Tauranga City

Willow Street, Tauranga
Private Bag 12022, Tauranga 3143
Telephone: 07 577 7000. Facsimile 07 577 7034

COPY

CODE COMPLIANCE CERTIFICATE NO: 36412

Section 95, Building Act 2004

THE OWNER	CONTACT PERSON
FLETCHER, NOEL JOHN FLETCHER, SANDRA LYNN 35 JARRAH PARK DRIVE PYES PA TAURANGA 3112	INSIGNIA DESIGN AND ARCHITECTURE LIMITED PO BOX 8334 CHERRYWOOD TAURANGA 3145 Ph day 0064 07 5764119 Email/website: mike@insigniadesign.co.nz

The building

Street address of building: 35 JARRAH PARK DRIVE

Legal description of land where building is located: LOT 33 DP333462

Building name:

Current, lawfully established, use: DWELLING

Year first constructed: 2013

First point of contact for communications with the council/building consent authority: Tauranga City Council, Building Services, Private Bag 12002, Tauranga 3143, phone 07 5777000, fax 07 5777034, info@tauranga.govt.nz

Building work ERECT DWELLING

Building consent number: 36412

Issued by: Tauranga City Council

Code compliance

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

a) the building work complies with the building consent

Compliance Schedule: No

Signature

MANAGER: BUILDING SERVICES
On behalf of: Tauranga City Council

Date: 25 Mar 2015

Tauranga City	**Code Compliance Certificate Assessment Checklist** **Building Consent No: 36412**	Certificates and Notices Procedure Ver: 1 Issued: 21.11.13

PROJECT

Site Address: 35 Jarrah Park Drive, Pyes Pa
Legal Description: Lot 33 DP 333462
Work Description: Erect dwelling with kiwi braai outdoor fire Delete From BC
Building Category: R2

OWNER

Name(s): Fletcher, Noel John & Sandra Lynn
Address: 35 Jarrah Park Drive, Pyes Pa, Tauranga 3112

File Completion Checklist

[P] CCC Application Form 6 received and complete
[P] All the relevant inspections have been completed
[NA] All failed inspections cleared
[P] Job Report has no outstanding matters on it
[NA] New compliance schedule required or existing requires amending
[NA] Compliance Schedule Statement form attached and CS can be issued
[NA] Amendments resolved and fees paid
[P] Required documents (producer statements, certificates, photos, reports) received
[P] Received documents acceptable
[P] LBP Certificates received and accepted
[P] Consent conditions satisfied
[P] CCC CAN BE ISSUED

NOTES:
Inspections prepaid 15
Inspections done 9

Emailed

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

R

Signed:
Name: Lex Plato
Position: Building Officer

Date: 24 March 2015

Quality Review Check
Signed:
Name:
Position:

Date:

12/388991

GoGet Job Report

Consent No	36412
Application Date	21 Dec 2011
Issue Date	24 Feb 2012
Site Address	35 Jarrah Park Drive, Pyes Pa
Valuation Ref	0661808119
Parcel ID	6698065
Referred Date	22 Feb 2012
CCC Issued Date	
Cancelled Date	
Owner	Fletcher, Noel John & Sandra Lynn
Owner Address	3 Jarrah Park Drive, Pyes Pa, Tauranga 3112
Owner Phone (Res)	
Owner Phone (Bus)	543 0065
Owner Phone	027 352 2269
Designer	INSIGNIA DESIGN AND ARCHITECTURE LIMITED
Designer LBP No	
Work Type	Residential-R2
Intended Use	Erect dwelling with ~~kiwi braai outdoor fire~~ Deleted, LP
Building Class	R2
Legal Description	Lot 33 DP 333462
Problem?	No
Disallow Bookings	No
Restricted Building	No
Notes	

Last Inspected	Status	Inspection Type	Inspector	Notes
13/12/2013	Pass	Final Building	Malcolm Hunt	Passed: Final Building Roof = light metal tiles. wall cladding = Rendered Brick veneer and minor Celcrete. Consented work appears to comply with all building code requirements and consent documents. Note: Minor 1200 fall area approx 1200 in length off paved area at rear of the dwelling. Contractor installing 1mtr high safety barrier to comply now. Complying smoke alarms installed. Note: Acrylic shower trays installed. Pending receipt of the documents as listed. Note: Kiwi Braai outdoor fire now deleted from this consent. Owner aware a subsequent consent will be required if fire installed at a later date.
13/12/2013	Pass	Final Plumbing	Malcolm Hunt	Passed: Final Plumbing Consented work appears to comply with all building code requirements and consent documents.

2

				Pending receipt of the documents as listed.
14/06/2012 9:18am	Pass	Pre Stopping	Malcolm Hunt	Passed: Pre Stopping Consented work appears to comply with all building code requirements and consent documents. All brace elements as shown on consent documents. OK to continue. Note: Roof on and cladding weathertight.
31/05/2012 3:44pm	Pass	Preline Building	Gary Cosford	Passed: Preline Building Pre-line passed. Moisture OK. Windows sealed. Insulation installed. OK to line.
28/05/2012	Pass	Brick Veneer	Malcolm Hunt	Passed: Brick Veneer Consented work appears to comply with all building code requirements and consent documents. Window head lintel bars and flashings as per Austral detail. 75% complete. Ok to continue and complete.
28/05/2012	Pass	Preline Plumbing	Malcolm Hunt	Passed: Preline Plumbing Consented work appears to comply with all building code requirements and consent documents. Water services are holding a positive pressure test at 1500 kpa at time of inspection. Plumbing services Water pressure certificate required on completion.
23/04/2012 9:19am	Pass	Fixing/Framing	Ian Watson	Passed: Fixing/Framing All framing and fixings to plan, tin tile roof.
23/03/2012	Pass	Slab	Gary Cosford	Passed: Slab This slabs is specifically designed with fibre mesh and no starters. Plans processed before cut off date. OK to pour. Siting ok.
21/03/2012 3:08pm	Pass	Underfloor plumbing	Malcolm Hunt	Passed: Underfloor plumbing Consented work appears to comply with all building code requirements and consent documents. Subject to Service connection yet to be verified. Slab penetrations require protection sleeves. Can be checked at slab inspection. AS:3500.2 principles. Producer Statement for pressure testing and "As Laid Plan" to come. ORG and rodding point yet to complete.

29/02/2012	Pass	Blocks/BondBeam	Ian Watson	Passed: Blocks/BondBeam Note footing insp. done by engineer, report to come. Ok to pour when final clean out is done (rain has washed rubbish into block work).Some verts to complete and steel to be 60 to earth face, builder will ensure this is done.

GoGet Statement of Compliance Exception Report

Consent No: 36412

Site Address: 35 Jarrah Park Drive, Pyes Pa

Inspections - Required, Not Done

Drainage

Consent Instructions - Outstanding

At the final inspection the inspector noted the out door fire place is to be deleted from the building consent Please provide written confirmation from the owner and a as built elevation with the fire place removed .	Lex Plato	26 Feb 2014 11:19
The first inspection by council was for block work the inspector noted the foundations where done under supervision of a engineer . Please provide a PS4 producer statement from a chartered professional engineer covering the foundations and piling and any other work done under his supervision for councils consideration.	Lex Plato	26 Feb 2014 11:19
There is no record of the required drainage inspection being done by council Please have the certifying drain layer reasonable for the work provide a producer statement covering the work done and provide a reason why the required inspection wasn't requested .	Lex Plato	26 Feb 2014 11:19

LAKES COAST CLUSTER GROUP

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

THE BUILDING CONSENT

Building consent number: 36412

Issued by [*name of building consent authority that granted building consent*]: Tauranga City Council

THE OWNER

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

Mrs Sandra Fletcher

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

Mailing address: 35 Jarrah Park Drive
Pyes Pa. Tauranga 3112

Street address/registered office:

Phone number: Landline: (07) 5430065 Mobile: 0273522269

Daytime: " After hours:

Facsimile number:

Email address: n_sfletcher@xtra.co.nz Website [if applicable]:

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

AGENT

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

Name of agent:

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

Mailing address:

Street address/registered office:

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20 JAN 2014
TAURANGA CITY COUNCIL

Phone number: Landline: Mobile:

Daytime: After hours:

Facsimile number:

Email address: Website [*if applicable*]:

Cont'd over)

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

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

Sandra Fletcher - 0273522269

APPLICATION

All building work to be carried out under the above building consent was completed on *[insert date]*: 20 January 2014

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

Name	Licensing class	Licensed building practitioner number (or registration number if treated as being licensed under section 291 of Building Act 2004)	Particular work carried out or supervised
Dave Strange		BP103552	builder of
DMS Ltd		Tel: 0274990329	residential
			property

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

Insignia Design & Architecture Ltd (Mike Fergus) Tel: 0211566028
A.C. Drainage Ltd - 08037 Tel: 027 4755147
Russell Nant Plumbing - 09375 Tel: 027 4782316
McDermand Plumbing & Gasfitting - 10128 - Tel: 027 4937337
Dean Bartlett Registered Electrician - E19176 Tel: 021 701 842

Note: *continue on another page if necessary*

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

N.A

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

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

Name of person signing: [redacted] Date: 20 Jan 2014

ATTACHMENTS

The following documents are attached to this application:

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

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20 JAN 2014
TAURANGA CITY COUNCIL

EWRB 551

ELECTRICAL WORKERS REGISTRATION BOARD
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.

To be completed whether or not an Inspection is required.

No. 3697275

No. of attachments

CUSTOMER INFORMATION - PLEASE PRINT CLEARLY

Name of customer: Noel + Sandra Fletcher Phone:

Address of installation: 35 Jarrah Park Drive. Tauranga

Postal address of customer (if not as above): 3 Jarrah Park Drive

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

58	No. of lighting outlets	1	No. of ranges
56	No. of socket outlets	—	No. of water heaters
Was any installation work carried out by the homeowner?			Yes ✓ No

Please tick (✓) as appropriate where work includes:

✓ Mains	✓ Main earthing system
✓ MEN Switchboard closest to point of supply	Electric lines

Description of work carried out (If necessary attach any pages with work done): Install M1 Metrbox with MEN point and revenue meter. 16mm u/s mains laid by other contractor. New house wired as per electrical plan. 3x for light, 1x for. earth loop. 0.84Ω, 0.71Ω, 0.65Ω, PFC 0.28kA, 0.32kA, 0.36kA RCD.1 - 24.5mS RCD.2 - 34.6mS RCD.3 - 24.3mS.

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

ADDITIONAL RECEIVED 20 JAN 2014 TAURANGA CITY COUNCIL

ELECTRICAL WORKER DETAILS

Name	Dean Bartlett	Registration No.	E19176
Company	electel	Contact Ph No.	021 701 842
Signature		Date	29-3-12.

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	C Higgins	Registration No.	I250417
Signature		Date	3/4/12
		Contact Ph No.	0272467732

This form is approved by the Electrical Workers Registration Board (PO Box 10-156, Wellington. Freephone 0800 66 1000) for the purposes of the Electricity (Safety) Regulations 2010.

CUSTOMER COPY – THIS IS AN IMPORTANT DOCUMENT AND SHOULD BE RETAINED

Plumbers, Gasfitters and Drainlayers Board

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

GASFITTING CERTIFICATE OF COMPLIANCE

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

ENERGY WORK CERTIFICATE

(Pursuant to the Building Act 2004)

This certificate is not transferable

Consumer:	N & S Fletcher	Certificate Number:	**704612**	**Test Results:**	7 min Duration
Installation Address:	35 Jarrah Park Drive	Gas Supplier:	Nova Gas		9.00kPa test pressure
	Pyes Pa	Category:	Domestic		0.00kPa Loss / Gain
	Tauranga	Type (Regulation 44(1)):	NEW		2.70kPa Working pressure
Vehicle Registration:		Gas Type:	NG	**Other Testing:**	
Vessel Registration:		Certification Date:	04 Sep 2012	**Test Date:**	03 Sep 2012

DESCRIPTION OF GASFITTING TO WHICH THIS CERTIFICATE APPLIES

Qty	Item Type	Item Location	Make/ Model	Input Rate	Flue Type	Flue Location	Vent Type	Vent Location
1	Pipework							
1	Bayonet	Lounge	Floor socket					
1	Bayonet	Family room	Floor socket					
1	Freestanding cooker	Kitchen	Delonghi DE91GW1	39.2 MJ/hr	Unflued		Adventitious	
1	Space heater inbuilt	Lounge	Rinnai IB35ETR	33 MJ/hr	Natural Draught Flue (Open)	Flued inside false chimney	Adventitious	
1	Water heater continuous flow	Outside	Bosch 17E Highflow	135 MJ/hr	Forced Draught Flue (Power)	Front of unit	Natural	
1	Water heater continuous flow	Outside	Bosch 26E Highflow	200 MJ/hr	Forced Draught Flue (Power)	Front of unit	Adventitious	

I certify that:

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

Signed:
Certifier

Authorisation No: 10128

Name: McDermond, Ian J

Installer(s) supervised by certifier
Authorisation No:
Name:

Authorisation No:
Name:

Certificate Owner
Authorisation No: 10128
Name: McDermond, Ian J
Company:

Anna Garcia

From: Anna Garcia <Anna.Garcia@tauranga.govt.nz>
Sent: Monday, 17 March 2014 1:52 p.m.
To: n_sfletcher@xtra.co.nz
Subject: Request for more information
Attachments: SC3640072714031713490.pdf

Hi Sandra,

As per our conversation this morning, please find attached a copy of the request for more information for your Code Compliance Certificate.

Kind Regards,

Anna Garcia| Building Consent Technician
Tauranga City Council | 07 577 7200 extn 7708 | Anna.Garcia@tauranga.govt.nz | www.tauranga.govt.nz

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a.garcia@tauranga.govt.nz [mailto:anna.garcia@tauranga.govt.nz]
ay, 17 March 2014 2:50 p.m.
Garcia
Message from KMBT_C364

26 February 2014

Fletcher
Noel John & Sandra Lynn
3 Jarrah Park Drive
Pyes Pa
Tauranga 3112

nsfletcher@xtra.co.nz

Dear Sir/Madam

Final Inspection of Building Work

Building Consent 36412
Property Situated at: 35 Jarrah Park Drive, Pyes Pa
Legal Description: Lot 33 DP 333462

The following items are required to be provided by you before we can recommend that a Code Compliance Certificate can be issued:

1. **There is no record of the required drainage inspection being done by council**

   Please have the certifying drain layer reasonable for the work provide a producer statement covering the work done and provide a reason why the required inspection wasn't requested.

2. **The first inspection by council was for block work the inspector noted the foundations where done under supervision of a engineer.**

   Please provide a PS4 producer statement from a chartered professional engineer covering the foundations and piling and any other work done under his supervision for councils consideration.

3. **At the final inspection the inspector noted the out door fire place is to be deleted from the building consent**

   Please provide written confirmation from the owner and a as built elevation with the fire place removed.

Yours faithfully

Lex Plato
Technical Officer-Plan Processing

Please address all Communications to:
Team Leader: Building Consents (BCA)
Tauranga City Council
Private Bag 12022
Tauranga 3143

Lex Plato

From: n_sfletcher@xtra.co.nz
Sent: Wednesday, 18 March 2015 9:53 a.m.
To: Lex Plato
Subject: 35 Jarrah Park Drive, Pyes Pa - Building Consent 36412
Attachments: Tga City Council - Final Inspection of Building Work 001.jpg; Tga City Council - Final Inspection of Building Work 002.jpg; Tga City Council - Final Inspection of Building Work 003.jpg; Tga City Council - Final Inspection of Building Work 004.jpg; Tga City Council - Final Inspection of Building Work 005.jpg; Tga City Council - Final Inspection of Building Work.jpg

Hello Lex

Please find attached all documents as requested.

I will also drop off original copies addressed to your attention at Council offices later today or tomorrow.

If there is anything further please let me know.

Many thanks

Sandra Fletcher
027 3522269

The message is ready to be sent with the following file or link attachments:
Tga City Council - Final Inspection of Building Work 001.jpg
Tga City Council - Final Inspection of Building Work 002.jpg
Tga City Council - Final Inspection of Building Work 003.jpg
Tga City Council - Final Inspection of Building Work 004.jpg
Tga City Council - Final Inspection of Building Work 005.jpg
Tga City Council - Final Inspection of Building Work.jpg

Note: To protect against computer viruses, e-mail programs may prevent sending or receiving certain types of file attachments. Check your e-mail security settings to determine how attachments are handled.

26 February 2014

Fletcher
Noel John & Sandra Lynn
3 Jarrah Park Drive
Pyes Pa
Tauranga 3112

nsfletcher@xtra.co.nz

Dear Sir/Madam

Final Inspection of Building Work

Building Consent 36412
Property Situated at: 35 Jarrah Park Drive, Pyes Pa
Legal Description: Lot 33 DP 333462

The following items are required to be provided by you before we can recommend that a Code Compliance Certificate can be issued:

1. **There is no record of the required drainage inspection being done by council**

   Please have the certifying drain layer reasonable for the work provide a producer statement covering the work done and provide a reason why the required inspection wasn't requested.

2. **The first inspection by council was for block work the inspector noted the foundations where done under supervision of a engineer.**

   Please provide a PS4 producer statement from a chartered professional engineer covering the foundations and piling and any other work done under his supervision for councils consideration.

3. **At the final inspection the inspector noted the out door fire place is to be deleted from the building consent**

   Please provide written confirmation from the owner and a as built elevation with the fire place removed.

Yours faithfully

Lex Plato
Technical Officer-Plan Processing

STRUCTURAL
GEOTECHNICAL
CIVIL
FIRE

IpeNz ARCHITECTS ACENZ

JOB NO: 112373

PRODUCER STATEMENT – CONSTRUCTION REVIEW

ISSUED BY: *Kirk Roberts Consulting Engineers Ltd – Damian McMillan*

TO: *N & S Fletcher*
TO BE SUPPLIED TO: *Tauranga City Council*
IN RESPECT OF: *Inspection of timber foundations to masonry block foundation walls, inspection of masonry block walls prior to grouting, soil testing of original ground and compacted fill to house to confirm bearing capacities*
AT: *35 Jarrah Park Drive, Tauranga*

Kirk Roberts Consulting Engineers Ltd has been engaged by *N & S Fletcher* to provide observation as defined in the Producer Statement Design with the exception of services in respect of the requirements of Clause B1/VM1 and B1/VM4 of Building Regulations 2004 for the building work described by the drawings and specifications prepared *by Insignia Design & Architecture* drawings titled *"Proposed New Five Bedroom Home at 35 Jarrah Park Drive for N & S Fletcher"*. Site inspections have been carried out as listed below

As an independent design professional covered by a current policy of Professional Indemnity Insurance to a minimum value of $200,000, I or personnel under my control have carried out periodic reviews of the work appropriate to the engagement and based upon these reviews and information supplied by the Contractor during the course of the works I BELIEVE ON REASONABLE GROUNDS THAT:

☐ All

☑ Part only (As Listed Below)

- Soil testing to original ground to confirm / check bearing capacity
- Inspection of foundations to masonry block walls prior to concreting
- Inspection of masonry block walls prior to grouting
- Soil testing to confirm / check compaction to compacted fill to house

Damian J. McMillan
B.E.(Hons), MIPENZ(Structural), CPEng (ID:229150)
Kirk Roberts Consulting Engineers Ltd.

Date 23rd July 2012
MIPENZ ☑

Producer Statement

Attention:

Tauranga City Council

Tauranga

A.C. Drainage LTD
22 Morington Dell
PAPAMOA
Ph: 0274 755 147
(07) 575 5647
Fax: (07) 575 5649
Licence No: 08037

Issued by A.C. Drainage LTD

Re Mrs. Fletcher	
Building Consent No 36413	
Address 35 Jarrah Park Drive Tauranga	
Scope of Worlds Drainage Inspection	

Garry Palmer AC. Drainage Ltd has completed water test to G13/AS2 Standard for new House 35 Jarrah Park Drive Tauranga. Also Garry Palmer AC. Drainage Ltd has Dug and Layed Sewer and Stormwater Drains to the New Zealand Standard. We were on the understanding that the Sewer and Stormwater Drainage Inspection had been booked with the Council.

16/3/2015

Garry Palmer

A.C. DRAINAGE LTD
22 Morington Dell
Papamoa Beach PAPAMOA 3118
Ph 0274 755 147 - 07 5755 647
Fax 07 5755 649

35 Jarrah Park Drive
Pyes Pa
Tauranga 3112

20 April 2014

Lex Plato
Technical Officer – Plan Processing
Tauranga City Council

Dear Lex

In response to your letter dated 26 February 2014 and the item listed as No.3 we wish to confirm that the out-door fireplace be deleted from the building consent. Should we wish to go ahead with building the fire place in future, we understand that we will need to re-apply for a permit in order to do so.

Thank you.

Kind regards

Noel & Sandra Fletcher
027 35 22269

STRUCTURAL
GEOTECHNICAL
CIVIL
FIRE

24th July 2012

Tauranga City Council
91 Willow Street
Tauranga

OUR JOB REF: 112373

RE: N & S Fletcher, 35 Jarrah Park Drive, Tauranga – BC ref: 33939
PRODUCER STATEMENT FOR CONSTRUCTION REVIEW (PS4)

Please find attached the Producer Statement for Construction Review (PS4) for N & S Fletcher, 35 Jarrah Park Drive, Tauranga – BC 33939.

Yours faithfully,

Damian McMillan
B.E.(Hons), MIPENZ,.CPEng (ID:229150)

35 Jarrah Park Drive
Pyes Pa
Tauranga 3112

n_sfletcher@xtra.co.nz

18 March 2015

Lex Plato
Technical Officer – Plan Processing
Tauranga City Council

Dear Lex

Final Inspection of Building Work

Building Consent 36412
Property Situated at: 35 Jarrah Park Drive, Pyes Pa
Legal Description: Lot 33 DP 333462

Please find the x3 items requested by you in order to recommend a Code of Compliance Certificate for our home.

Thank you very much.

Kind regards

Noel & Sandra Fletcher
027 3522269

Date: Wednesday 1st August 2012

RE: Fletcher Residence – 35 Jarrah Park Drive, Tauranga

To Whom It May Concern,

I confirm that the Celcrete 50mm panel installation carried out for the job at 35 Jarrah Park Drive, Tauranga was built to Celcrete International Limited's specifications as set out in the technical manual.

I/We confirm that, by my/our own labour or arrangements and cost, make good any defects in workmanship or damage resulting from neglect or omission by ourselves.

Should you have any queries please do not hesitate to contact me.

Yours Sincerely

Elliot Gear
Gear Contracting Ltd
021 458 758

Workmanship guarantee period – 5 years from date of practical completion

PRODUCER STATEMENT
APPROVED AUTHOR

DATE 22.1.2014

ADDITIONAL RECEIVED
20 JAN 2014
TAURANGA CITY COUNCIL

Producer Statement

Attention:

Bay Inspections
Tgc

A.C. Drainage LTD
22 Morington Dell
PAPAMOA
Ph: 0274 755 147
(07) 575 5647
Fax: (07) 575 5649
Licence No: 08037

Issued by A.C. Drainage LTD

Re [redacted] Mr & Mrs	Fletcher
Building Consent No 36412	
Address 35 Tarah Park	Drive Tgc
Scope of Worlds Water Test	

Garry Palmer AC. Drainage Ltd has completed water test to G13/AS2 Standard

For new House 35 Tarah Park Drive Tga

AC Drainage Ltd laid Stormwater and Sewer Drains to Connection

PREMIER INSULATION BOP LTD
the insulation experts
Phone: 07 574 9801
Fax: 07 574 9803
Mob: 0274 794 348
Email: mike@premierbop.co.nz
P.O.Box 10054, Bayfair, Mt. Maunganui, Bay Of Plenty 3152
www.premierbop.co.nz

PREMIER INSULATION LTD

This Producer Statement is to confirm the insulation material installed at:

Type:	Residential – New
Builder/Owner:	Sandra Fletcher
Address:	35 Jarrah Park Drive Pyes Pa Tauranga
Date installed:	29-31 May 2012
Insulation type	Premier brand A grade glass wool blanket
Extent of work:	Exterior ceilings dwelling – R3.6 Exterior walls dwelling – R2.4 Garage / dwelling dividing wall – R2.4 Interior wall Masterbed / Bed 2 – R2.4 Garage ceilings – R2.9 Exterior garage walls – R2.4
Guarantees:	Premier Insulation A Grade Glass Wool Blanket is guaranteed by the manufacturer as meeting or exceeding its stated R rating and the requirements of the New Zealand Building code (appropriate R value) including the 50 year durability requirement when installed according to manufacturers instructions. The product is fully BRANZ appraised, Appraisal number #509. Premier Insulation BOP Ltd warranty our installation of the insulation material as being to manufacturers / building code requirements and industry leading practice as at the date of installation. The ratings installed meet or exceed the requirements of the building code and /or the architects specifications as at the date of installation.

ENTERED

M.L. Kuipers von Lande
Director

PRODUCER STATEMENT
APPROVED AUTHOR

DATE 22-1-2014

ADDITIONAL RECEIVED
20 JAN 2014
TAURANGA CITY COUNCIL

RUSSELL NANT PLUMBING

213 GRANGE ROAD

TAURANGA

PH 5762184

0274782316

TO TAURANGA DISTRICT COUNCIL

14/08/2013

RUSSELL NANT PLUMBING HAVE PRESSURE TESTED ALL PEX HOT AND COLD WATER PIPES TO A MINUMIN PRESSURE OF 1500 KPA FOR NO LESS THAN 30 MINUTE AT 35 JARRAH PARK DRIVE PYES PA TAURANGA. OWNER N & S FLETCHER

Russell is a certifying plumber 09375. checked public reg. LS

Taylor Roofing 2004 Limited
81 Birch Avenue
P O Box 1066, Tauranga 3140
Telephone 07 578 5012
Facsimile 07 571 1525
Email admin@taylors4roofing.co.nz
www.taylors4roofing.co.nz

PRODUCER STATEMENT FOR TILE ROOF

SPECIFIC PRODUCTS COVERED BY THIS PRODUCER STATEMENT ARE:

Manufacturer: Metrotile (NZ) Ltd

Product Description: Metroroman Chip Coated Tiles - Ember

THIS STATEMENT APPLIES ONLY TO THE PRODUCTS LISTED ABOVE AND ONLY TO WORK CARRIED OUT PRIOR TO THE COMPLETION DATE SHOWN BELOW. IT DOES NOT APPLY TO THE STRUCTURE.

JOB SITE: 3 Jarrah Park Drive, Pyes Pa, Tauranga.

WE CONFIRM THAT THE Metroroman - Ember HAS BEEN INSTALLED IN ACCORDANCE WITH THE SPECIFIC DESIGN SUBMIITED AND APPROVED BY THE RELEVANT NZ BUILDING CODE AT THE TIME OF CONSENT

Authorised Signatory

.....
(Richard Coffey BP110779)

PRODUCER STATEMENT
APPROVED AUTHOR
DATE 22.1.2014

For Taylor Roofing 2004 Ltd
81 Birch Avenue
Tauranga

Completion Date: May 2012

Our Reference # 9904

Builder on this contract: N & S Fletcher

NB: NO WARRANTY OR PRODUCER STATEMENT IS VALID UNLESS ACCOUNT HAS BEEN PAID IN FULL

ADDITIONAL RECEIVED
20 JAN 2014
TAURANGA CITY COUNCIL

Metrotile
ROOFING SYSTEMS

Date: 20th May 2012 Warranty No: 101236.01 Distributor: TAYLOR ROOFING 2004 LTD

TEXTURED STONE-COATED TILE WARRANTY FOR NEW ZEALAND USE ONLY

(Manufactured from Zincalume only)

To the Purchaser Named Hereunder: N & S FLETCHER

Address: 3 JARRAH PARK DRIVE, PYES PA, TAURANGA

Tile warranty by Metrotile (NZ) Limited (hereinafter called the Company).

(a) Weather Security Warranty

The Company warrants that each Zincalume roofing tile comprised in the roof fitted to the purchaser's property described below; will carry a 50 year pro-rata weatherproof warranty. This warranty is a full 25-year weatherproof warranty plus a diminishing pro-rata weatherproof warranty for the subsequent 25 years. Should any tile not remain weatherproof over this period the Company may at its option repair or replace the tile. The Company's obligation under this section of the warranty shall be limited to the cost of the remedial work during the first 25 years following the date of this warranty, and thereafter shall be limited to sharing the costs with the purchaser based on the schedule on the reverse of this warranty.

(b) Surface Coating Warranty

If during a period of 20 years from the date of this warranty, the surface coatings of the tile deteriorates to the extent that in the Company's reasonable opinion the appearance of the roof is substantially affected, then the Company will at its option either repair the roof or apply the Company's surface coating to the roof. The Company's obligation under this surface warranty shall be limited to the cost of the remedial work during the first ten years following the date of this warranty, and thereafter shall be limited to the sharing of costs with the purchaser based on the schedule on the reverse side of this warranty.

(c) Installation Warranty by the Installation Contractor

The installation contractor warrants that defects in the purchaser's roof arising within five years of the date of this warranty and caused by faulty workmanship in the fitting of the roof shall, within a reasonable time, be made good by the installation contractor and without cost to the purchaser.

(d) Terms and Conditions of the Tile and Installation Warranties:

(i) The warranties shall only apply if the purchaser has made full payments for the supply and fitting of the roof and thereafter will extend to subsequent owners of the property.

(ii) The warranties shall only apply where the defect is a direct result of a manufacturing defect or faulty workmanship in fitting of the roof. (For example, damage caused by walking on the roof by the owner or any other persons such as plumbers, TV repairmen, electricians, painters etc. following the correct fitting of the roof, or any defects in the structure on which the roof is fitted, is not covered by the warranty.)

(iii) The Company by virtue of these warranties shall not be liable for any consequential, indirect or special damage or loss of any kind whatsoever beyond the period that the Company is liable to the consumer under the Consumer Guarantees Act 1993.

(iv) As colour variations may exist in tiles manufactured at different times the Company and installation contractor reserve the right to repair or replace tiles in a colour similar to the original.

(v) The warranties shall not apply if any work, except temporary emergency work, is done other than under the supervision of or subject to the inspection and approval of the Company.

(vi) The Company gives no warranty if during installation of the roof, skill saws, abrasive discs or hacksaws are used to cut tiles except as directed in fixing instructions issued by the manufacturer of the tiles.

(vii) The surface coating warranty shall not apply where the growth of organic matter such as moss or lichen occurs on the roof. Organic matter, if left unchecked, may damage the surface of any roofing or cladding product.

(viii) Any remedial work carried out under this warranty shall not extend the term of warranty.

(ix) This warranty does not in any way limit the rights of the consumer or limit the obligations of the Company under the Consumer Guarantees Act 1993

(e) Special Note:

If rainwater is to be collected from this roof and intended for drinking, the system must be disconnected for three good rainfalls or thoroughly hosed down before reconnecting.

How to care for your roof:

1. You should not walk on your roof unless absolutely necessary. If you do need to walk on your roof, to avoid denting or causing other damage to your roof, you should, firstly wear soft-soled shoes and secondly place your feet on the lowest point of the tile at the front edge.
2. Metrotile roofs must be washed down regularly with fresh water especially those areas sheltered by the eaves overhang of a higher roof. In areas near the sea, where salt deposits are noticeable on windows and similar surfaces, or near areas of industrial pollution, washing down should be carried out every 2-3 months. In other areas, washing down every 6 months should suffice.
3. All organic growth such as moss, mould, algae, lichen or other organic growth can damage the surface coating of your Metrotile roof and must be removed with chemical cleaners as recommended by Metrotile in order for your warranty to be valid – refer to section (d) (vii). Metrotile recommends to chemically clean the roof within a 3 year time period of your roof being installed and thereafter once every 2-3 years to maintain a good appearance and prevent the growth of moss, mould, algae, lichen or other organic growth. Metrotile recommends the use of MossBoss to chemically clean your roof.

Clause (a)	**Weather Security Pro Rata Warranty Schedule**			
Year	Company Contribution	%	Purchaser (Owner) Contribution	%
1 to 26	"	100%	"	0%
27	"	96%	"	4%
28	"	92%	"	8%
29	"	88%	"	12%
30	"	84%	"	16%
31	"	80%	"	20%
32	"	76%	"	24%
33	"	72%	"	28%
34	"	68%	"	32%
35	"	64%	"	36%
36	"	60%	"	40%
37	"	56%	"	44%
38	"	52%	"	48%
39	"	48%	"	52%
40	"	44%	"	56%
41	"	40%	"	60%
42	"	36%	"	64%
43	"	32%	"	68%
44	"	28%	"	72%
45	"	24%	"	76%
46	"	20%	"	80%
47	"	16%	"	84%
48	"	12%	"	88%
49	"	8%	"	92%
50	"	4%	"	96%
51 - thereafter	"	0%	"	100%

Clause (b)	**Satin Surface Coating Pro Rata Warranty Schedule**			
Year	Company Contribution	%	Purchaser (Owner) Contribution	%
1 to 5	"	100%	"	0%
6	"	90.9%	"	9.1%
7	"	81.8%	"	18.2%
8	"	72.7%	"	27.3%
9	"	63.6%	"	36.4%
10	"	54.6%	"	45.5%
11	"	45.5%	"	54.6%
12	"	36.4%	"	63.6%
13	"	27.3%	"	72.7%
14	"	18.2%	"	81.8%
15	"	9.1%	"	90.9%
16 - thereafter	"	0%		100%

Taylor Roofing (2004) Limited

81 Birch Avenue
P O Box 1066, Tauranga
Telephone 07 578 5012
Facsimile 07 5711525

Dear Customer,

Thank you for choosing Taylor Roofing to supply and instal your new roof. We appreciate your trust in our company to provide the right roofing products and service for your home or other building project, and we hope you will consider us again for future roofing work. The owners of Taylor Roofing, who also manage the company, have many years of experience in the roofing industry, and we use this knowledge to ensure you get the best possible job.

As a follow up service we have included with this letter, a manufacturers warranty for your new roof, signed also by us as the installer. If you are the builder please ensure that this letter and the warranty are passed on to the owner.

For **Colorcote®** (a registered trademark of Fletcher Challenge Ltd) roof products there are two copies of the warranty, one is to be retained by the owner, the other is to be signed by the owner or agent (mid page) and returned to Roof Manufacturers Ltd, P O Box 319, Tauranga, for filing.

For **Colorsteel®** (a registered trademark of New Zealand Steel Ltd) roof products there is only one copy, which does no require signing, and the owner is to retain.

Please note that all warranty's have maintenance requirements which the manufacturers include as part of the warranty.

Your roof will give you many years of satisfactory service if it is properly maintained.

Yours faithfully,

p.p. Taylor Roofing 2004 Ltd

Certified Tiler

PRODUCER STATEMENT

I TROY BRIDGER.
Full name

Of 35 WHITAKER. OTUMOETAI T.G.A.
Full address

Confirm that I have applied MAPEI WPS100.
Identify system

MAPEI BAND.

At 35 Jarrah Park Drive, Pyes Pa. Tauranga.
Address

On SHOWERS X3 AND 1X BATH.

Date 20.7.2012.

In accordance with all of the manufacturer's installation application requirements.

I am satisfied that the substrate over which the system has been applied had been suitably prepared for the application of that system and that the required flashings and/or waterproofing fittings had been properly installed.

Signed: ..... **Date:** 20.8.2012

Mapei Application number = 293.

changed from BC But is a approved product to use.

ADDITIONAL RECEIVED
20 JAN 2014
TAURANGA CITY COUNCIL

PRODUCER STATEMENT
APPROVED AUTHOR

DATE: 22-1-2014

WarrantyPlus

steel&tube
STRONGER IN EVERYWAY

RAINWATER warranty for 35 Jarrah Park Drive

COLORSTEEL® Endura™

Material Warranty

Steel & Tube Roofing Products warrants that COLORSTEEL® Endura™ coated steel materials as detailed below, will perform as follows;

Durability	Spouting will not perforate through corrosion within 10 years.
Coatings	Spouting will not flake, peel or excessively fade within 10 years.
Drinking Water	Products will be a suitable surface for the collection of rainwater for drinking.
Performance	Products will perform in accordance with our published design literature current at the time of supply.
Standards	NZS/AS 1397-93 Steel sheet and strip -Hot dipped zinc coated or aluminium/zinc coated. NZS/AS 2728-97 Prefinished/prepainted sheet metal products for interior/exterior building applications.

Issued to	N & S Fletcher	**Profile**	Customline Gutter
Address	35 Jarrah Park Drive	**Colour**	Ironsand
City	Tauranga	**Invoice No(s)**	72867282
Environment	Moderate Inland	**Lift No(s)**	V311843

Minor white corrosion, which may appear at unwashed tension bends or cut edges, is a natural weathering phenomenon of COLORSTEEL ® Endura™ and does not constitute a failure of the coating system. The life of the product may be extended beyond the warranty period by regular maintenance.

Important :This warranty is offered subject to maintenance by the occupier consisting of manual washing of unwashed areas and high risk areas every 3 months plus;
- manual washing and clearing of debris from gutters every six months

Please see overleaf for Terms and Conditions of warranty

Signed for Steel & Tube: 16 May 2012

ADDITIONAL RECEIVED
20 JAN 2014
TAURANGA CITY COUNCIL

Installer Warranty

Installed by Precise Spouting & Roofing Ltd **Install Date** May, 2012

Precise Spouting & Roofing Ltd warrants the product for 5 years against faulty workmanship or defects caused by poor installation. The installer does not warrant the product against mechanical damage occurring after installation.

Signed for Precise Spouting & Roofing Ltd

WARRANTY

STR0245

Certificate # RTA-CSTT-8UC7CD

Conditions & Environmental Categories

Terms & Conditions of Warranty

1. **This warranty is issued according to information supplied to Steel & Tube.**
   Environmental classifications are as described in the table below.
   The warranty shall not apply if the environment described herein is not an accurate assessment of actual site details.
2. **Maintenance must be carried out in accordance with the maintenance schedule printed on the front of this document.**
3. Prepainted material is subject to normal wear and tear which may include uniform fading, chalking and dirt collection.
4. The product must be processed, installed and maintained in accordance with manufacturer's published literature, Steel & Tube's literature and accepted good trade practice.
5. The products must be sold as prime material.
6. Garage doors are not included in this warranty.
7. Damage or corrosion resulting from the following circumstances is not covered:
   - Mechanical, chemical, heat or wet storage damages.
   - Contact with, or runoff from dissimilar materials such as stainless steel, lead or copper.
   - Contact with, or runoff from corrosive materials such as fertiliser or wet concrete.
   - Exposed soffits or aggressive internal environments.
   - Special Conditions as defined in New Zealand Steel or Pacific Coilcoaters literature.
   - Storm, volcanic activity or other causes beyond the control of the roofing manufacturer.

If the product has failed to perform as warranted, Steel & Tube will at its own option repair or replace the affected material. A new warranty shall be issued to cover the balance of the original offer for perforation protection.

Steel & Tube shall not be liable for any consequential loss or damage except as may be required by law.

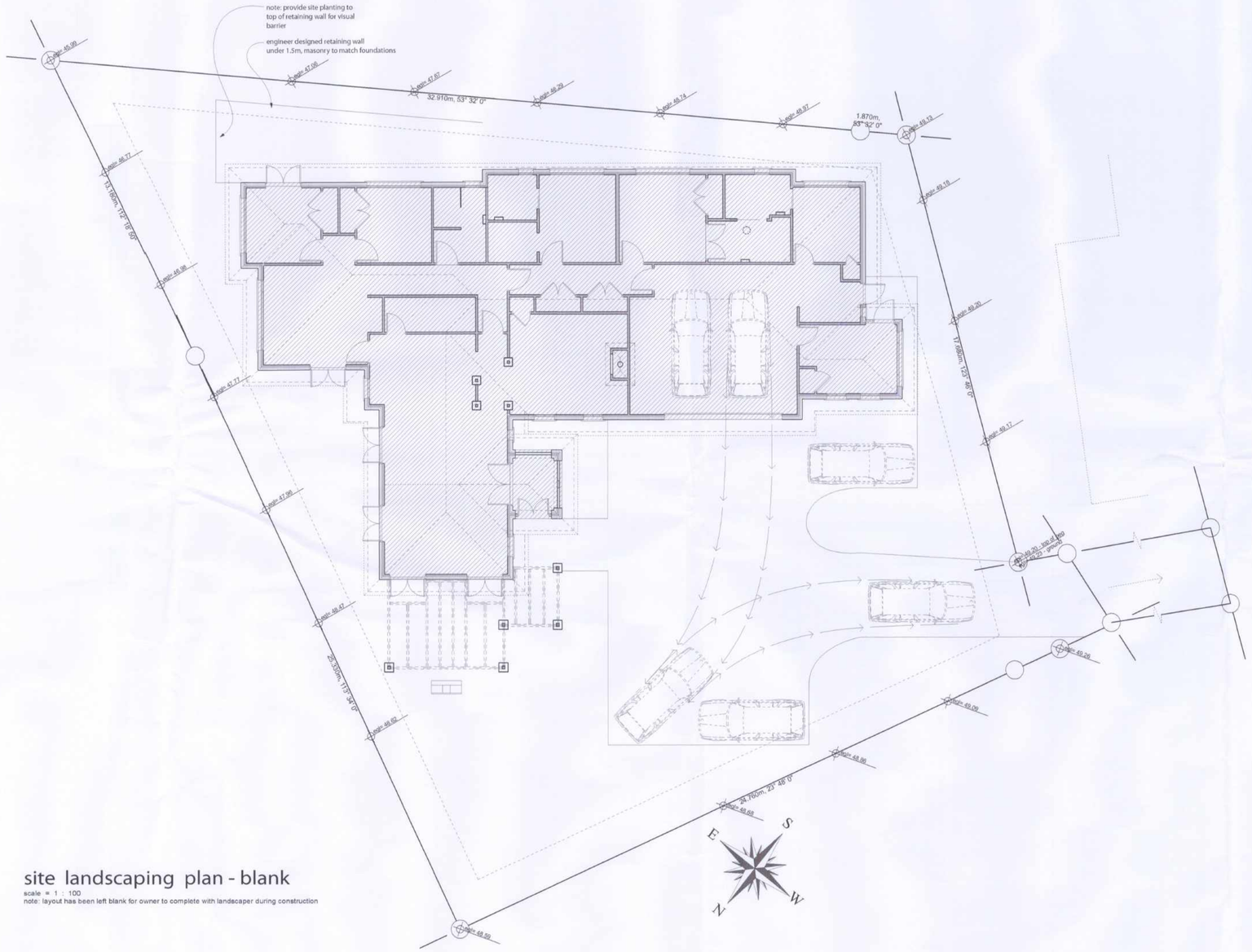
Environmental Categories

Category	Characterised By	Typical Zones
Extreme Marine	• Heavy salt deposits. • Almost constant smell of salt in the air.	Within 50 metres from breaking surf on East Coast and 100 metres from breaking surf on West Coast.
Very Severe Marine	• Heavy salt deposits. • Almost constant smell of salt spray in the air.	Within 50 – 100 metres from breaking surf on East Coast and 100 – 200 metres from breaking surf on West Coast.
Severe Marine	• Light salt deposits. • Frequent smell of salt in the air.	Commencing from Very Severe zone up to 500 metres or more inland from breaking surf; or in the immediate vicinity of calm salt water such as harbour foreshores.
Moderate Marine	• Little or no salt deposits. • Occasional smell of salt in the air.	500 metres to 1km from breaking surf; or in the immediate vicinity of calm salt water such as estuaries.
Moderate Inland	• No obvious marine influences.	More than 1000 metres from salt water.

