original design requirements of the scheme was for secondary (on-farm or on-site) storage to provide at least 12 hours of the scheme's 24 hour storage requirements. The primary or network storage has been designed to ultimately provide 12 hours storage. Users are therefore recommended to provide on-site storage of at least 12 hours of their allocation for their own emergency storage purposes.

Document Set ID: 704523
Version: 1, Version Date: 23/02/2012

The correctly sized restrictor will supply a user with the required water over 24 hours at a steady flow. In practise a household or enterprise will have certain periods where there will be a peak demand period. A typical household has a peak demand between 7.00 to 9.00 a.m. and 6.00 to 9.00 p.m. On-site storage will be required for peak demand periods where the restrictor flow is less than the peak demand flow. A typical flow from a household tap is 15 l/min and for 2 or more taps running is 22 l/min. The minimum restrictor flow is 1.4 l/min. The minimum on-site storage to cater for peak demands for a typical household should be 1 000 litres.

From the above it is recommended that all users have secondary or on-site storage. The recommended minimum on-site storage requirements for a typical household will be the maximum of 12 hours of their allocation or 1 000 litres. See the recommended storage in the box on page 1.

It should be noted that users with enterprises other than a typical household should calculate their peak demand requirements and ensure they have sufficient on-site storage.

On-site Pressure Pump

The provision of on-site storage will in most cases result in a reduction in system pressure for a user. In fact the available pressure will be the difference between the level of the tap and the water level in the storage facility. Ideally the on-site storage facility (i.e. a tank) should be at least 5 to 10 metres higher than the household taps (giving 5 to 10 metres head of pressure).

A garden sprinkler typically requires an operating pressure of 15 to 30 metres head.

If this is not possible due to the topography of the plot of land then it is recommended to install a small pump fitted with a pressure vessel and pressure switch. This arrangement will allow the pump to switch on and off automatically when household taps are used without burning out the electric pump motor.

Summary

It is recommended that all users make preparations to have secondary or on-site storage and if extra pressure is required, install a small pump fitted with a pressure vessel and pressure switch. This should be carried out as soon as possible to ensure a system storage of at least 24 hours but at least before the date for the flow restrictor change.

We will contact you with a more exact date for the change, approximately 3 months before it is programmed to occur.

If you want any further advise, please feel free to contact the undersigned. However the offer will not include detail on site design but we may be able to direct you to people who can assist in this regard.

Yours faithfully

Adrian Vosloo.
Utilities Planning Manager

Document Set ID: 704523
Version: 1, Version Date: 23/02/2012

P12012Z FILE

FILE copy to 6951/229.02

11 October, 1995

Please Quote: ~~6594054~~

Ref: ESL1110E.JWT

COPY

LS Martin
Martin McCaulay Morton Ltd
PO Box 878
ROTORUA

ATTN: Bart Yetsenga

Your Ref: 74896/1

Dear Sir

APPLICATION FOR SUBDIVISION CONSENT - CANDY, CENTRAL ROAD, KAHAROA

The copy of the land transfer plan is returned herewith with the certificate of compliance in terms of Section 224 (c) of the Resource Management Act 1991 duly signed.

The Consent Notice forwarded is also returned herewith signed and sealed pursuant to Section 221 of the Resource Management Act 1991.

Yours faithfully

Joanne Watts
Planner

land transfer plan released 12/10/95

Document Set ID: 704522
Version: 1, Version Date: 23/02/2012

CONSENT NOTICE PURSUANT TO SECTION 221

OF THE RESOURCE MANAGEMENT ACT 1991

IN THE MATTER of Lots 1, 2, 3 & 5 DPs 71633
AND
IN THE MATTER of Subdivision Consent 6594054 pursuant to Sections 105, 108, 220 and 221 of the Resource Management Act 1991.

Subdivider: M R Candy

Locality: Central Road, Kaharoa.

On 22 June 1995, the Rotorua District Council granted consent to a subdivision, legally described as Lots 1 - 3 and 5 DPs 71633 to be excised from Lot 1 DPs 68084 CT 54/697.

All owners of Lot 5 DPs 71633 are advised that in accordance with Part Sixteen Rule 10.11.1 of the Proposed District Plan, no further lifestyle lots may be excised from Lot 5 DPs 71633 subject to the provisions of the District Plan.

All owners of Lots 1, 2, 3 and 5 DPs 71633 are advised that the maximum daily water allocation at a steady flow basis as listed below:

Lot Number	Daily Entitlement	Average Flow
Lot 1 DPs 71633	1.50m³	1.04 litres/m
Lot 2 DPs 71633	3.00m³	2.08 litres/m
Lot 3 DPs 71633	No Allocation	
Lot 5 DPs 71633	20.12m³	13.97 litres/m

All owners of Lot 2 DPs 71633 are advised that any dwelling must be sited within the Restrictive Area A shown on DPs 71633.

If any proposed house is to be located outside the areas marked A then a Resource Consent will be required to be obtained from the Rotorua District Council.

This document is hereby authenticated in terms of Section 252 of the Local Government Act 1974.

Dated at Rotorua this 13th day of OCTOBER 1995.

The COMMON SEAL of the)
ROTORUA DISTRICT COUNCIL)
was affixed hereto in the presence)
of:)

.....
Mayor

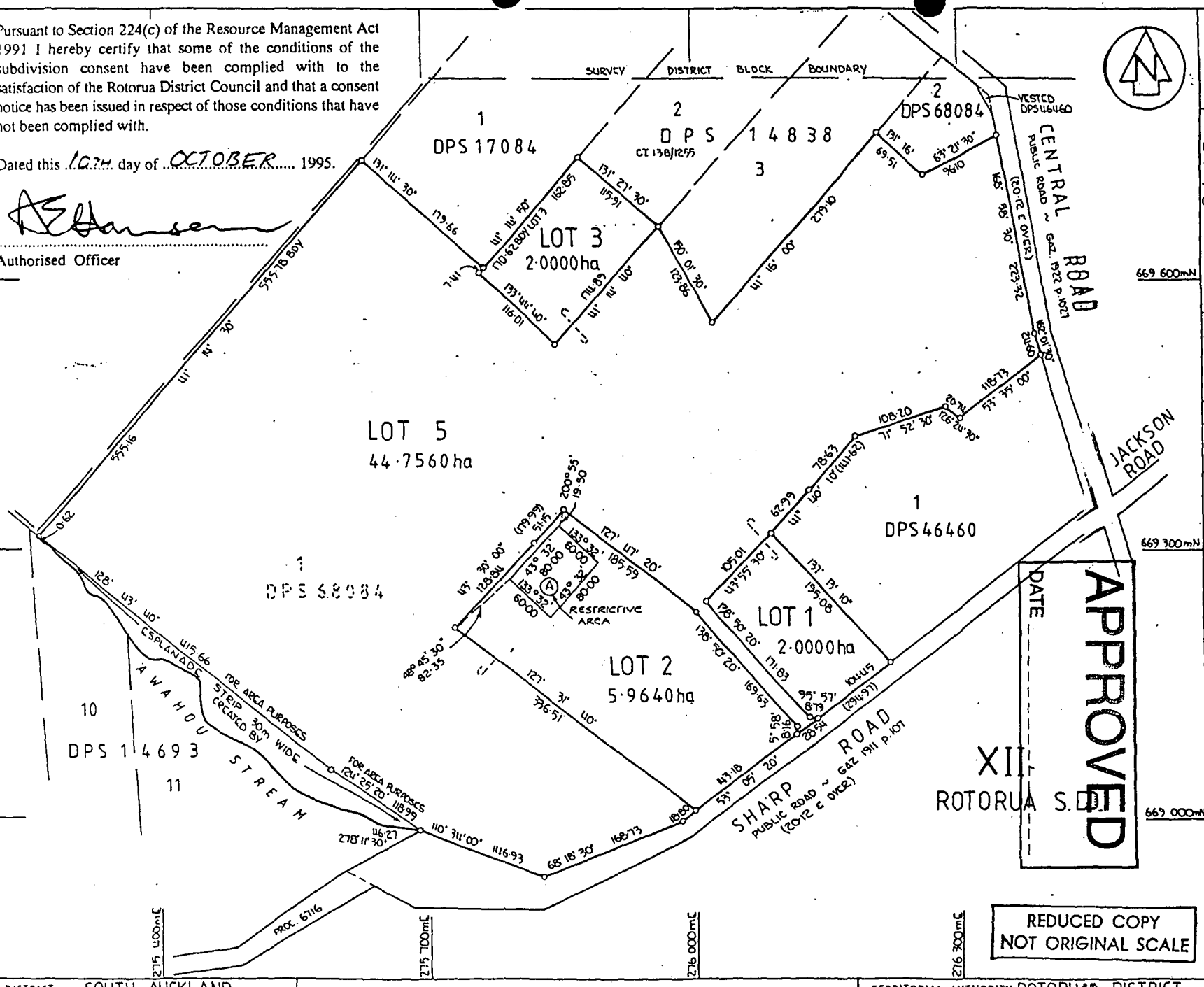
.....
District Manager

Document Set ID: 704522
Version: 1, Version Date: 23/02/2012

Pursuant to Section 224(c) of the Resource Management Act 1991 I hereby certify that some of the conditions of the subdivision consent have been complied with to the satisfaction of the Rotorua District Council and that a consent notice has been issued in respect of those conditions that have not been complied with.

Dated this 10TH day of OCTOBER 1995.

Authorised Officer



REDUCED COPY NOT ORIGINAL SCALE

Approvals

M. R. CANDY
REGISTERED OWNER

APPROVED PURSUANT TO SECTION 223 OF THE RESOURCE MANAGEMENT ACT 1991 ON THE 31ST DAY OF AUGUST 1995, SUBJECT TO THE AMALGAMATION CONDITION SET OUT HEREON.

THE COMMON SEAL OF THE ROTORUA DISTRICT COUNCIL IS AFFIXED HERETO IN THE PRESENCE OF:

MAYOR

FOR DISTRICT MANAGER

SCHEDULE

AMALGAMATION CONDITION

THAT LOT 3 HEREON BE TRANSFERRED TO THE OWNER OF LOT 2 DPS 14838 (CT 138/1255) AND THAT ONE CERTIFICATE OF TITLE BE ISSUED TO INCLUDE BOTH PARCELS.

SEE B.291790

RESTRICTIVE AREA SHOWN AS : (A)

NEW C.T. ALLOCATED	
LOT	C.T. REFERENCE
1	
2	
3 AND LOT 2 DPS 14838	
5	

Total Area 54·7200ha

Comprised in C.T. 54C/697 (All)

I, BART YETSENGA

Registered Surveyor and holder of an annual practising certificate (or who may act as a registered surveyor pursuant to section 25 of the Survey Act 1986) hereby certify that this plan has been made from surveys executed by me or under my directions, that both plan and survey are correct and have been made in accordance with the Survey Regulations 1972 or any regulations made in substitution thereof.

Dated at ROTORUA this 7TH day of SEPTEMBER 1995 Signature

Field Book ..... p. ..... Traverse Book ..... p. .....

Reference Plans DPS: 11262, 11693, 11838, 17084, 46460, DPS 51263, 68084; SO 32740; OP 31291; ML 9232;

Examined ..... Correct .....

Approved as to Survey

...../...../..... Chief Surveyor

Deposited this ..... day of ..... 19 ....

District Land Registrar

Title Received Instructions	S 71633

LAND DISTRICT SOUTH AUCKLAND

SURVEY BLK & DIST XII ROTORUA

LOTS 1-3 & 5 BEING SUBDIVISION OF LOT 1 DPS 68084.

TERRITORIAL AUTHORITY ROTORUA DISTRICT

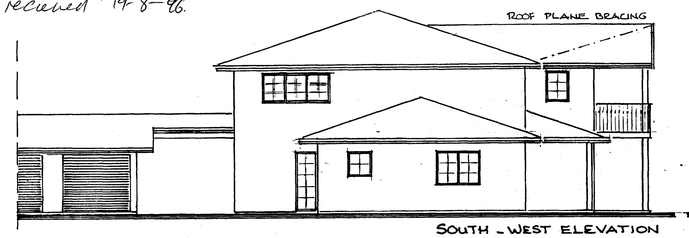
Surveyed by MARTIN, McCAULAY, MORTON LTD.

Scale 1:3000 Date AUGUST 1995

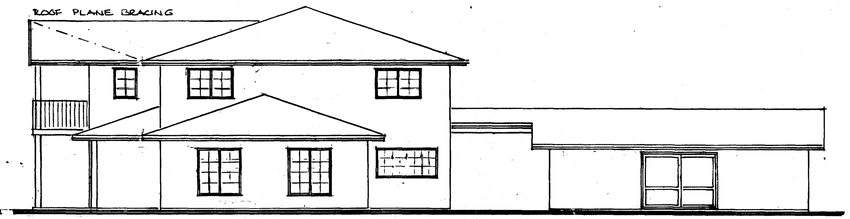
L 14896/1

Document Set ID: 7704522
Version: 1, Version Date: 23/02/2012

Revised plans received 19-8-96.

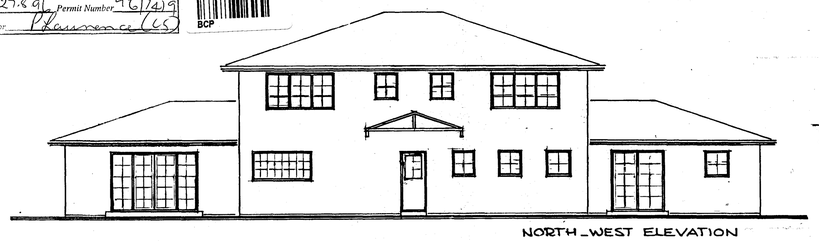


SOUTH - WEST ELEVATION

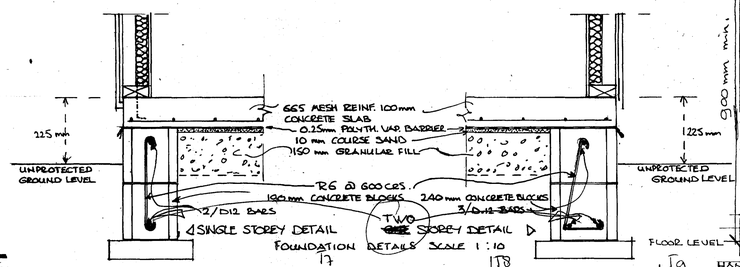


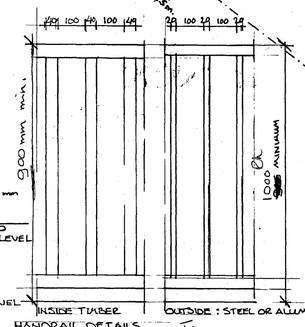
NORTH - EAST ELEVATION

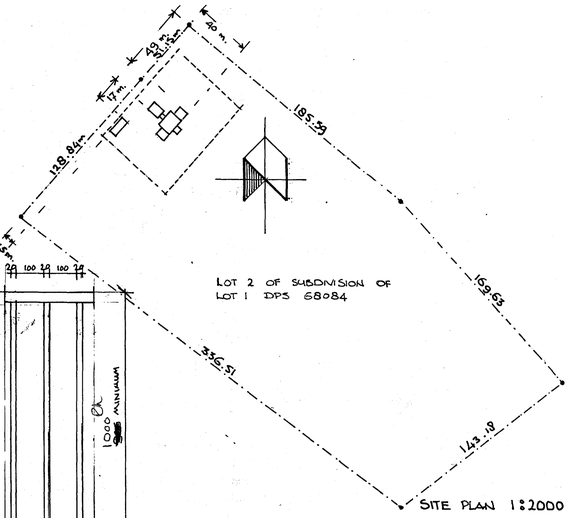
PLANS APPROVED SUBJECT TO ALL REQUIREMENTS OF THE BY-LAWS AND HEALTH DEPT. BEING FULLY COMPLIED WITH
Date 27.8.96 Permit Number 96/149
Inspector Plawrence (LS)
BCP



NORTH - WEST ELEVATION



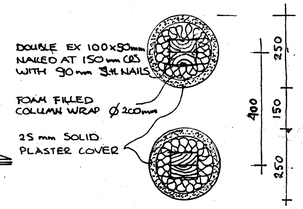




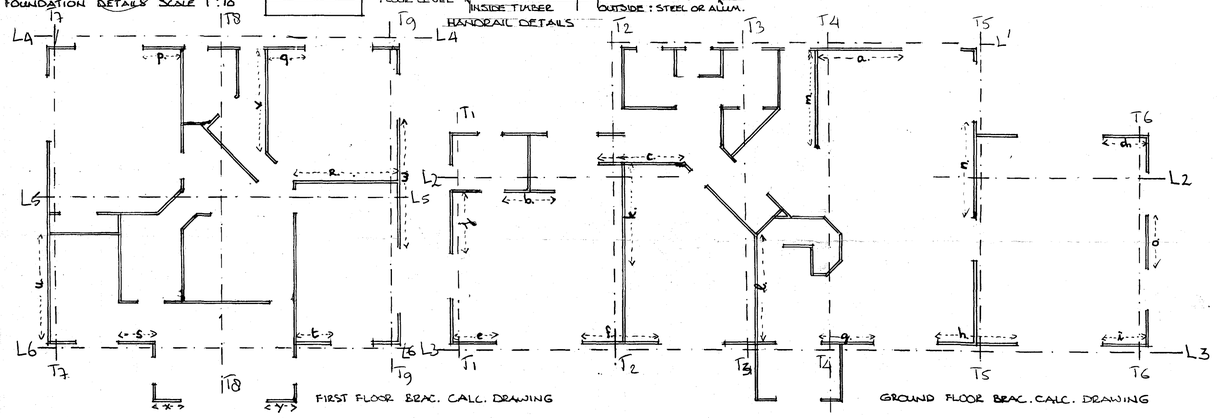
SITE PLAN 1:2000



SOUTH - EAST ELEVATION



DOUBLE COLUMN DETAIL SCALE 1:10



FIRST FLOOR BRAC. CALC. DRAWING

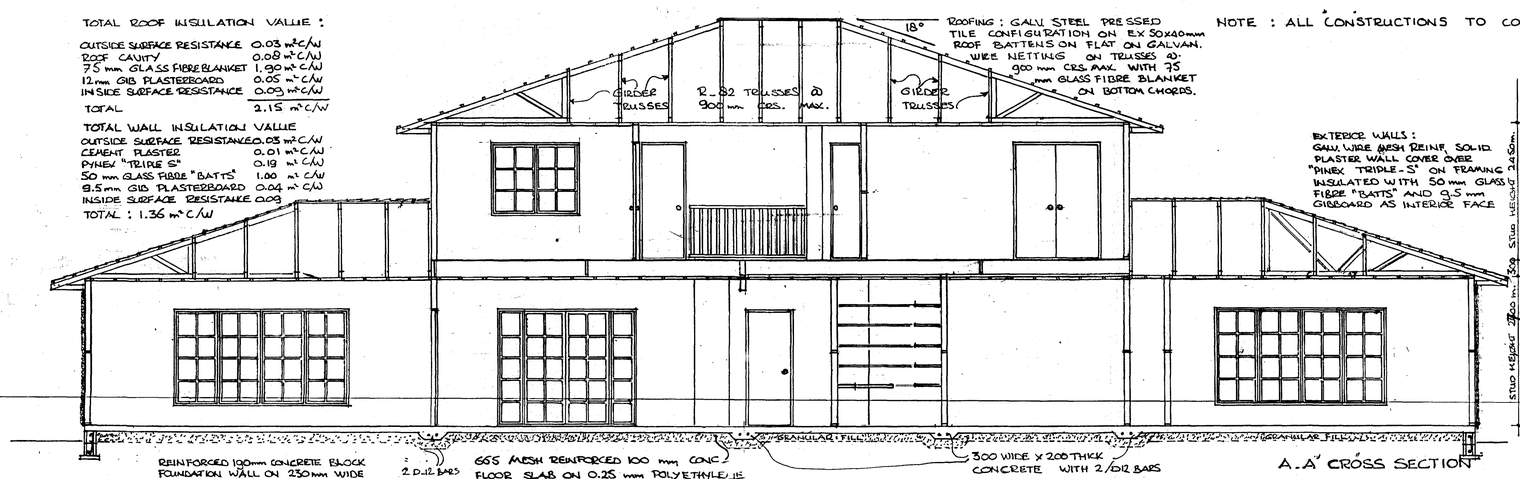
GROUND FLOOR BRAC. CALC. DRAWING

TOTAL ROOF INSULATION VALUE :

OUTSIDE SURFACE RESISTANCE	0.03 m²C/W
ROOF CAVITY	0.08 m²C/W
75 mm GLASS FIBRE BLANKET	1.90 m²C/W
12 mm GIB PLASTERBOARD	0.05 m²C/W
INSIDE SURFACE RESISTANCE	0.09 m²C/W
TOTAL	2.15 m²C/W

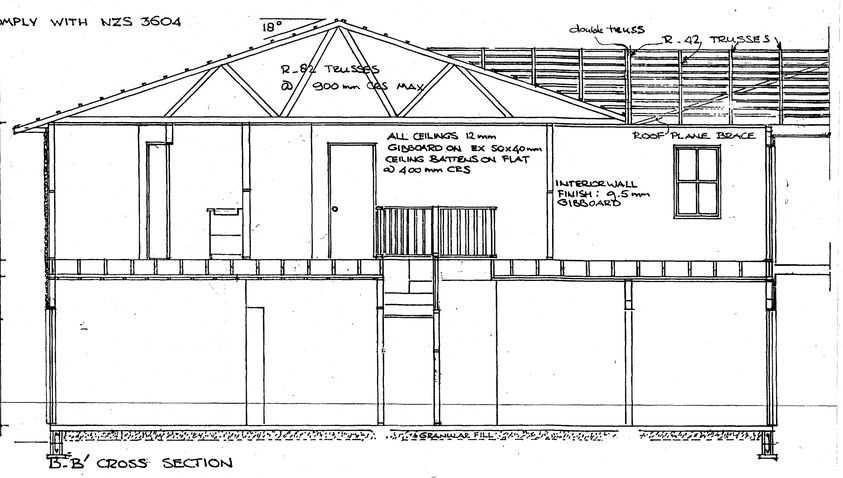
TOTAL WALL INSULATION VALUE

OUTSIDE SURFACE RESISTANCE	0.03 m²C/W
CEMENT PLASTER	0.01 m²C/W
PYNEX "TRIPLE S"	0.19 m²C/W
50 mm GLASS FIBRE "BATTS"	1.00 m²C/W
9.5 mm GIB PLASTERBOARD	0.04 m²C/W
INSIDE SURFACE RESISTANCE	0.09
TOTAL : 1.36 m²C/W	



A-A' CROSS SECTION

NOTE : ALL CONSTRUCTIONS TO COMPLY WITH NZS 3604



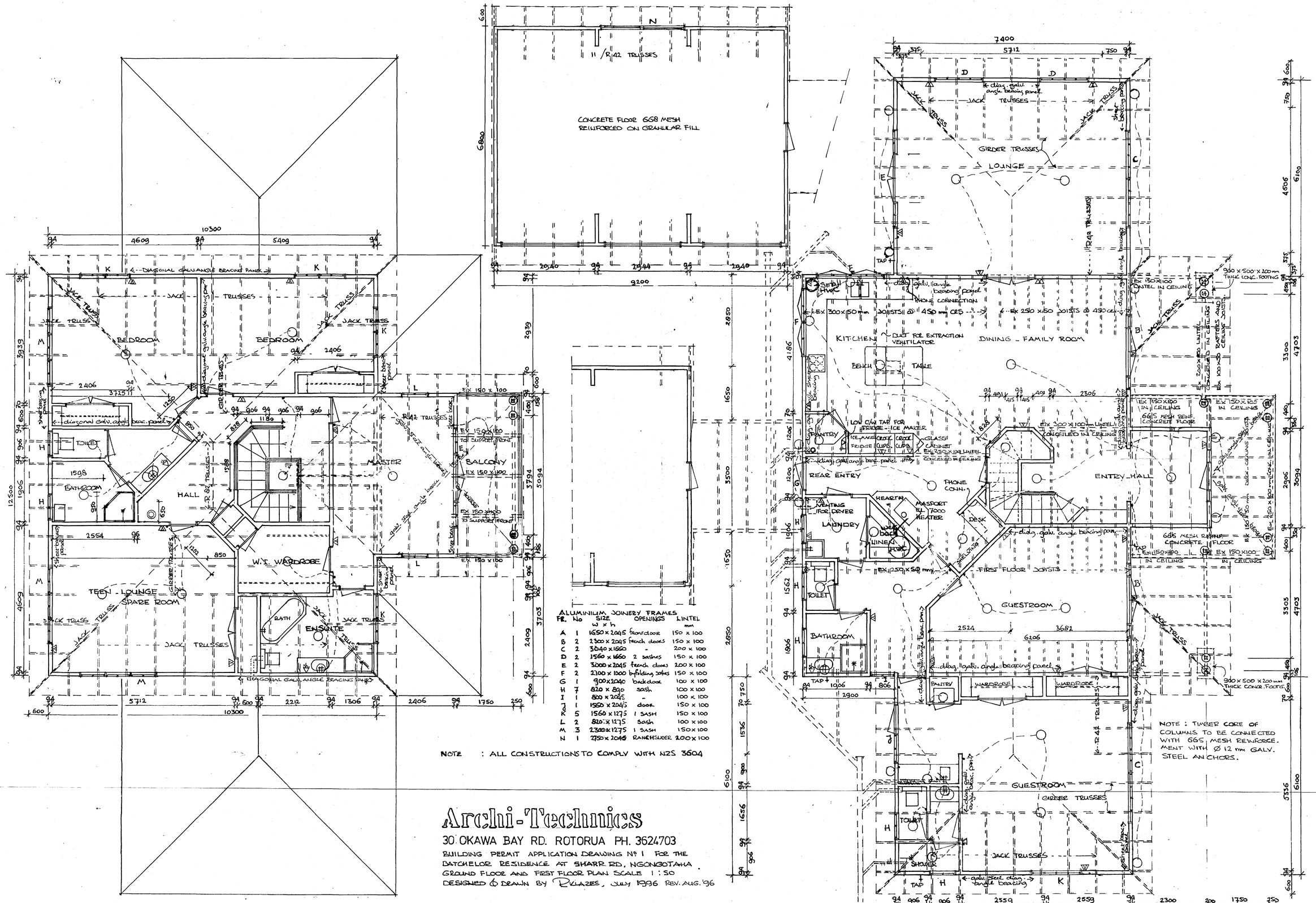
B-B' CROSS SECTION

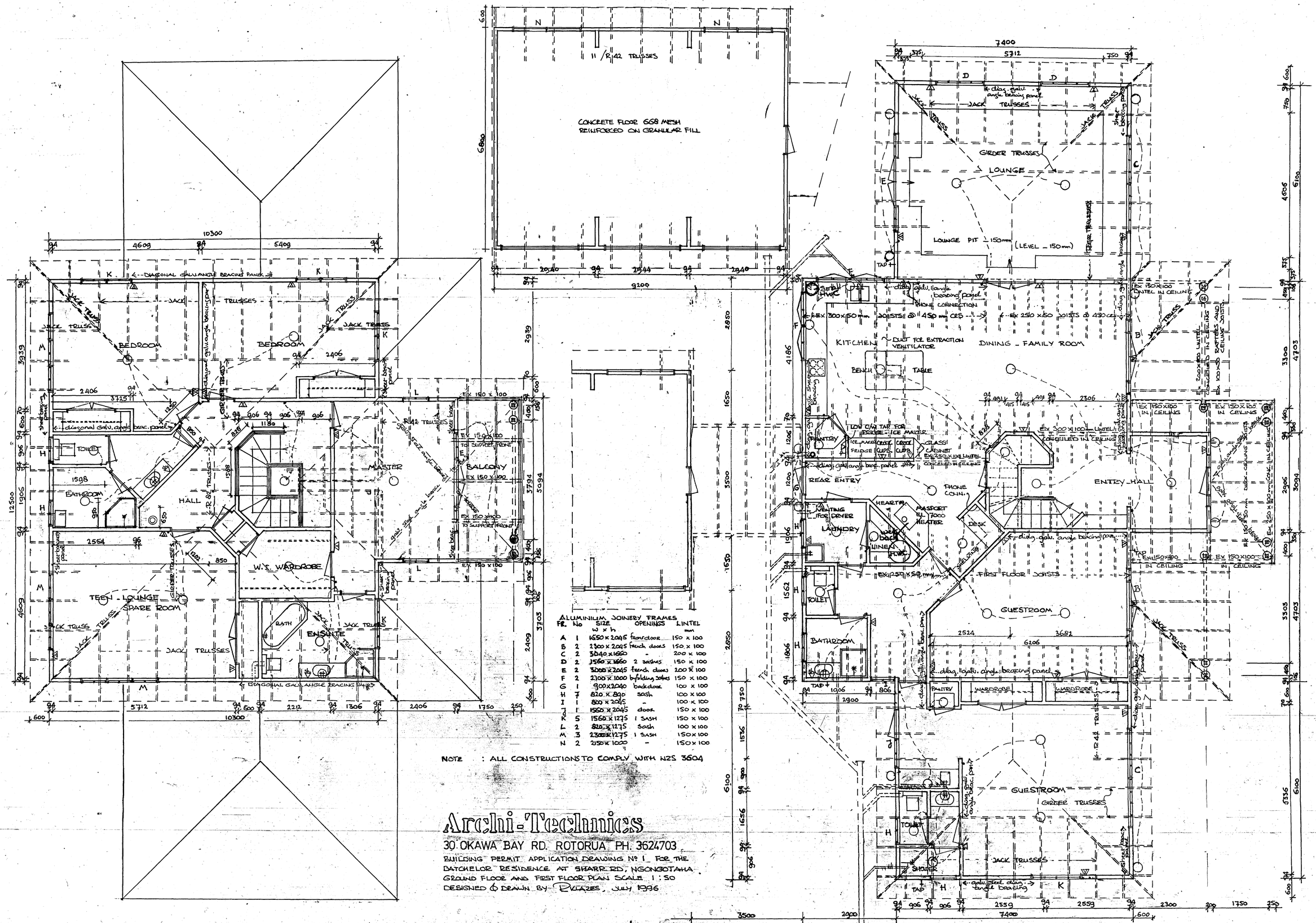
Archi-Technics

30 OKAWA BAY RD. ROTORUA PH 3624703

BUILDING PERMIT APPLICATION DRAWING Nº 2 FOR THE BACHELOR RESIDENCE AT SHARP RD. NGONGOTAHA
SITE PLAN SCALE 1:2000, CROSS SECTIONS SCALE 1:50
ELEVATIONS AND BRACING CALC DRAWINGS SCALE 1:100
DESIGNED & DRAWN R. KLAZES JULY 1996 REV. AUG.'96

Document Set ID: 588302
Version: 1, Version Date: 31/03/2010


N
11 / R42 TRUSSES
CONCRETE FLOOR 665 MESH REINFORCED ON GRANULAR FILL
6800
9200
2040
2344
2340
10300
4609
5409
5712
2212
1306
2406
1750
250
600
3939
2939
2050
1650
3500
4186
7400
5712
750
6100
4606
4703
3300
3305
3094
2906
1562
1806
2850
1536
900
1626
5336
2559
2300
2900
3500
7400
BEDROOM
BEDROOM
2406
3725
11
1250
1180
818
906
994
1598
TOILET
BATHROOM
HALL
MASTER
BALCONY
EX 150 x 100
EX 150 x 150 to support front
R12 TRUSSES
GIRDER TRUSSES
JACK TRUSSES
2554
W.I. WARDROBE
TEEN - LOUNGE
SPARE ROOM
BATH
ENSUITE
1100
850
1200
600
diagonal galv. angle bracing panel
diagonal galv. angle bracing panel
Sisalation sarking
Sisalation sarking
Sisalation sarking



ALUMINIUM JOINERY FRAMES

FR.	No	SIZE w x h	OPENINGS	LINTEL mm
A	1	1650 x 2045	front door	150 x 100
B	2	2300 x 2045	French doors	150 x 100
C	2	3040 x 1660	-	200 x 100
D	2	1560 x 1660	2 sashes	150 x 100
E	2	3000 x 2045	French doors	200 x 100
F	2	2100 x 1000	bifolding doors	150 x 100
G	1	900 x 2040	back door	100 x 100
H	7	820 x 890	sash	100 x 100
I	1	800 x 2045	-	100 x 100
J	1	1550 x 2045	door	150 x 100
K	5	1560 x 1275	1 sash	150 x 100
L	2	820 x 1275	sash	100 x 100
M	3	2300 x 1275	1 sash	150 x 100
N	2	2150 x 1000	-	150 x 100

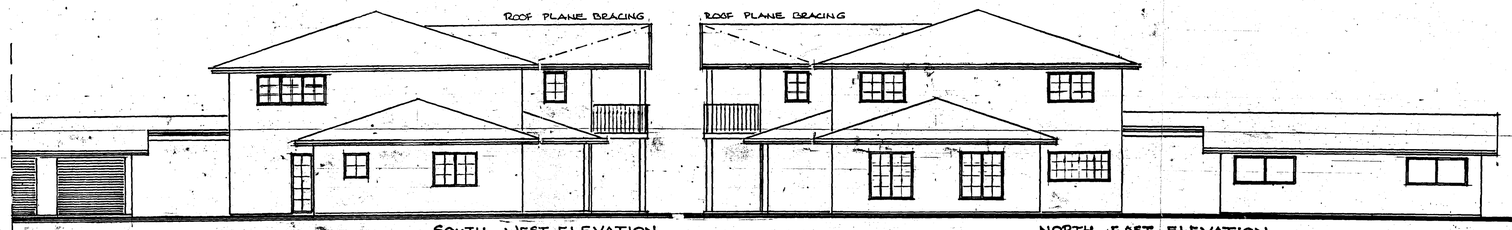
NOTE : ALL CONSTRUCTIONS TO COMPLY WITH NZS 3604

Archi-Technics

30 OKAWA BAY RD. ROTORUA. PH. 3624703

BUILDING PERMIT APPLICATION DRAWING № 1 FOR THE BATCHELOR RESIDENCE AT SHARP RD, NGONGOTAHA.
GROUND FLOOR AND FIRST FLOOR PLAN SCALE 1 : 50
DESIGNED & DRAWN BY R.VEALES. JULY 1996

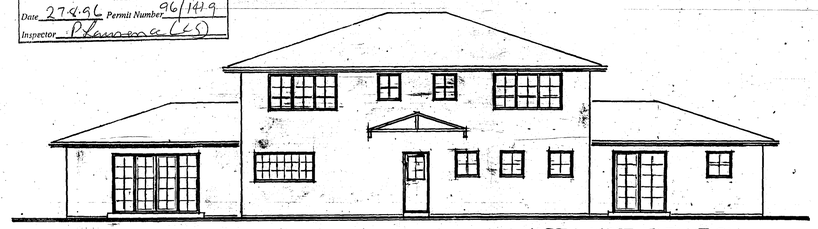
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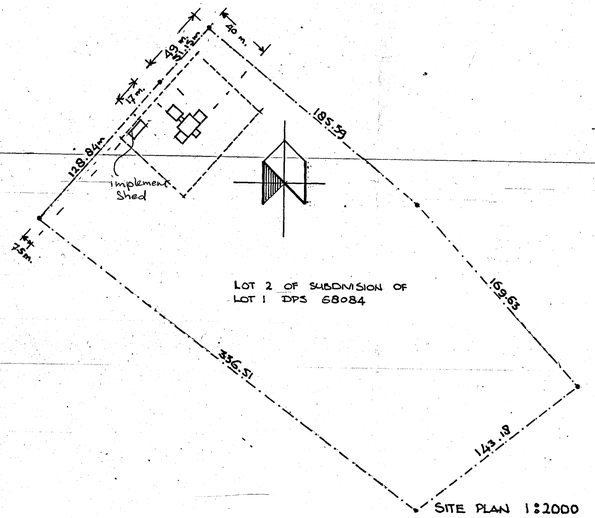
SOUTH - WEST ELEVATION

NORTH - EAST ELEVATION

PLANS APPROVED SUBJECT TO ALL REQUIREMENTS OF THE BY-LAWS AND HEALTH DEPT. BEING FULLY COMPLIED WITH
Date 27.9.96 Permit Number 96/1419
Inspector P Lawrence (CSO)



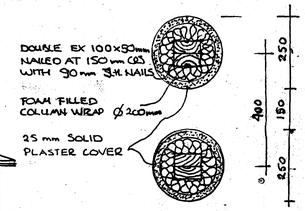
NORTH - WEST ELEVATION



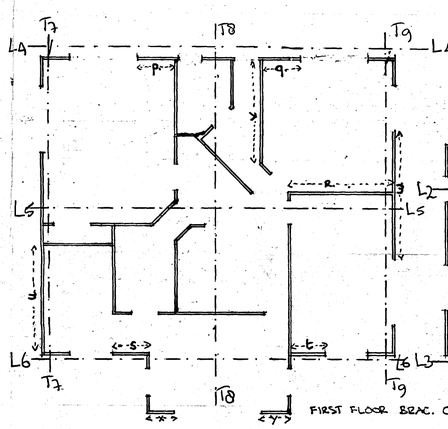
SITE PLAN 1:2000



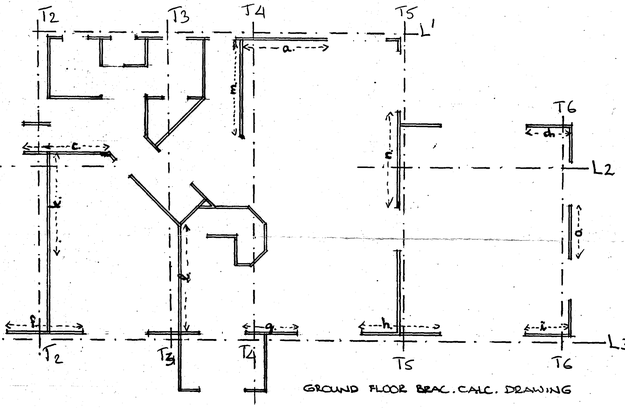
SOUTH - EAST ELEVATION



DOUBLE COLUMN DETAIL
SCALE 1:10

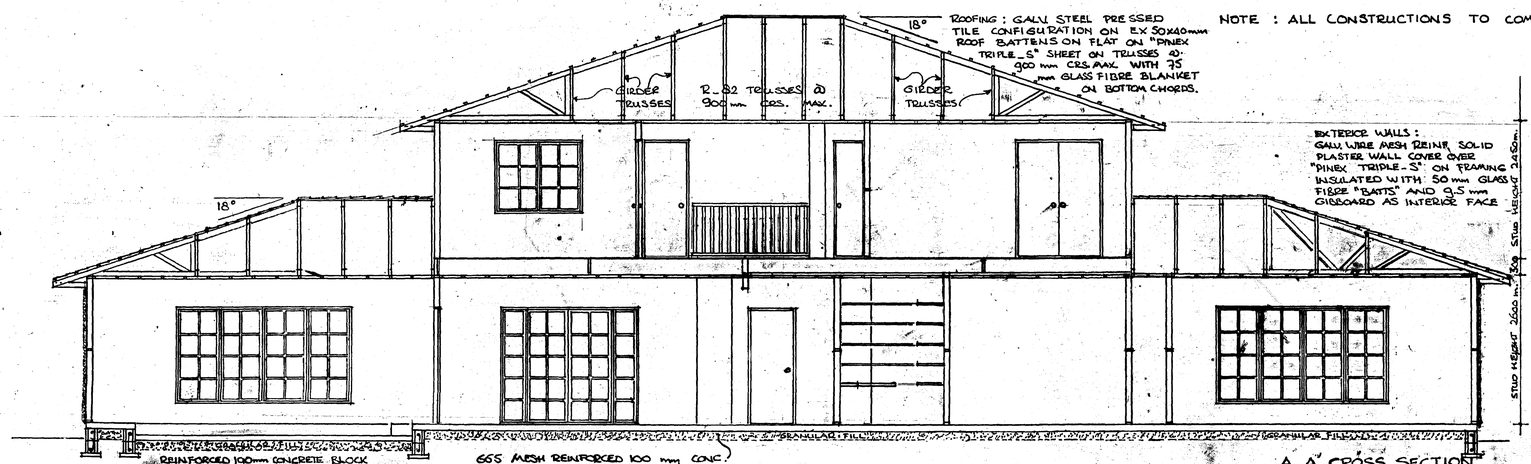


FIRST FLOOR BRAC. CALC. DRAWING



GROUND FLOOR BRAC. CALC. DRAWING

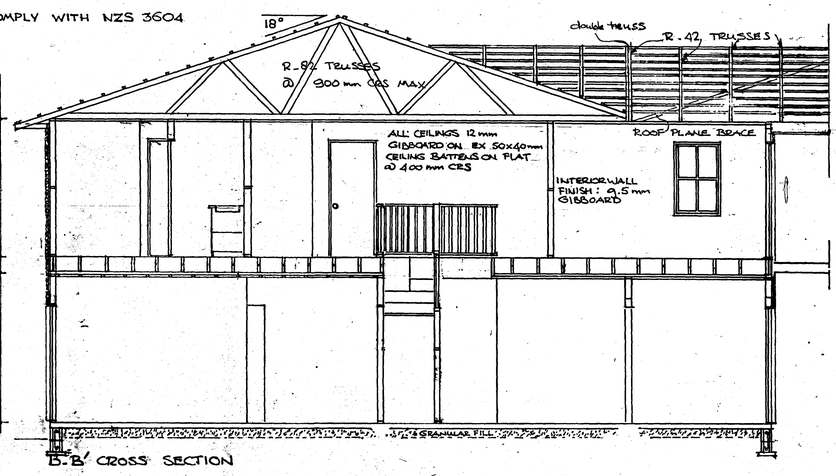
NOTE : ALL CONSTRUCTIONS TO COMPLY WITH NZS 3604



REINFORCED 100mm CONCRETE BLOCK FOUNDATION WALL ON 230mm WIDE CONCRETE FOOTING TO SUPPORT CONCRETE SLAB AND WALLS AND TO BOX LOWER FLOOR AREA IN LOUNGE

665 MESH REINFORCED 100 mm CONC. FLOOR SLAB ON 0.25 mm POLYETHYLENE SHEET ON 10 mm COURSE SAND ON 150 mm GRANULAR FILL ON SOLID GROUND

A-A' CROSS SECTION



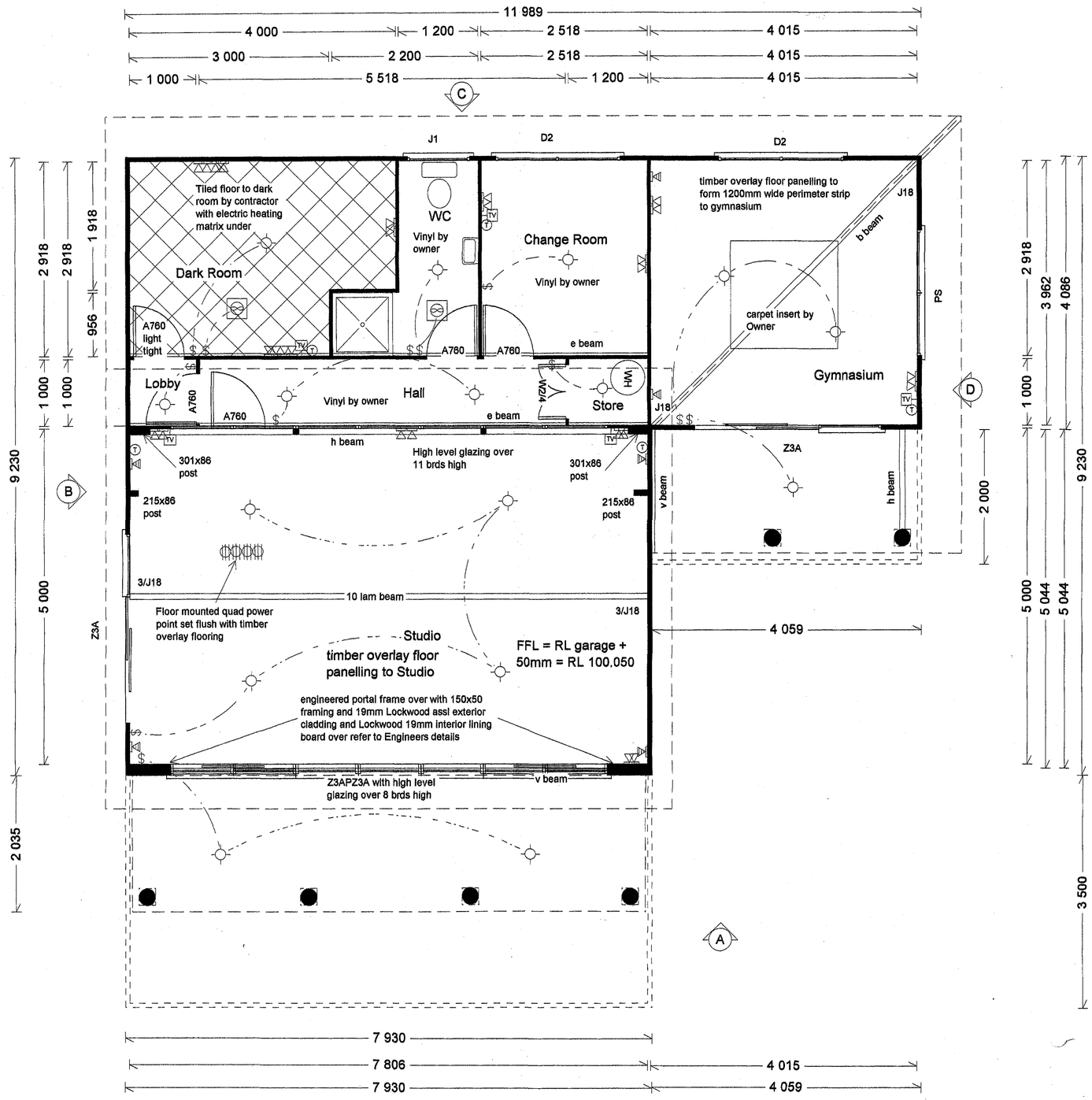
B-B' CROSS SECTION

Archi-Technics

30 OKAWA BAY RD. ROTORUA PH 3624703

BUILDING PERMIT APPLICATION DRAWING Nº 2 FOR THE BACHELOR RESIDENCE AT SHARP RD. NGONGOTAHA
SITE PLAN SCALE 1:2000, CROSS SECTIONS SCALE 1:50
ELEVATIONS AND BRACING CALC DRAWINGS SCALE 1:100
DESIGNED & DRAWN R. KLAZES JULY 1996

Document Set ID: 588302
Version: 1, Version Date: 31/03/2010



Scale 1 : 50

WARNING

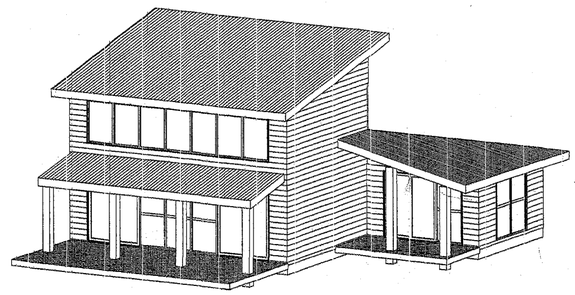
THIS BUILDING CONSENT IS ISSUED BUT IT IS AN OFFENCE TO COMMENCE BUILDING UNTIL ALL OTHER NECESSARY APPROVALS HAVE BEEN OBTAINED.

NB: FAILURE TO COMPLY WITH THIS DIRECTION PURSUANT TO SECTION 40 (2) OF THE BUILDING ACT 2004 MAY UPON SUMMARY CONVICTION, MAKE YOU LIABLE FOR A MAXIMUM FINE OF UP TO $100,000 AND $10,000 FOR EVERY DAY THE OFFENCE CONTINUES.

PROJECT INFORMATION MEMORANDUM ISSUED UNDER SECTION 32 OF THE BUILDING ACT 2004
DATE: 25-8-06 P.I.M. No: 36597
OFFICER:

PLANS APPROVED SUBJECT TO ALL REQUIREMENTS OF THE BUILDING ACT 2004 BEING FULLY COMPLIED WITH
DATE: 25.8.06 CONSENT No: 36598
OFFICER:

BCP



ELECTRICAL KEY

audio outlet
single power point
double power point
light outlet
quad power point
switch
sensor light
TV jack point UHF
telephone jack
shaver outlet
smoke detector
exterior wall light
extract fan thru roof

ELEVATION KEY

COPYRIGHT J HODGES CONSTRUCTION LTD, ROTORUA

LOCKWOOD

HODGES CONSTRUCTION LTD
P O BOX 473 ROTORUA PH 347 6338
DESIGN & BUILD

PROPOSED HOME FOR
MICHAEL REID
48 Sharp Road
ROTORUA

DESIGN *Photography Studio*

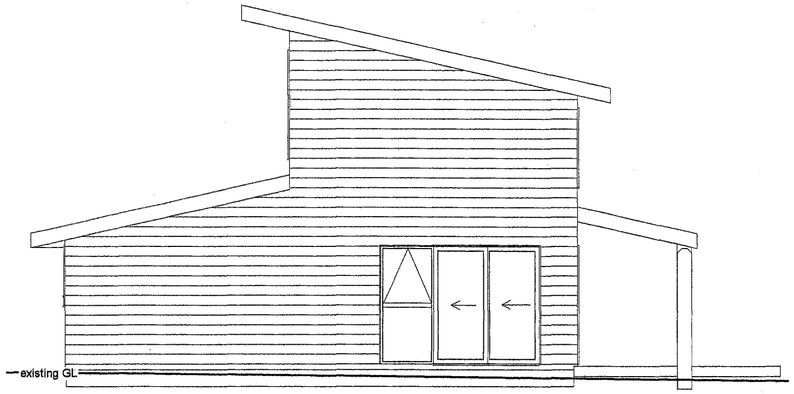
DRAWING *Floor Plan*
FLOOR AREA *89.00 m²*

SHEET *1 of 4*
DATE *June 06*
DESIGN BY *HCL*

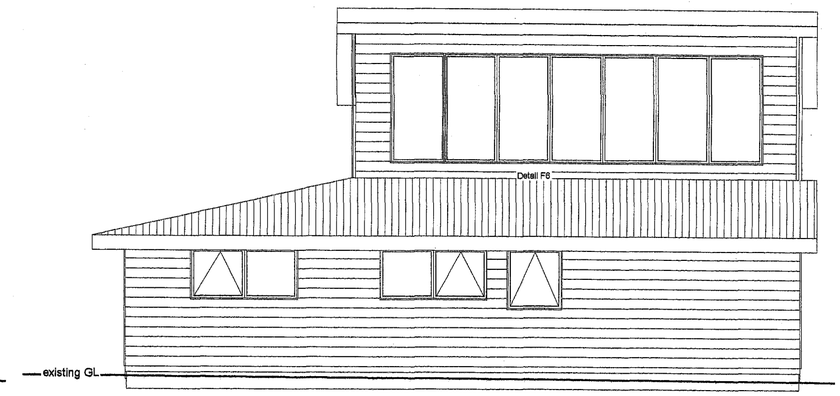
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Version: 1, Version Date: 31/03/2010



Elevation A

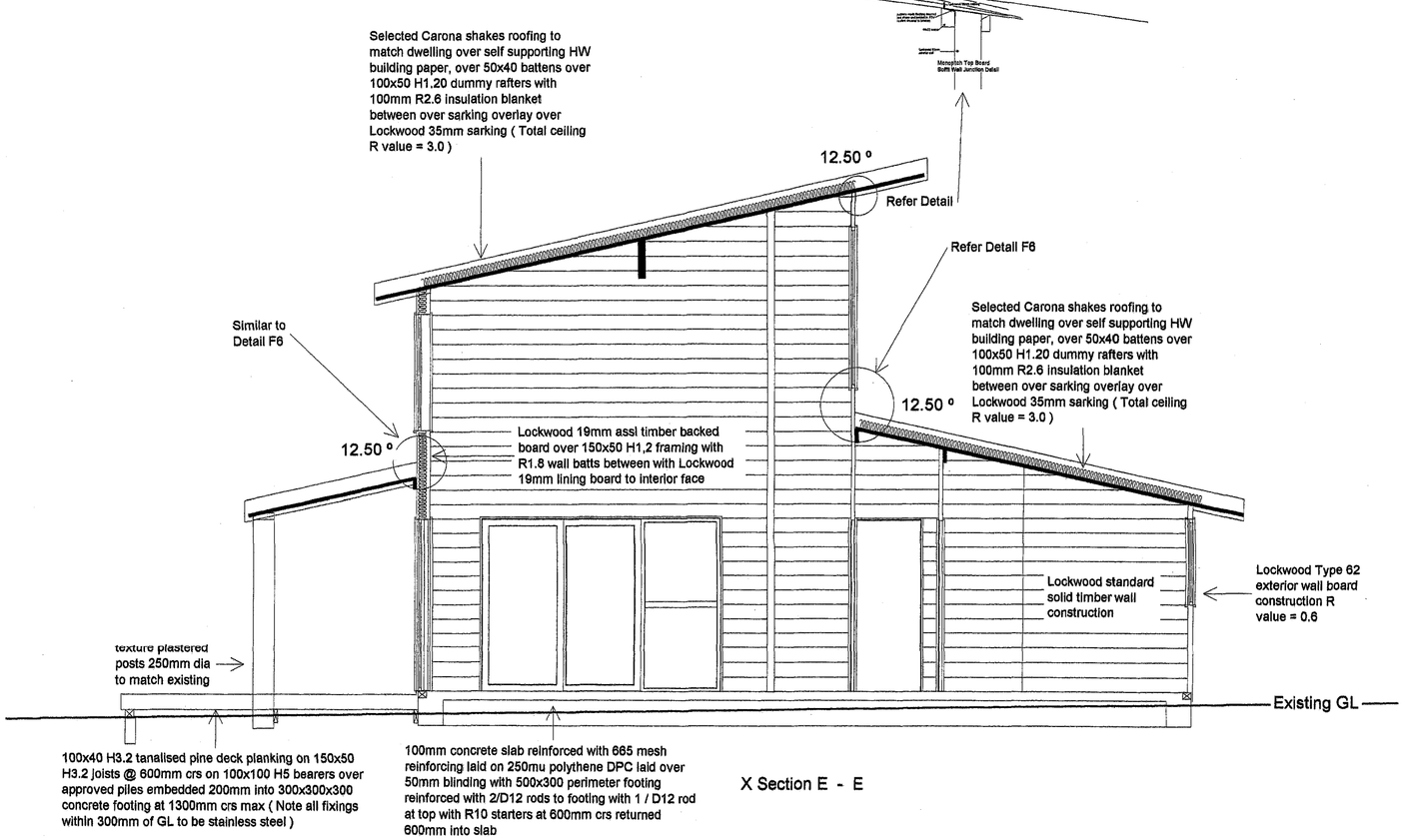


Elevation B



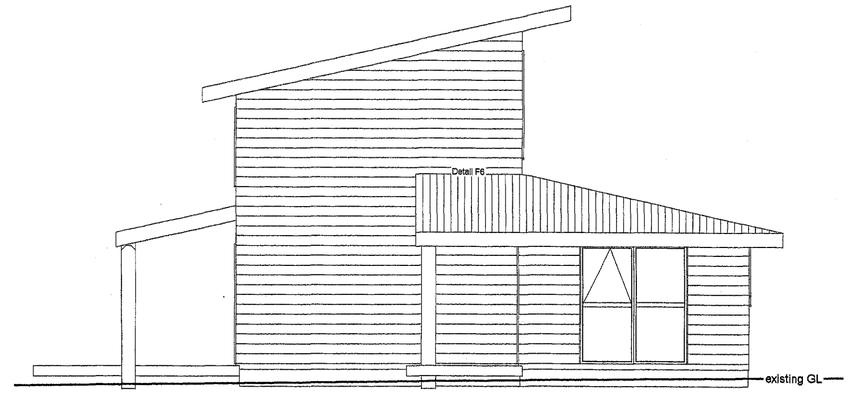
Elevation C

Scale 1 : 75



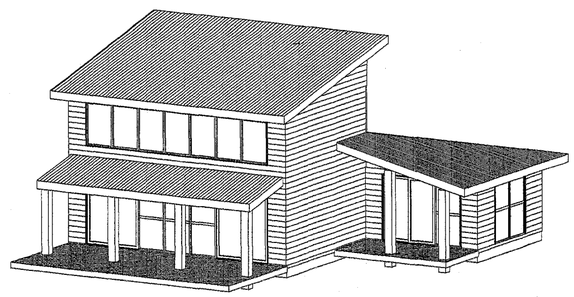
X Section E - E

Scale 1 : 50



Elevation D

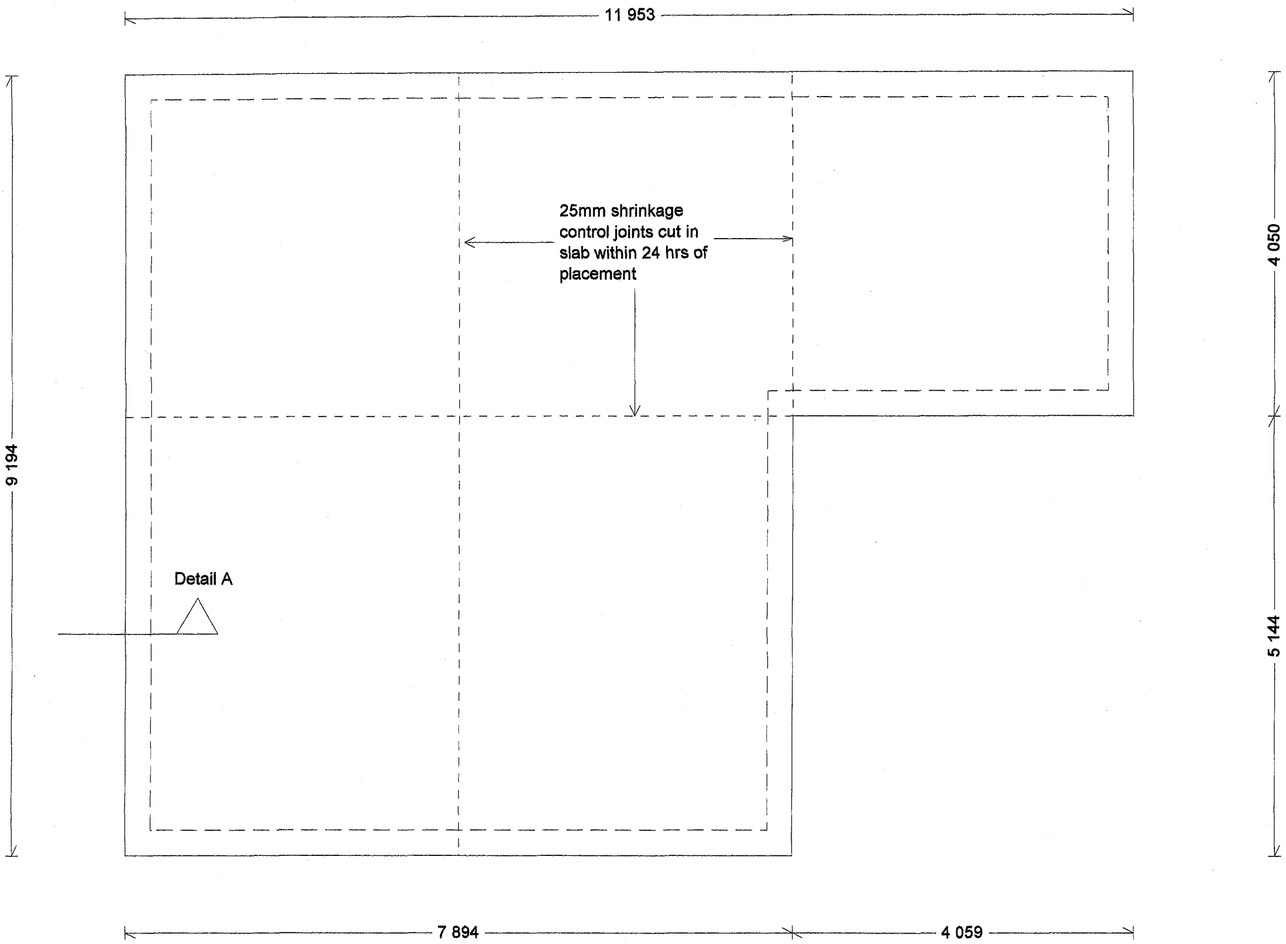
PIM / BC
№0036598



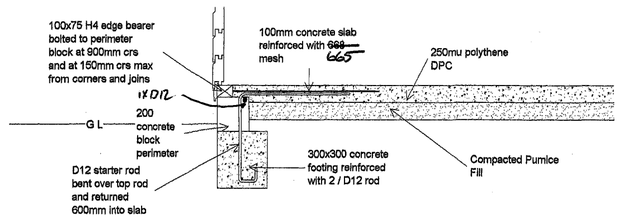
COPYRIGHT J HODGES CONSTRUCTION LTD, ROTORUA

LOCKWOOD	HODGES CONSTRUCTION LTD P O BOX 473 ROTORUA PH 347 6338 DESIGN & BUILD	PROPOSED HOME FOR DESIGN Photography Studio	MICHAEL REID 48 Sharp Road ROTORUA	DRAWING Elevations & X Section FLOOR AREA 89.00 m²	SHEET 2 of 4 DATE June 06 DESIGN BY HCL

Document Set ID: 588301
Version: 1, Version Date: 31/03/2010

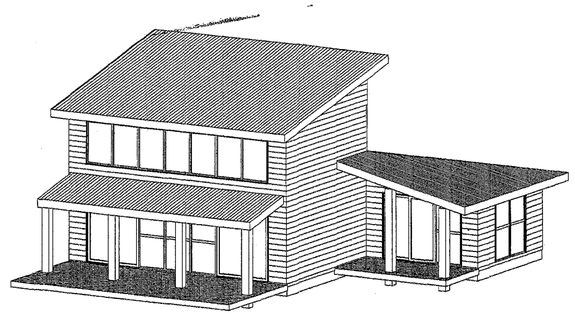


Scale 1 : 50



Detail A *Scale 1 : 25*

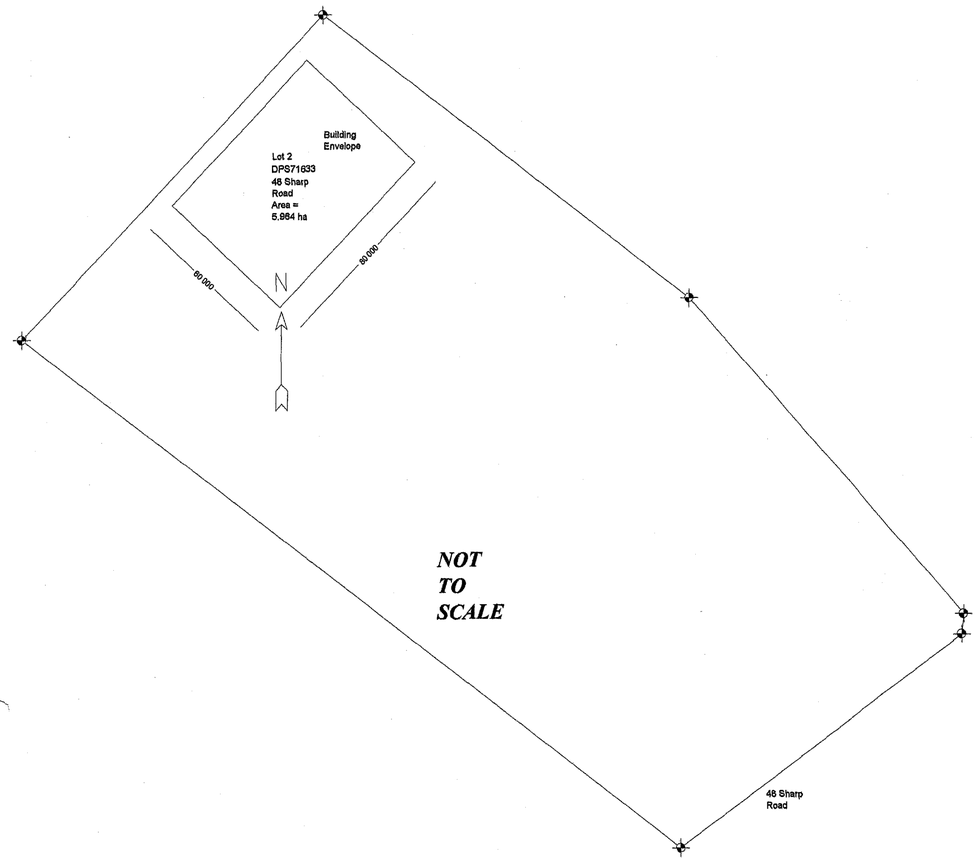
PIM / BC
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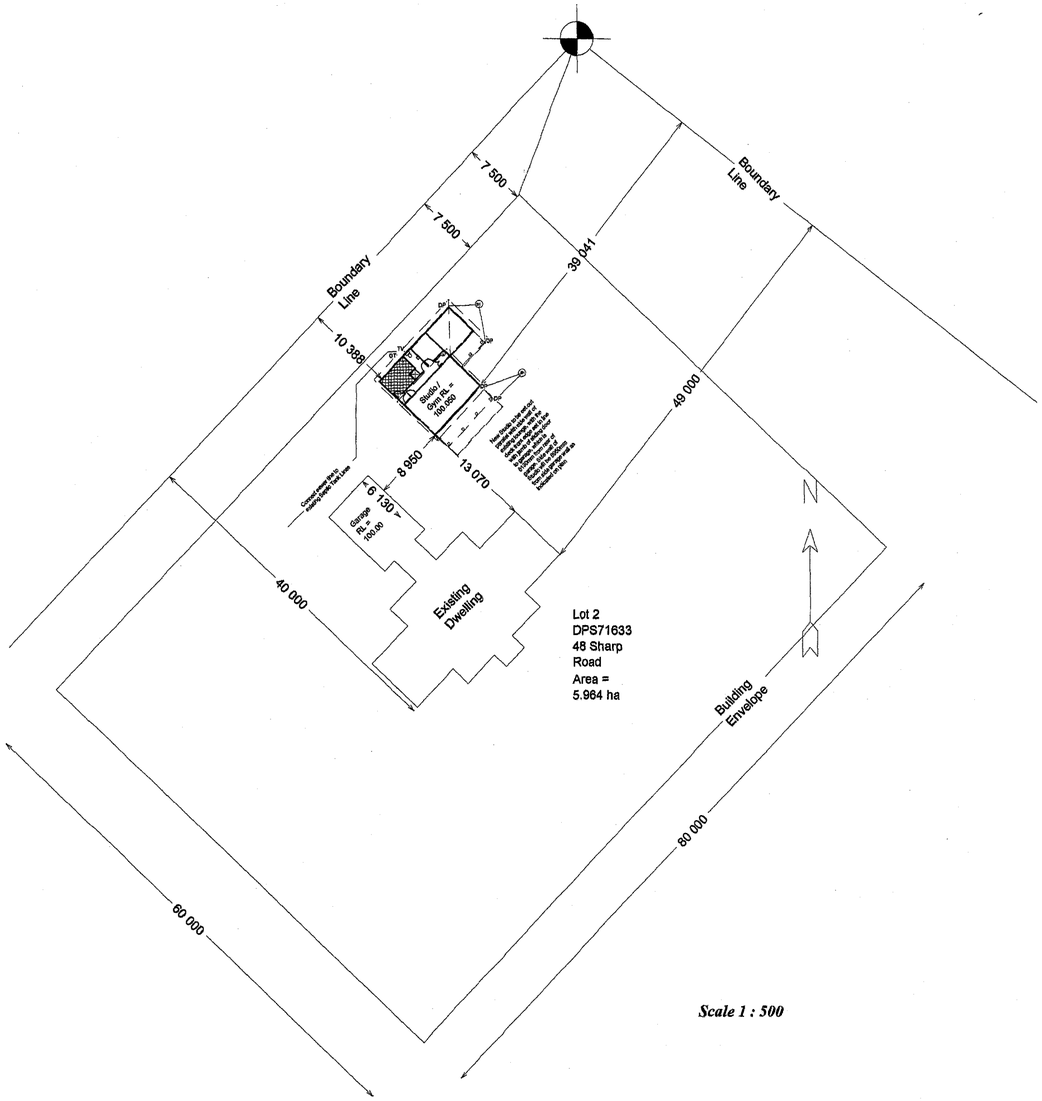
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LOCKWOOD	HODGES CONSTRUCTION LTD P O BOX 473 ROTORUA PH 347 6338 DESIGN & BUILD	PROPOSED HOME FOR DESIGN Photography Studio	MICHAEL REID 48 Sharp Road ROTORUA	DRAWING Foundation Plan FLOOR AREA 89.00 m²	SHEET 3 of 4 DATE June 06 DESIGN BY HCL

Document Set ID: 588301
Version: 1, Version Date: 31/03/2016

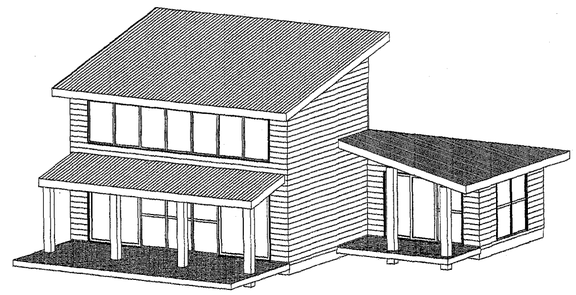


NOT TO SCALE



Scale 1 : 500

PIM / BC
#0036598



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LOCKWOOD	*HODGES CONSTRUCTION LTD* *P O BOX 473 ROTORUA PH 347 6338* *DESIGN & BUILD*	*PROPOSED HOME FOR* *DESIGN Photography Studio*	***MICHAEL REID*** *48 Sharp Road* *ROTORUA*	*DRAWING* *Site and Drainage Plan* *FLOOR AREA* *89.00 m²*	*SHEET* *4 of 4* *DATE* *June 06* *DESIGN BY* *HCL*

Document Set ID: 588301
Version: 1, Version Date: 31/08/2010

PLY BRACED WALLS
REPORT CLAUSE 5

DETAIL 8

M N O

11 989
4 000 | 1 200 | 2 518 | 4 015
3 000 | 2 200 | 2 518 | 4 015
1 000 | 5 518 | 1 200 | 4 015

C

A1 J1 'b' PROFILE D2 'b' PROFILE D2

Tiled floor to dark room by contractor with electric heating matrix under

WC
Vinyl by owner

Change Room N2
Vinyl by owner

Dark Room M1

timber overlay floor panelling to form 1200mm wide perimeter strip to gymnasium

b beam CLAUSE 15

carpet insert by Owner

Gymnasium

A760 light tight

CLAUSE 18 E BEAM

CLAUSE 18 e beam

A760 A760

Lobby
A760
A760
Vinyl by owner
Hall
CLAUSE 18 e beam
W24
Store WH

H BEAMS CLAUSE 19 & 20
H BEAMS CLAUSE 19 & 20 B1
High level glazing over 11 brds high
B2
H BEAMS CLAUSE 19 & 20

10 10

B

215x86 post
301x86 LAM STIFFENERS REPORT CLAUSE 17
215 x86 post
N1

Z3A

2 000

DOUBLE 90x45 DUMMY RAFTERS @ 300mm c/c SHOWN DASHED REPORT CLAUSE 11

DOUBLE 140x45 IN ROOF SPACE REPORT CLAUSE 25

H BEAM REPORT CLAUSE 21

LUMBERLOK MULTIBRACE REPORT CLAUSE 14

3/J18

CLAUSE 16 10 lam beam

3/J18

E BEAM CLAUSE 22

4 059

90x45 DUMMY RAFTERS @ 600mm c/c FOR MAXIMUM 900mm ROOF OVERHANG. REPORT CLAUSE 11

OVERHEAD TIE ROD REPORT CLAUSE 13

Floor mounted quad power point set flush with timber overlay flooring

Studio
timber overlay floor panelling to Studio

FFL = RL garage + 50mm = RL 100.050

DETAIL 12.

engineered portal frame over with 150x50 framing and 19mm Lockwood assi exterior cladding and Lockwood 19mm interior lining board over refer to Engineers details

Z3A Z3A with high level glazing over 8 brds high

E beam CLAUSE 23

200UB29.8 BRACING FRAME ALONG FRONT WALL. REFER REPORT CLAUSE 6

90x90 EXTERIOR ROOF SUPPORT POSTS IN 500mm x 500mm x 500mm MASS CONCRETE FOUNDATIONS REPORT CLAUSE 24.

