

GUIDANCE ON USE OF PRODUCER STATEMENTS

Producer statements were first introduced with the Building Act 1992. The producer statements were developed by a combined task committee consisting of members of the New Zealand Institute of Architects, Institution of Professional Engineers New Zealand, Association of Consulting Engineers New Zealand in consultation with the Building Officials Institute of New Zealand. The original suite of producer statements has been revised as at the date of this form as a result of enactment of the Building Act (2004) by these organisations to ensure standard use within the industry.

The producer statement system is intended to provide Building Consent Authorities (BCAs) with reasonable grounds for the issue of a Building Consent or a Code Compliance Certificate, without having to duplicate design or construction checking undertaken by others.

PS1 Design

Intended for the use by a suitably qualified independent design professional in circumstances where the BCA accepts a producer statement for establishing reasonable grounds to issue a Building Consent;

PS2 Design Review

Intended for use by a suitably qualified independent design professional where the BCA accepts an independent design professional's review as the basis for establishing reasonable grounds to issue a Building Consent;

PS3 Construction

Forms commonly used as a certificate of completion of building work are Schedule 6 of NZS 3910:20031 ; or Schedules E1/E2 of NZIA's SCC 2007 2

PS 4 Construction Review

Intended for use by a suitably qualified independent design professional who undertakes construction monitoring of the building works where the BCA requests a producer statement prior to issuing a Code Compliance Certificate.
This must be accompanied by a statement of completion of building work (Schedule 6).

The following guidelines are provided by ACENZ, IPENZ and NZIA to interpret the Producer Statement.

Competence of Design Professional

This statement is made by a Design Firm that has undertaken a contract of services for the services named, and is signed by a person authorised by that firm to verify the processes within the firm and competence of its designers.

A competent design professional will have a professional qualification and proven current competence through registration on a national competence-based register, either as a Chartered Professional Engineer (CPEng) or a Registered Architect.

Membership of a professional body, such as the Institution of Professional Engineers New Zealand (IPENZ) or the New Zealand Institute of Architects (NZIA) provides additional assurance of the designer's standing within the profession. If the design firm is a member of the Association of Consulting Engineers New Zealand (ACENZ), this provides additional assurance about the standing of the firm.

Persons or firms meeting these criteria satisfy the term "suitably qualified independent design professional".

Professional Indemnity Insurance

As part of membership requirements, ACENZ requires all member firms to hold Professional Indemnity Insurance to a minimum level.

The PI insurance minimum stated on the front of this form reflects standard, small projects. If the parties deem this inappropriate for large projects the minimum may be up to \$500,000.

Professional Services during Construction Phase

There are several levels of service which a Design Firm may provide during the construction phase of a project (CM1-5)³ (OL1-OL4)². The Building Consent Authority is encouraged to require that the service to be provided by the Design Firm is appropriate for the project concerned.

Requirement to provide Producer Statement PS4

Building Consent Authorities should ensure that the applicant is aware of any requirement for producer statements for the construction phase of building work at the time the building consent is issued as no design professional should be expected to provide a producer statement unless such a requirement forms part of the Design Firm's engagement.

Attached Particulars

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

Refer Also:

1 Conditions of Contract for Building & Civil Engineering Construction NZS 3910: 2003

2 NZIA Standard Conditions of Contract SCC 2007 (1st edition)

3 Guideline on the Briefing & Engagement for Consulting Engineering Services (ACENZ/IPENZ 2004)

www.acenz.org.nz

www.ipenz.org.nz

www.nzia.co.nz

SITE INSPECTION REPORT



Date: 20 January 2012	Report No: 1	Job No: 24340
Inspected By: John Butler		
Contractors Representative: Mike Williams		
Project: 155 Field Way, Walkanae	Area Inspected: Steel Beam	

**ISP CONSULTING
ENGINEERS LTD**

Civil & Structural
Electrical
Seismic Risk Analysis
Forensic Investigation
Building Compliance

Lower Hutt Office
Tel: 04 566 8004
Fax: 04 566 8037
Level 1, 14 Laings Rd
P.O. Box 30 535
Lower Hutt

Paraparaumu Office
Tel: 0800 477 546
P.O. Box 537
Coastlands Parade
Paraparaumu

Email: email@isp.co.nz
Web: www.isp.co.nz

Inspection time: 1530
Weather: Sunny & dry
Stage: Steel Beam prior to closing in.

Observations:

1. Steel Beam in place as prescribed. Interior connection rotated 90°.
2. J2 (2-240x45) replaced with 2-HS240x63.
3. Diagonal cleats on BM1/J1 connection replaced with multigrips, joisthangers and blocking (to be placed). Similar connection planned for J2.
4. Joisthangers on same side as J1 yet to be placed.
5. Joists on same side as J2 yet to be replaced with full length joists.

Instructions Given:

1. Complete connections as described above. Provide photo evidence of completion.

Approved to close in on completion of the above, provided photographic evidence supplied and the Local Authority have carried out any inspections they require.

Next Inspection Required: No further inspections.

Send To:

Mike Williams
metalmike.williams@gmail.com



ISO 9001



Safety • Competency

Electrical Certificate of Compliance

for a low voltage installation if prescribed electrical work has been done on any part of it and the prescribed electrical work involved placing, replacing, or repositioning conductors or fittings attached to conductors.

No. **3765984**

No. of attachments

To be completed whether or not an inspection is required.

CUSTOMER INFORMATION - PLEASE PRINT CLEARLY

Name of customer *Mrs Mrs Naef*

Phone: *(04) 905-0084*

Address of installation *155 Fieldway, Waikanae Bch*

Postal address of customer (if not as above)

DECLARATION OF CONFORMITY (Please tick (✓) appropriate boxes)

In accordance with Regulation 58 of the Electricity (Safety) Regulations 2010, the design of the installation or part of the installation to which this certificate applies

- (a) complies with either Part 2 of AS/NZS 3000:2007 or Part 1 of AS/NZS3000:2007 and Regulation 59 and
- (b) the supply system of the installation or part of the installation to which this certificate applies is 230V/400 V MEN or attached other system

WORK DETAILS

<i>11</i> No. of lighting outlets	No. of ranges	Please tick (✓) as appropriate where work includes:
<i>8</i> No. of socket outlets	No. of water heaters	
Was any installation work carried out by the homeowner?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input checked="" type="checkbox"/> Mains <input checked="" type="checkbox"/> MEN Switchboard closest to point of supply <input type="checkbox"/> Main earthing system <input type="checkbox"/> Electric lines

Description of work carried out (If necessary attach any pages with work done)

New Master Bedroom + Ensuite

CERTIFICATION OF WORK (Please tick (✓) appropriate boxes)

I certify that the completed installation or part of the installation to which this certificate applies

- has been installed in accordance with the design detailed in the Declaration of Conformity section above
- has had tests which are required by the Electricity (Safety) Regulations 2010 satisfactorily completed
- has an earthing system that is correctly rated
- contains fittings which are safe to connect to a power supply
- is safe to connect to a power supply

Validly authenticated

02 FEB 2015

Signature: *[Signature]*

ELECTRICAL WORKER DETAILS

Name *J. MEENAN*

Registration No. *E17102*

Company *O'LEARY ELECTRICAL*

Contact Ph No. *021 974 262*

Signature *[Signature]*

Date *8/5/12*

INSPECTION DETAILS

Electrical work requiring inspection by a registered electrical inspector

- Mains work (mains, MEN switchboards closest to the point of supply, or main earthing systems)
- Attached other
- Work carried out in accordance with Part 1 of AS/NZS 3000:2007

I certify that the items identified above are electrically safe and that the inspection has been carried out in accordance with the Electricity (Safety) Regulations 2010.

Name _____ Registration No. _____

Signature _____ Date _____

Contact Ph No. _____

For the purposes of the Electricity (Safety) Regulations 2010, Freephone 0800 66 1000, Wellington. Fax 04 10 130.

FOUL WATER DRAINS

Lay drains in straight runs to correct gradients, to discharge into the existing sewer. Set all inspection fittings on a concrete base.

STORMWATER DRAINS

Confirm the required location of all downpipes and all finished ground levels before commencing pipe work. Set downpipes bends in concrete brought up to protect the top of the fitting from damage. Trowel off and fit a cast iron grating. Lay drains in straight runs to correct gradients to discharge into the existing stormwater system.

BC 110554



**ISP CONSULTING
ENGINEERS LTD**

Civil & Structural
Seismic Risk Analysis
Building Compliance

Lower Hutt Office
Tel: 04 566 8004
Fax: 04 566 8037
Level 1, 14 Laings Rd
ISP Building
P.O. Box 30 535
Lower Hutt 5010

Paraparaumu Office
Tel: 04 902 5750
Level 1, Office 24
Kayel Building
Raumati Beach
P.O. Box 537
Paraparaumu 5254

Email: email@isp.co.nz
Web: www.isp.co.nz

Structural Calculations

For

**155 Field Way,
Waikanae Beach**

These calculations are in accordance with:

AS/NZS1170:2004 Structural Design Actions
NZS3101:2006 Design of Concrete Structures
NZS3404:1998 Design of Steel Structures
NZS3603:1993 Design of Timber Structures
NZS3604:2011 Timber Framed Buildings

Engineer:

Stuart Preston
Hugh Falkner
John Butler

Initials:

SRNP
HAF
JFGB

Preamble:

Structural Beam Design and end connection details.
Specific Structural Bracing Design.

Date:
5 September 2011

Job No.
24340




ISO 9001

SPECIFIC DESIGN

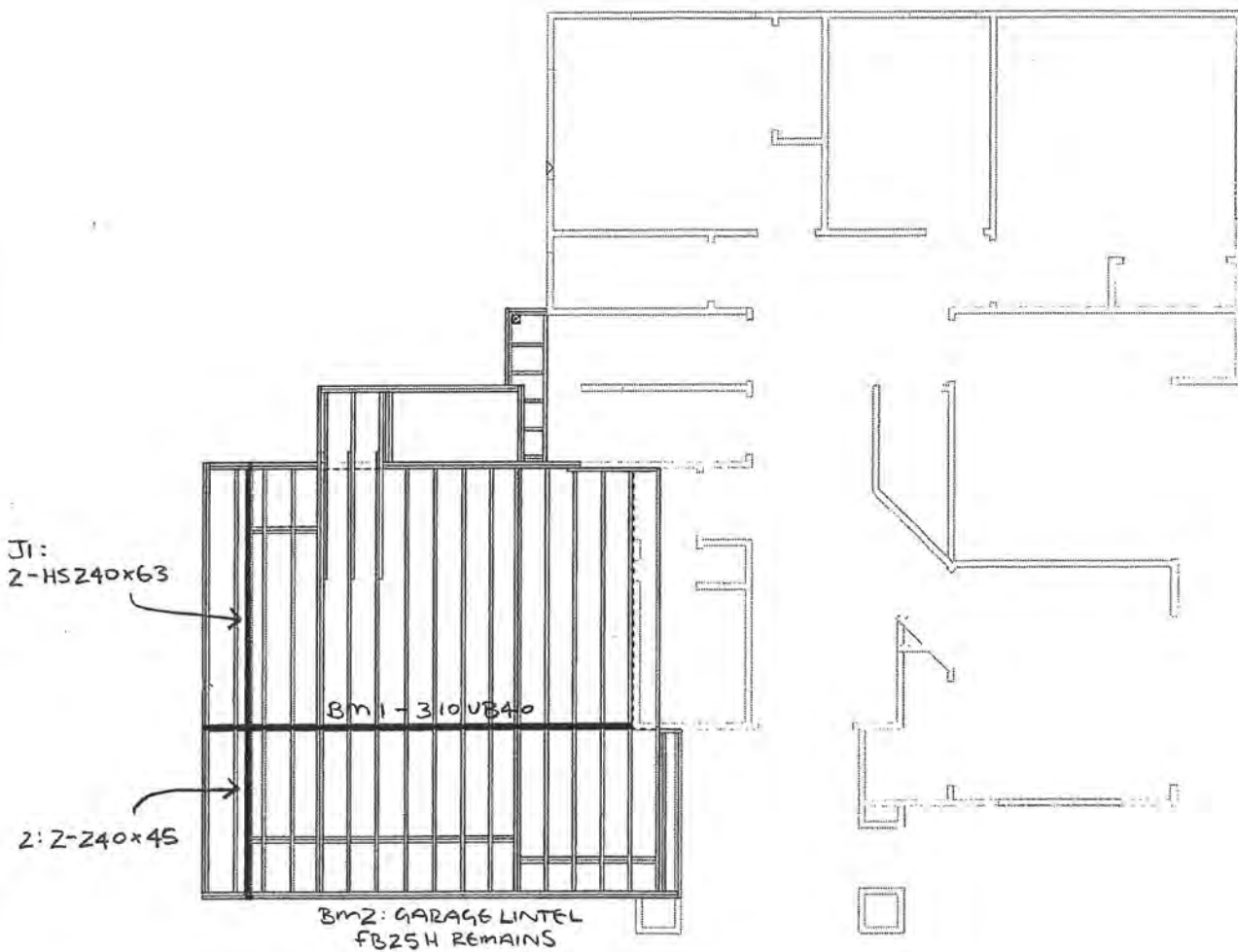
①

F14-06/02

Date 5/9/11	Eng. JFGB	Job No. 24340	Sheet No.
Project 155 FIELD WAY, WAIKANAE			

DESIGN SUMMARY

SCALE 1:100



JOIST LAYOUT PLAN

SPECIFIC DESIGN

2

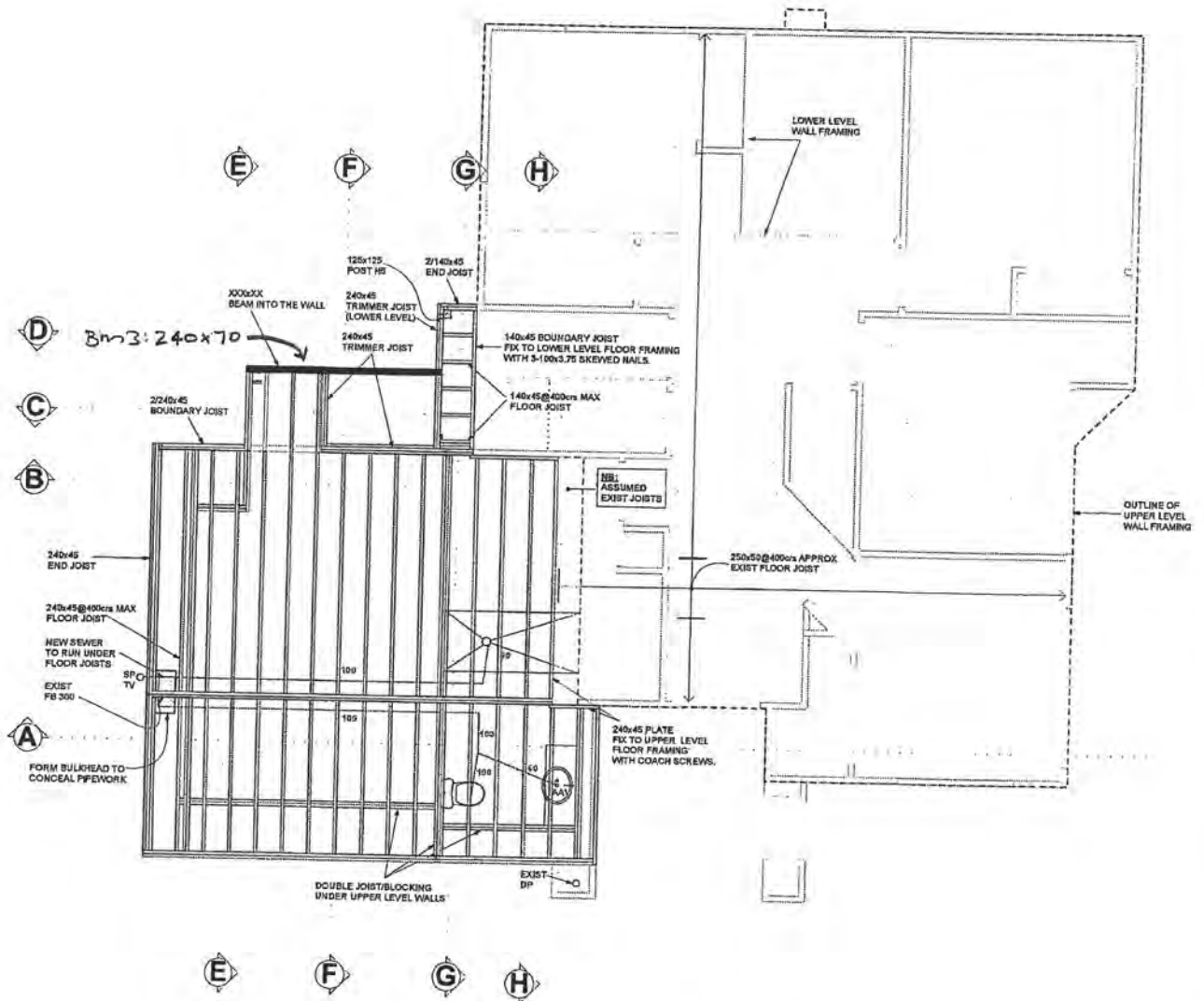
F14-06/02

Date 8/9/11	Eng. JFGB	Job No. 24363	Sheet No.
Project 155 FIELD WAY, WAIKANAÉ			

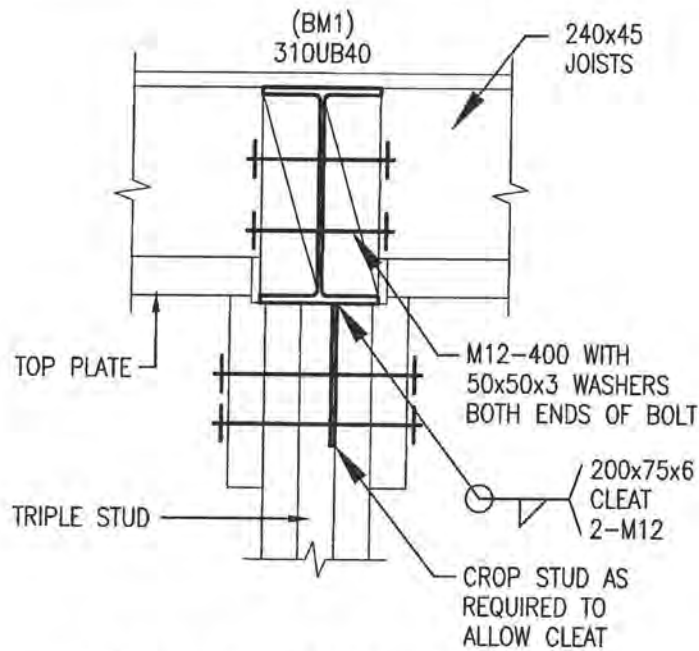


DESIGN SUMMARY

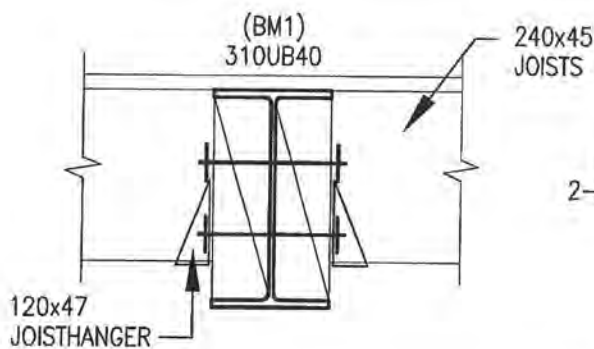
SCALE 1:100



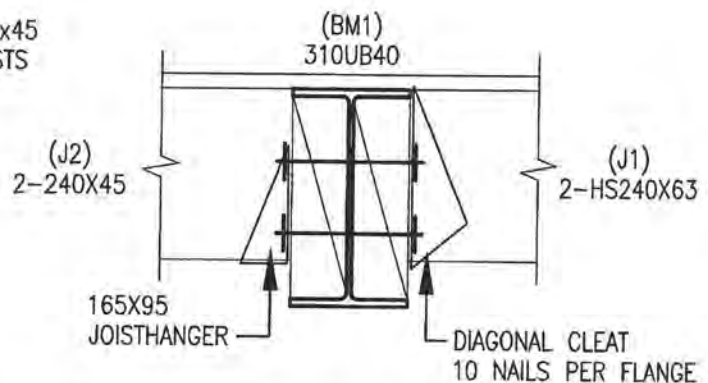
JOIST LAYOUT PLAN



BM1 END CONNECTIONS



TYPICAL JOIST CONNECTIONS



J1/BM1/J2 CONNECTIONS

NOTES:

1. DIMENSIONS TO BE ESTABLISHED ON SITE PRIOR TO STEEL FABRICATION.
2. M12 BOLTS TO BE GRADE 4.6
3. STEEL GRADES
 - PLATES 250MPa
 - HOT ROLLED SECTIONS 300MPa
4. ALL BOLTED TIMBER CONNECTIONS TO HAVE 50x3 GALV. WASHERS.
5. ALL INTERNAL STRUCTURAL STEEL TO HAVE ONE COAT IN ACCORDANCE WITH SYSTEM DESIGNATION AS/NZS 2312/ALK1 BEFORE DELIVERY TO SITE. ANY AREAS DAMAGED TO BE MADE GOOD UPON INSTALLATION.
6. TIMBER TREATMENT:
 - EXTERIOR TIMBER NOT IN CONTACT WITH GROUND TO BE TREATED TO TPC SPECIFICATION H3.1
 - EXTERIOR WALL FRAMING TO BE TREATED TO TPC SPECIFICATION H1.2


7. ENGINEER TO INSPECT ALL BEAMS PRIOR TO CLOSING IN.
 CONTACT STUART PRESTON OR JOHN BUTLER 566 8004
 (24 HOURS NOTICE REQUIRED)

ISP Lower Hutt Office
 Tel: (04) 566-8004
 Fax: (04) 566-8037
 Paraparaumu Office
 Tel: (04) 902 5750
 ISP CONSULTING ENGINEERS LTD.

CLIENT WERNER NAEF	DATE 5/9/11	DWG No.
PROJECT 155 FIELD WAY WAIKANAE BEACH	SCALE 1:10	S1
	DRAWN JFGB	JOB No 24340

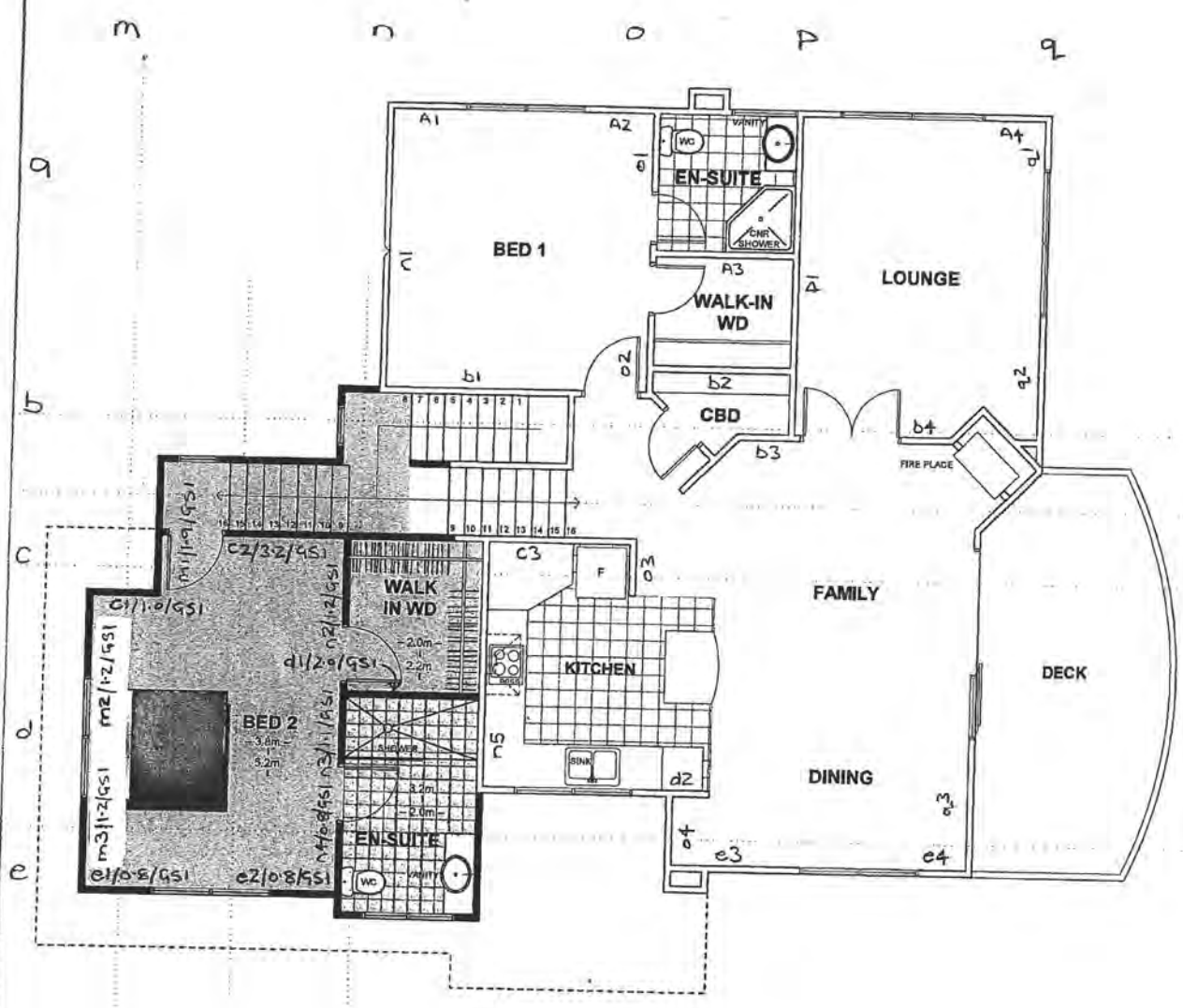
SPECIFIC DESIGN

F14-06/02

Date 5/9/11	Eng. JFGB	Job No. 24340	Sheet No.
Project 155 FIELD WAY, HAIKANAE			

BRACING SUMMARY

DETAILS OF EXISTING WALLS
HAVE BEEN OMITTED FOR
CLARITY




UPPER LEVEL

132.02m² (1419 sq.ft.)+ DECKS 36.58m²(394 sq.ft.)

SPECIFIC DESIGN

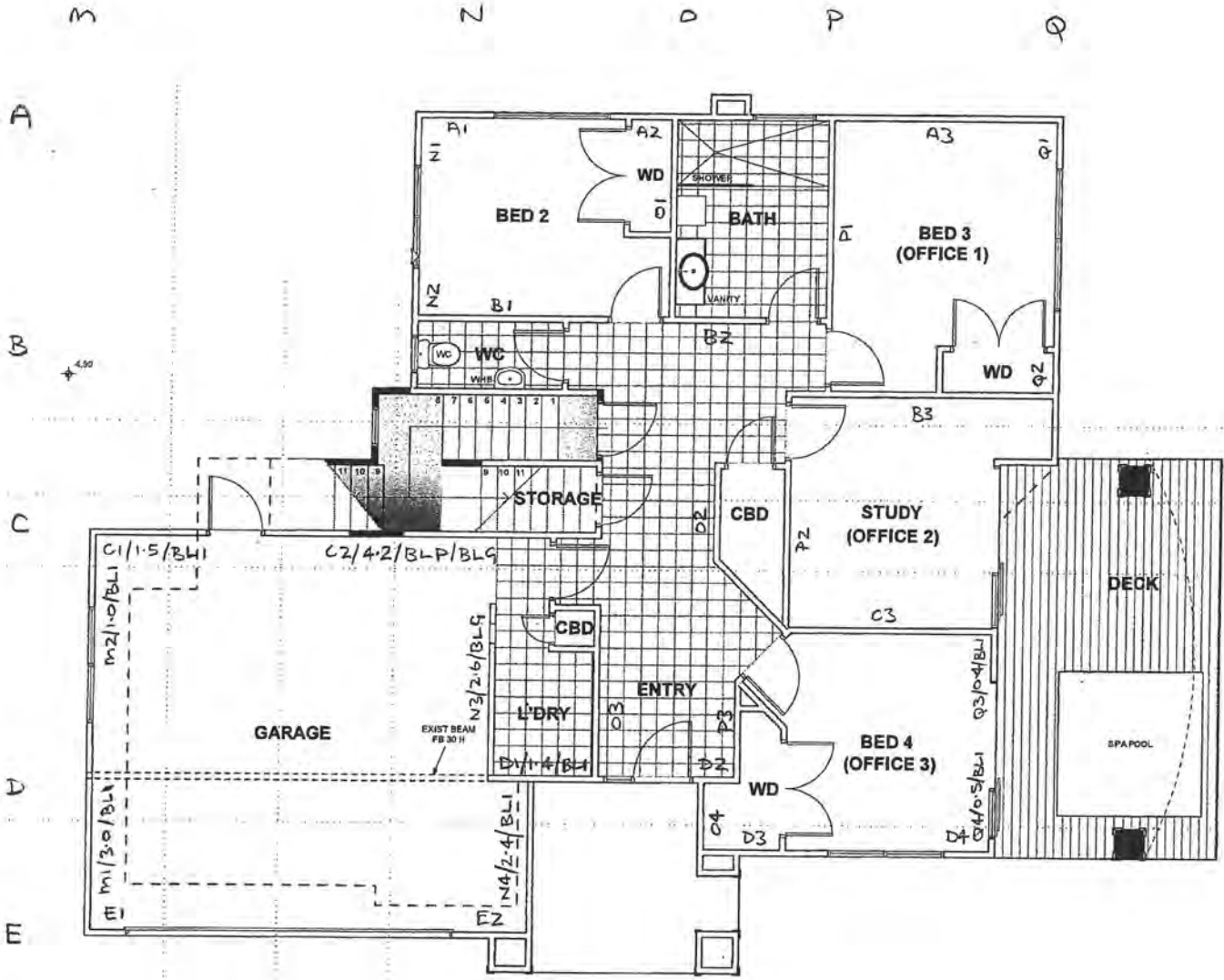
5

F14-06/02

Date 5/9/11	Eng. JFQB	Job No. 24340	Sheet No.
Project 155 FIELD WAY, WAIKANAE			
<p>BRACING SUMMARY</p> <p>DETAILS OF EXISTING WALLS HAVE BEEN OMITTED FOR CLARITY</p>			

BRACING SUMMARY

DETAILS OF EXISTING WALLS
HAVE BEEN OMITTED FOR
CLARITY



LOWER LEVEL

151.51m² (1631 sq.ft.)+ DECKS 36.58m²(394 sq.ft.)

GIB EzyBrace® 2011 Software




Demand Calculation Sheet

two storey

V06/11

Job Details

Street and Number	155 Field Way	 <p>BRANZ Appraised Appraisal No.294 [2011]</p>	
Suburb	Waikanae Beach		
Lot and DP Number	Lot 8 DP 91324		
City/Town/District	Waikanae Beach		
Designer & Date	JFGB		2-Sep-11
Company Name	ISP Consulting Engineers Ltd		
Job Number	J24340		

Building Specification

Select Lining Option

10 or 13 mm GIB® Plasterboard

Number of storeys	two																											
Floor Loading	2kPa																											
Foundation Type	slab																											
<table border="0" style="width:100%"> <tr> <td style="width:50%; text-align:center">Upper Floor</td> <td style="width:50%; text-align:center">Lower Floor</td> </tr> <tr> <td>Cladding Weight</td> <td>light</td> </tr> <tr> <td>Roof Weight</td> <td>light</td> </tr> <tr> <td>Room in Roof Space</td> <td>no</td> </tr> <tr> <td>Roof Pitch (degrees)</td> <td>15</td> </tr> <tr> <td>Roof height above eaves (m)</td> <td>1.7</td> </tr> <tr> <td>Building height to apex (m)</td> <td>7.0</td> </tr> <tr> <td>Ground to lower floor level (m)</td> <td>0.2</td> </tr> <tr> <td>Lower to upper floor level (m)</td> <td>3.0</td> </tr> <tr> <td>Stud Height (m)</td> <td>2.4</td> </tr> <tr> <td>Building Length (m)</td> <td>14.3</td> </tr> <tr> <td>Building Width (m)</td> <td>12.3</td> </tr> <tr> <td>Building Plan Area (m2)</td> <td>132</td> </tr> </table>			Upper Floor	Lower Floor	Cladding Weight	light	Roof Weight	light	Room in Roof Space	no	Roof Pitch (degrees)	15	Roof height above eaves (m)	1.7	Building height to apex (m)	7.0	Ground to lower floor level (m)	0.2	Lower to upper floor level (m)	3.0	Stud Height (m)	2.4	Building Length (m)	14.3	Building Width (m)	12.3	Building Plan Area (m2)	132
Upper Floor	Lower Floor																											
Cladding Weight	light																											
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Building Length (m)	14.3																											
Building Width (m)	12.3																											
Building Plan Area (m2)	132																											

Building Location

Wind Zone	Very High	Earthquake Zone	Soil Type
Select by Building Consent Authority Map or Preference	Very High	3	D&E (deep to very soft)
Wind Region	Preference selected	Annual exceedance probability	
Lee Zone	Preference selected	1/500 (NZS3604:2011 default)	
Ground Roughness	Preference selected		
Site Exposure	Preference selected		
Topographic Class	Preference selected		

Bracing Units required for Wind

Demand W (BU)		lower	Walls upper
along	slab	1542	651
across	slab	1692	648

Bracing Units required for Earthquake

Demand along / across E (BU)		
	Walls	
	lower	upper
slab	2265	1007

GIB EzyBrace® 2011 Software



SINGLE OR UPPER STOREY WALLS ALONG

V06/11

Lines		Bracing Elements							
1	2	3	4	5	6	7	8	9	10
Line Total Check	Line Label	Bracing Element No.	Available Wall Length L (m)	Angle to Bracing line (degrees)	Element Height H (m)	Bracing Type	Supplier	Bracing Units Achieved	
								W	E
288	a	1	1		2.4	BR4	Orig Plans	100	85
		2	1		2.4	Extg. Wall	Extg.	42	42
		3	2		2.4	Extg. Wall	Extg.	84	84
		4	0.9		2.4	BR4	Orig Plans	90	77
311	b	1	2.4		2.4	Gib2b	Orig Plans	192	168
		2	2		2.4	Extg. Wall	Extg.	84	84
		3	0.8		2.4	Extg Wall 2	Extg.	34	34
		4	0.6		2.4	Extg Wall 2	Extg.	25	25
348	c	1	1		2.4	GS1-N	GIB®	65	60
		2	3.2		2.4	GS1-N	GIB®	221	192
		3	2.3		2.4	Extg. Wall	Extg.	97	97
162	d	1	2		2.4	GS1-N	GIB®	138	120
		2	1		2.4	Extg. Wall	Extg.	42	42
210	e	1	0.8		2.4	GS1-N	GIB®	49	47
		2	0.8		2.4	GS1-N	GIB®	49	47
		3	1.8		2.4	Gib1a	Orig Plans	99	90
		4	0.6		2.4	Extg Wall 2	Extg.	25	25

								Wind	Earthq.
Totals Achieved		W	221%	EQ	131%			1435	1318
Timber Floor, design limit of 120 BU/m								OK	OK
Totals Required (from Demand)								651	1007

SP/JFGB/J24340

9 September 2011

Kapiti Coast District Council
Private Bag 60601
PARAPARAUMU

To Whom It May Concern:

**155 Field Way, Waikanae Beach
Additions and Alterations**

We confirm we have been engaged to carry out the following construction monitoring inspections:

1. Confirmation of structural steel elements prior to closing in.

If, following those inspections, we are satisfied that the construction works meet the requirements of Section B1 Structure of the NZ Building Code then we shall issue a PS4 and relevant site inspection notes and/or details of variations.

We trust this meets your requirements. Feel free to contact us with any queries or comments.

Yours sincerely,

ISP Consulting Engineers Ltd.



**John Butler
Structural Designer**



**ISP CONSULTING
ENGINEERS LTD**

Civil & Structural
Seismic Risk Analysis
Building Compliance

Lower Hutt Office
Tel: 04 566 8004
Fax: 04 566 8037
Level 1, ISP Centre
14 Laings Road
P.O. Box 30 535
Lower Hutt 5010

Paraparaumu Office
Tel: 04 902 5750
Level 1 Office 24
Kayel Building
Margaret Road
Raumati Beach
P.O. Box 537
Paraparaumu 5254

Email: email@isp.co.nz
Web: www.isp.co.nz



Kevin Collins

Additional Information

From: John Butler [ButlerJ@isp.co.nz]
Sent: Tuesday, 25 October 2011 9:14 a.m.
To: kevin@designnetwork.co.nz
Subject: RE: 155 field st

SPECIFIC DESIGN

Hi,

Item 1 - Please refer pages 9-11 of the calculations. Existing foundations are ok to take extra load.
Item 2 - Original probe results indicate site should be compacted sand.
The PS1 states the capacity of the foundations is to be confirmed by engineer.

John Butler
Structural Designer
ISP Consulting Engineers Ltd.
P.O. Box 30 535,
L r Hutt 5010
PH: (04) 566 8004
DDI: (04) 560 4363

-----Original Message-----

From: Kevin Collins [mailto:kevin@designnetwork.co.nz]
Sent: Tuesday, 25 October 2011 8:27 a.m.
To: Hugh Falkner
Subject: 155 field st

Hugh

Please action a response for the 2 items listed on the attached request.

Thanks

Kevin Collins
NZCD (Arch)
LBP - Design 3
ADNZ professional member

TEL: 5696109
FAX: 5691186

4 July 2012

To whom it may concern

RE: 155 FIELDWAY, WAIKANAE BEACH

We wish to confirm that the property at the above address is owned by Werner & Andrea Naef. They are the owners of the property and it has never been transferred to anyone else's name. This Code of Compliance Application is for a renovation of the property.

Regards



Carl van der Meer
Managing Director
CD van der Meer Builders Limited



Kāpiti Coast District Council

Private Bag 60 601
Paraparaumu 5254
New Zealand



07 October 2011

Design Network Architecture Ltd
PO Box 30-614
LOWER HUTT 5010

Building Consent: 110554

Dear Sir/Madam

Request for further information

Description: *Proposed addition on top of existing garage. Addition contain: Bed 2, Walk-in WD, En-suite & Stairs.*

Location: 155 Field Way, Waikanae Beach

Legal Description: LOT 8 DP 91324

Following checking of your *Building Consent* it is apparent that further information is required..

Information Needed:

- ✓ 1) Confirmation that the existing foundation is designed to take extra level and point loads.
- ✓ 2) New posts in new foundations will need ground conditions confirmed by suitability qualified person (chartered professional engineer)
- ✓ 3) Please confirm the stud centres.
- ✓ 4) Please confirm stud sizes.
- ✓ 5) The joist span in lower level appears unsuitable over the exit door.
- ✓ 6) The rafter sizes appear unsuitable for the span.
- ✓ 7) Please confirm fixings of the packers for membrane roofing substrate.
- ✓ 8) Building consent application requires completing.(F4, F7)
- ✓ 9) Parapet to wall junctions detail is now outside the scope of NZBC E2AS1 and will require further clarification.
- ✓ 10) The parapets details require further clarification, cladding direct fixed and on 7mm plywood is unsuitable.
- ✓ 11) The pitch/fall of the new membrane roof is 1:40 and recommends new E2AS1 1:30.
- ✓ 12) The parapet capping with the birds beak drip edge next to the membrane maybe unsuitable.

Author/generator ID data

delivering on the community's plan


KĀPITI COAST
DISTRICT COUNCIL
me huri whakamuri, ka tiro whakamua
(04) 296 4700 or 0800 486 486
kapiti.council@kapiticoast.govt.nz
www.kapiticoast.govt.nz

- 13) The internal gutter design is unsatisfactory and please confirm fall.
- 14) The Lower Gutter/roof please supply fall and requires further clarification.

We have suspended your application and will not proceed any further with its processing until the above information is received. Please send it to us by *31st October 2011*. If we do not receive it by this date, we may not be able to issue your *Building Consent*.

Please contact me if you would like to discuss this matter.

Yours faithfully

Leon Smith

Direct line tel. no. (04) 296 4635



COPY

BC 110554

KAPITI COAST DISTRICT COUNCIL
CONSENT NOTICE PURSUANT TO SECTION 221
OF THE RESOURCE MANAGEMENT ACT 1991
FOR THE DEPOSIT OF LAND TRANSFER PLAN 91324
BEING THE PROPOSED SUBDIVISION OF LOT 34 DP 85461,
FIELD WAY, WAIKANAE,
FOR THE PHARAZYN CHARITABLE TRUST

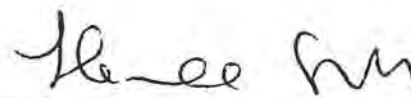
The District Land Registrar at Wellington

PURSUANT to Section 221 of the Resource Management Act 1991 the Kapiti Coast District Council hereby gives notice that it has consented to the proposed subdivision and the following condition is to be complied with on a continuing basis:

1. That specific foundation design by a registered engineer may be required for any new dwelling or additions and alterations to a dwelling within lots 1 - 8, and lots 10 - 20 land transfer plan 91324 in accordance with the recommendations within the soil test report prepared by Samcon Ltd. submitted with application No. RM 000117 a copy of which is available in Council's Resource Consents Office.

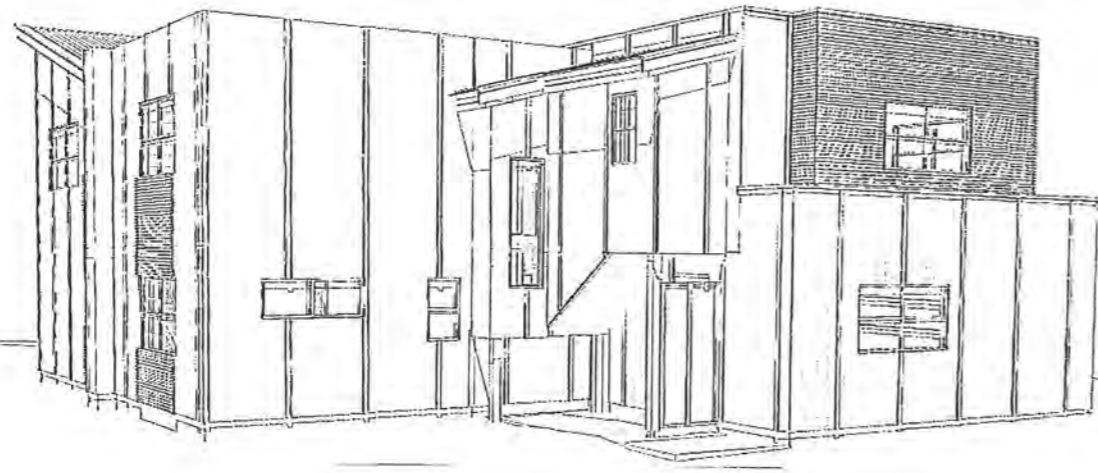
Issued in respect of application No. RM 000117 on this 28th day of August 2001.


AUTHORISED OFFICER

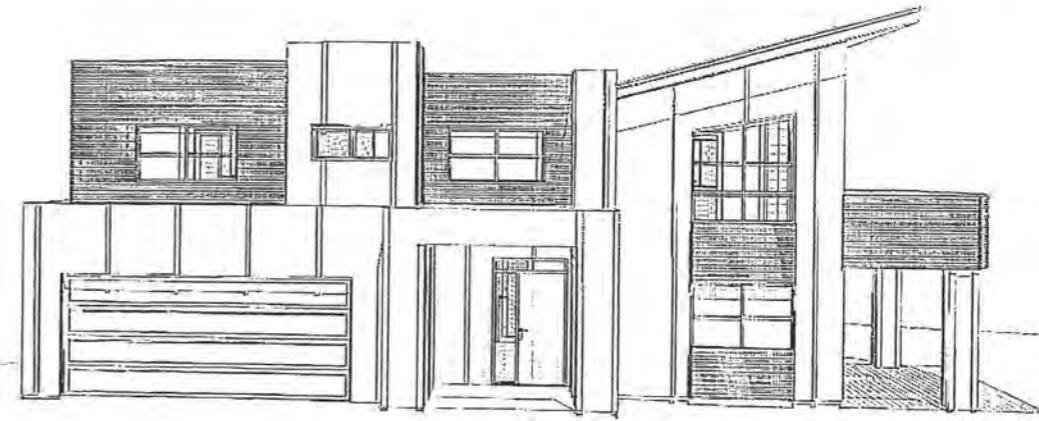

AUTHORISED OFFICER

APPROVED
BY
BUILDING
Leon Smith
OFFICER
8/03/2012

Amended Plan



Endorsements made on any
single
page apply equally to the entire
project.



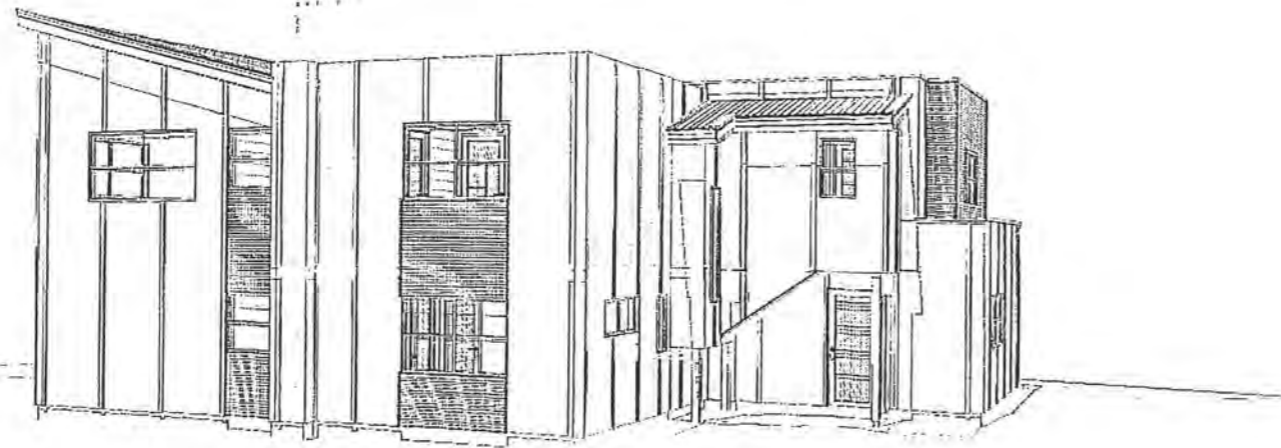
RECEIVED
15 FEB 2012
BY:

CAUTION
Plans have been digitally
reproduced and may not
be to scale.

MAINTENANCE

It is the Owners responsibility to ensure
ALL maintenance recommended by the
Manufacturer's of the Roof, Exterior
Cladding and Deck Coverings is carried
out at the required intervals.

RECEIVED
15 FEB 2012
BY:



INDICATIVE PERSPECTIVE ONLY

**THIS TIMBER FRAMED ADDITION HAS BEEN DESIGNED
IN ACCORDANCE WITH NZS 3604:2011**

INDEX:

DRAWING	SHEET	26/10/11	26/01/12
INDICATIVE PERSPECTIVE & INDEX	COVER	A	B
SITE PLAN, EXISTING FLOOR PLANS, NOTES	1		
ELEVATIONS, RISK MATRIX, H1 CALCULATIONS, GLAZING RATIO, VENTILATION & LIGHT RATIO, WINDOW AND DOOR SCHEDULE, NOTES	2		
FOUNDATION PLAN, POST TO BEAM CONNECTION AND POST UPLIFT FIXING DETAILS	3		
LOWER LEVEL FLOOR PLAN, NOTES	4	A	
UPPER LEVEL FLOOR PLAN, BRACING DETAILS	5		
JOIST LAYOUT PLAN, NOTES, WINDOW INSTALLATION SEQUENCE	6		
RAFTER PLAN, ROOF PLAN, ROOF DETAILS	7	A	B
SECTIONS AA - BB, PARAPET HEIGHTS AND BATTEN PATTERN	8		B
SECTIONS CC, DD, EE, FF.	9		B
SECTION GG, HH, FRAMING DETAILS	10		B
WINDOWS DETAILS	11		
WALL DETAILS	12		
PARAPET DETAILS	13	A	
JUNCTION DETAILS	14		
GUTTER SECTIONS AND KEY PLAN	15	A	

BUILDING CONSENT APPLICATION

PROPOSED ALTERATIONS & ADDITIONS

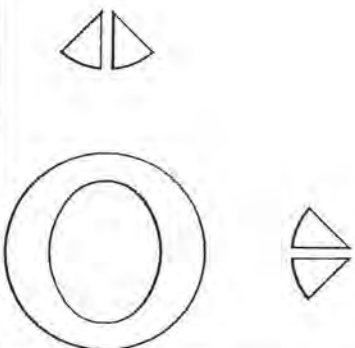
155 FIELD WAY, WAIKANAI BEACH

REFERENCE - 6604K

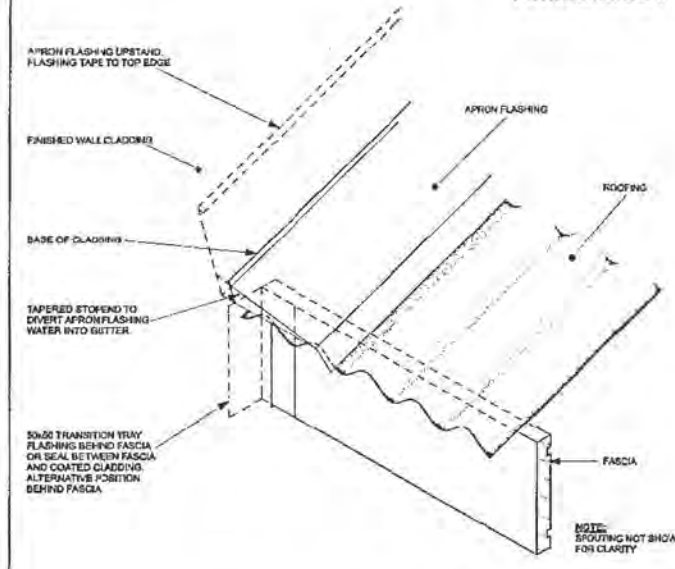
Design Network

ARCHITECTURE LTD

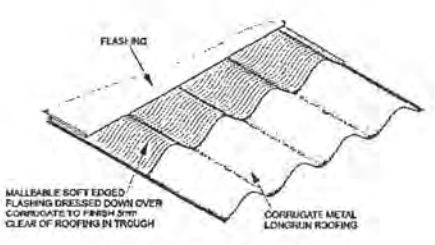
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PH: LOWER HUTT:(04) 5696-109, KAPITI(04)9025-505



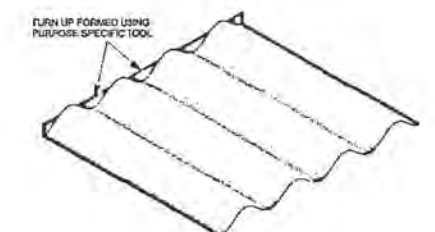
Ammended Plan



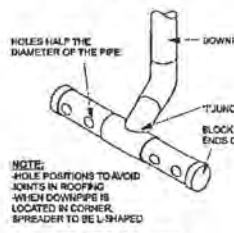
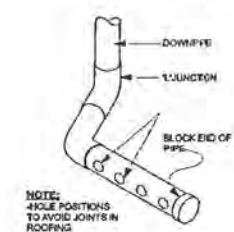
GUTTER TO WALL JUNCTION
FROM NZBC COMPLIANCE DOCUMENT E2-AE1



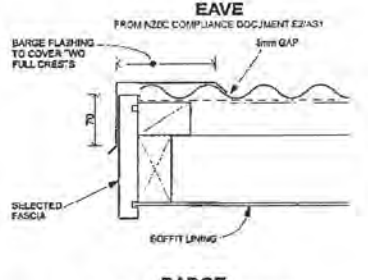
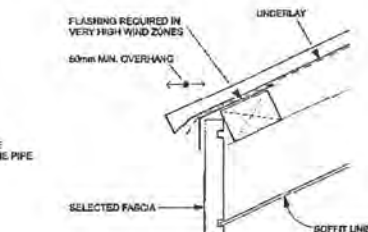
SOFT EDGE FLASHING
FROM NZBC COMPLIANCE DOCUMENT E2-AE1



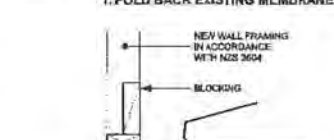
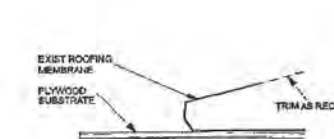
STOPENDS
FROM NZBC COMPLIANCE DOCUMENT E2-AE1