NOTE: Industrial and Geothermal areas are subject to individual assessment.
The above terms are subject to correct design, storage, installation and maintenance provisions.

Nearest Branch: 0800 427 663
Technical Helpline: 0800 333 247
Email: roofing@steelandtube.co.nz
Website: www.steelandtube.co.nz

MRM
FPB FUTURE-PROOF BUILDING
MEMBER OF ROOFING ASSOCIATION N.Z.
TELARC
steel&tube STRONGER IN EVERYWAY



site landscaping plan - blank

scale = 1 : 100
note: layout has been left blank for owner to complete with landscaper during construction

insignia DESIGN & ARCHITECTURE LTD
p. (07) 576 4119 m. 021 156 6028
po box 8334, cherrywood, tauranga
e. info@insigniadesign.co.nz
www.insigniadesign.co.nz

JOB DETAILS:

Proposed New Five Bedroom Home

at

35 Jarrah Park Drive, Tauranga

for

N. & S. Fletcher

GENERAL DESIGN NOTES:

do not scale from plans or details, consult with designer for confirmation if required

Plans to be read in conjunction with the Building Specifications, Bracing Calculations, Truss Designs, Engineering Designs and Specification and Manufacturers Specifications

all building work shall be strictly in accordance with NZS 3604 and The New Zealand Building Code and all relevant Standards and Codes

All works shall satisfy the requirements of E2-AS1 External Moisture

All Changes or Amendments to the Plans or Specifications to be Consulted with Insignia Design & Architecture Ltd prior to commencement.

Contractor to confirm all Dimensions, Levels, Boundary Setbacks and Setouts, Service Connections, Locations and Levels, Daylighting and Height Restriction Requirements prior to commencement of works

Consult with Plumbing, Drainage, Electrical and All Required Sub Contractors prior to commencement of construction stages to ensure all applicable works have been completed accordingly and as required.

All Construction Materials and Systems shall be stored, handled and installed strictly to manufacturers specifications and details

Timber and Wood Based Products and Timber Treatment for use in the Building to comply with NZS 3602

All Framing Shall be min. H1.2 treatment and strength grade or MSG8 or higher unless specified, refer to the plans for all timber strengths as required.

All Glazing shall comply with NZS 4223 and the Code of Practice for Glazing in Buildings.

Provide WANZ support bars under all Full Height Openings strictly to WANZ WIS Details.

Concrete to be min. 20.0 mPa grade unless noted otherwise, ready mixed to NZS 3104

Concrete Construction to NZS 3109

Reinforcing Bars and Welded Reinforcing Mesh to AS/NZS 4671

Construct Floor Slabs, DPM, Reinforcing and Saw Cuts to NZS 3604, Concrete Surface Finishes to NZS 3114

Masonry Construction, Materials and Workmanship to NZS 4210

Consent Plans subject to Acceptance by Local Council Authority, plans subject to change without notice until Final Consent Approval has been obtained

Consult with Insignia Design & Architecture Ltd prior to commencement of construction to ensure Final Approved sets of Plans are being used.

No Building Works to Commence prior to receipt of Approved Consent Plans from Local Council Authority.

Consent Plans to be submitted to Local Council Authority for Building Consent Processing within 3 months of Consent Plan date below to minimise the effects of unforeseen changes in Building Regulations and Manufacturers Specifications

DRAWING STAGE:

CONSENT PLAN

CONTENTS:

proposed site landscaping plan - blank

TCC597567

PROJECT STAGE	DATE
Concept Plan 4	11.11.2011
Engineering	06.12.2011
Consent Plan	19.12.2011

JOB NO:	SHEET:	SCALE:
2011-38	4 of 15	as noted @ A2

22 February 2012

Insignia Design & Architecture Ltd
PO Box 8334
Tauranga 3145

Dear Sir/Madam

Additional Information Required (Two Copies)
Application for Building Consent (Reference Number 36412)

Property Situated at: 35 Jarrah Park Drive, Pyes Pa
Legal Description: Lot 33 DP 333462

Two hard copies of the following information are required before your building consent application can be fully processed. Please provide only the relevant plans and documentation to avoid additional consent processing charges being incurred to Council's Building Counter.

1. Provide additional roof bracing as per NZS 3604 2011 or show roof bracing complies as drawn.

2. Plans construction details CO1-C11 show shelf angles, please clarify where the angles will be used. Note: shelf angles require specific design.

   The apron flashing behind the galv steel shelf angles requires to have a 50 year life for durability as per NZBC B2/AS1, please detail a material to show compliance.

3. The wet floor showers require complete enclosures to comply with NZBCE3/AS1 as the openings are within 1.500mm of the shower rose, please address.

4. The retaining walls associated with the dwelling require a barrier to be installed if people could fall 1m or more.

   The planting on the plans would be a alternative solution. Please provide information to show how the proposed planting complies with the performance criteria of NZBC F4 for Council's consideration.

Note things to consider:

- How accessible the retaining wall is.
- The purpose/use of the retaining wall.
- Weather the top of the wall is frequented by children etc.

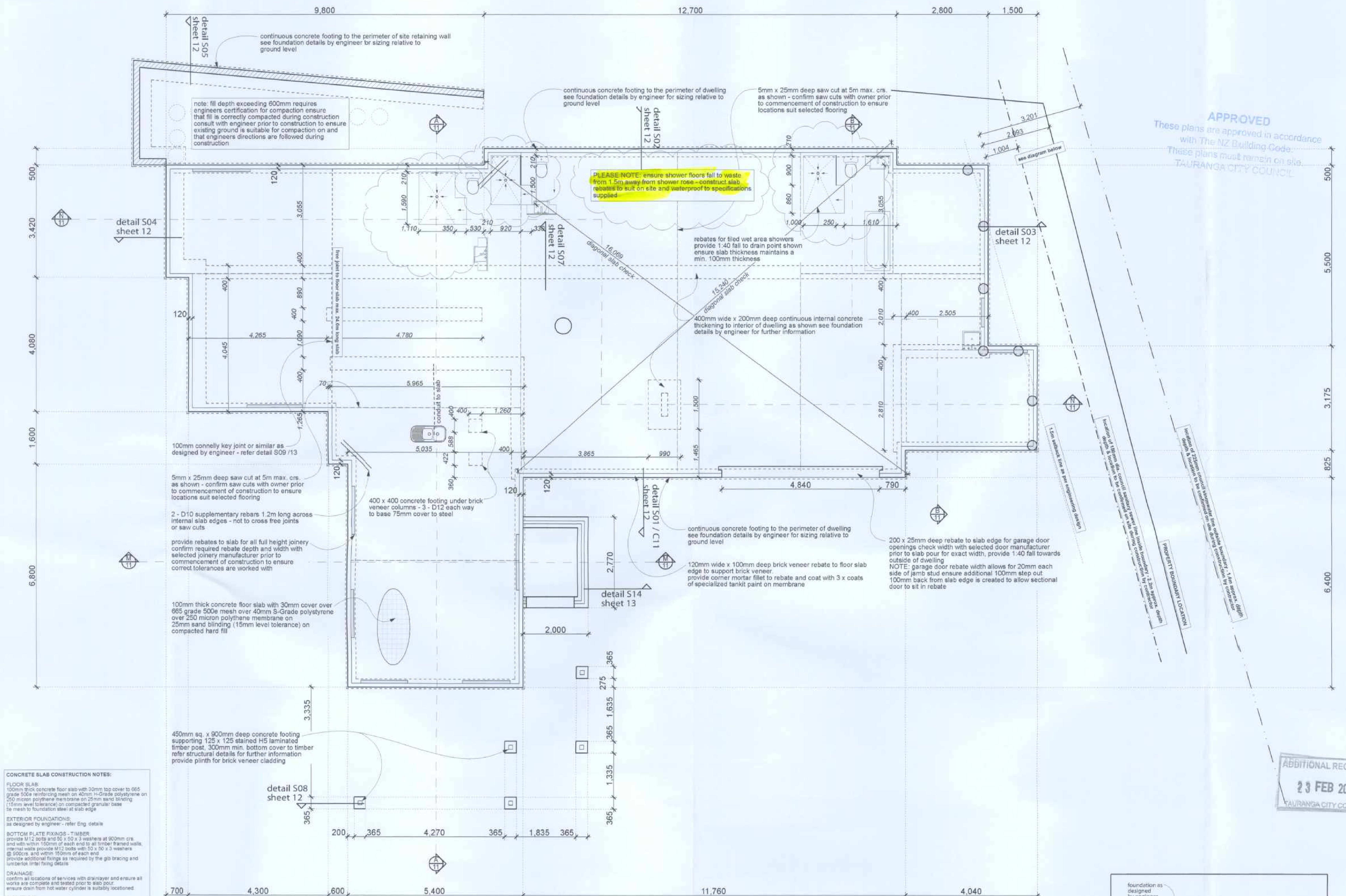
Yours faithfully

Lex Plato
Building Compliance and Inspections

Please address all Communications to:

Manager: Building Services
Tauranga City Council
Private Bag 12022
Tauranga 3143

(**Fax:** (07) 577 7034)



CONCRETE SLAB CONSTRUCTION NOTES:

FLOOR SLAB:
100mm thick concrete floor slab with 30mm top cover to 665 grade 500e reinforcing mesh on 40mm H-Grade polystyrene on 250 micron polythene membrane on 25mm sand blinding (15mm level tolerance) on compacted granular base
tie mesh to foundation steel at slab edge

EXTERIOR FOUNDATIONS:
as designed by engineer - refer Eng. details

BOTTOM PLATE FIXINGS - TIMBER:
provide M12 bolts and 50 x 50 x 3 washers at 900mm crs. and with within 150mm of each end to all timber framed walls. internal walls provide M12 bolts with 50 x 50 x 3 washers @ 900crs. and within 150mm of each end.
provide additional fixings as required by the gib bracing and lumberlok lintel fixing details

DRAINAGE:
confirm all locations of services with drainlayer and ensure all works are complete and tested prior to slab pour.
ensure drain from hot water cylinder is suitably locationed

ELECTRICAL:
confirm all locations of services with electrician and ensure all works / conduits are in place prior to slab pour.

FLOORING CHECK:
confirm locations of all saw cuts with owner prior to commencement of construction to ensure they will not interfere with the selected floor selections, relocate as required in accordance with NZS 3604 and engineering design

GENERAL SLAB CONSTRUCTION NOTES:

ensure ground levels around floor slab comply with NZS 3604 and E2-AS1
150mm min. step down from FFL to permanent paving
225mm min. step down from FFL to unprotected ground
1:25 min. fall away from the slab edge for a distance of 1m
granular fill to beneath floor slab to be compacted in layers of 150mm max. thickness so that the total thickness of the granular base is not less than 75mm and not more than 600mm granular fill shall comply with section 7.5.3.2 NZS 3604 no fill is to be placed beneath foundations or slab thickenings without seeking engineering advice and certifications for compaction fill depths exceeding 600mm require an engineer to investigate the underlying soils and certify all compaction of fill

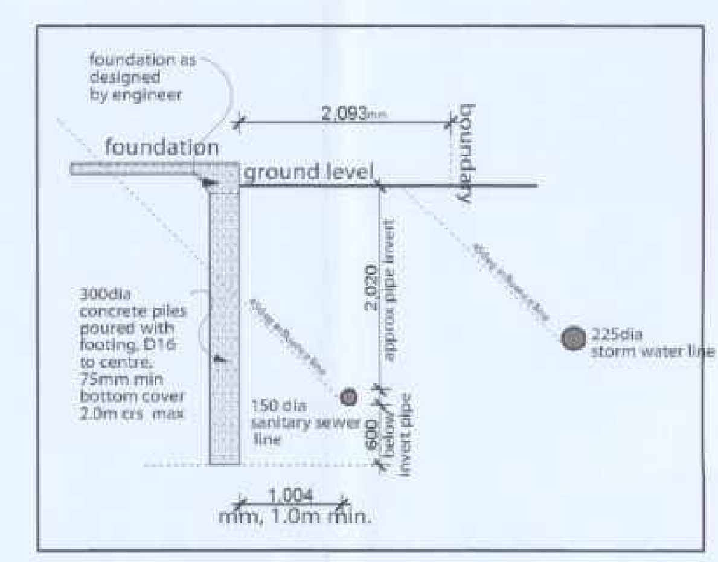
MOWING STRIP:
provide concrete mowing strip to edge of perimeter foundations to protect foundation edge from damage

DIMENSIONS NOTE:

all slab dimensions to be confirmed with floor plan dimensions and precut manufacturers prior to slab pour

concrete slab layout

scale = 1 : 75



service pipe proximity diagram
N.T.S
piling and foundation beam as design by Kirk Roberts Consulting Engineers

APPROVED
These plans are approved in accordance with The NZ Building Code.
These plans must remain on site
TAURANGA CITY COUNCIL

APPROVED
These plans are approved in accordance with The NZ Building Code.
These plans must remain on site
TAURANGA CITY COUNCIL

ADDITIONAL RECEIVED
23 FEB 2012
TAURANGA CITY COUNCIL

insignia DESIGN & ARCHITECTURE LTD
p. (07) 576 4119 m. 021 156 6028
po box 8334, cherrywood, tauranga
e. info@insigniadesign.co.nz
www.insigniadesign.co.nz

JOB DETAILS:

Proposed New Five Bedroom Home
at
35 Jarrah Park Drive, Tauranga
for
N. & S. Fletcher

GENERAL DESIGN NOTES:

do not scale from plans or details, consult with designer for confirmation if required

Plans to be read in conjunction with the Building Specifications, Bracing Calculations, Truss Designs, Engineering Designs and Specification and Manufacturers Specifications

all building work shall be strictly in accordance with NZS 3604 and The New Zealand Building Code and all relevant Standards and Codes

All works shall satisfy the requirements of E2-AS1 External Moisture

All Changes or Amendments to the Plans or Specifications to be Consulted with Insignia Design & Architecture Ltd prior to commencement

Contractor to confirm all Dimensions, Levels, Boundary Setbacks and Setouts, Service Connections, Locations and Levels, Daylighting and Height Restriction Requirements prior to commencement of works

Consult with Plumbing, Drainage, Electrical and All Required Sub Contractors prior to commencement of construction stages to ensure all applicable works have been completed accordingly and as required

All Construction Materials and Systems shall be stored, handled and installed strictly to manufacturers specifications and details

Timber and Wood Based Products and Timber Treatment for use in the Building to comply with NZS 3602

All Framing Shall be min. H1.2 treatment and strength grade or MSG8 or higher unless specified, refer to the plans for all timber strengths as required

All Glazing shall comply with NZS 4223 and the Code of Practice for Glazing in Buildings.

Provide WANZ support bars under all Full Height Openings strictly to WANZ WIS Details.

Concrete to be min. 20.0 mPa grade unless noted otherwise, ready mixed to NZS 3104

Concrete Construction to NZS 3109

Reinforcing Bars and Welded Reinforcing Mesh to AS/NZS 4671

Construct Floor Slabs, DPM, Reinforcing and Saw Cuts to NZS 3604, Concrete Surface Finishes to NZS 3114

Masonry Construction, Materials and Workmanship to NZS 4210

Consent Plans subject to Acceptance by Local Council Authority, plans subject to change without notice until Final Consent Approval has been obtained.

Consult with Insignia Design & Architecture Ltd prior to commencement of construction to ensure Final Approved sets of Plans are being used.

No Building Works to Commence prior to receipt of Approved Consent Plans from Local Council Authority.

Consent Plans to be submitted to Local Council Authority for Building Consent Processing within 3 months of Consent Plan date below to minimise the effects of unforeseen changes in Building Regulations and Manufacturers Specifications

DRAWING STAGE:

CONSENT PLAN
-amendment 1-

CONTENTS:

concrete slab layout

TCC597572

PROJECT STAGE	DATE
Concept Plan 4	11.11.2011
Engineering	06.12.2011
Consent Plan	19.12.2011
Consent Plan - Amend. 1	23.02.2012

JOB NO:	SHEET:	SCALE:
2011-38	9 of 15	as noted @ A2

insignia DESIGN & ARCHITECTURE LTD

APPROVED
These plans are approved in accordance with The NZ Building Code.
These plans must remain on site.
TAURANGA CITY COUNCIL

To whom it may concern,

Re: Proposed New Home
35 Jarrah Park Drive, Tauranga
Fletcher

Consent No. 36412

Additional Information as Requested

Attached are two copies of additional information plans indicating the following:

1. Please find attached the roof framing layout showing the roof bracing locations
2. please find attached the revised detail showing the use of a stainless steel flashing
   please find attached the signed copy of the detail by Kirk Roberts Engineer showing they have designed the fixings for the shelf lintel
3. Please find attached the revised slab layout showing the new fall locations required to the showers, along with note to ensure 1:40 fall is present to 1.5m from shower rose
4. the proposed site planting to the top of the proposed retaining wall is in line with the determination from the DBH - ***Determination No. 99/012***
   in this instance the area is round the back of the dwelling and will only be used by people familiar with the home and its surroundings it will not be used as a place on congregation, as noted on the plans a 600mm wide garden / visual barrier is to planted to the top of the wall .
   Please find attached the correspondence with Lex Plato – Building Inspector

If you have any questions relating to the above please feel free to contact me at any stage.

Regards
Michael Fergus

ADDITIONAL INFO RECEIVED
23 FEB 2012
TAURANGA CITY COUNCIL

p. 07 576 4119 | info@insigniadesign.co.nz | www.insigniadesign.co.nz
PO Box 8334, Cherrywood, Tauranga 3145

soffit lininig as noted - see brick veneer / wall junction detail for further information

70 series brick veneer to manufacturers specifications

brick ties @ 300mm max. crs. horizontally and every course vertically

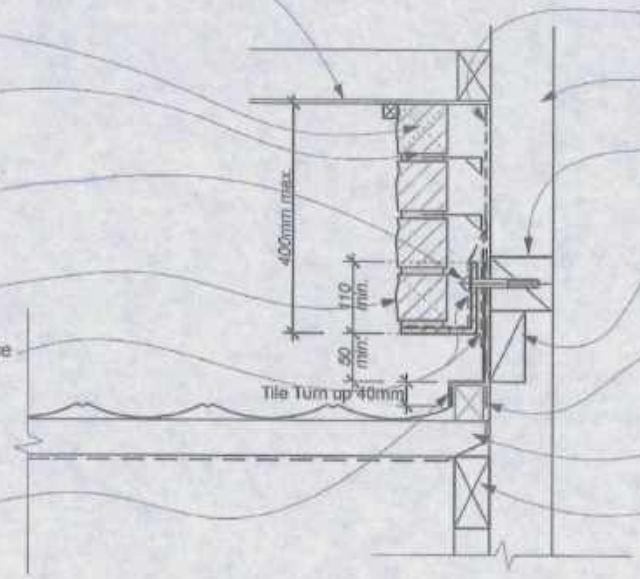
M10 - 100 galv. coach screws @ 250mm max. crs. must be fixed to every stud with intermediate fixing into nogging, provide 50 x 50 x 3 galv. washer to timber side

vent at base in accordance with manufacturers specifications and NZS 3604 - every third perpend

one layer of protectotape from building wrap over face of veneer lintel and one layer from building wrap over top of stainless steel apron flashing

100 x 100 x 8mm EA galv. brick veneer lintel paint finish, bottom of EA to remain flat to allow for cavity drainage

stainless steel 316 powdercoated apron flashing in accordance with roofing specifications, to continue up face of veneer angle for dimensions shown



building wrap, lapped over veneer angle and taped in place with protectotape

90 x 45mm H1.2 timber wall framing

90 x 90mm H1.2 timber nogging, provide lumberlok strap nail plates to fix nogging to studs - both sides and 6 - 3.15 x 90mm skew nails to studs each end

provide solid nogging behind apron flashing to support full extent of flashing

roofing underlay as specified to continue up behind apron flashing

purlins as specified

timber trusses to manufacturers specifications

C09: brick veneer over roof detail

NOTE: roof and wall cladding to be installed to manufacturers specifications & E2-AS1 - detail as taken from Monier Brick Installation Details - please refer for further details

scale = NTS

DESIGN ENGINEER

The structural elements designed on this drawing have been designed by Kirk Roberts Consulting Engineers Ltd.

Job No. 18313 Signed

22-2-12

insignia DESIGN & ARCHITECTURE LTD

p. (07) 576 4119 m. 021 156 6028
po box 8334, cherrywood, tauranga
e. info@insigniadesign.co.nz
www.insigniadesign.co.nz

Mike Fergus

From: Lex Plato [Lex.Plato@tauranga.govt.nz]
Sent: Thursday, 23 February 2012 8:15 a.m.
To: Mike Fergus
Subject: RE: Barriers

Hi Mike thanks for that info each case for a barrier to a retaining wall is accessed on its merits.
You can use that determination as part of the case you put forward but make sure you clarify the use of the area above the wall along the lines of the determination

---

From: Mike Fergus [mailto:mike@insigniadesign.co.nz]
Sent: Wednesday, 22 February 2012 1:46 p.m.
To: Lex Plato
Subject: Barriers

Good Afternoon Lex,

Thank you for taking the time to talk this afternoon.
AS discussed here is the information from the determination in relation to F4:

http://www.dbh.govt.nz/UserFiles/File/Building/Determinations/1999/pdf/1999-012.pdf

It would be logical to require a barrier where the area adjacent to the top of the wall is used as a path, or a space where people can be expected to gather for a public reception or other crowd activity. On the other hand, if the area concerned is separated from the top of the wall by a cultivated garden, a barrier may not be necessary.
In a domestic situation where users are familiar with the surroundings, a barrier is likely to be required only where the wall is adjacent to a path forming an access to the house.

The Decision

Barriers are required above retaining walls exceeding 1 metre in height, where people, particularly those unfamiliar with the area, would frequently be expected to be close to the top of the wall in the course of their normal activities.

I have left a message for Hamish at the DBH to call me back in relation to this but he is away for the day and will hopefully return my call tomorrow morning, could you please have a talk through about this and see what you come up with.
My only other option is to note that the ground level is to be filled to ensure less than 1.0m fall which I am happy to do.
I would like to get this back to you asap as everyone is waiting for this consent to come out.
I look forward to hearing from you.

cheers

Mike Fergus
Designer / Director

insignia DESIGN & ARCHITECTURE LTD

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TAURANGA CITY COUNCIL BUILDING INSPECTIONS

SCHEDULE OF ATTACHMENTS TO CONSENT APPLICATION FILES

Consent No: 36412 **Address:** 35 Jarrah Park Drive

DOCUMENT	DATE	BY:
Checklist		
Record of Inspections	19/1/2012	
Requests for Information		
Responses (Not Supplied by Building Services)		
Requests for Peer Review Form		
Schedule of Documents for Review		
Responses by Reviewer		
Producer Statements Required Form		
Others (List)		

GoGet Processing Summary Report

Consent No: 36412

Checklist/Elements	Status	Notes
Foundations	Pass	
Siteworks	Pass	
Council ground conditions OK	Pass	foundations under specific design
Site levels to FFL - major cuts not required	Pass	retaining walls to be installed engineers design
Sequence of Construction for retaining walls	Pass	Retaining wall can be built after work on the building commences.
Sediment control	Pass	Designer has included a notice regarding sediment control.
Foundations Structure	Pass	
Alternative Solution	Pass	Specific Design by Damian J Mcmillan CPE refer to structural details SO1-SO8
Check PIM/geotech report for ground conditions	Pass	60KPA MINIMUM
Concrete strength	Pass	20MPA
Footing dimension	Pass	REFER PLAN SO1-SO8
Masonry	Pass	
Masonry Walls	Pass	
Alternative Solution	Pass	SPECIFIC DESIGN 200 AND 250 SERIES
Steel grades shown	Pass	Engineer has specified the use of (grades) and this is shown on the drawings.
Elevation show vert/horizontal steel size/set out	Pass	Elevation provided showing steel set out and sizes.
Verticals at all corners, wall ends	Pass	Reinforcing shown to specific design
Floor Slabs	Pass	
Slab on Grade	Pass	
Compaction requirements fill >600mm	Pass	Fill to a depth of >600mm. Engineers compaction report to come. PS4 requested.
DPM specified	Pass	.250 polythene
Slab thickness shown	Pass	Slab thickness of 100mm minimum specified.
Reinforcing mesh/steel shown	Pass	Low tensile reinforcing shown for NZS 3604 slab. grade 500e
Anti cracking measures (slab size/diagonal bars/cuts)	Pass	concrete slab plan sheet 9 of 15 has details
Framing	Pass	
Wall Framing	Pass	
Acceptable Solution	Pass	Bulk of the framing to NZS 3604 with some proprietary members.
Timber grades specified	Pass	MSG8
Timber treatment	Pass	H1.2
Stud heights/sizes and spacings	Pass	2.400 AND 2.700 STUD HEIGHT AT 600 OK MED WIND
Top plate requirements (double where bracing lines between 5-6m)	Pass	Double top plate shown on the details
Support for Glazing units	Pass	All double glazed units spanning more that 600mm have a WANZ (or other) proprietory support bar specified.
Roof Framing	Pass	
Alternative Solution	Pass	trusses to NZBCBI/VMI
Timber grades specified	Pass	MSG8
Timber treatment framing and valley boards	Pass	H1.2
Rafter span and spacing	Pass	PERGOLA RAFTERS OK
Bracing	Pass	Provide additional roof bracing as per NZS 3604 2011 or show roof bracing complies as drawn New plan provided for the roof bracing

Checklist/Elements	Status	Notes
Strengthening for plant loadings/Solar Panels/AC etc	N/A	n
Durability	Pass	
Durability - Structure	Pass	
Acceptable Solution	Pass	B2/AS1
Surface Water	Pass	
Surface Water	Pass	
Acceptable Solution	Pass	E1/AS1
Downpipe Size (Table 5)	Pass	10 d pipes 80mm
Roof Cladding	Pass	
Profiled Metal/Other Roof	Pass	
Acceptable Solution	Pass	E2/AS1
Wall Cladding	Pass	
General (All Cladding Systems)	Pass	
Alternative Solution	Pass	Celcrete 50mm panel to chimney on the 40 mm cavity system . Has a Beal appraisal
Cavity Details	Pass	
Batten size/spacing/treatment	Pass	40mm blocks as per celcrete details
Masonry Veneer	Pass	
Acceptable Solution	Pass	E2/AS1
Steel/Brick Lintels Specified	Pass	Plans construction details CO1-C11 show shelf angles please clarify where the angles will be used . Note shelf angles require specific design. The apron flashing behind the galv steel shelf angles requires to have a 50 year life for durability as per NZBC B2/AS1 please detail a material to show compliance. New detail provide engineer has signed the plan s/steel flashing being used
Fire	Pass	
Fire - Single Dwellings	Pass	
Acceptable Solution	Pass	C/AS1
Access	Pass	
Access - Single Dwellings	Pass	
Acceptable Solution	Pass	D1/AS1
Interior Features All Buildings	Pass	
Internal Moisture	Pass	
Acceptable Solution	Pass	The wet floor showers require complete enclosures to comply with NZBCE3/AS1 as the openings are within 1.500mm of the shower rose please address. new plan provided that shows the 1.500 mm as required
Sealing substrates in wet areas	Pass	Superflex branz appraisal 472
Hazardous Building Materials	Pass	
Acceptable Solution	Pass	F2/AS1
Safety from Falling	Pass	
Acceptable Solution	N/A	F4/AS1
Retaining walls fall >1.0m	Pass	The retaining walls associated with the dwelling require a barrier to be installed if people could fall 1m or more. The planting on the plans would be a alternative solution . Please provide information to show how the proposed planting comply's with the performance criteria of NZBCF4 for councils consideration. Note things to consider.

Checklist/Elements	Status	Notes
		How accessible the retaining wall is. The purpose/use of the retaining wall. Weather the top of the wall is frequented by children etc Letter provided and a copy of a determination re a safety barrier on a retaining wall on the basic of the determination and the explained use of the area above the wall i agree planting is a except able barrier.
Personal Hygiene	Pass	
Acceptable Solution	Pass	G1/AS10
Laundering	Pass	
Acceptable Solution	Pass	G2/AS1
Food Preparation	Pass	
Acceptable Solution	Pass	G3/AS1
Ventilation	Pass	
Acceptable Solution	Pass	G4/AS1
Natural Light/Outside Awareness	Pass	
Acceptable Solution	Pass	G7/AS1
Water Supplies	Pass	
Water Supplies	Pass	
Acceptable Solutions	Pass	G12/AS10
Relief Valve & Exp Valve or Open Vent Specified	Pass	n
Foul Water	Pass	
Sanitary Plumbing/Drainage	Pass	
Drainage	Pass	
Energy Efficiency	Pass	
Housing and Buildings <300m2	Pass	
Schedule method <30% total glazing	Pass	Wall R2.4 batts Ceiling R3.6 batts floor 40mm eps double glazed windows etc
Solid Fuel Heaters	Pass	
Solid Fuel Heaters	Pass	
Alternative Solution	Pass	there is a out side metal barbecue kiwi Braai

I am satisfied on reasonable grounds that the provisions of the Building Code will be met if the building work in relation to the attached application is properly completed in accordance with the attached plans and specifications.

Signed: L M Plato Date: 23 February 2012

Lex Plato

PIM/ BCAN DEVLOPMENT ENGINEERING CHECKLIST

Property Address:..... **NO:** 36412

.....

CHECKLIST

Land Feature (FE) Register (Ozone)	YES/NO
Consent Notice	YES/NO
Others..... Foundations designed for 60kpa Producer statement (Kirk Roberts) attached.	
Technical Library (Soils Report) Number	TL 1817.
Site inspection required	YES/NO
Site visit carried out	Date:.....
Slope of site excessive (20° or more)	YES/NO/NA
Evidence of slippage	YES/NO/NA
Evidence of subsidence or poor bearing capacity 60 kpa	YES/NO/NA
Site affected by inundation (sea level rise, flooding)	YES/NO/NA
Site affected by erosion	YES/NO/NA
Site affected by falling debris	YES/NO/NA
Site affected by exceptional wind effects (windzone) Medium.	YES/NO/NA
Soakhole decommissioning zone	YES/NO/NA
Earthquake Prone Building register (at risk if assessed below 33%) refer dataworks activity Building – Earthquake	YES/NO/NA

Close Proximity to Council Main – sewer, water, stormwater (circle applicable service(s))

Easement in Gross (requires CE approval)	YES/NO/NA
Complies with Code of Practice	YES/NO/NA
Sec 72 Building Act 2004 required	YES/NO/NA

NOTES:

.....

.....

.....

.....

CONCLUSION

Geotechnical report required?	YES/NO/NA
Owner notified	Date:.....
Specific design foundation required?	YES/NO/NA
Owner notified:	Date:.....
From information currently held by Council the site is suitable for conventional development?	YES/NO/NA

..... 18/1/2012.

DEVELOPMENT ENGINEER **DATE**

TAURANGA CITY COUNCIL BUILDING INSPECTIONS

Consent No: 36412 **Building Category: R2**

Site Address: 35 Jarrah Park Drive, Pyes Pa

Owner/Agent: Fletcher, Noel John & Sandra Lynn

Inspections Required

The inspections below will need to be completed to the satisfaction of our inspectors before a Code Compliance Certificate can be issued. The inspections listed have been paid for. Payment for additional inspections may be required before the issuing of the Code Compliance Certificate.

To call for inspections please phone 578 6666.

Keep the full set of stamped approved plans and specifications on site, including the fire design where appicable, and engineers designs. Inspections will not be done where plans are not available.
Call for inspections well ahead of time to secure an appointment. At least 2 clear working days notice is the minimum requirement.

Request a final inspection once the building work has been completed and all documents requested are in your possession. Remember that it is an offence to occupy a public building that has not had a CCC issued or hand over possession of a dwelling.

	Inspection Types	
1	Foundations	includes piling
1	Blocks/BondBeam	Prior to concrete placement, steel in place
1	Underfloor	Prior to covering in
1	Slab	Prior to concrete placement
1	Drainage	In place and under test before backfill
1	Fixing/Framing	Wall and roof framing before wall/roof clad
2	Brick Veneer	Half completed corner bricks out for flushing
1	Cavity	chimney
1	Preline Building	Prior to lining with insulation in place
1	Preline Plumbing	Pipe work in place under 1500kPa test and visible
1	Pre Stopping	To check fire walls and bracing panels
1	Final Building	On completion of all works and collection of documents
1	Final Plumbing	On completion of all works
1	Retaining Walls	
15	Total Inspections	

Producer Statements Required

Provide the inspector who is carrying out the final inspection the following documentation for the listed building elements on completion.

The author of the statement must be clearly identified and the authors qualifications listed. The author must sign the statement.

Energy certificates (Electricity/Gas) should be on the prescribed forms.

The statement must refer to the means of the compliance with the NZ Building Code, e.g. a recognised standard or appraisal, pre-approved specific design or manufacturers specification.

Electricity	
Drainage As Built	
Insulation including "R" valves	Wall R2.4 Ceiling R3.6 FLOOR 40MM EPS
Waterproof membrane interior (under tiles etc)	Super flex branz appraisal 472

GoGet Consent Time Report

Consent No: 36412

Date	Processing/Inspection Type	Status	Inspector	Time
Processing				
22/02/2012	Processing	On	Lex Plato	300
23/02/2012	Processing	Off	Lex Plato	45
	SUBTOTAL:			5:45
	TOTALS:			5:45

Mike Fergus

From: Pat and Colin Henderson [pat@twelveacrewood.co.nz]
Sent: Wednesday, 21 December 2011 7:36 a.m.
To: Noel and Sandra Fletcher (Brittny, Gabrielle, Kimberley); Mike Fergus
Cc: Kathy and Garry
Subject: Design Approval Fletchers Lot 33

Good morning Sandra, Noel and Michael

Garry and I studied the plans last night as per your email yesterday, Michael.

The plans as supplied are fully approved by the Design Committee on behalf of the Twelve Acre Wood Committee.

Please confirm exterior colour selection in due course. Similarly, submit your landscape ideas further down the track.

Garry and I both like the plan and wish you a successful build process. We feel sure the house will provide a great outcome for the whole family - particularly when we can approve a shed for Noel!

Kind regards and Merry Christmas

Colin (& Garry)

TAW Design Committee

--

Pat and Colin Henderson
Jarrah Park Ltd
PO Box 3118
Tauranga 3142, NZ
31 Jarrah Park Drive
Tauranga 3112, NZ
Ph 07 543 0205 F 07 543 0218 Mobile 021 0560 886

Checksheet

☑ PIM and / or	☐ Building Consent	☐ Certificate of Acceptance	☑ Drainage/Water Connection Application (note fees)

Received Date 21.12.11	Lodgement $ 1000.00	Receipt No. 29366	Receipt Date 21.12.11
PIM No. 36412 Issued 24/2/12	BC No. 36412 Issued 24/2/12	COA No.	Issued

Officer	Approved to Issue	Date Approved	Date Information Requested	Date Information Received	Processing Time
Vetting	[illegible]	21.12.11			
Administration	Helen	22.12.11			0
Planning	SW	18/1/12			6
Development Engineer	SW	18/1/12.			0
Health					
Trade Waste					
Hazardous Substances					
Building LP	LP	[redacted] 23/2/12	22/2		23+
Plumbing	LP	23/2/12.			0
Structural					
Consultant					
Administration	[illegible]	23.2.12			0
				Total Processing Time	29+

Administration Use Only

					Fees (GST incl.)
Easement	**Yes / No**	Issue B/C		IBC	$ 119.70
		Issue PIM/Issue Advice Note		IPI/IAN	$ 142 —
		Issue CCC		CCC	$ 90.60
Plan Processing Fee	$	Plan Processing Fee		BIN	$ 1076.43
Building Inspection Fee	$	Inspection Fee	15	BEX	$ 1830 —
		Inspection Fee Commercial		BEC	$
Compliance Schedule	**Yes / No**	Compliance Schedule		COM	$
		Copy of CCC to Agent		CopyCCC	$
		Asset Bond		VCB	$ 770
PIM Planning Fee	$ 137	Asset Development Inspection Fee		ADIF	$ 215
PIM Dev. Eng Fee	$ 122	Water or Drainage Connection Application Fee		I06	$
Total PIM Fee	$ 259	Process PIM/Plan Development Eng Assessment		PIM/PDE	$ 259.00
Building Impact Fees		BIF Wastewater		BIFW	$ 3811.00
		BIF Water Supply		BIWS	$ 3960.02
		BIF Com Infrastructure		BICI	$ 4495.59
		BIF Reserves		BIRC	$ 1821.48
		BIF Roading		BIRD	$ 450.36
Government Levies		BRANZ Levy		I03	$ 407 —
		BIA Levy		BIA	$ 818.07
		BCA Accreditation Levy		BCA	$ 28.75
		Drainage Pollution Prevention		DPP	$ —
		Earthworks Monitoring		EMON	$ 190 —
		Total			$
SIF Fees *(PTO for Codes)*		Additional Fee			$
		Total Fee			$ 20485 —
BC Conditions	**Yes / No**	Less Lodgement		LOD	$ 1000 —
		Balance Owing			$ 19485 —

Invoice Number	845821	Date 23-2-12	Amount $ 19485 —
Receipt Number	388991.	Date 23.2.12	Amount $ 19,485.00

Bethlehem

		x No.	$
BHH20	Water		
BHWW	Wastewater		
BHSW	Stormwater		
BHRD	Roading		
BHCI	Com Infrastructure		
BHFR	Reserves		
	Total (inc GST)		

Pyes Pa

		x No.	$
PYH2O	Water		
PYWW	Wastewater		
PYSW	Stormwater		
PYRD	Roading		
PYCI	Com Infrastructure		
PYFR	Reserves		
	Total (inc GST)		

Ohauiti

		x No.	$
OHH2O	Water		
OHWW	Wastewater		
OHSW	Stormwater		
OHRD	Roading		
OHCI	Com Infrastructure		
OHFR	Reserves		
	Total (inc GST)		

Welcome Bay

		x No.	$
WAIH2O	Water		
WAIWW	Wastewater		
WAISW	Stormwater		
WAIRD	Roading		
WAICI	Com Infrastructure		
WAIFR	Reserves		
	Total (inc GST)		

Papamoa

		x No.	$
PAPH2O	Water		
PAPWW	Wastewater		
PAPSW	Stormwater		
PAPRD	Roading		
PAPCI	Com Infrastructure		
PAPFR	Reserves		
	Total (inc GST)		

Landscaping Impact Fees

		$
LIFJ	Judea	
LIFM	Mt Maunganui	
	Total (inc GST)	

West Bethlehem

		x No.	$
WBHH2O	Water		
WBHWW	Wastewater		
WBHSW	Stormwater		
WBHRD	Roading		
WBHCI	Com Infrastructure		
WBHFR	Reserves		
	Total (inc GST)		

West Pyes Pa

		x No.	$
WPYH2O	Water		
WPYWW	Wastewater		
WPYSW	Stormwater		
WPYRD	Roading		
WPYCI	Com Infrastructure		
WPYFR	Reserves		
	Total (inc GST)		

Wairakei

		x No.	$
WRKCI	Com Infrastructure		
WRKH20	Water		
WRKWW	Wastewater		
WRKSW	Stormwater		
WRKRD	Roading		
WRKFR	Reserves		
	Total (inc GST)		

Tauriko

		x No.	$
TKOH2O	Water		
TKOWW	Wastewater		
TKOSW	Stormwater		
TKORD	Roading		
	Total (inc GST)		

Mount Maunganui Infill

		x No.	$
MTH2O	Water		
MTWW	Wastewater		
MTCI	Com Infrastructure		
MTFR	Reserves		
	Total (incl GST)		

Tauranga Infill

		x No.	$
TGH2O	Water		
TGWW	Wastewater		
TGCI	Com Infrastructure		
TGFR	Reserves		
	Total (inc GST)		

Southern Pipeline Wastewater

		$
SPWW	Wastewater	

Project Information Memorandum Checksheet

PIM No. 36412

Vetting Officer: If the proposed building work is of minor nature, please provide standard information and complete process in readiness for the PIM to be issued.

- Are any other consents required? Yes / No
- Details of authorisations which have been granted Yes / No
- Historic Places Trust has been notified Yes / No **Date Notified** ...../...../.....

Circle if applicable / **Cross** if not applicable

PIMA

A REGISTERED SURVEYOR, EMPLOYED BY THE APPLICANT AT THE APPLICANT'S EXPENSE WILL BE REQUIRED TO DEMONSTRATE THAT THE BUILDING COMPLIES WITH THE MAXIMUM HEIGHT AND OVERSHADOWING REQUIREMENTS OF THE DISTRICT PLAN.

WRITTEN CONFIRMATION IS REQUIRED PRIOR TO THE CLOSING IN OF THE BUILDING.

A RESOURCE CONSENT WILL BE REQUIRED FOR ANY ENCROACHMENT INTO OVERSHADOWING AND/OR YARD REQUIREMENTS IDENTIFIED AFTER THE ISSUE OF THE BUILDING CONSENT.

PIM2A

The building as depicted in the attached plans **does not** comply with the District Plan. Therefore, if the project is to proceed the following authorisations are required:

A Resource Consent for:

Therefore, the following restrictions under Section 37 Building Act 2004 will apply until the Resource Consent has been obtained:

- ☐ No building work to which the above consent relates may be undertaken.
- ☐ Building work to which the above consent relates may be undertaken only to the extent specified herein:

PIM2B An Outline Plan Approval (Resource Management Act 1991) application is required.

PIM3 The building is to be erected and used in accordance with the attached Resource Consent conditions.

PIM4 Development Contribution Fee(s) together with Building Consent Fees and charges are to be paid before the Building Consent is uplifted.

PIM5 The Tauranga City Council Roading Hierarchy Plan showing the existing and proposed roading network is attached. For further information, please refer to the City Transportation Group, Tauranga City Council.

PIM6 Should an archaeological site be found on the site during excavations, the owner must apply for authority from Historic Places Trust prior to destroying, damaging, or modifying any archaeological site. Further information can be obtained by contacting the duty planner. Should koiwi (human remains) be uncovered during excavation, please contact the Tauranga City Council to arrange for tangata whenua to be advised and appropriate steps taken for reburial.

PIM7 Site is suitable for proposed building subject to confirmation of ground conditions at time of footing inspection.

PIM8 Normal precautions adopted for excavation and filling within the Tauranga area should be observed. Excavation faces near to boundaries or other structures, which are over 1.5 metres high, should generally be retained by walls designed in accordance with the New Zealand Building Code and fill, in excess of one metre deep, should only be placed under the guidance of a Registered Engineer. For a slab on grade floor where the fill exceeds a depth of 600mm from the existing building platform to the underside of the slab, it will be necessary for a geotechnical engineer to investigate the underlying soils to a depth of approximately twice the width of the fill. A Building Consent is required for retaining walls 1.5 metres in height or greater or irrespective of the height where there is likelihood of surcharge from buildings or vehicles. Excavations for the construction of retaining walls shall be contained within the legal boundaries of the lot, unless consent of the adjoining owners is obtained prior.