A

9 230
2 918 | 1 000 | 2 936
5 000
2 035
3 500
2 918 | 3 962 | 4 086
1 000
5 000 | 5 044 | 5 044

7 930
7 806 | 4 015
7 930 | 4 059

LUMBERLOK MULTIBRACE REPORT CLAUSE 14.

Scale 1 : 50

90x45 DUMMY RAFTERS @ 600mm c/c CONTINUOUS OVER 2 SUPPORTS (MINIMUM) TO CANTILEVER 900mm (MAXIMUM) AT ROOF OVERHANG (REPORT CLAUSE 11).

OUR APPROVAL OF THIS DRAWING RELATES TO OUR SPECIFICALLY DESIGNED STRUCTURAL ELEMENTS ONLY.

bsk Consulting Engineers Limited
P.O. BOX 23, ROTORUA
PH: 07 348-5394
FAX: 07 348-2311

SIGNED: ..... DATE: 24/7/06

(REFER ALSO REPORT REF: 15936 DATED: 24/7/06)

DRAWING No.1
BSK REF: 15936

PIM / BC
#0036598

ELECTRICAL KEY

audio outlet
single power point
double power point
light outlet
quad power point
switch
sensor light
TV jack point UHF
telephone jack
shaver outlet
smoke detector
exterior wall light
extract fan thru roof

ELEVATION KEY

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Document [illegible]3301
Version: 1, Version Date: 31/03/2010

LOCKWOOD

HODGES CONSTRUCTION LTD
P O BOX 473 ROTORUA PH 347 6338
DESIGN & BUILD

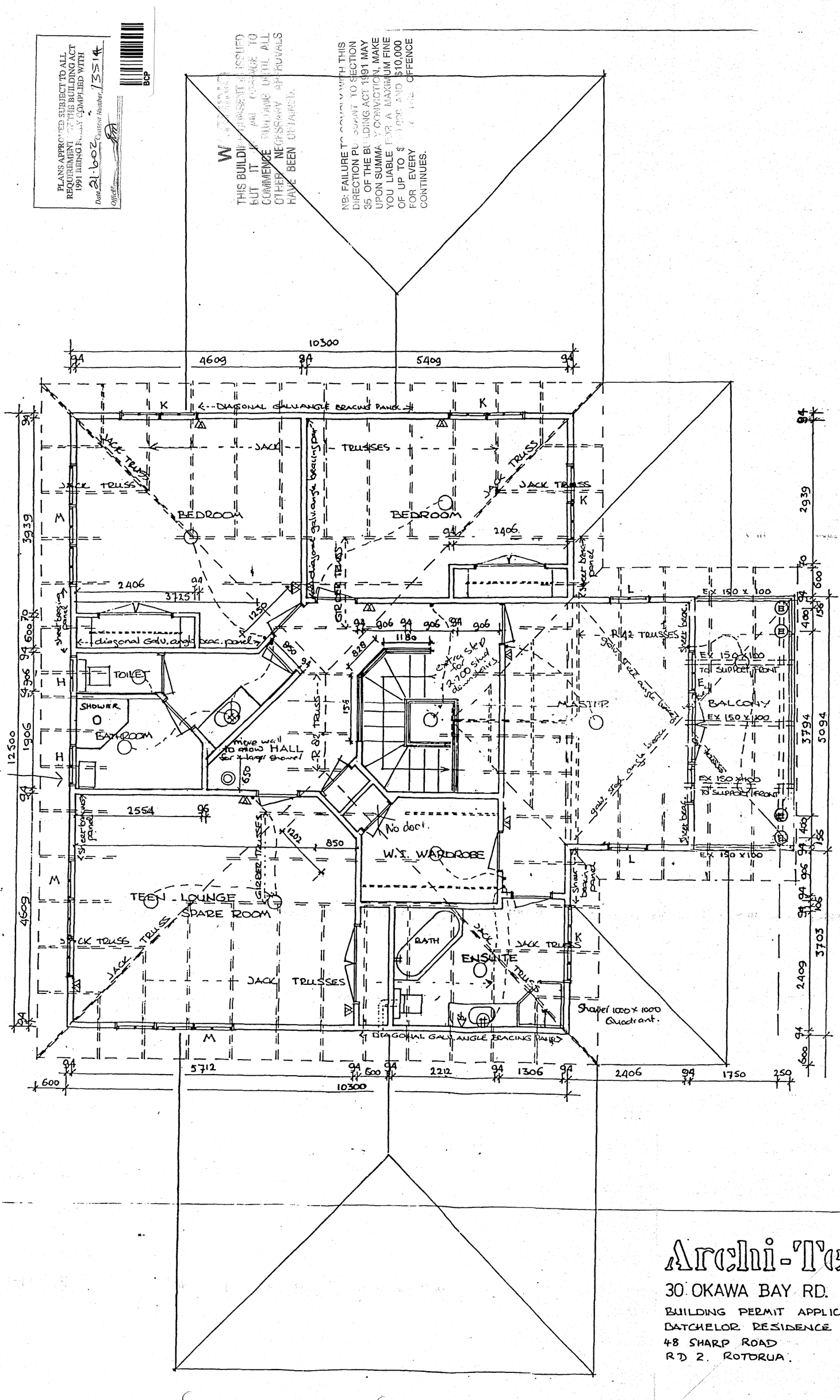
PROPOSED HOME FOR
MICHAEL REID
48 Sharp Road
ROTORUA

DESIGN Photography Studio

DRAWING Floor Plan

SHEET 1 of 4

DATE June 06



Archi-Ted

30 OKAWA BAY RD. RO

BUILDING PERMIT APPLICATI

BATCHELOR RESIDENCE AT

48 SHARP ROAD

RD 2. ROTORUA.

Document Set ID: 588300
Version: 1, Version Date: 31/03/2016

Property File Information

Property Address: 48 SHARP ROAD
KAHAROA, R D 2
ROTORUA

Property File No: P27041

Legal Description: Lot 2 DPS 71633

Ref: 27041	**Type:**	INFO - Water	INFO-WATER ALLOCATION	**Class ID** 13369
		INFO - Planning Restriction		**Class ID** 13368
		INFO - Building Restriction		**Class ID** 13367

Explanation: Attached Planning Restriction Notice for Lot 2 DPS 71633.

References: Subdivision consent reference 6594054.

Initiating Officer

Name: Joanne Watts
Position: Planner
Date: 07/11/1995
Signature:

Authorising Officer

Name: Stephen Colson
Position: Manager Planning Services
Date: 17/08/2004
Signature:

Document Set ID: 588288
Version: 1, Version Date: 31/03/2010

TOWN PLANNING
RESTRICTION

6951/220.02
LOT 2 DPS 71633

SUBDIVISION - CANDY, CENTRAL ROAD, KAHAROA

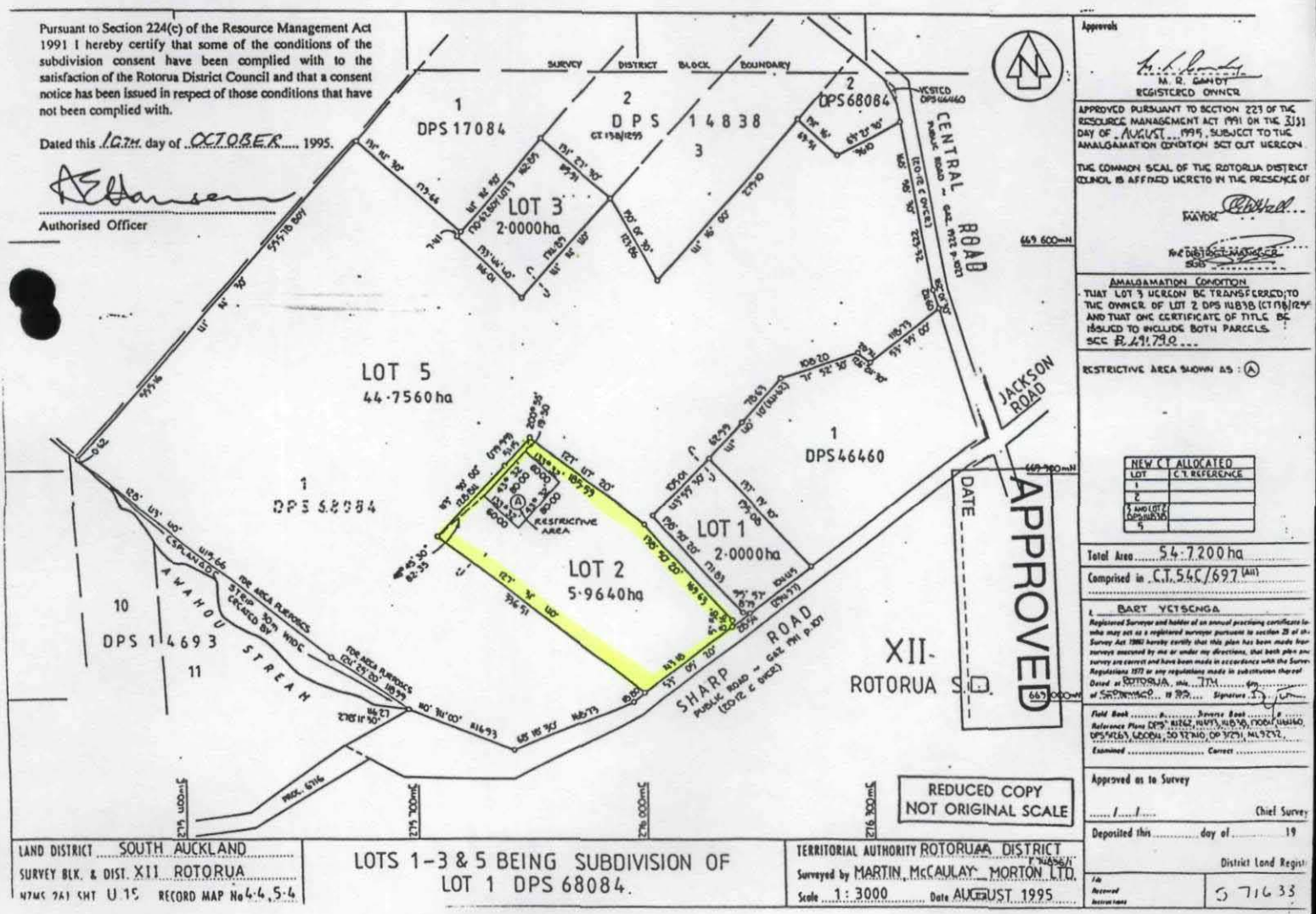
All owners of Lot 5 DPs 71633 are advised that in accordance with Part Sixteen Rule 10.11.1 of the Proposed District Plan, no further lifestyle lots may be excised from Lot 5 DPs 71633 subject to the provisions of the District Plan.

All owners of Lots 1, 2, 3 and 5 DPs 71633 are advised that the maximum daily water allocation at a steady flow basis as listed below:

Lot Number	Daily Entitlement	Average Flow
Lot 1 DPs 71633	1.50m³	1.04 litres/m
Lot 2 DPs 71633	3.00m³	2.08 litres/m
Lot 3 DPs 71633	No Allocation	
Lot 5 DPs 71633	20.12m³	13.97 litres/m

All owners of Lot 2 DPs 71633 are advised that any dwelling must be sited within the Restrictive Area A shown on DPs 71633.

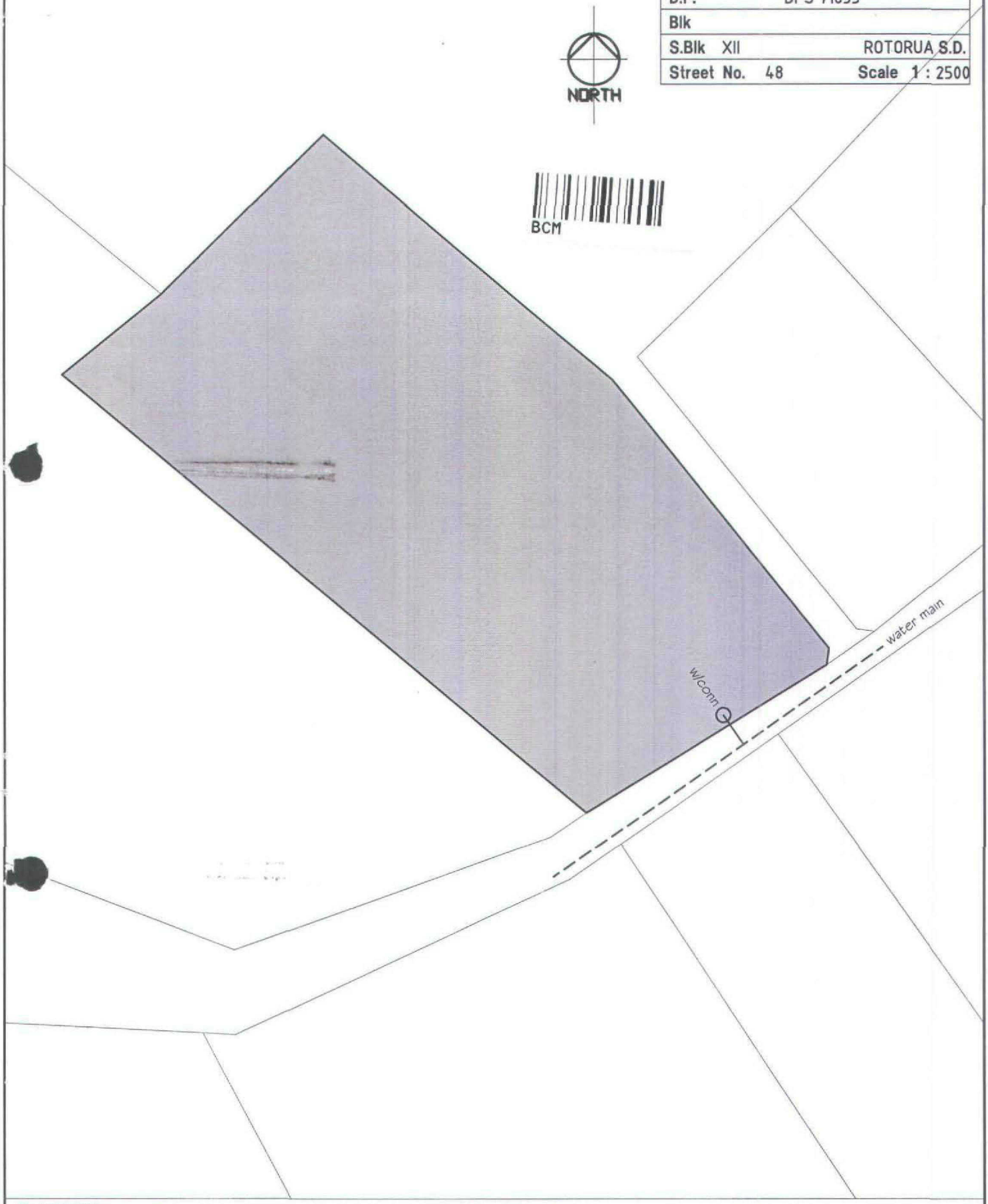
If any proposed house is to be located outside the areas marked A then a Resource Consent will be required to be obtained from the Rotorua District Council.



Document Set ID: 588288
Version: 1, Version Date: 31/03/2010

Rotorua District Council Services Plan

Valuation No.	06951/239-02
Lot No.	Lot 2
D.P.	DPS 71633
Blk	
S.Blk XII	ROTORUA S.D.
Street No. 48	Scale 1 : 2500



CAUTION

This plan is for the purpose of indicating RDC assets of water, sewerage and stormwater services ONLY. It is not to be used as a site plan for building purposes.
All services are indicated in good faith, however additional services may have been installed that do not appear on this plan.
Position measurements are subject to reasonable tolerances and depth of cover may have changed after installation.
Verify locations prior to excavating with machinery. A Street Opening Permit is required for excavation work within the road reserve.
Warning : Check for other underground services.

This plan was issued on 08/10/03.

Document Set ID: 588287
Version: 2, Version Date: 31/03/2010

FILE

21 June 2000

REG

Please Quote: P27041

Doc No: 149791v1

BATCHELOR, LEON FRANCIS
48 SHARP ROAD, RD2
KAHAROA
ROTORUA

Dear Sir/Madam

KAHAROA WATER SUPPLY FLOW RESTRICTORS

Further to previous correspondence in October 1999 regarding the installation of correctly-sized flow restrictors, I can now advise that this work will commence during the second week of September 2000 and be carried out over a 2-3 week period.

Your flow restrictor will be replaced with a correctly sized one during this time.

Details of your restrictor size and other details are as follows:

Water Account No:	4207
Property Valuation No:	06951/239.02
Existing Restrictor Size:	4 l/min
New Restrictor Size:	1.9 l/min
Recommended Minimum On-Site Storage:	1,300 litres

Please note that the on-site storage volume stated is the recommended minimum for typical household use and is equivalent to the greater of either 12 hours of your allocated flow or 1,000 litres. If your peak demand requirement is likely to be high, you should consider more storage.

With regards to sourcing storage tanks and/or pumping equipment, there are a number of different manufacturers and merchants of these, however Council is unable to recommend particular makes of these over any others. If you are yet to make arrangements to obtain this equipment suppliers can be found in the Yellow Pages under Tank Manufacturers, Water Pumps & Reticulation, and Water Storage. Some of these are already familiar with the general requirements of the Kaharoa Supply.

We will not be issuing any further advice of this upcoming work, but if you require any further clarification or information, please contact either myself or Kim Lockie, Ph 348 4199.

Formal Constitution of Kaharoa Water Supply Area

A number of the Urban and Rural water supply schemes in Rotorua District, whilst serving a defined area, have never been formally constituted as a Water Supply Area as defined in the Local Government Act 1974.

Document Set ID: 588286
Version: 2, Version Date: 31/03/2010

Council is proceeding with identifying each specific area and following the special order process to formally constitute these, including the Kaharoa Water Supply Area. The area proposed to be formally constituted is the area covering all properties currently served by the existing scheme, as shown on the attached plan.

The benefits of establishing a Water Supply Area include the ability to guarantee levels of service within a defined area, and also to control any extensions to the area and ensure that these are not funded by existing consumers within the area.

It is proposed that the special order process to constitute the Kaharoa Water Supply Area will be initiated by a resolution at the Council meeting on 15 August 2000, publicly advertised, and confirmed (subject to public comment) at the next Council meeting on 26 September 2000.

However, if you have any comments or concerns regarding this process these would be appreciated prior to 18 July 2000 so they can be addressed before the formal process commences.

Yours faithfully

Eric Cawte
Utilities Operations Manager

Document Set ID: 588286
Version: 2, Version Date: 31/03/2010

P27041

ROTORUA DISTRICT COUNCIL

WATER CONNECTION APPLICATION

Application No:
Valuation No 06951/239.02
Water Supply: KAHAROA

SECTION 1 APPLICANT TO COMPLETE

Name of Property Owner L. F. & R R BATCHELOR **FILE COPY**

Street Address (to be supplied) SHARP ROAD, KAHAROA

Postal Address of Owner (if different)

Full Legal Description (Lot No, DPS, SD, Blk No) LOT 2 DPS 71633 BLK XII

Contact Name and Phone No LEON OR RA BATCHELOR 3479530, 025 951 750

Description of existing buildings
(House, Garage, Unit etc)

Description of proposed buildings
(House, Garage, Unit etc) HOUSE. GARAGE

What is the purpose of connection;

Domestic [✓] Commercial [ ] Industrial [ ] Agricultural [ ] Fire Supply [ ]

Is the property already supplied with water (Y/N) [N]

Were any buildings demolished to which water was supplied(Y/N) [N]

Preferred location of gate valve and/or meter ; ..... metres from LEFT / RIGHT side boundary
(measured standing on road facing towards the property)

I hereby make application for the above water connection and agree to meet such fees, water rates, and/or conditions as may from time to time apply in respect to the Rotorua District Council General

Signature of Applicant/Owner A L Batchelor Date 6/6/96

SECTION 2 OFFICE USE ONLY

Building Services Department

Connection I. D. size (15,20,25)	15
Water Meter req'd (y/n)	Y
Consumer Class	25
Backflow preventer req'd (y/n)	Y

Fee Due $ 550.00
Cashiers receipt No S082267
Other 5/6

Recorded by.....
Date.....

Rates Department

Application details checked against Rates Database [ ]

Application noted on Val slip [ ]

REG

Recorded by.....
Date.....

Engineering Dept / Draughting

Connection size acceptable	Y
Flow Restrictor req'd	Y
Scheme Contribution req'd	N

Flow Rate 3 m³/day 2.08 l/sec
Property Area (Ha.) 5.9640
Other.....

Authorized by.....
Date.....

Operations

Job Charge Code.....
Job Cards No.....
Fitter.....
Connection size installed.....
Meter No.....
Meter Size ..... Type ..... Reading.....
Test Pressure / Flow recorded .....kPa / .....l/m
Location ..... metres from (L or R) ..... side boundary
Installation completed on ...../...../.19.....
Signed by .....

STREET OPENING

Post Installation Check
As Built information rec'd (y/n) [ ]
Water Billing Account No.....
Asset I.D. .....
Other Details .....

Recorded on As Built plan No.....

Signed by .....
Date...../...../.....

File Name I:\PROJECT\STDS\SERV_CON.XLS

Document Set ID: 588285
Version: 1, Version Date: 31/03/2010

FILE

P12017
6951/229/02

ROTORUA DISTRICT COUNCIL

01 September 1995

RC

Please Quote: ~~6595054~~
Your Ref: 74896/1

Ref: ESL0109Y.JWT

Private Bag RO 3029
Rotorua
New Zealand
Telephone 07-348 4199
Fax 07-346 3143

Address all communications to:
District Manager
Rotorua District Council

Martin McCaulay Morton Ltd
P O Box 878
ROTORUA

COPY

Attention: B Yetsenga

Dear Sir

APPLICATION FOR SUBDIVISION CONSENT : CANDY, CENTRAL ROAD, KAHAROA.

At its meeting on 30 August 1995, Council approved the land transfer plan relating to the variation approved on 30 May 1995.

Therefore, the plan is returned herewith with the approval executed under seal.

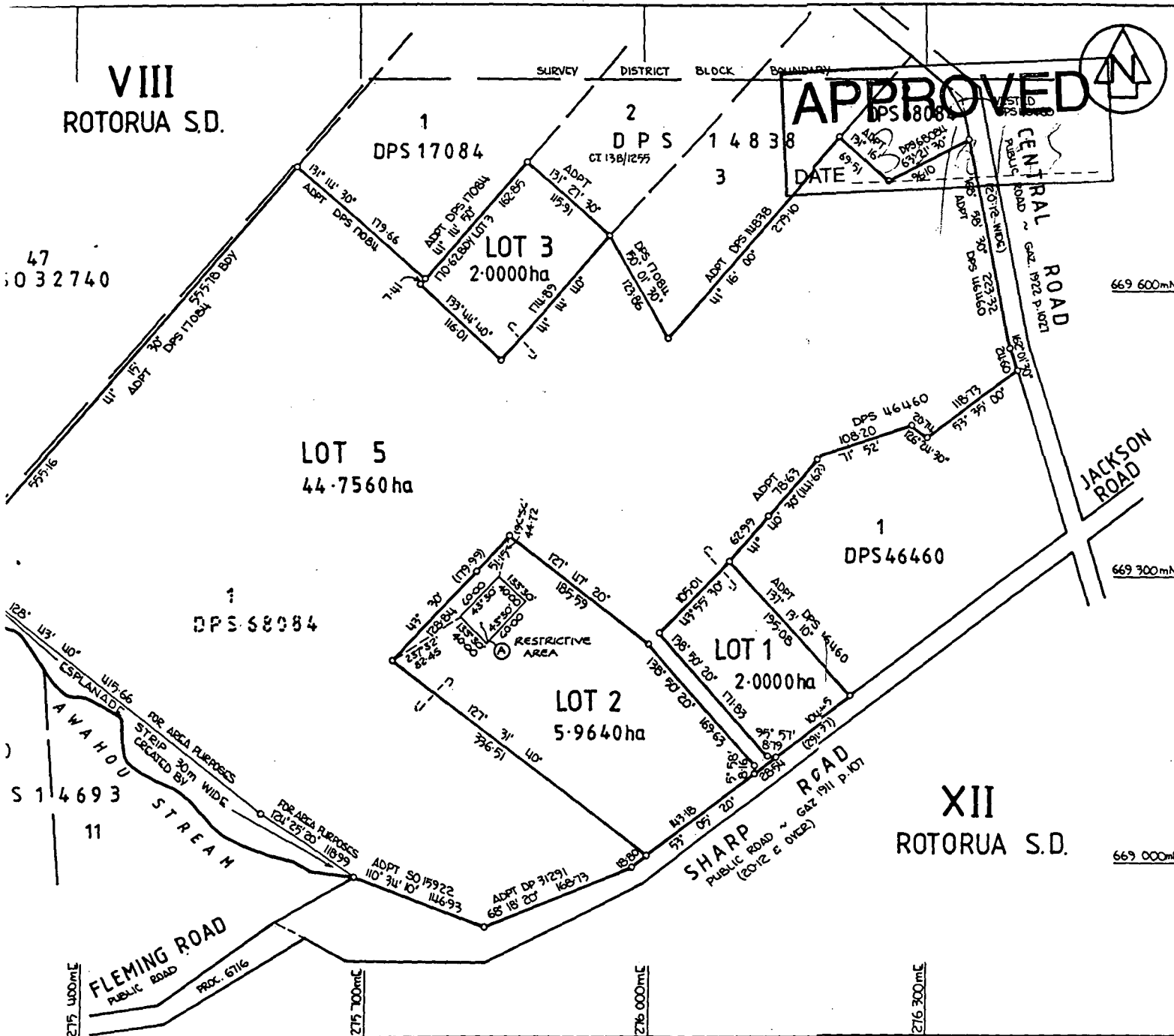
A copy of the approved land transfer plan should be submitted when requesting a certificate of compliance pursuant to Section 224(c) of the Resource Management Act 1991.

Yours faithfully

Joanne Watts
Planner.

Document Set ID: 588284
Version: 2, Version Date: 31/03/2010

SISTER CITIES:
Klamath Falls, Oregon, U.S.A



Approvals

M. R. CANDY
REGISTERED OWNER

APPROVED PURSUANT TO SECTION 223 OF THE RESOURCE MANAGEMENT ACT 1991 ON THE 31 DAY OF AUGUST 1995, SUBJECT TO THE AMALGAMATION CONDITION SET OUT HEREON

THE COMMON SEAL OF THE ROTORUA DISTRICT COUNCIL IS AFFIXED HERETO IN THE PRESENCE

MAYOR

FOR DISTRICT MANAGER SUB

AMALGAMATION CONDITION

THAT LOT 3 HEREON BE TRANSFERRED TO THE OWNER OF LOT 2 DPS 14838 (CT 13B/125 AND THAT ONE CERTIFICATE OF TITLE BE ISSUED TO INCLUDE BOTH PARCELS.

SEE B 291790

NEW C.T. ALLOCATED	
LOT	C.T. REFERRENCE
1	
2	
3 AND LOT 2 DPS 14838	
5	

RESTRICTIVE AREA SHOWN AS: (A)

Total Area 54·7200ha

Comprised in C.T. 54C/697 (All)

I, BART YETSENGA

Registered Surveyor and holder of an annual practising certificate (or who may act as a registered surveyor pursuant to section 25 of the Survey Act 1986) hereby certify that this plan has been made from surveys executed by me or under my directions, that both plan and survey are correct and have been made in accordance with the Survey Regulations 1972 or any regulations made in substitution thereof.

Dated at ROTORUA this day of 19 95 Signature

Field Book p. Traverse Book p.

Reference Plans DPS 51063, DPS 46460, DPS 14262

Examined Correct

Approved as to Survey

/ / Chief Surveyor

Deposited this day of 19

District Land Registrar

File
Received
Instructions

SOUTH AUCKLAND
XII ROTORUA
5 RECORD MAP No 4·4, 5·4

LOTS 1-3 & 5 BEING SUBDIVISION OF LOT 1 DPS 68084.

TERRITORIAL AUTHORITY ROTORUA DISTRICT

Surveyed by MARTIN, McCAULAY, MORTON LTD. F 74856/1

Scale 1:2000 Date AUGUST 1995

W.A. ROBERTSON, SURVEYOR GENERAL, DEPARTMENT OF SURVEY AND LAND INFORMATION, NEW ZEALAND

Document Set ID: 588284
Version: 2, Version Date: 31/03/2010

FILE

01 December 2006

RC

Please Quote: ~~62:06:208~~ P27041
OW: 74551
Enquiries to: Jeannie Preddey

Michael J. Reid
C/- J. Hodges Construction
PO Box 473
ROTORUA

RESOURCE CONSENT
Approved 4-12-06
Appn No 8006
Plan No
Date 4-12-06

Dear Sir,

NON-NOTIFIED APPLICATION FOR RESOURCE CONSENT
NOTICE OF DECISION – BASE CREATIONS LTD – 48 SHARP ROAD

I wish to advise that the following decision has been made under authority delegated to staff in respect of the above application:

(a) **Decision regarding non notification of the application**
That pursuant to Section 93(1)(b) of the Resource Management Act 1991, the Rotorua District Council resolves that the adverse effects of the proposal will be minor and the application need not be notified. The Council is satisfied after taking into due consideration the requirements of Section 94, 94A(a) and Section 94B that no persons are considered adversely affected by the proposal. Council is also satisfied that no special circumstances exist that require notification of the consent application in accordance with Section 94C(2) of the Resource Management Act 1991.

(b) **Decision on the application**
That pursuant to Sections 34A, 104, 104B, 104D and 108 of the Resource Management Act 1991, the Rotorua District Council resolves to grant consent to the application by Michael J. Reid to construct a subsidiary household unit at 48 Sharp Road legally described as Lot 2 DPS 71633.

This consent is subject to the following conditions:

1. **That all conditions relating to this resource consent must be met in full and a Planning Compliance Certificate issued before the use of the unit.**
2. **That the proposal proceeds in accordance with the application submitted by Michael J. Reid and the approved plans that have been numbered 8006/1-4 by Council.**

Financial contribution

3. **That a financial contribution of $200.00 (GST inclusive) for reserves and heritage purposes be paid to Council before the unit is occupied. This amount has been assessed at 1% of the value of the land area exclusive to the additional dwelling.**

Engineering

4. **That the water connection shall be from the existing private water lines.**

Document Set ID: 588283
Version: 1, Version Date: 31/03/2010

The reasons for this decision are that:

1. **The site is zoned Rural A in the District Plan where household units which are under $40m^2$ as per the definition of a household unit in the Operative Rotorua District Plan are assessed as being a Non Complying Activity.**
2. **After having regard to the relevant matters in Section 104 & 104D of the Act, Council is satisfied that consent can be granted as it is satisfied that any adverse effects of the proposal on the environment will be minor since the proposal is within the existing building footprint and will convert part of the existing garage into a self contained unit.**
3. **Council is also satisfied that the activity proposed is considered to be consistent with the relevant objectives & policies of the District Plan and the purposes and principles of the Resource Management Act 1991.**
4. **Council's Maori Consultation Committee advised that consultation with iwi was not required in this case**
5. **A financial contribution is payable in accordance with Appendix U of the District Plan towards the development of existing, and purchase of additional, land to enhance the amenity and heritage value of reserves.**

The applicants are advised that:

a) Before a Building Consent will be issued the applicant needs to demonstrate that the proposed on-site effluent disposal system will comply with Environment Bay of Plenty's "On-site Effluent Treatment Regional Plan". If compliance cannot be demonstrated, then separate resource consent from EBOP will be required. Please be aware that Rule 11 is now operative. Contact Environment Bay of Plenty for advice.

b) Fulfilment of the conditions of this consent within the timeframe specified in the consent is necessary to carry out the proposal for which this consent relates. Your progress towards satisfying the conditions of consent will be monitored by Council's Monitoring & Compliance Officer. Please contact the Monitoring & Compliance Officer to schedule the inspections described in Conditions 1, 7 and 8 so that a Planning Compliance Certificate can be issued.

c) Council has no records of an archaeological site on this property. This may be due to one of two factors. Either, there are no sites present or there has not been an archaeological survey undertaken. Please be advised that both known and unknown archaeological sites are protected under the Historic Places Act 1993. If during the exercising of this consent any archaeological site is uncovered work must stop and permission be obtained from the Historic Places Trust under the provisions of either Section 11 or 12 of the Historic Places Act 1993.

d) If you are dissatisfied with any aspect of the decision, you have a right of objection to Council under section 357 of the Resource Management Act 1991. Please advise Council in writing stating the reasons for the objection and the preferred outcome within 15 working days of receiving this decision. If no objection is received it will be assumed that the applicant accepts this decision.

e) The above consent lapses on the expiry of 5 years after the date of receiving this letter, unless the consent is given effect to.

Document Set ID: 588283
Version: 1, Version Date: 31/03/2010

f) No Development Contribution

Please be advised that this project has been assessed to determine whether a Development Contribution is payable in terms of the 'Development Contributions Policy' adopted by Rotorua District Council on 26 June 2006. **No Development Contribution is payable at this time.**

Please note this assessment has been based on the information provided with the application. Any future subdivision or development may require the assessment of a Development Contribution. Any alteration to the project or information provided may result in a reassessment. Please contact Council's Development Contribution Officer, Mr Len Mitchell if you wish to discuss Development Contributions.

If you have any questions regarding this consent, please contact Jeannie Preddey, Resource Management Planner on 350 0209 (Extn 8194).

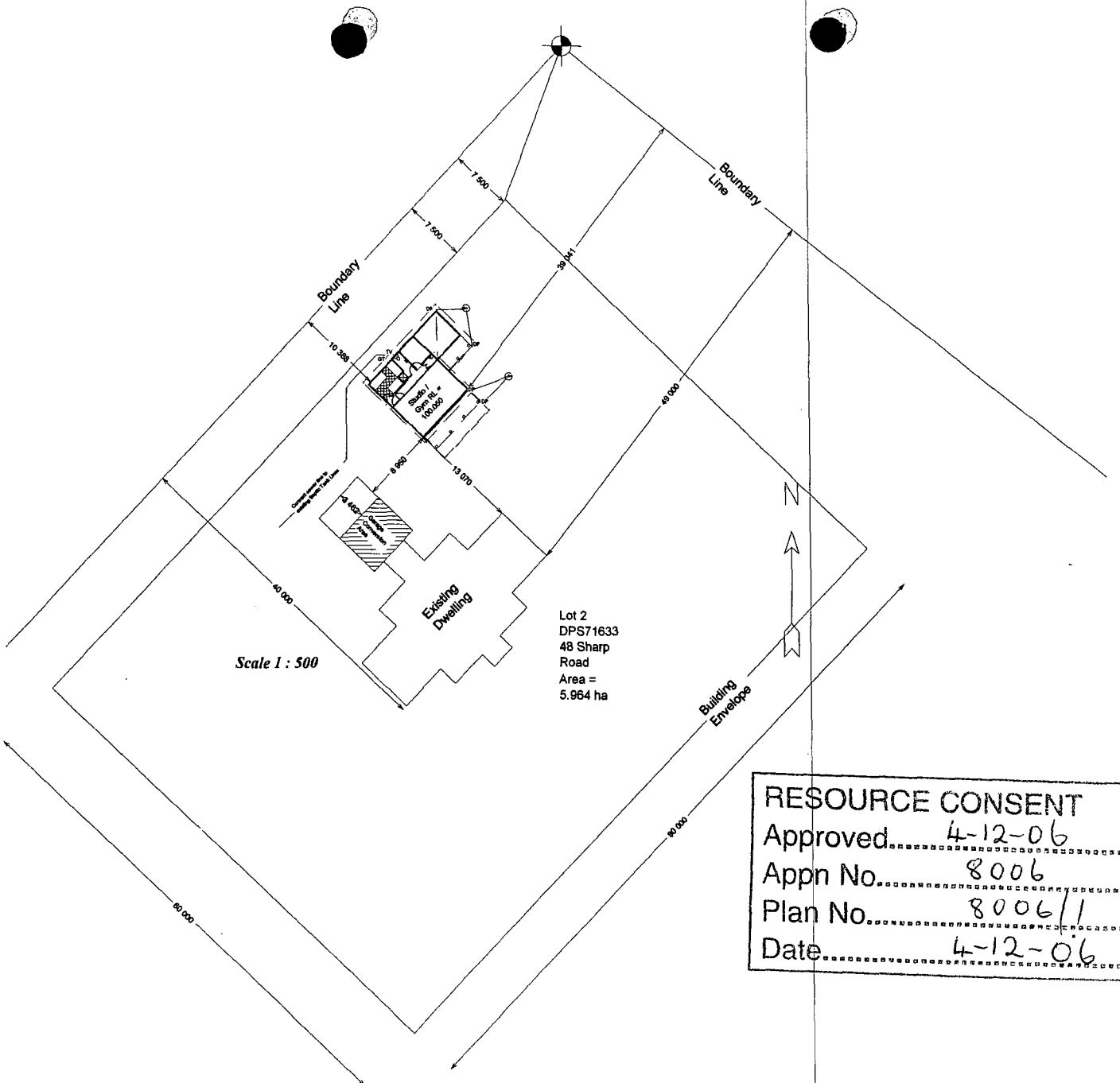
Yours faithfully,



.....

Nigel Wharton
Director, Environmental Services

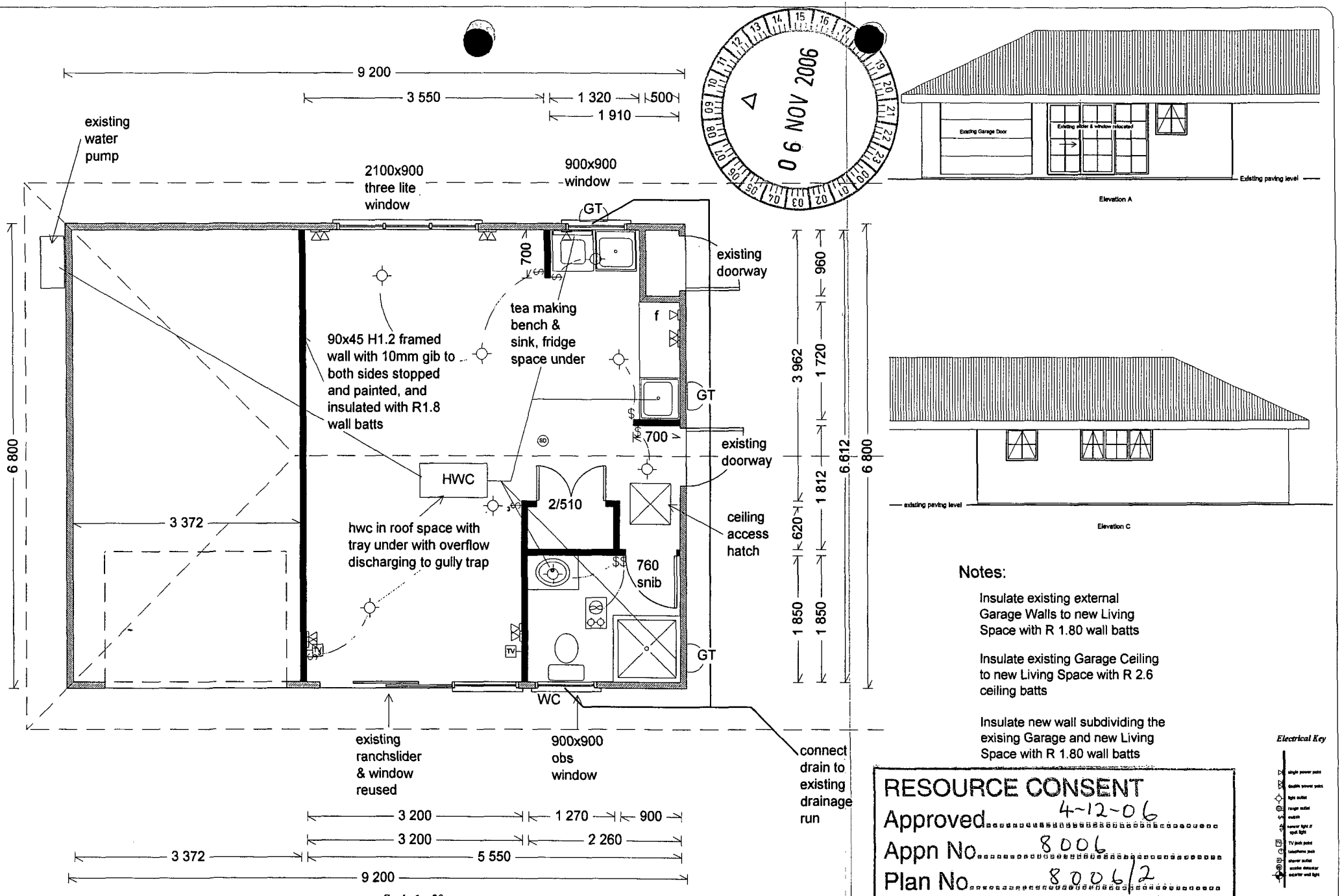
Document Set ID: 588283
Version: 1, Version Date: 31/03/2010



RESOURCE CONSENT
Approved 4-12-06
Appn No 8006
Plan No 8006/1
Date 4-12-06

LOCKWOOD	Hodges Construction Ltd 90 Fairy Springs Road, Rotorua ph 07 347 6338 fax 07 349 2013	Garage Conversion for	M Reid Care Giver's Quarters 48 Sharp Road Rotorua	Drawing: Site Plan Floor Area: N/A	Sheet: 4 of 4 Date: Oct 06 Design by: HCL

Document Set ID: 588283
Version: 1, Version Date: 31/03/2010



Notes:

Insulate existing external Garage Walls to new Living Space with R 1.80 wall batts

Insulate existing Garage Ceiling to new Living Space with R 2.6 ceiling batts

Insulate new wall subdividing the exising Garage and new Living Space with R 1.80 wall batts

Electrical Key

RESOURCE CONSENT
Approved 4-12-06
Appn No 8006
Plan No 8006/2
Date 4-12-06

LOCKWOOD

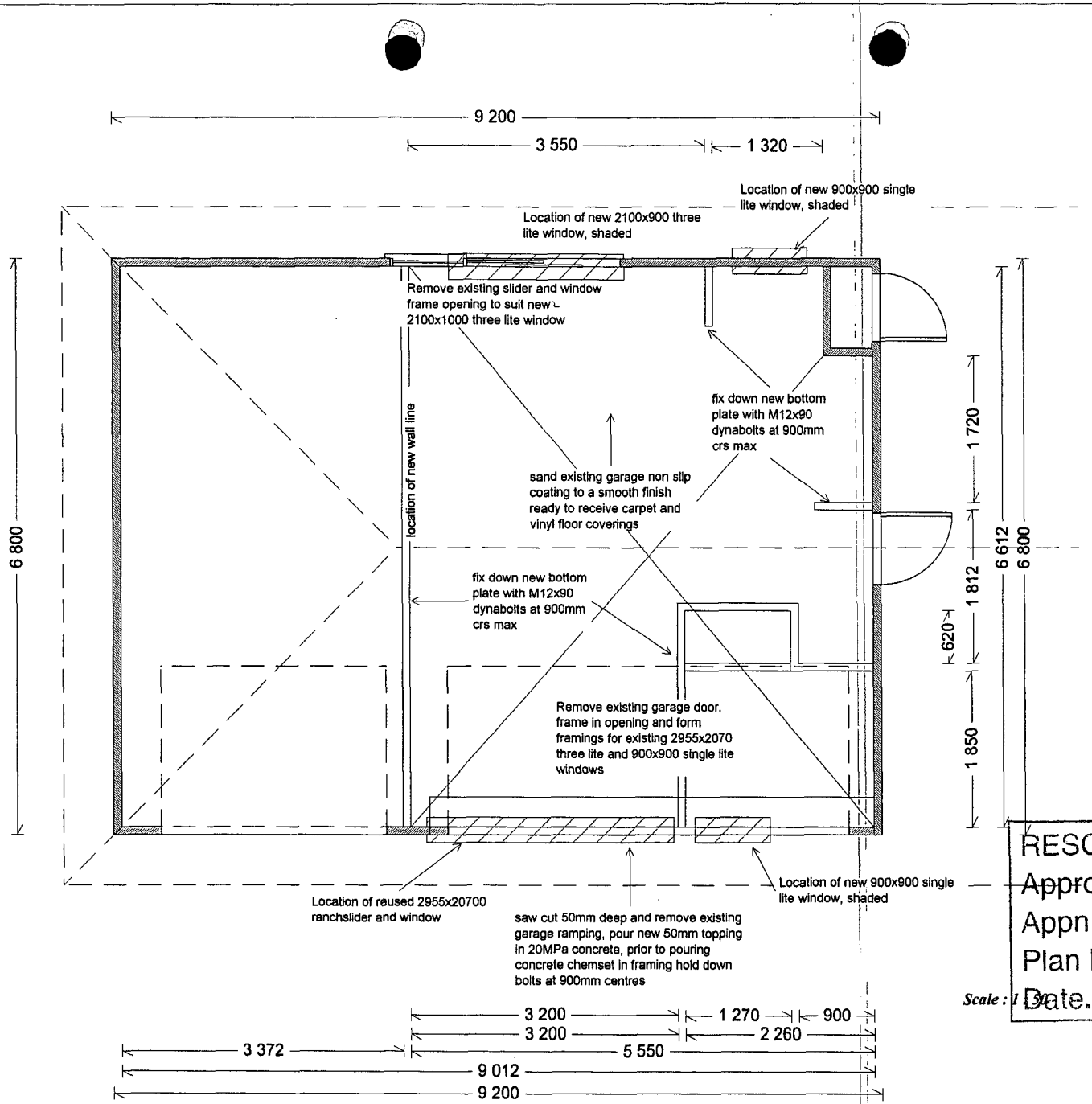
Hodges Construction Ltd
90 Fairy Springs Road, Rotorua
ph 07 347 6338 fax 07 349 2013

Garage Conversion for

M Reid Care Giver's Quarters
48 Sharp Road
Rotorua

Drawing	*Proposed Floor plan*	*Sheet*	*1 of 3*
Floor Area	*N/A*	*Date*	*Oct 06*
		Design by	*HCL*

Document Set ID: 588283
Version: 1, Version Date: 31/03/2010



RESOURCE CONSENT
Approved 4-12-06
Appn No. 8006
Plan No. 8006/3
Date 4-12-06

Scale : 1:50

LOCKWOOD

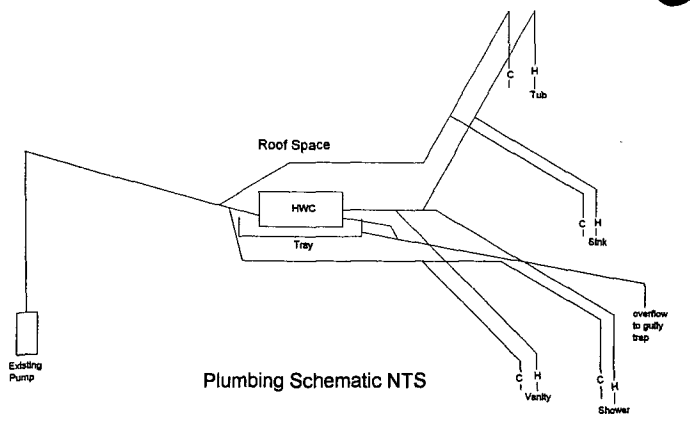
Hodges Construction Ltd
90 Fairy Springs Road, Rotorua
ph 07 347 6338 fax 07 349 2013

Garage Conversion for

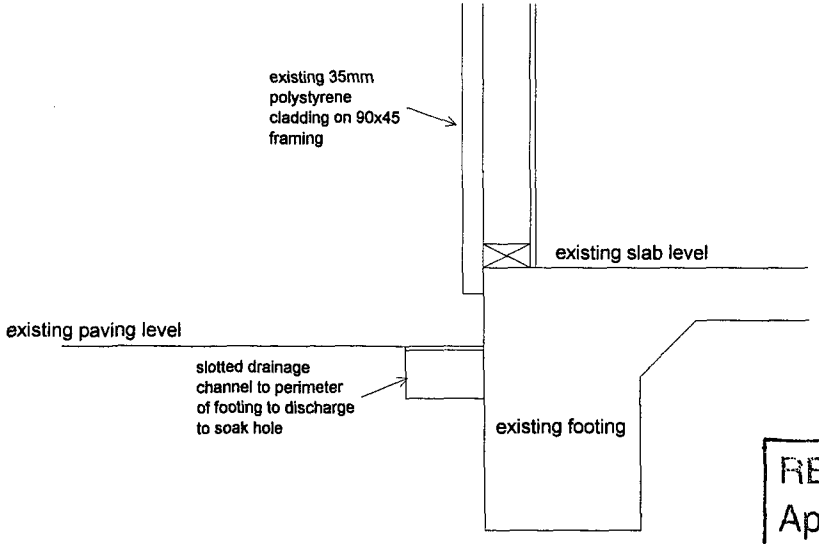
M Reid Care Giver's Quarters
48 Sharp Road
Rotorua

Drawing	Existing Garage Floor Plan
Floor Area	N/A
Sheet	2 of 3
Date	Oct 06
Design by	HCL

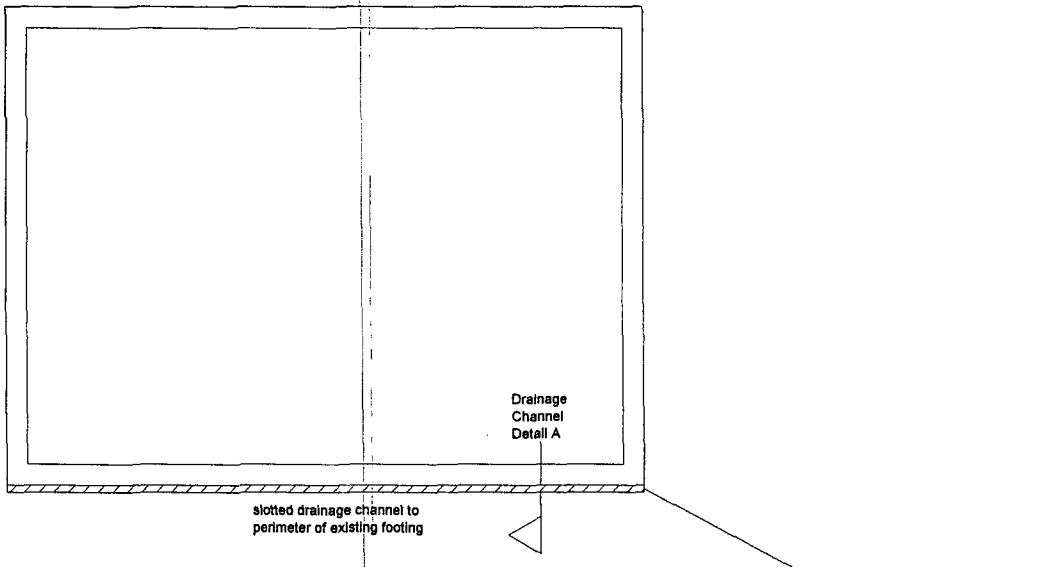
Document Set ID: 588283
Version: 1, Version Date: 31/03/2010



Plumbing Schematic NTS



Drainage Channel Detail A



RESOURCE CONSENT
Approved 4-12-06
Appn No. 8006
Plan No. 8006/4
Date 4-12-06

LOCKWOOD	Hodges Construction Ltd 90 Fairy Springs Road, Rotorua ph 07 347 6338 fax 07 349 2013	Garage Conversion for	M Reid Care Giver's Quarters 48 Sharp Road Rotorua	Drawing Floor Area	Details and Schematics N/A	Sheet Date Design by	3 of 3 Oct 06 HCL

Document Set ID: 588283
Version: 1, Version Date: 31/03/2010

BUILDING CONSENT NO: 96/1419

Project Information Memorandum No:

Section 35, Building Act 1991

ISSUED BY ROTORUA DISTRICT COUNCIL

(Insert a cross in each applicable box. Attach relevant documents).

APPLICANT

Name:
LF & RR BATCHELOR

Mailing Address:
P O BOX 4057
ROTORUA

PROJECT LOCATION

Street Address:
Lot 2 SHARP RD
ROTORUA

LEGAL DESCRIPTION

Property Number: 27041

Valuation Roll Number: 06951/239.02

Lot: 2 DP: 68084

Section: Block:

Survey District:

PROJECT

All ☐

Stage No x of an intended stages of:

New Building ☐

27.8.96 NEW BC 961419

Alteration ☐

Intended Use(s) (in detail):

NEW DWELLING
NEW DWELLING/GARAGE, IMPLEMENT SHED

Intended Life:

Indefinite, but not less than 50 years ☒

Specified as years

Demolition ☐

Estimated Value: $ 330,000.00

COUNCIL CHARGES

The balance of Council's charges payable on uplifting of this building consent, in accordance with the tax invoice are:

Total: $ 0.00

ALL FEES ARE G.S.T. INCLUSIVE

Signed for and on behalf of the Council:

Name: [signature]

Position: Admin-Building

Date: 27/8/96

This building consent is a consent under the Building Act 1991 to undertake building work in accordance with the attached plans and specifications so as to comply with the provisions of the building code. It does not affect any duty or responsibility under any other Act nor permit any breach of any other Act.

This building consent is issued subject to the conditions specified in the attached ..... pages, headed "Conditions of Building Consent No /"

Document Set ID: 588282
Version: 1, Version Date: 31/03/2010

CODE COMPLIANCE CERTIFICATE NO: 96/1419

PA7041

FILE

Section 43(3), Building Act 1991

ISSUED BY ROTORUA DISTRICT COUNCIL

BUILDING CONSENT NO: 96/1419

(Insert a cross in each applicable box. Attach relevant documents.)

PROJECT		PROJECT LOCATION
All	X	Street Number:
Stage No of an intended stages of:		LF & RR BATCHELOR Lot.2 SHARP RD Box 4057 ROTORUA Rot
New or relocated building	X	
Alteration		**LEGAL DESCRIPTION**
Intended use(s) (in detail): NEW DWELLING NEW DWELLING/GARAGE, IMPLEMENT SHED		Property Number: 27041 Valuation Roll Number: 06951/239.02
Intended Life:		
Indefinite, but not less than 50 years	X	Lot: 2 DP: 68084
Specified as years		Section: Block:
Demolition		Survey District:

This is:

X A final code compliance certificate issued in respect of all of the building work under the above building consent

☐ An interim code compliance certificate in respect of part only, as specified in the attached particulars, of the building work under the above building consent

☐ This certificate is issued subject to the conditions specified in the attached ..... page(s) headed "Conditions of Code Compliance Certificate No " (being this certificate).

The Council charges payable on the uplifting of this code compliance certificate, in accordance with the attached details, are: $ 0.00

Receipt No:

Signed for and on behalf of the Council:

Name: Jina Jone

Position: Admin Asst, Bldg Date: 3/9/97

Document Set ID: 588282
Version: 1, Version Date: 31/03/2010

MS404749KRY/1

3373010

BUILDING SERVICES

FIELD INSPECTION CARD

Application No: 96/1419 Date Consent Issued: 27-8-96

OWNER: Batchelor

SITE: Sharp Road

VALAUTION NO: 06951/239.02

FILE NO: P27041

LOT NO: 2 DPS 68084

BUILDER:

PLUMBER:

DRAINLAYER:

DESCRIPTION OF PROPOSED WORK: New Dwelling/Garage, Implement Shed

DATE	INSPECTION REPORTS	TIME
12-11-96	Footings inspected for dwelling garage & implement shed. To good bearing. steel in flag. Boundings confirmed. Ok to pour	
24-9-96	Septic tank and 3 connecting soakholes installed and checked. Ok to backfill	
15-11-96	Prefloor inspection plumbing installed poly-mesh installed & all steel tied	
5/2/97	P&D PROVING: hot & cold piped & coffs under test to 200 KPA. all wastes & vents in place. ok to continue	
10/2/97	PROVISIONAL: baths fitted to walls, moisture content < 18%, all framing complies, ok to continue.	
15/4/97	DRAIN: laid to tank with adequate fall, all inspection & under test, ok to back-fill. still doing the stormwater syste.	
30/4/97	DRAINAGE plan received	
5/6/97	FINAL: all work complete however the following to be addressed.	

Document Set ID: 5382824
Version: 1, Version Date: 31/03/2010

DATE	INSPECTIONS	TIM
	before the Code of Compliance Certificate can be issued ① space between the columns on upstairs deck to be filled in ② bathroom & ceiling extract fans to be discharged to the outside ③ the electric lead for the solid fuel heater to be protected. ④ the finished ground level is to be 100 mm minimum before the floor level, advised Builder & foreman from M.C Jarbo Contractors.	
1/9/97	FINAL: Mr Batchelor has fitted a patio bolt to the door off the main bedroom, all bathroom extracts fitted, the lead has been altered and ground levels all fall away from dwelling OK to issue the Code of Compliance Certificate	

Compliance Certificate Issued - Date:

Signed: 2/9/97

Document Set ID: 588282
Version: 1, Version Date: 31/03/2010



Document Set ID: 588282
Version: 1, Version Date: 31/03/2010

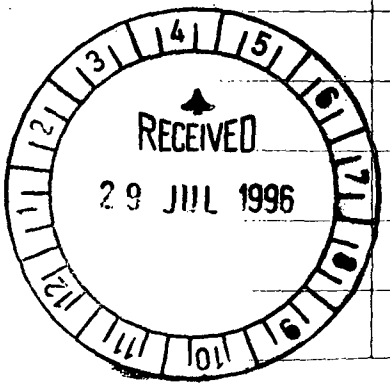
BUILDING CONSENT PROCESSING SHEET

PZ7041

CONSENT NUMBER: 60/96/ 1419 **DATE RECEIVED:** 29-7-96

SITE ADDRESS: SHARP RD INV 20/A

ACTION / OFFICER	REVIEW	DATE	TIME TAKEN	APPRO	DATE
Check Appln - Bldg Officer			Hours Min. .		
Prepare File & Data Entry			Hours Min. 15.	LS	30.7
C.P.C. Planning Rural A.		31/7	Hours Min. 15.	TLW	19/8
Drafting			Hours / Min. 15.	GCC	
Controlled Activity / Resource Consent			Hours Min. .		
Environmental Health			Hours Min. 5.	AR	01.08.96
Pollution Control Officer			Hours Min. 5.	MJT	1.8.96
Plumbing & Drainage		1-8-96	Hours Min. .	CW	19.8.96
Recreation & Community			Hours Min. 5.	AR	5/8/96
Dangerous Goods/Geoth			Hours Min. 5.		8/8/96
Resource Engineer			Hours Min. 5.		8/8/96
Land Fill			NO (UNKNOWN)		
Flood Prone			NO (UNKNOWN)		
Building Officer	CW	7-8-96	Hours Min. .	CW	19.8.96
Update Date Entry			Hours Min. .		
Issue Tax Invoice			Hours Min. .		
Issue Building Consent			Hours Min. .		
Fax Costs			Hours Min. .		
			Hours Min. .		
			Hours Min. .		
			Hours Min. .		
			Hours Min. .		
			Hours Min. .		



Document Set ID: 588282
Version: 1, Version Date: 31/03/2010

ARCHI-TECHNICS,30 OKAWA BAY ROAD,R.D.4,ROTORUA,PH/FX 07 3624703

ROTORUA DISTRICT COUNCIL

attn: DUTY BUILDING OFFICER

COPY

OKAWA BAY, 19 August '1996

Dear Sir,

re : P 27041, suspension notice.

Please find enclosed two copies of a revised drawing, showing details of handrails, foundation perimeters and a summary of wall and roof ventilation values.

As far as planning consent is concerned we confirm that the building elevations plans are not higher than the existing natural ground level. The front (south-east) elevation is exactly on natural ground level. The side elevations will be partially sunk below the natural ground level and the backmost elevation, being the back wall of the triple garage is 1.5 m. lower than the natural ground level, due to the contour of the site. Provisions for drainage to keep stormwater away from the foundations of house and garage will be made.

A bio cycle sewer tank will be used to collect and process the drainage of the sewer system

Name of Craftsman Plumber : City and Rurae Ltd

Name of Registered drainlayer : Norm Morris

Yours faithfully,

Rein Klazes, designer

Ra Batchelor.

Ra Batchelor, principal

Document Set ID: 588282
Version: 1, Version Date: 31/03/2010

7 August, 1996

Please Quote: P27041

Ref: *esl0714s.lsu*

L.F. & R.R. Batchelor
c/- R. Klazes
30 Okawa Bay Road
ROTORUA

Dear Sir,

NOTICE TO SUSPEND PROCESSING OF CONSENT APPLICATION PURSUANT TO THE BUILDING REGULATIONS 1992 SECTION 6(2) APPL NO. 96/1419 - PROPOSED NEW DWELLING/GARAGE, IMPLEMENT SHED STREET ADDRESS - SHARP ROAD

Receipt of your building consent application is acknowledged. You are hereby notified that the processing of this consent is suspended on the following grounds:

Planning - Please confirm in writing, that the building elevation plans are in relation to natural ground level. Letter provided 12/8/96.

Plumbing & Drainage - Bio-cycle sewer tank would be advisable as number of fittings in this dwelling. Name of Craftsman Plumber and Registered Drainlayer required.

Building

1. Details of handrails are required.
2. A clear detail of foundations is required
3. Insufficient wall and ceiling insulations is shown.

Receipt of your advice in respect of the above matters will enable your consent to be more fully considered.

PLEASE DIRECT ALL REPLIES/ENQUIRIES TO THE DUTY BUILDING OFFICER.

Yours faithfully

P. Lawrence
Building Control Manager

Document Set ID: 588282
Version: 1, Version Date: 31/03/2010

ARCHI-TECHNICS,30 OKAWA BAY ROAD,R.D.4,ROTORUA,PH/FX 07 3624703

ROTORUA DISTRICT COUNCIL

attn: DUTY BUILDING OFFICER

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Name of Craftsman Plumber : City and Rurae Ltd

Name of Registered drainlayer : Norm Morris

Yours faithfully,

Rein Klazes, designer

Ra Batchelor, principal

Document Set ID: 588282
Version: 1, Version Date: 31/03/2010

ROTORUA DISTRICT COUNCIL

APPLICATION FOR A BUILDING CONSENT

Section 33, Building Act 1992
(Attach all relevant documents in duplicate)

APPLICATION NUMBER 96/1419

PART A : GENERAL

(Complete Part A in all cases)

1. OWNER	2. CONTACT (If not owner)
Name L.F. & R.R. Batchelor	Contact Name R. Klazes
Postal Address P.O. Box 4057 Rotorua	Postal Address 30 Okawa Bay Rd R.D. 4 Rotorua
Phone Number 3479530	Phone Number 3624703
Fax Number 3460659	Fax Number 3624703

3. PROJECT LOCATION

Address: Sharp Rd, N

4. LEGAL DESCRIPTION LOT 2 of Subdivision of lot 1 DPS 68084

Valuation Number 6951-239-02		OFFICE USE ONLY Property ID:	
Lot:(s) 2. (Section)	DP:/S (Block) 68084	Lot Area:(s) m²/ha 5.964 ha	No. of new toilets/urinals 4

5. PROJECT

5.1		5.2 Intended Life	5.3
New Building	☑		Description of Work: building & new residence with garages and implement shed.
Alteration	☐	Indefinite but not less than 50 yrs ☑	5.4 Intended Use(s) (in detail) lifestyle block, residential
Relocation	☐	or	
Demolition	☐	Specified as ☐ yrs	5.5 Estimated Value: $ 330,000.- (GST INCL)

☑ Application for Building Consent only, in accordance with Project Information Memorandum No. .....

