



**GREAT LAKE TAUPŌ**

Taupō District Council

## Property File

**Property File No:** REF250349640

*I have requested that the information be provided to me under the Local Government Official Information and Meetings Act 1987 (LGOIMA). Council is protected from liability for having provided this information by s41 of the LGOIMA. Council is not liable for any inaccuracies or errors in the information provided.*

*The information provided does not constitute a Land Information Memorandum or any similar document.*

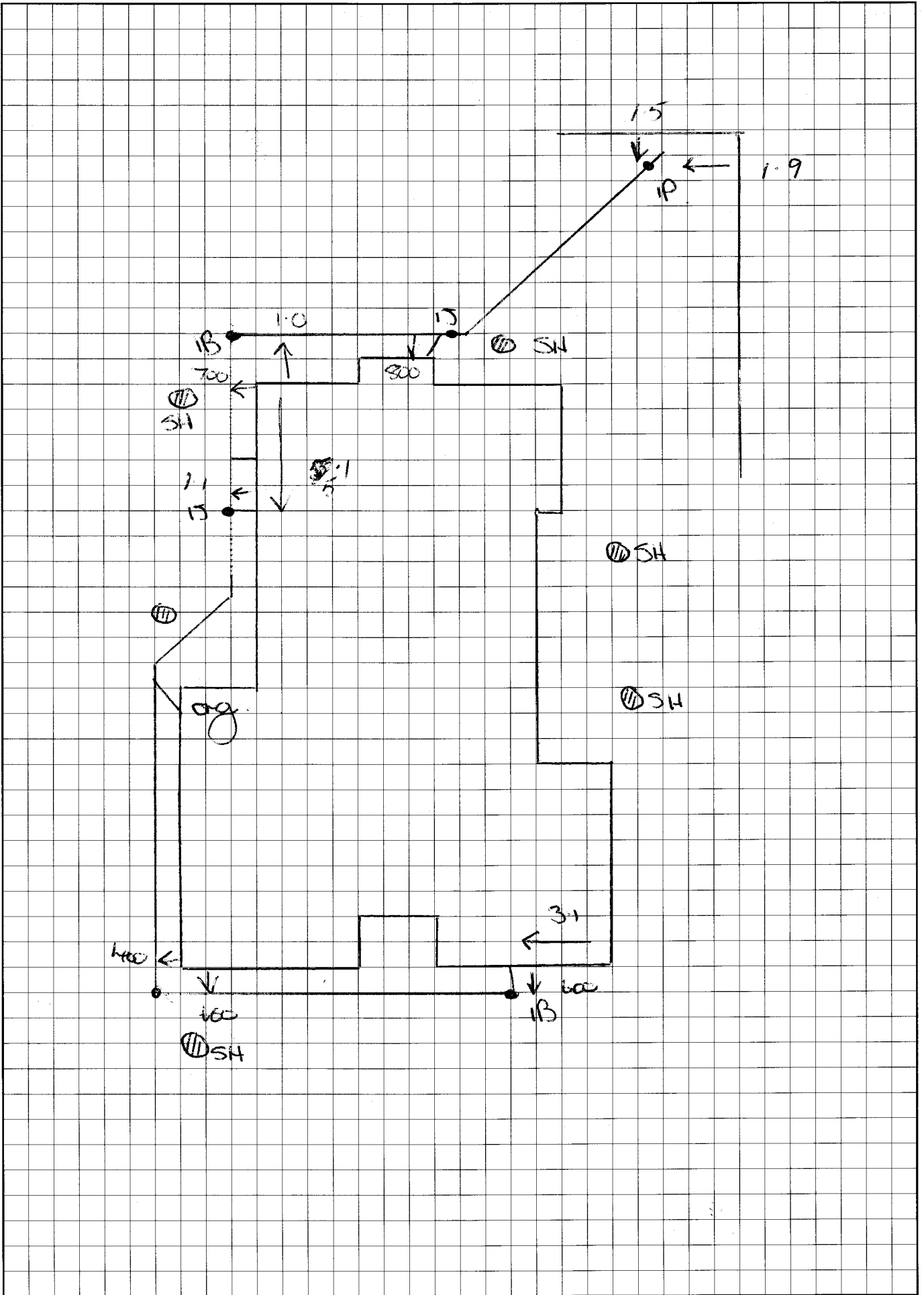
*I will only use the information for a lawful purpose and will not use, copy or distribute any private or confidential information in a way that might constitute a breach of the Privacy Act.*

*The content of this document is confidential and may contain copyright information and/or legally privileged information. If the document is not intended for you, you must not use, read, copy or distribute it. If you have received the information by mistake please call 64 7 376 0899 immediately and erase all material immediately.*

## Table of Contents

Drainage - A1021908.....	3
Envelope Cover Sheet - A1021909.....	8
Calculations - wall bracing - A1021912.....	11
Code Compliance Certificate - A121734.....	16
Inspections - A121735.....	21
Building Consent - A121736.....	31
Application Building Consent - A121737.....	34
Electrical Certificate - A121738.....	43
Correct Siting of Building - A121739.....	47
Producer Statement - floor system - A121740.....	49
Specifications - new residence - A121741.....	56
Specifications - rib raft floor system - A121742.....	70
producer Statement - Easy Beam - A121743.....	96
Producer Statement- truss design - A121745.....	100
Application Project Information Memorandum - A121746.....	105
Specific Notes Building Consent - A121747.....	126
Building plans - A123703.....	129
Resoure consent inspection - A101954.....	138
Signage - A132779.....	140
Land use to applicant - A335716.....	142
Resource consent inspection 13-11-2006 - A86586.....	144
Land Use Consent - A86587.....	146
Acceptance of application - A86589.....	159
Checklist for section 88 & 92 - A86592.....	161
Peer review checklist - A86593.....	163
Landuse engineering assessment cost - A86594.....	165
Application for resource consent - A86595.....	168
Asbuilt - Toby Connection - A592252.....	217

Drainage - A1021908



CHECKED BY: \_\_\_\_\_

BUILDING CONSENT NUMBER:

060 802

As Laid Plan for:

OWNERS NAME:

Estwar Holdings LTD

PROJECT LOCATION:

Rural ID/Street No.	Address	Locality
5	Barbary Close	Taupo

DETAILS - PLUMBER & DRAINLAYER

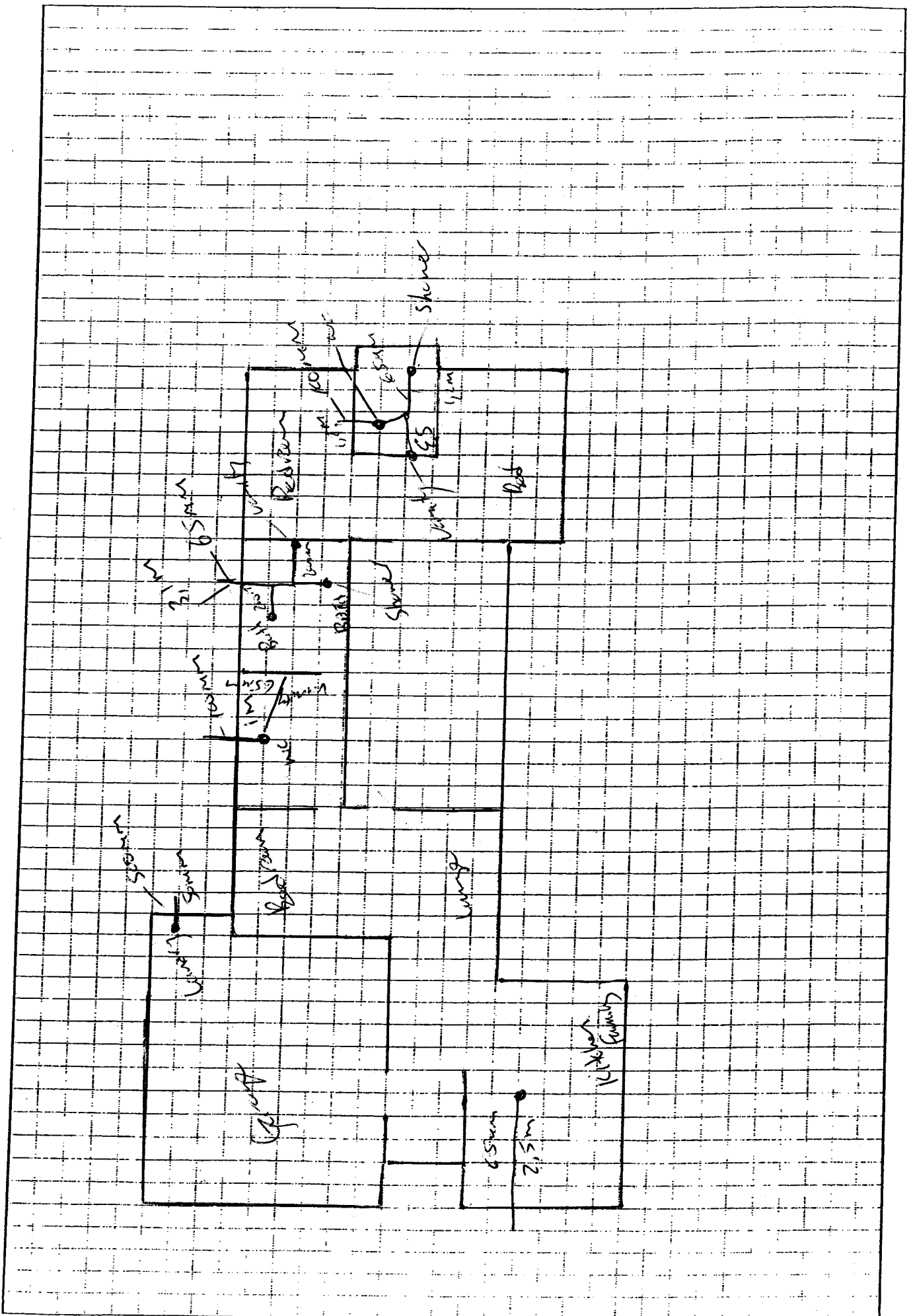
Name(s) & Registration No. (s)	Address('s)
16309 Kelvin Price	No 3 Oak Drive Taupo -

DRAW PLAN IN BLACK BALLPOINT ON GRAPH OPPOSITE

PLAN is to show:

1. All drains in correct position relative to building and boundaries
2. The road frontage
3. Depth of drains at connection points
4. All foulwater and stormwater drains
5. All inspection openings, accurately dimensioned
6. All buildings and boundaries
7. Outside water lines and the source of supply
8. The type, location and size of all on site sewage disposal systems
9. Size and position of soak holes.

REFER TO EXAMPLE ON LAST PAGE



CHECKED BY \_\_\_\_\_

BUILDING CONSENT NUMBER

060802

As Laid Plan for:

OWNERS NAME

Generation Developments Ltd

PROJECT LOCATION

Rural ID/ Street No.	Address	Locality
5	Burbury Close	Whiruwake

DETAILS – PLUMBER & DRAINLAYER

Name(s) & Registration No.(s)	Address('s)
Tony Tidswell	12/20 Totara Mews Totara Street Tunapa

**DRAW PLAN IN BLACK BALLPOINT ON GRAPH OPPOSITE**

PLAN is to show:

1. All drains in correct position relative to building and boundaries.
2. The road frontage
3. Depth of drains at connection points
4. All foulwater and stormwater drains
5. All inspection openings, accurately dimensioned.
6. All buildings and boundaries
7. Outside water lines and the source of supply.
8. The type, location and size of all on site sewage disposal systems.

**REFER TO EXAMPLE ON LAST PAGE**

Envelope Cover Sheet - A1021909

HAUFO DISTRICT COUNCIL  
**060802**  
 APPROVED CONSENT  
 PLAN REG. SECTION 223

PLAN TYPE: 8  
 CONSENT No: 060802  
 STREET CODE: 0825-5  
 STREET ADDRESS: 5 Barbary Close  
Whakamara

*Public Report*  
*28/10/06*  
*87*

*Access disq...  
 accordance  
 with  
 consent notes*

CIVIL ENGINEER  
 BUILDING INSPECTOR

TO BE CHECKED BY	ADDRESS:	LIST CODE:
BUILDING INSPECTOR <input checked="" type="checkbox"/> <i>4/8/06</i> <i>3/7/06</i>	<u>5 Barbary Close, Wharewata</u>	<u>0825 / 0005</u>
PLANNER	OWNER:	
P & D INSPECTOR	<u>Generation Developments Ltd</u>	
ENVIRONMENTAL H.O.	LEGAL DESCRIPTION	
FIRE & DANG. GOODS	VALUATION No. <u>073480900</u>	
N.Z. FIRE SERVICE	LOT No. <u>101 -</u>	
ENGINEER	D.P.D.P.S. S.O.M.L. <u>363862 -</u>	
RESERVES	SECTION	
OTHER <u>AB</u>	BLOCK	
ISSUE PERMIT	SURVEY DISTRICT	
BUILDING INSPECTOR <input type="checkbox"/>	APPLICATION AND CONSENT No.: <u>BC 060802 /</u>	<u>2/8/06</u> DUE: <del>3/1/06</del>
PROCESSING STOPPED BY FOR LACK OF:	DESCRIPTION: <u>Residential dwelling with attached garage</u>	
FEES <input type="checkbox"/> CALCS <input type="checkbox"/>	BUILDER: <u>Generation Developments Ltd</u>	
DETAILS <input type="checkbox"/> DISP. <input type="checkbox"/>	DATE APPLICATION RECEIVED: <u>4-7-06</u>	DATE PERMIT ISSUED: _____
PLANS <input type="checkbox"/> APPL. <input type="checkbox"/>	<u>Permit 3/8/06</u>	
DESIGN CERT <input type="checkbox"/> OTHER <input type="checkbox"/>		
CHECK INSIDE FOR DETAILS		

	Date	Result	Ins
Foundation			
Prefloor plumb			
Prefloor			
Bond Beams			
Precisading			
Prelim Plumbing			
Prelim			
Postline			
Drainage			
Fire			
Precast Panels			
Completion			

THIS COVER SHEET IS FOR PROCESSING PURPOSES ONLY  
 AUTHORITY TO ISSUE THE PERMIT IS PROVIDED BY THE SIGNATURES ON PAGE 4 OF THE APPLICATION FORM

*ISSUE CCC 31/10/06*



Calculations - wall bracing - A1021912

**GIB® Wall Bracing Calculation Sheet A**

single storey

V85A

GIB® EzyBrace™

GIB® Bracing Systems, 2006

**Job Details**

Name	Generation Developments Ltd.	
Street and Number		
Lot and DP Number	Lot 101 DP 363862	
City/Town/District	Aspect, Taupo	
Designer and date	Colin J. Davis	28-Jun-06
Company Name	Colin J. Davis & Associates Ltd.	

**COUNCIL / OFFICE COPY**

THESE PLANS AND SPECIFICATIONS ARE APPROVED SUBJECT TO THE PROVISIONS OF THE BUILDING ACT AND IT'S REGULATIONS AND ARE TO BE RETAINED ON THE JOB IN GOOD ORDER AND PRODUCED UPON REQUEST.

**Building Specification**

Location of Storey	single	▼
Floor Loading	2 kPa	▼
Foundation Type	slab	▼
Building Height to Apex (m)	6	▼
Roof Height above Eaves (m)	3	▼
Stud Height (m)	2.4	▼
Cladding Weight (top or single)	heavy	▼
Cladding Weight (lower)	heavy	▼
Cladding Weight (subfloor)	light	▼
Roof Weight	heavy	▼
Roof Pitch (degrees)	0-25	▼
Room in Roof Space	no	▼
Building Length (m)	17.46	
Building Width (m)	13.76	
Gross Building Plan Area (m2)	185.3	

not applicable (single storey building)  
not applicable (slab)

060802  
APPROVED CONSENT  
PLANS / SPECIFICATIONS

**Building Location**

<b>Wind Zone</b>	<b>High</b>		<b>Earthquake Zone</b>	
Region	R1	▼	A	▼
Terrain	Inland	▼		
Exposure	Exposed	▼		
Topography	Moderate	▼		

**Bracing Units required for Wind**

per m	subfloor	walls
W along	n/a	78 BUs/m
W across	n/a	78 BUs/m
<b>Totals</b>		
W along	n/a	1073 BUs
W across	n/a	1362 BUs

**Bracing Units required for Earthquake**

per m2	subfloor	walls
E	n/a	7.9 BUs/m2
<b>Totals</b>		
E along	n/a	1464 BUs
E across	n/a	1464 BUs



**GIB® Wall Bracing Calculation Sheet B**

single storey

V85A

GIB® EzyBrace™

GIB® Bracing Systems, 2006

Across									
Wall or Bracing Line		Bracing Elements provided						Wind	Earthq.
1	2	3	4	5	7	8	6	9W	10EQ
Line Label	Minimum BUs Req/Ach	Bracing Element No.	Supplier	Bracing Type	Element Length L (m)	Element Height H (m)	Angle to Bracing line (degrees)	BUs Achieved	BUs Achieved
<b>M</b>	enter	1	✓ Ply	SP1	0.9	2.4		90	90
		2	✓ Ply	SP1	1.2	2.4		120	120
line totals		3	✓ GIB®	GS1a	2.4	2.4		180	156
W	390	4							
EQ	366	5							
<b>N</b>	enter	1	✓ GIB®	GS1a	2.4	2.4		180	156
		2	✓ GIB®	GS1a	2.4	2.4		180	156
line totals		3							
W	360	4							
EQ	312	5							
<b>O</b>	enter	1	✓ GIB®	BL1	1.6	2.4		200	184
		2	✓ GIB®	GS1a	2.4	2.4		180	156
line totals		3							
W	380	4							
EQ	340	5							
<b>P</b>	enter	1	✓ Ply	SP1	0.9	2.4		90	90
		2	✓ GIB®	GS1a	2.4	2.4		180	156
line totals		3	✓ Ply	SP1	1.2	2.4		120	120
W	390	4							
EQ	366	5							
<b>Q</b>	enter	1	✓ Ply	SP2	0.6	2.4		54	48
		2	✓ Ply	SP2	0.6	2.4		54	48
line totals		3	✓ Ply	SP1	0.9	2.4		90	90
W	318	4	✓ Ply	SP1	1.2	2.4		120	120
EQ	306	5							
<b>R</b>	enter	1							
		2							
line totals		3							
W		4							
EQ		5							
<b>S</b>	enter	1							
		2							
line totals		3							
W		4							
EQ		5							
<b>T</b>	enter	1							
		2							
line totals		3							
W		4							
EQ		5							

COUNCIL / OFFICE COPY  
 THESE PLANS AND SPECIFICATIONS  
 ARE APPROVED SUBJECT TO THE  
 PROVISIONS OF THE BUILDING ACT  
 AND ITS REGULATIONS AND ARE  
 TO BE RETAINED ON THE JOB IN  
 GOOD ORDER AND PRODUCED UPON  
 REQUEST.

							Wind	Earthq.
Totals Achieved							1838	1690
							OK	OK
Totals Required (from Sheet A)							1362	1464

TAUPO DISTRICT COUNCIL  
 060802  
 APPROVED CONSENT  
 PLANS / SPECIFICATIONS

**GIB® Bracing Systems, 2006**

*For full construction details see literature  
GIB® Bracing Systems, 2006*

Supplier	System	Minimum Length (m)	BUs W/m	BUs EQ/m
	none			
GIB®	GS1a	1.8	65	55
		2.4	75	65
GIB®	GS2	1.2	70	60
		1.8	80	70
		2.4	90	80
GIB®	BL1	0.4	120	115
		0.6	125	115
GIB®	BL1a	1.8	130	115
GIB®	BLP	0.6	145	135
		0.9	145	145
GIB®	BLG	0.6	145	130
		1.2	150	130
Ply	SP1	0.9	100	100
Ply	SP2	0.6	90	80
Ply	SP4	0.45	70	85
Custom	Custom			
Custom	Custom			
Custom	Custom			
Custom	Custom			
Custom	Custom			
Custom	Custom			
Custom	Custom			
Custom	Custom			
Custom	Custom			

©Winstone Wallboards Limited, 1999-2006.  
All rights reserved

Code Compliance Certificate - A121734

## **Code Compliance Certificate**

### **Section 95, Building Act 2004**

#### **The Owner**

Name of owner: Wharewaka (2003) Ltd

Mailing address: C/O Carrus Corporation, P O Box 345, Tauranga  
3001

Street address/registered office: 36 Cameron Road, Tauranga

Phone number: Landline: 07 928 3939

Facsimile number: 07 578 8561

First point of contact for communications with the council/building consent  
authority:

As above

#### **The Building**

Street address of building: 5 Barbary Close, Taupo

Legal description of land where building is located: Lot 101 DP 363862

Valuation number: 0734180900

Building name: McClay

Current, lawfully established, use:

Year first constructed:

#### **Building Work**

Building consent number: **060802**

Issued by: Taupo District Council

Description of work: Residential dwelling with attached garage

Indefinite, but not less than 50 years

**Code Compliance**

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

- (a) the building work complies with the building consent.

**060802**



\_\_\_\_\_  
Signature

**Kelvin Short**

**Team Leader Building Inspections**

Position

**On behalf of: Taupo District Council**

**Date: 3/11/06**

# Application for Code Compliance Certificate

Section 92, Building Act 2004

## The Building Consent

Building consent number: **060802**

Issued by: Taupo District Council

## The owner

Name of owner: Generation Developments Ltd

Contact person:

Mailing address: C/- Helen Moffatt, P O Box 14232, Tauranga 3143

Street address/registered office: 36 Cameron Road, Tauranga

Phone number: Landline: 07 928 3939

Mobile:

Daytime:

After hours:

Facsimile number: 07 578 8561

Email address:

First point of contact for communications with the council/building consent authority:  
As above

## Application

All building work to be carried out under the above building consent was completed on

31/10/06 .....

The personnel who carried out the building work are as follows:

Builder: Generation Developments

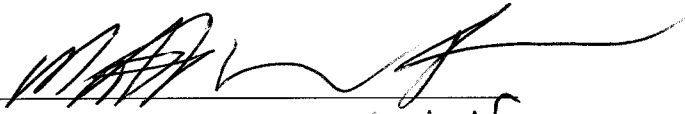
Designer: Colin J Davis P O Box 884, Tauranga : 07 578 3792

Drainlayer: Kelvin Price R D 1 Taupo : 021 158 5214

Plumber: Aqua Tidswell : 377 6408

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: C/- Helen Moffatt, P O Box 14232, Tauranga (Owner)

  
Signature of owner *on behalf*

*Matthew Thom*  
Name of person signing

Date: *31/10/06*

**Attachments**

The following documents are attached to this application:

Certificates from the personnel who carried out the work

Certificates that relate to the energy work

Evidence that specified systems are capable of performing to the performance standards set out in the building consent

Inspections - A121735



72 Lake Terrace, Taupo  
Ph: 07 376 0891 or 07 376 0752

CODE COMPLIANCE CERTIFICATE - BUILDING

SINGLE DWELLING ONLY

BUILDING CHECKLIST 109 INSPECTION G9

PROPERTY ADDRESS: 5 BARBARY CRESS CONSENT NO: 060 802

BUILDERS NAME: TODD ELLIOTT

	YES	NO	N/A		YES	NO	N/A
Check Conditions (compiled with)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
<b>EXTERIOR</b>				<b>INTERIOR</b>			
External envelope complete and weatherproof	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Ceiling and wall insulation in place	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Flashings/sealants complete	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fire ratings stopped	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Wet area/kitchen vents	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Correct installation of shower/bath linings, splash boards etc	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Safety glass	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Safety glass	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ground/paving heights <i>note</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Shower curtain/screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Crossing and footpath for damage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Wet areas completed, walls, ceilings, floors sealed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Brick veneer weep and ventilation holes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Bathroom, ensuite, wc, laundry, kitchen vents ducted to exterior	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Exterior decorated	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Heights of barriers and handrails/details	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Weathering of penetrations	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All inspections have been completed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Construction of decks/steps/handrails/timber treatment	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Smoke Alarms Fitted	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Barrier heights and construction/timber treatment	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Energy Certificates Provided	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sub floor access/ponding/ventilation/insulation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
Roof cladding/flushing fixings/roof penetrations	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Landscaping complete - retaining walls <i>yes</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Roof pitch for cladding used	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Wall cladding fixings/soakers/scribers etc	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Fire ratings	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>				

Comments: *DS - Tiling, Gas Cert, Elect Cert received*  
*Application for ACC received*  
*Top fix laundry cabinet in garage*

Further Inspection Required  Approved Inspector [Signature] Date 31/10/08

PROPERTY ADDRESS: 5 BARBARY CONSENT NO: 060 802

TYPE OF CLADDING	<u>Magnico Plaster - Omm</u>	YES	NO	N/A
Done as per approved Plans/document		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Done to alternative Solution		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Solution approved at time of consent		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cavity system used		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Done to E2/AS1		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Approved cladding system		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

TYPE OF ROOF	<u>Magnico Concrete</u>	YES	NO	N/A
As per approved plans		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Flashings to E2/AS1	<u>not complete</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative Solution		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Solution approved at time of consent		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments: 1/2 height brickwork. ties in place. cavity washed out.