PIM10 The on-site effluent treatment system shall be designed, constructed and maintained to comply with the requirements of Environment Bay of Plenty, under their "On-site Effluent Treatment Regional Plan". A reserve area shall be set aside on each lot for installing an alternative soakage bed system in the event of failure of the original. For further advice on the matter, please contact Environment Bay of Plenty on telephone 0800 368 267.

PIM11

Standard guidelines for the disposal of stormwater by ground soakage on residential lots at Mount Maunganui and Papamoa (exclusive of Bayfair Estate and Matapihi) are attached. In summary, these guidelines recommend that soakpits shall be constructed of three 600mm diameter perforated rings, unless ground water conditions dictate otherwise, which shall not service more than 30 square metres of roof area. Such soakage may be duplicated and inter-connected in parallel if more than 30 square metres of roof is served by a downpipe dropper.

During construction, the drainlayer shall examine the soils present and, after consideration of ground water levels and soil compaction present, make a judgement on whether good soakage is present to proceed with construction.

STAND1

Any lease agreement, rights of way and/or easement that relates to the property may require the applicant to obtain the consent of other interested parties to allow this proposal to proceed. Please check the terms of your lease agreement or Certificate of Title.

STAND2

Prior to the commencement of building, you are advised to locate and verify on site, the invert levels of service connections intended to be utilised and any Council pipelines and manholes that are in close proximity (as defined in Council's Infrastructure Development Code) to any building. Vehicle crossings are to be located clear of Council Stormwater Sumps. The attached services plan/asbuilt plan provides the approximate location of Council mains and service connections.

STAND3

Any works associated with public utilities, ie, sewer/stormwater/water which are required outside the legal boundaries of the site require prior approval from the Asset Development Division of the Tauranga City Council. For further details, please telephone (07) 577 7000.

Any work on Council utilities must be inspected by the Tauranga City Council's City Development staff prior to backfilling.

A SEPARATE FEE WILL BE CHARGED FOR INSPECTIONS.

STAND4

Street Trees - Vehicle crossings are not to be constructed within 2.0 metres of the trunk or within the dripline of any street tree without the prior consent of the Tauranga City Council's City Arborist. Any costs associated with removing or relocating street trees will be at the sole expense of the applicant.

LISTEDTREE

This site or an adjoining site contains a Landscape or Notable Tree identified in the Tauranga District Plan. The Tauranga District Plan contains specific requirements for works undertaken within the dripline of these trees. Please refer to the attached summary.

POLLUTION

Stormwater Pollution Prevention - The discharge to Council's STORMWATER SYSTEM of any material other than clean rainwater is **prohibited.** For further information, please contact the Pollution Prevention Officer, Tauranga City Council on phone (07) 577 7000.

TRADEWASTE

Trade Waste - The discharge to Council's WASTEWATER SYSTEM of wastewater arising from any trade activity or process may require a Trade Waste Consent. Please contact Glenn Coates, Trade Waste Officer, Tauranga City Council on phone (07) 577 7074 or (0274) 992 784 for further information.

HAZSUB

Hazardous Substances - Any storage or use of hazardous substances shall comply with the Hazardous Substances and New Organisms Act 1996 and Chapter 18 of the Tauranga District Plan. A resource consent may also be required. Please contact Tauranga City Council on phone (07) 577 7000 for further information.

HEALTH

The work is to comply with the Food Hygiene Regulations 1974 and the premises are to be registered with the Tauranga City Council prior to commencing operation.

BLDGCON

Building Consent will be issued with conditions. Please refer to the Building Consent for specific details of the conditions.

EARTHQUAKE

The existence of an entry under Section 74 of the Building Act 2004 may limit statutory natural disaster insurance. Refer Clause 3(d) of the Third Schedule to the Earthquake Commission Act 1993.

SWIMPOOL

Swimming Pool Water Connection - Pursuant to the Tauranga City Council General Bylaw 2008, it is a requirement of the Tauranga City Council that at the applicant's expense, an appropriate backflow prevention device is installed on the water main servicing the property, in an accessible position for inspection and servicing, at a point as near as practicable to the boundary of the property. Refer to the attached Water Consent for backflow requirements.

CUTSERVICE

All existing service connections are to be adequately terminated and made safe.

Water is to be disconnected and plugged at the point of supply by a registered plumber.

Sanitary sewer is to be capped at the lot boundary by a registered drainlayer and the position logged from the site boundaries.

Any gas service is to be disconnected by an authorised contractor. Application for termination should be made to either of the following gas retailers:

Contact Energy Phone 0800 363 726 or Natural Gas Corporation phone 0800 800 430.

SEC 363

Under Section 363 of the Building Act 2004 it is an offence to permit public use of a building for which no building consent or code of compliance certificate has been granted.

FIRESERVICE

The building owner is required to make provision for an evacuation scheme under Section 21A of the Fire Service Act 1975.

XING

Vehicle crossings are to be a maximum width of 4.5m at the kerb.

Project Information Memorandum – Other (cont'd)

That a consent notice be registered on the Certificate of Title for lots requiring that:

1) *Foundations for any structures requiring a Building Consent pursuant to the Building Act 1991 are to have their foundations specifically designed for an allowable bearing capacity of 60kPa unless site specific investigations by a Chartered Professional Engineer show that a higher allowable bearing capacity can be used.*

x1 Medium windzone.

Tauranga City

Application for
Building Consent and/or
Section 33 or Section 45, Building Act 2004

Single Residential Dwelling and Accessory Buildings Project Information Memoranda and/or Drainage and/or Water Services Approval

Section 198 Local Government Act 2002, and/or Tauranga City Council Water Supply Bylaw 2007, and/or Tauranga City Council Code of Practice for Development

This box for office use only Application No: 36412 Receipt No: 293616

The Building

Street address of building:
[for structures that do not have a street address, state the nearest street intersection and the distance and direction from that intersection]
35 Jarrah Park Drive
Tauranga

Legal description of land and where building is located:
[state legal description as at the date of application and, if the land is proposed to be subdivided, include details of relevant lot number and subdivision consent]
Lot: 33 DPS No. 333462
Flat: DPS No.

Building name: *[if applicable]* Vacant site

Location of building within site/block number:
[includes nearest street access] -

Number of levels: *[include ground level and any levels below ground]* 1

Level / Unit number: *[if applicable]* -

Total Floor Area (m²) 270.86m² base area

Indicate area affected by the building work if less than the total area (m²)

Current, lawfully established, use:
[include number of occupants per level, and use if more than 1] Vacant Site

Year first constructed:
[approximate date is acceptable eg: 1920s or 1960-1970] -

The Owner

[All contact details must be in New Zealand.]

Name of owner:
[Names must be in full] # 247235 Noel & Sandra Fletcher

Owner's mailing address: 3 Jarrah Park Drive
Pyes Pa Tauranga

Contact person: *[If owner is company, trustee or similar]* Sandra Fletcher

Street address / Registered office:

Phone numbers Landline 07 5430065 Mobile 0273522269
Daytime 07 5430065 After hours -

Email address: n_sfletcher@xtra.co.nz

Evidence of ownership is attached to this application:

☑ Certificate of Title ☐ Lease ☐ Agreement for Sale and Purchase ☐ Other document

Agent/Contact Person

(Only required if application is being made on behalf of the owner)

Name of agent: Insignia Design & Architecture Ltd

Contact person: *[insert n/a if the agent is an individual]* Mike Fergus

Agent's mailing address: PO Box 8334, Cherrywood
Tauranga

Street address / registered office:

Phone numbers Landline 5764119 Mobile 0211566028
Daytime After hours

Facsimile number(s):

Email address(es): mike@insigniadesign.co.nz

Relationship to owner:
[State details of the authorisation from the owner to make the application on the owner's behalf ie written authority] designer

First point of contact for communications with the Council / Building Consent Authority:
Full Name Agent as Above

The agent/contact person as nominated above is to receive the following:

Please tick box:

Processing enquiries ☑ PIM ☐ Service Consent ☐ Building Consent ☐ Copy of Code Compliance Certificate (cost $15.00) ☐

Email ☑

Who will be paying for this consent? Owner ☑ Agent/Contact ☐ Builder ☐

Application

I request that you issue a:

☐ Project Information Memorandum only

☐ Building Consent only. If applying for building consent only, please provide PIM No .....

☑ Both PIM and Building Consent

for the building work described in this application.

Signed by the owner *or* **Signed by the agent** ***[on behalf of, and with written authority from, the owner]***

Signature .....

Name Sandra Fletcher

Date 20/12/11

Signature .....

Name .....

Date .....

The Project

Detailed Description of the Building Work:

Construct new three bedroom home plus office, brick veneer cladding with lightweight tile roofing, concrete floor slab and drainage & site works as required. see attached plans for full extent of works

gas fire

Kiwi braai outdoor fire

Will the building work result in a change of use of the building? ☑ Yes ☐ No

If Yes, provide details of the new use:

Vacant Site → New Dwelling

Intended life of the building if less than 50 years: *[number of years]* –

List building consents previously issued for this project: *[if any]:*

–

What was the previous use of the building site?

– Vacant Site

Estimated value of the building work on which the building levy will be calculated:
[state estimated value as defined in section 97 of the Building Act 2004]

$ ~~300,000~~ 406,290 (incl. GST)

Project Information Memorandum

The following matters are involved in the project: *[tick the matters relevant to the project]* Vetting Officer ☐

Yes ☐	No ☑	**Is there a proposed subdivision for this land?** If Yes, please provide resource consent number .....
Yes ☑	No ☐	Are you digging out the site for a building platform?
Yes ☑	No ☐	Are there new or altered connections to Council sewer, storm water or water mains?
Yes ☑	No ☐	Are you altering domestic sewer or storm water drains?
Yes ☐	No ☑	Are you building near or over any road or public space?
Yes ☑	No ☐	Are you building near or over existing domestic sewer, storm water, water mains or wells?
Yes ☐	No ☑	Are you building or altering a vehicle crossing (entrance)?
Yes ☐	No ☑	Is the site contaminated?
Yes ☐	No ☑	Will the building be sited on sloping ground, or near to a bank, a stream or a coastal zone?
Yes ☑	No ☐	Have you demonstrated new or altered locations and/or external dimensions of proposed buildings?
Yes ☑	No ☐	Are you installing new or altering existing drains?
Yes ☐	No ☑	Are you intending to use or store hazardous substances?
Yes ☐	No ☑	Is there any other relevant information? Please state below or attach information, eg land use, consents.

Comments .....

Office Use Only	Signed:	Date: .....

Building Consent

Do not fill in this section if the application is for a project information memorandum only.

The building work will comply with the building code as follows:
[if you're not sure which clauses are applicable, talk to your architect]

	Clause		Means of Compliance	Proposed Inspections
	[which of the following clauses will be involved in the proposed work?]		*[refer to the relevant compliance document(s) or detail of alternative solution in the plans and specifications]*	*[state means of inspection. Note PS4 or certification may be required]*
☑	B1	Structure	☑ B1/AS2 ☑ NZS3604 ☐ NZS1170 ☐ NZS4229 ☑ Other ...Engineer..... *[specify]*	☑ Council ☐ Engineer ☐ Other ..... *[specify]*
☑	B2	Durability	☑ B2/AS1 ☐ NZS3101 ☐ NZS3602 ☑ NZS3604 ☑ Other ...Engineer..... *[specify]*	☑ Council ☐ Engineer ☐ Other ..... *[specify]*
☐	C1-4	Fire	☐ C/AS1 ☐ Other ..... *[specify]*	☐ Council ☐ Engineer ☐ Other ..... *[specify]*
☑	D1	Access routes	☑ D1/AS1 ☐ NZS4121 ☐ Other ..... *[specify]*	☑ Council ☐ Engineer ☐ Other ..... *[specify]*
☐	D2	Mechanical installations for access	☐ D2/AS1 ☐ NZS4332 ☐ EN81 ☐ EN115 ☐ Other ..... *[specify]*	☐ Engineer ☐ Other ..... *[specify]*
☑	E1	Surface water	☑ E1/AS1 ☐ AS/NZS3500.3 ☐ Other ..... *[specify]*	☑ Council ☐ Other ..... *[specify]*
☑	E2	External moisture	☑ E2/AS1 ☐ Specific design and testing ☐ Other ..... *[specify]*	☑ Council ☐ Other ..... *[specify]*
☑	E3	Internal moisture	☑ E3/AS1 ☐ Other ..... *[specify]]*	☑ Council ☐ Other ..... *[specify]*
☐	F1	Hazardous agents on site	☐ F1/AS1 ☐ Other ..... *[specify]*	☐ Council ☐ Other ..... *[specify]*
☐	F2	Hazardous building materials	☐ F2/AS1 ☐ NZS4223 ☐ Other ..... *[specify]*	☐ Council ☐ Other ..... *[specify]*
☐	F3	Hazardous substances etc including HSNO Act requirements	☐ F3/AS1 ☐ Other ..... *[specify]*	☐ Council ☐ Other ..... *[specify]*
☑	F4	Safety from falling	☑ F4/AS1 ☐ FSP Act ☐ Other ..... *[specify]*	☑ Council ☐ Other ..... *[specify]*
☑	F5	Construction and demolition hazards	☑ F5/AS1 ☐ Other ..... *[specify]*	☑ Council ☐ Other ..... *[specify]*
☐	F6	Lighting for emergency	☐ F6/AS1 ☐ NZS 2293 ☐ Other ..... *[specify]*	☐ Council ☐ Other ..... *[specify]*
☐	F7	Warning systems	☐ F7/AS1 ☐ AS/NZS1668 ☐ NZS4512 ☐ NZS4541 ☐ Other ..... *[specify]*	☐ Council ☐ Engineer ☐ Other ..... *[specify]*
☐	F8	Signs	☐ F8/AS1 ☐ Other ..... *[specify]*	☐ Council ☐ Other ..... *[specify]*

Clause *[which of the following clauses will be involved in the proposed work?]*			Means of Compliance *[refer to the relevant compliance document(s) or detail of alternative solution in the plans and specifications]*	Proposed Inspections *[state means of inspection. Note PS4 or certification may be required]*
☑	G1	Personal hygiene	☑ G1/AS1 ☐ Other ..... *[specify]*	☑ Council ☐ Other ..... *[specify]*
☑	G2	Laundering	☑ G2/AS1 ☐ Other ..... *[specify]*	☑ Council ☐ Other ..... *[specify]*
☑	G3	Food preparation and prevention of contamination	☑ G3/AS1 ☐ Other ..... *[specify]*	☑ Council ☐ Other ..... *[specify]*
☑	G4	Ventilation	☑ G4/AS1 ☐AS1668.2 ☐ Other ..... *[specify]*	☑ Council ☐ Other ..... *[specify]*
☑	G5	Interior environment	☑ G5/AS1 ☐ Other ..... *[specify]*	☑ Council ☐ Other ..... *[specify]*
☐	G6	Airborne and impact sound	☐ G6/AS1 ☐ Other ..... *[specify]*	☐ Council ☐ Other ..... *[specify]*
☑	G7	Natural light	☑ G7/AS1 ☐ Other ..... *[specify]*	☑ Council ☐ Other ..... *[specify]*
☑	G8	Artificial light	☑ G8/AS1 ☐ NZS6703 ☐ Other ..... *[specify]*	☑ Council ☐ Other ..... *[specify]*
☑	G9	Electricity	☑ G9/AS1 ☐ Other ..... *[specify]*	By certification only
☑	G10	Piped services	☑ G10/AS1 ☐ NZS5261 ☐ Other ..... *[specify]*	By certification only
☑	G11	Gas as an energy source	☑ G11/AS1 ☐ Other ..... *[specify]*	By certification only
☑	G12	Water supplies	☑ G12/AS1 ☐ AS/NZ3500.2 ☐ AS/NZ3500.5 ☐ Other ..... *[specify]*	☑ Council ☐ Other ..... *[specify]*
☑	G13	Foul water	☑ G13/AS1 ☐ AS/NZ3500.2 ☐ BS5572 ☐ Other ..... *[specify]*	☑ Council ☐ Other ..... *[specify]*
☐	G14	Industrial liquid waste	☐ G14/AS1 ☐ Other ..... *[specify]*	☐ Council ☐ Other ..... *[specify]*
☐	G15	Solid waste	☐ G15/AS1 ☐ Other ..... *[specify]*	☐ Council ☐ Other ..... *[specify]*
☑	H1	Energy efficiency	☑ H1/AS1 ☐ NZS4218 ☐ NZS4243 ☐ ALF Design Manual ☐ NZS4214 ☐ Other ..... *[specify]*	☑ Council ☐ Other ..... *[specify]*

When an alternative solution to the building code is proposed, the application shall be in writing with documentation clearly showing how the specific performance requirements of the N.Z. Building Code are satisfied.

Waiver/modification to NZ Building Code required for following parts of code:

.....

.....

.....

Attachments

[Tick as applicable or put n/a if there are no attachments]

The following documents are attached to this application:

- ☑ Drainage and/or Water Services Application
- ☑ Plans and Specifications [list below]

2 x Sets of plans
2 x sets of specifications

- ☐ Project Information Memorandum
- ☐ Development Contribution Notice
- ☐ Certificate attached to Project Information Memorandum
- ☐ A3/A4 Plan showing location of all Specified Systems for Compliance Schedule (ie, manual call points, fire cells, fire/smoke doors, backflow preventers, exit signs, etc.)

Contacts

Designer/Architect 363115

Business/name Insignia Design & Architecture Ltd.
Address P.O. Box 8334, Cherrywood
Tga.
Daytime 5764119 Mobile
After hours Facsimile
Registration/qualification Arch. Designer

Engineer

Business/name Mark Roberts Consulting Engineers
Address Grey St Tauranga
Daytime 5710950 Mobile
After hours Facsimile
Registration/qualification

Builder

Business/name DHS Builders - Dave Strange.
Address
Daytime Mobile
After hours Facsimile
Registration/qualification

Plumber

Business/name
Address
Daytime Mobile
After hours Facsimile
Registration/qualification

Drainlayer

Business/name
Address
Daytime Mobile
After hours Facsimile
Registration/qualification

Other

Business/name
Address
Daytime Mobile
After hours Facsimile
Registration/qualification

Privacy Information

Pursuant to the Privacy Act 1993 the following information is brought to your attention.

This document collects personal information about you and is collected pursuant to Section 33 and/or Section 45 of the Building Act 2004. Pursuant to Section 216 of the Building Act 2004, the Information contained in this document will be made available and passed on to the public on request.

The information contained in the document is being collected and held by the Tauranga City Council. You do have the right of access to and correction of this information subject to the provisions of the Privacy Act 1993.

Pursuant to Section 217 of the Building Act 2004 the building owner may request the plans and specifications be marked confidential for the purposes of security. Such a request must be in writing and addressed to:

Group Manager Customer and Environmental Services, Tauranga City Council, Private Bag 12 022, Tauranga 3143

Service Connection Authorisation

Vehicle Crossing *(Please tick box)*

- ☐ Not applicable
- ☑ I intend using the existing vehicle crossing
- ☐ I intend installing a new residential vehicle crossing (Please note: maximum width 4.5m at kerb)
- ☐ I intend installing a new commercial vehicle crossing (Please note: maximum width 6m at kerb)
- ☐ I intend installing a new industrial vehicle crossing (Please note: maximum width 9m at kerb)

Please note:

- Your proposed vehicle crossing must be clearly illustrated on the site plans accompanying this application and is to be clear of any obstructions, such as:
  - **Trees** - **Stormwater Cesspits** - **Streetlights** - **Traffic Islands** - **Manholes**
- When uplifting your building consent, you will receive a copy of a Council pamphlet headed *"Vehicle Crossing and Asset Protection Requirements"*. It is important you read this pamphlet and follow the instructions provided.
- If required, and prior to uplifting your building consent, the applicant shall pay Council a sum of money being the specified amount of a vehicle crossing and/or asset protection bond. No interest shall be payable to the applicant on the bond monies held by Council. All or any reasonable expenses incurred by Council in effecting repairs to a damaged vehicle crossing, footpath, wastewater, stormwater assets or arising there from, shall constitute a debt due to the Council by the applicant and may be recovered by Council by deduction from the monies deposited with the Council under this bond.
- When Council is satisfied that all specified works are completed and all as-built plans accepted, the said monies shall be repaid to the person nominated below and the bond cancelled. It should noted further that the applicant is the person/s making application for this building consent and / or project information memorandum and must be the owner of the land on which building work is contemplated or a person who or which has agreed in writing, whether conditionally or unconditionally, to purchase the land or any leasehold estate or interest in the land, or take a lease of the land, while the agreements remains in force.

Please nominate who is to receive vehicle crossing and / or asset protection bond refund: *(Please tick box)*

☐ Owner ☐ Owner's agent/contact person ☐ Builder

Sewer Connection *(Please tick box)*

- ☐ Not applicable
- ☑ I intend using the existing sewer connection
- ☐ I intend installing a new ..... mm sewer connection and have completed and attached the application form.
- ☐ I intend installing an on-site effluent treatment system
- ☐ Other *(supply details)* .....

.....

Please note:

- Your proposed sewer drainage system must be clearly illustrated on the site plans accompanying this application.
- If you intend installing an on-site effluent treatment system, it must be designed and installed in accordance with the Environment Bay of Plenty (EBOP) Operative On-Site Effluent Treatment Regional Plan.
- For further information, phone EBOP 0800 368 267.
- A trade waste consent is required for any wastewater discharge from a trade activity (Refer Trade Waste Officer, Tauranga City Council, phone 577 7000.)

Stormwater Disposal *(Please tick box)*

- ☐ Not applicable
- ☑ I intend using the existing stormwater connection
- ☐ I intend installing a new ..... mm stormwater connection and have completed and attached the application form.
- ☐ I intend installing an on-site disposal system.
- ☐ I intend installing a new kerb connection
- ☐ Other *(supply details)* .....

.....

Please note:

- Your proposed stormwater drainage system must be clearly illustrated on the site plans accompanying this application.

Water Services Application

If a New Water Connection, Change of Use of Water Connection, or an Alteration to an Existing Water Connection is being applied for, please complete the **Drainage and/or Water Services Application** on page 13 and submit it along with this form. If this does not apply, please sign here.

Name..Sandra Fletcher..... Signature..... Date..20/12/11.....

Building Consent Checklist – Residential – individual detached dwellings

Use this checklist when finalising your building drawings and plans to assist you to lodge a complete application and to avoid delays in processing. Your application will be accepted based on this checklist to ensure that it has sufficient information to commence processing.

Later, additional information may be requested during the processing of your building consent to confirm compliance with the Building Act, Building Code, District / City Plan and any other relevant legislation.

Processing time will be suspended until requested information is received.

Definition of a "complete application" – a complete application is one which the Council does not require any additional information in order to complete the consent process.

Use only Black or Blue Biro (pencil or red pen will not be accepted) Do not use lined paper

Font size must be no smaller than 8

All documents must have at least 1cm margin on all outer edges with no information in them

All stamps must be clear and legible

Any photocopies must be to an acceptable legible standard

To avoid delays in the processing of your application, please ensure you have provided the following information:

Every line must be marked.

- Tick (✓) if information has been provided.
- N/A if not applicable or not required

	Applicant	Office Use Only
Lodgement and Application Form *(completed in Full, Signed and dated)*		
One copy of Certificate of Title *(including any consent notices, easement instruments)*		✓
Two Site Plans: To acceptable metric scale, generally 1:100 1:200	✓	✓
(a) North Point	✓	✓
(b) The position of the building in relation to the boundaries of the site – with labelled points on boundaries where overshadowing is taken from *(include any written approval from adjoining land owners for encroachments into yards and/or overshadowing provisions)*	✓	✓
(c) Road frontage indicated *(Show existing buildings and proposed buildings in relation to the road frontages)*	✓	✓
(d) Site levels and finished floor levels relative to Moturiki Datum	✓	✓
(e) Crossings / driveways / driplines and trunks of street trees (trees located between the boundary and road) Crossings are to be clear of Council stormwater sumps *(**Note**: normally **one** crossing per site only)*	✓	✓
(f) On-site parking, access and manoeuvring areas demonstrated	✓	✓
(g) Land undergoing subdivision – if the title has not yet been issued for land you wish to build on, the council may or may not accept your building consent application depending on the status of the subdivision. Refer 224 Checklist AC-6	NA	N/A
Two Sets of Specifications that make reference to NZBC and relevant NZ Standards	✓	✓
Two Sets of Constructional Drawings : Scale 1-100 or 1-50 showing:	✓	✓
(a) Elevations (site gradients relative to floor levels)	✓	✓
(b) Overshadowing labelled to correspond with points on site plan shown on all elevations	✓	✓
(c) Plan of all floors describing the function of each room showing all doors, windows and ventilation, fireplaces and chimneys. For additions and alterations, the existing shall be shown separately and alongside the "proposed", to the same scale for comparison.	✓	✓
(d) Foundation details and retaining structures	✓	✓
(e) Cross-sections showing all construction details	✓	✓
(f) Specific design details signed by engineer accompanied with calculations	✓	✓
(g) Bracing details accompanied with bracing calculations	✓	✓
(h) Truss / Rafter Layout	✓	✓
(i) Lintel / Beam Sizes / Proprietary systems	✓	✓
(j) Floor Joist Layout / Pile Layout	✓	N/A
(k) H1 Calculations	✓	✓
(l) E2 Risk Matrix	✓	✓
(m) Solid Fuel Heater with seismic restraints / flashing details	NA	N/A
(n) Solar Panels / Tubes with specifications & hot water cylinder size	✓	N/A

All existing SEWERS, sewer connections and sewer drains shown	✓	✓
All existing STORMWATER drains and connections shown	✓	✓
Existing & proposed potable water supply and water supply for fire fighting shown (rural sites only)	NA	N/A
Proposed sewer and stormwater drains / soak holes shown	✓	✓
All existing and proposed sanitary fittings including pipe sizes	✓	✓
Swimming Pool / Spa Pool – Fences / Gates – Backwash – Backflow Prevention Device (Preventer Valve)	NA	N/A
Site Works	✓	✓

Payment of Fees

- Upon lodging your building consent and / or project information memorandum with Council, a non-refundable lodgement fee will be payable to Council.
- Payment of the balance of your building consent and / or project information memorandum fees will be required to be made to Council on completion of all processing.

A receipt for Lodgement Fees does not mean the consent is approved for issue

Vetting Officer: ..... Date: 21-12-11

OFFICE USE ONLY NOTES:

CONSENT OF OWNER FOR BUILDING CONSENT APPLICATION

By

Insignia Design & Architecture Ltd.

We Noel and Sandra Fletcher

Give our consent to Insignia Design & Architecture Ltd to submit our Building / Resource Consent Application for :

Proposed New Five Bedroom Home

to our property at :

35 Tamah Park Drive, Tauranga.

We realise that we will pay for the above Consent Application and Consent Fees and that it is being put into Council on our behalf with Insignia Design & Architecture Ltd acting as the agent only for processing enquiries.

Signed:

Date: 20/12/11

COMPUTER FREEHOLD REGISTER
UNDER LAND TRANSFER ACT 1952

Search Copy

R.W. Muir
Registrar-General
of Land

Identifier	**137137**
Land Registration District	**South Auckland**
Date Issued	24 June 2004

Prior References
110877

Estate	Fee Simple
Area	931 square metres more or less
Legal Description	Lot 33 Deposited Plan 333462

Proprietors
Noel John Fletcher as to a 1/2 share
Sandra Lynn Fletcher as to a 1/2 share

Interests

Land Covenant in Transfer 5484055.3 - 11.2.2003 at 9:00 am

Appurtenant hereto is a right of way created by Easement Instrument 5899491.14 - 16.2.2004 at 9:00 am

The easements created by Easement Instrument 5899491.14 are subject to Section 243 (a) Resource Management Act 1991

Appurtenant hereto is a right of way created by Easement Instrument 6054796.4 - 24.6.2004 at 9:00 am

Subject to a right of way over part marked G and right to drain stormwater over part marked H on DP 333462 created by Easement Instrument 6054796.4 - 24.6.2004 at 9:00 am

The easements created by Easement Instrument 6054796.4 are subject to Section 243 (a) Resource Management Act 1991

Subject to a right (in gross) to drain sewage over part marked H on DP 333462 in favour of the Tauranga City Council created by Easement Instrument 6054796.8 - 24.6.2004 at 9:00 am

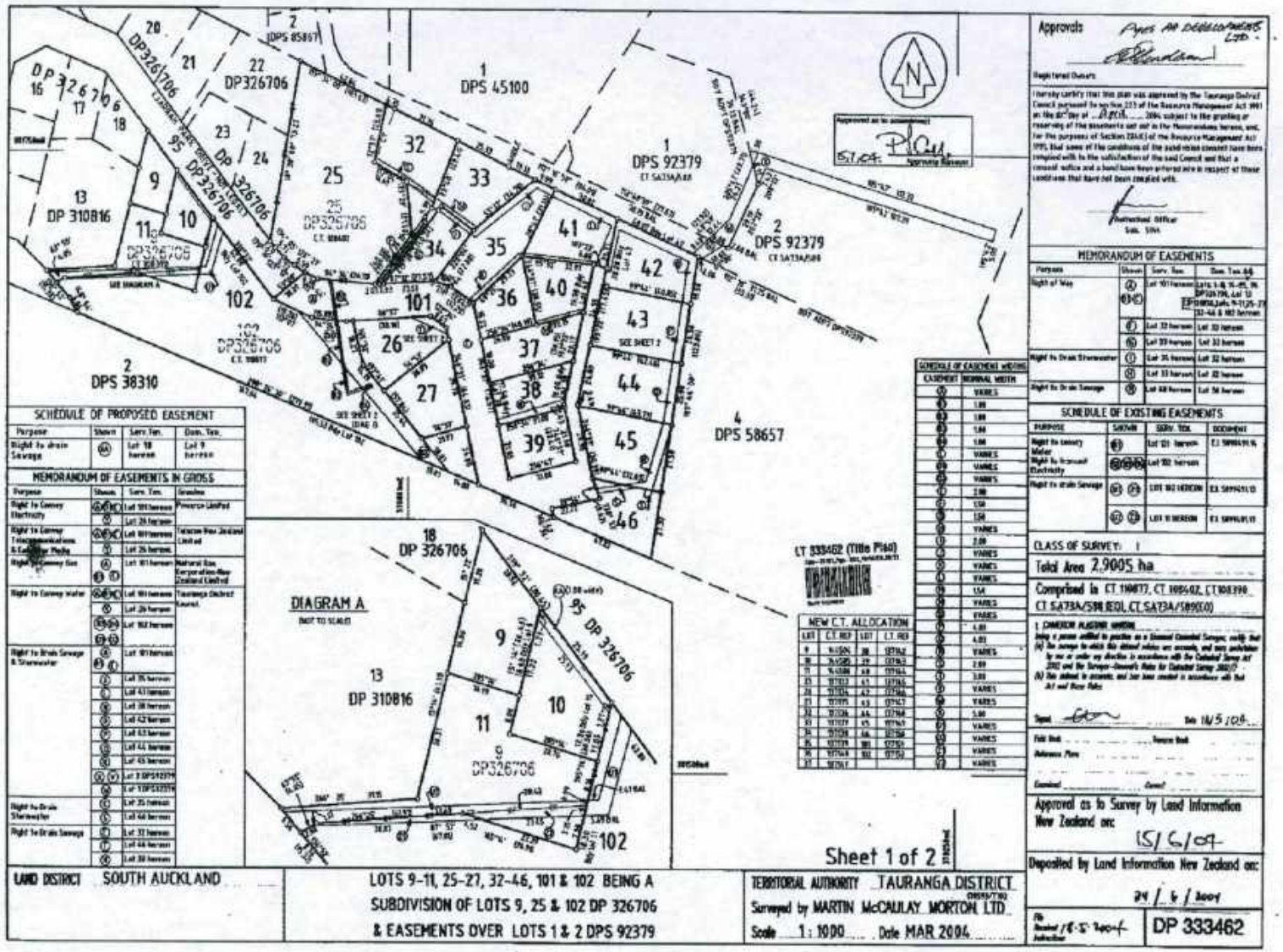
The easements created by Easement Instrument 6054796.8 are subject to Section 243 (a) Resource Management Act 1991

6532781.1 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 12.8.2005 at 9:00 am

Appurtenant hereto is a right of way and a right of way (Pedestrian Only) created by Easement Instrument 6630064.11 - Produced 1.11.2005 at 9:00 am and Entered 4.11.2005 at 9.01 am

The easements created by Easement Instrument 6630064.11 are subject to Section 243 (a) Resource Management Act 1991

Identifier 137137



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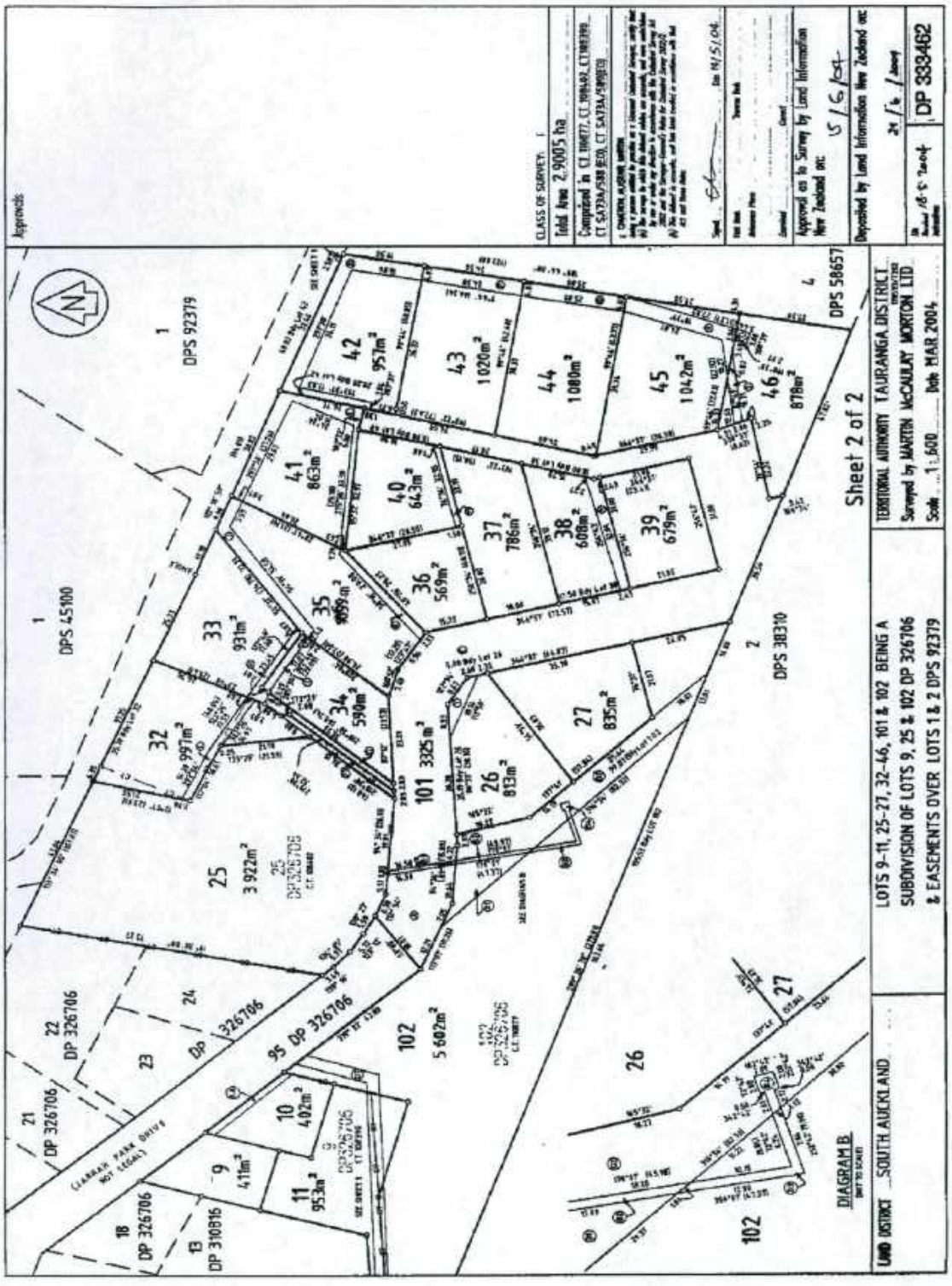

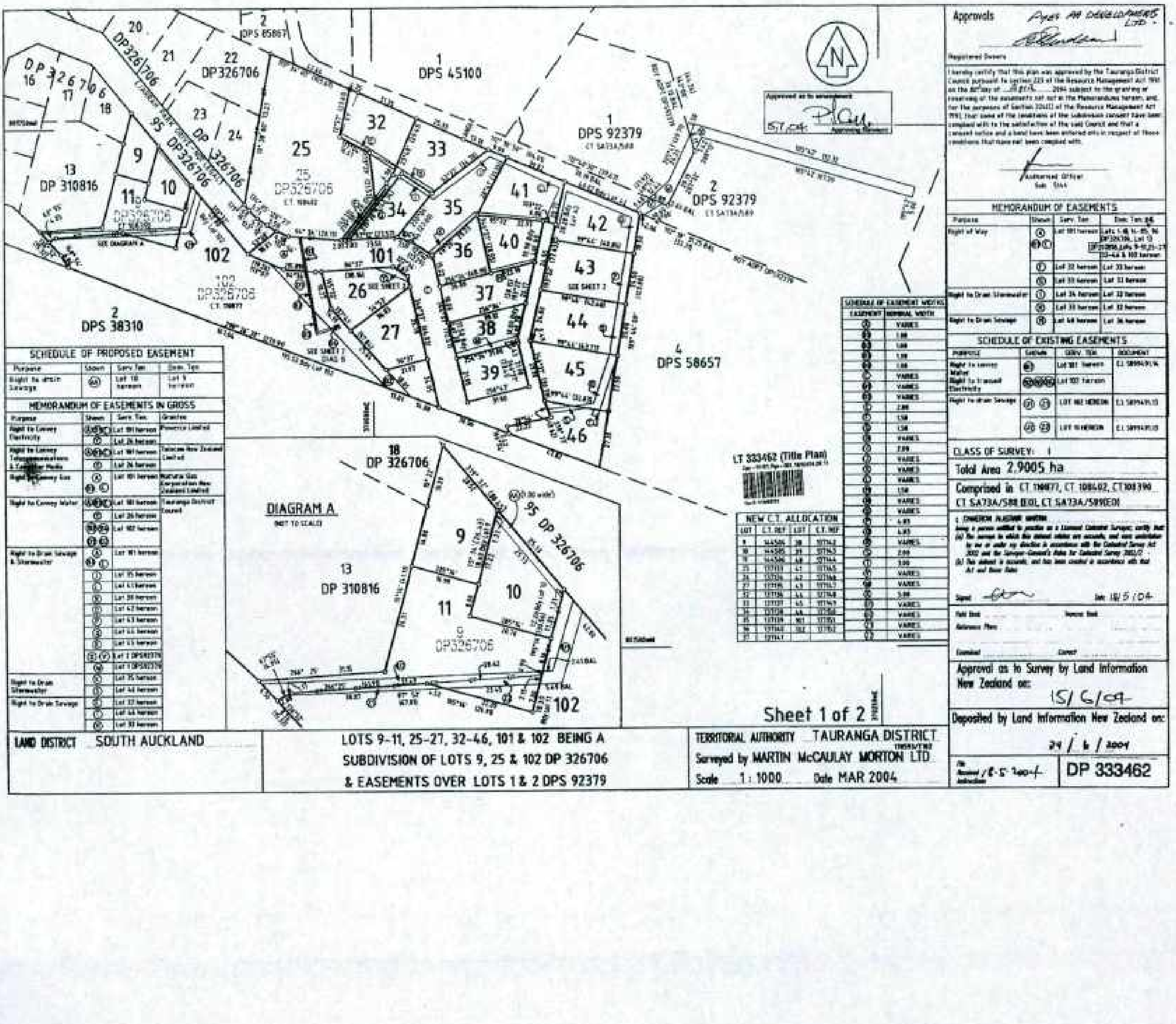

Approvals
Registered Owners
MEMORANDUM OF EASEMENTS
SCHEDULE OF EXISTING EASEMENTS
SCHEDULE OF PROPOSED EASEMENT
MEMORANDUM OF EASEMENTS IN GROSS
SCHEDULE OF EASEMENT WIDTHS
NEW C.T. ALLOCATION
DIAGRAM A
(NOT TO SCALE)
DPS 45100
DPS 92379
DPS 38310
DPS 58657
DP 310816
DP 326706
LT 333462 (Title Plan)
CLASS OF SURVEY: I
Total Area 2.9005 ha
Approval as to Survey by Land Information New Zealand on: 15/6/04
Deposited by Land Information New Zealand on: 24/6/2004
Sheet 1 of 2
LAND DISTRICT SOUTH AUCKLAND
LOTS 9-11, 25-27, 32-46, 101 & 102 BEING A SUBDIVISION OF LOTS 9, 25 & 102 DP 326706 & EASEMENTS OVER LOTS 1 & 2 DPS 92379
TERRITORIAL AUTHORITY TAURANGA DISTRICT
Surveyed by MARTIN McCAULAY MORTON LTD
Scale 1:1000 Date MAR 2004
DP 333462

Planning Checklist – Residential Zones

Site Address 35 Jarrah Park Drive

Activity Use: Dwelling BC No: 36412

Zone: Res A – SR

✓ = Checked and Complies × = Checked and Non-complying ✓ N/A = Not Applicable

	Vetting	Processing		Review	
Activity Use *(refer to Permitted Activity Table)*	Name:	DP	CP	DP	CP
Permitted		✓	✓		
Existing Resource Consent (*check conditions*)		N/A			
Notes:					
Bulk and Location					
Density (nett site area)		✓	✓		
Height		✓	✓		
Yards (*Written Neighbour Approval* ☐*Yes* ☐ *No*)		✓	✓		
Adjoining Zones		✓	✓		
Overshadowing (*Written Neighbour Approval* ☐*Yes* ☐ *No*)		✓	✓		
Site coverage			✓		
Outdoor Living Area			✓		
Access Lot / Right of Way Width (No of Units .....)		N/A			
Notes:					
Natural Resource					
Location Mean High Water		N/A			
Services (Chapter 12)					
Wastewater					
Stormwater		N/A			
Pressure Water Supply					
Heritage (Chapter 6 & 7)					
Trees		N/A			
Other					
Hazards (Chapter 8)					
Flood Hazard Policy					
Coastal Hazard Policy (CHEPA and CERZ)		N/A			
Hazardous Substances (Chapter 9)					
General (Chapter 4)					
Parking Numbers		✓	✓		
Location and dimensions of parking spaces		✓	✓		
Manoeuvring		✓	✓		
Earthworks			✓		
Certificate of Title					
Consent Notice / Easement / Building Line Restriction					

Resource Consent Required ☐Yes ☐ No

TCC Ref: 3465275

Willow Street, Tauranga
Private Bag 12022, Tauranga 3143
Telephone: 07 577 7000. Facsimile 07 577 7034

22 February 2012

Status of Building Consent: 36412
Location : 35 JARRAH PARK DRIVE

The purpose of this email is to update you on where your building consent application is at in the consent process.