☐ Application for Building Consent and Project Information Memorandum.

Signed by ~~the owner~~/owner's agent:

O.B.

Signature: ..... agent

Name: REIN KLAZES (PLEASE PRINT) Date: 29-7-96

Office Use Only
TARGET DATE 13/8/96

ROTORUA DISTRICT COUNCIL – BUILDING SERVICES DIVISION – PRIVATE BAG – ROTORUA – NEW ZEALAND
TELEPHONE 0-7-348-4199 – FAX 0-7-349-0993

Document Set ID: 588282
Version: 1, Version Date: 31/03/2010

PART B : PROJECT DETAILS

6. (Complete Part B only if you have NOT applied separately for a project information memorandum).

The project involves the following matters; tick each applicable box, if any, and attach relevant information in duplicate.

(a) ☑ Location, in relation to legal boundaries, and external dimensions of new, relocated, or altered buildings. (Site Plan with elevations, Topography, drawn to scale, Elevations in relation to natural ground level and proposed finish level).

(b) ☐ Details of any known or potential erosion, avulsion, falling debris, filled ground, subsidence, slippage, alluvion, inundation, geothermal, hazardous contaminants on or near the site.

(c) ☐ Provision to be made for vehicular access, including parking and materials used. (To be shown on site plan).

(d) ☐ Provisions to be made in building over or adjacent to any road or public place.

(e) ☐ Provisions to be made for disposing of stormwater and wastewater. (To be shown on site plan).

(f) ☐ Precautions to be taken where building work is to take place over existing drains or sewers or in close proximity to wells or watermains.

(g) ☑ New connections to public utilities, i.e. water supply, stormwater system, wastewater system.

(h) ☐ Provisions to be made in any demolition work for the protection of the public, suppression of dust, suppression of noise, disposal of debris and disconnection from public utilities.

(i) ☐ Details of any cultural or heritage significance of the building or building site, including whether it is on a marae, or waahi tapu.

(j) ☐ Copy or reference to, of any resource consent or planning approval for this project.

(k) ☐ Details of volume of Proposed Excavations: Include volumes for Site Preparation, Basement, and Driveway.

PART C : PROJECT DETAILS

(Complete Part C in all cases)

This application is accompanied by (tick each applicable box, attach relevant documents in duplicate).

7. ☑ The drawings, specifications, and other documents according to which the building is proposed to be constructed to comply with the provision of the New Zealand Building Code, with supporting documents, if any, including:

8. ☐ Building certificates

9. ☐ Producer statements

10. ☐ References to accreditation certificates issued by the Building Industry Authority.

11. ☐ References to determinations issued by the Building Industry Authority.

12. ☐ Proposed procedures, if any, for inspection during construction.

Document Set ID: 588282
Version: 1, Version Date: 31/03/2010

PART D

(Complete as far as possible in all cases)
Give names, addresses, telephone numbers. Give relevant numbers if known.

13. DESIGNER(S)

Name: Archi-Technics, Rein Klazes

Address: 30 Ohawa Bay Rd RD 4, Rotorua

Phone Number: 3624703 Fax Number: 3624703

BUILDER to be advised

Name:

Address:

Phone Number: Fax Number:

DRAINLAYER to be advised Norm Morris

Name: Reg. No.

Address:

Phone Number: Fax Number:

PLUMBER to be advised

Name: City & Rural LTD. Reg. No.

Address:

Phone Number: Fax Number:

If more than number allowed for, please provide details on a separate sheet.

Floor Area of Proposed Work	Area square metres
Buildings Other Than Detached Accessory Buildings:	sq.m.
Floor	sq.m.
Basement	sq.m.
Ground Floor	sq.m. 240
First Floor	sq.m. 129
Second Floor	sq.m. -
Additional Floors (Total)	sq.m. -
Mezzanine	sq.m. -
Decks	sq.m. - 10
Total	sq.m. 379
Detached Accessory Buildings:	Area square metres
Garage	sq.m. 63
Carport	sq.m.
Other Buildings, implement shed	sq.m. 69
Total	sq.m. 69

Document Set ID: 588282
Version: 1, Version Date: 31/03/2010

FOR OFFICE USE ONLY

FEES		
Fees paid on Application	**$**	**c**
Plan Review 5101613 29/7	800	—
Project Information Mem.		
TOTAL FEE GST incl.		
Fees payable on approval	**$**	**c**
Building Consent 5111317 27/8/96	800	00
Footpath Damage Deposit		
Crossing Deposit	[redacted]	
BRANZ Levy 5109447	330	00
B.I.A. Levy 22.8.96	214	50
Water Connection		
Sewer Connection		
Disconnection of Services		
Controlled Activity Fee		
Controlled Activity Bond		
Reserve/ Development Contribution		
Photocopying		
Structural Check		
Resiting Bond		
Service Lane Information		
Other		
APPROVAL TOTAL	1344	50

CONSENT ISSUE AUTHORITY

Receipt No. 9 5111317

Date of Issue 27.8.96

Authorised By [signature]

Date authorised 20/8/96

REFERRALS

	SENT	RETURNED
Structural		

AMENDED DETAILS RECEIVED

	DATE	SIGN
Planning		
Health		
P & D		
Trade Waste		
Rec & Com		
DG/GEO		
Res Eng		
Building		
Structural		

Document Set ID: 588282
Version: 1, Version Date: 31/03/2010

FREDERICK R SMITH BE (civil), MIPENZ, MACENZ
Registered Consulting Structural and Civil Engineer

23 Glamorgan Drive, Torbay, Auckland
P O Box 35 422, Browns Bay, Auckland
Telephone/Facsimile 64 9 473 1262
Mobile Telephone 025 997 139

STEEL FRAMED BUDGET GARAGES FARMSHEDS & CARPORTS

STATEMENT OF DURABILITY

NEW ZEALAND BUILDING CODE

The DURABILITY requirement, of the Building Regulations 1992, requires the structure of the building, which does not have moderate ease of access, to have a life of at least 50 years (clause B2.3 (a)) whereas building elements which do have a moderate ease of access (clause B2.3 (c)) shall have a life of at least 15 years and components such as linings, doors and windows shall have a life of at least 5 years (clause B2.3 (d)), with only normal maintenance, unless the *building* is given a *specified intended life.*

NORMAL CONDITIONS

In areas of normal conditions, provided doors are kept closed, the building is located, where possible so that the openings are away from prevailing inclement weather, and the building is given normal regular maintenance, which includes painting, then the life of the building will be 50 years.

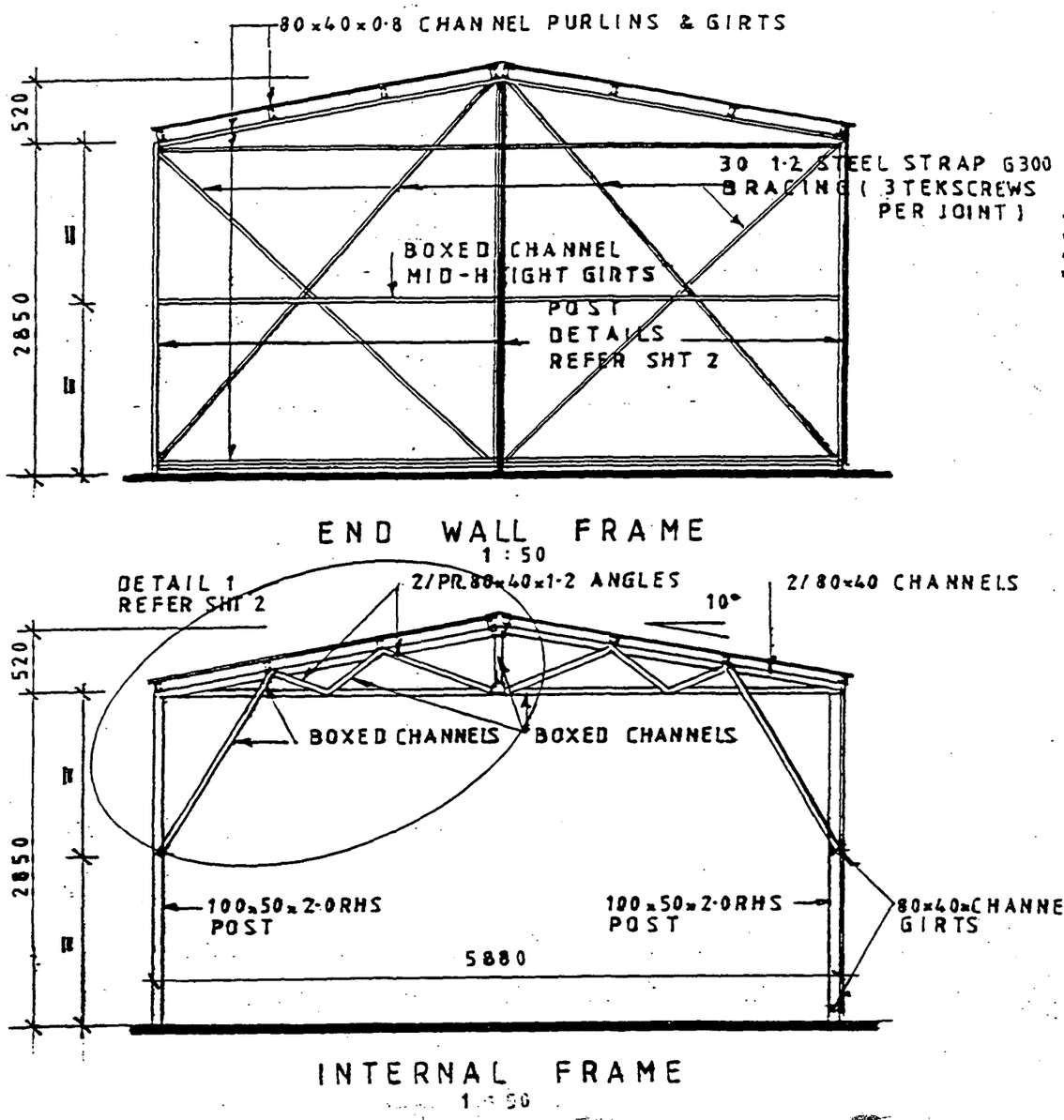
CORROSIVE CONDITIONS

In area of corrosive conditions - because conclusive test results are not available, to determine the life expectancy of the zincalume coated cladding, and because most of the components of the building have moderate ease of access the specified intended life of the building is to be 20 years. After this period the local authority may request an inspection and assessment of the future life of the building.

For the life of the building to be at least 20 years - all components, framing, cladding, doors and windows, etc., prior to assembly, shall be degreased, etched with a primer for galvanised iron and given a heavy coat of anti-corrosive zinc-rich paint, or equivalent protective paint system, as supplied by a reputable paint supplier.

Provided normal regular maintenance checks are made, and any corrosion treated and repaired, the life of the building will be extended by the life of the paint system.

Document Set ID: 588282
Version: 1, Version Date: 31/03/2010

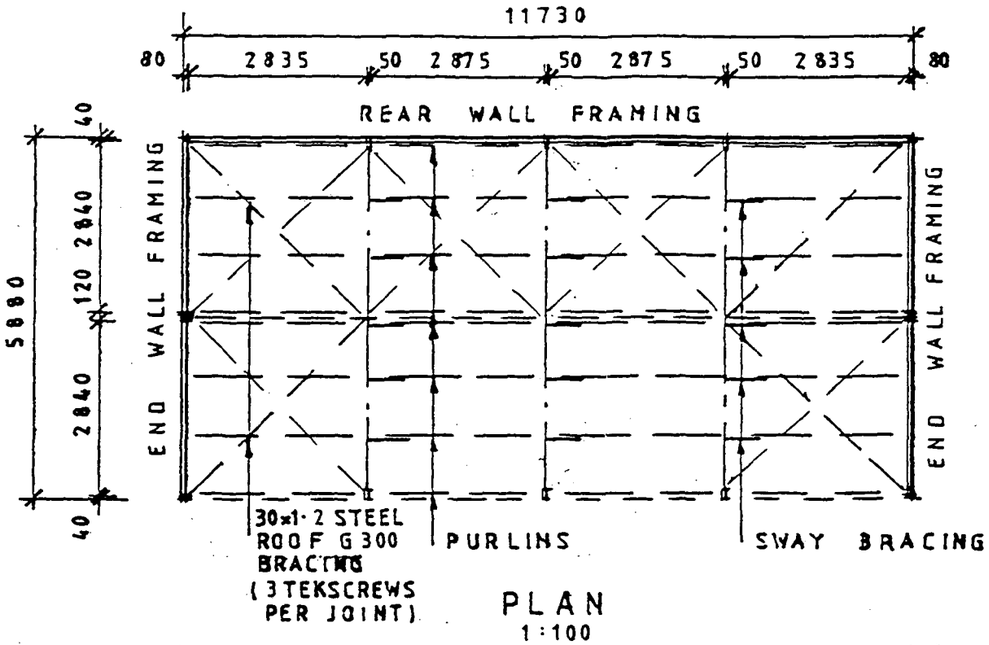


END WALL FRAME

1 : 50

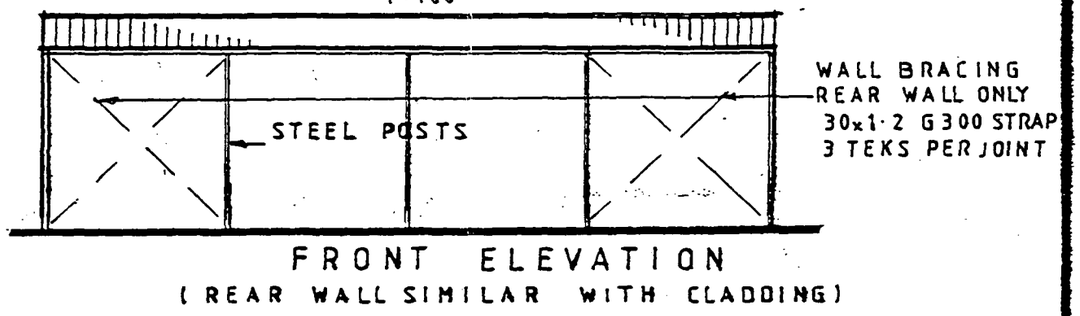
INTERNAL FRAME

1 : 50



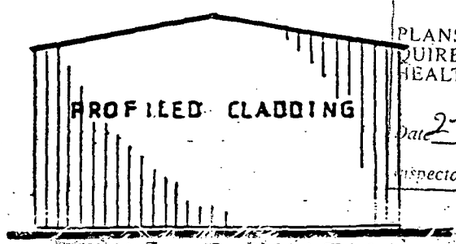
PLAN

1 : 100



FRONT ELEVATION

(REAR WALL SIMILAR WITH CLADDING)



END ELEVATION

1 : 100

PLANS APPROVED SUBJECT TO ALL REQUIREMENTS OF THE BY-LAWS AND HEALTH DEPT. BEING FULLY COMPLIED WITH

Date 27-8-96 Permit Number 96/1417

Inspector Plumbers (CS)

Designer: Des Newport, Consulting Engineer
Brisbane, Australia

Regd. Eng: FREDERICK R SMITH
CONSULTING ENGINEER

23 Glamorgan Drive, Torbay
Auckland Ph/Fx 09 473 1262

BUDGET GARAGES LTD

Sheet 1

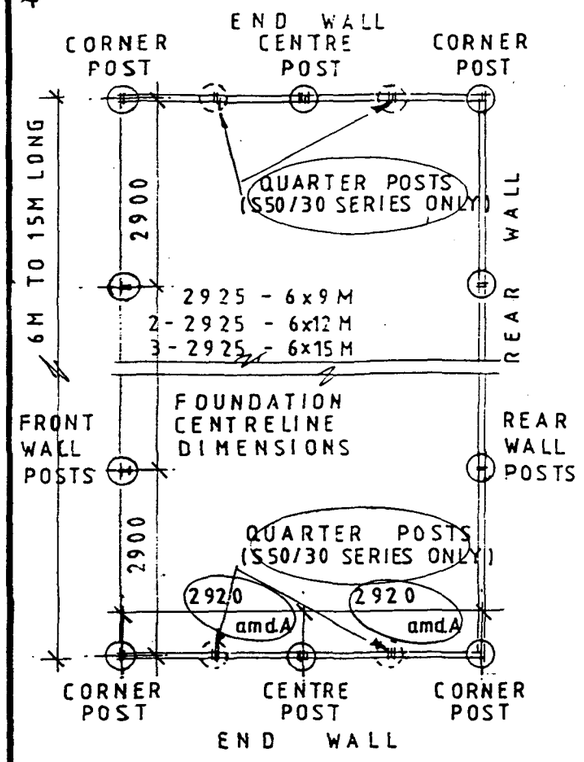
STEEL FRAMED FARMSHEDS

NOMINAL 6M WIDE x 12M LONG x 3.0M HIGH
for site wind speeds of - 45 metres per second

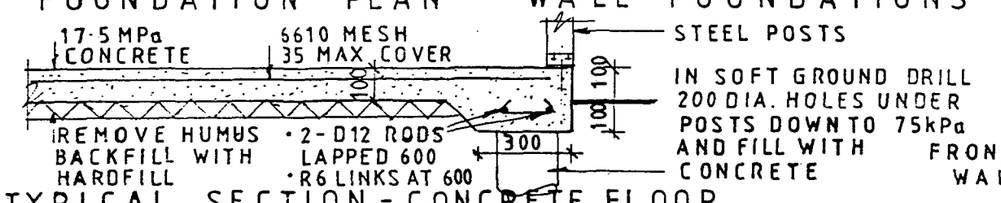
S45/6/12/30F

BUDGET GARAGES LIMITED- 5A Ryan Place, P O Box 76 318, Manukau City, Auckland- Phone 09 262 2803- Free Phone 0800 103 545- Fax 09 262 2798

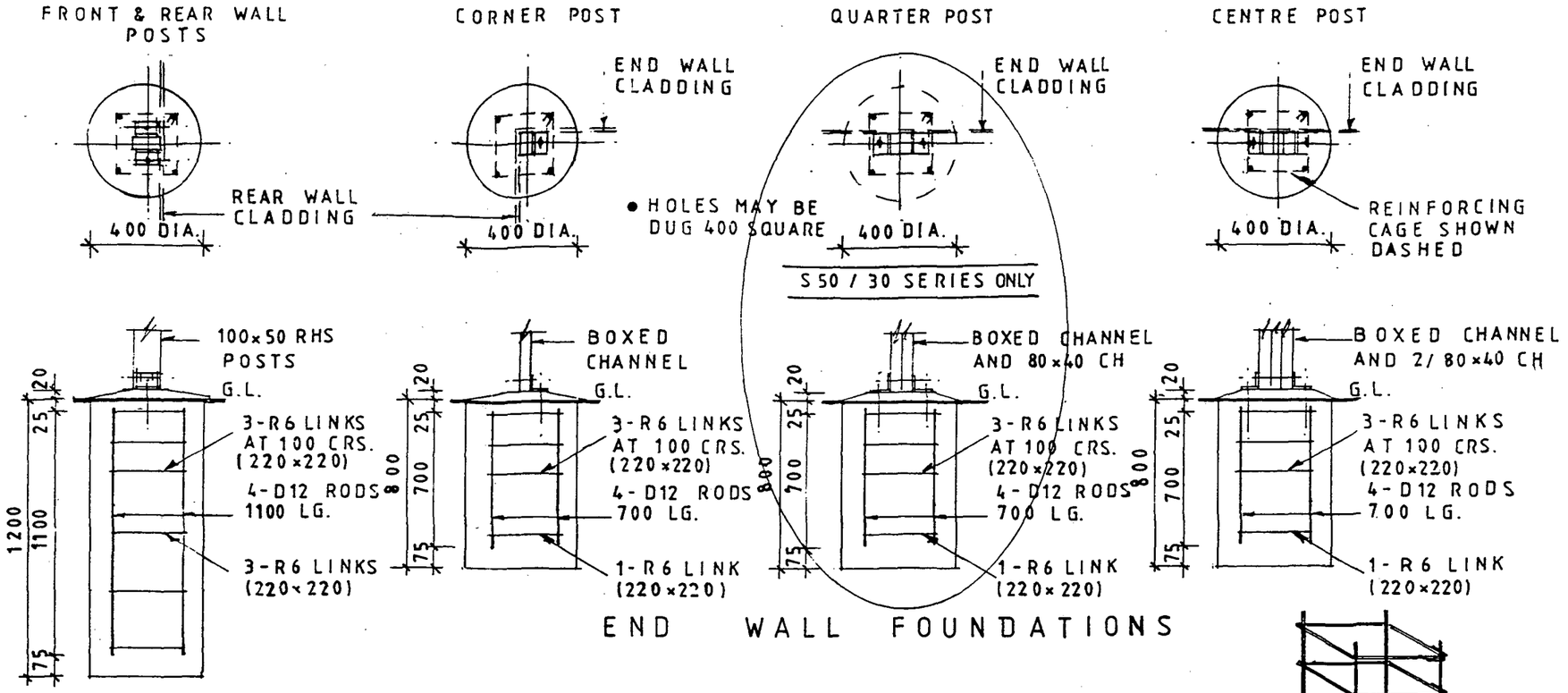
Document Set ID: 588282
Version: 1, Version Date: 31/03/2010



TYPICAL FOUNDATION PLAN



TYPICAL SECTION - CONCRETE FLOOR

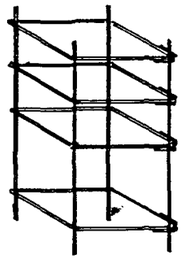


FRONT AND REAR WALL FOUNDATIONS

END WALL FOUNDATIONS

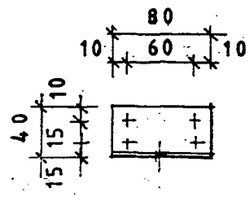
- REFER TO SPECIFICATION FOR CONCRETE DATA
- POUR FOUNDATIONS AGAINST NATURAL GROUND
- GROUND AT BOTTOM OF FOUNDATIONS MUST HAVE A SAFE BEARING CAPACITY OF 75 KPA

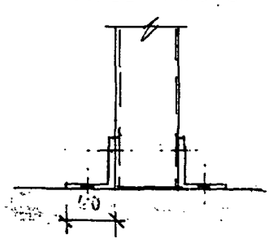
(IN 75kPa GROUND A 20 DIA. STICK TAKES REASONABLE FORCE TO PENETRATE 100MM)

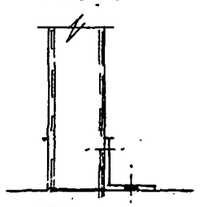


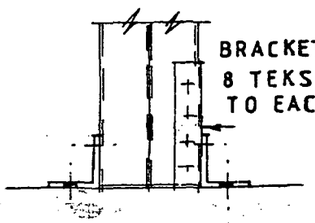
REINFORCING CAGE

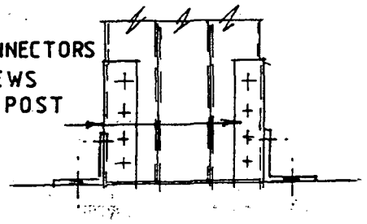
ANGLE CLEATS
- 40 x 40 x 2 ZINCALUME ANGLE 80 LONG
- 1 - 14 DIA. HOLE FOR
- 12 DIA. GALVANISED T12080GA RAMSET TRU-BOLTS TO CONCRETE WITH GALVANISED WASHERS
- 10# x 16 GALVANISED TEKSCREWS TO POSTS - 4 TO EACH ANGLE CLEAT











DETAILS - ANGLE CLEATS

A : 07/95 dimensions

QUANTITIES SCHEDULE

SIZE	6 x 6	6 x 9	6 x 12	6 x 15
SERIES (S50/30 not shown)	S45/24 S45/30 S50/24	S45/24 S45/30 S50/24	S45/24 S45/30 S50/24	S45/24 S45/30 S50/24
CONCRETE 17.5 Mpa cu. m	0.91 (1.0)	1.22 (1.4)	1.54 (1.6)	1.85 (2.0)
D12 RODS, metres total	24 x 0.7 8 x 1.1 (25.6 m)	24 x 0.7 16 x 1.1 (34.4 m)	24 x 0.7 24 x 1.1 (43.2 m)	24 x 0.7 32 x1.1 (52.0 m)
R6 LINKS, metres total	36 x 1.1 (39.6 m)	48 x 1.1 (52.8 m)	60 x 1.1 (66.0 m)	72 x 1.1 (79.2 m)

Designer: Des Newport, Consulting Engineer
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23 Glamorgan Drive, Torbay
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BUDGET GARAGES LTD

Sheet 3 A

STEEL FRAMED FARMSHEDS

FOUNDATION DETAILS - CONCRETE PILES

Document Set ID: 588282
Version: 1, Version Date: 31/03/2010

GENERAL NOTES

1- All work shall conform to the New Zealand Building Code.

2- Drawings shall not be scaled.

3- Set-out diagonals to ensure building is square.

LOADINGS

1- Buildings, designated as S45 and S50 have been designed for site wind speeds of 45 and 50 metres per second, respectively.

2- Buildings will withstand roof live loads of 0.25 kPa with 1 Kn point loads on sheeting.

3- Maximum snow load shall be 0.7 kPa. (350mm thick snow) Heavier snow loads will need extra purlins.

4- Building sites above 1000m above sea level will be specific design.

FOUNDATIONS

1- Founding material shall have a safe bearing capacity of 75 kPa.

2- In soft ground or expansive clays building loads shall be transferred down to ground having a bearing capacity of 75 kPa. A 20mm diameter stick needing reasonable force to penetrate 100mm will indicate 75kPa bearing.

CONCRETE

1- Clear excavations of all loose material before placing concrete.

2- Concrete shall have a maximum aggregate size of 20mm, slump of 80mm and 17.5 MPa compression strength at 28 days. (1: 6 cement : premix)

3- Concrete slabs shall be reinforced with 6610 mesh placed 35mm maximum below the surface with 300mm laps between the sheets.

4- Provide a 25um black polythene dampproof layer under the slab taped at all 100mm laps.(optional)

STEELWORK

1- All structural framing members and cleats shall be G550 grade steel zincalume AZ150 protected or galvanised to Z200 minimum.

2- For S45 buildings purlins shall be 80x40x0.8 B.M.T. lipped, crimped channel at 950mm centres maximum.

3- For S50 buildings purlins shall be single channels at eaves and ridges and boxed channels between.

4- For S45 buildings the girts shall be 80x40x0.8 B.M.T. lipped, crimped channels.

5- For S50 buildings girts shall be single channels except for boxed channels at mid-height girt.

6- Screws shall be No. 10 gauge x16mm long Tekscrews Class 3 galvanised plated, fixed at a minimum edge distance of 6mm and 12mm pitch.

7- Purlins shall be fixed to top chords of end walls with 40x40x1mm angle cleats having 2 Tekscrews to each end and to internal frames with Tekscrews per member.

8- Boxed members shall be flange connected with Tekscrews at 300mm centres (staggered).

9- Bracing sizes and fixing details shall be as shown on the drawings.

10- Other joints shall be fixed as detailed on sht 2.

11- Steelwork shall conform to :

NZS 3404 Steel Structures Standard

AS 1538 Cold Formed Steel Structures Code

AS 1562 Design and Installation of Metal Roofing

AS 1111/1112 Metric Hexagon Commercial Bolts and Screws

AS 2313 Guide to the Protection of Iron and Steel

AS 3566 Self Drilling Screws for Building and Construction Industry.

12- Posts for internal frames of farmsheds shall be 100x50x2.0 galvanised RHS for S45 and S50 farmsheds with 2.4 metre high walls. For S50 farmsheds with 3.0 metre high walls posts shall be 100x50x2.3 galvanised RHS.

CLADDING

1- Roof and wall sheeting shall be G550 grade steel protected with zincalume AZ150.

2- Roof sheets shall be fixed to ridge and eaves purlins with 1 Tekscrew at the centre of every pan and 1Tekscrew to second pans at intermediate fixings, all complete with neoprene washers.

3- Wall sheeting shall be fixed with 1 Tekscrew to each second pan to all girts, for walls square to the ridge, and to the centre of every pan to all girts, for walls parallel to the ridge.

STEEL PROTECTION - in areas of known corrosion

1- Locate the building with the open side facing away from the prevailing inclement weather.

2- Thoroughly degrease all components of the structure, cladding, doors, etc., etch with an approved primer for galvanised iron and paint a heavy coat of anti-corrosive zinc-rich paint, as supplied by a reputable paint supplier, prior to assembly of the building.

Designer: Des Newport, Consulting Engineer
Brisbane, Australia

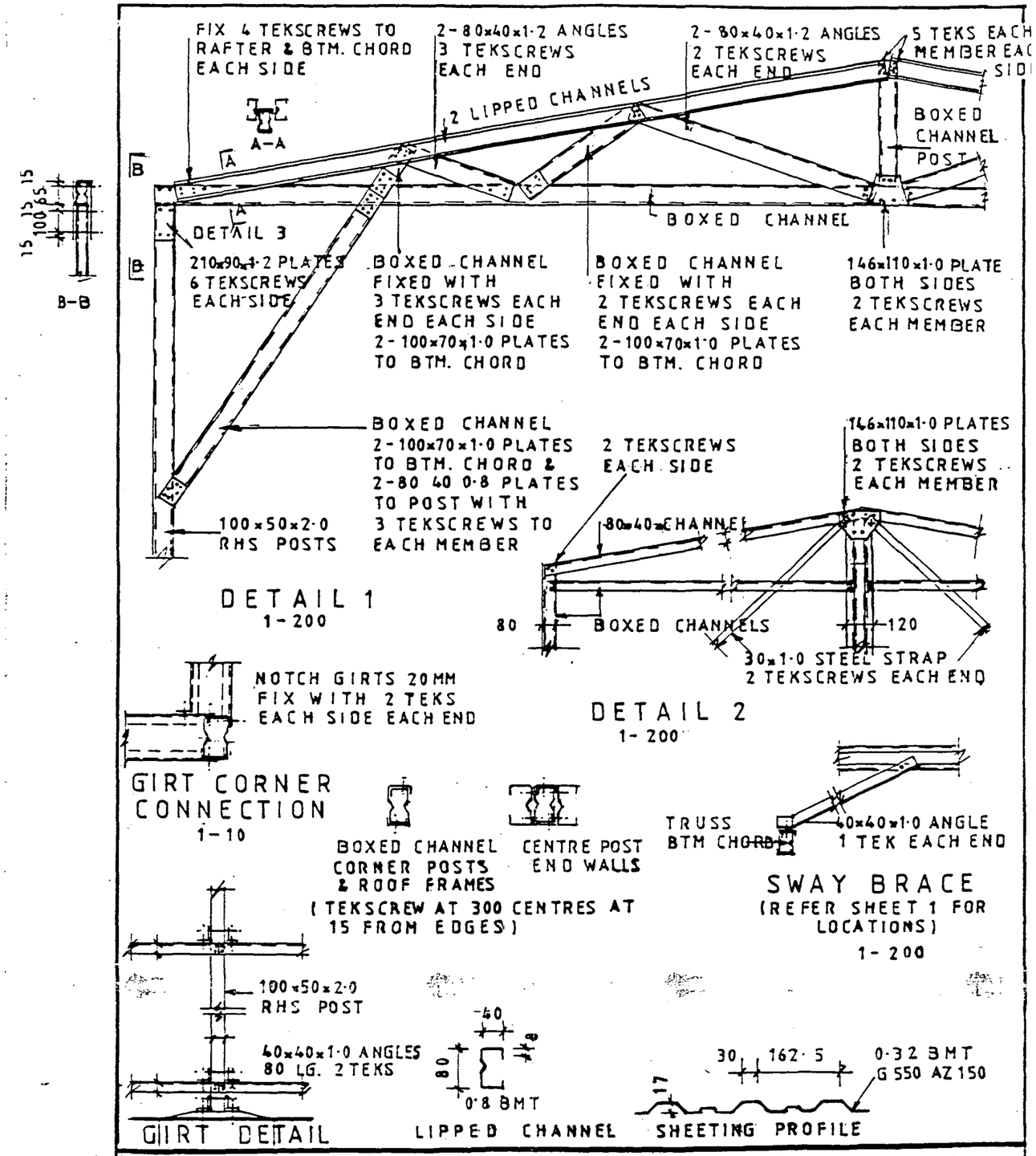
Regd. Eng: FREDERICK R SMITH
CONSULTING ENGINEER
23 Glamorgan Drive, Torbay
Auckland Ph/Fx 09 473 1262

BUDGET GARAGES LTD

STEEL FRAMED FARMSHEDS

SPECIFICATION

BUDGET GARAGES LIMITED 5A Ryan Place, P O Box 76 318, Manukau City, Auck.. Ph 09 262 2803, Free Ph. 0800 103 545, Fax 09 262 2798



Designer: Des Newport, Consulting Engineer
Brisbane, Australia

Regd. Eng: FREDERICK R SMITH
CONSULTING ENGINEER
23 Glamorgan Drive, Torbay
Auckland Ph/Fx 09 473 1262

BUDGET GARAGES LTD

STEEL FRAMED FARMSHEDS

CONSTRUCTION DETAILS

BUDGET GARAGES LIMITED 5A Ryan Place, P O Box 76 318, Manukau City, Auck.. Ph 09 262 2803, Free Ph. 0800 103 545, Fax 09 262 2798

Document Set ID: 588282
Version: 1, Version Date: 31/03/2010

BRACING CALCULATION FOR BUILDING PERMIT APPLICATION FOR BATCHELOR RESIDENCE PAGE
PROJECT NUMBER : ARCHI-TECHNICS COPYRIGHT

A. Ground FLOOR LEVEL 1.Longitudinal Direction	Brac line	Unts req.	Wall elem	Lgth (m.)	Hght (m.)	Brac type	1/2 face	Unts prov	Line tot.	Tot.
No. of bracing units req. not less th. the greater of -P1 x K1 = 4 x 248 = (992) -L1 x (Qw+Qr) = 10.5 x (27) = 284 Units p.meter elem. length dg, 1-face: 50 dg, 2-faces: 74 sh, 2-fces/>1.8: 83 sh, oth: 67	L1	125	a.	3.00	2.6	diag.	1	138	138	138
	L2	~~70~~ 192	b.	1.80	2.6	diag.	2	123	420	420
			c.	3.00	2.6	diag.	2	205		
			d.	1.50	2.6	Sheet	1	92		
	L3	248	e	1.50	2.6	Sheet	1	92	509	509
			f	2.60	2.6	diag.	1	120		
			g	1.85	2.6	diag.	1	85		
			h	2.60	2.6	diag.	1	120		
2.Transverse Direction			i	1.50	2.6	Sheet	1	92		(1067)
No. of bracing units req. not less th. the greater of -P1 K1 = 4 x 248 = (992) -L2 x (Qw+Qr) = 26 x (27) = 702	T1	74	j.	2.10	2.6	diag	1	97	97	
	T2	100	k	4.00	2.6	diag	2	273	273	
	T3	70	l	3.80	2.6	diag.	2	259	259	(1172)
	T4	70	m	3.40	2.6	diag	2	232	232	
	T5	100	n	2.80	2.6	diag	2	191	191	
B. First FLOOR LEVEL 1.Longitudinal Direction	T6	74	o	1.75	2.6	diag	1	120	120	
No. of bracing units req. not less th. the greater of -P2 x K2 = 2 x 161 = (322) -L3 x (Qw+Qr) = 11.7 x (9+14) = 276 Units p.meter elem. lenght dg, 1-face: 42 dg, 2-faces: 62 sh, 2-fces/>1.8: 83 sh, oth: 67	L4	125	p.	1.20	2.4	Sheet	1	80	160	
			q.	1.20	2.4	Sheet	1	80		
	L5	70	R.	3.50	2.4	diag	2	217	217	(523)
	L6	125	s.	1.10	2.4	Sheet	1	73	146	
2.Transverse Direction			t.	1.10	2.4	Sheet	1	73		
No. of bracing units req. not less th. the greater of -P2 x K2 = 2 x 161 = (322) -L4 x (Qw+Qr) = 13.7 x (9+14) = 316	T7	104	u.	3.50	2.4	diag	1	147	147	
	T8	70	v.	3.60	2.4	diag	2	223	223	(542)
	T9	104	w.	4.10	2.4	diag	1	172	172	
			x.	0.90	2.4	Sheet	1	60		120
			y.	0.90	2.4	Sheet	1	60		

P = number of bracing units per square meter in earthquake zone B, also depending on roof pitch and storey; P1=4, P2=2, P3= , P4= .
Q = number of bracing units per meter in wind exposure zone L, also depending on roof pitch, storey height, storey and direction. Qw=Qwalls, Qr=Qroof.
K1=floor/roof area in sq.metres above lower bracing level considered: 248 m2.
K2=floor/roof area in sq.meters above higher bracing level considered: 161 m2.
L1=maximum horizontal dimension of roof or external wall in metres at right angles to the wall bracing elements at lower level for longit.dir.: 10.5 m.
L2=as L1, but for transv. dir.: 26 m. L3=as L1, but for higher level : 11.7 m.
L4=as L3, but for transv. dir.: 13.7 m. *Signed :* *Date :* 26-7-96

Document Set ID: 588282
Version: 1, Version Date: 31/03/2010

BC Only

BUILDING SERVICES – BUILDING CONSENT

APPLICATION NO: 13514 VALUATION NO: 06951/239.02

OWNER: Batchelor PROPERTY NO: P27041

PROJECT LOCATION: 48 Sharp Rd.

DESCRIPTION OF WORK: Internal alterations to bathroom.

CHECK APPLICATION - BUILDING OFFICER:

DATE RECEIVED: 19.6.02	DUE DATE: 3.7.02
DATE SUSPENDED:	DATE ISSUED: 21.6.02

PROCESSING	REVIEW	DATE	TIME TAKEN	APPROVED	DATE
[redacted]	PLANNING RESTRICTIONS.				
Administration			10	CM	19.6.02
Building			20	[signature]	20.6.02
Resource Engineers					
Hazardous Substances					
Geothermal					
Environmental Health					
Disabled Persons					

21.6.02 ADD

BC 13514

RECEIVED 18 JUN 2002

NOTES AND CONDITIONS: (Please circle appropriate code for checkboxes)

200 a b c d e g h i j k
l m n o p q r s t u f

201 a b c d e g f

202 a b f

203 a f

204 f

205 a b f

206 a b c f

207 a f

208 a f

209 a f

210 a b c f

211 a b c f

212 a f

213 a b c d e g h i j k
l m n o p q r s f

214 a b f

215 a b c f

216 a f

217 a b f

218 a b c d e g h i f

219 f

220 a

FREE TEXT:

ROTORUA DISTRICT COUNCIL
106 Haupapa Street, Private Bag 3029, Rotorua, telephone 07-348-4199 ext 8659, fax 07-349-0993

Building Consent No:13514

Section 35, Building Act 1991
Issued:21Jun02
Project Information Memorandum No: 13513

Owner

MR LEON FRANCIS BATCHELOR
48 SHARP ROAD
KAHAROA, R D 2
ROTORUA 3221

Agent

MR LEON FRANCIS BATCHELOR
48 SHARP ROAD
KAHAROA, R D 2
ROTORUA 3221

Site Information

PROPERTY ID: 27041
ASSESSMENT NO: 06951/239.02
STREET ADDRESS: 48 SHARP ROAD, KAHAROA, R D 2, ROTORUA 3221
LEGAL DESCRIPTION: LOT 2 DPS 71633 BLK XII ROTORUA SD

Project Information

PROJECT IS FOR: Minor Works
INTENDED USE(S): INTERNAL ALTERATIONS TO BATHROOM
INTENDED LIFE: Indefinite but not less than 50 years
VALUE OF WORK: $3,400.00
NUMBER OF STAGES: 1

Fees

COUNCIL'S TOTAL CHARGES FOR THIS BUILDING CONSENT ARE: $150.00
PAYMENTS RECEIVED TO DATE:
Receipt number: 5556 Date: 18Jun02 Amount: $150.00

See attached page(s) for any other conditions.

Document Set ID: 588281
Version: 1, Version Date: 31/03/2010

1: Inspections Required

Plumbing work within any wall cavity, eg timber or blockwork.

Framing timber required to have a specificed moisture content.

At the completion of the work authorised by this consent.

Please arrange the booking of inspections and direct enquiries regarding this consent to the Building Services Department, phone (07) 3484199.

The fixing of framing members prior to any lining being fixed.

All foul water and stormwater drainage in ground before backfilling.

2: Code of Compliance Certificate

The owner or his agent shall as soon as practicable, advise the Rotorua District Council that all building work has been completed to the extent required by this building consent.

3: Standard Conditions

This building consent is permission to undertake building work in accordance with the approved plans and specifications. All work must comply with the provisions of the Building Code. Any alterations from the original plans and specifications must have prior approval from the Building Control Manager.

Any deficiency not specifically drawn to the attention of the builder or owner by the Building Officer shall not be deemed to have been approved.

Plumbing and drainage work to be carried out by licensed tradesperson only.

4: Standard Statement

THIS BUILDING CONSENT IS ISSUED SUBJECT TO ALL OTHER OUTSTANDING CONSENTS HAVING BEEN APPROVED. WORK SHALL NOT COMMENCE AND INSPECTIONS WILL NOT BE UNDERTAKEN UNTIL THOSE OUTSTANDING CONSENTS HAVE BEEN COMPLIED WITH.

Signed for and behalf of the Council:

Name: P Lawrence Position: Building Control Manager

Signed: pp KL Peterburg Date: 21/06/2002

See attached page(s) for any other conditions.

Document Set ID: 588281
Version: 1, Version Date: 31/03/2010

ROTORUA DISTRICT COUNCIL
Private Bag 3029
Rotorua
New Zealand
Telephone 07-348 4199
Fax 07-346 3143
E-mail mail@rdc.govt.nz

ROTORUA DISTRICT COUNCIL

APPLICATION FOR A BUILDING CONSENT

Section 33, Building Act 1992
(Attach all relevant documents in duplicate)

APPLICATION NUMBER 13514

PART A : GENERAL

(Complete Part A in all cases)

1. OWNER	2. CONTACT (If not owner)
Name L + R BATCHELOR	Contact Name
Postal Address 48 SHARP RD RD 2. ROTORUA.	Postal Address
Phone Number 3322 996	Phone Number
Fax Number 3322 997.	Fax Number

3. PROJECT LOCATION

Address: 48 SHARP RD. R.D. 2. ROTORUA.

4. LEGAL DESCRIPTION

		OFFICE USE ONLY	
Valuation Number 06951/239.02		Property ID: 27041	
Lot:(s) ~~(Section)~~ 2	DP:/S ~~(Block)~~ 71633	Lot Area:(s) m²/ha 5.964	No. of new toilets/urinals

5. PROJECT

5.1		5.2 Intended Life	5.3 INSTALL ONE TOILET + ONE VANITY.
New Building	☐		Description of Work: TO MAKE ONE LARGE BATHROOM INTO TWO BY CLOSING OF ONE DOORWAY AND INSTALLING TWO MORE.
Alteration	☑	Indefinite but not less than 50 yrs ☑	5.4 Intended Use(s) (in detail) TO MAKE 2 x ENSUITES
Relocation	☐	or	
Demolition	☐	Specified as ☐ yrs	5.5 Estimated Value: $ 3,400.00 (GST INCL)

☐ Application for Building Consent only, in accordance with Project Information Memorandum No.

Signed by the owner/owner's agent:

Signature: G Matson

Name: GARRY MATSON (PLEASE PRINT) Date: 17.6.02.

Office Use Only
TARGET DATE
/ /

Document Set ID: 588281
Version: 1, Version Date: 31/03/2010

PART B : PROJECT DETAILS

6. (Complete Part B only if you have NOT applied separately for a project information memorandum).

The project involves the following matters; tick each applicable box, if any, and attach relevant information in duplicate.

(a) ☐ Location, in relation to legal boundaries, and external dimensions of new, relocated, or altered buildings. (Site Plan with elevations, Topography, drawn to scale, Elevations in relation to natural ground level and proposed finish level).

(b) ☐ Details of any known or potential erosion, avulsion, falling debris, filled ground, subsidence, slippage, alluvion, inundation, geothermal, hazardous contaminants on or near the site.

(c) ☐ Provision to be made for vehicular access, including parking and materials used. *(To be shown on site plan).*

(d) ☐ Provisions to be made in building over or adjacent to any road or public place.

(e) ☐ Provisions to be made for disposing of stormwater and wastewater. (To be shown on site plan).

(f) ☐ Precautions to be taken where building work is to take place over existing drains or sewers or in close proximity to wells or watermains.

(g) ☐ New connections to public utilities, i.e. water supply, stormwater system, wastewater system.

(h) ☐ Provisions to be made in any demolition work for the protection of the public, suppression of dust, suppression of noise, disposal of debris and disconnection from public utilities.

(i) ☐ Details of any cultural or heritage significance of the building or building site, including whether it is on a marae, or waahi tapu.

(j) ☐ Copy or reference to, of any resource consent or planning approval for this project.

(k) ☐ Details of volume of Proposed Excavations: Include volumes for Site Preparation, Basement, and Driveway.

PART C : PROJECT DETAILS

(Complete Part C in all cases)

This application is accompanied by (tick each applicable box, attach relevant documents in duplicate).

7. ☐ The drawings, specifications, and other documents according to which the building is proposed to be constructed to comply with the provision of the New Zealand Building Code, with supporting documents, if any, including:

8. ☐ Building certificates

9. ☐ Producer statements

10. ☐ References to accreditation certificates issued by the Building Industry Authority.

11. ☐ References to determinations issued by the Building Industry Authority.

12. ☐ Proposed procedures, if any, for inspection during construction.

Document Set ID: 588281
Version: 1, Version Date: 31/03/2010

PART D

(Complete as far as possible in all cases)
Give names, addresses, telephone numbers. Give relevant numbers if known.

13. DESIGNER(S)

Name:

Address:

Phone Number: Fax Number:

BUILDER

Name: GARRY MATSON

Address: 36 ILES RD, ROTORUA.

Phone Number: 3456105 – 027·2741·202 Fax Number:

DRAINLAYER

Name: Reg. No.

Address:

Phone Number: Fax Number:

PLUMBER

Name: LAKE CITY PLUMBING. ROT. Reg. No.

Address: P.O. BOX 2068, ROTORUA.

Phone Number: 3460·918 – 0274·945·268 Fax Number:

If more than number allowed for, please provide details on a separate sheet.

CONFIDENTIALITY

I/we require that my/our ☐ plans ☐ specifications be treated as confidential in order to protect: ☐ copyright ☐ security of building.

14.	
Floor Area of Proposed Work	Area square metres
Buildings Other Than Detached Accessory Buildings:	sq.m.
Floor	sq.m.
Basement	sq.m.
Ground Floor	sq.m.
First Floor	sq.m.
Second Floor	sq.m.
Additional Floors (Total)	sq.m.
Mezzanine	sq.m.
Decks	sq.m.
Total	sq.m.
Detached Accessory Buildings:	Area square metres
Garage	sq.m.
Carport	sq.m.
Other Buildings	sq.m.
Total	sq.m.

FOR OFFICE USE ONLY

FEES		
Fees paid on Application	**$**	**c**
Plan Review		
Project Information Mem.		
TOTAL FEE GST incl.		
Fees payable on approval	**$**	**c**
Building Consent 700556 18.6.02	150	00
Footpath Damage Deposit		
Crossing Deposit		
BRANZ Levy		
B.I.A. Levy		
Water Connection		
Sewer Connection		
Disconnection of Services		
Controlled Activity Fee		
Controlled Activity Bond		
Reserve/ Development Contribution		
Photocopying		
Structural Check		
Resiting Bond		
Service Lane Information		
Other		
APPROVAL TOTAL		

CONSENT ISSUE AUTHORITY

Receipt No. _____

Date of Issue _____

Authorised By _____

Date authorised 20-6-02

REFERRALS

	SENT	RETURNED
Structural		

AMENDED DETAILS RECEIVED

	DATE	SIGN
Planning		
Health		
P & D		
Trade Waste		
Rec & Com		
DG/GEO		
Res Eng		
Building		
Structural		

Document Set ID: 588281
Version: 1, Version Date: 31/03/2010

PLANS APPROVED SUBJECT TO ALL REQUIREMENTS OF THE BUILDING ACT 1991 BEING FULLY COMPLIED WITH

Date 21-6-02 Consent Number 13514

Officer

10300

94 4609 94 5409 94

K ← DIAGONAL GALV. ANGLE BRACING PANEL → K

JACK TRUSSES

JACK TRUSS

BEDROOM

BEDROOM

JACK TRUSS

JACK TRUSS

M

3939

2406

3715

1250

GIRDER TRUSS

diagonal galv. angle bracing panel

2406

K

sheer bracing panel

L

sheer bracing panel

diagonal galv. angles

TOILET

SHOWER

SHOWER

BATHROOM

move wall to allow HALL for larger shower

650

H

4906

1906

12500

laundry chute.

2554

96

1202

850

W.I. WARDROBE

No door

1180

828

906

906

906

906

94

94

94

ROTORUA DISTRICT COUNCIL
1061 Haupapa Street, Private Bag RO 3029, Rotorua. Telephone 07-348 4199 ext 8859. Fax 07-349 0993

P27041

Issue Document

CODE COMPLIANCE CERTIFICATE No:13514

Section 43(3), Building Act 1991

Issued: 21/06/2002
Building Consent No: 13514

Owner

MR LEON FRANCIS BATCHELOR
48 SHARP ROAD
KAHAROA, R D 2
ROTORUA 3221

Agent

MR LEON FRANCIS BATCHELOR
48 SHARP ROAD
KAHAROA, R D 2
ROTORUA 3221

Site Information

PROPERTY ID: 27041
ASSESSMENT NO: 06951/239.02
STREET ADDRESS: 48 SHARP ROAD, KAHAROA, R D 2, ROTORUA 3221
LEGAL DESCRIPT: LOT 2 DPS 71633 BLK XII ROTORUA SD

Project Information

PROJECT IS FOR: Minor Works
INTENDED USE(S): INTERNAL ALTERATIONS TO BATHROOM
INTENDED LIFE: Indefinite but not less than 50 years

NUMBER OF STAGES: 1

Fees

There are no outstanding fees.

No Fees

Document Set ID: 588281
Version: 1, Version Date: 31/03/2010

This is a final code compliance certificate issued in respect of all of the building work under the above building consent.

Signed for and on behalf of the Council:

Name: P Lawrence Position: Building Control Manager

Signed: pp Date: 14 / 11 / 2002

See attached page(s) for any other conditions.

Document Set ID: 588281
Version: 1, Version Date: 31/03/2010

Doc No: 172943

BUILDING SERVICES

FIELD INSPECTION CARD

Application No: 13514 Date Consent Issued: 21.6.02

OWNER: Batchelar	BUILDER: Gary Matsa
SITE: 48 Sharp Road	PLUMBER: Lake City Plumbing
VALUATION NO: 06951/239.02	DRAINLAYER:
FILE NO: PA 7041	
LOT NO: 2	

DESCRIPTION OF PROPOSED WORK: Internal Alterations to Bathroom

DATE	INSPECTION REPORTS	TIME
19-7-02	Pipes in place - copper water supply and wastes in place.	40
14-11-02	Final - All work now complete	
	OK to issue c.c.c.	40
14/11/02	CCC ISSUED	
	Slot Dates	
	No Fees	

Document Set ID: 588281
Version: 1, Version Date: 31/03/2010

DATE	INSPECTIONS	TIME

Compliance Certificate Issued - Date:

Signed: M Jowett

MS309106CAL/1

3373010

BUILDING SERVICES

FIELD INSPECTION COMPLIANCE

File No: P27041 Appn No: 13514

Contractor: _____ Phone: _____

Owner: Baldock Phone: _____

Lot No: 2 DPS: 71633

Site Address: 48 Sharp Road

Proposed Work: Internal Alterations to Bathroom

Initial Inspection	First Owner	First RDC	Second Owner	Second RDC	Complies Owner	Complies RDC
1. Footings/Piles						
2. Concrete Floor 1						
3. Concrete Floor 2 P & D						
4. Bond beams						
5. Prelining 1						
6. Prelining 2						
7. Prelining P & D						Cw 19-7-02
8. Linings						
9. Fittings P & D						
10. Drain test P & D						
11. Final						M.J. 14-11-02
12. Solid Fuel Heaters						
13. Vehicle Crossing/ Damage Deposit						
14. Other (please note)						

Issue of Code Compliance Certificate approved.

Date: 14-11-02

Building Officer: M Jowett

Document Set ID: 588281
Version: 1, Version Date: 31/03/2010

Doc No. 101096

IMPORTANT

THIS CARD MUST BE PRODUCED ON THE SITE AT EVERY INSPECTION EITHER BY THE OWNER OR HIS/HER AGENT

ROTORUA DISTRICT COUNCIL

Private Bag RO 3029
Rotorua
New Zealand
Telephone 07-348 4199
Fax 07-346 3143
E-mail mail@rdc.govt.nz

Address all communications to:
District Manager
Rotorua District Council

As the holder of a Building Consent, the **OWNER** or his/her **AGENT** is required to:

(GIVE 24 HOURS NOTICE FOR ANY INSPECTION ON SITE)

1. Footings - reinforcing steel to be in place. Pile excavations complete. No concrete to be poured.

   Note: Boundary pegs should also be identified at this stage. (See 4 below).

2. Concrete Floor Slabs - two inspections; first for sub grade preparation, second when moisture barrier and steel is in place and plumbing pipe work is fitted.

3. Pre-lining Inspection 1 - when the structure is completely closed in, plumbing pipework is in place and before insulation is fitted.

3A. If applicable, check for correct facilities for disabled persons.

   Pre-lining Inspection 2 - when the insulation is fitted.

4. Linings and fittings - when all linings are fixed, plumbing fittings in place and before any decoration is done.

5. Water Supply - Back flow presenters in place.

6. Drains fully laid and ready to test - sewer and stormwater.

7. Final -when the building is ready for occupancy, but before occupancy takes place.

For all the above inspection, the **OWNER** or their **AGENT**, is required to be on site at the time of the inspection and they shall have a set of the stamped, approved drawings for the job on-site.

PLEASE NOTE:

Additional charges may be made for the following if the Building Officer arrives and:

1. The work is not ready for the inspection.

2. Owner/agent/plans not on site.

3. Inspection not cancelled.

4. Boundaries not located or proved/no footing/foundation inspection.

It is important to note that should the necessary inspection not be done, a **CODE COMPLIANCE CERTIFICATE** will not be issued.

Owners should have regard to consequence of occupying or selling a non-complying building.

SISTER CITIES:
Klamath Falls, Oregon, U.S.A.
Beppu City, Oita, Japan.
Lake Macquarie, NSW, Australia

Document Set ID: 588281
Version: 1, Version Date: 31/03/2010

pln 38225 STK/307

BUILDING SERVICES – BUILDING CONSENT

APPLICATION NO: 38226 **VALUATION NO:** 06981/239.02

OWNER: Reid **PROPERTY NO:** P27041

PROJECT LOCATION: 43 Sharp Rd

DESCRIPTION OF WORK: Convert garage to Caregivers flat

CHECK APPLICATION - BUILDING OFFICER:

DATE RECEIVED: 6.11.06	**DUE DATE:** 4.12.06
DATE SUSPENDED:	**DATE ISSUED:** 20/12/2006.

PROCESSING	REVIEW	DATE	TIME TAKEN	APPROVED	DATE
Hazard — Water	Allocation, Planning/Bldg			Rec'd — Ø	
Administration					
Building		2-12-06	45 HO		15/12/06
Resource Engineers					
Geothermal				20.12.06. BC 38226	
Hazardous Substances					
Environmental Health					
Disabled Persons					

Topping pad to slab proposed to part of floor only?

9 NOV 2006 RECEIVED

NOTES AND CONDITIONS: (Please circle appropriate code for checkboxes)

200 a b c (d) (e) (g) h i j (k)
(l) (m) (n) o p q r (s) t (u)
(v) w x (y) f

201 a b c d e g f

202 a (b) f

203 a f

204 f

205 a b f

206 a b c f

207 a f

208 (a) b f

209 a f

210 a b c f

211 a b c f

212 (a) f

213 a b c d e g h i j k l
m n o p q r s f

214 a b f

215 a b c f

216 a f

217 a b f

218 a b c d e g h i j k f

219 f

220 (a) (b) c d f

221 a b c d e g h i j k l
m n f

222 a b c d e g h i j k l
m n o p q r s t u v w
x f

FREE TEXT: 23

DESTINATION ROTORUA
ROTORUA DISTRICT COUNCIL

Rotorua District Council
1061 Haupapa Street
Private Bag 3029
Rotorua, New Zealand
P: 07 348 4199
F: 07 346 3143
E: mail@rdc.govt.nz
W: www.rdc.govt.nz

Building Consent No:38226
Section 51, Building Act 2004

Issued:20Dec06

The Building

Street Address of building: 48 SHARP ROAD, KAHAROA, R D 2, ROTORUA 3072
Legal Description of land where building is located:
Lot 2 DPS 71633
Building Name: CONVERT GARAGE TO CAREGIVERS QUAR

The Owner

Name of owner: MR MICHAEL JAMES REID
Mailing Address: HODGES CONSTRUCTION LTD
JOHN HODGES, PO BOX 473
ROTORUA

Contact Person: HODGES CONSTRUCTION LTD
Mailing Address: HODGES CONSTRUCTION LTD
JOHN HODGES, PO BOX 473
ROTORUA

Street address/registered office: 48 SHARP ROAD
KAHAROA, R D 2
ROTORUA 3072
Phone number: (Bus.)
(Pvt.)
Facsimile number:
Email address:
Website:

First point of contact for communications with council/building consent authority:

Building Work

The following building work is authorised by this consent:
Project: Additions & Alterations
Intended Use: CONVERT GARAGE TO CAREGIVERS QUARTERS

This building consent is issued under section 51 of the Building Act 2004. This building consent does not relieve the owner of the building (or proposed building) of any duty or responsibility under any other Act relating to or affecting the building (or proposed building).

This building consent also does not permit the construction, alteration,

Document Set ID: 588279
Version: 1, Version Date: 31/03/2010

demolition, or removal of the building (or proposed building) if that construction, alteration, demolition, or removal would be in breach of any other Act.

This building consent is subject to the following conditions:

1: THE APPROVED CONSENT DOUCUMENTS MUST BE ON SITE DURING ALL INSPECTIONS.

Inspections will not be performed if Documents are not on site and an invoice for reinspection will be sent out.

Notice by owner or agent that building work is ready for inspection shall be given to the Rotorua District Council at least three working days in advance for the following work:

At the completion of the work authorised by this Building Consent.

Please arrange the booking of inspections and direct enquiries regarding this consent to the Building Services Department, phone (07) 348 4199.

Prior to slab placement, hardfill, damp proofing (if required), reinforcement etc.

Plumbing under concrete floors.

Plumbing work within any wall cavity, eg timber or blockwork.

Post-wrap (Weather tape, flashing and cavity battens).

Pre-plaster (stucco, bricks and EIFS)

Framing timber required to have a specificed moisture content.

Thermal insulation material.

The fixing of framing members prior to any lining being fixed.

All foul water and stormwater drainage in ground before backfilling.

The fitting and fixture of ALL FLASHINGS as is required to meet the requirements of the Building Code.

2: Hot Water Control

The hot water supply to sanitary fixtures used for personal hygiene is to be fitted with tempering valves or other approved devices to limit the water temperature to 55 C.

3: Stormwater

All stormwater runoff from roof, driveways and pave areas shall be collected and piped to an approved soakhole or approved connection.

4: Code Compliance Certificate

The owner or agent shall as soon as practicable, advise the Rotorua District Council that all building work has been completed to the extent required by this Building Consent.

SECTION 93(2)(b)(i) BUILDING ACT 2004

The owner or agent must apply for a Code Compliance Certificate within 2 years after the date on which the Building Consent for the building work was

granted.

5: Standard Conditions

This building consent is permission to undertake building work in accordance with the approved plans and specifications. All work must comply with the provisions of the Building Code. Any alterations from the original plans and specifications must have prior approval from the Building Control Manager.

Endorsement on Plans and Specifications form part of this approval.

If the work is not commenced within six months and/or reasonable progress has not been made within twelve months a written extension of time can be granted on application to the Council.

The owner of the property is responsible for the correct siting of buildings or additions in relation to boudary pegs.

Any deficiency not specifically drawn to the attention of the builder or owner by the Building Officer shall not be deemed to have been approved.

The use is limited to that stated on the Building Consent. Any change of use would require a separate approval.

Plumbing and drainage work to be carried out by licensed tradesperson only.

6: Standard Statement

THIS BUILDING CONSENT IS ISSUED SUBJECT TO ALL OTHER OUTSTANDING CONSENTS HAVING BEEN APPROVED. WORK SHALL NOT COMMENCE AND INSPECTIONS WILL NOT BE UNDERTAKEN UNTIL THOSE OUTSTANDING CONSENTS HAVE BEEN COMPLIED WITH.

A CODE COMPLIANCE CERTIFICATE MAY NOT BE ISSUED IF ALL FLASHINGS HAVE NOT BEEN INSPECTED PRIOR TO THE COVERING UP OR CLOSING IN OF BUILDING WORK.

SECTION 52 BUILDING ACT 2004 (LAPSE OF BUILDING CONSENT)

A Building Consent lapses and is of no effect if the building work to which it relates does not commence within 12 months of the date of issue unless prior arrangements are made with the Building Consent Authority

TYPE 1 DOMESTIC SMOKE ALARM SYSTEM - CLAUSE F7 WARNING SYSTEMS:

* Requires that an appropriate means of detection and warning for fire must be provided within each household unit.
* Smoke alarms shall be located on the escape routes on all levels within household units.
* On all levels containing the sleeping spaces, the smoke alarms shall be located either:

a) in every sleeping space; or
b) within 3 metres of every sleeping space. In this case, the smoke alarms must be audible to sleeping occupants on the other side of closed doors.

These will be required on all new dwellings and retrospectively fitted in dwellings when, and if, a Building Consent for additions or alterations is applied for.

A CODE OF COMPLIANCE CERTIFICATE WILL NOT BE ISSUED UNTIL THE SMOKE ALARMS HAVE BEEN INSTALLED AND SEEN OPERATING.

Document Set ID: 588279
Version: 1, Version Date: 31/03/2010

Compliance Schedule

A compliance schedule is not required for the building.

JM Stimpson
Signature

Administration Assistant
Position

On behalf of: ROTORUA DISTRICT COUNCIL

Date: 20 Dec 2006

DESTINATION ROTORUA

ROTORUA DISTRICT COUNCIL

Rotorua District Council
1061 Haupapa Street
Private Bag 3029
Rotorua, New Zealand
P: 07 348 4199
F: 07 346 3143
E: mail@rdc.govt.nz
W: www.rdc.govt.nz

Project Information Memorandum No:38225
Section 34, Building Act 2004
Received:06Nov06
Issued:05Dec06

MR MICHAEL JAMES REID
HODGES CONSTRUCTION LTD
JOHN HODGES, PO BOX 473
ROTORUA

HODGES CONSTRUCTION LTD
HODGES CONSTRUCTION LTD
JOHN HODGES, PO BOX 473
ROTORUA

PROPERTY ID: 27041
STREET ADDRESS: 48 SHARP ROAD, KAHAROA, R D 2, ROTORUA 3072
LEGAL DESCRIPTION: Lot 2 DPS 71633

PROJECT IS FOR: Additions & Alterations
INTENDED USE(S): CONVERT GARAGE TO CAREGIVERS QUARTERS
INTENDED LIFE: Indefinite but not less than 50 years
VALUE OF WORK: $47,000.00
NUMBER OF STAGES: 1

COUNCIL'S TOTAL CHARGES FOR THIS PROJECT INFORMATION MEMORANDUM ARE: $180.00
PAYMENTS RECEIVED TO DATE:
Receipt number: 59477 Date: 06Nov06 Amount: $180.00

See attached page(s) for any other conditions.

Document Set ID: 588279
Version: 1, Version Date: 31/03/2010

1: PIM STATUS

The proposed building work may be undertaken, subject to the provisions of the Building Act 2004, and any condition of the Building Consent.

The proposed building work requires a Land Use Resource Consent for which approval must be obtained before the building work may be undertaken.

2:

No information concerning special features of the land has been identified.

Refer to attached copy of property information notice for detail on building and planning restrictions which affect this property.

3: PUBLIC UTILITIES - STORMWATER

The proposed building work is to be sited on land which the Council has identified as having no public utility system for stormwater disposal.

All stormwater from any new roofs or hard standing areas is to be disposed of on site by way of Council complying soak holes and to the satisfaction of the District Engineer.

4: RURAL SUPPLY

The proposed building work is to be sited on land which the Council has identified in its records as being connected to a Rural Water Supply administered by the Council. As Built connection details are attached. (Service Plan)

5: SEWERAGE

Environment BOP on site effluent treatment regional plan.

6: POLLUTION CONTROL

This Construction project is required to meet the objective of protecting the environment and the Public Utility Drainage Systems from the effects of construction sediments and contaminats or polluted wastewater discharges on and off site. This includes the likelihood of water overland flow carrying these sediments or contaminants off site or into public drains. Please demonstrate how this construction project is to achieve this objective.

7: LAND USE CONSENTS

Document Set ID: 588279
Version: 1, Version Date: 31/03/2010

Your application for Resource Consent has been received and is currently being processed. Please note that the resource consent process may take up to 20 working days from when Council received all necessary information.

A Resource Consent for a Non Complying Activity (Numbered 11581) is being processed by Environmental Consents Planner, J Preddey.

8: COMPULSORY PLANNING STATEMENTS

The District Plan does not indicate any proposed road widening, proposed service lane, designations, scheduled sites or protected historic buildings, sites or trees on the land the building work is proposed.

The proposal is not a "development" as defined in the District Plan.

9: RESTRICTION OR CAUTION

The land is subject to a Planning Restriction which may affect the proposal. See attached.

NATURAL GAS CORPORATION

For information regarding a proposed gas connection or the location of existing gas pipelines as they affect this property, please contact the the Natural Gas Corporation. For any building work (as defined by Section (2) of the Building Act 1991) that will disturb over and around any gas pipeline or service and prior to the commencement of that work, the applicant shall be required to contact the gas centre for authorisation to proceed.

ELECTRICITY

Under the Electrical Supply Regulations 1976 it is an offence to erect any building or structure within certain prescribed distances of an overhead electrical line. To enquire about these retrictions, contact your local electricity distributor.

Signed for and on behalf of the Council:

Signed: JM Sanderson Date: 05 / 12 / 2006

Document Set ID: 588279
Version: 1, Version Date: 31/03/2010

15 December 2006

LOCKWOOD

Rotorua District Council
Private Bag 3029
Rotorua Mail Centre
Rotorua 3046

Dear Sir(s)

RE: Building Consent Application No 38226

We are in receipt of the letter requesting additional information for this Building Consent Application and we now respond accordingly

Item 1
Window Flashing details for EIFS cladding **to all new and reused windows**
Window flashings details in accordance with NZBC E2/AS1 included (2 copies)

Item 2
Confirmation of layer of DPC under slab
Inspection of the property file for Council inspections made during the construction of the original garage confirm that DPC was placed.
This will be verified by inspection when the new chases are made for the waste water pipework from the new vanity and shower

Item 3
Effluent Disposal System
Approval email from P Futter, Environment BOP for Drainage System.

Item 4
Existing Ground Levels Compliance with NZS3604
The existing paving levels are 150mm below Care Givers Room floor level with ramping provided for access to the existing single bay garage.
Refer to Elevations A, C & D

New floor plan, elevations, site and drainage plans provided detailing amendments.

We trust that this information will assist Council and we look forward to receiving the approved Building consent in due course.

Thank you.