Further Inspection Required
  Approved
 Inspector [Signature]
 Date 12/9/06



TAUPO DISTRICT COUNCIL

PROPERTY ADDRESS: 5 Barbary Close CONSENT NO: 060802

APPROVED FOR PLANS/SPECIFICATIONS

INSPECTIONS	FORM NUMBER	RCK REQUIRED	OK	DATE	INSPECTOR
Foundation	101				
Prefloor Building	102				
Prefloor Plumbing	103		✓	15-8-06	M/He
Bond Beam / Tilt Slabs	106/112				
Precladding	111				
Preline Plumbing	104				
Preline Building	107				
Drains/Sanitary Sewer	105		✓	21-8-06	M/He
Postline	108				
Fire Appliance	110				
Final Building	109/109A				
Final Plumbing	109B				
Miscellaneous	113				

Notes Underflows dry & wastes. T-d small.  
Changes to H. Price.



72 Lake Terrace, Taupo  
Ph: 07 376 0891 or 07 376 0752

**PREFLOOR PLUMBING AND DRAINAGE**

**BUILDING CHECKLIST 103 INSPECTION G3**

PROPERTY ADDRESS: 5 Barbary Close CONSENT NO: 060802

COMPANY NAME:

NAME OF PLUMBER/DRAINLAYER DOING WORK:

REGISTRATION NUMBER:

	YES	NO	N/A
Pipework done as per AS/NZ 3500	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pipework done as per G13	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Specific Design	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
As per approved design	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Water pipes under concrete floor	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Pipes approved for this purpose	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Gradient of pipework suitable	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drains under test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
As built received	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pipework as per approved plans	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments:

*Underflow drainage + wastes in place on test.*

*OK to proceed. Tidsull plumbers.*

Further Inspection Required  Approved  Inspected

Brebner Print





72 Lake Terrace, Taupo  
Ph: 07 376 0891 or 07 376 0752

**POST LINING**

**BUILDING CHECKLIST 108 INSPECTION G8**

PROPERTY ADDRESS: 5 BARBARY CONSENT NO: 060 802

	YES	NO	N/A
Linings as per approved plans	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fire Rated OK	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Noise Rated OK	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Braceline	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fixings as per requirements	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments: *BL braces to have extra screws in corners.*

*Also Precladding. (exterior plastic wrapped.)*

*Building wrap strapping over 450 mm to be done before brickwork started  
Foundation sealed & Window door bank flashings in place OK.*

Further Inspection Required   
 Approved   
Inspector [Signature]   
Date 12/19/06

PROPERTY ADDRESS: 5 Barbary Close Taupo CONSENT NO: 060802  
Wharehaka

FRAMING	YES	NO	N/A
Done as per approved plans	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Done to NZS 3604	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative Solution Approved	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Complies with B1 structure	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Complies with B2 durability ie. Timber Treatment etc.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

INSULATION	YES	NO	N/A
Type: <u>Pink Batts</u>			
R. Value as per approved plans	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Specific design	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Complies with H1/NZS 4218	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments:

*Preline Building Inspection for New Dwelling*

*AT Inspection found the cladding was to be done later which was not completed. The builder had protected the exterior walls with plastic sheeting. Checked brace elements all appeared to be correct and have the correct fixing straps etc. Except for one metal angle brace on bedroom one and plywood to be installed on SP1 @ 12m on bedroom two. Builder assured me this would be finished that day. Checked bath installed and floor provided around openings. One lintel over 2.7m was to be strapped to studs. OK to proceed on reasonable grounds when these three items are completed.*

Further Inspection Required
  Approved
 Inspector M. Ann
 Date 7-9-06

PROPERTY ADDRESS: 5 Barbary close Taupo CONSENT NO: 060802

COMPANY NAME: AQUA TIDSWELL

NAME OF PLUMBER: NEEL McMAHON

REGISTRATION NUMBER:

	YES	NO	N/A
Approved type of Pipework	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pipework supported	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fittings piped as per approved plans	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Services on pressure test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Soil and Waste pipes as per A5 3500/ <del>G10</del> and G12	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check pipes are protected from frost damage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Integrity of framing (notches etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Position of HWC/OK <u>INFINITY SYSTEM</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments:

*Preline Plumbing Inspection For New Dwelling*

*checked w. Pipes on water Pressure test 200psi good.*

*checked position of terminal vent and pipes supported and protected from frost damage by insulation.*

*OK to proceed on reasonable grounds*

Further Inspection Required  Approved Inspector Neel McMahon Date 7.9.06

Brehner Print



72 Lake Terrace, Taupo  
Ph: 07 376 0891 or 07 376 0752

**SANITARY SEWER**

BUILDING CHECKLIST 105 INSPECTION G5

PROPERTY ADDRESS: 5 Barbary Close CONSENT NO: 060802  
 NAME OF DRAINLAYER DOING WORK:   
 REGISTRATION NUMBER:

	YES	NO	N/A
<b>DRAINS</b>			
Drains as per AS/NZ 3500	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drains as per NZBC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Specific Design	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
As per approved design	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pipe sizes correct	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Correct falls	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
As built received	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>STORMWATER</b>			
To Soak holes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Adequate Soak Holes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To piped system	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
As built received	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>SEPTIC TANK</b>			
Standard System	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Enhanced System	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
As per approved plans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Documentation Correct	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Maintenance Schedule received	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Product Statement received (enhanced system)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments: change to new drilling  
SW to Soak holes

Further Inspection Required  Approved Inspector ny AWS Date 21-8-06

Brehner Print

PROPERTY ADDRESS: 5 Bourbarry ct CONSENT NO: 060802

	YES	NO	N/A
As per approved plans	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
any variations? refer to comments	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Compaction Certificate	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Done as per 3604	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Specific Design	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has Engineer supervised work	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
PS4 required	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments:

Waffle slab, Raft system, integrated with 12mm steels between pods. Perimeter 3nr Rd 12s, 665 mesh on spacers.

No ~~poles~~ poles.

As per application

OK to proceed.

Further Inspection Required
  Approved
 Inspector: GML
 Date: 17/8/06

Building Consent - A121736

## ***Building Consent 060802***

### **Section 51, Building Act 2004**

#### **THE OWNER**

**Name of owner:** Generation Developments Ltd

**Mailing address:** C/- Helen Moffatt, P O Box 14232, Tauranga 3143

**Street address/registered office:** 36 Cameron Road, Tauranga

**Phone number:**       **Landline:** 07 928 3939

**Facsimile number:** 07 578 8561

**First point of contact for communications with the council/building consent authority:**

As above

#### **THE BUILDING**

**Street address of building:** 5 Barbary Close, Taupo

**Legal description of land where building is located:** Lot 101 DP 363862

**Valuation number:** 0734180900

**Building name:** McClay

#### **BUILDING WORK**

**The following building work is authorised by this building consent:**

Residential dwelling with attached garage

This building consent:

- Is issued under section 51 of the Building Act 2004.
- Does not relieve the owner of the building (or proposed building) of any duty or responsibility under any other Act relating to or affecting the building (or proposed building).

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

(a) This building consent is issued subject to the following conditions:

In accordance with clause B2 of the New Zealand Building Code, this building has an intended life Indefinite, but not less than 50 years from the date of issue of this consent.

1. Refer to conditions/notes attached to approved plans.

**When all building work authorised by the Building Consent Authority is complete, written application must be made to Taupo District Council for a CODE COMPLIANCE CERTIFICATE. This application must be made no later than 2 years after the date on which the building consent was issued. An application form for this purpose is enclosed.**

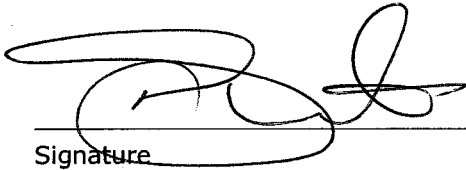
### **COMPLIANCE SCHEDULE**

A compliance schedule is not required for the building.

### **ATTACHMENTS**

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

As attached



Signature

**Building Control Officer**

Position

**On behalf of: Taupo District Council**

**Date: 7/08/06**

Application Building Consent - A121737



## APPLICATION FOR PROJECT INFORMATION MEMORANDUM AND/OR BUILDING CONSENT

### Section 33 or section 45, Building Act 2004

#### THE BUILDING

**Street address of building:** *[For structures that do not have a street address, state the nearest street intersection and the distance and direction from that intersection]* 5 Barbary Close, Aspect, Wharewaka Taupo

**Legal description of land where building is located:** *[state legal description as at the date of application and, if the land is proposed to be subdivided, include details of relevant lot numbers and subdivision consent]*

**Subdivision Consent** *(if applicable)* \_\_\_\_\_  
**Valuation No.** 0734180900 **Lot No** 101  
**DPS** 363862 **Section** \_\_\_\_\_  
**Block** \_\_\_\_\_ **Survey District** \_\_\_\_\_

**Building name:** *[insert building name if applicable]* McClay

**Location of building within site/block number:** *[include nearest street access]* Lot 101 Aspect **Number of levels:** *[include ground level and any levels belowground]* one

**Level/unit number:** \_\_\_\_\_ **Area:** *[total floor area; indicate area affected by the building work if less than the total area]* 177.1 m<sup>2</sup>

**Current, lawfully established, use:** *[include number of occupants per level and per use if more than 1]* Residential Dwelling

**Year first constructed:** *[insert year, approximate date is acceptable e.g. c1920s or 1960-1970]* 2006 **Expected completion date:** *[insert month year]* 2006

#### THE OWNER

**Name of owner:** *[include preferred form of address, eg, Mr, Miss, Dr, if an individual]* GENERATION DEVELOPMENTS LTD.  
P.O. BOX 14232  
TAURANGA

**Contact person:** *[insert contact name]* Helen Moffatt

**Mailing address:** *[insert mailing address]* PO Box 14232, Tauranga

**Street address/registered office:** *[insert street address/registered office]* 36 Cameron Road, Tauranga

**Phone numbers:** Landline: \_\_\_\_\_ Daytime: \_\_\_\_\_  
 Mobile: \_\_\_\_\_

**Facsimile number:** \_\_\_\_\_ **Er**

**Website:** *[website address if applicable]* \_\_\_\_\_

**The follow is attached** *copy of certificate or other document shc*

**Helen Moffatt**  
Production Administrator



Generation Developments Ltd  
PO Box 14232, Tauranga  
Phone 07 928 3939  
Fax 07 578 8561  
Email: helen@generation.co.nz  
www.generation.co.nz



**AGENT**

**Name of agent:** *[only required if application is being made on behalf of the owner]* \_\_\_\_\_

**Contact person:** *[insert contact name]* \_\_\_\_\_

**Mailing address:** *[insert mailing address]* \_\_\_\_\_

**Street address/registered office:** *[insert street address/registered office]* \_\_\_\_\_

**Phone numbers:** Landline: \_\_\_\_\_ Daytime: \_\_\_\_\_  
Mobile: \_\_\_\_\_ After Hours: \_\_\_\_\_

**Facsimile number:** \_\_\_\_\_ **Email address:** \_\_\_\_\_

**Website:** *[website address if applicable]* \_\_\_\_\_ **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:** \_\_\_\_\_  
*[all invoices and refunds related to this application will be directed to this person in all instances]*

**THE PROJECT**

**Description of the building work:** *[provide sufficient description of building work to enable scope of work to be fully understood]* Residential dwelling with attached garage

**Will the building work result in a change of use of the building?** *[Yes/No]* No **If Yes, provide details of the new use:** *[provide description of new use]*


**Intended life of the building if less than 50 years:**  **List building consents previously issued for this project (if any):** *[list who issued the consent, the date of issue and the consent number]*

**Estimated value of the building work on which the building levy will be calculated (including goods and services tax):** *[state estimated value as defined in section 7 of the Building Act 2004]* \$ 168,245

**Number of Toilet Pans:** *(Commercial properties only)* \_\_\_\_\_

**APPLICATION**

I request that you issue a <sup>†</sup>~~[project information memorandum/project information memorandum and building consent/building consent]~~ *[delete which is not applicable]* for the building work described in this application

Signature of *[owner/agent on behalf of and with the authority of the owner]* \_\_\_\_\_  
 Date: 3/7/06

**BUILDING PRACTITIONERS****Builder:**Business/name: GENERATION DEVELOPMENTS LTD. Address: \_\_\_\_\_Phone: P.O. BOX 14232 Mobile: \_\_\_\_\_

After hours: \_\_\_\_\_

Facsimile: TAURANGA Registration/qualification: \_\_\_\_\_**Designer/Architect:**Business/name: Colin J Davis Address: PO Box 884, TaurangaPhone: 07-578-3792 Mobile: \_\_\_\_\_

After hours: \_\_\_\_\_

Facsimile: 07-578-3700 Registration/qualification: \_\_\_\_\_**Plumber:**Business/name: Aqua Tidswell Address: PO Box 768, TaupoPhone: 07-377-6408 Mobile: \_\_\_\_\_

After hours: \_\_\_\_\_

Facsimile: \_\_\_\_\_ Registration/qualification: \_\_\_\_\_

**Drainlayer:**Business/name: Kelvin Price Drainage Ltd Address: 3 Oak Drive, RDI, TaupoPhone: 021-158-5214 Mobile: \_\_\_\_\_

After hours: \_\_\_\_\_

Facsimile: \_\_\_\_\_ Registration/qualification: \_\_\_\_\_

**Structural Engineer:**

Business/name: \_\_\_\_\_ Address: \_\_\_\_\_

Phone: \_\_\_\_\_ Mobile: \_\_\_\_\_

After hours: \_\_\_\_\_

Facsimile: \_\_\_\_\_ Registration/qualification: \_\_\_\_\_

**Engineer (identify practice college):**

Business/name: \_\_\_\_\_ Address: \_\_\_\_\_

Phone: \_\_\_\_\_ Mobile: \_\_\_\_\_

After hours: \_\_\_\_\_

Facsimile: \_\_\_\_\_ Registration/qualification: \_\_\_\_\_

**Head Contractor/Site Manager**

Business/name: \_\_\_\_\_ Address: \_\_\_\_\_

Phone: \_\_\_\_\_ Mobile: \_\_\_\_\_

After hours: \_\_\_\_\_

Facsimile: \_\_\_\_\_ Registration/qualification: \_\_\_\_\_

**Other:**

Business/name: \_\_\_\_\_ Address: \_\_\_\_\_

Phone: \_\_\_\_\_ Mobile: \_\_\_\_\_

After hours: \_\_\_\_\_

Facsimile: \_\_\_\_\_ Registration/qualification: \_\_\_\_\_

**COMPLIANCE SCHEDULE**

The specified systems for the building are as follows: *[specified systems are defined in regulations]*  
 N/A

---

The following specified systems are being altered, added to, or removed in the course of the building work: *[specify]*  
 N/A

---

There are no specified systems in the building.

**PROJECT INFORMATION MEMORANDUM**

**The following matters are involved in the project**

Subdivision	<input type="checkbox"/>	New or altered locations and/or external dimensions of buildings	<input checked="" type="checkbox"/>
Alterations to land contours	<input type="checkbox"/>	Building work over or adjacent to any road or public place	<input type="checkbox"/>
New or altered connections to public utilities	<input checked="" type="checkbox"/>	Building work over any existing drains or sewers or in close proximity to wells or water mains	<input type="checkbox"/>
New or altered access for vehicles	<input checked="" type="checkbox"/>	Other matters known to the applicant that may require authorisations from the territorial authority: <i>[specify]</i>	<input type="checkbox"/>
Disposal of stormwater and wastewater	<input checked="" type="checkbox"/>		

**BUILDING CONSENT**

**The following plans and specifications are attached to this application:**  
 05/A101

---



---

**ATTACHMENTS**

**The following documents are attached to this application:**

- Certificate attached to project information memorandum
- Plans and specifications *[list]* \_\_\_\_\_
- Project information memorandum
- Development contribution notice

**MATERIALS USED** *(Identify materials used. Required for Department of Building and Housing records)*

<b>Floor:</b>	Concrete Ribcraft		
<b>Roof:</b>	Concrete Tiles		
<b>Framing:</b>	Timber		
<b>Internal Lining:</b>	Gib-board		
<b>Exterior Cladding:</b>	Brick / Fosroc		
<b>Energy:</b>	Gas Fire		
<b>Cooking:</b>	Electric & Gas		
<b>Insulation</b>	Fibreglass		

**ESTIMATED TOTAL VALUE OF WORK**

\$ 168,245 gst inclusive  
 Project floor area 177.1 m<sup>2</sup>

**Council use only**

Lodgement deposit \$ 1200  
 Date paid \_\_\_\_\_  
 Receipt No. \_\_\_\_\_  
 Consent fee balance \$ \_\_\_\_\_  
 Date paid \_\_\_\_\_  
 Receipt No. \_\_\_\_\_

**Please complete**

Forward any refunds or further invoices to:  
 Helen Moffatt

**FEE PAYABLE**

**Consent deposit**

Project Information Memorandum \$ 100  
 Building Administration \$ 250 PO Box 14232 Tauranga  
 Technical Processing \$ 450 Phone 07 928 3940  
 Industry Levy (DBH) \$ 332.95 www.generation.co.nz  
 Industry Levy (BRANZ) \$ 169  
 Certificate of Title \$ 15  
 Producer Statements \$  
 Compliance Schedules \$  
 Other(s) water \$ 40

**Total consent deposit** \$ 1,200.00

**Consent fee balance**

Inspections \$ 585  
 Other(s) \$  
**Total balance payable** \$



**Consent conditions / comments**

Refer to conditions/notes attached to approved plans.

Owner/Builder to note that a certificate has been attached to the P.I.M. relating to this building consent. This certificate is issued pursuant to Section 37 of the Building Act 2004. No building work may proceed until the requirements of this certificate are satisfied. Proceeding with the work may result in enforcement action being taken under the Resource Management 1991.

BCO	P&D	CONSULTANT	PLANNER	EHO	NZFS

# Have you provided all the following information?

(Strike out where not applicable)

(Strike out where not applicable)



## GENERAL

	Yes	No	BCA
Plans and specifications of an acceptable standard	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Plans, elevations, cross sections of the proposal in triplicate (in duplicate if PIM issued)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Certificate of Title (recent search copy less than 6 months old)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## BULK & LOCATION

	Yes	No	N/A
Site Plan: Fully dimensioned, scaled, showing all buildings and easements (proposed/existing)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Site boundaries nominated	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Site area per unit indicated	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Site coverage and plot ration calculations %	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shared access ways/other areas <i>N/A</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Foulwater (sewer) drains	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stormwater drains and soakholes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water service details	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Site levels and finished floor level indicated	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vehicle crossing position indicated on plan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vehicle access manoeuvre and parking areas indicated	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Street trees, poles, sumps, manholes, traffic islands affecting vehicle access	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hill sites: indicate contours, drive gradients and building heights <i>N/A</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Landscaped areas indicated and planting plan produced	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Earthworks: identify proposal for cut and/or fill where cut is more than 1.5m deep or 25 cubic metres.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## OTHER MISCELLANEOUS

	Yes	No	N/A
Demolition details <i>N/A</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Swimming pool: design, fence and discharge	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Backflow prevention	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Notable and protected trees indicated	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Heritage site or building affected	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Resource Consent application	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Subdivision details	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**NOTE TO APPLICANTS** Please use this check sheet to ensure all the information required to be supplied with your application has been provided. More detailed information is available in the information booklet on Applying for a Building Consent Under the Building Act 2004 available from the Environmental Services reception. If required information has not been provided your application may not be accepted and you will experience delays in obtaining your consent.

## CONSTRUCTION DETAILS

	Yes	No	BCA
Foundation plans and design included.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Reports on ground condition as required	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Floor plans with fire partitions, common walls & dividing walls & identification of all rooms & their intended uses	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Elevations with maximum height and daylighting recession planes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Roof plan complete with truss design statement and details	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bracing calculations and layout plans	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Blockwork design, including foundations <i>N/A</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Retaining walls: design, heights, position, subsoil drainage and safety barriers <i>N/A</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Window positions: glazing & opening windows indicated	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sound insulation indicated <i>N/A</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Claddings and weathertightness details provided for all claddings	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stairs/steps/landings/balconies: dimensions, handrail and barrier details <i>N/A</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Solid fuel heater: make, model & location	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Accurate layout of plumbing & drainage systems	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Full details of alternative solutions if used <i>N/A</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## ACCESS & FACILITIES

	Yes	No	N/A
Access & facilities for persons with disabilities	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Access route details	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## SPECIALIST DESIGN INFO

	Yes	No	N/A
Producer Statement: specific design details for work outside the scope of acceptable solutions and non specific design codes.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Fire Safety Summary or Fire Design statement	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Drainage and/or plumbing	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Lifts, escalators, moving walkways	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Acoustic and thermal insulation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
HVAC systems	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Energy	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
People with disabilities access & facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Independent peer review for specialist design above	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Compliance Schedule details *N/A*



The building work will comply with the building code as follows: [Delete this section if this is not applicable]



Clause [which of the following clauses will be involved in the proposed building work?]	Means of compliance [refer to the relevant compliance document(s) or detail of alternative solution in the plans and specifications]	Proposed [state means of inspection. Note PS4 or certification requirements required]
<input checked="" type="checkbox"/> B1 Structure	<input type="checkbox"/> B1/AS2 4203 <input type="checkbox"/> NZS 4229 [specify] _____ <input checked="" type="checkbox"/> NZS 3604 <input type="checkbox"/> Other _____	<input type="checkbox"/> Council Engineer <input type="checkbox"/> Other _____ P.O. Box 14232 Tauranga Phone 07 928 3940 www.generation.co.nz
<input checked="" type="checkbox"/> B2 Durability	<input type="checkbox"/> B2/AS1 3602 <input checked="" type="checkbox"/> NZS 3604 [specify] _____ <input type="checkbox"/> NZS 3101 <input type="checkbox"/> Other _____	<input type="checkbox"/> Council Engineer <input type="checkbox"/> Other _____ [Specify]
<input type="checkbox"/> C1- 4 Fire N/A	<input type="checkbox"/> C1/AS1 _____ [specify] <input type="checkbox"/> Other _____	<input type="checkbox"/> Council Engineer <input type="checkbox"/> Other _____ [Specify]
<input checked="" type="checkbox"/> D1 Access Routes	<input checked="" type="checkbox"/> D1/AS1 <input type="checkbox"/> Other _____ <input type="checkbox"/> ZS 4121 <input type="checkbox"/> NZS 4121 [specify]	<input type="checkbox"/> Council Engineer <input type="checkbox"/> Other _____ [Specify]
<input type="checkbox"/> D1 Mechanical installations for access N/A	<input type="checkbox"/> D2/AS1 81 <input type="checkbox"/> EN 115 <input type="checkbox"/> NZS 4332 <input type="checkbox"/> EN <input type="checkbox"/> Other _____ [specify]	<input type="checkbox"/> Engineer <input type="checkbox"/> Other _____ [Specify]
<input checked="" type="checkbox"/> E1 Surface water	<input checked="" type="checkbox"/> E2/AS1 <input type="checkbox"/> Other _____ [specify] <input type="checkbox"/> AS/NZS3500.3	<input type="checkbox"/> Council <input type="checkbox"/> Other _____ [Specify]
<input checked="" type="checkbox"/> E2 External moisture	<input checked="" type="checkbox"/> E2/AS1 testing <input type="checkbox"/> Specific design &	<input type="checkbox"/> Council <input type="checkbox"/> Other _____ [Specify]
<input checked="" type="checkbox"/> E3 Internal moisture	<input checked="" type="checkbox"/> E2/AS1 <input type="checkbox"/> Other _____ [specify]	<input type="checkbox"/> Council <input type="checkbox"/> Other _____ [Specify]
<input type="checkbox"/> F1 Hazardous substances etc N/A	<input checked="" type="checkbox"/> F1/AS1 <input type="checkbox"/> Other _____ [specify]	<input type="checkbox"/> Council <input type="checkbox"/> Other _____ [Specify]
<input type="checkbox"/> F2 Hazardous building materials N/A	<input type="checkbox"/> F2/AS1 <input type="checkbox"/> Other _____ [specify] <input type="checkbox"/> NZS 4223	<input type="checkbox"/> Council <input type="checkbox"/> Other _____ [Specify]
<input type="checkbox"/> F3 Hazardous substances N/A	<input type="checkbox"/> F3/AS1 _____ [specify] <input type="checkbox"/> Other	<input type="checkbox"/> Council <input type="checkbox"/> Other _____ [Specify]
<input type="checkbox"/> F4 Safety from falling N/A	<input type="checkbox"/> F2/AS1 <input type="checkbox"/> Other _____ [specify] <input type="checkbox"/> FSP Act	<input type="checkbox"/> Council <input type="checkbox"/> Other _____ [Specify]
<input type="checkbox"/> F5 Construction and demolition hazards N/A	<input type="checkbox"/> F5/AS1 _____ [specify] <input type="checkbox"/> Other	<input type="checkbox"/> Council <input type="checkbox"/> Other _____ [Specify]
<input type="checkbox"/> F6 Lighting for emergency N/A	<input type="checkbox"/> F6/AS1 _____ [specify] <input type="checkbox"/> Other	<input type="checkbox"/> Council <input type="checkbox"/> Other _____ [Specify]
<input type="checkbox"/> F7 Warning systems N/A	<input type="checkbox"/> F7/AS1 <input type="checkbox"/> NZS 4512 <input type="checkbox"/> NZS 4515 [specify] _____ <input type="checkbox"/> Other _____ <input type="checkbox"/> AS/NZS 1668	<input type="checkbox"/> Council Engineer <input type="checkbox"/> Other _____ [Specify]
<input type="checkbox"/> F8 Signs N/A	<input type="checkbox"/> F8/AS1 _____ [specify] <input type="checkbox"/> Other	<input type="checkbox"/> Council <input type="checkbox"/> Other _____ [Specify]
<input type="checkbox"/> G1 Personal hygiene N/A	<input type="checkbox"/> G1/AS1 [specify] _____ <input type="checkbox"/> Other _____	<input type="checkbox"/> Council <input type="checkbox"/> Other _____ [Specify]
<input checked="" type="checkbox"/> G2 Laundering	<input checked="" type="checkbox"/> G2/AS1 [specify] _____ <input type="checkbox"/> Other _____	<input type="checkbox"/> Council <input type="checkbox"/> Other _____ [Specify]