The planning, engineering and infrastructure components of your application have been checked and signed off.

The Building Inspections team need more information from you before they can sign off your consent. We will send you the full request within the next working day.

Please be aware that the processing 'clock' has been stopped until we have all the information we need from you.

Regards,

Helen Marshall
Building Services

By Email: helen.marshall@tauranga.govt.nz

insignia DESIGN & ARCHITECTURE LTD

BUILDING SPECIFICATIONS

for

N. & S. Fletcher

at

35 Jarrah Park Drive, Tauranga

p. 07 576 4119 | info@insigniadesign.co.nz | www.insigniadesign.co.nz
PO Box 8334, Cherrywood, Tauranga 3145

SPECIFICATION

of work to be done and materials to be used in carrying out the works shown on the accompanying drawings

Proposed New Five Bedroom Home

(project name)

35 Jarrah Park Drive, Tauranga

(project address)

N. & S. Fletcher

(owners name)

Job Number: 2011-38

Date: 17-12-11

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1232 INTERPRETATION & DEFINITIONS

1. GENERAL

This general section relates to interpretation and definitions that are used in this specification.

1.1 DEFINITIONS

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 number.
Provide and fix:	"Provide" or "fix" or "supply" or "fix" if used separately mean provide and fix unless explicitly stated otherwise.
Review:	Review by the contract administrator is for general compliance only. Review does not remove the need for the contractor to comply with the stated requirements, details and specifications of the manufacturers and suppliers of individual components, materials and finishes. Neither can the review be construed as authorising departures from the contract documents.
Working day:	Working day means a calendar day other than any Saturday, Sunday, public holiday or any day falling within the period from 24 December to 5 January, both days inclusive, irrespective of the days on which work is actually carried out.

1.2 PERSONNEL

Owner:	The person defined as "owner" in the New Zealand Building Code.
Principal:	The person defined as "principal" in the conditions of contract.
Contractor:	The person contracted by the principal to carry out the contract.
Contract administrator:	The person appointed by the principal to administer the contract on the principal's behalf. It includes the architect, engineer, designer, project manager or other person so appointed. Where no person has been appointed by the Principal, it means the Principal or the Principal's representative.

1.3 ABBREVIATIONS

The following abbreviations are used throughout the specification:

AAMA	American Architectural Manufacturers Association
AS	Australian Standard
AS/NZS	Joint Australian/New Zealand Standard
ASTM	American Society for Testing and Materials
AWCINZ	Association of Wall and Ceiling Industries of New Zealand Inc
BCA	Building Consent Authority
BRANZ	Building Research Association of New Zealand
BS	British Standard
CSIRO	Commonwealth Scientific and Industrial Research Organisation
HERA	Heavy Engineering Research Association
LBP	Licensed Building Practitioner
MPNZA	Master Painters New Zealand Association Inc
NZBC	New Zealand Building Code
NZS	New Zealand Standard
NZS/AS	Joint New Zealand/Australian Standard
NZTA	New Zealand Transport Agency (previously TNZ)
NUO	Network Utility Operator
SARNZ	Scaffolding and Rigging Association New Zealand Inc
SED	Specific Engineering Design
TA	Territorial Authority
TNZ	Transit New Zealand (Transit New Zealand is now New Zealand Transport Agency NZTA, some specifications are still prefixed TNZ)

1.4 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.

1.5 WORDS IMPORTING PLURAL AND SINGULAR

Where the context requires, words importing singular only, also include plural and vice versa.

1233 REFERENCED DOCUMENTS

1. GENERAL

This general section relates to other documents referred to in this specification.

1.1 REFERENCED DOCUMENTS

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

Reference is also made to various standards produced by Standards New Zealand (NZS, AS/NZS, NZS/AS), overseas standards 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.

1.2 DOCUMENTS

Documents referred to in the GENERAL sections are:

NZBC F4/AS1	Safety from falling
NZBC F5/AS1	Construction and demolition hazards
AS/NZS 1170.2	Structural design actions - Wind loads
NZS 3109	Concrete construction
NZS 3114	Specification for concrete surface finishes
NZS 3404:1997	Steel structures standard
NZS 3602	Timber and wood-based products for use in building
NZS 3604	Timber-framed buildings
NZS 4210	Masonry construction: Materials and workmanship
NZS 6803	Acoustics - Construction Noise
Building Act 2004	
Building Regulations 1992	
Health and Safety in Employment Act 1992	
Health and Safety in Employment Regulations 1995	
New Zealand Building Code	
Historic Places Act 1993	
Resource Management Act 1991	
Smoke-free Environments Act 1990	
OSH	Guidelines for the provision of facilities and general safety in the construction industry
SARNZ	Best practice guideline for scaffolding in New Zealand

1237 WARRANTIES

1. GENERAL

This general section refers to the requirements for warranties as listed, either in this work section and/or in specific work sections. It includes: -

- Warranties for parts of the work required by the Principal in a required form
- Installer/applicator warranties for parts of the work in the installer/applicator's standard form
- Manufacturer/supplier warranties provided with products, appliances and the like in the suppliers standard form
- Guarantees provided by contractors in the contractor's standard form

Warranties

1.1 PROVIDE WARRANTIES

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

- Conform to the 1237WA WARRANTY AGREEMENT form included in the specification/conditions of contract.
- Commence warranties from the date of practical completion of the contract works (unless otherwise stated).
- Maintain their effectiveness for the times stated.
- Provide executed warranties prior to practical completion.

1.2 WEATHERTIGHTNESS AND WATERTIGHTNESS WARRANTY

A warranty is required from the contractor for a minimum period of 2 years, covering the weathertightness of the complete building envelope and the watertightness of all liquid supply and disposal systems and fittings. This general warranty is in addition to any specific warranties required.

1.3 WARRANTIES – INSTALLER/APPLICATOR

Where installer/applicator warranties are offered covering execution and materials of proprietary products or complete installations, provide such warranties to the contract administrator. These warranties may be provided in lieu of the warranties that are otherwise required provided that these warranties are subject to similar conditions and periods.

Provide warranties in favour of the principal. The terms and conditions of such warranties in no case negate the minimum remedies available under common law as if no warranty had been offered. Failure to provide the warranty does not reduce liability for execution and materials for that part of the work.

- Conform to the installer/applicator standard form. Where the installer/applicator does not have a standard form, use the 1237WA WARRANTY AGREEMENT included in the contract documents.
- Commence the warranties from the date normally applicable for the work.
- Maintain their effectiveness for the times stated.

1.4 WARRANTIES – MANUFACTURER/SUPPLIER

Where warranties are offered covering materials, equipment, appliances or proprietary products, provide all such warranties to the contract administrator.

Provide warranties in favour of the principal. The terms and conditions of such warranties in no case negate the minimum remedies available under common law as if no warranty had been offered. Failure to provide the warranty does not reduce liability for execution and materials for that part of the work.

- Conform to the manufacturer/suppliers standard form.
- Commence the warranties from the date normally applicable.
- Maintain their effectiveness for the times stated.

Submissions

1.5 REVIEW BY CONTRACTOR

Obtain the warranties from the installers and suppliers at the earliest possible date and review to ensure that they are correctly filled out and executed. Where warranties are executed as a deed, ensure that a duplicate copy is provided for execution by the Principal/Owner. Keep safe and secure until required for submission.

1.6 WARRANTIES - REQUIRED BY BUILDING CONSENT AUTHORITY

Obtain copies of warranties required for submission to the BCA as a condition of the Building Consent. Keep safe and secure until required at the time of the BCA final inspection and Code Compliance Certificate. Provide to the BCA in the form they require.

1.7 WARRANTIES - REQUIRED BY CONTRACT

Obtain copies of warranties listed in the contract documents for submission to the Contract Administrator/Owner. Provide all warranties at the same time. Present the warranties to the Contract Administrator in a "clear view" document book suitably labelled with the project name and details. If the project has an operations and maintenance documentation provision, present the warranties with the operations and maintenance information.

1.8 TIME FOR SUBMISSION

Refer to the contract conditions for any requirement relating to the time for submission for warranties

NZIA SCC Contracts	Submit all warranties no later than the date of the contractors advice of achieving practical completion.
NZS 3910 Contracts	Submit all warranties before the end of the defects liability period.
NZS 3915 Contracts	Submit all warranties before the end of the defects liability period.

Guarantees – Contractor

1.9 MASTER BUILD SERVICES LTD 7 YEAR GUARANTEE

Provide a Master Build New Homes Alterations & Additions Guarantee including all costs in the contract price and covering loss of deposit, non-completion and defects in materials and workmanship and structural defects under the terms of the guarantee offered by Master Build Services Ltd. Execute with all three signatories: owner, registered master builder and Master Build Services Ltd, before commencing the contract works.

1.10 MASTER BUILD SERVICES LTD 10 YEAR CLASSIC GUARANTEE

Provide a Master Build 10 Year Classic New Homes Alterations & Additions Guarantee including all costs in the contract price and covering defects in materials and workmanship, and structural defects including rot and fungal decay under the terms of the guarantee offered by Master Build Services Ltd. Execute with all three signatories: owner, registered master builder and Master Build Services Ltd, before commencing the contract works.

1.11 MASTER BUILD SERVICES LTD 10 YEAR PREMIUM GUARANTEE

Provide a Master Build 10 Year Premium New Homes Alterations & Additions Guarantee including all costs in the contract price and covering loss of deposit, non-completion, defects in materials and workmanship, and structural defects including rot and fungal decay under the terms of the guarantee offered by Master Build Services Ltd. Execute with all three signatories: owner, registered master builder and Master Build Services Ltd, before commencing the contract works.

1.12 CBANZ GUARANTEE

Provide a Certified Builders HomeFirst Builders Guarantee. Complete the guarantee application. Before commencing the contract works, execute with the signatures of the owner and the Certified Builder, and forward to CBA Guarantee Ltd along with a copy of the Building Consent, payment schedule and the fee payable.

Warranties schedule

1.13 SCHEDULE OF WARRANTIES

Provide the Warranties and Guarantees listed in this section:

Additionally the following work sections have Warranty requirements, refer to these sections for details:

1237WA WARRANTY AGREEMENT

Contract for:
(the contract works)

Contractor:
(the contractor)

Principal:
(the principal)

Warrantor:
(name of contractor, subcontractor or materials supplier)

Warranted works:
(the warranted works)

Warranted materials:
(the warranted materials)

Warranty period: years from the date of practical completion of the contract works.

The principal has entered into a contract (the contract) with the contractor for carrying out the contract works. The warranted works / materials are part of the contract works.

The contractor has agreed to arrange for the provision of a warranty in respect of the warranted works / materials for the warranty period on the terms set out in this warranty.

The warrantor has agreed to provide a warranty in respect of the warranted works / materials for the warranty period on the terms set out in this warranty.

1. IT IS HEREBY AGREED

The warrantor warrants to the principal that the warranted work performed /materials supplied shall be as required in the contract. If not specified the work shall be of good trade practice with materials and fittings of merchantable quality.

This warranty shall be in addition to and shall not derogate from any manufacturer's warranty or any warranty implied by law, attaching to any part of the warranted works.

1.1 WARRANTOR'S OBLIGATIONS

The warrantor agrees that if the warrantor is advised by the principal in writing of any defect in the warranted works / materials within the warranty period for which the warrantor is liable under the terms of this warranty, the warrantor will promptly take steps to remedy the defect / replace defective materials.

1.2 REMEDIAL WORK / REPLACEMENT OF DEFECTIVE MATERIALS

Any remedial work / replacement of defective materials which the warrantor is liable to undertake / provide under this warranty shall be carried out:

- to the standard required by the contract; and
- in a prompt and timely manner; and
- without unnecessary inconvenience to any occupants; and
- at the warrantor's cost; and
- subject to reasonable access being provided to the warrantor for the purpose of carrying out the remedial work.

1.3 REPAIR, REPLACEMENT AND/OR COMPENSATION

Where the cost of replacement of work and/or materials is out of all proportion to the consequences of the defect, or where the defect may not be reasonably capable of rectification without substantial expense which is out of all proportion to the cost of the contract works, the warrantor may:

- where the defect or defective material is reasonably rectified by repair rather than by replacement, the warrantor's obligation under this warranty shall be only to repair or otherwise make good the defect or
- propose reasonable monetary compensation in lieu of remedying the defect or
- propose a combination of both repair and compensation.

The principal must consider the warrantor's reasonable proposals and the parties must endeavour in good faith to reach agreement. Where agreement cannot be reached the dispute shall be resolved in accordance with the disputes clause in this warranty.

1.4 FAILURE BY WARRANTOR TO PERFORM REMEDIAL WORK

If the warrantor fails to promptly, adequately and satisfactorily carry out the remedial work or to propose acceptable repair/compensation, the principal may then arrange for the remedial work to be carried out by others.

If the warrantor fails to promptly, adequately and satisfactorily provide replacement materials or to propose acceptable repair/compensation, the principal may then arrange for the replacement materials to be supplied by others.

The principal must first give the warrantor 10 working days notice to carry out and complete the remedial work / supply replacement materials. If the warrantor does not complete this work / supply replacement materials within the time, the principal must then advise the warrantor in writing that the work will be carried out / materials will be supplied by others.

In such event the warrantor is not released from obligations under this warranty, which continues in full force and effect, except in respect of the defect remedied / materials supplied by the principal or by another person contracted by the principal. The reasonable cost of the remedial work carried out / materials supplied by such other persons including all reasonable costs of the principal is to be paid to the principal by the warrantor on demand.

1.5 EXCLUSIONS

The principal agrees that the warrantor is not liable for any defect or damage caused by:
- wilful act or negligence of the principal or any person other than the warrantor; or
- fire, explosion, earthquake, war, subsidence, slips, faulty materials or workmanship other than caused by the defect in the warranted work; or
- any force of nature which the warrantor could not reasonably foresee; or
- any neglect or unnecessary delay by the principal in giving notice to the warrantor of a defect in the warranted works becoming apparent; or
- design faults, errors or discrepancies, unless the warrantor undertook the design of the part of the warranted works the subject of the defect; or
- unintended use of the warranted works by the principal or any occupant thereof; or
- failure by the principal or any occupant thereof to maintain the warranted works in accordance with good practice and any manufacturer's stated or recommended instructions or requirements.

1.6 ASSIGNMENT

The principal may assign the benefit of this warranty to any person.

1.7 DISPUTES

Any dispute or difference between the principal and the warrantor arising out of or in connection with this warranty, or the subject matter of this warranty, including any question about its existence or validity, will be referred to arbitration by a sole arbitrator to be agreed upon by the parties. If the parties are unable to agree upon the identity of an arbitrator within 10 working days from the date upon which notice of the dispute is given, then the arbitrator will be appointed by the Registrar of the Building Disputes Tribunal (NZ) Ltd upon the application of either party.

1.8 NOTICES

Notices given to the warrantor are deemed to have been effectively served on the warrantor if given in accordance with the contract.

EXECUTED BY

Signed by the warrantor: .....

on this: .....day of .....20.....
(day) (month) (year)

(And where required to be executed as a deed) signed in the presence of:

Witness signature: .....

Name: .....
(print)

Address: .....
(print)

Occupation: .....
(print)

Signed by the principal: .....

on this: .....day of .....20.....
(day) (month) (year)

(And where required to be executed as a deed) signed in the presence of:

Witness signature: .....

Name: .....
(print)

Address: .....
(print)

Occupation: .....
(print)

NOTE – Where the warrantor is not the contractor the warranty agreement must be executed by the warrantor and the principal in the manner required for execution of a deed.

Any of these parties which are a company must execute the warranty by having it signed, under the name of the company, by two or more directors. If there is only one director, it is sufficient if the warranty agreement is signed under the name of the company by that director, but the signature must be witnessed by another person.

The witness must not only sign but must also add his or her occupation and address. Alternatively, companies may execute under power of attorney. Any party which is a body corporate (other than a company) must execute by affixing its seal, which must be attested in the manner provided for in the rules of, or applicable to, the body corporate.

In the case of a party who is an individual, the party must sign and the signature must be witnessed by another person. The witness must not only sign but must also add his or her occupation and address.

1240 ESTABLISHMENT

1. GENERAL

This general section relates to site establishment including: -
- Notices and approvals
- Inspections
- Site preparation
- Signage
- Temporary construction

Notices and approvals

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

1.2 BUILDING CONSENT AUTHORITY AND NETWORK UTILITY APPROVALS
Attend on Building Consent 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.

1.3 NOTIFY NETWORK UTILITY OPERATORS
Notify all network utility operators of proposed works before commencing site operations. Ascertain location of services or confirm that none exist in the vicinity of the works. Take all necessary precautions to avoid damage to existing services.

Inspections

1.4 CARRY OUT INSPECTIONS
as required by local council authority

Site preparation

1.5 SITE ACCESS
Access to the site is limited to: as directed by owner

1.6 WORKING AREA
Limited to the following designated working areas on the site:
as directed by owner

1.7 SITE AND SOIL SURVEYS
Carry out all investigations necessary and peruse all information available to determine ground conditions and likely ground performance both on the site and adjacent to it. Also refer to the territorial authority project information memorandum (PIM).

1.8 GROUND CONDITIONS
Refer to the soils investigation report included with this specification.

Existing buildings

1.9 ALTERATIONS
Control access and working areas within existing buildings. Liaise with building owner to establish site limitations.

1.10 TEMPORARY ACCESS
Liaise with the building owner to arrange access to areas of the existing building which are not normally part of the contract.

Signage

1.11 SITE SIGN

Obtain approval for, provide and erect a timber framed sign board ~mm x ~mm fully painted and displaying:

- Title of contract
- Principal's name
- Contractor's name
- Consultants as listed in general section 1222 PROJECT PERSONNEL
- If the contractor wishes, names of contractor and subcontractors.

Temporary construction

1.12 TEMPORARY ROADS

Provide as necessary all temporary roads, tracks, crossings and hard standing required for the efficient execution of the works and maintain to approval.

1.13 TEMPORARY BUILDINGS

Provide as necessary temporary sheds, offices, lunch rooms, sanitary accommodation and other temporary buildings required for storage, management of the works, for the use of workers while on site and as required by Acts and Regulations.

1.14 CONSULTANTS TEMPORARY SITE OFFICE

Provide temporary accommodation and facilities for site meetings and for use by consultants while on site.

1.15 HOARDINGS, GANTRIES, LIGHTING

Provide temporary fencing, hoardings, planked footways, guard rails, gantries and lighting as necessary to protect the public and others, for the proper execution of the works and to meet the requirements of territorial or other authority.

1250 TEMPORARY WORKS & SERVICES

1. GENERAL

This general section relates to temporary works and services required for the construction of the contract works. It includes:

- Temporary works and services including temporary fencing and hoardings
- Scaffolding and shoring
- General care and protection

Temporary works

1.1 COMPLY WITH NEW ZEALAND BUILDING CODE

Refer to New Zealand Building Code clauses and approved document paragraphs for the criteria and/or methods that must be used in this section to establish compliance with the code.

1.2 COSTS RELATING TO TEMPORARY WORKS

Pay all rates/fees in respect of temporary works.

1.3 MAINTENANCE OF TEMPORARY WORKS

Maintain alter, adapt and move temporary works and services as necessary. Clear away when no longer required and make good.

1.4 SAFEGUARD THE SITE, THE WORKS AND MATERIALS

Take all precautions to prevent unauthorised access, including access outside working hours, to the site, the works and adjoining property. Safeguard the site, the works, materials and plant from damage and theft.

1.5 SITE FENCING

Provide and maintain a site fence, 2 metres high from ground level on the side accessible to the public. Construct to comply with NZBC F5/AS1 Construction and demolition hazards. Construct as required for public areas and as shown on the drawings.
Construct the fence with:

- galvanized chain link netting with a 50mm x 50mm maximum grid size
- posts at 2.5 metre centres maximum
- gap at the bottom of the fence no greater than 100mm

1.6 SITE HOARDINGS

Provide and maintain hoardings, 2 metres high from ground level on the side accessible to the public. Construct to comply with NZBC F5/AS1 Construction and demolition hazards. Construct as required for public areas and as shown on the drawings.
Construct hoardings with continuous cladding of:

- close butted timber at least 19mm thick; or
- 6mm exterior grade plywood on studs at 600mm centres maximum; or
- 9mm exterior grade plywood on studs at 1 metre centres maximum; or
- continuous metal cladding suitably supported to provide strength and rigidity

1.7 SITE FENCING – NON PUBLIC AREAS

Provide and maintain a 1 metre high site fence to non public areas. Construct using:

- warratah stakes at 1.5 metre centres fitted with safety caps
- plastic safety mesh

1.8 PROVIDE SEDIMENT AND SILT RUN OFF PROTECTION

Provide appropriate measures to prevent or minimise sediment generation and silt run off. Comply with territorial and other authority requirements relating to carrying out earthworks.

Prevent silt run off by:

- exposing only as much ground as required at any time
- providing run off channels, contour drains or earth bunds to divert clean water away from the site on to stable sealed or grassed ground

- capture silt by the use of silt fences, vegetation buffer strips, sediment ponds or earth bunds.

Provide sediment control by:
- earth bunds constructed across the slope to control and detain run off
- silt fences constructed using filter fabric stretched between posts at a maximum of 1 metre spacing.

Pump water from trenches and other areas of the site using methods to prevent sediment entering any drain or watercourse. Filter dirty water before discharging into drainage system.

1.9 PROVIDE CONCRETE WASHWATER RUN OFF PROTECTION

Provide appropriate measures to prevent cement/concrete washwater or slurry run off to; drains or waterways, landscaped areas new or remaining and adjoining public or private properties. Comply with territorial and other authority requirements relating to cement/concrete washwater.

Control run off from:
- Cement/concrete based material production, placing and finishing.
- Hosing down and cleaning of, tools and equipment, fresh material, and spilt or surplus material, pumps and mixers etc.
- Wet cutting or grinding.
- Slab watering etc.
- Water cleaning of new concrete elements, fresh used formwork etc.

Small project with relatively large exposed ground areas - prevent run off by:
- directing small amounts of washwater onto the area of ground closest to the work.
- for larger amounts provide run off channels, and small soak pits
- very small amounts of washwater with no aggregate and only a small amount of sand may be spread over existing lawns.

Large project and those without suitable ground area - prevent run off by:
- plan and implement washwater control measures based on the expected volumes, allow for the timely removal and safe disposal of liquids and solids.
- control the volumes of water used for washing down, the more water used the bigger the problem.
- Control the flow of washwater so that it is directed to proper catchments.
- providing watertight bunds, pits or tanks, filtered washwater is not to be discharged to drains.

Spilt or surplus material:
- if possible allow to set and either use or dispose of as hardfill.
- pre-made concrete items, either use or dispose of as hardfill.

Pump washwater away from drains, waterways and adjoining property.

Temporary works – Existing Buildings

1.10 OCCUPIED BUILDINGS

Buildings which remain occupied during the construction must have temporary works agreed with the occupier/owner in advance.

1.11 PARTITIONS

Provide and maintain full height temporary partitions, dust sealed and with appropriate access doors, as shown on the drawings.
Construct the partitions from;
- timber or steel stud framing to suit the height
- 17mm CD plywood screw fixed to occupied side of wall only
- paint plywood white, occupied side only

1.12 SCREENS
Provide and maintain 2.0m high temporary screens with appropriate access doors, as shown on the drawings.
Construct the screens from;
- timber or steel stud framing
- 17mm CD plywood screw fixed to occupied side of wall only
- paint plywood white, occupied side only

1.13 DUST SCREENS
Provide and maintain full height temporary dust screens as shown on the drawings.
Construct the screens from;
- flexible membrane with taped joints
- timber battens for fixing membrane to edges of building fabric
- paint plywood white, occupied side only

Temporary services

1.14 WATER
Provide clean, fresh water for the works and make arrangements for distributing about the site.

1.15 ELECTRICITY
Nominate the person to install and be responsible for the complete temporary electrical installation. The name and designation of the person responsible is to be displayed prominently and close to the main switch or circuit breaker.

Inspect and overhaul the installation at such intervals as are prescribed by the network utility operator but not exceeding three monthly intervals.

1.16 TELEPHONE
Provide on site temporary telephone facilities.

1.17 FACSIMILE
Provide on site temporary facsimile facilities.

1.18 COMPUTER
Provide on-site temporary computer facilities complete with an email and internet connection capable of sending, receiving and printing site communications.

Scaffolding and shoring

1.19 GENERAL SCAFFOLDING
Provide as necessary general scaffolding for the efficient execution of the works. Placement, erection and structure to be by certified suppliers/erectors and approved by the Labour Department OSH inspectors before being used. Comply with the SARNZ publication: "Best practice guidelines for scaffolding in New Zealand."

Care and protection

1.20 PROTECT EXISTING BUILDINGS
Protect existing buildings and other designated features which are to remain in position during the execution of the works.

1.21 PROTECT ACCESS ROUTES
Protect access routes through the building and areas adjacent to the work area that are to remain in place. These include lifts and stairs. Comply with all fire egress requirements at all times.

1.22 PROTECT EXISTING SERVICES
Protect existing services and parts of service systems that are to remain in place during the execution of the works. Provide temporary caps or covers to prevent the ingress of dust and other contaminants into the systems, ducts, pipes etc.

1.23 MAKE GOOD EXISTING SERVICES

Make good all damage to existing roads, footpaths, grounds, sewers or other services, caused in carrying out the contract works.

1.24 PROTECT EXISTING TREES

Protect existing trees, fences, gates, walls, gardens and other designated site features which are to remain in position during the execution of the works.

Construct a temporary fence at the outer edge of the drip line of trees to be protected. Comply with territorial authority requirements.

1.25 CONSTRUCTION KEYING AND SECURITY

Provide locksets with temporary keying, or install with the cylinders removed.

1.26 TEMPORARY STORAGE

Provide temporary storage areas and protective covers and screens. Fillet stack and protect all framing and structural members from moisture and contamination. Completely protect finishing materials from the weather and damage and store in accordance with the manufacturer's requirements. Protect fabricated elements from the weather and damage, and store in accordance with suppliers' requirements.

1.27 PERIODIC SITE CLEANING

Carry out periodic site cleaning during the contract period. Place waste material in appropriate storage pending removal from the site.

1.28 PERIODIC RUBBISH REMOVAL

Maintain on site appropriate means for the storage and removal of construction waste material. Where required or appropriate provide for the separate storage of recyclable waste and other materials requiring special disposal. Keep food waste separate from construction waste.

1256 WASTE MANAGEMENT

1. GENERAL

This general section relates to the implementation of a site waste management plan.

1.1 DOCUMENTS REFERRED TO

Documents referred to in this section are:

REBRI Resource Guides :
Website: http://www.rebri.org.nz/

Documents listed above and cited in the clauses that follow are part of this specification. However, this specification takes precedence in the event of it being at variance with the cited document.

1.2 ABBREVIATIONS

The following abbreviations are used in this specification:
REBRI Resource Efficiency in the Building and Related Industries

Requirements

1.3 WASTE MANAGEMENT PLAN

Prepare and submit a waste management plan in line with the guidelines provided in the REBRI Guides. http://www.rebri.org.nz/
The submitted plan to include the following factors:
- site planning and material storage
- waste management
- purchasing
- recycling
- salvage.

1.4 RECORD KEEPING

Maintain a record of waste materials, recycled, reused and disposed of by the project using the REBRI Waste Management Plan and REBRI C&D Waste Transfer Form or a form generated by the contractor containing the same information.
- For each material recycled from the project, include the amount (in cubic metres or tonnes), or in the case of reuse, state quantities by number, type and size of items, and the destination (i.e. recycling facility, used building materials yard).
- For each material land filled, include the amount (in cubic metres or tonnes) of material and the identity of the landfill, clean fill and/or transfer station.

If requested, submit to the Contract Administrator the REBRI Waste Management Plan, REBRI C&D Waste Transfer Forms or bills, invoices and other documentation confirming that all materials have been received at the required locations.

1.5 ENSURE

Ensure all site management and staff, subcontractors, material and product suppliers and waste disposal companies are made aware that this is a REBRI project and provide access to or copies of the waste management plan.

Equipment

1.6 CONTAINERS

Provide appropriately sized and sited containers for the storage of reusable, recyclable and waste products. Clearly label each container.

Conditions

1.7 STORAGE

Store all materials so they are not damaged prior to use.

1.8 PLANNING

Plan the measurement and ordering of materials and components to minimise waste.

Application

1.9 DEMOLITION

- Sort concrete and concrete block waste for recycling as aggregate, sub-base material or fill.
- Sort brick waste for reuse as whole bricks, or re-use as crushed brick for landscape cover, sub-base material or fill.
- Sort asphalt material by type for milling and recycling.

1.10 DISMANTLING/REUSE

- Dismantle, store and protect items, elements and components for reuse on site.
- Dismantle, store and protect items, elements and components for recycling off site.
- Dismantle store and protect items, elements and components for return to the owner.

1.11 SITE CLEARING

- Sort asphalt material by type for milling and recycling.
- Grind, chip or shred vegetation for mulching and composting on site.
- Grind, chip or shred vegetation for off site mulching and composting.
- Separate and recycle steel reinforcing and other metals.
- Provide suitable on-site locations for the disposal of excavated rock, soil and vegetation.

1.12 CONCRETE

- Plan for maximum re-use of concrete formwork.
- Separate and recycle concrete.
- Provide a suitable on-site location for the disposal of excess concrete.

1.13 WOOD

- Separate and recycle wood offcuts and waste.
- Separate timber for reuse
- Provide a suitable storage area for sizeable off-cuts for use as spacers or blocking.
- Separate CCA treated timber from untreated timber.
- Chip untreated timber for mulching and composting on site.
- Chip untreated timber for off site mulching and composting.

1.14 PLASTERBOARD

- Include for both horizontal fitting of sheets and customised sheet lengths.
- Retain larger off-cuts for use around doors, windows or built-in items.

1.15 PLUMBING

- Select plumbing materials with a high recycled content.
- Ensure that reusable packaging materials are returned to the vendors.
- Retain PVC off-cuts for use as stubs.
- Separate and recycle plastics.

1.16 ELECTRICAL

- Select electrical materials with a high recycled content.
- Ensure that reusable packaging materials are returned to the vendors.
- Separate and recycle metals and wire.
- Separate and recycle plastics.

1.17 MECHANICAL

- Select mechanical materials with a high recycled content.
- Ensure that reusable packaging materials are returned to the vendors.
- Separate and recycle metals and wire.
- Separate and recycle plastics.

Completion

1.18 CLEANING

All cleaning materials used on the project to be biodegradable and non-toxic.

1270 CONSTRUCTION

1. GENERAL

This GENERAL section relates to common requirements for construction issues including: -

- Quality assurance
- Noise and nuisance
- Set out
- Common execution requirements
- Common materials requirements
- Supply of spare materials
- Common requirements for samples and tests
- Final presentation and cleaning
- Commissioning

Quality control and assurance

1.1 QUALITY ASSURANCE

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

- Concrete quality and finish.
- Dimensional accuracy of structural column locations (following completion of foundations).
- All perimeter columns and frames for plumb.
- Levels of all floors relative to the site datum.
- Framing timber moisture content.

Where any material, quality or dimension falls outside specified or required tolerances, obtain written direction from the contract administrator. Where building consent approval is affected, confirm remedial action with the Building Consent Authority.

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

Noise and nuisance

1.2 LIMIT CONSTRUCTION NOISE

Minimise the effects of noise generation by including in the planning of the work such factors as placing of plant, programming the sequence of operations and other management functions. Limit construction noise to comply with the requirements of NZS 6803, the requirements of the Resource Management Act sections 326, 327 and 328 and the Health and Safety in Employment Regulations clause 11.

1.3 ACCEPTABLE NOISE LEVELS

Refer to NZS 6803 Tables 2 and NZS 6803, tables 3 for the upper limits of construction work noise in residential and industrial areas over the various time periods, particularly 0730 to 1800 hours. Note also the allowed adjustments and exemptions in NZS 6803, 6. Do not exceed these limits.

1.4 PROVIDE INFORMATION TO NEIGHBOURS

Provide information to neighbours of any noise generation from the site liable to constitute a problem. Explain to them the means being used to minimise excessive noise and establish with them the timings most suitable for the noise generating work to be carried on.

Discuss with any complainant the measures being used to minimise noise. Where possible modify these measures to accommodate particular circumstances. Finally, determine the sound level at the location under discussion using methods and observation reporting as laid down in NZS 6803. If the noise level is above the upper limits of NZS 6803, tables 2 and NZS 6803, tables 3, cease the noise generating operation and remedy the problem.

1.5 INCONVENIENCE TO OTHERS
When the works are to be carried out in or around occupied premises, ascertain the nature and times of occupation and use. Carry out the works in a manner to minimise inconvenience, nuisance and danger to occupants and users.

1.6 DIRT AND DROPPINGS
Remove dirt and droppings deposited on public or private thoroughfares from vehicles servicing the site to the satisfaction of the appropriate authorities and the contract administrator.

1.7 DAMAGE AND NUISANCE
Take all precautions to prevent damage and nuisance from water, fire, smoke, dust, rubbish and all other causes resulting from the construction works.

Set-out and tolerances

1.8 SURVEY INFORMATION
Locate and verify survey marks and datum points required to set out the works. Record and maintain their position. Re-establish and replace disturbed or obliterated marks.

1.9 SET-OUT AND DATUM
Set out the work to conform with the drawings. Establish a permanent site datum to confirm the proposed building ground floor level and its relationship to all other existing and new building levels.

1.10 SET-OUT BY LICENSED CADASTRAL SURVEYOR
Before commencing construction provide the contract administrator with a certificate prepared by a licensed cadastral surveyor that the set-out is complete and that the building is accurately placed on the site.

During construction provide the contract administrator with a certificate, prepared by the same licensed cadastral surveyor confirming the set-out of the foundations and grid lines. Necessary adjustments are to be determined and agreed to by the contract administrator before proceeding further.

1.11 CONFIRM HEIGHT IN RELATION TO BOUNDARY
Provide a certificate prepared by a licensed cadastral surveyor that the building has been constructed within the allowed height in relation to boundary. Provide the certificate to the local authority. Provide a copy of the certificate to the contract administrator

1.12 USE OF SET-OUT INSTRUMENTS
Permit without charge, the use of instruments already on site for checking, setting out and levels.

1.13 CHECK DIMENSIONS
Check all dimensions both on drawings and site, particularly the correlation between components and work in place. Take all dimensions on drawings to be between structural elements before linings or finishes, unless clearly stated otherwise.

1.14 TOLERANCES
All work to be level, plumb, and true to line and face. Unless otherwise specified in specific work sections of this specification, tolerances for structural work shall comply with the following:

Concrete construction:	To NZS 3109 Concrete construction Clause 3.9 Tolerances for reinforcement Table 5.1 Tolerance for precast components Table 5.2 Tolerance for in situ construction To NZS 3114 Concrete surface finishes
Masonry construction:	To NZS 4210 Masonry construction: Materials and workmanship Clause 2.6.5 Tolerances Table 2.2 Maximum tolerances

Structural steelwork:	To NZS 3404:1997 Steel structures standard Section 14.4 Tolerances (after fabrication) Section 15.3 Tolerances (erection)
Timber framing:	To NZS 3604 Timber-framed buildings Clause 2.2 Tolerances Table 2.1 Timber framing tolerances

Refer to work sections for tolerance requirements for finishes.

Execution

1.15 EXAMINE PREVIOUS WORK
Before commencing any part of the work carefully examine the previous work on which it may depend. Report in writing to the contract administrator defects that may affect the quality of the proposed work and obtain instructions. Commencing work on any part means that previous work is accepted as being satisfactory for work of the required standard.

1.16 WORKER QUALIFICATIONS
All work to be level, plumb, and true to line and face. Employ only experienced workers familiar with the materials and techniques specified.

1.17 MINIMISE DELAYS DUE TO WEATHER
Use appropriate techniques and methods to prevent damage and minimise delays due to weather.

Materials

1.18 NEW PRODUCTS AND MATERIALS
Materials and products to be new unless stated otherwise, of the specified, and complying with all cited documents.

1.19 COMPATIBILITY OF MATERIALS AND FINISHES
Ensure all parts of a construction or finish are compatible and their individual use approved by the manufacturers and suppliers of other parts of the system. Source all parts of a system from a single manufacturer or supplier.

1.20 STORING PRODUCTS AND MATERIALS
Take delivery of and store products, materials and components in accordance with codes of practice and the product manufacturer's or supplier's stated requirements. Maintain the proper condition of any protective packaging, wrappings or supports during delivery, unloading and storage.

1.21 HANDLING PRODUCTS AND MATERIALS
Handle products, materials and components in accordance with codes of practice and the manufacturer's or supplier's stated guidelines. Avoid distortion and any contact with potentially damaging surfaces or conditions.

1.22 SUBSTRATE CONDITIONS
Ensure substrate conditions are within the manufacturer's or supplier's stated guidelines both before and during the installation of any material, product or system. Obtain written instructions on the necessary action to rectify unsatisfactory conditions.

1.23 INSTALLING PRODUCTS AND MATERIALS
Install in accordance with the manufacturer's or supplier's technical literature. Ensure that all installers are familiar with the required substrate conditions and the manufacturer's or supplier's specified preparation, fixing and finishing techniques.

1.24 COMPLY WITH STANDARDS
Comply with the relevant and/or cited Standard for any material or component. Obtain certificates of compliance when requested by the contract administrator.

1.25 CONDITION OF MATERIALS AND COMPONENTS
To be in perfect condition when incorporated into the work.

1.26 INCOMPATIBLE MATERIALS AND METALS
Separate incompatible materials and metals with separation layers, sleeves or gaskets of plastic film, bituminous felt or mastic or paint coatings, installed so that none are visible on exposed surfaces.

Samples and tests

1.27 SAMPLES AND PROTOTYPES
Where specified in the work sections, submit samples, prepare sample panels, and construct prototypes for review as to appearance, form and conformance with the drawings and specifications. Submit all information required to assist the review process, including technical data, manufacturer's literature, independent appraisals and producer statements.

Timing for the provision and review of samples, sample panels and prototypes to be included in the contract programme. Allow a minimum of 10 working days for each review. Proceed only after instructions to proceed have been issued in writing by the contract administrator.

In situ work may be incorporated in the finished work if so confirmed, otherwise allow to remove completely and replace.

1.28 CONTROL STANDARD
Obtain the contract administrator's confirmation of material, component and work samples which then become the quality control standard. Remove from the site any rejected samples. Retain confirmed samples with care on site for comparison throughout the contract. Remove from the site when no longer required.

Spares

1.29 SPARES
Collect, protect and store safely all spare materials required under the contract. Give the contract administrator an inventory of all spares.

Final presentation and cleaning

1.30 REMOVE TEMPORARY PROTECTION
Remove all temporary markings, coverings, labels and protective wrappings unless instructed otherwise.

1.31 REPLACE DAMAGED MATERIALS
Replace all materials or component damaged during the works to the standard of and integral with the original.

1.32 COMPLETE ALL SERVICES
Ensure all services are complete and operational, with all temporary labelling removed, required labelling fixed and service instructions provided.

1.33 CLEANING BY CONTRACTOR
Clear the contract works of all construction materials, waste, dirt and debris. Clean the contract works including:

- Wipe all surfaces to remove construction dust
- Clean out service ducts and accessible concealed spaces
- Clean out all gutters and rainwater heads
- Wipe dust from both sides of glass. Take particular care when removing paint or cementitious materials to not damage the glass.
- Remove adhesive residue left by labels and other temporary protection/markings
- Clean out the interior of all cabinetry

- Wash down external concrete including driveways and concrete masonry. Take care when waterblasting to not cause damage to the surface or allow water to enter the building.
- Remove rubbish and building material from the area immediately adjacent to the contract works

1.34 CLEANING BY COMMERCIAL CLEANER

Use a commercial cleaning firm to clean the whole of the interior of the building, including all appliances, equipment, fittings, surfaces and finishes to leave it without any blemish. Cleaning to include:

- Clean and wash down all external surfaces to remove dirt, debris and marking.
- Clean all interior surfaces including cabinetwork, joinery, sanitary and hardware items.
- Vacuum or polish all floor finishes.
- Clean and polish all glass, both sides.

Commissioning

1.35 MOVING PARTS

Adjust, ease and lubricate all doors, windows, drawers, hardware, appliances, controls and all moving parts to give easy and efficient operation.

1.36 SECURITY AT COMPLETION

Remove any temporary lock cylinders and complete final keying prior to handing over keys to the principal on completion of the works. Leave the works secure with all accesses locked. Account for all keys/cards/codes and hand to the principal along with an itemised schedule, retaining a duplicate schedule signed by the principal as a receipt.

2210 PREPARATION AND GROUNDWORK

1. GENERAL

This section relates to the clearance, excavation and backfilling of the site area in preparation for:

- footings and floor slabs
- backfilling behind basement retaining walls

Documents

1.1 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

NZS 3604	Timber-framed buildings
OSH	Approved code of practice for safety in excavation and shafts for foundations

1.2 SITE SAFETY

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

1.3 ARCHAEOLOGICAL DISCOVERY

If fossils, antiquities and other items of value are found refer to the general section 1270 CONSTRUCTION for actions to be taken with archaeological discovery.

2. PRODUCTS

2.1 EXCAVATED CLEAN FILL

Clean, free of contamination, mineral soil 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 VOLCANIC TUFF FILL

Scoriaceous tuff of variable grading excluding excessive silt or clay material, capable of being placed and compacted as specified.

2.3 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.

2.4 SAND FILL

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

2.5 HARD FILL

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

2.6 GRANULAR FILL

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.

2.7 DRESSING COURSE

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

2.8 FREE-DRAINING AGGREGATE

Scoria or crushed gravel graded 50 to 14 clean.

3. EXECUTION

3.1 WASHOUT BAY FOR TRUCK

Provide a designated area for trucks to be washed down to avoid mud and dirt being carried off site.

3.2 EXCAVATION GENERALLY

Carry out excavation, using plant suitable for the purpose, to the guidelines set by the OSH publication: Approved code of practice for safety in excavation and shafts for foundations.

3.3 BURNING OF MATERIALS

Burning of materials is not permitted on site.

3.4 PROTECT EXISTING WORK

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

3.5 PROTECT TREES

Protect from damage trees, shrubs, natural site features and existing landscaped areas nominated on the drawings as being retained. Ensure existing levels are undisturbed beneath the dripline of retained trees.

3.6 EROSION CONTROL

Ensure measures are in place to contain silt dislodged as a result of water infiltration and to prevent it being carried off site with stormwater.

3.7 SURFACE PREPARATION

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

3.8 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.

3.9 STOCKPILE TOPSOIL

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

3.10 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.