Yours faithfully

John Hodges
HODGES CONSTRUCTION LTD

HODGES CONSTRUCTION LTD
55 Fairy Springs Road, PO Box 473, Rotorua 3040
Phone 07 347 6338 Fax 07 349 2013
Email: hodges@clear.net.nz
www.lockwoodhomes.co.nz www.initialhomes.co.nz

Initial Homes BY LOCKWOOD

Document Set ID: 588279
Version: 1, Version Date: 31/03/2010

DESTINATION ROTORUA

ROTORUA DISTRICT COUNCIL

Rotorua District Council
1061 Haupapa Street
Private Bag 3029
Rotorua Mail Centre
Rotorua 3046
New Zealand
P: 07 348 4199
F: 07 346 3143
E: mail@rdc.govt.nz
W: www.rdc.govt.nz

05 December 2006

Please Quote Building Consent No: 38226

File No: P27041
Doc No: OW-74745

J Hodges
PO Box 473
ROTORUA

Dear Sir/Madam

48 SHARP ROAD

I acknowledge receiving your Building Consent Application dated 6.11.06, to construct a garage into a habitable space but wish to advise that the plans and specifications submitted do not fully comply with the Building Code and/or legislation. Further processing of this Consent will be suspended until amendments or the required additional information is received. The permitted period of suspension will be **up to 20 working days** within which time it is considered all information should have been submitted.

BUILDING

Page 15 of 26

1. Please provide flashing details to all window openings and show compliance with NZBC E2/AS1.

confirm DPC onsite Ponk

2. Confirm a DPC layer is present under the slab or that a new one will be laid under a topping pad.

3. Confirm the on site effluent treatment system will comply with the Regional Plan. Call EBOP to confirm, phone 0800 ENV BOP.

Sh 1 ISO to paving level

4. Show ground levels comply with NZS 3604 to perimeter of building where slotted drain is not shown.

All additional information must be lodged together and shall include a reference clearly indicating how and where this information has been provided and can be found within the documents.

On receipt of this information further consideration will be given to the application and if found to be satisfactory the consent will be issued on payment of the required fees.

Should you envisage difficulty in providing additional information within the given time or wish to discuss the matter, Council Officers will be pleased to provide assistance.

Yours faithfully

pp. JM Sandison

Colin Wiggins
Building Officer

Document Set ID: 588279
Version: 1, Version Date: 31/03/2010

05 December 2006

Please Quote Building Consent No: 38226

File No: P27041
Doc No: OW-74745

J Hodges
PO Box 473
ROTORUA

Dear Sir/Madam

48 SHARP ROAD

I acknowledge receiving your Building Consent Application dated 6.11.06, to construct a garage into a habitable space but wish to advise that the plans and specifications submitted do not fully comply with the Building Code and/or legislation. Further processing of this Consent will be suspended until amendments or the required additional information is received. The permitted period of suspension will be **up to 20 working days** within which time it is considered all information should have been submitted.

BUILDING

1. Please provide flashing details to all window openings and show compliance with NZBC E2/AS1.

2. Confirm a DPC layer is present under the slab or that a new one will be laid under a topping pad.

3. Confirm the on site effluent treatment system will comply with the Regional Plan. Call EBOP to confirm, phone 0800 ENV BOP. SEE INFO PROVIDED 14·12·06

4. Show ground levels comply with NZS 3604 to perimeter of building where slotted drain is not shown.

All additional information must be lodged together and shall include a reference clearly indicating how and where this information has been provided and can be found within the documents.

On receipt of this information further consideration will be given to the application and if found to be satisfactory the consent will be issued on payment of the required fees.

Should you envisage difficulty in providing additional information within the given time or wish to discuss the matter, Council Officers will be pleased to provide assistance.

Yours faithfully

Colin Wiggins
Building Officer

Document Set ID: 588279
Version: 1, Version Date: 31/03/2010

BC 38226 5K/387

BUILDING SERVICES – PROJECT INFORMATION MEMORANDUM

APPLICATION NO: 38225 **VALUATION NO:** 06981/239.02

OWNER: Reid **PROPERTY NO:** P27041

PROJECT LOCATION: 48 Sharp Rd

DESCRIPTION OF WORK: Convert garage to Caregivers qtrs

CHECK APPLICATION - BUILDING OFFICER:

DATE RECEIVED:	DUE DATE:
6.11.06	4.12.06
DATE SUSPENDED:	**DATE ISSUED:** 05/12/2006

PROCESSING	REVIEWED BY	TIME TAKEN	DATE RECEIVED	DATE PROCESSED
Administration		20	11.11.06	
Hazard Water Allocation, Planning / Bldg			Rest.	
Graphic Solutions				
Planning Rural A	Jeanne	30	13.11.06	13.11.06
Resource Engineers	Bic	15		16.11.06
Pollution Control				
Geothermal				
Hazardous Substances				
Environmental Health				
Recreation and Community				
Building				

PIM FEE	DATE PAID	RECEIPT NO.	DATE RECEIVED STAMP
$ 180.00	6.11.06	R 59530	9 NOV 2006

NOTES AND CONDITIONS: (Please circle appropriate code for checkboxes)

300 a b c d (e) g h i j k l f
302 a b c d e g h i j k l m
n o p q r s t u v w x (f)
304 a b c f
306 a b c d e g h i j k l
m n o f
308 a b c d e f
310 a f
312 a b c d e g h f
314 a b (c) d e g (h) f
316 a b c d e f
318 a (b) c d e g h i f
320 a b c d e g (h) f
322 a b f
324 a b c d e g h i j f
326 a b c d e g h i j k f
328 a b c d e g h i j k l m
n f
330 a b c d f
332 a b c d e g h i j f
334 a b c d e g h i f
336 a b f

338 a b c d e g h i f
340 a b c f
342 a b f
344 a b c f
346 a f
348 a b c d e g h i j k
l m n o p q r s t u
v w x y z f
350 a b c d e g f
352 a b c f
354 a b c f
356 a b c (d) e g h (f)
358 (a) (b) c d f
360 a b c d f
362 a f
364 a f
366 a b c d f
368 (a) b f
370 a b c f
372 a b f f
374 a b f

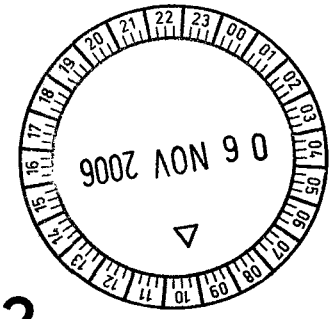
(14)

FREE TEXT:

356 f) A resource consent for a non-complying activity (ID 11581) is being processed by J. Preddey.

302(f) Refer to attached copy of property information notice for detail on building and planning restrictions which affect this property.

320(h) Environment BOP on site effluent treatment regional plan.



PIM / APPLICATION No. 38225/26

DATE RECEIVED 6/11/06

DATE ISSUED 20/12/2006

SITE FILE No. 27041

Form 2

APPLICATION FOR PROJECT INFORMATION MEMORANDUM AND/OR BUILDING CONSENT

Section 33 or section 45, Building Act 2004

THE BUILDING

Street address of building:
[for structures that do not have a street address, state the nearest street intersection and the distance and direction from that intersection]

48 SHARP ROAD

Legal description of land where building is located:
[state legal description as at the date of application and, if the land is proposed to be subdivided, include details of relevant lot numbers and subdivision consent]

Subdivision Consent *(if applicable)* _____

Valuation No. 06951/239.02 **Lot No.** 2

DPS 71633 **Section** _____

Block _____ **Survey District** _____

Building name: _____

Location of building within site/block number:
[include nearest street access]

Number of levels: _____
[include ground level and any levels belowground]

Level/unit number: _____
[insert level/unit number if applicable]

Area: 38 m²
[total floor area; indicate area affected by the building work if less than the total area]

Current, lawfully established, use:
[include number of occupants per level and per use if more than 1]

Year first constructed: 1996
[insert year, approximate date is acceptable e.g: c1920s or 1960-1970]

Expected completion date: March 06.
[insert month year]

Version 2 12/05

Document Set ID: 588279
Version: 1, Version Date: 31/03/2010

THE OWNER

Name of owner:
[include preferred form of address, eg, Mr, Miss, Dr, if an individual]
MR. M. J. REID

Contact person:
[insert contact name]
John Hodges

Mailing address:
[insert mailing address]
P. O. Box 473
Rotorua.

Street address/registered office:
[insert street address/registered office]
ABOVE

Phone numbers:
Landline: 07 3476338 Daytime: _____
Mobile: _____ After Hours: _____

Facsimile number: 07 3492013
Email address: hodges@clear.net.nz

Website: _____
[website address if applicable]

The following evidence of ownership is attached to this application:
[current copy of certificate of title, lease, agreement for sale and purchase, or other document showing full name of legal owner(s) of the building]

AGENT

Name of agent:
[include preferred form of address, eg, Mr, Miss, Dr, if an individual]
HODGES CONSTRUCTION LTD

Contact person:
[insert contact name]
JOHN HODGES

Mailing address:
[insert mailing address]
P. O. Box 473
ROTORUA.

Street address/registered office:
[insert street address/registered office]

Phone numbers:
Landline: 07 3476338 Daytime: _____
Mobile: _____ After Hours: _____

Facsimile number: 07 3492013
Email address: hodges@clear.net.nz

Website: _____
[website address if applicable]

Relationship to owner: BUILDER
[state details of the authorisation from the owner to make the application on the owner's behalf]

First point of contact for communications with the council/ building consent authority:
[all invoices and refunds related to this application will be directed to this person in all instances]
HODGES CONSTRUCTION LTD.
P. O. Box 473
ROTORUA.

Document Set ID: 588279
Version: 1, Version Date: 31/03/2010

THE PROJECT

Description of the building work:
[provide sufficient description of building work to enable scope of work to be fully understood]
Conversion of existing Garage to Care Givers Quarters

Will the building work result in a change of use of the building?
Yes ☑ No ☐

If Yes, provide details of the new use:
[provide description of new use]
Care Givers Quarters No Longer Garage.

List building consents previously issued for this project (if any):
[list who issued the consent, the date of issue and the consent number]

Intended life of the building if less than 50 years: _____

Estimated value of the building work on which the building levy will be calculated (including goods and services tax):

[state estimated value as defined in section 7 of the Building Act 2004] $ 47000-00

Number of Toilet Pans: 1
(Commercial properties only)

BUILDING PRACTITIONERS

Builder:
Business/name: HODGES CONSTRUCTION LTD Address: P.O. Box 473 ROTORUA
Phone: 3476338 Mobile: 0274979110 After hours: _____ Facsimile: 349 2013
Email: hodges@clear.net.nz Registration/qualification: N.Z.C.Q.S.

Designer/Architect:
Business/name: HODGES CONSTRUCTION LTD Address: P.O. Box 473, Rotorua
Phone: _____ Mobile: _____ After hours: _____ Facsimile: _____
Email: _____ Registration/qualification: _____

Plumber/Gas Fitter:
Business/name: L. CANNON Address: ROTORUA.
Phone: _____ Mobile: _____ After hours: _____ Facsimile: _____
Email: _____ Registration/qualification: _____

Drainlayer:
Business/name: T. Andersen Address: Rotorua
Phone: _____ Mobile: _____ After hours: _____ Facsimile: _____
Email: _____ Registration/qualification: _____

Electrician:
Business/name: Hepburn Electrical Address: Rotorua.
Phone: _____ Mobile: _____ After hours: _____ Facsimile: _____
Email: _____ Registration/qualification: _____

Document Set ID: 588279
Version: 1, Version Date: 31/03/2010

BUILDING PRACTITIONERS

Structural Engineer:

Business/name: _____ Address: _____

Phone: _____ Mobile: _____ After hours: _____ Facsimile: _____

Email: _____ Registration/qualification: _____

Engineer (identify practice college):

Business/name: _____ Address: _____

Phone: _____ Mobile: _____ After hours: _____ Facsimile: _____

Email: _____ Registration/qualification: _____

Head Contractor/Site Manager

Business/name: _____ Address: _____

Phone: _____ Mobile: _____ After hours: _____ Facsimile: _____

Email: _____ Registration/qualification: _____

Other:

Business/name: _____ Address: _____

Phone: _____ Mobile: _____ After hours: _____ Facsimile: _____

Email: _____ Registration/qualification: _____

Other:

Business/name: _____ Address: _____

Phone: _____ Mobile: _____ After hours: _____ Facsimile: _____

Email: _____ Registration/qualification: _____

Other:

Business/name: _____ Address: _____

Phone: _____ Mobile: _____ After hours: _____ Facsimile: _____

Email: _____ Registration/qualification: _____

Other:

Business/name: _____ Address: _____

Phone: _____ Mobile: _____ After hours: _____ Facsimile: _____

Email: _____ Registration/qualification: _____

Other:

Business/name: _____ Address: _____

Phone: _____ Mobile: _____ After hours: _____ Facsimile: _____

Email: _____ Registration/qualification: _____

Document Set ID: 588279
Version: 1, Version Date: 31/03/2010

The building work will comply with the building code as follows: *[Delete this section if this is an application for a PIM only]*

Clause *[which of the following clauses will be involved in the proposed building work?]*		**Means of compliance** *[refer to the relevant compliance document(s) or detail of alternative solution in the plans and specifications]*	**Proposed inspections** [state means of inspection. Note PS4 or certification may be required]
☑ B1	Structure	☐ B1/AS2 ☑ NZS 3604 ☐ NZS 4203 ☐ NZS 4229 ☐ Other _____ *[Specify]*	☐ Council ☐ Engineer ☐ Other _____ *[Specify]*
☑ B2	Durability	☐ B2/AS1 ☐ NZS 3101 NZS 3602 ☑ NZS 3604 ☐ Other _____ *[Specify]*	☐ Council ☐ Engineer ☐ Other _____ *[Specify]*
☐ C1- 4	Fire	☐ C1/AS1 ☐ Other _____ *[Specify]*	☐ Council ☐ Engineer ☐ Other _____ *[Specify]*
☐ D1	Access Routes	☐ D1/AS1 ☐ NZS 4121 NZS 4121 ☐ Other _____ *[Specify]*	☐ Council ☐ Engineer ☐ Other _____ *[Specify]*
☐ D2	Mechanical installations for access	☐ D2/AS1 ☐ NZS 4332 EN 81 ☐ EN 115 ☐ Other _____ *[Specify]*	☐ Engineer ☐ Other _____ *[Specify]*
☑ E1	Surface water	☐ E1/AS1 ☑ AS/NZS3500.3 ☐ Other _____ *[Specify]*	☐ Council ☐ Other _____ *[Specify]*
☑ E2	External moisture	☑ E2/AS1 ☐ Specific design & testing	☐ Council ☐ Other _____ *[Specify]*
☑ E3	Internal moisture	☑ E3/AS1 ☐ Other _____ *[Specify]*	☐ Council ☐ Other _____ *[Specify]*
☐ F1	Hazardous substances etc	☐ F1/AS1 ☐ Other _____ *[Specify]*	☐ Council ☐ Other _____ *[Specify]*
☐ F2	Hazardous building materials	☐ F2/AS1 ☐ NZS 4223 ☐ Other _____ *[Specify]*	☐ Council ☐ Other _____ *[Specify]*
☐ F3	Hazardous substances	☐ F3/AS1 ☐ Other _____ *[Specify]*	☐ Council ☐ Other _____ *[Specify]*
☐ F4	Safety from falling	☐ F4/AS1 ☐ FSP Act ☐ Other _____ *[Specify]*	☐ Council ☐ Other _____ *[Specify]*
☐ F5	Construction and demolition hazards	☐ F5/AS1 ☐ Other _____ *[Specify]*	☐ Council ☐ Other _____ *[Specify]*
☐ F6	Lighting for emergency	☐ F6/AS1 ☐ Other _____ *[Specify]*	☐ Council ☐ Other _____ *[Specify]*
☐ F7	Warning systems	☐ F7/AS1 ☐ AS/NZS 1668 ☐ NZS 4512 ☐ NZS 4515 ☐ Other _____ *[Specify]*	☐ Council ☐ Engineer ☐ Other _____ *[Specify]*
☐ F8	Signs	☐ F8/AS1 ☐ Other _____ *[Specify]*	☐ Council ☐ Other _____ *[Specify]*
☑ G1	Personal hygiene	☑ G1/AS1 ☐ Other _____ *[Specify]*	☐ Council ☐ Other _____ *[Specify]*

Document Set ID: 588279
Version: 1, Version Date: 31/03/2010

☐ G2	Laundering	☐ G2/AS1	☐ Other _____ *[Specify]*	☐ Council ☐ Other _____ *[Specify]*
☐ G3	Food preparation and prevention of contamination	☐ G3/AS1	☐ Other _____ *[Specify]*	☐ Council ☐ Other _____ *[Specify]*
☐ G4	Ventilation	☐ G4/AS1	☐ AS/NZS 1668.2 ☐ Other _____ *[Specify]*	☐ Council ☐ Other _____ *[Specify]*
☐ G5	Interior environment	☐ G5/AS1	☐ Other _____ *[Specify]*	☐ Council ☐ Other _____ *[Specify]*
☐ G6	Airborne & impact sound	☐ G6/AS1	☐ Other _____ *[Specify]*	☐ Council ☐ Other _____ *[Specify]*
☑ G7	Natural light	☑ G7/AS1	☐ Other _____ *[Specify]*	☐ Council ☐ Other _____ *[Specify]*
☐ G8	Artificial light	☐ G8/AS1	☐ NZS 6703 ☐ Other _____ *[Specify]*	☐ Council ☐ Other _____ *[Specify]*
☑ G9	Electricity	☑ G9/AS1	☐ Other _____ *[Specify]*	By certification only
☐ G10	Piped services	☐ G10/AS1	☐ NZS 5261 ☐ Other _____ *[Specify]*	By certification only
☐ G11	Gas as an energy source	☐ G11/AS1	☐ Other _____ *[Specify]*	By certification only
☑ G12	Water supplies	☐ G12/AS1	☑ AS/NZS 3500.1 ☐ AS/NZS 3500.4 ☐ Other _____ *[Specify]*	☐ Council ☐ Other _____ *[Specify]*
☑ G13	Foul water	☐ G13/AS1	☑ AS/NZS 3500.2 BS 5572 ☐ Other _____ *[Specify]*	☐ Council ☐ Other _____ *[Specify]*
☐ G14	Industrial liquid waste	☐ G14/AS1	☐ Other _____ *[Specify]*	☐ Council ☐ Other _____ *[Specify]*
☐ G15	Solid waste	☐ G15/AS1	☐ Other _____ *[Specify]*	☐ Council ☐ Other _____ *[Specify]*
☑ H1	Energy efficiency	☑ H1/AS1 ☐ ALF Design Manual ☐ NZS 4214	☐ NZS 4218 ☐ NZS 4243 ☐ Other _____ *[Specify]*	☐ Council ☐ Other _____ *[Specify]*

Document Set ID: 588279
Version: 1, Version Date: 31/03/2010

HAVE YOU PROVIDED ALL THE FOLLOWING INFORMATION?
(Strike out where not applicable)

NOTE TO APPLICANTS Please use this check sheet to ensure all the information required to be supplied with your application has been provided. If required information has not been provided your application may not be accepted and you will experience delays in obtaining your consent.

GENERAL	Yes	No	N/A
Plans and specifications of an acceptable standard (Reference BRANZ Bulletin 365 Acceptable Plans and Specifications)	☑	☐	☐
Plans, elevations, cross sections of the proposal in duplicate	☑	☐	☐
Certificate of Title (recent search copy less than 6 months old)	☐	☑	☐
Wind Zone classification	☐	☐	☑
Earthquake Zone classification	☐	☐	☑
Corrosion Zone classification	☐	☐	☑
Presence of natural hazards eg. Flooding, falling debris, erosion	☐	☐	☐

BULK & LOCATION	Yes	No	N/A
Site Plan: Fully dimensioned, scaled, showing all buildings and easements (proposed/existing)	☑	☐	☐
Site boundaries nominated	☑	☐	☐
Site area per unit indicated	☐	☐	☐
Site coverage and plot ration calculations %	☐	☐	☐
Shared access ways/other areas	☐	☐	☐
Foulwater (sewer) drains	☑	☐	☐
Stormwater drains and soakholes	☑	☐	☐
Water service details	☑	☐	☐
Site levels and finished floor level indicated	☐	☐	☐
Vehicle crossing position indicated on plan	☐	☐	☐
Vehicle access manoeuvre and parking areas indicated	☐	☐	☐
Street trees, poles, sumps, manholes, traffic islands affecting vehicle access	☐	☐	☐
Hill sites: indicate contours, drive gradients and building heights	☐	☐	☐
Landscaped areas indicated and planting plan produced	☐	☐	☐
Earthworks: identify proposal for cut and/or fill where cut is more than 1.5m deep or 20 cubic metres.	☐	☐	☐

OTHER MISCELLANEOUS	Yes	No	N/A
Demolition details	☐	☐	☐
Swimming pool: design, fence and discharge	☐	☐	☐
Backflow prevention	☐	☐	☐
Notable and protected trees indicated	☐	☐	☐
Heritage site or building affected	☐	☐	☐
Resource Consent application	☑	☐	☐
Subdivision details	☐	☐	☐

ADDITIONAL INFORMATION

Document Set ID: 588279
Version: 1, Version Date: 31/03/2010

CONSTRUCTION DETAILS	Yes	No	N/A
Products and designs match selected earthquake, wind and corrosion zones	☑	☐	☐
Timber treatment specifications	☑	☐	☐
Foundation plans and design included. Plans to show details on reinforcing, all fixings and subfloor bracing for timber floors.	☐	☐	☑
Floor slab details including location of expansion joints	☐	☐	☑
Geotechnical reports on ground condition as required	☐	☐	☑
Floor plans with fire partitions, common walls & dividing walls & identification of all rooms & their intended uses	☑	☐	☐
Elevations with maximum height and daylighting recession planes	☐	☐	☑
Beam designs including fixings, design charts for manufactured beams where used	☐	☐	☑
Roof plan complete with truss design statement and details	☐	☐	☑
Details to resist roof uplift	☐	☐	☑
Bracing calculations and layout plans	☐	☐	☑
Brace fixing details	☐	☐	☑
Blockwork design, including cover to reinforcing, locations and detail of expansion joints, fixings.	☐	☐	☑
Retaining walls: design, heights, position, subsoil drainage and safety barriers	☐	☐	☑
Windows: opening and fixed windows indicated, cantilevered lintel details included where appropriate	☑	☐	☐
Glazing: safety glass specifications included	☑	☐	☐
Sound insulation indicated	☐	☐	☑
Location of smoke detectors	☑	☐	☐
Claddings and weathertightness details provided for all claddings, including risk matrix or equivalent	☐	☐	☑
Stairs/steps/landings/balconies: dimensions, handrail and barrier details	☐	☐	☑
Decks: membrane specifications (especially compatible substrates), threshold details, position and size of overflows, gutter size calculations,	☐	☐	☑
Solid fuel heater: make, model & location	☐	☐	☑
Accurate layout of plumbing & drainage systems	☑	☐	☐

Full details of alternative solutions if used	Yes	No	N/A
Producer Statement: specific design details for work outside the scope of acceptable solutions and non specific design codes.	☐	☐	☐
Fire Safety Summary or Fire Design statement	☐	☐	☐
Drainage and/or plumbing	☐	☐	☐
Lifts, escalators, moving walkways	☐	☐	☐
Acoustic and thermal insulation	☐	☐	☐
HVAC systems	☐	☐	☐
Energy	☐	☐	☐
People with disabilities access & facilities	☐	☐	☐
Independent peer review for specialist design above	☐	☐	☐
Compliance Schedule details	☐	☐	☐

ADDITIONAL INFORMATION

Document Set ID: 588279
Version: 1, Version Date: 31/03/2010

MATERIALS USED *(identify materials used. Required for Department of Building and Housing records)*

What materials will be used for the:

Floor

1 ☐ Timber 2 ☐ Concrete 3 ☐ Wood Products

4 ☐ Other Specify: _____

Framing

1 ☑ Timber 2 ☐ Concrete 3 ☐ Steel 4 ☐ Aluminium

5 ☐ Other Specify: H1.2 framing.

Roof

1 ☐ Steel sheeting 2 ☐ Steel tiles 3 ☐ Concrete tiles 4 ☐ Shingles

5 ☐ Aluminium 6 ☐ Other Specify: N/A

Internal

1 ☑ Plaster board 2 ☐ Fibrous Plaster 3 ☐ Wood Products

4 ☐ Other Specify: _____

External Cladding

1 ☐ Brick 2 ☐ Concrete 3 ☐ Concrete block 4 ☐ Cement board

5 ☐ Plaster 6 ☐ Timber 7 ☐ Steel 8 ☐ Aluminium

9 ☑ XPS 10 ☐ Other Specify: To match existing.

Energy

Energy source _____

Cooking: N/A.

Insulation Fibreglass Wool insulation.

Connection to or disconnection from:

☐ Council water supply *(Please attach "Application for Water Connection" form.)* ☐ Council sewerage

Document Set ID: 588279
Version: 1, Version Date: 31/03/2010

COMPLIANCE

The specified systems for the building are as follows: *[specified systems are defined in regulations]*

The following specified systems are being altered, added to, or removed in the course of the building work: *[specify]*

There are no specified systems in the building. ☐

PROJECT INFORMATION MEMORANDUM

The following matters are involved in the project

- ☐ Subdivision
- ☐ Alterations to land contours
- ☐ New or altered connections to public utilities
- ☐ New or altered access for vehicles
- ☑ Disposal of stormwater and wastewater
- ☐ New or altered locations and/or external dimensions of buildings
- ☐ Building work over or adjacent to any road or public place
- ☐ Building work over any existing drains or sewers or in close proximity to wells or water mains
- ☐ Other matters known to the applicant that may require authorisations from the territorial authority: *[specify]*

BUILDING CONSENT

The following plans and specifications are attached to this application:

Floor Plan, Elevations

ATTACHMENTS

The following documents are attached to this application:

- ☐ Certificate attached to project information memorandum
- ☑ Plans and specifications *[list]* Floor Plan and Elevations, Plumbing Schematic Specification.
- ☐ Project information memorandum
- ☐ Development contribution notice

Document Set ID: 588279
Version: 1, Version Date: 31/03/2010

WAIVER/MODIFICATION TO NZ BUILDING CODE REQUIRED FOR FOLLOWING PARTS OF CODE:

APPLICATION

I request that you issue a †[~~project information memorandum~~/project information memorandum and building consent/~~building consent~~] *[delete which is not applicable]* for the building work described in this application

If you do not want information contained in this application to be made available for purposes of marketing please tick the box ☑

Signature of owner/agent *on behalf of and with the authority of the owner]*

Date: 6/11/06.

Document Set ID: 588279
Version: 1, Version Date: 31/03/2010

COUNCIL USE ONLY

CONSENT CONDITIONS / COMMENTS

BCO	P&D	CONSULTANT	PLANNER	EHO	NZFS

Document Set ID: 588279
Version: 1, Version Date: 31/03/2010

COUNCIL USE ONLY

ESTIMATED TOTAL VALUE OF WORK

$ 47K gst inclusive Project floor area 38 m²

FEE PAYABLE

Consent deposit

Project Information Memorandum	$ 180.00 ✓	Lot 3.
Building Administration	$ 500.00 ~~$600~~	— $100.00
Technical Processing	$ 195.00	2 inspection
Industry Levy (DBH)	$ 92.59	
Industry Levy (BRANZ)	$ 47.00	—
Developmental Contribution		
_____	$	
_____	$	
_____	$	
_____	$	
Certificate of Title	$ 15.00 ✓	
Producer Statements	$	
Compliance Schedules	$	
Rural Number	$	
Vehicle Crossing	$ —	
Street Damage	$ —	
Water Connection	$	
Sewer Connection	$	
Other(s) CC	$ 75.00 ✓	
Total consent deposit	$	
Consent fee balance Inspections	$ 195.00	3 inspection
Other(s)	$	
Total balance payable	$	

Granted by Jed Dodson

Signature

Date 18.12.06

Issued by

Signature

Date

Lodgement deposit	$ 770.00	
Date paid	6.11.06	
Receipt No.	R 59530	
Consent fee balance	$ 239.59	
Date paid	18/12/06	
Receipt No.	296711	

Please complete
Forward any refunds or further invoices to:

_____

_____

_____

Document Set ID: 588279
Version: 1, Version Date: 31/03/2010

Site Inspection Calculation Sheet

Client	J. Hodges
Address	48 Sharp Rd
Consent Number	38226

Inspection	Number Required	Time Required	Totals
Processing Hours - Admin			50
Processing Hours - Building Process	@ 65 for 1/2hrs		—
Replies to Requests for Further Information	@ 65 for 1/2hrs		—
Site Formation - Siting	1	0.5	—
Footings/Piles	1	0.5	—
Bond Beams & Columns	1	0.5	—
Under Floor Plumbing/Drainage	1	0.5	—
Concrete Floor	1	0.5	65
Pre-wrap (Wind ties & Ext Braces)	1	1.0	—
Post-wrap (Weather tape, flashings & cavity battens, Wall Insulation)	1	~~1.0~~ .5	65
Half Height Bricks (Ties/Weep Holes)	1	0.5	—
Pre-plaster (Stucco, Bricks, EIFS)	1	0.5	65
Pre-lining (Moisture & Int Braces)	1	~~1.0~~ .5	65
Pre-lining (Plumbing/Drainage)	1	0.5	65
Post-lining (Bracing - Fixing of Gib)	1	0.5	—
Drain Test (Plumbing/Drainage)	1	0.5	
Solid Fuel Heaters	1	0.5	—
Vehicle Crossing/Damage Deposit	1	0.5	—
Other (Please Note)	1	0.5	—
Other (Please Note)	1	0.5	—
Final Inspection - CCC	1	1.0	130
Total			~~440~~
Money Received			65
Totals to Invoice (Excluding PIM and Levies)	Total - Money Received		375

Document Set ID: 3882719
Version: 1, Version Date: 31/03/2010

COMPUTER FREEHOLD REGISTER
UNDER LAND TRANSFER ACT 1952

Search Copy

R.W. Muir
Registrar-General
of Land

Identifier	**SA57C/387**
Land Registration District	**South Auckland**
Date Issued	20 November 1995

Prior References
SA54C/697

Estate	Fee Simple
Area	5.9640 hectares more or less
Legal Description	Lot 2 Deposited Plan South Auckland 71633

Proprietors
Michael James Reid

Interests

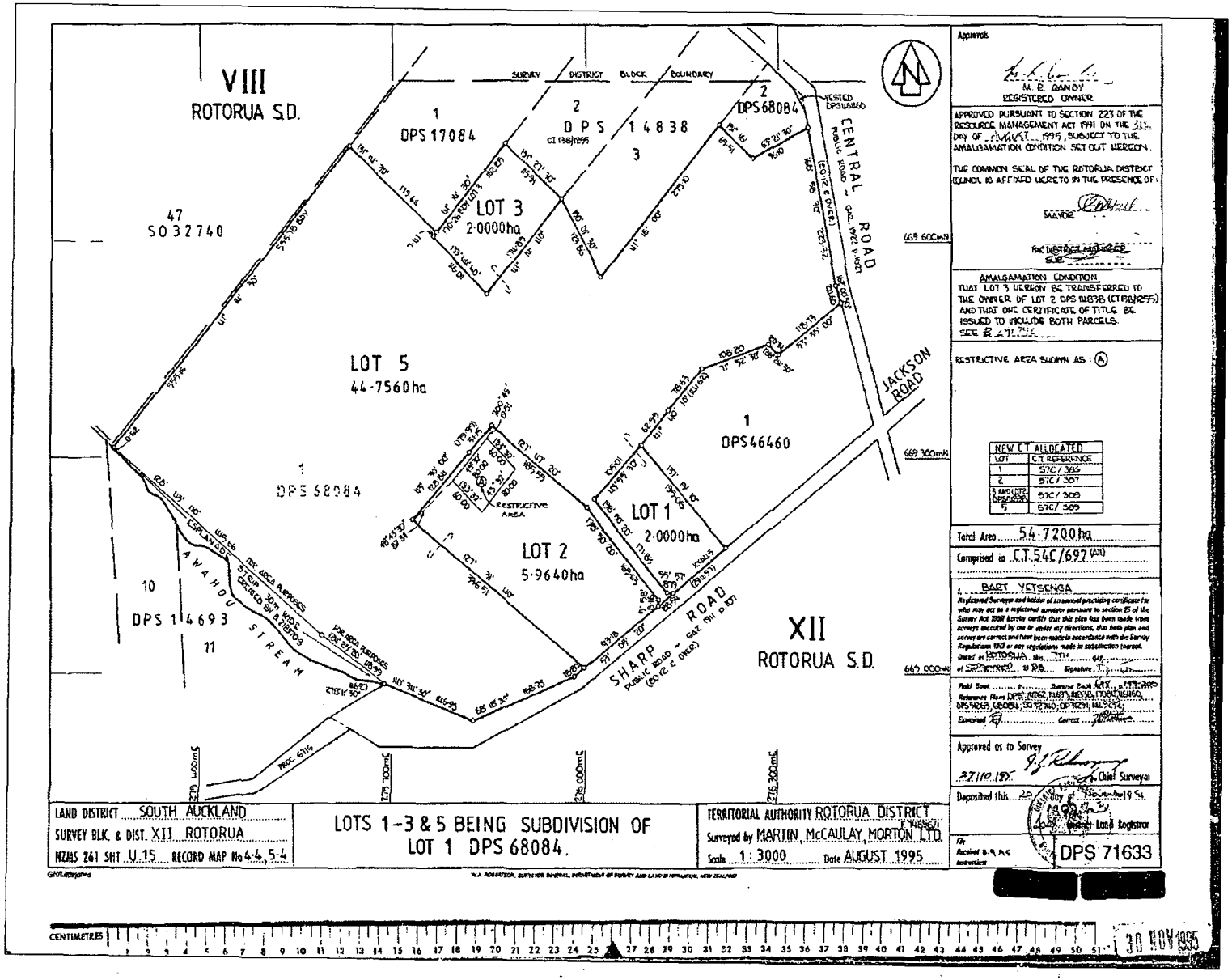
B309362.2 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 20.11.1995 at 2.10 pm

Land Covenant in Transfer B363444.3 - 26.8.1996 at 9.04 am

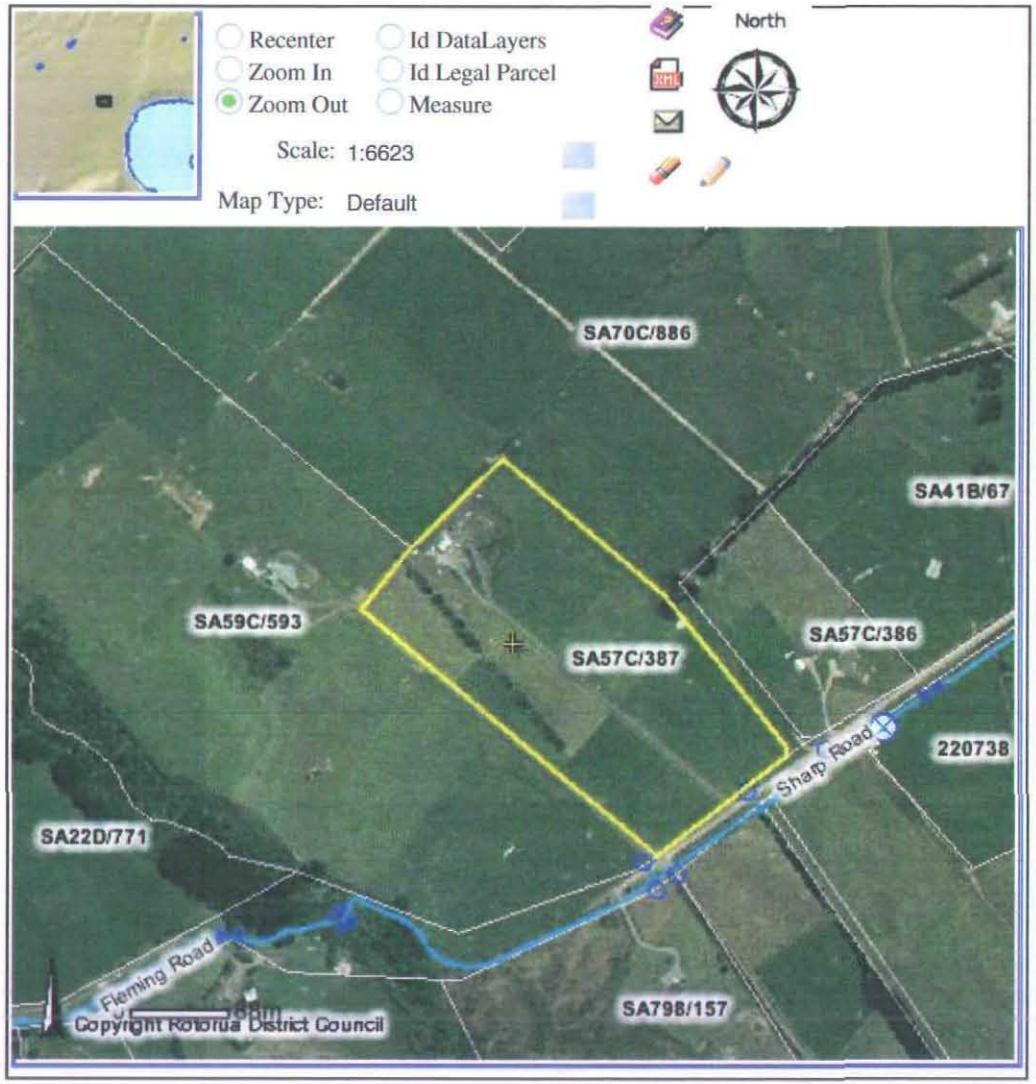
Document Set ID: 588279
Version: 1, Version Date: 31/03/2010

Transaction Id
Client Reference 250-50241-2215

Search Copy Dated 8/11/06 8:43 am, Page 2 of 2
Register Only



Document Set ID: 588279
Version: 1, Version Date: 31/03/2010



Parcel results

- Legal Parcel - File: 27041 (Lot 2 DPS 71633)
  - 48 Sharp Road, Kaharoa, R D 2, Rotorua,
  - Legal description: Lot 2 DPS 71633Check for Title Plans?...
  - Sue: 4323112
  - Header_Id:57677
  - District Plan Zone: Rural A (General)
  - Lake Catchment:
  - Generate parcel map...
  - Display legal parcel....
  - Classification details...
  - Application details...
  - Open occupancies on this parcel in a new window....
- Rating Parcel - File: 27041 (48 Sharp Road)
  - 48 Sharp Road, Kaharoa, R D 2, Rotorua,
  - CT 1: 57C/387
  - Header_Id:57676
  - District Plan Zone:
  - Display rating parcel....
  - Rating details for 06951/239.02
  - Generate parcel map...
  - Text note details...
  - Ownership details...
    - MICHAEL JAMES REID
      ATTN: MR LEWIS, C/O P O BOX 242, ROTORUA 3215
  - Application details...
  - Water billing details...
  - Open occupancies on this parcel in a new window....

Document Set ID: 588279
Version: 1, Version Date: 31/08/2010

Darrell Holder

P27041

BC 38226

From: Paul Futter [Paul.Futter@envbop.govt.nz]
Sent: Thursday, 14 December 2006 08:37
To: John Hodges
Cc: Darrell Holder
Subject: RE: Septic Tank System for 48 Sharp Road Rotorua
Attachments: 48 Sharp Road A3 Layout of Drainage Plan.pdf

Hi John

I confirm, that based on the information supplied, that the proposed system (shown in the attachment to this reply) complies with our rules for on-site effluent treatment.



Paul Futter
Senior Project Implementation Officer

Environment Bay of Plenty – Regional Council
Working with our communities for a better environment

From: John Hodges [mailto:hodges@clear.net.nz]
Sent: Wednesday, 13 December 2006 12:03 PM
To: Paul Futter
Subject: Septic Tank System for 48 Sharp Road Rotorua

Hi Paul

Thanks for your assistance.
Attached is the pdf file of the drainage plan which covers the proposed system to upgarde the existing to current requirements as discussed with Waipapa Tanks (Murray Gigger) and Andersen Draiange (Drainlayer) for a septic tank system that will work for the existing 4 bedroom dwelling on Roof water tank collection and new Bedroom being included in the existing garage.

We need approval from EBOP as requested by Colin Wiggins (Approving Building Consents Office, Rotorua District Council) Can you provide this approval via email to us addressed to Colin Wiggins with refernece to Building Consent No 38226 so that we can forward this information to RDC.

Our contact details are

Hodges Construction Ltd
P O Box 473
ROTORUA

Ph 07 347 6338
Mobile 0274 979 110
email: hodges@clear.net.nz

Thanks

John Hodges
HODGES CONSTRUCTION LTD

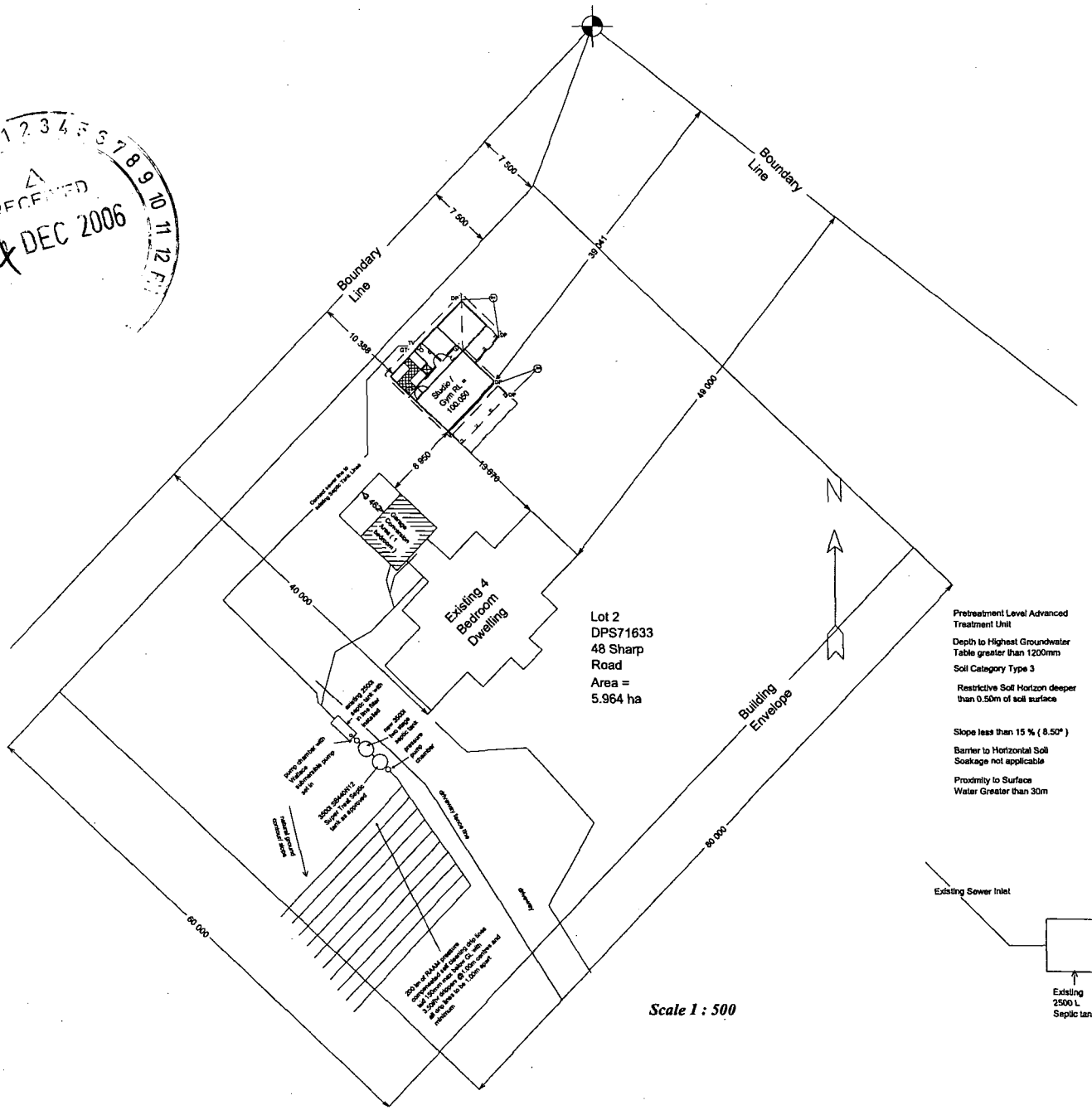
This e-mail message has been swept for content and viruses. No viruses were detected. Contact the Helpdesk on extension 9CIS (9247) for assistance, if required.

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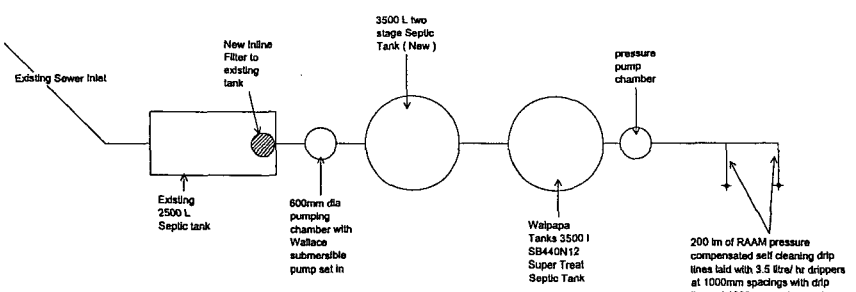
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14 DEC 2006

15 Dec 2006

Drainage Plan ammendments to include new EBOP requirements, location of drip line field included



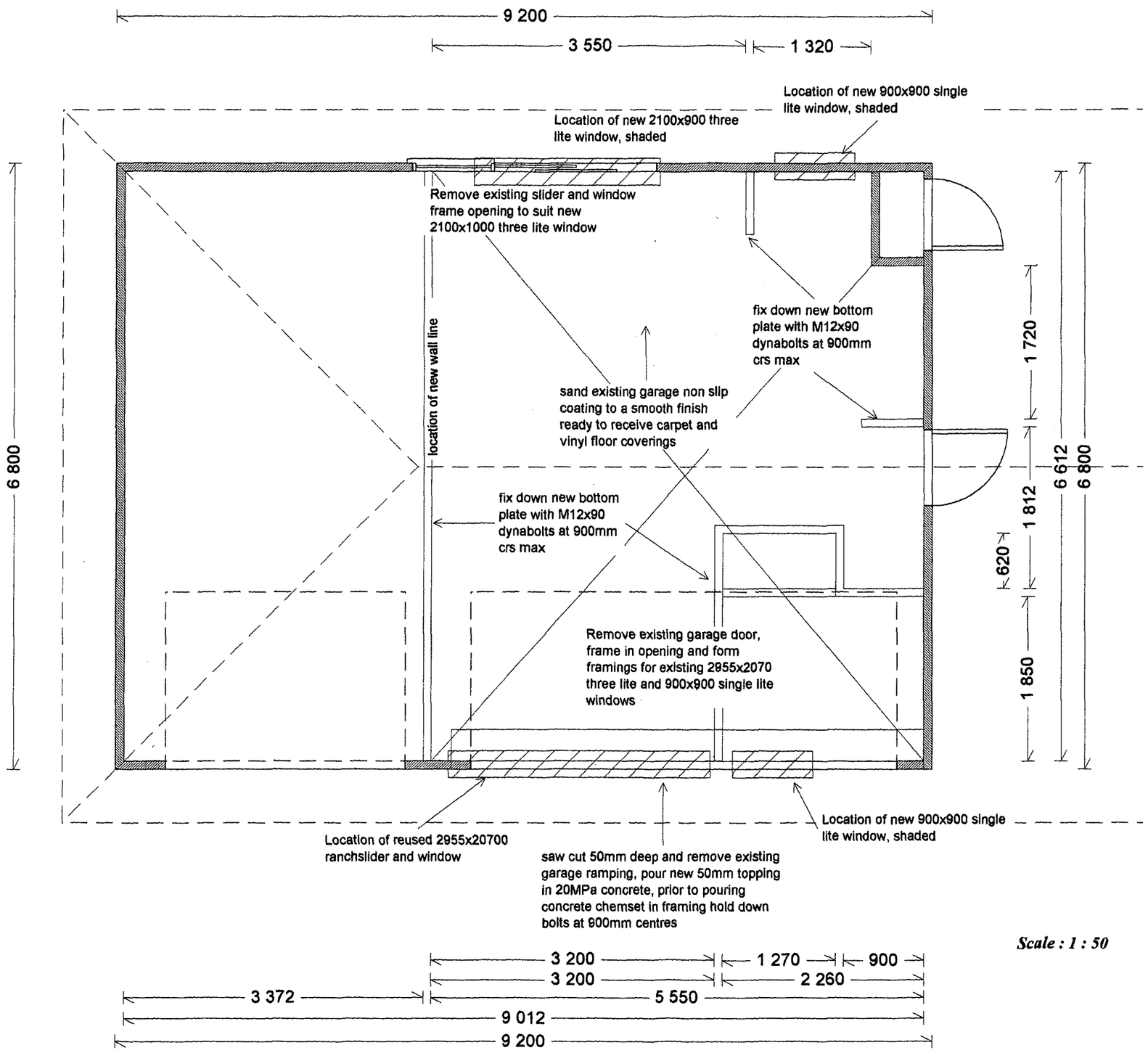
	Score
Pretreatment Level Advanced Treatment Unit	1
Depth to Highest Groundwater Table greater than 1200mm	0
Soil Category Type 3	1
Restrictive Soil Horizon deeper than 0.50m of soil surface	0
Slope less than 15 % (8.50°)	0
Barrier to Horizontal Soil Soakage not applicable	0
Proximity to Surface Water Greater than 30m	0
	2 Total



LOCKWOOD	Hodges Construction Ltd 90 Fairy Springs Road, Rotorua ph 07 347 6338 fax 07 349 2013	Garage [redacted]version for	M Reid Care Giver's Quarters 48 Sharp Road Rotorua [redacted]

Drawing	Site Plan	Sheet	4 of 4
Floor Area	N/A	Date	Oct 06 Ammended 7 Dec 2006
		Design by	HCL

Document Set ID: 588279
Version: 1, Version Date: 31/03/2010

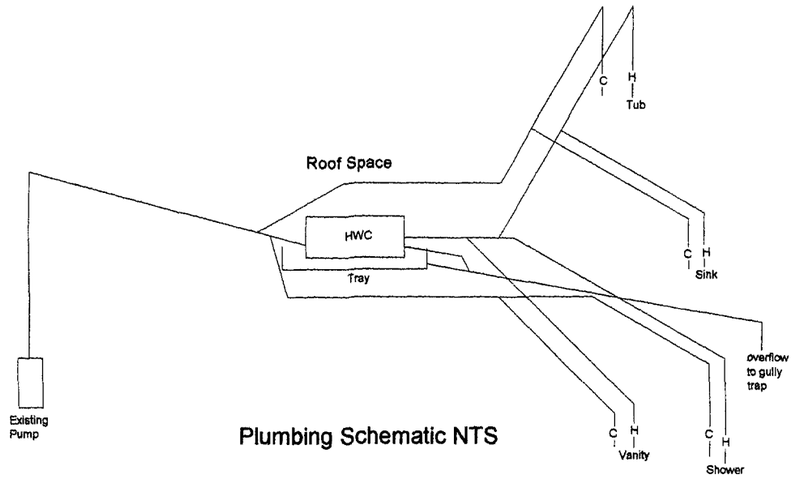


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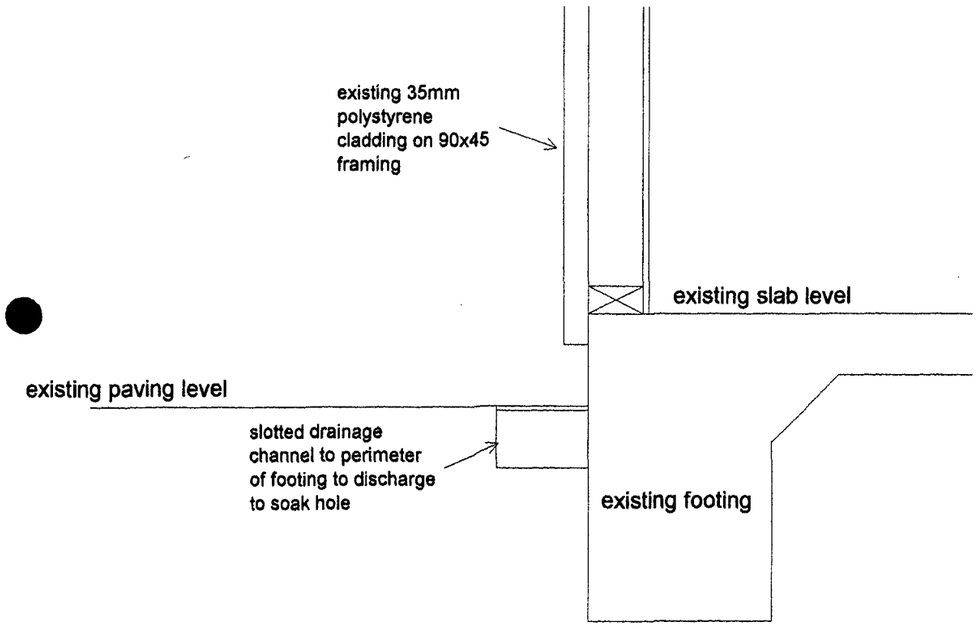
№ 00362226

LOCKWOOD	*Hodges Construction Ltd* *90 Fairy Springs Road, Rotorua* *ph 07 347 6338 fax 07 349 2013*	*Garage Conversion for*	*M Reid Care Giver's Quarters* *48 Sharp Road* *Rotorua*	*Drawing* Existing Garage Floor Plan *Floor Area* N/A *Sheet* 2 of 3 *Date* Oct 06 *Design by* HCL

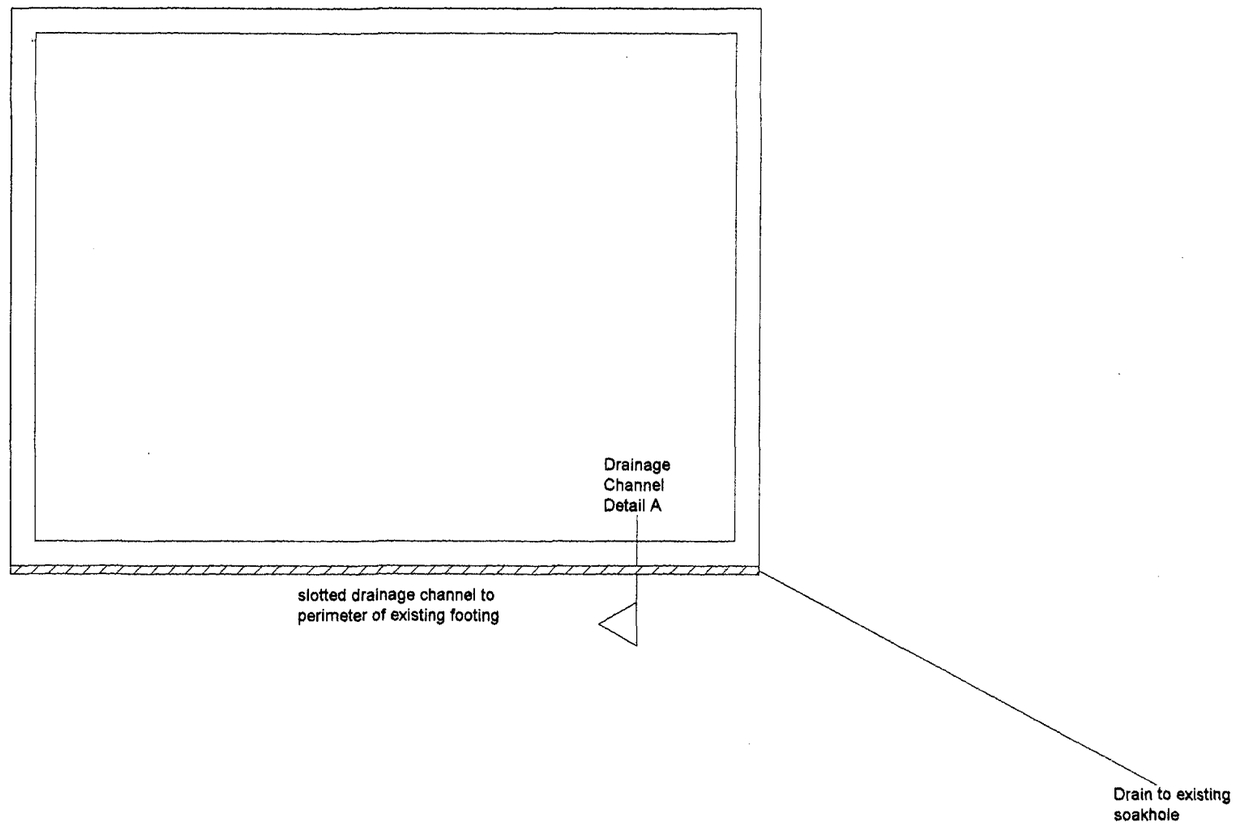
Document Set ID: 588279
Version: 1, Version Date: 31/03/2010



Plumbing Schematic NTS



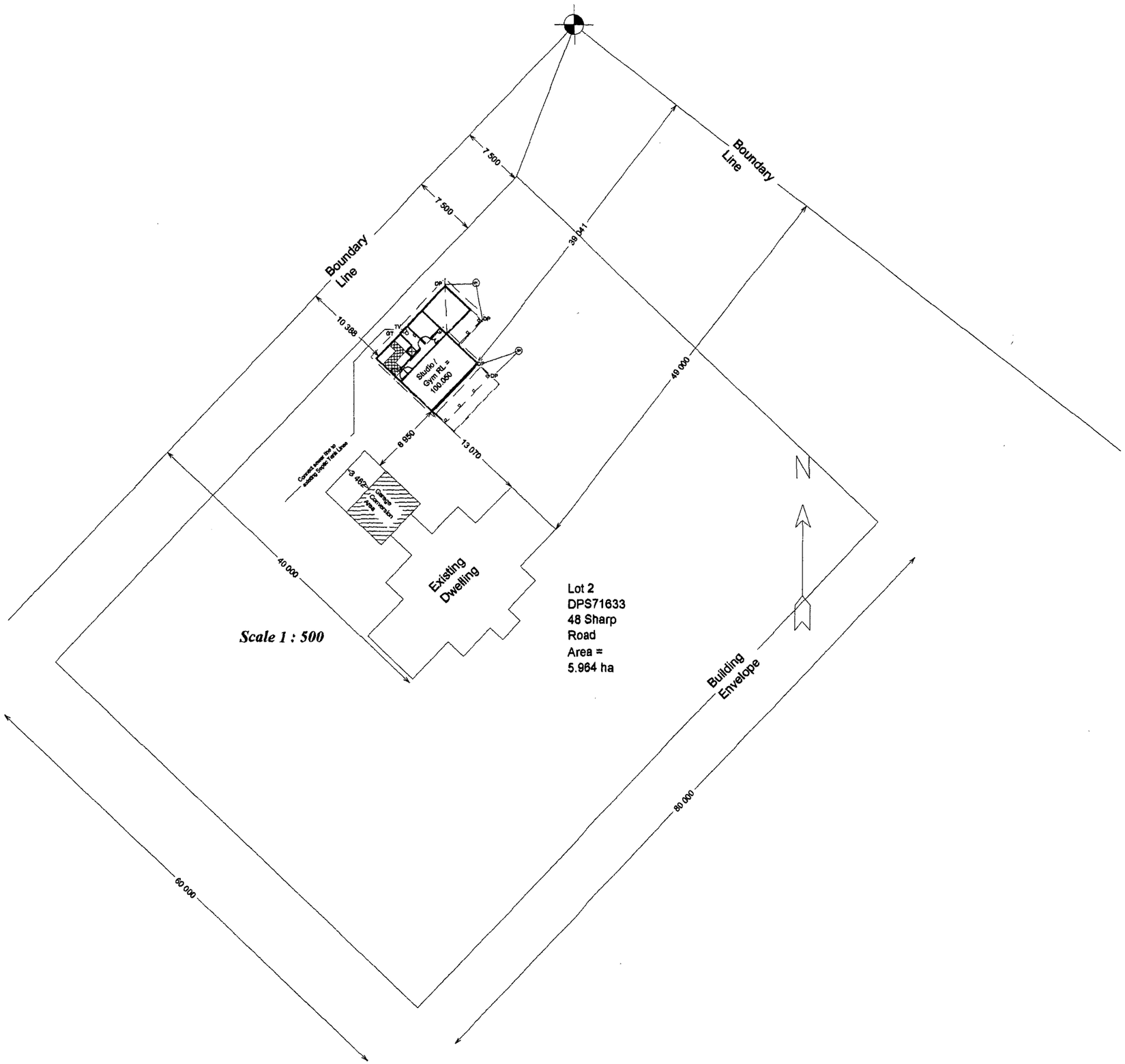
Drainage Channel Detail A



№0038226

LOCKWOOD	Hodges Construction Ltd 90 Fairy Springs Road, Rotorua ph 07 347 6338 fax 07 349 2013	Garage Conversion for	M Reid Care Giver's Quarters 48 Sharp Road Rotorua	Drawing / Floor Area	Details and Schematics / N/A
				Sheet	3 of 3
				Date	Oct 06
				Design by	HCL

Doc... Sheet ID: 588279
Version: 1, Version Date: 31/03/2010



№0038226

LOCKWOOD	*Hodges Construction Ltd* *90 Fairy Springs Road, Rotorua* *ph 07 347 6338 fax 07 349 2013*	*Garage Conversion for*	*M Reid Care Giver's Quarters* *48 Sharp Road* *Rotorua*	*Drawing* *Site Plan* *Floor Area* *N/A*	*Sheet* *4 of 4* *Date* *Oct 06* *Design by* *HCL*

Document Set ID: 588279
Version: 1, Version Date: 31/03/2010



SPECIFICATION
OF

work to be done and materials used in the
construction and completion of a new home

For — **MICHAEL J REID**
Conversion of Garage to
Care Givers Room

on — **Lot 2**
DPS 71633

Street No
Address — **48 Sharp Road**
ROTORUA

The whole of the works is to carried out by

HODGES CONSTRUCTION LIMITED
ROTORUA

Builders of quality homes and franchised contractor
for the world patented Lockwood building system

Document Set ID: 588279
Version: 1, Version Date: 31/03/2010

SPECIFICATION INDEX

SECTION	PAGE
Preliminary and General	3
Concrete Works	4
Carpentry	5
Joinery Fittings	7
Plumbing	7
Drainage Works	8
Electrical Work	9
Painting and Decorating	10
Schedule of Finishes	11

Document Set ID: 588279
Version: 1, Version Date: 31/03/2010

PRELIMINARY AND GENERAL

The Contractor shall provide all labour and materials, supply and maintain all required tools, plant, scaffolds, sheds and the like.
All work shall be carried out in accordance with this Specification together with all relevant plans and details and shall comply with the Building Code of New Zealand 1992.

All work shall be in accordance with NZS 3604 Model building by-law except where overruled by the Territorial Authority By-laws or specific design requirements.

PLANS AND SPECIFICATIONS
The working drawings with this Specification and any special conditions attached will form part of the contract agreement.
Figured dimensions shall take precedence over scaled dimensions. Large scale drawings will take precedence over small scale drawings.

INSURANCE
The Contractor will insure the building for the full contract price plus GST, against "Builders All Risk" in the names of the Owner, the Builder and the Mortgagee (if any) for their respective rights and interests. This cover will remain in force from the date of commencement until the date of occupation.

DEFAULT AND BANKRUPTCY
The usual laws of bankruptcy and default will apply to this agreement.

VARIATIONS AND ADDITIONAL WORK
The Contractor shall carry out variations or extra work requested by the Owner or their representative and the Contractor will be under no obligation to accept any extras, variations or deletions to the contract, but may in its absolute discretion accept any such variation to the contract as the Owner may request. The Owner will duly pay for as an addition to the contract price all extra work and materials ordered and supplied by the Contractor. Extras will be charged on a cost plus **20%** basis unless otherwise quoted and agreed for.

BUILDING CONSENT AND FEES (BY OWNER)
The Ownewr shall obtain all Building Consent from and pay all fees demanded by the Territorial Authority before commencement of the works. This clause shall not apply for the arrangement and payment of the inspection and valuation by the lending institution (if any) in respect of progress payments. In the event of additional work being required by the Territorial Authority, this work will be regarded as an extra to the Contract and payments for these will be the responsibility of the Owner.

VEHICLE CROSSING
Where a vehicle crossing is called for by the Territorial Authority any fees arising from this request will be the treated as a variation to the Contract, but passed on at the direct cost as invoiced by the Territorial Authority.

MATERIAL SPECIFICATION
Should any materials specified for this Contract be unprocurable at the time of purchase then negotiations shall be made for the provision of substitutes. Any substitute must also be acceptable to the Territorial Authority prior to the work recommencing. Any cost variation will be credited or charged as an extra on completion of the contract. All materials placed on the site by the Contractor for the building remain the property of the Contractor in the case of these materials not being used. All waste material and formwork remain the property of the Contractor.

MAINTENANCE
The Contractor will maintain the work carried out for a period of **ninety (90) days** after completion of the Contract. During this period the Contractor will make good any all defects in any part of the trade to a true workmanlike standard.

Document Set ID: 588279
Version: 1, Version Date: 31/03/2010

CLEAN UP AND MAKE GOOD
The site is to be left clean at all times from the accumulation of rubbish resulting from the works, and provision is to be made for the regular removal of the same from the site.
Excavated soil and spoil is the responsibility of the Owner.
The Contractor is responsible for leaving the building broom clean only.

SUBCONTRACTORS
All subcontractors shall be engaged and supervised by the Contractor except where prior arrangements have been made in writing between the Contractor and the Owner. Every subcontractor jointly and separately will collaborate, wait on, assist and render all necessary assistance to complementary trades. Additional work or adjustments must be made with the Contractor. Alterations and additional works instructed by the Owner to the subcontractor will not be the responsibility of the Contractor. (Refer to extra work)

The individual subcontracts listed in this Specification are respectively the responsibility of the subcontractor under which they are listed.

Any subcontractor working on the contract without their own set of plans and / or Specification does so at their own risk, and any errors from doing so must be rectified at their own expense.

ARBITRATION
Any dispute arising between the Owner and the Contractor not soluble by the terms of this Specification, will be referred to Arbitration within the meaning of the Arbitration Act 1908.
Occupation of the building cannot be taken until the dispute is settled. In the event that the Owner takes occupation then any claim to Arbitration is nullified.

CONCRETE WORKS

CONCRETE WORK
Concrete shall be 20 MPa strength at 28 days, mixed with sharp clean sand and crushed hard metal or river shingle.
All concrete will be placed as close to its final position as possible compacted and screeded level.

REINFORCING
Footings: Shall be shown on the drawings, steel to conform to Appendix E NZS 3604 Hook rod ends if detailed with U bends having an internal radius of 4 bar diameters minimum and lapped 40 diameters minimum. Bend steel 600mm around all angles. All joints will be tied with 16 gauge black iron wire to secure and avoid displacement during concrete placement.
Concrete Slab: Shall be 100mm thick or as detailed on the drawings and reinforced with suitable HRC welded wire mesh, lapped 200mm at sheet joins. All mesh reinforcing will be supported on approved mesh chairs and wire tied at laps.

DAMP-PROOF COURSE
An approved black polythene damp-proof corse of 0.010mm minimum will be placed under concrete surfaces laid on a 30mm layer of compacted sand or clean white pumice. This damp-proof course will be properly lapped and taped at all joints and securely taped around all penetrations. Care is to be taken during the placing of all concrete to avoid tears in the membrane. Any tears in the membrane are to be securely taped prior to placing concrete.

COMPACTION
Sand or clean white pumice shall be thoroughly watered and rolled to provide a substantial bed for the placing of the concrete slab.

FINISHING

Document Set ID: 588279
Version: 1, Version Date: 31/03/2010

All sizeable slabs shall be screeded off level or to the prescribed falls and then brought to a hard surface with an approved power float or bull float equipment. Power floating shall be carefully timed to suit the curing rate of concrete and shall be such as to leave the surface perfectly dense and free from ridges. The surface is to be accurate to 6mm in 3.00metres.

BUILDING IN

Provide and build in all items and fixings necessary which may or may not be specified or shown on the drawings, but which are none the less necessary for the complete and proper execution of the works.