<input checked="" type="checkbox"/> G3 Food preparation and prevention of contamination	<input checked="" type="checkbox"/> G3/AS1 [specify] <input type="checkbox"/> Other _____	<input type="checkbox"/> Council <input type="checkbox"/> Other _____ [Specify]
<input checked="" type="checkbox"/> G4 Ventilation	<input checked="" type="checkbox"/> F7/AS1 <input type="checkbox"/> AS/NZS 1668.2 <input type="checkbox"/> Other _____ [specify]	<input type="checkbox"/> Council <input type="checkbox"/> Other _____ [Specify]
<input checked="" type="checkbox"/> G5 Interior environment	<input checked="" type="checkbox"/> G5/AS1 [specify] <input type="checkbox"/> Other _____	<input type="checkbox"/> Council <input type="checkbox"/> Other _____ [Specify]
<input type="checkbox"/> G6 Airborne & impact sound N/A	<input type="checkbox"/> G6/AS1 [specify] <input type="checkbox"/> Other _____	<input type="checkbox"/> Council <input type="checkbox"/> Other _____ [Specify]
<input checked="" type="checkbox"/> G7 Natural light	<input checked="" type="checkbox"/> G7/AS1 [specify] <input type="checkbox"/> Other _____	<input type="checkbox"/> Council <input type="checkbox"/> Other _____ [Specify]
<input type="checkbox"/> G8 Artificial light N/A	<input type="checkbox"/> G8/AS1 <input type="checkbox"/> NZS 6703 <input type="checkbox"/> Other _____ [specify]	<input type="checkbox"/> Council <input type="checkbox"/> Other _____ [Specify]
<input checked="" type="checkbox"/> G9 Electricity	<input checked="" type="checkbox"/> G9/AS1 [specify] <input type="checkbox"/> Other _____	By certification only
<input checked="" type="checkbox"/> G10 Piped services	<input checked="" type="checkbox"/> G10/AS1 <input type="checkbox"/> NZS 5261 <input type="checkbox"/> Other _____ [specify]	By certification only
<input checked="" type="checkbox"/> G11 Gas as an energy source	<input checked="" type="checkbox"/> G11/AS1 [specify] <input type="checkbox"/> Other _____	By certification only
<input checked="" type="checkbox"/> G12 Water supplies	<input checked="" type="checkbox"/> G12/AS1 3500.4 <input type="checkbox"/> AS/NZS 3500.1 <input type="checkbox"/> AS/NZS 3500.4 <input type="checkbox"/> Other _____ [specify]	<input type="checkbox"/> Council <input type="checkbox"/> Other _____ [Specify]
<input checked="" type="checkbox"/> G13 Foul water	<input checked="" type="checkbox"/> G13/AS1 <input type="checkbox"/> AS/NZS 3500.2 <input type="checkbox"/> BS 5572 <input type="checkbox"/> Other _____ [specify]	<input type="checkbox"/> Council <input type="checkbox"/> Other _____ [Specify]
<input type="checkbox"/> G14 Industrial liquid waste	<input type="checkbox"/> G14/AS1 [specify] <input type="checkbox"/> Other _____	<input type="checkbox"/> Council <input type="checkbox"/> Other _____ [Specify]
<input type="checkbox"/> G15 Solid waste	<input type="checkbox"/> G15/AS1 [specify] <input type="checkbox"/> Other _____	<input type="checkbox"/> Council <input type="checkbox"/> Other _____ [Specify]
<input checked="" type="checkbox"/> H1 Energy efficiency	<input type="checkbox"/> H1/AS1 <input type="checkbox"/> NZS 4218 <input type="checkbox"/> NZS 4243 <input checked="" type="checkbox"/> ALF Design Manual 4214 <input type="checkbox"/> NZS <input type="checkbox"/> Other _____ [specify]	<input type="checkbox"/> Council <input type="checkbox"/> Other _____ [Specify]



PO Box 14232  
Tauranga  
Phone 07 928 3940  
www.generation.co.nz

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

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Electrical Certificate - A121738



# Electrical Certificate of Compliance

No. 2096762

No. of attachments

This certificate is issued for electrical work that is carried out on electrical installations...  
the placing or positioning or the replacing or repositioning  
conductors (including fittings attached to those conductors).  
to be completed whether or not an inspection is  
required.

### GENERAL INFORMATION - PLEASE PRINT CLEARLY

Customer: Generation Developments

Phone: 5788571

Installation: 5 BARBARY Close Wharewaka Point Tauranga

Customer (if not as above): P.O Box 14232 Tauranga

26  
29

No. of lighting outlets

No. of ranges

Please tick (✓) as appropriate where work includes:

No. of socket outlets

No. of water heaters

Mains

Main earthing system

Installation work carried out by homeowner?

Yes  No

Switchboard

Electric lines

Description: Remove & lift off  
new installation including  
all lighting, power panel  
Wall over & R.O.  
protected DB Board

It is recommended that test results be recorded here:

Visual Examination

Earth Continuity

Bonding

Polarity

Insulation Resistance Mohm

Other

If necessary attach any pages with sketches of work done

### CERTIFICATION OF WORK

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

### ELECTRICAL WORKER DETAILS

Name: Neil MacMurdo  
Registration no.: E4963  
Company: MacMurdo Electrical  
Signature: [Signature]  
Date: 10.10.06  
Contact Ph No.: 5780538

### CERTIFICATION OF ELECTRIC LINES

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

Name: Coak MacMurdo  
Registration no.: E1606  
Company: MacMurdo Deal  
Signature: [Signature]  
Date: 10.10.06  
Contact Ph No.: 5780538

### INSPECTION DETAILS Electrical work requiring inspection by a registered electrical inspector

New mains  Switchboard  Earthing system  Installation work in hazardous areas

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

Name: NORM SHOLT  
Signature: [Signature]

Registration no.: 1914  
Date: 11/10/06  
Contact Ph No.: 0204421014

Certificate No 400929

WELLINGTON  
Tel 04 494 2978  
Fax 04 494 2975  
website www.pgdb.co.nz

UNIMERS COPY

plumbers and  
rainlayers Board

**ENERGY WORK CERTIFICATE**  
(Pursuant to the Building Act 1991)

**THIS CERTIFICATE IS NOT TRANSFERABLE**

Please complete in block letters

Location address: (for recipient)  
Number: \_\_\_\_\_  
Street name: \_\_\_\_\_  
Suburb: \_\_\_\_\_  
Town/City: \_\_\_\_\_  
Postal/Postcode: \_\_\_\_\_  
County/Business name: \_\_\_\_\_  
District: \_\_\_\_\_

**DESCRIPTION OF GASFITTING TO WHICH THIS CERTIFICATE APPLIES**

Location	Appliance		Flue		Ventilation	
	Make/model	Input rate	Type	Location	Type	Location
10/11/12	10/11/12	10/11/12	10/11/12	10/11/12	10/11/12	10/11/12
10/11/12	10/11/12	10/11/12	10/11/12	10/11/12	10/11/12	10/11/12
10/11/12	10/11/12	10/11/12	10/11/12	10/11/12	10/11/12	10/11/12
10/11/12	10/11/12	10/11/12	10/11/12	10/11/12	10/11/12	10/11/12

Registered Gasfitters Supervised by certifier  
Certificate owner  
Registration No  
On behalf of  
Registration No

Category  
 Domestic  
 Commercial  
 Industrial  
 Temporary  
 Other

Type (Regulation 24(1))  
 New  
 Addition  
 Extension  
 Replacement  
 Alteration  
 Repair following accident

Gas Type  
 NG  
 LPG  
 TLP  
 Bio

Name of Gas Supplier  
 YES  
 NO

Pipework installed  
 YES  
 NO

Test Results  
min. Duration  
kPa Test pressure  
kPa Loss/gain  
kPa Working pressure

Other Testing  
Combustion  
 Yes  
 No  
Ventilation  
 Yes  
 No

Test Date

I certify that:  
All appliances and fittings worked on by me or by persons working under my supervision are safe and that all work carried out was in accordance with all applicable requirements of the Gas Act 1992 and Gas Regulations 1993 as amended.

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 Regulations 1993 as amended.

Gasfitting work to which this certificate applies  
 does  
 does not include work on an appliance or fitting imported or manufactured by a person for their own use.

Certifiers Name  
Address  
Registration No

Date

(If other than certifying gasfitter)

action No

**TAUPO PLATEAU TILING****Professional Tile Installation****Scott Hoverd**  
**0274 867 945**  
**PO Box 2007**  
**Taupo**

**CERTIFICATION OF WATERPROOFING**  
**30 October 2006**

To Whom It May Concern:

This is to verify that lot 101 – 5 Barbary Close, Taupo has been waterproofed to the ensuite and main bathroom in shower walls and floor areas. Construction chemicals liquid flash one product was used and applied to manufactures specifications. This product has meet the AS/NZ 4858 Standard approval for these applications in wet areas.

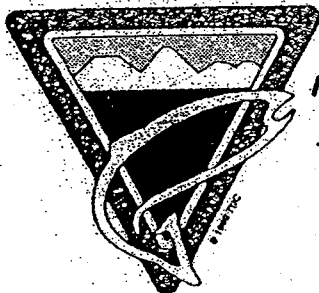
Certificate of Conformity No. 97/003 and ABSAC appraisal No. 209.

Regards



Scott Hoverd  
Company Director.

Correct Siting of Building - A121739



# Taupo District Council

060802

CONSENT NO :

APPROVED CONSENT  
PLANS / SPECIFICATIONS

VALUATION NO : \_\_\_\_\_

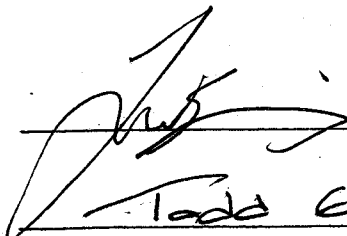
This form should be completed and available for collection by the Building Inspector when the footing inspection is carried out.

DATE

17/8/06

## UNDERTAKING AS TO CORRECT SITING OF BUILDING

I hereby certify that I have checked that the building currently being constructed at 5 Barbours Cr [address of property] is the correct distance from the legal site boundaries as per the building consent plans approved by Council.

  
\_\_\_\_\_  
Todd Elliott

BUILDER/OWNER

SIGNATURE

[Name]

[Delete that which does not apply]

\* This form is required to be completed to ascertain correct siting of buildings due to recent instances of incorrect siting.

Producer Statement - floor system - A121740



**PRODUCER STATEMENT - DESIGN**

**Issued by:** Firth Industries Limited  
**Relating To:** Firth Ribraft Floor System  
**In Respect Of:** Lateral Resistance

**COUNCIL / OFFICE COPY**  
THESE PLANS AND SPECIFICATIONS ARE APPROVED SUBJECT TO THE PROVISIONS OF THE BUILDING ACT AND IT'S REGULATIONS AND ARE TO BE RETAINED ON THE JOB IN GOOD ORDER AND PRODUCED UPON REQUEST.

Firth Industries developed, markets and supplies componentry for the Firth Ribraft Floor System. Opus International Consultants have carried out an appraisal of the system (Appraisal Certificate No 1999/22), and developed a non-specific design guide (Firth Ribraft Floor System Manual: May 2000) which has received B.L.A. Accreditation as a non-specific design guide.

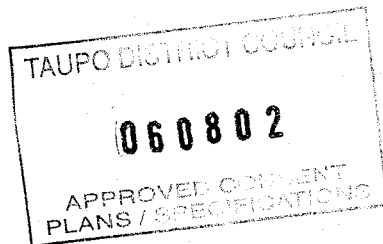
Further to the non-specific design guide, I have carried out specific design relating to the requirements for provision of lateral resistance. This work is separate to the Opus Appraisal and the Ribraft Floor System Manual and in no way changes the content of either.

As a design professional I believe on reasonable grounds that subject to:

1. all conditions and requirements of the Firth Ribraft Floor System Manual: May 2000 being met except for those contained in Section 5 Lateral Resistance,
2. the building wind zone as determined in Section 5 of NZS 3604:1999 not exceeding VH,
3. the height H of the building not exceeding the plan dimension L, with H and L as shown in Figure 5.3 of NZS3604:1999.

shear piles as described in Section 5 of the Firth Ribraft Floor Manual: May 2000 are not required for compliance with the relevant provisions of the building code. Sufficient shear resistance is provided by base friction to satisfactorily resist seismic and wind loads.

Malcolm Thomson  
B.E.(Civil), Reg.Eng, MIPENZ  
Registration No: 10078



FIRTH a division of Fletcher Concrete and Infrastructure Limited,  
302 Great South Road, Greenlane, Private Bag 99904, Newmarket, Auckland, New Zealand.  
Telephone: 0-9-520 4654 Facsimile: 0-9-520 0390



**CENTRAL  
LABORATORIES**  
Appraisal Certificate  
No. 1999/22



Firth Industries' RibRaft Floor System is accredited by the Building Industry Authority as complying with certain provisions of the New Zealand Building Code. The Authority's accreditation is binding on territorial authorities and building certifiers.

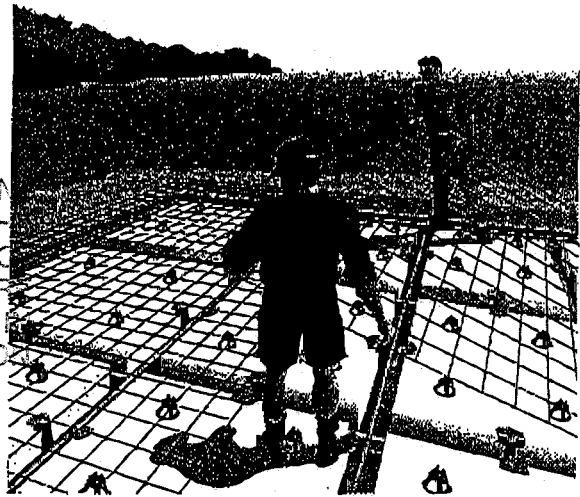


# Firth RibRaft Floor System

**Appraisal**

This **Appraisal** relates to certain uses of the Firth RibRaft floor system ("the system") that do not require specific design. Firth Industries Ltd supply some of the components of the system, including the concrete, and provide design and installation information for use by others. No specialist building skills are necessary to design and install the system.

The system has been appraised for use as a reinforced concrete slab-on-ground floor construction for domestic or residential buildings covered by the scope of NZS 3604:1999 "Timber Framed Buildings." The use of the system must also meet the limitations specified in Clause 3 "Scope" of Section 1 of the Firth RibRaft Floor System Manual, May 2000 (referred to as the RibRaft Manual).



COUNCIL / OFFICE COPY  
THESE PLANS AND SPECIFICATION  
ARE APPROVED SUBJECT TO THE  
PROVISIONS OF THE BUILDING ACT  
AND ITS REGULATIONS AND ARE  
TO BE RETAINED ON THE JOB  
IN GOOD ORDER AND PRODUCED UPON  
REQUEST.

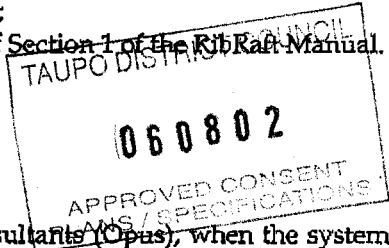
The **Appraisal** covers standard non-specific design and construction details for the system when the supporting ground:

- a) meets the requirements of the definition of good ground as given in NZS 3604:1999 except that the minimum ultimate bearing capacity shall be as stipulated in the RibRaft Manual;
- b) is not damp as defined in Clause 3.5 of Section 1 of the RibRaft Manual.

### Building Regulations

New Zealand Building Code (NZBC)

In the opinion of Opus International Consultants (Opus), when the system is used in accordance with the conditions of this **Appraisal**, the relevant provisions of the following NZBC clauses will be met: B1 Structure, B2 Durability, E2 External Moisture.



Opus International Consultants Limited  
Central Laboratories  
Quality Management Systems Certified to ISO9001

Hutt Park Road  
P O Box 30845, Lower Hutt  
New Zealand

Telephone: +64 4 587 0600  
Facsimile: +64 4 568 3169  
Website: www.opus.co.nz

Product Information

General

The system is a reinforced concrete waffle raft ground floor slab system. There are many ways the system can be engineered and constructed. However, only one non-specific design is covered by this Appraisal.

The non-specific detail consists of an 85mm thick top slab supported by a grid of ribs normally 100 mm wide at a maximum spacing of 1200mm x 1200mm centres. The overall depth is 305mm. Edge beams and ribs under loadbearing walls are 300mm wide to provide for the extra load carried by these members. Construction is directly on levelled ground covered with a DPM (damp proof membrane).

Polystyrene waffle pods 1100mm square and 220mm thick are placed directly on levelled ground. These are arranged in such a way that a reinforced concrete floor slab with a grid of reinforced concrete ribs and edge beams is formed when concrete is placed onto them. Pods may be cut to suit specific layout architecture and also to accommodate services.

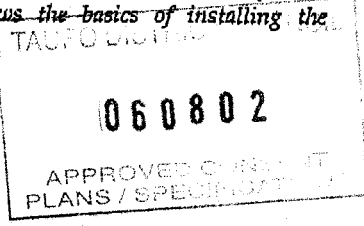
Reinforcing steel consists of steel mesh in the top slab with reinforcing bars in the ribs and edge beams. Specifically designed spacers are used to position the polystyrene pods and the rib and edge beam reinforcing steel bars in a secure manner until the concrete is placed. The reinforcing mesh is held in place by mesh chairs.

There are two Firth concrete products that can be used in the system.

- Raftmix is a 20 MPa 80mm slump structural mix available in either a 13mm or more usually a 19mm nominal aggregate size. This mix is normally placed in the floor straight from the concrete truck chute and if necessary by wheel barrow over planks set up over the pods.
- Raftmix Pump is a 20 MPa 100mm slump pump mix available in either a 13mm or more commonly a 19mm nominal aggregate size. The selection of aggregate size may be determined either by the capability of the available concrete pump or by the concrete placer's preference.

Conventional timber or steel formwork is used to form the edge of the slab. Specific shear keys provide resistance to horizontal loads (earthquake or wind) but do not contribute to carrying vertical load.

To assist installers, Firth Industries has an optional instructional video that shows the basics of installing the system.



Supply

The components of the system are only available through Firth Industries, distributors of Firth Industries and registered installers of the system. The components are designed to ensure that the system is constructed in the correct manner by only allowing one method of construction. These components are:

- Raftmix and Raftmix Pump concrete
- Polystyrene RibRaft waffle pods
- RibRaft rib and edge beam spacers
- Polystyrene RibRaft shear key supports

Other necessary components of the system available from general building material suppliers are:

- Reinforcing steel (Grade 430 and Grade 300 as applicable) complying with NZS 3402:1989 "Steel Bars for the Reinforcement of Concrete".
- 665 Reinforcing mesh complying with NZS 3422:1975 "Welded Fabric of Drawn Steel Wire for Concrete Reinforcement"
- Mesh chairs (40mm).
- Sand complying with the requirements of Section 7 of NZS 3604:1999.
- Damp proof membrane (DPM) complying with the requirements of Section 7 of NZS 3604:1999.

Handling and Storage

No specific precautions are required with respect to handling or storage of the RibRaft components.

Design Information

General

Standard designs for construction that falls within the scope of this appraisal are provided in the RibRaft Manual.

B1 Structure

The system when designed and installed in accordance with the designs in the RibRaft Manual, will meet the requirements of the New Zealand Building Code clauses B1.3.1, B1.3.2, and B1.3.4 for B1.3.3 (a), (b), (f), (g), (h), (j), (m), (p) and (q) i.e. for loads arising from gravity, earthquake, snow, wind, human impact, differential movement, influences of non-structural elements and contents, and creep and shrinkage.

B2 Durability

The system will meet the provisions of the New Zealand Building Code clause B2.3.1(a) provided the concrete construction conforms to NZS 3109:1997 "Concrete Construction". The RibRaft Manual provides specific instructions in this regard and floor slabs installed in accordance with those instructions will comply with that standard.

The system does not require maintenance to ensure ongoing compliance with the durability requirements of the building code. However, in common with all concrete

COUNCIL OFFICE COPY  
 THESE PLANS AND SPECIFICATIONS  
 ARE APPROVED SUBJECT TO THE  
 PROVISIONS OF THE BUILDING ACT  
 AND IT'S REGULATIONS AND ARE  
 TO BE RETAINED ON THE JOB IN  
 GOOD ORDER AND PRODUCED UPON  
 REQUEST.

slab-on-ground construction, property owners should ensure that large trees are kept sufficiently far away from the edge of the slab as to prevent the tree roots from disturbing the soil moisture conditions under the slab. As a guide, trees should be as far from the edge of the slab as they are tall when fully grown. The property owner shall also ensure that the ground level around the system is maintained so that it is never below the bottom of the system. This can be ensured by paving or landscaping around the building.

**E2 External Moisture**

The construction details follow the practice of NZS 3604:1999 with respect to ensuring against damage to building components as a result of external moisture entering through the concrete slab, and meet the requirements of the New Zealand Building Code clause E2.3.3.

The finished floor level of the system above the ground level must meet the requirements of NZS 3604:1999. These are easily met by the standard construction details, but property owners must ensure that subsequent landscaping does not compromise these clearances.

**H1 Energy Efficiency**

Calculations in accordance with NZS 4214:1977 "Methods of Determining the Total Thermal Resistance of Parts of Buildings" indicate that the total thermal resistance of the system to be of the order of 5.1 m<sup>2</sup> °C/w using 220mm polystyrene waffle pods.

Buildings correctly designed and constructed incorporating the system will meet the performance requirements for energy efficiency specified by NZBC H1.3.1 for housing and H1.3.2 for other buildings.

**Installation**

Installation of the system must be as detailed in Section 2 of the RibRaft Manual. The special rib and edge beam spacers provide for reinforcing steel to be retained in the correct positions. The steel bars then provide weight to hold the waffle pods in place while concrete is placed.

It is very important that the sand bed is accurately levelled, as this establishes the height of the pods and the concrete cover to the reinforcing mesh.

All shear keys must be poured on top of Firth's 100mm thick polystyrene Shear Key Supports.

**Basis of Appraisal**

Structural calculations were carried out by Opus International Consultants Ltd. Loadings were derived from NZS 4203:1992 "General structural design and design loadings for buildings" and concrete materials properties from NZS 3101:1995 "Concrete Structures Standard".

The capacity of the RibRaft system to withstand dead, live and bracing load conditions was established using a

Microstran analysis of the slab, where the slab is supported along lines of ribs and edge beams on a number of elastic springs representing the stiffness of the soil. Values of soil stiffness for different safe bearing capacity soils were determined from Stockwell's correlation of safe bearing capacity with Scala penetrometer readings, and derivation of soil elastic stiffness from Scala penetrometer readings by a combination of Stockwell (1977) and Bowles (1988)

The construction requirements of NZS 3101:1995 were used to establish the durability of the system. The design of the system to withstand inputs from bracing panels has been based on a comparison with the foundations in NZS 3604:1999 and NZS 4229:1999 "Concrete Masonry Buildings not Requiring Specific Design".

The construction details to ensure compliance with respect to external moisture were compared with Acceptable Solution E2/AS1 Section 4.2.

**Other Investigations**

Opus International Consultants have viewed site installations that demonstrate the workability and practicality of the system. Opus International Consultants also examined the factory production of the components and ongoing quality assurance. The manufacture of the concrete, which is to NZS 3104:1991 "Concrete Production - High Grade and Special Grade" has been examined by Opus International Consultants.

As at April 2000, there had been at least 1500 buildings built using the system. No problems had been encountered in the construction or performance of these floors.

**Sources of Information**

- NZS 3101:1995 "Concrete Structures Standard"
- NZS 3104:1991 "Concrete Production - High Grade and Special Grade"
- NZS 3109:1997 "Concrete Construction"
- NZS 3402:1989 "Steel Bars for the Reinforcement of Concrete"
- NZS 3422:1975 "Welded Fabric of Drawn Steel Wire for Concrete Reinforcement"
- NZS 3604:1999 "Timber Framed Buildings"
- NZS 4203:1992 "General structural design and design loadings for buildings"
- NZS 4214:1977 "Methods of Determining the Total Thermal Resistance of Parts of Buildings"
- NZS 4229:1999 "Concrete Masonry Buildings not Requiring Specific Design"
- Firth RibRaft Floor System Manual, May 2000
- The Building Regulations 1992.
- New Zealand Building Code Handbook and Approved Documents, Building Industry Authority, 1992.
- Joseph Bowles, Text book: "Foundation Analysis And Design" 1988
- M J Stockwell, paper: "Derivation of Allowable Bearing Pressure Under Small Structures" NZ engineering 1977

COUNCIL OFFICE COPY  
THESE PLANS AND SPECIFICATIONS  
ARE APPROVED SUBJECT TO THE  
PROVISIONS OF THE BUILDING ACT  
AND IT'S REGULATIONS AND ARE  
TO BE RETAINED ON THE JOB IN  
GOOD ORDER AND PRODUCED UPON  
REQUEST

060802  
APPROVED CONSTRUCTION  
PLANS / SPECIFICATIONS  
Page 3

**Conditions of Appraisal**

The Appraisal will remain valid subject to the following:

1. The product continues to comply with the manufacturing specification and quality measures of Firth Industries Ltd. These specifications and quality assurance measures are as viewed and approved by Opus International Consultants.
2. The system complies with the conditions of this Appraisal and with the RibRaft Manual.
3. Firth Industries Ltd continues to have the product reviewed by Opus International Consultants every two years from the date of issue.
4. The overall quality and expected performance of the product is maintained. Firth Industries Ltd shall notify Opus International Consultants of any changes in specification or quality assurance measures prior to them coming into effect.