3.11 GENERAL EXCAVATION

Trim ground to required profiles, batters, falls and levels. Remove loose material. Protect cut faces from collapse. Keep excavations free from water.

3.12 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.

3.13 FOUNDATION EXCAVATION

Take foundation excavations to depths shown. Keep trenches plumb and straight, bottoms level and free of soft spots, stepped as detailed and clean and free of water.

3.14 INADEQUATE BEARING

If bearing is not to NZS 3604, 3.1.2 **Foundations** and 3.1.3 **Determination of good ground**, then excavate further and backfill with material as follows. Confirm any changes with the territorial authority.

Below slabs on grade:	Hardfill compacted in 150mm layers
Below footings:	10 MPa concrete
Service trenches:	Hardfill compacted in 150mm layers

If excavation exceeds the required depths, backfill and compact to the correct level with material as listed.

3.15 STANDARD OF COMPACTION

Place fill in layers of not more than 150mm and compact to achieve 95% of maximum dry density. For granular fill material, the fill shall be compacted to 80% of saturated dry density.

3.16 GRANULAR BASE FOR SLABS

To conform to NZS 3604, section 7.5.3, **Granular base**. Consolidate with a vibrating roller. Blind the surface with 20mm of coarse sand or sand/cement and roll ready to receive a damp-proof membrane.

3.17 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.

3.18 RETAINING WALLS

Backfill behind retaining walls with free draining granular material and compact in 200mm layers. Ensure any tanking membranes, drain coil and damp-proofing are not damaged.

3.19 SURPLUS MATERIAL

Remove surplus and excavated material from the site.

3120 CONCRETE

1. GENERAL

This section relates to formwork, reinforcement, concrete mixes and the placing of concrete.

Documents

1.1 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

NZBC B1/AS1	Structure
NZBC E2/AS3	External moisture
AS 1366.3	Rigid cellular plastics for thermal insulation - Rigid cellular polystyrene - Moulded (RC/PS - M)
NZS 3101.1	Concrete structures standard
NZS 3104	Specification for concrete production
NZS 3109	Concrete construction
NZS 3114	Specification for concrete surface finishes
NZS 3604	Timber-framed buildings
AS/NZS 4671	Steel reinforcing materials
AS/NZS 4858	Wet area membranes
CCANZ CP 01	Code of practice for weathertight concrete and concrete masonry construction

2. PRODUCTS

2.1 NORMAL CONCRETE

Normal concrete 17.5, 20 or 25 MPa grade, (refer to SELECTIONS), maximum aggregate size 19mm ready-mixed to NZS 3104. Provide delivery dockets listing mix and despatch details.

2.2 PRESCRIBED MIX CONCRETE

Prescribed mix concrete 17.5, 20 or 25 MPa grade (refer to SELECTIONS) minimum strength, using either separate batching of sand and builder's mix or coarse aggregate to NZS 3104, table 3.1, Grading recommendations for combined and uncombined coarse aggregates.

2.3 SITE CONCRETE

Special concrete 10 MPa with minimum water for workability, all materials and batching to NZS 3104, table 3.1, Prescribed mixes (P).

2.4 REINFORCEMENT

Bars to AS/NZS 4671. Grade 300E deformed, other than for ties, stirrups and spirals, unless shown otherwise on the drawings. Welded reinforcing mesh to AS/NZS 4671. All reinforcing and mesh for residential slabs on ground shall be to AS/NZS 4671 Class E.

2.5 TYING WIRE

Mild drawn steel wire not less than 1.2mm diameter.

2.6 SPACERS AND CHAIRS

Precast concrete or purpose made moulded PVC to approval. Where concrete spacer blocks are used in exposed concrete work use blocks matching surrounding concrete.

2.7 DAMP-PROOF MEMBRANE

0.25mm minimum polyethylene to NZS 3604, 7.5.4, Damp-proof membrane.

2.8 CELLULAR POLYSTYRENE INSULATION

Proprietary expanded polystyrene (EPS) foam board to AS 1366.3.

Accessories

2.9 WATERPROOFING FOR EXTERIOR OPENINGS
Unreinforced wet area membrane to AS/NZS 4858 for waterproofing around openings for windows, doors, meters and other services openings, at or above floor level, also parapets and ends of masonry walls abutting other claddings to CCANZ CP 01. Refer to SELECTIONS.
Do not use bituminous coatings.

3. EXECUTION

3.1 HANDLE AND STORE
Handle and store 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.

Ensure reinforcement is clean and remains 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
Use falsework and formwork of sufficient strength to retain and support the wet concrete to the required profiles and tolerances. Select formwork finish to produce the specified finished quality. Ensure timber or plywood used for formwork is non-staining to the set concrete.

Securely fix and brace formwork sufficiently to support loads and with joints and linings tight enough to prevent water loss. Do not use tie wires or rods unless approved in writing by the Contract Administrator. Unless detailed otherwise, provide a 19mm chamfer or fillet strip at all interior and exterior angles of beam and column forms. Mitre 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 INSTALL DAMP-PROOF MEMBRANE
Apply polythene membrane to prepared basecourse with 150mm laps between sheets. Tape seal laps and penetrations with 50mm wide pressure sensitive plastic tape. Refer to drawings for perimeter details.

3.4 INSTALL CELLULAR POLYSTYRENE INSULATION
Install EPS insulation system to manufacturer's requirements.

3.5 CUT AND BEND REINFORCEMENT
Cut and bend bars using proper bending tools to avoid notching and to the requirements of NZS 3109: 3.3 Hooks and bends. Minimum radii of reinforcement bends to NZS 3109, table 3.1, Minimum radii of reinforcement bends. Do not rebend bars. Where rebending is approved, use a purpose built tool, proper preparation and preheating.

3.6 ADJUSTMENTS
Use a purpose built tool for on site bending and to deal with minor adjustments to steel reinforcement.

3.7 TOLERANCES, BENDING
To NZS 3109, 3.9, Tolerances for reinforcement.

3.8 SECURE REINFORCEMENT
Secure reinforcement adequately with tying wire and place, support and secure against displacement when concreting. Bend tying wire back well clear of the formwork. Spacing as dimensioned, or if not shown, to the clear distance minimums in NZS 3109, 3.6, Spacing of reinforcement.

3.9 LAPPED SPLICES

Length of laps where not dimensioned on the drawings in accordance with the SELECTIONS. Increase laps of plain round steel by 100%. Provide laps only where indicated on the drawings. Tie all lapping bars to each other.

3.10 REINFORCEMENT COVER

Minimum cover to all reinforcing bars, stirrups, ties and spirals, as shown on drawings. Where cover is not shown on drawings provide minimum cover to NZS 3101.1, table 3.6, Minimum required cover for a specified intended life of 50 years. Fix chairs for top reinforcement in slabs at 1.0 metre centres or to ensure adequate support. Cover tolerances to NZS 3109, 3.9, Tolerances for reinforcement.

3.11 CASTING IN

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.

Do not use grounds exceeding 100mm in length. Location and form of conduits to be approved in writing by the Contract Administrator. Minimum cover 40mm. Do not encase aluminium items in concrete. Do not paint steel embedded items more than 25mm into the concrete encasement. Cut back form ties to specified cover and fill the cavities 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 accommodate expansion. Do not embed pipes for conveying liquids exceeding a temperature of 50°C in concrete.

3.12 CONSTRUCTION JOINTS

Locate and construct as shown on the drawings or in accordance with NZS 3109, 5.6, Type B.

3.13 PRE-PLACEMENT INSPECTION

Do not place concrete until all excavations, boxing and reinforcing have been inspected and passed by the Building Consent Authority.

3.14 SURFACE FINISHES

To NZS 3114, 105, Specification of finishes, as scheduled or as denoted on the drawings.

3.15 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.

3.16 CONCRETE SURFACE TOLERANCES

To NZS 3114, 104, Surface tolerances and NZS 3114, 105, Specification of finishes, with the suggested tolerances becoming the required tolerances.

3.17 PUMPING CONCRETE

Set up and supervise pump operation, placing and compaction of the mix to NZS 3109, 7.4, Handling and placing and NZS 3109, 7.6, Compaction Advise the ready-mix supplier of the type of pump and the slump required, in addition to the concrete grade, strength and quantity.

3.18 COMPACTION

Use power operated vibrators on foundations, vertical constructions and beams.

3.19 RESIDENTIAL FLOOR SLABS

Generally to NZS 3604 as modified by NZBC B1/AS1 and NZBC E2/AS3

Construct to NZS 3604, 4.5 **Concrete and concrete masonry** and NZS 3604, 7.5, **Concrete slab-on-ground floors in timber buildings** as modified by NZBC B1/AS1, 3.0 **Timber**. Lay to true and straight surfaces, screeded, floated and steel (manual or power) trowelled finish. Tolerance on flatness: maximum 3mm gradual deviation over a 3 metre straight-edge, to NZS 3109, 104, Surface tolerances.
Allow for free Joints to NZBC B1/AS1, 3.1.13 NZS 3604 **New clause**

3.20 SAW CUTS

Cut slabs where indicated on the drawings and as required to control shrinkage cracking. Carry out cutting 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: $^1/_3$ slab depth or 30mm minimum.

Spacing of sawcuts

Floor situation	Maximum spacing of sawcuts both ways
Industrial floor	5m
Architectural, exposed floor, thin finishes, rigid finishes	4m
Carpet on underlay flooring	6m

3.21 SURFACE DEFECTS

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.

3.22 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. Ensure any membrane used will not affect subsequent applied finishes.

3.23 STRIKE FORMWORK

Strike formwork without damaging or overloading structure. Do not remove formwork before the following minimum periods:

12 hours:	Sides of beams, walls and columns
4 days:	Slabs in beam and slab construction (leave props under slab spans over 2 metres)
10 days:	Props from under slab spans over 2 metres
18 days:	Beams, soffits and slab spans over 5 metres

3.24 WATERPROOFING EXTERIOR OPENINGS

Apply waterproofing to the exposed face of openings for, windows, doors, meters etc, also if necessary the top of parapets/balustrades and ends of masonry walls abutting other claddings. To CCANZ CP 01, waterproofing manufacturer's requirements and as detailed.
Provide temporary protection from direct sunlight.

3.25 CLEAN OUT

Clean out saw cuts. Fill with cement grout where the floor will be covered with carpet or vinyl.

3.26 REMOVE

Remove all unused materials and all concrete and reinforcing debris from the site.

4. SELECTIONS

4.1 DAMP-PROOF MEMBRANE
Brand/type: see selections

4.2 CELLULAR POLYSTYRENE INSULATION
Brand: bondor

Grade:	S grade
Thickness:	40mm

4.3 REINFORCEMENT LAPS

Where reinforcement laps are not shown on the drawings, lap as follows:

Bar diameter	Grade 300E deformed
10mm	400mm
12mm	500mm
16mm	650mm

4.4 CONCRETE – refer to the attached drawings and engineering specifications

3321F FIRTH CONCRETE MASONRY

1. GENERAL

This section relates to the laying, reinforcing and grouting of **Firth** hollow concrete masonry for observation type A or B specific design masonry using ready-mix grout for the following types:
- **Firth** hollow block masonry
- **Firth** HotBloc® self insulating masonry
- **Firth** EsiBloc® mortarless masonry

Documents

1.1 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

AS/NZS 1170.1	Structural design actions - Permanent, imposed and other actions
NZS 1170.5	Structural design actions - Earthquake actions - New Zealand
NZS 3104	Specification for concrete production
NZS 3109	Concrete construction
NZS 3112.1	Methods of test for concrete - Tests relating to fresh concrete
NZS 4210	Masonry construction - Materials and workmanship
NZS 4230	Design of reinforced concrete masonry structures
NZS 4229	Concrete masonry buildings not requiring specific engineering design
AS/NZS 4455.1	Masonry units, pavers, flags, and segmental retaining wall units - Masonry units
AS/NZS 4671	Steel reinforcing materials

1.2 MANUFACTURER/SUPPLIER DOCUMENTS

Manufacturer's and supplier's documents relating to this part of the work:
Firth Industries documents relating to work in this section are:
Firth Masonry Homes Construction Manual
Firth Cantilever Masonry Retaining Walls Manual
Firth Hollow Masonry Document
Firth EsiBloc® Mortarless Masonry Manual
Firth Energy Efficiency Masonry Construction
Firth Masonry Insulation Solutions

Manufacturer/supplier contact details

Company:	**Firth** Industries
Email:	info@firth.co.nz
Web:	www.firth.co.nz
Telephone:	0800 800 576
Facsimile:	0800 800 530

Requirements

1.3 NO SUBSTITUTIONS

Substitutions are not permitted to any specified **Firth** hollow concrete masonry or associated products.

1.4 QUALIFICATIONS

Blocklayers to be experienced competent workers familiar with the required **Firth** type of block laying and be registered with the New Zealand Masonry Trades Registration Board as a Registered Structural Mason.

1.5 CONSTRUCTION OBSERVATION BY ENGINEER

Where required as a condition of the building consent, advise the engineer when inspections are required.

Obtain the producer statements required from the engineer relating to the masonry construction and keep with the building consent documentation.

1.6 QUALITY RECORDS
Keep accurate records relating to strength and quality of materials used in the construction, and make the information available to the Building Consent Authority inspector on request.

1.7 SELECTED MASONRY
Refer to the drawings for areas of masonry, which require select quality blocks to both sides, self-insulating masonry, water resistant masonry or mortarless masonry.

1.8 CERTIFICATION - SEALERS FOR MASONRY
The sealer applicator is to certify that the sealer application is in accordance with the design and manufacturer's specification. Provide certification to the Contract Administrator.

1.9 CERTIFICATION - PLASTERING FOR MASONRY
The plaster applicator is to certify that the plaster application is in accordance with the design and manufacturer's specification. Provide certification to the Contract Administrator.

Performance - tests

1.10 TESTS
Carry out all required tests to NZS 4210: appendix 2A, Compressive strength tests for mortar and grout.

1.11 RECORDS OF TESTS
To NZS 4210 and kept on site:
- spread of grout tests
- grout supplier's test certificates.
- mortar

1.12 TESTING PROCEDURES
Provide advance notice of cell filling work. Maintain on site all equipment necessary for taking and preparing samples for test. Retain records of test results and supply on request.

1.13 SPREAD OF GROUT
If requested, carry out tests to NZS 3112.1, to the requirements of NZS 4210.

1.14 COMPRESSIVE STRENGTH OF GROUT
If requested, carry out tests to NZS 4210: appendix 2A, Compressive strength tests for mortar and grout, with 3 specimens per test.

1.15 COMPRESSIVE STRENGTH OF MORTAR
If requested, carry out tests to NZS 4210: appendix 2A, Compressive strength tests for mortar and grout, with 3 specimens per test.

1.16 EXPANSION OF GROUT
If requested, carry out tests to NZS 4210: appendix 2C, Test for expansion of grout.

2. PRODUCTS

Materials

2.1 MASONRY
Firth masonry blocks to AS/NZS 4455.1 with true and unblemished surfaces and arrises. Use appropriate masonry for intermittently filled construction where vertical reinforcement is placed prior to laying of masonry. Refer to SELECTIONS for type, size and bond.

2.2 REINFORCEMENT
To AS/NZS 4671, deformed mild steel except for ties in plain round mild steel.

2.3 JOINT REINFORCEMENT
Galvanized steel twin 4mm diameter rods spaced 60mm apart by a 2mm diameter lattice welded on.

Accessories

2.4 MORTAR
Dricon Trade Mortar to NZS 4210: 2.2 Mortar. Refer to SELECTIONS for colour.

2.5 ESIBLOC® MASONRY GLUE
Sika Boom® - G Fixing Foam, gap filling, moisture cure polyurethane glue which develops rapid early strength and formulated to be unaffected by wet site conditions.

2.6 EXPANSIVE AGENT
Proprietary admixture based on aluminium powder providing controlled expansion prior to initial set. Use in strict accordance with the manufacturers requirements. Add the required measured dose of agent to the agitator truck on site, immediately prior to grouting. Ensure thorough mixing for 3 to 5 minutes before discharge.

3. EXECUTION

Conditions

3.1 COMPLIANCE
Comply with NZS 4210.

3.2 TOLERANCES
Construct within the tolerances set out in NZS 4210: clause 2.6.5, Tolerances and clause 2.7, Laying the units, unless specified otherwise on the drawings or in this specification. Lay blocks with jointing of consistent thickness throughout.

Lay masonry to an even, plane surface with no deviation exceeding 3mm in 3 metres on any surface in view in the finished work.

Where EsiBloc® mortarless masonry is used, EsiBloc® wedges are to be used to maintain levels.

3.3 CHECK BASE
Check that the base concrete on which masonry is being built is true to line and level, to ensure that work can be taken up true and plumb with 10mm thick bed and perpendicular joints. If more than 20mm thickness of mortar bed is needed to correct inaccuracies obtain written direction on remedial action.

3.4 CONSTRUCTION JOINTS
Ensure the structural integration of all masonry with adjacent concrete work by providing well roughened, retarded construction joints at all junctions.

All construction joints between grout and concrete and between grout and grout similar to Type B as described in NZS 3109, clause 5.6.3, prepared using an approved retarder, except that the roughness at fine grout surfaces may be ±1.5mm above and below the average level. Use a "double strength" retarder if necessary to suit the high cement content of the grout.

Vertical joints between masonry and concrete to achieve full structural integration across the joints. Allow to construct concrete work first with prepared vertical construction joints at block junctions the same as for horizontal construction joints. Lay masonry so that all courses have open ends abutting the existing concrete work.

3.5 COVER
All cover shall be in accordance with NZS 3109: 3.8 Cover and 3.9 Tolerances for reinforcement.

3.6 STARTER POSITIONS
Check the location of starter reinforcement before block laying commences, or by a dry trial lay up of the first course. Do not attempt to correct misplacement by cranking bars. Where misplacement exceeds the location tolerance obtain written directions before proceeding further.

3.7 MOISTURE CONTENT
Ensure that blocks are air-dry prior to laying. If necessary to reduce excess absorption of water from the mortar, some dampening of the surface is permissible but no surface water may be present at the time of placing mortar.

3.8 PROTECTION
Keep fair face block walls clean of mortar droppings, grout splashes, or stains of any kind as the work proceeds and before any droppings set and protected from weathering prior to sealing to avoid instances of efflorescence and staining.

3.9 WEATHER PRECAUTIONS
When extreme temperatures prevail, either below 4°C or above 27°C, make adjustments to construction as listed in NZS 4210: clause 2.18, Cold weather construction, and clause 2.19, Hot weather construction. Do not use expansive grout for filling in temperatures below 5°C.

Application

3.10 SELECTION
For fair face walls select blocks for consistent colour, texture and lack of imperfections. Refer to clause PROTECTION.

3.11 BONDING PATTERN
Unless specifically shown or described otherwise in SELECTIONS/drawings, lay masonry in stretcher bond with full masonry bonding at intersections. Stack bonding must comply with NZS 4230.

3.12 OPEN-ENDED DEPRESSED WEB MASONRY
Use open-ended depressed web masonry throughout all courses in fully grouted walls.

3.13 CUTTING
Cut using a masonry saw to provide clean, accurate cuts.

3.14 BEDDING FOR INTERMITTENTLY FILLED WALLS
Lay blocks on shell bedding, with full bedding of the cross webs at positions of filled cells of intermittently filled walls.

3.15 SHELL BEDDING
Lay masonry on full mortar beds under face shells only where fully grouted.

3.16 BOTTOM COURSE
For fully grouted walls use inverted open-end depressed web bond beam masonry for the first course, to permit clean-out of grout space at the base.

3.17 CLEAN OUT HOLES
Use special clean-out masonry or saw off a 100mm x 200mm high section of face shell at the base of all cells containing reinforcement, to form clean out and inspection holes.

3.18 GROUT SPACE
Ensure that grouting cells at reinforcement locations are continuously clear by removal of projecting mortar.

3.19 TIE REINFORCING STEEL
Tie vertical reinforcing steel to starter bars. Lay and tie horizontal bars as the work proceeds.

3.20 REINFORCEMENT LAPS
Laps 40 diameters, except as noted otherwise on the drawings.

3.21 BRACING
Provide temporary lateral bracing to the wall where necessary to ensure stability and until final supporting construction is in place.

3.22 NON EXPOSED MASONRY
To be laid to the same tolerances as fair face masonry. Joints to be tooled and struck off flush.

3.23 TOOLED JOINTS
Finish joints on exposed masonry by tooling to produce a neat, slightly concave joint. Do not use raked joints on exterior walls. Mortar joints around openings to be flush. Refer to the drawings for details.

3.24 CONTROL JOINTS
Refer to NZS 4210: clause 2.10, Methods of controlling wall movements, generally and to clause 2.10.2, Vertical control joints, for location; not more than 6 metres apart.

Debond reinforcement passing through control joints 150mm each side for single walls and 300mm one side for 2 walls. Rake out and prime adhesion faces of vertical control joints between masonry and between masonry and concrete as required by the sealant manufacturer. Use masking tape to avoid over-run of sealant onto the block face. Provide a backing strip to limit sealant depth to 10mm, and insert sealant, all to the manufacturer's requirements.

Grouting of bond beams at control joint locations to be discontinuous unless specifically noted otherwise.

Application - grouting

3.25 INSPECTION
Inspect clean-out holes prior to grouting. Ensure that cells are clean and reinforcement is correctly placed. Mortar back the clean-out hole shell. If holes are covered in the completed work, boxing across the face may replace the shell infill. Brace hole infills to prevent blowouts during grouting.

Notify when work is ready for inspection.

3.26 EXTENT OF GROUTING
Only those cells with reinforcing or where fixing devices occur shall be filled with grout. EsiBloc® mortarless masonry to be solid filled, with EsiBloc® Fill™.

3.27 LIMIT RATE
Limit rate of pour to avoid hydrostatic blowouts.

Application - ancillary work

3.28 HOLES AND CUT MASONRY
Provide all necessary holes, pockets and chases. Cut blocks when non-standard shapes are required. When cut masonry units are used, ensure vertical joints in adjacent courses are no closer than 100mm. Subsequent cutting away of masonry to form holes is not permitted.

3.29 BUILT IN ELEMENTS
As the work proceeds, mortar in place elements such as sills, copings, lintels, and steps.

3.30 BUILT IN FIXINGS
Build in all necessary plugs, bolts, ties, metal flashings, dowels, fastenings and fixings required by this and other work sections. Co-operate with others to meet this requirement. Fixings only permitted into filled cells.

3.31 ELECTRICAL WORK
Ensure that provision for and fitting of boxes, conduit and pre-wiring are made and done as the work proceeds under the direction of the electrician.

3.32 SEALANT
Apply appropriate sealant where required to the manufacturer's specifications.

3.33 WEATHERPROOFING AROUND OPENINGS
Refer to architectural drawings for weatherproofing details around openings.

3.34 PLASTER
Apply appropriate plaster system where required to the manufacturer's specifications.

Completion

3.35 PROGRESSIVE CLEANING
Clean off mortar splashes and grout spills as they occur.

3.36 FINAL CLEANING
At completion, clean down block work, remove efflorescence and remove waste materials from adjoining surfaces and floors.

3.37 REPLACE
Replace damaged, cracked or marked elements.

3.38 REMOVE
Remove debris, unused materials and elements from the site.

4. SELECTIONS
For further details on selections go to www.firth.co.nz.
Substitutions are not permitted to the following, unless stated otherwise.

4.1 MASONRY UNITS

Brand:	**Firth**
Series:	20 and 25
Type/size:	190 and 240mm x 190mm x 390mm
Bonding pattern:	Stretcher bond

3322 ICF INSULATING BLOCKWORK

1. GENERAL

This section relates to the supply, erection, reinforcement and concrete filling of hollow ICF (expanded polystyrene) blockwork.

Related work

1.1 RELATED SECTIONS
Refer to ~ for ~.

Documents

1.2 DOCUMENTS REFERRED TO
Documents referred to in this section are:

NZS 3104	Specification for concrete production
NZS 3109	Concrete construction
AS/NZS 4671	Steel reinforcing materials

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.

Performance

1.3 CONCRETE TESTS
Retain mix design information for plant mixed concrete for inspection. Keep an accurate record of the in-place location of all batches. Carry out tests in accordance with NZS 3104, section 2.15 Control tests and their evaluation.

2. PRODUCTS

Materials

2.1 MANUFACTURER
Refer to SELECTIONS/drawings for manufacturer.

2.2 BLOCKS
Blocks injection moulded from fire retardant polystyrene beads. Final density between 23 and 26 kg per cubic metre.

Metal bridges of galvanized steel, bonded into each external skin of polystyrene.

2.3 REINFORCEMENT
Deformed and plain steel bars to AS/NZS 4671.

2.4 CONCRETE INFILL
Normal concrete infill with a minimum compressive strength of 20 MPa at 28 days, to NZS 3104 and a slump of between 100 and 120mm. Maximum aggregate size 14mm. Supply concrete from a ready mix concrete plant with Certificate of Audit.

Equipment

2.5 PROP SYSTEM
As recommended and supplied by the manufacturer, for use during erection and the subsequent filling of block cores.

3. EXECUTION

Conditions

3.1 ALL WORK
All work by a firm approved by the manufacturers and/or distributors of the ICF blocks.

3.2 EXECUTION
Carry out all work using persons skilled in the methods and recommendations laid down by the ICF block manufacturer and in accordance with the manufacturer's technical information on the use of equipment and construction techniques.

Keep a current copy of the ICF block manufacturer's technical manual on site and bring to the attention of all workers during the construction process.

3.3 STORAGE
ICF blocks are vulnerable to damage. Take care to protect blocks during delivery, storage and installation, with particular attention taken to preventing damage to corners and rebates.

3.4 SOLVENTS
Do not allow solvent products to come into contact with ICF blocks.

3.5 CUTTING
Carefully follow the recommendations and requirements set out in the manufacturer's technical manual. Generally cut blocks using a small panel saw or sharp Stanley knife, with a keyhole saw used for reveals and cut outs.

3.6 ACCURACY
All walls true to line, level and plumb and within the following tolerances:

Deviation from plan location:	20mm
Deviation from vertical within a storey:	10mm per 3 metres
Relative displacement between load bearing walls in adjacent stories intended to be in vertical alignment:	5mm
Deviation from line to plan	
- Any length up to 10 metres:	5mm
- Any length over 10 metres:	10mm
Deviation from horizontal	
- Any length up to 10 metres:	5mm
- Any length over 10 metres:	10mm

Application

3.7 PROPPING
Install a propping system to hold the blocks in place during filling. Bolt props to the floor prior to laying of blocks, and install at all wall corners, and every 2 metres along each wall. Adjust for straightness and plumb. Install soft iron wire ties every fourth course, through the polystyrene, around the metal bridge and back out around the prop.

3.8 ALL BLOCKS
Accurately bed all blocks into the blocks below and to butt accurately against each other, ensuring true wall dimensions are achieved. Do not place webs of blocks over the vertical flue of the block below.

Horizontal joints may be glued with polystyrene contact adhesive on each face, when required to assist stability against wind or construction loads.

Stay all walls against wind and construction loads.

3.9 PLACE REINFORCING
Place and tie reinforcing as detailed and in accordance with NZS 3109. Cut, bend and place reinforcement as shown on the drawings, with cover maintained by the use of plastic or concrete spaces.

Bars lapped only where detailed, with lapping kept to a minimum and staggered wherever practicable.

3.10 BUILT IN ITEMS

Build in all bolts, straps and fixings as detailed and as required. Construct chases, holes, cut-outs and recesses only as and where detailed. Any cast in fixings to have the surrounding polystyrene removed to provide a minimum of 30mm concrete cover around the fixing.

3.11 CONSTRUCTION JOINTS

Locate construction joints in accordance with NZS 3109. Immediately before placing concrete, wet the construction joint area and apply a 10mm thick layer of cement slurry to the joint; slurry being either a cement/water paste, or a 1:1 mix of cement and sand. Work the slurry well into the construction joint before placing the concrete.

3.12 INSPECTION

Provide notification that the work is ready for inspection prior to grouting. Do not proceed with grouting until written approval has been received that walls have been constructed and reinforced in accordance with the design documentation.

3.13 CONCRETING

To NZS 3109. Ensure that all cells are clear and clean and all reinforcement is in place. Consolidate infill concrete by rodding with a 16mm square end reinforcing rod, or by using a small poker vibrator. Height and extent of lifts and sectional lifts to be strictly in accordance with the ICF block manufacturer's technical manual.

Finishing

Completion

3.14 WIRE TIES AND PROPS

Once the concrete infill has cured, cut off all wire ties level with the polystyrene surface. Carefully dismantle and remove the prop system.

3.15 CLEANING

Both during laying and on completion, clean down all exposed block surfaces to remove adhesive or concrete splashes.

3.16 MAKE GOOD

Make good any damaged corners or faces using acrylic cement plaster.

3.17 LEAVE

Leave work to the standard required by following procedures.

3.18 REMOVE

Remove all debris, unused materials and elements from the site.

3820L LASERFRAME® CARPENTRY

1. GENERAL

This section relates to the supply and erection of light timber framing, incorporating Carter Holt Harvey Timber **Laser*frame*®** kiln-dried framing.
It includes:
- flooring
- flooring underlays for ceramic tiling and insulation.

1.1 RELATED WORK

Refer to 4161 UNDERLAYS, FOIL AND DPC for underlays, foils and DPC.
Documents

1.2 DOCUMENTS
Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

NZBC B2/AS1	Durability
AS/NZS 1859.1	Reconstituted wood-based panels - Specifications - Particleboard
AS/NZS 2269.0	Plywood - Structural - Specification
AS/NZS 2918	Domestic solid fuel burning appliances - Installation
NZS 3602	Timber and wood-based products for use in building
NZS 3603	Timber structures standard
NZS 3604	Timber-framed buildings
BRANZ BU 519	Fasteners selection

*** A copy of** NZS 3604 **Timber-framed buildings, must be held on site.**

1.3 MANUFACTURER/SUPPLIER DOCUMENTS
Manufacturer's and supplier's documents relating to this part of the work:
Laser*frame*® product information:
Laser*frame*® Product Information Sheet

Copies of the above literature are available at

Company:	Carter Holt Harvey
Web:	www.laserframe.co.nz
Telephone:	0800 74 63 99

Requirements

1.4 NO SUBSTITUTIONS
Substitutions are not permitted to any specified system, or associated components and products.

1.5 SAMPLES
Provide samples of the following for review prior to ordering:
- Boarding for exterior decks
- Timber strip flooring

2. PRODUCTS

2.1 BUILDING UNDERLAYS
Refer to 4230 WALL CLADDING, 4161 UNDERLAYS, FOIL AND DPC and 4710 INSULATION for the supply of wall underlays, roof underlays and sheet insulation products.

2.2 TIMBER GROUND FLOOR FRAMING
Laser*frame*® kiln dried, verified structural grade (SG) to NZS 3603, with moisture content at supply of 90% of the product, within MC range of 8 - 26%.

2.3 TIMBER FRAMING
Laser*frame*® kiln dried, verified structural grade (SG) to NZS 3603, with moisture content at supply of 90% of the product, within MC range of 8 - 26%.

2.4 TIMBER FRAMING, TREATED FOR INTERIOR USE
Laser*frame*® kiln dried, verified structural grade (SG) to NZS 3603, Boron H1.2 with moisture content at supply of 90% of the product, within MC range of 8 - 26%.

2.5 TIMBER FRAMING, TREATED FOR EXTERIOR EXPOSED USE AND CANTILEVERED DECKS
Pinex® SG6 or Pinex verified SG8 grade radiata pine to NZS 3603, treated H3.2 to NZS 3602, table 1, reference B.3, with moisture content to NZS 3602, table 4, Allowable moisture content.

2.6 CEILING BATTENS
Merchantable grade or better.

2.7 EXTERIOR WALL BATTENS/STRAPPING
Merchantable grade or better, treated H3.1 to NZS 3602, table 1, reference 1D.10.

2.8 TIMBER TRUSSES
Moisture content: 90% of the product, within MC range of 8 - 26%

2.9 DPC
Refer to 4161 UNDERLAYS, FOIL AND DPC section

2.10 NAILS
Steel, stainless steel and galvanized steel of pattern to suit the location and to BRANZ BU 519 Fasteners selection.

Type to NZS 3604, section 4, **Durability**, and of the size and number for each particular types of joint as laid down in the nailing schedules of NZS 3604, section 6, **Foundations and subfloor framing**, section 7, **Floors**, section 8, **Walls**, section 9, **Posts** and section 10, **Roof framing**. Except that when hand driving nails into **Laser*frame*®** the nail lengths and diameters should be generally as for power driven nails.

2.11 BOLTS AND SCREWS
Steel, stainless steel and galvanized steel of pattern to suit the location and to BRANZ BU 519 Fasteners selection.

2.12 NAIL PLATES
Stainless steel and/or galvanized steel toothed or nailed plates to the plate manufacturer's design for the particular locations as shown on the drawings.

2.13 CONNECTORS
Galvanized steel connectors and structural brackets to the connector manufacturer's design for particular locations shown on drawings.

3. EXECUTION

3.1 EXECUTION
To NZS 3603 and NZS 3604. 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, and stairs).

3.2 SEPARATION
Separate all timber framing timbers from concrete, masonry and brick by: -
- a full length bituminous damp-proof membrane overlapping timber by at least 6mm; or
- a 12mm minimum free draining air space

3.3 ATTENDANCE
Provide and fix blocks, nogs, openings and other items as required by other trades.

3.4 MOISTURE CONTENT

Maximum allowable equilibrium moisture content (EMC) for framing supporting interior linings:

- At enclosure: 24%
- At lining: 20%
- Timber strip flooring: 12% - 18% at time of laying

3.5 DIMENSIONS

All timber sizes except for battens are actual minimum dried sizes.

3.6 PROTECT

Keep **Laser*frame*®** dry and wrapped prior to erection. Protect against damage and from inclement weather and ensure that any variation in moisture content is kept to a minimum, before and after erection and before enclosure.

3.7 SET OUT

Set-out framing generally in accordance with the requirements of NZS 3604, to carry superimposed loads and as required to support sheet linings and claddings. Set back nogs 12.5mm from face of studs where required for back-blocking of plasterboard non-tapered ends or edges.

3.8 SET TIMBERS

Set timbers true to the required lines and levels with all mitres, butt joints, laps and housings cut accurately to provide full and even contact over the whole of the bearing surface.

3.9 TIMBER CUTTING

Select and cut spanning members to minimise allowable defects and avoiding knots and short grain on edges in the middle third, and shakes, splits and checks at mid-span and close to ends. Refer to the recommendations appropriate for the treatment type (if any) for the field application of timber preservatives to cut ends.

3.10 HOLES AND NOTCHES

Limit holes and notches, checks and half-housing for the structure to those allowable in NZS 3604. Neatly form holes and notches for services without lessening the structural integrity of the member.

3.11 CUTTING

Cutting for straightening to comply with NZS 3604.

3.12 EXPOSED TIMBER CONNECTORS AND FIXINGS

Do not use on any structural framing exposed to view unless detailed on the drawings.

3.13 POWDER ACTUATED AND MECHANICALLY POWERED FIXING

Comply with the OSH: Guidelines for the provision of facilities and general safety in the construction industry, part 5, section 5.7.

3.14 ADDITIONAL FRAMING

Position and fix all necessary members for the fixing of all services, fittings, fixtures, edges of linings or claddings, and to provide lateral support to load carrying framing.

3.15 FORM NAILED JOINTS

Fully drive nails in all structural joints with the number and location for each joint to the requirements of NZS 3604. Except that 75mm x 3.15mm nails may be used in 35mm timber joints in wall frames and 90mm x 3.15mm nails may be used in 45mm timber joints in wall frames. 100mm x 3.75mm nails should not be used without pre-drilling to 80% of nail diameter.

3.16 FRAMING WALLS

Frame to required loading and bracing complete with lintels, sills and nogs, all fabricated and fastened to NZS 3604, section 8, **Walls**.

3.17 FRAMING ROOFS

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, section 9, **Posts** and section 10, **Roof framing**.

3.18 FRAMING CEILINGS

Frame to required loading and bracing complete with runners and battens set out to support ceiling lining. All fabricated and fastened to NZS 3604, section 13, **Ceilings**. Trim for openings in ceilings and hatches to NZS 2604 section 13.3, **Openings in ceilings**. Provide blocking for water tanks located in the ceiling space to NZS 3604, section 13.4, **Water tanks in roof space**.

3.19 INSTALLING WALL BATTENS

Lay out, fabricate and fasten to suit the selected wall cladding or lining.

3.20 INSTALLING CEILING BATTENS

Fabricate and fasten to NZS 3604, section 13 **Ceilings**, table 13.1 **Ceiling battens**.

3.21 INSTALLING UNDERLAYS AND SHEET INSULATION PRODUCTS

Refer to 4230 WALL CLADDING, 4161 UNDERLAYS, FOIL AND DPC and 4710 INSULATION for the installation of wall underlays, roof underlays and sheet insulation.

3.22 FIT JAMB BATTENS

For walls with direct fix cladding, fit and fix 20mm jamb battens over the wall underlay, to the jambs of window and door rough openings, to NZBC E2/AS1, fig 17A. Cut around sill flashings.

3.23 FIT CAVITY BATTENS

Fit and fix 20mm cavity battens over wall underlay or rigid air barrier, fully nail to timber studs to the requirements of the manufacturer or to NZS 3604. Fit and fix related flashings and cavity closers.

3.24 INSTALLING DECK UNDERLAY

Lay and secure in accordance with the Building Code.

3.25 DPC TO TIMBER

Refer to 4161 UNDERLAYS, FOIL AND DPC section

3.26 INSTALL PROPRIETARY FIREPLACE

Prepare for the installation as detailed and as required by the manufacturer. Install strictly in accordance with AS/NZS 2918 and the manufacturer's stated and detailed requirements.

4. SELECTIONS

For further details on selections go to www.laserframe.co.nz.
Substitutions are not permitted to the following, unless stated otherwise.

4.1 EXTERIOR WALL FRAMING

Member	Type	Grade	Treatment
Exterior walls:	Laserframe®	SG8	H1.2
Parapets:	Laserframe®	SG8	H1.2
Enclosed decks and balconies:	Laserframe®	SG8	H1.2
Cantilevered joists enclosed decks and balconies:	Laserframe®	SG8	H3.2
Wall battens:	Radiata pine	Merchantable	H3.1
Jamb battens:	Radiata pine	Merchantable	H3.1
Cavity battens:	Radiata pine	Merchantable	H3.1

4.2 ROOF FRAMING

Member	Type	Grade	Treatment
Rafters:	Laserframe®	SG8	H1.2
Trusses:	Laserframe®	SG8/SG10	H1.2

Purlins:	Laserframe®	SG8	H1.2
Ceiling joists:	Laserframe®	SG8	H1.2
Valley boards:	Radiata pine	Merchantable	H1.2
Sarking:	Radiata pine	Merchantable	H1.2
Skillion roof framing:	Laserframe®	SG8	H1.2
Enclosed flat roof framing:	Laserframe®	SG8	H1.2

4.3 EXPOSED FRAMING

Member	Type	Grade*	Treatment
Posts:	Pinex®	SG6	H3.2 CCA
Joists:	Laserframe®	Pinex verified SG8	H3.2 CCA
Boarding for exterior decks:	Pinex®	Merchantable	H3.2 CCA
Exterior stairs and steps:	Pinex®	SG8	H3.2 CCA
Pergola:	Pinex®	SG8	H3.2 CCA

4.4 INTERIOR FRAMING

Member	Type	Grade	Treatment
Non structural walls:	Laserframe®	SG8	H1.2
Structural and braced walls:	Laserframe®	SG8	H1.2

4.5 EXTERIOR FINISHING TIMBERS

Member	Type	Treatment
Weatherboards:	All Profiles finger jointed pre-primed	H3.1 LOSP
Fascia/barge boards:	All Profiles finger jointed pre-primed	H3.1 LOSP
Exterior mouldings:	All Profiles finger jointed pre-primed	H3.1 LOSP

4.6 INTERIOR FINISHING TIMBERS

Member	Type	Treatment
Architraves:	Pine	None
Skirtings:	Pine	None
Cornices:	Pine	None

4.7 CEILING BATTENS

Timber/grade/treatment: Gauged, H1.2, merchantable grade radiata pine

4161T THERMAKRAFT UNDERLAYS, FOILS AND DPC - RESIDENTIAL

1. GENERAL

This section relates to the application of **Thermakraft** Industries (NZ) Ltd, DPC, DPM, underfloor foil insulation, wall underlays and roofing underlays:
- for use in residential applications

1.1 ABBREVIATIONS AND DEFINITIONS

Refer to the general section 1232 INTERPRETATION & DEFINITIONS for abbreviations and definitions used throughout the specification.

The following abbreviations apply specifically to this section:

NZMRM	New Zealand Metal Roofing Manufacturers Inc.

The following definitions apply specifically to this section:

Wall underlay	the same meaning as defined in NZBC E2/AS1, covering kraft based and synthetic wall underlays, sometimes called, wall wraps, building wraps or building papers.

Documents

1.2 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

NZBC E2/AS1	External moisture
NZS/AS 1530.2	Methods for fire tests on building materials, components and structures - Test for flammability of materials
NZS 2295	Pliable, permeable building underlays
AS/NZS 2904	Damp-proof courses and flashings
NZS 3604	Timber-framed buildings
AS/NZS 4389	Safety Mesh
AS/NZS 4534	Zinc and zinc/aluminium-alloy coatings on steel wire
NZMRM	NZ Metal Roof and Wall Cladding - Code of Practice

1.3 MANUFACTURER/SUPPLIER DOCUMENTS

Thermakraft documents relating to this part of the work:
Thermakraft product manual and technical data sheets.
BRANZ Appraisal 356 - Thermakraft **Cover-Up™** Breather-Type Building Wrap
BRANZ Appraisal 329 - **Supercourse 500** Damp-Proof Course and Concealed Flashing
BRANZ Appraisal 560 - **Mirrablack** Damp Proof Course and Concealed Flashing
BRANZ Appraisal 549 - **Diflex 130** Building Wrap
BRANZ Appraisal 614 - **Aluband™/Aluminium** Window Sealing System
BRANZ Appraisal 651 - Thermakraft Covertek 407 Fire Retardant Self-Supporting Roof Underlay
BRANZ Appraisal 695 - **Watergate-Plus** Fire Retardant Wall Underlay
BRANZ Appraisal 710 - Thermakraft Covertek 403 Absorbent Breathable Roof Underlay
BRANZ Appraisal 711 - Thermakraft Covertek 403 Fire Retardant Absorbent Breathable Wall Underlay

Manufacturer/supplier contact details

Web:	www.thermakraft.co.nz
Telephone:	0800 806 595

1.4 MANUFACTURER'S WARRANTY

Warrant this work under normal environmental and use conditions against failure of materials and execution. Thermakraft Industries Ltd warrant performance of products if design and installation complies with relevant technical literature, NZBC, and recognised industry Codes of Practice. Copy of Thermakraft Product Warranty available on request.

Requirements

1.5 NO SUBSTITUTIONS
Substitutions are not permitted to any specified materials, or associated products, components or accessories.