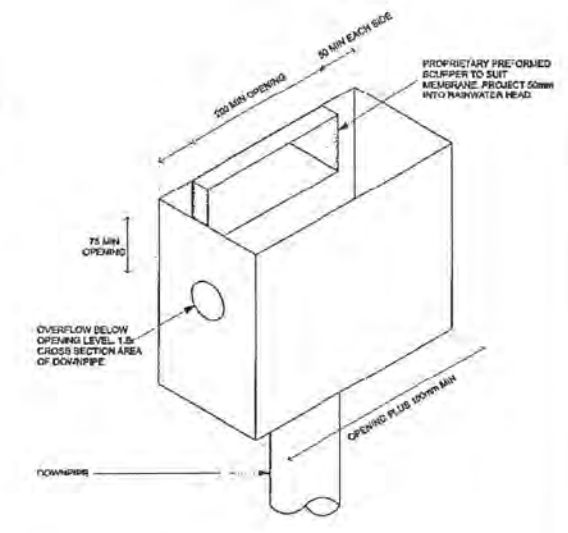
T' SPREADER



BARGE
FROM NZBC COMPLIANCE DOCUMENT E2-AE1



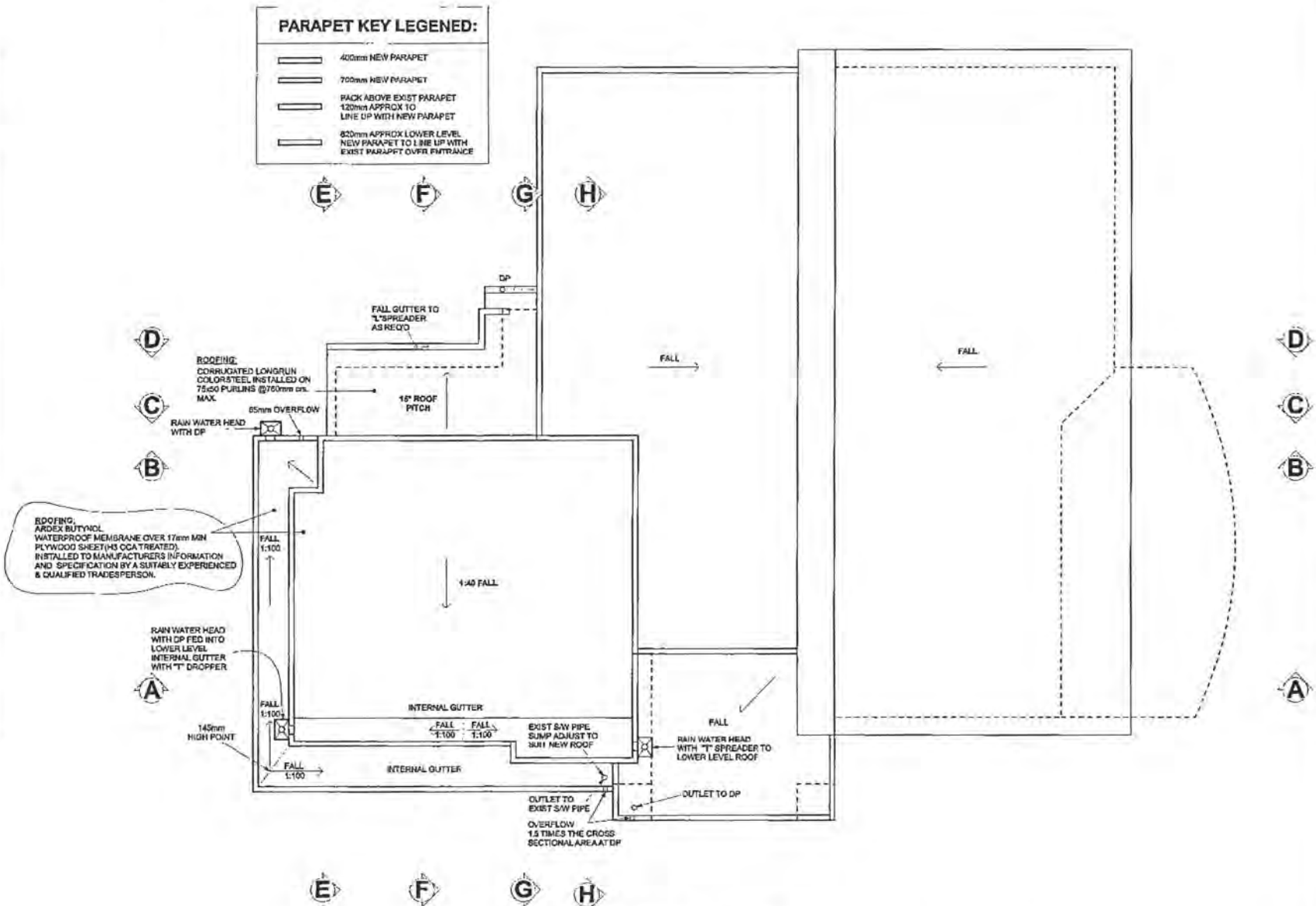
EXISTING MEMBRANE TO NEW WALL



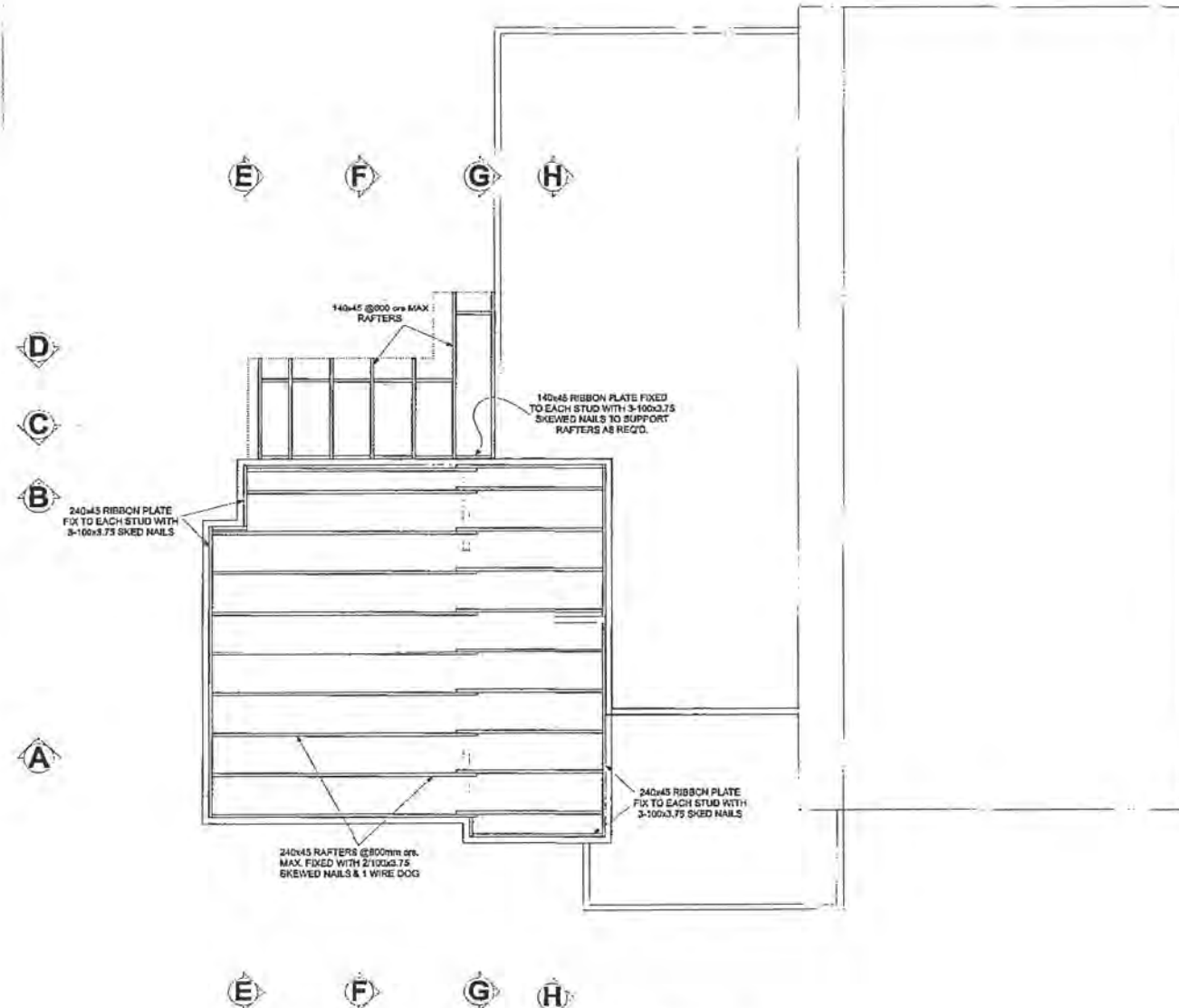
RAINWATER HEAD

ROOF DETAILS

- PARAPET KEY LEGENED:
- 400mm NEW PARAPET
 - 700mm NEW PARAPET
 - PACK ABOVE EXIST PARAPET 120mm APPROX TO LINE UP WITH NEW PARAPET
 - 80mm APPROX LOWER LEVEL NEW PARAPET TO LINE UP WITH EXIST PARAPET OVER ENTRANCE



ROOF PLAN



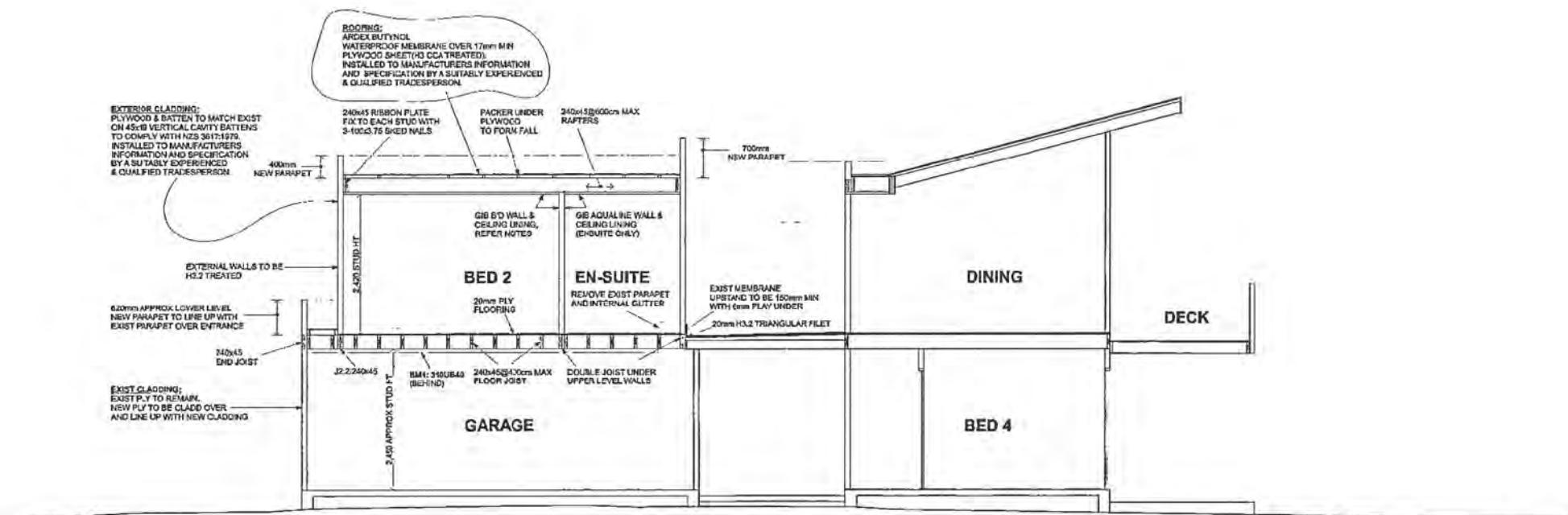
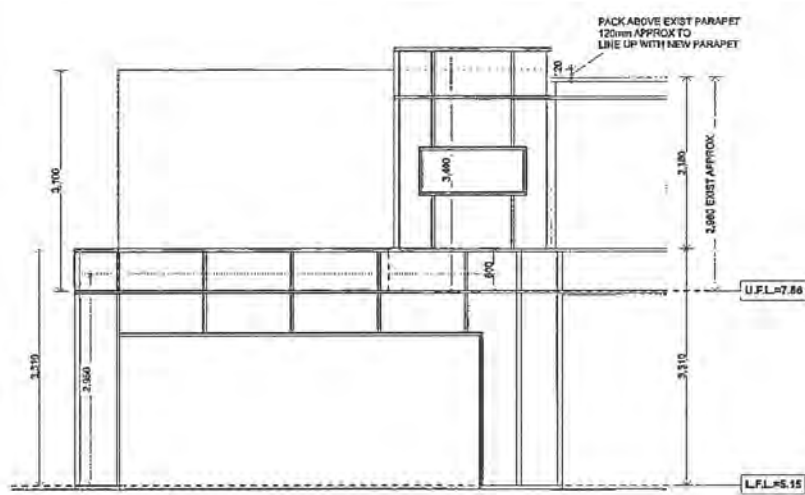
RAFTER PLAN

REV. No	REV. DATE	DRAWING AMENDMENT	START DATE	18-07-2011	BUILDING CONSENT APPLICATION	SHEET No.	7B
A	26-10-11	GUTTER FALLS	REV. DATE	30-08-2011		CODE	
B	26-01-12	CHANGE FROM SKELERUP BUTYROL TO ARDEX BUTYROL ROOF MEMBRANE	FINISH DATE	09-09-2011	SCALE FOR A1 SIZE PAPER	REF	6604K
			1:50 1:5		COPYRIGHT RETAINED BY DESIGN NETWORK ARCHITECTURE LTD. DESIGNER TO BE CONTACTED IMMEDIATELY IF AN ERROR OR DISCREPANCY IS DISCOVERED		

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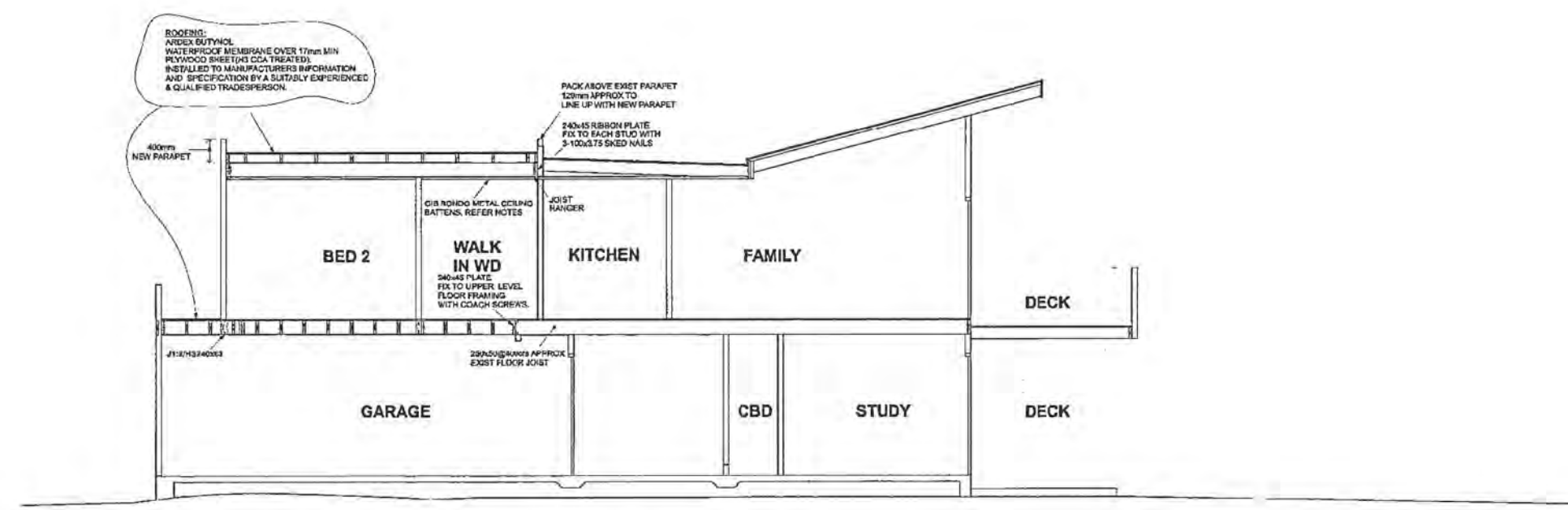
PROPOSED ALTERATIONS & ADDITIONS
155 FIELD WAY
WAIKANAI BEACH

Ammended Plan



PARAPET HEIGHTS AND BATTEN PATTERN

A-A



B-B

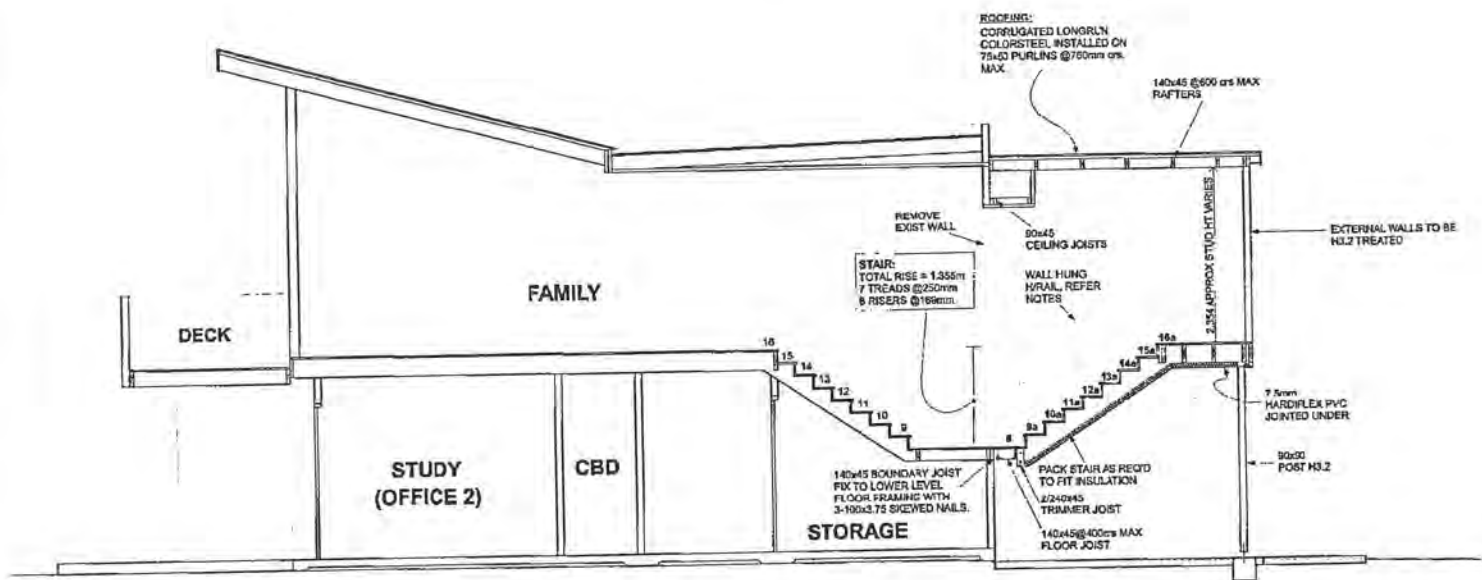
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PH: LOWER HUTT: (04) 5696-109, KAPITI (04) 9025-505

PROPOSED ALTERATIONS & ADDITIONS
155 FIELD WAY
WAIKANAI BEACH

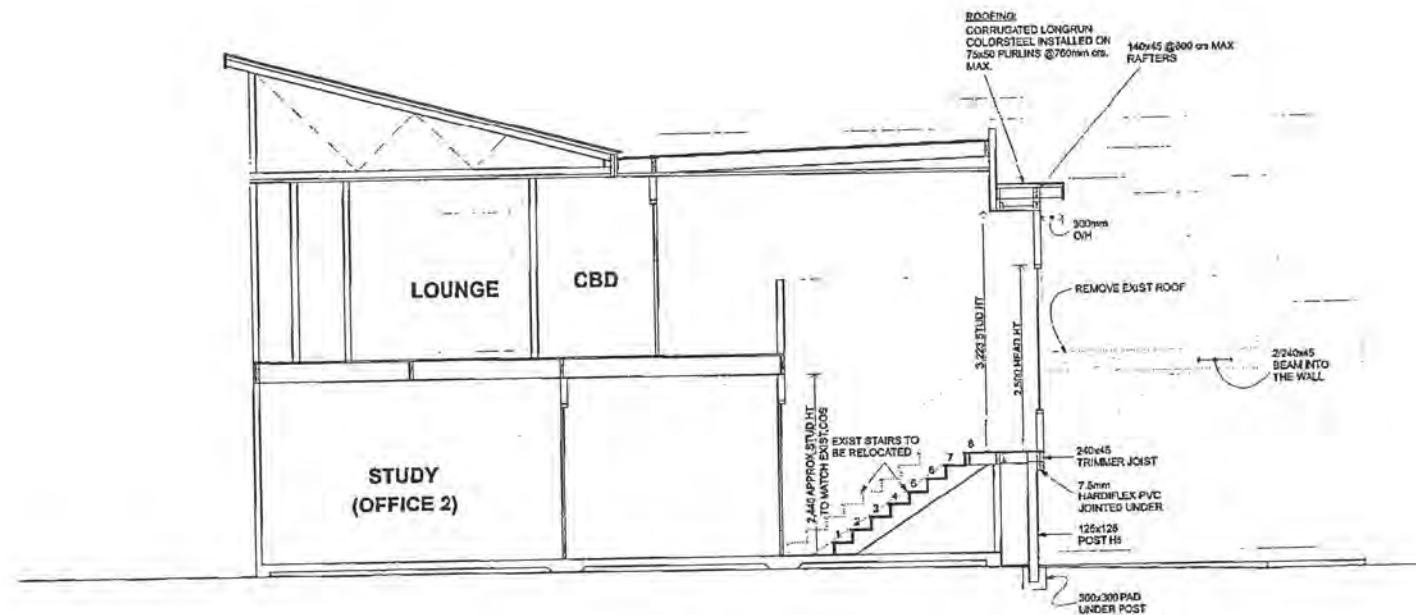
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			30-08-2011	CODE P20N	
			09-09-2011	REF 6604K	

COPYRIGHT RETAINED BY DESIGN NETWORK ARCHITECTURE LTD. DESIGNER TO BE CONTACTED IMMEDIATELY IF AN ERROR OR DISCREPANCY IS DISCOVERED.

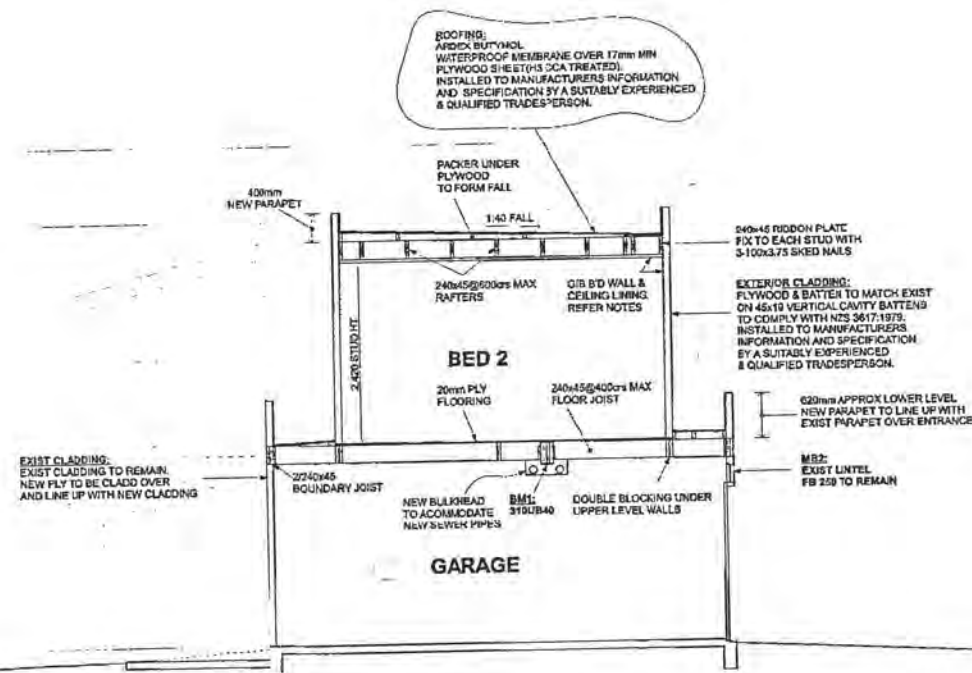
Amended Plan



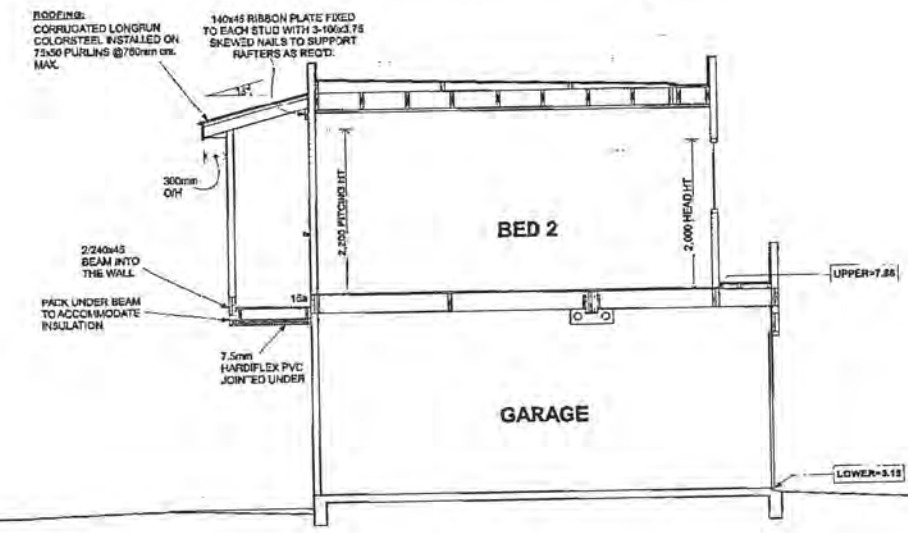
C-C



D-D



E-E



F-F

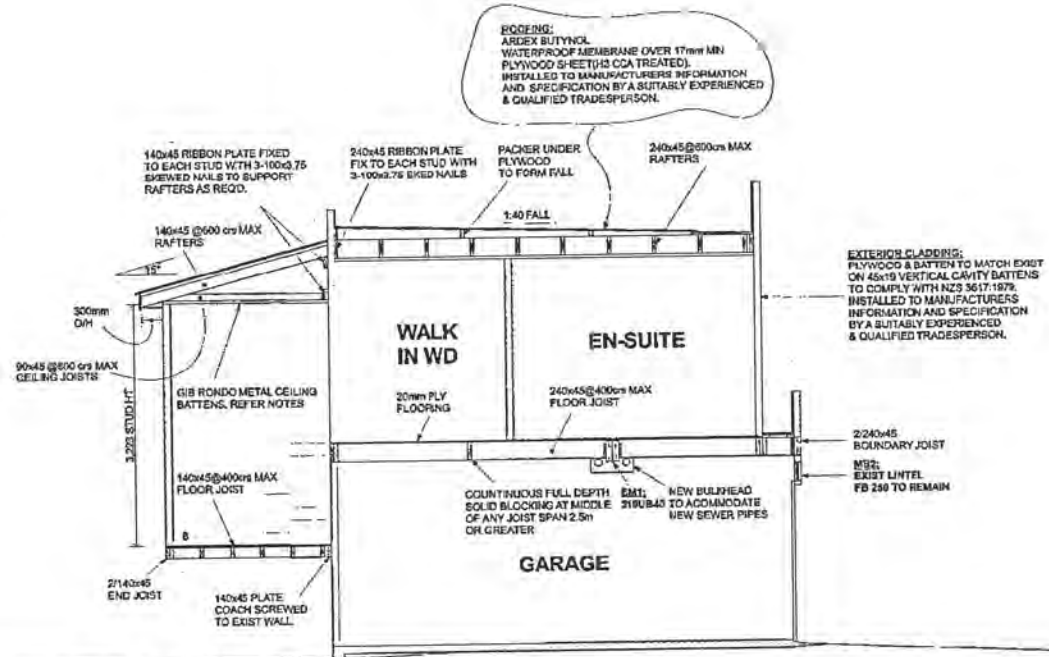
Design Network
ARCHITECTURE LTD

PROPOSED ALTERATIONS & ADDITIONS
155 FIELD WAY
WAIKANAI BEACH

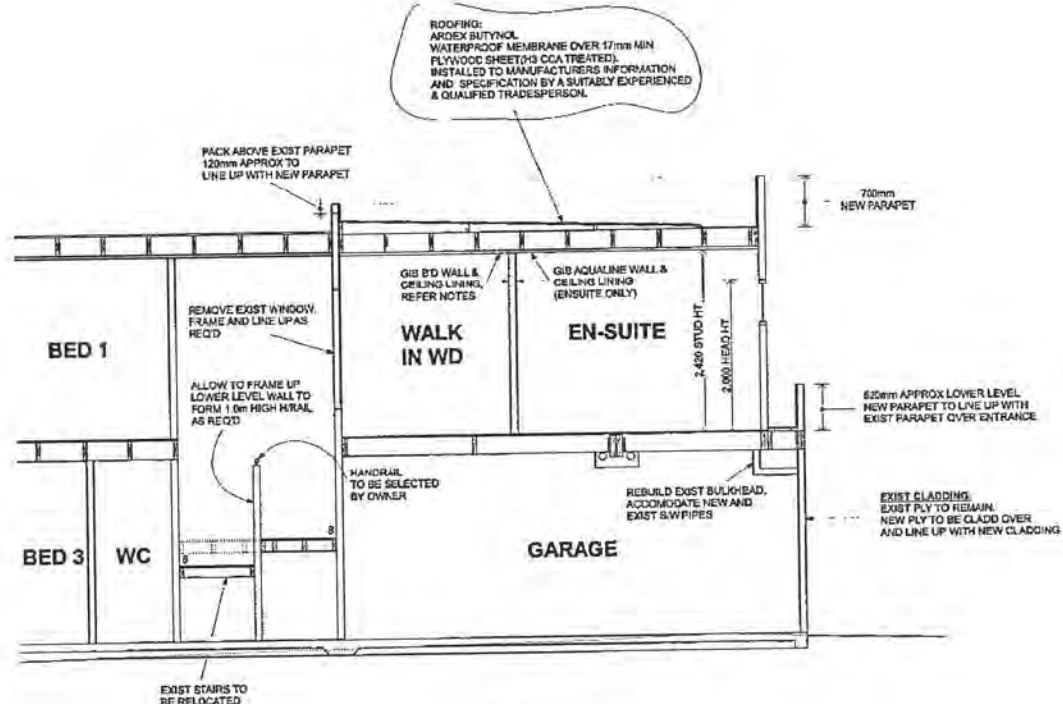
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			REV DATE		CODE
			30-08-2011	P20N	
			FINISH DATE	SCALES FOR A1 SIZE PAPER	REF
			09-09-2011	1:50	6604K
COPYRIGHT RETAINED BY DESIGN NETWORK ARCHITECTURE LTD. DESIGNER TO BE CONTACTED IMMEDIATELY IF AN ERROR OR DISCREPANCY IS DISCOVERED					

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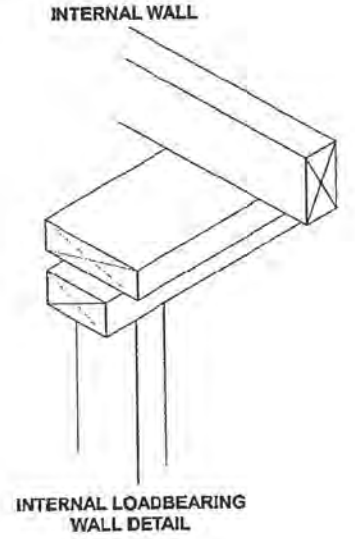
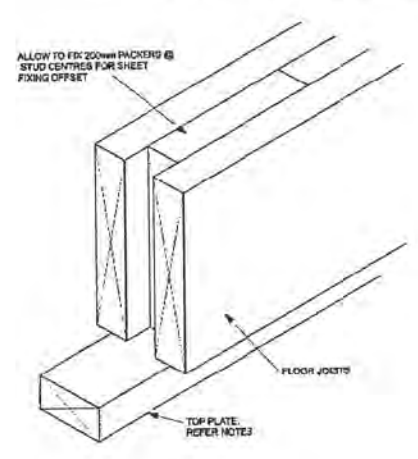
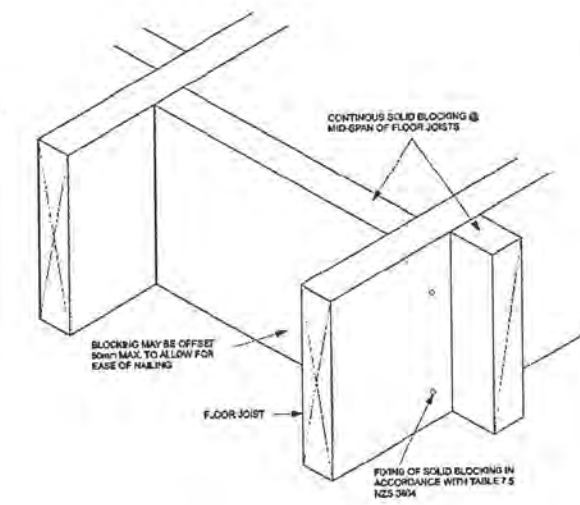
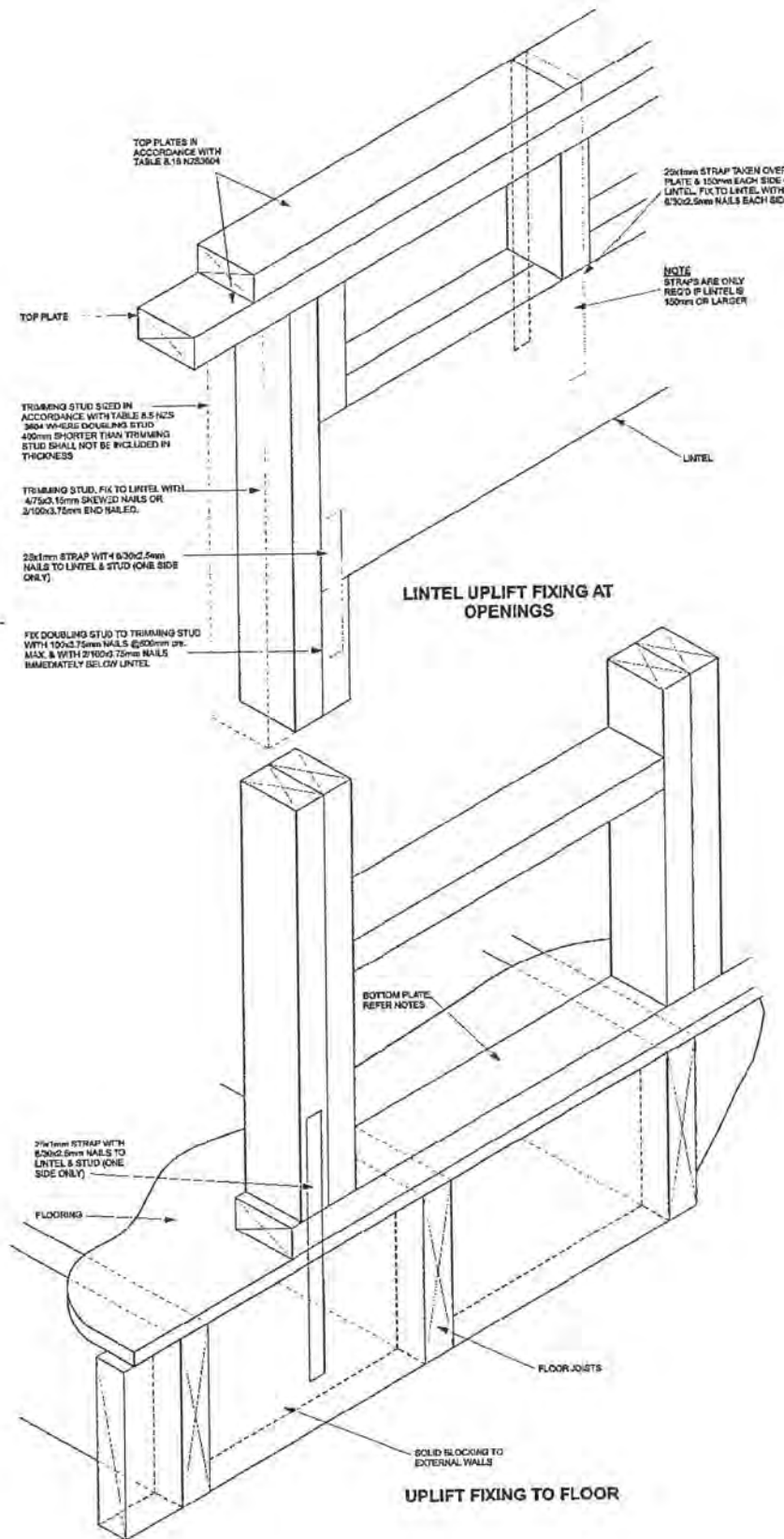
Amended Plan



G-G



H-H



REV. No	REV. DATE	DRAWING AMENDMENT	START DATE	REV. DATE	FINISH DATE	SCALES FOR A1 SIZE PAPER	SHEET No.
B	26-01-12	CHANGE FROM SKELERUP BUTYROL TO ARDEX BUTYROL ROOF MEMBRANE	18-07-2011	30-08-2011	09-09-2011	1:50 1:5	10B
						CCDE	P20N
						REF 6604K	

KCDC Building Consent Authority
 Building Consent AMENDMENTS Documentation Filed

BC No.	110554 A.
Street Address.	155 Field Way, Waikanae Beach

Tick indicates document(s) included in this Building Consent

Amendment Consent Application,	√								
Costing schedule,	√								
Amended Plans and specifications,	√								
Invoice and receipt,	√								
Processing records/checksheets,									
Inspection page printouts									
<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 15%;">1</td> <td style="width: 15%;">to</td> <td style="width: 15%;">43</td> <td style="width: 15%;"></td> <td style="width: 15%;"></td> <td style="width: 15%;"></td> <td style="width: 15%;"></td> <td style="width: 15%;"></td> </tr> </table>	1	to	43						
1	to	43							
Amended Building consent and memorandum,									
Producer statements and supporting documentation,									
Peer review documents,									
Fire design documents,									
Requests for further information and other correspondence,									
Supplementary information,									

This form comprises part of the Building Consent documentation and indicates the contents of the Building Consent File. Refer KCDC Policy 029.



CODE COMPLIANCE CERTIFICATE

SECTION 43(3), BUILDING ACT 1991

APPLICATION

MR I YOUNG	No.	020045
6 BLACKBURNE ROAD	Issue date	28/05/04
TE HORO	Application date	28/01/02
	Overseer	Barrie McLennan

PROJECT

Description	New (& prebuilt) House, Unit, Bach, Crib, Town House etc. Being Stage 1 of an intended 1 Stages NEW DWELLING
Intended Life	Indefinite, but not less than 50 years
Intended Use	RESIDENTIAL
Estimated Value	\$200,000
Location	155 FIELD WAY, WAIKANAE BEACH
Legal Description	LOT 8 DP 91324
Valuation No.	

This is a final Code Compliance Certificate issued in respect of all the building work under the above building consent.

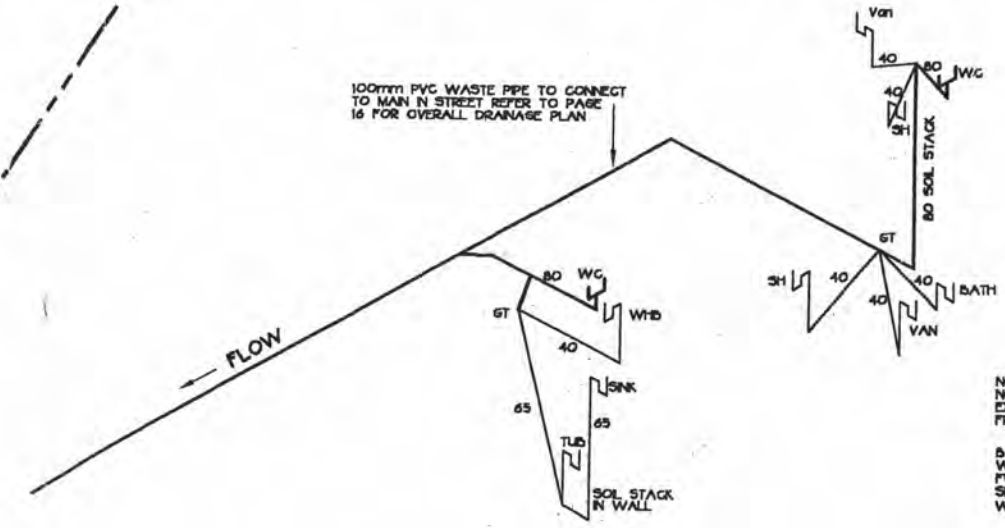
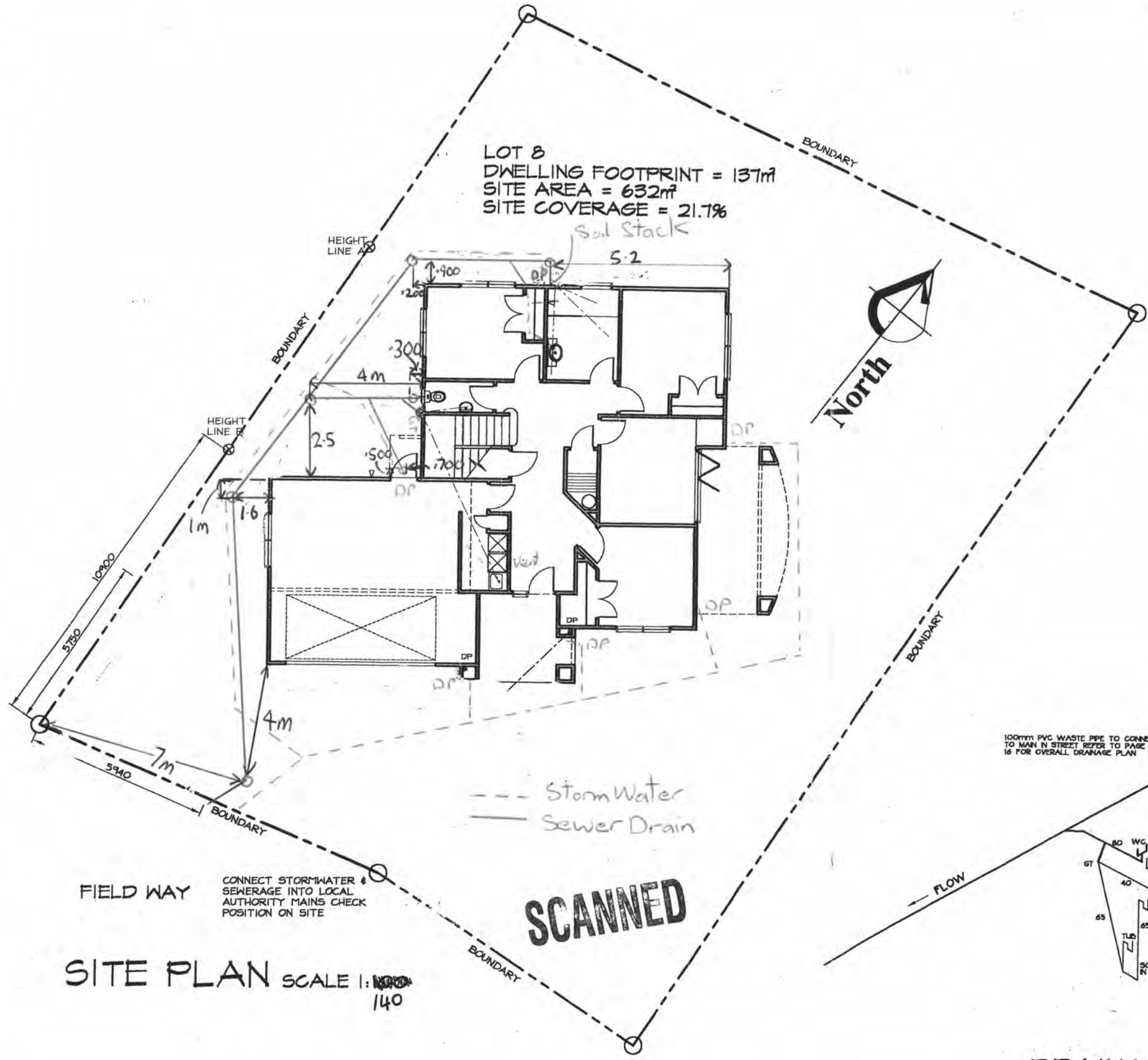
The property owner must follow and carry out the manufacturers prescribed maintenance procedures.

Signed for and on behalf of the Kapiti Coast District Council:

Name: Barrie McLennan

Date: 28/5/04

LOT 8
 DWELLING FOOTPRINT = 137m²
 SITE AREA = 632m²
 SITE COVERAGE = 21.7%



NOTE
 NO PIPES AT ANY POINT
 EXCEED 85m IN LENGTH
 FROM DN 100 VENTED DRAIN

B BATH
 WC WATER CLOSET
 FW FLOOR WASTE
 SH SHOWER
 WHB WASH HAND BASIN

PLUMBING SCHEMATIC & DRAINAGE
 TO BE APPROVED BY PLUMBER &
 DRAFTER

DRAINAGE SCHEMATIC
 NOT TO SCALE

PROJECT: PROPOSED DWELLING FOR MR & MRS YOUNG
 LOT 8 FIELD WAY WAIKANAEBEACH

Design Network Kapiti

REVISIONS:
 1 - 10/1/02

301 Kapiti Road
 PO Box 1616
 Paraparaumu Beach
 New Zealand
 Tel: 04 902 5505
 Fax: 04 902 5504
 Email: kapiti@desnet.co.nz

CONTRACTOR TO VERIFY ALL DIMENSIONS
 ON SITE PRIOR TO COMMENCING WORK
 DO NOT SCALE DRAWINGS.
 THESE DRAWINGS ARE COPYRIGHT.
 DRAWINGS TO BE READ IN CONJUNCTION
 WITH STRUCTURAL ENGINEERS
 DRAWINGS.

DATE:	NOVEMBER 2001
DESIGNED:	MS
DRAWN:	BF
CAD REF:	
SCALE:	1:140

JOB/SHEET No:
 2285/1

(A1 original) OF 7

FIELD WAY
 CONNECT STORMWATER &
 SEWERAGE INTO LOCAL
 AUTHORITY MAINS CHECK
 POSITION ON SITE

SITE PLAN SCALE 1:140

APPLICATION FOR WATER SUPPLY AND CONNECTION PERMIT

SCANNED

The Borough Engineer
Private and
PARAFARAUMI

I, Jan Young (full name)
PLEASE PRINT

hereby apply for an "ORDINARY" service to be laid from the Kapiti Borough Water Supply to the premises owned by me at:

(PROPERTY Address in full if different from above) 155 Fieldway

Lot 8 DP 91324

Fees Payable (on application)

Inspection \$ _____
Connection \$ _____
Total \$ _____

Note: All dwelling units to pay full inspection fees.

The connection fee to be divided equally between dwelling units situated on the same lot sharing a common lateral.

Owners Signature

Date

THIS PART TO BE COMPLETED BY PLUMBER

I, Mark Sciffe (full name)
of _____ (address)
being a Licensed Craftsman Plumber apply for permission to connect the above premises to the Kapiti Borough Water Supply. I agree to comply in every respect with the Kapiti Borough Water Supply By-laws. Connection NOT permitted until permit obtained.

(Signature)

(Craftsman Licence No.)

(Date)

1. Existing Water Supply To be retained/dismantled
2. Pressure: high/low "Header Tank"/Pressure Reducing Valve
3. B/W Cylinder Type new dug Exhaust Pipe/Pressure Relief Valve
4. Approximate Age of Water Piping Copper/PVC/Alkathene
5. If premises have swimming pool what capacity Filter plant Yes/No
6. State precisely how it is proposed to make the new connection:

OFFICE USE ONLY

Permit No. <u>020045</u>	Job Inspected	Building Register Entry
Date Issued	Connection Recorded	

KAPITI COAST DISTRICT COUNCIL

APPLICATION FOR SEWER CONNECTION AND PERMIT

SCANNED

The Borough Engineer
Private Bag
PARAPARAUMU

I, Jan Young (Full name)
PLEASE PRINT

..... (Postal Address)

hereby apply for an ordinary connection to the Kapiti Borough Sewer from the premises owned by me at

(PROPERTY Address in full 155 Fieldway
if different from above)

Lot 8 DP 91324

Fees Payable (on application)

Inspection \$ _____
Connection \$ _____
Total \$ _____

Note: All dwelling units to pay full inspection fees.
The connection fee to be divided equally between
dwelling units situated on the same lot sharing
a common lateral.

.....
Owners Signature

.....
Date

THIS PART TO BE COMPLETED BY DRAINLAYER

Mark Scifo (full name)

..... (address)

a licensed Drainlayer apply for permission to connect the premises mentioned above to the
Borough Sewer.

Connection NOT permitted until permit obtained. new dig

.....
(Signature)

.....
(License No.)

.....
(Date)

OFFICE USE ONLY

Permit No.

Job Inspected

Building Register Entry

23045
Issued

Connection Recorded

04 237 5786

CONFIDENTIAL

CONFIDENTIAL

SITE CHECK SHEET

NAME: Mr Ian Young

SITE ADDRESS: 155 Field Way, Waik LOT: 8 DP: 01324

PROJECT: New Dwelling CONSENT NO: 020045

BUILDER: CONTACT NO:

WORK CANNOT PROCEED PAST EACH STEP UNTIL THAT STEP HAS BEEN INSPECTED, APPROVED AND THIS FORM SIGNED BY THE RELEVANT INSPECTOR

FOUNDATIONS

Date: 21/3/02 Officer: B/MC

Approved building consent documents on site: YES/NO

SITING:

Front yard	<input checked="" type="checkbox"/>	Left hand side yard	<input checked="" type="checkbox"/>	Conforms with approved plan	<u>YES/NO</u>
Rear yard	<input checked="" type="checkbox"/>	Right hand side yard	<input checked="" type="checkbox"/>	If no, has new site plan been requested	<u>YES/NO</u>

Minimum floor level	<input checked="" type="checkbox"/>	Footing size	<input checked="" type="checkbox"/>	Foundation wall reinforcing	<input checked="" type="checkbox"/>
Pile hole size	<input checked="" type="checkbox"/>	Footing reinforcing	<input checked="" type="checkbox"/>	Foundation wall size	<input checked="" type="checkbox"/>
Anchor pile size	<input checked="" type="checkbox"/>	Subfloor vents	<input type="checkbox"/>	Specific design	<u>YES/NO</u>
Pile hole spacing	<input checked="" type="checkbox"/>	Steps/stairs	<input type="checkbox"/>	If yes, has Engineer inspected	<u>YES/NO</u>

Has a Site Instruction been issued? Yes/No Instruction No:

Is a reinspection required? Yes/No Proposed date of follow up inspection

Labels in place? Yes/No Producer Statement Yes/No/NA

COMMENTS

OK TO CONTINUE
I APPROVED BUILDING

BT

PRE-SLAB

PLUMBING AND DRAINAGE: Date: Officer:

UNDERSLAB PLUMBING

Pipe sizes
Falls
Pipe protection

UNDERSLAB DRAINAGE

Pipe sizes
Falls
Pipe protection

Has a Site Instruction been issued? Yes/No Instruction No:

Is a reinspection required? Yes/No Proposed date of follow-up inspection

Labels in place? Yes/No Producer Statement Yes/No/NA

COMMENTS

BUILDING

Date: 8 / 4 / 02 Officer: BLM

Minimum floor level
DPC
Joints taped
Penetrations
Specific design Yes/No
If yes, has Engineer inspected Yes/No

Mesh
Mesh chairs
Slab thickening
Bottom plate fixings

Has a Site Instruction been issued? Yes/No Instruction No: VERBAL

Is a reinspection required? Yes/No Proposed date of follow up inspection A.S.A.P.

Labels in place? Yes/No Producer Statement Yes/No/NA

COMMENTS

PHINNO OWNER: 50mm EPS POLYSTYRENE INSULATION NOT IN PLACE, OWNER TO PROVIDE LETTER FOR ITS EXCLUSION FROM UNDER SLAB.

OK TO CONTINUE

U

SUBFLOOR

Date: Officer:

Ord pile fixings
Anchor pile bolts
Brace pile bolts and washers
Timber treatment
Subfloor framing
Subfloor beams/bearers

Subfloor bracing
Joists - size/spacing/fixing
Cant. Joists - lth/size/spc
Solid blocking - spacing
Notching, holes etc
Proprietary connections

Has a Site Instruction been issued? Yes/No Instruction No:

Is a reinspection required? Yes/No Proposed date of follow up inspection.....

Labels in place? Yes/No Producer Statement Yes/No/NA

COMMENTS

EXTERIOR CLADDING

Solid Plaster/Textured Finish: Date: Officer:

Rigid backing
Non rigid backing
Building paper
Battens (non rigid)
Cavity (non rigid)
Sheet set out (Hardies)

Reinforcement
Spacers
Nailing (Hardies)
Flashings
Control joints

Has a Site Instruction been issued? Yes/No Instruction No:

Is a reinspection required? Yes/No Proposed date of follow up inspection

Producer Statement Yes/No/NA

COMMENTS

12.5 PLY WITH S/S NAILS. (TEXTURE 2000)

HORIZONTAL BATTENS GROOVED TO ACCOMMODATE JOINT FLASHING & GROOVED IN BOTTOM HALF OF HORIZONTAL BATTEN

DETAILS OF TEXTURE 2000 BATTEN DETAILS PROVIDED BY KEOC

ALSO PLY BRACING REQUIREMENTS

ADVISED BUILDER ALL FLASHINGS TO BE IN PLACE CORRECTLY TO ALL EXTERNAL OPENINGS, PARAPETS & JUNCTIONS etc

PRELINE

PLUMBING AND DRAINAGE: Date: Officer:
Plumber:

Pressure test
Visual leak check
Pipe support/clips
Pipe size
Pipe material

Joint strain
Pipe insulation
Stacks
Wastes
Supply tank

Has a Site Instruction been issued? Yes/No Instruction No:

Is a reinspection required? Yes/No Proposed date of follow up inspection

Preline Labels in place? Yes/No Producer Statement Yes/No/NA

COMMENTS

BUILDING

Date: 28/5/02 Officer: BDM

Timber treatment
~~Ceiling diaphragm~~
~~Dragon ties~~
Studs - size/spacing
* Wall insulation *NOT IN PLACE* *
Posts - size/fixing
Lintels/bms - size/fixings
Ext joinery - labels
Ceiling runners
Wall bracing
* Mech ventilation *TUBES ONLY* *
Moisture Content Walls % *DRYFRAME*

Bracing straps
Timber grade
Wall dwangs
Trimming studs
Truss/rafter - fix/space
Ceiling joists
Plate fixings
Ventilation
Ceiling battens
Check exterior claddings *PHY TEXTURE 2000 S/S NAILS*
Ceiling *DRYFRAME* %

Has a Site Instruction been issued? ~~Yes~~ No Instruction No:

Is a reinspection required? ~~Yes~~ No Proposed date of follow up inspection

Preline Labels in place? ~~Yes~~ No Producer Statement ~~Yes~~ No/NA

COMMENTS

OK TO CONTINUE

BT

POSTLINE

Date: 5.6.2022 Officer: WLS

Sheets nailed as per your schedule Insulation to walls

Has a Site Instruction been issued? Yes/No Instruction No:

Is a reinspection required? Yes/No Proposed date of follow up inspection

Postline Label in place? Yes/No

COMMENTS

Gib Bracing on exterior walls over added to fly bracing. Some fixing completed to Gib walls. glued in place of screwing. Upper floor some gib sheets still to fit on external wall. Down stairs shower leaking. Builder instructed to remove insulation which is wet. All appears to be ok.

DRAINS

Drainlayer: Date: Officer:

Drain depth	<input type="checkbox"/>	Gully traps	<input type="checkbox"/>
Subsoil drains	<input type="checkbox"/>	Granular bedding	<input type="checkbox"/>
Pipe material	<input type="checkbox"/>	Terminal vents	<input type="checkbox"/>
Disposal field	<input type="checkbox"/>	Even gradient/line	<input type="checkbox"/>
Drains under building	<input type="checkbox"/>	Soil stack	<input type="checkbox"/>
Connection to main	<input type="checkbox"/>	Manhole - haunching	<input type="checkbox"/>
Pipe supports	<input type="checkbox"/>	Inspection/bends	<input type="checkbox"/>
Manhole - structure	<input type="checkbox"/>	SW to kerb	<input type="checkbox"/>
Lamp holes	<input type="checkbox"/>	Sumps	<input type="checkbox"/>
Drain test	<input type="checkbox"/>		

Has a Site Instruction been issued? Yes/No Instruction No:

Is a reinspection required? Yes/No Proposed date of follow up inspection

Producer Statement Yes/No/NA

COMMENTS

.....

.....

.....

.....

.....