Firth Industries' RibRaft Floor System is accredited by the Building Industry Authority as complying with certain provisions of the New Zealand Building Code. The Authority's accreditation is binding on territorial authorities and building certifiers.

Opus International Consultants is satisfied that the calculations, documentation and performance in use show the Firth RibRaft floor system is fit for the purpose for which it has been appraised.

Appraisal Manager  
for Opus International Consultants Ltd

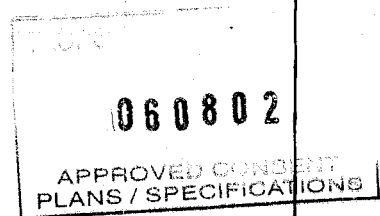
Date: May 2000

Enquiries about the current status or technical aspects of this Appraisal should be made to:

**Central Laboratories**  
**Opus International Consultants Ltd**  
P O Box 30 845  
Lower Hutt  
Phone: (04) 587 0600  
Fax: (04) 568 3169  
E-mail: central.lab@opus.co.nz  
Web site: www.opus.co.nz

Enquiries about the Firth RibRaft floor system should be made to:

**Firth Industries Ltd**  
PO Box 99 904  
Newmarket  
Auckland  
New Zealand  
Ph 0800 800 576  
Fax 0800 800 530  
E-mail: info@firth.co.nz  
Web site: www.firth.co.nz



**COUNCIL / OFFICE COPY**

THESE PLANS AND SPECIFICATIONS ARE APPROVED SUBJECT TO THE PROVISIONS OF THE BUILDING ACT AND IT'S REGULATIONS AND ARE TO BE RETAINED ON THE JOB IN GOOD ORDER AND PRODUCED UPON REQUEST.

The opinions expressed in this Appraisal relating to compliance with the New Zealand Building Code are in respect of the New Zealand Building Code in force at the date of issue of this Appraisal.

TAUPO DISTRICT COUNCIL  
 060802  
 APPROVED CONSENT  
 PLANS / SPECIFICATIONS

\*\*\* URGENT \*\*\*

**Generation Developments  
 Fax Message**

<b>COMPANY:</b> Attention: Kelvin Taupo District Council	<b>COMPANY:</b> Generation Developments Ltd
<b>FAX No.</b> 07 378 0114	<b>SUBJECT:</b> Lot 101 Aspect, 5 Barbary Close, Taupo, Consent Number: 060802
<b>DATE</b> 31 July 2006	<b>FROM:</b> Helen Moffatt
<b>No. OF PAGES</b> 1 of 6	<b>FAX No.</b> 07 578 8561 <b>PHONE No.</b> 07 928 3939

Hi Kelvin

Further to our phone conversations on Friday I attach documentation as requested regarding the ribratt floor for this house.

I will phone you shortly to ensure you have received this fax and that you have sufficient information to complete your part of this building consent application.

Originals will be sent by courier to you today.

Thanks so much for your help in this matter.

Cheers  
 Helen

**COUNCIL / OFFICE COPY**  
 THESE PLANS AND SPECIFICATIONS  
 ARE APPROVED SUBJECT TO THE  
 PROVISIONS OF THE BUILDING ACT  
 AND IT'S REGULATIONS AND ARE  
 TO BE RETAINED ON THE JOB IN  
 GOOD ORDER AND PRODUCED UPON  
 REQUEST.

**AMENDED**

AMENDED PLANS

31 JUL 2006

Date Received:



Specifications - new residence - A121741

# SPECIFICATION

For the work to be done and the materials to be used for the satisfactory erection and completion of the following building project:

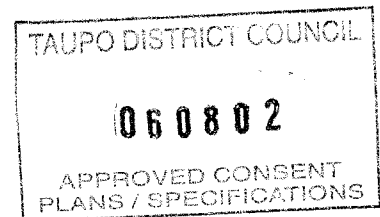
**PROPOSED NEW RESIDENCE FOR:**

**LOT 101**

**ASPECT at WHAREWAKA**

**TAUPO**

**BY: GENERATION DEVELOPMENTS LTD**



**DESIGN AND DOCUMENTATION BY:**

**COLIN J. DAVIS & Associates LTD**  
ADNZ NZCD (arch)  
Architectural design and Draughting  
PO Box 884 TAURANGA ph/fax 578 3792  
Email - cjdavis@xtra.co.nz

COUNCIL / OFFICE COPY  
THESE PLANS AND SPECIFICATIONS  
ARE APPROVED SUBJECT TO THE  
PROVISIONS OF THE BUILDING ACT  
AND IT'S REGULATIONS AND ARE  
TO BE RETAINED ON THE JOB IN  
GOOD ORDER AND PRODUCED UPON  
REQUEST.

## **1.0 PRELIMINARY AND GENERAL**

### **1.1 SCOPE**

The contract shall be for the provision of all labour, materials, plant, scaffolding, formwork and completion of the following building project. Proposed new residence to lot 101 Aspect - Taupo. accordance with the true meaning of the drawings and this specification.

### **1.2 DRAWINGS**

This specification shall be read with the accompanying drawings.

Job No. 05 / AS101 sheets 01 - 07.

Should any information in this specification vary from the drawings, then the contractor shall take the drawings as being correct.

Use only figured dimensions, i.e. **DO NOT SCALE OFF THE DRAWINGS**

### **1.3 FEES**

The contractor shall obtain the building consent and pay all fees and charges legally demandable.

### **1.4 INSURANCE**

Before commencing work the contractor shall take out and maintain for the duration of the building contract 'Builders All Risk Insurance' for the full value of the building contract, and Public Liability Insurance.

### **1.5 MATERIALS AND WORKMANSHIP**

All materials and manufactured items shall be new and as specified here in. Workmanship shall be in accordance with best trade practice.

### **1.6 SUB-TRADES**

This specification is sub divided into sub-trades for convenience only and each sub-trade is not an entire contract, sub-contractors shall be bound by all clauses of the specification that may be relevant to their performance. Each trade shall collaborate with and give all necessary assistance to the other trades.

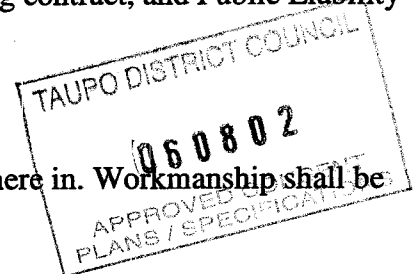
### **1.7 CONSTRUCTION INSPECTION**

The contractor is to construct the building in accordance with the certified plans, no changes, including materials, are to be allowed without written notification to the territorial authority.

Inspection of construction is to be carried out by the territorial authority and notice shall be given as required by the authority.

Inspection of construction is to be carried out by the territorial authority or the building certifier and notice shall be given as follows:

COUNCIL OFFICE  
THESE PLANS AND SPECIFICATIONS  
ARE APPROVED SUBJECT TO THE  
PROVISIONS OF THE BUILDING ACT  
AND IT'S REGULATIONS AND ARE  
TO BE RETAINED ON THE JOB IN  
GOOD ORDER AND PRODUCED UPON  
REQUEST.



2 days notice as to the intended commencement of construction.

1 day's notice of the covering up or closing of any:

1. Drainage & plumbing.
2. Foundation excavations & reinforcing steel.
3. Timber required to have a specified moisture content & all other work in respect of which such notice is required as a condition of the building consent.

## **1.8 CODE COMPLIANCE CERTIFICATE**

Upon completion of the building the owner shall as soon as practicable, advise the territorial authority, on the prescribes form, that the building has been completed to the extent required by the building consent issued, in respect of that building work, for the issue of a code compliance certificate.

Completed to the extent required by the building consent issued, in respect of that building work, for the issue of a code compliance certificate.

## **2.0 CONCRETE WORK**

All concrete materials, mixing, placing, cover and reinforcing etc. shall comply with the requirements of NZSS 3109:1997.

## **2.2 CONCRETE**

All concrete shall comply with NZSS 3104:2003 Concrete production and shall be 20 Mpa at 28 days with a 20 mm nom. maximum aggregate size and 80 mm slump. Reinforcing to comply with NZSS 3109:1997 Reinforcement shall be clean, free from mill scale, dirt, loose rust, paint, oil or any other materials. Steel that has not lost its mill scale must be exposed to the weather or otherwise treated to improve its surface adhesion. All reinforcing greater than 10.5 mm dia shall be deformed bars. Laps shall be 40 dia for plain rods and 32 dia for deformed rods. Fit stirrups snugly around bars and bind with 1.6 mm soft iron wire. All reinforcing shall be grade 300 or grade 430 as specified. Max. Covers to reinforcement shall be 75 mm exposed to earth and 50 mm protected by vapour barrier

## **2.4 FOOTINGS**

Construct concrete footings as shown on the drawings. Reinforcing to be strictly as shown on the drawings and all footing are to be inspected by the Local Authority before pouring the concrete.

## **2.5 CONCRETE FLOOR SLABS**

Floor slabs to be Firth Rib raft floor slab system to be as designed and specified by Firth Industries. Lay 0.25 mm polythene D PC over 15 mm sand blinding layer over 150mm minimum compacted pumice/sand hardfill base. Seal around all penetrations and take over all footing sides to the external face. Slab to be leveled to screed, cement dusted and finished with a powered float by experienced workmen to give dense even surface free from irregularities. Form recesses for external doors.

No holes or chases other than those specified are to be made in the slab without the approval of the engineer. All concrete shall be mechanically vibrated and carefully worked around the reinforcement and into the corners of the formwork.

## **COUNCIL / OFFICE COPY**

THESE PLANS AND SPECIFICATIONS ARE APPROVED SUBJECT TO THE PROVISIONS OF THE BUILDING ACT AND IT'S REGULATIONS AND ARE TO BE RETAINED ON THE JOB IN GOOD ORDER AND PRODUCED UPON REQUEST.

COUNCIL / OFFICE COPY  
THESE PLANS AND SPECIFICATIONS  
ARE APPROVED SUBJECT TO THE  
PROVISIONS OF THE BUILDING ACT  
AND ITS REGULATIONS AND ARE  
TO BE RETAINED ON THE JOB IN  
GOOD ORDER AND PRODUCED UPON  
REQUEST

### **3.0 BRICKLAYING**

#### **3.1 MATERIALS**

Brickwork to exterior walls to be selected 70 mm Monier bricks. All bricks to be delivered to site free from dirt and dust and stored in a dry position, any damaged or discoloured bricks are not to be used.

#### **3.2 MORTAR**

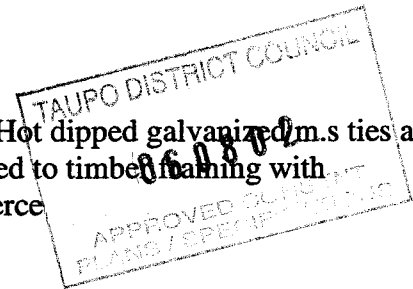
Mortar shall be composed of cement, lime and sand. All lime other than hydrated lime shall be slaked. Mortar shall be mixed in the following proportions: Cement 1: Sand 4: Lime 1 with compressive strength of 12.5 Mpa at 28 days.

#### **3.3 WORKMANSHIP**

The whole of the job is to be carried out by skilled tradesmen. In accordance with NZSS 4210:2001 and NZSS 3604:1999 appendix.F. All corners to be plumbed both ways and the courses are to be level and straight. All joints are to be weather struck exposed faces. Sills are to be bricks on the edge protruding 25 mm

#### **3.4 TIES**

Veneer to be secured to wall framing with 'Bricklock' Duo 85 mm Hot dipped galvanized m.s ties at horizontally and 350 mm crs vertically. Wall ties shall be faced fixed to timber framing with Tapcon self threading timber screws. Fix so that the fixing nails pierce



### **4.0 CARPENTRY**

This section covers all timber framing, wall and ceiling linings, all finishing timbers, exterior linings, weatherboards, soffit linings, barge and fascia boards.

#### **4.1 TIMBER**

All timber shall be graded to sizes specified and be free from defects which render it unfit for its purpose. Timber shall come from seasoned stocks or kiln dried and stacked or as long possible before use. Framing timber shall have a maximum moisture content of 20%. All framing to exterior walls shall be H 3 LSOP treated timber. Internal timber to be KD un treated. Exterior exposed timber shall be tanalised in accordance with the Timber Preservation Authority recommendations. All framing to comply with all sections of NZSS 3604:1999. and its amendments. Roof trusses and tile battens to treated to H1.2, valley boards to be treated to H3.1 LSOP

#### **4.2 FRAMING**

All materials to be the best of their respective kinds and grades laid true to their various lines and levels and constructed in a proper tradesman like manner in accordance with the best trade practice and to comply with the local body bylaws.

#### **4.3 DPC**

Separate all exterior timber walls coming into contact with the concrete with one layer of 3 ply Malthoid DPC with a minimum lap of 75 mm.

#### **4.4 TIMBER SCHEDULE**

##### **STRUCTURAL TIMBERS:**

Top plates  
Studs  
Lintels  
Rafters  
Nogs  
Ceiling joists / runners

##### **FINISHING TIMBERS:**

Pine -dressing A grade

##### **EXTERIOR TIMBERS:**

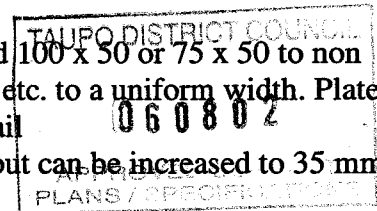
Beams  
Pergola rafters  
Sized as shown out of No 1  
framing  
Sized as shown out of Tan Pine.

#### **COUNCIL / OFFICE COPY**

THESE PLANS AND SPECIFICATIONS  
ARE APPROVED SUBJECT TO THE  
PROVISIONS OF THE BUILDING ACT  
AND IT'S REGULATIONS AND ARE  
TO BE RETAINED ON THE JOB IN  
GOOD ORDER AND PRODUCED UPON  
REQUEST.

#### **4.5 WALL FRAMING**

All wall framing to be stress graded kiln dried timber framing gauged 100 x 50 or 75 x 50 to non load bearing walls as shown on the drawings. Gauge all studs plates etc. to a uniform width. Plates to in long straight lengths and are to butt jointed with Pryda 4N10 nail plates. All holes for plumbing or wiring to be not more than 24 mm but can be increased to 35 mm where not more than 3 studs drilled.



#### **4.6 BUILDING PAPER**

Building paper shall be Framgaurd building wrap. Fix paper securely with laps not less than 75 mm at all joints and edges. Support wrap with polypropylene tape straps at 300 crs.

#### **4.7 WALL BRACING**

Wall bracing to be strictly as shown on the bracing schedule and complying with NZSS 3604:1990. Type GIB 1 and GIB 2 bracing to be Pryda Teebrace galv steel brace checked into each stud and used in conjunction with 9.5 mm gib bd fixed with 30 x 2.5 Gib clouts at 150 mm crs to perimeter of sheets and at 400 mm crs to intermediate studs. Type BR4 bracing to be 9.5 mm Braceline Gib bd fixed with 30 x 2.5 mm galv Gib clouts with 15 mm galv washers at 150 mm crs to the perimeter of sheets and double nail (no washers) to intermediate studs and nogs at 300 mm crs. plus at the bottom of each sheet to both sides, additional fixing of a 25.0 x 1.0mm x 300 mm long fixed with 6- 30 x 2.5 nails to both stud and joist / plate. Type SP 1 and SP2 bracing to be 7.5 mm Plywood tan H3 grade DD sheet brace used in conjunction with 9.5 mm Gib bd. Fix plywood to framing with 30 x 2.5 mm H.D galv. clouts at 150 mm crs. to perimeter and 300 mm crs. to intermediate studs. Additional fixing of 6Kn proprietary of stud to bottom plate at each end of brace.

#### **4.8 INSULATION**

Ceiling R2.2 Fiberglass insulation.

R2.5

214  
Walls R.1.8 Fiberglass insulation

#### **4.9 TRUSSES**

Trusses to be specifically designed in accordance with NZS 3603 treated to H 1.2 and shall be fabricated in controlled factory conditions. Trusses shall be erected in accordance with the truss drawings and to be plumb and properly aligned at 900 CRS max. Anchor over top plates with no less than 2 /100 mm x 3.75 mm skew nails plus 2 / 4.9mm Pride Z nails.

#### **4.10 CEILING FRAMING**

Frame for ceiling lining using continuous lengths of rolled formed CB35 metal battens or 75 x 40 timber fixed to underside of the trusses. Fix with 2/75 x 3.15 nails to bottom chord of truss.

#### **4.11 ROOF BRACING**

Brace roof with a diagonally opposing pair of continuous steel strips each having a capacity of 8 KN. in tension, fix over the top of each rafter or truss top chord. Provide one pair per 35 m<sup>2</sup> of roof plane area.

#### **4.12 WALL LININGS**

10 mm Gib board to all walls. 10 mm Gib 'Gib Aqualine' to all wet areas. Fix sheets horizontally and nail the sheet edges with 30 x 2.5 mm gib clouts at 300 mm CRS 12 mm from the edge and at 150 mm CRS to gib bd linings fixed over a wall brace and double nail at 300 mm CRS to all intermediate studs and nogs. All joints to be filled with Jib bedding compound, joints taped with Gib reinforcing tape and finished with finishing compound Walls lined with Gib Aqualine to be stopped with 1 st and 2 nd coat with Gib AquaMix for a level 4 finish to wallpapered walls and a level 5 finish for painted walls.

#### **4.13 CEILING LININGS**

13 mm Gibraltar board to all ceilings. Fix sheets by screws and adhesive. Apply daubs of adhesive at the 200 mm and 400 mm point from the sheet edges, position sheets hard up to the timber framing and double screw at the centre line of the sheet and to the sheet edges, 12 mm from the edge. Use type '8' Gypsum 32 mm x 6 gauge screws. All joints to be filled with Gib bedding compound, joints taped with Gib reinforcing tape and finished with finishing compound.

#### **4.14 SHELVING**

All shelving to cupboards to be Clarrison pre- finished metal shelving. and wardrobes

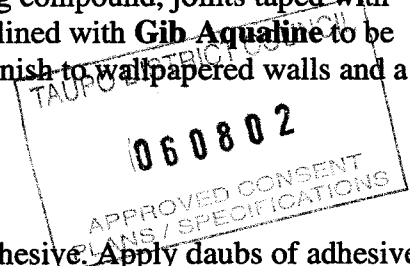
#### **4.15 MOULDINGS**

Skirting 60 x 10 pine  
Jambs ex 25 mm pine  
Cornice 50 mm Gib Cove - 40 x 10 to cupboards

#### **4.16 SOFFIT LINING**

4.5 mm flat Hardies Silkline with 40 x 2.5 galvanized flat head nails at 150 mm centers to perimeter and intermediate nogs, PVC jointers to sheet edges.

COUNCIL / OFFICE COPY  
THESE PLANS AND SPECIFICATIONS  
ARE APPROVED SUBJECT TO THE  
PROVISIONS OF THE BUILDING ACT  
AND IT'S REGULATIONS AND ARE  
TO BE RETAINED ON THE JOB IN  
GOOD ORDER AND PRODUCED UPON  
REQUEST



## **5.0 JOINERY**

### **5.1 WORKMANSHIP**

Workmanship to be to best of trade practice. Exterior timber joinery shall have meeting faces and joints primed during assembly and shall be primed on all faces before installation.

### **5.2 INTERNAL DOORS**

Internal door frames to be out of ex 150 x 30 pine finger jointed to have architraves fitted. Doors to be flush panel paint quality M.D.F. doors Manhattan style

### **5.3 HARDWARE**

Contractor is to fit all door hardware, latchsets and locks as required to enable operation of all doors. See addendum for specification of Hardware.

## **6.0 ALUMINIUM JOINERY**

Provide and install aluminium joinery as specified herein and approved for use and comply with NZSS 4211:1985 and NZSS 3504:1979.

### **6.1 FINISH**

All aluminium to be polyester powder coated 'Cordalux' powder coating colours. To architectural aluminium association specification for stoved organic finishes to 40 microns min

### **6.2 DIMENSIONS**

Sizes as shown on the drawing to be adhered to and are nominal only allowances to be made for clearance trim only.

### **6.3 SASHES**

All sashes shall be awning or casement hung - see elevations. Use vinyl or neoprene seals to perimeters of all sashes and glazing.

### **6.4 JOINTS**

All joints in sashes or frames shall be mitre cut sealed and fastened with 18/8 stainless steel screws.

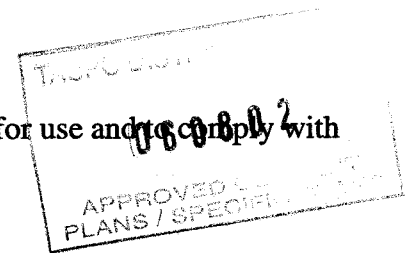
### **6.5 REVEALS**

All reveals to be out of ex 25 mm Tan H3 pine - paint finish, size for architraves.

### **6.6 GLAZING**

All glazing to be sized as per NZS 4223:1985 parts I II NZS 4223 PART III: 1999 WC, ensuite and bathroom which is to have selected obscure glazing. Bathroom to have 3 mm Toughened safety glass grade A.

COUNCIL / OFFICE COPY  
THESE PLANS AND SPECIFICATIONS  
ARE APPROVED SUBJECT TO THE  
PROVISIONS OF THE BUILDING ACT  
AND IT'S REGULATIONS AND ARE  
TO BE RETAINED ON THE JOB IN  
GOOD ORDER AND PRODUCED UPON  
REQUEST.



## **7.0 CONCRETE ROOF TILES**

### **7.1 SCOPE**

To entire roof area of house supply and fix Monier glazed concrete roof tiles with profiles specified on drawings.

### **7.2 LAYING**

Fix 50 x 50 H1.2 tile battens at centers to suit the tiles. Secure all perimeter tiles and not less than 50% of the main roof tiles with mechanical fixing by either 2.15 mm galv. nails or by screws.

### **7.3 VALLEYS**

All valleys shall be 0.55 mm coloursteel 'Endura' over ex 25 mm H 3.1 valley bd in a straight and continuous line. Tiles shall be fixed either side of the valley and neatly cut with a tile cutter. Any gaps that occur through the cutting shall be made bird proof with galv. ms mesh.

### **7.4 HIPS AND RIDGES**

The hips and ridges shall be covered with concrete ridge tiles and shall be bedded and pointed with weep holes provided at the pan of each tile. The end ridge and hip tiles shall be secured. Bedding mortar shall be coloured struck off to give a smooth face.

### **7.5 GUARANTEE**

A written guarantee shall be provided at the completion of the job covering workmanship and materials to a term as specified by manufacturer.

## **8.0 PLUMBING**

### **8.1 GENERAL**

The whole of the work shall be carried out in strict accordance with the drawings. The work is to be carried out by registered plumber. Plumbing to be to AS1 / G13 of the approved documents to the NZ building code.

### **8.2 WATER SUPPLY**

Lay on cold water supply from existing main in 19 mm Dia PVC tubing. Provide and fix stop cock in suitable position. Take 19 mm Dia copper tube branches to HWC and 12 mm Dia copper branches to each new shower, basin, bath, WC, tub and washing machine. All sanitary fittings shall be installed to prevent backflow into the water supply by providing an air gap of 25 mm min. between every potable water supply outlet and the overflow pipe or flood level of the fixture to which it discharges.

### **8.3 HOT WATER SUPPLY**

All piping in connection with the hot water supply shall be copper to NZS 3501:1976 with all jointing to BS 1723.

COUNCIL / OFFICE COPY  
THESE PLANS AND SPECIFICATIONS  
ARE APPROVED SUBJECT TO THE  
PROVISIONS OF THE BUILDING ACT  
AND IT'S REGULATIONS AND ARE  
TO BE RETAINED FOR THE JOB IN  
GOOD ORDER AND PRODUCED UPON  
REQUEST.

Provide and fix Rinnai Infinity 24 continuous gas water heater. Take 15 mm Dia copper branches to all fittings. The Digital control pads are to be set to not more than 55oC. All hot water supply pipes to be insulated with lagging. All hot and cold water copper pipes to be in wall and ceiling framing, no pipes to be laid under concrete floor.

## **8.5 WASTE PIPES**

All waste pipes to as sized on the drawings and to out of UPVC, to be as per NZS 7643:1979. Pipes to be supported at 500 mm crs. At supports and at floor and wall penetrations fit pipe sleeves or flexible lagging. All fittings to have a water trap to prevent foul air from entering the building, the depth of the trap shall be not less than 40 mm and located as close as possible to the fitting. All fittings to discharge directly over a gully trap.

## **8.6 GUTTERS & DOWNPIPES**

Continuous spouting - Colorsteel fascia / gutter system to be used, discharge into 100 x 50 UPVC M.S. downpipes in positions shown on drawings.