1.6 INSTALLATION SKILL LEVELS
Installers to be experienced in the installation of **Thermakraft** products and familiar with **Thermakraft** Industries technical literature and the related documents listed in this design i.e. NZMRM NZ Metal Roof and Wall Cladding - Code of Practice.

2. PRODUCTS

Materials

DPM

2.1 DAMP-PROOF MEMBRANE - MEDIUM DUTY
Thermathene Black™, a minimum of 250 microns polyethylene film, which compiles to NZS 3604, 7.5.4, **Damp-proof Membrane**, to NZBC E2/AS1. Refer to SELECTIONS for type of jointing tape.

DPC

2.2 EMBOSSED POLYETHYLENE
Supercourse 500, hi-impact polyethylene film to AS/NZS 2904 and embossed on both sides. Thickness 500 microns minimum, manufactured for use as a damp-proof course and concealed flashings around doors and windows and to BRANZ Appraisal 329.

Wall underlays

2.3 SYNTHETIC, NON ABSORBENT WOVEN BREATHER TYPE WALL UNDERLAY
Thermakraft Cover-Up™, high tensile coated polyolefin woven building underlay with micro perforated pores that allow the membrane to breathe. A fire retardant product, Flammability Index of ≤ 5, when tested to NZS/AS 1530.2. The product has a BRANZ Appraisal 356.

Accessories

2.4 WINDOW AND DOOR SEALING TAPE
Thermakraft Aluband™/Window Sealing Tape system consists of synthetic faced reinforced bituminous window sealing tape, **Thermakraft Aluband™** Corner Moulding™ piece, used in conjunction with the **Thermakraft Aluband™** Hand Tool to ensure good adhesion and a tight fit into corners. See **Thermakraft** Data Sheet 312 for installation details and BRANZ Appraisal 614.

2.5 AIR SEAL BACKING ROD
P.E.F. Thermakraft WindowWorm Backing Rod, a cylindrical flexible closed cell polyethylene material available in various diameters and used in conjunction with foam sealants. Refer to SELECTIONS for sizes.

2.6 STUD STRAPS - POLYETHYLENE
Thermastrap 201 & 203, 19mm wide polyethylene straps.

2.7 WIRE NETTING
75mm galvanized hexagonal wire netting to AS/NZS 4534.

2.8 AUSMESH
Ausmesh 300, 2mm x 150 x 300mm galvanized or PVC coated safety mesh to AS/NZS 4389.

2.9 GUTTER AND UNDER FLASHINGS

Thermakraft 215™, bituminous breather type underlay cut to width for use under valley, apron flashing and internal gutters.

Soffit liner cut to width from **Thermakraft 210™** bituminous breather type underlay. Refer to SELECTIONS.

2.10 TAPE

Thermakraft tapes to compliment the underlay. Pressure sensitive aluminium foil tapes for joining foil insulation and vapour barriers. **Thermakraft Aluband™ Window Sealing Tape** can be used to repair damaged bituminous underlays.

3. EXECUTION

Conditions

3.1 GENERAL REQUIREMENTS

Design application and installation of **Thermakraft** Building products to NZBC E2/AS1, BRANZ Appraisals, **Thermakraft** Technical Literature and Industry Codes of Practice.

3.2 STORAGE

Store building underlays and accessory materials, under conditions that ensure no deterioration or damage. Store rolls in an upright position on a smooth floor and protected from sunlight, UV radiation and moisture.

3.3 INSPECTION

Before starting work, check that the building construction phase will allow work of the required standard. Carry out remedial work identified before laying underlay.

Application - DPC/ DPM

3.4 DPC TO LOSP TREATED TIMBER

Lay Supercourse 500 / MirraBlack DPC under LOSP or CCA treated bottom plate of all timber framed walls on concrete, in a single layer with 50mm overlaps at joints to provide a waterproof barrier.

3.5 DPC TO TIMBER / STEEL

Lay DPC under the bottom plate of all timber / steel framed walls on concrete, in a single layer with 50mm overlaps at joints to provide a waterproof barrier. Refer to SELECTIONS for type.

3.6 DPC TO MASONRY AND BRICK VENEER

Lay DPC along based of cavity and fix top edge to studs with galvanized clouts. Turn DPC out over concrete rebate under bottom course of veneer.

3.7 DPM TO CONCRETE FLOOR

Lay DPM under concrete floor substrate over sand binding, in a single layer with 150mm overlaps at joints to provide a waterproof barrier. Refer to SELECTIONS for type.

Application - wall underlay

3.8 WALL UNDERLAY

Fix horizontally to outside face of framing in true alignment, with succeeding sheets overlapping 150mm to NZBC E2/AS1, 9.1.7, **Wall underlay** and refer to **Thermakraft** industries for requirement for fastenings. Fix to **Thermakraft** Industries Technical Data specifications. Scribe neatly around penetrations and openings to leave no gaps. For gaps around Poly Butyl pipe systems , refer to pipe manufacturer's technical specifications. Keep clean, undamaged and without visible weather deterioration until closed in.

3.9 METAL CLADDING ON TIMBER CAVITY BATTENS

Fix strip of **Thermakraft** DPC as a separator between the timber and metal cladding.

Application - Roofing underlay

3.10 WIRE NETTING
Lay 75mm galvanized wire netting at right angles across the purlins and drawn taunt before fixing. Tie edges of netting together with galvanized wire clips.

3.11 ROOF UNDERLAY
Lay vertically over purlins on wire netting with a 150mm side lap. Fix securely to purlins with galvanized fixing clips. Lay underlay to avoid excessive dishing between purlins. When used vertically limit individual runs to 10 metres for bituminous based underlays. Do not lay vertically on roof pitches under 10°.

Lay horizontally across the rafter/trusses starting at the gutter line with succeeding sheets in true alignment and lapping 150mm. Scribe around and fit neatly to all penetrations. Avoid prolong exposure by installing the roof immediately. Installation to comply with NZBC E2/AS1 8.1.5.1, **Underlay support** and NZMRM Code of Practice.

3.12 GUTTER AND UNDER FLASHINGS
Lay **Thermakraft 215™** bituminous breather type underlay cut to width by manufacturer for use as an underlay to valley, apron flashings, and internal gutters. Lap under flashings with adjoining underlays. Fix **Thermakraft 210™** bituminous breather type underlay soffit liner from top plate down 150mm past ribbon plate.

Completion

3.13 CLEAN UP
Clean up as the work proceeds.

3.14 LEAVE
Leave work to the standard required by following procedures.

3.15 REMOVE
Remove debris, unused materials and elements from the site.

4263F FIRTH VENEER CLADDING

1. GENERAL

This section relates to laying Firth brickwork and hollow concrete masonry as:
- a veneer cladding
- internal walls
- a fire surround

Documents

1.1 DOCUMENTS REFERRED TO

Documents referred to in this section are:

NZBC B1/AS1	Structure
NZBC B1/AS3	Structure
AS/NZS 1170.2	Structural design actions - Wind actions
NZS 1170.5	Structural design actions - Earthquake actions - New Zealand
AS/NZS 2699.1	Built-in components for masonry construction - Wall ties
AS/NZS 2699.3	Built-in components for masonry construction - Lintels and shelf angles (durability requirements)
AS/NZS 2918	Domestic solid fuel burning appliances - Installation
NZS 3604	Timber-framed buildings
NZS 4210	Masonry construction, materials and workmanship
NZS 4229	Concrete masonry buildings not requiring specific engineering design
SNZ HB 4236	Masonry veneer wall cladding
AS/NZS 4455.1	Masonry units, pavers, flags, and segmental retaining wall units - Masonry units
BRANZ	Good Practice Guide: Masonry Veneer

Documents listed above and cited in the clauses that follow are part of this specification.

1.2 MANUFACTURER'S DOCUMENTS

Firth Industries documents relating to work in this section are:
Firth Brick Veneers literature
Firth Hollow Masonry literature
Firth Two Storey Brick Veneer Design Solution - 70mm
Firth Two Storey Brick Veneer Design Solution - 90mm

Further information and/or names of installers familiar with Firth bricks are available by phoning 0800 800 576.
Copies of the above documents are available from **Firth** Industries

Web:	www.firth.co.nz
Email:	info@firth.co.nz
Telephone:	0800 800 576
Facsimile:	0800 800 530

Further information is available by phoning 0800 800 576.

Requirements

1.3 NO SUBSTITUTIONS

Substitutions are not permitted to any specified **Firth** brickwork or hollow concrete masonry or associated **Firth** products.

1.4 QUALIFICATIONS

Brick layers to be registered masons competent and experienced in this work.

Blocklayers to be experienced competent workers familiar with the required **Firth** type of block laying and be registered with the New Zealand Masonry Trades Registration Board as a Registered Structural Mason.

1.5 CONSTRUCTION OBSERVATION BY ENGINEER
Where required as a condition of the building consent, advise the engineer when inspections are required.

Obtain the producer statements required from the engineer relating to the masonry construction and keep with the building consent documentation.

Performance

1.6 FIXINGS, WIND
Design and use the fixings appropriate for the wind zone (R) and topographical classification (T) of this site and building height; as required by NZS 3604 and the wind loads on various wall areas as given by AS/NZS 1170.

1.7 FIXINGS, EARTHQUAKE
Use fixings and methods capable of sustaining the loads appropriate to the area as set out in NZS 3604 and as required by NZS 1170.

2. PRODUCTS

Materials

2.1 MASONRY BRICKS
Firth concrete masonry bricks to AS/NZS 4455.1. Refer to SELECTIONS for type, size and colour.

2.2 MASONRY UNITS
Firth masonry units to AS/NZS 4455.1 with true and unblemished surfaces and arrises. Refer to SELECTIONS for type and size.

2.3 LINTELS
To AS/NZS 2699.3.

2.4 VERMIN STOP
Galvanized hexagon 10mm mesh of 1mm diameter steel wire 100mm wide, complete with galvanized steel staples.

2.5 DAMP-PROOF MEMBRANE
Heavy kraft, strip laminates saturated and coated with bitumen, butyl rubber sheet with adhesive, or equivalent.

2.6 LEAD DAMP-PROOF COURSE
Not less than 1.8mm (20 kg/m²) thick, bitumen coated.

Components

2.7 METAL TIES
Flat strap type, manufactured to AS/NZS 2699.1 and NZS 4210: 2.1.9 Wall ties. Stainless steel for Zone D.

2.8 DOVETAIL METAL TIES
Folded metal slot type, manufactured to AS/NZS 2699.1 and NZS 4210: 2.1.9 Wall ties.

2.9 VENEER METAL TIES
To AS/NZS 2699.1. Veneer ties with screw or spiked end fixing to framing.

2.10 JOINT REINFORCEMENT
Galvanized mild steel bonding with an ultimate tensile strength not less than 5300 kN.

Accessories

2.11 MORTAR
Dricon Trade Mortar to NZS 4210: 2.2 Mortar. Refer to SELECTIONS for colour.

Finishes

2.12 RESIN ANTI-GRAFFITI COATING
Long life shield coating. Refer to SELECTIONS.

2.13 WAX ANTI-GRAFFITI COATING
Sacrificial barrier coating. Refer to SELECTIONS.

3. EXECUTION

Conditions

3.1 TOLERANCES
To NZS 4210, table 2.2 Maximum tolerances.

3.2 HANDLING AND STORAGE OF MATERIALS
To NZS 4210 for aggregates, cement, bricks and reinforcement.

3.3 MEASURE MATERIALS
Measure materials for mortar accurately by weight or volume using suitably calibrated equipment.

3.4 WET WEATHER
Keep bricks dry at all times prior to laying. Protect the top row of uncompleted brick walls. Protect freshly laid brickwork during interruption through rain and at completion of each day's work.

3.5 COLD WEATHER CONSTRUCTION
When air temperature is below 5°C take the precautions required by NZS 4210: 2.18 Cold weather construction.

3.6 HOT WEATHER CONSTRUCTION
When air temperature is above 25°C or there is a drying wind, or lower temperatures, take the precautions required by NZS 4210: 2.19 Hot weather construction.

3.7 KEEP FACE WORK CLEAN
Keep clean during erection and until completion of the contract works. Turn back scaffold boards at night and during heavy rain. Do not rub face work to remove stains.

Application

3.8 COLOUR MIXING
Check all bricks delivered to site for colour variation, prior to commencing work. Ensure bricks are thoroughly blended from several pallets to ensure an even colour spread throughout the work.

3.9 UNIFORMITY
Carry up work with no portion more than 1500mm above another at any time, raking back between levels.

3.10 BONDING
Lay bricks to the required bonding in the various locations. Refer to SELECTIONS and/or drawings.

3.11 PROVIDE WEEPHOLES
Provide weepholes at the bottom of cavities and cells to NZS 4210, section 2.9.3, **Weep holes and ventilation of cavities** and as necessary to drain moisture to the outside air.

3.12 INSTALL VERMIN STOP
Fold and staple one edge of the mesh to the substrate and with the mesh sloping outwards, set the other edge half the thickness of the veneer or 50mm, whichever is less, into the mortar joint.

3.13 FORM OPENINGS
Unless detailed otherwise form openings to typical details from BRANZ Good Practice Guide; Masonry Veneer.

3.14 INSTALL LINTELS
Fit angle lintels to openings, sized to NZS 4229, table 12.2, **Veneer lintel table....** and placed to NZS 4229, 12.6, **Openings**.

3.15 CAVITY WIDTH
No cavity width less than 40mm or more than 75mm unless detailed otherwise.

3.16 CAVITY VENTILATION
Ventilate to outside air with top and bottom openings to the requirements of NZS 4229, 12.4 **Cavities**. Seal cavity off from the floor and roof space.

3.17 SEPARATION JOINTS
Provide for wall movements of veneer with control joints to NZS 4210: 2.10 Methods of controlling wall movements. Weatherproof as necessary.

3.18 ERECT
Erect the cavity walls with cavities of the widths detailed. Bond the two thicknesses of brickwork together using 185mm x 105mm box ties, with extra ties at reveals and openings and all ties laid to fall towards outer thickness. Keep the cavity clear by lifting screeds or other means. Leave openings at the base, clean out cavity at completion and after inspection brick up openings to match the surrounding work.

3.19 FORM REVEALS
Form lintels, jambs and sills as detailed complete with damp-proofing and all ready for following work.

3.20 CAVITY BRIDGES
Seal the two thicknesses of brickwork with galvanized drip formers where in situ concrete is being placed above.

3.21 JOINT REINFORCEMENT
Flush up brickwork with mortar to an even bed and lay reinforcement where shown on the drawings. Keep back 12mm from the face of brickwork and complete the mortar joints to a normal thickness. Laps 200mm minimum.

3.22 WALL TIES GENERALLY
Wall ties at unsupported edges, all openings and at bottom of veneer walls to NZS 4210: 2.9 Veneer and cavity wall construction.

3.23 PLACE TIES
Place ties to: -
- NZS 4210: 2.9.5 Tie anchorage, cover and fixing; and
- NZS 4210: 2.9.6 Placing of ties; and
- NZS 4210: 2.9.7 Tie classification and spacing.

3.24 BUILD IN WALL TIES, TIMBER
Build in wall ties for timber support walls to NZS 4210, 2.9, Veneer and cavity wall construction. Fix to timber stud with screws or other non impact fasteners and to concrete or concrete masonry with one double-thread fastener.

3.25 BUILD IN WALL TIES, CONCRETE AND MASONRY
Build in wall ties for reinforced concrete or masonry support walls at 600mm horizontal and 400mm vertical maximum, or equivalent area. Set into concrete with dovetail ties slotted in as work proceeds.

3.26 FORM OPENINGS
Provide a flexible damp-proof course, extending 200mm beyond ends of lintels and sloping to weepholes over all openings in cavity walls.

3.27 DAMP COURSE TO JAMBS
Provide a flexible damp-proof course to jambs of openings in cavity walls, fully lapped with horizontal damp-proof courses at head and sill.

3.28 DAMP COURSE TO SILLS
Provide a flexible damp-proof course under jointed sills, turned up at back and ends.

Application - ancillary work

3.29 BUILD IN FIXINGS
Build in necessary fixing bricks or blocks for trims.

3.30 BUILD IN ELEMENTS
Build in sills, copings, lintels, steps and other elements using mortar similar to that in adjacent walls.

3.31 BUILD IN DOORS AND WINDOWS
Build in door and window frames as the work proceeds and bed in mortar similar to that in adjacent work.

Finishing

3.32 SEALANT
Apply sealant where required to the manufacturer's stated requirements.

Completion

3.33 PROGRESSIVE CLEANING
Clean off all mortar and other contaminants from the face work immediately they occur.

3.34 EFFLORESCENCE, WATER CLEANING
To remove deposits, brush with a stiff-bristle broom and take away brushings from the locality. Remove remaining deposit with a damp sponge. Wash wall thoroughly with a plentiful supply of clean water. Repeat this process every 4 weeks from appearance through to the completion of the contract works.

3.35 REPLACE
Replace damaged, cracked or marked elements.

3.36 LEAVE
Leave work to the standard required by following procedures.

3.37 REMOVE
Remove all debris, unused materials and elements from the site.

4323G GERARD® STEEL TILE ROOFING

1. GENERAL

This section relates to GERARD® interlocking pressed metal roofing tiles complete with underlay, battens and accessories including:
- GERARD® Klass fascia rainwater systems.

1.1 RELATED WORK
Refer to 7411 RAINWATER SPOUTING SYSTEMS for downpipes.

1.2 ABBREVIATIONS
The following abbreviations are used throughout this part of the specification:

NZMRM	New Zealand Metal Roofing Manufacturers Inc

Documents

1.3 DOCUMENTS
Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

NZBC B2/AS1	Durability
NZBC E2/AS1	External moisture
NZS 3602	Timber and wood based products for use in building
NZS 3604	Timber-framed buildings
NZS 4217	Pressed metal tile roofs
NZMRM	NZ metal roof and wall cladding code of practice

1.4 MANUFACTURER'S DOCUMENTS
Manufacturer's and supplier's documents relating to work in this section are:

GERARD® Roofs Technical Specifications for the installation of GERARD® Roofs

Copies of the above literature are available from GERARD® Roofs
Telephone: 0800 104 868

Warranties

1.5 MANUFACTURER'S WARRANTY
Warrant this work under normal environmental and use conditions against failure.

Materials:		25 years full weatherproof warranty; plus a diminishing pro rata warranty for the next 25 years
Coating:	Satin:	15 years pro rata GERARD® Roofs warranty 5 years full warranty; plus a diminishing pro rata warranty for the next 10 years
	Textured:	20 years pro rata GERARD® Roofs warranty 10 years full warranty; plus a diminishing pro rata warranty for the next 10 years
Execution:		5 years installation warranty

The required form of warranty agreement is the GERARD® Roofs Warranty and Maintenance Guide for your GERARD® roof. Refer to the general section 1237 WARRANTIES for details of when completed warranties must be submitted.

Requirements

1.6 NO SUBSTITUTIONS
Substitutions are not permitted to any specified GERARD® system, or associated components and products.

1.7 QUALIFICATIONS
Carry out the roofing work with trained, experienced, competent installers familiar with the products being used, employed by or contracted to a GERARD® Certified Roofing Company.

Performance

1.8 FIXINGS, WIND
Design and use the fixings appropriate for the wind zone (R) and topographical classification (T) of this site and building height; to the NZMRM NZ Metal roof & wall cladding - Code of practice, section 10, tables 10.1.5.A, 10.1.5.B, 10.1.5.C and 10.1.5.D. To NZS 3604 table 10.12 Tile Battens for all wind zones.

1.9 CO-ORDINATE
Co-ordinate to ensure substrate and preparatory work is complete and other work programmed in the order required for access and completion of the roof.

1.10 PERFORMANCE
Accept responsibility for the weather-tight performance of the completed roofing system, including all penetrations through the roof and junctions with walls and parapets. Comply with the NZMRM NZ Metal roof & wall cladding - Code of practice, sections 2 to 7 (Performance, Loadings, Design, Flashings, Penetrations and Installation), and section 10, Pressed metal Tiles.

2. PRODUCTS

Materials

2.1 UNDERLAY
Breather type roof underlay.

2.2 BATTENS
Grade and moisture content to NZS 3602 table 1, reference 1E1,Timber treatment H1.2 to NZBC B2/AS1. Size, spacing and fixing to the NZMRM NZ Metal roof & wall cladding - Code of practice, section 10, clause 10.1.5 Tiling Battens.

2.3 PRESSED METAL TILES
To NZS 4217, part 1 and the NZMRM NZ Metal roof & wall cladding - Code of practice, section 10.

Components

2.4 NAILS
Hot-dipped galvanized steel flat head 50mm x 2.8mm nails to GERARD® Roofs specification.

2.5 FLASHINGS, CAPPINGS AND COVERS
To NZS E2/AS1, 4.0 **Flashings**. Use ridge and hip caps, barge covers, general purpose malleable-edged flashings and side flashings supplied by GERARD® Roofs as part of the selected tile roofing system.

3. EXECUTION

Conditions

3.1 INSPECTION
Inspect the roof framing and supporting structure and do not start work until it is complete and fully braced ready for tiling, all to the requirements of NZS 3604 or specific design where required.

3.2 STORAGE
Stack tiles on a level, hard base, ventilated and protected from damage and weather.

3.3 HANDLING
Unload and handle tiles without soiling, scratching, crushing or other damage.

3.4 COMPLY
Comply with the preparation, laying and fixing requirements of NZS 4217, NZBC E2/AS1 8.0 **Roof claddings**, and the GERARD® Roof's requirements where these are of a higher standard.

Application

3.5 SET-OUT
Carefully set out the roof with a measuring rod to position the battens accurately taking account of rafter lengths, overhangs into gutters and spoutings and verge overhangs, all to minimise tile cutting.

3.6 LAY UNDERLAY
Lay roof underlay, drawn tight, over rafters from ridges and hips, over fascia into gutters and into valleys to NZS 4217 and NZBC E2/AS1: 8.1.5 **Underlays**. Fix to GERARD® Roof's requirements, without any damage. If damaged make good with full lap inserts as the work proceeds.

3.7 FIX BATTENS
Fix battens over the underlays in straight courses, spanning at least 3 rafters, between fascia and ridge and elsewhere to GERARD® Roof's required details. Nail at every crossing to the requirements of NZMRM NZ Metal roof & wall cladding - Code of practice, clause 10.1.5 Tiling battens, tables 10.1.5.A, 10.1.5.B, 10.1.5.C and 10.1.5.D. Square cut ends to form butt joint over rafters with joints staggered.

3.8 LAYING
Do not take heavy equipment onto the roof. Plan work to minimise foot traffic. Work on the roof only using appropriate footwear. Interlock, lap and lay tiles to NZBC E2/AS1: 8.3 **Pressed metal tiles**, and GERARD® Roof's requirements. Finish ridge, hip, valley, barge and eaves to GERARD® Roof's required details if not detailed elsewhere.

3.9 NAILING TILES
Nail tiles to battens generally through the upstand and downturn of the tile lap as well as all elements to GERARD® Roof's details and to nail size, type and spacing in NZS 4217, table 5. Fix bottom course of satin finish tiles with vertical nails with butyl/EPDM washers. Fix the bottom course of textured tiles with vertical nails and cover heads with touch up materials.

3.10 CUTTING AND BENDING
Cut, bend and straighten tiles neatly to finish true to line and plane when in place, using installation equipment maintained in the proper condition, all to NZS 4217 and to GERARD® Roof's details.

3.11 FIT FLASHINGS, COVERS AND CAPPINGS
Cut, fit and fix all elements true to line and plane, to NZBC E2/AS1: 4.0 **Flashings**, NZBC E2/AS1: 5.0 **Roof/wall junctions**, to GERARD® Roof's details and the NZMRM NZ Metal roof & wall cladding - Code of practice, section 10, if not detailed elsewhere.

3.12 PENETRATIONS
Form to NZBC E2/AS1: 8.1.7 **Roof penetrations**, and to the NZMRM NZ Metal roof & wall cladding - Code of practice.

3.13 PENETRATIONS AND JUNCTIONS
Check that adjoining walls and parapets are prepared ready for the installation of the roofing. Confirm that openings have been prepared ready for the installation of skylights and other penetrations through the roof. Required work includes the following:
- underlay turned up at wall and parapet lines
- underlay finished and dressed off to all openings, ready for the installation of skylights and other penetrations

- roofing installation neatly finished to all sides of openings and to all wall and parapet junctions including proprietary GERARD® PVC stop ends.
- installation of flashings (those required to be installed prior to installation of penetrating elements and/or wall linings).

3.14 INTERNAL GUTTERS

Fit internal gutters to project design and to NZMRM NZ Metal roof & wall cladding - Code of practice, section 8.4.4 **Internal Gutters**.

Completion

3.15 MAKE GOOD

Touch up all damaged coatings with GERARD® Roof's finishing kit.

3.16 LEAVE

Leave this work complete with all necessary flashings, valleys, ridges and hips all properly installed as the work proceeds so the finished roof is completely weathertight.

3.17 REMOVE

Remove trade rubbish and unused materials from the roof and surrounds regularly during the work. Sweep down the completed roof and clean out spoutings, gutters and rainwater pipes. Remove debris, unused materials and elements from the site.

4521AR APL RESIDENTIAL ALUMINIUM WINDOWS AND DOORS

1. GENERAL

This section relates to the fabrication, supply and installation by either an **Altherm, First** or **Vantage** fabricator of:

- Residential aluminium windows and doors
- Metro Series aluminium windows and doors
- APL Architectural Series aluminium windows and doors
- Metro Thermal Heart aluminium windows and doors
- Smartwood composite aluminium / timber windows and doors
- Roof windows and overhead glazing
- Balustrading
- Hardware and furniture
- Flashings and sealants

1.1 ABBREVIATIONS AND TERMS

PVF²	Polyvinylidene Fluoride
SLS	Serviceability limit state
ULS	Ultimate limit state
WANZ	Windows Association of Zealand
PQAS	Powder Coating Quality Assurance System

Documents

1.2 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

NZBC E2/AS1	External moisture
NZBC F4/AS1	Safety from falling
NZBC H1/VM1	Energy efficiency
NZBC H1/AS1	Energy efficiency
AS/NZ 1580	Methods of test for paints and related materials - Determination of dry film thickness on metallic substrates - Non destructive methods
AS/NZS 1170.2	Structural design actions - Wind loads
NZS 1170.5	Structural design actions - Earthquake actions - New Zealand
AS/NZS 1734	Aluminium and aluminium alloys - Flat sheet, coiled sheet and plate
AS/NZS 1866	Aluminium and aluminium alloys - Extruded rod, bar, solid and hollow shapes
AAMA 2604.05	Performance requirements and test procedures for high performance organic coatings on aluminium extrusions and panels
NZS 3604	Timber-framed buildings
AS 3715	Metal finishing - Thermoset powder coatings for architectural applications
BS 3900	Methods of tests for paints, Part C5: Determination of film thickness
NZS 4211	Specification for performance of windows
NZS 4223.3	Glazing in buildings - Human impact safety requirements
AS/NZS 4680	Hot-dip galvanized (zinc) coatings on fabricated ferrous articles
WANZ	Window installation system - An Alternative Solution for the installation of windows and doors
WANZ	Powder Coating Quality Assurance System (PQAS)
WANZ	SFA 3503-03:2005 Anodising Standard
BRANZ BU 337	Protecting Window Glass from Surface Damage

US Federal Specification

TT-S-001543A	Sealing compound, silicone rubber base (for caulking, sealing and glazing in buildings and other structures)
TT-S-00230C	Sealing compound, elastomeric type, single component (for caulking, sealing and glazing in buildings and other structures)

1.3 MANUFACTURER'S DOCUMENTS

Manufacturer's and supplier's documents relating to work in this section are contained within:

Altherm Specifier's Guide
First Specifier's Guide
Vantage Specifier's Guide

Copies of the above literature are available from:

Web:	www.altherm.co.nz
	www.firstwindows.co.nz
	www.vantagejoinery.com
Email:	specifiersguide@aplnz.co.nz
Telephone:	09 309 3251
Facsimile:	09 309 3298

Warranties

1.4 WARRANTY - MANUFACTURER/FABRICATOR

Provide a material manufacturer/fabricator warranty:

5 years:	For fabrication

Refer to the general section for the required form of 1237WA WARRANTY AGREEMENT and details of when completed warranty must be submitted.

1.5 WARRANTY - INSTALLER

Provide an installer warranty:

2 years:	For installation

- Provide this warranty in the installer standard form.

Refer to the general section 1237 WARRANTIES for additional requirements.

Requirements

1.6 NO SUBSTITUTIONS

Substitutions are not permitted to any specified **APL** aluminium system, or associated components and products.

1.7 QUALIFICATIONS

Work to be carried out by tradesmen experienced, competent and familiar with the materials and techniques specified.

1.8 COMPLIANCE

Windows and doors to be manufactured and installed to NZBC E2/AS1.

1.9 SHOP DRAWINGS AND INSTALLATION DETAILS

Shop drawings to show the general arrangement of the aluminium joinery including, but not be limited to:

Construction details (minimum scale 1:5) showing the interface between joinery elements and the building structure including: -

- Jointing details and method of fixing between individual elements and between this installation and adjacent work
- Interaction between claddings and linings
- Flashing details
- Sealants and air seals
- Non standard fixing details including bracketing

And where required the following: -

- Design calculations
- Producer Statement in the form PS1 Producer Statement Design
- Rebate sizes
- Dimensions of all typical elements and of any special sizes and shapes

- Provision for the exclusion and/or drainage of moisture
- Provision for adjustment of fixings to ensure true alignment of windows and doors
- Sealant types and full size sections of all sealants and backing rods
- Provision for thermal movement
- Provision for seismic movement and movement under wind loads
- Sequence of installation
- Glazing specification and details

Where requested provide the following additional information
- Information of Professional Indemnity Insurance held by the person providing the calculations and shop drawings

Complete shop drawing review before commencing fabrication.

1.10 CERTIFICATION
Provide evidence of a certificate by a laboratory accredited by International Accreditation of New Zealand that the windows and doors offered comply with the requirements of NZS 4211

Performance

1.11 PERFORMANCE - WINDOWS AND DOORS
To NZS 4211, including:
- deflection, opening sashes, air infiltration, water penetration, ultimate strength, torsional strength of sashes, marking.

Refer to SELECTIONS.

1.12 STRUCTURAL/WEATHER-TIGHTNESS
The structural and weather-tight performance of the completed joinery, the glazing and infill panels is the responsibility of the window fabricator.

Performance – Wind (design by contractor)

1.13 DESIGN PARAMETERS – NON SPECIFIC DESIGN
Design the installation to the wind zone parameters of NZS 3604, table 5.1.
Refer to SELECTIONS for wind zone.

1.14 DESIGN PARAMETERS – SPECIFIC DESIGN
Design the installation to the wind pressure parameters of AS/NZS 1170.2 Refer to SELECTIONS for ULS and SLS

Finishes

1.15 CERTIFY COATINGS - POWDER COATING
Certify on request, compliance with this specification and support with control and sampling records. Test for film thickness to BS 3900, part C5, method No. 4, using method (b) or to AS/NZ 1580.108.1 for certifying thickness and method (a) where any dispute arises as to the thickness provided.
The coating should be applied by an applicator who can certify that the coating has been applied in accordance with the specification.

2. PRODUCTS

2.1 WINDOWS
Refer to SELECTIONS for type and finish.

2.2 DOORS
Refer to SELECTIONS for type and finish.

2.3 ROOF WINDOWS AND OVERHEAD GLAZING SYSTEMS
Refer to SELECTIONS for type and finish.

2.4 BALUSTRADING
Refer to SELECTIONS for type and finish.

Materials

2.5 ALUMINIUM EXTRUSIONS
Alloy designation to comply with AS/NZS 1866. Branded and extruded for anodising or powder coating.

2.6 ALUMINIUM SHEET AND STRIP
Complying with AS/NZS 1734 of suitable thickness. Rolled for anodising or powder coating.
Alloy designation: 5251 - H16 or 5005 - H16

2.7 STAINLESS STEEL SHEET AND STRIP
Type: 316 austenitic steel
Finish grade: 2B (satin lustre)

2.8 GLASS
Refer to the glazing section for glass types and installation.

Reveals

2.9 REVEALS - TIMBER PAINTED
Timber reveals for paint finish with all sides primed grooved for wall linings or flush finished for architraves.

Flashings

2.10 FLASHINGS GENERALLY
To NZBC E2/AS1, 9.1.10 **Windows and Doors**. Material, grade and colour of head flashings to match the window frames. Ensure that materials used for head, jamb and sill flashings are compatible with the window frame materials and fixings and cladding materials.

Components for installation - cavity systems

2.11 WANZ CAVITY CLOSER
Flashing device (unperforated) to close the cavity above the window or door unit to direct water that occasionally penetrates the wall cladding into the cavity spaces adjacent to the window.

2.12 STANDARD CAVITY CLOSER
A device constructed from either aluminium or PVC to close the cavity above the window or door unit, between the cladding and head flashing, to provide ventilation in accordance with NZBC E2/AS1 to the spaces above the window or door.

2.13 WANZ SUPPORT BAR
Extruded aluminium support bar with built in drainage and ventilation to NZBC E2/AS1, and support bar location bracket, to provide continuous support to the window unit. Size to suit cladding type.

Components

2.14 GLAZING GASKETS
Thermoplastic rubber. Do not stretch glazing gaskets during installation. Measure and cut gaskets 5-10% over length before installation.

2.15 HARDWARE AND FURNITURE
Hinges, stays, catches, fasteners, latches, locks and furniture as offered by the window and door manufacturer. Refer to SELECTIONS for type and finish. Key alike all lockable window hardware able to be keyed alike.

2.16 SAFETY STAYS
Stainless steel non releasable restrictors to limit window opening to NZBC F4/AS1, Table 2, Acceptable opening sizes for barriers.

2.17 FIXING BRACKETS
Designed by manufacturer to specific design.

2.18 WEATHERING/INSTALLATION SEALANT
Building sealant used in accordance with manufacturer's instructions for weather sealing aluminium frames to the cladding, complying with US Federal Specification TT S 0011534A, or a one-part polyurethane moisture curing, elastic joint sealant of medium modulus (± 25% movement) to US Federal Specification TT S 00230C.

Finishes

2.19 DURALLOY POWDER COATED ALUMINIUM
Polyester powder organic coating in accordance with WANZ Powder Coating Quality Assurance System and AS 3715.

2.20 DURATEC POWDER COATED ALUMINIUM
Polyester powder organic coating in accordance with WANZ Powder Coating Quality Assurance System and AS 3715.

2.21 FLUROSET POWDER COATED ALUMINIUM - HIGH PERFORMANCE
PVF^2 fluoropolymer powder coating in accordance with AAMA 2604.05 and WANZ Powder Coating Quality Assurance System.

2.22 FROST ANODISED ALUMINIUM
To WANZ SFA 3503-03. Refer to SELECTIONS for thickness and colour.

2.23 TRADITIONAL ANODISED ALUMINIUM
To WANZ SFA 3503-03. Refer to SELECTIONS for thickness and colour

3. EXECUTION

Conditions - generally

3.1 DO NOT DELIVER
Do not deliver to site any elements which cannot be unloaded immediately into suitable conditions of storage.

3.2 UNLOAD WINDOW JOINERY
Unload, handle and store elements in accordance with the window manufacturer's requirements.

3.3 AVOID DISTORTION
Avoid distortion of elements during transit, storage and handling.

3.4 PREVENT DAMAGE
Store windows and doors on site in a clean and dry environment in such a manner as to prevent damage to prefinished surfaces. Stack the units in a vertical position resting on their sills, with layers interleaved between to prevent rubbing. Keep paper and cardboard wrappings dry.

3.5 PROPRIETARY ELEMENTS
Fix in accordance with the window manufacturer's requirements.

3.6 PROTECTIVE COVERINGS
Retain protective coverings and coatings to BRANZ BU 337 and keep in place during the fixing process. Provide protective coverings and coatings where required to prevent marking of surfaces visible in the completed work and to protect aluminium joinery from following trades. Remove protection on completion.

3.7 ADDITIONAL PROTECTION
Supply and fix additional protection as necessary to prevent marking of surfaces which will be visible on completed work.

Conditions - fixings and fastenings

3.8 SUPPLY OF FIXINGS
Use only fixings and fastenings recommended by the manufacturer of the component being fixed and to comply with the ULS wind pressure stated in SELECTIONS. Ensure fixings and fastenings exposed to the weather are of aluminium, or Type 316 stainless steel or if not exposed to the weather may they be hot-dip galvanized steel with a coating weight of 610 g/m² complying with AS/NZS 4680.

3.9 INSTALLATION FIXING
To NZBC E2/AS1, 9.1.10.8, **Attachments for windows and doors**. Fix windows/doors through reveal to frame with a pair of 75 x 3.15mm minimum galvanised jolt head nails or a pair of 8 gauge x 65mm minimum stainless steel screws. Fix at a maximum of 450 centres along all reveals and a maximum of 150mm from reveal ends. Ensure fixings do not penetrate metal flashings.
Install packers between reveals and framing at fixing points, except at the head.

Assembly

3.10 FABRICATION
Fabricate frames as detailed on shop drawings. Install glazing, hinges, stays and running gear as scheduled. Provide temporary bracing and protection. Temporarily secure all opening elements for transportation.

3.11 TIMBER / PVC REVEALS
Before fixing to aluminium frames, ensure that timber reveals which are being painted have been primed on all surfaces. Securely fix reveals through aluminium fin.

3.12 HARDWARE GENERALLY
Factory fit all required and scheduled hardware. Account for all keys and deliver separately to the site manager.

3.13 SAFETY STAYS
Factory fit safety stays to all windows scheduled for safety stays and to all windows where safety stays are required to comply with NZBC F4/AS1 4.0, Opening windows.

Installation - windows and doors

3.14 SUPPLY OF FIXINGS
Use only fixings and fastenings recommended by the manufacturer of the component being fixed and to comply with the ULS wind pressure stated in SELECTIONS.

3.15 EXPOSED FIXINGS AND FASTENINGS
Ensure fixings and fastenings exposed to the weather are of aluminium, or Type 304 stainless steel.

3.16 PROTECTED FIXINGS AND FASTENINGS
Fixings and fastenings not exposed to the weather may be hot-dip galvanized steel with a coating weight of 610 g/m² complying with AS/NZS 4680.

3.17 CORROSION PROTECTION
Before fixing, apply suitable barriers of bituminous coatings, stops or underlays between dissimilar metals in contact, or between aluminium in contact with concrete.

3.18 CONFIRM PREPARATION OF EXTERIOR WALL OPENINGS

Confirm that exterior wall openings have been prepared ready for the installation of all window and door frames. Do not proceed with the window and door installation until required preparatory work has been completed.

Required preparatory work includes the following:

- wall cladding underlay/building wrap to openings finished and dressed off ready for the installation of window and door frames to NZBC E2/AS1:9.1.5 **Wall underlays to wall openings.**
- Full height 20mm jamb battens to NZBC E2/AS1 figure 72A (direct fix only)
- claddings neatly finished off to all sides of openings
- installation of flashings (those which are required to be installed prior to frames).
- application of waterproof sealer to all door and window sills in concrete floor or concrete sill situations. To door sills only, apply a suitable membrane over the sealer
- all in accordance with the shop drawings, where applicable.

3.19 INSTALLATION

Fix to comply with the reviewed shop drawings and installation details including flashings and bedding compounds, pointing sealants and weathering sealants.

3.20 INSTALLATION CAVITY CONSTRUCTION

Install to WANZ Installation System details and drawings including WANZ cavity closers, sill support bars and support angles

3.21 INSTALL FLASHINGS

Install flashings to heads, jambs and sills of frames as supplied and required by the window manufacturer and as detailed on the drawings. Finish head flashings to match window finish.

Place all flashings so that the head flashing weathers the jamb flashings, which in turn weathers over the upstand of the sill flashing. Ensure that sill flashings drain to the outside air.

Except where window/door frames are recessed, ensure that head flashings over-sail unit by 30mm minimum at each end.

3.22 COMPLETE AIR SEAL

To NZBC E2/AS1:9.1.6 **Air seals**. Form an air-tight seal by means of proprietary expanding foam or sealants used with PEF backing rods, applied between the window / door reveal and structural framing to a depth of 10 - 20mm, to provide a continuous air tight seal to the perimeter of the window or door.

3.23 FIX HARDWARE

Fix all sash and door hardware and furniture as scheduled.

Application - jointing and sealing

3.24 SEAL FRAMES ON SITE

Seal frames to each other and to adjoining structure and finishes, all as required by the window and sealant manufacturer and to make the installation weathertight.. In very high and extra high or greater wind zones, seal between the window head and the head flashing. Do not seal the junction between the sill member and the cladding or sill flashing which must remain open.

3.25 PREPARE JOINTS

Ensure joints are dry. Remove loose material, dust and grease. Prepare joints in accordance with the sealant manufacturer's requirements, using required solvents and primers where necessary. Mask adjoining surfaces which would be difficult to clean if smeared with sealant.

3.26 BACK UP
When using back-up materials do not reduce depth of joint for sealant to less than the minimum required by the manufacturer of the sealant. Insert polyethylene rod or tape back-up behind joints being pointed with sealant.

3.27 SEALANT FINISH
Tool sealant to form a smooth fillet with a profile and dimensions required by the sealant manufacturer. Remove excess sealant from adjoining surfaces, using the cleaning materials nominated by the sealant manufacturer and leave clean.

Cleaning

3.28 REMOVE TRADE DEBRIS
Remove trade debris by appropriate means on a floor by floor basis as each floor is completed and again before any work is covered up by others. Arrange for general removal.

3.29 TRADE CLEAN
Trade clean window frames, operable windows and doors, glass and other related surfaces inside and out at the time of installation to remove marks, dust and dirt, to enable a visual inspection of all surfaces.

Completion

3.30 PROTECTIVE COVERINGS
Retain protective coverings and coatings and keep in place during the fixing process. Provide protective coverings and coatings where required to prevent marking of surfaces visible in the completed work and to protect aluminium joinery from following trades. Remove protection on completion.

3.31 REPLACE
Replace damaged, cracked or marked elements.

3.32 PROTECTION
Protect finishes against damage from adjacent and following work.

3.33 IN-SITU TOUCH-UP TO POWDER COATED ALUMINIUM
In situ touch-up of polyester or fluoropolymer coated aluminium is only permitted to minor surface scratching. Otherwise replace all damaged material.

3.34 SAFETY
Indicate the presence of transparent glasses for the remainder of the contract period, with whiting, tape or signs compatible with the glass type. Indicators other than whiting must not be applied to the glass surface. Masking tape must not be used for this purpose.

3.35 MANIFESTATIONS
Apply manifestations to comply with NZS 4223.3, 303.1 Manifestations.

4610MR METRO GLASSTECH RESIDENTIAL GLAZING

1. GENERAL

This section relates to the supply and fixing of **Metro GlassTech** products for external and internal joinery in residential type buildings and includes:
- windows and doors
- frameless shower and bath screens
- splashbacks, wall linings
- balustrade systems, pool fences
- mirrors and mirror frames

1.1 ABBREVIATIONS AND DEFINITIONS
Refer to the general section 1232 INTERPRETATION & DEFINITIONS for abbreviations and definitions used throughout the specification.