Make provision for:

Shower/Bath trap
WC Outlets
All under floor piping
All waste outlets
Rebate footings for sills as necessary

All plumbing is to be laid in clean white pumice or clean sand prior to laying the damp-proof membrane, and will be suitably lagged in densotape or similar. All water service pipes underfloor will be run in copper.

Provide electrical wiring and / or telephone penetrations prior to placing damp-proof as necessary to complete the works.

CARPENTRY

INSPECTION OF SUBSTRUCTURE

The Contractor and or sub contractor engaged to carry out all or part of the work described in this section shall inspect the construction completed prior to commencing this part of the contract. If any part of the structure is not to the satisfaction of the Contractor and or sub contractor, it shall be brought to the attention of the main Contractor who will ensure that all such unsatisfactory factors are made good. Failure to comment on any unsatisfactory factor in the substructure will indicate acceptance of the substructure and a first class job will then be the responsibility of the contractor/subcontractor engaged to carry out this work.

REFERENCE

Reference shall be made to NZS 3604 and all amendments and to all other standards mentioned in NZS 3604 and all requirements set out in these standards shall be met along with any requirements of the NZ Building Code, unless otherwise approved by the Territorial Authority inspectors.

TIMBER TREATMENT

The timber used for the differing uses in the construction of this building shall be treated to the gradings as set out below.

H 1	Out of ground but protected from weather	Framing, interior finishing, flooring, painted weather-boards
H 2	NOT APPLICABLE IN NEW ZEALAND	
H 3	Out of ground and exposed to weather	Fence battens and palings, exterior joinery, deckings, railings, fascias and barges
H 4	In ground, high decay	Fence posts, crib walls,. agricultural posts and poles
H 5	In ground severe decay hazard	House piles and poles, foundation panelling horticultural posts and poles
H 6	In contact with sea water	Marine piles

Document Set ID: 588279
Version: 1, Version Date: 31/03/2010

TIMBER GRADING
Unless stated otherwise all framing timber used shall be No. 1 Framing Grade Pinus Radiata, treated as per the table and shall be thicknessed. Unless stated otherwise all timber sizes stated refer to the rough sawn size and allowance shall be made for the actual thicknessed size of the timber.

DAMPCOURSE
All timber through the building which could otherwise be in contact with concrete shall be separated from the concrete with a layer of approved Dampcourse.

BUILDING PAPER
One layer of approved Building paper will be fixed over the framing under all exterior sheathings and claddings. Such building paper will fixed from the bottom layer up with all subsequent layers lapping the previous layer by 150mm minimum. All building paper shall be securely fixed to the framing so as to prevent shifting until the exterior sheathing has been fixed in place. All holes, tears etc shall be repaired so as to protect the framing, interior linings etc. in the event of the exterior sheathing leaking.

PLATES
All bottom and top plates shall be in long lengths and shall be perfectly straight or be capable of being straightened with out cutting. Joints in top plates shall be over supports and shall be made by means of a neat butt joint with a 180mm length of 25x1mm steel strap across the joint and nailed to the plates with six 30x2.5mm flat head nails into each length of plate (twelve nails per joint). Walls supporting floor joists shall have a double top plate.

STUDS
All studs shall be in single lengths and shall be straight or be capable of being straightened by a cut half the depth of the stud, wedging and flitching both sides with 25x450mm blocks, provided that not more than 25% of the studs in any wall shall be straightened, adjacent studs shall not be straightened and each stud will have a maximum of one straightening cut. No trimmer stud shall be straightened by cutting. Unless otherwise shown or specified all studs shall be at 600mm centres maximum with a minimum of three studs at all corners and intersections. All studs shall be perpendicular in both directions.

DWANGS
All walls will have a minimum of two rows of dwangs provided that the maximum spacing between adjacent dwangs or plates and dwangs is 800mm. Dwangs shall be of the same dimensions as the studs they span between provided that where studs exceed 50mm in thickness the dwangs need not exceed 50mm.

NAILING
Generally nailing shall be through one end of the members to be nailed e.g. through the thickness of a bottom plate into the end grain of a stud. All junctions in all framing members shall be made with a minimum of two 100x3.75 nails when nailed through a member or four 75x3.15 nails when skewed. For full details of nailing Appendix A of NZS 3604 will apply and these general instructions do not override NZS 3604 in any way.

FIXING
Frames will be securely fixed to concrete floors with M10 bolts at 1200mm centres to the edges of the floor slab and with 4mm shot fired fasteners at 900mm centres elsewhere provided that each length of bottom plate has a minimum of two fixings and that the fixing shall be positioned within 150mm of the end of each length of bottom plate. Frames shall be fixed to timber floor joists with two 100x3.75 nails at 600mm centres.

FRAMES
All frames shall be squared before standing up and shall be held in the squared position with a permanent of temporary brace while they are being manoeuvred into their designed positions. Once all frames are in place they shall be checked and corrected to ensure that all walls and rooms are square, perpendicular, and straight and all braces shall be nailed and tensioned to ensure that the frames do not move from their designed positions. Top plates shall be temporarily propped in their correct positions to ensure that alignment is maintained while the roof and ceiling framing is fixed in position.

Document Set ID: 588279
Version: 1, Version Date: 31/03/2010

FLOOR JOISTS
Floor joists shall be of sizes and laid at the centres shown on the drawings and shall have their top surfaces set to a common level to support the floor decking and shall be laid in straight lines on edge. Floor joists shall be laid so that any crook in them will straighten under load or any crook may be cut through half the depth of the joist provided that any such cut shall only occur directly over support. Joints in floor joists shall occur only over supports, (except where joists are cantilevered in which case no joints will be permitted) and where a series of joists are butt joined over the same support, each joist shall have a minimum of 32mm bearing and every joist shall be fitted with a 300mm long flitch plate of the same size as the joist. Proprietary nail plate fasteners can be used as alternative to the flitch plates. All flitch plates shall be nailed with four nails into each joist. Joists shall be fixed to supports with a minimum of two 100x3.75 skewed nails.

BEARERS
Bearers shall be of the sizes and laid in straight lengths at the locations shown on the drawings. Joints in bearers shall be over supports and fixed to supports with two 100x3.75 galvanised nails. All bearers shall be fixed to piles with approved steel dogs and with their top edge laid to a common level to support the floor joists.

FLOOR PLATFORM
The floor platform shall consist of 20mm thick, high density, particle board fixed in full size sheets (2400x1200mm min) wherever possible and nailed with 60x2.8mm nails at 150mm centres to all sheet edges and 300mm centres to all intermediate joists and dwangs with no nails closer than 10mm to the edge of the sheet. All nails shall be punched below the surface of the floor. All sheet joints shall occur over joists or dwangs of a minimum size of 50x50mm. The platform shall be protected from staining or scarring of materials and shall be given a one cut sanding on completion of the job.

JOINERY FITTINGS

DARK ROOM FITTINGS
All joinery fittings are manufactured from prefinished Melamine / Meltecca composite board.
The bench tops will be 600mm wide Formica or Wilsonart with a Stainless steel sink insert.
All units shall be fitted square, plumb and true in accordance with good trade practice.
Nett Sum included in Agreement is $ 2090-00 including GST

PLUMBING WORKS

GENERAL
Provide all materials, labour and plant necessary to complete the work set out in the plans and Specification all in accordance with best trade practice and the requirements of the Territorial Authority and N Z Building Code 1992. The work will be carried out by a competent tradesman possessing the qualifications as set out in clauses 15 & 16 of NZS 671. Material usage will be consistent with sound trade practice and in no case inferior to any requirements of Section 1 and Sections 26-91 of NZS 671. The Plumber shall give all usual notices to the Territorial Authority and shall uplift the permit before commencing the work. Water pipes and tubes shall be set out in straight runs of even gradients, avoiding all places where airlocks are likely to occur. Use easy bends and unless unavoidable, elbow fittings are not to be used. Copper tubing is to be secured in position by copper straps. all piping where practical is to be concealed. All work shall be left in a thoroughly sound and water tight condition and / or in perfect working order. In the event of any piping above the floor being exposed to view such pipework is to be 12.7mm copper pipe with chrome plating or similar.

COLD WATER SUPPLY
Lay cold water supply from supply point in PVC pipe buried not less than 600mm. Take 12.7mm branches to all plumbing fittings and cylinders.

Document Set ID: 588279
Version: 1, Version Date: 31/03/2010

HOT WATER SUPPLY
Supply and install in roof space a 135 litre cylinder. From the cylinder provide 12.7mm branches in copper to all plumbing fittings. All pipework is to be completely wrapped and lagged in a suitable material and secured in position.

VENTS AND SOIL STACKS
All soil stacks and back vents to wastes shall be in an approved rigid PVC. Where possible back vents and soil stacks will be concealed.

WASTES
Join the WC pan to drain above floor level with an approved jointing method.
All other wastes shall be of an approved size and run in approved PVC piping or as approved by the Territorial Authority.

PRESSURE
Where necessary provide a suitable pressure reducing valve, tempering valve and cocks all in accordance with the manufacturers instructions and Territorial Authority requirements. The Plumber will ensure that all pressure equipment and valves meet the Territorial Authority requirements.

FIXING
The sink top, tub, and all vanity units will be supplied by others and the Plumber will be responsible for connecting only to these items.

SCHEDULE OF FITTINGS

Tapware	CP single lever Laska
HWC	135 l mains pressure
Shower	Englefield 900x900 two sided
Vanity	Stella 750 White
Vanity Tap	CP single lever Laska
Shower Mixer	CP single lever Laska
Shower Roses	Slide type Shower Rose
WC Pan	Caroma Close Coupled
WC Cistern	Caroma to suit
Extract fans	Fit thru roof electrician supplied fan outlets, flash & counterflash

DRAINAGE WORKS

PRELIMINARY
The whole of the drainage works shall be carried out in accordance with the Territorial Authority and NZ Building Code, and to the satisfaction of the Territorial; Authority inspector.

GENERAL
Provide all fittings necessary to complete the works and lay all drains to an even and consistent fall not less than 1 in 40.

SANITARY FITTINGS
Fit WC pans to sewer connections.
Connect up vent pipes fixed by Plumber.
Provide all necessary Gulley Traps, inspection pipes, inspection bends and the like to complete the Sewer

Document Set ID: 588279
Version: 1, Version Date: 31/03/2010

drains to the satisfaction of the Territorial Authority and NZ Building Code, and connect to existing Septic Tank System

ELECTRICAL WORKS

GENERAL
Provide all materials, labour and plant necessary to complete the works as set out on the Plans and Specifications in accordance with the best trade practices, the current wiring Regulations, and to the satisfaction of the Supply Authority. Obtain all permits and give all notices prior to commencing the works.

MAIN CONNECTION
Make connection to the existing house prior to completion.

SWITCHBOARD
Provide and fit an internal fuseboard where indicated or agreed. The fuseboard location is to be such that easy access is provided.

LIGHTS
Provide light points complete with shades and lamps as indicated on the drawings. Provide 100W lamps to main living areas and 75W lamps elsewhere. Hanging lights on sloping ceilings will finish 2200mm above floor level. Wall lights will be placed 1550mm above floor level. External wall lights will be placed at a height of 1800mm.

SWITCHES
All switches will be placed 1000mm above floor level unless instructed otherwise.

POWER POINTS
Provide all power points as shown on the plan. All power points will be placed 300mm above floor level except in kitchen areas and the like where power points will be mounted 1000mm above floor level or at such a height to suit the appliance.

MATERIALS
All switches and plugs will be flush type, ring grip rocker type, **COLOUR TO BE CONFIRMED WITH OWNER**

AERIAL AND EARTH POINTS
Provide aerial connections with 3600mm of spare cable to the roof peak. The aerial cable will be of an adequate ohm rating to permit future high frequency pick ups.

PAINTING AND POLYURETHANING

GENERAL
Paint or polyurethane walls or surfaces to the colour scheme selected by the Owner and the following Specification. All paints shall comply with NZS 521 and amendments.

WORKMANSHIP
All work shall be carried out in accordance with the NZ Code of Practice for Painting. The Painter will be responsible for the protection of persons and works in the immediate vicinity of the painting operations, and shall supply all necessary dust covers, guards and the like. Care shall be taken in cutting in around glass surfaces and up to other finishes, hardware and the like. All splashes and disfigurements and the like will be removed by the Painter.

Document Set ID: 588279
Version: 1, Version Date: 31/03/2010

MATERIALS
The materials used shall be of NZ manufacture and of an approved brand delivered in unbroken containers. Materials shall be applied strictly in accordance with the manufacturers recommendations.

EXTERNAL PAINTING
Paint all external exposed woodwork with three coats of paint in accordance with the following:

Prime all exposed timbers
Stop and rub down after priming has dried, all nail holes and defects with best linseed oil putty, rub down as required to obtain a surface suitable for undercoating.
Apply an approved undercoat suitable for the finishing coat as recommended by the manufacturer
Apply a finishing coat to all exposed woodwork, glazing putties, metalwork and and the like of an approved brand.

Paint all exposed External Concrete cement sheets with two coats of exterior quality PVA paint in a matt finish.
Clean down and apply one coat of calcium plumbate and two coats of anticorrosive paint to exposed metalwork

INTERNAL PAINTING
Thoroughly prepare all surfaces to be painted or polyurethaned by stopping and carefully rubbing down to provide a suitable and adequate surface for later applications.
Painted woodwork shall be primed and painted walls sealed, undercoated and finished with two coats of semi gloss enamel in service areas and two coats of plastic paints in living areas.

POLYURETHANING
Stop where necessary with linseed oil putty stained to match the surfaces where applied.
Remove all dirty marks from surfaces prior to sealing.
Apply one coat of sealer followed by one coat of hard dry polyurethane. Allow to sand between coats as necessary to provide a first class finish. All polyurethane will be worked well into the vee grooves of boards and runs will be carefully brushed out.
External timber soffits shall be polyurethaned with three coats of antifungicidal varnish applied strictly in accordance with the manufacturers recommendations and undiluted.

Document Set ID: 588279
Version: 1, Version Date: 31/03/2010

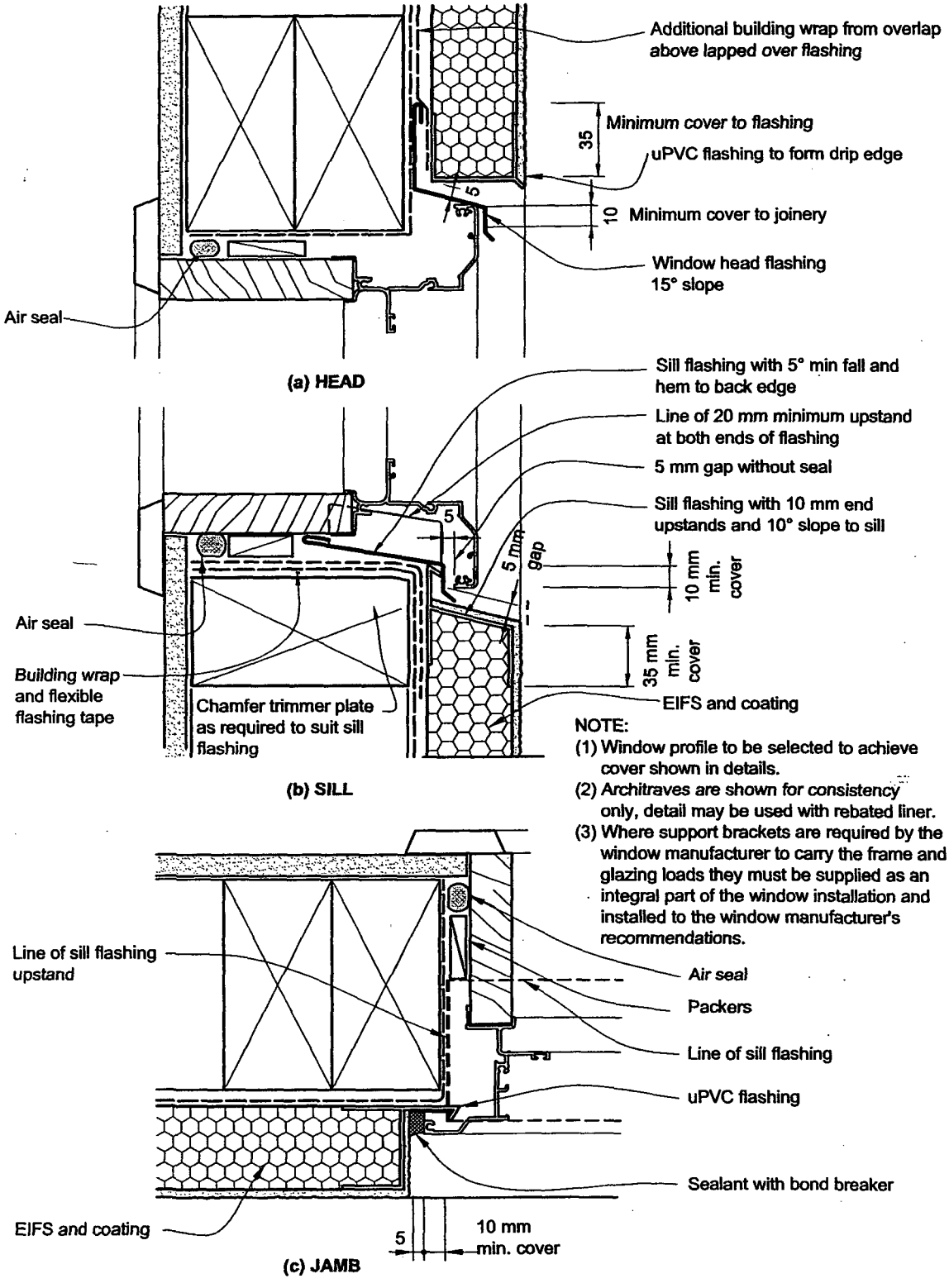
SCHEDULE OF FINISHES
FOR
Michael Reid Care Giver Quarters
48 Sharp Road
Rotorua

INTERIOR WALLS		
General	100x50 framed	Gib lined & painted
INTERNAL CEILINGS		
General	Gib lining on battens	Gib lining painted
EXTERNAL WALLS		
General	Polystyrene Clad & Textured	Painted to match existing
	Interior Face Gib Lined	Painted
INTERNAL DOORS AND FRAMES		
All Interior Doors	Hollow core P Q	Painted
All Interior Door Frames	Pine	Painted
Door Hardware	Satin Chrome Lever action hardware	
EXTERNAL WINDOWS AND DOORS		
Exterior	**Powder Coated Aluminium**	**To match existing**
Interior	Pine Subframes	Painted
PLUMBING	Hot Water Heating	135 litre mains
	WC pan Close coupled	Caroma Trident Pan & Caroma Trident Cistern
	CP single lever tap ware	Laska Range
	Polybutylene Pipework	Hot & Cold water services
	900x900 shower	Englefield 900x900 two Sided with slide shower rose
	Stella 750 Vanity	White
	Laundry Tub	3100 model Supertub
ELECTRICAL	Nett sum allowance	$ 2430-00 incl GST
	Light Outlets	8 off
	Power Points Double	6 off
	TV jacks	2 off
	Smoke alarm	1 off
	Extract fans	1 off
DRAINAGE	Sewer & Stormwater Connected to existing Nett Sum $ 2360-00 including GST	
FLOORING	Sand existing concrete slab ready to receive Carpets and Vinyls by others	
GENERAL	Standard Building Consent Fees Builders All Risk Insurances during construction Construction Labour	

Document Set ID: 588279
Version: 1, Version Date: 31/03/2010

Figure 127: Windows for direct fixed EIFS
Paragraph 9.9.9 a)

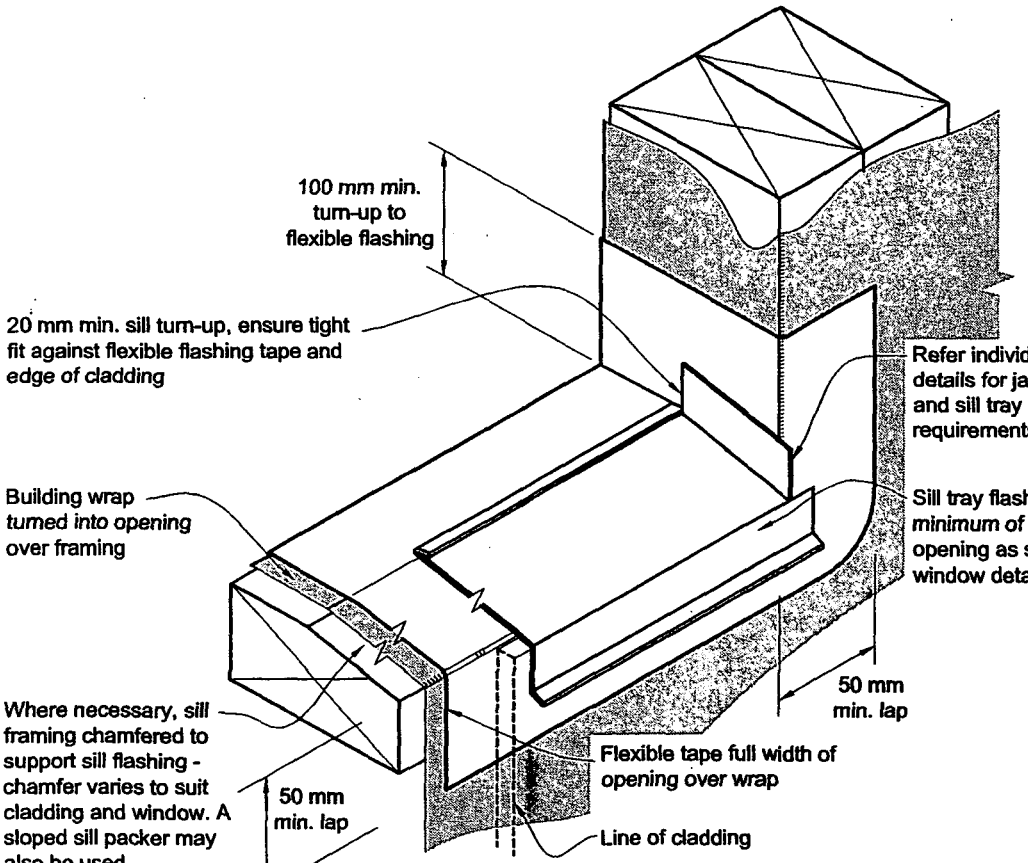
GENERAL: (a) Refer Figure 72 for wrapping of framed opening prior to window installation.
(b) Sliding and bi-fold windows will require specific design.
(c) A minimum of 8 mm effective cover at sills shall be permitted where necessary to allow for tolerances.



Amend 2 Jul 2005

Document Set ID: 588279
Version: 1, Version Date: 31/03/2010

Figure 72: General window opening
Paragraphs 9.1.5 and 9.1.10.2, Figures 76, 81-86, 90, 91, 95, 99, 115, 116, 127 and 128



NOTE:
(1) Detailed *cladding* omitted for clarity, refer to specific *claddings*.
(2) Sill *flashing* shall extend back past the condensation channel of the window.
(3) Head to be treated similarly with continuous *building wrap* and *flexible tape* at corners.
(4) Openings in *cavity walls* shall be treated similarly, except the sill *flashings* shall be omitted.

Amend 2
Jul 2005

Document Set ID: 588279
Version: 1, Version Date: 31/03/2010

John Hodges

From: "Paul Futter" <Paul.Futter@envbop.govt.nz>
To: "John Hodges" <hodges@clear.net.nz>
Cc: "Darrell Holder" <Darrell.Holder@rdc.govt.nz>
Sent: 14 December 2006 08:36
Attach: 48 Sharp Road A3 Layout of Drainage Plan.pdf
Subject: RE: Septic Tank System for 48 Sharp Road Rotorua

Hi John

I confirm, that based on the information supplied, that the proposed system (shown in the attachment to this reply) complies with our rules for on-site effluent treatment.

Paul Futter
Senior Project Implementation Officer

Environment Bay of Plenty – Regional Council
Working with our communities for a better environment

From: John Hodges [mailto:hodges@clear.net.nz]
Sent: Wednesday, 13 December 2006 12:03 PM
To: Paul Futter
Subject: Septic Tank System for 48 Sharp Road Rotorua

Hi Paul

Thanks for your assistance.
Attached is the pdf file of the drainage plan which covers the proposed system to upgarde the existing to current requirements as discussed with Waipapa Tanks (Murray Gigger) ar
Andersen Draiange (Drainlayer) for a septic tank system that will work for the existing 4 bedroom dwelling on Roof water tank collection and new Bedroom being included in the exis
garage.

We need approval from EBOP as requested by Colin Wiggins (Approving Building Consents Office, Rotorua District Council)
Can you provide this approval via email to us addressed to Colin Wiggins with refernece to Building Consent No 38226 so that we can forward this information to RDC.

Our contact details are

Hodges Construction Ltd
P O Box 473
ROTORUA

Ph 07 347 6338
Mobile 0274 979 110
email: hodges@clear.net.nz

Thanks

John Hodges
HODGES CONSTRUCTION LTD

This e-mail message has been swept for content and viruses. No viruses were detected. Contact the Helpdesk on extension 9CIS (9247) for assistance, if required.

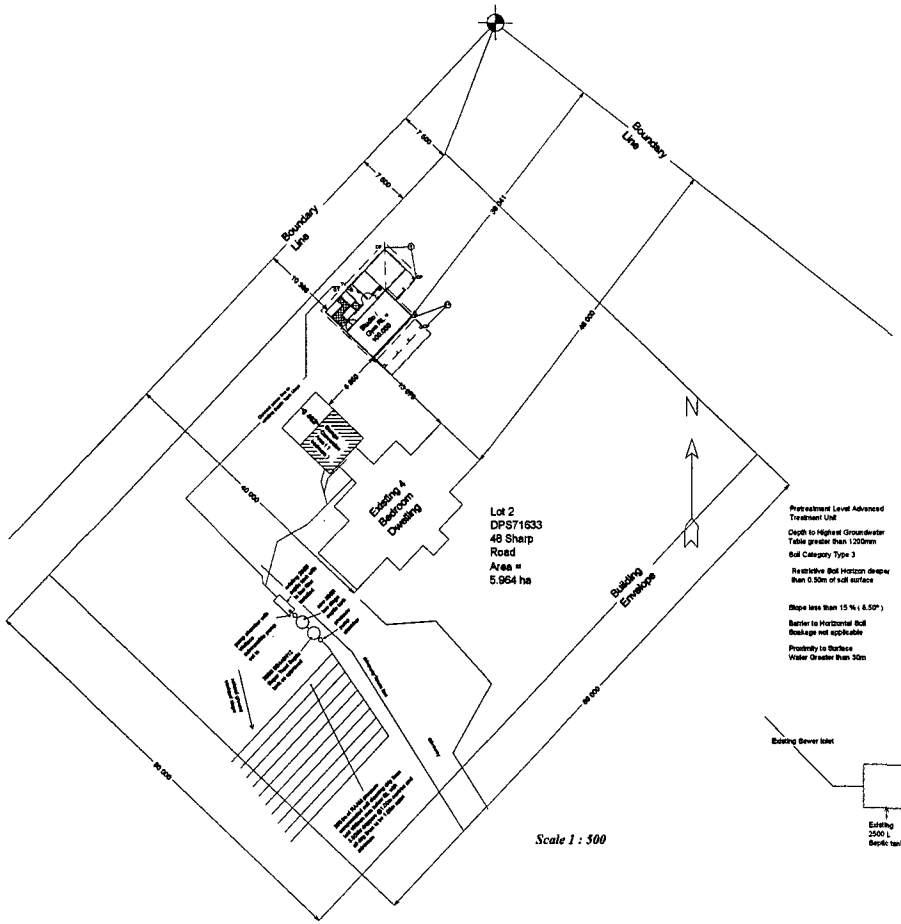
Email disclaimer: This email and any attachments are confidential. If you are not the intended recipient, do not copy, disclose or use the contents in any way. If you receive this message in error, please let us know by return email and then destroy the message. Environment Bay of Plenty is not responsible for any changes made to this message and/or any attachments after sending.

This e-mail has been checked for viruses and none detected.

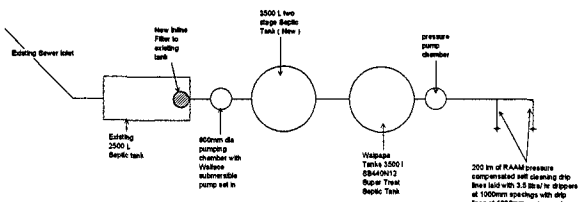
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15 Dec 2006

Drainage Plan ammendments to include new EBOP requirements, location of drip line field included

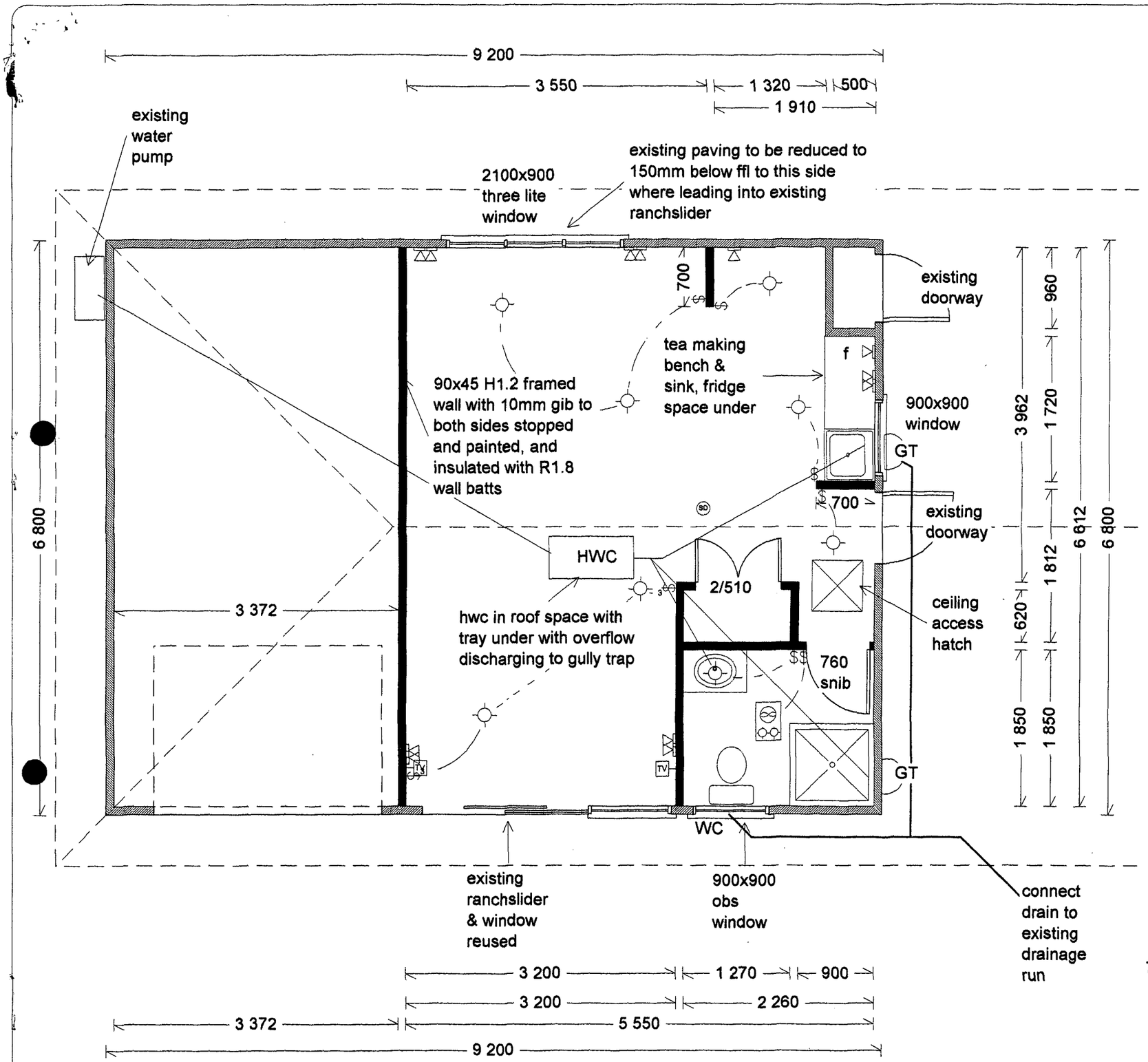


	Score
Pretreatment Level Advanced Treatment Unit	1
Depth to Highest Groundwater Table greater than 1200mm	0
Soil Category Type 3	1
Restrictive Soil Horizon deeper than 0.50m of soil surface	0
Slope less than 15 % (8.50°)	0
Barrier to Horizontal Soil Soakage not applicable	0
Proximity to Surface Water Greater than 30m	0
	2 Total

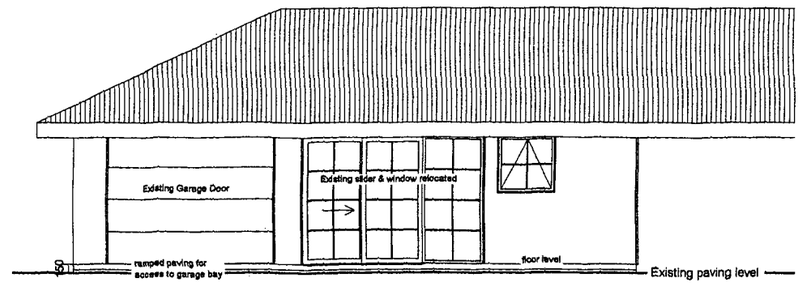


LOCKWOOD	Hodges Construction Ltd 90 Fairy Springs Road, Rotorua ph 07 347 6338 fax 07 349 2013	Garage Conversion for	M Reid Care Giver's Quarters 48 Sharp Road Rotorua	Drawing: Site Plan Floor Area: N/A	Sheet: 4 of 4 Date: Oct 06 Amended 7 Dec 2006 Design by: HCL

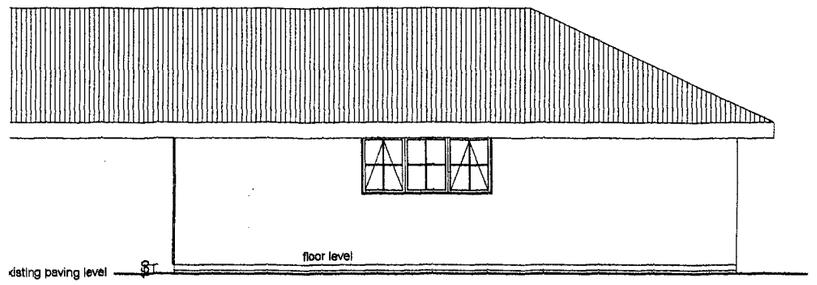
Document Set ID: 588279
Version: 1, Version Date: 31/03/2010



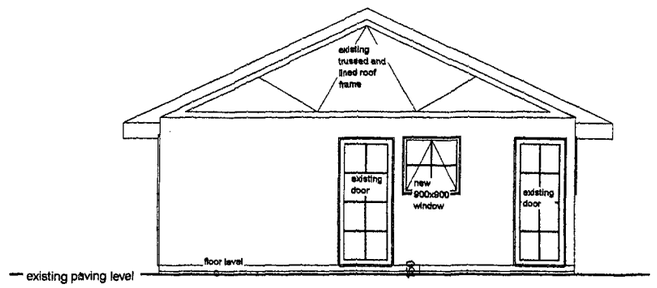
Scale 1 : 50



Elevation A



Elevation C



Elevation D

Notes:

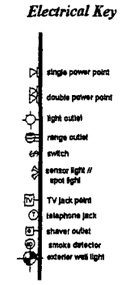
Insulate existing external Garage Walls to new Living Space with R 1.80 wall batts

Insulate existing Garage Ceiling to new Living Space with R 2.6 ceiling batts

Insulate new wall subdividing the exising Garage and new Living Space with R 1.80 wall batts

7 Dec 2006	Laundry deleted, 900x900 window relocated to above tea making bench
	Elevation D added
	Laundry GT deleted, drainage run amended

Electrical Key



LOCKWOOD

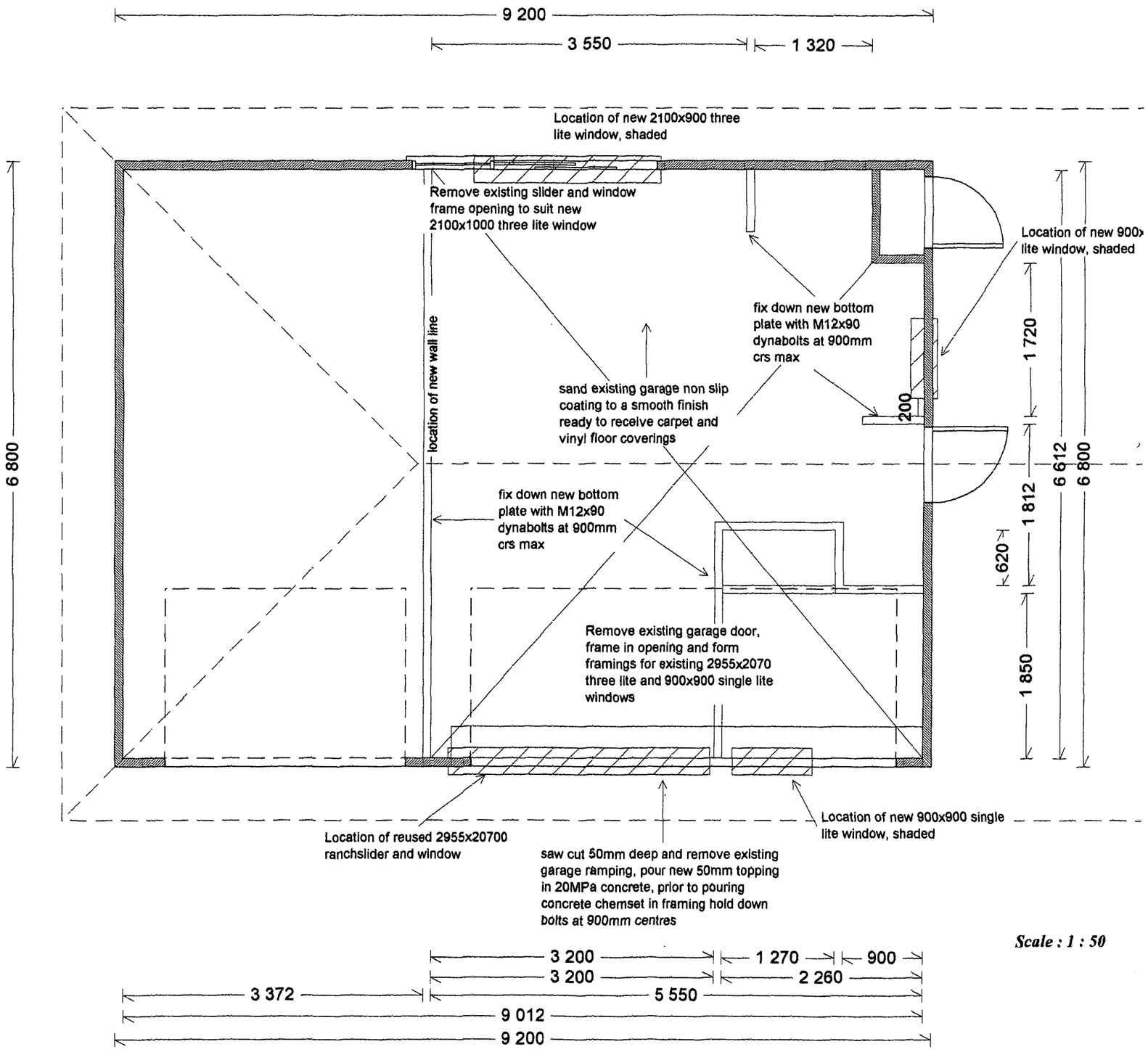
Hodges Construction Ltd
90 Fairy Springs Road, Rotorua
ph 07 347 6338 fax 07 349 2013

Garage Conversion for

M Reid Care Giver's Quarters
48 Sharp Road
Rotorua

Drawing	*Proposed Floor plan*	*Sheet*	*1 of 1*
Floor Area	*N/A*	*Date*	*Oct 06 Ammended 7 Dec 2006*
		Design by	*HCL*

Document Set ID: 588279
Version: 1, Version Date: 31/03/2010



7 Dec 2006

Laundry deleted, 900x900 window relocated to above tea making bench

Scale : 1 : 50

LOCKWOOD

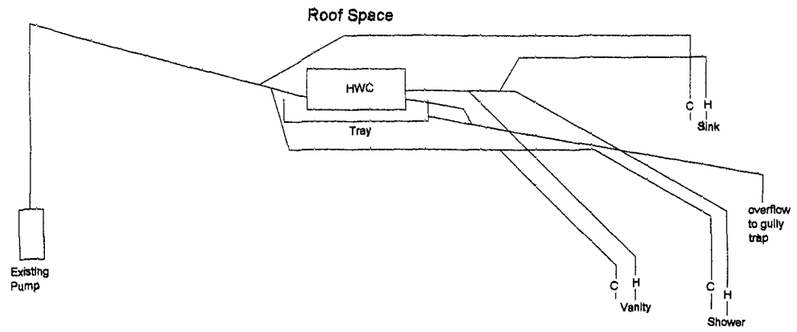
Hodges Construction Ltd
90 Fairy Springs Road, Rotorua
ph 07 347 6338 fax 07 349 2013

Garage Conversion for

M Reid Care Giver's Quarters
48 Sharp Road
Rotorua

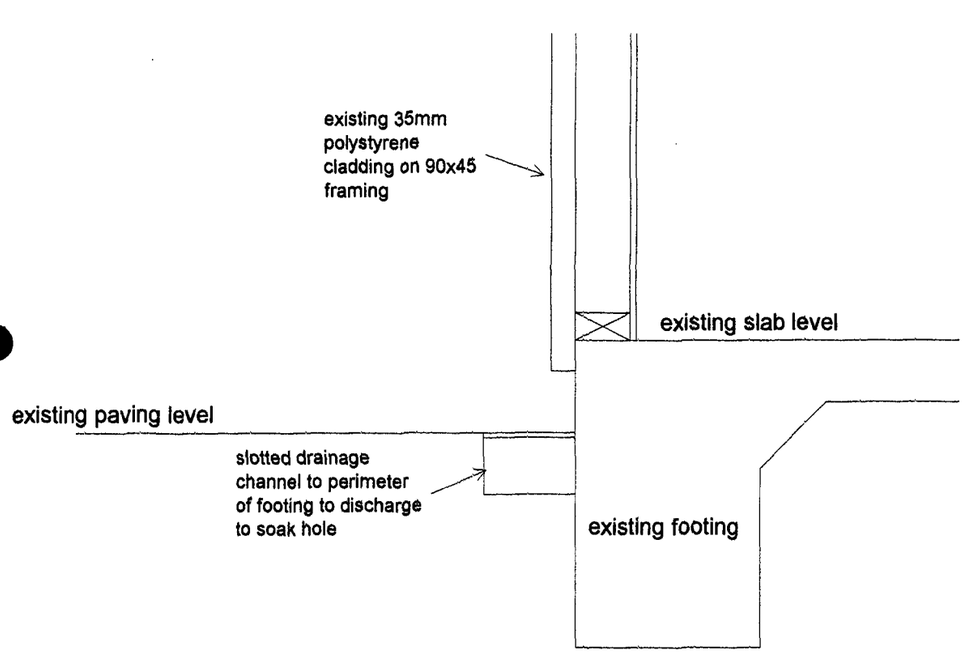
Drawing	*Existing Garage Floor Plan*
Floor Area	*N/A*
Sheet	*2 of 4*
Date	*Oct 06 Ammended 7 Dec 2006*
Design by	*HCL*

Document Set ID: 588279
Version: 1, Version Date: 31/03/2010

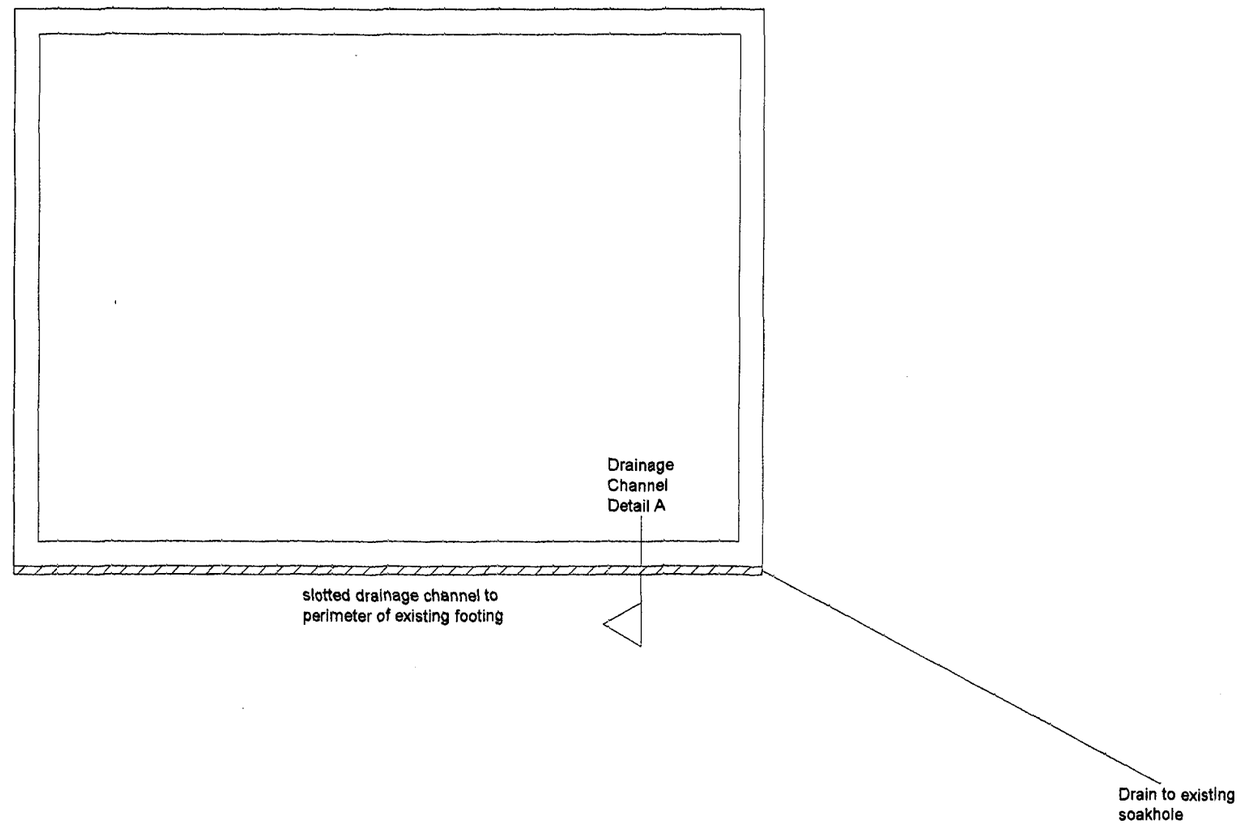


Plumbing Schematic NTS

7 Dec 2006
Plumbing Schematic
Amended for deletion of
Laundry



Drainage Channel Detail A

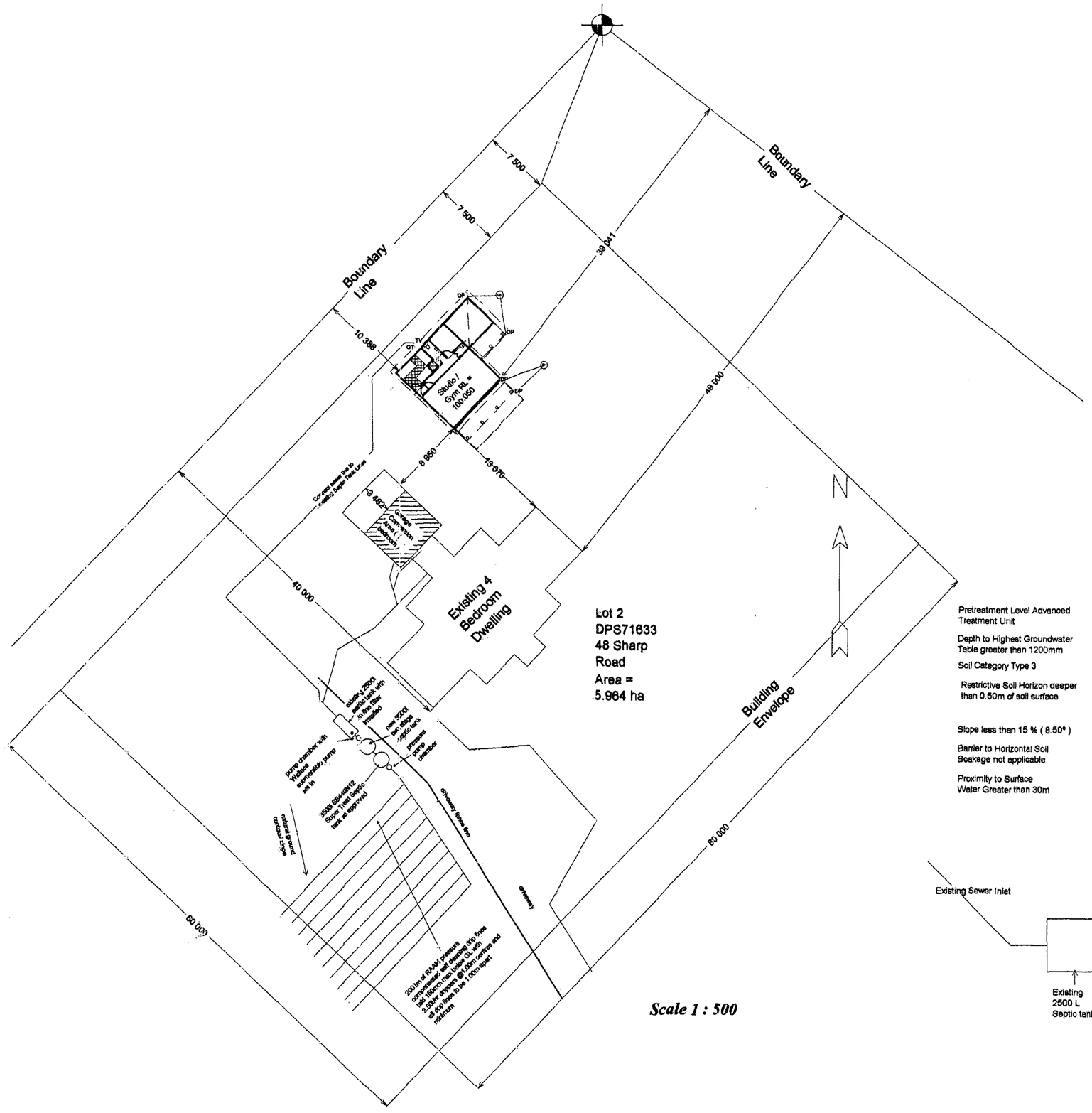


LOCKWOOD	Hodges Construction Ltd 90 Fairy Springs Road, Rotorua ph 07 347 6338 fax 07 349 2013	Garage Conversion for	M Reid Care Giver's Quarters 48 Sharp Road Rotorua
		Drawing: Details and Schematics Floor Area: N/A	Sheet: 3 of 4 Date: Oct 06 Ammended 7 Dec 2006 Design by: HCL

Document Set ID: 588279
Version: 1, Version Date: 31/03/2010

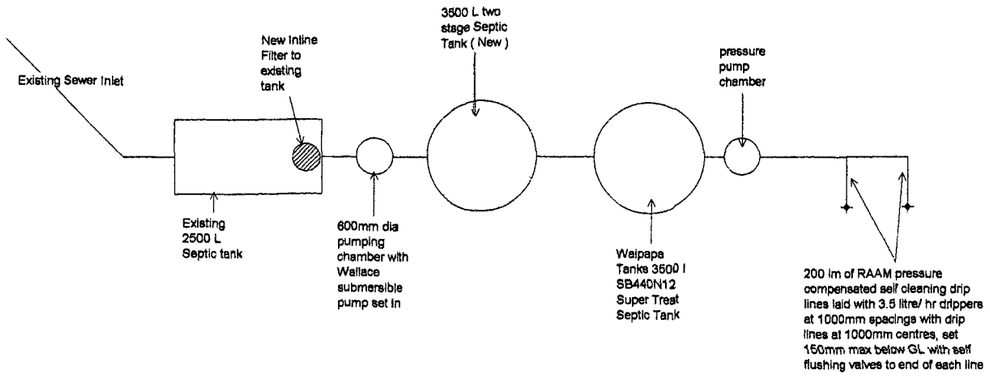
15 Dec 2006

Drainage Plan ammendments to include new EBOP requirements, location of drip line field included



Scale 1 : 500

	Score
Pretreatment Level Advanced Treatment Unit	1
Depth to Highest Groundwater Table greater than 1200mm	0
Soil Category Type 3	1
Restrictive Soil Horizon deeper than 0.60m of soil surface	0
Slope less than 15 % (8.50°)	0
Barrier to Horizontal Soil Soakage not applicable	0
Proximity to Surface Water Greater than 30m	0
	2 Total



LOCKWOOD

Hodges Construction Ltd
90 Fairy Springs Road, Rotorua
ph 07 347 6338 fax 07 349 2013

Garage Conversion for

M Reid Care Giver's Quarters
48 Sharp Road
Rotorua

Drawing	*Site Plan*	*Sheet*	*4 of 4*
Floor Area	*N/A*	*Date*	*Oct 06* *Ammended 7 Dec 2006*
		Design by	*HCL*

Document Set ID: 588279
Version: 1, Version Date: 31/03/2010

Pim 36597 57c/337

BUILDING SERVICES – BUILDING CONSENT

APPLICATION NO: 36598 **VALUATION NO:** 06951/239.02

OWNER: Reid **PROPERTY NO:** P27041

PROJECT LOCATION: 48 Sharp Rd

DESCRIPTION OF WORK: Erect Studio + Gym

CHECK APPLICATION - BUILDING OFFICER: JV

29.8.06 BC 36598

DATE RECEIVED:	DUE DATE:
02-08-06	30-08-06
DATE SUSPENDED: Inv 25806	**DATE ISSUED:** 29-8-06.

PROCESSING	REVIEW	DATE	TIME TAKEN	APPROVED	DATE
Hazard Bldg + Planning		Rest - JV			
Administration	JP	7-8-06	20		
Building			120	CW	22-8-6
Resource Engineers					
Geothermal					
Hazardous Substances					
Environmental Health					
Disabled Persons					

RECEIVED 02 AUG 2006

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

NOTES AND CONDITIONS: (Please circle appropriate code for checkboxes)

200 (a) (b) (c) (d) (e) (g) h (i) (j) (k)
l (m) (n) (o) p q r (s) t (u)
(v) w x (y) f

201 a b c d e g f

202 a (b) f

203 a f

204 f

205 a b f

206 a b c f

207 a f

208 (a) b f

209 a f

210 a b c f

211 a b c f

212 (a) f

213 a b c d e g h i j k l
m n o p q r s f

214 a b f

215 a b c f

216 a f

217 a b f

218 (a b c d e g h) i j k f

219 f

220 (a) (b) c d f

221 a b c d e g h i j k l
m n f

222 a b c d e g h i j k l
m n o p q r s t u v w
x f

FREE TEXT:

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

DESTINATION ROTORUA

ROTORUA DISTRICT COUNCIL

Rotorua District Council
1061 Haupapa Street
Private Bag 3029
Rotorua, New Zealand
P: 07 348 4199
F: 07 346 3143
E: mail@rdc.govt.nz
W: www.rdc.govt.nz

P27041

FILE

Code Compliance Certificate: 36598
Section 95, Building Act 2004

Issued: 01Mar07

The Building

Street Address of building: 48 SHARP ROAD, KAHAROA, R D 2, ROTORUA 3072
Legal Description of land where building is located:
Lot 2 DPS 71633
Current, lawfully established use:
Year first constructed:

- ERECT STUDIO & GYM

The Owner

Name of owner: MR MICHAEL JAMES REID
Contact Person: HODGES CONSTRUCTION LTD
Mailing Address: HODGES CONSTRUCTION LTD — faxed 1/3/7.
JOHN HODGES, PO BOX 473
ROTORUA

Street address/registered office: 48 SHARP ROAD
KAHAROA, R D 2
ROTORUA 3072
Phone number: (Bus.)
(Pvt.)
Facsimile number:
Email address:
Website:

First point of contact for communications with council/building consent authority:

Building Work

Building Consent number: 36598
Issued by: ROTORUA DISTRICT COUNCIL

Code Compliance

The building consent authority named below is satisfied, on reasonable grounds, that -

No fee

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

DESTINATION
ROTORUA
ROTORUA DISTRICT COUNCIL

Rotorua District Council
1061 Haupapa Street
Private Bag 3029
Rotorua, New Zealand
P: 07 348 4199
F: 07 346 3143
E: mail@rdc.govt.nz
W: www.rdc.govt.nz

(a) the building work complies with the building consent.

Council Charges

The Council's total charges payable on the uplifting of this code compliance certificate in accordance with the attached details are: $0.00

This is a final code compliance certificate issued in respect of all of the building work under the above building consent

D MACLEOD

BUILDING ADMINISTRATION
Position

On behalf of: ROTORUA DISTRICT COUNCIL

Date: 01 Mar 2007

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

DESTINATION ROTORUA
ROTORUA DISTRICT COUNCIL

Rotorua District Council
1061 Haupapa Street
Private Bag 3029, Rotorua
P: 07 348 4199
F: 07 349 0993
E: mail@rdc.govt.nz
W: www.rdc.govt.nz

Form 6

APPLICATION FOR CODE COMPLIANCE CERTIFICATE

Section 92, Building Act 2004

THE BUILDING CONSENT

Building consent number: 36598

Issued by [name of building consent authority that granted building consent]: Rotorua District Council

*THE OWNER

Name of owner [include preferred form of address, eg, Mr, Miss, Dr, if an individual]:
Mr Michael Reid

†Contact person:

Mailing address: C/o Hodges Construction, ~~P.O.~~

Street address/registered office: P.O. Box 473 Rotorua

Phone number: Landline: 3476338 Mobile:

Daytime: After hours:

Facsimile number:

Email address: Website:

The following evidence of ownership is attached to this application: [copy of certificate of title, lease, agreement for sale and purchase, or other document showing full name of legal owner(s) of the building]

‡AGENT

‡Name of agent [only required if application is being made on behalf of the owner]:
Hodges Construction LTD.

§Contact person: John Hodges

Mailing address: P.O. Box 473
Rotorua.

Street address/registered office:

Phone number: Landline: 3476338 Mobile:

Daytime: After hours:

Facsimile number:

Email address: Website:

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

Relationship to owner [state details of the authorisation from the owner to make the application on the owner's behalf]:

Builder.

First point of contact for communications with the council/building consent authority [Contact details must be in NZ]:

Full name: Hodges Construction LTD.

Mailing address: P.O. Box 473
Rotorua

Phone number(s): 3476339

Facsimile number(s): 3492013

Email address(es):

APPLICATION

All building work to be carried out under the above building consent was completed on: 26.02.07

The personnel who carried out the building work are as follows [list names, addresses, phone numbers, and (where relevant) registration numbers]:

Les Cannon Plumbing
Anderson Drainage
Hepburn Electrical

The following specified systems are contained on the compliance schedule for the building and, in the opinion of the personnel who installed them, are capable of performing to the performance standards set out in the building consent:

I request that you issue a code compliance certificate for this work under section 95 of the Building Act 2004.
The code compliance certificate should be sent to [state which address, and whether owner or agent]:

Hodges Construction LTD (Agent)
P.O. Box 473 Rotorua

Signature of [owner/agent on behalf of and with the authority of the owner]: B.C Reid

Name of person signing: Bryan Riach.

Date: 26.02.07

ATTACHMENTS

The following documents are attached to this application:

- [x] Certificates from the personnel who carried out the work
- [x] Certificates that relate to the energy work
- [ ] Evidence that specified systems are capable of performing to the performance standards set out in the building consent

*Delete this section if details have not changed from the building consent.
†Delete if owner is an individual.
‡Delete this section if the application is not being made on behalf of the owner.

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

rec 26 Feb 07

EW

ELECTRICAL WORKERS REGISTRATION BOARD
Safety • Competency

Electrical Certificate of Compliance

No. 2231005

No. of attachments 0

for prescribed electrical work that is carried out on electrical installations and involves the placing or positioning or the replacing or repositioning of conductors (including fittings attached to those conductors).

To be completed whether or not an Inspection is required.

CUSTOMER INFORMATION - PLEASE PRINT CLEARLY

Name of customer: Michael Reid (Hodges Construction) Phone:

Address of installation: 48 Sharp Road Rotorua

Postal address of customer (if not as above):

WORK DETAILS

15	No. of lighting outlets	—	No. of ranges	Please tick (✓) as appropriate where work includes:	
15 (4 of in floor box)	No. of socket outlets	1	No. of water heaters		Mains ✓ Main earthing sys
Was any installation work carried out by the homeowner?			Yes ✓ No	✓	Switchboard Electric lines

Description: Photography studio building at right rear of property.
Also has 2 × extract fans + 1 × paddle fan.
2 × Air con units connected by others.
Dark room sink(s) yet to be placed at time of livening.

If necessary attach any pages with sketches of work done

It is recommended that test results be recorded here:

Visual Examination	✓
Earth Continuity	✓
Bonding	✓
Polarity	✓
Insulation Resistance	✓ Mohm
Other	

CERTIFICATION OF WORK

I certify that the above electrical work has been carried out in accordance with the requirements of the Electricity Act 1992 and Electricity Regulations 1997.

ELECTRICAL WORKER DETAILS

Name	A. C. Risbet
Registration no.	E18317
Company	Hepburn Electrical
Signature	Colin
Date	9/2/07
Contact Ph No.	(07) 347 8491

CERTIFICATION OF ELECTRIC LINES

(to be completed where a separate electrical worker has installed the electric line portion of the mains)

Name	
Registration no.	
Company	
Signature	
Date	
Contact Ph No.	

INSPECTION DETAILS

Electrical work requiring inspection by a registered electrical inspector

☐ New mains ☐ Switchboard ☐ Earthing system ☐ Installation work in hazardous areas

I certify that the inspection has been carried out in accordance with the requirements of regulation 41 of the Electricity Regulations 1997.

Name	[illegible]
Signature	[signature]
Registration no.	E 2681
Date	13-2-07
Contact Ph No.	347849

CUSTOMER COPY - THIS IS AN IMPORTANT DOCUMENT AND SHOULD BE RETAINED

Form approved by the Electrical Workers Registration Board (PO Box 10-156, Wellington. Freephone 0800 66-1000) for the purposes of the Electricity Regulations 1997.

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

Doc No: IT-12403

File No: 37-73-010\14

BUILDING SERVICES

FIELD INSPECTION CARD

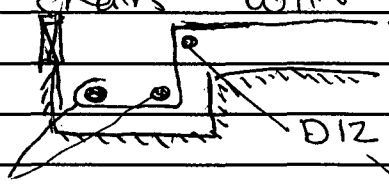
Application No: 36598

Date Consent Issued: 29.8.06

OWNER: Reid Phone: 0274979110	BUILDER: Phone:
SITE: 48 Sharp Rd Kaharoa.	PLUMBER: Phone:
VALUATION NO: 06951 | 239.02 FILE NO: P37041	DRAINLAYER: Phone:
LEGAL DESCRIPTION: Lot/Sec: 2	DPS/BLK: 71633

DESCRIPTION OF PROPOSED WORK: 8 inspections and CCC allowed for

Erect Studio + Gym

DATE	INSPECTION REPORTS	TIME
11/9/06	Site information and documents OK. boundary distances OK	
RL	Footing in firm bearing ground 2 D12 bars on chairs with D12 starters and 600 mdrs	
		
siting	D12 in slab perimeter	
Noted 13/9/ 27/11/06	100mm ϕ PVC pipe for WC (N2s) 50mm ϕ vents and conduits for plumbing pipes PRE-LINE plumbing in K2 surface mounted for lockwood and under pressure	
	200 psi holding pipes Clipped will be covered will false wall T.V. in needs Cap. To be confirmed	
RL	DRAINAGE 100mm PVC. to existing Septic tank fall approx 1-70 mtrs OK.	
	SW to open paddock	
	Pre line to front wall will Steel portal.	

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

DATE	INSPECTIONS	TIME
	Frame & ISO Frame M.C. appro	
	14.2% Frame boiled to portal insp	
RL	Galv. bolts OK & continue	
4/11/06	Footing for verandah poles.	
	in firm ground and to size	
RL	required OK to pour for	
26/2/07	FINAL - External all flashing and	
Reg.	trim on. landscaping OK	
	Internal — wet areas sealed and	
	safety glass in Water temp at	
	54.1% Smoke alarm in	
	OK to issue CC	
	on receipt of form 6 + electrical cert	
	OK to issue CCC	
	no bond refund.	
1/3/7	CCC issued	
	Stage Dates	
	No Fees	

CODE COMPLIANCE CERTIFICATE
SIGN: ...
DATE: 1/3/07

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

Site Inspection Calculation Sheet

P 27041

Client	Reid
Address	48 Sharp Rd

Consent Number	36598

Inspection	Number Required	Time Required	Totals
Processing Hours - Admin			
Processing Hours - Building Process	@ 65 for 1/2hrs	2hrs	260
Replies to Requests for Further Information	@ 65 for 1/2hrs		
Site Formation - Siting	1 1	0.5	
Footings/Piles	1	0.5	65
Bond Beams & Columns	1	0.5	
Under Floor Plumbing/Drainage	1 1	0.5	65
Concrete Floor	1 1	0.5	65
Pre-wrap (Wind ties & Ext Braces)	1	1.0	65
Post-wrap (Weather tape, flashings & cavity battens, Wall Insulation)	1	1.0	
Half Height Bricks (Ties/Weep Holes)	1	0.5	
Pre-plaster (Stucco, Bricks, EIFS)	1	0.5	
Pre-lining (Moisture & Int Braces)	1	1.0	130
Pre-lining (Plumbing/Drainage)	1	0.5	65
Post-lining (Bracing - Fixing of Gib)	1	0.5	65
Drain Test (Plumbing/Drainage)	1	0.5	65
Solid Fuel Heaters	1	0.5	
Vehicle Crossing/Damage Deposit	1	0.5	
Other (Please Note)	1	0.5	
Other (Please Note)	1	0.5	
Final Inspection - CCC	1	1.0 Pd for	
Total			
Money Received			
Totals to Invoice (Excluding PIM and Levies)	Total - Money Received		

$520 Pd for.

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

DESTINATION ROTORUA
ROTORUA DISTRICT COUNCIL

Rotorua District Council
1061 Haupapa Street
Private Bag 3029
Rotorua, New Zealand
P: 07 348 4199
F: 07 346 3143
E: mail@rdc.govt.nz
W: www.rdc.govt.nz

Project Information Memorandum No:36597
Section 34, Building Act 2004
Received:02Aug06
Issued:25Aug06

MR MICHAEL JAMES REID
JOHN HODGES
PO BOX 473
ROTORUA

HODGES CONSTRUCTION LTD
JOHN HODGES
PO BOX 473
ROTORUA

PROPERTY ID: 27041
STREET ADDRESS: 48 SHARP ROAD, KAHAROA, R D 2, ROTORUA 3072
LEGAL DESCRIPTION: Lot 2 DPS 71633

PROJECT IS FOR: New Work
INTENDED USE(S): ERECT STUDIO AND GYM
INTENDED LIFE: Indefinite but not less than 50 years
VALUE OF WORK: $238.00
NUMBER OF STAGES: 1

COUNCIL'S TOTAL CHARGES FOR THIS PROJECT INFORMATION MEMORANDUM ARE: $400.00
PAYMENTS RECEIVED TO DATE:
Receipt number: 51797 Date: 02Aug06 Amount: $400.00

See attached page(s) for any other conditions.

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Please demonstrate how this construction project is to achieve this objective.