## **9.0 DRAINLAYING**

### **9.1 GENERAL**

The Drainage contractor is to provide and supply, and do everything necessary to complete the drainage in accordance with the drawings. The Drainage contractor must execute all work that is shown on the drainage plan and as required to comply with the NZ building code.

### **9.2 EXCAVATION**

Excavate for trenches, gully traps, drains etc. to depth required for laying of sanitary and stormwater drains.

Soil drains to be 100 min dia UPVC.

Stormwater drains to be 100 mm dia UPVC.

All UPVC pipes to be to NZS 7649

### **9.3 LAYING**

Start from the outfall and as work proceeds lay and solidly bed all drains to sizes and gradients required. The trench width shall be no less than 300 mm and the width of the trench at the top of the pipe shall be no more than 600 mm unless covered in concrete. Bedding materials shall be a minimum of 100 mm of clean granular non-cohesive material with a maximum particle size of 20 mm. Backfilling shall be granular bedding and selected fill placed in layers of 100 mm loose thickness and compacted. All joints shall be flexible and to comply with pipe manufacturers specifications with the invert perfectly true and concentric with the proceeding pipe. The layout is to be laid only in straight lines between bends and all junctions shall be no greater than 60°.

Soil drains connection to connect into territorial authority sewer connection

Stormwater drains to discharge into soakholes to be as per Taupo District council requirements for Wharewaka and shall be generally as follows, either 1/600 dia ring 6m deep or 1/900 dia ring 4m deep, to service not more than 50 m2 of roof area, with drainlayer being responsible for determining soil conditions to determine suitability as per council requirements. Pits are to be located away from paved areas and to have removable lids for maintenance.

## **9.4 GULLY TRAPS**

Gully traps to be positioned so that the top of the gully dish is no less than 50 mm below the overflow level of the lowest sanitary fixture. The construction shall be to prevent the ingress of surface water and shall the top of the gully dish 100 mm above the ground or if there is paving 25mm, and it shall have a grating, a minimum pipe size of 80 mm and a water seal depth of 65 mm. Waste pipes discharging over the gully shall be arranged to permit easy cleaning and located at least 20 mm over the water seal. The top of the water seal is to be no more than 600mm below the top of the gully trap.

## **9.5 VENTILATION**

80mm terminal vent to be used for ventilation.

## **9.6 MAINTENANCE**

Drains shall be provided with access points as shown on

## **10.0 ELECTRICAL**

The electrician shall supply and install all items necessary for the electrical wiring system complete. The whole of the work shall be carried out in accordance with the Electricity regulations 1993 and the New Zealand electrical code of practice for electrical wiring work in domestic premises NZEC 51: 1993 and the electrical contractor is to obtain all permits and pay all fees required from the supply authority, and arrange for all inspections required.

## **10.1 MAIN SUPPLY**

The electrician is to arrange for the mains building, check conditions before tendering.

## **10.2 METERBOARD**

Provide and set up where directed a meterboard and case with necessary equipment therein neatly labeled

## **10.3 WIRING**

All cables shall be 250 volts complying with the BSS 7 rubber insulated and PVC cable and flexible cords for the electric power and lighting. All plastic material for switches, flush plates, light sockets and socket outlets shall be white or as directed by the owners. All wiring is to be concealed in the wall framing or in plastic conduits.

## **10.4 FITTINGS**

Provide all socket outlets and wall switches in positions as shown on the drawings; the fittings shall PDL Clipsal 2000 series in white. Socket outlets to be 201SVs with extra switch. The electrician is not to start placing any socket outlets, wall switches or lights without consulting with the owners the exact location of each fitting.

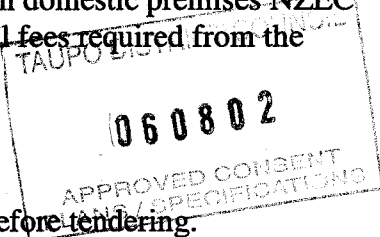
Allow to wire and install for the following fittings:

Electric hot water cylinders.

Wall oven / hob

Range hood

COUNCIL / OFFICE COPY  
THESE PLANS AND SPECIFICATIONS  
ARE APPROVED SUBJECT TO THE  
PROVISIONS OF THE BUILDING ACT  
AND ITS REGULATIONS AND ARE  
TO BE RETAINED ON THE JOB IN  
GOOD ORDER AND PRODUCED UPON  
REQUEST.



Dishwasher

Waste disposer

All light fittings

Heated towel rails

Ceiling fans

COUNCIL / OFFICE COPY  
THESE PLANS AND SPECIFICATIONS  
ARE APPROVED SUBJECT TO THE  
PROVISIONS OF THE BUILDING ACT  
AND IT'S REGULATIONS AND ARE  
TO BE RETAINED ON THE JOB IN  
GOOD ORDER AND PRODUCED UPON  
REQUEST.

## **11.0 PAINTER**

### **11.1 MATERIALS**

The materials shall be premium quality delivered in unopened complete containers with makers name bearing brand name. Materials shall be applied strictly in accordance manufacturers specifications.

### **11.2 WORKMANSHIP**

All work to be of the highest standard performed by skilled tradesmen only and finished to the satisfaction of the owner and designer. No paint containing oil to be applied to damp surfaces and no external painting is to be done during frost or unsuitable weather. Between each coat rough patches etc. shall be sanded down to obtain a smooth surface. Any work damaged by dust or other cause is to be rubbed down and recoated. Each coat of paint is to be finished with one coat over all surfaces and allowed to dry thoroughly before a further coat is applied.

### **11.3 TINTS**

The designer will supply the painting contractor with a colour schedule and colours are to be strictly adhered to. Any variations made from the instructions given are to be rectified at the expense of the painting contractor.

### **11.4 PROTECTION OF WORK**

The painting contractor is to take adequate precautions during and after painting both inside and out to protect his work from dust, dirt or any other disfigurement whatsoever. He shall provide and carry out all necessary protection to the floor and walls.

### **11.5 HARDWARE**

The locks and fasteners must be removed while painting work is in progress and refixed on completion.

### **11.6 PAINTING SCHEDULE**

#### **11.6:1 CEILINGS**

1st coat    Sealer/ Undercoat  
2nd coat    Acrylic latex matt finish

3rd coat Acrylic latex matt finish

**11.6:2 WALLS**

1st coat Sealer/ Undercoat  
2nd coat Acrylic satin finish  
3rd coat Acrylic satin finish

**11.6:4 SKIRTINGS / ARCHITRAVES / DOORS & JAMBS**

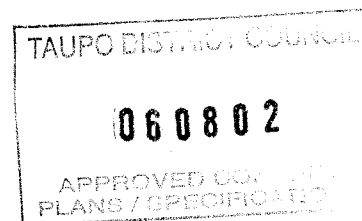
1st coat Interior wood primer  
2nd coat Alkyd undercoat  
3rd coat Alkyd satin finish enamel

**10.6.3 SOFFIT**

PRE FINISHED

**11.6:4 SKIRTINGS / ARCHITRAVES / DOORS & JAMBS**

1st coat Interior wood primer  
2nd coat Alkyd undercoat  
3rd coat Alkyd satin finish enamel



COUNCIL / OFFICE COPY  
THESE PLANS AND SPECIFICATIONS  
ARE APPROVED SUBJECT TO THE  
PROVISIONS OF THE BUILDING ACT  
AND IT'S REGULATIONS AND ARE  
TO BE RETAINED ON THE JOB IN  
GOOD ORDER AND PRODUCED UPON  
REQUEST.

CLIENT... GENERATION DEVELOPMENTS LTD COUNCIL / OFFICE COPY  
 THESE PLANS AND SPECIFICATIONS ARE APPROVED SUBJECT TO THE PROVISIONS OF THE BUILDING ACT AND ITS REGULATIONS AND ARE TO BE RETAINED ON THE PROJECT.

TABLE 2 - BUILDING ENVELOPE RISK MATRIX e2/AS1 PARAGRAPH 3.1.2, FIG 1

ELEVATION NUMBER	RISK SEVERITY								
	LOW	SCORE	MEDIUM	SCORE	HIGH	SCORE	VERY HIGH	SCORE	SUBTOTALS FOR EACH RISK FACTOR
RISK FACTOR									
WIND ZONE ( per NZS 3604 )	0		0		1		2		0
NUMBER OF STOREYS	0		1		2		4		0
ROOF/WALL INTERSECTION DESIGN	0		1		3		5		1
EAVES WIDTH	0		1		2		5		1
ENVELOPE COMPLEXITY	0		1		3		6		1
DECK DESIGN	0		2		4		6		0
TOTAL RISK SCORE									3

TABLE 2 - BUILDING ENVELOPE RISK MATRIX e2/AS1 PARAGRAPH 3.1.2, FIG 1

ELEVATION NUMBER	RISK SEVERITY								
	LOW	SCORE	MEDIUM	SCORE	HIGH	SCORE	VERY HIGH	SCORE	SUBTOTALS FOR EACH RISK FACTOR
RISK FACTOR									
WIND ZONE ( per NZS 3604 )	0		0		1		2		0
NUMBER OF STOREYS	0		1		2		4		0
ROOF/WALL INTERSECTION DESIGN	0		1		3		5		1
EAVES WIDTH	0		1		2		5		1
ENVELOPE COMPLEXITY	0		1		3		6		1
DECK DESIGN	0		2		4		6		0
TOTAL RISK SCORE									3

TABLE 2 - BUILDING ENVELOPE RISK MATRIX e2/AS1 PARAGRAPH 3.1.2, FIG 1

ELEVATION NUMBER	RISK SEVERITY								
	LOW	SCORE	MEDIUM	SCORE	HIGH	SCORE	VERY HIGH	SCORE	SUBTOTALS FOR EACH RISK FACTOR
RISK FACTOR									
WIND ZONE ( per NZS 3604 )	0		0		1		2		0
NUMBER OF STOREYS	0		1		2		4		0
ROOF/WALL INTERSECTION DESIGN	0		1		3		5		1
EAVES WIDTH	0		1		2		5		1
ENVELOPE COMPLEXITY	0		1		3		6		1
DECK DESIGN	0		2		4		6		0
TOTAL RISK SCORE									3

TABLE 2 - BUILDING ENVELOPE RISK MATRIX e2/AS1 PARAGRAPH 3.1.2, FIG 1

ELEVATION NUMBER	RISK SEVERITY								
	LOW	SCORE	MEDIUM	SCORE	HIGH	SCORE	VERY HIGH	SCORE	SUBTOTALS FOR EACH RISK FACTOR
RISK FACTOR									
WIND ZONE ( per NZS 3604 )	0		0		1		2		0
NUMBER OF STOREYS	0		1		2		4		0
ROOF/WALL INTERSECTION DESIGN	0		1		3		5		1
EAVES WIDTH	0		1		2		5		1
ENVELOPE COMPLEXITY	0		1		3		6		1
DECK DESIGN	0		2		4		6		0
TOTAL RISK SCORE									3

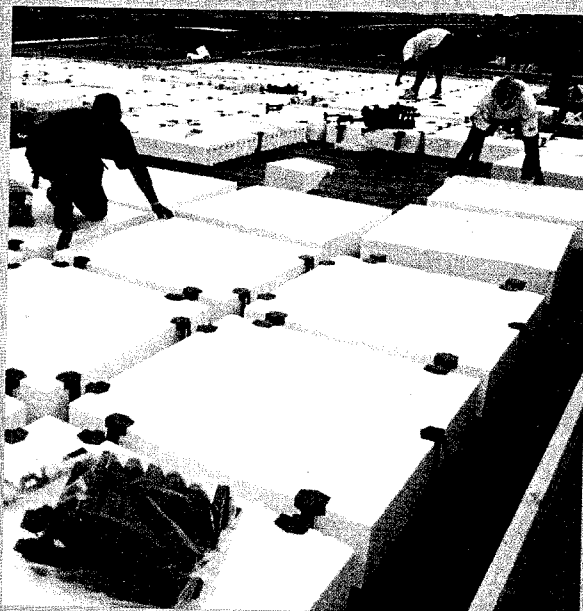
TAKAPO DISTRICT COUNCIL  
 1 060802  
 APPROVED CONSENT  
 PLANS / SPECIFICATIONS

Specifications - rib raft floor system - A121742



# RIBRAFT™ FLOOR SYSTEM

FIRTH TECHNICAL SOLUTIONS



Firth Industries' Ribraft Floor System is accredited by the Building Industry Authority as complying with certain provisions of the New Zealand Building Code. The Authority's accreditation is binding on territorial authorities and building certifiers.

## INSTRUCTIONS ON THE USE OF THIS MANUAL

This Manual consists of two Sections:

**Section 1: Firth RibRaft Floor System Design Information**

and

**Section 2: Firth RibRaft Floor System Installation Information**

Section 1 contains information principally useful for the specifier or building designer while Section 2 is primarily aimed at the person on site installing the Firth RibRaft Floor system.

This document contains non-specific design and installation information. A variation to any of the information given requires specific design and is hence beyond the scope of this document.

Firth RibRaft Floor System can be constructed for all slab-on-ground concrete floors for domestic or residential buildings that fall within the scope of NZS 3604:1999 "Timber Framed Buildings" and Clause 3 "Scope" of Section 1 of this Manual. The design and installation details in this Manual shall be used to design and construct such a floor.

The Firth Ribraft Floor System is covered by the BIA Codemark®. This is conditional on the system being used as described in Opus Appraisal Certificate 1999/22 dated May 2000 which in turn requires design in accordance with Section 1 and installation with Section 2 of this Manual.

***This Manual shall cover only the non-specific design details, but an engineer may wish to use this Manual to assist with a specific design of a RibRaft floor.***

# CONTENTS

## SECTION 1

<b>1 GENERAL</b> .....	<b>5</b>
<b>2 TECHNICAL DESCRIPTION</b> .....	<b>5</b>
2.1 Overview .....	5
2.2 Pods .....	5
2.3 Steel .....	5
2.4 Concrete .....	5
<b>3 SCOPE</b> .....	<b>5</b>
3.1 Structure Limitations .....	5
3.2 Live Loading .....	5
3.3 Dead Loading .....	6
3.4 Building Types .....	6
3.5 Foundation Soils .....	6
3.6 Flow Diagrams .....	6
<b>4 CONSTRUCTION DETAILS</b> .....	<b>9</b>
4.1 Pod Layout .....	9
4.2 Edge Beam Width and Reinforcement .....	10
4.3 Internal Ribs Width and Reinforcement .....	10
4.4 Mesh Reinforcement .....	10
4.5 Re-entrant Corners .....	10
<b>5 LATERAL RESISTANCE</b> .....	<b>11</b>
5.1 Seismic Resistance .....	11
5.2 Wind Resistance .....	12
5.3 Shear Keys .....	12
<b>6 OTHER DESIGN DETAILS</b> .....	<b>13</b>
6.1 Shrinkage Control .....	13
6.2 Services Detailing .....	13

## SECTION 2

<b>1 GENERAL</b> .....	<b>15</b>
<b>2 SITE REQUIREMENTS</b> .....	<b>15</b>
2.1 General .....	15
2.2 Temporary Excavations .....	15
2.3 Surface Water .....	15
<b>3 INSTALLATION PROCEDURE</b> .....	<b>16</b>
3.1 Site Preparation .....	16
3.2 Earthworks .....	16
3.3 Shear Keys .....	16
3.4 Plumbing and Services .....	16
3.5 Sand Blinding .....	17
3.6 Damp Proof Membrane .....	17
3.7 Edge Formwork .....	17
3.8 Laying the Pods and Spacers .....	18
3.9 Reinforcing Steel .....	19
3.9.1 Edge Beam Steel .....	19
3.9.2 Rib Steel .....	19
3.9.3 Mesh Reinforcing .....	19
3.9.4 Re-entrant Corner Steel .....	19
3.10 Concrete Installation .....	20
3.10.1 Placing .....	20
3.10.2 Finishing .....	20
3.10.3 Curing .....	20
3.11 Shrinkage Control Joints .....	20
3.12 Removal of Formwork .....	21
3.13 Brick Veneer .....	21
3.14 Landscaping/Paving .....	21
3.15 Ongoing Maintenance .....	21
<b>4 SHEAR KEYS</b> .....	<b>21</b>



# **FIRTH RIBRAFT FLOOR SYSTEM**

## **SECTION 1**

### **DESIGN INFORMATION**

## 1 GENERAL

This Section of this Manual contains non-specific design information required for the Firth RibRaft Floor System (the system). Full information on the non-specific installation procedures is described in Section 2 of this Manual (Installation Information).

## 2 TECHNICAL DESCRIPTION

### 2.1 Overview

The Firth RibRaft Floor System is a reinforced concrete waffle raft floor slab-on-ground. It consists of an 85mm thick slab supported by a grid of ribs normally 100mm wide at 1200mm x 1200mm centres. The overall depth is 305mm. Edge beams and ribs under loadbearing walls are 300mm wide to provide for the extra load carried by these members.

### 2.2 Pods

Polystyrene pods 1100mm square and 220mm thick are placed directly on levelled ground and are arranged in such a way as to form a reinforced concrete floor slab with a grid of reinforced concrete ribs and edge beams when concrete is placed onto them. Pods may be cut to suit specific architecture layout and also to accommodate services.

*(300mm thick pods are available if needed for deeper edge beams and internal ribs for construction following specific engineering design. Such uses are outside the scope of this document.)*

### 2.3 Steel

Reinforcing steel consists of steel 665 mesh in the slab with reinforcing bars in the ribs and edge beams. The reinforcing bars and all welded mesh fabric reinforcing shall conform to NZS 4671:2001 "Steel Reinforcing Materials". Specifically designed spacers are used to position the polystyrene pods and the rib and edge beam reinforcing steel bars in a secure manner until the concrete is placed. The reinforcing mesh is held in place by mesh chairs. Conventional timber or steel formwork is used to form the edge of the slab.

### 2.4 Concrete

One of the following Firth concrete products shall be used in the system:

- 1) Raftmix – a 20MPa 80mm slump structural mix available in either a 13mm or more usually a 19mm nominal aggregate size. This mix is normally placed

in the floor straight from the concrete truck chute and if necessary by wheelbarrow over planks set up over the pods.

- 2) Raftmix Pump – a 20MPa 100mm slump pump mix available in either a 13mm or more commonly a 19mm nominal aggregate size. The selection of aggregate size may be determined either by the capability of the available concrete pump or by the concrete placer's preference.

## 3 SCOPE

This Clause sets out the limitations that apply to the use of the non-specific details for the system. The concrete floor slab for buildings or ground conditions that do not meet this scope must be subjected to specific engineering design to comply with the requirements of the New Zealand Building Code.

### 3.1 Structure Limitations

The non-specific details of the system shall only be used where the structure supported by the system complies with the following criteria:

- The system is laid level, and is not stepped.
- The structure supported by the system has no basement, part basement or foundation walls.
- The structure supported by the system has a roof pitch limited to 30 degrees maximum from the horizontal.
- Roof and ceiling loads of the structure supported by the system are taken to the external walls by roof trusses.
- The maximum height of each storey of the structure supported by the system is 3m.
- Only ground floor walls of the structure supported by the system are permitted to be "heavy external walls" (as defined in Clause 3.3 below)
- Three storey buildings supported by the system shall be limited to those with live loadings on the upper floors of 1.5kPa.

### 3.2 Live Loading

The live loading cases of structures covered by these designs are:

- 1.5kPa and 3.0kPa as per NZS 3604:1999 "Timber Framed Buildings".
- 9.0kN concentrated load in garage area (vehicle limited to 2500kg gross).

### 3.3 Dead Loading

The dead loading cases of structures covered by these designs are:

- Light external walls with total mass not exceeding 60kg/m<sup>2</sup> – e.g. timber framing with weather boards and interior wall linings
- Heavy external walls with total mass greater than 60kg/m<sup>2</sup> but not exceeding 290kg/m<sup>2</sup> – e.g. timber framing with masonry veneer or partially filled 20 series masonry blocks
- Internal walls with total mass not exceeding 35kg/m<sup>2</sup> – e.g. timber framing and linings
- Light roofs with total mass not exceeding 45kg/m<sup>2</sup> – e.g. ceiling linings and metal roof, including framing
- Heavy roofs with total mass greater than 45kg/m<sup>2</sup> but not exceeding 85kg/m<sup>2</sup> – e.g. ceiling lining and concrete tiles or slates, including framing
- Mid-floors with total mass not exceeding 60kg/m<sup>2</sup> – e.g. timber framing and flooring, including ceiling linings.

### 3.4 Building Types

The designs given in this Manual are limited to where the system supports Building Types A to E as described in Table 1. The classification of wall weights is as detailed in Clause 3.3 of this Section. Single, two and three storey shall be as defined in NZS 3604:1999.

Building Type	Description	Ground Floor External Walls	Second Storey External Walls	Third Storey External Walls
A	Single storey	Light		
B	Single storey	Heavy		
C	Two Storey	Light	Light	
D	Two Storey	Heavy	Light	
E	Three Storey	Heavy	Light	Light

**Table 1** Building Identifier

### 3.5 Foundation soils

The system shall be used when the supporting ground meets the definitions of “good ground” given in Section 3 of NZS 3604:1999, except that the ultimate bearing capacity shall be as given in Table 2 top right. However, the system shall not be used for damp sites i.e. where it can be reasonably expected that the ground water level could come within 600mm of the underside of the system. The acceptability of the ground shall be verified in accordance with Clause 3.1.3 of NZS 3604:1999.

Building Type	Ultimate Bearing Capacity (kPa) for:	
	1.5kPa Live Load	3.0kPa Live Load
A	150	150
B	150	180
C	150	180
D	210	240
E	270	300

**Table 2** Minimum Ultimate Bearing Capacity

The ultimate bearing capacity required of the supporting ground shall be verified with by Scala Penetrometer testing in accordance with Clause 3.3 of NZS 3604:1999. Where the required bearing capacity differs from 300kPa, the bearing capacity shall be verified when the number of blows per 300mm depth of penetration below the underside of the system at each test site, exceeds the values given in Table 3 below.

Min. blows per 300mm depth	Bearing Capacity (kPa)
6	150
7	180
8	210
9	240
10	270

**Table 3** Scala Penetrometer Blows Required For Determining Ultimate Bearing Capacity

### 3.6 Flow Diagrams

The flow diagrams on the following pages (adapted from NZS 3604:1999) will help in determining whether the non-specific details for the system can be used for the purposes of the concrete floor slab construction. There are two checks in the process. The first is to determine whether the proposed building complies with the requirements set out in this Manual (Building Check), and the second is to determine whether the site complies with the requirements set out in this Manual (Site Check).

(Note: NZS 3604:1999 provides for parts of buildings to be considered as individual buildings. These flow diagrams apply to those parts of the building where slab-on-ground is being considered and where the part of the building can be considered as an individual building under NZS 3604:1999).