MISCELLANEOUS INSPECTIONS

Blockfill: Date: Officer:

Reinforcing
 Engineers design Yes/No
 If yes, has engineer checked Yes/No

Cavities cleared

Has a Site Instruction been issued? Yes/No Instruction No:

Is a reinspection required? Yes/No Proposed date of follow up inspection

Producer Statement Yes/No/NA

COMMENTS

Retaining Walls

Siting
 Stretchers
 Deadmen
 Poles/posts
 Footing
 Engineers design/supervision

Subsoil drainage
 Post Holes
 Retaining components
 Tie bars
 Headers

Has a Site Instruction been issued? Yes/No Instruction No:

Is a reinspection required? Yes/No Proposed date of follow up inspection

Producer Statement Yes/No/NA

COMMENTS

Solid Fuel Heaters

B.M.L. 20/6/02

Chimney Check
 Seismic fixing
 Flue flashing
 Flue
 Mantel shelf

Flue height
 Hearth
 Clearances
 Ceiling plate

Has a Site Instruction been issued? Yes/No Instruction No:

Is a reinspection required? Yes/No Proposed date of follow up inspection

COMMENTS

*PHONED PAUL GARDNER SPOKE TO TING -
 HEATER TO BE SEISMICALLY RESTRAINED
 ALSO HEATER SPECS TO PROVIDE
 RECMEX*

[Signature]

= 021-037-1970

FINAL INSPECTION

BM 18/9/02

Building Exterior

CHECK PLANS

Subfloor - ventilation	<input type="checkbox"/>	Flashings - roof penet	<input type="checkbox"/>	Gulley dishes	<input checked="" type="checkbox"/>
Decks - structure	<input checked="" type="checkbox"/>	hips	<input type="checkbox"/>	Wastes to gullys	<input checked="" type="checkbox"/>
Balustrades - design	<input checked="" type="checkbox"/>	valleys	<input checked="" type="checkbox"/>	Terminals vents	<input type="checkbox"/>
height	<input checked="" type="checkbox"/>	gables	<input checked="" type="checkbox"/>	Spouting - Downpipes	<input checked="" type="checkbox"/>
Steps/Stairs - design	<input type="checkbox"/>	flues	<input type="checkbox"/>	Landscaping & ground levels	<input checked="" type="checkbox"/>
handrail	<input type="checkbox"/>	Cladding (ground clearance)	<input checked="" type="checkbox"/>	Texture Coating Warranty	<input checked="" type="checkbox"/>
Flashings - windows	<input checked="" type="checkbox"/>	Roofing & Fixings	<input checked="" type="checkbox"/>	<i>PLY 2000 BATTEN</i>	
		(roofing warranty)			

Building Interior

CHECK FITTINGS

Service area floors & walls	<input checked="" type="checkbox"/>	Food storage	<input checked="" type="checkbox"/>	Water temperature	<i>53°</i>	<input checked="" type="checkbox"/>
Stair design	<input checked="" type="checkbox"/>	Nat. ventilation	<input checked="" type="checkbox"/>	Solid fuel heater		<input checked="" type="checkbox"/>
Handrails	<input checked="" type="checkbox"/>	Mech. Ventilation	<input checked="" type="checkbox"/>	Supply tank		<input type="checkbox"/>
Barriers	<input checked="" type="checkbox"/>	Insulation	<input checked="" type="checkbox"/>	Trap seals & AA Valves		<input checked="" type="checkbox"/>
Lightings	<input checked="" type="checkbox"/>	Hot water cylinder flues	<input type="checkbox"/>	Cistern flushing		<input checked="" type="checkbox"/>
Laundering	<input checked="" type="checkbox"/>	Hot water cylinder valves	<input checked="" type="checkbox"/>	WC pan connection		<input checked="" type="checkbox"/>
Cooking facilities	<input checked="" type="checkbox"/>	Hot water cylinder rest	<input checked="" type="checkbox"/>	Septic Tank		<input type="checkbox"/>
		Tempering valve	<input checked="" type="checkbox"/>	(engineers inspc report)		
				Windows - labels	<i>OMEGA</i>	<input type="checkbox"/> <i>V/M</i>
				Safety glass		<input checked="" type="checkbox"/>

*skays fitted to windows with sill cover
item 760
SMOKE detectors 1 up stairs & 1 down as stove*



Footpath crossing installed	<input checked="" type="radio"/> Yes / <input checked="" type="radio"/> No	Berm damaged	<input checked="" type="radio"/> Yes / <input checked="" type="radio"/> No
Refund crossing deposit	<input checked="" type="radio"/> Yes / <input checked="" type="radio"/> No	Engineering site reports required	<input checked="" type="radio"/> Yes / <input checked="" type="radio"/> No
Stormwater & site drainage appear satisfactory	<input checked="" type="radio"/> Yes / <input checked="" type="radio"/> No	Engineering site reports received	<input checked="" type="radio"/> Yes / <input checked="" type="radio"/> No

Has a Site Instruction been issued? Yes/No NTR Instruction No.

Producer Statement Yes/No/NA

OK to issue final code compliance certificate. Yes/No

If an interim certificate is issued please list proposed conditions on the reverse of this form.

Is a reinspection required? Yes/No Proposed date of follow up inspection

Comments:

ELECTRICAL CERTIFICATE ✓
ROOFING MATERIAL WARRANTY
INBUILT FIRE INSTALLERS CHECK SHEET ✓
SEAL EXTERIOR ELECTRICAL METEORBOX WINDOW TO CHAOSING ✓
PLUMBING & DRAINAGE PRODUCER STATEMENT & ASBUILT
MARK SCARFE 021-565596 - I PHONED 18/9/02 -

Tick (✓) approved inspections

Cross (x) inspections not approved

Strike out inspections not applicable

Application No: 020045
 Date: 28-01-02
 Site Address: 155 Feldway

COSTING SHEET

ADMIN = \$40 per hour
 PLAN VETTING = \$60 per hour
 INSPECTIONS = \$50
 DIGITAL SCANNING = \$22.50

TECHNICAL CONSULTANTS = Cost + 10%

CLASSIFICATION	\$	PLAN VETTING				TOT \$	CONSULTANTS			TOT \$	INSPECTIONS					TOT	SET FEE	PIM	CC C	DIG SCAN Y/N	TOT
		PI	D	Bld	EH		DP				Site	PI	D	Bld	EH						
1. Fire Places, Signs, Minor Plumbing and Drainage	0 - 1,500															30	Nil	Nil			
2. Sheds, Parapool Carports	1501 - 4,000															70	Nil	Nil			
3. Garages, Conservatories, Swlm Pool, etc	4,001 - 10,000															100	50	30			
4. House Additions	4,001 - 10,000															120	50	30			
5. House Additions	10,000 - 40,000															150	50	30			
6. House Additions	40,001 - 70,000															200	100	30			
7. Dwellings	70,001-100,000															250	100	30			
8. Dwellings	100,001-150,000															320	100	30			
9. Dwellings	150,001-200,000	3	3	12		\$270	2			\$30	1	3	2	5	\$550	420	100	30		\$1400	
10. Dwellings	200,001-250,000															520	100	30			
11. Dwellings	250,001-300,000															650	100	30			
12. Dwellings	300,000 +															700	100	30			
13. Commercial/Industrial	0-10,000															120	50	30			
14. Commercial/Industrial	10,001-50,000															200	50	30			
15. Commercial/Industrial	50,001-100,000															300	150	30			
16. Commercial/Industrial	100,001-150,000															400	150	30			
17. Commercial/Industrial	150,001-200,000															550	150	30			
18. Commercial/Industrial	200,001-250,000 +															750	150	30			

FOR COUNCIL USE:

DEPARTMENT	TICK FOR REFERRAL	COMMENTS	APPROVING OFFICER/ DATE
Resource Consents UB 23/1		Consent notice on file - to check RM 000117 specific for date design may be NOT TO SCALE	UB 24-1-2
Plumbing and Drainage		Plans show compliance with bills + local standards (can't use that scale)	
Building			
Fire Design	N/A		
Compliance Schedule	N/A		
Structural			
Hazardous Substances	N/A		
Environmental Health			
Site- Footpath & Entrance Conditions	Ground		

RIGHTLY SLOPING SITE TO ROAD
NEW VEHICLE CROSSING REQUIRED ROAD KERB BERM & FOOTPATH IN NEW CONDITION, UNPAVED.
SOFT SAND ON TOP FIRM AT 200mm APPEARS SATISFACTORY

NOTES:

Specific foundation design - see consent notice

CONFIDENTIAL

CONFIDENTIAL

U/HIGH WIND SCOR.



175 Rimu Road
Private Bag 601
Paraparaumu
Phone: [04] 9045700
Fax: [04] 9045830



5 Hagley Street
P O Box 50218
Porirua City
Phone: [04] 237 5089
Fax: [04] 237 1439

APPLICATION FOR BUILDING CONSENT
Section 33, Building Act 1991

To: Kapiti Coast District Council/~~Porirua City Council~~ (delete one)
[Tick each applicable box and attach relevant documents in duplicate]

App. No. 020045

ANTICIPATED COMMENCEMENT DATE: 2-2-02 FINISH DATE: 2-5-02

Prop ID _____ Owner ID _____ Applicant ID _____

PART A : GENERAL

[Complete Part A in all Cases - Refer over for Part B, C and D, sign and date]

APPLICANT	PROJECT
<p>Owner Name: Ian Young</p> <p>Mailing Address: 6 Blackburne Rd Te Heru</p> <p>Contact Name: Ian</p> <p>Phone: 04-297-1716 wk 06-364-3603 hm</p> <p>Cellphone No: 021-375-105</p> <p>Fax: _____</p>	<p>New or Relocated Building <input checked="" type="checkbox"/></p> <p>Alterations or Additions <input type="checkbox"/></p> <p>Accessory Building or Fire <input type="checkbox"/></p> <p>Building demolition or Removal <input type="checkbox"/></p> <p>Intended use, e.g Dwelling, Carport, Garage etc Dwelling</p> <p>Being stage 1 of an intended 1 stages.</p> <p>Estimated value (inclusive of GST) \$ 200,000</p> <p>Intended life: (of building) Indefinite but not less than 50 years <input checked="" type="checkbox"/></p> <p>Specified as _____ years</p>
<p>FOR COUNCIL USE</p> <p>Received: 22 / 1 / 02</p> <p>Application Fee: \$ 790</p> <p>Receipt No: _____</p> <p>Balance of Fees: \$ _____</p> <p>Receipt No: _____</p> <p>Date: / /</p> <p>NOTE: Balance of fees are payable on consent approval</p>	<p>PROJECT LOCATION</p> <p>155 Street Address (if any) Fieldway Waikanae Beach</p> <p>Legal description CT: 59A/824 (as shown on certificate of title rates notice, if any)</p> <p>Lot 8 DP 91324</p> <p>Valuation No. _____</p>

This application is for:
 Building Consent only, in accordance with Project Information Memorandum
 Both Building Consent and a project Information Memorandum

SCANNED

PART B : BUILDING DETAILS

(Complete Part B in all cases)

This application is accompanied by (tick each applicable box, attach relevant documents in duplicate):

The drawings, specifications and other documents according to which the building is proposed to be constructed to comply with the provisions of the building code, with supporting documents, if any, including:

- Building certificates
- Producer statements
- References to accreditation certificates issued by the Building Industry Authority
- References to determinations issued by the Building Industry Authority

Proposed procedures, if any, for inspection during construction

PART C : PROJECT DETAILS

(Complete Part C only if you have not applied separately for a project information memorandum)

- Location, in relation to legal boundaries, and external dimensions of new, relocated, or altered buildings
- New provisions to be made for vehicular access, including parking
- Provisions to be made in building over or adjacent to any road or public place
- New provisions to be made for disposing of stormwater and wastewater
- Precautions to be taken where building work is to take place over existing drains or sewers or in close proximity to wells or watermains
- New connections to public utilities
- Provisions to be made in any demolition work for the protection of the public, suppression of dust, disposal of debris, disconnection from public utilities and suppression of noise
- Any cultural heritage significance of the building or building site, including whether it is on a marae

PART D : KEY PERSONNEL

Designer(s): Design Network (Mark S)

Building Certifier(s): Barry McLennan (KCDC)

Builder/s: Fleckwood Developments (Carl van der Meer)

Registered Drainlayer: Kapiti Plumbing Ltd REG NO: _____

Craftsman Plumber: Kapiti Plumbing Ltd REG NO: _____

Other: _____

PLEASE NOTE

The information provided in support of this application is public and as such is freely available on request. However under Section 27(3) of the Building Act 1991 you may for security and/or copyright reasons request the plans and specifications pertaining to this application be marked as confidential by completing the following section

CONFIDENTIALITY

Plans and Specifications

I/We require that my/our:

1. plans
 2. specifications
- be treated as confidential in order to protect either:
3. the security of the building; and/or
 4. copyright

Signed: [Signature]

Signed for and on behalf of the Applicant:

Name: Ian Michael Young

Position: Owner

Date: 21/1/02

SIZE OF BUILDING

Floor area m² 237

No of Stories 2

No of Units 1

FOR OFFICE USE ONLY

FEES		APPLICATION DEPOSIT	
Building	\$1400	RECEIPT NO	DATE 22.01.02
Sewer Connection	\$.....	929363	
Water Connection	\$.....	INVOICE NO	DATE.....
Vehicle Crossing	\$.....	65723	20.2.02
Damage Deposit	\$700.00	RECEIPT NO	DATE 20.2.02
Structural Checking	\$.....	932968	
Building Research Levy	\$200	FEES PAID BY:	
Development Levy	\$.....	Mr. I. Young	
BIA Levy	\$130	(Eftpos Chq)	
Compliance Schedule	\$.....	BUILDING CONSENT	DATE ISSUED
Digital Storage Fee	\$22.50	NUMBER	
Certificate of Title Charge	\$.....	020045	20.2.02
Photocopying	\$.....	AUTHORISATION FOR REFUND OF DEPOSITS	
SUBTOTAL	\$2452.50	Deposit held =	\$700.....
Less Deposit Paid	\$710.00	Cost to Repair Damage Caused During	
TOTAL	\$1662.50	Construction =	\$Nil.....
GST INCLUDED	\$.....	Total Balance to be Refunded	\$700
CONFIDENTIAL		Authority Number:	
		Authorised: <u>[Signature]</u>	DATE: 18/9/02

Building Consent

Section 35, Building Act 1991

Application

MR I YOUNG	No.	020045
6 BLACKBURNE ROAD	Issue date	20/02/02
TE HORO	Application date	28/01/02
	Overseer	Barrie McLennan

Project

Description	New Construction Being Stage 1 of an intended 1 Stages NEW DWELLING
Intended Life	Indefinite, but not less than 50 years
Intended Use	RESIDENTIAL
Estimated Value	\$200,000
Location	155 FIELD WAY, WAIKANAE BEACH
Legal Description	LOT 8 DP 91324
Valuation No.	

Charges

The Council's charges paid on uplifting this Building Consent, in accordance with the attached details are:

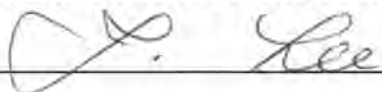
	\$	2,122.50
Building Research Levy	\$	200.00
Building Industry Authority Levy	\$	130.00
Total	\$	2,452.50

PAID

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 is not a consent under the Resource Management Act and does not affect any duty or responsibility under any other Act nor permit any breach of any other Act.

Signed for and on behalf of the Council:

Name:



Date: 20. 2. 02

Addenda to Application

Application

MR I YOUNG
6 BLACKBURNE ROAD
TE HORO

No.

020045

Project

Description	New Construction Being Stage 1 of an intended 1 Stages NEW DWELLING
Intended Life	Indefinite, but not less than 50 years
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Estimated Value	\$200,000
Location	155 FIELD WAY, WAIKANAE BEACH
Legal Description	LOT 8 DP 91324
Valuation No.	

Builder:

FLECKWOOD DEVELOPMENTS

General Requirements

- a) The District Inspector is to be given 24 hours' notice before carrying out the following inspections:
1. INITIAL INSPECTION - PREVIOUSLY COMPLETED
 2. FOUNDATION INSPECTION
 3. PRE-CONCRETE SLAB INSPECTION OF PLUMBING
 4. PRE-SLAB INSPECTION, CONCRETE FLOOR
 5. PRELINING INSPECTION, MOISTURE TEST, CHECK BRACING
 6. PRELINING INSPECTION OF PLUMBING
 7. POST-LINING INSPECTION, LININGS, FIXED AS PER BRACE DESIGN
 8. WATER TEST ON SEWER DRAINS
 9. FINAL INSPECTION BUILDING
 10. FINAL INSPECTION OF PLUMBING
 11. FINAL INSPECTION GULLIES, ETC
- b) To arrange for any of the above required inspections by the District Inspector, please contact the building inspectorate on (04) 902 2845 between the hours of 8.00am and 4.30pm.

1. LAPSE AND CANCELLATION OF BUILDING CONSENT. A building consent shall lapse and be of no effect if the building work concerned has not been commenced within 6 calendar months after the date of issue. Or within such further period as the territorial authority allows.
2. The inspection of all specific design components of the building is the responsibility of the Design Engineer who is also required to supply a written report to Council.
3. All foundations are to be to solid bearing minimum of 300mm
4. NZS3604 is an Acceptable Solution in terms of the New Zealand Building Code and is a recommended reference document for timber framed buildings.
5. Metal head flashings required over all exterior joinery.
6. All glazing, construction system and components to comply with Very High Wind Area (50 m/s) and 500 m Coastal Corrosion Zone if applicable.
7. Note and comply with endorsements on approved plans.
8. Both hot and cold water pipes are to be tested to 1500 KPA pressure.
9. Owner/builder is to ensure that the proposed foundation height will allow a satisfactory drainage connection to the sewer main.
10. Roof stormwater to be piped to kerb and channel in an approved manner.
11. A tempering valve is to be installed on the hot water cylinder.
12. Minimum heights of finished concrete slab-on-ground floors above adjoining finished ground level to comply with the current NZS3604.
13. Deck & stair balustrades with a greater drop than 1.0m require min 1.0m high balustrade measured from floor or tread. max 150mm bottom rail to floor. max 100mm space or hole between vertical rails. CERTAIN OTHER DECK CONFIGURATIONS MAY REQUIRE SAFETY BARRIERS. CONFER INSPECTOR
14. Installation of solid fuel appliances must comply with manufactures specifications and be secured against seismic movement ie EARTHQUAKES.
15. Provide from your Contractor a roof warranty covering the product and its installation.
16. Provide from your Contractor a warranty covering the roof and fascia gutter system, including product, design and installation.
17. As this site is located in the Severe Coastal Corrosion Zone, all exposed fixings and cladding fixings need to be stainless steel.
18. If cladding is to have pre-finished colour coating, that coating shall be appropriate for the designated coastal conditions of that site.
19. Textured Systems should be applied by licensed, trained applicators only. Supply copy of warranty to Certifier.
20. Ground bearing must be reconfirmed on site after excavation.
21. Soft ground maybe encountered requiring Engineer's specific design.

I have read the foregoing requirements, and the Owner/Builder/Authorised Person hereby agrees to comply with them.

**OWNER/BUILDER/
AUTHORISED PERSON**

Date:

CAUTION
Plans have been digitally reproduced and may not be to scale.

CONFIDENTIAL

PROPOSED DWELLING FOR MR & MRS YOUNG

LOT 8 FEILDWAY

WAIKANAE BEACH

All references to standards and codes etc shall be taken as reference to latest version including ammendments.

INDEX

- 1 SITE PLAN
- 2 GROUND FLOOR PLAN
- 3 FIRST FLOOR PLAN
- 4 FOUNDATION & ROOF PLANS, FOOTING DETAILS
- 5 ELEVATIONS, JOIST PLAN & ROOF FRAMING PLAN
- 6 SECTIONS
- 7 ELECTRICAL & BRACING PLANS

VERY HIGH WIND ZONE
Refer section 10 of NZS 3604 (1999) for roof framing and fixing requirements.
[purlins - 10.2.1.16], [rafters - 10.2.1.3], [trusses - 10.2.2]
Max stud spacing - refer
NZS 3604 stud tables.

APPROVED BY P & D
SIMON COPP
Officer
15/2/02

APPROVED BY BUILDING
MARK FITZPATRICK
Officer

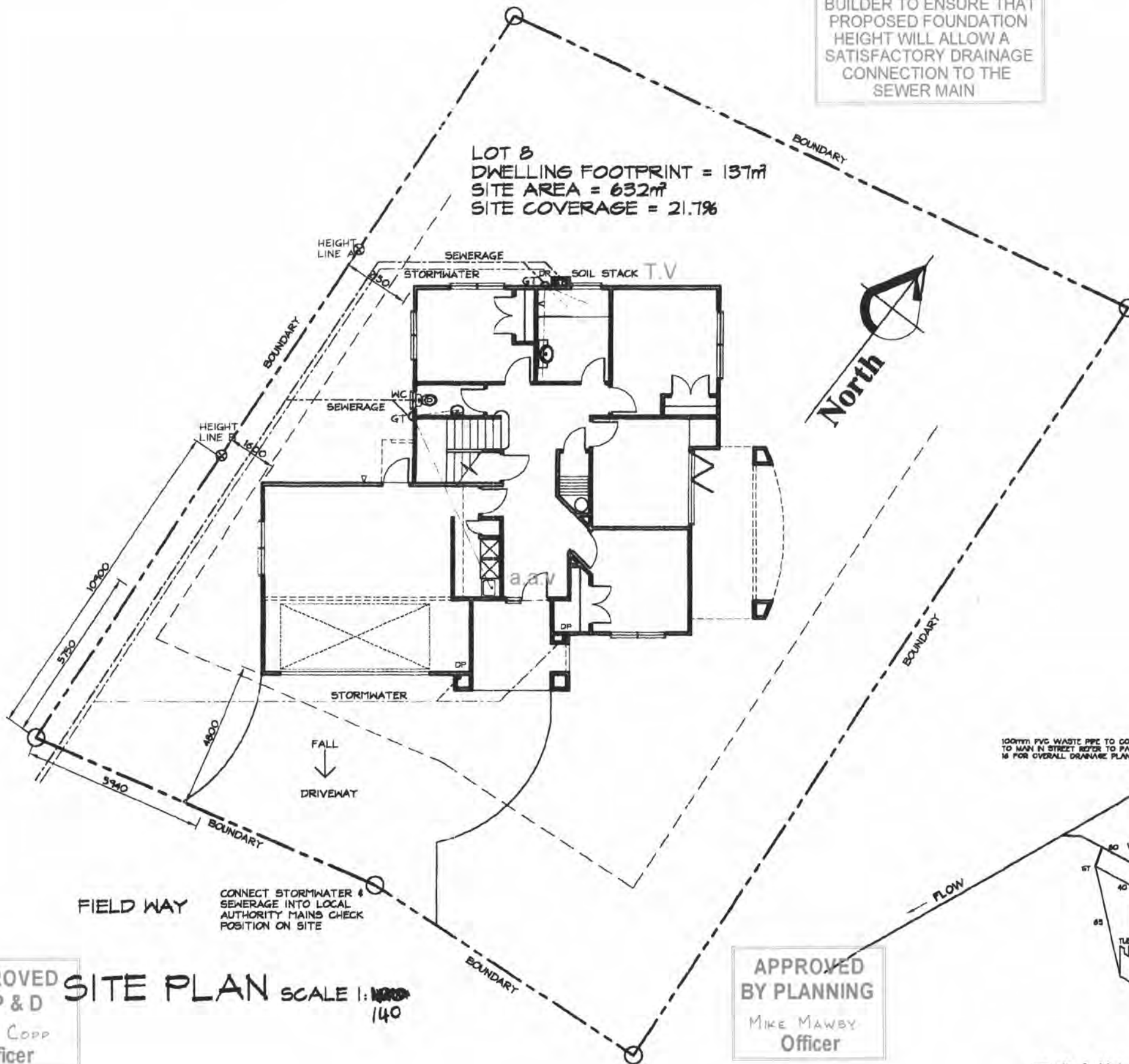
APPROVED BY PLANNING
MIKE MAWBY
Officer

Design Network Kapiti
ARCHITECTURE
301 Kapiti Road
PO Box 1616
Pareparaumu Beach
New Zealand
Tel: 04 902 5505
Fax: 04 902 5504
Email: kapiti@desnet.co.nz

CHECK P.I.M INFORMATION FOR SERVICE LOCATIONS.

BUILDER TO ENSURE THAT PROPOSED FOUNDATION HEIGHT WILL ALLOW A SATISFACTORY DRAINAGE CONNECTION TO THE SEWER MAIN

LOT 8
 DWELLING FOOTPRINT = 137m²
 SITE AREA = 632m²
 SITE COVERAGE = 21.7%



CONNECT STORMWATER & SEWERAGE INTO LOCAL AUTHORITY MAINS CHECK POSITION ON SITE

100mm PVC WASTE PIPE TO CONNECT TO MAIN IN STREET REFER TO PANE 16 FOR OVERALL DRAINAGE PLAN

NOTE
 NO PIPES AT ANY POINT EXCEED 85m IN LENGTH FROM DN 100 VENTED DRAIN

B BATH
 WC WATER CLOSET
 FW FLOOR WARE
 SH SHOWER
 WTB WASH HAND BASIN

PLUMBING SCHEMATIC & DRAINAGE TO BE APPROVED BY PLUMBER & DRAINLAYER

APPROVED BY PLANNING
 MIKE MAWBY
 Officer

APPROVED BY P & D
 SIMON COPP
 Officer

15/2/02

SITE PLAN SCALE 1:140

DRAINAGE SCHEMATIC
 NOT TO SCALE

PROJECT: PROPOSED DWELLING FOR MR & MRS YOUNG
 LOT 8 FIELD WAY WAIKANA E BEACH

Design Network Kapiti

REVISIONS:
 1 - 10/1/02

301 Kapiti Road
 PO Box 1616
 Paraparaumu Beach
 New Zealand
 Tel: 04 902 5505
 Fax: 04 902 5504
 Email: kapiti@desnet.co.nz

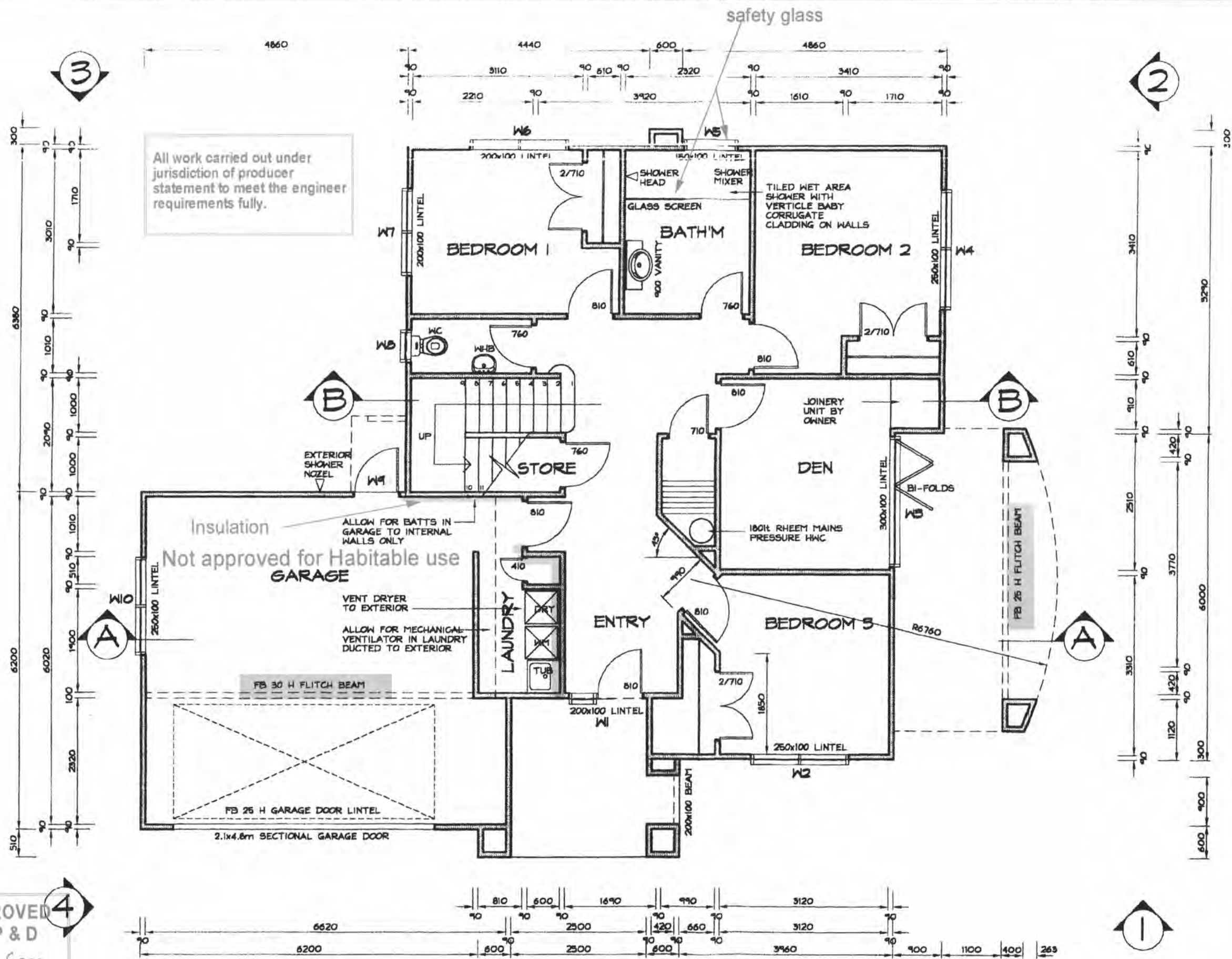
CONTRACTOR TO VERIFY ALL DIMENSIONS ON SITE PRIOR TO COMMENCING WORK. DO NOT SCALE DRAWINGS. THESE DRAWINGS ARE COPYRIGHT. DRAWINGS TO BE READ IN CONJUNCTION WITH STRUCTURAL ENGINEERS DRAWINGS.

DATE:	NOVEMBER 2001
DESIGNED:	MS
DRAWN:	BF
CAD REF:	
SCALE:	1:140

JOB/SHEET No:
 2285/1

(A1 original) OF 7

2 straps required on the hot water cylinder.



All work carried out under jurisdiction of producer statement to meet the engineer requirements fully.

Insulation
Not approved for Habitable use
GARAGE

ALLOW FOR BATTS IN GARAGE TO INTERNAL WALLS ONLY

VENT DRYER TO EXTERIOR

ALLOW FOR MECHANICAL VENTILATOR IN LAUNDRY DUCTED TO EXTERIOR

GROUND FLOOR PLAN SCALE 1:70 AREA = 137m²

APPROVED BY P & D
SIMON COPP
Officer
15/2/02

PROJECT: PROPOSED DWELLING FOR MR & MRS YOUNG
LOT 8 FIELD WAY WAIKANAEBEACH

Design Network Kapiti

REVISIONS:
1 - 10/1/02

301 Kapiti Road
PO Box 1616
Paraparaumu Beach
New Zealand
Tel: 04 902 5505
Fax: 04 902 5504
Email: kapiti@desnat.co.nz

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DATE:	NOVEMBER 2001
DESIGNED:	MS
DRAWN:	BF
CAD REF:	
SCALE:	1:70

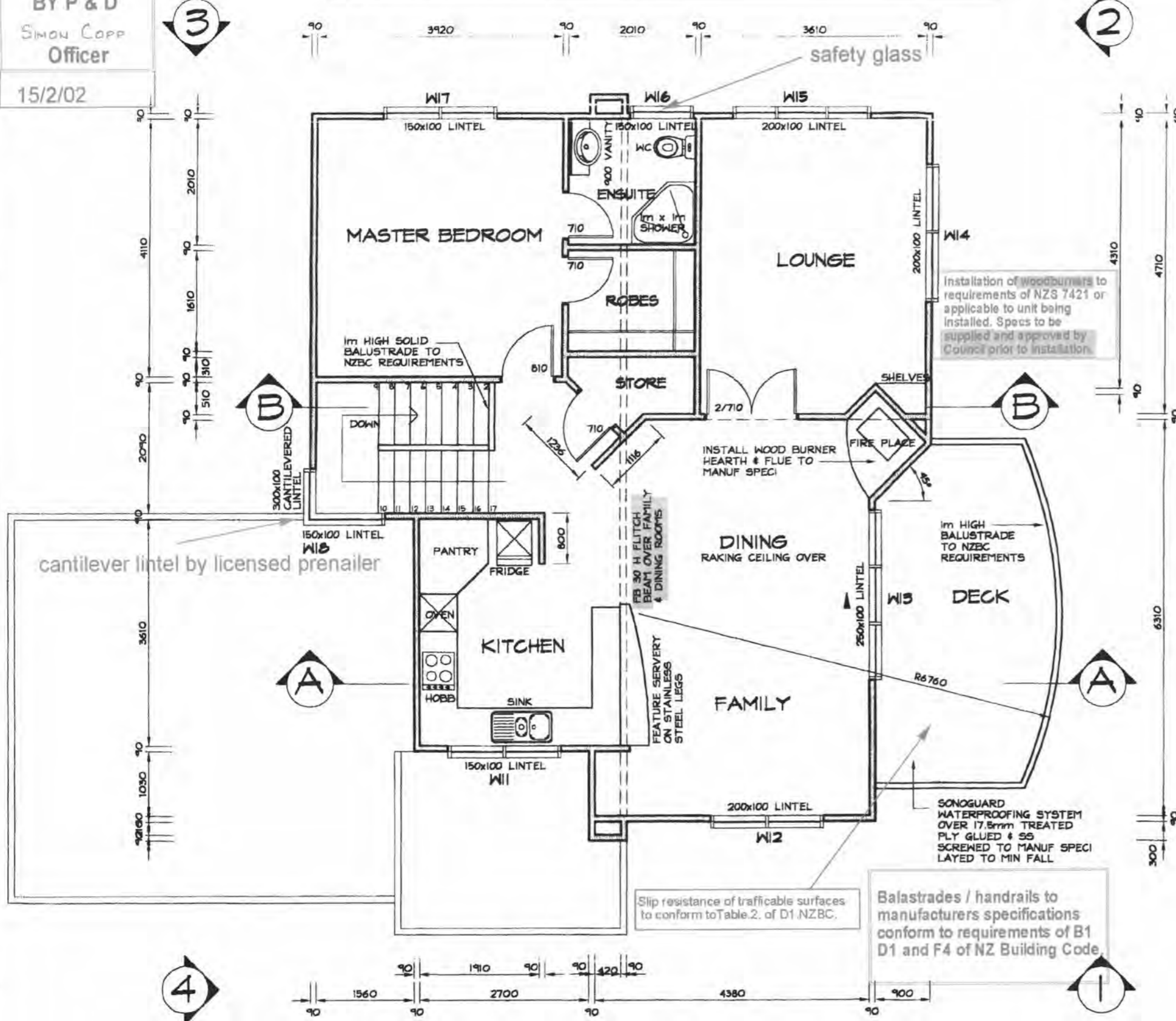
JOB/SHEET No:
2285/2
(A1 original) OF 7

APPROVED
BY P & D

SIMON COPP
Officer

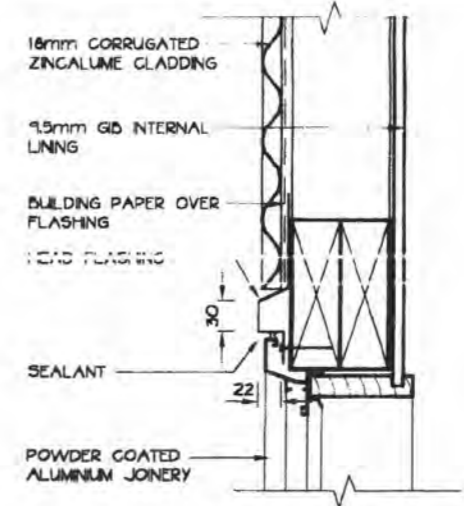
15/2/02

ensure soil and waste pipes can run to the exterior without damaging any structural members.

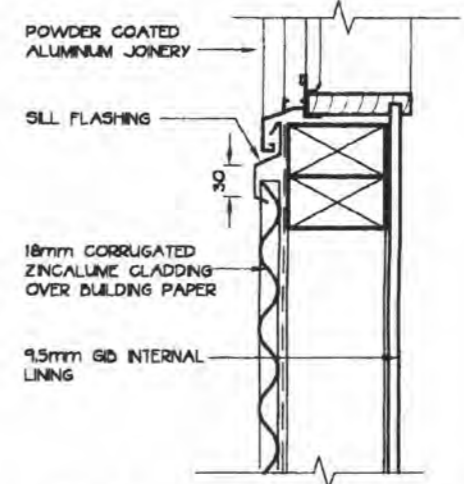


FIRST FLOOR PLAN

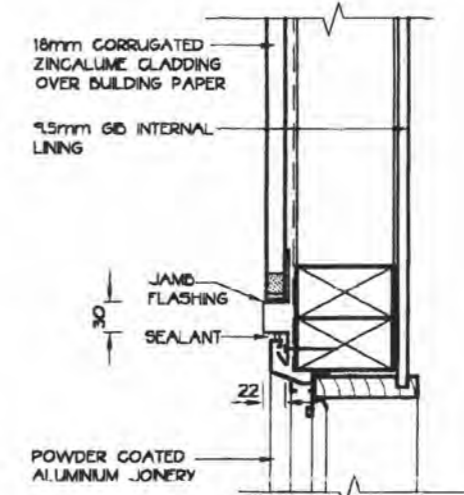
SCALE 1:70 AREA = 90m²



HEAD DETAIL 1:5



SILL DETAIL 1:5



JAMB DETAIL 1:5

CRITICAL DETAIL:
BUILDER & ROOFING CONTRACTOR MUST WORK IN UNISON TO ENSURE THAT BOXED WINDOW FLASHINGS SIT TIGHT AROUND ALUMINUM WINDOWS. TIMBER OPENING TO BE PACKED IF NECESSARY.
ROOFER - TO PRECUT & TRIM FLASHINGS AS REQUIRED
BUILDER - TO ORGANISE WINDOW PLACEMENT & LEVELLING PACK & FIX WHEN ROOFER READY

PROJECT: PROPOSED DWELLING FOR MR & MRS YOUNG
LOT 8 FIELDWAY WAIKANAEBEACH

REVISIONS:
1 - 10/1/02

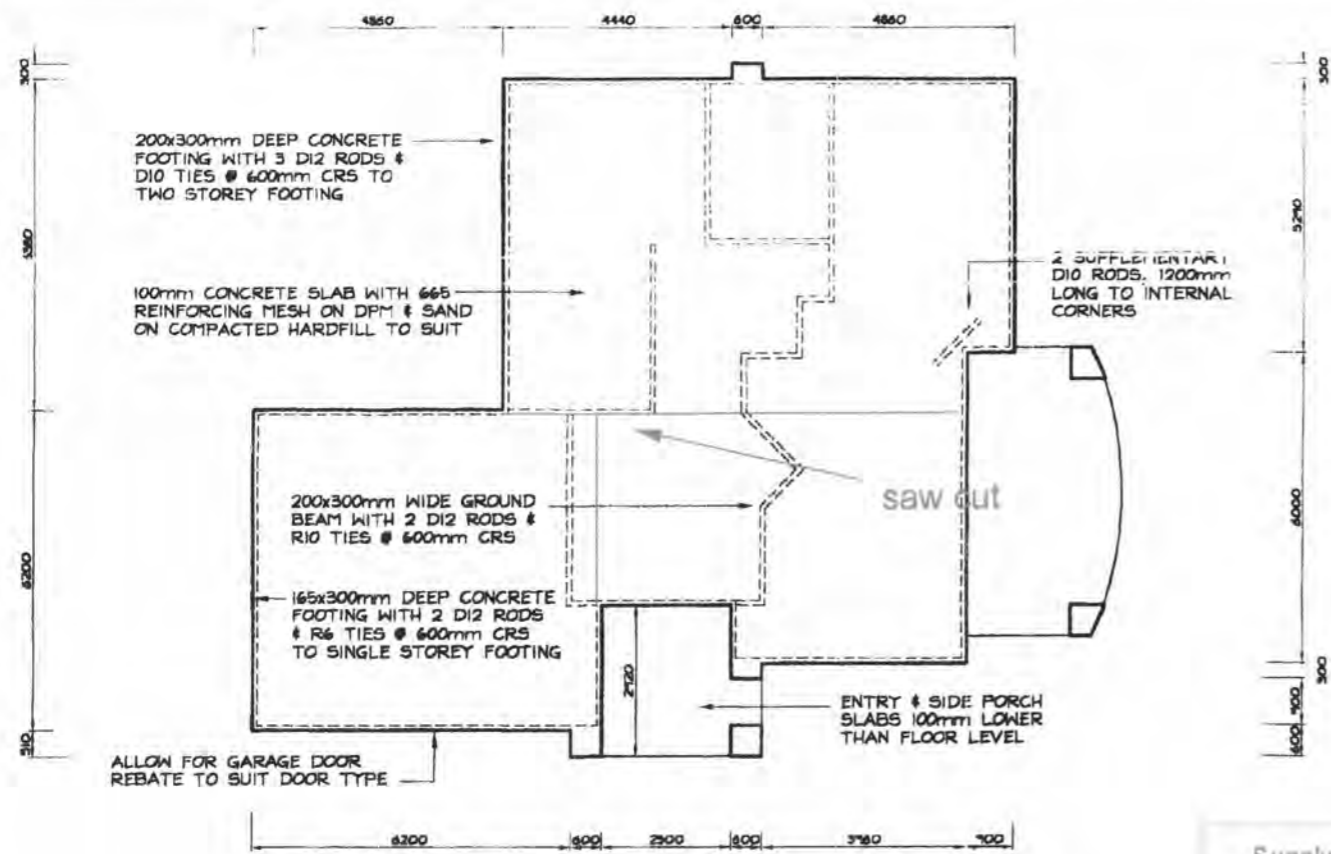
301 Kapiti Road
PO Box 1616
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Tel: 04 902 5505
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Email: kapiti@desnet.co.nz

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DATE:	NOVEMBER 2001
DESIGNED:	MS
DRAWN:	BF
CAD REF:	
SCALE:	1:70

JOB/SHEET No:
2285/3
(A1 original) OF 7

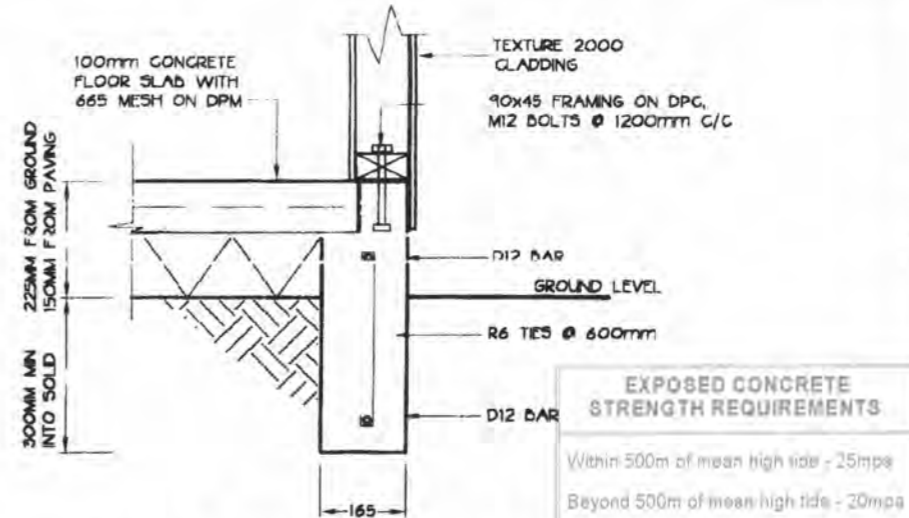
Design Network Kapiti



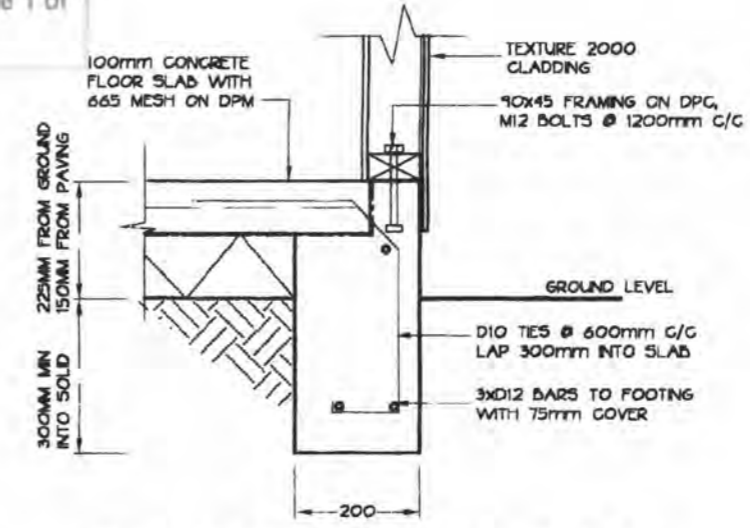
FOUNDATION PLAN SCALE 1:100

Roofing material to be installed to manufacturers requirements. In particular, fixing and minimum pitch (reference also Table 1 of E2 NZ Building Code.)

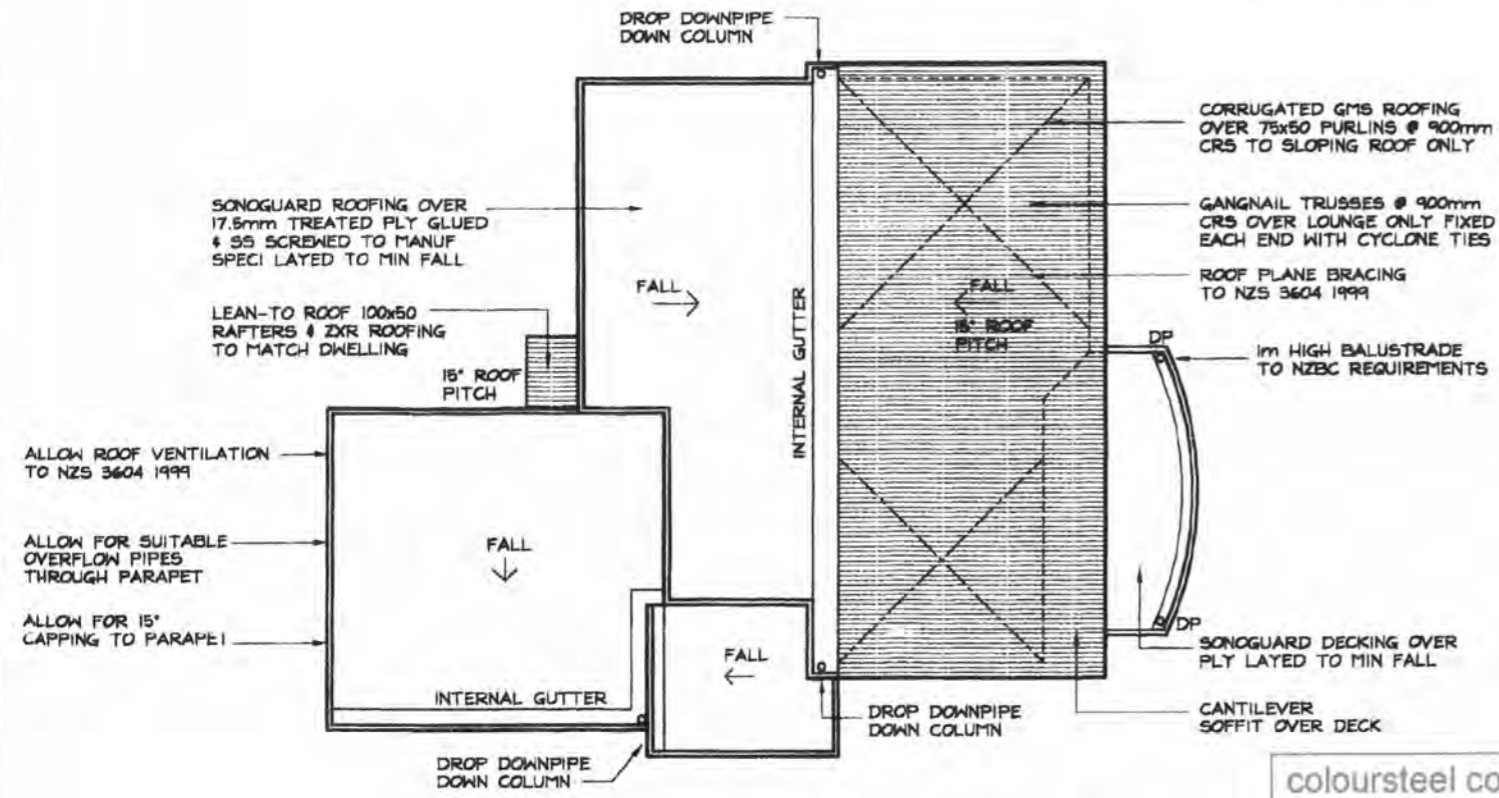
Supply copy of relevant warranties for roofing, membrane systems or fascia/gutter systems as appropriate to Council



SINGLE STOREY FOOTING SCALE 1:10

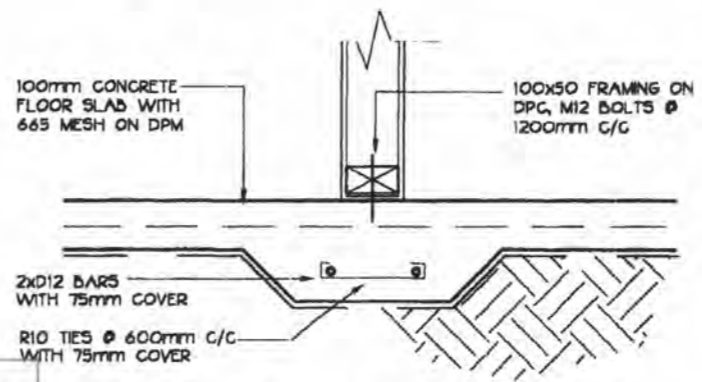


TWO STOREY FOOTING SCALE 1:10



ROOF PLAN SCALE 1:140

coloursteel coatings to be suitable for corrosion zone, check manufacturers warranty requirements



GROUND BEAM SCALE 1:140

PROJECT: PROPOSED DWELLING FOR MR & MRS YOUNG
LOT 8 FIELDWAY WAIKANAEBEACH

REVISIONS:
1 - 10/3/02

301 Kapiti Road
PO Box 1616
Paraparaumu Beach
New Zealand
Tel: 04 902 5505
Fax: 04 902 5504
Email: kapiti@desnet.co.nz

CONTRACTOR TO VERIFY ALL DIMENSIONS ON SITE PRIOR TO COMMENCING WORK. DO NOT SCALE DRAWINGS. THESE DRAWINGS ARE COPYRIGHT. DRAWINGS TO BE READ IN CONJUNCTION WITH STRUCTURAL ENGINEERS DRAWINGS.

DATE:	NOVEMBER 2001
DESIGNED:	MS
DRAWN:	BF
CAD REF:	
SCALE:	1:140, 1:100, 1:10

JOB/SHEET No:

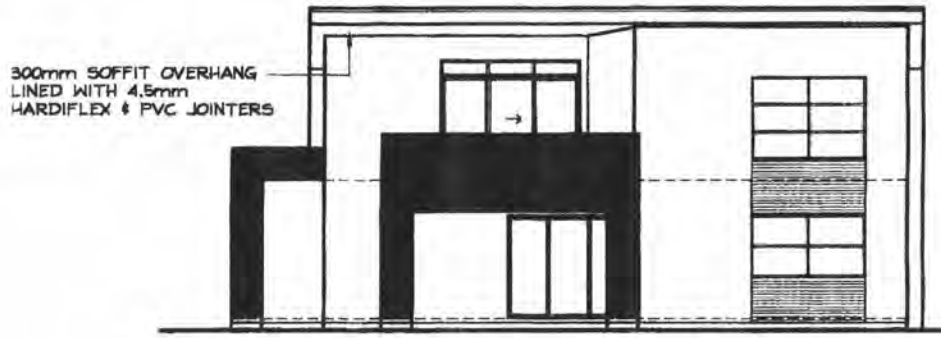
2285/4

(A1 original) OF 7

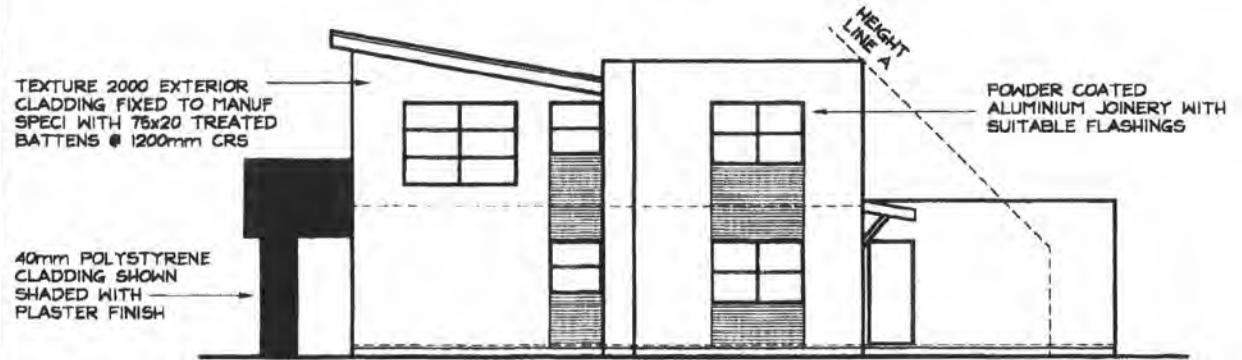
Design Network Kapiti



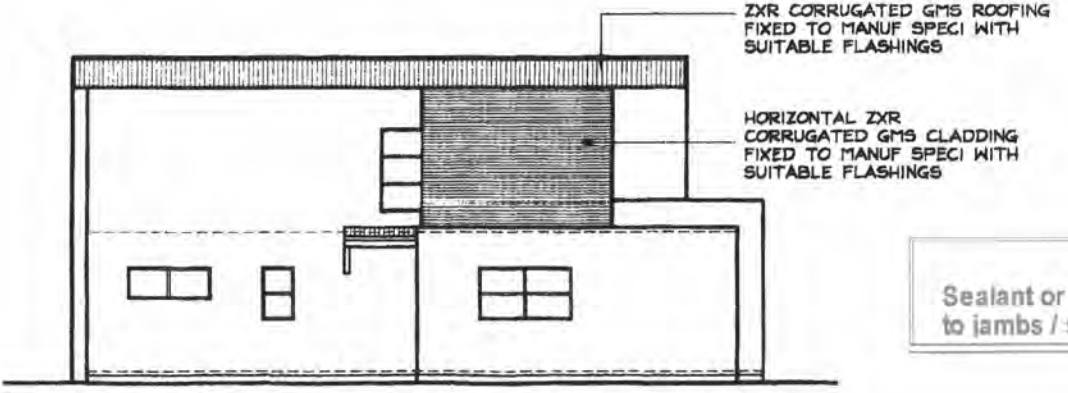
ELEVATION 1 SCALE 1:140



ELEVATION 2 SCALE 1:140

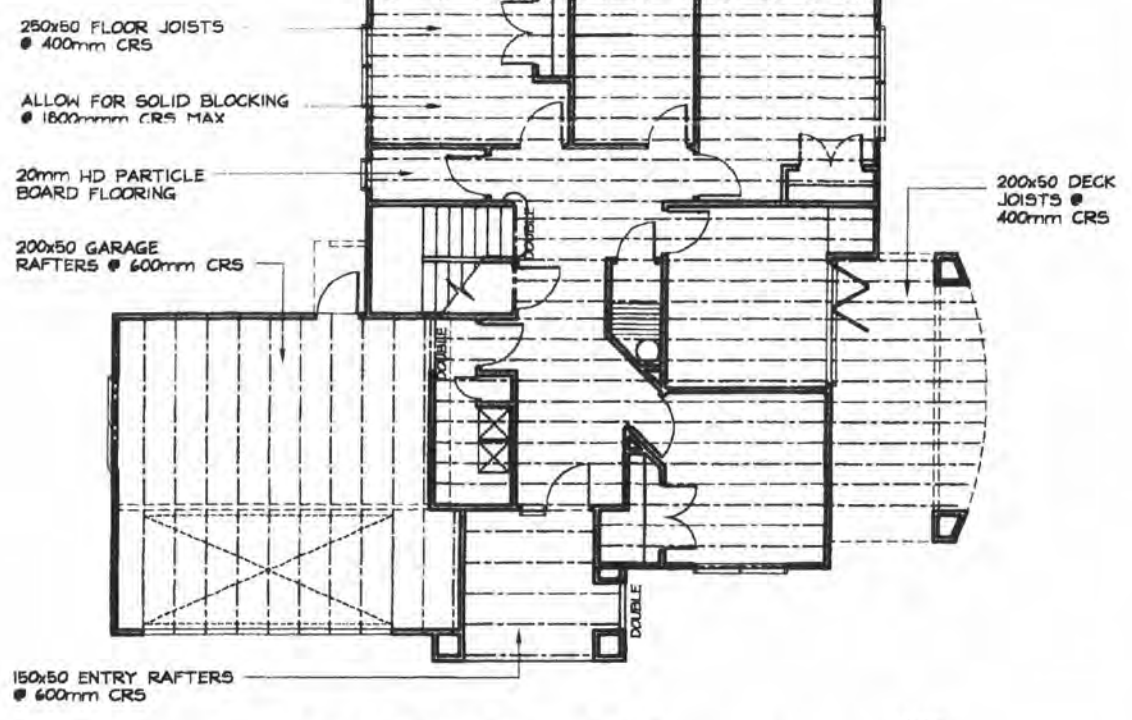


ELEVATION 3 SCALE 1:140



ELEVATION 4 SCALE 1:140

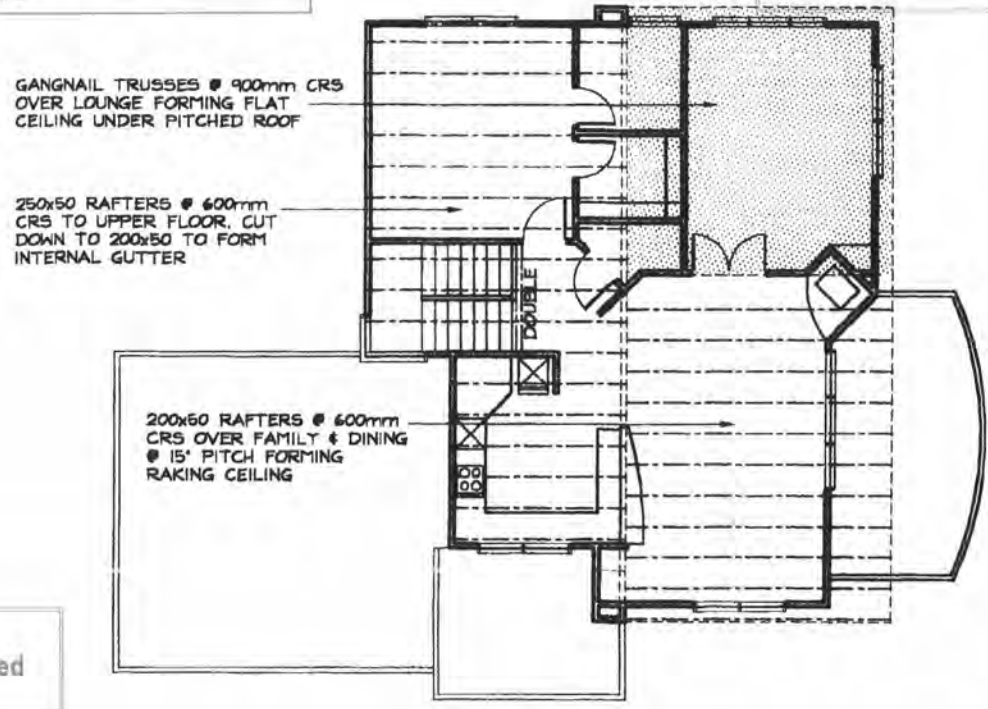
MINIMUM FINISHED FLOOR LEVEL ABOVE	
PROTECTED GROUND:	150mm + 20mm + 150mm + 150mm = 450mm
UNPROTECTED GROUND:	150mm + 20mm + 150mm + 150mm + 25mm = 575mm



JOIST PLAN SCALE 1:140

Note area is coastal corrosion area, and components must meet 50yr durability requirements of NZ Bldg Code

The truss manufacturer must confirm the minimum size requirement of all lintels or beams supporting girder truss point loads. Provide in writing to Council and contractor.