7: PERMITTED ACTIVITY

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Signed for and on behalf of the Council:

Name: L Tetenburg Position: Administration - Building

Signed: L Tetenburg Date: 25/08/2006

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

Building Consent No:36598
Section 51, Building Act 2004

Issued:29Aug06

The Building

Street Address of building: 48 SHARP ROAD, KAHAROA, R D 2, ROTORUA 3072
Legal Description of land where building is located:
Lot 2 DPS 71633
Building Name: ERECT STUDIO AND GYM

The Owner

Name of owner: MR MICHAEL JAMES REID
Mailing Address: JOHN HODGES
PO BOX 473
ROTORUA

Contact Person: HODGES CONSTRUCTION LTD
Mailing Address: JOHN HODGES
PO BOX 473
ROTORUA

Street address/registered office: 48 SHARP ROAD
KAHAROA, R D 2
ROTORUA 3072
Phone number: (Bus.)
(Pvt.)
Facsimile number:
Email address:
Website:

First point of contact for communications with council/building consent authority:

Building Work

The following building work is authorised by this consent:
Project: New Work
Intended Use: ERECT STUDIO AND GYM

This building consent is issued under section 51 of the Building Act 2004. This building consent does not relieve the owner of the building (or proposed building) of any duty or responsibility under any other Act relating to or affecting the building (or proposed building).

This building consent also does not permit the construction, alteration,

Document Set ID: 588278
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At the completion of the work authorised by this Building Consent.

Please arrange the booking of inspections and direct enquiries regarding this consent to the Building Services Department, phone (07) 348 4199.

Excavation for foundations.

Reinforcing steel for foundations.

Reinforcing Steel for masonry prior to any required washout ports being closed off.

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Post-wrap (Weather tape, flashing and cavity battens).

Framing timber required to have a specificed moisture content.

Thermal insulation material.

Fixing of linings for bracing elements.

The fixing of framing members prior to any lining being fixed.

All foul water and stormwater drainage in ground before backfilling.

The fitting and fixture of ALL FLASHINGS as is required to meet the requirements of the Building Code.

2: Hot Water Control

The hot water supply to sanitary fixtures used for personal hygiene is to be fitted with tempering valves or other approved devices to limit the water temperature to 55 C.

3: Stormwater

All stormwater runoff from roof, driveways and pave areas shall be collected and piped to an approved soakhole or approved connection.

4: Code Compliance Certificate

The owner or agent shall as soon as practicable, advise the Rotorua District Council that all building work has been completed to the extent required by this Building Consent.

SECTION 93(2)(b)(i) BUILDING ACT 2004

The owner or agent must apply for a Code Compliance Certificate within 2 years after the date on which the Building Consent for the building work was granted.

5: Standard Conditions

This building consent is permission to undertake building work in accordance with the approved plans and specifications. All work must comply with the provisions of the Building Code. Any alterations from the original plans and specifications must have prior approval from the Building Control Manager.

Endorsement on Plans and Specifications form part of this approval.

If the work is not commenced within six months and/or reasonable progress has not been made within twelve months a written extension of time can be granted on application to the Council.

The owner of the property is responsible for the correct siting of buildings or additions in relation to boudary pegs.

Any deficiency not specifically drawn to the attention of the builder or owner by the Building Officer shall not be deemed to have been approved.

The use is limited to that stated on the Building Consent. Any change of use would require a separate approval.

Plumbing and drainage work to be carried out by licensed tradesperson only.

6: Standard Statement

THIS BUILDING CONSENT IS ISSUED SUBJECT TO ALL OTHER OUTSTANDING CONSENTS HAVING BEEN APPROVED. WORK SHALL NOT COMMENCE AND INSPECTIONS WILL NOT BE UNDERTAKEN UNTIL THOSE OUTSTANDING CONSENTS HAVE BEEN COMPLIED WITH.

A CODE COMPLIANCE CERTIFICATE MAY NOT BE ISSUED IF ALL FLASHINGS HAVE NOT BEEN INSPECTED PRIOR TO THE COVERING UP OR CLOSING IN OF BUILDING WORK.

SECTION 52 BUILDING ACT 2004 (LAPSE OF BUILDING CONSENT)

A Building Consent lapses and is of no effect if the building work to which it relates does not commence within 12 months of the date of issue unless prior arrangements are made with the Building Consent Authority

TYPE 1 DOMESTIC SMOKE ALARM SYSTEM - CLAUSE F7 WARNING SYSTEMS:

* Requires that an appropriate means of detection and warning for fire must be provided within each household unit.
* Smoke alarms shall be located on the escape routes on all levels within household units.
* On all levels containing the sleeping spaces, the smoke alarms shall be located either:

a) in every sleeping space; or
b) within 3 metres of every sleeping space. In this case, the smoke alarms

must be audible to sleeping occupants on the other side of closed doors.

These will be required on all new dwellings and retrospectively fitted in dwellings when, and if, a Building Consent for additions or alterations is applied for.

A CODE OF COMPLIANCE CERTIFICATE WILL NOT BE ISSUED UNTIL THE SMOKE ALARMS HAVE BEEN INSTALLED AND SEEN OPERATING.

Compliance Schedule

A compliance schedule is not required for the building.

Signature

ADMINISTRATION ASSISTANT
Position

On behalf of: ROTORUA DISTRICT COUNCIL

Date: 29 Aug 2006

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

Version: 1, Version Date: 31/03/2010

DESTINATION ROTORUA

ROTORUA DISTRICT COUNCIL

Property File : _____

As Built - Drainage Plan

As Built - Drainage Plan

Drainage Plan for :

Address 40 SHARP ROAD

Lot _____ D.P. _____

Owner _____

Inspector RAY Date of Inspection _____

Drainlayer ANDERSEN DRAINAGE Licence No. 16874.

Building Consent No. _____

Note : Plan to be drawn in black and red ballpoint on graph opposite

Plan to include :

1 The correct position of the drains in relation to the building and boundaries.

2 The position of the street frontage

3 Depth of drains at connection point.

4 Both wastewater and stormwater drains to be drawn.

5 Clearly define all inspection openings, with accurate measurements from two points.

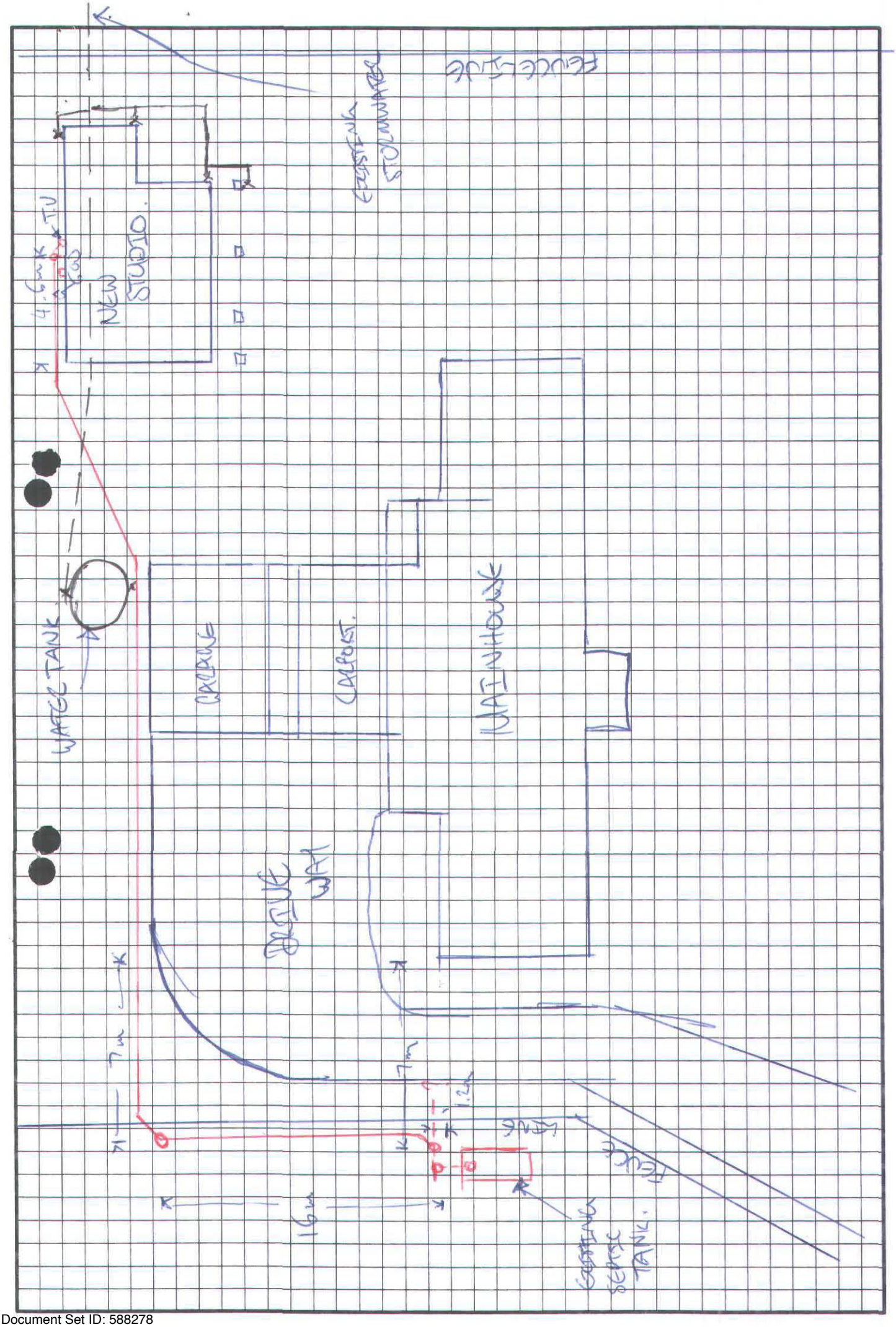
6 Clearly define all buildings and boundaries.

7 Refer to example drain plan back page.

DESTINATION ROTORUA

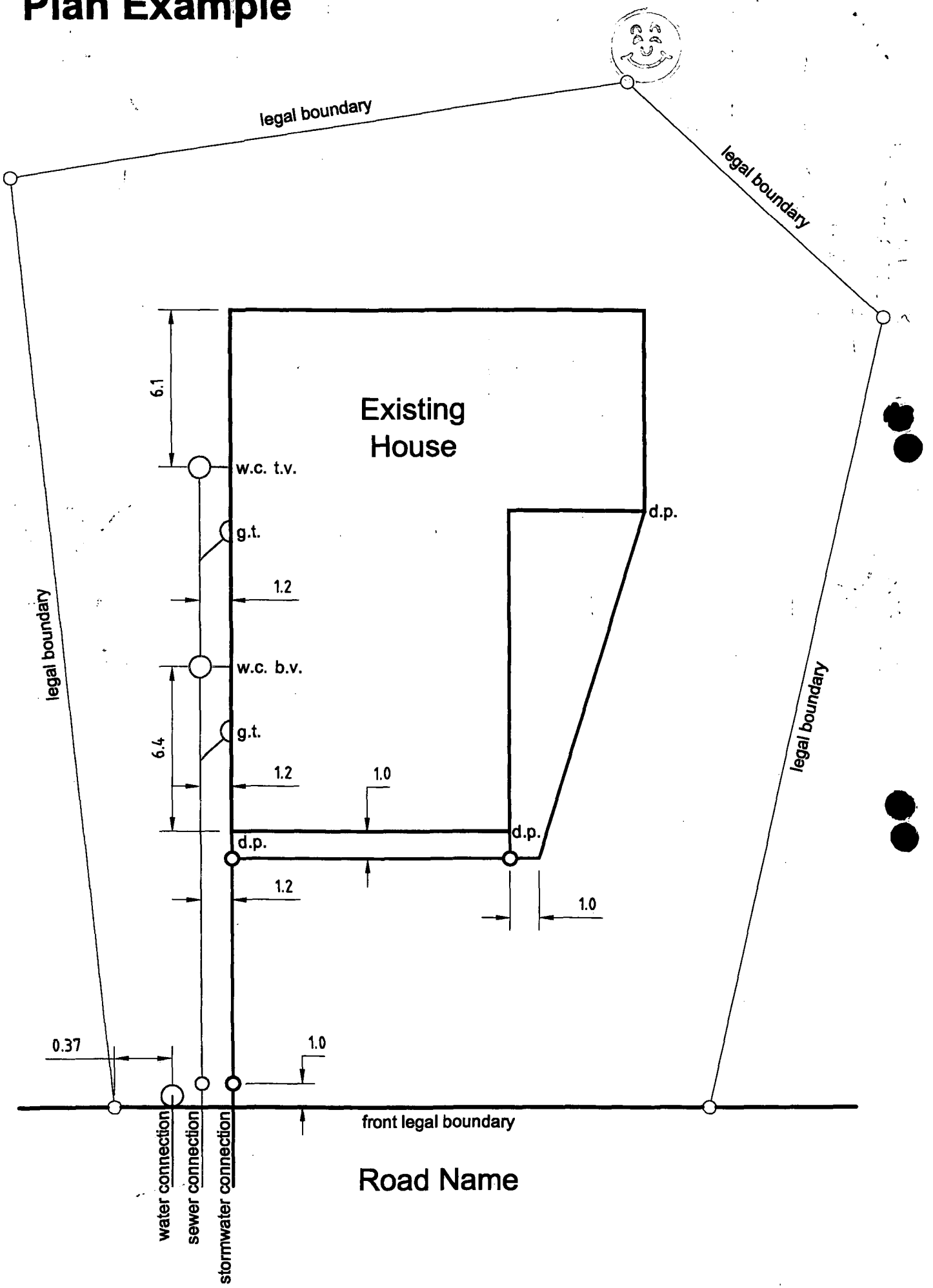
ROTORUA DISTRICT COUNCIL

Document Set ID: 588278
Version: 1, Version Date: 01/08/2016



Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

Plan Example



10613

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

BC 36598 574/387

BUILDING SERVICES – PROJECT INFORMATION MEMORANDUM

APPLICATION NO: 36597 **VALUATION NO:** 06951/739.02

OWNER: Reid **PROPERTY NO:** P27044

PROJECT LOCATION: 48 Sharp Rd

DESCRIPTION OF WORK: Erect Studio + Gym

CHECK APPLICATION - BUILDING OFFICER: N

DATE RECEIVED:	DUE DATE:
02-08-06	30-08-06
DATE SUSPENDED:	**DATE ISSUED:** 25-8-06

PROCESSING	REVIEWED BY	TIME TAKEN	DATE RECEIVED	DATE PROCESSED
Administration		20	7.8.06	
Hazard Bldg + Planning Restriction				
Graphic Solutions				
Planning	JP & LD	20	8.8.06	D
Resource Engineers	BK	15		10.8.06
Pollution Control				
Geothermal				
Hazardous Substances				
Environmental Health				
Recreation and Community				
Building				

PIM FEE	DATE PAID	RECEIPT NO.	DATE RECEIVED STAMP
$400.00	2.8.06	R51797	RECEIVED 02 AUG 2006

NOTES AND CONDITIONS: (Please circle appropriate code for checkboxes)

300 a b c d e g h i j k l f
302 a b c d e g h i j k l m
n o p q r s t u v w x (f)
304 a b c f
306 a b c d e g h i j k l
m n o f
308 a b c d e f
310 a f
312 a b c d e g f
314 a b (c) d e g f (H)
316 a b c d e f
318 a (b) c d e g h i f
320 a b c d e g (h) f
322 a b f
324 a b c d e g h i j f
326 a b c d e g h i j k f
328 a b c d e g h i j k l m
n f
330 a b c d f
332 a b c d e g h i j f
334 a b c d e g h i f
336 a b f

338 a b c d e g h i f
340 a b c f
342 a b f
344 a b c f
346 (a) f
348 a b c d e g h i j k
l m n o p q r s t u
v w x y z f
350 a b c d e g f
352 a b c f
354 a b c f
356 (a) (b) c d e g h f
358 (a) (b) c d f
360 a b c d f
362 a f
364 a f
366 a b c d f
368 (a) b f
370 a b c f
372 a b f f
374 a b f

FREE TEXT:

302(F) Refer to attached copy of property information notice for detail on building and planning restrictions which affect this property.

320(H) Environment BOP on site effluent treatment regional plan.

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

Building Consent No:36598
Section 51, Building Act 2004

Issued:29Aug06

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M P Petersburg
Signature

ADMINISTRATION ASSISTANT
Position

On behalf of: ROTORUA DISTRICT COUNCIL

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Signed for and on behalf of the Council:

Name: L Tetenburg Position: Administration - Building

Signed: L Tetenburg Date: 25/08/2006

See attached page(s) for any other conditions.

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

Site Inspection Calculation Sheet

P 27041

Client	Reid
Address	48 Sharp Rd

Consent Number	36598

Inspection	Number Required	Time Required	Totals
Processing Hours - Admin			
Processing Hours - Building Process	@ 65 for 1/2hrs	2hrs	260
Replies to Requests for Further Information	@ 65 for 1/2hrs		
Site Formation - Siting	1	0.5	
Footings/Piles	1	0.5	65
Bond Beams & Columns	1	0.5	
Under Floor Plumbing/Drainage	1	0.5	65
Concrete Floor	1	0.5	65
Pre-wrap (Wind ties & Ext Braces)	1	1.0	65
Post-wrap (Weather tape, flashings & cavity battens, Wall Insulation)	1	1.0	
Half Height Bricks (Ties/Weep Holes)	1	0.5	
Pre-plaster (Stucco, Bricks, EIFS)	1	0.5	
Pre-lining (Moisture & Int Braces)	1	1.0	130
Pre-lining (Plumbing/Drainage)	1	0.5	65
Post-lining (Bracing - Fixing of Gib)	1	0.5	65
Drain Test (Plumbing/Drainage)	1	0.5	65
Solid Fuel Heaters	1	0.5	
Vehicle Crossing/Damage Deposit	1	0.5	
Other (Please Note)	1	0.5	
Other (Please Note)	1	0.5	
Final Inspection - CCC	1	1.0 Pd for	
Total			
Money Received			
Totals to Invoice (Excluding PIM and Levies)	Total - Money Received		

$520 Pd for

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

COMPUTER FREEHOLD REGISTER
UNDER LAND TRANSFER ACT 1952

Search Copy

R.W. Muir
Registrar-General
of Land

Identifier	**SA57C/387**
Land Registration District	**South Auckland**
Date Issued	20 November 1995

Prior References
SA54C/697

Estate	Fee Simple
Area	5.9640 hectares more or less
Legal Description	Lot 2 Deposited Plan South Auckland 71633

Proprietors
Michael James Reid

Interests

B309362.2 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 20.11.1995 at 2.10 pm

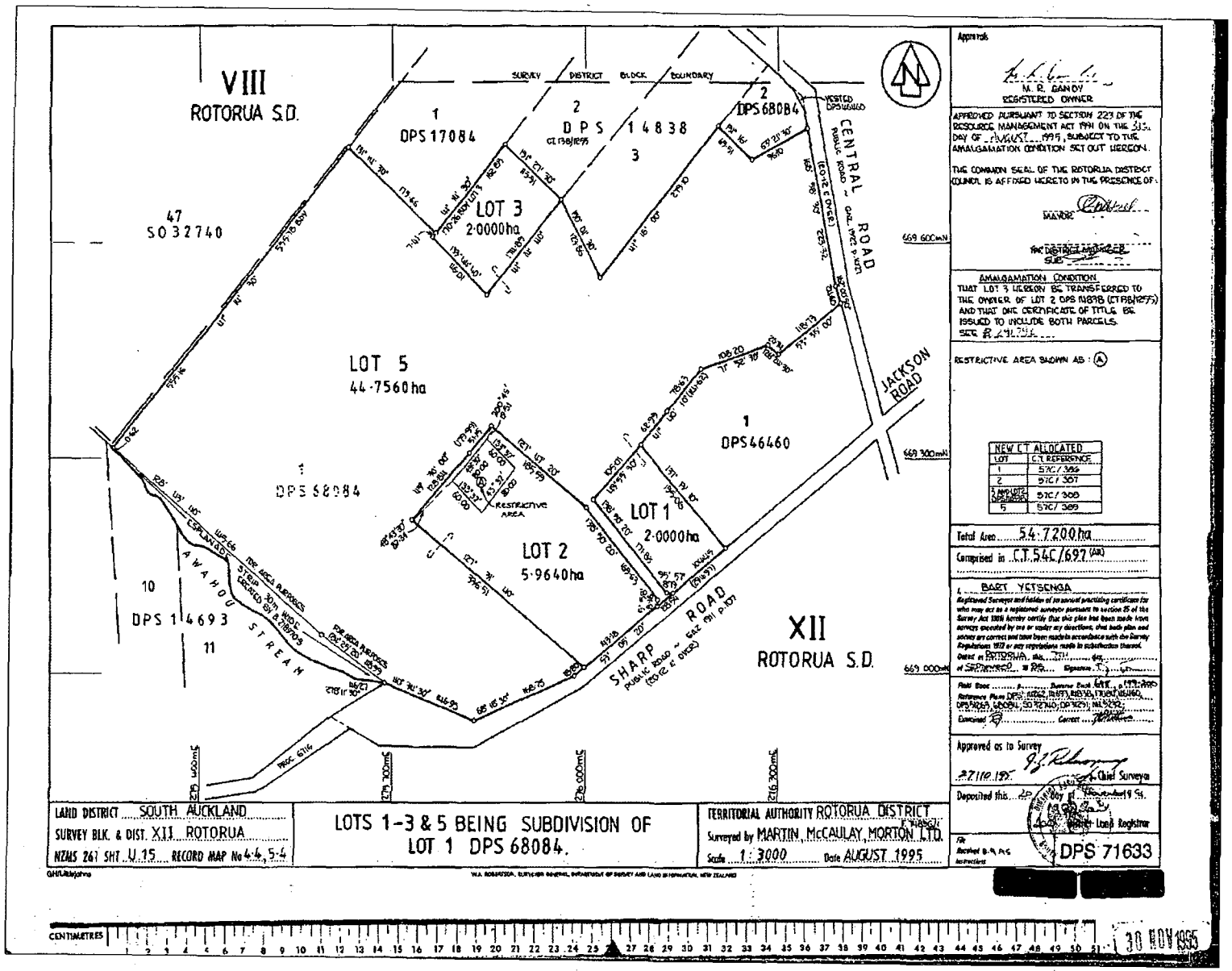
Land Covenant in Transfer B363444.3 - 26.8.1996 at 9.04 am

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

Transaction Id
Client Reference 250-50241-2215

Search Copy Dated 3/08/06 4:16 pm, Page 2 of 2
Register Only

Identifier **SA57C/387**



Approvals

M. R. GANDY
REGISTERED OWNER

APPROVED PURSUANT TO SECTION 223 OF THE RESOURCE MANAGEMENT ACT 1991 ON THE 31st DAY OF AUGUST 1995, SUBJECT TO THE AMALGAMATION CONDITION SET OUT HEREON.

THE COMMON SEAL OF THE ROTORUA DISTRICT COUNCIL IS AFFIXED HERETO IN THE PRESENCE OF:

MAYOR

THE DISTRICT MANAGER

AMALGAMATION CONDITION

THAT LOT 3 HEREON BE TRANSFERRED TO THE OWNER OF LOT 2 DPS 68084 (CT 57C/387) AND THAT ONE CERTIFICATE OF TITLE BE ISSUED TO INCLUDE BOTH PARCELS.

SEC 8 241 ...

RESTRICTIVE AREA SHOWN AB : (A)

NEW CT ALLOCATED	
LOT	CT REFERENCE
1	57C/386
2	57C/387
3 AMALGAMATED WITH LOT 2	57C/388
5	57C/389

Total Area 54·7200ha

Comprised in CT 54C/697 (AR)

I, BART YETSENGA

Registered Surveyor and holder of an annual practising certificate (or who may act as a registered surveyor pursuant to section 35 of the Survey Act 1986) hereby certify that this plan has been made from surveys executed by me or under my direction, that both plan and survey are correct and have been made in accordance with the Survey Regulations 1972 or any approvals made in substitution thereof.

Dated at ROTORUA this 7TH day of SEPTEMBER 1995 Signature

Field Book ... Survey Book 64K ... p 177-200
Reference Plans DPS 68082, 68083, 68085, 17084, 46460, DPS 9069, 14693, SO 32740, DP 9021, NZ 5252
Examined ... Correct ...

Approved as to Survey
27/10/95
Chief Surveyor

Deposited this 30th day of NOVEMBER 1995
District Land Registrar

File
Received B.P. P.S.
Instructions

DPS 71633

LAND DISTRICT SOUTH AUCKLAND
SURVEY BLK. & DIST. XII ROTORUA
NZMS 261 SHT U 15 RECORD MAP No 4-4, 5-4

LOTS 1-3 & 5 BEING SUBDIVISION OF LOT 1 DPS 68084.

TERRITORIAL AUTHORITY ROTORUA DISTRICT
Surveyed by MARTIN, McCAULAY, MORTON LTD.
Scale 1:3000 Date AUGUST 1995

W.A. ROBERTSON, SURVEYOR-GENERAL, INSTITUTE OF SURVEY AND LAND INFORMATION, NEW ZEALAND

CENTIMETRES

30 NOV 1995

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

DESTINATION
ROTORUA
ROTORUA DISTRICT COUNCIL

Rotorua District Council
1061 Haupapa Street
Private Bag 3029
Rotorua, New Zealand
P: 07 348 4199
F: 07 346 3143
E: mail@rdc.govt.nz
W: www.rdc.govt.nz

File No: 37-04-001

Doc No: OW-13507

TO: ALL BUILDING OWNERS & BUILDING CONTRACTORS

DEFINITION OF BOUNDARIES

This is to confirm that in all instances of undertaking building work which is outside the original footprint of an existing building, it is a requirement of every Building Consent, and in particular the First Footing Inspection that the owner of the property identifies the boundaries of the property.

Identifying means finding and exposing the boundary pegs or, alternatively, at least having the boundaries redefined by a Registered Surveyor.

Please note that failure to undertake this work will probably result in the Building Officer being unable to undertake the first inspection because he cannot determine where the boundaries to the property are located.

Help us to help you.

Ensure that this is undertaken before the First Inspection.

PIM / BC
#0036598

John Kardas
Building Control Manager

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010



Parcel results

- Rating Parcel - File: 27041 (48 Sharp Road)
  - 48 Sharp Road, Kaharoa, R D 2, Rotorua,
  - CT 1: 57C/387
  - *Header_Id:57676*
  - Display rating parcel....
  - Rating details for 06951/239.02
  - Generate parcel map...
  - Text note details...
  - Ownership details...
    - MICHAEL JAMES REID
      ATTN: MR LEWIS, C/O P O BOX 242, ROTORUA 3215
  - Application details...
  - Water billing details...
  - Open occupancies on this parcel in a new window....
  - Legal Parcel - File: 27041 (Lot 2 DPS 71633)
- Legal Parcel - File: 27041 (Lot 2 DPS 71633)
- Definitions of terms used .....
- *Data as at 2006-08-02 01:41*

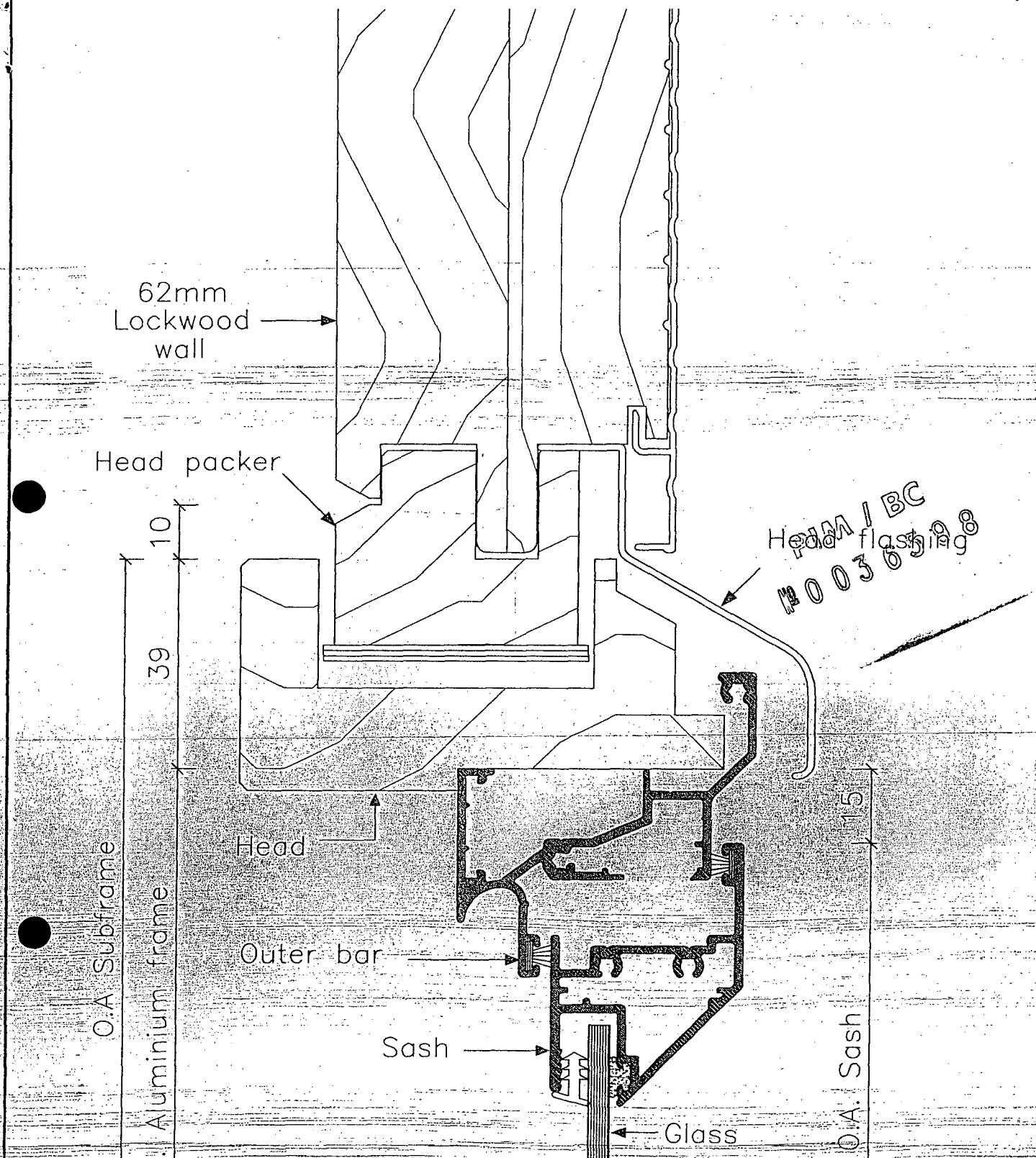
PIM / BC
0036598

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

PATENTS & COPYRIGHTS RESERVED

LOCKWOOD

live the lifestyle



HAM / BC
#0036398

La Grouw Corporation Ltd, Private Bag RO3034, Rotorua, New Zealand. Ph (07) 3477691 Fax (07) 3477614

Typical section through head

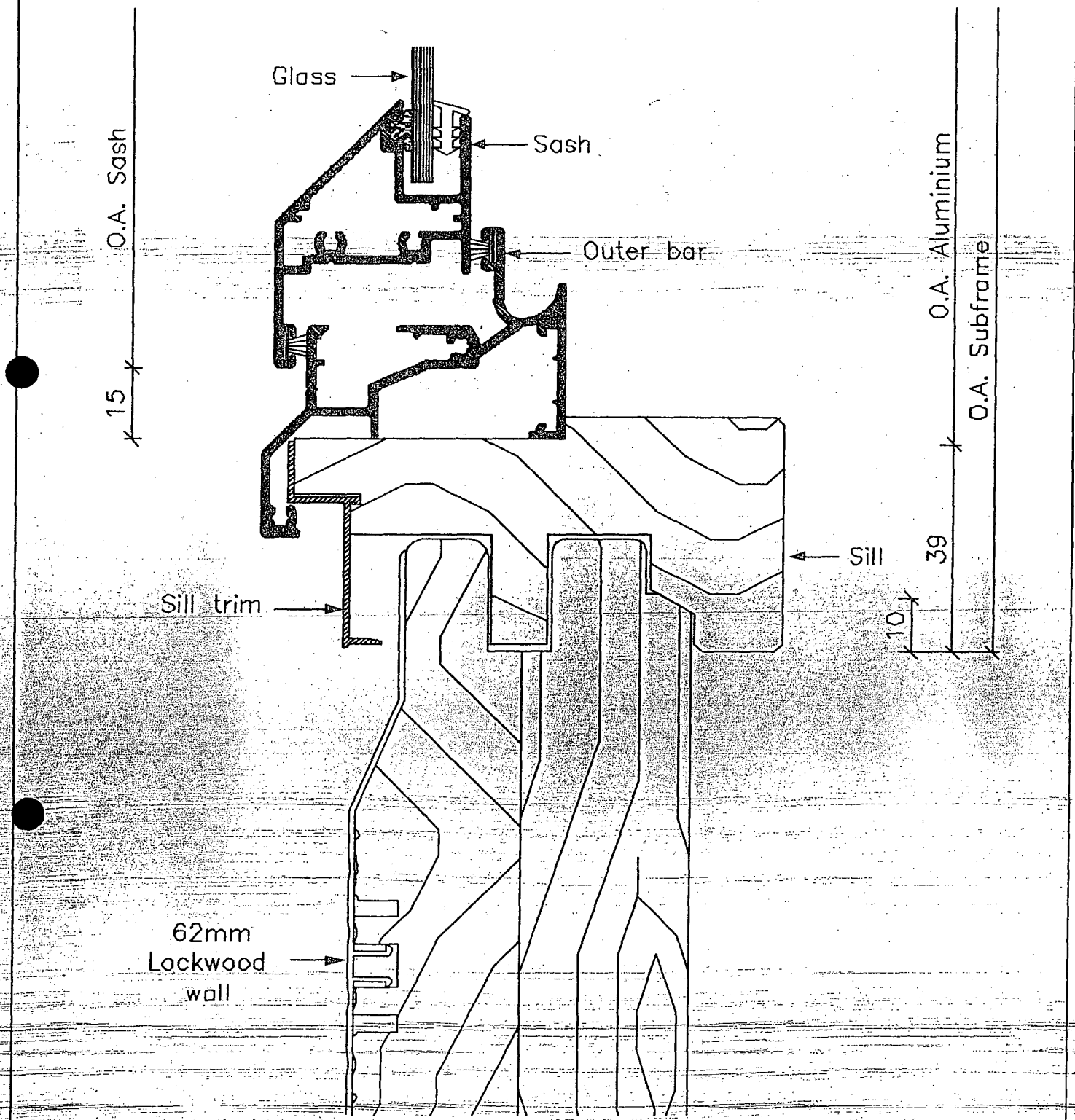
REVISIONS	Drawn	SHEET
	Oliver	
	Date 24/04/01	K-1
APPROVED	Scale	

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

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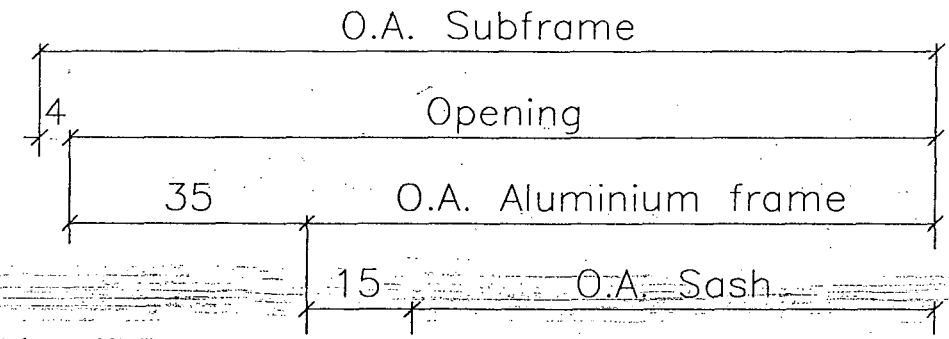
Typical section through sill with 62mm wall under

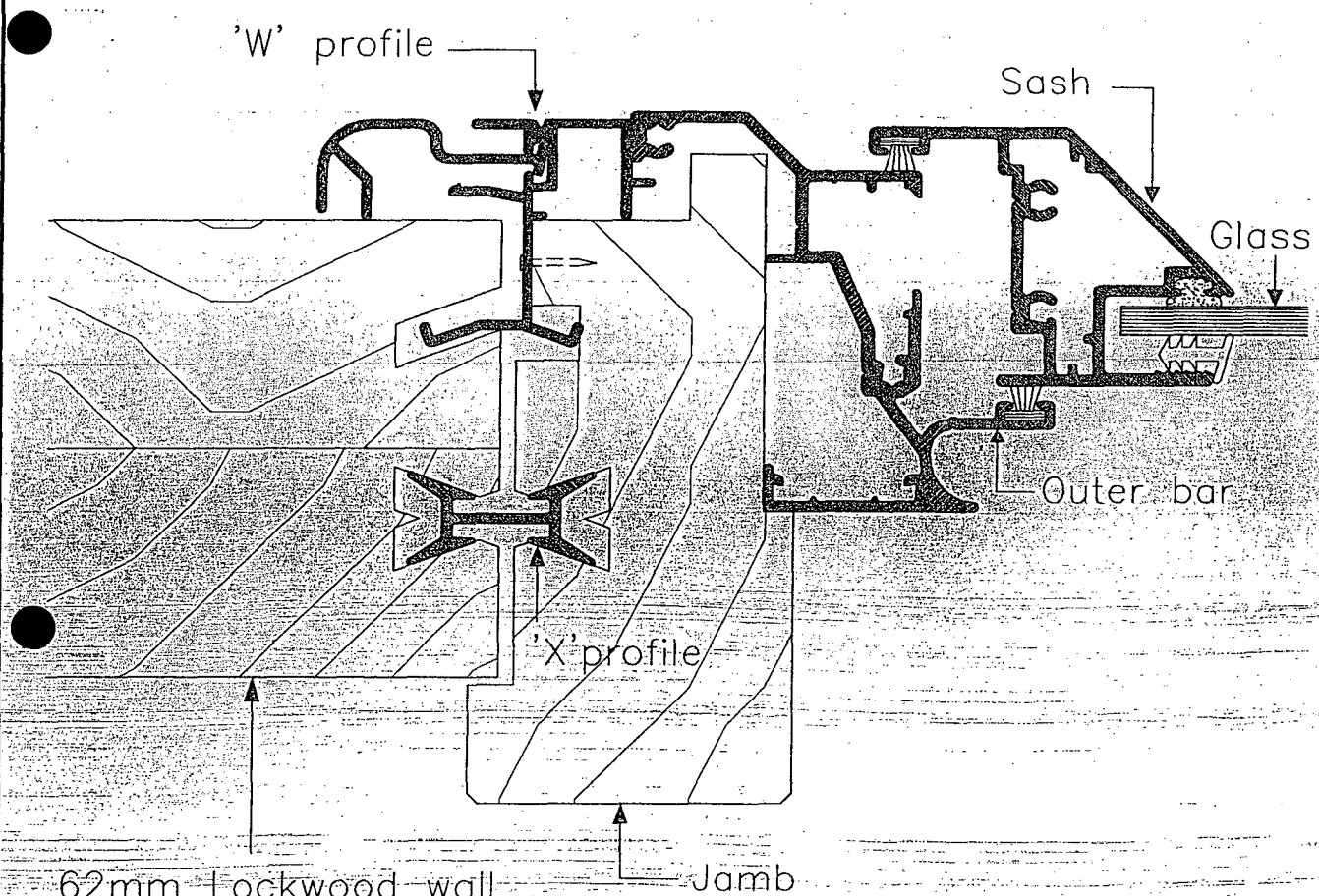
REVISIONS	Drawn	SHEET
KRT 21/8/03	Oliver	
	Date 20-02-02	K-2
APPROVED	Scale 1:1	

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

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Ea Grouw Corporation Ltd, Private Bag RO3034, Rotorua, New Zealand. Ph (07) 3477691, Fax (07) 3477614

Typical section though jamb

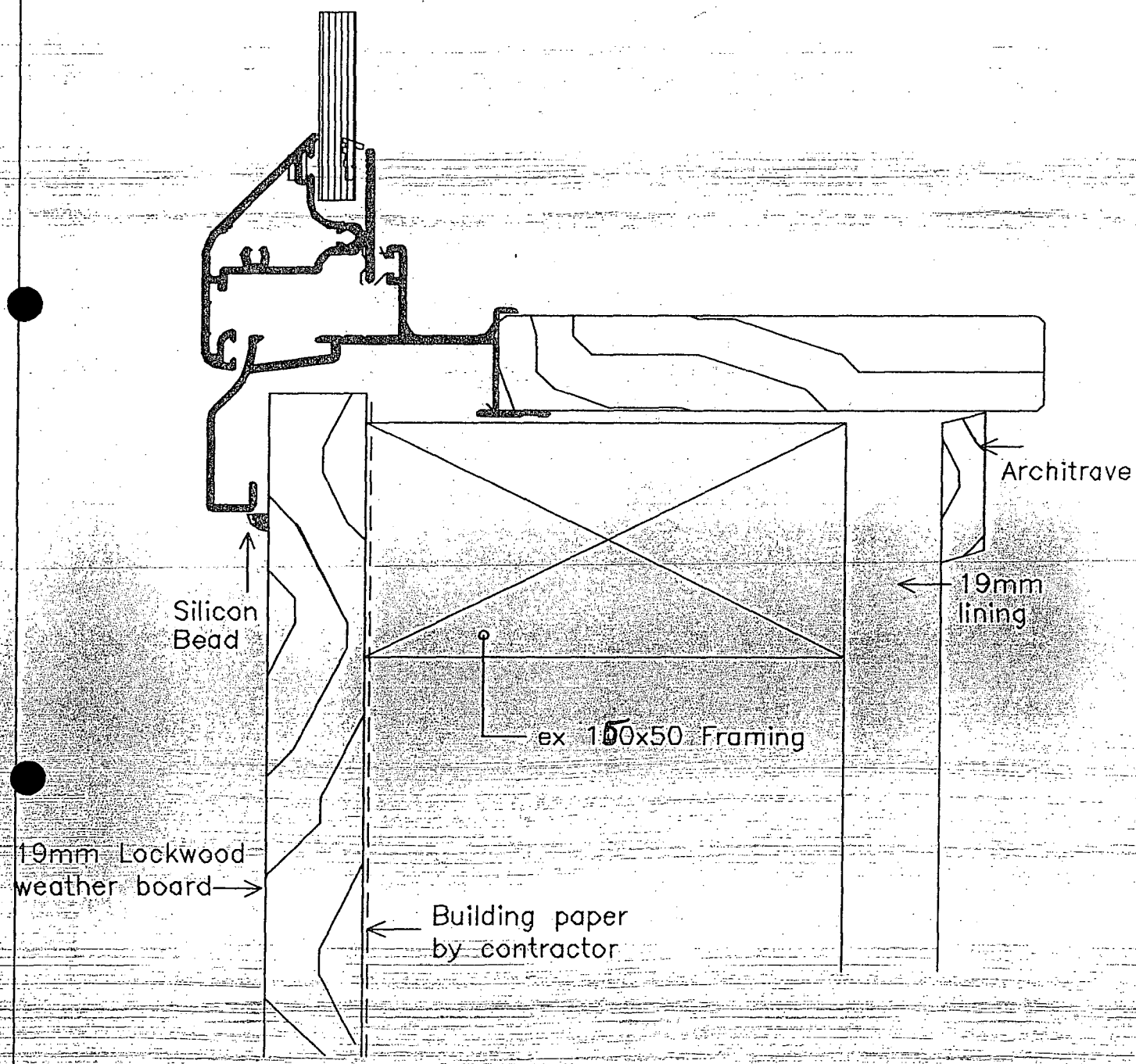
REVISIONS	Drawn: Oliver	SHEET
	Date: 24/04/01	K—3
APPROVED	Scale	

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Conventional sill detail with Lockwood alum/cedar lining

REVISIONS	Drawn	SHEET
KRT-21/8/03	Oliver	T—11
	Date 24/04/01	
APPROVED	Scale 1:1	

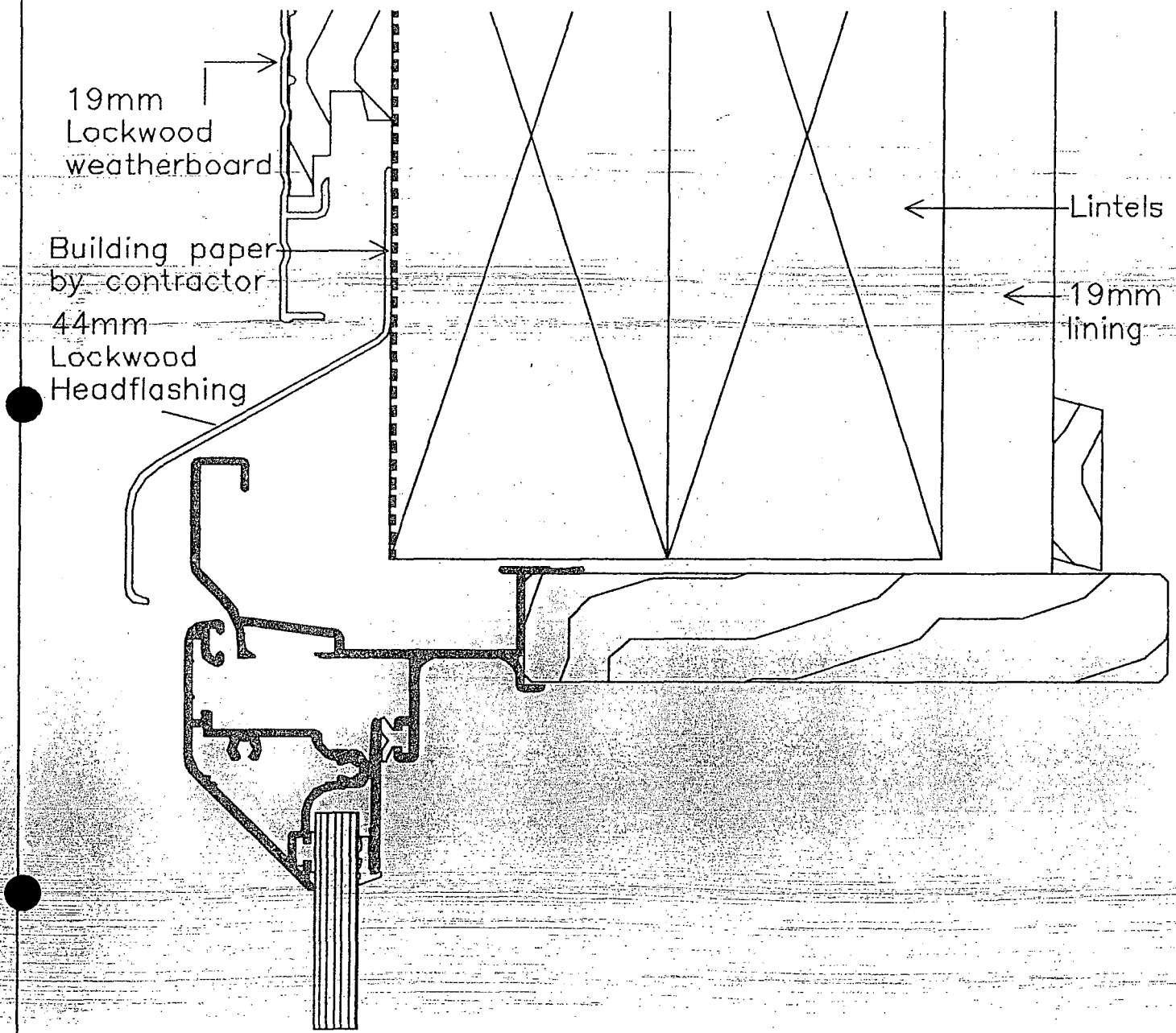
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NOTE: Contractor to trim 19mm lining back on site



La Grouw Corporation Ltd, Private Bag RO3034, Rotorua, New Zealand. Ph (07) 3477691, Fax (07) 3477614

Conventional head detail with Lockwood alum/cedar lining

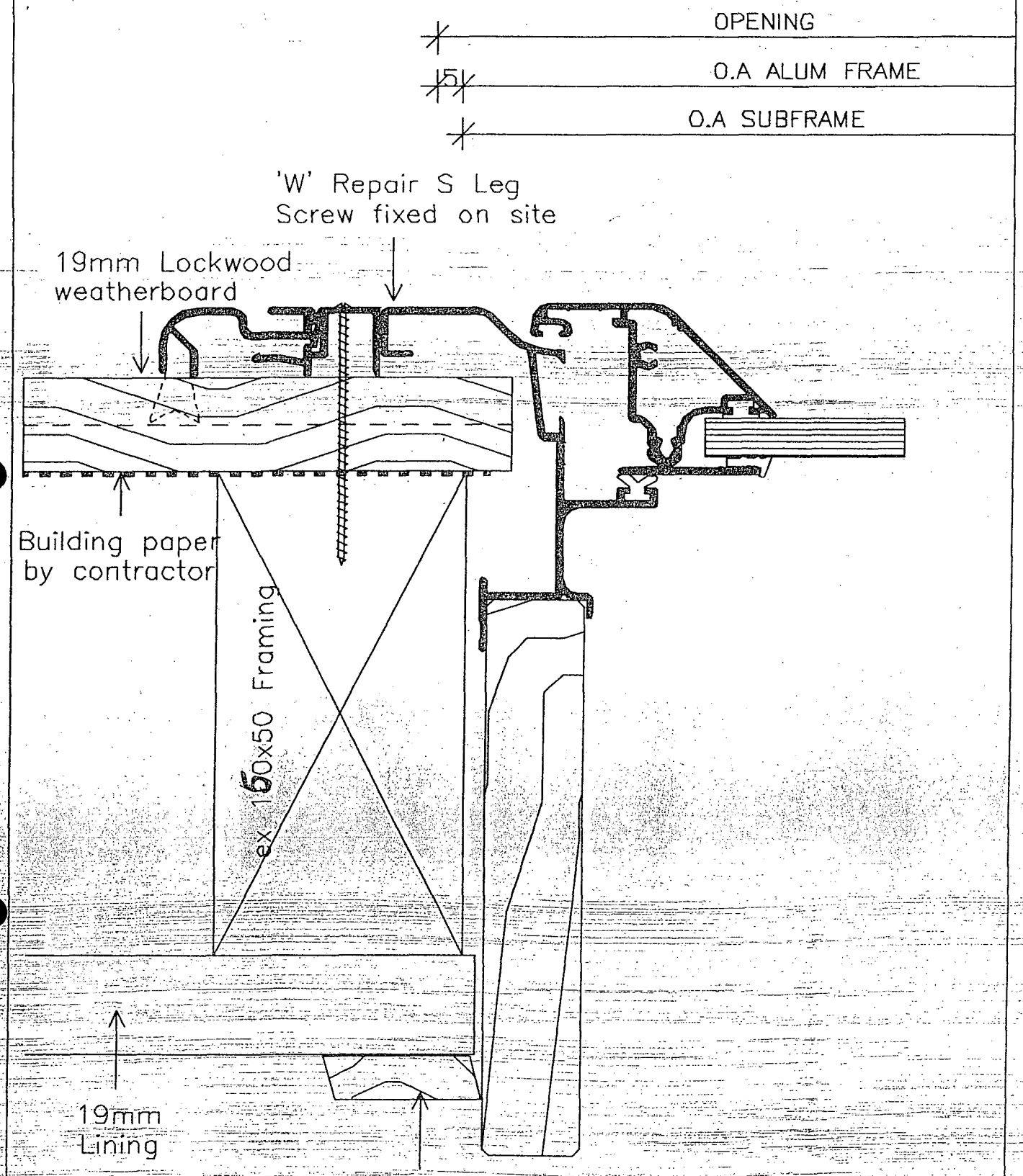
REVISIONS	Drawn	SHEET
KRT-21/8/03	Oliver	
	Date 24/04/01	T-10
APPROVED	Scale 1:1	

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Conventional jamb detail
Lockwood lining

REVISIONS	Drawn	SHEET
KRT 21/8/03	Oliver	
	Date 24/04/01	T – 16
APPROVED	Scale 1:1	

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

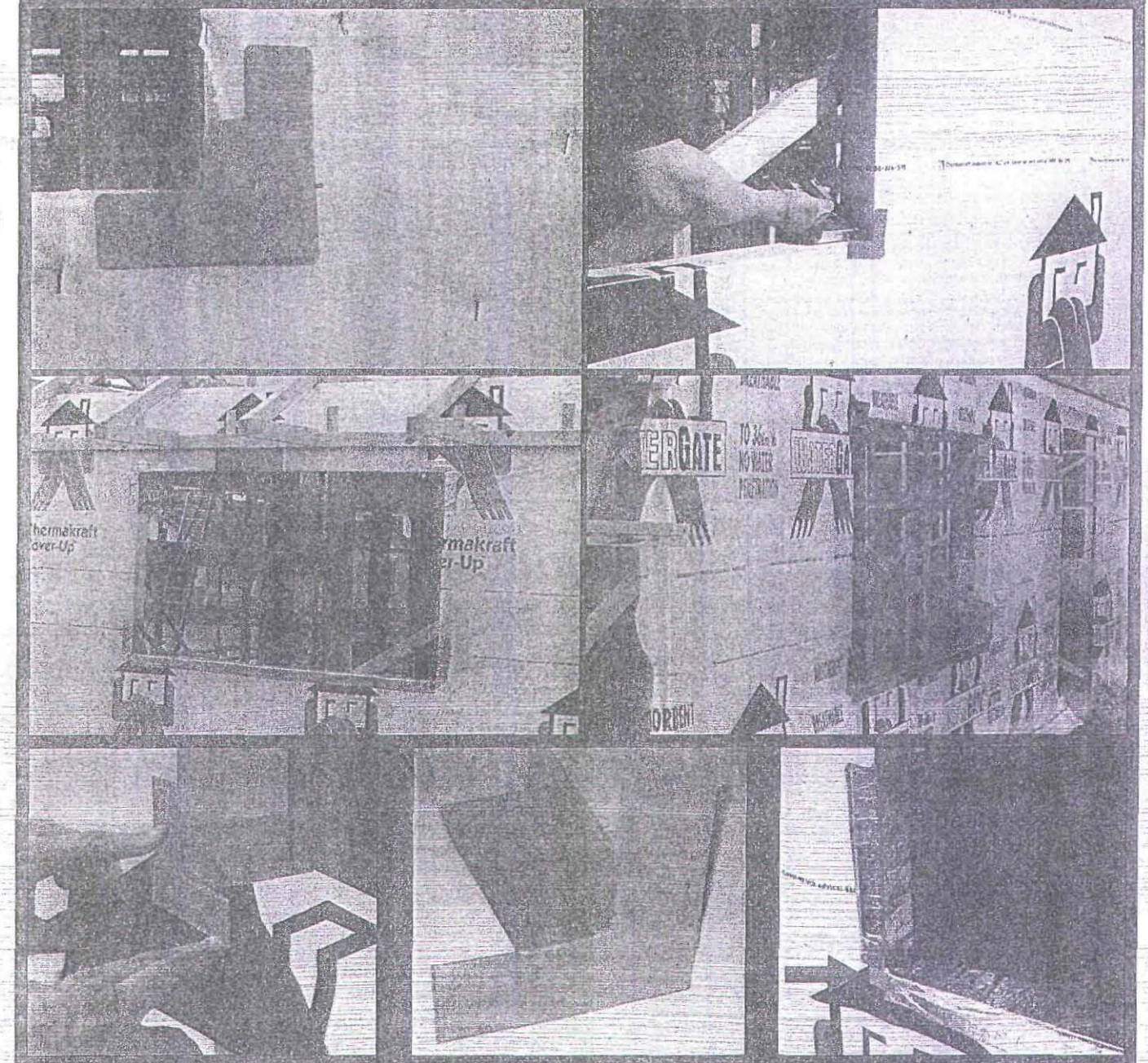
Thermakraft ALU WINDOW SEALING TAPE

Results of Material Test - Copies & Full Report available on request - B.E.A.L. Cert. No. C403

TEST	METHOD	RESULT
ACCELERATED AGING	AC148S4.3.12. METHOD B	PASS
COMPATABILITY	BQ1 TM1 410 NO INCOMPATABILITY	PASS
PEEL ADHESION	ASTM D903	PASS
UV RESISTANCE	ASTM D4587-01 240HRS	PASS
TENSILE STRENGTH	ASTM E154 (DRY NOT WET)	PASS
WATER PERMEABILITY	AS/NZ 4347.1.1995	PASS
NAIL RESISTANCE	ASTM D 1970	PASS
TEAR RESISTANCE	ASTM D 1938	PASS
COLD BEND TEST	AC 148 S4.6.1	PASS

THERMAKRAFT ALUBAND TABLE OF PROPERTIES		
COMPOUND - BITUMEN MODIFIED WITH SYNTHETIC COMPOUNDS		
THICKNESS - 1.06mm (MINIMUM)		ASTMD 1000
TOTAL THICKNESS - 1.12mm (MINIMUM)		ASTM 1000
ADHERENCE ON PRIME STEEL - 27.7n/cm		DIN 30672
RESISTANCE TO PENETRATION - SATISFACTORY		DIN 30672
TEMPERATURE OF APPLICATION		5° + 50°C
TEMPERATURE OF OPERATION		-10° + 50°C
ALUBAND ROLL DIMENSIONS	150mm x 25.0m	4 ROLL CARTON
	50mm x 25.0m	12 ROLL CARTON

Thermakraft Corner Moulded Piece



Corner Moulded Pieces = 50 units per packet / 20 packets per box (1000 pieces)

WINDOW SEALING TECHNOLOGY FOR SILL & JAMB INTERSECT

Simple application providing a sure and permanent
WATER & MOISTUREPROOF BARRIER *for* WINDOWS & DOORS

NOTE: *When using the corner mouldings at the top corners of the window, use a 50mm flashing tape over the top corner piece angled at 45° (Refer Fig 11)*

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

Thermakraft ALU WINDOW SEALING SYSTEM



FIG 1 STAPLE GUN • KNIFE • ALUBAND • SUPERCOURSE • CORNER MOULD • ALUBAND TOOL

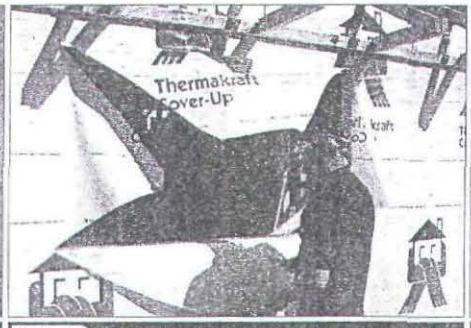


FIG 2 CUT OPENING AS SHOWN ABOVE. FOLD BACK & STAPLE



FIG 3 STAPLE THE CORNER MOULDS TO ALL FRAME CORNERS

ALUBAND Window Sealing Tape IS AN ALUMINIUM-FACED, BITUMINOUS, SELF ADHESIVE, WITH A POLYETHYLENE BACKING.

THE SYSTEM • THE METHOD

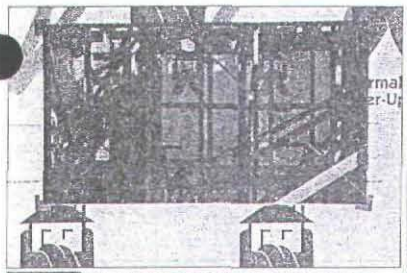


FIG 4 THE CORNER MOULDED PIECE FIXED BY STAPLES TO ALL JAMB/SILL INTERSECTIONS, BOTH TOP AND BOTTOM. THE SPECIALLY DESIGNED PIECE FITS LEFT OR RIGHT HAND CORNERS.

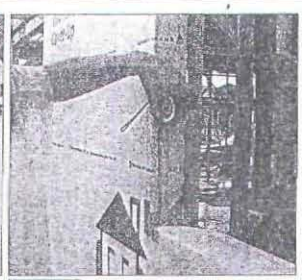


FIG 5 MEASURE 200mm UP THE JAMB, ADD BOTH UPSTANDS TO THE SILL MEASUREMENT AND CUT THE ALUBAND. NEXT REMOVE RELEASE POLYETHYLENE FILM AS YOU ADHERE THE TAPE TO THE FRAME.



FIG 6 ENSURE A FIRM PRESSURE IS MAINTAINED DURING THE APPLICATION. THE EDGES OF ALUBAND MUST BE PUSHED FIRMLY INTO THE WRAP OR BUILDING MEMBRANE.



FIG 7 AS WITH THIS PHOTO, ***NOTE THE USE OF THE ALUBAND TOOL TO PUSH THE ALUBAND TIGHTLY INTO THE CORNER MOULD. ENSURE ALUBAND IS NOT ADHERED PAST THE INSIDE FACE OF THE SILL. THE ALUBAND IS NOW READY TO BE CUT AT THE SILL/JAMB INTERSECT. (REFER FIG 9).***



FIG 8 PRESS FIRMLY ALONG THE SILL AND JAMB PRIOR TO MAKING THE CORNER CUT.

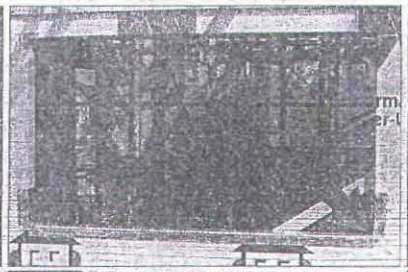


FIG 9 SHOWS THE ALUBAND WITH THE FLANGES FOLDED BACK ONTO THE COVER-UP MEMBRANE, EXPOSING THE BOTTOM EDGE OF THE CORNER MOULDED PIECE.

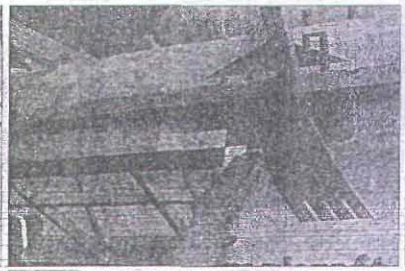


FIG 10 PROCEED TO FIX ALUBAND TO THE TOP CORNERS OF THE FRAME, CUTTING THE TAPE AND FOLDING BACK ONTO THE COVER-UP, LEAVING THE EXPOSED CORNER OF OUR MOULDED PIECE.

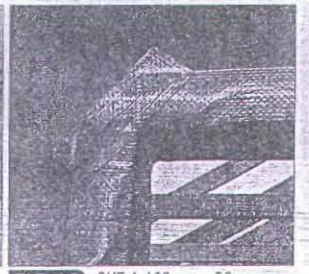


FIG 11 CUT A 100mm x 50mm WIDE ALUBAND AND FIX THE TAPE AT 45° ANGLE, COVERING THE CORNER MOULDED PIECE. THE FRAME IS NOW READY FOR THE WINDOW.

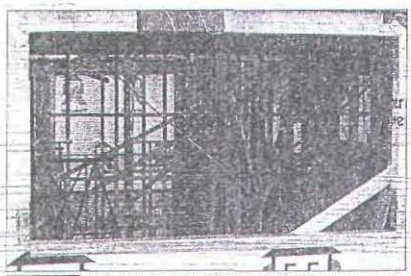


FIG 12 THE COMPLETED WINDOW OPENING WITH THE ALUBAND AND CORNER MOULDED PIECE, NOW READY TO ACCEPT THE WINDOW FRAME.

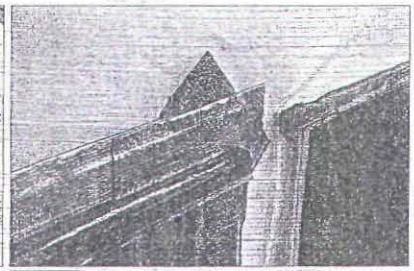


FIG 13 SHOWS THE CORRECT WAY FOR SEALING THE TOP WINDOW FLASHING, USING ALUBAND TO ADHERE THE FLASHING DIRECT TO THE COVER-UP WALL WRAP. ***NOTE THE ADJACENT FLASHING WHICH HAS BEEN INCORRECTLY FITTED UNDER THE COVER-UP.***

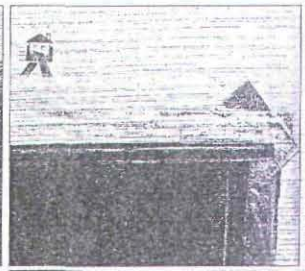


FIG 14 SHOWS ALUBAND 50mm WINDOW SEALING TAPE FIRMLY ADHERED TO THE COVER-UP MEMBRANE. ***NOTE THE TAPE IS EXTENDED 50mm PAST THE ENDS OF THE METAL FLASHING.***

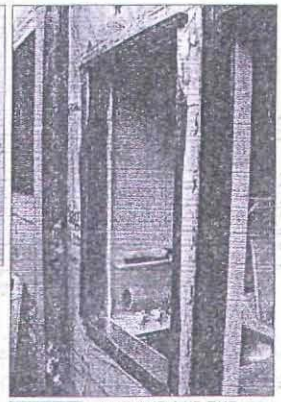


FIG 15 ALUBAND AND THE CORNER MOULDED PIECE COVERING THE WHOLE FRAME, WITH THE METAL FLASHING TAPED TO THE COVER-UP. THE FULL WINDOW TAPING IS A REQUIREMENT FOR SPECIFIC EXTERIOR SHEATHINGS.

Thermakraft ALU WINDOW SEALING SYSTEM
is used for: **REPAIRS • WATERPROOFING • PIPEWORK • TILES • CONCRETE**

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

48 Sharp Road,
Ngongotaha, RD2
Rotorua, Bay of Plenty.

Phone: 073323904
FAX: 073323906
email: reidmj13@xtra.co.nz

LIAM DAGG
Senior Resource Management Advisor
Planning Services

DESTINATION ROTORUA
ROTORUA DISTRICT COUNCIL

P: 07 348 4199
F: 07 346 3143
E: liam.dagg@rdc.govt.nz
W: www.rdc.govt.nz

1061 Haupapa Street
Private Bag 3029
Rotorua, New Zealand

Monday, June 19, 2006

Rotorua City Council
Building Approval Department

Dear Sir or Madam,

RIM / BC
#0036598

I wish to apply for building permission for a photographic studio at my residence at 48 Sharp Road, Ngongotaha, Rotorua.

I have always been a very keen photographer but have never had the time to persue, fully, my interest in photography. Having retired a couple of years ago I now have the time to take photographs and process them.

Unfortunately, the weather in Rotorua leaves much to be desired for outdoor photographic opportunities. There is a lot of rain and a good deal of dark cloudy weather during the months that I live here. For this reason I wish to work indoors with portraits and still-life.

I do not envisage a commercial venture. The project of building a photographic studio is simply to further an interest of mine. Film will be processed, but only in relatively small quantities reflecting an individual's needs to work with his hobby. For the greater part of my work, digital processes will be used. However, I shall develop film and print them when the need arises. I fully appreciate that digital work is more environmentally friendly and will keep that in mind during my work.

Chemicals to be used will developer:DD-X Developer or ID-11 1 developer for black and white film, stop bath: Ilfostop; Hypam Fixer for fixing film; for developing prints:Universal Paper Developer. All of these chemical are manufactured by Ilford. No more than two litres of each of these chemicals will be stored on site, enough for personal use.

I hope this information is sufficient to enable you to decide whether or not this project should be undertaken.

Yours Sincerely,

Michael J.Reid

No issues from Planning/District Plan perspective (Permitted Activity) — no resource consent required

LIAM DAGG 20/6/06

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

LOCKWOOD

Issue No: **14**
Date: January 06

STANDARD SPECIFICATION FOR LOCKWOOD COMPONENTS

ALL COMPONENTS CONFORM WITH THE NEW ZEALAND BUILDING CODE MINIMUM PERFORMANCE CRITERIA FOR DURABILITY SUBJECT TO NORMAL MAINTENANCE

Under the New Zealand Building Code, Handbook and Approved Documents (NZBC), building materials, components and construction methods are required to be sufficiently durable to ensure that the building, without reconstruction or major renovation, satisfies the other functional requirements of the NZBC. Durability does not include aesthetic appearance. Clause B2 is used as an acceptable solution in ensuring compliance with the durability provisions of the NZBC.