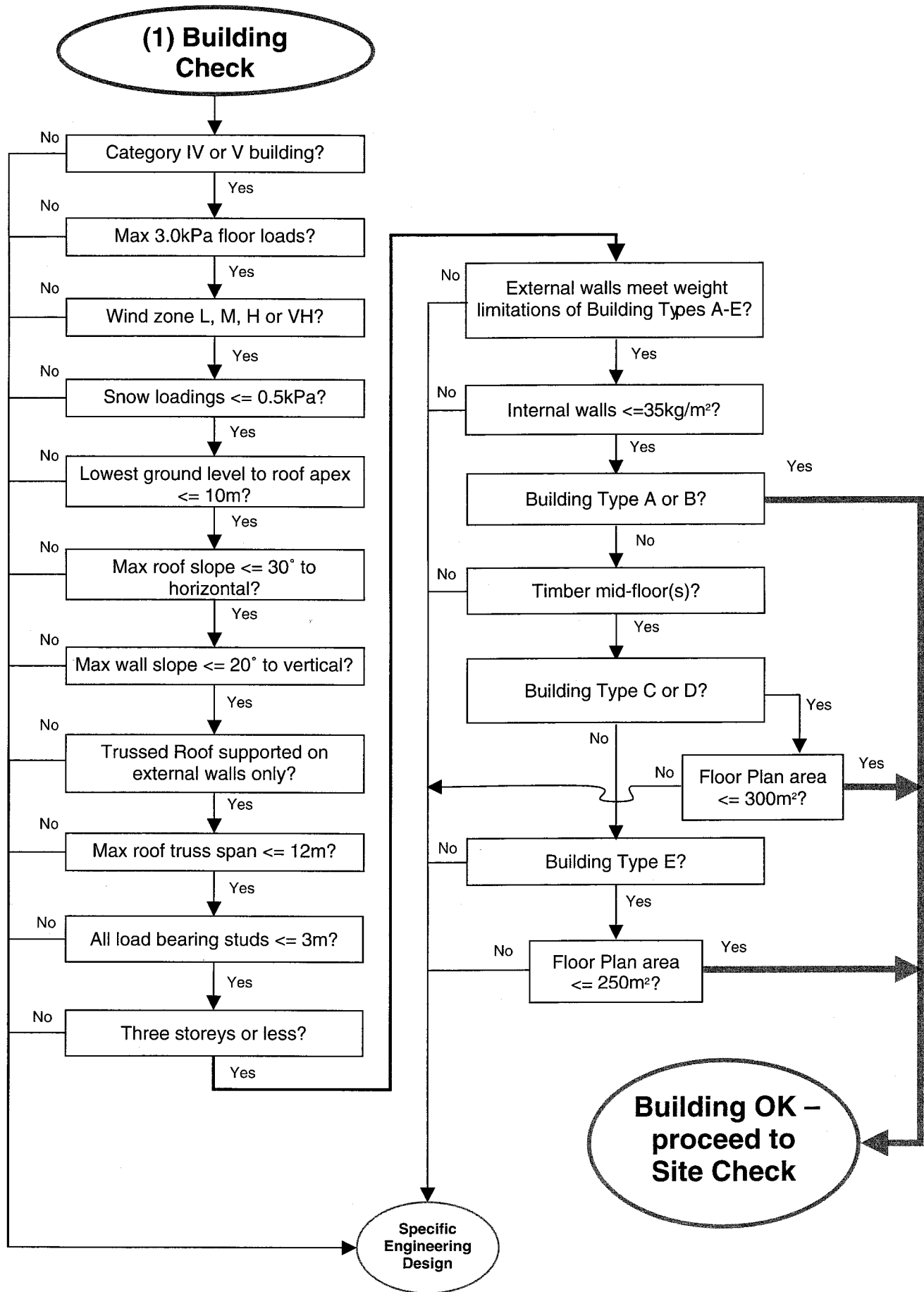


Figure 1 Building Check Flow Diagram

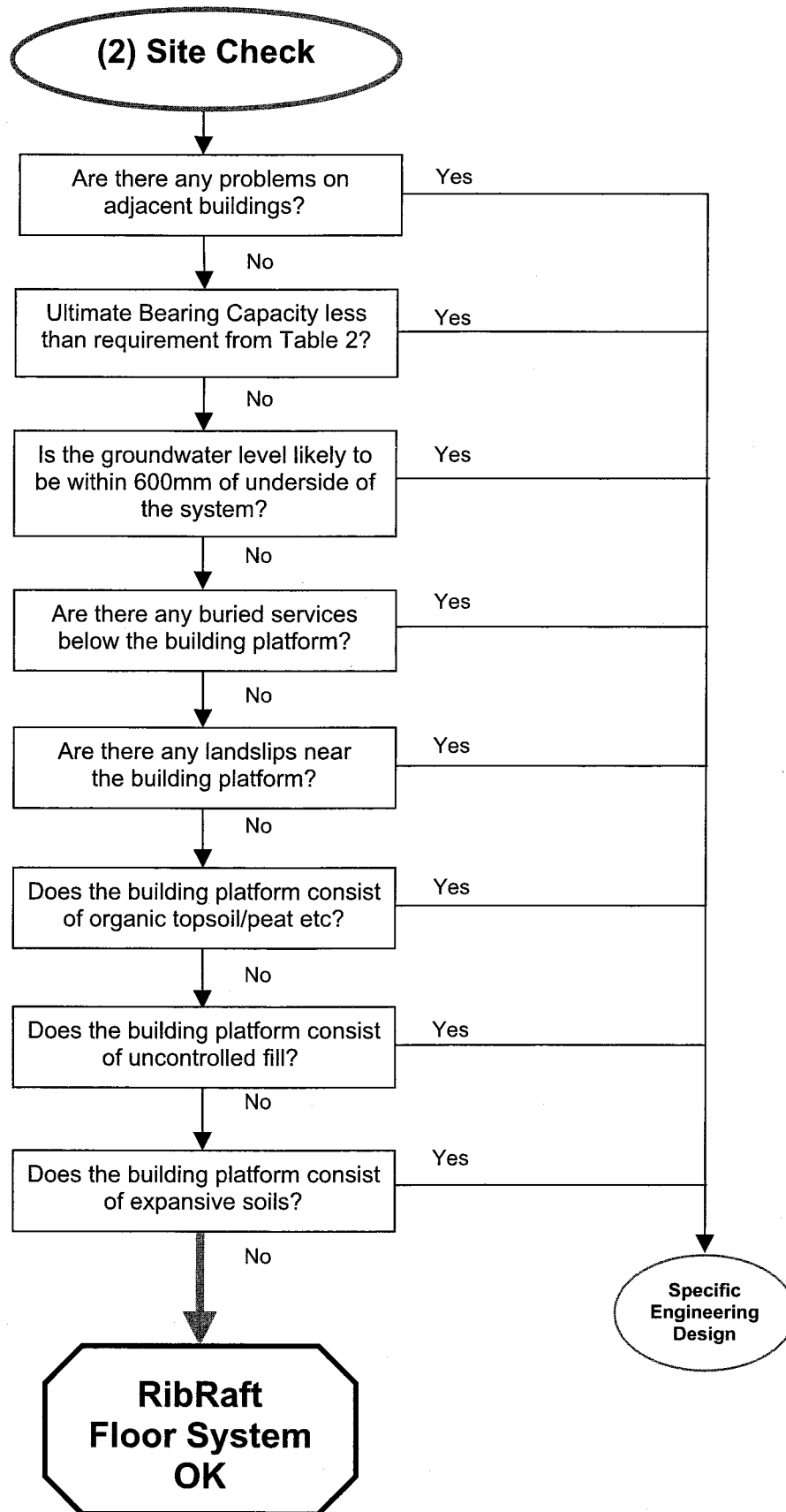


Figure 2 Site Check Flow Diagram

## 4 CONSTRUCTION DETAILS

Standard construction details for the system are provided here for buildings that fall within the above scope.

### 4.1 Pod Layout

Firth polystyrene pods (1100x1100x220mm thick) shall be placed on levelled ground and arranged in a waffle pattern. The pods are used as void formers while the concrete is curing. Once the concrete cures, the pods do not add to the structural performance.

Pods shall be placed so as to provide the necessary spacing between the edge beams and ribs as described below. The first rib out from the edge beam shall have a maximum clear separation of 1100mm however in all other cases the centre to centre distance between the ribs, whether they are 100mm or 300mm wide, shall be 1200mm. In the case of 100mm ribs this centre to centre spacing is achieved by the 1100mm square pods however between 100mm and 300mm

ribs, or between two 300mm ribs, the pods shall be cut down to suit. Pods may be cut down to size but never added to, where this is necessary to suit the building layout, penetrations or orientation of beams and ribs.

Figure 3 below shows a typical layout of the pods and ribs. Note the part pods around the edge, where the building shape dictates, and adjacent to the 300mm rib.

*Firth suggests that when drawing the building plan, the location of any loadbearing walls be identified first. This establishes the location of the 300mm wide ribs. A generic RibRaft grid (100mm wide ribs at 1200mm centres) can then be laid out on the plan and the location of the pods can then be confirmed. A common approach is to use a corner of the building as a starting point. Ribs can be used at less than 1200mm centres, however it is more cost effective to use the 1200mm centres wherever practicable.*

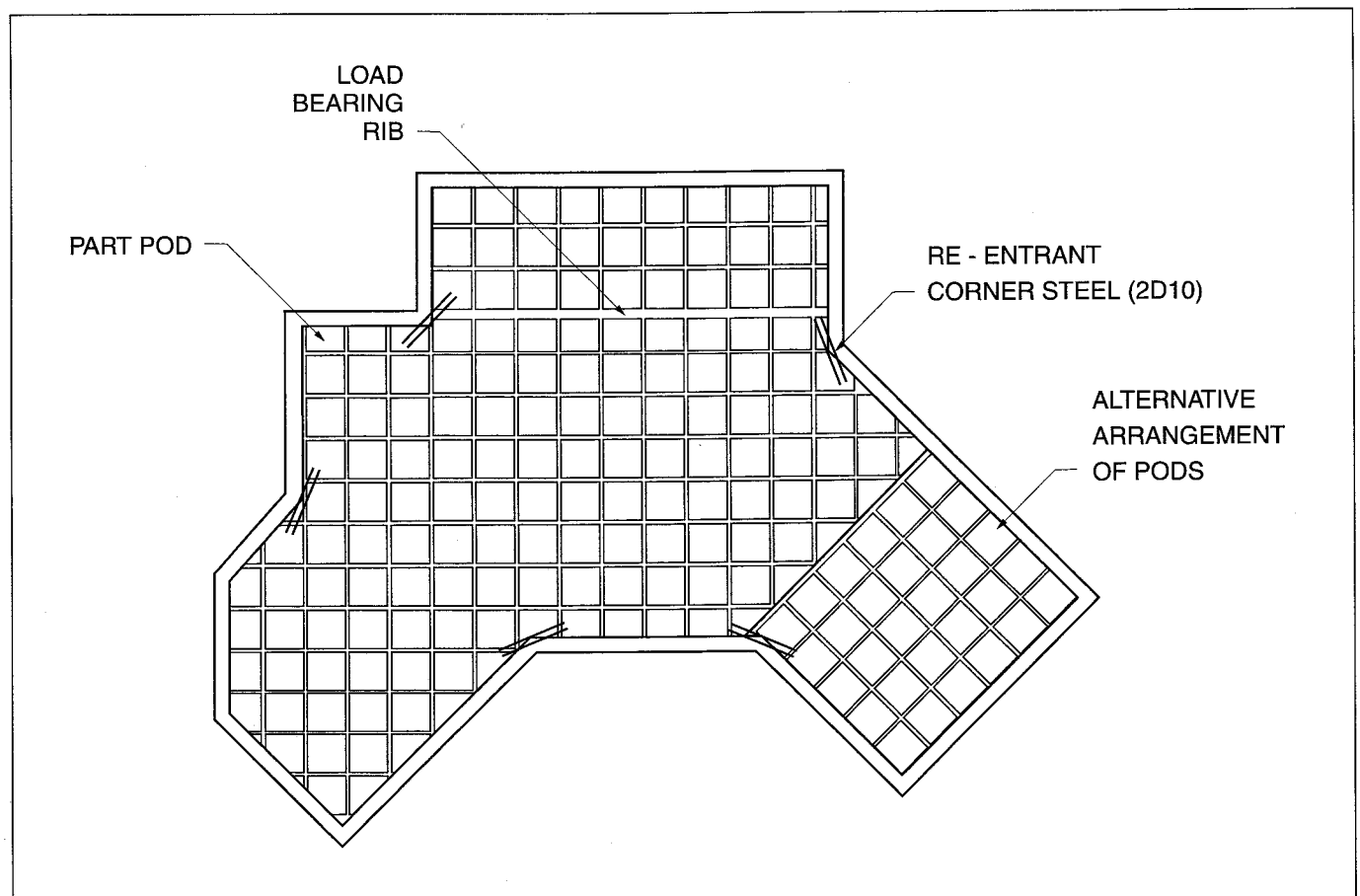


Figure 3 Typical RibRaft Plan

## 4.2 Edge Beam Width and Reinforcement

Edge beams around the perimeter of the floor slab shall be 300mm to provide bearing capacity for external load bearing walls, and contain 2-HD12 bars (Grade 430) as bottom steel and 1-HD12 bar (Grade 430) in the top. This top bar shall be tied to the underside of the reinforcement mesh. Refer Figure 4, below for construction details. The edge beam shall be rebated for brick veneers where necessary as shown in Figure 4(C).

## 4.3 Internal Ribs Width and Reinforcement

Each standard internal rib shall be 100mm wide and shall contain 1-HD12 steel bar (Grade 430) held in place by a Firth spacer. For all loadbearing walls, the pods shall be cut to create a 300mm wide rib directly under the loadbearing wall, with 2-HD12 (Grade 430) steel bars as bottom steel. Figures 4(D) & (E) show

construction details for standard ribs and ribs under loadbearing walls. Where the ribs meet at other than right angles, the reinforcement from each rib shall be bent into the adjacent rib and tied together. The reinforcement shall lap for at least 480mm.

## 4.4 Mesh Reinforcement

The entire floor slab shall be reinforced with 665 steel mesh supported on 40mm mesh chairs sitting on the polystyrene pods.

## 4.5 Re-entrant Corners

In order to limit cracking at the re-entrant, or internal corners, extra steel shall be placed on top of the mesh. These shall be 2-D10 bars (Grade 300), 1200mm long tied to the top of the mesh at 200mm centres, with 50mm cover from the internal corner – refer Figure 3 on page 9 of this manual.

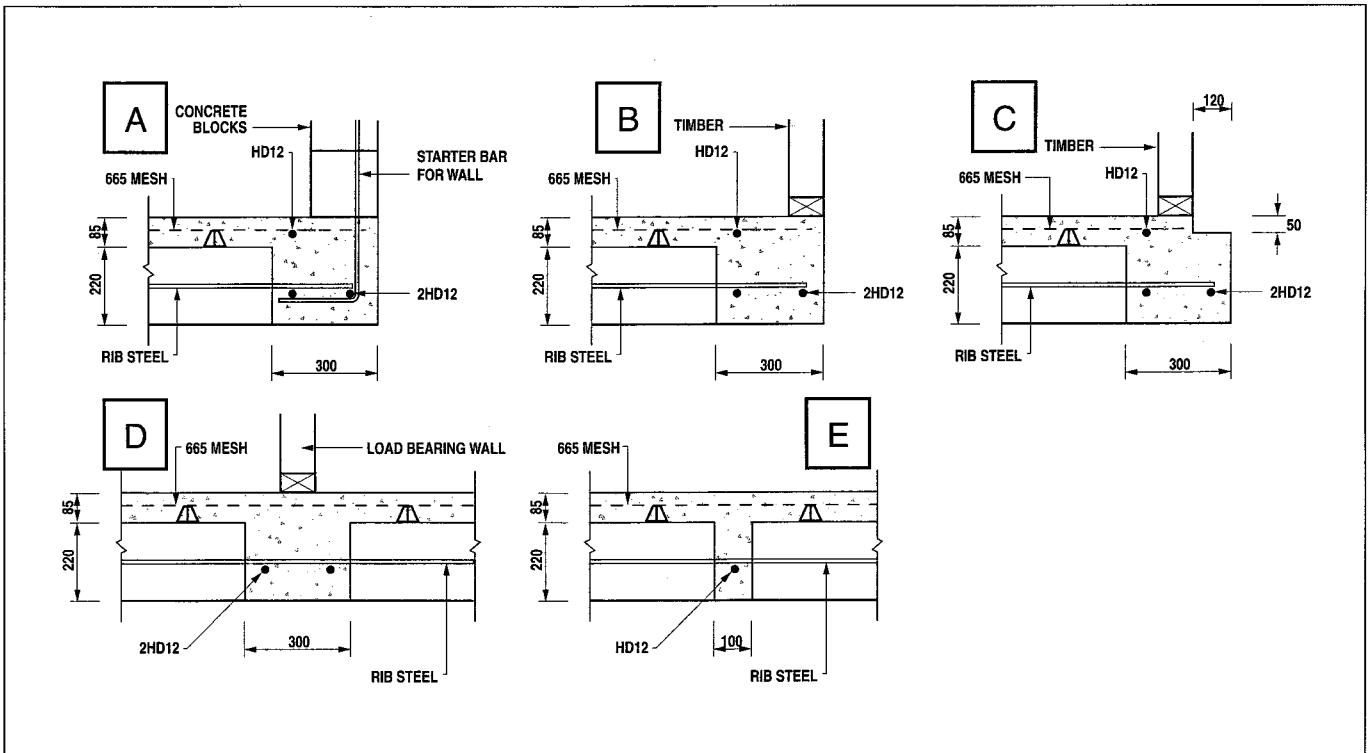


Figure 4 Standard RibRaft Construction Details

## 5 LATERAL RESISTANCE

Unlike conventional foundation systems, the Firth RibRaft system is not embedded into the ground. Sliding resistance to horizontal seismic and wind loads is provided primarily by frictional contact with the soil. Depending on the seismic or wind zone and the weight of the building elements this frictional resistance may not be sufficient on its own, and specific shear keys may be required.

To determine if shear keys are required the system's lateral resistance shall be checked firstly for seismic loads in accordance with Clause 5.1 and secondly for wind loads in accordance with Clause 5.2.

For the purposes of this Manual, the ground shall be classified as clay or sand according to the following descriptions:

**Clay:** retains shape when moulded under hand pressure; may stick to boots and hands; cracks and becomes hard, but retains shape, when dried in direct sunlight; and when dug with a spade the cut vertical surface stands.

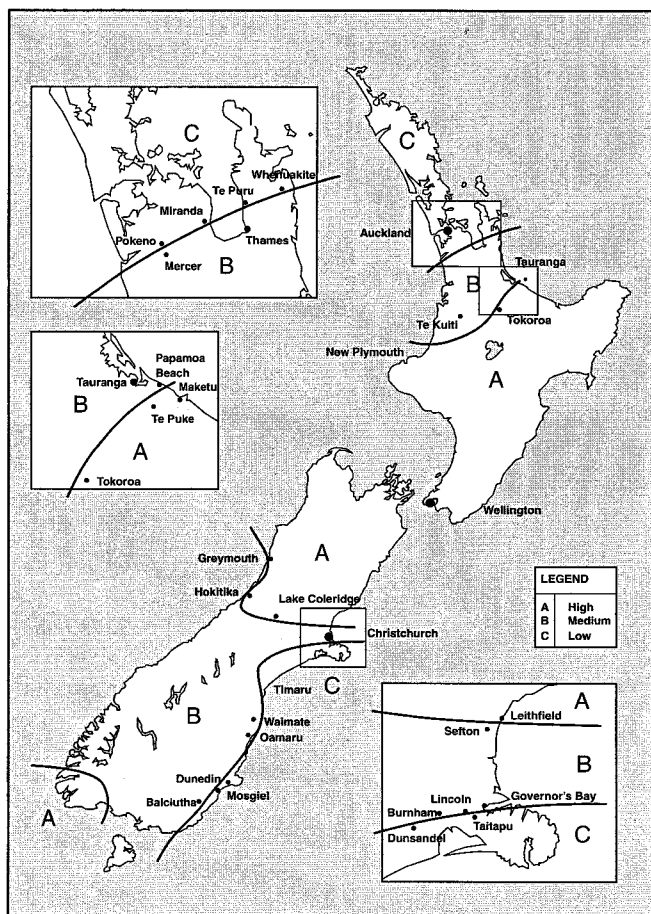


Figure 5 Seismic Zones

**Sand:** Individual particles visible to the unaided eye; when dry will run through the fingers and forms a conical mound if poured; when moist quickly dries out under direct sunlight, and when dug with a spade the vertical surface does not stand for long.

### 5.1 Seismic Resistance

To determine the required number of shear keys, follow the two steps below:

**Step 1** From Figure 5 below left (from NZS 3604:1999) determine the seismic zone for the building.

**Step 2** From the Tables below determine the number of shear key piles required based on the soil type supporting the system.

Building Type	Roof Type	Seismic Zone A		Seismic Zone B		Seismic Zone C	
		Sand	Clay	Sand	Clay	Sand	Clay
A	Light	6	8	3	4	–	–
A	Heavy	7	8	4	4	–	–
B	Light	10	12	5	6	–	1
B	Heavy	11	13	6	7	1	1
C	Light	9	11	5	6	–	1
C	Heavy	10	11	5	6	–	1
D	Light	13	15	7	8	1	1
D	Heavy	13	16	7	8	1	1
E	Light	15	18	8	9	1	1
E	Heavy	16	19	8	10	1	1

Table 4 Number of Shear Key Piles per 100m<sup>2</sup> of ground floor area for 1.5kPa live load

Building Type	Roof Type	Seismic Zone A		Seismic Zone B		Seismic Zone C	
		Sand	Clay	Sand	Clay	Sand	Clay
A	Light	7	8	4	4	–	–
A	Heavy	8	9	4	5	–	–
B	Light	11	13	6	7	1	1
B	Heavy	11	13	6	7	1	1
C	Light	10	12	4	6	–	1
C	Heavy	11	13	5	7	1	1
D	Light	14	16	6	9	1	1
D	Heavy	14	17	7	9	1	1
E	Light	16	19	9	10	1	1
E	Heavy	17	20	9	11	1	1

Table 5 Number of Shear Key Piles per 100m<sup>2</sup> of ground floor area for 3.0kPa Live Load

## 5.2 Wind Resistance

The building's bracing demand from wind loading shall be assessed from Section 5 of NZS 3604:1999 for both directions (i.e. along and across the building). The bracing capacity of the system must exceed the greater of the bracing demands determined.

The bracing capacity of the system shall be determined as the sum of the bracing capacity provided by frictional resistance (i.e. friction between the system and the ground) and the bracing capacity provided by the shear keys (if any) necessary to meet the requirements of Clause 5.1.

The bracing capacity provided by frictional resistance shall be determined from Table 6 depending on the building type, roof weight, and floor live loading.

The bracing capacity provided by the shear keys shall be sum of the bracing capacity of the individual shear keys determined as follows. If the shear key is in clay, each shear key shall be considered to contribute 170 BU's. If the shear key is in sand, each shear key shall be considered to contribute 200 BU's.

If the bracing capacity of the system, determined from the frictional resistance and the shear keys as described above, is less than the bracing demand further shear keys shall be added until the bracing demand is met.

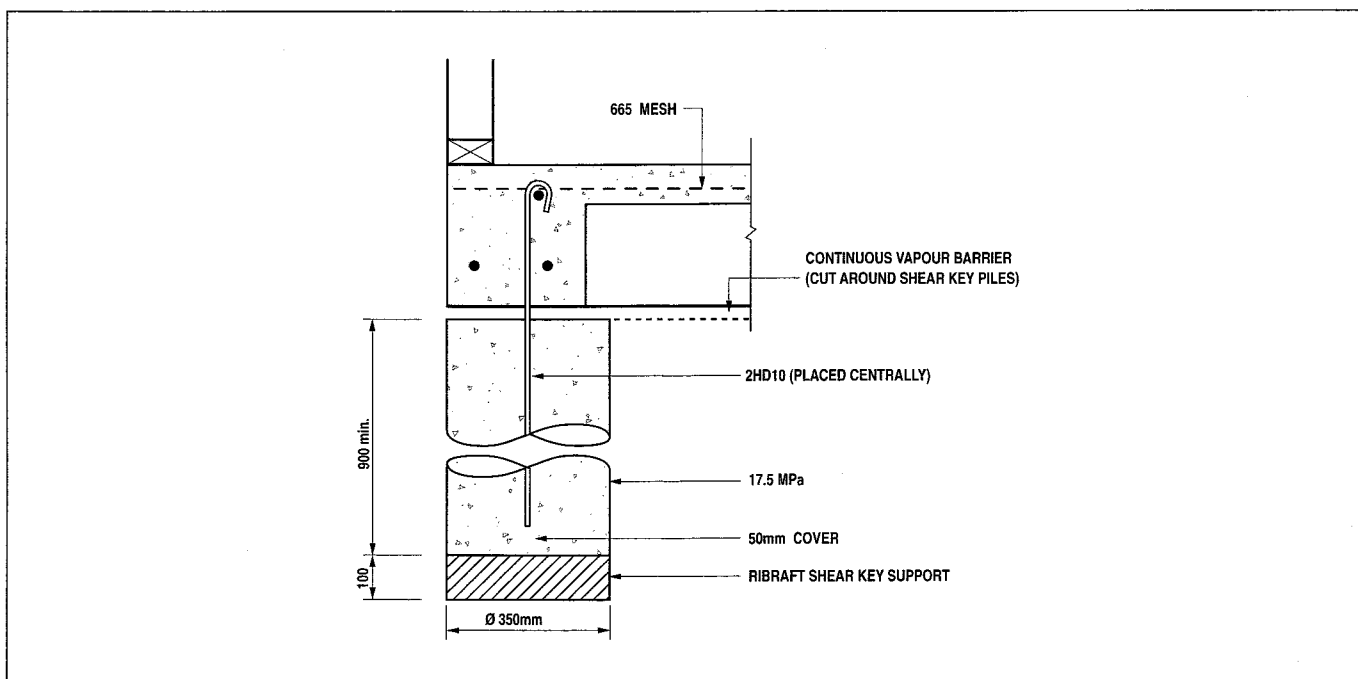
Building Type	Roof Type	BU's provided per 100m <sup>2</sup> for live loading of:	
		1.5kPa	3.0kPa
A	Light	1150	1267
A	Heavy	1267	1383
B	Light	1800	1917
B	Heavy	1917	2033
C	Light	1617	1833
C	Heavy	1717	1950
D	Light	2267	2483
D	Heavy	2367	2600
E	Light	2717	2933
E	Heavy	2833	3050

**Table 6** Bracing Capacity provided by Frictional Resistance per 100m<sup>2</sup> of ground floor area.

## 5.3 Shear Keys

Shear key piles required by Clauses 5.1 and 5.2 must be uniformly distributed around the perimeter of the building, and be located at the edge beam/internal rib junction. Where a shear key is required, the minimum number of shear keys shall be two per floor plan.

Construction details of the shear keys shall be as shown on Figure 6 below. Shear keys shall be a minimum of 900mm long. The holes shall be over-drilled at least 100mm and a polystyrene RibRaft Shear Key Support placed into the bottom of each hole. This will support only the plastic (wet) concrete and then allow movement of the shear key if settlement of the supporting ground occurs. The effective end bearing of the shear keys is therefore eliminated.



**Figure 6** Shear Key Pile Construction Details

## 6 OTHER DESIGN DETAILS

### 6.1 Shrinkage Control

Shrinkage control joints reduce the risk of unwanted cracks, and their placement needs to be carefully considered where cracking could be unacceptable. Factors to consider are the type of floor finish, the location of ribs and ground beams, underfloor heating and the effect of piles restraining shrinkage. Shrinkage control joints shall be saw cut after hardening. The saw cuts shall be cut to a depth of 25mm and shall be cut no later than 24 hours in summer, or 48 hours in winter. The shrinkage control joints shall be positioned to coincide with major changes in floor plan. Where the concrete is to be exposed, or brittle covering placed over, the maximum intermediate bay sizes shall be limited to 6m. Bay dimensions formed by shrinkage control joints shall be limited to a maximum ratio of length:width of 2:1. Shrinkage control joints shall be placed over 100mm wide internal ribs wherever possible. Where a shrinkage control joint runs along the line of a 300mm wide loadbearing rib then the joint shall be located directly above one edge of the 300mm rib.