ROOF FRAMING SCALE 1:140

Sealant or flashing required to jambs / sills

PROJECT: PROPOSED DWELLING FOR MR & MRS YOUNG
LOT 8 FIELDWAY WAIKANAEBEACH

Design Network Kapiti

REVISIONS:
1 - 10/1/02

301 Kapiti Road
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New Zealand
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DATE:	NOVEMBER 2001
DESIGNED:	MS
DRAWN:	BF
CAD REF:	
SCALE:	1:140

JOB/SHEET No:
2285/5

(A1 original) OF 7

Textured systems should be applied by licensed, trained applicators only. Supply copy of warranty to council.

Insulate to isolate (NZS 4218)

INSULATION
21.8 insulation batts to exterior walls
22.6 insulation batts to ceilings

BOTTOM PLATE FIXINGS
100 max 900mm crs.
120 max 1400mm crs.
Approved anchors (fixed to manufacturers instructions)
'Ramsel' Dynabolt 'PLUS' only.

ZRX CORRUGATED GMS ROOFING OVER 75x50 PURLINS @ 900mm CRS

200x50 RAFTERS @ 600mm CRS TO RAKING CEILING OVER FAMILY & DINING ROOM

100x50 TIMBER FRAMING @ 400mm CRS LINED WITH 9.5mm GIB

TEXTURE 2000 EXTERIOR CLADDING FIXED TO MANUF SPECI WITH 75x20 TREATED BATTENS @ 1200mm CRS

SONOGUARD DECKING OVER 200x50 DECK JOISTS @ 400mm CRS

1m HIGH SOLID BALUSTRADE SEE SHEET 7 FOR DETAIL

FB 30 H FLITCH BEAM

4.5mm HARDIFLEX SOFFIT LINING WITH PVC JOINTERS

POWDER COATED ALUMINIUM JOINERY WITH SUITABLE HEAD FLASHINGS

200x300mm DEEP CONCRETE FOOTING WITH 3 D12 RODS & D10 TIES @ 600mm CRS TO DWELLING

SONOGUARD WATERPROOFING SYSTEM TO FLAT ROOF OVER 17.5mm TREATED PLY GLUED & SS SCREWED TO MANUF SPECI LAYED TO MIN FALL

250x50 RAFTERS @ 600mm CRS CUT DOWN TO 200x50 TO FORM INTERNAL GUTTER TO FALL TO DOWNPIPES

ALLOW FOR CEILING VENTILATION TO NZS 3604 1999

9.5mm GIB CEILING LINING TO U/SIDE OF 75x40 BATTENS @ 400mm CRS

HORIZONTAL ZRX CORRUGATED GMS CLADDING FIXED TO MANUF SPECI WITH SUITABLE FLASHINGS TO FEATURE AREAS

20mm HD PARTICLE BOARD FLOORING OVER 250x50 FLOOR JOISTS @ 400mm CRS

ALLOW FOR R2.6 BATTENS TO CEILING

FB 30 H FLITCH BEAM

SONOGUARD ROOFING OVER 200x50 RAFTERS @ 600mm CRS OVER GARAGE

300mm HIGH TIMBER PARAPET WITH 15° CAPPING

ALLOW FOR OVERFLOW PIPES THROUGH PARAPET

100mm CONCRETE SLAB WITH 665 REINFORCING MESH ON DPM & 50mm EPS POLYSTYRENE INSULATION ON COMPACTED HARDFILL TO SUIT

165x300mm DEEP CONCRETE FOOTING WITH 2 D12 RODS & R6 TIES @ 600mm CRS TO GARAGE

GARAGE

LAUNDRY

ENTRY

BEDROOM 3

SECTION AA SCALE 1:70

Cladding to be installed to manufacturers requirements in particular fixing and ground clearance.

Both sides of bolted connections to be fitted with 50x50x3mm square or 55mm dia round washers

All parapets or solid balustrades finished in either sprayed textured acrylic or solid plaster systems must be flashed and finished at top edge with a min 15 degree crossfall to ensure adequate water run-off

SONOGUARD WATERPROOFING SYSTEM TO FLAT ROOF OVER 17.5mm TREATED PLY GLUED & SS SCREWED TO MANUF SPECI LAYED TO MIN FALL

ALLOW FOR CEILING VENTILATION TO NZS 3604 1999

ALLOW FOR OVERFLOW PIPES THROUGH PARAPET

250x50 RAFTERS @ 600mm CRS CUT DOWN TO 200x50 TO FORM INTERNAL GUTTER TO FALL TO DOWNPIPES

1m HIGH SOLID BALUSTRADE SEE SHEET 6 FOR DETAIL

100x50 TIMBER FRAMING @ 400mm CRS LINED WITH 9.5mm GIB

100mm CONCRETE SLAB WITH 665 REINFORCING MESH ON DPM & 50mm EPS POLYSTYRENE INSULATION ON COMPACTED HARDFILL TO SUIT

ZRX CORRUGATED GMS ROOFING OVER 75x50 PURLINS @ 900mm CRS

300mm SOFFIT OVERHANG LINED 4.5mm HARDIFLEX WITH PVC JOINTERS

GANGNAIL TRUSSES @ 900mm CRS OVER LOUNGE ONLY FIXED EACH END WITH CYCLONE TIES

9.5mm GIB CEILING LINING TO U/SIDE OF 75x40 BATTENS @ 400mm CRS

TEXTURE 2000 EXTERIOR CLADDING FIXED TO MANUF SPECI WITH 75x20 TREATED BATTENS @ 1200mm CRS

20mm HD PARTICLE BOARD FLOORING OVER 250x50 FLOOR JOISTS @ 400mm CRS

POWDER COATED ALUMINIUM JOINERY WITH SUITABLE HEAD FLASHINGS

200x300mm DEEP CONCRETE FOOTING WITH 3 D12 RODS & D10 TIES @ 600mm CRS TO DWELLING

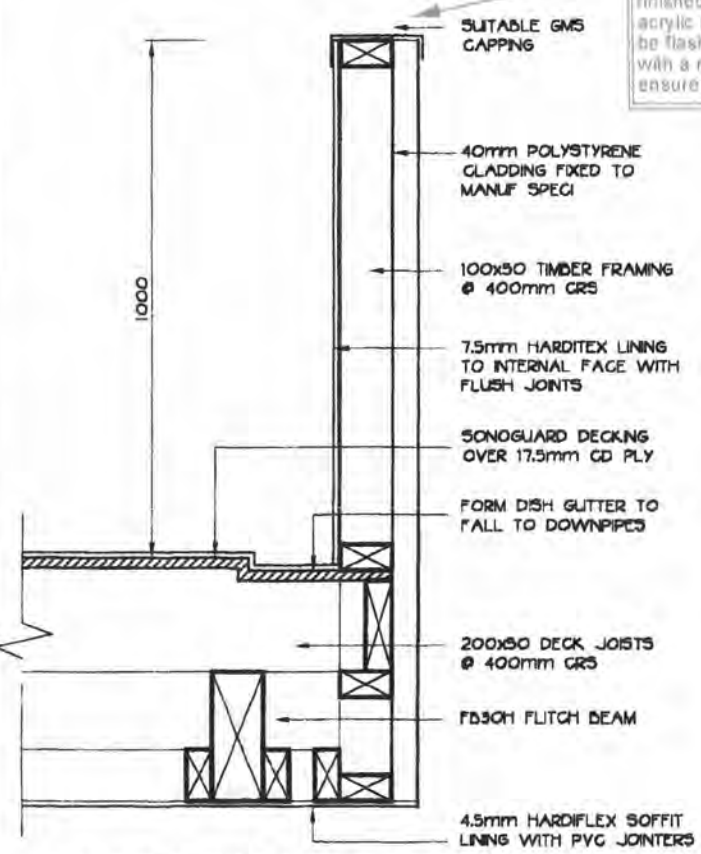
STAIRWELL

STORE

LOUNGE

DEN

SECTION BB SCALE 1:70



EXTERNAL BALUSTRADE SCALE 1:10

PROJECT: PROPOSED DWELLING FOR MR & MRS YOUNG
LOT 8 FIELDWAY WAIKANAEBEACH

REVISIONS:
1 - 10/1/02

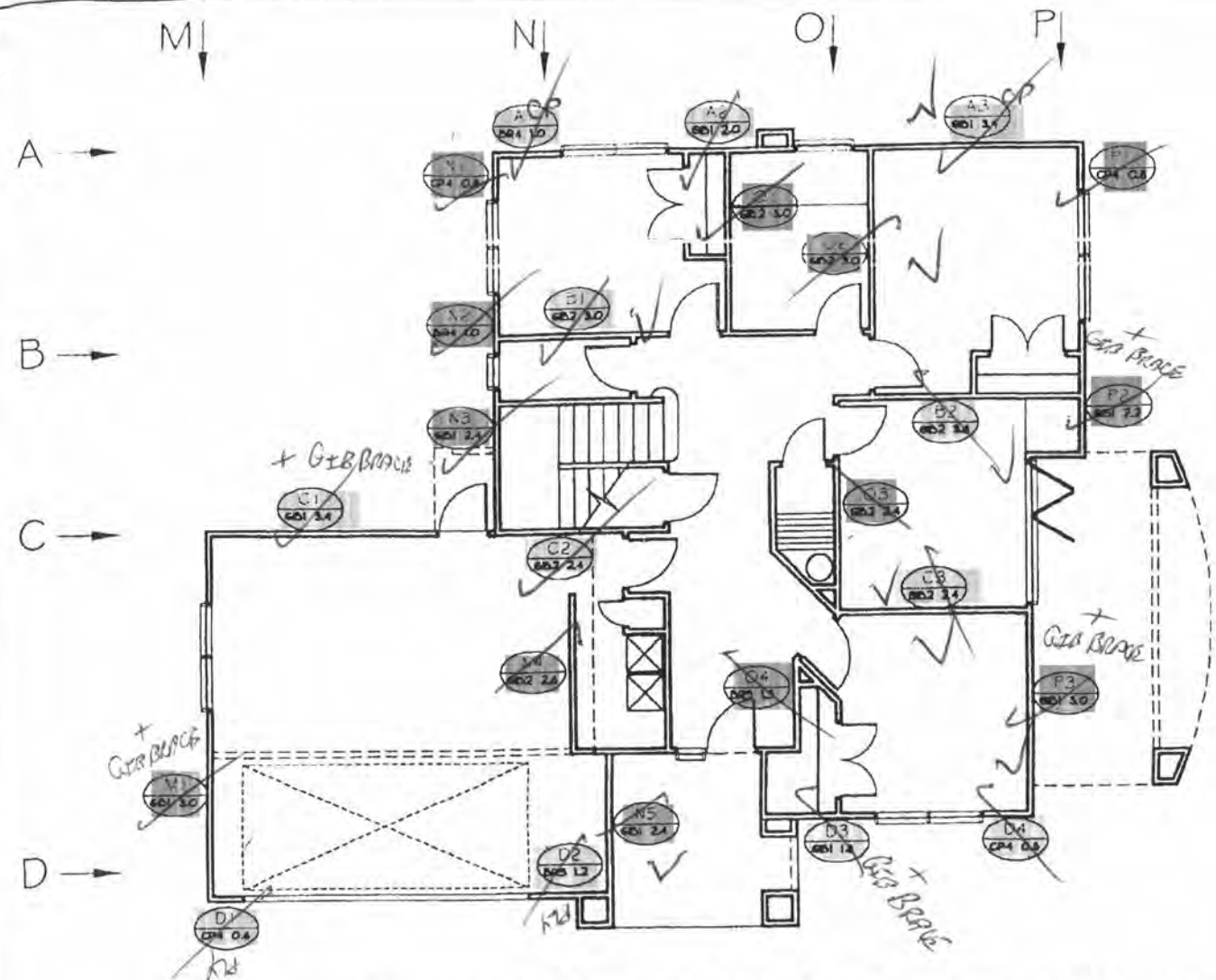
301 Kapiti Road
PO Box 1616
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New Zealand
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DATE:	NOVEMBER 2001
DESIGNED:	MS
DRAWN:	BF
CAD REF:	
SCALE:	1:70

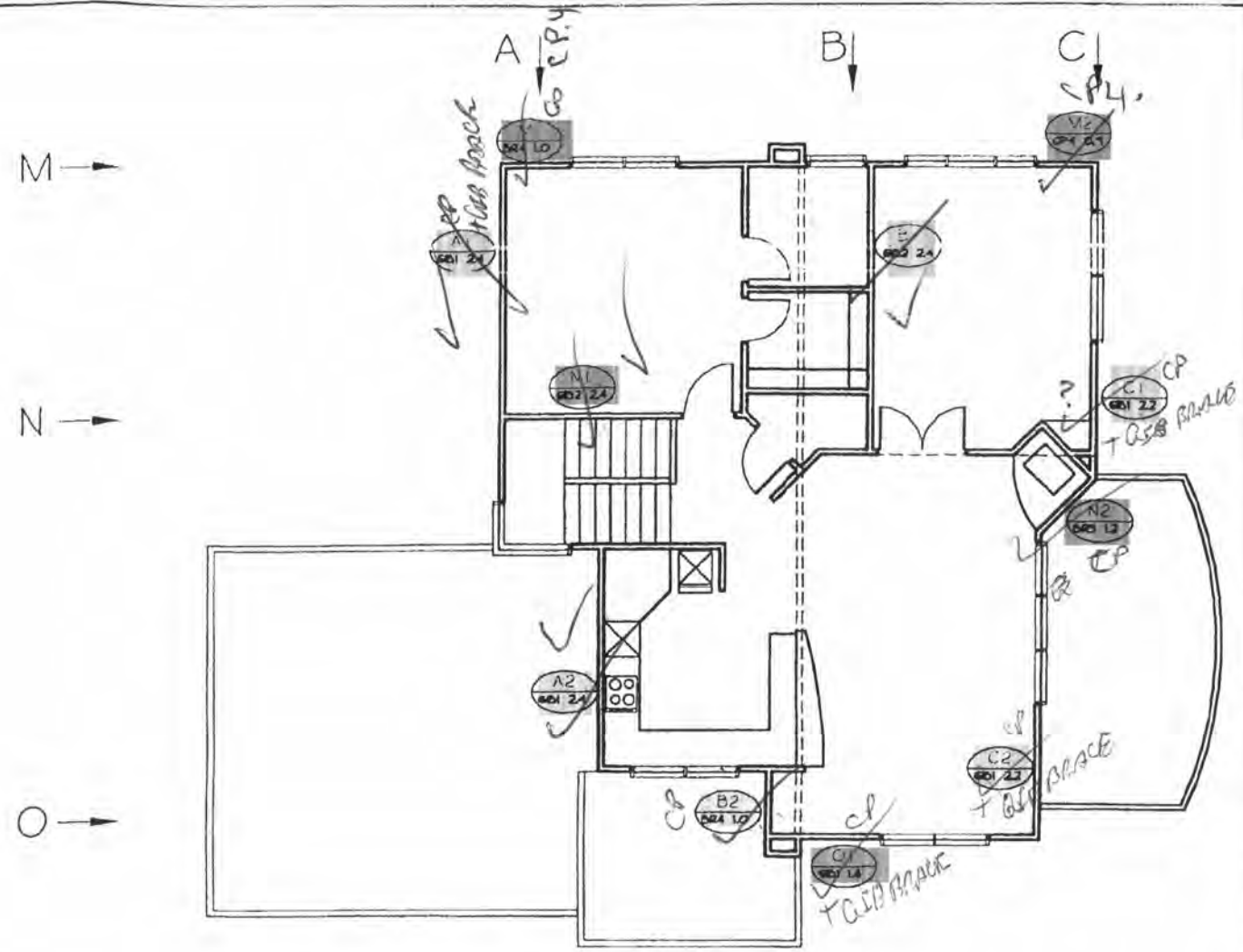
JOB/SHEET No:
2285/6
(A1 original) OF 7

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LOWER BRACING PLAN

SCALE 1:100
NTS
W.H.

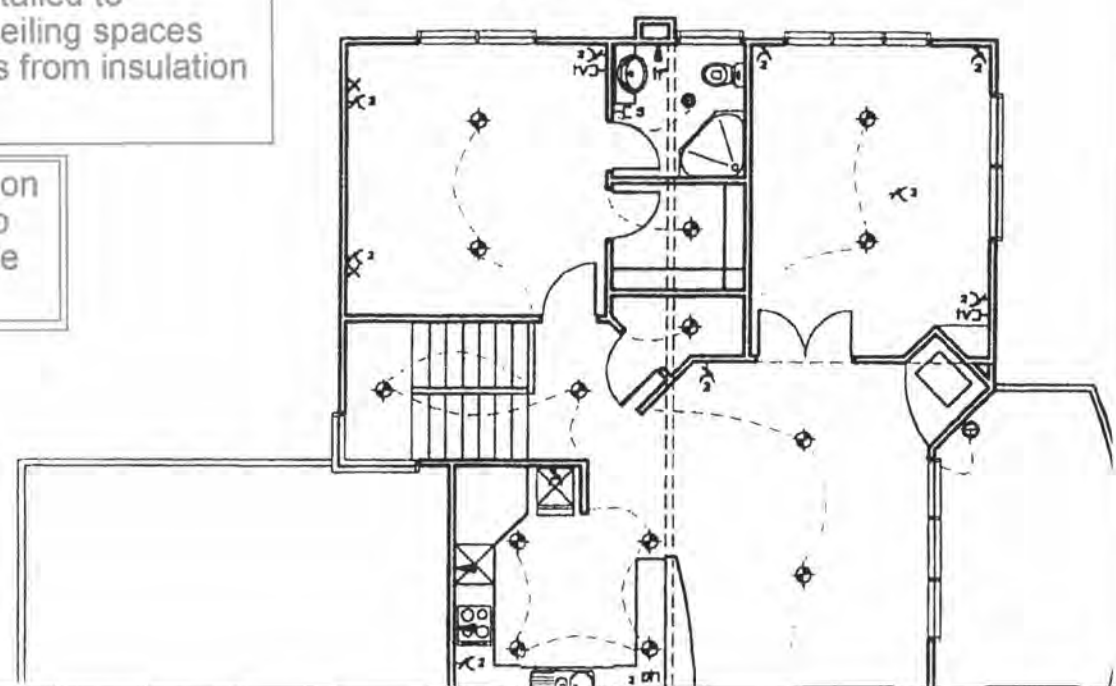
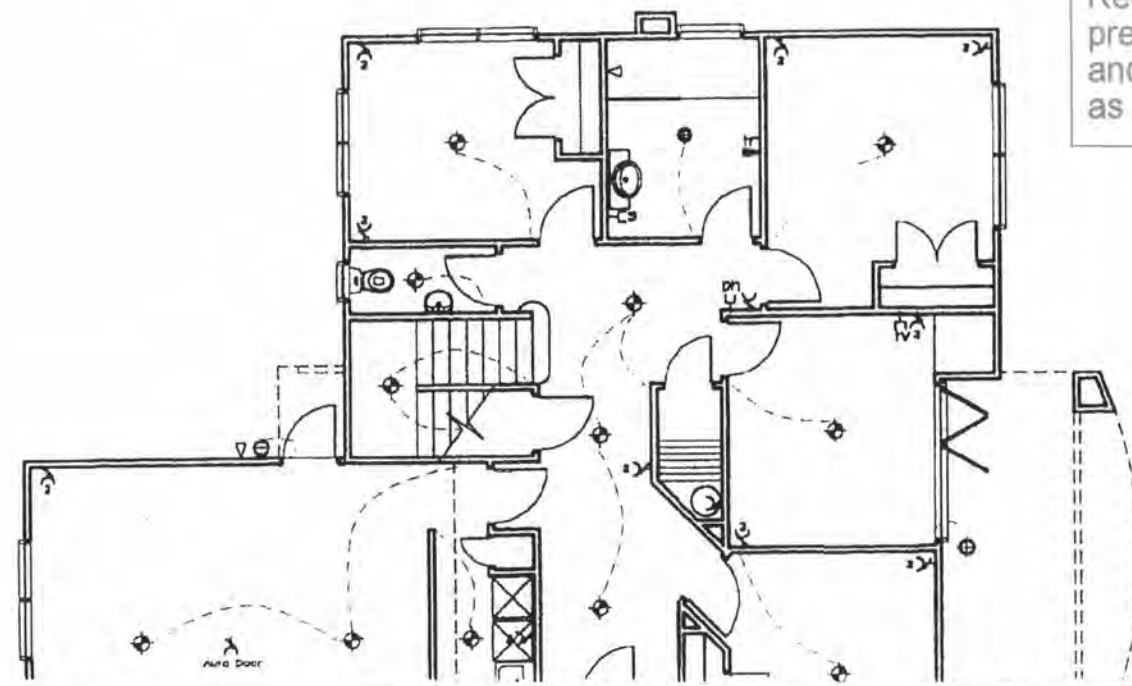


UPPER BRACING PLAN

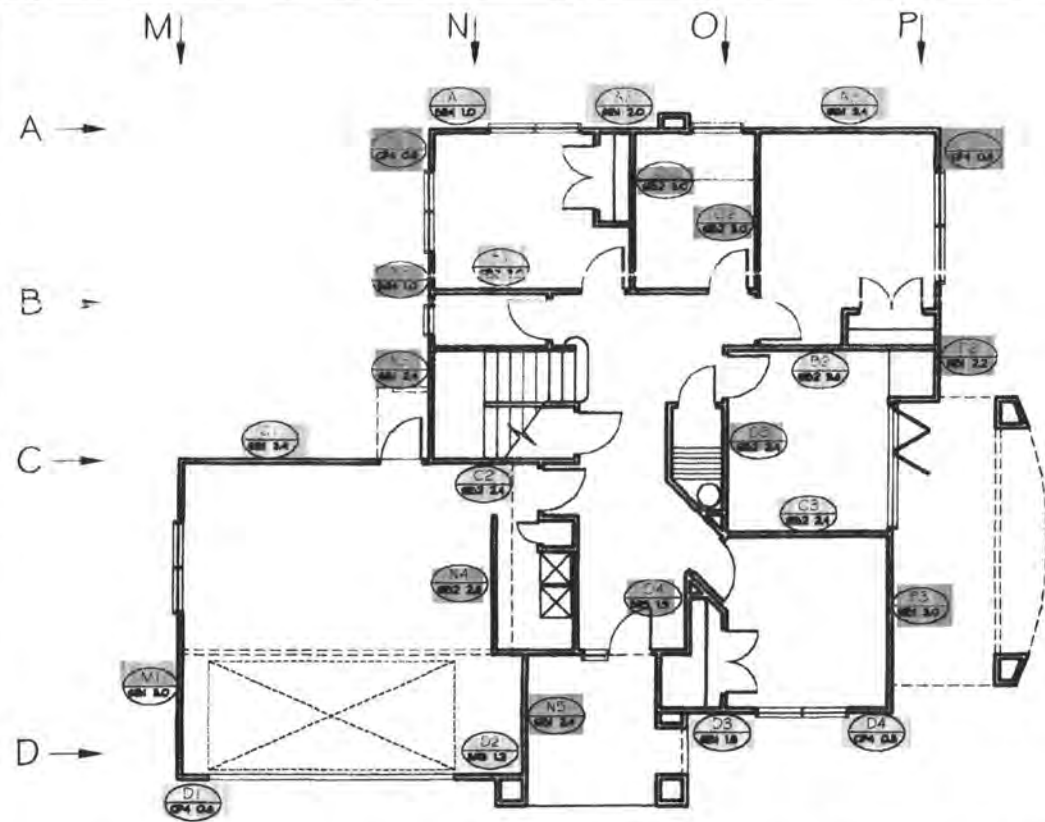
SCALE 1:100
NTS
W.H.

Recessed Downlights shall be installed to prevent transfer of moisture into ceiling spaces and maintain minimum clearances from insulation as required by NZECP 54:2001.

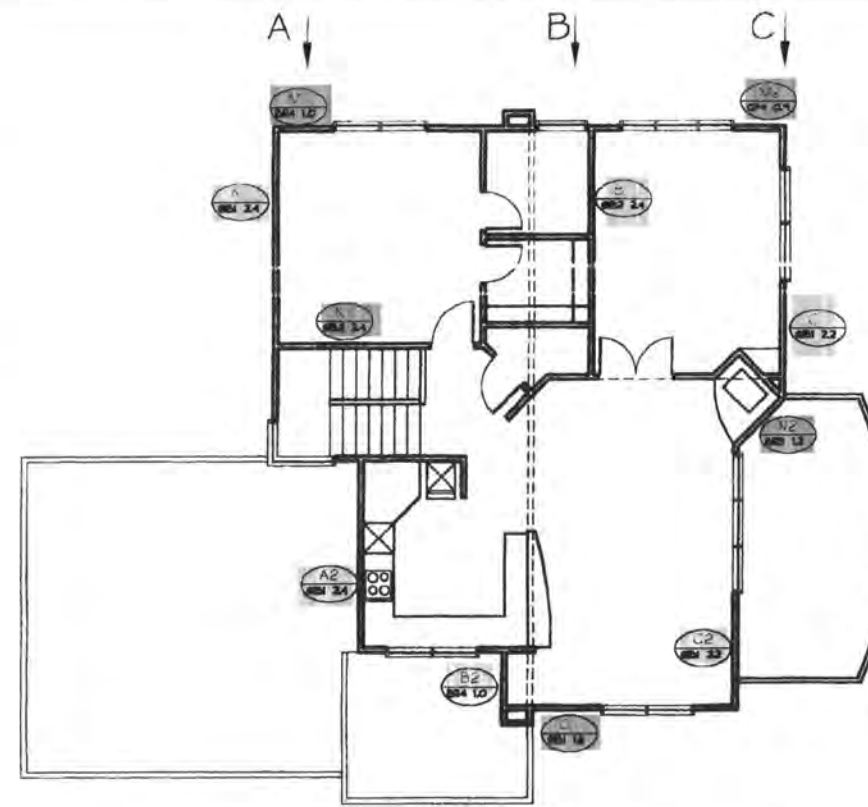
Provide Electrical Certification after completion and prior to Code Compliance Certificate being issued



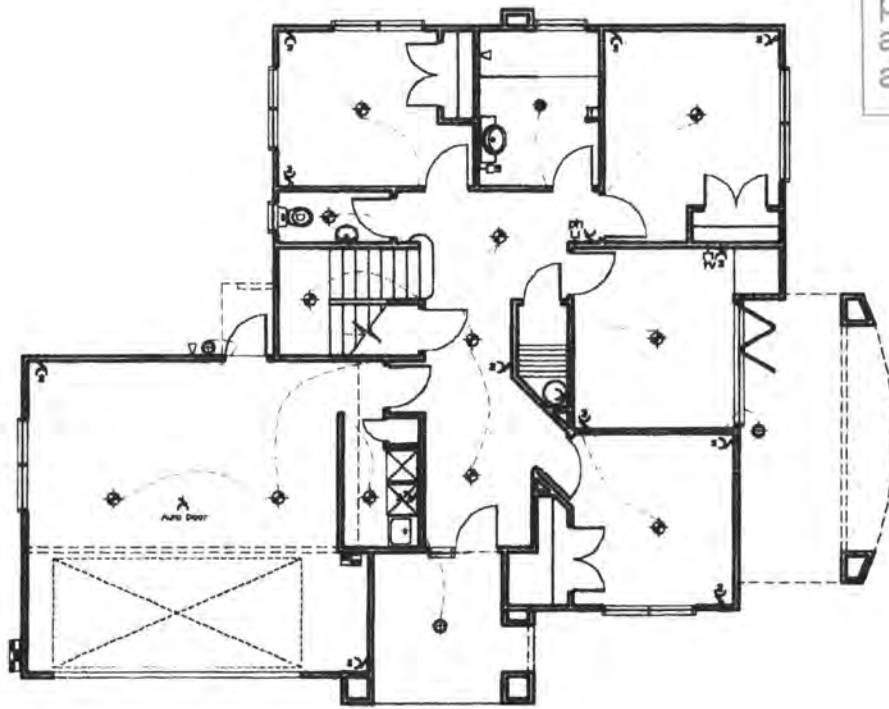
AL LEGEND



LOWER BRACING PLAN
SCALE 1:140



UPPER BRACING PLAN
SCALE 1:140

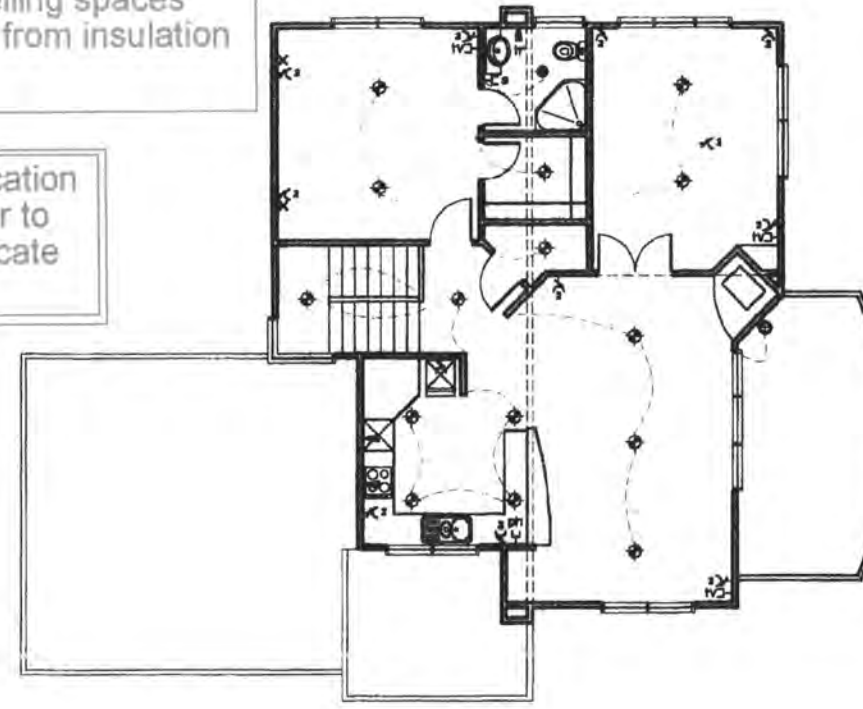


ELECTRICAL PLAN
SCALE 1:140

Recessed Downlights shall be installed to prevent transfer of moisture into ceiling spaces and maintain minimum clearances from insulation as required by NZECP 54:2001.

Provide Electrical Certification after completion and prior to Code Compliance Certificate being issued

ELECTRICAL LEGEND	
⊙	Ceiling Mounted Lighting Point
⬢	Recessed Downlight
⊗	Wall Mounted Lighting Point
⊙	Ceiling Light / Extract Fan
⊕	Power Point (2 denote outlets)
⊖	Permanent Point
TV	Television Point
PT	Telephone Point
SP	Shaving Point
TR	Heated Towel Rail
AD	Auto garage Door Opener
SB	Switch Board
MB	Meter Board



ELECTRICAL PLAN
SCALE 1:140

PROJECT: PROPOSED DWELLING FOR MR & MRS YOUNG
LOT 8 FIELDWAY WAIKANA E BEACH

REVISIONS:
1 - 10/1/02

301 Kapiti Road
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DATE: NOVEMBER 2001

DESIGNED: MS

DRAWN: BF

CAD REF:

SCALE: 1:140

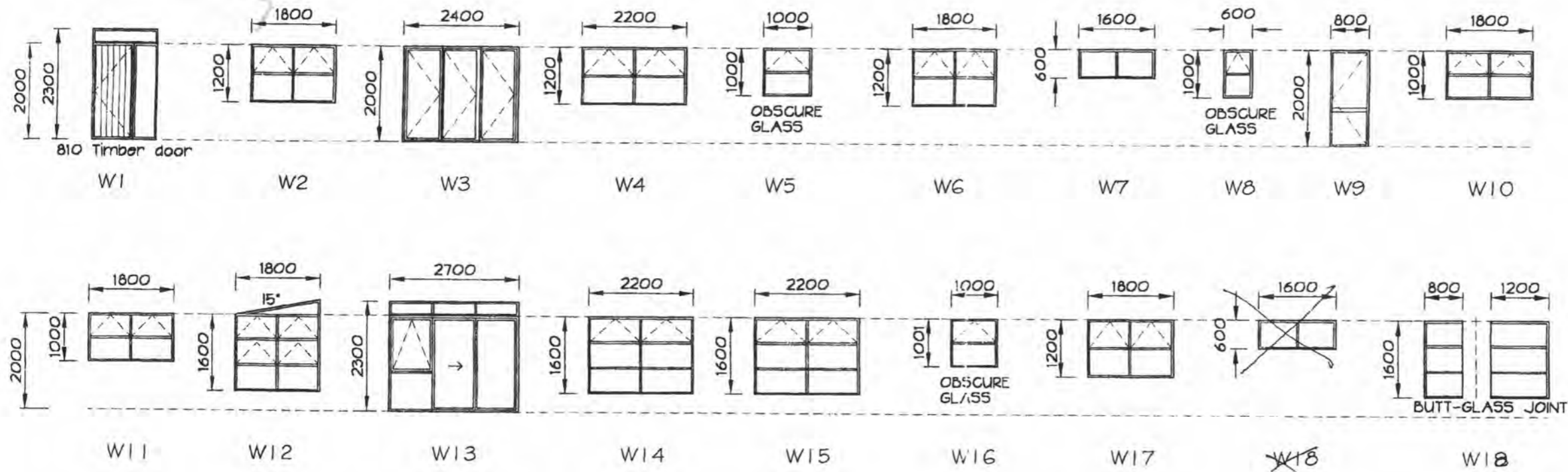
JOB/SHEET No:

2285/7

(A1 original) OF 7

Design Network Kapiti

18/02/2002



JOINERY SCHEDULE

Scale 1:100

NOTE:
 EXTERIOR JOINERY TO COMPLY WITH NZS 4211, 100 Pa MIN DESIGN WIND PRESSURE AND SUITABLE HEAD FLASHINGS TO BE FITTED TO ALL UNITS

All habitable / service rooms to have 5% of their floor area as opening windows or approved alternative, to achieve ventilation requirements.

GLAZING CONFORM NZS 4223 PARTS 1, 2, 3.
 FIT SUITABLE FLASHINGS ETC. JOINERY
 VERY HIGH WIND 1550pa DWP

PROJECT: **YOUNG 2285**

Design Network Kapiti

REVISIONS:

301 Kapiti Road
 PO Box 1616
 Paraparaumu Beach
 New Zealand
 Tel: 04 902 5505
 Fax: 04 902 5504
 Email: kapiti@desnet.co.nz

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DATE:	
DESIGNED:	
DRAWN:	
CAD REF:	
SCALE:	

JOB/SHEET No:
 (A1 original) OF

Producer Statement

Private Sewer Drains

Construction Review

Issued by Kapiti Plumbing Registration Number 12724

To Kapiti Coast District Council

In respect to the following

Private Sewer Drains installed in accordance with G13 AS2 or AS/NZS 3500 .2.2 as shown on the approved plans or as per the attached amended plan

Installed at Lot 8 Fieldway Waikanae

Building Consent No.

As a registered drainlayer, currently holding an annual practicing license, certify that I, or personnel under my control, have carried out the installation of the above system and I believe on reasonable grounds that the installation complies with the New Zealand Building Code.

Signed [Signature] Date 2.9.02

Note: Fully dimensioned as built drain plan to be supplied. (scale 1:100)

Drains may be laid and backfilled without inspection provided that the drain is left under test with a min of 1.0 m head and the inspection at the lateral left exposed.

SCANNED

RECEIVED
19 SEP 2002
BY: Lee

Producer Statement

Stormwater Drains

Signed

Construction Review

Issued by Kapiti Plumbing..... Registration Number 12724

To Kapiti Coast District Council

In respect to the following

Stormwater Drains installed in accordance with E1 AS1 as shown on the approved plans or as per the attached amended plan

Installed at Lot 8 fieldway WaiKANAE

Building Consent No.....

As a registered drainlayer, currently holding an annual practicing license, certify that I, or personnel under my control, have carried out the installation of the above system and I believe on reasonable grounds that the installation complies with the New Zealand Building Code.

Signed [Signature]..... Date 2.9.02

Note: Fully dimensioned as built drain plan to be supplied. (scale 1:100)

SCANNED

Producer Statement
Piped Services
&
Sanitary Plumbing Stacks

Construction Review

Issued by Kapiti Plumbing Registration Number 12724

To Kapiti Coast District Council

In respect to the following

Piped Services installed in accordance with G12/AS1 as shown on the approved plans or as per the attached amended plan and Sanitary Plumbing Stacks installed in accordance with G13/AS1 or AS/NZS 3500.2.2

Installed at Lot 8 Fieldway Waikanae

Building Consent No.....

As a Craftsman plumber, currently holding an annual practicing license, certify that I, or personnel under my control, have carried out the installation of the above system and I believe on reasonable grounds that the installation complies with the New Zealand Building Code. Both hot and cold systems have been pressure tested for a period of 15 minutes at a pressure of 1500 kPa.

Signed M. Heath Date 2.9.02

SCANNED

Attn: Barry McLennan



Effective May 2002

HEATCELL® SPITFIRE 2002

INSERT SPECIFICATIONS - FOR AN INSULATED BUILT IN FIRE BOX CASING

PAGE 1 OF 2

Note:

Heatcell Cabinet Contents

1* Heatcell Case

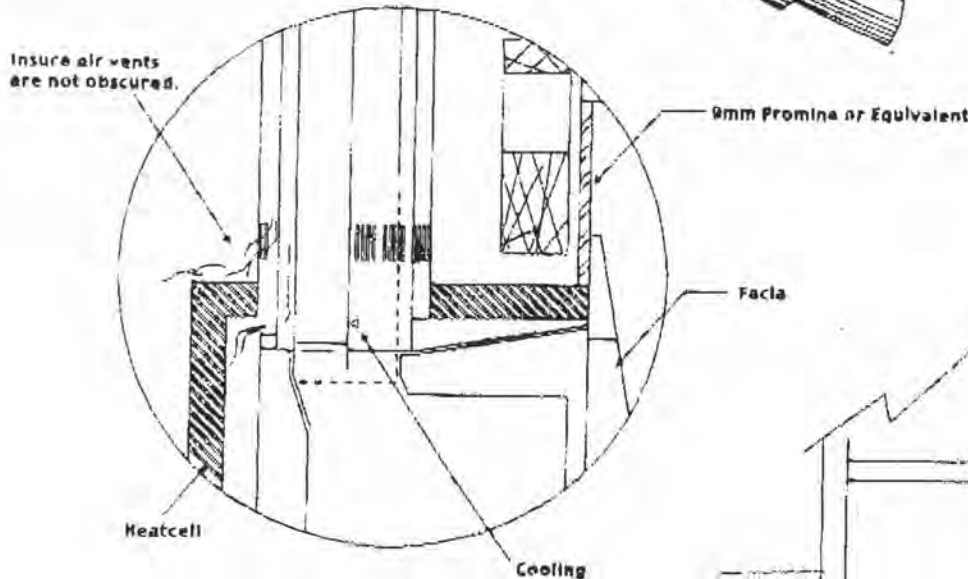
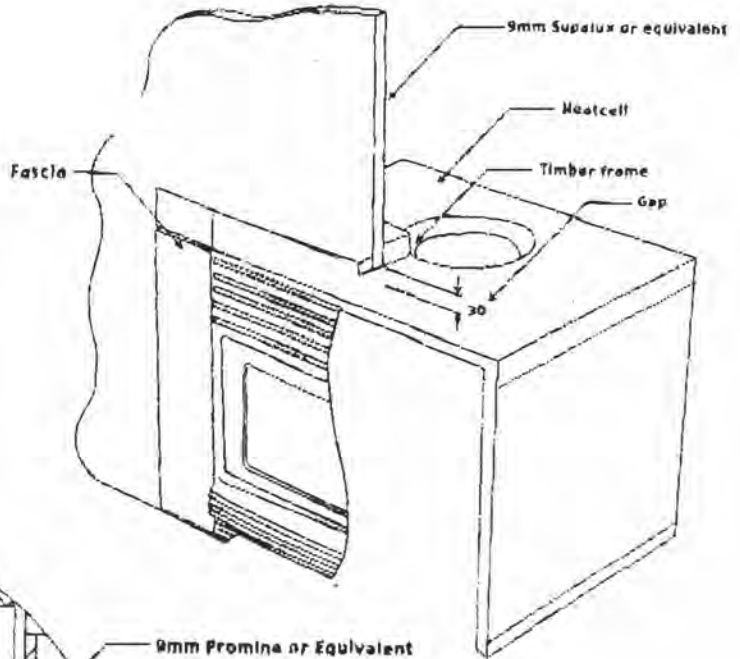
1* 150ø S/S Flue length x 600L

1* 200ø Inner x 600L

1* 250ø Perforated outer liner x 600L

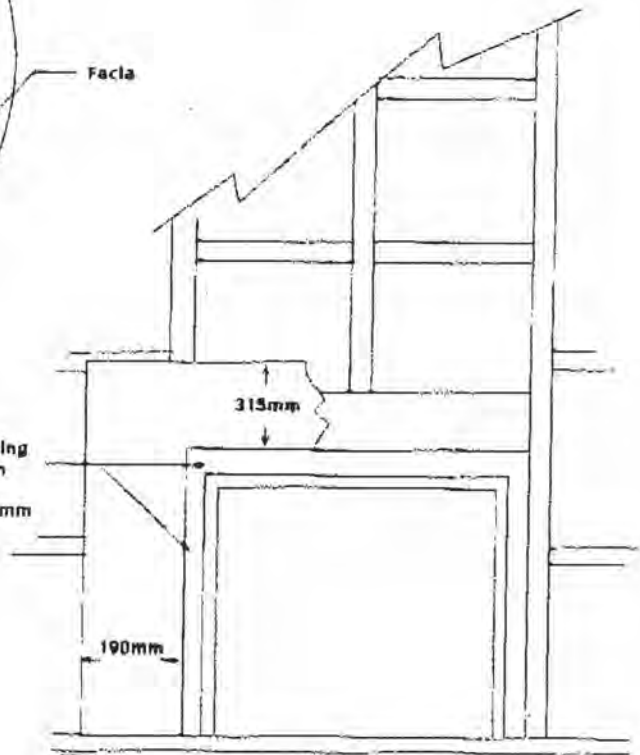
Warning

Jayline flue components supplied must be used due to special cooling vents.



Clearance from Heatcell to all framing and combustables = Minimum 30mm

Framing timber can touch the ø250mm outer flue liner.





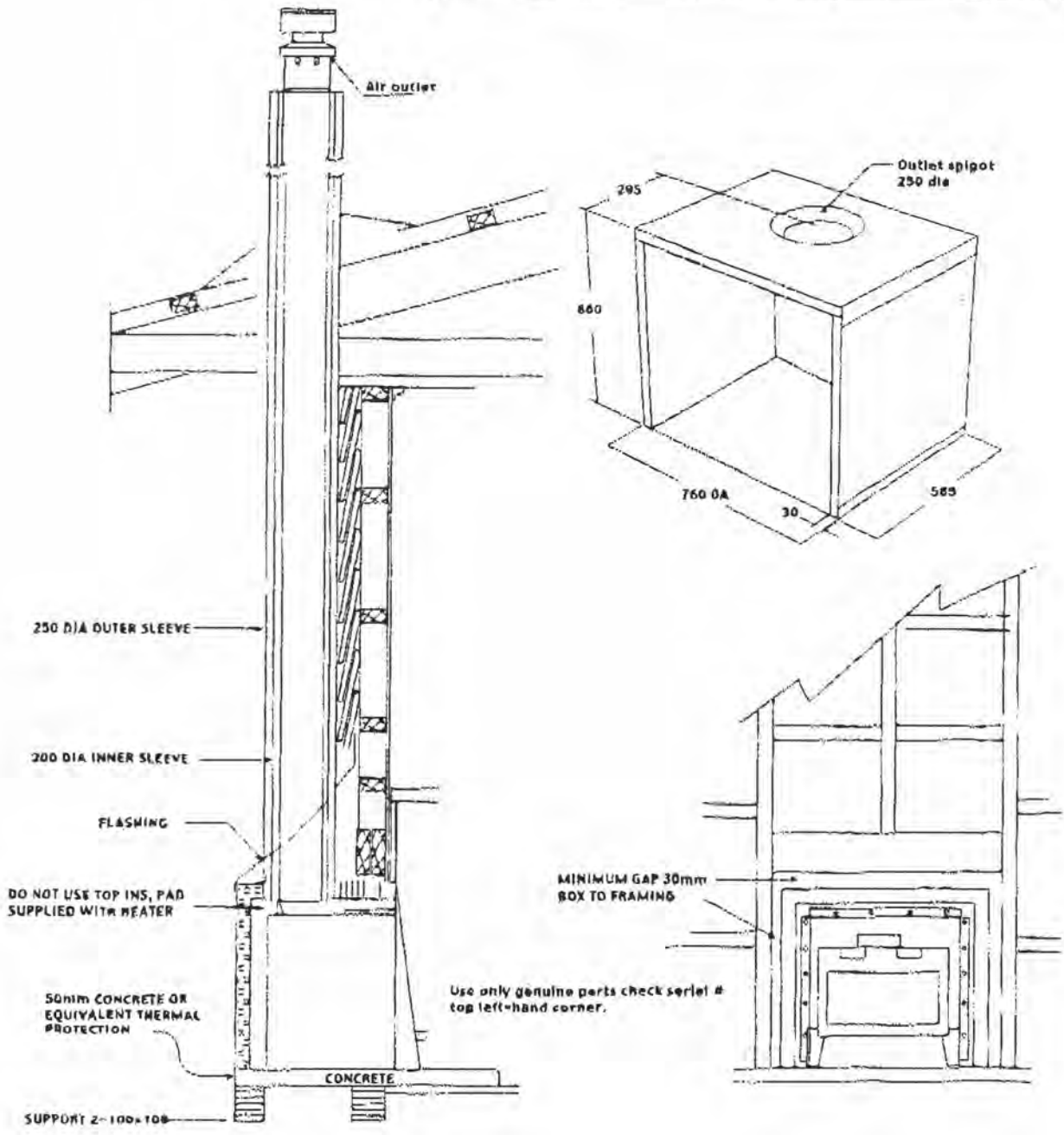
HEATCELL[®] SPITFIRE

INSERT SPECIFICATIONS - FOR AN INSULATED BUILT IN FIRE BOX CASING

PAGE 2 OF 2

Notes: Flue Kits (All Models)
 Please follow the flue manufacturer's installation instructions. The tested flue height for this unit is 4 metres. Deviation from this may alter the heater's performance. If in doubt contact your Jayline supplier.
 (Seismic Restraint)
 Drill through the bottom tray of the cabinet into the masonry and fit two M6 bolts or similar diameter as a seismic restraint.

Typical installation shown complies with AS/NZS 2918 (including appendix J). The insulating blanket supplied should be installed with all units to ensure maximum performance.





**RESIDENTIAL WARRANTY
& MAINTENANCE REQUIREMENTS
FOR ROOFING & RAINWATER
PRODUCTS**



PROPERTY OWNER: I Young

SITE ADDRESS: 155 Feildway Waikanae Beach

PHONE NO:

DATE: May 2002

You have chosen high quality COLORCOTE® pre-painted metal products for your building which are designed to give you protection well into the future. The terms and conditions of this warranty are detailed below. To ensure you gain maximum value from your investment over time, the minimum maintenance program specified below **MUST BE STRICTLY ADHERED TO:**

This warrants the following material: .40 ZRX Torres Blue corrugated Material

Lift No: 127890 A.

	<u>Roofing</u>		<u>Cladding</u>	
Will not perforate through corrosion:	15	Years	15	Years
Will not flake, peel or excessively fade:	15	Years	15	Years
	<u>Fascia</u>		<u>Gutter</u>	
Will not perforate through corrosion:	15	Years	15	Years
Will not flake, peel or excessively fade:	15	Years	15	Years

This roof was installed by: Horowhenua Tile Co
And carries a workmanship warranty for: 5 Years

Signature of property owner or agent: _____
Signature of Installer: _____



TO VALIDATE THIS WARRANTY A SIGNED COPY MUST BE RETURNED TO THE ROOFING MANUFACTURER

COLORCOTE® products will inevitably weather, chalk and fade over time as a result of normal wear and tear. The environmental classifications are described in AS/NZS 2728:1997, and are as summarised in the Atmospheric Environment Usage Guide published by Pacific Coilcoaters. Determination of coating performance will be as per test methods described in Australian Standard AS1580. If any COLORCOTE® ZR8™, ZRX™, AR8™ or ARX™ product fails to perform as warranted we will, at our sole option, repair or replace (including labour) the affected material.

Please note this warranty is subject to the following terms and conditions:

- This warranty will not apply to weathering, chalking or fading over time as a result of normal wear and tear.
- If the COLORCOTE® ZR8™, ZRX™, AR8™ or ARX™ product has not been selected, processed or maintained in accordance with the published recommendations of Pacific Coilcoaters and accepted good trade practices, this warranty will not apply.
- If inappropriate fastenings are used this warranty will not apply.
- Defects caused by faulty design, or method of manufacture of residential buildings are not covered by this warranty.
- Garage doors are not covered by this warranty.
- Pacific Coilcoaters must be given the opportunity for inspection on site prior to any remedial action being offered or taken.
- The product must be manufactured from prime COLORCOTE® pre-painted metal products.
- Damage or corrosion resulting from the following is not covered by this warranty:
 1. Damage sustained during handling, storage, processing or installation.
 2. Damage sustained after installation.
 3. Damage caused after the product has left our control.
 4. Failure to remove debris leading to the accumulation of moisture retaining matter in gutters and downpipes.

Our liability under this warranty shall in all cases be limited to replacing or repairing the defective product as specified above including labour. Any repaired or replaced product will be covered by this warranty only for the unexpired portion of the warranty of the original product. Pacific Coilcoaters will not under any circumstances be liable for consequential loss or damage. All claims must be made promptly in writing and accompanied by the original warranty document. This warranty does not in any way affect the rights of a consumer under the Consumer Guarantees Act.

- Minimum Maintenance Requirements**
1. Washing of naturally unwashed areas every 6 months.
 2. Removal of debris from gutters every 6 months.
 3. Washing of any noticeable buildup of salty deposits and/or other contaminants are to be removed when identified.
 4. When considering overpainting consult with your local distributor to ensure correct procedures are undertaken.

This Warranty is issued by:



Signed: _____
Position: Manager
Date: 03.03.2003



**RESIDENTIAL WARRANTY
& MAINTENANCE REQUIREMENTS
FOR ROOFING & RAINWATER
PRODUCTS**



PROPERTY OWNER: I Young

SITE ADDRESS: 155 Feildway Waikanae Beach

PHONE NO:

DATE: May 2002

You have chosen high quality COLORCOTE® pre-painted metal products for your building which are designed to give you protection well into the future. The terms and conditions of this warranty are detailed below. To ensure you gain maximum value from your investment over time, the minimum maintenance program specified below **MUST BE STRICTLY ADHERED TO:**

This warrants the following material: .40 ZRX Torres Blue corrugated Material

Lift No: 127890 A

Will not perforate through corrosion:	<u>Roofing</u> 15 Years	<u>Cladding</u> 15 Years
Will not flake, peel or excessively fade:	15 Years	15 Years
Will not perforate through corrosion:	<u>Fascia</u> 15 Years	<u>Gutter</u> 15 Years
Will not flake, peel or excessively fade:	15 Years	15 Years

This roof was installed by: Horowhenua Tile
And carries a workmanship warranty for: 5 Years

Signature of property owner or agent: _____
Signature of Installer: _____

TO VALIDATE THIS WARRANTY A SIGNED COPY MUST BE RETURNED TO THE ROOFING MANUFACTURER

COLORCOTE® products will inevitably weather, chalk and fade over time as a result of normal wear and tear. The environmental classifications are described in AS/NZS 2728:1997, and are as summarised in the Atmospheric Environment Usage Guide published by Pacific Coilcoaters. Determination of coating performance will be as per test methods described in Australian Standard AS1580.

If any COLORCOTE® ZR8™, ZRX™, AR8™ or ARX™ product fails to perform as warranted we will, at our sole option, repair or replace (including labour) the affected material.

Please note this warranty is subject to the following terms and conditions:

- This warranty will not apply to weathering, chalking or fading over time as a result of normal wear and tear.
- If the COLORCOTE® ZR8™, ZRX™, AR8™ or ARX™ product has not been selected, processed or maintained in accordance with the published recommendations of Pacific Coilcoaters and accepted good trade practices, this warranty will not apply.
- If inappropriate fastenings are used this warranty will not apply.
- Defects caused by faulty design, or method of manufacture of residential buildings are not covered by this warranty.
- Garage doors are not covered by this warranty.
- Pacific Coilcoaters must be given the opportunity for inspection on site prior to any remedial action being offered or taken.
- The product must be manufactured from prime COLORCOTE® pre-painted metal products.
- Damage or corrosion resulting from the following is not covered by this warranty:
 1. Damage sustained during handling, storage, processing or installation.
 2. Damage sustained after installation.
 3. Damage caused after the product has left our control.
 4. Failure to remove debris leading to the accumulation of moisture retaining matter in gutters and downpipes.

Our liability under this warranty shall in all cases be limited to replacing or repairing the defective product as specified above including labour. Any repaired or replaced product will be covered by this warranty only for the unexpired portion of the warranty of the original product. Pacific Coilcoaters will not under any circumstances be liable for consequential loss or damage. All claims must be made promptly in writing and accompanied by the original warranty document. This warranty does not in any way affect the rights of a consumer under the Consumer Guarantees Act.