The following abbreviations apply specifically to this section:

PVB	Polyvinyl Butyral
CIP	Cast in place

Documents

1.2 DOCUMENTS
Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

NZBC B1/AS1	Structure
NZBC F2/AS1	Hazardous building materials
NZBC F4/AS1	Safety from falling
NZBC H1/AS1	Energy Efficiency
NZS 3604	Timber-framed buildings
NZS 4211	Performance of windows
NZS 4218	Thermal insulation - Housing and Small Buildings
NZS 4223.1	Glazing in buildings - Glass selection and glazing
NZS 4223.Supp1	Glazing in buildings - Supplement 1 to NZS 4223.1:2008 and NZS 4223.4:2008
NZS 4223.3	Glazing in buildings - Human impact safety requirements
NZS 4223.4	Glazing in buildings - Wind, dead, snow and live action
AS/NZS 2208	Safety glazing materials in buildings
AS/NZS 4666	Insulating glass units
BRANZ BU 337	Protecting window glass from damage

1.3 MANUFACTURER/SUPPLIER DOCUMENTS
Manufacturer's and supplier's documents relating to this part of the work:
Metro GlassTech Catalogue & Reference and Guide - 6th edition

Manufacturer/supplier contact details

Company:	**Metro GlassTech**
Web	www.metroglasstech.co.nz
Email:	info@metroglasstech
Telephone:	0800 65 89 45

Warranties

1.4 WARRANTY - MANUFACTURER/SUPPLIER
Provide a material manufacturer/supplier warranty:

10 years:	for insulating glass units
10 years:	for laminated safety glass
10 years:	for toughened safety glass
10 years:	for screen printed glass

- Provide this warranty on the manufacturer/supplier standard form.
- Commence the warranty from the date of completion of this part of the contract work.

Refer to the general section for the required form of 1237WA WARRANTY AGREEMENT and details of when completed warranty must be submitted.

Requirements

1.5 SAMPLES
Submit samples of selected glass for review if required.

Performance

1.6 ENERGY EFFICIENCY
Provide glazing to meet the energy requirements of NZS 4218 and NZBC H1/AS1 for housing small buildings.
Refer to SELECTIONS and schedules for location and type of glazing.

2. PRODUCTS

2.1 NO SUBSTITUTIONS
Substitutions are not permitted to any specified **Metro GlassTech**, products or systems.

Materials

2.2 CLEAR FLOAT GLASS
Clear ordinary annealed transparent float glass for general window glazing. Thickness as required by NZS 4223.1 and NZS 4223. Supp 1.

2.3 TEXTURED, PATTERNED OR OBSCURE GLASS
Translucent, annealed, rolled glass with a decorative pattern on one surface.

2.4 LAMINATED GLASS
Safelite Grade A Safety Glass to AS/NZS 2208 with PVB or CIP resin interlayer.

2.5 TOUGHENED GLASS
Tempafloat Grade A Safety Glass to AS/NZS 2208.

2.6 TINTED FLOAT GLASS
Body tinted float glass.

2.7 REFLECTIVE AND COATED FLOAT GLASS
Either coated float glass incorporating both solar and thermal insulation properties; or coated float glass with only the thermal insulation properties.

2.8 GLASSTECH INSULATING GLASS UNITS (IGU's)
IGU's to AS/NZS 4666 and the IGU Manufacturers Association (IGUMA) requirements.

Materials, mirrors

2.9 MIRROR GLASS
Clear annealed mirror float glass, including silver, activation, passivation and two protective coats.

2.10 SAFETY MIRROR GLASS
4 mm, 5 mm and 6 mm annealed float glass mirror vinyl back safety glazing material to AS/NZS 2208.

Materials, screens

2.11 GLASS SCREENS
Proprietary shower/bath screens, formed to shape before toughening, complete with matching hardware.

Components, general

2.12 JOINTING, PUTTY AND SEALING MATERIALS
Ensure jointing, putty and sealing materials are compatible with glass substrates. Confirm compatibility with laminated glass, IGUs and coatings.

Components, aluminium glazing

2.13 GLAZING TAPE AND GASKETS
Single/double sided pressure sensitive self-adhesive low/medium/high density foam tapes/butyl tapes selected to suit the glazing detail to window manufacturers' requirements.

2.14 SETTING BLOCKS
Santoprene/Neoprene, 80-90 Shore A hardness, set at quarter points or to detail, to support the weight of glass panes.

Components, mirrors

2.15 MIRROR ADHESIVE
Adhesive mirror-mastic and double-sided adhesive tape.

2.16 MIRROR MOUNTING CHANNELS
Refer to SELECTIONS/drawings for type and finish.

2.17 MIRROR DE-MISTER
Refer to BATHROOM AND TOILET FIXTURES for type.

3. EXECUTION

Conditions

3.1 GENERAL REQUIREMENTS
To NZS 4223.1, NZS 4223.3, NZS 4223.4 and NZBC B1/AS1, 7.0 **Glazing**. All external glazing is wind and watertight on completion.

3.2 DELIVERY
Keep glass dry and clean during delivery and bring on to site when ready to glaze directly into place. Comply also with the storage requirements set out in BRANZ BU 337.

3.3 GLASS CONDITION
All glass to have undamaged edges and surfaces.

3.4 GLASS THICKNESS
If not specifically stated in the glazing schedule determine the minimum thickness of glass for each sheet as required by NZS 4223.1, NZS 4223.3, NZS 4223.4, and NZS 4223. Supp 1.

Determine the final glass thickness based on whether wind loading or human impact considerations govern.

3.5 REBATE DIMENSIONS
Provide rebates for glazing to the widths and depths necessary for each situation including minimum glass edge cover to NZS 4223.1, Section 4 Glazing.

Conditions - human impact safety requirements

3.6 SAFETY GLAZING, GENERAL REQUIREMENTS
Glazing of doors, side panels, low level and window seat glazing, shower doors and screens, bath enclosures, stairwell landings and similar locations, to NZS 4223.3 and NZBC B1/AS1, 7.0 **Glazing**, in respect of, thickness, maximum areas and requirements for Grade A Safety Glass.

3.7 SAFETY GLAZING MATERIAL
Use only materials from NZS 4223.3, Appendix 3.A Schedule of safety glazing materials that also comply with the relevant requirements of AS/NZS 2208. Ensure material is permanently marked and if cut by the distributor or installer mark each piece to NZS 4223.3, clause 303.7 Identification of safety glazing materials.

3.8 CONTAINMENT
Edge cover to comply with NZS 4223.1, Section 4 Glazing, table 5. Otherwise to NZS 4223.3, clause 303.2 Containment.

Assembly

3.9 WORKING OF GLASS
All working of glass as required in NZS 4223.1.

3.10 EDGE WORK AND BEVELLING
Edgework other than a clean cut. Refer to SELECTIONS/drawings for type.

3.11 SURFACE TREATMENT
Refer to SELECTIONS/drawings for finish.

3.12 SURFACE CUTTING
Refer to SELECTIONS/drawings for finish.

Application aluminium

3.13 INSTALL GLASS TO ALUMINIUM FRAMES
Install glass to NZS 4223.1.
- Bead glaze to Section 4 Glazing.
- Channel glaze to Section 4 Glazing, and Section 5 for Framed, Unframed, Partly Framed Glass Assemblies.

3.14 INSTALL SAFETY GLASS
To NZS 4223.3, as modified by NZBC F2/AS1 and NZBC B1/AS1, 7.0 **Glazing**.

Application - mirrors

3.15 MIRRORS, SCREW FIXED
Fix with proprietary zinc-plated steel countersunk-head screws, fitted with black neoprene washers with fine-threaded upstands to receive chrome plated dome screw covers.

3.16 MIRRORS, CHANNEL MOUNTED
Fix with proprietary mounting channels, to the channel manufacturer's requirements.

3.17 MIRRORS, ADHESIVE FIXED
Fix with adhesive mirror-mastic and double-sided adhesive tape. Adhesive mastic area 0.25 m^2 per 1 m^2 of mirror.

Application miscellaneous

3.18 INSTALL GLASS BALUSTRADES
Specify the type of occupancy to AS/NZS 1170.1 Table 3.3
Confirm/design and carry out installation to
NZBC B1/AS1: Structure, 7 Glazing
NZBC F2/AS1: Hazardous building materials, 1.0 Glazing
NZBC F4/AS1: Safety from falling, 1.0 Barriers in buildings.

3.19 INSTALL GLASS SCREENS
Install shower and bath screens and doors to manufacturer's requirements.

Finishing

3.20 SAFETY
Indicate the presence of transparent glass for the construction period, with tape or signs compatible with the glass type.

3.21 MANIFESTATIONS
To NZS 4223.3, clause 303.1 Manifestation (making glass visible).

Completion

3.22 TRADE CLEAN
Remove safety indicators and trade clean at completion of the building as required by the contract documents.

3.23 REPLACE
Replace damaged, cracked or marked glass that occurs during glazing.

3.24 LEAVE
Leave work to the standard required by following procedures.

3.25 REMOVE
Remove debris, unused materials and elements from the site.

4. SELECTIONS
For further details on selections go to www.metroglasstech.co.nz.

4710P PINK® BATTS® & PINK® BATTS® SILENCER® INSULATION

1. GENERAL

This section relates to Tasman Insulation **Pink® Batts®** insulation materials installed into residential buildings.
It includes:
Thermal:
- **Pink® Batts® Wall Insulation (Pink® Batts® Classic** and **Pink® Batts® Ultra®)**
- **Pink® Batts® Ceiling Insulation (Pink® Batts® Classic** and **Pink® Batts® Ultra®)**
- **Pink® Batts® SnugFloor™ Underfloor Insulation**
- **Pink® Batts® Masonry Wall Insulation**

Acoustic:
- **Pink® Batts® Silencer®**
- **Pink® Batts® Silencer® Midfloor**

1.1 ABBREVIATIONS AND DEFINITIONS

Refer to the general section 1232 INTERPRETATION & DEFINITIONS for abbreviations and definitions used throughout the specification.

The following abbreviations apply specifically to this section:

STC	Sound Transmission Class
IIC	Impact Insulation Class

Documents

1.2 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

NZBC H1/AS1	Energy efficiency
NZS 4218:2004	Energy Efficiency - Small building envelope
NZS 4220	Code of practice for energy conservation in non-residential buildings
NZS 4243.1	Energy Efficiency - Large buildings - Building thermal envelope
NZS 4246	Energy efficiency - Installing insulation in residential buildings
NZECP 54	NZ Electrical Codes of Practice for the installation of recessed luminaires and auxiliary equipment

1.3 MANUFACTURER/SUPPLIER DOCUMENTS

Manufacturer's and supplier's documents related to this section are:
Tasman Insulation New Zealand: Product Data Sheets

Manufacturer/supplier contact details

Company:	**Tasman Insulation New Zealand**
Web:	www.pinkbatts.co.nz
Telephone:	0800 PINK BATTS (746 522)

Warranties

1.4 GUARANTEE

Provide a Tasman insulation guarantee.

- For **Pink® Batts®** insulation products.
- Provide on completion of the installation, a **PinkFit® Home Insulation Installation Guarantee** form, to confirm the insulation has been installed to NZS 4246.

Requirements

1.5 QUALIFICATIONS, PINK® BATTS® AND PINK® BATTS® SILENCER®

Installers to be **PinkFit® - Preferred Pink® Batts® installers**. A list of approved installers can be obtained from the web, by telephone or from the local building supplies merchant.

Web:	www.pinkbatts.co.nz
Telephone:	Freephone 0800 746 534 (0800 PINKFIT)

1.6 NO SUBSTITUTIONS
Substitutions are not permitted to any specified Tasman Insulation **Pink® Batts®** insulation or associated products, components or accessories.

Performance

1.7 SOUND RATING REQUIREMENTS
Provide sound rated wall, floor and ceiling systems as scheduled.

2. PRODUCTS

Materials - thermal

2.1 PINK® BATTS® CEILING INSULATION
Pink® Batts® Ceiling Insulation (**Pink® Batts® Classic** and **Pink® Batts® Ultra®**) is a light weight flexible bio-soluble glass wool manufactured from up to 80% recycled glass, bonded with a thermosetting resin to form rectangular insulating slabs and blanket.

2.2 PINK® BATTS® WALL INSULATION
Pink® Batts® Wall Insulation (**Pink® Batts® Classic** and **Pink® Batts® Ultra®**) is a light weight flexible bio-soluble glass wool manufactured from up to 80% recycled glass, bonded with a thermosetting resin to form rectangular insulating slabs and blanket.

Materials - acoustic

2.3 PINK® BATTS® SILENCER®
Pink® Batts® Silencer® bio-soluble glass wool manufactured from up to 80% recycled glass in slabs and coloured grey for identification.

Components

2.4 FASTENERS
Insul anchors complete with retaining washer.

2.5 TAPES
Proprietary plastic tape stapled across framing to retain insulation in unlined wall and ceiling locations.

2.6 ADHESIVE TAPE
Pressure sensitive adhesive tape.

3. EXECUTION

3.1 STORAGE
Accept materials undamaged and dry and store in a location that protects them from the weather and damage. Avoid distortion, stretching, compression, puncturing and damage to edges of materials. Do not use damaged or wet insulation materials.

3.2 HANDLING
Wear protective clothing as necessary and when handling, avoid delamination or distortion of the rectangular form. Maintain full thickness unless compression is an installation system requirement.

3.3 INSPECTION
Before starting installation of blankets and slabs, check that the location and framing are free from moisture, that the cavities are not interconnected and that mesh, wall underlays and vapour barriers are in place.

Application - general

3.4 INSTALL INSULATION - GENERAL
Lay, install, fit and fix to NZBC H1/AS1: Energy efficiency, 2.0 Building thermal envelope, and to manufacturer's requirements. Install in housing to NZS 4218 and NZS 4246. Install in large buildings to NZS 4243.1 and NZS 4220. Allow insulation to re-loft/relax prior to installation. Do not cover vents and cut around all recessed light fittings and metal flues to the safety requirements of NZECP 54. Lift up electrical wires, lighting transformers/controllers and lay the insulation underneath.

Application, thermal insulation

3.5 INSTALL PINK® BATTS® CEILING INSULATION
Ensure that the product is installed dry; if wet replace before installation. If cutting is required, cut oversize by 5-10mm to ensure a friction fit. Insulate around vents (not over them) to allow unhindered ventilation.

Fit **Pink® Batts® Ceiling Insulation** beneath electrical wiring and plumbing. Install to the outer edge of the top plate. Maintain a 25mm gap clearance between the **Pink® Batts®** insulation and roof underlay. Adhere to the clearances as per product datasheet for recessed light fittings; clearances are required for some fittings to prevent light fittings from overheating and failing. Refer to NZS 4246 for installation guidelines and **Pink® Batts®** Product Data Sheets, for detailed installation instructions.

3.6 INSTALL PINK® BATTS® WALL INSULATION
Ensure the product is installed dry; if wet replace before installation. If cutting is required, cut oversize by 5-10mm to ensure a friction fit. Fill gaps around windows and doors with off-cuts. Insulate around vents (not over them) to allow unhindered ventilation.

Fit **Pink® Batts® Wall Insulation** behind electrical wiring and plumbing. Ensure there are no gaps, folds or undesirable compression at edges.

Refer to NZS 4246 for installation guidelines and **Pink® Batts®** Product Data Sheets, for detailed installation instructions.

Application, acoustic insulation

3.7 INSTALL PINK® BATTS® SILENCER®
Install **Pink® Batts® Silencer®** when lining on one side is installed. When cutting is required, cut oversize by 5-10mm to ensure a friction fit. Fill gaps around with off-cuts. Fit **Pink® Batts®** insulation behind electrical wiring and plumbing. Ensure there are no gaps, folds or undesirable compression at edges. Refer to **Pink® Batts®** Product Data Sheets, for detailed installations

Completion

3.8 CLEAN UP
Clean up as the work proceeds, so no spare offcuts or any other matter or item remain behind claddings or linings.

3.9 LEAVE
Leave work to the standard required by following procedures.

3.10 REMOVE
Remove debris, unused materials and elements from the site.

5113G GIB® PLASTERBOARD LININGS

1. GENERAL

This section relates to the supply, fixing and jointing of GIB® plasterboard linings and accessories to timber and steel framed walls and ceilings to form:

- standard systems
- superior finish quality systems
- bracing systems
- fire rated garage boundary wall systems
- wet area systems

1.1 RELATED SECTIONS

Refer to 5171G GIB® PLASTERBOARD FIRE & SOUND LININGS for performance wall linings

1.2 ABBREVIATIONS

The following abbreviations are used throughout this part of the specification:

AWCINZ	Association of Wall and Ceiling Industries New Zealand

Documents

1.3 DOCUMENTS REFERRED TO

Documents referred to in this section are:

NZBC E2/AS1	External moisture
AS 1397	Steel sheet and strip - hot-dipped, zinc-coated, or aluminium/zinc-coated
AS/NZS 2588	Gypsum plasterboard
AS/NZS 2589	Gypsum linings - Application and finishing
NZS 3604	Timber-framed buildings
AS/NZS 4600	Cold-formed steel structures

BRANZ technical paper P21: A wall bracing test and evaluation procedure

NASH	Residential and Low-Rise Steel Framing Part 1 2010 Design Criteria

Documents listed above and cited in the clauses that follow are part of this specification. However, this specification takes precedence in the event of it being at variance with the cited document.

1.4 MANUFACTURER'S DOCUMENTS

Manufacturer's and supplier's documents which refer to work in this section are:

GIB® Site Guide (Jan 2010)
GIB Ultraline® Plus lining system (February 2006)
GIB® Noise Control Systems (March 2006)
GIB Aqualine® Wet Area Systems (March 2007)
GIB® Ezybrace® Systems (June 2011)
GIB® Ezybrace® Software (2011)
GIB® Ezybrace® for Steel Frame Housing (NASH) Software (2011)
GIB® Residential Garage Boundary Walls (March 2009)
GIB® Rondo® Metal Ceiling Batten Systems
GIB-Cove®
GIB® Goldline® Platinum Tape-on Trims
GIB® UltraFlex high impact corner mould

BRANZ Appraisal 294 - GIB® Ezybrace® Systems
BRANZ Appraisal 427 - GIB Aqualine® Wet Area Systems

Copies of the above literature are available at

Web:	www.gib.co.nz
Telephone:	0800 100 442

Requirements

1.5 NO SUBSTITUTIONS
Substitutions are not permitted to any specified GIB® systems, GIB® system components, GIB® plasterboard, associated GIB® products or GIB® accessories.

1.6 INSTALLER WORK SKILLS AND QUALIFICATIONS
GIB® plasterboard fixers and plasterers to be experienced competent workers, familiar with GIB® plasterboard lining systems installation and finishing techniques. Submit evidence of experience on request. For example:
- National Certificate of Interior Systems; or
- Certified Business member of AWCINZ.

Performance

1.7 INSPECTIONS AND ACCEPTANCE
Allow for inspection of the finished plasterboard surface:
- before applying sealer and
- before applying finish coatings or decorative papers,
so that after assessment of the type and/or angle of illumination and its effect on the completed decorative treatment, group approval and acceptance of the surface can be given.

1.8 SOUND INSULATION REQUIREMENTS
Provide the GIB® Noise Control Systems. Refer to SELECTIONS for system/STC. Include for forming and treating of perimeters of openings and penetrations in the elements to ensure the specified performance. Ensure absence of adjoining flanking paths.

1.9 BRACING REQUIREMENTS
Provide braced wall systems using GIB® Ezybrace® Systems (June 2011) or GIB® Ezybrace® Software (2011) to meet the requirements of NZS 3604 when tested to BRANZ Technical paper P21. Alternatively use GIB® Ezybrace® for Steel Frame Housing (NASH) Software 2011 to meet the requirements of NASH Residential and Low-Rise Steel Framing Part 1 2010 Design Criteria. Refer to drawings for location and type.

2. PRODUCTS

Materials

2.1 GIB® PLASTERBOARD
Gypsum plaster core encased in a face and backing paper formed for standard and water resistance use to AS/NZS 2588. Refer to SELECTIONS for location, type, thickness and finish.
GIB® Standard plasterboard
GIB Wideline® plasterboard
GIB Ultraline® and/or GIB® Ultraline PLUS high quality surface plasterboard
GIB Fyreline® fire resistant plasterboard
GIB Braceline® & GIB® Noiseline dual purpose wall bracing & noise control plasterboard
GIB Aqualine® wet area plasterboard
GIB Fibrerock® Impact Resistant Gypsum lining

2.2 CORNICE
GIB-Cove® plasterboard cornice. Refer to SELECTIONS for profile and size.

Components

2.3 CEILING BATTENS
GIB® Rondo® metal ceiling battens, batten joiners and perimeter channel.

2.4 SCREWS
GIB® Grabber® drywall screws.

2.5 NAILS
GIB® Nails (gold passivated).

Size: 30mm, 40mm

2.6 TAPE ON TRIMS AND EDGES
GIB® Goldline® tape-on trims
GIB® UltraFlex high impact corner mould

2.7 METAL ANGLE TRIMS
GIB® galvanized steel slim angle trims.

2.8 CONTROL JOINTS
GIB® Rondo® P35 control joints.
GIB® Goldline® tape-on trims

Accessories

2.9 ADHESIVE
Timber frame and/or steel frame:
GIBFix® One ultra low VOC water based wallboard adhesive
GIBFix® All-Bond solvent based wallboard adhesive

2.10 JOINTING COMPOUND

Bedding compound:	GIB Tradeset®, GIB Lite Blue®, GIB MaxSet®, GIB ProMix® All Purpose, GIB Plus 4®
Finishing compound:	GIB ProMix® All Purpose, GIB® Trade Finish®, GIB® Trade Finish® Lite, GIB ProMix® Lite, GIB® U-Mix, GIB Plus 4®
Cove:	GIB-Cove® Bond

2.11 JOINTING TAPE
GIB® paper jointing tape.

2.12 ACOUSTIC SEALANT
GIB Soundseal® ultra low VOC water based highly flexible acoustic sealant.

2.13 GAP FILLER
GIB® Gap Filler ultra low VOC multi-purpose acrylic flexible filler

3. EXECUTION

Conditions

3.1 STORAGE
Store GIB® plasterboard sheets and accessories in dry conditions stored indoors out of direct sunlight in neat flat stacks on either an impervious plastic sheet or clear of the floor with no sagging and avoiding damage to ends, edges and surfaces. Reject damaged material. Refer to GIB® Site Guide (Jan 2010).

3.2 LEVELS OF PLASTERBOARD FINISH
Provide the selected plasterboard surfaces to the pre decorative levels of finish specified in AS/NZS 2589.

3.3 CONFIRM LEVELS OF PLASTERBOARD FINISH ACCEPTANCE
Before commencing work, agree in writing upon the surface finish assessment procedure towards ensuring that the quality of finish expectations are reasonable and are subsequently obtained and acceptable.

Do not apply decorative treatment until it is agreed in writing by the contractor, subcontractors and decorator that the specified plasterboard Level of Finish has been achieved.

"Levels of plasterboard finish" is a tool for specifying the required quality of finish when installing and flush stopping GIB® plasterboard **prior** to the application of a range of decorative finishes under various lighting conditions. Refer to **AS/NZS** 2589.

3.4 SUBSTRATE
Do not commence work until the substrate is plumb, level and to the standard required by the sheet manufacturer's requirements. Refer to GIB® Site Guide (Jan 2010).

3.5 TIMBER FRAME MOISTURE CONTENT
Maximum allowable moisture content to AS/NZS 2589 for timber framing at lining: 18% or less for plasterboard linings. Refer to NZBC E2/AS1 and GIB® Site Guide (Jan 2010).

3.6 PROTECTION
Protect surfaces; cabinetwork, fittings, equipment and finishes already in place from the possibility of water staining and stopping damage. Refer to GIB® Site Guide.

Application

3.7 INSTALL CEILING BATTENS
Install to GIB® Rondo® Ceiling Batten Systems.

3.8 LINING WALLS AND CEILINGS GENERALLY
Form to GIB® Site Guide (Jan 2010). Ensure bulk insulation thickness shall not exceed that of the wall framing.

3.9 BOARD ORIENTATION
Minimise joints by careful sheet layout using the largest sheet sizes possible, and generally fixing horizontally. Where part sheets are required for various stud heights they should be positioned so the cut sheet is as low as possible to keep joints below eye level.

3.10 FORM NOISE CONTROL SYSTEMS
Form to GIB® Noise Control Systems.

3.11 FORM WET AREA SYSTEMS
Form to GIB Aqualine® Wet Area Systems.

3.12 FORM BRACING SYSTEMS
Form to GIB® Ezybrace® Systems (June 2011).

3.13 FORM CONTROL JOINTS
Form control joints to GIB® Site Guide.

3.14 INSTALL COVES
Install to GIB-Cove® literature using GIB-Cove® Bond.

3.15 INSTALL TAPE-ON TRIMS
Install to GIB® Goldline® Tape-on trims literature and/or GIB® Ultraflex high impact corner mould literature.

Finishing

3.16 FINISHING GENERALLY
To GIB® Site Guide (Jan 2010) and AS/NZS 2589.

Completion

3.17 REPLACE
Replace damaged sheets or elements.

3.18 CLEAN DOWN
Clean down completed surfaces to remove irregularities and finally sand down with fine paper to the sheet manufacturer's requirements, to leave completely smooth and clean.

3.19 REMOVE
Remove debris, unused materials and elements from the site.

3.20 LEAVE

Leave work to the standard required by following procedures.

6221A ARDEX TILING SOLUTIONS

1. GENERAL

This section relates to the preparation of floor and wall surfaces for tiling systems with **Ardex Tiling Solutions**:

- acoustic underlays
- levelling screeds
- primers
- undertile heating
- waterproofing systems
- decoupling system
- adhesives
- sealants
- grouts

Documents

1.1 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

NZBC D1/VM1	Access routes
NZBC D1/AS1	Access routes 2.0 Level access routes 3.0 Ramps
AS CA27	Code of recommended practice for internal plaster on solid backgrounds
AS 1315	Portland Cement
AS/NZS 4586	Slip resistance classification of pedestrian surface materials
AS 3740	Waterproofing of wet areas within residential buildings
AS 3958.1	Ceramic tiles - Guide to the installation of ceramic tiles
AS/NZS 4671	Steel reinforcing materials
AS 4992	Ceramic tiles - products for installation

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 MANUFACTURER'S DOCUMENTS

Manufacturer's and supplier's documents relating to work in this section are:

Ardex Tiling Solutions
BRANZ Appraisal 472 - Superflex® Wet Area Membranes
BRANZ Appraisal 473 - Superflex™ External Waterproofing Membranes
BRANZ Appraisal 727 - Ardex Undertile Sheet Membrane (WPM 750)

Copies of the above literature are available from Ardex
Telephone: 0-9-580 0005 Auckland
0-4-568 5949 Wellington
0-3-373 6900 Christchurch

Warranties

1.3 WARRANTY - WATERPROOFING

Warrant this work under normal environmental and use conditions against failure of materials and execution

Warranty period:	Materials	15 years
	Execution	2 years

Refer to the general section for the required form of 1237WA WARRANTY AGREEMENT and details of when completed warranty must be submitted.

1.4 WARRANTY - TILING
Warrant this work under normal environmental and use conditions against failure of materials and execution
Warranty period: 2 years

Refer to the general section for the required form of 1237WA WARRANTY AGREEMENT and details of when completed warranty must be submitted.

Requirements

1.5 NO SUBSTITUTIONS
Substitutions are not permitted to any specified Ardex materials, or associated products, components or accessories.

1.6 QUALIFICATIONS
Waterproofing work to be carried out by an Ardex approved waterproofing applicator.

Tiling to be carried out by competent workers experienced with the materials and in the techniques specified.

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

1.8 SAMPLE PANEL
Make first area of work available as a sample panel for inspection to confirm quality of work. Provide additional panels if requested.

1.9 DEFLECTION CRITERIA FOR SUSPENDED FLOORS
Check that the floor is rigid enough for the tiling. Deflection of suspended floors should not exceed $^{1}/_{360}^{th}$ of the span under dead load and live load.

1.10 PROVIDE SPARE TILES
Provide spare tiles. Refer to SELECTIONS for type and quantity.

1.11 SYSTEMS ARDEX PROJECT
Contact Ardex with any relevant key dates and for a list of approved applicators. The contractor is to contact Ardex prior to starting the contract.

Northern Region: North of Taupo
Contact: Shaun Armstrong 027 493 7497

Southern Region: South of Taupo
Contact: Ronald Rose 027 485 0490

Performance

1.12 SLIP RESISTANCE FOR ACCESS ROUTES
Slip resistance for tiles to comply with NZBC D1/AS1: 2.0 Level access routes and 3.0 Ramps.
- when in place on a level access route, to have a mean coefficient of friction (μ) not less than 0.4 when tested in accordance with AS/NZS 4586.
- when in place on a sloping access route, to have a coefficient of friction (μ) not less than 0.4 + 0.0125S (S = slope of surface expressed as a percentage).

1.13 PROVIDE EVIDENCE OF SLIP RESISTANCE
Provide evidence that the tiles comply with the standard of performance specified.

1.14 CERTIFY SLIP RESISTANCE
Provide certificates and any other evidence at the time of selection/supply that the tiles comply with NZBC D1/VM1 and NZBC D1/AS1: Access routes.

1.15 QUALITY ASSURANCE
Prepare an inspection and test plan (ITP) for the work. Record on the ITP the inspections and checks as they are made. Make ITP's available for inspection.

Refer to Ardex Tiling flow chart and check list.

2. PRODUCTS

Materials - Floor preparation

2.1 FLOOR OVERLAY
6mm Thick sheet of Portland cement, sand, fine cellulose fibre and water, with a smooth finish.

2.2 DECOUPLING SYSTEM
Ardex DS60, a 0.4mm decoupling sheet to isolate the substrate from the finished floor surface covering.

2.3 ACOUSTIC UNDERLAY
Ardex DS40 4mm sound insulation matting. Refer to Ardex DS40 Marshall Day acoustic report for the appropriate construction details.

2.4 SCREED
Mix of 3:1 Portland cement, coarse washed sand gauged with Abacrete liquid polymer additive to the tile manufacturer's stated requirements.

2.5 ARDEX HYDREPOXY 300
Two-component water-based epoxy polymide membrane/barrier coating.

2.6 ARDEX LQ 92
Cement based, fast setting, under-tile levelling compound.

2.7 ARDEX MULTIPRIME
Water based primer.

Materials - Waterproofing

2.8 WATERPROOFING SYSTEM
Flexible waterproofing membranes.

Superflex Premixed:	ARDEX WPM 001
Superflex Two part:	ARDEX WPM 002
Sheet Membrane:	ARDEX WPM 750

Materials - Tile adhesives

2.9 ABACRETE
Liquid polymer.

2.10 ARDION 90
Admixture for use with Ardex cement-based adhesives.

2.11 ABAFLEX
High performance, flexible, polymer modified cement based adhesive.

2.12 ARDEX X77
High performance, fibre reinforced polymer modified adhesive with microtec technology.

2.13 ARDEX X78
Pourable high performance floor tile adhesive, fibre reinforced polymer modified adhesive with microtec technology.

2.14 ARDEX X52
Rubber modified cementitious adhesive.

2.15 ARDEX WA 100
Two part epoxy adhesive for natural stone.

2.16 ARDEX X10
Flexible non-slump wall tile adhesive.

2.17 ARDEX MULTIPURPOSE POWDER (MPP)
Cementitious flexible mastic adhesive powder.

2.18 ARDEX OPTIMA
High performance, premium grade with exceptional adhesion properties, water resistant two part adhesive.

2.19 ARDEX QUICKBOND
Fast setting polymer fortified, cement based adhesive.

2.20 ARDEX SUPER TILESET
Cement based polymer fortified adhesive.

2.21 ARDEX D2
High performance, non slump, water resistant dispersion adhesive.

2.22 ARDEX S16
Rapid drying cement based adhesive.

2.23 ARDEX STS 8
High tensile strength cement based tile adhesive. Ideal for larger format tiles.

2.24 ARDEX X56
Highly flexible, 1.5mm, fast setting, polymer modified adhesive.

Materials - Sealants - grouts

2.25 SEALANTS
Ardex SE Acetic cure.
Ardex ST Neutral cure.
Sealants and back-up materials as described in clause 2.7 of AS 3958.1 and clause 9.18 of AS 3740.

2.26 ARDEX GROUTS
Ardex FG8 for joints 1mm to 8mm wide, mixed with groutbooster where required.
Ardex FSDD fine sanded grout for joints 1 - 4mm.
Ardex MG Rapid Drying Marble and Natural Stone Grout.
Ardex WA Easy to use Epoxy Grout and Adhesive.
Ardex Abacolour Wide Joint for joints 5mm to 15mm wide.

2.27 ARDEX ABAPOXY GROUT
100% solids epoxy grout. 5 colours.
Available by indent only.

2.28 ARDEX GROUT BOOSTER
Water based additive.

Components

2.29 STRIPS AND WEATHERBARS
Unless otherwise specified edge strips, floor finish divider strips and weather bars shall be aluminium.

2.30 EXPANSION JOINT, METAL AND RUBBER
Clear anodised aluminium/brass with metal anchor to set into in-situ concrete, cement screed/bed and complete with rubber infill.

2.31 EXPANSION JOINT, METAL AND COMPOUND
Aluminium/brass angles with high density foam rubber insert and jointing compound.

2.32 EXPANSION JOINT, PLASTIC
Rigid stabilised PVC sides with flexible central section.

3. EXECUTION

General

3.1 HANDLING AND STORAGE
Take delivery of packets of tiles undamaged and dry. 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.

3.2 CHECK TILES
Check tiles to ensure that they are as specified, from the same batch, of a consistent colour and pattern and sufficient to complete the work. Reject tiles that vary widely in colour or pattern. Reject tiles that are damaged.

3.3 CONFIRM LAYOUT
Before commencing work confirm the proposed layout of tiles and expansion joints and other visual considerations of the finished work.

3.4 SETTING OUT
Before commencing the setting out confirm the number and location of cut tiles. Minimise in number with no cut tiles less than half size and only at the perimeter of the work.

3.5 PREPARATION OF BACKGROUNDS
Prepare backgrounds in accordance with AS 3958.1, section 4 and to the manufacturer's instructions for the selected substrate. See also the Ardex Flooring Solutions manual by visiting http://www.ardex.co.nz/

Conditions

3.6 SERVICES AND ACCESSORIES
Ensure that all services and accessories are in place and located to suit the tile layout, and that the substrate, background and adjoining surfaces (with the preparation called for in this section) are of the quality necessary to allow tiling of the required standard.

3.7 DO NOT START
Do not start laying tiles until concrete floors are cured, moisture content of floors is such that shrinkage is complete, thermal movement has been accommodated and the levels and surface finish will allow for tile laying of the required standard.

3.8 SUBSTRATE TEMPERATURE
Do not carry out tiling where the substrate temperature is below 5°C or above 40°C.

3.9 MOISTURE CONTENT
Ensure the floor is dry and if in doubt check for moisture content by hygrometer. Do not proceed with tiling work until readings for the whole area show 75% relative humidity or less.

Application

3.10 APPLICATION GENERALLY
Prepare backgrounds as described in AS 3958.1, Section 4. Suitably prepare backgrounds and substrates to the manufacturer's instructions to receive the bedded

finish. Remove all dirt, dust, grease, oil, loose particles and any other form of contamination or deleterious material. Ensure that substrates are sound and dry.

Installation to be in accordance with AS 3958.1, Section 5, including setting out, fitting, movement joints, sealants, tile finish and joints, and grouting.

3.11 BACKGROUND MATERIALS

Ensure that the installation of background materials and substrate materials meets relevant standards and the manufacturer's instructions. Inspect background and substrate materials for any conditions unsuitable for tiling over. Do not commence work until the affected area is rectified. Confirm any specific preparation required for the adhesive being used.

3.12 UNDERLAY

Underlay material: CFC sheet 6mm or DS60 as advised.

Locations:	In internal locations apply underlay over the following flooring backgrounds subject to movement - strip timber flooring (T&G); particleboard sheet flooring.
Installation:	Supply and install CFC to the manufacturer's recommendations.

Waterproofing

3.13 WET AREA WATERPROOFING

Provide waterproofing to wet areas as described in AS 3740.

Material:	Refer to SELECTIONS
Locations:	Extent of wet areas as described in AS 3740 and as shown on the drawings.
Installation:	Supply and install waterproofing membrane to the manufacturer's recommendations by an Ardex approved Superflex waterproofing applicator.

Screed

3.14 SCREED

Install as described in AS 3958.1, appendix A.

Preparation:	Apply a slurry coat to background of 3:2 by volume of cement to Abacrete, to improve adhesion.
Mixing:	For screeds mix 21 litres of diluted Abacrete (1:3 by volume, Abacrete to water) with 40kg of Portland cement and 120kg of clean sand. Apply screed while slurry coat is still damp.
Thickness:	Reinforce as per AS 3958.1 if over 40mm thick. Minimum screed thickness is 15mm with Abacrete.
Tiling over:	Allow at least 7 days after screeding before tiling over, unless using X77 or X78 in which case tiling can commence after 16 hours.

3.15 CEMENT RENDER

Prepare surfaces, mix and apply as described in AS 3958.1, Appendix B.

Cement render:	Apply slurry coat and render coat to required thickness.
Slurry coat:	3:2 by volume of cement to Abacrete.
Render coat:	Mix 27 litres of diluted Abacrete (1:3 by volume, Abacrete to water) with 40kg of Portland cement and 120kg of clean sand. Apply render while slurry coat is still damp. Apply renders up to 13mm thick in the normal manner. For renders over 13mm contact Ardex before proceeding.
Tiling over:	Allow at least 7 days after rendering before tiling over, unless using X77 in which case tiling can commence after 16 hours.

Tiling

3.16 ADHESIVE APPLICATION METHODS

Ensure that the whole of the back of the tile is in good contact with the adhesive with no voids. Remove a tile periodically during installation to ensure correct coverage. Do not fix tiles over skinned adhesive.

Notched trowel method

Adhesive application to be as described in AS 3958.1, clause 5.6.2(a). Notched trowel sizes shall be 4.5mm x 4.5mm x 4.5mm (mosaics) 6mm x 6mm x 6mm, 10mm x 10mm x 10mm, 12mm x 12mm x 12mm. Use an appropriately notched trowel to achieve full coverage.

Buttering method

Adhesive application to be as described in AS 3958.1, Clause 5.6.2(c).

Tiles in awkward locations

The buttering method may be required, or fixing might be necessary to achieve full bedding, even though the notched trowel method is used generally.

3.17 SETTING OUT

Setting out, cutting and fitting of tiles to be as described in AS 3958.1, clauses 5.4.2 and 5.4.3. Set out tiling as shown on the drawings. Confirm bond and pattern before installing. Provide even and correct falls to floor tiles where required, including falls to floor wastes. Ensure that a level finish is provided at wall lines. Where falls are not required ensure that the tiles are laid level.

3.18 TILE FINISH AND JOINTS

Provide tile finish and joints, including tolerances, as described in AS 3958.1, clause 5.4.6. Joint widths to be suited to tile and to the manufacturer's instructions.

3.19 MOVEMENT JOINTS

Provide movement joints as described in AS 3958.1, clause 5.4.5 and AS 3740, clause 8.5.

Depth:	Movement joints to go right through the tile and bed to the background.
Width:	Minimum 6mm.
Corner locations:	In wall tiling at internal vertical corners; in floor tiling at walls, columns, nibs, hobs and similar.
Interruptions:	Around sanitary fixtures, around fixtures interrupting the tile surface; at junctions with joinery fixtures, including window and door frames and built in cupboards; at changes in substrate or background.
Large areas:	In floor tiling provide joints at not less than 4.5 metres spacing in both directions and 3.5 metres externally. In wall tiling provide vertical joints at not less than 3.5 metres spacing along the length of a wall. In wall tiling, provide horizontal joints at each story rise in the height of a wall. Over all existing expansion joints.

3.20 GROUTING

Grout tiling to AS 3958.1, clause 5.7.

3.21 SILICONE

Apply Ardex SE acetic cure or Ardex ST neutral cure silicone to movement joints between tiles, and at junctions to tiled walls and tiled floors. The silicone should only be fixed to two surfaces to allow movement. On flat joints use a polyethylene tape or release agent and on floor to wall joints greater than 10mm deep use a backing rod.

Completion

3.22 REPLACE

Replace damaged tiles or elements.

3.23 CLEANING

Upon completion of setting and grouting, thoroughly sponge and wash the tiles to leave them completely clean and without blemish. Finally polish glazed tiles with a clean dry cloth.

3.24 LEAVE

Leave work to the standard required by following procedures.

3.25 REMOVE

Remove debris, unused materials and elements from the site.

3.26 PROTECT TILES

Protect tiles from damage. Ensure tiles are not disturbed by foot traffic for at least 24 hours after laying and after grouting. Provide protection to tiles by laying sheet material such as insulating board for the period between completion of laying and completion of the contract works.

6700D DULUX PAINTING GENERAL

1. GENERAL

This section relates to the general matters related to painting work.

1.1 RELATED WORK

Refer to 6711D DULUX PAINTING EXTERIOR for exterior paint systems.
Refer to 6721D DULUX PAINTING INTERIOR for interior paint systems.
Refer to 6711DE DULUX ENVIRONMENTAL PAINTING EXTERIOR for environmental exterior paint systems.
Refer to 6721DE DULUX ENVIRONMENTAL PAINTING INTERIOR for environmental interior paint systems.

1.2 ABBREVIATIONS

The following abbreviations are used throughout this part of the specification:

APAS	Australian Paint Approval Scheme
MPNZA	Master Painters New Zealand Association Inc.
VOC	Volatile organic compound

Documents

1.3 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

AS/NZS 2311	Guide to the painting of buildings
AS/NZS 2312	Guide to the protection of structural steel against exterior atmospheric corrosion by the use of protective coatings
AS/NZS ISO 9001	Quality management systems - Requirements
OSH	Guidelines for the provision of facilities and general safety in the construction industry
OSH	Guidelines for the management of lead-based paint
MPNZA	Specification manual
MPNZA	Painters hazard handbook

Health and Safety in Employment Act 1992

1.4 MANUFACTURER'S DOCUMENTS

Manufacturer's and supplier's documents relating to work in this section are:
Dulux DuSpec specification sheets and product data sheets

Copies of relevant literature are available from **Dulux**

Web:	www.duspec.co.nz
Email:	specifier@dulux.co.nz
Telephone:	0800 800 424
Facsimile:	0800 801 424

Warranties

1.5 WARRANTY

Warrant this work under normal environmental and use conditions against failure of materials and execution.

Product warranty: Products must be applied in accordance with application and preparation procedures according to **Dulux** Duspec Specifications and Product Data Sheets.

Refer to the general section 1237WA WARRANTY AGREEMENT for the required format and details of when completed warranty must be submitted.