Supplementary reinforcing using 2-D10 bars (Grade 300) shall be used at all re-entrant corners as shown on Figure 3. These bars shall be 1200mm long, 200mm apart, tied to the top of the mesh, with 50mm cover and shall not be placed across any shrinkage control joints.

### 6.2 Services Detailing

Ideally, services ducts shall be conveyed underground to their plan location then brought up through the polystyrene pod and 85mm thick concrete floor slab, but this may not always be possible. Services shall not be placed within any concrete except to cross that section of concrete i.e. services shall not run along ribs or edge beams. The maximum diameter of the services (excluding the opening – see below) shall be as follows:

Through edge beam:	50mm both horizontally and vertically
Through 300mm internal ribs:	50mm both horizontally and vertically
Through 100mm internal ribs:	50mm horizontally but <b>nil</b> vertically
Through the slab:	<b>nil</b> horizontally and 110mm vertically (except as noted).

Any services crossing ribs or the edge beam (either horizontally or vertically) shall be placed only within the middle third of the member. At no stage shall any of the reinforcement bars be relocated or cut to allow for the services (it is acceptable, however to cut the mesh). In some instances this will dictate the location of the ribs. The pods shall be cut to allow for this and if necessary, the spacing of the ribs shall be decreased locally. Except as noted, there shall be 600mm minimum clear spacing in each direction between penetrations through the system.

Except as noted, all services shall be placed centrally within an opening 50mm greater in diameter than the service duct/pipe, where they pass through the system. This is to allow seismic tolerances to prevent shearing of the services during a seismic event. Where the services pass through the slab, the opening shall be sealed to prevent materials entering the subfloor cavities. (This can be achieved with Denso tape and a type of easily compressible foam.)

Larger penetrations or voids up to 450mm square (e.g. for shower waste/traps) are permitted through the slab provided all the conditions of this paragraph are met. These openings shall be trimmed with 1 D12 bar 1500mm long placed along each side of the opening, tied to the mesh. One set of parallel bars shall be placed on top of the mesh and the other set placed under the mesh. These openings shall not be placed over a rib or edge beam. If necessary, the rib spacing shall be reduced or the pod layout altered to ensure that the opening occurs solely in the slab above a polystyrene pod. Penetrations such as these shall not be installed in garages or other areas where large (>3kN) point loads could be present. Only one penetration greater than 110mm is permitted in the slab above any single pod or part pod. Where two large openings are required to be in close proximity, an internal rib shall separate them. For these large penetrations/voids in the slab, the services shall not be within 25mm of the edges of the void through which they pass, and the opening shall be sealed to prevent materials entering the subfloor cavities. (This type of opening is normally only required for a shower waste/trap and the installation of the shower will ensure that the void is sealed/covered.)

**END OF SECTION 1**



# **FIRTH RIBRAFT FLOOR SYSTEM**

## **SECTION 2**

### **INSTALLATION INFORMATION**

# 1 GENERAL

This Section details the non-specific installation information required for the Firth RibRaft Floor System (the system). Full information on the non-specific details and design procedures, and requirements for the site assessment are described in Section 1 of this Manual (Design Information).

## 2 SITE REQUIREMENTS

### 2.1 General

The site requirements of this Manual are concerned solely with the soil conditions under or immediately adjacent to the system. If a site does not comply with this Manual, the system shall be subject to specific design.

This Section shall only apply for building sites such that:

- the ground is as specified in Section 1 of this Manual;
- any system erected at the top of a slope (whether fill or natural ground) shall be located as shown in Figure 1 so that the finished ground is always outside the dashed line shown. (The vertical distance, V, shall be measured to 50mm below the underside of the slab).

Where the finished ground does not comply with Figure 1, the slope shall be retained by a specifically designed retaining wall.

### 2.2 Temporary Excavations

No excavation shall take place at a location or in a manner where the stability of the foundation material is likely to be compromised. The backfilled material shall match the compaction and strength of, and have similar properties to, the surrounding material. The sides of the excavation shall be propped as necessary.

Temporary excavations shall be open for no longer than 48 hours and shall take place only above the critical depth line as shown on Figure 2. Should temporary excavations be required below this line, specific engineering design is required.

### 2.3 Surface Water

Surface water from the site shall not flow across the slab platform. For example, on cut and fill sites the ground uphill from the system shall be graded to direct any surface run-off away from the system as shown in Figure 3.

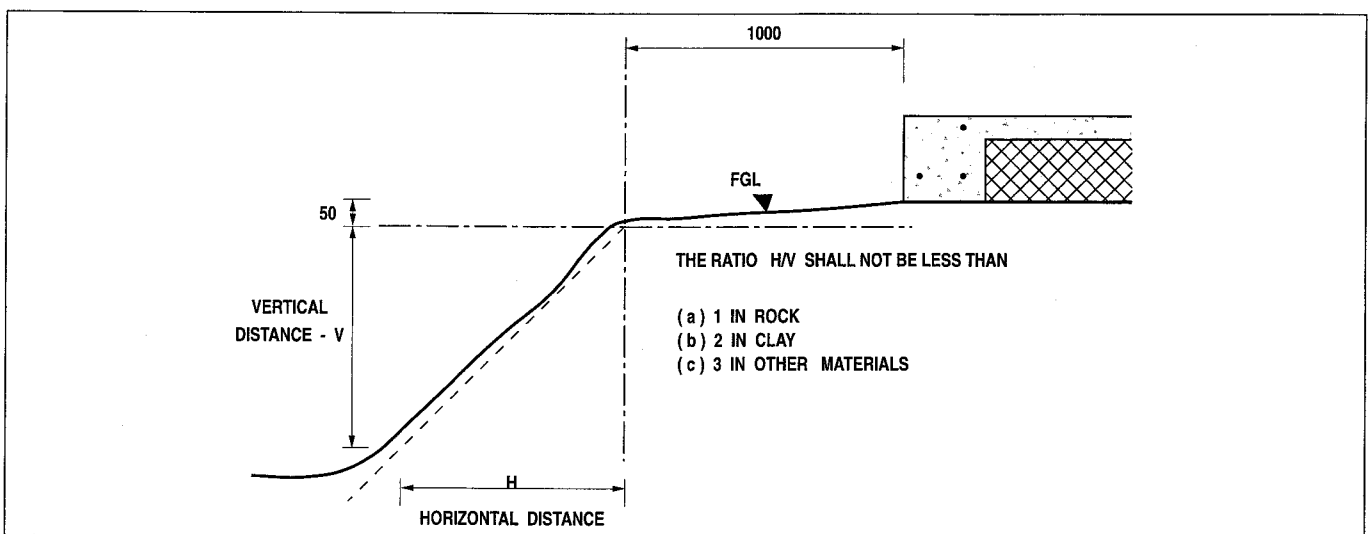


Figure 1 Relationship of RibRaft to Sloping Ground Surface

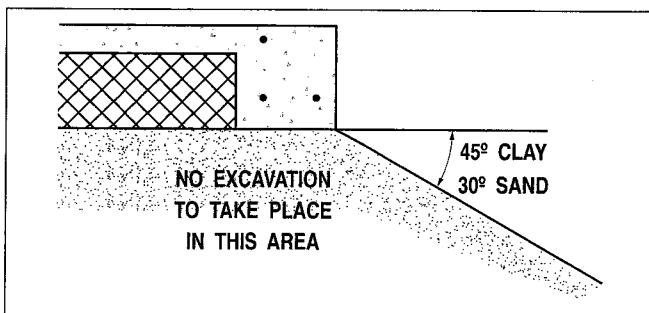


Figure 2 Temporary Excavation Limits

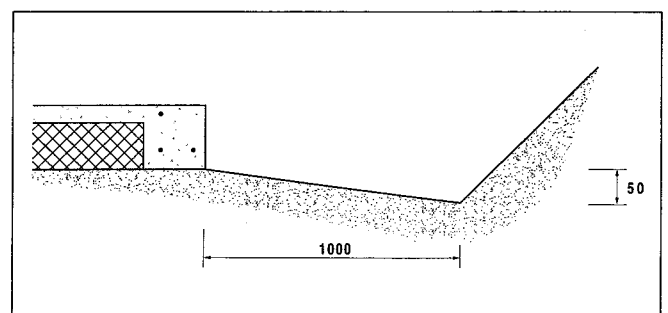


Figure 3 Site Grading

### 3. INSTALLATION PROCEDURE

#### 3.1 Site Preparation

All vegetation, topsoil and other organic or deleterious material shall be removed from the area to be covered by the building (formation area) prior to commencing construction of the system.

#### 3.2 Earthworks

The formation area shall be cut or filled to a level approximately 330mm below finished floor level. Where fill is required to achieve this level, the fill shall be certified by a geotechnical engineer (outside the scope of this Manual) or shall be in accordance with Clause 7.5.3 of NZS 3604:1999 "Timber Framed Buildings".

The formation area shall also extend a minimum of 1000mm beyond the slab perimeter as shown in Figure 4 below. The installer shall confirm the acceptability of the ground over the entire building platform before proceeding with the construction. Refer to Clause 3.5 of Section 1 (Design Information) for requirements.

#### 3.3 Shear Keys

Where shear keys are required, the holes shall be drilled following the site clearing and earthworks, in accordance with Clause 4 below, and prior to the construction of the system commencing.

#### 3.4 Plumbing and Services

Any plumbing and services required beneath the system shall be conveyed underground to their plan location then brought up through the system. The trenching, placing, and bedding of the pipes/ducts and the backfilling of the trenches shall conform to the requirements of the consent documentation. Services

shall not be placed within any concrete except to cross that section of concrete i.e. services shall not run along ribs or edge beams. The maximum diameters of the services/ducts shall be as dictated in Section 1.

Where required, the services shall be installed by removing unnecessary polystyrene and placing pipes within the pod depth. All pipes shall be held firmly in place and have temporary end covers. Any services crossing ribs or the edge beam (either horizontally or vertically) shall be placed only within the middle third of the member. At no stage shall any of the reinforcement bars be relocated or cut to allow for the services (it is acceptable, however to cut the mesh). In some instances this will dictate the location of the ribs. The pods shall be cut to allow for this and if necessary, the spacing of the ribs shall be decreased locally. There shall be 600mm minimum clear spacing in each direction between penetrations through the system (except where noted).

Except as noted all services shall be placed centrally within an opening 50mm greater in diameter than the service duct/pipe, where they pass through the system. This is to allow seismic tolerances to prevent shearing of the services during a seismic event. Where the services pass through the top of the system, the opening shall be sealed to prevent materials entering the subfloor cavities. (This can be achieved with Denso tape and a type of easily compressible foam.)

Larger penetrations or voids that are required, up to 450mm square (e.g. for shower waste/traps), shall be installed in accordance with all the conditions of this paragraph. These openings shall be trimmed with 1 D12 bar 1500mm long placed along each side of the opening, tied to the mesh. One set of parallel bars

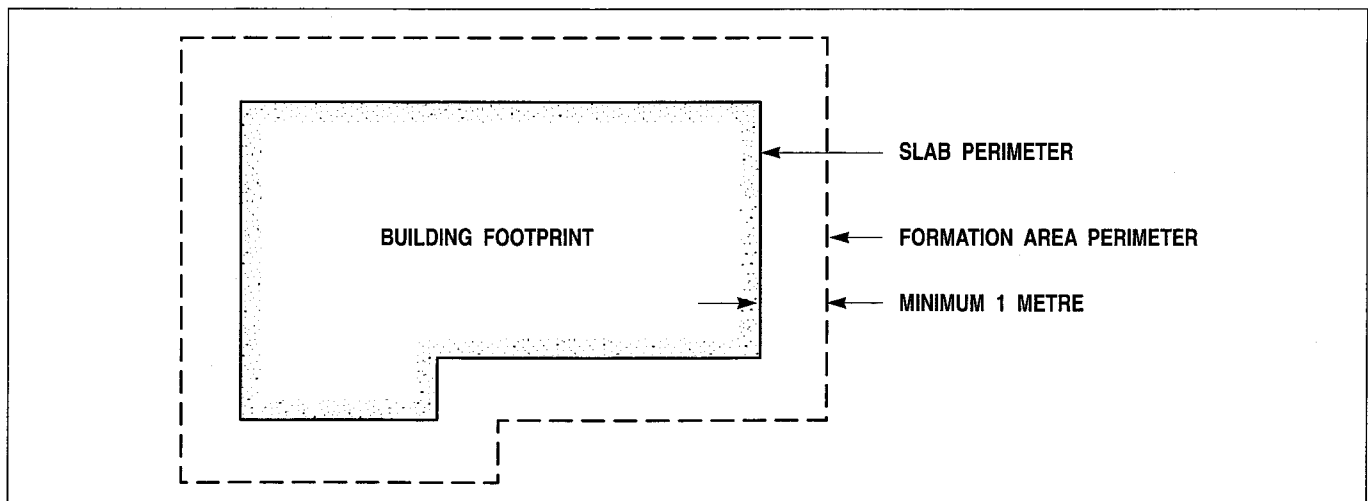


Figure 4 Plan of Formation Area

shall be placed on top of the mesh and the other set placed under the mesh. These openings shall not be placed over a rib or edge beam. If necessary, the rib spacing shall be reduced or the pod layout altered to ensure that the opening occurs solely in the slab above a polystyrene pod. Penetrations such as these shall not be installed in garages or other areas where large (>3kN) point loads could be present. Only one penetration greater than 110mm is permitted in the slab above any single pod or part pod. Where two large openings are required to be in close proximity, an internal rib shall separate them. For these large penetrations/voids in the slab, the services shall not be within 25mm of the edges of the void through which they pass, and the opening shall be sealed to prevent materials entering the subfloor cavities. (This type of opening is normally only required for a shower waste/trap and the installation of the shower will ensure that the void is sealed/covered.)

### 3.5 Sand Blinding

A layer of sand shall be placed, screeded and compacted over the building platform, extending to at least 500mm beyond the system perimeter – refer Figure 5. The maximum thickness of this blinding layer shall be 50mm. The surface shall be level and a minimum of 305mm below finished floor level. A small plate compactor, vibrating roller or similar, should be used to compact the sand blinding layer. *The sand is required to be level to ensure that pods remain stable throughout the installation of the system.*

### 3.6 Damp Proof Membrane

The damp proof membrane (DPM) material shall be in accordance with NZS 3604:1999. The DPM shall be laid over the entire building platform on top of the sand blinding layer, extending to the outside of the edge beam – refer Figure 5 below. The joints shall be lapped not less than 150mm and sealed with pressure sensitive tape. All penetrations of the DPM by plumbing and services shall also be sealed with pressure sensitive tape.

The DPM may extend beyond the edge of the slab i.e. underneath the formwork, or may be folded and stapled up the inside of the formwork. The minimum requirement is that the DPM extends to the outside of the edge beam. It is very important that the DPM is not bunched up at the formwork. The installer shall ensure a square and tidy finish at the underside and at all corners of the edge beam.

### 3.7 Edge Formwork

The edge formwork shall be constructed ensuring that the requirements of NZS 3109:1997 “Concrete Construction” are adhered to. The formwork shall be adequately supported and braced to prevent any buckling or warping. If the wall is to be constructed in brick veneer, formwork for a brick veneer rebate should be adequately fixed to the perimeter formwork.

Thorough cleaning of re-useable formwork and the use of release agents enhances the life and performance of formwork and maintains a quality surface finish.

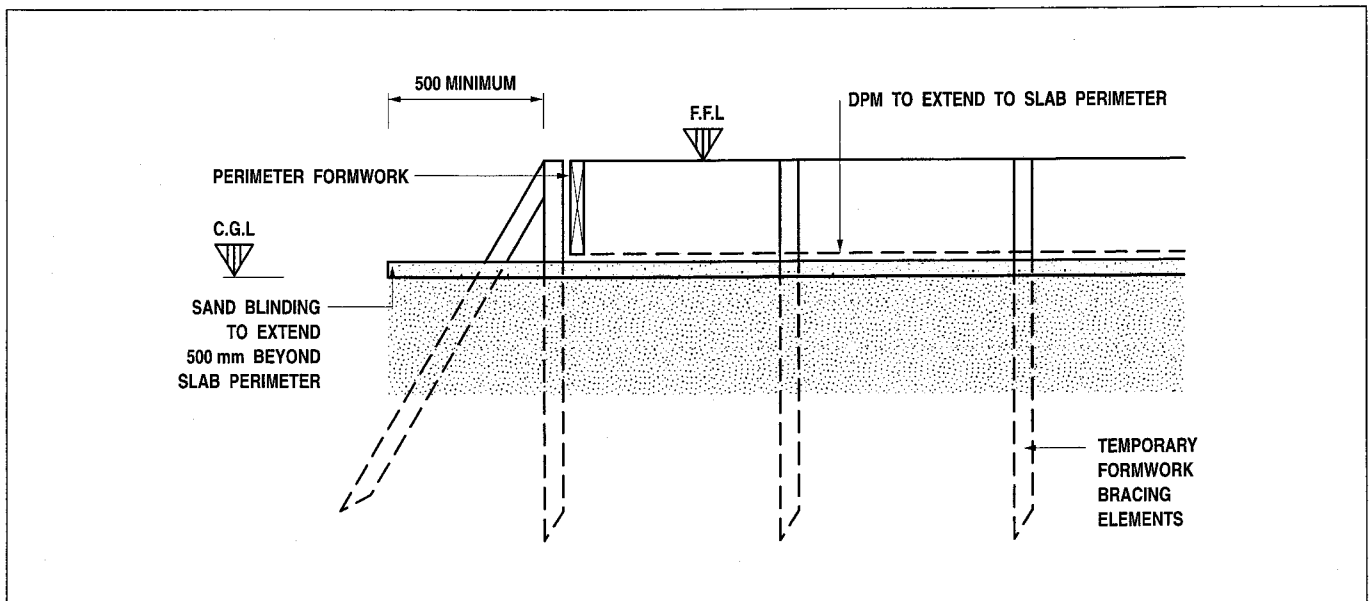


Figure 5 Sand Blinding/DPM/Formwork Details

### 3.8 Laying the Pods and Spacers

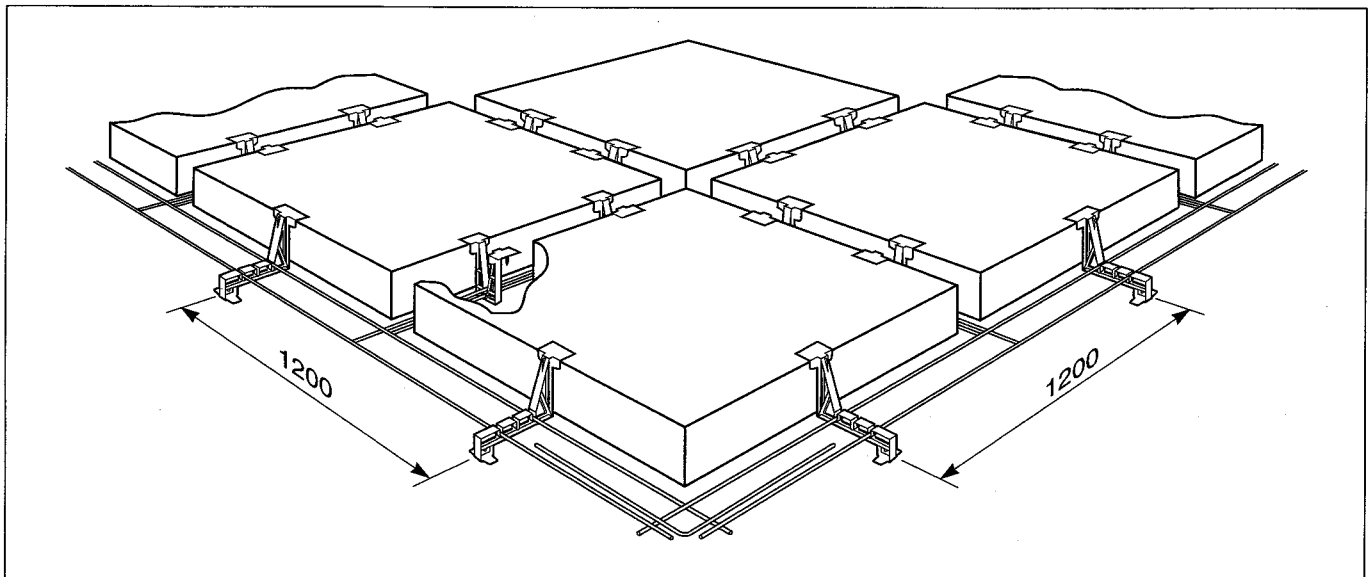
The Firth polystyrene pods shall be laid out over the DPM in a regular waffle pattern. The edge beam shall be formed using the Firth 300mm spacers. These shall be placed at a maximum of 1200mm centres along the perimeter of the slab and one per pod or part pod. Ribs supporting a loadbearing wall shall be formed using a minimum of one Firth 300mm spacer along the edge of each pod or part pod.

Except where a 300mm wide rib is required, each pod or part pod shall always be separated by 100mm using a minimum of one Firth 100mm spacer along each edge of each pod or part pod. The ribs in both directions shall form a waffle pattern throughout the slab. It is essential that the ribs and edge beams are straight when the concrete is poured, i.e. the pods need to be lined up. Figure 6 below shows a detailed layout of the pods and spacers.

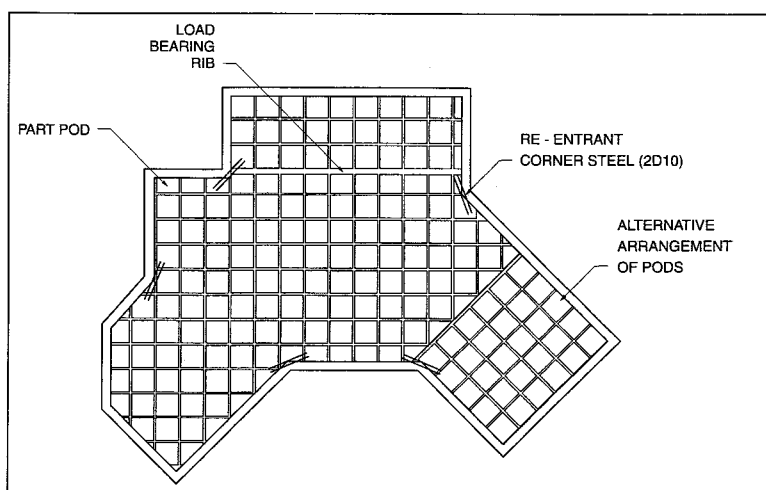
Where the shape of the house plan dictates, it may be more practical to consider the floor to be made up of different segments. The pods in each segment shall be in a regular waffle pattern – refer right hand side of Figure 7 below. Where these segments meet, the pods shall be cut to suit and the ribs made to join. The non right-angle rib junctions created by this approach are acceptable.

Alternatively, it is also acceptable to keep the orientation of the pods constant throughout the plan and have non right-angle junctions between the ribs and edge beam – refer left hand side of Figure 7 below.

As can be seen from Figure 7, it is not necessary for the pods to line up perfectly with the edge beam. It is acceptable to cut the pods (i.e. use part pods) where the building layout dictates.



**Figure 6** Detailed Layout of Pods and Spacers (mesh and top steel omitted for clarity)



**Figure 7** Typical Pod and Rib Layout

### 3.9 Reinforcing Steel

All reinforcing steel shall conform to NZS 4671:2001 "Steel Reinforcing Materials". All steel shall be of deformed type. All bends shall be made cold without fracture. Welded lap joints are not permitted. All welded mesh fabric reinforcing shall conform to NZS 4671:2001 "Steel Reinforcing Materials". Figure 10 on page 20 shows the detailed layout of the spacers and the steel in the edge beam and the standard ribs.

#### 3.9.1 Edge Beam Steel

Two edge beam reinforcing bars shall be placed in the bottom of the edge beam and supported in the correct position by the Firth spacers, as shown in Figure 10 on page 20. One edge beam bar shall be tied below the mesh at the perimeter of the area covered by the polystyrene pods as shown in Figure 10. All steel shall be lapped a minimum of 40 bar diameters (480mm for 12mm steel). Tying of the edge beam steel is only required at corners. Figure 8 shows the layout for the edge beam bottom steel bars at the corner. The inner bottom bars and the top bars shall cross each other and extend to 75mm from the outside face of the edge beam as shown. These bars shall be tied together where they cross.

#### 3.9.2 Rib Steel

Rib reinforcing steel shall be placed in the bottom of the internal ribs and supported in the correct position by the Firth spacers.