- Minimum Maintenance Requirements**
1. Washing of naturally unwashed areas every 6 months.
 2. Removal of debris from gutters every 6 months.
 3. Washing of any noticeable buildup of salty deposits and/or other contaminants are to be removed when identified.
 4. When considering overpainting consult with your local distributor to ensure correct procedures are undertaken.

This Warranty is issued by:



Signed: _____
Position: Manager
Date: 03.03.2003

ACCEPTABLE SOLUTION F4/AS1

1.0 BARRIERS IN BUILDINGS

1.1 Barrier heights

Amd 2
Aug '94

1.1.1 Acceptable minimum barrier heights are given in Table 1.

Comment:

A handrail can be constructed as an integral part of a barrier. Refer NZBC D1 "Access Routes".

Building type	Location	Barrier height (mm) (Note 1)
Detached dwellings and within household units of multi-unit dwellings	External deck or external balcony	1000
	Stairs, landings, ramps or edges of internal floors	900
All other buildings, and common areas of multi-unit dwellings	Stairs or ramps	900
	All locations other than stairs	1000

NOTE:

- Heights are measured vertically from floor level on floors, landings and ramps, and from pitch line or stair nosings on stairways.
- A landing is a platform with the sole function of providing access. A platform used as a space for people to congregate is described as a deck or balcony.

Amd 2
Aug '94

1.2 Barrier construction

1.2.1 Buildings frequented by young children

Amd 2
Aug '94

Barriers located in any part of a *building* likely to be frequented by children under the age of 6 years shall have:

Amds 1
and 2

- No openings which will permit the passage of a sphere greater than given by Table 2.
- No components between the heights of 150 mm and 760 mm above floor (or stair nosing) level which can provide a toehold, and

Amd 2
Aug '94

Age group	Examples of application (Note 2)	Maximum sphere dia. (mm)
Children under 4	Housing, Early Childhood Centres, shopping malls, health care facilities	100
Children 4 and under 6	Cinemas, motels, halls churches, bridges with pedestrian access	130

NOTE:

- Opening size restrictions are chosen on the basis of child head and chest dimensional statistics.
- Because the barrier opening size is determined by the age and likely presence of children, and not by the classified use of the building, it is reasonable to expect different parts of a building to have different requirements. For example, in a public hall children may be expected in a public gallery, but not in a gallery reserved for lighting equipment or musicians. In shopping malls children are expected in public areas, but not in areas for the preparation of food or the unloading and reception of stock.

Amd 2
Aug '94

Building



Address 155 FIELD WAY
 WAIKANAЕ
 Date 1-6-02
 Phone: 293-4440

Dear Sir

FREE STANDING FIRE OR FIRE PLACE HEATER INSTALLED AT:

..... 155 FIELD WAY, WAIKANAЕ
 for MR & MRS YOUNG
 THE HEATING CENTRE
 by 3 IHAKARA STREET
 PARAPARAUMU
 Address: PH. (04) 298-6556

I hereby notify you that the following requirements under NZS 7421:1990 have been met and the solid fuel burning domestic appliance type and model Jayline Spitive has been installed in accordance with the manufacturer's installation instructions. Inbuilt

Please tick where applicable the following:

1.	Building Consent Number issued and sited	
2.	The chimney has been cleaned.	N/A
3.	The chimney is in a sound condition.	N/A
4.	The chimney is of pumice and of correct dimensions to comply with BRANZ zero clearance certificates.	✓
5.	The chimney is ventilated to manufacturer's requirements.	✓
6.	The appliance is restrained against seismic activity (free standing and fireplace heaters).	✓
7.	The fire plate heater has been approved by BRANZ as complying with their zero clearance certificate.	✓
8.	The hearth is an approved type according to manufacturer's requirements.	✓
9.	The hearth is restrained against seismic activity.	✓
10.	The fire surround at its connection to the fire place is fully insulated with approved material [see BRANZ Building Information Bulletin 248 (1986)].	✓
11.	The ash hearth is of correct dimensions to installation instructions.	✓

Mark N/A if clause not applicable. Please return promptly after installation.

(PRINT) INSTALLERS NAME: PAUL GARDINER

Butynol

Materials Warranty

NORCROS
building products

32 Lane Street, Woolston
Christchurch, New Zealand
P.O. Box 19549, Christchurch

Telephone 03 384 302

Facsimile 03 384 977

Warranty Number: NZWBM2532

Date of Installation: Wednesday, 1 May 2002

Building Owner: Name: Ian Young

Address: 155 Feildway, Waikanae Beach

Roofing Contractor: Name: Horowhenua Tile Co

Address: 7 Kahu Road, Paraparaumu

Phone No: 04 2989995

Reference: WHT107

Product, Type and Use

1.5mm Dove Grey Butynol,

Area Laid in Square Metres: 28

Subject to the conditions appearing below, **NORCROS BUILDING PRODUCTS NZ LTD** ("Norcros") warrants to Ian Young the ("Owner")

that the Butynol Membrane (the "Membrane") will retain its waterproofing properties for the following period from the date of installation of the membrane:

Twenty (20) years for Butynol Membrane together with Tapes and Adhesives.

This Warranty shall be subject to the conditions which follow:

Extent of Liability

1. This Warranty shall only apply to any defect in the Membrane which permits the entry of water which is solely attributable to a defect in the Membrane. This Warranty does not cover workmanship which is and shall be the sole responsibility of the accredited applicator who is not an agent, servant, or employee of Norcros.
2. Norcros's obligations under this Warranty shall be limited to the timely repair or replacement free of charge by Norcros of any defective Membrane which permits the entry of water on a pro-rata basis of the purchase price in such a manner as to charge the Owner only for that portion of the warranty period which has elapsed since the purchase of the Membrane.
3. Norcros shall have no further liability or responsibility other than set out in this Warranty. In particular, Norcros shall not be liable for any direct, indirect or consequential injury, loss or damage to the Owner whatsoever and howsoever arising.
4. Without limiting the generality of the preceding clause, this Warranty shall not cover and Norcros shall have no liability of the following acts, conditions, or circumstances or any damage or defects which may arise therefrom:
 - a) Wars, strikes, lock-outs, delays, acts of God, fire, earthquake, flood, hail, lightning, hurricane, tornado or windstorm or any other cause (whether similar or dissimilar) beyond the reasonable control of: Norcros; or
 - b) The act, omission, default or representation of any party other than Norcros or its servants; or
 - c) Exposure to a chemical or solution, fire or radiation, or contamination by radioactivity from any nuclear fuel or waste; or
 - d) Settlement, distortion, failure of the walls or foundations of the building, ponding or cracking of the roof or the deck.
 - e) Infiltration or condensation of moisture in, through, or around the walls, copings, building structure, or underlying or surrounding materials; or
 - f) Defects in design; or

027-4430452

Applicator Workmanship Warranty

WARRANTY No. WHT 107

BUILDING OWNER & ADDRESS

DATE OF INSTALLATION May 2002

IAN YOUNG 155 Fieldway
WALKER BEACH

ROOFING CONTRACTOR (Name, Address, Phone No.)

7 Kake Rd PARAPARAUMU 2988885
HEROUMENUA TILE CO

AREA LAID m²

2800

PRODUCT, TYPE AND USE

1.5 ml grey
Butylgel

Subject to the conditions appearing below, the Applicator warrants its workmanship as follows:

- a) All membrane products (the "Materials") are laid and installed in compliance with the manufacturer's instructions; and
- b) For a period [] years, the Workmanship on the Materials by the Applicator shall maintain a waterproof barrier to the area treated.

This Warranty shall be subject to the conditions which follow:

1. This Warranty shall extend only to the workmanship undertaken by the applicator and shall in no way bind the manufacturer of the Materials laid and installed by the Applicator.
2. The Applicator's obligations under this Warranty shall be limited to the Applicator making good at their expense any defect in the workmanship which permits the entry/escape of water. The Applicator shall have no further liability or responsibility for any direct, indirect or consequential injury, loss or damage whatsoever and howsoever arising.
3. This Warranty shall not apply to any alleged defective workmanship that is:
 - a) Due directly or indirectly to any cause such as (without limiting the generality of this exclusion) governmental or environmental interference or any other cause beyond the reasonable control of the Applicator; or
 - b) Caused by the act, omission, default or representation of any party other than the Applicator, its servants or agents and in particular the work of any other tradesman and damage from persons not authorised by the Applicator to have access to or be employed in the repair, maintenance or alteration of the application during the warranty period; or
 - c) Caused by the Materials or any of them being disturbed by any party other than the Applicator after fixing.

This Warranty shall be invalid unless the Applicator receives the Customer's written claim within the warranty period and within fourteen (14) days after the date of discovery of any alleged defect.

Where it is necessary for the Applicator to repair any defective workmanship, the Customer shall remove and/or replace plant, equipment or any other objects that hinder the access by the Applicator to the Materials. The cost of any site visit requested under a warranty claim which does not reveal any problem relating to the warranted areas of work shall be paid for by the party requesting the inspection at the then current trade consultancy rates.

The Customer shall have made payment in full to the Applicator for the workmanship within the period of the Applicator's contract with the Customer prior to the Customer making claim under this Warranty.

In the event that any Materials subject to this Warranty are ordinarily acquired for personal, domestic or household use or consumption, then this Warranty shall be read subject to the guarantees contained in the Consumer Guarantees Act 1993.

Applicator Name (Print)

John Thompson Telephone No.: 04 2488885

Address

7 Kake Rd PARAPARAUMU

Signature of Applicator

[Handwritten Signature]

Date:

11/3/2003

Warranty Number: NZWBM2532

Warranty Owner: Ian Young

NORCROS
building products

32 Lane Street, Woolston
Christchurch, New Zealand
P.O. Box 19549, Christchurch
Telephone 03 384 3029
Facsimile 03 384 9779

- g) Materials other than the membrane, including, but not limited to, metal work expansion or control joints, fasteners, drains, vents, vapour retarders, walkways, pitch pockets, flashing materials, and rooftop units and equipment; or
- h) Expansion or contraction of any flashing or metal work, any adjacent or abutting building, structure or improved or unimproved property, or any component thereof, including but not limited to, structure failure or damage, leakage, or drainage; or
- i) Any new installations, repairs, or other maintenance or construction on, to or through the Membrane; or
- j) Damages caused directly or indirectly by falling objects or traffic of any nature on the roof; or
- k) Improper installation of insulation or defects or failure of any material used in any roofbase or insulation over which the Membrane is applied; or
- l) The failure of material or structures to conform to manufacturers specifications as to roof slopes or other requirements; or
- m) Negligence, misuse, improper treatment or improper site preparations; or
- n) Storage, handling or installation of the Membrane otherwise than in accordance with Norcros's published use and handling procedures and installation specifications.

Claim

5. This Warranty shall be invalid unless Norcros receives the Owners written claim within the warranty period and within fourteen (14) days after the date of discovery of any alleged defect.

Access to Material and Site

6. In the event that it is necessary for Norcros to repair or replace any defective Membrane, the Owner shall provide Norcros with clear and unrestricted access to the Membrane. Nothing in this Warranty shall require Norcros to remove and/or replace plant, equipment or any other object or substance in order to gain access to the defective Membrane. The Owner shall co-operate in all respects with Norcros to accomplish the said repair or replacement. The cost of any site visit requested under a Warranty claim which does not reveal any problem relating to the Warranty shall be paid for (at Norcros's sole discretion) by the party requesting the inspection at the then current trade consultancy rates.

Consumer Guarantees Act

7. This warranty shall apply in addition to, and not in substitution for any rights which a consumer may have in terms of the Consumer Guarantees Act 1993.

No Other Warranty

8. Except as expressly set out in this Warranty, and with the exception of the relevant statutory warranties contained in the Consumer Guarantees Act 1993, no other warranty or condition shall be implied against Norcros by any statute, at common law or otherwise, and no representation, express condition, warranty or variation of this warranty shall be binding on Norcros unless it is in writing and signed for or on behalf of Norcros. This Warranty shall prevail despite any indication to the contrary by any person acting or purporting to act on Norcros's behalf and shall replace all or any other alleged rights or remedies contained in any other document or representation whether issued or made prior to or subsequent upon the granting of this Warranty by Norcros.

Validity of Warranty

9. This Warranty is valid and enforceable on the condition that Norcros have been paid in full for the materials supplied.

By:



Date: 28-3-03

Electrical Certificate of Compliance

EWNB 3:

No. 1026473

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).

No. of attachments

CUSTOMER INFORMATION - PLEASE PRINT CLEARLY

Name of customer **MR + MRS YOUNG**

Telephone

Fax

Address of installation **155 FEEDWAY WAIKANA BEACH (LOT 8.)**

Postal address of customer (if not as above)

WORK DETAILS

No. of lighting outlets	No. of ranges	Please tick (✓) as appropriate where work includes:	
2	No. of water heaters	<input checked="" type="checkbox"/> Mains	<input checked="" type="checkbox"/> Main earth
Was any installation work carried out by the homeowner?	Yes No	<input checked="" type="checkbox"/> Switchboard	<input type="checkbox"/> Electric lines

Description

Use sketch if necessary

To install Temporary Power box for builder.

To wire and fit out house, as per Owners plans Test & Union

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 **GRAHAM McHATTIE**

Registration no. **E 3841**

Company **GRAHAM'S ELECTRICAL**

Signature **G McHattie**

Date **06/3/02**

CERTIFICATION OF ELECTRIC LINES

(to be completed where "Description of Work" includes "Electric Lines")

Name

Registration no.

Company

Signature

Date

INSPECTION DETAILS Electrical work requiring inspection by a registered electrical inspector

New mains Switchboard Earthing system Installation work in hazardous area

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

Name **AL STOLLINGWORTH** Registration no. **I 2866**

Signature **AS** Date **7-3-02**

26.05.04

Attn: Ken Smith

While I was doing a Final Reinspection
at 155 Fieldway Waitanāe. (26-05-04)

On site is an existing spa pool with
a hard cover but it isn't fenced properly
I informed the owner verbally.

Leon Smith





Building Exterior		CHECK PLANS			
Subfloor - ventilation	<input type="checkbox"/>	Flashings - roof penet	<input type="checkbox"/>	Gulley dishes	<input type="checkbox"/>
Decks - structure	<input type="checkbox"/>	hips	<input type="checkbox"/>	Wastes to gullys	<input type="checkbox"/>
Balustrades - design	<input type="checkbox"/>	valleys	<input type="checkbox"/>	Terminals vents	<input type="checkbox"/>
height	<input type="checkbox"/>	gables	<input type="checkbox"/>	Spouting - Downpipes	<input type="checkbox"/>
Steps/Stairs - design	<input type="checkbox"/>	flues	<input type="checkbox"/>	Landscaping & ground levels	<input type="checkbox"/>
handrail	<input type="checkbox"/>	Cladding (ground clearance)	<input type="checkbox"/>	Texture Coating Warranty	<input type="checkbox"/>
Flashings - windows	<input type="checkbox"/>	Roofing & Fixings	<input type="checkbox"/>		
		(roofing warranty)			

Building Interior		CHECK FITTINGS			
Service area floors & walls	<input type="checkbox"/>	Food storage	<input type="checkbox"/>	Water temperature	<input type="checkbox"/>
Stair design	<input type="checkbox"/>	Nat. ventilation	<input type="checkbox"/>	Solid fuel heater	<input type="checkbox"/>
Handrails	<input type="checkbox"/>	Mech. Ventilation	<input type="checkbox"/>	Supply tank	<input type="checkbox"/>
Barriers	<input type="checkbox"/>	Insulation	<input type="checkbox"/>	Trap seals & AA Valves	<input type="checkbox"/>
Lightings	<input type="checkbox"/>	Hot water cylinder flues	<input type="checkbox"/>	Cistern flushing	<input type="checkbox"/>
Laundrying	<input type="checkbox"/>	Hot water cylinder valves	<input type="checkbox"/>	WC pan connection	<input type="checkbox"/>
Cooking facilities	<input type="checkbox"/>	Hot water cylinder rest	<input type="checkbox"/>	Septic Tank	<input type="checkbox"/>
		Tempering valve	<input type="checkbox"/>	(engineers inspc report)	
				Windows - labels	<input type="checkbox"/>
				Safety glass	<input type="checkbox"/>

Footpath crossing installed	Yes/No	Berm damaged	Yes/No
Refund crossing deposit	Yes/No	Engineering site reports required	Yes/No
Stormwater & site drainage appear satisfactory	Yes/No	Engineering site reports received	Yes/No

Has a Site Instruction been issued? Yes/No NTR Instruction No.

Producer Statement Yes/No/NA

OK to issue final code compliance certificate. Yes/No

If an interim certificate is issued please list proposed conditions on the reverse of this form.

Is a reinspection required? Yes/No Proposed date of follow up inspection

Comments:

Kapiti Coast District Council

Phone (04) 904 5700, Fax (04) 904 5830 175 Rimu Road, Private Bag 601, Paraparaumu. Website www.kcdc.govt.nz

Tick (✓) approved inspections

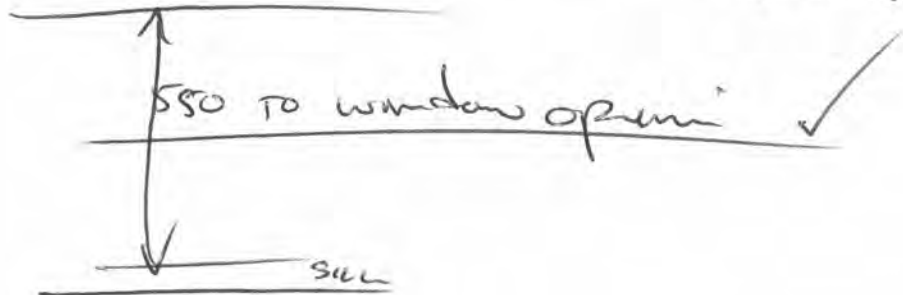
Cross (x) inspections not approved

Strike out inspections not applicable

Carl Vandermer house

- = Kapiti Plumbline

- Additional smoke detector required
- Spa pool
- Lower back garden to clear cladding ✓



410

carpet



**CERTIFICATE OF TITLE
UNDER LAND TRANSFER ACT 1952**




R. W. Muir
Registrar-General
of Land

Identifier **WN59A/824**
Land Registration District **Wellington**
Date Issued 03 September 2001

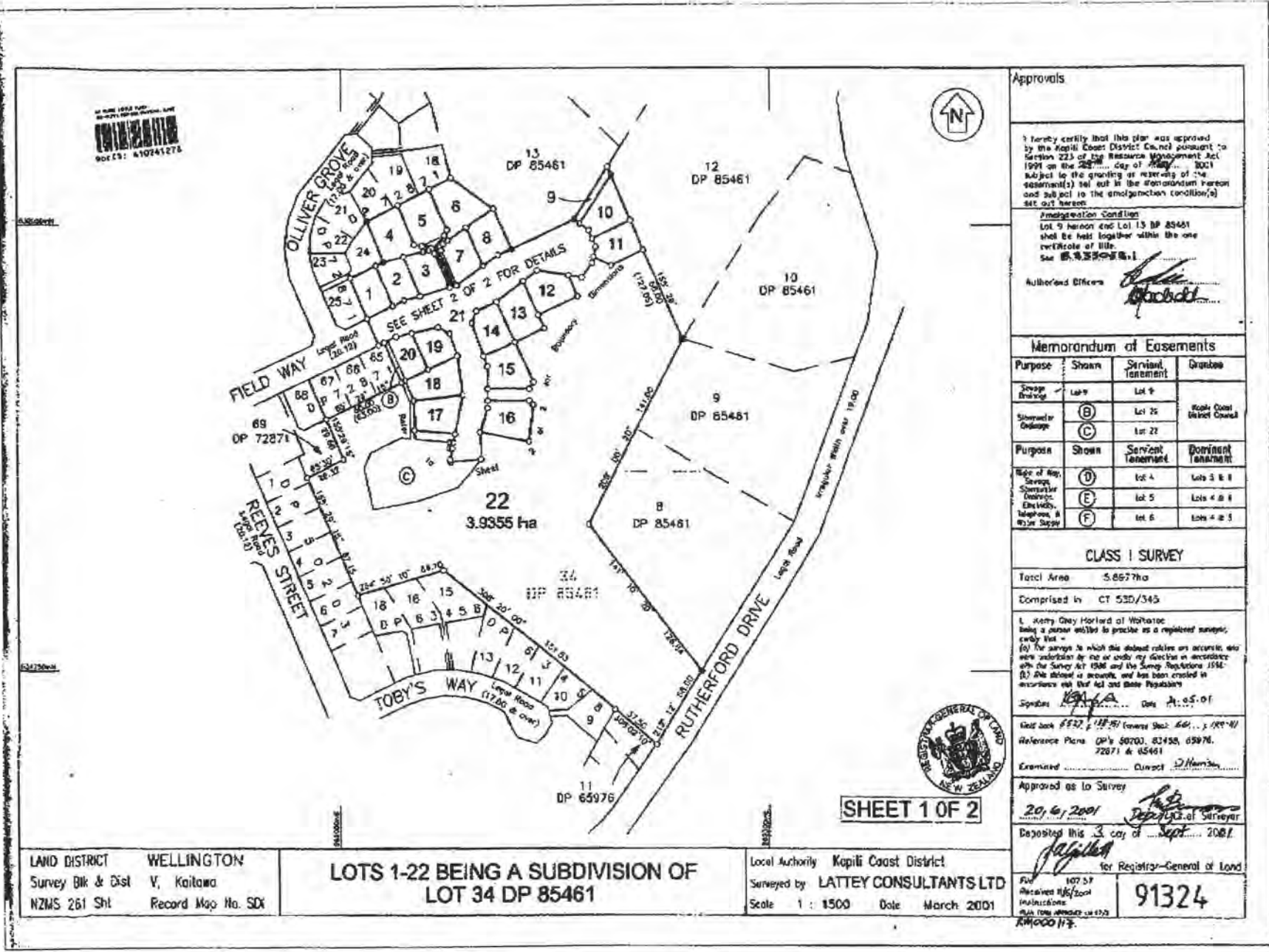
Prior References
WN53D/345

Estate Fee Simple
Area 632 square metres more or less
Legal Description Lot 8 Deposited Plan 91324

Proprietors
Shane Jervis Treadwell, Alastair Jervis Treadwell and Mical Shane Jervis Treadwell

Interests
5078774.5 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 3.9.2001 at 3:33 pm

Identifier
WN59A/824



Approvals

I hereby certify that this plan was approved by the Kapiti Coast District Council pursuant to Section 223 of the Resource Management Act 1991 on the 28th day of May 2001 subject to the granting or reserving of the easement(s) set out in the Memorandum hereon and subject to the amalgamation condition(s) set out hereon.

Amalgamation Condition
Lot 9 hereon and Lot 15 DP 85461 shall be held together within the one certificate of title.
See **85461/824**.

Authorised Officers
[Signature]
[Signature]

Memorandum of Easements

Purpose	Shown	Servient Tenement	Dominant
Sewage Easement	Lot 9	Lot 9	
Stormwater Easement	(B)	Lot 25	Kapiti Coast District Council
	(C)	Lot 22	
Purpose	Shown	Servient Tenement	Dominant Tenement
Right of Way, Sewage, Stormwater Easement, Electricity, Telephone, & Water Supply	(D)	Lot 4	Lots 3 & 8
	(E)	Lot 5	Lots 4 & 8
	(F)	Lot 6	Lots 4 & 8

CLASS I SURVEY

Total Area 5.8677ha
Comprised in CT 53D/345

I, Kerry Gray Horford of Wellington being a person entitled to practice as a registered surveyor, certify that -
(a) the survey to which this document relates was accurate, and was undertaken by me or under my direction in accordance with the Survey Act 1986 and the Survey Regulations 1986.
(b) the document is accurate, and has been created in accordance with that Act and those Regulations.

Signature *[Signature]* Date 11.05.01

Well done 85461/824 (Control Sheet) 601... 1/100/01
Reference Plans DP's 80700, 81458, 85976, 72871 & 85461
Examined Correct *[Signature]*

Approved as to Survey
20/6/2001 *[Signature]* Deputy Registrar
Deposited this 3 day of Sept 2001
[Signature] for Registrar-General of Land

File No 10757
Received 11/6/2001
Instructions
Plan 1000 117
91324

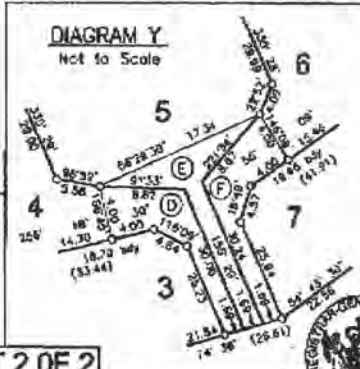
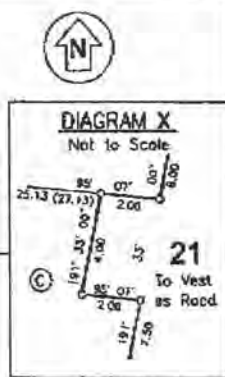
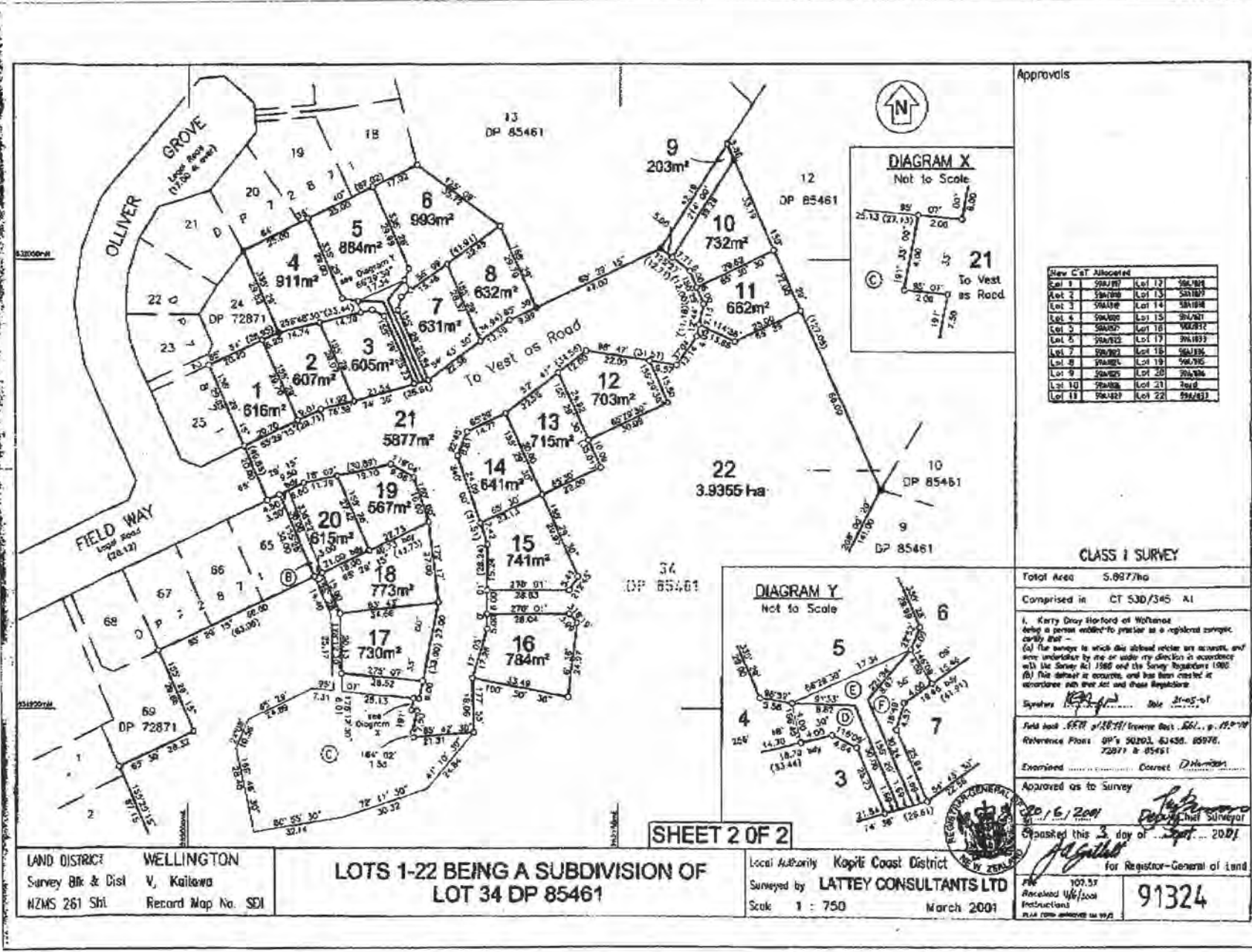
LAND DISTRICT WELLINGTON
Survey Blk & Dist V, Kaitawa
NZMS 261 Sht Record Map No. SDX

LOTS 1-22 BEING A SUBDIVISION OF LOT 34 DP 85461

Local Authority Kapiti Coast District
Surveyed by LATTEY CONSULTANTS LTD
Scale 1 : 1500 Date March 2001

Duplicate Copy Dated 8/10/01 11:58 am, Page 2 of 3 Duplicate 1

Identifier **WN59A/824**



Approvals

New Cst Allocated			
Lot 1	594287	Lot 12	594288
Lot 2	594289	Lot 13	594289
Lot 3	594290	Lot 14	594290
Lot 4	594291	Lot 15	594291
Lot 5	594292	Lot 16	594292
Lot 6	594293	Lot 17	594293
Lot 7	594294	Lot 18	594294
Lot 8	594295	Lot 19	594295
Lot 9	594296	Lot 20	594296
Lot 10	594297	Lot 21	594297
Lot 11	594298	Lot 22	594298

CLASS I SURVEY

Total Area 5.9977ha
 Comprised in CT 530/346 A1

I, Kerry Gray Stafford of Wellington being a person entitled to practise as a registered surveyor certify that -
 (a) The survey to which this abstract relates are accurate and were undertaken by me or under my direction in accordance with the Survey Act 1980 and the Survey Regulations 1980.
 (b) This abstract is accurate, and has been checked in accordance with these Act and these Regulations.

Surveyed by *[Signature]* Date 21-05-01

Field Book 5971 of 18/11/1999/1998/1997/1996/1995/1994/1993/1992/1991/1990/1989/1988/1987/1986/1985/1984/1983/1982/1981/1980/1979/1978/1977/1976/1975/1974/1973/1972/1971/1970/1969/1968/1967/1966/1965/1964/1963/1962/1961/1960/1959/1958/1957/1956/1955/1954/1953/1952/1951/1950/1949/1948/1947/1946/1945/1944/1943/1942/1941/1940/1939/1938/1937/1936/1935/1934/1933/1932/1931/1930/1929/1928/1927/1926/1925/1924/1923/1922/1921/1920/1919/1918/1917/1916/1915/1914/1913/1912/1911/1910/1909/1908/1907/1906/1905/1904/1903/1902/1901/1900/1899/1898/1897/1896/1895/1894/1893/1892/1891/1890/1889/1888/1887/1886/1885/1884/1883/1882/1881/1880/1879/1878/1877/1876/1875/1874/1873/1872/1871/1870/1869/1868/1867/1866/1865/1864/1863/1862/1861/1860/1859/1858/1857/1856/1855/1854/1853/1852/1851/1850/1849/1848/1847/1846/1845/1844/1843/1842/1841/1840/1839/1838/1837/1836/1835/1834/1833/1832/1831/1830/1829/1828/1827/1826/1825/1824/1823/1822/1821/1820/1819/1818/1817/1816/1815/1814/1813/1812/1811/1810/1809/1808/1807/1806/1805/1804/1803/1802/1801/1800/1799/1798/1797/1796/1795/1794/1793/1792/1791/1790/1789/1788/1787/1786/1785/1784/1783/1782/1781/1780/1779/1778/1777/1776/1775/1774/1773/1772/1771/1770/1769/1768/1767/1766/1765/1764/1763/1762/1761/1760/1759/1758/1757/1756/1755/1754/1753/1752/1751/1750/1749/1748/1747/1746/1745/1744/1743/1742/1741/1740/1739/1738/1737/1736/1735/1734/1733/1732/1731/1730/1729/1728/1727/1726/1725/1724/1723/1722/1721/1720/1719/1718/1717/1716/1715/1714/1713/1712/1711/1710/1709/1708/1707/1706/1705/1704/1703/1702/1701/1700/1699/1698/1697/1696/1695/1694/1693/1692/1691/1690/1689/1688/1687/1686/1685/1684/1683/1682/1681/1680/1679/1678/1677/1676/1675/1674/1673/1672/1671/1670/1669/1668/1667/1666/1665/1664/1663/1662/1661/1660/1659/1658/1657/1656/1655/1654/1653/1652/1651/1650/1649/1648/1647/1646/1645/1644/1643/1642/1641/1640/1639/1638/1637/1636/1635/1634/1633/1632/1631/1630/1629/1628/1627/1626/1625/1624/1623/1622/1621/1620/1619/1618/1617/1616/1615/1614/1613/1612/1611/1610/1609/1608/1607/1606/1605/1604/1603/1602/1601/1600/1599/1598/1597/1596/1595/1594/1593/1592/1591/1590/1589/1588/1587/1586/1585/1584/1583/1582/1581/1580/1579/1578/1577/1576/1575/1574/1573/1572/1571/1570/1569/1568/1567/1566/1565/1564/1563/1562/1561/1560/1559/1558/1557/1556/1555/1554/1553/1552/1551/1550/1549/1548/1547/1546/1545/1544/1543/1542/1541/1540/1539/1538/1537/1536/1535/1534/1533/1532/1531/1530/1529/1528/1527/1526/1525/1524/1523/1522/1521/1520/1519/1518/1517/1516/1515/1514/1513/1512/1511/1510/1509/1508/1507/1506/1505/1504/1503/1502/1501/1500/1499/1498/1497/1496/1495/1494/1493/1492/1491/1490/1489/1488/1487/1486/1485/1484/1483/1482/1481/1480/1479/1478/1477/1476/1475/1474/1473/1472/1471/1470/1469/1468/1467/1466/1465/1464/1463/1462/1461/1460/1459/1458/1457/1456/1455/1454/1453/1452/1451/1450/1449/1448/1447/1446/1445/1444/1443/1442/1441/1440/1439/1438/1437/1436/1435/1434/1433/1432/1431/1430/1429/1428/1427/1426/1425/1424/1423/1422/1421/1420/1419/1418/1417/1416/1415/1414/1413/1412/1411/1410/1409/1408/1407/1406/1405/1404/1403/1402/1401/1400/1399/1398/1397/1396/1395/1394/1393/1392/1391/1390/1389/1388/1387/1386/1385/1384/1383/1382/1381/1380/1379/1378/1377/1376/1375/1374/1373/1372/1371/1370/1369/1368/1367/1366/1365/1364/1363/1362/1361/1360/1359/1358/1357/1356/1355/1354/1353/1352/1351/1350/1349/1348/1347/1346/1345/1344/1343/1342/1341/1340/1339/1338/1337/1336/1335/1334/1333/1332/1331/1330/1329/1328/1327/1326/1325/1324/1323/1322/1321/1320/1319/1318/1317/1316/1315/1314/1313/1312/1311/1310/1309/1308/1307/1306/1305/1304/1303/1302/1301/1300/1299/1298/1297/1296/1295/1294/1293/1292/1291/1290/1289/1288/1287/1286/1285/1284/1283/1282/1281/1280/1279/1278/1277/1276/1275/1274/1273/1272/1271/1270/1269/1268/1267/1266/1265/1264/1263/1262/1261/1260/1259/1258/1257/1256/1255/1254/1253/1252/1251/1250/1249/1248/1247/1246/1245/1244/1243/1242/1241/1240/1239/1238/1237/1236/1235/1234/1233/1232/1231/1230/1229/1228/1227/1226/1225/1224/1223/1222/1221/1220/1219/1218/1217/1216/1215/1214/1213/1212/1211/1210/1209/1208/1207/1206/1205/1204/1203/1202/1201/1200/1199/1198/1197/1196/1195/1194/1193/1192/1191/1190/1189/1188/1187/1186/1185/1184/1183/1182/1181/1180/1179/1178/1177/1176/1175/1174/1173/1172/1171/1170/1169/1168/1167/1166/1165/1164/1163/1162/1161/1160/1159/1158/1157/1156/1155/1154/1153/1152/1151/1150/1149/1148/1147/1146/1145/1144/1143/1142/1141/1140/1139/1138/1137/1136/1135/1134/1133/1132/1131/1130/1129/1128/1127/1126/1125/1124/1123/1122/1121/1120/1119/1118/1117/1116/1115/1114/1113/1112/1111/1110/1109/1108/1107/1106/1105/1104/1103/1102/1101/1100/1099/1098/1097/1096/1095/1094/1093/1092/1091/1090/1089/1088/1087/1086/1085/1084/1083/1082/1081/1080/1079/1078/1077/1076/1075/1074/1073/1072/1071/1070/1069/1068/1067/1066/1065/1064/1063/1062/1061/1060/1059/1058/1057/1056/1055/1054/1053/1052/1051/1050/1049/1048/1047/1046/1045/1044/1043/1042/1041/1040/1039/1038/1037/1036/1035/1034/1033/1032/1031/1030/1029/1028/1027/1026/1025/1024/1023/1022/1021/1020/1019/1018/1017/1016/1015/1014/1013/1012/1011/1010/1009/1008/1007/1006/1005/1004/1003/1002/1001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Examined Correct *[Signature]*

Approved as to Survey *[Signature]* 20/6/2001

Witnessed this 3 day of *[Signature]* Sept. 2001

For Registrar-General of Land

Scale 1 : 750 March 2001

Local Authority Kapiti Coast District

Surveyed by LATTEY CONSULTANTS LTD

PN 107.57 Received 16/3/2001 Instructions FILE COPY APPROVED IN 1995

91324

SHEET 2 OF 2

LAND DISTRICT WELLINGTON
 Survey Blk & Dist V, Kaitiaki
 NZMS 261 Sht. Record Map No. SD1

LOTS 1-22 BEING A SUBDIVISION OF
 LOT 34 DP 85461

Local Authority Kapiti Coast District
 Surveyed by LATTEY CONSULTANTS LTD
 Scale 1 : 750 March 2001

Duplicate Copy Dated 8/10/01 11:58 am, Page 3 of 3

TOTAL P.04 Duplicate 1

Gib® Wall Bracing Calculation Sheet A upper of two

Job Details

Name	YOUNG	
Street and Number	FIELDWAY	
Lot and DP Number	LOT 8	
City/Town/District	WAIKANAE BEACH	
Designer and date	DESIGN NETWORK	1-Nov-00

Building Specification

Location of Storey	upper	▼	<p style="font-size: 2em; opacity: 0.5; transform: rotate(-15deg);">CONFIDENTIAL</p> <p>not applicable (slab)</p>
Floor Loading	2 kPa	▼	
Foundation Type	slab	▼	
Building Height to Apex (m)	6	▼	
Roof Height above Eaves (m)	1	▼	
Stud Height (m)	2.4	▼	
Cladding Weight (top or single)	light	▼	
Cladding Weight (lower)	light	▼	
Cladding Weight (subfloor)	light	▼	
Roof Weight	light	▼	
Roof Pitch (degrees)	0-25	▼	
Room in Roof Space	no	▼	
Building Length (m)	11.3		
Building Width (m)	9.9		
Gross Building Plan Area (m2)	90		

Building Location

Wind Zone	Very High		Earthquake Zone	
Region	R1	▼	A	▼
Terrain	Coastal	▼		
Exposure	Exposed	▼		
Topography	Moderate	▼		

Bracing Units required for Wind

per m	subfloor	walls
W along	n/a	63 BUs/m
W across	n/a	44 BUs/m
Totals		
W along	n/a	624 BUs
W across	n/a	497 BUs

Bracing Units required for Earthquake

per m2	subfloor	walls
E	n/a	5.6 BUs/m2
Totals		
E along	n/a	504 BUs
E across	n/a	504 BUs

Gib® Wall Bracing Calculation Sheet B

upper of two

Along									
Wall or Bracing Line	Bracing Elements provided							Wind	Earthq.
1	2	3	4	5	6	7	8W	9EQ	
Line Label	Minimum BUs Req/Ach	Bracing Element No.	Supplier	Bracing Type	Element Length L (m)	Element Height H (m)	BUs Achieved	BUs Achieved	
A	enter	1	Gib® ✓	Gib1b ▼	2.4	2.4	180	120	
		2	Gib® ✓	Gib1b ▼	2.4	2.4	180	120	
		3		none ▼		2.4			
<i>line totals</i>		4		none ▼		2.4			
W	360	5		none ▼		2.4			
EQ	240	6		none ▼		2.4			
B	enter	1	Gib® ✓	Gib2b ▼	2.4	2.4	192	168	
		2	Gib® ✓	BR4 ▼	1	2.4	100	85	
		3		none ▼		2.4			
<i>line totals</i>		4		none ▼		2.4			
W	292	5		none ▼		2.4			
EQ	253	6		none ▼		2.4			
C	enter	1	Gib® ✓	Gib1a ▼	2.2	2.4	121	110	
		2	Gib® ✓	Gib1a ▼	2.2	2.4	121	110	
		3		none ▼		2.4			
<i>line totals</i>		4		none ▼		2.4			
W	242	5		none ▼		2.4			
EQ	220	6		none ▼		2.4			
D	enter	1		none ▼		2.4			
		2		none ▼		2.4			
		3		none ▼		2.4			
<i>line totals</i>		4		none ▼		2.4			
W		5		none ▼		2.4			
EQ		6		none ▼		2.4			
E	enter	1		none ▼		2.4			
		2		none ▼		2.4			
		3		none ▼		2.4			
<i>line totals</i>		4		none ▼		2.4			
W		5		none ▼		2.4			
EQ		6		none ▼		2.4			
							Wind	Earthq.	
Totals Achieved							894	713	
							OK	OK	
Totals Required (from Sheet A)							624	504	

Gib® Wall Bracing Calculation Sheet B upper of two

Across		Bracing Elements provided					Wind	Earthq.
Wall or Bracing Line		3	4	5	6	7	8W	9EQ
1	2							
Line Label	Minimum BUs Req/Ach	Bracing Element No.	Supplier	Bracing Type	Element Length L (m)	Element Height H (m)	BUs Achieved	BUs Achieved
M	enter	1	Gib® ✓	BR4	1	2.4	100	85
		2	Ply ✓	CP4	0.9	2.4	87	86
		3		none		2.4		
<i>line totals</i>		4		none		2.4		
W	187	5		none		2.4		
EQ	171	6		none		2.4		
N	enter	1	Gib® ✓	Gib2b	2.4	2.4	192	168
		2	Gib® ✓	BR5	1.2	2.4	138	102
		3		none		2.4		
<i>line totals</i>		4		none		2.4		
W	330	5		none		2.4		
EQ	270	6		none		2.4		
O	enter	1	Gib® ✓	Gib1a	1.8	2.4	99	90
		2		none		2.4		
		3		none		2.4		
<i>line totals</i>		4		none		2.4		
W	99	5		none		2.4		
EQ	90	6		none		2.4		
P	enter	1		none		2.4		
		2		none		2.4		
		3		none		2.4		
<i>line totals</i>		4		none		2.4		
W		5		none		2.4		
EQ		6		none		2.4		
Q	enter	1		none		2.4		
		2		none		2.4		
		3		none		2.4		
<i>line totals</i>		4		none		2.4		
W		5		none		2.4		
EQ		6		none		2.4		

							Wind	Earthq.
Totals Achieved							616	531
							OK	OK
Totals Required (from Sheet A)							497	504

Gib® Wall Bracing Calculation Sheet A

lower of two

Job Details

Name	YOUNG	
Street and Number	FIELDWAY	
Lot and DP Number	LOT 8	
City/Town/District	WAIKANAЕ BEACH	
Designer and date	DESIGN NETWORK	1-Nov-00

Building Specification

Location of Storey	lower	▼	<i>not applicable (slab)</i>
Floor Loading	2 kPa	▼	
Foundation Type	slab	▼	
Building Height to Apex (m)	6	▼	
Roof Height above Eaves (m)	1	▼	
Stud Height (m)	2.4	▼	
Cladding Weight (top or single)	light	▼	
Cladding Weight (lower)	light	▼	
Cladding Weight (subfloor)	light	▼	
Roof Weight	light	▼	
Roof Pitch (degrees)	0-25	▼	
Room in Roof Space	no	▼	
Building Length (m)	14.8		
Building Width (m)	12.6		
Gross Building Plan Area (m2)	137		

Building Location

Wind Zone	Very High	Earthquake Zone
Region	R1 ▼	A ▼
Terrain	Coastal ▼	
Exposure	Exposed ▼	
Topography	Moderate ▼	

Bracing Units required for Wind

per m	subfloor	walls
W along	n/a	159 BUs/m
W across	n/a	141 BUs/m
Totals	subfloor	walls
W along	n/a	2003 BUs
W across	n/a	2087 BUs

Bracing Units required for Earthquake

per m2	subfloor	walls
E	n/a	9.9 BUs/m2
Totals	subfloor	walls
E along	n/a	1356 BUs
E across	n/a	1356 BUs

Gib® Wall Bracing Calculation Sheet B

lower of two

Along										
Wall or Bracing Line		Bracing Elements provided							Wind	Earthq.
1	2	3	4	5	6	7	8W	9EQ		
Line Label	Minimum BUs Req/Ach	Bracing Element No.	Supplier	Bracing Type	Element Length L (m)	Element Height H (m)	BUs Achieved	BUs Achieved		
A	enter	1	Gib® ✓	BR4	▼	1	2.4	100	85	
		2	Gib® ✓	Gib1a	▼	2	2.4	110	100	
		3	Gib® ✓	Gib1b	▼	3.4	2.4	255	170	
<i>line totals</i>		4		none	▼		2.4			
W	465	5		none	▼		2.4			
EQ	355	6		none	▼		2.4			
B	enter	1	Gib® ✓	Gib2b	▼	3	2.4	240	210	
		2	Gib® ✓	Gib2b	▼	3.6	2.4	288	252	
		3		none	▼		2.4			
<i>line totals</i>		4		none	▼		2.4			
W	528	5		none	▼		2.4			
EQ	462	6		none	▼		2.4			
C	enter	1	Gib® ✓	Gib1b	▼	3.6	2.4	270	180	
		2	Gib® ✓	Gib2b	▼	2.4	2.4	192	168	
		3	Gib® ✓	Gib2b	▼	2.4	2.4	192	168	
<i>line totals</i>		4		none	▼		2.4			
W	654	5		none	▼		2.4			
EQ	516	6		none	▼		2.4			
D	enter	1	Ply ✓	CP4	▼	0.6	2.4	58	57	
		2	Gib® ✓	BR5	▼	1.2	2.4	138	102	
		3	Gib® ✓	Gib1a	▼	1.8	2.4	99	90	
<i>line totals</i>		4	Ply ✓	CP4	▼	0.8	2.4	78	76	
W	373	5		none	▼		2.4			
EQ	325	6		none	▼		2.4			
E	enter	1		none	▼		2.4			
		2		none	▼		2.4			
		3		none	▼		2.4			
<i>line totals</i>		4		none	▼		2.4			
W		5		none	▼		2.4			
EQ		6		none	▼		2.4			
							Wind	Earthq.		
Totals Achieved							2020	1658		
							OK	OK		
Totals Required (from Sheet A)							2003	1356		

Gib® Wall Bracing Calculation Sheet B

lower of two

Across									
<i>Wall or Bracing Line</i>		<i>Bracing Elements provided</i>					<i>Wind</i>	<i>Earthq.</i>	
1	2	3	4	5	6	7	8W	9EQ	
Line Label	Minimum BUs Req/Ach	Bracing Element No.	Supplier	Bracing Type	Element Length L (m)	Element Height H (m)	BUs Achieved	BUs Achieved	
M	enter	1	Gib®	Gib1b	3	2.4	225	150	
		2		none		2.4			
		3		none		2.4			
<i>line totals</i>		4		none		2.4			
W	225	5		none		2.4			
EQ	150	6		none		2.4			
N	enter	1	Ply	CP4	0.8	2.4	78	76	
		2	Gib®	BR4	1	2.4	100	85	
		3	Gib®	Gib1b	2.4	2.4	180	120	
<i>line totals</i>		4	Gib®	Gib2b	2.6	2.4	208	182	
W	746	5	Gib®	Gib1b	2.4	2.4	180	120	
EQ	583	6		none		2.4			
O	enter	1	Gib®	Gib2b	3	2.4	240	210	
		2	Gib®	Gib2b	3	2.4	240	210	
		3	Gib®	Gib2b	2.4	2.4	192	168	
<i>line totals</i>		4	Gib®	BR5	1.5	2.4	173	128	
W	845	5		none		2.4			
EQ	716	6		none		2.4			
P	enter	1	Ply	CP4	0.6	2.4	58	57	
		2	Gib®	Gib1a	2.2	2.4	121	110	
		3	Gib®	Gib1b	3	2.4	225	150	
<i>line totals</i>		4		none		2.4			
W	404	5		none		2.4			
EQ	317	6		none		2.4			
Q	enter	1		none		2.4			
		2		none		2.4			
		3		none		2.4			
<i>line totals</i>		4		none		2.4			
W		5		none		2.4			
EQ		6		none		2.4			

							Wind	Earthq.
Totals Achieved							2219	1766

							OK	OK
Totals Required (from Sheet A)							2087	1356

23rd September 2002

Mr I Young
155 Fieldway
WAIKANAE

Dear Mr Young

BUILDING CONSENT 020045 – 155 FIELDWAY, WAIKANAE

The following items require completion or change to comply with the above building consent documents:

1. Electrical compliance certificate required. 26/5/04
2. Roofing material warranty required, colour steel and Butynol.
3. Inbuilt fire installers check sheet required. - Recd 30.9.02
4. Seal exterior electrical meter box window to cladding. -

When the above work is complete, please arrange for re-inspection.

Yours faithfully



Barrie McLennan
BUILDING CONTROL OFFICER



KAPITI COAST DISTRICT COUNCIL
CONSENT NOTICE PURSUANT TO SECTION 221
OF THE RESOURCE MANAGEMENT ACT 1991
FOR THE DEPOSIT OF LAND TRANSFER PLAN 91324
BEING THE PROPOSED SUBDIVISION OF LOT 34 DP 85461,
FIELD WAY, WAIKANAE,
FOR THE PHARAZYN CHARITABLE TRUST

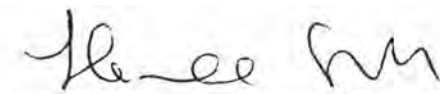
The District Land Registrar at Wellington

PURSUANT to Section 221 of the Resource Management Act 1991 the Kapiti Coast District Council hereby gives notice that it has consented to the proposed subdivision and the following condition is to be complied with on a continuing basis:

1. That specific foundation design by a registered engineer may be required for any new dwelling or additions and alterations to a dwelling within lots 1 – 8, and lots 10 - 20 land transfer plan 91324 in accordance with the recommendations within the soil test report prepared by Samcon Ltd. submitted with application No. RM 000117 a copy of which is available in Council's Resource Consents Office.

Issued in respect of application No. RM 000117 on this 28th day of August 2001.


AUTHORISED OFFICER


AUTHORISED OFFICER

COPY

The Consents Officer
Kapiti Coast District Council
Rimu Road
PARAPARAUMU

**STATEMENT OF PROFESSIONAL OPINION AS TO
SUITABILITY OF LAND FOR BUILDING PURPOSES**

Subdivision : Pharazyn Estate Stage 5
Owner : Pharazyn Charitable Trust
Location : Field Way, Waikanae Beach

I, Graeme Douglas Walker of

Samcon Limited, Consulting Engineers
Paekakariki Hill Road, RD 1 Porirua

Hereby confirm that;

1. I am a Registered Engineer experienced in the field of soils engineering and was retained by the subdividing owner for the purposes of testing and reporting on the soil conditions on the above site.
2. The extent of my inspections during construction and the results of all tests carried out are described in our report dated 8 June 2001.
3. In my professional opinion, not to be construed as a guarantee, I consider that
 - (a) The earth fills shown on Lattey Consultants Ltd Plan 107.55-1 have been placed in compliance with the specifications, and the requirements of the Kapiti Coast District Council.
 - (b) The filled ground in Lots 2 – 8, Lot 11 and Lot 18 is suitable for the erection thereon of lightweight timber framed residential buildings not requiring specific design in terms of NZS 3604 and related documents provided that:
 - I. All organic material to be stripped from the foundation zones and all enclosed areas within the building site.
 - II. Once excavated the foundation subgrade shall be further tested by Penetrometer to ensure the actual conditions are consistent with those anticipated by this report for the full foundation area.
 - III. Foundation subgrades to be compacted and inspected prior to pouring of foundations

Samcon Limited

Paekakariki Hill Road RD 1 Porirua
Fax 23 99 576

- IV. Where the existing ground level is to be altered by more than 300mm, by cutting of the existing soils, or by filling over them, the site shall be tested again to confirm whether the new soil profile is suitable for lightweight timber-framed buildings, or if it should be subject to specific design.
 - V. Building foundations shall not be constructed within 5 metres of any retaining wall unless first subjected to specific design.
 - VI. Batters shall not be cut steeper than 1 (vertical) to 3 (horizontal) without specific investigation and design.
- (c) The original ground in Lots 1, 11, 14, 15, 17, 18 and 20, not affected by the fillings is suitable for the erection thereon of lightweight timber framed residential buildings not requiring specific design in terms of NZS 3604 and related documents provided that:
- I. All organic material to be stripped from the foundation zones and all enclosed areas within the building site.
 - II. Once excavated the foundation subgrade shall be further tested by Penetrometer to ensure the actual conditions are consistent with those anticipated by this report for the full foundation area.
 - III. Foundation subgrades to be compacted and inspected prior to pouring of foundations
 - IV. Where the existing ground level is to be altered by more than 300mm, by cutting of the existing soils, or by filling over them, the site shall be tested again to confirm whether the new soil profile is suitable for lightweight timber-framed buildings, or if it should be subject to specific design.
 - V. Building foundations shall not be constructed within 5 metres of any retaining wall unless first subjected to specific design.
 - VI. Batters shall not be cut steeper than 1 (vertical) to 3 (horizontal) without specific investigation and design.
- (d) The original ground not affected by the filling in Lots 10, 12, 13, 16 and 19 shall be investigated for the specific requirements of the houses to be constructed on these lots, and appropriate foundations designed to suit the structure, and the ground conditions identified by that investigation.
4. This professional opinion is furnished to the Kapiti Coast district Council and the subdividing owner for their purposes alone on the express condition that it not be relied upon by any other person and does not remove the necessity for normal inspection of foundation conditions at the time of erection of any structure.

COPY

Graeme D Walker
(BE Hons, BCA, MIPENZ, Reg No 5845)

Samcon Limited

8 June 2001

Samcon Limited

Paekakariki Hill Road RD 1 Porirua
Fax 23 99 575

Ph 23 99 565

Mob 025 345 868

PHARAZYN ESTATE – STAGE 5

FIELD WAY, WAIKANAЕ BEACH

EARTHWORKS PHASE

REPORT ON SOIL TESTING

June 2001

This report summarises the extent and results of soil testing carried out on the above development site.

1. The Site.

Stage 5 of the Pharazyn Estate project comprises 19 residential lots at the end of Field Way in Waikanae Beach. The lots are serviced from an extension to Field Way constructed as part of these works, the partial construction of new local road ("Road 1") off Field Way, and various rights-of-way from these roads.

The full extent of earthworks carried out under this stage are shown on Plan 107.55-1 (Issue C) – Lattey Consultants Limited, which should be referred to in conjunction with this report.

The site area comprises sand dunes of moderate contour with only minimal vegetation and little to no topsoil. Portions of the site – in particular Lots 10 and 11 – have been earthworked previously in part to provide access to the area beyond, and in part as a borrow area for other works.