1. **BEARERS:** Sizes to suit spans. No.1 framing grade treated to H3.2, Radiata Pine gauged.

2. **FLOOR JOISTS & NOGGINGS:** Sizes to suit spans. No.1 framing grade treated to H1.2, Radiata Pine gauged.

3. **FLOORING:** 20mm untreated high density flooring grade particle board.

4. **ALUMINIUM ALLOY INTERLOCKING EXTRUSIONS:** 'X' and 'V' profiles. Corner connections, etc., may in some cases require screw fixing in position.

5. **EXTERIOR WALLS:**

   (i) ALUMINIUM SHEATHED **(62mm)**: The board will be manufactured from either a solid one piece ex 200mm x 70mm Lockwood grade, fingerjointed, kiln dried, Radiata Pine or constructed from a composite number of pieces of timber, laminated to an inside laminate of ex 200mm x 40mm Lockwood grade, fingerjointed, kiln dried, Radiata Pine planks treated to H1.2. Sheathed with an aluminium extrusion, electrostatically coated with thermo setting Polyester resin coating on the visible surfaces to a minimum thickness of 50 microns to form a finished overall size of 62mm x 192mm board to the registered design in a tongue and groove configuration;

   (ii) RADIATA PINE **(62mm)**: Constructed from one ex 200mm x 40mm clear grade and one ex 200mm x 40mm Lockwood grade or one ex 200mm x 25mm clear grade and one ex 200mm x 12mm Cut of Log grade and one ex 200mm x 40mm Lockwood grade kiln dried, Radiata Pine planks treated to H3.1, fingerjointed where necessary. Laminates are bonded with a Resorcinol adhesive to form a finished size of 62mm x 192mm board to the registered design in a tongue and groove configuration with a striated exterior surface suitable for an oil based penetrating stain. [Refer Important Information 9.f.];

   (iii) CEDAR **(62mm)**: Constructed of one ex 200mm x 25mm vertical grain Cedar and one ex 200mm x 50mm Lockwood grade or one 200mm x 25mm vertical grain Cedar and one ex 200mm x 12mm Cut of Log grade and one ex 200mm x 40mm Lockwood grade kiln dried, Radiata Pine planks treated to H3.1, fingerjointed where necessary. Laminates are bonded with a Resorcinol adhesive to form a finished size of 62mm x 192mm board to the registered design in a tongue and groove configuration with a striated exterior surface suitable for an oil based penetrating stain. [Refer Important Information 9.f.];

   (iv) ALUMINIUM SHEATHED **(97mm Insulated)**: The board will be manufactured from one piece of ex 200mm x 50mm or 40mm Lockwood grade and one piece of ex 200mm x 40mm select purpose grade, fingerjointed, kiln dried, Radiata Pine or other, treated to H1.2. These are held separated by two structural spreaders glued in place using Resorcinol adhesive. Insulation of required value is placed between said boards. Sheathed with an aluminium extrusion, electrostatically coated with thermo setting Polyester resin coating on the visible surfaces to a minimum thickness of 50 microns to form a finished overall size board of 97mm x 192mm to the registered design in a tongue and groove configuration;

   (v) RADIATA PINE **(97mm Insulated)**: Constructed from one ex 200mm x 40mm dressing grade and one ex 200mm x 50mm or 40mm Lockwood grade or one ex 200mm x 25mm dressing grade and one ex 200mm x 15mm Cut of Log grade laminated with a Resorcinol adhesive and one ex 200mm x 50mm or 40mm Lockwood grade kiln dried, Radiata Pine planks treated to H3.1, fingerjointed where necessary. These are held separated by two structural spreaders glued in place using Resorcinol adhesive. Insulation of required value is placed between the said boards. This forms a finished size board of 97mm x 192mm to the registered design in a tongue and groove configuration with a striated exterior surface suitable for an oil based penetrating stain. [Refer Important Information 9.f.];

   (vi) CEDAR **(97mm Insulated)**: Constructed from one ex 200mm x 25mm vertical grain Cedar and one ex 200mm x 15mm Cut of Log grade laminated with a Resorcinol adhesive and one ex 200mm x 50mm or 40mm Lockwood grade kiln dried, Radiata Pine planks treated to H3.1, fingerjointed where necessary. These are held separated by two structural spreaders glued in place using Resorcinol adhesive. Insulation of required value is placed between the said boards. This forms a finished size board of 97mm x 192mm to the registered design in a tongue and groove configuration with a striated exterior surface suitable for any oil based penetrating stain. [Refer Important Information 9.f.];

   (vii) 43mm EXTERIOR WALL: Comprised of ex 200mm x 50mm Lockwood grade fingerjointed kiln dried Radiata Pine planks treated to H1.2, and lined on the exterior with ex 50mm x 50mm No.2 framing grade, Radiata Pine wall battens treated to H1.2 and building wrap. The tongues of the wall planks of the 43mm & batten system are taped with the patented "noise reduction" system where necessary. These walls must be lined with a suitable proven product such as brick veneer, Lockwood weatherboard lining or other approved exterior wall cladding materials and insulated to the requirements of NZS 4218.

6. **INTERIOR WALLS (43mm):** Ex 200mm x 50mm Lockwood grade kiln dried Radiata pine plank treated to H1.2, fingerjointed where necessary to form a finished size of 43mm x 192mm board to the registered design in a tongue and groove configuration. The tongues of the wall planks are taped with the patented "noise reduction" system where necessary. Where interior walls are exposed to the elements, these walls must be lined with a suitable proven product such as brick veneer, Lockwood weatherboard lining or other approved exterior wall cladding materials and insulated to the requirements of NZS 4218.

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

7. **JOINERY:**

(i) ALUMINIUM: Joinery extrusions are electrostatically coated with thermo setting Polyester resin coating on the visible surfaces to a minimum average thickness of 50 microns. All aluminium frames and panels are supplied with hardware in a subframe of either ex 200mm x 50mm, ex 200mm x 25mm, ex 100mm x 50mm, or ex 125mm x 50mm kiln dried Radiata Pine fingerjointed and treated to H3.1. Colour matched sill flashings supplied if required. Garden windows incorporate awning sashes in the side panels. French doors are outward hanging. **Inward opening doors, Bi-fold windows and doors and Z12 sliders are not suitable for exposed conditions and may leak when exposed to the elements.** Fixed and open panels may be interchanged. All glass is to comply with NZS 4223. All joinery frames are to comply with NZS 4211 (Performance of Windows);

(ii) TIMBER EXTERIOR DOORS: Exterior Cedar glazed doors are constructed and pre-hung in aluminium frames in ex 100mm x 50mm or suitable sized Radiata Pine fingerjointed frames and treated to H3.1. The doors will be inward or outward opening with hardware supplied. **Timber exterior doors are not suitable for exposed conditions and may leak and distort when exposed to the elements.** All glass to comply with NZS 4223. All joinery frames are to comply with NZS 4211 (Performance of Windows);

(iii) INTERIOR DOORS (including wardrobe doors): Flush hollow-core paint quality doors prehung in ex 100mm x 50mm kiln dried Radiata Pine, untreated, fingerjointed timber frames. Sliding wardrobe doors are supplied with finger pulls, roller bearing hangers and tracks. Varnish quality or solid core doors are available on request as an optional variation. Doors are constructed of timber styles and rails using an adhesive containing an insect repellent and an M.D.F. door skin. All hardware supplied.

8. **PILLARS AND STIFFENERS:** Finished 86mm x 86mm constructed of 3 ex 100mm x 40mm laminates or 124mm x 86mm constructed out of 3 laminates of ex 100mm x 50mm kiln dried GL8 stress graded Radiata Pine treated to H1.2, fingerjointed where necessary. **Sylvic M7** is used to bond laminates for **interior** use and **Resorcinol adhesive** is used to bond laminates for **exterior** use. Other stiffeners (A, B, C and H see Roof Supporting Beams) will be supplied to suit the structural requirement. All exterior pillars are treated to H3.1 and primed.

9. **ROOF SUPPORTING BEAMS:** GL8 stress graded Radiata Pine fingerjointed, treated to H1.2 for interior use and H3.1 for exterior use, **suitable for exterior use, only when top surface is not exposed:**

(i)	T Beam	-	Finished 430mm x 86mm being 10 laminates ex 100mm x 50mm;
(ii)	9 Lam Beam	-	Finished 387mm x 86mm being 9 laminates ex 100mm x 50mm;
(iii)	8 Lam Beam	-	Finished 344mm x 86mm being 8 laminates ex 100mm x 50mm;
(iv)	A Beam	-	Finished 301mm x 86mm being 7 laminates ex 100mm x 50mm;
(v)	B Beam	-	Finished 258mm x 86mm being 6 laminates ex 100mm x 50mm;
(vi)	C Beam	-	Finished 215mm x 86mm being 5 laminates ex 100mm x 50mm;
(vii)	H Beam	-	Finished 165mm x 86mm being 4 laminates ex 100mm x 50mm;

(viii) Laminated beams and nailing beams of various sizes will be supplied to suit the structural design requirement.

Sylvic M7 is used to bond laminates for **interior** use products and **Resorcinol adhesive** is used to bond laminates for **exterior** use.

10. **FULL ROOF SARKING (35mm):** Ex 200mm x 40mm Lockwood grade kiln dried Radiata Pine planks treated to H1.2 or H3.1 on roofs less than 10°, fingerjointed where necessary. The tongues of the boards are taped with the patented "noise reduction" system.

11. **BARGE AND SPOUTING BOARDS:** Ex 250mm x 40mm and 100mm x 50mm GL8 stress graded kiln dried Radiata Pine, treated to H3.1, fingerjointed where necessary, and primed; or ex 200mm x 40mm kiln dried Radiata Pine planks, treated to H3.2, fingerjointed where necessary, and primed. Avoid painting with dark colours, which absorb heat and cause undue stress to the timber. [Refer Important Information 9.f.]

12. **BUILDING WRAP:**

(i) Heavy duty synthetic non-absorbent for placement on top of sarking;

(ii) Self supporting for placement on top of purlins.

(iii) Synthetic non-absorbent for placement on the ex 50 x 50 batten to 43mm exterior walls.

13. **ROOFING TIMBER:**

(i) DUMMY RAFTERS - ex 100mm x 50mm treated to H1.2 or H3.1 on roofs less than 10°, kiln dried VSG or MSG 8 Radiata Pine or untreated Douglas Fir;

(ii) PURLINS - ex 75mm x 50mm treated to H1.2 or H3.1 on roofs less than 10°, kiln dried Radiata Pine No.1 framing grade or untreated Douglas Fir;

(iii) TILE BATTENS - ex 50mm x 40mm treated to H1.2, kiln dried Radiata Pine No.1 framing grade or untreated Douglas Fir.

14. **FINISHING MATERIALS:** Kiln dried Radiata Pine fingerjointed where necessary:

(i) Flashing baseboards - ex 200mm x 25mm or ex 100mm x 25mm kiln dried Radiata Pine H3.2 treated, primed. [Refer Important Information 9.f.];

(ii) Cappings - ex 100mm x 50mm or ex 150mm x 50mm kiln dried, untreated Radiata pine;

(iii) Scotia and skirting - ex 50mm x 25mm or ex 100mm x 25mm kiln dried, untreated Radiata Pine;

(iv) Soft PVC mouldings that fit into A, B, C, W and L aluminium profiles;

(v) Shelving and battens - ex 200mm x 25mm and ex 50mm x 25mm kiln dried, untreated Radiata Pine or other suitable size;

(vi) Wardrobe rails - 19mm diameter powder coated steel pipe complete with P.V.C. holders;

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

(viii) Sealant.

15. **TIE-RODS:** 10mm or (12mm as an option) diameter galvanised rods, threaded one end. Complete with washers and nuts.

16. **WEATHERBOARD LINING :**

(i) ALUMINIUM CLADDING (19mm): Powder coated aluminium extrusion fixed to ex 200mm x 25mm kiln dried Radiata Pine Merchant and Better grade backing board treated to H3.1, fingerjointed where necessary and primed. The powder coated paint film is electrostatically applied onto the aluminium to a minimum average thickness of 50 microns on all visible surfaces;

(ii) CEDAR (19mm): Ex 200mm x 25mm clear vertical grain kiln dried, Cedar with a striated face. Suitable for an oil based penetrating stain. [Refer Important Information 9.f.];

(iii) RADIATA PINE (19mm): Ex 200mm x 25mm clear grade, kiln dried Radiata Pine treated to H3.1, finger jointed where necessary with a striated face suitable for an oil based penetrating stain. [Refer Important Information 9.f.];

(iv) WEATHERCLAD 21: Powder coated aluminium extrusion weatherboard system, supplied with PVC fixing clips. The powder coated paint film is electrostatically applied onto the aluminium to a minimum average thickness of 50 microns on all visible surfaces.

17. **INTERIOR LINING BOARD (19mm):** Ex 200mm x 25mm kiln dried, untreated Radiata Pine plank, fingerjointed where necessary.

18. **FIRST FLOOR SUPPORT BEAMS:** (Refer 9).

19. **FIRST FLOOR JOISTS AND NOGGINGS:** (Refer 2).

20. **FIRST FLOOR FLOORING:** (Refer 3).

21. **FIRST FLOOR FLOORING (43mm):** Ex 200mm x 50mm Lockwood grade kiln dried Radiata Pine planks treated to H1.2, finger jointed where necessary. The tongues of the board are taped with the patented "noise reduction" system.

22. **WALL & CEILING BATTENS:**

(i) Wall: ex 50mm x 50mm Radiata Pine (Lockwood grade) treated to H1.2;

(ii) Ceiling Battens: ex 75mm x 50mm kiln dried, untreated Radiata Pine.

23. **CEILING TILES:** Rectangular, preprimed wood fiber tiles.

24. **TRUSS PLATE:** Ex 100mm x 50mm or ex 75mm x 50mm gauged No.1 framing grade Radiata Pine treated to H1.2.

25. **ROOF TRUSSES:** Manufactured from No.1 framing grade Radiata pine gauged, treated to H1.2, or untreated Douglas Fir. A Structural Design Certificate is available on request.

26. **PLYWOOD BRACING PANELS:** 7.5mm standard construction plywood. Installation in accordance with manufacturers specification;

NOTE: ITEMS NOT INCLUDED IN THE PURCHASE MUST BE STRUCK OUT OF THIS SPECIFICATION.

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

1. SCOPE OF USE:

The components specified are intended only for use as components for the construction of houses and commercial units.

The components specified are manufactured for Lockwood by a variety of manufacturers, who may have their own specifications on the use and maintenance of their components. Nothing here should be taken as overriding the manufacturers specifications on the use and maintenance of their components.

Before commencing any project using the components specified, the user must refer to the environmental limitations and procedures for handling, storage, erection and maintenance, which are referred to in this specification. These limitations and procedures must be strictly observed. **Should a user fail to strictly observe the limitations and procedures, or fail to use the components in the manner or environment for which they were intended, a reduction in product life and in durability could result.**

2. DURABILITY:

The durability of each component as per Clause B2 of the NZBC is the expected performance criteria for the life of that specific component if: -

a. They receive normal use;
b. They receive normal maintenance;
c. They are used in the environment for which they are specified;
d. They are handled, stored and erected using the procedures specified in this specification or in manuals, plans or other documentation supplied, or made available by Lockwood;
e. Wind speeds do not exceed the engineered design specification. [Refer Important Information 9.g.].

If normal maintenance is not carried out, or if components are not handled, stored and erected using the procedures specified, a reduction in the performance criteria and durability of the components may result.

If the components are exposed to environments other than the environments for which they are specified, their durability may be reduced. This is especially the case for metal components. **If any of the components are used in a more severe environment than that for which they are specified their performance for the durability criteria cannot be guaranteed.**

3. EXPOSURE ZONES:

Reference in this specification to environments or exposure zones is taken from NZS 3604:1999. A reference to an environment includes reference to a zone. NZS 3604:1999 classifies building sites as being in a sea spray zone or within zones 1, 2, 3 or 4 as identified in the Standard. The zone depends upon the severity of exposure of the site to wind-driven sea salt or to geothermal gases. There are maps within NZS 3604:1999 which identify the zones.

The sea spray zone is the area identified on the maps as sea spray zone and is also those areas within 500 metres of the sea, including harbours or 100 metres from tidal estuaries and sheltered inlets. It also includes all offshore islands including Waiheke, Great Barrier, Stewart and the Chatham Islands.

Zones 1, 2, 3 and 4 are as shown on the maps in NZS 3604:1999.

All locations within 50 metres of geothermal hot spots are an environment referred to in NZS 3604:1999. A geothermal hot spot is a location that exhibits any geothermal activity such as steam, water or fumes emitting from the ground, hot water or mud pool. They are mainly found in zone 4, but may occur elsewhere.

NZS 3604:1999 also defines 3 separate environments being: -

a. "closed" means in a situation where the material is not exposed to rain or ground moisture and wind blown corrosive salts;

b. "exposed" means in a situation where the material is washed by direct or wind blown rain;

c. "sheltered" means a situation where the material is not washed by direct or wind blown rain but may be subject to wind blown salts.

4. MAINTENANCE REQUIREMENTS:

In all zones and environments normal maintenance of a building erected from the specified components is as specified. Without limiting the normal maintenance requirements specified elsewhere, important maintenance requirements are: -

a. Adequate ventilation of the building so as to prevent the build-up of internal moisture;
b. Maintaining the building in a weatherproof condition;
c. Protection of all exposed surfaces from moisture and damage in accordance with standard building practice;
d. Application and maintenance of protective coatings required twice a year. [Refer Important Information 9.f.];
e. Exposed metal surfaces (even if they are covered with a protective coating) should be washed at least every 12 months with fresh, clean, iron and copper-free water and a soft brush. (Iron and copper is normally found in bore water, and filters are available to extract this from the water). This includes roofs, aluminium joinery and sheathing. Areas which are sheltered from rain washing should be washed at least every six months with fresh, clean, iron and copper-free water and a soft brush;
f. The exposed ends of all tie-rods, nuts and washers are to be covered with a protective coating of petroleum grease (not supplied), and every 5 years thereafter, the washers and nuts on the end are to be checked for snugness and greased again with petroleum grease or an equivalent product so that the washers and nuts and thread are protected;
g. Exposed nail plates and metal fasteners are to be covered with a protective coating of petroleum grease and every 5 years thereafter, greased again with petroleum grease or with an equivalent product so that the exposed metal surfaces are protected;
h. **For sea spray zones or environments within 50 metres of a geothermal hot spot, in addition to the normal maintenance specified, a. to g. above, normal maintenance in these zones or environments would include: -**
Exposed metal surfaces (even if they are covered with a protective coating) should be washed at least every 6 months with fresh, clean, iron and copper-free water and a soft brush. This includes roofs, aluminium joinery and sheathing. Areas which are sheltered from rain washing should be washed more frequently with fresh, clean, iron and copper-free water and a soft brush.

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

5. COMPONENT HANDLING, STORAGE AND ERECTION:

The components must be handled, stored and erected using the procedures specified in the Lockwood Assembly Manual and the plans supplied with the components.

The performance of some of the components can be limited by a number of factors including: -

a. Allowing the components to become unduly wet or exposed to moisture during construction;

b. Damage to the surface coating during handling and construction;

c. Failure to apply protective coatings to the surfaces of some of the components promptly, with the components being dry at the time of application.

6. AVAILABILITY OF INFORMATION TO BUILDING OWNER:

The person obtaining the specified components from Lockwood must ensure that a copy of this specification is passed on to the owner of the building, and the owner must ensure that the Specification is are passed on through the chain of ownership, so that it always remains with the owner of the building, so that the owner of the building from time to time will be aware of the provisions of this specification and of the on- going maintenance requirements associated with the components.

Any specifications or maintenance requirements for a specific set of components which have been obtained from Lockwood to be erected in an environment which is not specified in NZS 3604:1999 must be made available to the owner and subsequent owners of the building from time to time in the same manner as provided for in this specification.

7. GENERAL:

a. Timber Treatment (complies with NZS 3602:2003):

Where timber is treated it will be treated as class H1.2, H3.1 or H3.2 as provided in NZS 3640:2003 (see table 3.1 and table 4.4.2 of NZS 3640:2003).

Any of the following timber alternatives for the specified classes may be used subject to availability:-

(i) Light Organic Solvent Preservatives – Class H1.2 and H3.1:

This treatment is applied by double vacuum pressure application to the timber.

(ii) Multisalt Class H3.2:

This is a treatment using copper chrome arsenate multisalt timber preservative applied under pressure to the timber.

b. Powdercoating:

Given that there can be batch variations in powder coated colour, the colour shall match the corresponding master standard and be within less than or equal to 1.5 Delta E units of the master standard when measured on an approved colour computer – C.I.E. Lab System.

c. Miscellaneous:

(i). The Lockwood Building System is protected in many countries by patents, copyrights, design registrations and trademarks. These are available upon request.

(ii). This specification is a general guide and is not to be treated as a substitute for detailed technical advice in relation to environments which are more severe than those specified in NZS 3604:1999.

(iii). If the components are not handled, stored, erected, used and maintained in accordance with this specification, Lockwood is not liable for any loss or damage suffered. Lockwood is not liable if any technical advice obtained independently of Lockwood is deficient.

8. ADHESIVES:

Sylvic M7 is used for bonding structural wooden components for use on products that are completely protected from elements, i.e. internal use and protected from the weather.
Resorcinol adhesives are used for bonding structural wooden components for use on products that are exposed to the exterior and in wet and humid conditions.

9. IMPORTANT INFORMATION:

a. In general, the quality of material and standard finish for Lockwood components will be within the limits of the specification. Lockwood is the manufacturer of Lockwood building components. Lockwood sells components through appointed franchised builders who enter into building contracts with individual building purchasers. Any responsibility of Lockwood in any area, is confined solely to components supplied by Lockwood. There are normally materials in every building, which are supplied by the franchised builders and not by Lockwood.

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

b. Lockwood designs components for erection in accordance with standard plans for which a Lockwood Design Certificate ("Certificate") is issued. Any changes made to a standard plan are not covered by a Certificate and it is the responsibility of the franchised builder (or the client if a kitset sale) to ensure that any changes made to a standard plan do not weaken the structure. Unless Lockwood expressly in writing assumes liability for any changes made to a standard plan, Lockwood has no responsibility for any changes made.

c. If, due to any changes made to a standard plan, the characteristics of a site, or any other reason, engineering calculations are needed, the obtaining of those calculations and their accuracy is the responsibility of the franchised builder (or the client if a kitset sale).

d. Lockwood is not responsible for any component or product erected from components that have been altered by a franchised builder, any other builder, or any other person so that the component or product is outside the then current Lockwood specifications, plans, enhancements or additions.

e. Due to changes in atmospheric conditions, movement could occur after construction of the timber components. Reasonable movement has been allowed for in the design of the system.

f. It is recognised that exposed timber will naturally tend to move. Splits and cracks may appear and there may be gum leakage, fungal and mould growth. All exposed timber surfaces require a weatherproofing and biocide timber protection preparation applied twice yearly. It is suggested, to reduce the incidence of the above, an application of biocide and protective coating is applied to reduce deterioration. It will require the twice yearly maintenance for this treatment to stay effective. Any such surface distortion, fungal or mould growth is purely cosmetic and should not adversely affect the structural integrity of the product, provided the surface is adequately maintained. Application of a biocide and protective coating to exposed timber surfaces will not necessarily fully prevent surface distortion or mould and fungal attack, but will minimise this natural feature of timber. Dark colours on timber exterior surfaces can result in excessive heat absorption, causing undesirable timber movement. This can be significantly reduced by the use of light or neutral colours and stains.

g. The Lockwood Building System can be modified to suit site exposure conditions for wind speeds as contained in NZS 3604:1999. Components produced for Stock, Transportable, and Show Homes due to their transportable nature will be designed to suit 50 metres per second (very high) wind speeds. Where topography, elevation or degree of exposure of the building site results in higher wind speeds than contained in NZS 3604:1999, special engineering calculations and the Specific Wind Speed Kit must be requested in writing and incorporated into the design.

h. Lockwood is continually researching and developing its product range. Therefore, specifications or designs may change without notice.

10. **CONSUMER GUARANTEES ACT:**

a. If the Consumer either acquires or holds himself or herself out as acquiring the components for the purpose of a business then the provisions of the Consumer Guarantees Act 1993 shall not apply to the supply of the components by Lockwood.

b. The Consumer has not made known, either expressly or by implication, to Lockwood any particular purpose for which the components are being acquired other than purposes for which components of the type in question are commonly supplied as part of a domestic building contract using Lockwood components and in terms of this specification.

c. There has been no representation to the Consumer that the components are or will be fit for any purpose other than the purposes for which they are commonly supplied as part of a domestic building contract using Lockwood components under the terms of this specification.

d. The Consumer is required, when ordering components, to specify the exposure zone or environment referred to in NZS 3604:1999 for the building to be erected from the components. This is vital information so that correctly specified components can be supplied for that exposure zone or environment. If the Consumer does not specify the exposure zone or environment when ordering the components, Lockwood will supply the components for an exposure zone other than sea spray zone and an environment which is not within 50 metres of a geothermal hot spot.

e. The Lockwood components are supplied for erection into a building to be located in the exposure zone or environment specified when the order is placed. If the components are erected into a building located in a more severe exposure zone or environment, or if the building once erected is transported to an exposure zone or environment more severe than the one for which the components are supplied, then some of the components may not meet the period of durability specified for that component, even with normal use and normal maintenance because they are in a more severe exposure zone or environment.

Customer Signature: _____

Customer Name: _____

Date: _____

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

SPECIFICATION
OF

work to be done and materials used in the
construction and completion of a new home

For	**MICHAEL J REID** **Photography Studio & Gymnasium**
on	**Lot 2** **DPS 71633**
Street No **Address**	**48 Sharp Road** **ROTORUA**

The whole of the works is to carried out by

HODGES CONSTRUCTION LIMITED
ROTORUA

Builders of quality homes and franchised contractor for the world patented Lockwood building system

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

SPECIFICATION INDEX

SECTION	PAGE
Preliminary and General	3
Earthworks and Site Preparation	4
Concrete Slab Foundation	6
Reinforcing Steel	7
Roofing	8
Carpentry	9
Joinery Fittings	11
Plumbing	11
Drainage Works	12
Electrical Work	13
Painting and Decorating	14
Schedule of Finishes	15

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

PRELIMINARY AND GENERAL

The Contractor shall provide all labour and materials, supply and maintain all required tools, plant, scaffolds, sheds and the like.
All work shall be carried out in accordance with this Specification together with all relevant plans and details and shall comply with the Building Code of New Zealand 1992.

All work shall be in accordance with NZS 3604 Model building by-law except where overruled by the Territorial Authority By-laws or specific design requirements.

PLANS AND SPECIFICATIONS
The working drawings with this Specification and any special conditions attached will form part of the contract agreement.
Figured dimensions shall take precedence over scaled dimensions. Large scale drawings will take precedence over small scale drawings.

INSURANCE
The Contractor will insure the building for the full contract price plus GST, against "Builders All Risk" in the names of the Owner, the Builder and the Mortgagee (if any) for their respective rights and interests. This cover will remain in force from the date of commencement until the date of occupation.

DEFAULT AND BANKRUPTCY
The usual laws of bankruptcy and default will apply to this agreement.

VARIATIONS AND ADDITIONAL WORK
The Contractor shall carry out variations or extra work requested by the Owner or their representative and the Contractor will be under no obligation to accept any extras, variations or deletions to the contract, but may in its absolute discretion accept any such variation to the contract as the Owner may request. The Owner will duly pay for as an addition to the contract price all extra work and materials ordered and supplied by the Contractor. Extras will be charged on a cost plus **20%** basis unless otherwise quoted and agreed for.

BUILDING CONSENT AND FEES (BY OWNER)
The Ownewr shall obtain all Building Consent from and pay all fees demanded by the Territorial Authority before commencement of the works. This clause shall not apply for the arrangement and payment of the inspection and valuation by the lending institution (if any) in respect of progress payments. In the event of additional work being required by the Territorial Authority, this work will be regarded as an extra to the Contract and payments for these will be the responsibility of the Owner.

VEHICLE CROSSING
Where a vehicle crossing is called for by the Territorial Authority any fees arising from this request will be the treated as a variation to the Contract, but passed on at the direct cost as invoiced by the Territorial Authority.

MATERIAL SPECIFICATION
Should any materials specified for this Contract be unprocurable at the time of purchase then negotiations shall be made for the provision of substitutes. Any substitute must also be acceptable to the Territorial Authority prior to the work recommencing. Any cost variation will be credited or charged as an extra on completion of the contract. All materials placed on the site by the Contractor for the building remain the property of the Contractor in the case of these materials not being used. All waste material and formwork remain the property of the Contractor.

MAINTENANCE
The Contractor will maintain the work carried out for a period of **ninety (90) days** after completion of the Contract. During this period the Contractor will make good any all defects in any part of the trade to a true workmanlike standard.

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

CLEAN UP AND MAKE GOOD

The site is to be left clean at all times from the accumulation of rubbish resulting from the works, and provision is to be made for the regular removal of the same from the site.
Excavated soil and spoil is the responsibility of the Owner.
The Contractor is responsible for leaving the building broom clean only.

SUBCONTRACTORS

All subcontractors shall be engaged and supervised by the Contractor except where prior arrangements have been made in writing between the Contractor and the Owner. Every subcontractor jointly and separately will collaborate, wait on, assist and render all necessary assistance to complementary trades. Additional work or adjustments must be made with the Contractor. Alterations and additional works instructed by the Owner to the subcontractor will not be the responsibility of the Contractor. (Refer to extra work)

The individual subcontracts listed in this Specification are respectively the responsibility of the subcontractor under which they are listed.

Any subcontractor working on the contract without their own set of plans and / or Specification does so at their own risk, and any errors from doing so must be rectified at their own expense.

ARBITRATION

Any dispute arising between the Owner and the Contractor not soluble by the terms of this Specification, will be referred to Arbitration within the meaning of the Arbitration Act 1908.
Occupation of the building cannot be taken until the dispute is settled. In the event that the Owner takes occupation then any claim to Arbitration is nullified.

EARTHWORKS AND SITE PREPARATION

SETTING OUT

The owner will be responsible for the locating and clear flagging of all survey pegs before the set out of the building on the site.
The Contractor will be responsible for the accurate setting out of the building and works to the dimensions shown on the contract drawings.

LEVELS

Foundation heights shown on the plan are an approximation and should be verified on site by the Contractor. Any variation in the ground level requiring additional foundation work will be provided for as extra work.

GROUND CONDITIONS

Foundations on this contract provide for solid bearing down to 300mm below ground surface level.
Where soft, unsuitable or unusual strata or below ground conditions are encountered requiring additional depth of concrete and other foundation materials to provide solid bearing to build on and or comply with Mortgagees and or Territorial Authority requirements, the additional costs incurred by the Contractor will be charged as additional work to the Owner.
Where unusual ground conditions are encountered and special foundation details and works have to be carried out, these too will be treated as additional work and the additional costs incurred by the Contractor will be charged as additional work to the Owner.

TEMPORARY SERVICES

Water: A toby should be on every section. in the event of water not being supplied any additional arrangements made by the Contractor will be provided for as Extra Work and any additional costs incurred will be charged to the Owner.

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

Electric Power: The Owner will be responsible for the supply of temporary electric power to the building site given that Incoming Electric mains have been provided for by the Owner. In the event that the Owner does not provide Incoming. Electric mains and the Contractor has no means of providing power to the building site then any costs incurred in the hireage of Temporary generators will be charged as Extra work to the Owner.

SITE PREPARATION

Must comply with NZS 3604 3.4 excavation of the building site, if required, and will be arranged for by the Contractor and if the cost is not included in the contract, an extra charge will be bade as Extra Work. The Contractor responsible for the Supervision of the excavation and the progress of levels to establish the required platform.
For the purpose of the contract agreement, soil conditions are taken to solid ground approved by the Territorial Authority. It will be the Owners responsibility to ensure that they or their representative is in attendance when excavations are carried out on the building site.

SITE ACCESS

All building sites will have access suitable for heavy vehicles. If this is not the case the responsibility of providing access rests with the Owner and access should be provided at their cost prior to the commencement of building. However, if during the works it is necessary to provide hardfill for access this will be undertaken by the Contractor and charged to the Owner as Extra Work. Where access is only available through an adjoining property, it will be the responsibility of the Owner to obtain prior approval from the owner of that property.

CLEARING OF SITE

Clearing of vegetation and other materials from the building site prior to commencement will be the responsibility of the Owner. In the event that the Contractor needs to provide site clearance during the building stage then the cost of this work will be charged as Extra Work to the Owner.
The general excavation of the vegetation to the sloping hillside within the building foot print plus 2.00m each way has been included within the contract price by the Contractor.

FOOTPATH DAMAGE

The Contractor will be responsible for any damage to Territorial Authority footpaths and / or road crossings, resulting from any vehicle used by him or his sub trades, or delivery vehicles of materials ordered by him, providing that such crossings are constructed to an acceptable standard.

REGISTERED ENGINEER

If the lending Authority and / or Territorial Authority requests an Engineers report, instructions or calculations, then the costs of this service will be provided as Extra Work to the contract. Where the section has been filled, the Owner must provide the Engineers Certificate of Compaction.

EARTH FILL

The Contractor will not be liable for any damage or deterioration of any work to the building or to the site caused by or resulting from the inadequacy of earth fill or by the negligent application thereof, and the Owner indemnifies the Contractor and his sub contractors against any claim against him by any person whatsoever for damages or expenses incurred by faulty earth aforesaid.

MATERIAL DELIVERIES

If the site is of an unusual location and / or has exceptionally limited access which does not permit the access of normal wheeled delivery vehicles then any costs incurred in the delivery of materials by other means will be treated as Extra Work to the contract and met by the Owner.

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

CONCRETE SLAB FOUNDATION

CONCRETE WORK

Concrete shall be 17.5MPa strength at 28 days, mixed with sharp clean sand and crushed hard metal or river shingle.
All concrete will be placed as close to its final position as possible compacted and screeded level.

REINFORCING

Footings: Shall be shown on the drawings, steel to conform to Appendix E NZS 3604 Hook rod ends if detailed with U bends having an internal radius of 4 bar diameters minimum and lapped 40 diameters minimum. Bend steel 600mm around all angles. All joints will be tied with 16 gauge black iron wire to secure and avoid displacement during concrete placement.
Concrete Slab: Shall be 100mm thick or as detailed on the drawings and reinforced with suitable HRC welded wire mesh, lapped 200mm at sheet joins. All mesh reinforcing will be supported on approved mesh chairs and wire tied at laps.

DAMP-PROOF COURSE

An approved black polythene damp-proof corse of 0.010mm minimum will be placed under concrete surfaces laid on a 30mm layer of compacted sand or clean white pumice. This damp-proof course will be properly lapped and taped at all joints and securely taped around all penetrations. Care is to be taken during the placing of all concrete to avoid tears in the membrane. Any tears in the membrane are to be securely taped prior to placing concrete.

COMPACTION

Sand or clean white pumice shall be thoroughly watered and rolled to provide a substantial bed for the placing of the concrete slab.

FINISHING

All sizeable slabs shall be screeded off level or to the prescribed falls and then brought to a hard surface with an approved power float or bull float equipment. Power floating shall be carefully timed to suit the curing rate of concrete and shall be such as to leave the surface perfectly dense and free from ridges. The surface is to be accurate to 6mm in 3.00metres.

BUILDING IN

Provide and build in all items and fixings necessary which may or may not be specified or shown on the drawings, but which are none the less necessary for the complete and proper execution of the works.
Make provision for:

- Shower/Bath trap
- WC Outlets
- All under floor piping
- All waste outlets
- Rebate footings for sills as necessary

All plumbing is to be laid in clean white pumice or clean sand prior to laying the damp-proof membrane, and will be suitably lagged in densotape or similar. All water service pipes underfloor will be run in copper.
Provide electrical wiring and / or telephone penetrations prior to placing damp-proof as necessary to complete the works.

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

REINFORCING STEEL

PRELIMINARY
Reference shall be made to the Preliminary and General section of these specifications which apply equally to all trades and sections.

INSPECTION OF THE SUBSTRUCTURE
The contractor and /or subcontractor engaged to carry out all or part of the work described in this section shall inspect the construction completed prior to commencing his part of the contract. If any part of the substructure is not to the satisfaction of the contractor and / or subcontractor, he shall bring this to the attention of the main contractor who shall ensure that all such unsatisfactory factors are made good. Failure to comment on any unsatisfactory factor in the substructure shall indicate acceptance of the substructure and a first class job shall then be the responsibility of the contractor / subcontractor engaged to carry out this work.

REINFORCING STEEL
All reinforcing steel used shall comply with NZS 3402P and shall be mild steel, deformed, round, hot rolled bars of the lengths and diameters specified or shown on the drawings. Plain bars may be used for reinforcement 12mm and less. Welded wire fabric shall comply with NZS 3422.
Reinforcing shall be free from pitting, loose rust, mill scale, paint, oil, grease, adhering earth, or any other material which may impair the bond between the concrete and the reinforcement or that may cause corrosion of the reinforcement or deterioration of the concrete.

BENDING
Reinforcement shall be bent cold to the required shape.

PLACING
All reinforcing shall be placed and securely fixed in position so that the steel will stay in place while the concrete is poured and vibrated. Where two bars cross they shall be securely tied with 1mm soft black tie wire.

LAPS
Laps in reinforcing shall only occur where necessary and where shown on the plan. Full lengths shall be used wherever possible. The laps shall be 32 bar diameters for deformed rod and 40 bar diameters for plain rods, unless detailed otherwise.
Welded laps or crossings will only be permitted with the permission of the Territorial Authority or Engineer and shall conform with BS 5135.
Mesh shall lap 300mm with adjacent sheets, sides and ends.

CLEANING UP
On completion of this part of the contract, the subcontractor shall remove all wastage, tools, equipment, surplus materials, etc. from the site and leave the site clean and tidy.

COVER TO STEEL
The minimum cover to the reinforcing shall be as follows:

Concrete cast insitu, not exposed to the weather nor in contact with the ground									
Diameter of Bars		40	32	28	24	20	16	12	10
Walls, Slabs and Ribs		40	30	30	30	20	20	20	20
Beams and Columns	Principal Reinforcement	40	40	40	40	40	40	40	40
	Secondary Reinforcement				25	25	25	25	
Shells and Folded plate Members		20	20	20	20	20	15	15	15
Concrete cast insitu and exposed to the weather or in contact with the ground									
Walls, Slabs and Ribs		20	20	20	20	20	15	15	15
Beams and Columns	Principal Reinforcement	50	50	50	50	50	50	50	50
	Secondary Reinforcement			40	40	40	40	40	
Shells and Folded plate Members		45	45	45	45	35	35	35	35

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

Concrete Precast not exposed to the weather or in contact with the ground									
Walls, Slabs and Ribs		35	25	25	25	15	15	15	15
Beams and	Principal Reinforcement	35	35	35	35	35	35	30	30
Columns	Secondary Reinforcement			20	20	20	15	15	
Shells and Folded plate Members		20	20	20	20	20	20	15	15
Concrete Precast and exposed to the weather or in contact with the ground									
Walls, Slabs and Ribs		40	40	40	40	30	30	30	30
Beams and	Principal Reinforcement	40	40	40	40	40	40	40	40
Columns	Secondary Reinforcement			30	30	30	30	30	
Shells and Folded plate Members		30	30	30	30	30	30	30	30
Concrete cast against and permanently exposed to the ground									
Bars of all diameters		all 75mm							

PROFILED COLOURSTEEL ROOFING
Endura

GENERAL FIXING
All work shall be accurately laid out to ensure that the roofing sheets remain parallel.
All sheets shall be laid into the prevailing weather.
All perimeters and around all openings shall be double nailed.
All barge flashings shall be securely nailed along their length to prevent future distortion.

RIDGING
Ridging shall be lead edged fitted with 200mm laps and lead edges well beaten into corrugations

BARGE ROLLS
Fit square ended barge capping with 300mm laps to flash connection of the roof to all barge boards.

VALLEYS
All valley flashings shall be 0.60mm gauge accurately cut and folded.

FIXING
Fix all sheets to 75x50mm purlins with a maximum spacing of 760mm. All roofing, barges and ridges are to be fixed with propriety nails.

COMPLETION
Touch up all roof imperfections and remove all off cuts from site. The roof fixer is to cut all sheets in one location to avoid unnecessary materials being spread around the site.

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

CARPENTRY

INSPECTION OF SUBSTRUCTURE
The Contractor and or sub contractor engaged to carry out all or part of the work described in this section shall inspect the construction completed prior to commencing this part of the contract. If any part of the structure is not to the satisfaction of the Contractor and or sub contractor, it shall be brought to the attention of the main Contractor who will ensure that all such unsatisfactory factors are made good. Failure to comment on any unsatisfactory factor in the substructure will indicate acceptance of the substructure and a first class job will then be the responsibility of the contractor/subcontractor engaged to carry out this work.

REFERENCE
Reference shall be made to NZS 3604 and all amendments and to all other standards mentioned in NZS 3604 and all requirements set out in these standards shall be met along with any requirements of the NZ Building Code, unless otherwise approved by the Territorial Authority inspectors.

TIMBER TREATMENT
The timber used for the differing uses in the construction of this building shall be treated to the gradings as set out below.

H 1	Out of ground but protected from weather	Framing, interior finishing, flooring, painted weather-boards
H 2	NOT APPLICABLE IN NEW ZEALAND	
H 3	Out of ground and exposed to weather	Fence battens and palings, exterior joinery, deckings, railings, fascias and barges
H 4	In ground, high decay	Fence posts, crib walls,. agricultural posts and poles
H 5	In ground severe decay hazard	House piles and poles, foundation panelling horticultural posts and poles
H 6	In contact with sea water	Marine piles

TIMBER GRADING
Unless stated otherwise all framing timber used shall be No. 1 Framing Grade Pinus Radiata, treated as per the table and shall be thicknessed. Unless stated otherwise all timber sizes stated refer to the rough sawn size and allowance shall be made for the actual thicknessed size of the timber.

DAMPCOURSE
All timber through the building which could otherwise be in contact with concrete shall be separated from the concrete with a layer of approved Dampcourse.

BUILDING PAPER
One layer of approved Building paper will be fixed over the framing under all exterior sheathings and claddings. Such building paper will fixed from the bottom layer up with all subsequent layers lapping the previous layer by 150mm minimum. All building paper shall be securely fixed to the framing so as to prevent shifting until the exterior sheathing has been fixed in place. All holes, tears etc shall be repaired so as to protect the framing, interior linings etc. in the event of the exterior sheathing leaking.

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

PLATES
All bottom and top plates shall be in long lengths and shall be perfectly straight or be capable of being straightened with out cutting. Joints in top plates shall be over supports and shall be made by means of a neat butt joint with a 180mm length of 25x1mm steel strap across the joint and nailed to the plates with six 30x2.5mm flat head nails into each length of plate (twelve nails per joint). Walls supporting floor joists shall have a double top plate.

STUDS
All studs shall be in single lengths and shall be straight or be capable of being straightened by a cut half the depth of the stud, wedging and flitching both sides with 25x450mm blocks, provided that not more than 25% of the studs in any wall shall be straightened, adjacent studs shall not be straightened and each stud will have a maximum of one straightening cut. No trimmer stud shall be straightened by cutting. Unless otherwise shown or specified all studs shall be at 600mm centres maximum with a minimum of three studs at all corners and intersections. All studs shall be perpendicular in both directions.

DWANGS
All walls will have a minimum of two rows of dwangs provided that the maximum spacing between adjacent dwangs or plates and dwangs is 800mm. Dwangs shall be of the same dimensions as the studs they span between provided that where studs exceed 50mm in thickness the dwangs need not exceed 50mm.

NAILING
Generally nailing shall be through one end of the members to be nailed e.g. through the thickness of a bottom plate into the end grain of a stud. All junctions in all framing members shall be made with a minimum of two 100x3.75 nails when nailed through a member or four 75x3.15 nails when skewed. For full details of nailing Appendix A of NZS 3604 will apply and these general instructions do not override NZS 3604 in any way.

FIXING
Frames will be securely fixed to concrete floors with M10 bolts at 1200mm centres to the edges of the floor slab and with 4mm shot fired fasteners at 900mm centres elsewhere provided that each length of bottom plate has a minimum of two fixings and that the fixing shall be positioned within 150mm of the end of each length of bottom plate. Frames shall be fixed to timber floor joists with two 100x3.75 nails at 600mm centres.

FRAMES
All frames shall be squared before standing up and shall be held in the squared position with a permanent of temporary brace while they are being manoeuvred into their designed positions. Once all frames are in place they shall be checked and corrected to ensure that all walls and rooms are square, perpendicular, and straight and all braces shall be nailed and tensioned to ensure that the frames do not move from their designed positions. Top plates shall be temporarily propped in their correct positions to ensure that alignment is maintained while the roof and ceiling framing is fixed in position.

FLOOR JOISTS
Floor joists shall be of sizes and laid at the centres shown on the drawings and shall have their top surfaces set to a common level to support the floor decking and shall be laid in straight lines on edge. Floor joists shall be laid so that any crook in them will straighten under load or any crook may be cut through half the depth of the joist provided that any such cut shall only occur directly over support. Joints in floor joists shall occur only over supports, (except where joists are cantilevered in which case no joints will be permitted) and where a series of joists are butt joined over the same support, each joist shall have a minimum of 32mm bearing and every joist shall be fitted with a 300mm long flitch plate of the same size as the joist. Proprietary nail plate fasteners can be used as alternative to the flitch plates. All flitch plates shall be nailed with four nails into each joist. Joists shall be fixed to supports with a minimum of two 100x3.75 skewed nails.

BEARERS
Bearers shall be of the sizes and laid in straight lengths at the locations shown on the drawings. Joints in bearers shall be over supports and fixed to supports with two 100x3.75 galvanised nails. All bearers shall be fixed to piles with approved steel dogs and with their top edge laid to a common level to support the floor joists.

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

FLOOR PLATFORM
The floor platform shall consist of 20mm thick, high density, particle board fixed in full size sheets (2400x1200mm min) wherever possible and nailed with 60x2.8mm nails at 150mm centres to all sheet edges and 300mm centres to all intermediate joists and dwangs with no nails closer than 10mm to the edge of the sheet. All nails shall be punched below the surface of the floor. All sheet joints shall occur over joists or dwangs of a minimum size of 50x50mm. The platform shall be protected from staining or scarring of materials and shall be given a one cut sanding on completion of the job.

JOINERY FITTINGS

DARK ROOM FITTINGS
All joinery fittings are manufactured from prefinished Melamine / Meltecca composite board.
The bench tops will be 600mm wide Formica or Wilsonart with a Stainless steel sink insert.
All units shall be fitted square, plumb and true in accordance with good trade practice.
Nett Sum included in Agreement is $ 5400-00 including GST

PLUMBING WORKS

GENERAL
Provide all materials, labour and plant necessary to complete the work set out in the plans and Specification all in accordance with best trade practice and the requirements of the Territorial Authority and N Z Building Code 1992. The work will be carried out by a competent tradesman possessing the qualifications as set out in clauses 15 & 16 of NZS 671. Material usage will be consistent with sound trade practice and in no case inferior to any requirements of Section 1 and Sections 26-91 of NZS 671. The Plumber shall give all usual notices to the Territorial Authority and shall uplift the permit before commencing the work. Water pipes and tubes shall be set out in straight runs of even gradients, avoiding all places where airlocks are likely to occur. Use easy bends and unless unavoidable, elbow fittings are not to be used. Copper tubing is to be secured in position by copper straps. all piping where practical is to be concealed. All work shall be left in a thoroughly sound and water tight condition and / or in perfect working order. In the event of any piping above the floor being exposed to view such pipework is to be 12.7mm copper pipe with chrome plating or similar.

COLD WATER SUPPLY
Lay cold water supply from supply point in PVC pipe buried not less than 600mm. Take 12.7mm branches to all plumbing fittings and cylinders.

HOT WATER SUPPLY
Supply and install above floor level a 135 litre cylinder. From the cylinder provide 12.7mm branches in copper to all plumbing fittings. All pipework is to be completely wrapped and lagged in a suitable material and secured in position.

VENTS AND SOIL STACKS
All soil stacks and back vents to wastes shall be in an approved rigid PVC. Where possible back vents and soil stacks will be concealed.

WASTES
Join the WC pan to drain above floor level with an approved jointing method.
All other wastes shall be of an approved size and run in approved PVC piping or as approved by the Territorial Authority.

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

PRESSURE
Where necessary provide a suitable pressure reducing valve, tempering valve and cocks all in accordance with the manufacturers instructions and Territorial Authority requirements. The Plumber will ensure that all pressure equipment and valves meet the Territorial Authority requirements.

FIXING
The sink top, tub, and all vanity units will be supplied by others and the Plumber will be responsible for connecting only to these items.

SPOUTING AND DOWNPIPES
Fit spouting and downpipes to the manufacturers specifications. All spoutings will be fixed straight and with even falls. Downpipes will be provided at the locations shown or agreed on site with the Contractor.

Spouting will be	Colorsteel box section **Colour to be advised**
Downpipes will be	uPVC

SCHEDULE OF FITTINGS

Tapware	CP single lever Laska
HWC	135 l mains pressure
Shower	Englefield 900x900 three sided
WC WHB	Proprietary off shelf
Vanity Tap	CP single lever Laska
Shower Mixer	CP single lever Laska
Shower Roses	Slide type Shower Rose
WC Pan	Caroma Close Coupled
WC Cistern	Caroma to suit
Extract fans	Fit thru roof electrician supplied fan outlets, flash & counterflash

DRAINAGE WORKS

PRELIMINARY
The whole of the drainage works shall be carried out in accordance with the Territorial Authority and NZ Building Code, and to the satisfaction of the Territorial; Authority inspector.

GENERAL
Provide all fittings necessary to complete the works and lay all drains to an even and consistent fall not less than 1 in 40.

SANITARY FITTINGS
Fit WC pans to sewer connections.
Connect up vent pipes fixed by Plumber.
Provide all necessary Gulley Traps, inspection pipes, inspection bends and the like to complete the Sewer drains to the satisfaction of the Territorial Authority and NZ Building Code, and connect to existing Septic Tank System

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

ELECTRICAL WORKS

GENERAL
Provide all materials, labour and plant necessary to complete the works as set out on the Plans and Specifications in accordance with the best trade practices, the current wiring Regulations, and to the satisfaction of the Supply Authority. Obtain all permits and give all notices prior to commencing the works.

MAIN CONNECTION
Make connection to the existing house prior to completion.

SWITCHBOARD
Provide and fit an internal fuseboard where indicated or agreed. The fuseboard location is to be such that easy access is provided.

LIGHTS
Provide light points complete with shades and lamps as indicated on the drawings. Provide 100W lamps to main living areas and 75W lamps elsewhere. Hanging lights on sloping ceilings will finish 2200mm above floor level. Wall lights will be placed 1550mm above floor level. External wall lights will be placed at a height of 1800mm.

SWITCHES
All switches will be placed 1000mm above floor level unless instructed otherwise.

POWER POINTS
Provide all power points as shown on the plan. All power points will be placed 300mm above floor level except in kitchen areas and the like where power points will be mounted 1000mm above floor level or at such a height to suit the appliance.

MATERIALS
All switches and plugs will be flush type, ring grip rocker type, **COLOUR TO BE CONFIRMED WITH OWNER**

AERIAL AND EARTH POINTS
Provide aerial connections with 3600mm of spare cable to the roof peak. The aerial cable will be of an adequate ohm rating to permit future high frequency pick ups.

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

PAINTING AND POLYURETHANING

GENERAL

Paint or polyurethane walls or surfaces to the colour scheme selected by the Owner and the following Specification. All paints shall comply with NZS 521 and amendments.

WORKMANSHIP

All work shall be carried out in accordance with the NZ Code of Practice for Painting. The Painter will be responsible for the protection of persons and works in the immediate vicinity of the painting operations, and shall supply all necessary dust covers, guards and the like. Care shall be taken in cutting in around glass surfaces and up to other finishes, hardware and the like. All splashes and disfigurements and the like will be removed by the Painter.

MATERIALS

The materials used shall be of NZ manufacture and of an approved brand delivered in unbroken containers. Materials shall be applied strictly in accordance with the manufacturers recommendations.

EXTERNAL PAINTING

Paint all external exposed woodwork with three coats of paint in accordance with the following:

Prime all exposed timbers

Stop and rub down after priming has dried, all nail holes and defects with best linseed oil putty, rub down as required to obtain a surface suitable for undercoating.

Apply an approved undercoat suitable for the finishing coat as recommended by the manufacturer

Apply a finishing coat to all exposed woodwork, glazing putties, metalwork and and the like of an approved brand.

Paint all exposed External Concrete cement sheets with two coats of exterior quality PVA paint in a matt finish.

Clean down and apply one coat of calcium plumbate and two coats of anticorrosive paint to exposed metalwork

INTERNAL PAINTING

Thoroughly prepare all surfaces to be painted or polyurethaned by stopping and carefully rubbing down to provide a suitable and adequate surface for later applications.

Painted woodwork shall be primed and painted walls sealed, undercoated and finished with two coats of semi gloss enamel in service areas and two coats of plastic paints in living areas.

POLYURETHANING

Stop where necessary with linseed oil putty stained to match the surfaces where applied.

Remove all dirty marks from surfaces prior to sealing.

Apply one coat of sealer followed by one coat of hard dry polyurethane. Allow to sand between coats as necessary to provide a first class finish. All polyurethane will be worked well into the vee grooves of boards and runs will be carefully brushed out.

External timber soffits shall be polyurethaned with three coats of antifungicidal varnish applied strictly in accordance with the manufacturers recommendations and undiluted.

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

SCHEDULE OF FINISHES
FOR
Michael Reid Photography Studio & Gymnasium
48 Sharp Road
Rotorua

INTERIOR WALLS		
Studio & Gymnasium	Lockwood Solid Timber	Polyurethaned
Hall, Dark Room, WC & Change	Lockwood Solid Timber	Polyurethaned
INTERNAL CEILINGS		
Sloping Sarked Timber Ceilings	Lockwood Sarking	Polyurethaned
WARDROBES		
All wardrobes will be left natural, no polyurethane will be applied unless specifically requested by the owner		
SOFFITS	Lockwood Timber	Antifungicidal
Polyurethane		
EXTERNAL WALLS (TYPE 62 LOCKWOOD BOARD)		
Lockwood Exterior Walls	Lockwood Aluminium	**Colour to be advised**
	Interior Face	Polyurethaned
INTERNAL DOORS AND FRAMES		
All Interior Doors	Hollow core P Q	Painted
All Interior Door Frames	Pine	Polyurethaned
Door Hardware	Satin Chrome Lever action hardware	
Dark Room door to be sealed to provided a light tight door.		
EXTERNAL WINDOWS AND DOORS (DOUBLE GLAZED)		
Exterior	**Powder Coated Aluminium**	**Colour to be advised**
Interior	Pine Subframes	Polyurethaned
ROOF		
ENDURA Coloursteel	Prefinished	**Colour to be advised**
Spouting	Prefinished box section	**Coloursteel box section**
FASCIA & BARGE BOARDS	Timber painted	**Colour to be advised**
	Flashing Base Board	**Colour to be advised**
PLUMBING	Hot Water Heating	135 litre mains
	WC pan Close coupled	Caroma Trident Pan & Caroma Trident Cistern
	WC wash hand basin	Prefinished type
	CP single lever tap ware	Laska Range
	Polybutylene Pipework	Hot & Cold water services
	900x900 shower	Englefield 900x900 three sided with slide shower rose
Fit thru roof Extract fans supplied by Electrician		

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

ELECTRICAL

Light Outlets	13 off
Exterior soffit lights	3 off
Power Points Double	8 off
Power Points Quad	2 off
Floor mounted Quad pp	1 off
Telephone jacks	5 off
UHF TV jacks	5 off
Audio outlets	6 off
Smoke alarm	1 off
Extract fans	2 off

DRAINAGE

Sewer & Stormwater Connected to existing
Nett Sum $ 2400-00 including GST

FLOORING

Power Float finish to concrete slab
Timber overlay flooring to Studio and
to 1200mm perimeter of Gymnasium
Tiled flooring on heating matrix to Dark Room
Tile supply $ 72-00 per m² incl GST
All other floor coverings by Owner

DECKING

100x40 H3.2 tanalised deck planking on 150x50 H3.2
tanalised deck joists at 600mm crs over suitable
tanalised bearers over supports.
All fixings to bearers and joists where less
than 300mm above GL are to be stainless steel

GENERAL

Standard Building Consent Fees
Builders All Risk Insurances during construction
Construction Labour
Lockwood Working Drawing Fees
Engineering Fees

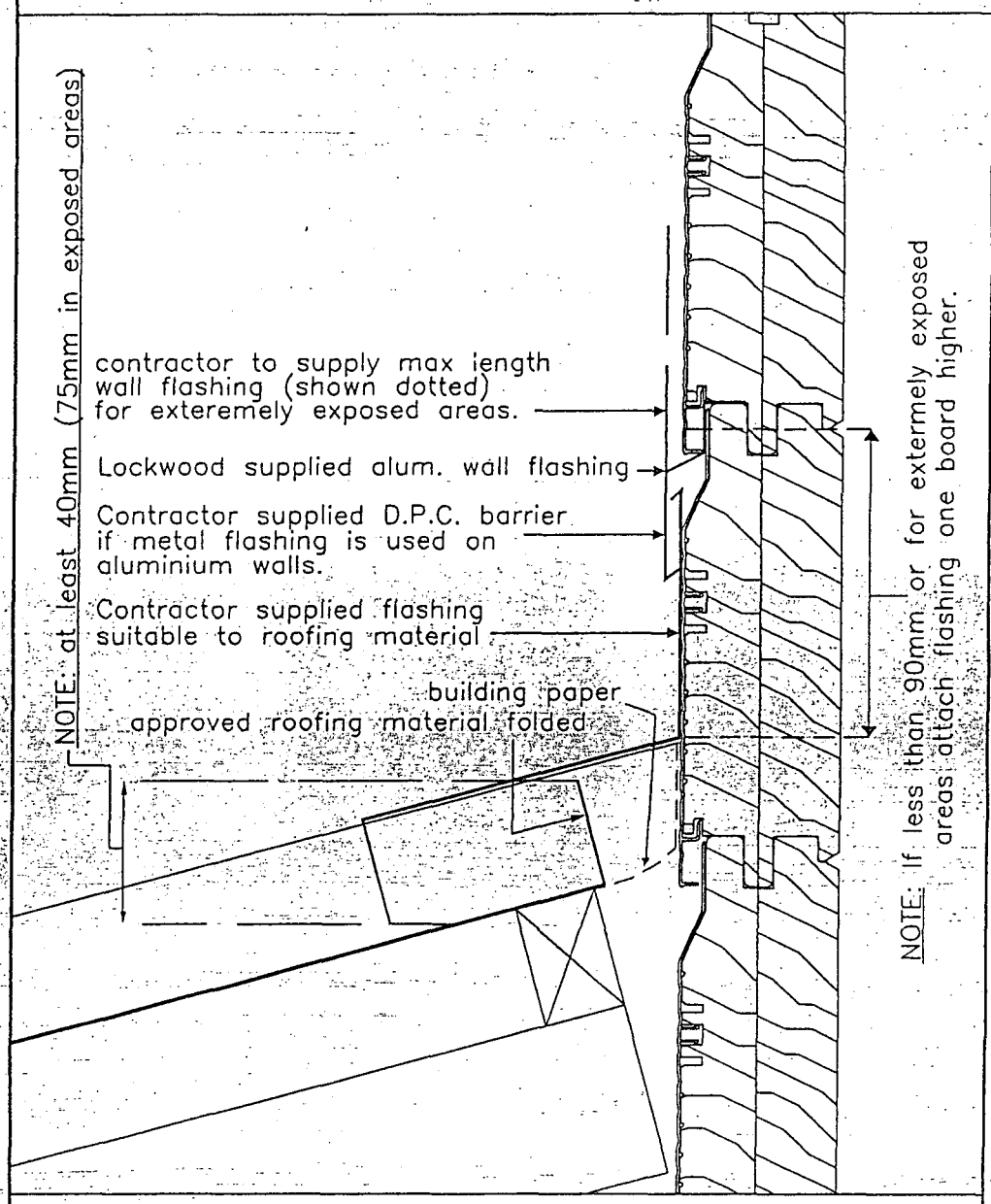
Nett Sum Allowance of $ 1800-00 incl GST
for Power, Water and Telephone from existing Dwelling

Nett Sum Allowance of $ 5400-00 incl GST
for Dark Room Cabinets

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

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LOCKWOOD



La Grouw Corporation Ltd, Private Bag RO3034, Rotorua, New Zealand. Ph (07) 3477691, Fax (07) 3477614

Roof flashing detail for aluminium wall

REVISIONS	Drawn	SHEET
	Oliver	F — 6
	Date 24/04/01	
APPROVED	Scale 1:2	

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

bsk Consulting Engineers Limited

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24 July 2006

J Hodges Construction Ltd
P O Box 473
ROTORUA

Attention: Mr John Hodges

Dear Sir

RE: PROPOSED LOCKWOOD FOR REID
48 SHARP ROAD, ROTORUA **OUR REF: 15936**

As requested we have completed the structural design work, and provide below our report.

Drawing No. 1, and Detail Sheets 1 - 7, all Ref: 15936, accompany this report.

1. DESIGN BASIS

All structural design has been based on High Wind and Earthquake A, in terms of NZS 3604:1999.

2. LOCKWOOD GLULAM BEAMS

All Glulam beams and posts to be structural grade GL8 or better in terms of AS/NZS 1328.1-1998.

3. FOUNDATIONS AND SUB-FLOOR DESIGN

This report and Producer Statement relates to the structure from floor level up. All foundations and sub-floor design are to be designed by others to suit the specific site conditions.

4. LATERAL BRACING

Bracing Unit calculations are attached. Tie rods shown on Drawing No. 1.
Additional bracing capacity was required on grid lines C, M and N.
This has been achieved through the use of a portal bracing frame, as in Clause 6 and two ply braced walls, as in Clause 5.

5. CONSTRUCTION PLY BRACING PANELS M1 AND N1

Refer Drawing No. 1, bracing panels M1 and N1, both approximately 2.9m length of ply bracing.
7.5mm Construction ply nailed to face of 62mm boards full height of wall. Construct similarly to that shown for Test Panel 16 (Data Sheet accompanying).

Document Set ID: 588278

Double tie rods at each end of the solid timber wall behind (as shown on Drawing No.1), nailing around the full perimeter of each sheet at 100mm and 150mm centres, as shown, and at 300mm centres internally.
Six aluminium seating profile floor cleats fully nailed to floor and walls, Overline ply, as necessary.

6. 200UB 29.8 BRACING FRAME

Refer Detail Sheets 1 - 3.
207mm x 134mm x 29.8 kg/m universal beam bracing frame within ex 150 x 50 framed wall on Grid C, all as detailed.

Structural steelwork contractor to confirm all dimensions on site before fabrication.

All structural steelwork to be degreased and mechanically wire brushed, and primed with two full coats of an approved anti-corrosive metal primer.

7. S PROFILES

On all exterior Lockwood walls - at 900mm maximum c/c, fully nailed into floors and walls.

8. INTERIOR SEATING PROFILES

On all interior walls - at 900mm maximum c/c, fully nailed into floors and walls.

9. TIE RODS

10 ϕ galvanised throughout. Refer Drawing No. 1, for location. Fixed over sarking and to sub floor all to Lockwood standard details.

Tie rods in wall under upper level joinery along grid line B (3 off), to be bent over 21st board and stapled to Lockwood standard (refer Detail Sheet 6).

Tie rods shown are required for structural tie down and for bracing stability in Lockwood walls. Additional tie rods shall be incorporated by the Lockwood design office, as necessary to provide for wall straightening and construction purposes.

10. POSTS AND WALL STIFFENERS

86 x 86, 215 x 86 and special 301 x 86 (refer Clause 17), sizes shown on Drawing No. 1, X profile to walls full height.

At tops either extend posts above sarking and cut sarking neatly around posts, or tenon and mortice to beam over (as specified in report).

All stiffener posts shall be fixed to floor slab on Lockwood J9 brackets to Lockwood Standard Details.

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

11. DUMMY RAFTER UPGRADES

Ex 100 x 50, (90 x 45 finished dimension), VSG8 or MSG8, Radiata Pine dummy rafters at 900mm centres throughout except for areas as specified in (a) and (b) below:

a) For ~~larger horizontal~~ STEP spans GREATER THAN 3.0m over the Gymnasium, use double 90 x 45 dummy rafters (on edge) at 300mm centres (5 off, as shown on Drawing No.1). One double dummy rafter to be located directly above Z3A slider as shown. Nail double dummy rafters together with 90 x 3.55mmø FH galvanised nails at 300 centres along length.

b) Where roof eave overhangs exceed 600mm (at rear of upper level roof and on roof over Gymnasium deck, refer Drawing No.1), provide dummy rafters at 600mm (max) centres. Dummy rafters to be continuous over a minimum of two supports.

For all spans exceeding 2.5m, provide continuous temporary rows of support midspan under sarking and maintain temporary support until all roof fixing is complete.

Dummy rafters to be skew nail fixed or screw fixed to 35mm sarking to Lockwood Standard specifications, or alternatively can use Lumberlok CPC40 cleats as in Clause 12 below.

Double dummy rafters as in (a) above, to be fixed to 35mm sarking with Lumberlok CPC40 cleats as in Clause 12 below.

12. ALTERNATIVE DUMMY RAFTER FIXING SPECIFICATION

Dummy rafters may be fixed to sarking with Lumberlok CPC40 fixings (concealed purlin cleats) instead of standard nails or screws as follows.
Locate CPC40 cleats within 200mm of each end of sarking spans and at 900mm maximum centres, both sides of each dummy rafter.
Each CPC40 cleat to be fixed to rafters with 4 nails (30 x 3.15mmϕ FH galvanised), and to sarking with 2/14 gauge x 30mm wood screws, class 2 minimum durability rating, or class 3 or class 4.

13. OVERHEAD TIEROD

Refer Drawing No.1, for location.
10mmϕ galvanised rod threaded both ends with nuts and washers both ends.
Fit along with 13th board, rebate washer into bottom of 13th board, obscured by timber sub frame.
At top provide special shaped timber packer onto sarking and tension from top.

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

14. LUMBERLOK MULTIBRACE STRAP BRACING

53mm x 0.91mm Lumberlok Multibrace located on top of 35mm sarking, as shown, (refer Drawing No. 1).
Nail at each end of each strap with 12 nails, tension with purpose made tensioners, and then nail to each sarking plank with 2 nails.
All nails 30mm x 3.15mmϕ FH galvanised.

15. B BEAM HIP OVER GYMNASIUM

258 x 86, 5.7m approximate overall length.
2/J16 msb connections to face of 62mm wall at high end.
Special concealed msb bracket (hot dip galvanised) at low end as Detail Sheets 4 and 5.

16. 10 LAM ROOF BEAM OVER STUDIO

430 x 86, 7.8m approximate overall length.
3/J18 msb connections both ends to face of 62mm walls.

17. SPECIAL A BEAM STIFFENERS IN STUDIO

Refer Drawing No. 1 and Detail Sheet 6.
301 x 86 (2 off), both 6.1m approximate overall length.
X-profile to 44mm walls full height, with dovetail cut made centrally along 301mm wide face. At tops extend stiffeners above sarking and cut sarking neatly around stiffeners.
Fix stiffeners to floor slab with Lockwood J9 brackets to Standard Lockwood Details.

18. INTERIOR E BEAMS

140 x 45, No. 1 Framing Grade Radiata Pine.
Top of E beams cut at 12.5° flush with underside of sarking. Nail to walls with 75 x 3.15mmø JH galvanised nails at 300mm c/c staggered up and down along length, countersunk.