Requirements

1.6 NO SUBSTITUTIONS
Substitutions are not permitted to any specified **Dulux** system, or associated components and products.

1.7 QUALIFICATIONS
Painters to be a member of MPNZA and experienced competent workers, familiar with the materials and the techniques specified.

1.8 CONTROL SAMPLES
Prepare samples of the finished work as scheduled, including preparation and colour as specified. Obtain written approval of the appearance before proceeding. Refer to SELECTIONS for requirements.

Use the **Dulux** Architectural Brushouts as a basis of standard where appropriate. Fax requests through to **Dulux.**

1.9 HEALTH AND SAFETY
Refer to the requirements of the Health and Safety in Employment Act and OSH: Guidelines for the provision of facilities and general safety in the construction industry. If the elimination or isolation of potential hazards is not possible then minimise hazards in this work on site by using the proper equipment and techniques as required in the MPNZA Painters hazard handbook. Supply protective clothing and equipment. Inform employees and others on site of the hazards and put in place procedures for dealing with emergencies.

Refer to OSH: Guidelines for the management of lead-based paint for the required procedures and precautions when:
- treating/removing lead-based paint
- burning off paint
- sanding off paint
- using solvent based paint removers.

1.10 MATERIAL SAFETY DATA SHEETS
Refer to **Dulux** for the material safety data sheets for every applicable product and comply with the safety procedures listed. Keep sheets on the site.

Performance

1.11 DULUX INSPECTION
Permit representatives of **Dulux** to inspect the work in progress and take samples of their products from site if requested.

1.12 INSPECTION OF THE WORK
Inspection of the whole of the work at each of the stages set out in SELECTIONS may be made. Agree a programme that will facilitate such inspection, including notification when each part and stage of the work is ready for inspection.

2. PRODUCTS

Materials

2.1 PAINT TYPES
Use the manufacturer's complete system and only the products specified.

2.2 MATERIALS GENERALLY
Use only **Dulux** products which are guaranteed for their consistency and performance under ISO 9001 and APAS approval, prepared, mixed and applied as directed in the **Dulux** Duspec specification sheets, specification manuals and product data sheets.

2.3 THINNERS/ADDITIVES
Use only if and when expressly directed by **Dulux** for their particular product in a particular application.

Accessories

2.4 FILLERS
For recommendations on; fillers, stopping, paint strippers, cleaning agents, etching solutions, mould inhibitors, rust inhibitors, knotting and other commodities used for the surface preparation, refer to the manufacturer of the specified coating.

2.5 GYPSUM FILLER - INTERIOR
Finishing compound to match the plasterboard stopping system and finishing grade gypsum plaster to match the fibrous plaster system. For interior surfaces such as paper faced plasterboard use **Dulux** Professional Ultra 5 Surface Prep & Finish as an aid to achieving a Level 5 finish.

3. EXECUTION

Conditions

3.1 EXECUTION
To conform to manufacturer's requirements and those methods, practices and techniques contained in AS/NZS 2311, the MPNZA Specification manual, and OSH Guidelines for the provision of facilities and general safety in the construction industry.

3.2 PREPARE
Prepare surfaces to the coating manufacturer's requirements.

3.3 COATED SURFACES
Ensure that substrate surfaces are able to achieve the specified finish.

3.4 PRE-PRIMED SURFACES
Sand down any breakdown or damage of the primer to a sound surface and immediately re-prime.

3.5 BRUSH DOWN
Brush down surfaces immediately before application, to remove dust, dirt and loose material.

3.6 COMPATIBILITY
Check that materials are as required by the paint manufacturers for the particular surface and conditions of exposure, and that they are compatible with each other. Use paint from the same manufacturer for each paint system. If not compatible, obtain instructions before proceeding.

3.7 TREATED SURFACES
Where surfaces have been treated with preservatives or fire retardants, check with the treatment manufacturer that coating materials are compatible with the treatment and do not inhibit its performance. If they are not compatible, obtain instructions before proceeding.

3.8 ANCILLARY SURFACES
The coatings listed in schedules and elsewhere are of necessity simplified. Coat ancillary exposed surfaces to match similar or adjacent materials or areas, except where a fair-faced natural finish is required or items are completely prefinished. In cases of doubt obtain instructions before proceeding.

3.9 HARDWARE
Do not paint hinges or hardware that cannot be removed. If items can be removed, carefully remove hardware, fixtures and fittings before commencing work. Set aside where they cannot be damaged or misplaced and replace on completion.

3.10 PROTECTION
Use dropsheets, coverings and masking necessary to protect adjoining fixtures, fittings and spaces from paint drops, spots, spray and damage.

Preparation - unpainted and pre-primed timber and wood based products

3.11 MOISTURE CONTENT
Ensure moisture content at the time of application is near to the equilibrium moisture content pertaining to the particular locality in which the timber is used, without any excessive moisture content gradient between core and surface.

3.12 PREPARING DRESSED TIMBER
Ensure dressed timber is smooth, free from raised or woolly grain, planing burrs or other machining defects. Slightly round or ease sharp edges to ensure they can be properly coated. Sand timber to bring up to a smooth finish along the direction of the grain. Sand timber back to new condition timber that has been weathered.

3.13 PREPARING ROUGH SAWN TIMBER
Thoroughly brush along the direction of the grain to remove dust and dirt.

3.14 PREPARING PRE-PRIMED TIMBER
Check pre-prime coat for damage, powdering, weathering or loss of adhesion. Where primer is sound, thoroughly brush along the direction of the grain to remove dust and dirt. If there is doubt, sand back and re-prime.

3.15 TIMBER SPECIES
Check that the preparation and paint system is suitable for the timber species.

3.16 PREPARING DAMAGE AND DEFECTS
Scrape clean loose or soft material holes, depressions, resin or gum pockets, knot holes, surface splits, checks, or any localised decay. Apply primer and/or sealer specified and fill these areas with linseed oil putty or other appropriate filler.

3.17 FIXINGS
Take timber fixings below the painted or clear finished surface. Leave corrosion resistant timber fixings flush with clear finished surfaces.

3.18 CLEANING
Remove grease and oil by wiping down with solvent or water-based degreasing agent. Remove resin by wiping down with solvent or water-based degreasing agent or heating and scraping. Remove sanding dust. Bad staining may be untreatable and require replacement of timber, discuss with paint manufacturer and main contractor.

Preparation - unpainted metal

3.19 PREPARING STEEL
Remove loose rust and mill scale by hand-tool or power-tool cleaning. Remove more adherent rust and scale by abrasive blast cleaning or pickling. Use chemical pre-treatment to remove the last traces of rust and to inhibit rust formation.

In wet/damp areas follow the requirements of AS/NZS 2312 for surface preparation treatments.

3.20 PREPARING ZINC AND ALUMINIUM-ZINC ALLOY COATED STEEL
Remove grease, oil and other solvent soluble contaminants by wiping and/or brushing with mineral turpentine or white spirit. Wipe with a clean solvent. Allow to dry and proceed immediately with the next operation.

3.21 PREPARING ALUMINIUM
Remove grease, oil and dust by wiping and/or brushing with mineral turpentine or white spirit. Wash thoroughly using water with a few drops of detergent, then wash with clean water. Allow to dry and proceed immediately with the next operation.

Preparation - unpainted masonry

3.22 PREPARING BRICKS

Remove loose dirt, sand, aggregate and mortar by brushing down or blocking-off surface with a flat stone, hose with clean water. Fill holes with mortar/acrylic based filler. Remove efflorescence by dry brushing with a stiff bristle brush. Brickwork that has been acid cleaned shall have the pH tested to ensure it is neutralized before painting.

3.23 PREPARING CONCRETE

Remove grease and formwork oil with solvent or water and household detergent. Wash with clean water and allow to dry. Fill unwanted holes with cement grouting and allow to cure. Remove loose surface material and surface projections with a flat stone. Roughen slightly dense or glazed surfaces with light (30 mesh) sandblasting, rubbing with coarse abrasive stones, or by wetting the surface and treating with 10% commercial hydrochloric acid solution. Allow to react for 5 minutes, scour surface with a stiff bristle brush, wash off with clean water and allow to dry. Remove efflorescence by dry brushing or by wetting the surface and treating with 10% commercial hydrochloric acid solution as above.

Remove dust and dirt by brushing, air blast, hosing, or scrubbing as may be necessary.

3.24 PREPARING CEMENT PLASTER

Ensure surface is adequately cured and dry. Treat mould with one part sodium hypochlorite household bleach to three parts clean water solution or a proprietary anti-mould solution, and allow to dry. Remove efflorescence by brushing only.

3.25 PREPARING CONCRETE MASONRY

Remove loose dirt, sand, aggregate and mortar by brushing down or blocking-off the surface with a flat stone or hardwood block. Fill holes with mortar or acrylic based filler. Treat mould with one part sodium hypochlorite household bleach to three parts clean water solution, or a proprietary anti-mould solution, and allow to dry.

Remove efflorescence by dry brushing or by wetting the surface and treating with 10% commercial hydrochloric acid solution. Allow to react for 5 minutes, scour the surface with a stiff bristle brush, wash off with clean water and allow to dry.

Remove dust and dirt by brushing, air blast, hosing or scrubbing.

Preparation - gypsum plaster

3.26 PREPARING GYPSUM PLASTER

Fill and sand small crevices and cracks. Surface moisture content not to exceed 12% at time of coating.

Preparation - unpainted linings

3.27 PREPARING FIBROUS PLASTER

Check for and remove release agents and other contaminants by washing with clean water or solvent and allow to dry. Fill cracks and surface imperfections with patching plaster and lightly sand smooth. Remove dust.

3.28 PREPARING PLASTERBOARD

Check that joints are prepared to a smooth level surface finish. Fill cracks and surface imperfections with the sheet manufacturer's required stopping compound and lightly sand smooth. Remove dust.

Preparation - unpainted plastics

3.29 PREPARING POLYESTERS (GRP) AND PHENOL FORMALDEHYDES

Wipe surfaces with methyl ethyl ketone or other suitable solvent. Lightly abrade with sandpaper and dust off. Proceed immediately with priming.

3.30 PREPARING UNPLASTICISED POLYVINYL CHLORIDE (uPVC)

Wipe surfaces with mineral turpentine, methylated spirits or white spirit. Lightly abrade with sandpaper and dust off. Proceed immediately with topcoats applicable for walls or timber finishes.

Application - before applying final coatings

3.31 OFF-SITE WORK
Carry out off-site preparation and coating under cover, in a suitable environment and with adequate lighting. Store items both before and after coating in a clean, dry area, protected from the weather and mechanical damage, properly stacked and spaced to permit air circulation and to prevent sticking of surfaces.

3.32 PRIMING JOINERY
Before priming preservative treated timber ensure that any cut surfaces have been retreated. Liberally coat end grain, allow to soak in and then recoat. Ensure LOSP. treated joinery has dried sufficiently to lose odour.

3.33 CONCEALED JOINERY SURFACES
Apply off-site coatings to all surfaces including those which will be concealed when incorporated into the building.

3.34 CONCEALED METAL SURFACES
Apply primer to suit the coating system to all metal surfaces which will be concealed when incorporated into the building.

3.35 DOORS
Prime or seal and paint all six faces of doors before hanging.

3.36 BEAD GLAZING
Before glazing apply the first two coats, or the primer and one undercoat, to rebates of stained, varnished or painted joinery and beads.

3.37 PUTTY FRONTING
According to the painting manufacturer's instructions allow putty to set, then prime with **Dulux** Prepcoat Oil Based Primer Undercoat. Fully protect the putty by completing the **Dulux** coating system as soon as it is sufficiently firm.

Application - generally

3.38 PAINTING GENERALLY
Comply with the **Dulux** Duspec specification sheets, specification manuals and product data sheets and the additional requirements of this work section.

3.39 MIXING
Thoroughly mix paints. Lift any settled pigment and ensure the paint is homogenous.

3.40 ENVIRONMENT
Paint exterior surfaces only in favourable weather conditions:
- warm dry days without frost or heavy dews
- avoid painting in direct sunlight any surfaces that absorb heat excessively
- as far as possible apply paint in the temperature range 15°C to 25°C
- do not paint if temperatures fall outside the range of 10°C and 35°C unless paints with the necessary temperature tolerance have been specified
- do not apply solvent borne paint if moisture is present on the surface

3.41 SEQUENCE OF OPERATIONS
Painting work to generally the following sequence:
- Complete surface preparation before commencing painting
- Apply primers, sealers, stains, undercoats, paints and clear coatings in the sequences laid down by **Dulux**
- Allow the full drying times between coats laid down by **Dulux**
- Do not expose primers, sealers and undercoats beyond a few days before applying the next coat
- Finish broad areas before painting trim
- Ensure batch numbers of tins are matched for whole areas

- Internally paint ceilings before walls and walls before joinery, trim and other items.

3.42 PAINT APPLICATIONS
Select brush, roller, or pad and apply paint to the requirements of **Dulux** and to obtain a smooth even coating of correct thickness, uniform gloss and colour.

3.43 DRYING TIME
Before handling or applying the next coat of paint, give each coat the full drying time as required by the paint manufacturer. Ensure that surfaces are dry and that condensation does not occur before the paint reaches surface-dry condition.

3.44 LIGHTLY SAND
Lightly sand primers, sealers, undercoats and intermediate coats to remove dust pick-up, protruding fibres and coarse particles. Remove dust immediately before applying the next coat.

3.45 DEFECTIVE WORK
Correct defective work immediately and re-coat as required, following precisely the **Dulux** paint system specified.

3.46 EACH COAT
Each coat of paint and the completed paint system to have the following qualities and properties:
- uniform finish, colour, texture, sheen and hiding power
- the specified number of coats applied
- no blemishes such as runs, sags, crinkling, fat edges, entrained paint skins, hairs, dust, bare or starved patches, cracks, brush marks, ladder marks and blistering
- proper covering of corners, crannies, thin edges, cracks, end grain and other difficult places of application

Completion

3.47 CLEAN
Clean adjoining surfaces, glass and fittings of any paint contamination. Clean off glass indicators at completion of the building works. Clean glass inside and out to a shining finish.

3.48 CLEAN EQUIPMENT
Use **Dulux** Envirosolutions wash system for the cleaning of water-based paint and plasters from brushes, rollers, plastering or spray equipment to separate the solids from the water component for safe disposal. Phone 0800 800 424 for information regarding this system.

3.49 LEAVE
Leave the whole of this work uniform in gloss and colour, of correct thickness, free from painting defects, clean and unmarked and to the standard required by following procedures.

3.50 REMOVE
Remove dropsheets, coverings and masking to leave surrounding surfaces and areas clean, tidy and undamaged. Remove debris, unused materials and elements from the site.

3.51 REPLACE HARDWARE
Replace hardware without damage to it or the adjoining surface. Leave properly fitted and in working order.

4. SELECTIONS
Substitutions are not permitted to the following, unless stated otherwise.

4.1 SELECTIONS
Refer to 6711D DULUX PAINTING EXTERIOR and 6721D DULUX PAINTING INTERIOR for selections.

Refer to 6711DE DULUX ENVIRONMENTAL PAINTING EXTERIOR and 6721DE DULUX ENVIRONMENTAL PAINTING INTERIOR for selections.

6711D DULUX PAINTING EXTERIOR

1. GENERAL

This section relates to the surface preparation and painting of new and existing exterior substrates using **Dulux** exterior paint systems.

1.1 RELATED WORK

Refer to 6700D DULUX PAINTING GENERAL for general matters related to painting work.

2. PRODUCTS

2.1 PRODUCTS

Refer to 6700D DULUX PAINTING GENERAL for product clauses.

3. EXECUTION

3.1 EXECUTION

Refer to 6700D DULUX PAINTING GENERAL for execution clauses.

4. SELECTIONS

Substitutions are not permitted to the following, unless stated otherwise.
All VOC levels quoted are based on white topcoats and will vary when tinted. Refer to DULUX Duspec for up to date VOC levels as these are subject to change.

Exterior Decorative Paint Systems

Supply the listed **Dulux** Paint systems for the following new substrates:

4.1 EXTERIOR TIMBER -WALL AREAS

Coating type:	Water based low sheen
System:	DuSpec NZSD2361
Preparation:	PTI003
1st coat:	DULUX Prepcoat Acrylic Primer Undercoat @12 sqm / litre
2nd coat:	DULUX Weathershield X10 @16 sqm / litre
3rd coat:	DULUX Weathershield X10 @16 sqm / litre

4.2 EXTERIOR CEMENTITIOUS - MASONRY, BRICK, BLOCKWORK

Coating type:	Water based low sheen
System:	DuSpec NZSD3706
Preparation:	PBK019
1st coat:	DULUX Prepcoat Acrylic Sealer Undercoat @ 12 sqm / litre
2nd coat:	DULUX Weathershield X10 @ 16.1 sqm / litre
3rd coat:	DULUX Weathershield X10 @ 16.1 sqm / litre

4.3 EXTERIOR CEMENTITIOUS - NEW CEMENT RENDER HIGH BUILD MASONRY, BLOCKWORK

Coating type:	Water based matt
System:	DuSpec NZSA0547
Preparation:	PCE007
1st coat:	DULUX Acratex 501/8 HAR Primer @ 10 sqm / litre
2nd coat:	DULUX Acra-Shield Matt @ 6.7 sqm / litre
3rd coat:	DULUX Acra-Shield Matt @ 6.7 sqm / litre

4.4 EXTERIOR GALVANIZED IRON, ZINCALUME

Coating type:	Water based low sheen
System:	DuSpec NZSD0397
Preparation:	PZC012
1st coat:	DULUX Quit Rust Galvanised Iron Primer Plus @ 14.8 sqm / litre
2nd coat:	DULUX Weathershield X10 @ 16.1 sqm / litre
3rd coat:	DULUX Weathershield X10 @ 16.1 sqm / litre

4.5 EXTERIOR PLASTICS

Coating type:	Water based low sheen
System:	DuSpec NZSD0407
Preparation:	PPC011
1st coat:	DULUX Prepcoat Primerlock @ 10 sqm / litre
2nd coat:	DULUX Weathershield X10 @ 16.1 sqm / litre
3rd coat:	DULUX Weathershield X10 @ 16.1 sqm / litre

4.6 EXTERIOR FIBRE CEMENT SHEETING

Coating type:	Water based low sheen
System:	DuSpec NZSD2634
Preparation:	PFC013
1st coat:	DULUX Prepcoat Acrylic Primer Undercoat @ 13.7 sqm / litre
2nd coat:	DULUX Weathershield X10 @ 16.1 sqm / litre
3rd coat:	DULUX Weathershield X10 @ 16.1 sqm / litre

Exterior Stain & Semi Transparent Systems

4.7 EXTERIOR TIMBER -WALL AREAS STAINED WATER BASED

Coating type:	Water based stain matt (NB: Use to change the colour of timber)
System:	DuSpec NZSW0443
Preparation:	PTI003
1st coat:	CABOT'S Deck & Exterior Stain @ 11.5 sqm / litre
2nd coat:	CABOT'S Deck & Exterior Stain @ 11.5 sqm / litre
Optional:	CABOT'S Deck & Exterior Stain @ 11.5 sqm / litre

6721D DULUX PAINTING INTERIOR

1. GENERAL

This section relates to the surface preparation and painting of new and existing interior substrates using **Dulux** interior paint systems.

1.1 RELATED WORK

Refer to 6700D DULUX PAINTING GENERAL for general matters related to painting work.

2. PRODUCTS

2.1 PRODUCTS

Refer to 6700D DULUX PAINTING GENERAL for product clauses.

3. EXECUTION

3.1 EXECUTION

Refer to 6700 PAINTING GENERAL for execution clauses.

4. SELECTIONS

Substitutions are not permitted to the following, unless stated otherwise.
All VOC levels quoted are based on white topcoats and will vary when tinted. Refer to DULUX Duspec for up to date VOC levels as these are subject to change.

Interior Decorative Paint Systems

Supply the listed **Dulux** paint systems for the following new substrates:

4.1 INTERIOR PAPERFACED PLASTERBOARD - WALLS PAINT FINISH

Coating type:	Water based low sheen
System:	DuSpec NZSD0088
Preparation:	PPL008
1st coat:	DULUX Prepcoat acrylic sealer undercoat @ 12 sqm / litre
2nd coat:	DULUX Wash & Wear 101 @ 16.1 sqm / litre
3rd coat:	DULUX Wash & Wear 101 @ 16.1 sqm / litre
Spread of Flame Index	= 0
Smoke Development Index	= 2

4.2 INTERIOR PAPERFACED PLASTERBOARD - WALLS - WATER BASED ENAMEL

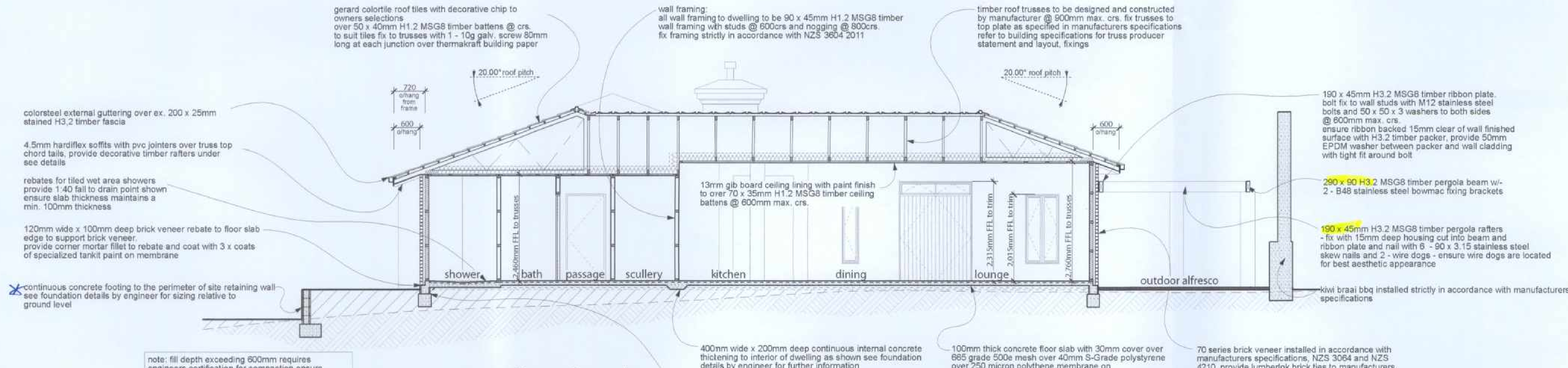
Coating type:	Water based enamel low sheen
System:	DuSpec NZSD0178
Preparation:	PPL008
1st coat:	DULUX Prepcoat acrylic sealer undercoat @ 12 sqm / litre
2nd coat:	DULUX Aquanamel @ 16.1 sqm / litre
3rd coat:	DULUX Aquanamel @ 16.1 sqm / litre
Spread of Flame Index	= 0
Smoke Development Index	= 3

4.3 INTERIOR PAPERFACED PLASTERBOARD - WALLS - SUPERIOR FINISH

Coating type:	Water based low sheen
System:	DuSpec NZSD3798
Preparation:	PPL008
1st coat:	DULUX Professional Ultra 5 Surfacer Prep & Finish @ 5 sqm / litre
2nd coat:	DULUX Wash & Wear 101 Advanced @16.1 sqm / litre
3rd coat:	DULUX Wash & Wear 101 Advanced @16.1 sqm / litre

4.4 INTERIOR PAPERFACED PLASTERBOARD - WALLS - HIGH SERVICE AREAS

Coating type:	Water based semi gloss
System:	DuSpec NZSI0509
Preparation:	PPL008
1st coat:	DULUX Prepcoat acrylic sealer undercoat @ 12 sqm / litre
2nd coat:	DULUX Enviropoxy WBE @ 8.4 sqm / litre



cross section A - A

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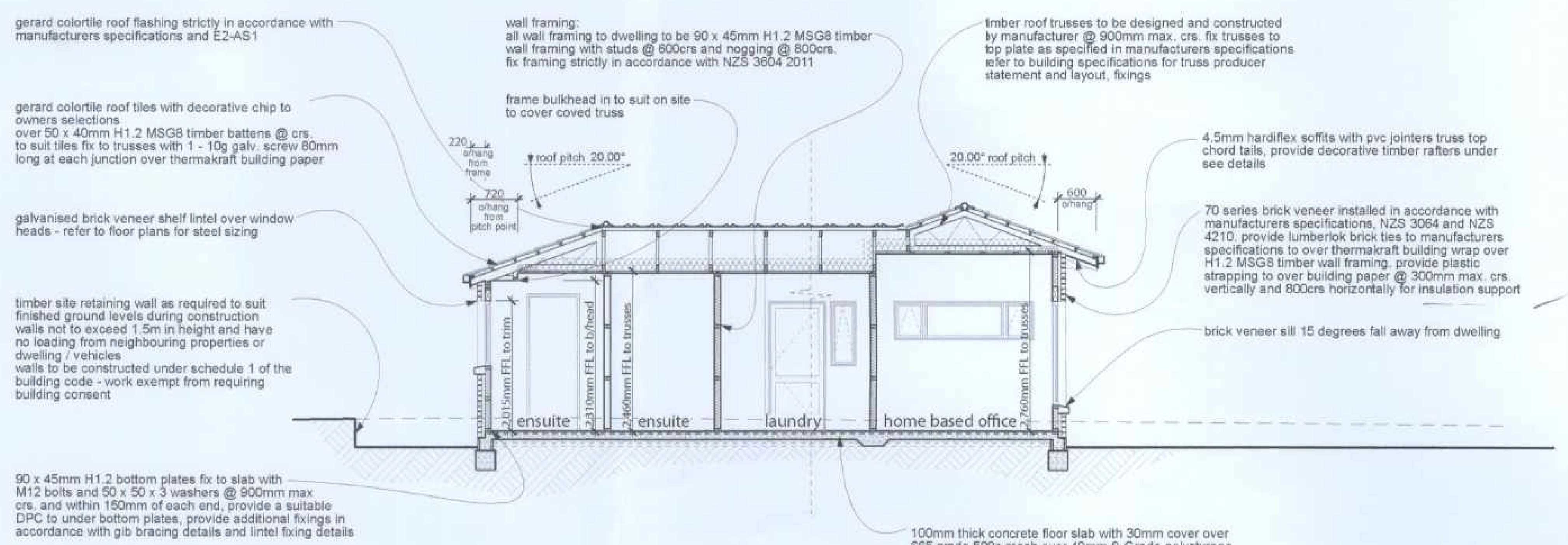

cross section B - B

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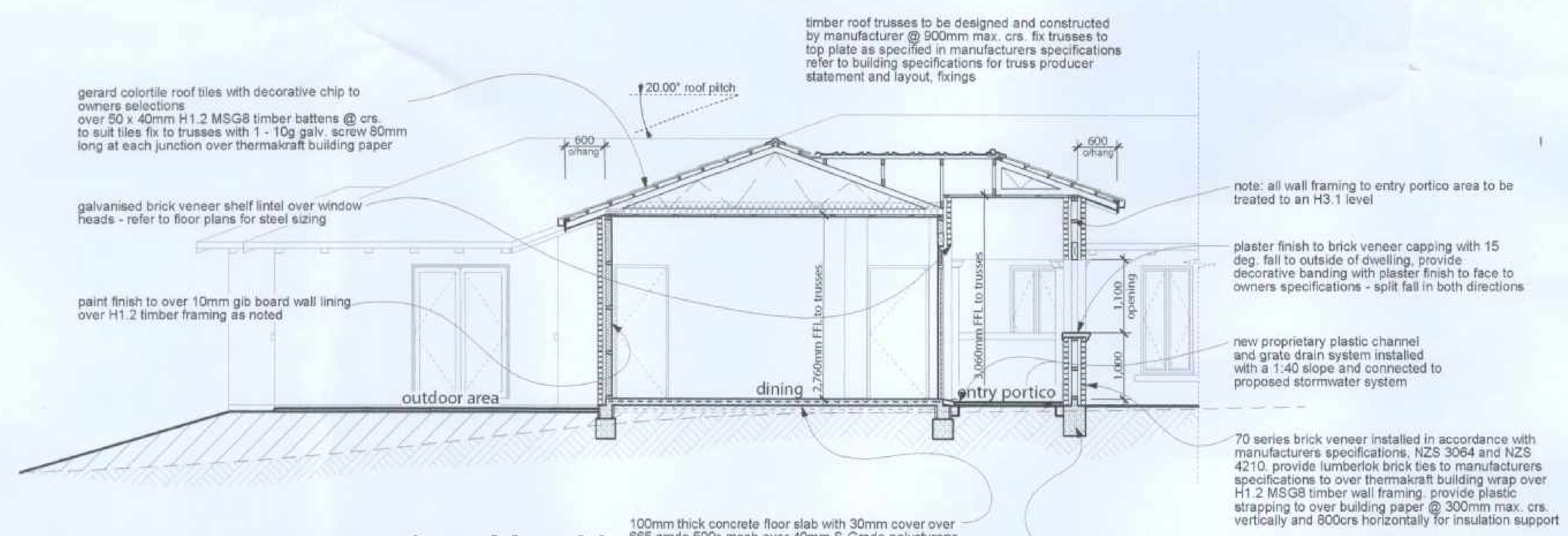

cross section M - M

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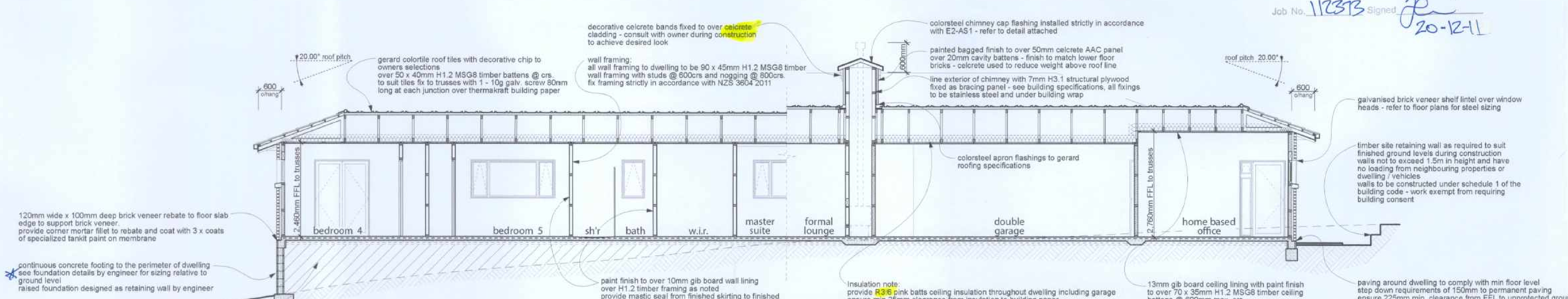
NOTE: provide WANZ support bars under all joinery units including full height door units



cross section N - N

scale = 1 : 75

APPROVED
These plans are approved in accordance with The NZ Building Code. These plans must remain on site. TAURANGA CITY COUNCIL

DESIGN ENGINEER
The structural elements designated * on this drawing have been designed by Kirk Roberts Consulting Engineers Ltd.
Job No. 112373 Signed [signature] 20-12-11

TCC597574

GENERAL CONSTRUCTION NOTES:

CLADDING:
painted bagged 70 series brick over nominal 50mm cavity (min. 40mm)

JOINERY:
Powder coated aluminium windows and doors as per plan installed to E2-AS1. Double glazing to all units. Obscure glazing as noted on elevations. All windows and doors include condensation channels. Two catches to all sashes wider than 600mm. Provide WANZ support bars to under all openings

TIMBER FRAMING:
90 x 45mm H1.2 SG8 timber wall framing with studs @ 600crs and nogging @ 800crs. provide additional 140 x 35mm H1.2 SG8 top plate 90 x 45mm H1.2 bottom plates fix to slab with M12 bolts @ 900mm max. crs. and within 150mm of each end, provide a suitable DPC to under bottom plates, provide additional fixings in accordance with gib bracing details and lintel fixing details

INSULATION:
R3.6 Pink Batts Fibre Blanket to ceilings. ensure 25mm clearance to building paper to manufacturers specifications taper ends of batts as required

CEILING:
13mm standard Gib, fixed and stopped to level 4 paint quality finish. Gib Aqualine 13mm to Bathroom and Ensuite on 70 x 35mm H1.2 SG8 timber ceiling battens @ 450mm max crs

WALL LININGS:
Gib Standard 10mm, fixed and stopped to level 4 paint quality finish. Gib Aqualine to wet areas with an impervious paint finish, provide a mastic seal from skirting to finished flooring and a mastic seal from fixtures to finished wall surface

SKIRTINGS:
confirm with owner during construction

ARCHITRAVES:
confirm with owner during construction

CONCRETE SLAB CONSTRUCTION NOTES:

FLOOR SLAB:
100mm thick concrete floor slab with 30mm top cover to 665 grade 500e reinforcing mesh on 40mm H-Grade polystyrene on 250 micron polythene membrane on 25mm sand blinding (15mm level tolerance) on compacted granular base tie mesh to foundation steel at slab edge

EXTERIOR FOUNDATIONS:
as designed by engineer - refer Eng. details

BOTTOM PLATE FIXINGS - TIMBER:
provide M12 bolts and 50 x 50 x 3 washers at 900mm crs. and with within 150mm of each end to all timber framed walls, internal walls provide M12 bolts with 50 x 50 x 3 washers @ 900crs. and within 150mm of each end
provide additional fixings as required by the gib bracing and lumberlok lintel fixing details

DRAINAGE:
confirm all locations of services with drainlayer and ensure all works are complete and tested prior to slab pour
ensure drain from hot water cylinder is suitably locationed.

ELECTRICAL:
confirm all locations of services with electrician and ensure all works / conduits are in place prior to slab pour

FLOORING CHECK:
confirm locations of all saw cuts with owner prior to commencement of construction to ensure they will not interfere with the selected floor selections, relocate as required in accordance with NZS 3604 and engineering design

GENERAL SLAB CONSTRUCTION NOTES:

ensure ground levels around floor slab comply with NZS 3604 and E2-AS1
150mm min. step down from FFL to permanent paving
225mm min. step down from FFL to unprotected ground
1:25 min. fall away from the slab edge for a distance of 1m
granular fill to beneath floor slab to be compacted in layers of 150mm max. thickness so that the total thickness of the granular base is not less than 75mm and not more than 600mm granular fill shall comply with section 7.5.3.2 NZS 3604 no fill is to be placed beneath foundations or slab thickenings without seeking engineering advice and certifications for compaction fill depths exceeding 600mm require an engineer to investigate the underlying soils and certify all compaction of fill

MOWING STRIP:
provide concrete mowing strip to edge of perimeter foundations to protect foundation edge from damage

DIMENSIONS NOTE:

all slab dimensions to be confirmed with floor plan dimensions and precut manufacturers prior to slab pour

ROOF CONSTRUCTION NOTES:

ROOFING:
gerard 'colortile' roofing with decorative chip (color and style to owners selections during construction)
over 50 x 40mm H1.2 timber battens @ crs to suit tiles over thermakraft self supporting building paper over H1.2 treated timber
trusses
fix battens to roof trusses with 1 - 10g self drilling screw 80mm long - galvanised

FLASHINGS:
Colorsteel flashings to be installed in accordance with manufacturers specifications and with E2/AS1

ROOF FRAMING:
timber roof trusses to be designed and constructed by manufacturer at 900mm max. crs. fix strictly to truss manufacturers
specifications

FASCIA:
ex. 200 x 25mm H3.2 timber fascia - stain finish to owners specifications

GUTTER:
colorsteel continuous gutter with internal brackets - standard colour range

DOWNPIPES:
80mm colorsteel round profile

SOFFIT:
4.5mm hard flex soffits with pace jointers over 90 x 45mm H1.2 soffit blocking; fix to NZS 3604
provide decorative 100 x 70mm H3.2 timber outriggers under soffit
lining at 900mm crs. nail fix to soffit blocking installed prior to soffit
linings with hand driven 100mm stainless steel nails

insignia DESIGN & ARCHITECTURE LTD
p. (07) 576 4119 m. 021 156 6028
po box 8334, cherrywood, tauranga
e. info@insigniadesign.co.nz
www.insigniadesign.co.nz

JOB DETAILS:

Proposed New Five Bedroom Home

at

35 Jarrah Park Drive, Tauranga

for

N. & S. Fletcher

GENERAL DESIGN NOTES:

- do not scale from plans or details, consult with designer for confirmation if required
- Plans to be read in conjunction with the Building Specifications, Bracing Calculations, Truss Designs, Engineering Designs and Specification and Manufacturers Specifications
- all building work shall be strictly in accordance with NZS 3604 and The New Zealand Building Code and all relevant Standards and Codes
- All works shall satisfy the requirements of E2-AS1 External Moisture
- All Changes or Amendments to the Plans or Specifications to be Consulted with Insignia Design & Architecture Ltd prior to commencement
- Contractor to confirm all Dimensions, Levels, Boundary Setbacks and Setouts, Service Connections, Locations and Levels, Daylighting and Height Restriction Requirements prior to commencement of works
- Consult with Plumbing, Drainage, Electrical and All Required Sub Contractors prior to commencement of construction stages to ensure all applicable works have been completed accordingly and as required.
- All Construction Materials and Systems shall be stored, handled and installed strictly to manufacturers specifications and details
- Timber and Wood Based Products and Timber Treatment for use in the Building to comply with NZS 3602
- All Framing Shall be min. H1.2 treatment and strength grade or MSG8 or higher unless specified, refer to the plans for all timber strengths as required.
- All Glazing shall comply with NZS 4223 and the Code of Practice for Glazing in Buildings.
- Provide WANZ support bars under all Full Height Openings strictly to WANZ WIS Details.
- Concrete to be min. 20.0 mPa grade unless noted otherwise, ready mixed to NZS 3104
- Concrete Construction to NZS 3109
- Reinforcing Bars and Welded Reinforcing Mesh to AS/NZS 4671
- Construct Floor Slabs, DPM, Reinforcing and Saw Cuts to NZS 3604, Concrete Surface Finishes to NZS 3114
- Masonry Construction, Materials and Workmanship to NZS 4210
- Consent Plans subject to Acceptance by Local Council Authority, plans subject to change without notice until Final Consent Approval has been obtained.
- Consult with Insignia Design & Architecture Ltd prior to commencement of construction to ensure Final Approved sets of Plans are being used.
- No Building Works to Commence prior to receipt of Approved Consent Plans from Local Council Authority.
- Consent Plans to be submitted to Local Council Authority for Building Consent Processing within 3 months of Consent Plan date below to minimise the effects of unforeseen changes in Building Regulations and Manufacturers Specifications

DRAWING STAGE:

CONSENT PLAN

CONTENTS:

PROJECT STAGE	DATE
Concept Plan 4	11.11.2011
Engineering	06.12.2011
Consent Plan	19.12.2011

JOB NO:	SHEET:	SCALE:
2011-38	11 of 15	as noted @ A2

10 July 2012

COPY

FLETCHER, NOEL JOHN
3 JARRAH PARK DRIVE
PYES PA
TAURANGA 3112

Dear Sir/Madam

Building Consent application – 36412
Location – 35 JARRAH PARK DRIVE

On 20 February 2012 the proposed development contribution charges for the financial year beginning 1 July 2012 were first publically available. Most of these proposed charges were substantially lower than the development contribution charges that were operative at that time and that remained operative until 30 June 2012 inclusive.

Council was concerned that this may result in a large amount of building and resource consent applications being deferred until 1 July 2012 in order to secure the lower contribution charges that were proposed. It was not in the interests of the Council, the development community or individual consent applicants for this to occur.

As such, Council adopted transition provisions that provided for the refund of the difference between the operative 2011/12 development contribution charges and the operative 2012/13 development contribution charges. These transitional provisions apply to consents that were issued between 20 February 2012 and 30 June 2012 inclusive in circumstances where the total development contribution charges have reduced by at least 5%.

You have been identified as the applicant for a building consent that meets these criteria. The Council is legally obliged to refund the person or entity that paid the development contribution. As such, we recommend that you contact your agent to arrange on-payment of this refund to you if this applicable. A copy of this letter has been sent to your agent to make them aware of the situation.

For further information please contact Andrew Mead on 577-7000.

Yours sincerely

Helen Marshall
Team Leader – Building Consents
Building Services

Checksheet

☑ PIM and / or	☐ Building Consent	☐ Certificate of Acceptance	☑ Drainage/Water Connection Application (note fees)

[redacted]eived Date 21.12.11	Lodgement $ 1000.00	Receipt No. 293616	Receipt Date 21.12.11
PIM No. 36412 Issued 24/2/12	BC No. 36412 Issued 24/2/12	COA No.	Issued

Officer	Approved to Issue	Date Approved	Date Information Requested	Date Information Received	Processing Time
Vetting	[redacted]	21.12.11			
Administration	Helen	22.12.11			0
Planning	SW	18/1/12			6
Development Engineer	SW	18/1/12.			0
Health					
Trade Waste					
Hazardous Substances					
Building LP	LP	[redacted] 23/2/12	22/2		23+
Plumbing	LP	23/2/12.			0
Structural					
Consultant					
Administration	Jess	23.2.12			0
				Total Processing Time	29+

Administration Use Only

					Fees (GST incl.)
Easement	Yes / No	Issue B/C		IBC	$ 119.70
		Issue PIM/Issue Advice Note		IPI/IAN	$ 140 —
		Issue CCC		CCC	$ 90.60
Plan Processing Fee	$	Plan Processing Fee		BIN	$ 1076.43
Building Inspection Fee	$	Inspection Fee	15	BEX	$ 1830 —
		Inspection Fee Commercial		BEC	$
Compliance Schedule	Yes / No	Compliance Schedule		COM	$
		Copy of CCC to Agent		CopyCCC	$
		Asset Bond		VCB	$ 770
PIM Planning Fee	$ 137	Asset Development Inspection Fee		ADIF	$ 215
PIM Dev. Eng Fee	$ 122	Water or Drainage Connection Application Fee		I06	$ [redacted]
Total PIM Fee	$ 259	Process PIM/Plan Development Eng Assessment		PIM/PDE	$ 259.00
Building Impact Fees		BIF Wastewater	CR 67.87	BIFW	$ 3811.00
		BIF Water Supply	CR 518.81	BIWS	$ 3960.02
		BIF Com Infrastructure	CR 3722.01	BICI	$ 4495.59
		BIF Reserves	CR 1398.80	BIRC	$ 1821.48
		BIF Roading	CR 163.32	BIRD	$ 450.36
Government Levies		BRANZ Levy		I03	$ 407 —
		BIA Levy		BIA	$ 818.07
		BCA Accreditation Levy		BCA	$ 28.75
		Drainage Pollution Prevention		DPP	$ —
		Earthworks Monitoring		EMON	$ 190 —
		Total			$
SIF Fees *(PTO for Codes)*		Additional Fee			$
		Total Fee			$ 20485 —
BC Conditions	Yes / No	Less Lodgement		LOD	$ 1000 —
		Balance Owing			$ 19485 —

Invoice Number	845821	Date 23-2-12	Amount $ 19485 —
Receipt Number	388991.	Date 23.2.12	Amount $ 19,485.00

CREDIT Note 870602 10.7.12 5900.81