2. The Works

Physical earthworks commenced in late March 2001. Initial works focussed on stripping of service corridors and road subgrades to enable works by service installation teams. The bulk of the earthworks were completed in the last week of April and first week of May. General tidying of the site, and earthworks in Lot 11 were completed in late May, with equipment leaving the site 31 May 2001. Routine inspections of the work methodology and materials were carried out throughout the duration of the bulk earthworks.

All surface vegetation, and surface sands associated with the vegetation have been stripped from areas where filling was required. This material was stockpiled on site and respread to depths of up to 200mm on completion of the earthworks.

The formation of the site required approximately 7000 cubic metres of earthworks. The earthworks were carried out using plant from Gary Holland Earthmoving Limited, acting as subcontractor to Higgins Contractors Limited. In general the material was

excavated from cut sites, carted by dumper, and spread and compacted by multiple passes of a loaded Volvo L90C rubber tyred loader.

As displayed on Plan 107.55-1 the following lots have had filling placed within their boundaries under this contract.

- Lots 2 – 8
- Lot 11
- Lot 18

Plan 107.55-1 indicates that the depth of filling placed is shallow in many areas such that, after excavation for foundations, the strength of natural soils beneath the fill will be dominant in determining the foundation design for buildings.

Prior to the commencement of filling a test pit was excavated in the main fill area below Lots 2 – 8 to confirm the subsurface soils were satisfactory; clean sands were encountered for the full depth to the water table (approximately 1.5 metres below the existing ground level.) No other investigation – no auger holes, density tests or other form of investigation was carried out in any part of the site.

All filling material placed comprised clean beach sand.

3. Testing Procedures

Prior to commencing works the existing soils in the main fill area in Lots 2 – 8, and in Lot 11 were tested using a Scala Probe. Thereafter the fill was tested progressively as the fill level was raised.

On completion of the earthworks, and following the respreading of vegetation and surface soils each lot was tested by 4 Scala Probe tests located in the corners of a notional building footprint.

Specific site testing was carried out 10 to 16 May 2001, with the exception of Lot 11 where tests were carried out on completion of earthworks in this location, 1 June 2001.

The locations of these tests are shown on attached plan ST-1. In general the tests extend to depths of 900mm, except where unsatisfactory results have been encountered at that level. In these instances the depth of the test has been extended until either a satisfactory result has been obtained, or the need for separate investigation established.

The tests were performed to determine the adequacy (or otherwise) of the sites to accept normal foundation loadings from light timber framed without requiring specific foundation design, as determined by NZS 3604. The Statement of Professional Opinion resulting from this testing is attached in the standard NZS 4404 format.

In general the adequacy of the subsurface soils has been determined by their ability to yield Scala Probe test values of no less than 4 blows per 100mm. For the purposes of this report it has been taken that foundations will extend through the surface 100 – 200mm of strippings layered over the site, and that the exposed foundation base will be compacted once formed. Hence sites yielding results of 4 blows per 100 mm (or better) at depths of no greater than 400mm have been accepted as satisfactory. Foundation constructions not complying with these assumptions should be subject to specific design.

Samcon Limited

Paekakariki Hill Road RD 1 Porirua
Fax 23 99 576

These test results are indicative of the specific tests sites selected. The conditions away from the test sites are inferred from these tests and it should be appreciated that actual conditions may vary. For this reason the tests do not obviate the need for normal inspection and testing of the foundation materials once building details are available.

4. Recommendations

The test results indicate that all sites on compacted fill attain the standards required for lightweight timber framed houses not exceeding two storeys in height. As detailed further below various sites within natural ground, or areas subjected to cutting, do not all attain the required standards.

Specific note is made of the random nature of weak (loose) areas within the 'natural' areas of the site. This circumstance reflects the normal manner in which sand dunes are formed, and may be replicated in other portions of the development site. During foundation construction foundation excavations should be checked to confirm the conditions anticipated by these attached tests have been attained.

The following sites contain significant fill areas, as shown on the attached plans, and tests confirm that the sites are suitable for normal (NZS 3604) foundations for lightweight timber framed houses.

Lots 2 – 8, Lot 18.

The following sites comprise natural land, or land subjected to cutting as shown on the attached plans, and tests confirm that the sites are suitable for normal (NZS 3604) foundations for lightweight timber framed houses.

Lots 1, 11, 14, 15, 17, and 20

The following sites comprise natural land, or land subjected to cutting as shown on the attached plans, and tests confirm that the sites are *not* suitable for normal (NZS 3604) foundations for lightweight timber framed houses unless the ground conditions at the site is first investigated for the specific structure envisaged and an appropriate foundation system designed by a suitably qualified engineer.

Lots 10, 12, 13, 16 and 19.

The attached Statement of Professional Opinion should be read in conjunction with the following requirements with respect to sites that do not require specific foundation design.

- All organic material to be stripped from the foundation zones and all enclosed areas within the building site.
- Once excavated the foundation subgrade shall be further tested by Penetrometer to ensure the actual conditions are consistent with those anticipated by this report for the full foundation area.
- Foundation subgrades to be compacted and inspected prior to pouring of foundations
- Where the existing ground level is to be altered by more than 300mm, by cutting of the existing soils, or by filling over them, the site shall be tested again to

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confirm whether the new soil profile is suitable for lightweight timber-framed buildings, or if it should be subject to specific design.

- Building foundations shall not be constructed within 5 metres of any retaining wall unless first subjected to specific design.
- Batters shall not be cut steeper than 1 (vertical) to 3 (horizontal) without specific investigation and design.

This report does not preclude the possibility that the Kapiti Coast District Council may at their discretion require additional testing of the site and/or additional works at the owners expense, in consequence of as building consent application.

COPY

Graeme D Walker
(BE Hons, BCA, MIPENZ, Reg No 5845)

Samcon Limited

8 June 2001

Attached to this report.....

- Scala Probe Results (6 pages)
- Plan ST 1

SUMMARY OF SCALA PROBES TESTS - INDIVIDUAL LOTS

PHARAZYN ESTATE - STAGE -5

Lot No	1	1	1	1	2	2	2	2	3	3	3	3
Test ID	A	B	C	D	A	B	C	D	A	B	C	D
Depth in mm												
000 - 100	P	P	P	P	P	P	P	P	P	P	P	P
100 - 200	P	P	P	1	P	1	2	P	1	3	3	3
200 - 300	3	1	3	3	4	4	5	4	4	4	5	6
300 - 400	5	3	4	6	6	7	7	6	8	10	10	8
400 - 500	5	5	7	8	7	9	11	8	8	12	14	16
500 - 600	7	8	9	9	10	11	16	14	14	15	17	18
600 - 700	7	11	10	6	10	12	18	15	20	16	14	18
700 - 800	7	13	13	6	9	14	15	16	22	21	18	16
800 - 900	7	14	12	7	6	14	19	17			23	18

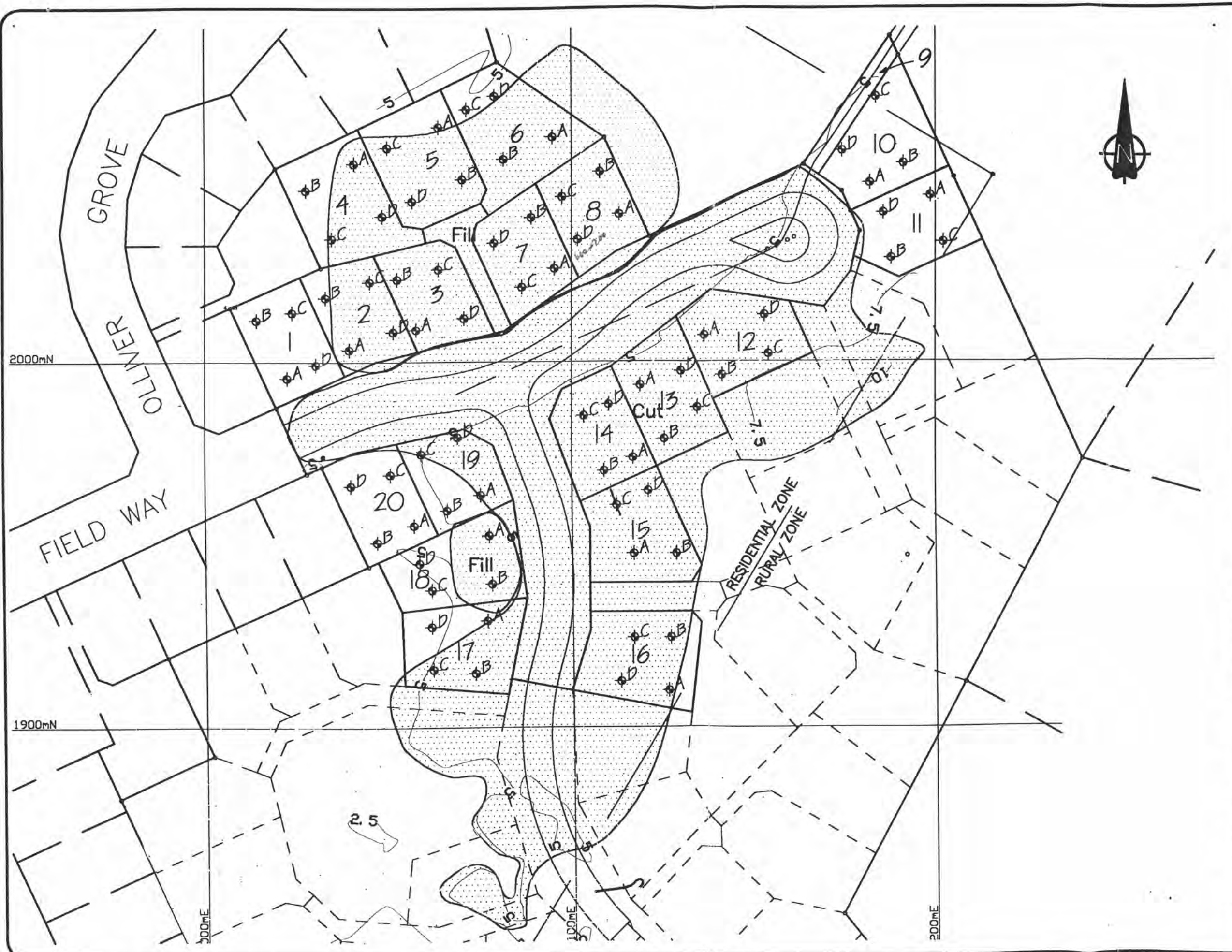
Lot No	4	4	4	4	5	5	5	5	6	6	6	6
Test ID	A	B	C	D	A	B	C	D	A	B	C	D
Depth in mm												
000 - 100	P	P	P	P	P	P	P	P	P	P	P	P
100 - 200	P	1	P	1	2	4	P	2	2	2	P	P
200 - 300	3	4	2	4	4	7	3	5	4	5	3	2
300 - 400	5	5	5	9	7	9	4	8	8	6	5	4
400 - 500	7	7	7	15	10	11	8	13	8	8	8	4
500 - 600	10	8	9	19	13	15	11	18	10	9	11	6
600 - 700	13	10	11	21	15	17	15	19	12	13	11	8
700 - 800	19	18	12		19	22	19	24	14	15	14	9
800 - 900		16	16		21		23		17	18	15	9

Lot No	7	7	7	7	8	8	8	8
Test ID	A	B	C	D	A	B	C	D
Depth in mm								
000 - 100	P	P	P	P	P	P	P	P
100 - 200	1	1	1	2	1	P	2	3
200 - 300	5	6	5	5	5	2	5	5
300 - 400	8	12	7	8	11	5	8	8
400 - 500	12	15	12	12	13	7	12	12
500 - 600	13	17	16	15	16	11	15	15
600 - 700	17	18	16	14	20	15	18	17
700 - 800	17	22	19	14	22	18	20	20
800 - 900	15	21	22	17	19	22	24	18

Lot No	10	10	10	10	11	11	11	11	11	12	12	12	12
Test ID	A	B	C	D	A	B	C	D	E	A	B	C	D
Depth in mm													
000 - 100	P	P	4	P	P	P	P	P	P	P	P	1	P
100 - 200	3	P	5	2	P	4	P	3	P	P	P	3	1
200 - 300	7	2	3	4	P	7	P	7	2	P	3	3	3
300 - 400	10	3	9	7	3	9	2	10	3	2	5	6	5
400 - 500	12	8	9	7	5	10	5	13	4	3	7	7	6
500 - 600	10	8	9	7	7	12	6	13	3	4	8	10	8
600 - 700	11	9	7	7	7	16	6	9	5	7	9	12	10
700 - 800	11	11	6	7	8	21	6	9	4	9	10	11	11
800 - 900	14	13	4	12	9		5	8	4	10	10	9	8
900 - 1000			3				5		(RL - 2m)				
1000 - 1100			3				5						
1100 - 1200			3				4						
1200 - 1300			4				4						
1300 - 1400			5				4						
1400 - 1500			10				6						
1500 - 1600							6						
1600 - 1700							6						

Lot No	13	13	13	13	14	14	14	14	15	15	15	15
Test ID	A	B	C	D	A	B	C	D	A	B	C	D
Depth in mm												
000 - 100	P	P	P	P	P	P	P	P	P	P	P	P
100 - 200	1	3	P	P	1	1	1	P	P	P	P	1
200 - 300	4	4	3	3	3	2	4	3	3	3	2	3
300 - 400	5	7	3	3	5	4	7	5	4	6	3	6
400 - 500	5	7	5	5	7	5	7	7	7	8	5	7
500 - 600	3	8	4	4	9	7	10	9	7	8	7	7
600 - 700	3	9	6	6	9	7	13	9	10	9	8	8
700 - 800	4	7	5	5	10	8	15	9	10	8	8	9
800 - 900	8	6	4	4	8	8	15	8	8	7	7	9

Lot No	19	19	19	10	20	20	20	20
Test ID	A	B	C	D	A	B	C	D
Depth in mm								
000 - 100	P	P	P	P	P	P	P	P
100 - 200	2	P	2	2	3	P	3	3
200 - 300	3	2	4	3	6	3	6	4
300 - 400	3	4	7	5	8	4	8	7
400 - 500	4	5	8	8	10	7	9	7
500 - 600	2	4	10	9	11	7	10	5
600 - 700	4	6	10	11	9	9	11	10
700 - 800	5	7	11	10	10	9	11	11
800 - 900	6	8	11	9	13	7	13	10



PHARAZYN EST
 SUBDIVISION
 STAGE 5
 SOIL TEST
 PLAN



DESIGNED		
DRAWN	SJH	June 2001
APPROVED	GDW	June 2001
SCALE	1:1000	
DATUM	MSL	
CADFILE		

ST 1



Approvals

I hereby certify that this plan was approved by the Kapiti Coast District Council pursuant to Section 223 of the Resource Management Act 1991 on the 29th day of May 2001 subject to the granting or reserving of the easement(s) set out in the Memorandum hereon and subject to the amalgamation condition(s) set out hereon

Amalgamation Condition
Lot 9 hereon and Lot 13 DP 85461 shall be held together within the one certificate of title.
See B.833058.1

Authorised Officers
[Signature]
[Signature]

Memorandum of Easements

Purpose	Shown	Servient Tenement	Grantee
Sewage Drainage	(A)	Lot 9	Kapiti Coast District Council
Stormwater Drainage	(B)	Lot 20	
	(C)	Lot 22	
Purpose	Shown	Servient Tenement	Dominant Tenement
Right of Way, Sewage, Stormwater Drainage, Electricity, Telephone, & Water Supply	(D)	Lot 4	Lots 5 & 6
	(E)	Lot 5	Lots 4 & 6
	(F)	Lot 6	Lots 4 & 5

CLASS I SURVEY

Total Area 5.8977ha
Comprised in CT 53D/345

I, Kerry Gray Harford of Waikanae being a person entitled to practise as a registered surveyor, certify that -
(a) The surveys to which this dataset relates are accurate, and were undertaken by me or under my direction in accordance with the Survey Act 1986 and the Survey Regulations 1998:
(b) This dataset is accurate, and has been created in accordance with that Act and those Regulations.

Signature *[Signature]* Date 21.05.01

Field book p Traverse Book p
Reference Plans DP's 50203, 63458, 65976, 72871 & 85461
Examined Correct

Approved as to Survey
...../...../..... Chief Surveyor

Deposited this day of 20.....
for Registrar-General of Land

File 107.57
Received 11/6/2001
Instructions
PLAN FORM APPROVED LM 97/2
91324
RM000117.



SHEET 1 OF 2

Fieldway Nth

LAND DISTRICT WELLINGTON
Survey Blk & Dist V, Kaitawa
NZMS 261 Sht Record Map No. SDI

LOTS 1-22 BEING A SUBDIVISION OF
LOT 34 DP 85461

Local Authority Kapiti Coast District
Surveyed by LATTEY CONSULTANTS LTD
Scale 1 : 1500 Date March 2001

**MR & MRS YOUNG
LOT 8
FIELD WAY, WAIKANAЕ BH**

NEW RESIDENCE

SPECIFICATION

CONFIDENTIAL

**NEW RESIDENCE
MR & MRS YOUNG
LOT 8 FIELD WAY, WAIKANAE BH**

INDEX

1201:-	Preliminaries and General
2201:-	Preparation and Ground Work
3101:-	Concrete
3801:-	Carpentry
4201:-	Cladding
4201H:-	James Hardie Cladding
4401:-	Membrane Roofing
4502:-	Aluminum Windows and Doors
5101:-	Lining
5101H:-	James Hardie Linings
5501:-	Joinery Fittings
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6501:-	Carpeting
6601:-	Painting and Paperhanging
7101:-	Water
7201:-	Gas
7401:-	Rainwater Plumbing
7402:-	Sanitary Plumbing
7403:-	Drainage
7701:-	Electrical
8201:-	Paving
8301:-	Landscaping
7403:-	Drainage
7701:-	Electrical

1201 PRELIMINARIES AND GENERAL

1. THE PROJECT

1.1 DESCRIPTION

The scope of the works to be as described in this specification and as shown on the drawings.

1.2 SITE

The site of the works, the site address and the legal description are shown on the drawings. Confine access and work to the area of the site indicated.

2. DOCUMENTATION

2.1 SPECIFICATION SECTIONS

The designation and numbering of individual specification sections follows the CBI (Association for Co-ordinated Building Information in New Zealand) system for the co-ordination and classification of construction information. Sections are for reference and convenience only and do not constitute individual trade sections or work elements.

Read all sections together and read 1201 PRELIMINARIES AND GENERAL with all other sections.

2.2 INTERPRETATIONS

Required:	Required by the documents, or by a statutory authority.
Proprietary:	Identifiable by naming the manufacturer, supplier, installer, trade name, brand name, catalogue or reference no.
Approval:	Approval in writing.
Direction:	Direction in writing.
Notified:	Notified in writing.

2.3 SUBSTITUTIONS

A substitution may be proposed where specified products are not available, or if substitute products are brought to the attention of and are considered by the owner to be equivalent or superior to those specified.

Any proposed substitution of specified products to be notified. Notification to include sufficient information to allow the owner to confirm that the substitution is equivalent or superior to that specified.

Any approval of substitutions to be in writing.

2.4 THE WORDS "PROVIDE" OR "FIX"

The words "provide" or "fix" if used separately mean provide and fix unless explicitly stated otherwise.

2.5 MANUFACTURER'S AND SUPPLIER'S

Manufacturer's and supplier's requirements, instructions, specifications or details means those issued by them for their particular material, product or component and are the latest edition.

2.6 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 manufacturer's literature to the owner.

2.7 ABBREVIATIONS

The following abbreviations are used throughout the specification sections:

AS	Australian Standard
AS/NZS	Joint Australian/New Zealand Standard
BRANZ	Building Research Association of New Zealand
BS	British Standard
CSA	Canadian Standards Association
HERA	Heavy Engineering Research Association
NZBC	New Zealand Building code
NZMP	New Zealand Miscellaneous Publication
NZS	New Zealand Standard
NZS/AS	Joint New Zealand/Australian Standard

2.8 DEFINED WORDS

Words defined in the conditions of contract, New Zealand Standards, or other reference documents, to have the same interpretation and meaning when used in their lower case, title case or upper case form in the specification text.

2.9 REFERENCED DOCUMENTS

Throughout this specification, reference is made to various New Zealand Building Code (NZBC) acceptable solutions and verification methods for criteria and/or methods used to establish compliance with the Building Act.

Reference is also made to various Standards produced by Standards New Zealand (NZS, NZMP, AS/NZS, NZS/AS), Transit New Zealand specifications, overseas standards (AS, BS, CSA) and to listed Acts, Regulations and various industry codes of practice and practice guides. The latest edition (including amendments and provisional editions) at the date of this specification applies unless stated otherwise.

It is the responsibility of the contractor to be familiar with the materials and expert in the techniques quoted in these publications.

Documents cited both directly and within other cited publications are deemed to form part of this specification. However, this specification takes precedence in the event of it being at variance with the cited documents, with the resolution of any variance being confirmed by the owner in writing and then notified to the territorial authority for consent prior to any further work proceeding.

2.10 DOCUMENTS REFERRED TO

Documents referred to in this section are:

- Building Act 1991
- Building Regulations 1992
- Health and Safety in Employment Act 1992
- Smoke Free Environments Act 1990

2.12 BUILDING CONSENT COMPLIANCE

It is an offence under the Building Act 1991 to carry out any work not in accordance with the building consent. The resolution of matters concerning compliance to be referred to the owner for a direction. If required, the owner to refer the matter to the territorial authority for consent.

2.13 BUILDING CONSENT

Obtain the original or copies of the building consent form and documents from the owner and keep on site. Liaise with the territorial authority 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.

2.14 PRODUCER STATEMENTS

When producer statements verifying construction are required, provide copies to both the territorial authority and the owner. Producer statements to be in the form required by the Building Act.

2.15 COMPLIANCE SCHEDULE

Obtain from the owner the list of all systems and features agreed as comprising the compliance schedule when application was made for building consent. Supply to the owner the inspection, maintenance and reporting procedure information for each system or feature of the building needed to complete the schedule for issue by the territorial authority.

2.20 GUARANTEES

Provide executed guarantees in favour of the owner in respect of, but not limited to, materials, elements, service, application, installation and finishing called for in that specified section of work. The terms and conditions of the guarantee in no case negate the minimum remedies available under common law as if no guarantee had been offered. Failure to provide guarantees does not reduce liability under the terms of the guarantee called for in that specified section of the work.

2.21 OVERALL WEATHERTIGHTNESS AND WATERTIGHTNESS

A guarantee 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 guarantee is in addition to any specific guarantees required.

2.22 TRADE GUARANTEES AND WARRANTIES

Where specific trade guarantees/warranties are offered covering materials and/or execution of proprietary products or complete installations, provide copies of all such guarantees/warranties to the owner.

2.23 FORM OF GUARANTEE

Conform with the form of guarantee included in this specification. Commence all guarantees from the date of practical completion. Maintain their effectiveness for the times stated.

2.28 SERVICES PLANS

Prepare services plans setting out the actual positions as constructed of all sewer, stormwater, sanitary plumbing, piped and ducted services, electrical and mechanical services. Except where specified otherwise, as-built plans may be marked up on copies of relevant project drawings. Provide 1 set of services plans to the owner. Provide services plans required by the building consent to the territorial authority.

3. ESTABLISHMENT

3.1 COMPLY

Comply with all statutory obligations and regulations of regulatory bodies controlling the execution of the works.

3.2 APPROVALS

Attend on territorial authority officers, statutory and network utility inspectors, as necessary to obtain approvals (in addition to building consent approval) for and the satisfactory completion of, the works.

4. TEMPORARY WORKS AND SERVICES

4.1 SITE ACCOMMODATION

Provide, erect and maintain all scaffolding, sheds, toilets, water, power, hoardings and access to the site. Allow for all cartage, craneage, plant hire and storage. Arrange for all temporary works and services necessary for the completion of the works. Pay all fees and remove temporary works and services on completion of the works.

4.2 PROTECT

Protect all parts of the work liable to damage, including all adjoining public or private property, existing buildings, existing roads, footpaths, fences, site services, trees, landscaping and all existing retained site features, until completion of the works. Take all precautions necessary to protect the works from damage by unauthorised entry or inclement weather. Brace and support all parts of the works against damage during construction.

Make good all damage to existing property and site features arising from construction activities or failure to protect.

4.3 STORAGE

Provide temporary storage areas and protective covers and screens. Framing and structural members to be fillet stacked and protected from moisture and contamination. Finishing materials to be completely protected from the weather and damage and stored in accordance with the manufacturer's requirements. Fabricated elements to be protected from the weather and damage, and stored in accordance with the supplier's requirements.

5. PROJECT MANAGEMENT

5.1 WORKING HOURS

Work outside normal hours may be permitted, but 24 hours notice is required in writing to the owner before proceeding. Obtain any necessary permits and permission for such work.

5.2 HEALTH AND SAFETY

Refer to the requirements of the Health and Safety in Employment Act 1992. Comply with all relevant New Zealand safety legislation.

Take all necessary steps to make the site and the contract works safe and to provide and maintain a safe working environment. Ensure that all those working on or visiting the site are aware of the rules governing site safety, are properly supervised and are not unnecessarily exposed to hazards.

Maintain proper procedures for dealing with any emergencies that may arise. Immediately investigate accidents, identify their cause and maintain a register of accidents and serious harm. Provide copies of the register to the owner, together with copies of all reports supplied to a public authority.

5.3 SMOKING

Do not smoke on site except in a designated location in accordance with the Smoke Free Environments Act 1990. This location to be determined by the contractor with the approval of the owner.

6. CONSTRUCTION

6.1 QUALITY ASSURANCE

Carry out and record regular checks of material quality and accuracy, including

- Concrete quality and finishes (refer to 3101 CONCRETE)
- Dimensional accuracy of structural columns (following completion of foundations)
- All perimeter columns and frames for plumb
- Levels of all floors relative to the site datum
- Framing timber moisture content (refer to 3801 CARPENTRY).

Where any material, quality or dimension exceeds specified or required tolerances, obtain written confirmation from the owner and when building consent approval is affected, confirm remedial action with the territorial authority

Provide all materials, equipment, plant, attendances, supervision, inspections and programming to ensure the required quality standards are met.

6.2 NUISANCE

Take all reasonable precautions to prevent damage and nuisance from water, fire, smoke, vehicles, dust, rubbish, noise and all other causes resulting from the contract works. Comply with the requirements of the territorial authority and all relevant Acts and Standards.

6.3 SET OUT

Establish a permanent site datum to confirm the proposed building ground floor level and its relationship to all other existing and new building levels.

While it remains the contractor's responsibility to set out the works accurately and correctly and to confirm any changes from the approved location with the territorial authority, obtain the owner's written confirmation that they have sighted the proposed building location, site datum and profiles, before commencing any further work.

- 6.4 **EXECUTION**
Conform to the requirements of this specification. All work to be level, plumb, and true to line and face. Employ only experienced workers familiar with the materials and techniques specified.
- 6.5 **MATERIALS**
Materials to be new unless stated otherwise, of the specified quality and complying with all cited documents. Substitution of alternative materials, plant or equipment from those specified to be confirmed by the owner in writing. If required the owner to obtain approval from the territorial authority for the substitution.
- 6.6 **COMPLETE ALL SERVICES**
Ensure all building services are operational, with all temporary labelling removed, required labelling fixed and service instructions provided.
- 6.7 **CLEAR AWAY**
Clear away all trade debris, unused materials and elements from the site and leave the building clean and ready for occupancy, with all services operating and mechanical parts in good working order. Remove all temporary markings, coverings and protective wrappings. Ensure that any maintenance requirements on temporary markings are conveyed to the owner.
- 6.8 **CLEAN**
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.
- 6.9 **SPARES**
Collect, protect and store safely all spare materials required under the contract. Give the owner an inventory of all spares.

2201 PREPARATION AND GROUNDWORK

1. GENERAL

1.1 DOCUMENTS

Documents referred to in this section are:

NZS 3604

Light timber frame buildings not requiring specific design

Occupational Safety and Health Service (OSH) publication: Approved code of practice for safety in excavation and shafts for foundations

1.3 SITE SAFETY

Provide adequate support for all excavations. Cover holes and fence off open trenches and banks.

2. PRODUCTS

2.1 EXCAVATED FILL

Material from other formations in the excavation which may be selected and approved as suitable for filling by having grading and moisture content properties that will allow recompaction to 95% of maximum density.

2.2 ROCK FILL

Hard material comprising rock, broken stone, hard brick, concrete, run of pit scoria, or other comparable inert material capable of being placed and compacted as specified.

2.3 SAND FILL

Clean sand of such grading in particle size as to allow for mechanical compaction to 90% maximum density.

2.4 HARDCORE

Scoria or crushed rock to GAP (General All Passing) 40 grading.

2.5 GRANULAR BASE

Approved screened crushed gravel or scoria graded in size from 20mm to 7mm, clean. When tested with a standard sieve of 4.75 opening no material is to pass.

2.6 DRESSING COURSE

Scoria to GAP 20 grading, or "dirty footpath scoria", or equivalent "all in" graded crushed metal aggregate.

2.7 FREE-DRAINING AGGREGATE

Scoria or crushed gravel graded 50 to 14 clean.

3. EXECUTION

3.1 CARRY OUT

Carry out all excavation to the guidelines set by the Occupational Safety and Health Service (OSH) publication: "Approved code of practice for safety in excavation and shafts for foundations."

3.2 FIRES

Do not light rubbish fires on site.

3.3 EXISTING WORK

Protect from damage existing buildings, structures, roads, paving and services nominated on the drawings as being retained, throughout the course of the work.

3.4 PREPARATION

Comply with NZS 3604, section 3.5. Remove all turf, vegetation, trees, topsoil, stumps and rubbish from the area to be built on.

3.5 UNDERGROUND ELEMENTS AND SERVICES

Break out and remove old foundations, slabs, drainage pipes, manholes, tanks, cables and redundant services. Report for instructions when any unexpected voids, made-up ground or services are encountered. Seal off the ends of drains or remove to territorial authority approval.

3.6 TOPSOIL

Stockpile excavated topsoil on site where directed. Keep separate from other excavated materials. Spread and level where directed before completion of the works.

- 3.7 **SHORING AND UNDERPINNING**
Carry out shoring and underpinning shown on the drawings and as necessary to prevent subsidence of adjoining public or private property and to ensure the safety of the public and site personnel. Maintain protection throughout the progress of the works, or until foundations and subgrade structures have been completed and the stability of adjoining public and private property secured.
- 3.8 **GENERAL EXCAVATION**
Trim ground to required profiles, batters, falls and levels. Remove all loose material. Protect all cut faces from collapse. Keep all excavations free from water.
- 3.9 **ROCK EXCAVATION**
If rock is found at any level above the underside of the structural foundations, or above required base levels for site service trenches, immediately notify the owner. Obtain written instructions from the owner on the proposed approach to rock excavation, or consequent alterations to subgrade construction. Confirm any changes with the territorial authority.
- 3.10 **EXCAVATION FOR FOUNDATIONS**
Foundation excavations to be taken to depths shown. Keep trenches plumb and straight, bottoms level and solid, stepped as detailed and clean and free of water.
- 3.11 **INADEQUATE BEARING**
If bearing is inadequate then excavate further and backfill with material as follows:

Below slabs on grade: Hardfill
Below footings: 10MPa concrete
Service trenches: Hardfill

If excavation exceeds the required depths, backfill and compact to the correct level with material as listed.
- 3.12 **GRANULAR BASE FOR SLABS**
To conform with NZS 3604 section 7.5.3. Consolidate with a vibrating roller. Blind the surface with coarse sand or sand/cement and roll ready to receive a dampproof membrane.
- 3.13 **GENERAL BACKFILLING**
Obtain written confirmation from the owner before using any excavated material. Compact approved backfilling in 150mm layers with the last 200mm in clean topsoil, lightly compacted and neatly finished off.
- 3.14 **RETAINING WALLS**
Backfill behind retaining walls with free draining granular material and compact in 200mm layers. Ensure any tarring membranes, drain coil and dampproofing are not punctured.
- 3.15 **SURPLUS MATERIAL**
Remove all surplus and excavated material from the site.

3101 CONCRETE

1. GENERAL

1.1 DOCUMENTS

Documents referred to in this section are:

NZS 3104	Concrete production - high grade and special grade
NZS 3108	Concrete production - ordinary grade
NZS 3109	Concrete construction
NZS 3114	Concrete surface finishes
NZS 3124	Concrete construction for minor works
NZS 3402	Steel bars for the reinforcement of concrete
NZS 3422	Welded fabric of drawn steel wire for concrete reinforcement
NZS 3604	Timber frame buildings

2. PRODUCTS

2.1 REINFORCEMENT

Bars to NZS 3402. Welded reinforcing mesh to NZS 3422.

2.2 TYING WIRE

Mild drawn steel wire not less than 1.2mm diameter.

2.3 SPACERS AND CHAIRS

Precast concrete or purpose made moulded PVC to approval. Concrete spacer blocks to only be used where the concrete surface is not exposed in the finished work.

2.4 VAPOUR BARRIER

0.25mm minimum polyethylene to NZS 3604, section 7.5.4.

2.5 READY-MIX CONCRETE

Ordinary grade 17.5 MPa, maximum aggregate size 19mm to NZS 3104.

2.6 SITE MIXED CONCRETE

To NZS 3124. Ordinary grade 17.5 MPa minimum strength, using either separate batching of sand and coarse aggregate to NZS 3108, or builder's mix.

2.7 SITE CONCRETE

To NZS 3124. 1:8 (cement : all-in aggregate) with minimum water for workability, all materials and batching to NZS 3108.

3. EXECUTION

3.1 HANDLE AND STORE

Handle and store all reinforcing steel and accessories without damage or contamination. Store on timber fillets on hard ground in a secure area clear of any building operation. Lay steel fabric flat.

All reinforcement to be clean and kept clean so that at the time of placing concrete it is free of all loose mill scale, loose rust and any other contamination that may reduce bonding capacity.

3.2 FALSEWORK AND FORMWORK

Falsework and formwork to be of sufficient strength to retain and support the wet concrete to the required profiles and tolerances. Formwork finish to be selected to produce the specified finished quality. Timber or plywood used for formwork to be non-staining to the set concrete.

Securely fix and brace formwork with sufficient strength to support all loads and with joints and linings tight enough to prevent water loss. Tie wires or rods not to be used unless approved in writing by the owner. Unless detailed otherwise, all interior and exterior angles of beam and column forms to have a 19mm chamfer or fillet strip, mitred at intersections.

Water blast to clean formwork. Keep formwork wet before concrete is placed.

Unless detailed otherwise, set up soffit boxing for beams and slabs to provide a camber when forms are stripped, of 3mm rise for every 3 metres of total clear span.

3.3 REINFORCEMENT

All Grade 300 deformed other than ties, stirrups and spirals, unless shown otherwise on the drawings.

3.4 CUT AND BEND

Cut and bend bars using proper bending tools to avoid notching and to the requirements of NZS 3109. Do not rebend bars without written approval. Reject all bars with unspecified kinks or bends. Unless detailed otherwise bend main reinforcing bars, stirrups and ties to the former pin diameters as given in NZS 3109, table 3.1.

3.5 SECURE REINFORCEMENT

Secure reinforcement adequately with tying wire and place accurately, supported adequately and secured against displacement when concreting. Bend tying wire back well clear of the formwork. Spacing to be as dimensioned on the drawings but if not shown then the clear distance to be to the minimums laid down in NZS 3109, clause 3.6.

3.6 LAPPED SPLICES

Length of laps where not dimensioned on the drawings to be in accordance with NZS 3109, clause 3.7. Increase laps of plain round steel by 100%.

3.7 COVER

Minimum cover to all reinforcing bars, stirrups, ties and spirals, as shown on the drawings and to NZS 3109, clause 3.8. Fix chairs for top reinforcement in slabs at 1.0 metre centres or to ensure adequate support. Cover tolerances to NZS 3109, clause 3.9.

- 3.8 **INSPECTION**
Do not place concrete until all excavations, boxing and reinforcing have been inspected and passed by the territorial authority inspector.
- 3.9 **SURFACE FINISHES**
To comply with NZS 3114, section 105, or as denoted on the drawings.
- 3.10 **EXPOSED CONCRETE**
Formwork linings and surface finishes as nominated for both fair face and concealed or exposed surfaces. Unless detailed, obtain written confirmation of the type and pattern of all joints.
- 3.11 **CONCRETE SURFACE TOLERANCES**
To comply with NZS 3114, sections 104 and 105, with the suggested tolerances becoming the required tolerances.
- 3.12 **INSTALL VAPOUR BARRIER**
Apply polythene membrane to prepared basecourse with 150mm laps. Tape seal laps and penetrations with 50mm wide pressure sensitive plastic tape. Refer to drawings for perimeter details.
- 3.13 **DAMPPROOFING**
Refer to 2301 FOUNDATIONS.
- 3.14 **CASTING IN**
Allow to build in all grounds, bolts and fixings for wall plates and bracing elements, holding down bolts, pipes, sleeves and fixings as required by all trades and as shown on the drawings, prior to pouring the concrete.
Continuous grounds (i.e. exceeding 100mm) must not be used. Location and form of conduits to be approved in writing by the owner. Minimum cover 40mm. Bare aluminium items not to be encased in concrete. Steel embedded items not to be painted more than 25mm into the concrete encasement. Any form ties to be cut back to specified cover and the cavities filled with mortar.
Form all pockets, chases and flashing grooves as required by all trades and as shown on the drawings.
Wrap all pipes embedded in concrete with tape to break the bond and to allow for expansion. Pipes for conveying liquids exceeding a temperature of 50 degrees centigrade not to be embedded in concrete.
- 3.15 **PUMPING CONCRETE**
Pump operation, placing and compaction of the mix to be set up and supervised in accordance with NZS 3109. Advise the ready-mix supplier of the type of pump to be used and the slump required, in addition to the concrete grade, strength and quantity.
- 3.16 **COMPACTION**
Use power operated vibrators.
- 3.17 **RESIDENTIAL FLOOR SLABS**
Construct in accordance with NZS 3604, section 7.5. Lay to true and straight surfaces, screeded, floated and steel (manual or power) trowelled finish. Tolerance on flatness to be a maximum 3mm gradual deviation over a 3 metre straight-edge, to the requirements of NZS 3109.
- 3.18 **CONSTRUCTION JOINTS**
Locate and construct as shown on the drawings.
- 3.19 **SAW CUTS**
Floor slabs cast on the ground to be poured in areas not greater than 25 square metres, with a maximum ratio of length to breadth of 1:1.5
Cut slabs where indicated on the drawings and as required to control shrinkage cracking. Cutting to be carried out as soon as possible, without causing tear-out of aggregate and before shrinkage cracking has occurred, generally within 24 hours of pouring. Where saw cuts are made, cut out 100mm of every second wire of the mesh for a length of 50mm each side of the saw cut position. Saw cuts to be 1/3rd slab depth or 30mm minimum.
- 3.20 **REPAIRS**
Make good surface defects immediately after forms are stripped. Make good hollows or bony areas with 1:2 mortar or plaster, finished to the same tolerances as the parent concrete. Fill any tie rod holes with 1:2 mortar.
- 3.21 **CURING OF CONCRETE**
Keep damp for not less than seven days. Ensure curing of slabs commences as soon as possible after final finishing, by the use of continuous water sprays, or ponding. Alternately, apply a curing membrane. Make sure any membrane used will not affect subsequent applied finishes.
- 3.22 **STRIKE FORMWORK**
Strike formwork without damaging or overloading structure. Do not remove formwork before the following minimum periods:
- | | |
|---|----------|
| Sides of beams, walls and columns: | 12 hours |
| Slabs in beam and slab construction (leave props under slab spans over 2 metres): | 4 days |
| Props from under slab spans over 2 metres: | 10 days |
| Beams, soffits and slab spans over 5 metres: | 18 days |
- 3.23 **CLEAN OUT**
Clean out saw cuts and fill with cement grout where the floor will be covered with carpet or vinyl.
- 3.24 **REMOVE**
Remove all unused materials and all concrete and reinforcing debris from the site.

3801 CARPENTRY

1. GENERAL

1.1 DOCUMENTS

Documents referred to in this section are:

AS/NZS 1748	Mechanically stress-graded timber	
AS/NZS 1859	Reconstituted wood based panels	1859.1 Particle board
AS/NZS 2269	Plywood - structural	
NZS 3602	Specifying timber and wood-based products for use in building	
NZS 3603	Timber structures standard	
NZS 3604	Timber frame buildings	
NZS 3606	Manufacture of glue-laminated timber	
NZS 3631	NZ national timber grading rules	
NZMP 3640	Minimum requirements of the NZ Timber Preservation Council Inc.	
BRANZ Bulletin 328: Selection and use of fasteners		
BRANZ Bulletin 343: Moisture in timber		
BRANZ Bulletin 357: Thermal insulation of houses		
BRANZ Bulletin 368: Preventing moisture problems in timber framed skillion roofs		

2. PRODUCTS

2.1 BUILDING PAPER

Breather type kraft paper laminates.

2.2 ALUMINIUM FOIL

Aluminium sheet, kraft paper fibre reinforced laminates.

2.3 GLASS FIBRE INSULATION

Interleaved glass fibre quilt in block form.

2.4 FOIL-FACED INSULATION

Foil faced glass fibre quilt in roll form.

2.5 NATURAL WOOL INSULATION

Natural wool insulation blanket in roll form blended with polyester.

2.6 POLYESTER INSULATION

Polyester insulation blanket in roll form.

2.7 POLYSTYRENE INSULATION

Polystyrene, closed cell, in panel form.

2.8 TIMBER FRAMING GENERALLY

Species, grade and level of treatment as set out in NZS 3602. Grading to NZS 3631 and treated to NZMP 3640. Mechanical stress grading to be acceptable as an alternative to visual grading.

2.9 TIMBER FRAMING DRY, CHEMICAL FREE, MECHANICALLY STRESS GRADED

Species, grade and moisture content in service as set out in NZS 3602. Machine stress graded to AS/NZS 1748, with an average moisture content at supply of 16% or less.

2.10 TIMBER FRAMING DRY, TREATED

Species, grade and moisture content in service as set out in NZS 3602. Treated H1 to NZMP 3640, with an average moisture content at supply of 16% or less. Either mechanically stress graded to AS/NZS 1748, or visual grading to NZS 3631

2.11 EXTERIOR TIMBER WALL BATTENS

Grading to NZS 3631 and treated to H3 as required by NZS 3604, clause 11.8.9

2.12 CEILING BATTENS

Species, grade, moisture content in service and level of treatment as set out in NZS 3602. Grading to NZS 3631 and treated to NZMP 3640.

2.13 LAMINATED TIMBER

Radiata pine laminations to NZS 3606, table 1; treated as required by NZS 3602, to the requirements of NZMP 3640 with special attention to section 4 "Requirements and advisory notes." Supply weather resistant sealed

2.14 TIMBER STRIP FLOORING

Dressing grade to NZS 3631, section 4.4. H1 treated to NZMP 3640

- 2.15 **PARTICLE BOARD FLOORING**
Flooring grade high density resin bonded to AS/NZS 1859.1.
- 2.16 **PLYWOOD**
Structural plywood to AS/NZS 2269 for bracing, bracketing, sarking and floors.
- 2.17 **COMPRESSED FIBRE CEMENT SHEET FLOORING**
18mm thick high density sheet of Portland cement, fine sand, cellulose fibre and water, with a smooth finish both sides.
- 2.18 **HARDWOOD SPACED BOARDING FOR EXTERIOR DECKS**
Plantation-grown hardwood. Dressed four sides and with arrises removed. Provide a timber sample for approval prior to laying.
- 2.19 **SOFTWOOD SPACED BOARDING FOR EXTERIOR DECKS**
Selected radiata pine, treated to H3 to NZMP 3640, sections 8.6 and 9.3. Dressed four sides and with arrises removed. Provide a timber sample for approval prior to laying.
- 2.20 **DAMP-PROOF COURSE**
2-ply/3-ply kraft felt strip saturated and coated with bitumen.
- 2.21 **NAILS**
Steel, stainless steel and galvanised steel of pattern to suit the location and to BRANZ Bulletin 328 "Selection and use of fasteners."
- 2.22 **BOLTS AND SCREWS**
Steel, stainless steel and galvanised steel of pattern to suit the location and to BRANZ Bulletin 328 "Selection and use of fasteners."
- 2.23 **NAIL PLATES**
Stainless steel and/or galvanised steel toothed or nailed plates to the plate manufacturer's design for the particular locations as shown on the drawings.
- 2.24 **CONNECTORS**
Galvanised steel connectors and structural brackets to the connector manufacturer's design for particular locations shown on drawings.
3. **EXECUTION**
- 3.1 **ATTENDANCE**
Provide and fix blocks, nogs, openings and other items as required by other trades.
- 3.2 **MOISTURE CONTENT**
Maximum allowable equilibrium moisture content (EMC) in accordance with BRANZ Bulletin 343 for framing supporting interior linings:
- | | <u>EMC</u> |
|---|------------|
| - Framing at erection | 24% |
| - Framing at enclosure | 20% |
| - Framing at lining | 16% |
| - Timber strip flooring (at time of laying) | 10% |
- 3.3 **GENERALLY**
To NZS 3603 and 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).
- 3.4 **DIMENSIONS**
All timber sizes are nominal sizes.
- 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 **SUB-FLOOR FRAMING**
Frame up off foundation walls and piles, all fabricated, fastened and braced to NZS 3604, section 6.1.1.
- 3.7 **FLOOR FRAMING**
Framed and fastened to NZS 3604, section 7.
- 3.8 **WALL FRAMING**
Frame to required loading and bracing complete with lintels, sills and nogs, all fabricated and fastened to NZS 3604, section 8.

- 3.9 **ROOF FRAMING**
Frame to required loading and bracing complete with valley boards, ridge boards and purlins. Design and fit roof trusses complete with anchorage. All fabricated and fastened to NZS 3604, sections 9 and 10.
- 3.10 **INSTALLING WALL BATTENS**
Lay out, fabricate and fasten to suit the selected wall cladding or lining.
- 3.11 **INSTALLING CEILING BATTENS**
Fabricate and fasten in accordance with NZS 3604, section 13.
- 3.12 **INSTALLING PERFORATED FOIL FLOOR UNDERLAY**
Lay and secure to the underlay manufacturer's requirements and to BRANZ Bulletin 357 "Thermal insulation of houses."
- 3.13 **INSTALLING BUILDING PAPER DECK UNDERLAY**
Lay and secure in accordance with BRANZ Bulletin 368 "Preventing moisture in timber framed skillion roofs."
- 3.14 **INSTALLING INSULATION**
Lay and fit insulation as detailed, to the insulation manufacturer's requirements, and to the requirements of BRANZ Bulletin 357 "Thermal insulation of houses."
- 3.15 **LAYING TIMBER STRIP FLOORING**
Lay, cramp and fasten to NZS 3604, section 7.2.2. Punch nails, fill holes, then sand off with one coarse and one fine paper, hand sanding into corners.
- 3.16 **LAYING PARTICLE BOARD FLOORING**
Lay and fasten to the flooring manufacturer's requirements and NZS 3604, section 7.2.3. Punch nails, fill holes, then sand with one coarse and one fine paper, hand sanding into corners.
- 3.17 **LAYING PLYWOOD SARKING AND FLOORING**
Lay and countersink screw fix to the plywood manufacturer's requirements and to NZS 3604, section 7.2.3.
- 3.18 **LAYING COMPRESSED FIBRE CEMENT SHEET FLOORING**
Set out and countersink screw fix through pre-drilled holes strictly in accordance with the flooring manufacturer's requirements and NZS 3604, section 7.
- 3.19 **LAYING HARDBOARD UNDERLAY**
Punch existing floor fixings and course sand level. Lay underlay with joints staggered, with a 1mm gap between sheets and a 2mm gap at all perimeters. Use 18mm divergent staples at 100mm centres throughout the whole sheet and 30mm apart, 18mm in from the edges of the sheets. Punch staples below the surface and sand joints level.
- 3.20 **LAYING FIBRE CEMENT UNDERLAY**
Punch existing floor fixings and course sand level. Set out and fix strictly in accordance with the underlay manufacturer's requirements, using 25mm x 2.5mm annular-threaded underlay nails. Drive heads flush with the sheet surface.
- 3.21 **LAYING TIMBER SPACED BOARDING FOR EXTERIOR DECKS**
Confirm with the owner whether the grooved side of the boards are to be face up or face down. Avoid excessively short or long lengths, drill for all fixings, stagger end joints and space boards a maximum of 2mm apart. Fix using annular grooved galvanised jolt head nails, heads driven flush with the board surface.
- 3.22 **LEAVE**
Leave all work to the standard required by all following trades.

4201 CLADDING

1. GENERAL

1.1 DOCUMENTS

Documents referred to in this section are:

NZBC	E2/AS1	External moisture	2.1 Timber weatherboards
AS/NZS 1491		Finger jointed structural timber	
AS/NZS 2269		Plywood - Structural	
NZS/AS 2908		Cellulose-cement products	2908.2 Flat sheets
NZS 3602		Specifying timber and wood-based products for use in building	
NZS 3604		Timber frame buildings	
NZS 3611		Exterior plywood	
NZS 3617		Profiles of weatherboards fascia boards and flooring	
NZS 3631		NZ national timber grading rules	
NZMP 3640		Minimum requirements of the NZ Timber Preservation Council	
NZS 4214		Methods of determining the total thermal resistance of parts of	buildings
BRANZ Bulletin 284: Sealed joints in external claddings - 2. Sealants			
BRANZ Bulletin 304: Flashing design			
BRANZ Bulletin 305: Domestic flashing installation			
BRANZ Bulletin 326: Cladding buildings on exposed sites			
BRANZ Bulletin 328: Selection and use of fasteners			
BRANZ Bulletin 343: Moisture in timber			

2. PRODUCTS

2.1 BUILDING PAPER

Breather type kraft paper laminates.

2.2 WOOD FIBRE SUB-SHEATHING

Low density insulating board, 10.5mm thick and faced with bitumen emulsion.

2.3 FIBRE CEMENT SUB-SHEATHING

Treated cellulose fibre in a matrix of cement and sand autoclaved sheet, 4.5mm thick, tinted.

2.4 PLYWOOD

Structural plywood to AS/NZS 2269.

2.5 PLYWOOD CLADDING

Rotary cut radiata pine veneer ply sheet to NZS 3611 treated H3.

2.6 TIMBER WEATHERBOARD

Dressing grade to NZS 3631, to NZS 3617 for profile and to NZS 3602 for selection.

2.7 FIBRE-CEMENT WEATHERBOARD

Cellulose cement autoclaved sheets to NZS/AS 2908.2.

2.8 FIBRE CEMENT SHEET CLADDING

Cellulose cement autoclaved sheets to NZS/AS 2908.2.

2.9 FIBRE-CEMENT SOFFIT LINING

Cellulose cement autoclaved sheets to AS/NZS 2908.2.

2.10 TIMBER FASCIAS AND BARGE BOARDS

Dressing grade to NZS 3631 and H3 treated to NZMP 3640. Finger jointed timber to AS/NZS 1491.

2.11 EXTERIOR FINISHING TIMBER

2.12 PVC JOINTERS

To suit sheet thickness.

2.13 NAILS, SCREWS AND FASTENINGS

Steel, stainless steel and galvanised steel of pattern to suit location and to BRANZ Bulletin 328 Selection and use of fasteners.

3. EXECUTION

3.1 MOISTURE CONTENT

Maximum allowable equilibrium moisture content (EMC) in accordance with BRANZ Bulletin 343 for

-	Framing at enclosure	EMC
-	Weatherboards (at time of fixing)	20%
-	Exterior joinery and trim	14%
		+14%

- 3.2 **GENERALLY**
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 BUILDING PAPER**
Fix breather type building paper to NZS 4214, as detailed and to the sheathing manufacturer's requirements.
- 3.4 **INSTALL WOOD FIBRE SUB-SHEATHING**
Fix to framing to the sub-sheathing manufacturer's requirements. Seal all ends and edges. Prime backs of sheets before fixing.
- 3.5 **INSTALL FIBRE CEMENT SUB-SHEATHING**
Fix strictly in accordance with the sub-sheathing manufacturer's requirements, including expansion joints and control joints as required. Liaise with the solid plasterer regarding the timing of fixing the building paper overlay. Install overlay in accordance with the sub-sheathing manufacturer's and the plasterer's requirements.
- 3.6 **INSTALL PLYWOOD**
Fix to framing to the plywood manufacturer's requirements and to BRANZ Bulletin Number 326 "Cladding buildings on exposed sites."
- 3.7 **INSTALL PLYWOOD CLADDING**
Fix to framing to the cladding manufacturer's requirements and to BRANZ Bulletin 326 "Cladding buildings on exposed sites."
- 3.8 **PRIME OR SEAL**
Prime or seal all front and back faces, edges and end grain before fixing of all weatherboards and exterior trim, to the finish and quality specified in 6701 PAINTING AND PAPERHANGING.
- 3.9 **INSTALL TIMBER WEATHERBOARDS**
Fix to framing, level, true to line and face, to NZBC acceptable solution E2/AS1, 2.1, to NZS 3604, sections 11.5.2 and to BRANZ Bulletin 326 "Cladding buildings on exposed sites."
- 3.10 **INSTALL FIBRE CEMENT WEATHERBOARDS**
Fix to framing to the weatherboard manufacturer's requirements and to BRANZ Bulletin 326 "Cladding buildings on exposed sites."
- 3.11 **INSTALL FIBRE CEMENT SHEET CLADDING**
Fix to timber framing to detail and to the cladding manufacturer's requirements and to BRANZ Bulletin 326 "Cladding buildings on exposed sites."
- 3.12 **INSTALL FIBRE CEMENT SOFFITS**
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 capping moulds.
- 3.13 **INSTALL EXTERIOR TIMBER FINISHINGS**
Fix timber fascias, barge boards, facings, beads, trim and enclosures level, true to line and face, with all end grain sealed and joints mitred.
- 3.14 **INSTALL FLASHINGS**
Fix flashings, covers and soakers as detailed and to BRANZ Bulletins 304 "Flashing design" and 305 "Domestic flashing installation."
- 3.15 **USE OF SEALANTS**
Selection and use of sealants to follow BRANZ Bulletin 284 "Sealed joints in external claddings - 2 Sealants"
- 3.16 **LEAVE**
Leave all work to the standard required by all following trades.

4201H JAMES HARDIE CLADDING

1. GENERAL

1.1 DOCUMENTS

Documents referred to in this section are:

- | | | |
|---|---|--------------------|
| NZS/AS 2908 | Cellulose-cement products | 2908.2 Flat sheets |
| NZS 3602 | Timber and wood-based products for use in building | |
| NZS 3604 | Light timber frame buildings not requiring specific design | |
| NZS 4214 | Methods of determining the total thermal resistance of parts of buildings | |
| BRANZ appraisal certificate 229: James Hardie wall bracing systems | | |
| BRANZ Bulletin 284: Sealed joints in exterior claddings - 2. Sealants | | |
| BRANZ Bulletin 304: Flashing design | | |
| BRANZ Bulletin 305: Domestic flashing installation | | |

1.2 JAMES HARDIE DOCUMENTS

James Hardie documents that relate to work in this section are:

- Harditex™ Technical
- Harditex™ Selling
- Harditex™ Premium Selling
- Harditex™ BRANZ appraisal certificate 243
- Hardibacker® Technical
- Hardibacker® BRANZ appraisal certificate 240
- Hardiflex® Technical
- Hardiflex® Selling
- Hardiflex® BRANZ appraisal certificate 242
- James Hardie Weatherboards Technical
- James Hardie Weatherboards Selling
- James Hardie Weatherboards BRANZ appraisal certificate 241
- James Hardie Soffits Technical
- James Hardie Soffits Selling
- BRANZ Appraisal Certificate 229: James Hardie wall bracing systems

Copies of the above literature are available by phoning the James Hardie Helpline on 0800 808 868.

2. PRODUCTS

2.1 BUILDING PAPER

Breather type kraft paper laminates.