19. H BEAMS ABOVE HIGH LEVEL JOINERY ALONG GRID LINE B

Refer Drawing No.1 and Detail Sheet 6.
165 x 86 (3 off), two at 2.2m approximate overall lengths and one at 2.8m approximate overall length.
H beams hard up under sarking.
J18 msb connections at ends to face of 86 x 86 and special 301 x 86 stiffeners.
Coach screw through H beam centrally into 62mm board behind. Coach screws 125mm approximate length, galvanised and located 100mm from each end of H beam and at 650mm approximate centres along length. Rebated below flush, site check for 50mm minimum penetration into 13th board.
Timber plug holes at completion and sand off flush.

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

20. H BEAMS BELOW HIGH LEVEL JOINERY ALONG GRID LINE B

Refer Drawing No.1 and Detail Sheet 6.
165 x 86 (3 off), two at 2.2m approximate overall lengths and one at 2.8m approximate overall length.
H beams hard up under sill.
J18 msb connections at ends to face of 86 x 86 and special 301 x 86 stiffeners.
Coach screw through H beam centrally into 62mm board behind. Coach screws 125mm approximate length, galvanised and located 100mm from each end of H beam and at 650mm approximate centres along length. Rebated below flush, site check for 50mm minimum penetration into 13th board.
Timber plug holes at completion and sand off flush.

21. H BEAM OUTSIDE GYMNASIUM

165 x 86 (H3.1 treated), 1.6m approximate overall length.
J18 msb connections both ends, to face of 90 x 90 H5 treated post and to face of 62mm wall.

H3.1 beam to be painted with an appropriate 3 coat paint system. It should be noted that to achieve a 50 year life, any paint system is likely to require regular maintenance throughout its life.

All end cuts, rebates for fixings, bolt holes, etc, in H3.1 (LOSP) timbers shall be liberally coated with "Enseal Clear" or equivalent concentrated preservative prior to fixing brackets or bolting.

22. E BEAM OUTSIDE GYMNASIUM

140 x 45 (H3.1 treated), No. 1 Framing Grade Radiata Pine.
Top of E beam cut at 12.5° flush with underside of sarking.
Screw fix to 62mm wall with14 gauge x 75mm type 17 screws at 300mm centres (maximum), staggered up and down along length countersunk.

23. E BEAM TO SUPPORT PORCH ROOF OUTSIDE STUDIO

140 x 45 (H3.1 treated), No. 1 Framing Grade Radiata Pine.
Top of E beam cut at 12.5° flush with underside of sarking.
Screw fix with 14 gauge x 100mm type 17 screws centrally to each wall stud (600mm max centres), countersunk.

24. 90 X 90 EXTERIOR ROOF SUPPORT POSTS

90 X 90 No. 1 Framing Grade Radiata Pine, H5 treated posts (6 off).
Posts embedded 400mm into 500mm x 500mm x 500mm deep mass concrete foundations.
Fix to fascia beams at tops to Lockwood standard details.

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

25. DOUBLE 140 X 45 ROOF BEAM ABOVE GYMNASIUM DECK

2/Ex 150 x 50's (140 x 90 finished dimension), MSG8 or VSG8 minimum structural grade Radiata Pine, 1.6m approximate overall length above Gymnasium deck within roof space. Nail 140 x 45's together with 90 x 3.55mmø FH galvanised nails at 300 centres along length, both sides.

Fix beam to face of double dummy rafter above Z3A slider with Multigrips both sides (12 nails per Multigrip, 30 x 3.15mmø FH galvanised), or on joist hanger.
Fix to 90 x 90 post with 2M10 galvanised bolts + Multigrip as Details 12 and 13.
Dummy rafters fixed to face of beam with Multigrips both sides (12 nails per Multigrip, 30 x 3.15mmø FH galvanised), or on joist hangers.

Note: All work shall comply with the New Zealand Building Code, NZS3604:1999, Standard Lockwood Details and Structural Handbook where not specifically covered in this report.

We enclose the Bracing Unit calculations, and the Producer Statement – Design referenced to this report.

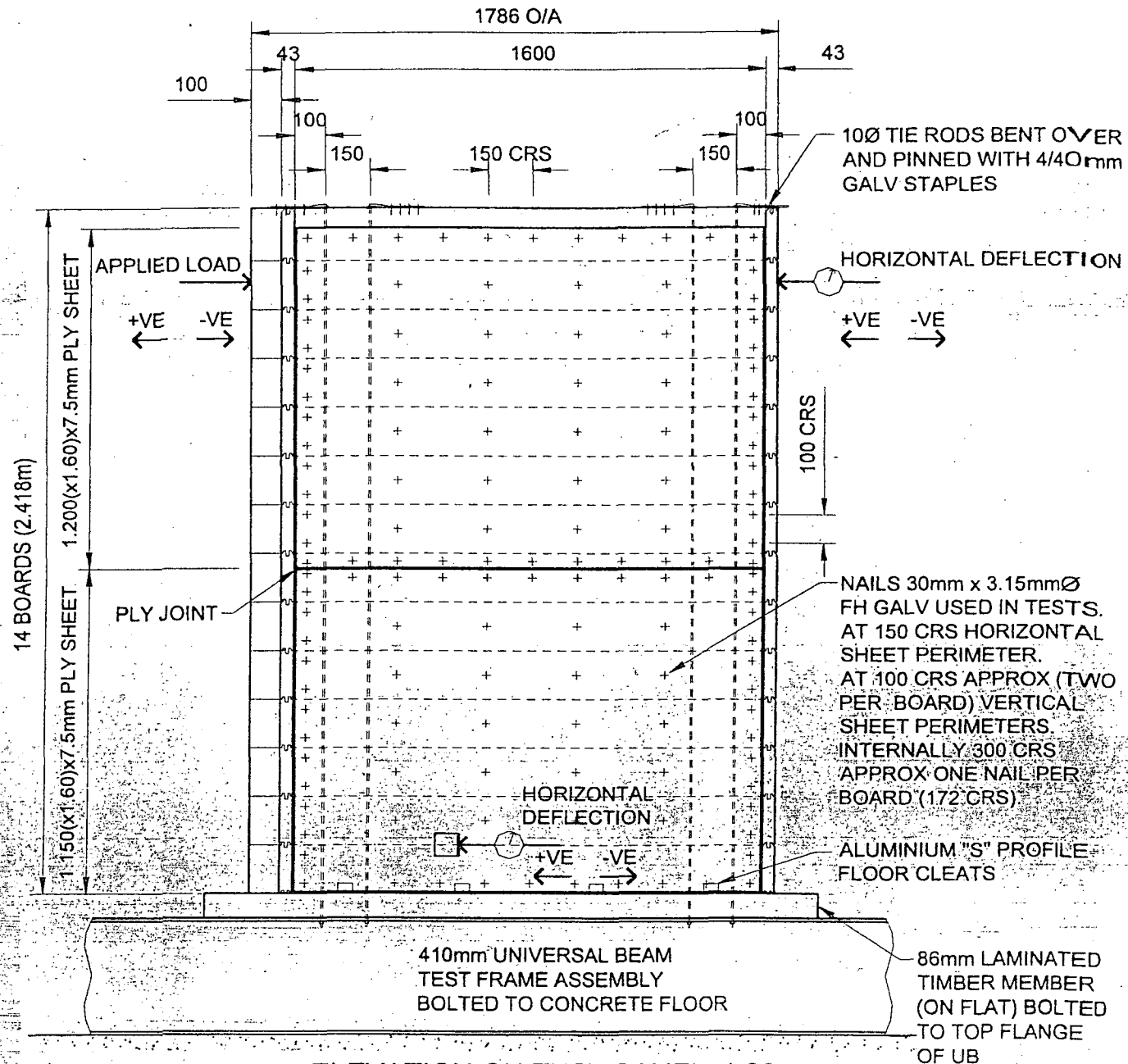
Please advise if we can assist further in this matter.

Yours faithfully

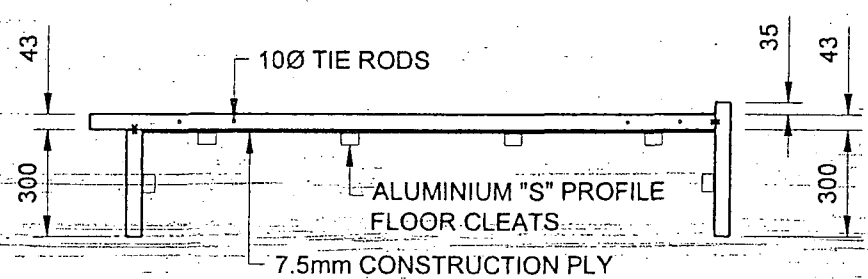
AG Kennedy
BE, MIPENZ(Structural), CPEng, IntPE
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Version: 1, Version Date: 31/03/2010

LA GROUW CORPORATION LIMITED
BRACING UNIT TEST No16
ADDITIONAL PLY FACED SHEAR TEST



ELEVATION ON TEST PANEL 1:20



PLAN 1:20

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Version: 1, Version Date: 31/03/2010

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

Building Regulation Clause(s) .....

PRODUCER STATEMENT – PS1 – DESIGN

ISSUED BY: AG KENNEDY
(Suitably qualified Design Professional)

TO: MR MICHAEL REID
(Owner)

TO BE SUPPLIED TO: ROTORUA DISTRICT COUNCIL
(Territorial Authority)

IN RESPECT OF: PROPOSED NEW LOCKWOOD
(Description of Building Work)

AT: 48 SHARP ROAD, ROTORUA
(Address)

LOT: **DP:** **SO:**

BSK CONSULTING ENGINEERS LTD *(Design Firm)* has been engaged by HODGES CONSTRUCTION LTD *(Owner/Developer/Contractor)*

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

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

☐ All ☑ Part only as specified - FLOOR LEVEL UP (FLOOR SLAB & FOUNDATION DESIGN BY OTHERS)

of the building work. The design has been prepared in accordance with B1/VM1 *(verification method(s)/acceptable solutions(s))*

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

BSK CONSULTING ENGINEERS LTD *(Design Firm)* drawings titled REPORT DATED 24/07/06

and numbered BSK REF: 15936 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 : HIGH WIND AND EARTHQUAKE A IN TERMS OF NZS3604:1999

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) Date: 24 JULY 2006

MIPENZ(Structural) CPEng IntPE
(Professional Qualifications)

PO Box 23, ROTORUA *(Address)* Member ACENZ ☑

IPENZ ☑

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

January 2004

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

LOCKWOOD

LOCKWOOD WALL BRACING CALCULATION SHEET A

JOB DETAILS

BSK JOB NUMBER: 15936

Name	Reid
Street and number	Sharp Road
Lot and DP number	Lot 2 DP 71633
City/Town/District	Rotorua
Bracing prepared by	TK
Franchisee	Hodges Construction

BUILDING DETAILS

Location of storey	Single		
Building height to apex	8.5 & 4.5	Roof weight	Light
Roof height above eaves	2.3 & 1.7	Cladding weight	Light
Stud height	4.8 & 2.25	Room in roof space	No
Average roof pitch	12.5	Gross building plan area	89
Building length BL	12		
Building width BW	9.1		

Note: When 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

Determine Wind Zone by application of NZS 3604 Figures 2.3 and 2.4 and Tables 2.4 and 2.5.

LOW	MEDIUM	HIGH	VERY HIGH	SPECIAL
○	○	◉	○	○

EARTHQUAKE ZONE

Select E/Q wind from Fig.2.2 NZS 3604

A		B		C
◉		○		○

BU's required Wind

W along =	178.3 & 59.5 BU's
W across =	183 & 59.5 BU's

(5 x 178.3) + (4.1 x 59.5) = 1135

(7.9 x 183) + (4.1 x 59.5) = 1690

Total wind load,

W along x BW =	1135	BU's
W across x BL =	1690	BU's

Earthquake B/U's	3.6	per sqm

Note: For a room in the roof space use E+3 (See NZS 3604:1999 Cl 5.3.3.3)

Total earthquake load,

EQ along and EQ across

E x GPA BU's =	320	BU's

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

LOCKWOOD WALL BRACING CALCULATION SHEET B

ALONG

Wall or bracing line		Bracing elements provided				Test panel capacities		
Line Label	Min B/U's Required	Bracing Element No	Bracing Type	Length Element (m)		Test panel	B/U Wind Achieved	B/U E/Q Achieved
A	122	A1	LW15	4.1		3312	325	353
B	567	B1	LW5	3.3		3208	306	313
		B1	LW11	2.5		2200	226	246
C	446	C1	Portal	7.8		n/a	446	446
D								
E								
Total B/U Achieved							1303	1358
From Sheet A Total B/U Required							1135	320

If Wind required > E/Q required complete the wind achieved only. If E/Q required > 1.25 Wind achieved complete the E/Q achieved column only. Otherwise complete both Wind and E/Q achieved columns.

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

LOCKWOOD WALL BRACING CALCULATION SHEET C

ACROSS

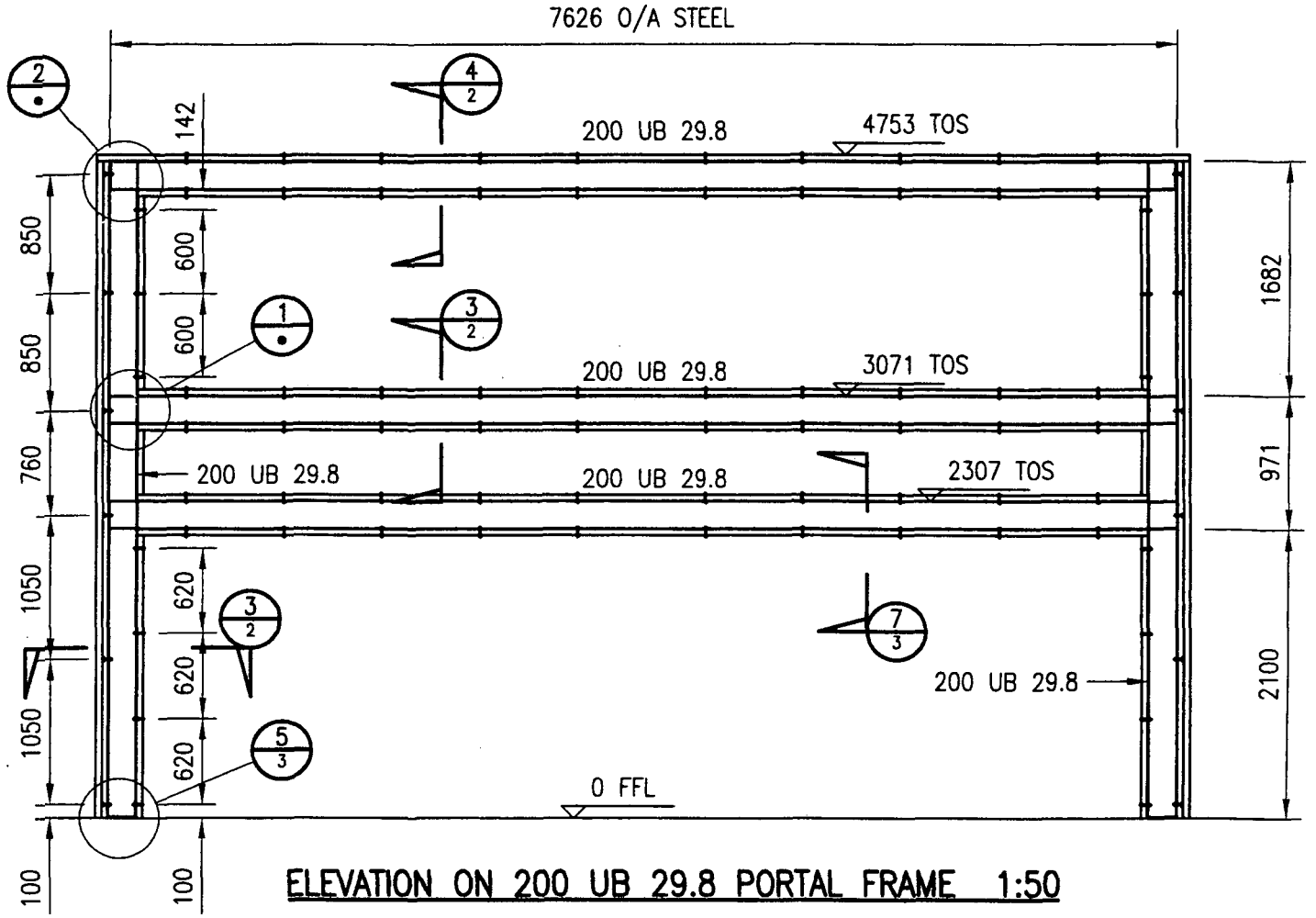
Wall or bracing line		Bracing elements provided				Test panel capacities		
Line Label	Min B/U's Required	Bracing Element No	Bracing Type	Length Element (m)		Test Panel Length	B/U Wind Achieved	B/U E/Q Achieved
M	723	M1	180% LW16	4		n/a	736	767
N	848	N1	80% LW5	5		3208	245	250
		N2	180% LW16	4		n/a	736	767
O	119	O1	LW14	4		4000	206	228
P								
Q								
Total B/U Achieved							1923	2012
From Sheet A Total B/U Required							1690	320

If Wind required > E/Q required complete the wind achieved only. If E/Q required > 1.25 Wind achieved complete the E/Q achieved column only. Otherwise complete both Wind and E/Q achieved columns.

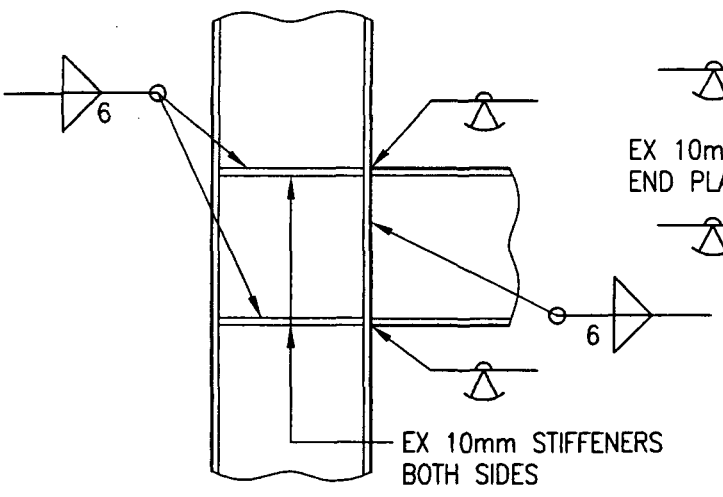
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EMAIL: bsk.144@clear.net.nz
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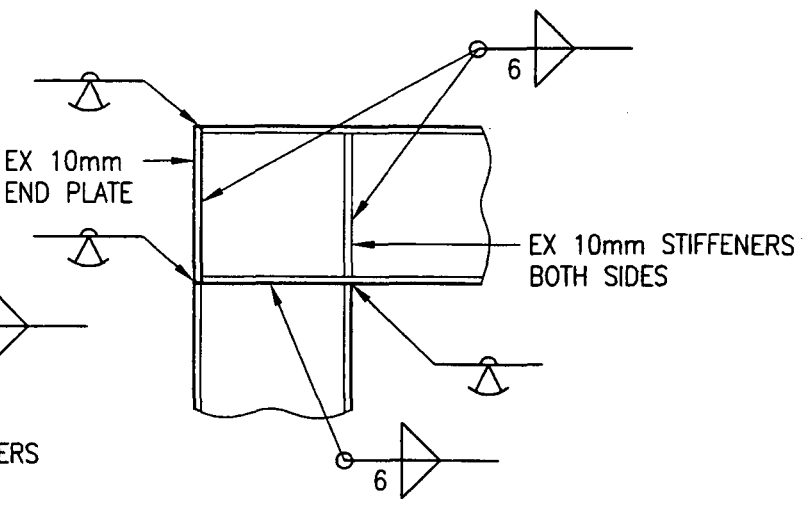
PROJECT: REID HOME	JOB REF: 15936
	DATE: 24/7/06
	SHEET: 1 OF: 7



ELEVATION ON 200 UB 29.8 PORTAL FRAME 1:50



DETAIL 1
1:10

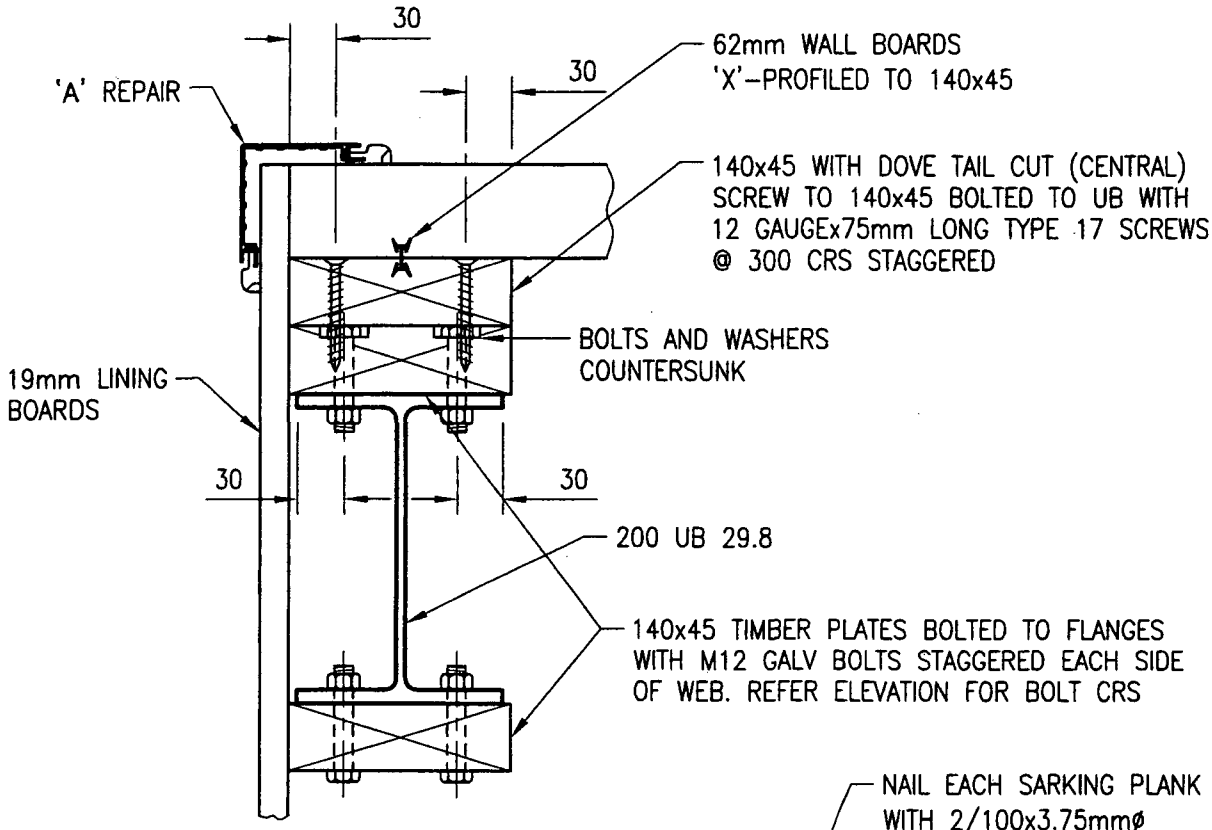


DETAIL 2
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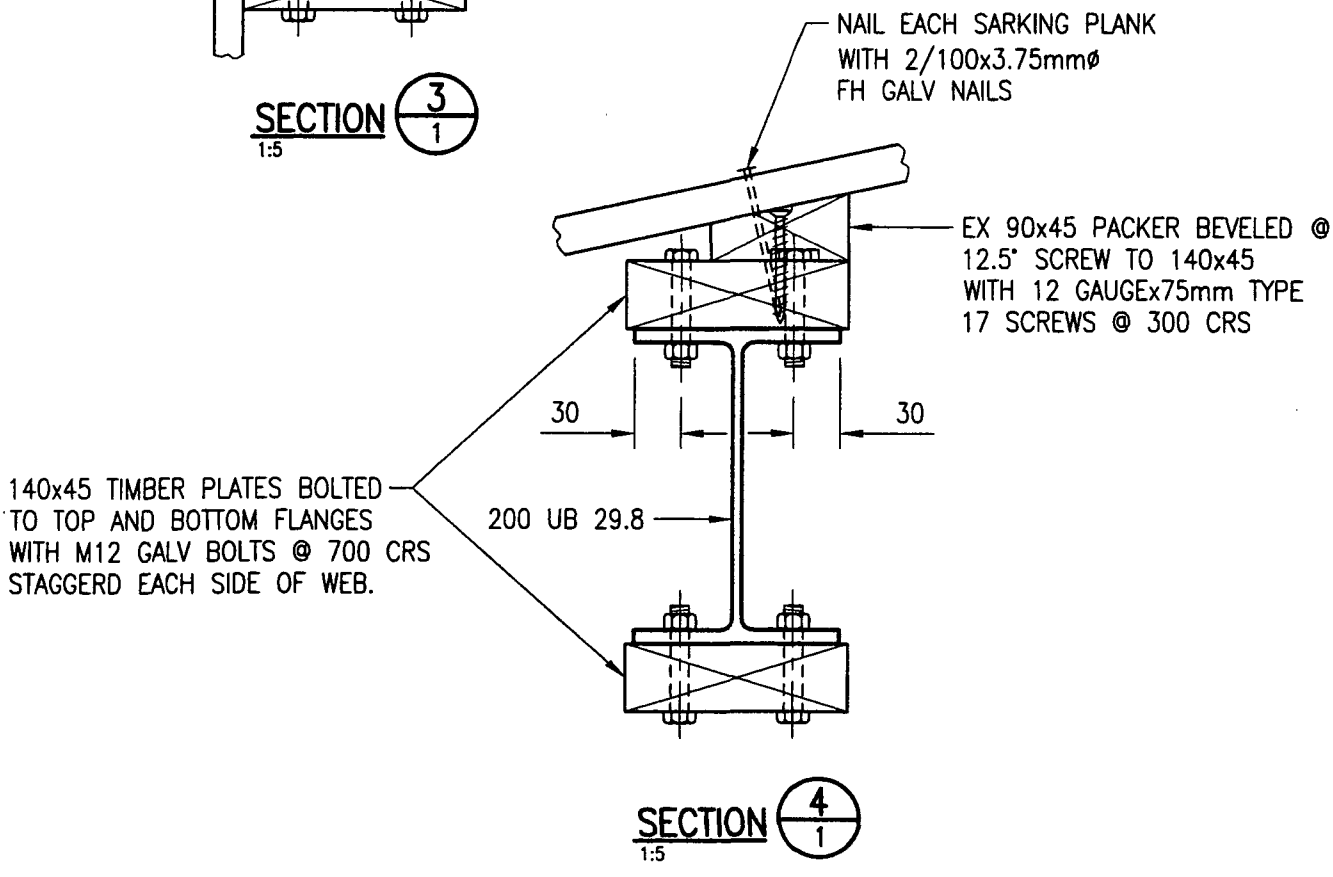
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SECTION 3/1
1:5

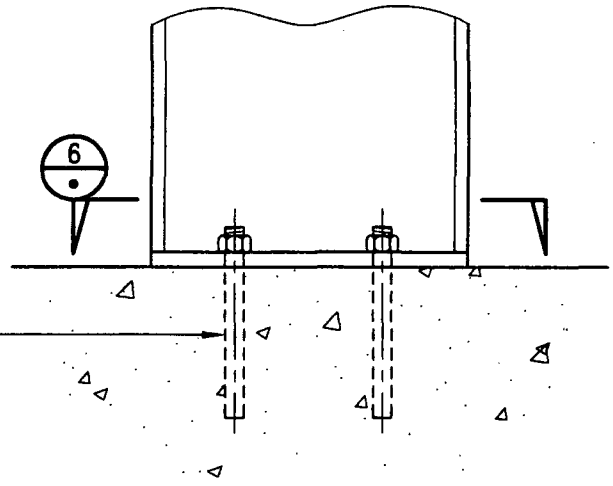


SECTION 4/1
1:5

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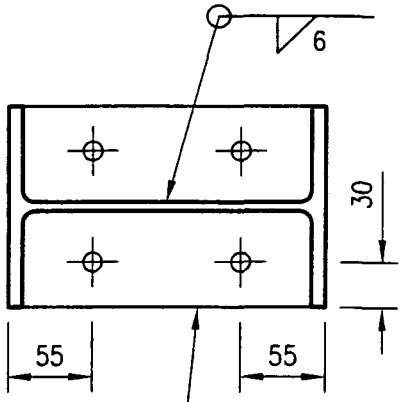
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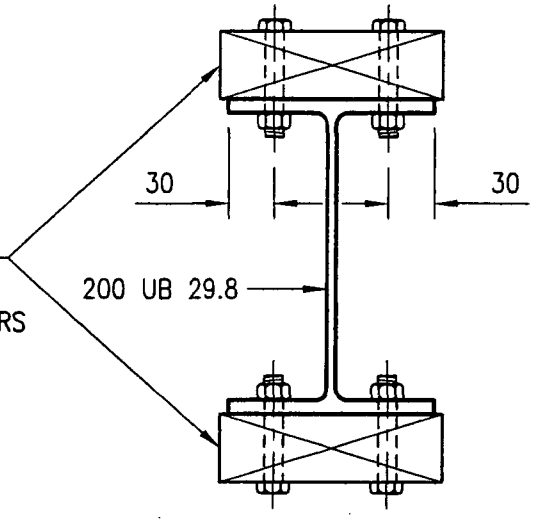
M12 RAMSET CHEMSET ANCHOR BOLTS,
110mm MINIMUM EMBEDMENT IN 14mmø
HOLES DRILLED INTO CONCRETE

SECTION 5/1
1:5



EX 10mm BASEPLATE
12.5mmø HOLES
FOR M12 GALV CHEMSET
ANCHOR BOLTS

SECTION 6
1:5



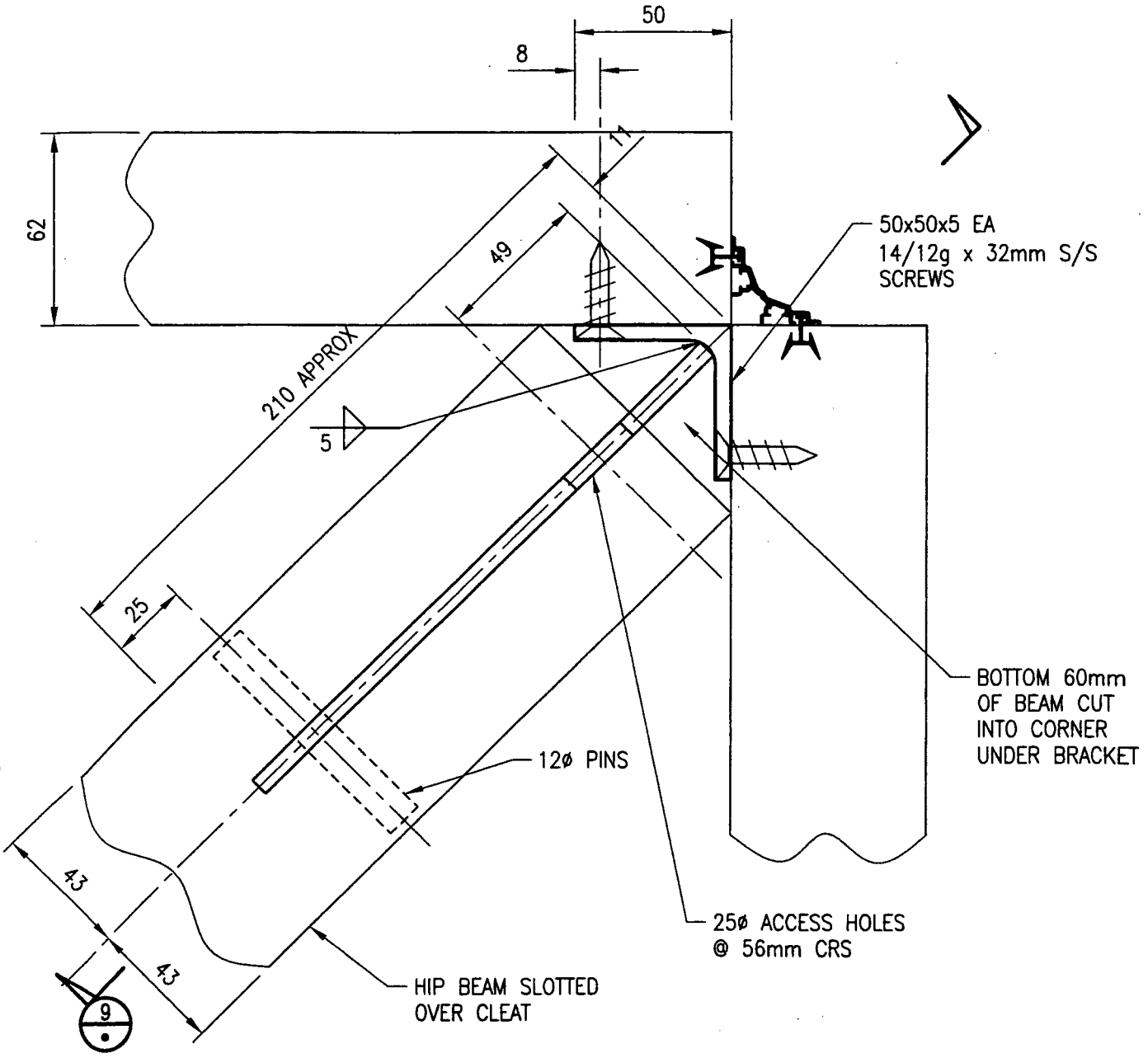
140x45 TIMBER PLATES BOLTED
TO TOP AND BOTTOM FLANGES
WITH M12 GALV BOLTS @ 700 CRS
STAGGERD EACH SIDE OF WEB.

SECTION 7/1
1:5

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	SHEET: 4 OF: 7

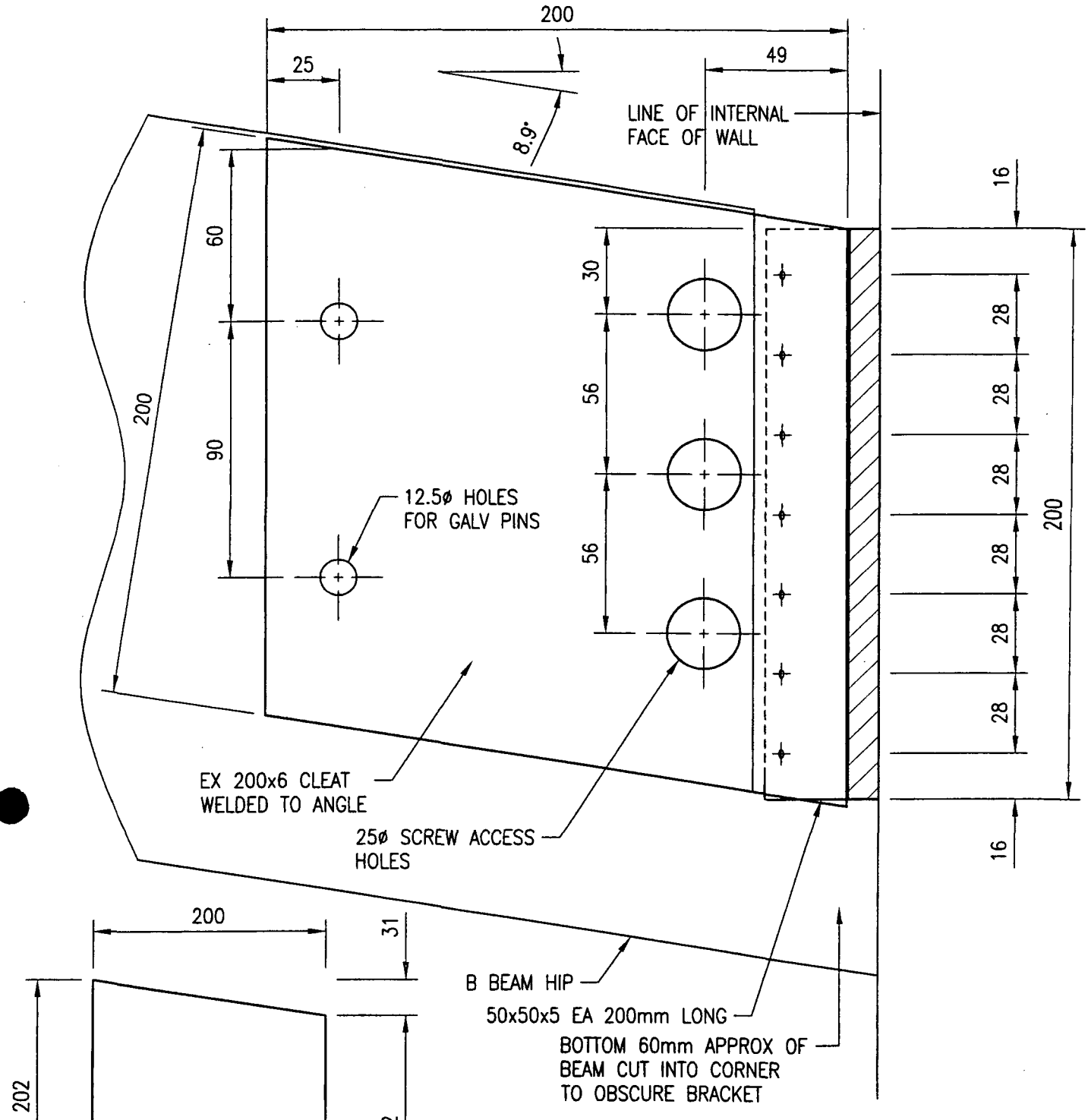


DETAIL 8 1:2

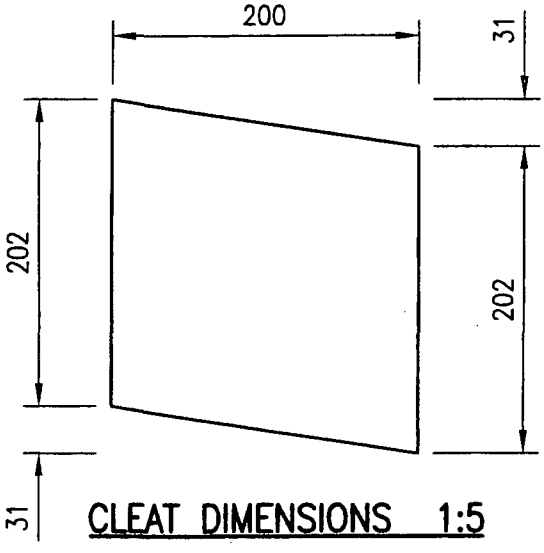
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	SHEET: 5 OF: 7



DETAIL 9 1:2



CLEAT DIMENSIONS 1:5

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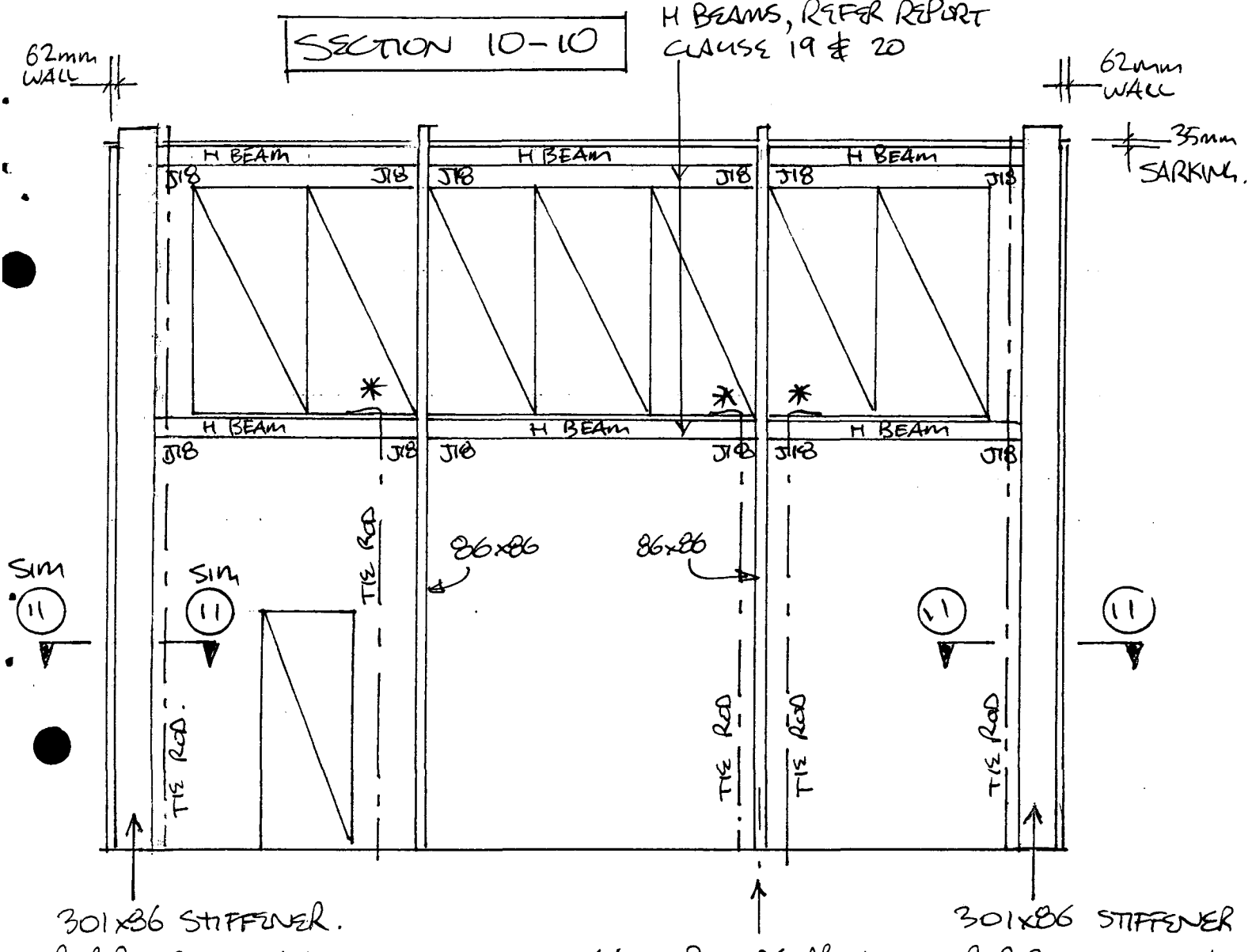
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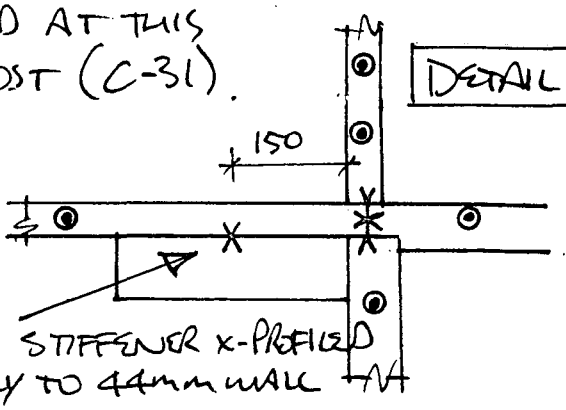
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	DATE 24/7/06
	SHEET 6 OF 7

SECTION 10-10



* LOWER LEVEL TIE RODS TURNED OVER 21st BOARD AND STAPLED TO LOCKWOOD STANDARD.

DETAIL 11



Document Set ID: 588078
Version: 1, Version Da

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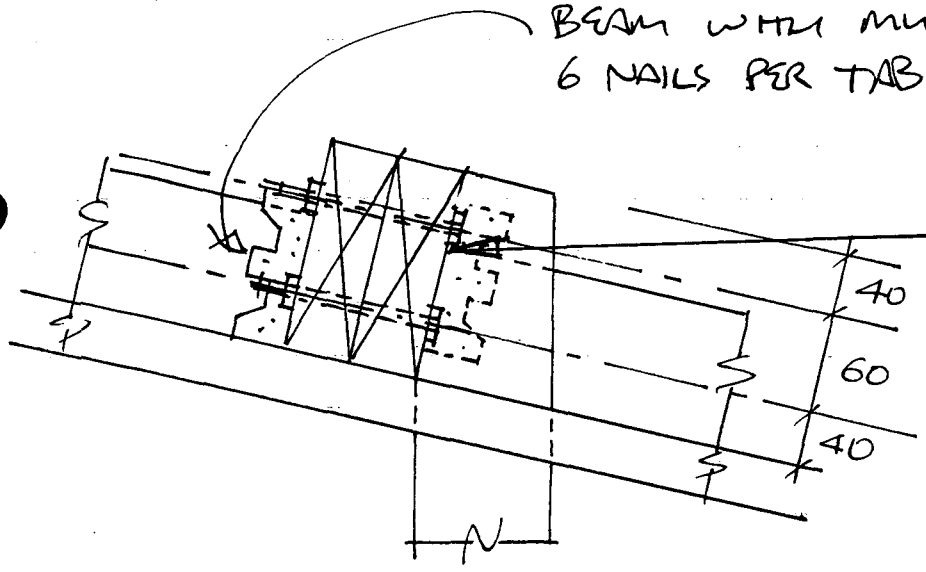
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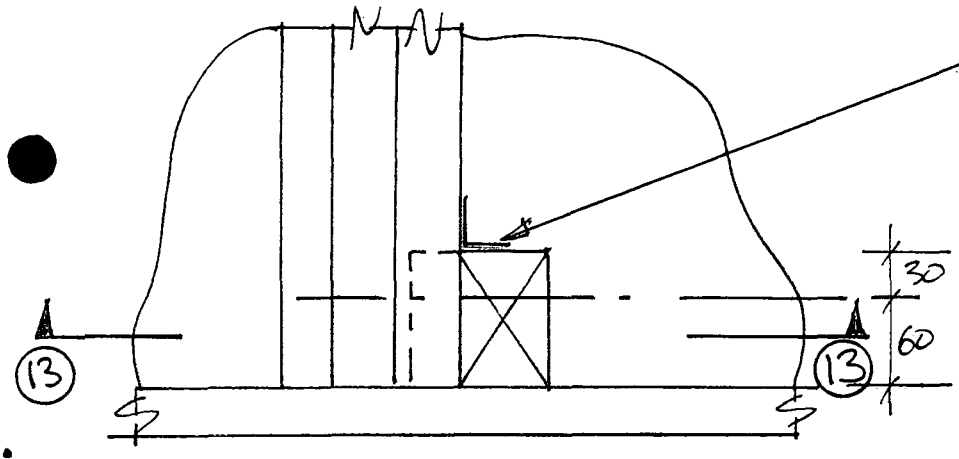
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	DATE 24/7/06
T.K.	SHEET 7 OF 7

DETAIL 13

DUMMY RAFTERS FIXED TO FACE OF BEAM WITH MULTIGRIPS BOTH SIDES, 6 NAILS PER TAB (30x3.15mm Ø FH GALV).



90x90 POST CUT AT 12.5°. DOUBLE 140x45 BOLTED TO POST WITH 2M10 GALV BOLTS + WASHERS.



PROVIDE LUMBERLOK MULTIGRIP BETWEEN POST AND BEAM, 6 NAILS PER TAB (30x3.15mm Ø FH GALV).

DETAIL 12

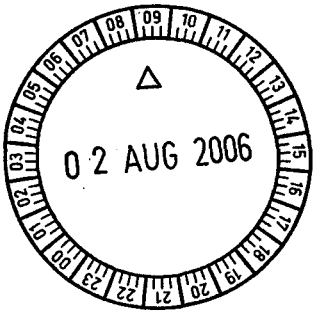
Document Set ID: 588
Version: 1, Version D

PIM / APPLICATION No. 36597/8

DATE RECEIVED _____

DATE ISSUED _____

SITE FILE No. 27041 · 57C/387



Form 2

APPLICATION FOR PROJECT INFORMATION MEMORANDUM AND/OR BUILDING CONSENT

Section 33 or section 45, Building Act 2004

THE BUILDING

Street address of building:
[for structures that do not have a street address, state the nearest street intersection and the distance and direction from that intersection]

48 SHARP ROAD
ROTORUA

Legal description of land where building is located:
[state legal description as at the date of application and, if the land is proposed to be subdivided, include details of relevant lot numbers and subdivision consent]

Subdivision Consent *(if applicable)* _____

Valuation No. 06951/239.02 **Lot No.** 2

DPS 71633 **Section** _____

Block _____ **Survey District** _____

Building name: _____

Location of building within site/block number:
[include nearest street access]

Number of levels: Single
[include ground level and any levels belowground]

Level/unit number: _____
[insert level/unit number if applicable]

Area: 90 · m²
[total floor area; indicate area affected by the building work if less than the total area]

Current, lawfully established, use:
[include number of occupants per level and per use if more than 1]

Dwelling

Year first constructed: _____
[insert year, approximate date is acceptable e.g: c1920s or 1960-1970]

Expected completion date: _____
[insert month year]

Version 2 12/05

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

THE OWNER

Name of owner:
[include preferred form of address, eg, Mr, Miss, Dr, if an individual]
M. REID
(MICHAEL)

Contact person:
[insert contact name]
J. Hodges

Mailing address:
[insert mailing address]
c/- P.O. Box 473
Rotorua

Street address/registered office:
[insert street address/registered office]

Phone numbers:
Landline: 3476338 Daytime:
Mobile: 0274979110 After Hours:

Facsimile number: 3492013
Email address: hodge@clear.net.nz

Website:
[website address if applicable]

The following evidence of ownership is attached to this application:
[current copy of certificate of title, lease, agreement for sale and purchase, or other document showing full name of legal owner(s) of the building]

AGENT

Name of agent:
[include preferred form of address, eg, Mr, Miss, Dr, if an individual]
HODGES CONSTRUCTION LTD

Contact person:
[insert contact name]
John Hodges

Mailing address:
[insert mailing address]
P.O. Box 473
ROTORUA.

Street address/registered office:
[insert street address/registered office]

Phone numbers:
Landline: 3476338 Daytime:
Mobile: 0274979110 After Hours:

Facsimile number:
Email address:

Website:
[website address if applicable]

Relationship to owner: Builder.
[state details of the authorisation from the owner to make the application on the owner's behalf]

First point of contact for communications with the council/ building consent authority:
[all invoices and refunds related to this application will be directed to this person in all instances]
HODGES CONSTRUCTION LTD
P.O. Box 473
ROTORUA.

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

THE PROJECT

Description of the building work:
[provide sufficient description of building work to enable scope of work to be fully understood]
Hobby Photo Studio & Gymnasium

Will the building work result in a change of use of the building?
Yes ☐ No ☑

If Yes, provide details of the new use:
[provide description of new use]

Intended life of the building if less than 50 years: ✓

List building consents previously issued for this project (if any):
[list who issued the consent, the date of issue and the consent number]

Estimated value of the building work on which the building levy will be calculated (including goods and services tax):
[state estimated value as defined in section 7 of the Building Act 2004] $238000

Number of Toilet Pans: 1
(Commercial properties only)

BUILDING PRACTITIONERS

Builder:
Business/name: HODGES CONSTRUCTION Address: ROTORUA
Phone: 3476338 Mobile: 0274979110 After hours: _____ Facsimile: _____
Email: _____ Registration/qualification: NZCQS

Designer/Architect:
Business/name: LOCKWOOD / HCL Address: ROTORUA.
Phone: 3476338 Mobile: _____ After hours: _____ Facsimile: _____
Email: _____ Registration/qualification: _____

Plumber/Gas Fitter:
Business/name: L. Cannon Address: ROTORUA
Phone: _____ Mobile: 0274930940 After hours: _____ Facsimile: _____
Email: _____ Registration/qualification: _____

Drainlayer:
Business/name: T. ANDERSEN Address: ROTORUA.
Phone: _____ Mobile: 0274501157 After hours: _____ Facsimile: _____
Email: _____ Registration/qualification: _____

Electrician:
Business/name: HEPBURNS Address: ROTORUA.
Phone: 3478491 Mobile: _____ After hours: _____ Facsimile: _____
Email: _____ Registration/qualification: _____

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

BUILDING PRACTITIONERS

Structural Engineer:

Business/name: BSK Address: Rotorua

Phone: 3485394 Mobile: _____ After hours: _____ Facsimile: _____

Email: _____ Registration/qualification: _____

Engineer (identify practice college):

Business/name: _____ Address: _____

Phone: _____ Mobile: _____ After hours: _____ Facsimile: _____

Email: _____ Registration/qualification: _____

Head Contractor/Site Manager

Business/name: _____ Address: _____

Phone: _____ Mobile: _____ After hours: _____ Facsimile: _____

Email: _____ Registration/qualification: _____

Other:

Business/name: _____ Address: _____

Phone: _____ Mobile: _____ After hours: _____ Facsimile: _____

Email: _____ Registration/qualification: _____

Other:

Business/name: _____ Address: _____

Phone: _____ Mobile: _____ After hours: _____ Facsimile: _____

Email: _____ Registration/qualification: _____

Other:

Business/name: _____ Address: _____

Phone: _____ Mobile: _____ After hours: _____ Facsimile: _____

Email: _____ Registration/qualification: _____

Other:

Business/name: _____ Address: _____

Phone: _____ Mobile: _____ After hours: _____ Facsimile: _____

Email: _____ Registration/qualification: _____

Other:

Business/name: _____ Address: _____

Phone: _____ Mobile: _____ After hours: _____ Facsimile: _____

Email: _____ Registration/qualification: _____

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

The building work will comply with the building code as follows: *[Delete this section if this is an application for a PIM only]*

Clause *[which of the following clauses will be involved in the proposed building work?]*		**Means of compliance** *[refer to the relevant compliance document(s) or detail of alternative solution in the plans and specifications]*	**Proposed inspections** [state means of inspection. Note PS4 or certification may be required]
☑ B1	Structure	☐ B1/AS2 ☑ NZS 3604 ☐ NZS 4203 ☐ NZS 4229 ☐ Other _____ *[Specify]*	☐ Council ☑ Engineer ☐ Other _____ *[Specify]*
☑ B2	Durability	☐ B2/AS1 ☐ NZS 3101 NZS 3602 ☑ NZS 3604 ☐ Other _____ *[Specify]*	☐ Council ☐ Engineer ☐ Other _____ *[Specify]*
☐ C1- 4	Fire	☐ C1/AS1 ☐ Other _____ *[Specify]*	☐ Council ☐ Engineer ☐ Other _____ *[Specify]*
☐ D1	Access Routes	☐ D1/AS1 ☐ NZS 4121 NZS 4121 ☐ Other _____ *[Specify]*	☐ Council ☐ Engineer ☐ Other _____ *[Specify]*
☐ D2	Mechanical installations for access	☐ D2/AS1 ☐ NZS 4332 EN 81 ☐ EN 115 ☐ Other _____ *[Specify]*	☐ Engineer ☐ Other _____ *[Specify]*
☐ E1	Surface water	☐ E1/AS1 ☐ AS/NZS3500.3 ☐ Other _____ *[Specify]*	☐ Council ☐ Other _____ *[Specify]*
☑ E2	External moisture	☑ E2/AS1 ☐ Specific design & testing	☐ Council ☐ Other _____ *[Specify]*
☑ E3	Internal moisture	☑ E3/AS1 ☐ Other _____ *[Specify]*	☐ Council ☐ Other _____ *[Specify]*
☐ F1	Hazardous substances etc	☐ F1/AS1 ☐ Other _____ *[Specify]*	☐ Council ☐ Other _____ *[Specify]*
☐ F2	Hazardous building materials	☐ F2/AS1 ☐ NZS 4223 ☐ Other _____ *[Specify]*	☐ Council ☐ Other _____ *[Specify]*
☐ F3	Hazardous substances	☐ F3/AS1 ☐ Other _____ *[Specify]*	☐ Council ☐ Other _____ *[Specify]*
☐ F4	Safety from falling	☐ F4/AS1 ☐ FSP Act ☐ Other _____ *[Specify]*	☐ Council ☐ Other _____ *[Specify]*
☐ F5	Construction and demolition hazards	☐ F5/AS1 ☐ Other _____ *[Specify]*	☐ Council ☐ Other _____ *[Specify]*
☐ F6	Lighting for emergency	☐ F6/AS1 ☐ Other _____ *[Specify]*	☐ Council ☐ Other _____ *[Specify]*
☐ F7	Warning systems	☐ F7/AS1 ☐ AS/NZS 1668 ☐ NZS 4512 ☐ NZS 4515 ☐ Other _____ *[Specify]*	☐ Council ☐ Engineer ☐ Other _____ *[Specify]*
☐ F8	Signs	☐ F8/AS1 ☐ Other _____ *[Specify]*	☐ Council ☐ Other _____ *[Specify]*
☑ G1	Personal hygiene	☐ G1/AS1 ☐ Other _____ *[Specify]*	☐ Council ☐ Other _____ *[Specify]*

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

☐ G2	Laundering	☐ G2/AS1	☐ Other _____ *[Specify]*	☐ Council ☐ Other _____ *[Specify]*
☐ G3	Food preparation and prevention of contamination	☐ G3/AS1	☐ Other _____ *[Specify]*	☐ Council ☐ Other _____ *[Specify]*
☐ G4	Ventilation	☐ G4/AS1	☐ AS/NZS 1668.2 ☐ Other _____ *[Specify]*	☐ Council ☐ Other _____ *[Specify]*
☐ G5	Interior environment	☐ G5/AS1	☐ Other _____ *[Specify]*	☐ Council ☐ Other _____ *[Specify]*
☐ G6	Airborne & impact sound	☐ G6/AS1	☐ Other _____ *[Specify]*	☐ Council ☐ Other _____ *[Specify]*
☑ G7	Natural light	☑ G7/AS1	☐ Other _____ *[Specify]*	☐ Council ☐ Other _____ *[Specify]*
☐ G8	Artificial light	☐ G8/AS1	☐ NZS 6703 ☐ Other _____ *[Specify]*	☐ Council ☐ Other _____ *[Specify]*
☑ G9	Electricity	☑ G9/AS1	☐ Other _____ *[Specify]*	By certification only
☐ G10	Piped services	☐ G10/AS1	☐ NZS 5261 ☐ Other _____ *[Specify]*	By certification only
☐ G11	Gas as an energy source	☐ G11/AS1	☐ Other _____ *[Specify]*	By certification only
☐ G12	Water supplies	☐ G12/AS1	☐ AS/NZS 3500.1 ☐ AS/NZS 3500.4 ☐ Other _____ *[Specify]*	☐ Council ☐ Other _____ *[Specify]*
☑ G13	Foul water	☐ G13/AS1	☑ AS/NZS 3500.2 BS 5572 ☐ Other _____ *[Specify]*	☐ Council ☐ Other _____ *[Specify]*
☐ G14	Industrial liquid waste	☐ G14/AS1	☐ Other _____ *[Specify]*	☐ Council ☐ Other _____ *[Specify]*
☐ G15	Solid waste	☐ G15/AS1	☐ Other _____ *[Specify]*	☐ Council ☐ Other _____ *[Specify]*
☑ H1	Energy efficiency	☑ H1/AS1 ☐ ALF Design Manual ☐ NZS 4214	☐ NZS 4218 ☐ NZS 4243 ☐ Other _____ *[Specify]*	☐ Council ☐ Other _____ *[Specify]*

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

HAVE YOU PROVIDED ALL THE FOLLOWING INFORMATION?

(Strike out where not applicable)

NOTE TO APPLICANTS Please use this check sheet to ensure all the information required to be supplied with your application has been provided. If required information has not been provided your application may not be accepted and you will experience delays in obtaining your consent.

GENERAL	Yes	No	N/A
Plans and specifications of an acceptable standard (Reference BRANZ Bulletin 365 Acceptable Plans and Specifications)	☑	☐	☐
Plans, elevations, cross sections of the proposal in duplicate	☑	☐	☐
Certificate of Title (recent search copy less than 6 months old)	☐	☑	☐
Wind Zone classification	☑	☐	☐
Earthquake Zone classification	☑	☐	☐
Corrosion Zone classification	☐	☐	☑
Presence of natural hazards eg. Flooding, falling debris, erosion	☐	☐	☑

BULK & LOCATION	Yes	No	N/A
Site Plan: Fully dimensioned, scaled, showing all buildings and easements (proposed/existing)	☑	☐	☐
Site boundaries nominated	☑	☐	☐
Site area per unit indicated	☑	☐	☐
Site coverage and plot ration calculations %	☐	☐	☑
Shared access ways/other areas	☐	☐	☑
Foulwater (sewer) drains	☑	☐	☐
Stormwater drains and soakholes	☑	☐	☐
Water service details	☐	☐	☑
Site levels and finished floor level indicated	☑	☐	☐
Vehicle crossing position indicated on plan	☐	☐	☑
Vehicle access manoeuvre and parking areas indicated	☐	☐	☑
Street trees, poles, sumps, manholes, traffic islands affecting vehicle access	☐	☐	☑
Hill sites: indicate contours, drive gradients and building heights	☐	☐	☑
Landscaped areas indicated and planting plan produced	☐	☐	☑
Earthworks: identify proposal for cut and/or fill where cut is more than 1.5m deep or 20 cubic metres.	☐	☐	☑

OTHER MISCELLANEOUS	Yes	No	N/A
Demolition details	☐	☐	☐
Swimming pool: design, fence and discharge	☐	☐	☐
Backflow prevention	☐	☐	☐
Notable and protected trees indicated	☐	☐	☐
Heritage site or building affected	☐	☐	☐
Resource Consent application	☐	☐	☐
Subdivision details	☐	☐	☐

ADDITIONAL INFORMATION

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

CONSTRUCTION DETAILS	Yes	No	N/A
Products and designs match selected earthquake, wind and corrosion zones	☑	☐	☐
Timber treatment specifications	☑	☐	☐
Foundation plans and design included. Plans to show details on reinforcing, all fixings and subfloor bracing for timber floors.	☑	☐	☐
Floor slab details including location of expansion joints	☑	☐	☐
Geotechnical reports on ground condition as required	☐	☐	☑
Floor plans with fire partitions, common walls & dividing walls & identification of all rooms & their intended uses	☐	☐	☐
Elevations with maximum height and daylighting recession planes	☐	☐	☑
Beam designs including fixings, design charts for manufactured beams where used	☑	☐	☐
Roof plan complete with truss design statement and details	☐	☐	☑
Details to resist roof uplift	☐	☐	☐
Bracing calculations and layout plans	☑	☐	☐
Brace fixing details	☑	☐	☐
Blockwork design, including cover to reinforcing, locations and detail of expansion joints, fixings.	☐	☐	☑
Retaining walls: design, heights, position, subsoil drainage and safety barriers	☐	☐	☑
Windows: opening and fixed windows indicated, cantilevered lintel details included where appropriate	☑	☐	☐
Glazing: safety glass specifications included	☑	☐	☐
Sound insulation indicated	☐	☐	☑
Location of smoke detectors	☐	☐	☑
Claddings and weathertightness details provided for all claddings, including risk matrix or equivalent	☑	☐	☐
Stairs/steps/landings/balconies: dimensions, handrail and barrier details	☐	☐	☑
Decks: membrane specifications (especially compatible substrates), threshold details, position and size of overflows, gutter size calculations,	☑	☐	☐
Solid fuel heater: make, model & location	☐	☐	☑
Accurate layout of plumbing & drainage systems	☑	☐	☐

Full details of alternative solutions if used	Yes	No	N/A
Producer Statement: specific design details for work outside the scope of acceptable solutions and non specific design codes.	☐	☐	☐
Fire Safety Summary or Fire Design statement	☐	☐	☐
Drainage and/or plumbing	☐	☐	☐
Lifts, escalators, moving walkways	☐	☐	☐
Acoustic and thermal insulation	☐	☐	☐
HVAC systems	☐	☐	☐
Energy	☐	☐	☐
People with disabilities access & facilities	☐	☐	☐
Independent peer review for specialist design above	☐	☐	☐
Compliance Schedule details	☐	☐	☐

ADDITIONAL INFORMATION

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

MATERIALS USED *(identify materials used. Required for Department of Building and Housing records)*

What materials will be used for the:

Floor

1 ☐ Timber 2 ☑ Concrete 3 ☐ Wood Products

4 ☐ Other Specify: _____

Framing

1 ☑ Timber 2 ☐ Concrete 3 ☐ Steel 4 ☐ Aluminium

5 ☐ Other Specify: LOCKWOOD 62mm SOLID TIMBER WALLS

Roof

1 ☐ Steel sheeting 2 ☐ Steel tiles 3 ☐ Concrete tiles 4 ☑ Shingles

5 ☐ Aluminium 6 ☐ Other Specify: CARONA SHAKES.

Internal

1 ☐ Plaster board 2 ☐ Fibrous Plaster 3 ☑ Wood Products

4 ☐ Other Specify: LOCKWOOD 44mm SOLID TIMBER

External Cladding

1 ☐ Brick 2 ☐ Concrete 3 ☐ Concrete block 4 ☐ Cement board

5 ☐ Plaster 6 ☐ Timber 7 ☐ Steel 8 ☑ Aluminium

9 ☐ XPS 10 ☐ Other Specify: LOCKWOOD ASSL CLADDING

Energy

Energy source _____

Cooking: N/A.

Insulation R2.60 to ceilings.

Connection to or disconnection from:

☐ Council water supply *(Please attach "Application for Water Connection" form.)* ☐ Council sewerage

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

COMPLIANCE

The specified systems for the building are as follows: *[specified systems are defined in regulations]*

The following specified systems are being altered, added to, or removed in the course of the building work: *[specify]*

There are no specified systems in the building. ☐

PROJECT INFORMATION MEMORANDUM

The following matters are involved in the project

- ☐ Subdivision
- ☐ Alterations to land contours
- ☐ New or altered connections to public utilities
- ☐ New or altered access for vehicles
- ☑ Disposal of stormwater and wastewater
- ☐ New or altered locations and/or external dimensions of buildings
- ☐ Building work over or adjacent to any road or public place
- ☐ Building work over any existing drains or sewers or in close proximity to wells or water mains
- ☐ Other matters known to the applicant that may require authorisations from the territorial authority: *[specify]*

BUILDING CONSENT

The following plans and specifications are attached to this application:

Floor Plan, Elevations, X Section, Foundation Plan Site Plan, Drainage Plan, Engineers Plans & Details, Lockwood Specification, Job Specification

ATTACHMENTS

The following documents are attached to this application:

- ☑ Certificate attached to project information memorandum
- ☐ Plans and specifications *[list]* Refer Above and letter from Owner regarding useage signed off by Council
- ☐ Project information memorandum
- ☐ Development contribution notice

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

WAIVER/MODIFICATION TO NZ BUILDING CODE REQUIRED FOR FOLLOWING PARTS OF CODE:

APPLICATION

I request that you issue a †[project information memorandum/project information memorandum and building consent/building consent] *[delete which is not applicable]* for the building work described ~~in this application~~

Signature of †owner/agent *[on behalf of and with the authority of the owner]*

Date: 2/8/06.

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

COUNCIL USE ONLY

CONSENT CONDITIONS / COMMENTS

Approved
K Wiggins
22-8-06

BCO	P&D	CONSULTANT	PLANNER	EHO	NZFS

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010

COUNCIL USE ONLY

ESTIMATED TOTAL VALUE OF WORK

$ 238,000 gst inclusive Project floor area 90 m²

FEE PAYABLE

Consent deposit

Project Information Memorandum	$	400.00
Building Administration	$	700.00
Technical Processing	$	325
Industry Levy (DBH)	$	468-86
Industry Levy (BRANZ)	$	238
Developmental Contribution		
_____	$	
_____	$	
_____	$	
_____	$	
Certificate of Title	$	15.00
Producer Statements	$	
Compliance Schedules	$	
Rural Number	$	
Vehicle Crossing	$	—
Street Damage	$	—
Water Connection	$	
Sewer Connection	$	
Other(s) CCC	$	75.00
Total consent deposit	$	

8 inspects & CCC allowed for

Granted by _____

Signature _____

Date _____

(unformed road)

Issued by _____

Signature _____

Date _____

Consent fee balance

Inspections	$	
Other(s)	$	
Total balance payable	$	1031.86

Lodgement deposit	$	1190.00
Date paid		2.8.06
Receipt No.		R 51797
Consent fee balance	$	
Date paid		
Receipt No.		

Please complete
Forward any refunds or further invoices to:

_____

_____

_____

Document Set ID: 588278
Version: 1, Version Date: 31/03/2010