2.2 GENERALLY

James Hardie fibre cement sheets to comply with NZS/AS 2908.2.

2.3 HARDIBACKER® SUBSTRATE PANELS

Treated cellulose fibre in a matrix of cement and sand autoclaved sheet, 4.5mm thick, tinted blue.

2.4 HARDIFLEX® CLADDING PANELS

Treated cellulose fibre in a matrix of cement and sand autoclaved sheet.

2.5 HARDITEX™ FLUSH CLADDING SYSTEM

Treated cellulose fibre in a matrix of cement and sand autoclaved sheet, with rebated joints both sides and one edge, oxide tinted pink.

2.6 JAMES HARDIE WEATHERBOARDS

Treated cellulose fibre in a matrix of cement and sand, formed into boards and cured by autoclaving.

2.7 HARDISOFFIT™ SOFFIT PANELS

Treated cellulose fibre in a matrix of cement and sand autoclaved sheet with an unsanded finish.

2.8 SILKLINE™ SOFFIT PANELS

Treated cellulose fibre in a matrix of cement and sand autoclaved sheet, pre-painted in off-white.

2.9 VILLABOARD® FLUSH FINISH PROTECTED SOFFIT PANELS

Treated cellulose fibre in a matrix of cement and sand autoclaved sheet, sealed one side.

2.10 HARDIFLEX® SOFFIT PANELS

Treated cellulose fibre in a matrix of cement and sand autoclaved sheet with an unsanded finish.

- 2.11 **SCREWS FOR TIMBER**
For timber framing, countersunk Phillips-head stainless steel screws.
- 2.12 **SCREWS FOR VILLABOARD® SOFFIT LININGS**
Villadrive® wood screws, 6 gauge x 30mm and 6 gauge x 25mm for steel.
- 2.13 **FASTENINGS FOR SOFFIT LININGS**
Fastfix white nylon fasteners.
- 2.14 **HARDIFLEX®, HARDITEX™, HARDIBACKER® NAILS GALVANISED**
Galvanised 40mm x 2.8mm flathead minimum head diameter 6.8mm. Refer to relevant James Hardie technical literature.
- 2.15 **HARDIFLEX®, HARDITEX™, HARDIBACKER® NAILS STAINLESS STEEL**
316 stainless steel 40mm x 2.8mm flathead minimum head diameter 6.8mm. Refer to relevant James Hardie technical literature.
- 2.16 **JAMES HARDIE WEATHERBOARD NAILS GALVANISED**
Galvanised 50mm x 2.8mm and for single vertical applications 40mm x 2.8mm flathead minimum head diameter 6.8mm. Refer to relevant James Hardie technical literature.
- 2.17 **JAMES HARDIE WEATHERBOARD NAILS STAINLESS STEEL**
316 stainless steel 50mm and for single vertical applications 40mm x 2.8mm flathead minimum head diameter 6.8mm. Refer to relevant James Hardie technical literature.
- 2.18 **SOFFIT JOINTERS, CAPPING MOULDS, SCOTIA MOULDS**
Extruded PVC. Refer to relevant James Hardie technical literature.
- 2.19 **JAMES HARDIE WEATHERBOARD PVC ACCESSORIES**
Extruded PVC. Refer to relevant James Hardie technical literature.
- 2.20 **JAMES HARDIE WEATHERBOARD ALUMINIUM ACCESSORIES**
Etch-primed aluminium. Refer to relevant James Hardie technical literature.
- 2.21 **PANEL JOINTERS**
Extruded PVC to suit the selected panel texture. Refer to relevant James Hardie technical literature.
- 2.22 **SEALING STRIPS**
Butynol rubber and/or compressible sealing strips. Refer to relevant James Hardie technical literature.
- 2.23 **HARDIBACKER® BOARD SECTIONS**
PVC base mould, control joint mould, spacer angles and horizontal flashings. Refer to relevant James Hardie technical literature.
- 2.24 **SEALANT**
Silicone or polyurethane sealant. Refer to relevant James Hardie technical literature.
- 2.25 **TIMBER FASCIAS AND BARGE BOARDS**
Dressing grade to NZS 3631 and H3 treated to NZMP 3640. Finger-jointed timber to AS/NZS 1491.
3. **EXECUTION**
- 3.1 **MOISTURE CONTENT**
Maximum allowable equilibrium moisture content (EMC) of framing at enclosure 24%.
- 3.2 **GENERALLY**
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 PAPERS**
Fix breather type building paper to NZS 4214, as detailed. Refer also to relevant James Hardie technical literature.
- 3.4 **STORING JAMES HARDIE PRODUCTS**
Take delivery of sheets dry and undamaged in pallets and stack vertically or lay horizontally on a smooth level surface. Protect edges and corners from damage and cover to keep dry until fixed.
- 3.5 **HANDLING JAMES HARDIE PRODUCTS**
Avoid distortion and contact with potentially damaging surfaces. Do not drag sheets across each other, or across other materials. Protect edges, corners and surface finish from damage.


- 3.6 **SUBSTRATE FOR JAMES HARDIE PRODUCTS**
Do not commence work until the substrate is of the standard required by relevant James Hardie technical literature for the specified finish; plumb, level and in true alignment. Moisture content of timber framing to comply with NZS 3602 moisture content maximums, to minimise shrinkage and movement after sheets are fixed.
- 3.7 **THERMAL BREAK WITH JAMES HARDIE PRODUCTS**
Install thermal break to steel framing, strictly in accordance with relevant James Hardie technical literature.
- 3.8 **INSTALLING JAMES HARDIE PRODUCTS**
Install in accordance with relevant James Hardie technical literature. Refer to the JAMES HARDIE DOCUMENTS clause. Retain current copies of all relevant James Hardie publications on site and ensure that all installers are familiar with requirements for preparation, fixing and finishing James Hardie cladding products and accessories.
- 3.9 **FIRE RESISTANCE RATING JAMES HARDIE PRODUCTS**
Form fire resistance ratings using James Hardie fibre cement sheets, in accordance with James Hardie technical literature.
- 3.10 **BRACING SYSTEM JAMES HARDIE PRODUCTS**
Fix sheets in accordance with relevant James Hardie technical literature and BRANZ appraisal certificate 229.
- 3.11 **INSTALL HARDIBACKER® SUBSTRATE PANELS**
Set out panels with all joints fully supported. Fix in accordance with relevant James Hardie technical literature, including expansion joints and control joints as required. Liaise with the solid plasterer regarding the timing of fixing the building paper overlay. Install overlay in accordance with relevant James Hardie technical literature.
- 3.12 **INSTALL HARDIFLEX® CLADDING PANELS**
Cut sheets dry, form holes and work sheets in accordance with relevant James Hardie technical literature. Cover framing with building paper to James Hardie requirements. Fit and nail sheets to all framing, with all joints fully supported, progressively installing PVC jointers to vertical joints, PVC flashings to horizontal joints and capping moulds to any exposed edges.
- 3.13 **INSTALL HARDITEX™ FLUSH CLADDING SYSTEM**
Cut sheets dry, form holes and work sheets to relevant James Hardie technical literature. Cover framing with building paper to NZS 3604. Fit butynol rubber sealing strips behind control joints before scribe fitting and nailing sheets to all framing. Fit control joints at 5.4 metre maximum centres horizontally and vertically and at inter-storey floor joist level, with vertical structural expansion joints at 14.4 metre centres. Finalise location and form of control and expansion joints on site before commencing cladding work.
- 3.14 **INSTALL JAMES HARDIE WEATHERBOARDS**
Establish a level line and assess the number of boards required, allowing a minimum overlap of 30mm. Fix boards strictly in accordance with relevant James Hardie technical literature, fixing to each stud by fastening through both thicknesses of boards 20mm up from the underside of the lap. Install external and internal corner moulds, soakers and cappings as detailed and as required.
- 3.15 **INSTALL HARDISOFFIT™ SOFFIT PANELS**
Cut sheets dry and scribe fit to fully support all edges and joints. Nail and drill for and insert PVC fasteners to relevant James Hardie technical literature. Fit complete with colour matched jointers and capping moulds.
- 3.16 **INSTALL SILKLINE™ SOFFIT PANELS**
Cut sheets dry and scribe fit to fully support all edges and joints. Nail and drill for and insert PVC fasteners. Fit complete with colour matched jointers and capping moulds. Refer to relevant James Hardie technical literature.
- 3.17 **INSTALL VILLABOARD® FLUSH FINISH PROTECTED SOFFIT PANELS**
Cut sheets dry, and scribe fit to fully support all edges and joints. Fit expansion joints to limit finished areas to 9 metres x 6 metres. Flush joints with bedding compound, paper reinforcing tape and finishing compound to flush width of 150mm. Refer to relevant James Hardie technical literature.
- 3.18 **INSTALL HARDIFLEX® SOFFIT PANELS**
Cut sheets dry and scribe fit to fully support all edges and joints. Nail and drill for and insert PVC fasteners. Fit complete with jointers and capping moulds. Refer to relevant James Hardie technical literature.
- 3.19 **INSTALL EXTERIOR TIMBER FINISHINGS**
Fix timber fascias, barge boards, facings, beads, trim and enclosures level, true to line and face, with all end grain sealed and joints mitred.
- 3.20 **FIX FLASHINGS**
Fix flashings, covers and soakers as detailed and to BRANZ Bulletins 304 "Flashing design" and 305 "Domestic flashing installation."

3.21 USE OF SEALANTS

Selection and use of sealants to follow BRANZ Bulletin 284 "Sealed joints in external claddings - 2. Sealants."

3.22 LEAVE

Leave all work to the standard required by all following trades.



Specification for Sonoguard roofing and decking system on plywood



Roofing and decking

The following application guide is suitable for both roofing and decking situations. The only difference between these two is the texture required from the aggregate.

The decking surface can be controlled using different sized aggregate and different methods of application.

The roofing situation can also have whatever aggregate is required for the expected traffic.

Surface Preparation

To obtain maximum performance clean surface thoroughly to remove all contaminants such as dirt, oil, grease, wax, rust and coatings.

Otherwise no surface preparation is required on plywood.

Plywood Detailing, Priming & Preparation

All plywood must be smooth-faced and exterior grade. Construction must conform to code, but plywood must not be less than 12mm thick. Plywood must be fixed with the following:

- Counter-sunk stainless steel screws at 250mm c/c.
- 5mm gap left between sheets to allow for movement

Priming is not necessary on clean, dry plywood unless it is suspected of being damp ie during winter it is good practice to prime as a matter of course. In this case use Concessive 2530 a two-pot high-viscosity epoxy from MBT.

Mastertop 1090 solvent-based epoxy may also be used in situations where Class A or B construction ply is used and provided it is not allowed to pool.

General details are available on the Sonoguard Datasheet. Those relevant to the plywood roofing situation are:

- All 5mm spaces between abutting sheets must be caulked with NP 1, or Ultra sealants achieving a 5mm joint minimum. This is followed by a pre-stripe 100-150mm wide with 1mm of Base Coat.
- A cant bead at vertical-horizontal junctions will be required in addition to the joints.
- Use sealant and pre-stripe between existing flashings and the plywood deck

Membrane Application

All preparatory work must be completed before application begins. Be certain the substrate is clean, dry, and stable. Sealants and pre-striping should be properly profiled and be cured. The base, and two topcoats are applied with a properly sized squeegee to arrive at the required thicknesses. (Airless spray equipment may also be used.)

The best method to ensure the proper wet film thickness is the use of a grid system. Divide the surface to be coated into grids and calculate the square metres of each. Refer to the coverage chart to determine the quantity of Sonoguard® needed for each grid to arrive at the required thicknesses.

For example, a deck 10m wide can be divided into 1.8m x 10m grids, each containing 28m². One 18.93 litre pail of Sonoguard® base coat will cover 20m² at 1-1.2mm thick. The thickness of all coats can also be verified by the use of a wet film thickness gauge.

Priming (if required)

During the summer priming is not required. During the winter and when the plywood is suspected of being damp prime with Concesive 2530, or Mastertop 1090 if suitable ply is being used

During the winter after thoroughly vacuuming the surface, apply Concesive 2530 to prime all the properly prepared deck surfaces at the rate of 5 - 8m² per litre. Using a short to medium-nap roller, force the primer into pores and voids to eliminate pinholes. Do not apply over pre-striping. **Time priming for late afternoon or early morning application to avoid pinholing due to plywood breathing air out with the increase in temperature.** Dust primer with F1 aggregate to create bond if weather prevents flow of work. Allow primer to fully cure, which is generally the next day, before applying Base Coat.

Base Coat

Apply Sonoguard Base Coat 1-1.2mm thick (1pail = 20m²) using a notched squeegee or roller to entire deck surface, over-coating the properly prepared cracks, joints, and flashings. For sloped areas, use Sonoguard Slope-Grade Base Coat. Do not coat expansion joints over 25mm wide.

Allow curing time of overnight (16 hour minimum). Slightly extend the curing time in cool or dry weather conditions. The surface of the base coat should have a slight tack. If the coating has been exposed for a prolonged period, consult MBT for recommendations. Colour – Light Grey.

Top Coat

Apply Sonoguard top-coats 0.35mm thick (1pail = 45m²). These can be applied by several methods of roller, spray or squeegee to achieve the correct thickness. Following application of the first coat aggregate is broadcast so that a non-slip surface is achieved. The second coat at the same thickness is then applied over the top.

Colour - Light Grey standard.
- Huge range of colours using pigment pack
(1 or 2) per pail of Sonoguard® Tint Base Top Coat.

Allow overnight curing before subjecting to light foot traffic. Full cure of system is dependant on temperature and typically 3-5 days at 23°C is required.

Aggregate

In most roofing situations the system will benefit from a light sprinkle of F1 aggregates but it is important to understand that if the Sonoguard is regularly wet when accessed then we advise using Sonoguard Aggregate.

Different textures can be obtained by using different aggregates at different application rate. The different sands are:

- | | |
|---------------------------|-------------------|
| • J61 sand | Very fine sand |
| • Fulton 1836 silica sand | Light/medium sand |
| • Sonoguard aggregate | 1-2mm |

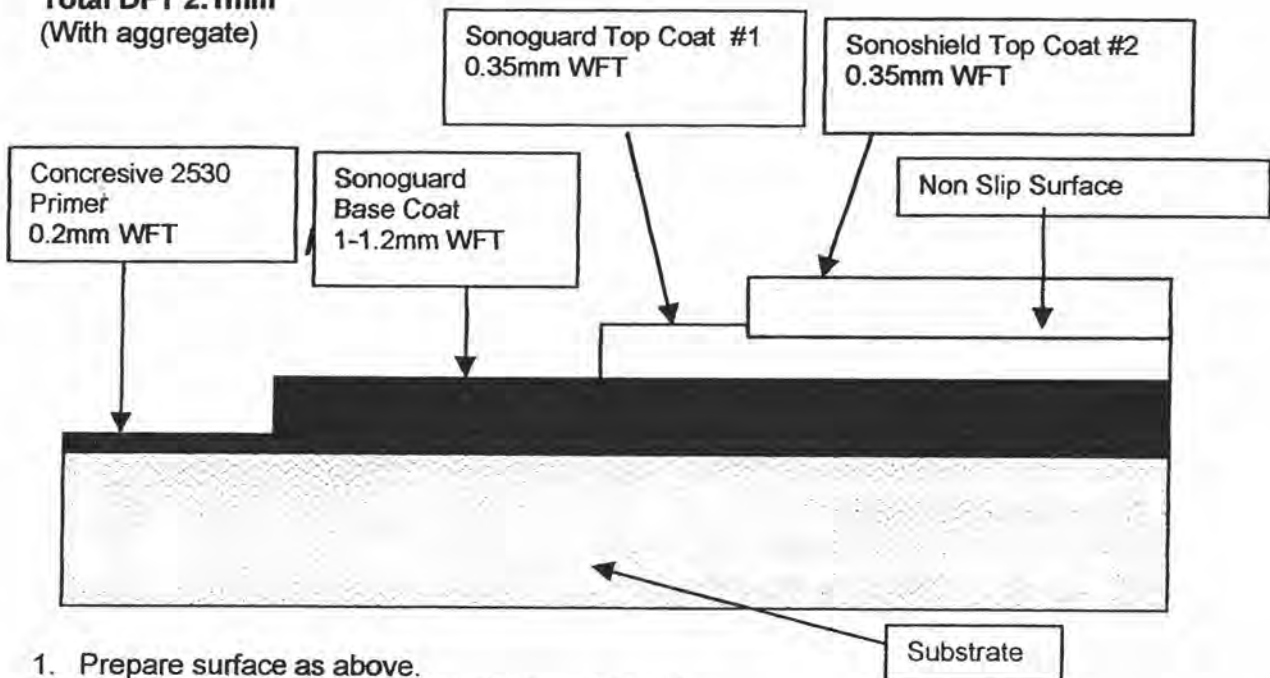
Note:

- Windy conditions can result in wind blown rubbish on system
- If compressed air is being used to remove excess aggregate off surface then ensure it is oil free.

Roof-top & Decking System

No Vehicle Traffic, Occupied Space Under

Total DFT 2.1mm
(With aggregate)



1. Prepare surface as above.
2. Prime surface with Concrete 2530 at 5-8 m²/L.
3. Apply 1-1.2mm Sonoguard[®] Base Coat (using a notched squeegee) at 1L/m² or 20m²/pail. Allow to cure overnight.
4. Apply 0.35mm of Sonoguard Top Coat at 3m²/L or (45m²/pail) and broadcast suitable aggregate for required slip resistance and then allow to cure.
5. The next day remove excess aggregate by vacuuming and applying another 0.35mm over to encapsulate the aggregate.

Curing Time

Allow curing time of 72 hours (minimum) before vehicular use and 48 hours before pedestrian use. Extend the curing time in cool weather conditions. (15 - 5°C average.)

Maintenance

Surfaces may be cleaned with commercial detergents. MBT recommends that a maintenance agreement be established between the owner and applicator. Periodic inspection and repair of damaged surfaces will greatly prolong the performance and life of the system.

Repairing damaged surfaces

To repair surfaces, cut around the damaged area a minimum of 50mm on all sides and remove the membrane.

The substrate must be thoroughly abraded to remove all membrane and primer residue and to expose a fresh surface.

Follow all Sonoguard[®] application procedures and detail treatments in the re-application of repair materials.

FOR BEST PERFORMANCE

- Be sure to allow for movement in the deck by the proper design and use of expansion and control joints
- When applying sealants, use backing materials according to industry standards

- Be certain that all aggregate not properly encapsulated is thoroughly removed
- Use interior locations only with adequate ventilation and with a minimum of 6 air changes per hour
- Do not apply when substrates temperatures are over 35°C, under 5°C. When applying to decks containing between-slab membranes ensure concrete is completely dry
- A variety of sand sizes and configurations may be used to enhance slip or wear resistance. Size and type of material along with means of thorough encapsulation may have a varying effect on degree of slip resistance, aggregate popout, wear, and aesthetics. The specifier with MBT should determine the type most suitable for their specific needs. MBT supplies F5 Aggregate or Sonoguard® Aggregate. The Sonoguard® Aggregate will achieve a slip coefficient of approximately 200% the minimum requirement of AS/NZS 3661.1.Wet.
- Select the proper amount of aggregate to promote slip resistance
- Pre-stripe to level out recessed sealant joints less than 25mm wide for optimal aesthetic appearance
- ~~Prime in late afternoon or early morning when substrate temperature is low or falling so that pinholes are avoided.~~

Avoid application of Sonoguard®

- when inclement weather is present or imminent
- to damp, wet, or contaminated surfaces

Trouble shooting

The following tips can be used to solve possible problems as well as avoid them.

1. **Problem:** Irregular appearance... Possible causes include overly rough substrate, uneven coating application, or uneven distribution of aggregate
Solution: Recoating may diminish an irregular appearance. The number of additional coat(s) is dependent on the degree of irregularity. A sample recoat should be done to test for an acceptable appearance.
 2. **Problem:** Uneven aggregate distribution... Possible causes include casting aggregate into an uneven coating, not casting aggregate consistently.
Solution: Preferably the aggregate should be evenly distributed before encapsulation. If the surface cures unevenly, a recoat may diminish the unevenness. Use a sample area to gauge the results of any recoat.
 3. **Problem:** Inadequate slip resistance... Possible causes include inconsistent coating application, failure to properly embed aggregate or an overly heavy finish coat.
Solution: Lightly abrade surface. Begin by testing in a sample area. If adequate slip resistance is not obtained, contact MBT Technical Sales Representative.
 4. **Problem:** Blisters/Pin Holes... Possible causes include too heavy a coating application, water vapour exiting a wet substrate or priming hot substrate with rising temperatures.
Solution: Cut blisters and spot repair. Extent of repair is dependent on which coat was affected. Recoating and broadcasting to refusal may help.
 5. **Problem:** Intercoat adhesion is poor... Possible causes include: preceding coat is contaminated by dirt or moisture; coating is applied past the critical recoat time.
Solution: Remove poorly bonded coat and reactivate surface using Sonoshield Thinners. Apply Sonoguard® Coating within 1 hour of Sonoshield Thinners application.
 6. **Problem:** Re coat application required or weather delays subsequent coats.
Solution: Re-activate surface with Sonoshield Thinners and apply Sonoguard® coating within 1 hour of Sonoshield Thinners application.
- NOTE: Maximum re coat interval is 3 days at 25°C.**

4502 ALUMINIUM WINDOWS AND DOORS

1 GENERAL

1.1 DOCUMENTS

Documents referred to in this section are:

NZBC	F2/AS1	Hazardous building materials	1.0 Glazing
AS/NZS 2208		Safety glazing materials in buildings	
NZS 3604		Timber frame buildings	
AS 3715		Metal finishing - Thermoset powder coatings for architectural applications	
NZS 4211		Performance of windows	
NZS 4223		Code of practice for glazing in buildings	
		Part 1: The selection and installation of glass in buildings	
		Part 2: The selection and installation of manufactured sealed insulating glass units	
		Part 3: Human impact safety requirements	
		Window Association of New Zealand: Aluminium Window Handbook	
		Window Association of New Zealand: Specification for powder coatings on architectural aluminium products	
		Window Association of New Zealand: Installation code for aluminium joinery products	
		BRANZ Bulletin 349: Finishes for aluminium	

1.2 SUBMIT

Submit full size section samples, with the selected finish of all profiles offered.

1.3 CERTIFICATION

The building wind zone is determined from Table 5.1 and 5.2 of NZS 3604. Provide a certificate from a laboratory accredited by International Accreditation of New Zealand that the windows and doors offered comply with the requirements of NZS 3604 and the required site and building design wind pressure, air leakage and water leakage levels to NZS 4211.

1.4 QUALIFICATIONS

To be fabricated by a member of the Window Association of New Zealand.

1.5 PERFORMANCE

The structural and weather-tight performance of glazing and infill panels to be the responsibility of the window manufacturer.

2 PRODUCTS

2.1 WINDOW AND DOOR SECTIONS

All aluminium members to be formed from extruded sections. Folded sections restricted to flashings and concealed members only.

2.2 GLASS GENERALLY

All glazing to comply with NZS 4223, with particular attention to NZS 4223, part 3 and AS/NZS 2208 where glass could be subject to human impact.

2.3 FLOAT GLASS

To NZS 4223, part 1, clause 101.2.2.2: Glazing quality (selection G). Thickness as required by NZS 4223, part 1.

2.4 PATTERNED GLASS

Translucent, annealed glass with a decorative pattern on one surface.

2.5 LAMINATED GLASS

Grade A safety glazing material to AS/NZS 2208, with PVB or CIP resin interlayer.

2.6 TOUGHENED GLASS

Grade A safety glazing material to AS/NZS 2208.

2.7 SEALED INSULATING GLASS UNITS

To the performance requirements of NZS 4223, part 2, clause 209.

2.8 SOLAR FLOAT GLASS

Float glass, body-tinted or reflective coated glazing.

2.9 ORGANIC POWDER COATING FINISH

To AS 3715 and the Window Association of New Zealand's "Specification for powder coatings on architectural aluminium products." All finished surfaces to show uniformity of gloss and colour (to match approved sample) free of all coating defects.

2.10 ANODISING

To BRANZ Bulletin 349 "Finishes for aluminium."

2.11 FABRICATION SEALANT

To the window manufacturer's requirements.

- 2.12 **GLAZING TAPE AND GASKETS**
To the window manufacturer's requirements.
- 2.13 **FIXINGS**
All fixings and bracketing to be compatible with aluminium. Do not use electroplated zinc fasteners or brass fastenings.
3. **EXECUTION**
- 3.1 **SITE MEASURE**
All window frame measurements to be verified on site prior to fabrication.
- 3.2 **GENERALLY**
Execution to be in accordance with the requirements of NZS 4211 and the Window Association of New Zealand's "Aluminium window handbook" and "Installation code for aluminium joinery products."
- 3.3 **HANDLING**
Avoid distortion of elements during transit, handling and storage. Prevent pre-finished surfaces from rubbing together. Prevent contact with mud, plaster and cement. Do not deliver to site any elements which cannot be immediately unloaded into suitable conditions of storage.
- 3.4 **CORROSION PROTECTION**
All cut ends and holes drilled in aluminium to be sealed, or suitably coated before the frames are installed. Before fixing, apply bituminous coatings, slips or underlays between dissimilar metals in contact, or aluminium in contact with concrete.
- 3.5 **FIX FRAMES**
Fix frames rigidly in place without distortion, to the window manufacturer's and the Window Association of New Zealand's "Aluminium window handbook" requirements, plumb, true to line and face, weathertight and with all openings operating freely.
- 3.6 **DRAINAGE**
All sills to incorporate anti-condensation channels. All sills to sashes and fixed lights to incorporate positive drainage to the exterior.
- 3.7 **GLAZING INSTALLATION**
All glass to be held in aluminium beads and black PVC gaskets.
- 3.8 **SAFETY GLASS INSTALLATION**
Use in all doors, sidelight panels, low level windows and all other locations to comply with NZS 4223, part 3, as modified by NZBC acceptable solution F2/AS1. Glass to comply with AS/NZS 2208.
- 3.9 **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. Head flashings to be finished to match window finish.
- 3.10 **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.
- 3.11 **RETAIN PROTECTIVE COVERINGS**
Retain protective coverings and coatings in place during fixing wherever possible. Provide additional protection to prevent marking of surfaces which will be visible in the completed work. Remove protection on completion.
- 3.12 **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.
- 3.13 **MANIFESTATIONS**
To comply with NZS 4223, part 3, 303.1.
- 3.14 **CLEAN GLASS**
Clean off or remove glass indicators at completion of the building. Clean all glass inside and out to a shining finish.
- 3.15 **CLEAN FRAMES**
On completion clean down both sides of all window and door frames using the methods required by the window and door manufacturer.
- 16 **CONFIRM**
Confirm the proper operation of all hardware and operating systems on completion of the installation and again at completion of the contract works.

5101 LINING

1. GENERAL

1.1 DOCUMENTS

Documents referred to in this section are:

NZMP 9	Fire properties of building materials and elements of structure
AS/NZS 1859	Reconstituted wood-based panels
	1859.1 Particleboard
	1859.2 Medium density fibreboard (MDF)
	1859.4 Hardboard
	1859.5 Fibre insulating board (insulation board)
AS/NZS 2269	Plywood - structural
AS 2458	Hardboard
AS/NZS 2589	Gypsum linings in residential and light commercial construction - Application and finishing
	Part 1: Gypsum plasterboard
NZS/AS 2908	Cellulose-cement products 2908.2 Flat sheets
NZS 3602	Timber and wood-based products for use in buildings
NZS 3604	Light timber frame buildings not requiring specific design
NZS 3610	Profiles of mouldings and joinery
NZS 3612	Interior plywood
NZS 4221	Fibrous plaster sheet
	New Zealand Fibrous Plaster Association: Code of recommended practice for the application and fixing of fibrous plaster
	BRANZ Bulletin 328: Selection and use of fasteners
	BRANZ Bulletin 343: Moisture in timber

1.2 MOISTURE CONTENT

Maximum allowable equilibrium moisture content (EMC) in accordance with BRANZ Bulletin 343 for:

	EMC
- Framing at lining (timber-based)	20%
- Framing at lining (plasterboard/fibrous)	16%

1.3 STORAGE

Protect all joinery, fittings and finishes already in place from water staining or damage from lining installation. Immediately make good any damage.

1.4 TIMING OF WORK

Building to be weatherproof before lining work commences.

2. PRODUCTS

Plasterboard

2.1 PLASTERBOARD

Gypsum plaster core encased in a durable face and backing paper formed for standard use, bracing use, water resistance, and for fire rated use as approved by the fire ratings committee of Standards New Zealand for inclusion in NZMP 9. Refer to the drawings and/or the finishing schedule for the location of standard, water resistant, bracing, special ceiling, fire rated, sound rated panels.

2.2 EXTERNAL ANGLE

Slim type 0.5mm galvanised steel.

2.3 CASING BEAD

Slim type 0.5mm galvanised steel or PVC.

2.4 CORNICE

Plasterboard scotia type.

2.5 NAILS

Galvanised clouts 40mm x 2.5mm.

2.6 SCREWS

40 x 6 gauge zinc electro-plated bugle head gypsum drywall screws

2.7 JOINTING

Compound and paper tape to the board manufacturer's requirements

2.8 ADHESIVE

Multi-purpose water based wallboard adhesive

Fibrous Plaster

2.9 STANDARD SHEET

Standard hardness, fungicide treated, fibreglass reinforced fibrous plaster sheet to NZS 4221. Thickness and sheet size to suit the location.

- 2.10 **PREMIUM SHEET**
Premium grade, fungicide treated, fibreglass reinforced fibrous plaster sheet to NZS 4221. Thickness and sheet size to suit the location.
- 2.11 **WATER RESISTANT SHEET**
Water repellent added to standard hardness fibrous plaster sheet to NZS 4221. Thickness and sheet size to suit the location.
- 2.12 **EXTERNAL ANGLES**
Slim type 0.5mm galvanised steel.
- 2.13 **CORNICE**
Cast fibrous plaster as detailed or described on the drawings.
- 2.14 **ORNAMENTS**
Cast fibrous plaster as detailed or described on the drawings.
- 2.15 **NAILS**
Galvanised steel clouts 40mm x 2.5mm.
- 2.16 **TAPE**
Fibreglass mesh 40mm wide.
- 2.17 **STOPPING COMPOUND**
White gypsum stopping compound to the board manufacturer's requirements.
- 2.18 **ADHESIVE**
Multi-purpose water-based wallboard adhesive.
- Sundry Linings And Finishings**
- 2.19 **TIMBER BOARDING**
Selection to NZS 3602.
- 2.20 **STRUCTURAL PLYWOOD**
To AS/NZS 2269 for bracing.
- 2.21 **INTERIOR PLYWOOD**
To NZS 3612 for interior finish.
- 2.22 **PARTICLE BOARD**
Medium density resin bonded to AS/NZS 1859.1.
- 2.23 **MEDIUM DENSITY FIBREBOARD**
Medium density fibreboard resin bonded to AS/NZS 1859.2.
- 2.24 **MEDIUM DENSITY FIBREBOARD, WOOD VENEER FINISH**
Selected veneer factory applied to form panel.
- 2.25 **MEDIUM DENSITY FIBREBOARD, MELAMINE FINISH**
Medium density fibreboard veneered on both sides with melamine-impregnated decorative sheet.
- 2.26 **FIBRE CEMENT SHEET**
Cellulose cement autoclaved sheets to NZS/AS 2908.2.
- 2.27 **PRE-FINISHED FIBRE CEMENT SHEET**
Factory applied water resistant coating on cellulose cement autoclaved sheets to NZS/AS 2908.2.
- 2.28 **WOOD FIBREBOARD**
Low density wood fibre insulating board to AS/NZS 1859.5, face-coated with fire-retardant primer/undercoat.
- 2.29 **HARDBOARD**
High density wood fibreboard panels to AS/NZS 1859.4.
- 2.30 **PRE-FINISHED HARDBOARD**
High density wood fibreboard panels to AS/NZS 1859.4, pre-finished with simulated woodgrain laminate, grooved or plain.
- 2.31 **OIL TEMPERED HARDBOARD, COATED**
Factory applied, water resistant coating on high density oil tempered hardboard sheet to AS/NZS 1859.4.
- 2.32 **LAMINATE PANELS**
High pressure decorative melamine laminate, bonded to a high density oil-tempered hardboard sheet to AS/NZS 1859.4, with melamine backing.
- 2.33 **NAILS**
Zinc-plated steel, stainless steel and galvanised steel of pattern to suit location and to BRANZ Bulletin 318 "Selection and use of fasteners."
- 2.34 **TIMBER INTERIOR FINISHING TRIM**
Selection to NZS 3602. As detailed, or if not shown, profile to NZS 3610.
- 2.35 **PVC JOINTERS**
Profiles to suit location and sheet thickness.

- 2.36 **METAL JOINTERS**
Profiles to suit location and sheet thickness.
3. **EXECUTION**
- 3.1 **SUBSTRATE**
To NZS 3604, sections 8, 10, 12, 13 and the standard required by the lining manufacturer's requirements. Moisture content of timber framing to be at or below specified levels. Starting work implies acceptance the substrate will allow work of the required standard.
- 3.2 **CONFIRM LEVELS OF FINISH**
Before commencing work, confirm the surface finish assessment procedures necessary to ensure the specified levels of finish will be obtained.
- Plasterboard**
- 3.3 **LEVELS OF FINISH**
Provide levels of finish to standards laid down by AS/NZS 2358.1 as follows:
Level 3: surfaces receiving heavy to medium texture finishes
Level 4: surfaces receiving light texture or wall covering finishes
Level 5: surfaces receiving thin coating finishes.
- 3.4 **LINE CEILINGS**
Line ceilings with plasterboard sheets, fastened to the plasterboard manufacturer's requirements.
- 3.5 **LINE WALLS**
Line walls that are up to 2400mm high by the horizontal method and walls above 2400mm high by the vertical method, with plasterboard sheets, fastened to the plasterboard manufacturer's requirements.
- 3.6 **LINE WET AREA WALLS**
Line wet area walls with water resistant plasterboard sheets using adhesive and nail fixing to studs at centres to suit the surface finish and to the plasterboard manufacturer's details.
- 3.7 **FORM BRACING PANELS AND SYSTEMS**
Form using high density plasterboard sheets fixed with clout-washers and clouts to the plasterboard manufacturer's details. For panels strap substrate and for systems diagonal brace to NZS 3604, sections 5, 8 and 13.5.
- 3.8 **FORM FIRE RATED PANELS AND SYSTEMS**
Form following the sheet manufacturer's specifications and details for the required fire rating.
- 3.9 **FORM SOUND RATED PANELS AND SYSTEMS**
Form following the sheet manufacturer's specifications and details for the required sound rating.
- 3.10 **FIX EXTERNAL ANGLES**
Fix full length to all external corners with clouts at 100mm each side staggered.
- 3.11 **FIX CORNICE**
Fix with adhesive and with all joints scribe-fitted to the plasterboard manufacturer's requirements.
- 3.12 **FILL JOINTS**
Fill joint recess with bedding compound, centre the paper tape, apply second coat of bedding compound followed by a coat of finishing compound; allow to dry and lightly sand off, all to the plasterboard manufacturer's requirements.
- 3.13 **STOPPING**
Fill nail holes and flush up external angles with two successive coats of bedding compound followed by a coat of finishing compound, allow to dry and lightly sand off, all to the plasterboard manufacturer's requirements.
- Fibrous Plaster**
- 3.14 **GENERALLY**
All fibrous plaster work to be in accordance with the New Zealand Fibrous Plaster Association's "Code of recommended practice for the application and fixing of fibrous plaster."
- 3.15 **LEVELS OF FINISH**
Provide levels of finish to standards laid down by the fibrous plaster panel manufacturer.
- 3.16 **REBATES**
Form rebates in sheets for taping of joints.
- 3.17 **LINE CEILINGS**
Line ceilings with fibrous plaster sheets and fix with adhesive using temporary double-head nailing all as required by the sheet manufacturers.
- 3.18 **LINE WALLS**
Line walls with fibrous plaster sheets and fix with adhesive using temporary double-head nailing all as required by the sheet manufacturers.
- 3.19 **FIX EXTERNAL ANGLES**
Fix full length angles to all external corners with clouts at 100mm centres, each side staggered.

- 3.20 **FIX CORNICE**
Fix with the sheet manufacturer's required adhesive, all joints mitred and with pattern matched.
- 3.21 **FIX ORNAMENTS**
Fix as required by the sheet manufacturer and to detail.
- 3.22 **JOINTS**
Dip tape in stopping plaster, set in joint rebates and flush up to a smooth surface as required.
- 3.23 **STOPPING**
Fill fastening holes, angles and damaged arrises with stopping plaster and flush up to a smooth surface as required by the sheet manufacturer.
- Sundry Linings And Finishings**
- 3.24 **INSTALL TIMBER BOARDING**
Selected profile timber boarding, secret nailed. Mix and match board grain before installation.
- 3.25 **FIX PLYWOOD PANELLING**
Fix to timber framing to detail and to the panel manufacturer's requirements.
- 3.26 **FIX PARTICLE BOARD**
Fix to timber framing to detail and to the panel manufacturer's requirements.
- 3.27 **FIX MEDIUM DENSITY FIBREBOARD**
Fix to timber framing to detail and to the panel manufacturer's requirements.
- 3.28 **FIX MEDIUM DENSITY FIBREBOARD, WOOD VENEER**
Fix to timber framing to detail and to the panel manufacturer's requirements.
- 3.29 **FIX MEDIUM DENSITY FIBREBOARD, MELAMINE VENEER**
Fix to timber framing to detail and to the panel manufacturer's requirements.
- 3.30 **FIX FIBRE CEMENT SHEET**
Fix to timber framing with jointing as detailed and to the panel manufacturer's requirements.
- 3.31 **FIX COATED FIBRE CEMENT SHEET**
Fix to timber framing with jointing as detailed and to the panel manufacturer's requirements.
- 3.32 **FIX WOOD FIBREBOARD**
Fix to timber framing with jointing as detailed and to the panel manufacturer's requirements.
- 3.33 **FIX HARDBOARD**
Fix to timber framing with jointing as detailed and to the panel manufacturer's requirements.
- 3.34 **FIX PRE-FINISHED HARDBOARD**
Fix to timber framing with jointing as detailed and to the panel manufacturer's requirements.
- 3.35 **FIX COATED OIL TEMPERED HARDBOARD**
Fix to timber framing with jointing as detailed and to the panel manufacturer's requirements.
- 3.36 **FIX LAMINATE PANELS**
Fix to timber framing with jointing as detailed and to the panel manufacturer's requirements.
- Sundry Items**
- 3.37 **FIX PROPRIETARY ACCESS HATCH**
Install and fix to the hatch manufacturer's requirements.
- 3.38 **CEILING ACCESS**
Trim out ceiling to form 600mm x 500mm square clear opening. Fit finished 40mm x 12mm timber facings to perimeter, set to support a lift-out panel of the ceiling material.
- 3.39 **INSTALL TRIM**
Scribe and fit reveal linings to exterior timber joinery, architraves to interior joinery, skirtings to all walls and timber bead cornices as detailed and shown.
- 3.40 **CLEAN**
Clean all adjoining surfaces and fittings of spots, marks, dust and droppings.
- 3.41 **LEAVE**
Leave all work to the standard required by all following trades

5101H JAMES HARDIE LINING

1. GENERAL

1.1 DOCUMENTS

Documents referred to in this section are:

NZS/AS 2908	Cellulose-cement products	2908.2 Flat sheets
NZS 3602	Timber and wood-based products for use in buildings	
NZS 3610	Profiles of mouldings and joinery	
BRANZ appraisal certificate 229: James Hardie wall bracing systems		

1.2 JAMES HARDIE DOCUMENTS

James Hardie documents that relate to work in this section are:

- Hardiglaze® Technical
 - Hardiglaze® Selling
 - Hardiglaze® Premium Selling
 - Hardiglaze® BRANZ appraisal certificate 243
 - Villaboard® Technical
 - Villaboard® Selling
 - Villaboard® BRANZ appraisal certificate 239
 - Villaboard® Drywall Systems Technical
 - Villaboard® Installation Checklist
 - Villaboard® Bedding and Finishing Compound Fixing and Finishing Schedules
 - BRANZ Appraisal Certificate 229: James Hardie wall bracing systems
- Copies of the above literature are available by phoning the James Hardie Helpline on 0800 808 868.

1.3 MOISTURE CONTENT

Maximum allowable equilibrium moisture content (EMC) for framing at lining 18%.

1.4 PROTECT

Protect all joinery, fittings and finishes already in place from water staining or damage from plasterboard installation. Immediately make good any damage.

1.5 BUILDING

Building to be weatherproof before lining work commences.

2. PRODUCTS

James Hardie Villaboard® Products

2.1 GENERALLY

All James Hardie fibre cement sheets to comply with NZS/AS 2908.2.

2.2 VILLABOARD® SHEET LINING

Treated cellulose fibre in a matrix of cement and sand autoclaved sheet, primed on one side.

2.3 VILLABOARD® NAILS

Hardiflex® 40mm x 2.8mm galvanised flathead nails for 6mm and 9mm thick linings.
Weatherboard 50mm x 2.8mm galvanised flathead nails for fixing over gypsum plaster board.

2.4 TILE AND SLATE UNDERLAY ANNULAR THREADED NAILS

James Hardie 25mm x 2.5mm annular threaded hot dipped galvanised for 6mm sheet linings under ceramic tiles.

2.5 VILLABOARD® SCREWS FOR POWER SCREW GUN DRIVING

For timber framing: Villadrive 3.5mm - 18 x 30mm with self embedding head, supplied by James Hardie.
For steel framing: Villadrive 3.5mm x 25mm with self embedding head, supplied by James Hardie.

2.6 VILLABOARD® CONTROL JOINTS SECTION

James Hardie purpose made 45mm x 10mm shaped PVC control joint.

2.7 VILLABOARD® EXTERNAL CORNER SECTIONS

James Hardie 30mm x 30mm x 1.2mm PVC angle.

2.8 VILLABOARD® PVC JOINTERS

Hardijointer® 6mm PVC jointer.

2.9 VILLABOARD® PVC PERIMETER ANGLES

James Hardie 30mm x 30mm PVC 2-piece perimeter angles.

2.10 BATTENS, TIMBER

Minimum ex 45mm wide x 40mm gauged timber.

2.11 BATTENS, STEEL

Minimum 72mm wide x 23mm deep x 0.55mm thick with 37mm bearing surface face galvanised steel (275 gm/m² zinc coating).

- 2.12 **PACKERS**
3mm James Hardie fibre cement packers.
- 2.13 **POLYETHYLENE TAPE FOR VILLABOARD®**
Self adhesive polyethylene for behind expressed joints and expressed control joints.
- 2.14 **JOINT REINFORCING TAPE FOR VILLABOARD®**
52mm wide perforated paper tape.
- 2.15 **WALL BOARD ADHESIVE FOR VILLABOARD®**
Solvent based wall board adhesive.
- 2.16 **VILLABOARD® BEDDING COMPOUND**
Pre-mixed bedding compound.
- 2.17 **VILLABOARD® FINISHING COMPOUND**
Finishing compound in powder form.
- 2.18 **SEALANT FOR VILLABOARD®**
Silicone or polyurethane sealant. Refer to relevant James Hardie technical literature.
- James Hardie Hardiglaze® Products**
- 2.19 **HARDIGLAZE® SHEET LININGS**
Treated cellulose fibre in a matrix of cement and sand autoclaved sheet, polyurethane coated on one side.
- 2.20 **HARDIGLAZE® FIXINGS**
40mm nylon Fastfix fasteners.
- 2.21 **HARDIGLAZE® CORNER MOULDS**
Flexible edge 1-piece external and 2-piece internal corner moulds in PVC gloss white.
- 2.22 **HARDIGLAZE® PVC ACCESSORIES**
Extruded PVC supplied by James Hardie.
- 2.23 **WALL BOARD ADHESIVE FOR HARDIGLAZE®**
Solvent based or foam polyurethane wallboard adhesive. Refer to relevant James Hardie technical literature.
- 2.24 **SEALANT FOR HARDIGLAZE®**
Silicone sealant. Refer to relevant James Hardie technical literature.
- Sundry Items**
- 2.25 **INTERIOR FINISHING, TIMBER**
Selection to NZS 3602. As detailed, or if not shown, profile to NZS 3610.
3. **EXECUTION**
- 3.1 **INSTALLING JAMES HARDIE PRODUCTS**
To be strictly in accordance with relevant James Hardie technical literature. Refer to the JAMES HARDIE DOCUMENTS clause. Retain current copies of all relevant James Hardie publications on site and ensure that all installers are familiar with requirements for preparation, fixing and finishing James Hardie cladding products and accessories.
- James Hardie Villaboard®**
- 3.2 **STORAGE**
Take delivery of sheets dry and undamaged in pallets and stack horizontally on a smooth, level surface. Protect edges and corners from damage and cover to keep dry until fixed.
- 3.3 **HANDLING**
Avoid distortion and contact with potentially damaging surfaces. Do not drag sheets across each other, or across other materials. Protect edges, corners and surface finish from damage.
- 3.4 **SUBSTRATE**
Do not commence work until the substrate is of the standard required by relevant James Hardie technical literature for the specified finish; plumb, level and in true alignment. Moisture content of timber framing to comply with NZS 3602 moisture content maximums, to minimise shrinkage and movement after sheets are fixed.
- 3.5 **FIRE RESISTANCE RATING JAMES HARDIE PRODUCTS**
Form fire resistance ratings using James Hardie fibre cement sheets, in accordance with James Hardie technical literature.
- 3.6 **ACOUSTIC RATING**
Fix sheets over plasterboard sheets.
- 3.7 **BRACING SYSTEM**
Fix sheets in accordance with relevant James Hardie technical literature and BRANZ appraisal certificate 229.

- 3.8 **FIXING WITH BUTT JOINTS**
Cut sheet using the appropriate method for the specified finish. Prepare and fix square edged sheets in accordance with relevant James Hardie technical literature. Joint width: 1-2mm
- 3.9 **FIXING WITH EXPRESSED JOINTS**
Prepare and fix square edged sheet in accordance with relevant James Hardie technical literature.
Joint backing: Black self adhesive polyethylene tape
- 3.10 **FIXING WITH PVC JOINTERS**
Prepare and fix square edged sheet in accordance with relevant James Hardie technical literature. Include flexible sealant in wet areas.
- 3.11 **FIXING WITH FLUSH JOINTED WALLS, PAINT OR WALLPAPER**
Prepare and fix recessed edge sheets in accordance with relevant James Hardie technical literature.
- 3.12 **ADHESIVE FIXING WITH FLUSH JOINTED WALLS, PAINT OR WALLPAPER**
Prepare and fix recessed edge sheets in accordance with relevant James Hardie technical literature. Fix with screws and/or nails at edges. Use a combination of adhesive and fasteners to intermediate studs.
- 3.13 **FIXING WITH FLUSH JOINTED WALLS, HEAVY VINYL**
Prepare and fix recessed edge sheets in accordance with relevant James Hardie technical literature.
- 3.14 **ADHESIVE FIXING WITH FLUSH JOINTED WALLS, HEAVY VINYL**
Prepare and fix recessed edge sheets in accordance with relevant James Hardie technical literature. Fix with screws and/or nails at edges. Use a combination of adhesive and fasteners to intermediate studs.
- 3.15 **FIXING WITH FLUSH JOINTED CEILINGS FOR PAINT**
Fix ceiling battens at 600mm centres maximum. (Do not fix sheets to the underside of roof trusses). Fix sheets in an offset pattern so that adjacent end joints do not coincide. Break the ceiling into bays not exceeding 9 metres x 6 metres and provide expansion joints at the perimeter of each bay. Provide expansion joints at the junction of large ceilings and narrow passages.
- 3.16 **ADHESIVE FIXING WITH FLUSH JOINTED CEILINGS, PAINT**
Fix ceiling battens at 600mm centres maximum. (Do not fix sheets to the underside of roof trusses). Fix sheets in an offset pattern so that adjacent end joints do not coincide. Use a combination of adhesive and fasteners to intermediate battens. Break the ceiling into bays not exceeding 9 metres x 6 metres and provide expansion joints at the perimeter of each bay. Provide expansion joints at the junction of large ceilings and narrow passages.
- 3.17 **FIXING IN CERAMIC TILED AREAS**
Prepare and fix sheets generally horizontally, in accordance with relevant James Hardie technical literature. Provide control joints around the perimeter of the sheets when using this method.
- 3.18 **PROVIDE VERTICAL CONTROL JOINTS**
Provide vertical control joints at 7.2 metre centres maximum. Provide acoustic sealant in walls having an acoustic rating.
- 3.19 **PROVIDE HORIZONTAL CONTROL JOINTS**
Provide horizontal control joints at the floor joist level of all upper-storey floors and at 4.8 metre centres maximum.
- 3.20 **PROVIDE EXTERNAL CORNER ANGLE**
Provide PVC external corner angle to all external corners.
- 3.21 **INTERNAL CORNERS**
Use recessed edge sheets for all non-tiled internal corners.
- 3.22 **SILICONE JOINTS**
Provide polyethylene tape behind all joints that are to be finished with flexible sealant
- 3.23 **LEVELS OF FINISH**
To conform with the following levels of finish:
Level 0 finish: Taping, stopping or finishing not required.
Level 1 finish: Joints and corners taped and finished with bedding compound. Remove surplus compound. Tool marks and ridges are acceptable to a small degree.
Level 2 finish: Joints and corners taped and finished with bedding compound. The finish to be smooth enough to accept vinyl, ceramic tiles or textured coating without blemishes.
Level 3 finish: Joints and corners taped and finished with bedding compound and a minimum of one separate coat of joint compound and finishing compound applied over all joints, angles, fastener heads and accessories. All joint compound and finishing compound to be finished free of tool marks and ridges.
Level 4 finish: Joints and corners taped and finished with bedding compound and a minimum of one separate coat of joint compound applied over all joints, angles, fastener heads and accessories. A thin skim coat of finishing compound to then be applied to the entire surface. The surface to be finished free of tool marks and ridges to achieve a smooth, true surface.
Level 5 finish: Water resistant skim coat finish over entire sheet and joint
- 3.24 **JOINT FINISHING FOR PAINT OR WALLPAPER**
Fill recess with bedding compound and joint reinforcing tape. Apply a coat of bedding compound. Flush over fasteners with one coat of bedding compound. Apply a coat of finishing compound. Lightly sand to achieve the required level of finish.

- 3.25 **JOINT FINISHING FOR HEAVY VINYL**
Fill recess with bedding compound and joint reinforcing tape. Apply a coat of bedding compound. Flush over fasteners with one coat of bedding compound. Lightly sand to achieve the required level of finish
Finish level: 2
- 3.26 **JOINT FINISHING FOR TILED AREAS**
Flush joints and corners with bedding compound to achieve a smooth finish. Flush over fasteners with 2 successive coats of bedding compound to achieve a smooth finish.
James Hardie Hardiglaze®
- 3.27 **STORAGE**
Take delivery of sheets dry and undamaged in pallets and stack horizontally on a smooth, level surface. Protect edges and corners from damage and cover to keep dry until fixed.
- 3.28 **HANDLING**
Avoid distortion and contact with potentially damaging surfaces. Do not drag sheets across each other, or across other materials. Protect edges, corners and surface finish from damage.
- 3.29 **SUBSTRATE**
Do not commence work until the substrate is of the standard required by relevant James Hardie technical literature for the specified finish; plumb, level and in true alignment. Moisture content of timber framing to comply with NZS 3602 moisture content maximums, to minimise shrinkage and movement after sheets are fixed.
- 3.30 **FIXING HARDIGLAZE®**
Cut, prepare and fix sheets in accordance with relevant James Hardie technical literature.
- 3.31 **HARDIGLAZE® WET AREA JOINTING**
Silicone sealant-fill all PVC jointers, external and internal corners and cap moulds, strictly in accordance with relevant James Hardie technical literature.
- 3.32 **HARDIGLAZE® FLASHING DETAILS TO BATH**
Form and seal strictly in accordance with relevant James Hardie technical literature.
- 3.33 **HARDIGLAZE® SHOWER DRIP EDGE DETAIL**
Form and seal strictly in accordance with relevant James Hardie technical literature.
- Sundry Items**
- 3.34 **CEILING ACCESS**
Trim out ceiling to form 600mm x 500mm square clear opening. Fit finished 40mm x 12mm timber facings to perimeter, set to support a lift-out panel of the ceiling material.
- 3.35 **FIX TRIM**
Scribe and fit facings to exterior joinery, architraves to interior joinery, skirtings to all walls and timber bead cornices as detailed and shown.
- 3.36 **CLEAN**
Clean all adjoining surfaces and fittings of spots, marks, dust and droppings.
- 3.37 **LEAVE**
Leave all work to the standard required by all following trades.

5501 JOINERY FITTINGS

1. GENERAL

1.1 DOCUMENTS

Documents referred to in this section are:

NZBC	DI/AS1	Access routes	4.0 Stairways
AS/NZS 1859	Reconstituted wood based panels		1859.2 medium density fibreboard (MDF)
NZS 3602	Timber and wood-based products for use in buildings		

2. PRODUCTS

- 2.1 MEDIUM DENSITY FIBREBOARD BACKING BOARD
Medium density fine wood fibreboard sheet to AS/NZS 1859.2. Thickness: 6mm
- 2.2 PRE-FINISHED MDF BACKING BOARD
Medium density fine wood fibreboard sheet to AS/NZS 1859.2. Thickness: 6mm
- 2.3 SOLID TIMBER ELEMENTS
Selection to NZS 3602.
- 2.4 STAIRCASE ELEMENTS
Timber selections to NZS 3602.
- 2.5 CARCASE
Melamine urea formaldehyde resin bonded medium density sheet to AS/NZS 1859.2.
- 2.6 PRE-FINISHED CARCASE
Melamine urea formaldehyde resin bonded, medium density sheet to AS/NZS 1859.2, veneered both sides, with decorative sheet impregnated with melamine resin.
- 2.7 CUPBOARD DOORS, PRE-FINISHED
Melamine urea formaldehyde resin bonded, medium density sheet to AS/NZS 1859.2, veneered both sides, with decorative sheet impregnated with melamine resin.
- 2.8 CUPBOARD DOORS, WOOD VENEER
Medium density wood fibreboard to AS/NZS 1859.2, veneered with selected species wood veneer.
- 2.9 DRAWER FRONTS
As for CUPBOARD DOORS.
- 2.10 SHELVING
As for PRE-FINISHED CARCASE, supported on adjustable shelf studs.
- 2.11 BENCHTOPS, CONSTRUCTION
As detailed on the drawings.
- 2.12 JOINERY FITTINGS, COMPONENTRY
Carcase connectors to be one piece steel straight deep cut thread, fibreboard screws with press fit plastic trim cap. Carcase fasteners to be knocked down type centric sphere zinc alloy connectors with connecting bolts, sleeves and dowels to suit each particular fastening location.
- 2.13 HINGES
As shown and described on the drawings.
- 2.14 HARDWARE
Drawer runners, catches, locks, stays, handles, metal and plastic connectors, shelf supports, support brackets, rails and sundry fittings, all as shown and described on the drawings.
- ### 3. EXECUTION
- 3.1 GENERALLY
Execution to include those methods, practices and processes contained in the current syllabus for the National Certificate in Carpentry and the National Certificate in Joinery (cabinetry, exterior joinery, stairs).

3.2 **FABRICATION QUALITY**

Check site dimensions. Carry out machining within the practices required for the particular timber, wood product or pre-finished wood product being used. Machine drill and cut all holes and recesses and form all joints to the componentry manufacturer's requirements. All work to be accurate, square and true to line and face.

3.3 **FABRICATE JOINERY FITTINGS**

Carry out jointing, dowelling and all other operations necessary for the proper assembly of the fittings as detailed with all fixings concealed unless otherwise detailed. Scribe fit adjustable shelves with 4 shelf pins and locate force fit pin holes at 50mm maximum centres in solid checks. Construct drawers as detailed, using proprietary metal section drawer runners. Fit drawers with 3mm clearance into the drawer space.

Hang doors on concealed hinges.

Use glue joints where provision for shrinkage is not required, with contact surfaces, gluing and pressure all applied to the glue manufacturer's requirements.

Locate and drive connectors and connecting bolts to the bolt manufacturer's requirements.

3.4 **INSTALL JOINERY FITTINGS**

Scribe fit on site - level, square, plumb and true to line and face.

3.5 **FABRICATE TIMBER STAIRS**

To comply with NZBC acceptable solution D1/AS1, 4.0. closed type, unless detailed otherwise. Ex 50mm strings, with ex 50mm treads housed into ex 25mm risers. House and wedge treads and risers 15mm into strings, all glued, wedged and blocked. Form nosing overhangs of 25mm by splaying risers forward to finish flush with the front of the treads. Fabricate and install the handrails and balustrading as detailed, complete with all associated metal componentry and hardware.

3.6 **WARDROBE AND COAT CUPBOARD**

Fit out with 300mm wide melamine faced board shelf, on ex 25mm scotia bead to back and ends. All exposed edges clashed to match. Fit the selected powder-coated aluminium coat rail to the front edge of the shelf.

3.7 **STORAGE CUPBOARD**

Fit out with 5 full depth melamine faced board shelves on ex 25mm scotia beads along back and ends. All exposed edges clashed to match. Shelf heights as shown on the drawings.

3.8 **LINEN CUPBOARD**

Fit out with 2 full depth 20mm x 70mm timber slat shelves on ex 25mm scotia bead along ends.

3.9 **LEAVE**

Leave all work to the standard required by all following trades.

6201 TILING

1. GENERAL

1.1 DOCUMENTS

Documents referred to in this section are:

NZBC	D1/AS1	Access Routes	2.1 Slip resistance
AS 2358	Adhesives for ceramic tiles		
AS/NZS 3661	Slip resistance of pedestrian surfaces		3661.1 Requirements
AS 3740	Waterproofing of wet areas within residential buildings		
AS 3958	Ceramic tiles	Part 1: Guide to the installation of ceramic tiles	
BS 5980	Adhesives for ceramic tiles		
BS 6431	Ceramic floor and wall tiles		
BRANZ publication: Good Tiling Practice			

1.2 QUALIFICATIONS

All work in this section to be carried out by competent tilers, experienced with the materials and techniques specified.

1.3 ADHESIVES COMPATIBILITY

All adhesives selected for use on proprietary substrates or waterproof membranes to have documented compatibility approval from the respective manufacturers.

1.4 SAMPLES

Submit samples of the tiles specified, sufficient to show the pattern and the range of colour finish.

1.5 SLIP RESISTANCE

The owner to confirm which tiled surfaces are "wet" and which are "dry" for testing and confirmation purposes.

To comply with NZBC acceptable solution D1/AS1, clause 2.1.

All floor tiles, when in place on a level access route, to have a mean coefficient of friction not less than 0.4 when tested in accordance with AS/NZS 3661.1, appendix A and B.

All floor tiles, when in place on a sloping access route, to have a coefficient of friction of not less than $0.4 \times 0.0125S$ (S = slope of surface expressed as a percentage).

2. PRODUCTS

2.1 WALL TILES

To BS 6431.

2.2 FLOOR TILES

To BS 6431.

2.3 RIGID SHEET UNDERLAYS

Refer to 3801 CARPENTRY.

2.4 SHEET WATERPROOFING MEMBRANE

Refer to 4401 MEMBRANE ROOFING.

2.5 LIQUID WATERPROOFING MEMBRANE

To AS 3740.

2.6 CEMENT BASED SCREED

Mix of 3:1 Portland cement, wash-mix sand, gauged with liquid polymer additive to the tile manufacturer's requirements.

2.7 TILE ADHESIVE

To AS 2358 and BS 5980.

2.8 GROUT

Cement based, compressible and to suit the particular location and use.

2.10 MOVEMENT CONTROL JOINT SEALANT

To BRANZ "Good Tiling Practice," section 8.0.

3. EXECUTION

3.1 HANDLING AND STORAGE

Handle tiles with care to avoid chipping, soiling and damage. Store on hard, level standings in non-traffic, non-work areas that are enclosed, clean and dry. Reject all damaged tiles.

3.2 SUBSTRATE

Ensure that all services and accessories are in place and located to suit the tile layout, with the substrate required for tiling work. Commencement of the work means the substrate and environment are accepted by the tile layer as satisfactory.

3.3 TEMPERATURE

Do not carry out tiling where the ambient temperature is below 5 degrees C, or onto a substrate with a temperature higher than 40 degrees C.

3.4 LAYOUT

Before commencing work, obtain approval for the proposed layout of tiles, expansion joints and other visual considerations of the finished work.

3.5 GENERALLY

All surface preparation and tiling work to be in accordance with AS 3958, part 1, as modified by BRANZ "Good Tiling Practice."

- 3.6 **NEW CONCRETE AND MASONRY WALLS PREPARATION**
Concrete walls to be air dried for 4 weeks before applying mortar or adhesive. Remove all contaminants affecting bonding, adhesion by steam cleaning. Surface to finish clean and dry, with a texture giving a complete key.
- 3.7 **EXISTING WALL SURFACES PREPARATION**
Remove all paint and other finishes sufficiently to obtain a key and prepare in accordance with the adhesive manufacturer's requirements. Variation in background to be a maximum of + or - 4mm in 2 metres lineal.
- 3.8 **EXISTING SHEET WALL LININGS PREPARATION**
Remove all contaminants that may affect bonding or adhesion. Surface to finish clean and dry with a texture providing a complete key, to the sheet manufacturer's requirements and with a maximum variation in the background plane of + or - 4mm in 2 metres lineal. Remove all paint and other finishes from existing sheet linings. Surface to finish clean and dry with a texture providing a complete key.
- 3.9 **CONCRETE FLOORS PREPARATION**
Completely remove from the surfaces all contaminants such as paints, oils, release and curing compounds. Remove all projective unevenness and loose material to leave a clean, dust and dirt-free surface. Remove all existing finishes down to the concrete. If the exposed concrete finish is not suitable then scabble the surface to expose the coarse aggregate.
- 3.10 **TIMBER FLOORS PREPARATION**
Confirm with the owner that the deflection of the timber floor is within the range of $1/360^{\text{th}}$ span. Completely remove from the surface all existing finishes, punch nail heads and sand to a smooth, clean, dust-free surface.
- 3.11 **LAYING SHEET WATERPROOFING MEMBRANES**
Refer to 4401 MEMBRANE ROOFING.
- 3.12 **LAYING CEMENT SCREED**
Apply a proprietary cement slurry bond coat over the whole of the floor to the tile manufacturer's requirements. Thoroughly mix and place a 40mm thick mortar bed over the bond coat and firmly tamp, screed and compact to the required level. In waterproofed areas where the cement screed has been laid over the waterproofing membrane, the screed surface to be protected by a further waterproof coating before laying tiles.
- 3.13 **APPLYING LIQUID WATERPROOFING MEMBRANES**
Apply the selected liquid waterproof membrane system to the membrane manufacturer's requirements and in accordance with AS 3745.
- 3.14 **TILE FIXING GENERALLY**
Apply adhesive, prepare and fix tiles by the method required by the adhesive manufacturer and tap them firmly into place.
- 3.15 **TILE FIXING, CONCRETE, CEMENT-BASED ADHESIVE, THICK BED**
Apply and float thick bed cement-based adhesive to a maximum 6mm bed thickness to the tile manufacturer's requirements. Rib surface with a notched trowel, press the tile and beat it into place with 3mm joints, and to obtain adequate coverage of adhesive on the back of each tile.
- 3.16 **TILE FIXING, CONCRETE, CEMENT-BASED ADHESIVE, THIN BED**
Apply and float thin bed cement-based adhesive to a minimum 3mm bed thickness to the tile manufacturer's requirements. Rib surface with a notched trowel, press the tile and beat it into place with 3mm joints, and to obtain adequate coverage of adhesive on the back of each tile.
- 3.17 **TILE FIXING, RIGID SHEET LININGS**
Refer to 3801 CARPENTRY for the installation of rigid sheet linings. Prime the surface after the curing of any waterproof membrane. Spread adhesive to a uniform minimum thickness of 3mm and rib it with a notched trowel to the tile manufacturer's requirements. Press the tile and beat it into place to obtain adequate coverage by adhesive on the back of each tile.
- 3.18 **TILE FIXING, INTERIOR TIMBER FRAMED FLOORS**
Refer to 3801 CARPENTRY for the installation of rigid sheet underlays. After the curing of any waterproof membrane, prime the surface, spread adhesive to a uniform minimum thickness of 3mm and rib it with a notched trowel to the tile manufacturer's requirements. Press the tile and beat it into place to obtain adequate coverage by adhesive on the back of each tile.
- 3.19 **GROUTING**
Remove spacers. Prepare joints, mix and apply proprietary grout and finish off to the grout manufacturer's requirements. Grout to finish uniform in colour, smooth and without voids, pinholes or low spots.
- 3.20 **MOVEMENT CONTROL JOINTS**
To be a minimum width of 6mm, carried through tile and bedding. Where substantial movement is anticipated, carry through the rigid sheet to the structure. Install joints over expansion joints in structure, at junctions between different backgrounds, where abutting other materials, at storey heights horizontally and 3.0 metres vertically, at internal corners and at junctions with floors and columns. Ensure joints are clean, formed, filled, and the sealant inserted, all to the sealant manufacturer's requirements.
- 3.21 **CLEAN**
Upon completion of setting and grouting, thoroughly sponge and wash the tiles to leave completely clean and without blemish. Finally polish tiles with a clean dry cloth.
- 3.22 **TAKE AWAY**
Take away from the site all unused materials.

6501 CARPETING

1. GENERAL

1.1 SAMPLES

Provide 300mm x 300mm minimum size samples of each carpet for the owner's approval of colour, design and quality. Provide samples of underlay and accessories offered.

1.2 QUALIFICATIONS

All work in this section to be by competent, experienced carpet layers, familiar with the materials and techniques specified.

2. PRODUCTS

2.1 NEEDED UNDERLAY

Slab felt of matted jute or other approved fibre.

2.2 FOAM UNDERLAY

Slab foam plastic.

2.3 RUBBER UNDERLAY

High resilience foam rubber slab, heavy crepe.

2.4 RUBBER UNDERLAY, DOUBLE DIRECT STICK

High resilience foam rubber slab, heavy crepe, kraft paper topped and hessian backed.

2.5 EDGE GRIPPER

Plywood batten with plated toothed metal strip on top, prenailed type for timber substrate and adhesive type for concrete.

2.6 UNDERLAY JOINTING TAPE

Single-sided, self-adhesive cloth strip.

2.7 UNDERLAY FIXING TAPE

Double-sided, self-adhesive cloth strip.

2.8 HEAT-BOND TAPE

Double-stick method carpet tape.

2.9 TRIM AND FIXING BARS

Aluminium section of the type required by the manufacturer of the carpet being laid.

2.10 BINDER BARS

Anodised aluminium section with a fluted face.

2.11 CARPET-TO-CARPET BARS

Anodised aluminium section with fluted face. Fix with matching roundhead counter-sunk screws.

2.12 ADHESIVE PRIMER

Compatible with and approved by the direct stick or double - direct stick adhesive manufacturer.

2.13 ACRYLIC ADHESIVE

Water dispersed non-flammable acrylic based.

2.14 LATEX ADHESIVE

Water based non-flammable natural rubber latex based.

2.15 SOLVENT ADHESIVE

Sprayable contact adhesive polychloroprene based.

2.16 ADHESIVE, DOUBLE DIRECT STICK

Underlay to substrate: water dispersed, non-flammable, acrylic based, pressure sensitive.

2.17 CONTACT ADHESIVE

For carpet joins on underlay use trowel applied polychloroprene rubber.

3. EXECUTION

3.1 COMPLY

Comply with the requirements of the carpet manufacturer including preparation of and procedures over the various substrates.

- 3.2 **SUBSTRATE**
Before starting work inspect the substrate to ensure it will allow work of the required standard and that all fittings and fixtures around which the carpet is to be scribed, are in place.
- 3.3 **PROTECTION**
Protect adjoining work surfaces and finishes during installation and make good any damage to same.
- 3.4 **TAPE**
Tape for binding and seaming to be the type and width required by the carpet manufacturer to suit the specified carpet and the standard of performance required.
- 3.5 **LAYOUT**
Plan the carpet layout so that:
- seams run lengthways
 - traffic runs along the seam
 - light from windows is not across the seam
 - pile faces away from the main natural light source.
- 3.6 **TEMPERATURE**
Acclimatise carpet to a room temperature above 15 degrees centigrade through the whole of the installation.
- 3.7 **STORAGE**
Keep carpet dry and protected from damage, sharp bending or folding.
- 3.8 **PREPARE NEW TIMBER OR PARTICLE BOARD FLOOR**
To be level, sanded smooth and dry with all loose material and dust removed. For direct stick applications, seal the floor to the carpet manufacturer's requirements.
- 3.9 **PREPARE EXISTING TIMBER OR PARTICLE BOARD FLOOR**
Remove all existing coverings including adhesives, waxes and paints. Check for soundness and nail down loose panels or boards. Sand smooth and remove all loose material and dust. For direct stick applications seal the floor to the carpet manufacturer's requirements.
- 3.10 **PREPARE NEW CONCRETE FLOOR**
To be level, smooth, clean, cured and dried to a relative humidity not exceeding 65% and with all loose material and dust removed. For direct stick applications turn off drying aids for not less than 4 days, then test for relative humidity using an approved hygrometer. Take readings in all corners, along edges, and at various points over the whole area. Do not lay material until all readings show 65% relative humidity or less.
- 3.11 **PREPARE EXISTING CONCRETE FLOOR**
Remove all existing coverings completely including adhesives and paints. Patch cracks and depressions with a compatible latex patching compound to the carpet manufacturer's requirements. Seal large areas of patching. Leave surface level, smooth and clean with all loose material and dust removed. Seal powdery surfaces for direct stick applications.
- 3.12 **NEEDED UNDERLAY**
Fix grippers to the carpet manufacturer's requirements and lay underlay at right angles to the main carpet seams with no cross seams coinciding. Hand sew or staple along the entire length of all seams.
- 3.13 **FOAM AND RUBBER UNDERLAY**
Fix grippers to the carpet manufacturer's requirements and lay underlay at right angles to the main carpet seams with no cross seams coinciding. Join with masking tape along the entire length of all seams. Spot tack with adhesive in larger areas or stick seams to the floor.
- 3.14 **RUBBER UNDERLAY, DOUBLE DIRECT STICK**
Apply adhesive to the carpet manufacturer's requirements and lay underlay at right angles to the main carpet seams with no cross seams coinciding and with all joints and edges tightly butted and the underlay completely bonded to the substrate.
- 3.15 **STAIR UNDERLAY**
Cut underlay into pads to cover the tread and riser and width of stair carpet less 50mm. Fix to the tread and riser to prevent movement and wrinkling.
- 3.16 **SEAMING AND JOINING**
Carry out carpet seaming and jointing to ensure:
- joints will not break down under traffic use or when stretched
 - pattern matching and a consistent pile lay
 - pile in seams lined up straight and flat and not caught down
 - seams flat
 - straight seams with diagonals and designs aligned.

- 3.17 **SEWING**
Latex seal raw edges to prevent pile loss. Stretch to even tension. Using 18 gauge thread sew to 20 stitches per 100mm. Latex and tape all cross joints after sewing.
- 3.18 **TAPING**
Latex seal raw edges to prevent pile loss. Tape seams and cross seams to the carpet manufacturer's required systems. Ensure adhesive is at full strength before stretching the carpet.
- 3.19 **TAPING, HEAT BOND**
Protect carpet edges with a heat shield attachment on the iron. Heat the tape at a rate which ensures a complete melt without overheating, all to the carpet manufacturer's required system. Ensure the adhesive is at full strength before stretching the carpet.
- 3.20 **STRETCHING**
Install the carpet flat and taut so that movement does not cause rucking. Use a power stretcher to ensure maximum tension between walls, with knee kickers used only to assist. Apply force by correct pin adjustment to the carpet base only, to avoid damage to pile and underlay. Tension foam back carpet without stretching. Stretch woven carpet warp at least 1% and weft at least 0.2%. Stretch tufted carpet at least 1% in each direction.
- 3.21 **DIRECT STICK INSTALLATION**
Apply adhesive evenly over the entire substrate surface to the carpet manufacturer's requirements and lay the carpet with all edges, selvages and joins tightly butted and all completely bonded to the floor surface. Roll the carpet with a clean 25kg roller and ensure complete contact with adhesive.
- 3.22 **DOUBLE DIRECT STICK INSTALLATION**
Refer to the EXECUTION requirements for RUBBER UNDERLAY, DOUBLE DIRECT STICK, then apply adhesive on the underlay to the carpet manufacturer's requirements and lay the carpet with all edges, selvages and joins tightly butted and all completely bonded to the underlay surface.
- 3.23 **FIT STAIR NOSINGS**
Fit stair nosings as detailed and to the nosing manufacturer's requirements.
- 3.24 **FIX TRIMS**
Fix binder bars, carpet to carpet bars, and trims to all junctions with other materials and to carpet edges, all to the carpet manufacturer's requirements. Ensure that all junctions with other materials are neatly formed, with bars and trims securely fastened to the substrate, 20mm from each end and at maximum 100mm centres.
- 3.25 **TAKE AWAY**
Take away from the site all plant and all materials not used, leaving finished floor clean and without blemish.
- 3.26 **CLEAN**
On completion thoroughly vacuum the finished carpet and arrange for inspection by the owner.

6701 PAINTING AND PAPERHANGING

1. GENERAL

1.1 DOCUMENTS

Documents referred to in this section are:
Health and Safety in Employment Act 1992
BRANZ Bulletin 314: Removing paint coatings from houses

1.2 QUALIFICATIONS

All work to be carried out by competent and experienced painters and paperhangers.

1.3 HEALTH AND SAFETY

Refer to the requirements of the Health and Safety in Employment Act 1992 and if elimination or isolation are not possible, then minimise the hazards in this work.

Refer to BRANZ Bulletin 314 "Removing paint coatings from houses" for the required procedures and precautions when:

1. Treating or removing lead based paint.
2. Burning off paint.
3. Sanding off paint.
4. Using solvent based paint removers.

2. PRODUCTS

2.1 PAINT

To the paint manufacturer's standards for exterior and/or interior primers, undercoats, sealers, stains, clear coatings, solvent-borne and water-borne paints.

2.2 GAP FILLERS

Gap fillers to be linseed oil, putty, plastic wood, wood filler or plastic filler, to suit and to match the surface being prepared.

3. EXECUTION

3.1 INSPECT

Inspect all surfaces to be painted and report to the owner any that will not, after the preparatory work laid down by the paint manufacturer, allow work of the required standard. Confirm that all areas have adequate lighting and are sufficiently free of other construction activities to enable painting and/or paperhanging work to proceed.

3.2 PROTECT

Cover up all adjoining surfaces and areas liable to damage or over-painting.

3.3 REMOVE HARDWARE

Remove hardware and door/window furniture and replace on completion. Do not paint over permanently attached hinges, or any hardware items which cannot be removed.

3.4 PRIMING AND SEALING

Ensure that all priming and sealing work necessary before or during construction is carried out when required.

3.5 ENVIRONMENTAL CONDITIONS

Carry out work within acceptable temperature and humidity limits, with timber dry, all to the requirements of the paint manufacturer.

3.6 SELECTIONS

Confirm all selections, colours and finishes for both paint and wallpaper with the owner, before commencing work.

3.7 LEAD, ASBESTOS

Lead-based paint and asbestos, if present, to be handled as set out in BRANZ Bulletin 314 "Removing paint coatings from houses"

3.8 SHARP EDGES, CRACKS AND HOLES

Sharp edges, cracks and holes if present, to be repaired to the requirements of the paint manufacturer.

3.9 PREPARE SURFACES

Prepare surfaces to be coated by making good all damage and defects. Gap filler to be linseed oil putty, plastic wood, wood filler or plaster filler as appropriate to the surface and to the paint manufacturer's requirements.

3.10 PAINT APPLICATION

Apply paint by brush and/or roller to suit the location of the coating to the paint manufacturer's requirements. Do not spray on site without express permission.

- 3.11 **MANUFACTURER'S MANUALS**
Refer to the paint manufacturers' manuals and follow their preparation, sequence and application requirements applying to each system. All paint coats in any system to be supplied by the same manufacturer.
- 3.12 **DEFECTIVE WORK**
Correct defective work immediately, with recoating to follow the systems requirements.
- 3.13 **SCUFF BETWEEN COATS**
Scuff between all coats to remove any dust pick-up, protruding fibres and coarse particles.
- 3.14 **FINISHED PAINT SURFACES**
All finished paint surfaces to show uniformity of gloss and colour, to have the correct thickness for each coat, and freedom from painting defects such as tackiness and conspicuous brush marks. Finished work to be clean and free of any disfigurement.
- 3.15 **CONFIRM WALLPAPER**
Confirm that all rolls of each pattern are from the same batch.
- 3.16 **WALLPAPER INSTALLATION**
Seal or size walls. All drops to be full-length, completely glued, pattern matched and hung vertically without bubbles or visible butt joints. Scribe cut paper 2mm onto surrounding trim.
- 3.17 **CLEAN**
Clean all adjoining surfaces, glass and fittings of any paint contamination.
- 3.18 **REPLACE**
Replace all hardware without damage to the hardware or the adjoining surfaces.
- 3.19 **TAKE AWAY**
Take away from the site all unused painting materials and equipment.

7101 WATER

1. GENERAL

1.1 DOCUMENTS

Documents referred to in this section are:

NZBC	G12/AS1	Water supplies
NZS 4602	Low pressure copper thermal storage electric water heaters	
NZS 4603	Installation of low pressure thermal storage electric water heaters with copper cylinders (open-vented systems)	
NZS 4606	Storage water heaters	Part 3: Specific requirements for water heaters with composite shells
NZS 4607	Installation of thermal storage electric water heaters: valve-vented systems	
CSA B137-8	Polybutylene (PB) piping for hot and cold water distribution systems.	
Plumbers, Gasfitters and Drainlayers Act 1976		

1.2 QUALIFICATIONS

All work covering water supply to be carried out by or under the direct supervision of a person registered under the Plumbers, Gasfitters and Drainlayers Act 1976.

2. PRODUCTS

2.1 WATER MAIN ALKATHENE

High density alkathene 32mm OD (minimum 25mm internal diameter) pipe to minimum 1200 kPa (170 psi) complete with rubber ring compression type fittings.

2.2 POLYBUTYLENE WATER PIPE

Polybutylene tubing to CSA B137-8 complete with fittings and accessories brand-matched.

2.3 EXPOSED PIPES

Chrome plate on copper pipes, or white polybutylene or PVC, including back nuts.

2.4 GATE VALVES

De-zincified brass with screwed ends.

2.5 ELECTRIC HOT WATER CYLINDER, MAINS PRESSURE

A grade to NZS 4606, part 3, ceramic-coated steel thermal storage cylinder, insulated and complete with fittings required for installation by the manufacturer.

2.6 ELECTRIC BOILING CYLINDER, WALL MOUNTED

Proprietary wall-mounted boiling water heater in a pre-finished cabinet, complete with tap draw off.

2.7 GAS HOT WATER HEATER, STORAGE TYPE

Insulated cylinder with an integral gas burner and flue.

2.8 GAS HOT WATER HEATER, CONTINUOUS FLOW TYPE

Continuous flow unit with an integral gas burner and flue.

3. EXECUTION

3.1 ELECTROLYTIC ACTION

Avoid electrolytic action by eliminating contact or continuity of water between dissimilar metals

3.2 GENERALLY

Generally carry out the whole of this work and tests to NZBC acceptable solution G12/AS1.

3.3 EXCAVATE

Excavate for the water main to a firm, even trench base in straight runs. Allow to backfill

3.4 WATER MAIN

Lay a minimum of 450mm below ground level from the utility network operator's supply through a gate valve and meter to the building. Lay marker tape above main in backfill.

3.5 COPPER WATER SUPPLY

Size the piping layout to eliminate loss of pressure at any point by simultaneous draw-off. Run pipes in straight runs, firmly fixed to falls, with long radius bends and jointed by brazing or with cross fittings, all to NZBC acceptable solution G12/AS1. Conceal all piping, insulate all hot water pipework and pressure test before the wall linings are fixed

- 3.6 **POLYBUTYLENE WATER SUPPLY**
Size the piping layout to eliminate loss of pressure at any point by simultaneous draw-off. Run pipes complete with all fittings, and jointed to the pipe manufacturer's specifications, all to NZBC acceptable solution G12/AS1. Conceal all pipework and pressure test before the wall linings are fixed.
- 3.7 **ELECTRIC HOT WATER CYLINDERS AND BOILING CYLINDERS**
Install where shown complete with all the necessary fittings to the cylinder manufacturer's requirements and in accordance with NZBC acceptable solution G12/AS1 4.10. Low pressure, open-vented systems to NZS 4603. Valve-vented systems to NZS 4607.
- 3.8 **GAS HOT WATER HEATER, STORAGE TYPE**
Install where shown complete with all the necessary fittings to the cylinder manufacturer's requirements and in accordance with NZBC acceptable solution G12/AS1 4.10. Complete flue installation in accordance with the heater manufacturer's details and requirements.
- 3.9 **GAS HOT WATER HEATER, CONTINUOUS FLOW TYPE**
Install where shown complete with all the necessary fittings to the cylinder manufacturer's requirements and in accordance with NZBC acceptable solution G12/AS1 4.10. Complete flue installation in accordance with the heater manufacturer's details and requirements.
- 3.10 **FIRE HOSE REELS**
Install where shown, complete with all fittings to the hose reel manufacturer's requirements.
- 3.11 **PENETRATIONS**
At all penetrations through constructions provide and fit collars to match pipework.
- 3.12 **TAPS AND FAUCETS**
Install taps and faucets in accordance with the tap manufacturer's requirements. Flush out on completion. Check that washers or ceramic discs are operating correctly.
- 3.13 **LEAVE**
Leave all water services in proper working order. Pressure test to ensure no leakage and leave in proper working order.
- 3.14 **CLEAN**
Clean all tapsets and fittings. Remove all unused materials from the site.

7201 GAS

1. GENERAL

1.1 DOCUMENTS

Documents referred to in this section are:

NZBC	G10/AS1	Piped services (Gas)
NZS 5258		Gas distribution
NZS 5261		Installation of gas burning appliances and equipment
NZS 7646		Polyethylene pipes and fittings for gas reticulation

Electricity Regulations 1997

Gas Regulations 1993

Plumbers, Gasfitters and Drainlayers Act 1976

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 REGULATIONS

Comply with the Gas Regulations, Electricity Regulations and other network utility operator's requirements. Give notices for inspections and carry out tests as required.

1.3 GAS MAIN

Include for the cost of this service complete with excavation and backfilling.

1.4 QUALIFICATIONS

Work to be carried out by or under the direct supervision of a person registered under the Plumbers, Gasfitters and Drainlayers Act

1.5 AS-BUILT PLANS

Supply a 1:100 scale as-built plan of gas pipe runs, sizes, componentry and fittings at completion.

1.6 PIPE SIZES

use pipe sizes which give a minimum pressure at any appliance inlet of 1.13 kPa for natural gas, when all appliances are in use; and with a maximum design pressure drop from meter outlet to any appliance of 80 Pa. All to NZS 5261.

1.7 PRESSURE TEST

Pressure test the system for leakage to NZS 5261 before pipework is concealed by linings

1.8 FINAL INSPECTION AND TEST

Submit the work for inspection and test and prove to the satisfaction of the network utility operator that the installation complies with all Acts and Regulations and has been tested for leakage and proved to be sound.

1.9 CERTIFICATION CERTIFICATE

Provide a Gasfitting Certification Certificate as required by Regulation 24 of the Gas Regulations 1993

2. PRODUCTS

2.1 COPPER PIPE

Complete with fittings to NZS 5261

2.2 STEEL PIPE

Galvanised and wrapped or coated, complete with fittings to NZS 5261.

2.3 POLYETHYLENE PIPE

To NZS 7646 and complete with fittings to NZS 5261

2.4 ISOLATING VALVES

Manual shut-off valves to NZS 5261.

2.5 METER

Primary meter to suit design load, supply pressure and pressure drop, supplied and installed by the network utility operator.

3. EXECUTION

3.1 GENERALLY

Carry out the whole of this work to the requirements of NZBC acceptable solutions.

3.2 MAINS CONNECTION

Arrange for the network utility operator to extend their distribution system through the main meter to connect to this installation, all to NZS 5258

- 3.3 METER
Check the location of the meter enclosure with the owner. Allow to install as detailed.
- 3.4 PIPING
Run the system, completely concealed, in the most suitable type of pipe for each part of the installation, bent, supported, jointed and complete with all fittings to NZS 5261. Confirm the type of pipe to be used and its location.
- 3.5 GAS APPLIANCES
Supply, fit and connect the following appliances to NZS 5261, complete with flues as required and all to the appliance manufacturer's requirements.
- 3.6 GAS HOT WATER HEATER
Connect the following gas hot water heater supplied and fitted under 7101 WATER, to NZS 5261 and the heater manufacturer's requirements.
- 3.7 REPLACE
Replace all damaged, cracked or marked elements.
- 3.8 LEAVE
Leave all appliances clean and in full working order and leave all work to the standard required for all following trades.
- 3.9 REMOVE
Remove all debris, unused materials and elements from the site.

7401 RAINWATER PLUMBING

1. GENERAL

1.1 DOCUMENTS

Documents referred to in this section are:

- NZS/AS 1397 Steel sheet and strip - hot-dipped, zinc-coated or aluminium/zinc-coated
 BRANZ Bulletin 304: Flashing design.
 BRANZ Bulletin 305: Domestic flashing installation.

2. PRODUCTS

UPVC

2.1 UPVC SPOUTING

Profile, jointing, brackets and fittings brand matched and complete to the spouting manufacturer's specifications.

2.2 UPVC DOWNPIPES

Tubes, stand-off brackets and fittings brand matched and complete to the manufacturers specifications.

Profiled Galvanised Steel

2.3 PROFILED GALVANISED SHEET STEEL

0.60mm sheet steel galvanised to NZS/AS 1397.

2.4 GALVANISED STEEL SPOUTING

Quarter-round 125mm.

2.5 GALVANISED STEEL DOWNPIPES

Formed into round tube, seam jointed and complete with stand-off brackets, galvanised screw fixed.

Rectangular Galvanised Steel

2.6 RECTANGULAR GALVANISED SHEET STEEL

0.60mm sheet steel galvanised to NZS/AS 1397.

2.7 GALVANISED STEEL SPOUTING

Profile, jointing, brackets and fittings brand matched and complete to the spouting manufacturer's specifications.

2.8 GALVANISED STEEL DOWNPIPES

Formed into round tube, seam jointed and complete with stand-off brackets, galvanised screw fixed.

Rectangular Aluminium And Zinc Alloy Coated Steel

2.9 RECTANGULAR ALUMINIUM AND ZINC ALLOY COATED SHEET STEEL

0.60mm sheet steel coated to NZS/AS 1397.

2.10 ALUMINIUM AND ZINC ALLOY COATED STEEL SPOUTING

Profile, jointing, brackets and fittings brand-matched and complete to the spouting manufacturer's specifications.

2.11 ALUMINIUM AND ZINC ALLOY COATED STEEL DOWNPIPES

Formed into round tube, seam jointed and complete with stand-off brackets, galvanised screw fixed.

Rectangular Pre-painted Galvanised Steel

2.12 RECTANGULAR PRE-PAINTED GALVANISED SHEET STEEL

0.60mm sheet steel galvanised to NZS/AS 1397.

2.13 PRE-PAINTED GALVANISED STEEL SPOUTING

Profile, jointing, brackets and fittings brand matched and complete to the spouting manufacturer's specifications.

2.14 PRE-PAINTED GALVANISED STEEL DOWNPIPES

Formed into round tube, seam jointed and complete with stand-off brackets, galvanised screw fixed.

Rectangular Aluminium And Zinc Alloy Coated Pre-Painted Steel

2.15 RECTANGULAR ALUMINIUM AND ZINC ALLOY PRE-PAINTED SHEET STEEL

0.60mm sheet steel coated to NZS/AS 1397, pre-painted.

2.16 ALUMINIUM AND ZINC ALLOY COATED PRE-PAINTED STEEL SPOUTING
Profile, jointing, brackets and fittings brand matched and complete to the spouting manufacturer's specifications.

2.17 ALUMINIUM AND ZINC ALLOY COATED PRE-PAINTED STEEL DOWNPIPES
Formed into round tube, seam jointed and complete with stand-off brackets, galvanised screw fixed.

Copper

2.18 COPPER SHEET
0.60mm (24g) copper sheet.

2.19 COPPER SPOUTING
Quarter-round 125mm.

2.20 COPPER DOWNPIPES
Formed into round tubes, seam jointed and complete with stand-off copper brackets, brass screw fixed.

General

2.21 RAINWATER HEADS, DROPPERS, OVERFLOWS
Fabricate and install as detailed.

2.22 FLASHINGS GENERALLY
0.6mm sheet steel galvanised to NZS/AS 1397, aluminium-zinc coated to NZS/AS 1397, 1.8mm (20kg/m²) copperised pure lead, 0.5mm copper sheet and 0.7mm aluminium sheet, all to location, compatibility and design requirements of BRANZ Bulletin 304 "Flashing design."

2.23 DOMES
Wire mesh in round form with legs to clip inside the outlet opening to the downpipe.

2.24 SPOUTING MESH
Flexible plastic mesh fitted into the spouting to the spouting mesh manufacturer's requirements.

3. EXECUTION

3.1 ELECTROLYTIC ACTION
Avoid electrolytic action by eliminating contact or continuity of water between dissimilar metals.

Check compatibility of all metals used for rainwater goods, against the materials used for roofing and flashings. Notify any incompatibility to the owner and obtain written approval for amendments to selections and then submit to the territorial authority for their approval.

3.2 LIAISON
Ensure liaison with all associated installations to ensure material selections are compatible and all required flashing work is completed.

UPVC

3.3 FIT UPVC SPOUTING
Fit and screw fix brackets, set to falls to outlets. Solvent welded or rubber ring jointed spouting section to be complete with all fittings to the spouting manufacturer's requirements.

3.4 FIX UPVC DOWNPIPES
Screw fix stand-off brackets, set pipes plumb and clear of the wall, solvent welded. Discharge into stormwater bends.

Galvanised Steel

3.5 FIT GALVANISED STEEL SPOUTING
Screw fix brackets, set to falls to outlets, with spouting joints silicone sealed and pop-riveted to the spouting manufacturer's requirements.

3.6 FIX GALVANISED STEEL DOWNPIPES
Screw fix stand off brackets, set pipes plumb and clear of the wall, with joints silicone sealed. Discharge into stormwater bends.

Aluminium And Zinc Alloy Coated Steel

3.7 FIT ALUMINIUM AND ZINC ALLOY COATED STEEL SPOUTING
Screw fix brackets, set to falls to outlets, with spouting joints silicone sealed and pop-riveted to the spouting manufacturer's requirements.

7402 SANITARY PLUMBING

1. GENERAL

1.1 DOCUMENTS

Documents referred to in this section are:

NZBC	G1/AS1	Personal hygiene
		2.0 Fixture construction and installation
		3.0 Location of sanitary fixtures
NZBC	G13/AS1	Foul water - sanitary plumbing
AS/NZS 3500	National plumbing code	
NZS 7641	Unplasticized PVC waste and ventilating pipe, fittings and accessories, 32mm, 40mm and 50mm	
Plumbers, Gasfitters and Drainlayers Act 1976		

1.2 QUALIFICATIONS

Work covering waste disposal and plumbing fittings to be carried out by or under the direct supervision of a person registered under the Plumbers, Gasfitters and Drainlayers Act 1976.

2. PRODUCTS

2.1 UPVC WASTE, SOIL AND VENT PIPES

UPVC pipe to NZS 7641 complete with fittings brand-matched to the pipe manufacturer's requirements.

2.3 EXPOSED PIPES

Chrome plate on copper pipes, or white polybutylene or PVC, including back nuts.

3. EXECUTION

3.1 GENERALLY

Carry out the whole of this work and tests to AS/NZS 3500 or NZBC acceptable solutions G1/AS1, 2.0, 3.0 and G13/AS1.

3.2 ELECTROLYTIC ACTION

Avoid electrolytic action by eliminating actual contact or continuity of water between dissimilar metals.

3.3 SANITARY FIXTURES

Fit and install all sanitary fittings and associated screens, elements and hardware, plumb, true to line and rigid, all to the fixture manufacturer's requirements. Standard chrome plated wastes and plastic plugs on chrome plated chains to be supplied with all basins, tubs and baths.

3.4 TRAPS, WASTE AND VENT PIPES

Connect waste outlets to traps and run waste pipes and back vents concealed, all sized and fixed to AS/NZS 3500 or NZBC acceptable solution G13/AS1. Discharge wastes into the drainage system stack, soil pipe, or gully trap as shown. Bird proof mesh to all roof vents and vermin proof mesh to all untrapped waste pipes.

3.5 PENETRATIONS

At all penetrations through constructions provide and fit collars to match pipework.

3.6 SUNDRY HARDWARE

Install all sundry hardware and fittings as selected.

3.7 TEST

Test all soil and waste disposal systems to ensure no leakage exists and leave all in working order.

3.8 CLEAN UP

Remove labels and clean all fittings. Remove all unused materials from the site.

- 3.8 **FIX ALUMINIUM AND ZINC ALLOY COATED STEEL DOWNPIPES**
Screw fix stand off brackets, set pipes plumb and clear of the wall, with joints silicone sealed. Discharge into stormwater bends.
- Galvanised Steel, Pre-Painted**
- 3.9 **FIT GALVANISED STEEL PRE-PAINTED SPOUTING**
Screw fix brackets, set to falls to outlets, with spouting joints silicone sealed and pop-riveted to the spouting manufacturer's requirements.
- 3.10 **FIX GALVANISED STEEL PRE-PAINTED DOWNPIPES**
Screw fix stand off brackets, set pipes plumb and clear of the wall, with joints silicone sealed. Discharge into stormwater bends.
- Aluminium And Zinc Alloy Coated Steel Pre-Painted**
- 3.11 **FIT ALUMINIUM AND ZINC ALLOY COATED STEEL PRE-PAINTED SPOUTING**
Screw fix brackets, set to falls to outlets, with spouting joints silicone sealed and pop-riveted to the spouting manufacturer's requirements.
- 3.12 **FIX ALUMINIUM AND ZINC ALLOY COATED STEEL PRE-PAINTED DOWNPIPES**
Screw fix stand off brackets, set pipes plumb and clear of the wall, with joints silicone sealed. Discharge into stormwater bends.
- Copper**
- 3.13 **FIT COPPER SPOUTING**
Screw fix spouting brackets to fall to outlets. Spouting joints silfos brazed.
- 3.14 **FIX COPPER DOWNPIPES**
Screw fix stand off brackets, set downpipes plumb and clear of wall, with joints silfos brazed. Discharge downpipes into stormwater bends.
- General**
- 3.15 **FLASHINGS**
Scribe fit, fold, lap, seam, or run solder as required by the metal, to flash all roof penetrations, roofing and exterior joinery to prevent weather penetration. Allow for 2 rows of rivets to all overlapping sheet joints. Install and fix flashings and flashing joints to the criteria stated in BRANZ Bulletins 304 "Flashing design" and 305 "Domestic flashing installation."
- 3.16 **INSTALL DOMES**
Install wire mesh domes at the top of all downpipes.
- 3.17 **INSTALL SPOUTING MESH**
Install mesh into spoutings, strictly in accordance with the mesh manufacturer's requirements.
- 3.18 **FLASH ROOF LIGHTS**
Flash to roofing to the manufacturer's specifications.
- 3.19 **LEAVE**
Leave all rainwater services in proper working order and all flashing work completed to keep the building weathertight.
- 3.20 **CLEAN UP**
Take away from the site all unused materials and elements.

7403 DRAINAGE

1. GENERAL

1.1 DOCUMENTS

Documents referred to in this section are:

NZBC	B1/AS1	Structure - general	6.0 Drains
NZBC	E1/AS1	Surface water	
NZBC	G13/AS2	Foul Water - drainage	
NZS 3108		Concrete production, ordinary grade	
NZS 3402		Steel bars for the reinforcement of concrete	
AS/NZS 3500		National plumbing and drainage code	
NZS 7643		Installation of Unplasticized PVC pipe systems	
NZS 7649		Unplasticized PVC sewer and drain pipe and fittings	
Plumbers, Gasfitters and Drainlayers Act 1976			

1.2 AS-BUILT DRAWINGS

Supply a 1:100 scale as-built plan of drains and fittings to the territorial authority and to the owner on completion.

1.3 QUALIFICATIONS

All work to be carried out by or under the direct supervision of a person registered under the Plumbers, Gasfitters and Drainlayers Act 1976.

2. PRODUCTS

2.1 CONCRETE

17.5 MPa ordinary grade to NZS 3108.

2.2 REINFORCEMENT

To NZS 3402 Grade 300 deformed bars.

2.3 UPVC PIPES

UPVC pipes bends, junctions, fittings and joints to NZS 7649.

2.5 PLASTIC PIPES

Plastic pipes for field drains perforated and coiled with filter fabric over.

2.6 GULLY TRAPS

To NZBC acceptable solution G13/AS2, 3.2. complete with grating.

2.7 SURFACE WATER SUMP GRATINGS

Cast iron frame with lift-up grating.

2.8 INSPECTION COVERS

Cast iron frame with screw-down cover.

2.9 DRAINAGE AND FILLING MATERIALS

Granular:	Clean gravel or crushed stone or a blend of these.	Particle size from minimum 7mm to maximum 20mm.
Selected:	Fine grain soil or granular material suitable for bedding, excluding topsoil.	
Ordinary:	Top soil or other excavated materials.	

3. EXECUTION

3.1 EXCAVATE

Excavate for drains to a firm even base with correct gradients set in straight runs.

3.2 MANUFACTURER'S REQUIREMENTS

All installations to the pipe and fitting manufacturer's requirements.

3.3 GENERALLY

Carry out drainage work and tests to AS/NZS 3500 and NZS 7643, all as modified by NZBC acceptable solution (if any).

3.4 LAY FOUL WATER DRAINS

Lay drains in straight runs to correct gradients, to discharge into the network utility operators sewer. Set all inspection fittings on a concrete base.

3.5 INSTALL GULLY TRAPS

Set on concrete brought up to protect the top of the fitting. Trowel off.

- 3.6 **LAY STORMWATER DRAINS**
Confirm the required location of all downpipes and all finished ground levels before commencing pipework. Set downpipe bends in concrete brought up to protect the top of the fitting from damage. Trowel off and fit a cast iron grating. Lay drains in straight runs to correct gradients to discharge into the network utility operator's stormwater system.
- 3.7 **LAY SUBSOIL DRAINS**
Lay perforated coil piping firmly in a granular bed in straight runs to correct gradients, discharging into a cesspit. Carry the granular bed up over the pipes without disturbing them, to a total depth of 300mm and cover with geotextile fabric; all to the pipe manufacturer's requirements.
- 3.8 **INSTALL SURFACE WATER SUMP**
To NZBC acceptable solution E1/AS1, complete with ceramic half-siphon pipe and cast iron frame with a lift out grating.
- 3.9 **INSTALL STORMWATER INSPECTION CHAMBERS**
To NZBC acceptable solution E1/AS1, with channels to form a cascade and with a 75mm fall across the chamber. Bench from channels at 45 degrees and plaster all the interior with 1:2 cement: sand mortar, trowelled smooth. Fit a cast iron cover and frame.
- 3.10 **INSTALL FOUL WATER INSPECTION CHAMBERS**
To NZBC acceptable solution G13/AS2, with ceramic channels to form a cascade and with a 75mm fall across the chamber. Bench from channels at 45 degrees and plaster all the interior with 1:2 cement: sand mortar, trowelled smooth. Fit a cast iron cover and frame.
- 3.11 **SOAKHOLES OR TRENCHES**
Dispose of stormwater on site as shown on the drawings, by soakage, to suit local geology and soil structure; all as directed by the territorial authority.
- 3.12 **CONCRETE ENCASEMENT**
Concrete encase shallow drains and drains under driveways, on a 100mm deep 17.5 MPa concrete bed reinforced with three 10mm mild steel bars. Surround pipes with a polythene membrane to allow movement and encase in 100mm 17.5 MPa concrete.
- 3.13 **FIELD TEST**
Field test drains for watertightness (UPVC to NZS 7643 section 11) to the satisfaction of the territorial authority inspector.
- 3.14 **BACKFILL**
Backfill drain lines in 150mm layers, well tamped but without disturbing the drains. Finish off with 150mm of topsoil, slightly mounded above the finished ground line.

7701 ELECTRICAL

1. GENERAL

1.1 DOCUMENTS

Documents referred to in this section are:

NZBC	F6/AS1	Lighting for emergency
NZBC	F8/AS1	Signs
SAA/SNZ 77		Definition of year 2000 conformity requirements
AS/NZS 2293		Emergency evacuation lighting for buildings
NZS 3000		New Zealand wiring rules
AS/NZS 3008		Electrical installations - Selection of cables
		3008.1.2: Typical New Zealand installation conditions
NZS 6401		PVC-insulated cables for electric power and lighting
Electricity Regulations 1997		
New Zealand electrical codes of practice (ECP)		

1.2 COMPLY

Comply with the Electricity Regulations 1997, NZS 3000, AS/NZS 3008.1.2 and the New Zealand electrical codes of practice for listed and prescribed work and with the utility network operator's requirements. Apply for the service connection. Arrange for the required inspections of listed work. Pay all fees.

1.3 QUALIFICATIONS

All work to be carried out by or under the direct supervision of a holder of a practising certificate under the Electricity Regulations 1997.

1.4 CERTIFICATE OF COMPLIANCE

Supply a certificate of compliance to the owner, as required by the Electricity Regulations 1997, and in particular, clauses 16, 34 and 35. Allow the network utility operator to view before the meter installation, listed work inspection, polarity check and livening of supply.

1.5 YEAR 2000 COMPLIANCE

All hardware and software for the complete electrical installation to be "year 2000 compliant" as defined in, and in accordance with SAA/SNZ MP77.

2. PRODUCTS

2.1 MAINS UNDERGROUND, SINGLE PHASE

Tough plastic sheathed neutral screened cable to NZS 6401 and AS/NZS 3008.1.2, with a minimum rating of 60 amps per phase.

2.2 CABLES

Tough plastic sheathed copper conductors to NZS 6401 and in accordance with AS/NZS 3008.1.2. Minimum sizes are indicated below. Increase these as necessary due to method of installation, cable length or load.

Lighting circuits	1.5mm ² on 16 amp MCB's	
Power circuits (domestic)	1.5mm ² on 16amp MCB's	
Power circuits (domestic - insulated construction)		2.5mm ² on 16amp MCB's
Power circuits (commercial)	2.5mm ² on 20amp MCB's	

2.3 METER BOX

Rust protected metal case (glass panel door), all powder coated and complete with meter mounting, main switch and fuse

2.4 DISTRIBUTION BOARD

Complete with neutral and earth busbars, MCB's and 60 amp main switch, complete with removable insulated panel and 20% spare space. Include 2 spare MCB's labelled as "spare." All protective devices to be 6kA MCB's of the appropriate rating.

2.5 WALL BOXES

Standard size in plastic, with 2 or more gang size in metal, all screw fixed.

2.6 SWITCH UNITS

16 amp, 230 volt flush polycarbonate units. For number of switches per unit, dimmer units, neon indicator or toggle units, locally units and 2-way units refer to the electrical drawings.

2.7 HOT WATER SYSTEM SWITCH

One way 20 amp switch complete with clamp for flexible PVC conduit

2.8 SWITCHED SOCKET UNITS

10 amp, 230 volt flush polycarbonate 3 pin combined switch units

- 2.9 **SHAVER AND EARTH LEAKAGE PROTECTED SOCKET OUTLETS**
Earth leakage protected 110/230 volt multiple plug configuration and residual current protected socket outlets, tripping at 30 mA.
- 2.10 **CEILING ROSES**
White plastic mounting base with screwed cover and to be terminal type.
- 2.11 **BATTEN HOLDERS**
Standard white plastic bayonet cap, with cap angled where wall mounted, and brass liners.
- 2.12 **BELL SYSTEM**
Supply a bell transformer as part of the distribution board.
- 2.13 **TV AERIAL**
Aerial, co-axial cable and outlets, suitable for both VHF and UHF reception.
- 2.14 **GARAGE DOOR CONTROLLERS**
Refer to 4503 COMPOSITE DOORS, WINDOWS AND ROOFLIGHTS.
- 2.15 **SELECTIONS**
Confirm all selections with the owner in writing before ordering.
3. **EXECUTION**
- 3.1 **MAINS**
Lay underground mains to the network utility operator's requirements. Excavate trench, install marker tape and backfill.
- 3.2 **METER BOX**
Fit to the meter box manufacturer's requirements and the network utility operator's requirements, level and plumb where shown on the plan. Recess into the external wall; flash to weatherproof.
- 3.3 **DISTRIBUTION BOARD**
Fit to the board manufacturer's requirements, level and plumb where shown on the plan. Recess into the wall. All labelling to be complete and include a warning notice if light dimmers are used in the installation.
- 3.4 **CABLING**
Install with a maximum of 8 light outlet units or 4 switched socket units on any circuit. Separate circuits for all electric heating appliances. All cabling to be run concealed. No TPS cable to be laid directly in concrete and all holes in timber framing for the passage of cables to be at the centre line of the timber member.
- 3.5 **SWITCH AND SOCKET UNITS**
Fit all single and double switch units and socket units level and plumb where shown on the drawings. Install at the following heights (to the centre of the unit) unless shown otherwise on the electrical drawings.
Switch Units : 1000mm
Socket Units : 150mm above work benches
400mm elsewhere
Mount switches vertically and socket units horizontally. Label all switch units which control electrical equipment by engraving on the rocker switch.
- 3.6 **LIGHT FITTINGS**
Install selected light fittings in the locations and heights shown on the drawings and in accordance with the fitting manufacturer's requirements.
- 3.7 **EMERGENCY AND EXIT LIGHT FITTINGS**
Install selected fittings in the locations and heights shown on the drawings and in accordance with NZBC acceptable solutions F6/AS1 and F8/AS1, AS/NZS 2293, including test facilities.
- 3.8 **ELECTRIC HOT WATER SYSTEM**
Wire as a separate circuit through a wall-mounted isolating switch, with the cable from switch to element encased in flexible PVC conduit, clamp fixed at each end. Hot water cylinders, thermostats and 3000 watt element supplied and fitted under 7101 WATER
- 3.9 **WIRE FOR PLUMBING FITTINGS**
Wire for all fittings to the Electricity Regulations 1997 and to the fitting manufacturer's requirements.
- 3.10 **TELEPHONE WIRING**
Wire for the telephone outlets shown on the electrical drawings.
- 3.11 **TELEPHONE DRAW WIRES**
Supply draw wires for the telephone outlets shown on the drawings.

- 3.12 **TV AERIAL**
Fit aerial, run cabling concealed below the roof and fit outlets where shown on the electrical drawings. The system to be suitable for high quality reception of all VHF and UHF channels - Sky TV installation practices minimum.
- 3.13 **WALL HEATERS**
Install to the heater manufacturer's requirements, fitted neatly and without damage to surrounding finishes.
- 3.14 **CENTRAL VACUUM UNIT**
Install central unit, ducting and outlets to the system manufacturer's requirements, with room outlets fitted neatly and without damaging surrounding finishes.
- 3.15 **SECURITY SYSTEM**
Install to the system manufacturer's requirements, with control panel, detectors and associated equipment fitted neatly and without damage to surrounding finishes.
- 3.16 **MANUAL FIRE ALARM SYSTEM**
Install to the system manufacturer's requirements, with outlets fitted neatly and without damage to surrounding finishes.
- 3.17 **SMOKE DETECTORS**
Install detectors to the detector manufacturer's requirements, fitted neatly and without damage to the surrounding finish.
- 3.18 **ELECTRIC POWERED FITTINGS AND EQUIPMENT**
Install and wire all selected fittings and equipment to the Electricity Regulations 1997 and the individual fittings and equipment manufacturer's requirements. Refer to the drawings for required layouts and locations for equipment.
- 3.19 **ELECTRIC POWER FOR SITEWORKS**
Provide circuits and connections for site installations, including 12 volt path lighting and electronic irrigation systems. Refer to the drawings for required connection points. High current capacity wiring to be used for all 12 volt system wiring.
- 3.20 **EARTHING PROTECTION**
Provide a plastic toby box or UPVC tube to contain and protect the earth pin. Fix the connecting earth wiring closely and securely against wall surfaces.
- 3.21 **LABELLING**
Provide and install a printed label under each controller, switch and circuit breaker on all distribution boards. List the rating of each circuit.
- 3.22 **COMPLETION**
Leave all work operating correctly, with all equipment clean and all light bulbs and tubes operational.

Omega Quote

Kitchen Creator

~~Atta~~

Mico Balloons

Topkiff

Fireplace etc.



Project Information Memorandum
Section 31, Building Act 1991

Application

MR I YOUNG	No.	020045
6 BLACKBURNE ROAD	Issue date	20/02/02
TE HORO	Application date	28/01/02
	Overseer	Barrie McLennan

Project

Description	New Construction Being Stage 1 of an intended 1 Stages NEW DWELLING
Intended Life	Indefinite, but not less than 50 years
Intended Use	RESIDENTIAL
Estimated Value	\$200,000
Location	155 FIELD WAY, WAIKANAE BEACH
Legal Description	LOT 8 DP 91324
Valuation No.	

This project information memorandum is confirmation that the proposed building work may be undertaken, subject to the provisions of the Building Act 1991, and any requirements of the building consent.

This project information memorandum includes:

- Information identifying relevant special features of the land concerned
- Details of relevant utility systems
- Details of authorisations which have been granted

Signed for and on behalf of the Council:

Name: *[Signature]*

Date: 20.2.02

PROJECT INFORMATION MEMORANDUM

Application Details

Applicant Name MR I YOUNG
Applicant Address 6 BLACKBURNE ROAD
 TE HORO
 OTAKI
Applicant Phone
Location 155 FIELD WAY WAIKANAE BEACH
Legal Description LOT 8 DP 91324
Proposal NEW DWELLING

Planning Requirements

Use permitted Permitted activity
Resource Consent granted None listed
Designations on property None listed
Easements None listed
Site subject to inundation Not known to be
Coastal building line restriction N/A
relocatable zone N/A
Min floor level (50 year event) N/A
Recommended minimum
Floor level (100 year event) N/A
Yard and height requirements Comply
Tree/building preservation None listed
Other comments

Note: Minimum floor levels must use Mean Sea Level Wellington Datum 1953. Certification that the floor level complies with the minimum floor level will be required from a registered surveyor prior to foundation inspection.

Special Features of the Land

<u>Potential erosion</u>	/
<u>Potential avulsion</u>	/
<u>Potential subsidence</u>	/
<u>Potential slippage</u>	/
<u>Potential alluvion</u>	/
<u>Potential inundation</u>	/
<u>Hazardous contaminants</u>	/
<u>Other features</u>	Site is located within the very high wind zone and coastal corrosion area.

Plumbing and Drainage Details

<u>Sewer available / connected</u>	Available
<u>Water available / connected</u>	Available
<u>Plan of existing services (if any)</u>	Not supplied
<u>Location of sewer lateral</u>	no written record of location
<u>Location and size of water toby</u>	20mm no record of location
<u>Location of easments (if any)</u>	see Planners comments
<u>Location of public drains (if any)</u>	unknown
<u>Stormwater disposal to</u>	Kerb
<u>P and D Notes</u>	no asbuilt information available,check with subdivider for locations.ensure that the subdivision has been signed off by Council before the house can be occupied.ENSURE HOUSE IS CLEAR OF ANY EASEMENTS

Services Plan