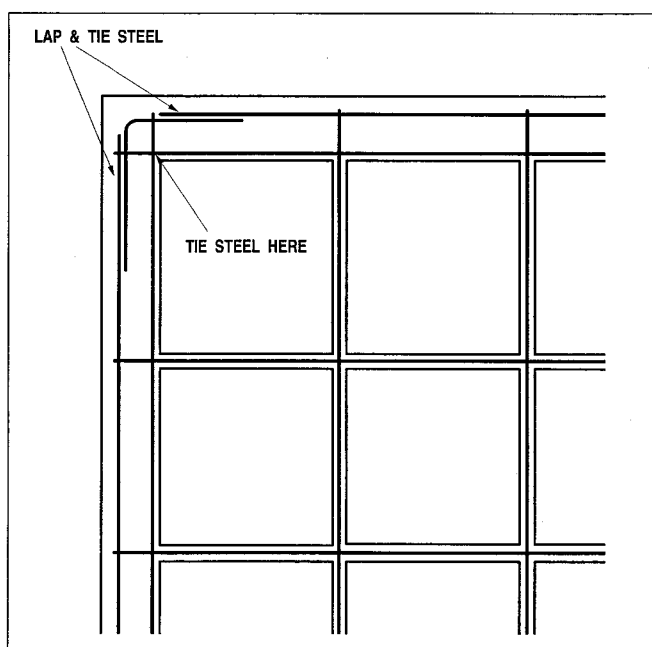


Figure 8 Corner Steel Layout

Figure 9 shows the detail of the Firth spacers, and Figure 10 shows a detailed section identifying how the steel is located in the spacers. The 300mm spacer shall be used for the 300mm wide internal ribs.

All steel shall be lapped a minimum of 480mm. At the junction with the edge beam, each rib steel bar shall sit on top of the edge beam bars, and extend to the outermost bar. The 75mm cover to the edge of the beam shall still be allowed for. One HD12 bar shall be placed in each 100mm wide rib and two HD12 bars shall be placed in each 300mm wide rib.

#### 3.9.3 Mesh Reinforcing

665 mesh reinforcing shall be placed over the pods and supported on 40mm mesh chairs spaced at a minimum of 1200mm centres, with at least two mesh chairs placed per pod and at least one per part pod. The mesh shall be lapped 225mm minimum and tied at all laps.

#### 3.9.4 Re-entrant Corner Steel

Two D10 bars, 1200mm long shall be placed across the corner, tied to the top of the mesh at re-entrant corners at 200mm centres, with 50mm cover from the internal corner as detailed in Figure 7 (this steel is to control cracking at this potential weak point).

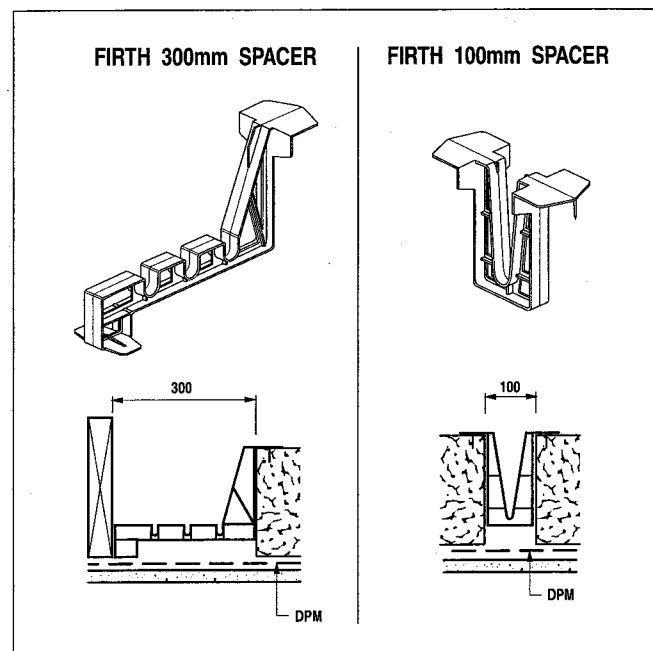


Figure 9 Spacer Details

### 3.10 Concrete Installation

Concrete placing, finishing and curing shall be in accordance with NZS 3109:1997, Clause 7.

#### 3.10.1 Placing

Only Firth Raftmix or Raftmix Pump concrete shall be used in the floor. These two different concrete mixes shall be used in the following instances:

- Raftmix – For placement in the floor directly from the concrete truck chute.
- Raftmix Pump – For placement in the floor by concrete pump.

The concrete shall be poured in such a way to ensure that the pods remain in position during placing (Firth recommends that small amounts of concrete be placed on top of the pods prior to the ribs being filled). The concrete shall be compacted with the use of an immersion vibrator around all steel and into all corners of the formwork.

#### 3.10.2 Finishing

Screeding with the aid of a level shall commence immediately after compaction. Unless specifically installed as a screeding datum, the top of the formwork shall not be assumed as level and thus shall not be used for screeding purposes. Final finishing with a trowel shall take place after all the bleed water has evaporated. Edge of slab and rebates shall be tooled to prevent chipping of top of slab.

The surface shall be a blemish free surface to class U3 finish (refer NZS 3114:1987 "Specification for Concrete Finishes").

#### 3.10.3 Curing

Proper curing of the concrete must take place immediately after finishing the concrete. One of the following methods of curing is recommended:

- Ponding or continuous sprinkling of water.
- Placing a wet covering or plastic membrane over the slab.
- The use of liquid membrane curing compounds.

When warm sunny days are followed by cool nights, the change in temperature can cause cracking. Immediate and continuous wet curing to reduce the maximum temperature and/or raise the minimum temperature can reduce the risk of this type of cracking.

#### 3.11 Shrinkage Control Joints

Shrinkage control joints shall be saw cut after hardening. The saw cut shall be cut to a depth of 25mm and shall be cut no later than 24 hours in summer, or 48 hours in winter. The shrinkage control joints shall be positioned to coincide with major changes in floor plan. Where the concrete is to be exposed or brittle covering placed over, the maximum intermediate bay sizes shall be limited to 6m. Bay dimensions formed by shrinkage control joints shall be limited to a maximum ratio of length:width of 2:1.

Shrinkage control joint shall be placed over 100mm wide internal ribs wherever possible. Where a shrinkage control joint runs along the line of a 300mm wide loadbearing rib then the joint shall be located directly above one edge of the 300mm rib. Supplementary reinforcing bars shall not be placed across any shrinkage control joints.

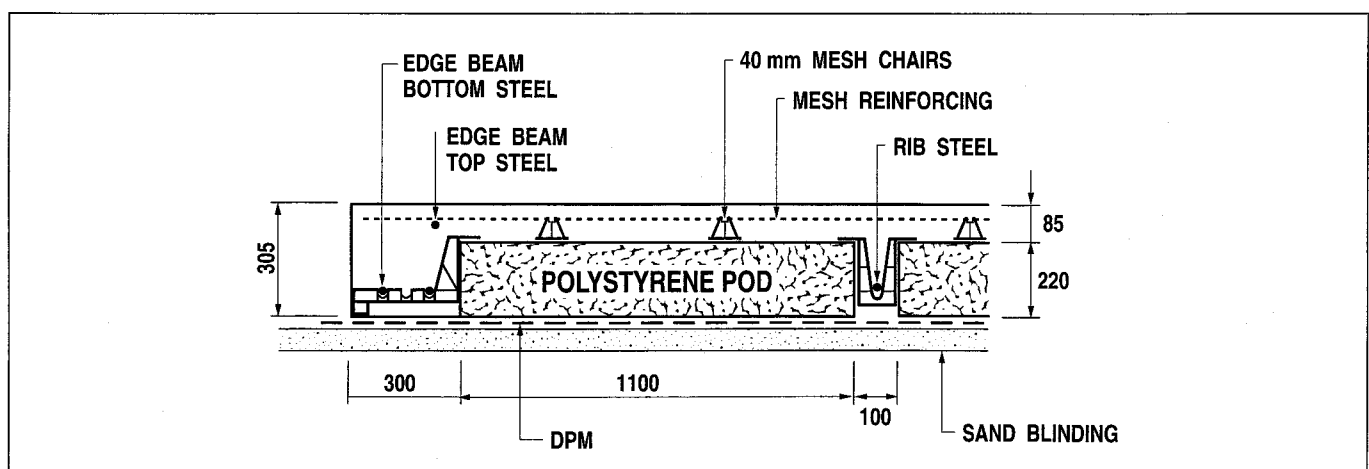


Figure 10 Detailed Section

### 3.12 Removal of Formwork

The formwork shall not be removed prior to 12 hours after the slab has been finished. No installation loads are to be placed on the system before adequate curing has taken place.

### 3.13 Brick Veneer

Where the building is to be clad with brick veneer, the rebate in the edge beam shall be waterproofed with a bituminous sealer due to the possibility of ponding of water. Firth recommends a Flintcote® or equivalent coating on both the vertical and horizontal faces of the rebate.

### 3.14 Landscaping/Paving

Landscaping and/or paving adjacent to the slab shall be kept the minimum required distance below FFL, as per the requirements of NZS 3604:1999. The landscaping shall allow for large trees to be kept sufficiently away from the edge of the slab. This is to prevent the tree roots from disturbing the soil moisture conditions under the slab. As a guide, trees should be as far away from the edge of the slab as they are tall when fully grown.

### 3.15 Ongoing Maintenance

The building owner shall ensure that the ground surrounding the system be maintained so that the

integrity of the system is not jeopardised. In other words, at no time shall the ground immediately adjacent to the system be allowed to settle away to expose the underside of the slab.

*This can also be ensured by maintaining the landscaping or providing a paved surface or similar around the edge of the building.*

## 4 SHEAR KEYS

Shear keys shall be provided to conform to the requirements of Section 1 of this Manual. Holes for the shear keys shall be drilled at least 1000mm deep. Into the bottom of each hole a RibRaft Shear Key Support shall be placed. Every precaution shall be taken to ensure that the shear key support is laid level and at the base of the hole. The minimum depth of concrete placed on the support shall be 900mm. Refer to Figure 11 below for construction details.

The connection steel (2HD10) shall be secured in place and held during pouring to ensure the bars are correctly located. The concrete for the shear keys shall be placed separately to the rest of the floor and shall be finished level to the top of the sand blinding layer. The top surface of the shear key shall be finished rough to ensure a good join to the Raftmix concrete in the system and the DPM shall be neatly cut around the shear keys.

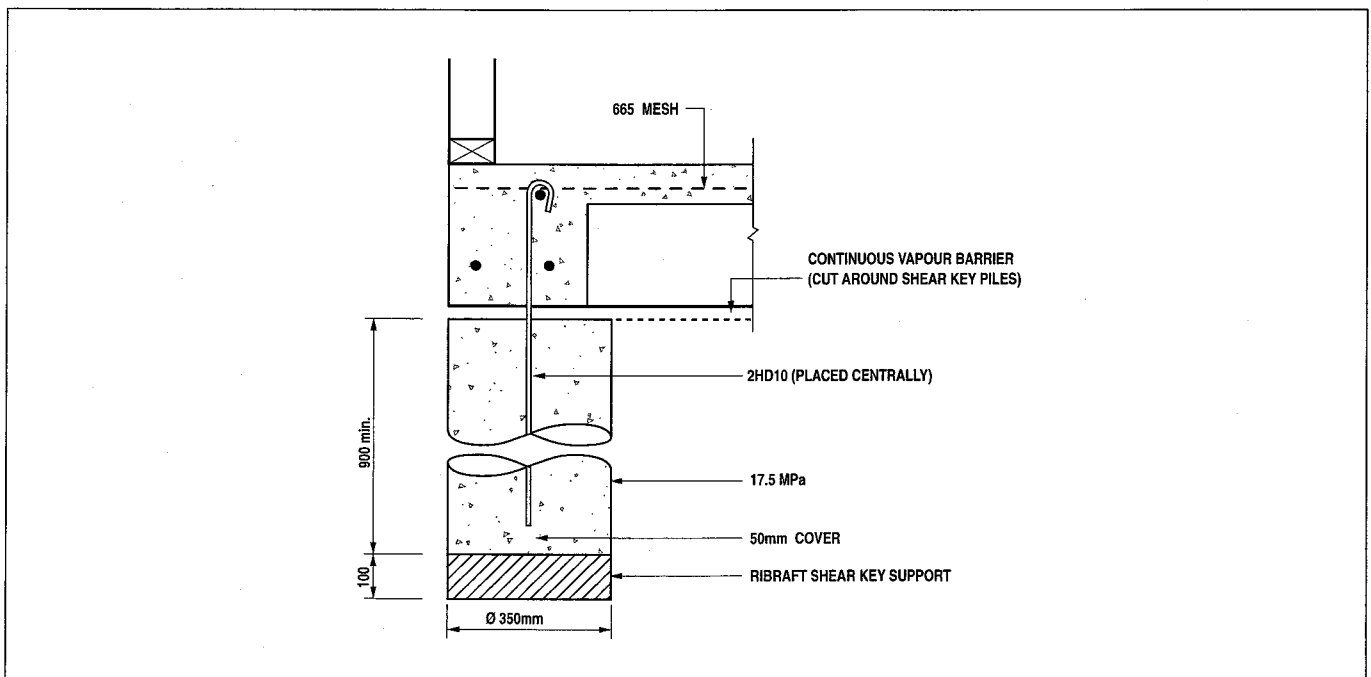


Figure 11 Shear Key Pile Construction Detail

END OF SECTION 2



# RIBRAFT™

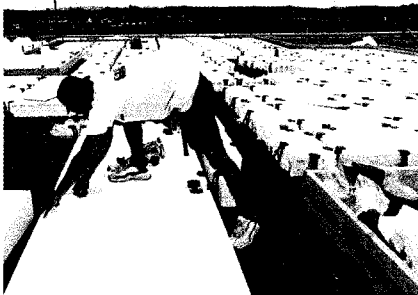
FLOORING SOLUTIONS



Firth Industries' RibRaft Floor System is accredited by the Building Industry Authority as complying with certain provisions of the New Zealand Building Code. The Authority's accreditation is binding on territorial authorities and building certifiers.

# RIBRAFT™

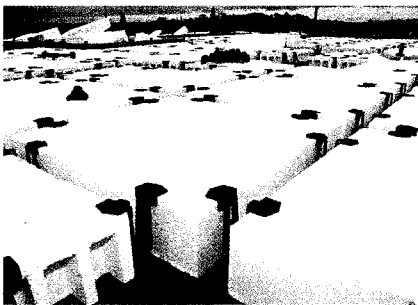
Save money, time and effort. Increased strength and superior insulation benefits.



The Firth RibRaft™ system is becoming one of New Zealand's fastest growing residential and light commercial flooring solutions. The RibRaft system is an innovative method of concrete floor construction, offering an insulated floor with a quick, practical and efficient construction method. It provides high strength and durability as well as saving time and money. The system uses polystyrene pods, steel reinforcing rods, plastic spacers and Raft Mix concrete, each of the components simply fit together, dramatically reducing labour time and costs. Compared to traditional flooring construction RibRaft offers a number of significant benefits:

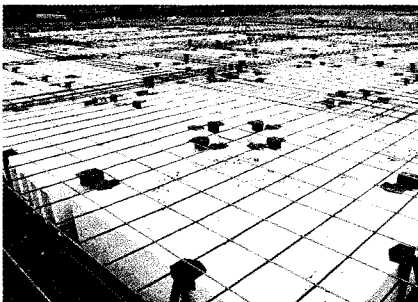
## TIME AND COST SAVINGS

With the RibRaft system the need to dig trenches for footings is eliminated allowing substantial reductions in time and labour costs. The need for extra sub-trades is also eliminated. With construction occurring above ground and the components not affected by rain, work can often continue even during wet weather.



## ENERGY EFFICIENCY

The insulation benefits (R value) of the RibRaft floor is up to 5 times better than conventional floors. Also where in-floor heating is used the polystyrene pods eliminate the need for further insulation.



## INCREASED STRENGTH

The raft design offers significantly increased strength and resistance to cracking allowing the system to be built on soils with a minimum bearing pressure of 50kPa. A reinforced concrete perimeter beam and reinforced concrete ribs over the floor area, results in a slab of immense strength.

## REDUCED SPOIL

As the floor is 'on ground' not 'in ground' the amount of excavated material on your construction site is greatly reduced.

## TO OBTAIN A FIRTH RIBRAFT FLOOR

### MAKE DECISION TO USE RIBRAFT

- RibRaft specified by architect/designer
- Change of design from traditional floor

### DESIGN

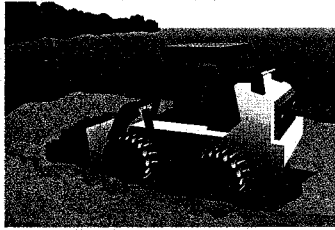
- Use BIA accredited non-specific design or consult an engineer

### PROVIDE COUNCIL WITH PLANS FOR THEIR APPROVAL

### BUILDING CONSENT APPROVED

- Installation undertaken by a specialist RibRaft installer. Contact Firth Customer Service for a list of installers in your area. The installer will order all materials and arrange for full construction
- Own installation. Contact Firth Customer Service or your local RibRaft distributor to order materials and for detailed installation advice.

# THE INSTALLATION PROCESS



## STEP ONE

Cut building platform to level surface approximately 330mm below finished floor level. Council to inspect site slab before slab construction commences.



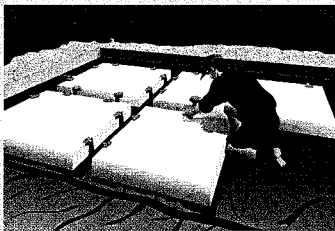
## STEP TWO

Place a layer of sand, up to 50mm thick over the entire building area, extending 1m outside the perimeter. Shear piles for seismic resistance will be constructed at this stage if necessary.\*



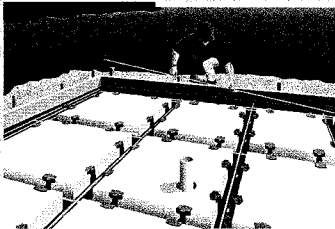
## STEP THREE

Lay damp proof membrane (minimum thickness of 0.25mm) over the entire building platform at least to slab edge. Cut around and tape securely to plumbing pipes and laps. Set up formwork for slab perimeter and rebate if required.



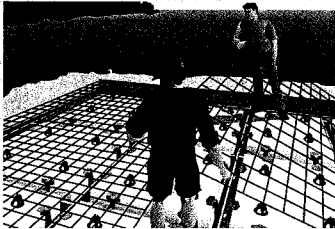
## STEP FOUR

Place polystyrene pods in a grid pattern (1200mm centres) as per your RibRaft layout plan. Position pods with relevant spacers i.e. Firth 300mm spacers for edge beams and internal load bearing ribs; Firth 100mm spacers for standard internal ribs. The pods can be cut to accommodate the size and shape of the house and allow for load bearing walls.



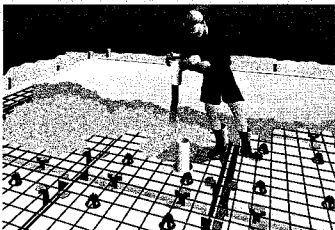
## STEP FIVE

Place reinforcing bars in edge beams and ribs being careful to ensure the steel is positioned in the lugs provided in the spacers. Lap all reinforcing steel as required and tie all corner steel laps. If required at this stage the plumbing can be installed and inspected as necessary.



## STEP SIX

Place reinforcing mesh to mesh chairs on top of the pods. Ensure 50mm cover to edge formwork. Lap and tie mesh. Tie reinforcing bar to perimeter mesh. Re-entrant corners need additional shrinkage control steel tied to top of mesh.



## STEP SEVEN

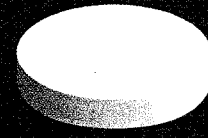
Pour Firth Raftmix concrete, taking care to ensure that the pods remain in place, for convenience it is easiest to use a concrete pump. It is desirable to pour some concrete over the pods before placing in the ribs. Concrete thickness above the pods is 85mm. Vibrate concrete, finish surface and ensure adequate curing takes place.

### NOTE

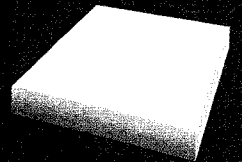
The installation process described above is for the non-specific design as per the Firth RibRaft Floor System Manual. Different installation techniques may be required for designs that fall outside the scope of this Manual.

\* Some regions throughout New Zealand require the use of shear piles for seismic resistance, refer to Ribraft Floor System Manual.

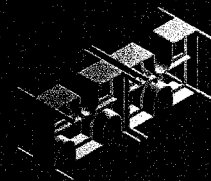
# COMPONENTS AVAILABLE FROM FIRTH



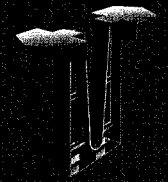
Polystyrene Shear Key Support  
345mm x 100mm



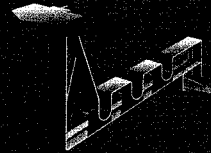
Polystyrene Pod  
220mm & 300mm depth



200mm Spacer



100mm Spacer

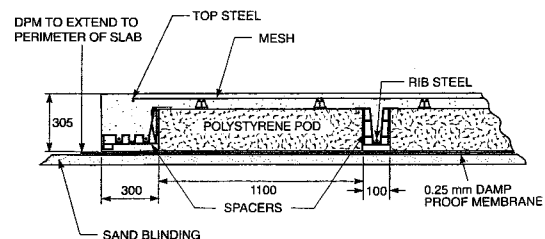
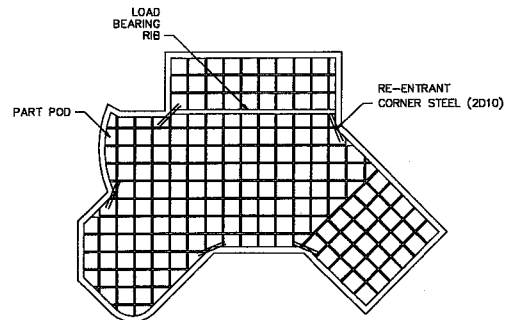


300mm Spacer



Mesh Chair

# SAMPLE FLOOR DESIGN



CENTRAL LABORATORIES  
ANALYSIS  
 Appraisal Certificate  
 No. 1999/22

**Firth RibRaft Floor System**

**Appraisal**

The Appraisal relates to certain uses of the Firth RibRaft floor system of the system that do not require specific design. Firth Industries Ltd warrants that the components of the system, including the concrete, and general design and construction instructions are safe for others. The specific loading is to be reviewed by design and verified by others.

The system has been appraised for use as a structural concrete slab-on-ground floor system for domestic or industrial buildings covered by the scope of the Building Code (Trade and Services). The use of the system may also meet the requirements of Class 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

**Building Regulations**

Class 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.

**Other Technical Information**

See page 10 of the Appraisal for details of the system and its use.

**Other Information**

See page 11 of the Appraisal for details of the system and its use.

**Firth RIBRAFT™ FLOOR SYSTEM**


FIRTH TECHNICAL SOLUTIONS



**FIRTH TECHNICAL SOLUTIONS**

**Firth MASONRY VILLA**

FIRTH TECHNICAL SOLUTIONS



**FIRTH TECHNICAL SOLUTIONS**

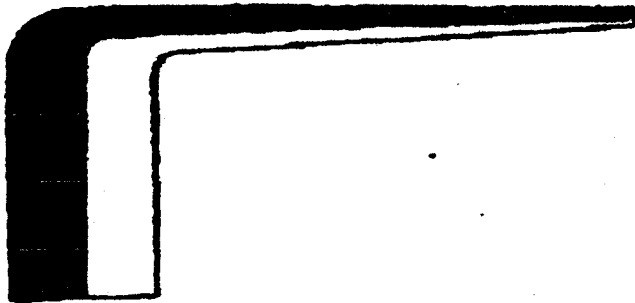


Firth Industries' RibRaft Floor System is accredited by the Building Industry Authority as complying with certain provisions of the New Zealand Building Code. The Authority's accreditation is binding on territorial authorities and building certifiers.



0800 800 576  
 www.firth.co.nz

producer Statement - Easy Beam - A121743



St Elms Court  
47 Hereford Street  
Christchurch  
EO. Box 25  
Telephone 379-27  
Fax 379-434  
Email: consultants@ots.co.nz

J.S. O'Loughlin BSc BE (Hons) MPEENZ  
J.S. Spence BE (Hons) MPEENZ

MEMBERS OF THE ASSOCIATION OF CONSULTING ENGINEERS NEW ZEALAND

**PRODUCER STATEMENT**  
**STRUCTURAL DESIGN**

**EASY BEAM - HEAVY DUTY AND LIGHT DUTY**

Issued by John Stanley Spence in respect of "Easy Beam", manufactured by McCallum Engineering.

The beam is as shown on O'Loughlin Taylor Spence Ltd drawings numbers EB1, EB2 and EB3, file 1816/14 additional requirements and limitations as detailed below:-

O'Loughlin Taylor Spence Ltd has been engaged to carry out the structural design in respect of the requirements of B1 - Structure, of the Building Regulations 1992.

The design has been carried out in accordance with the standards listed in Section B1/101 of the approved document issued by the Building Industry Authority.


The beam has been designed for the loads set out in NZS 4203: 1992 for the following situations:-

- |    |   |             |      |
|----|---|-------------|------|
| 1. | Maximum altitude                          | Snow Zone 1 | 500m |
|    |   | Snow Zone 2 | 400m |
|    |   | Snow Zone 3 | 350m |
|    |   | Snow Zone 4 | 100m |
|    |   | Snow Zone 5 | 150m |
| 2. | Basic non-directional wind speed 48m/sec. |             |      |
| 3. | Terrain Category - 3.                     |             |      |
| 4. | Shielding Multiplier - 1.0                |             |      |
| 5. | Hill Shape Multiplier - 1.0               |             |      |
| 6. | Structure Risk Multiplier - 1.0.          |             |      |

COUNCIL / OFFICE COPY  
THESE PLANS AND SPECIFICATIONS  
ARE APPROVED SUBJECT TO THE  
PROVISIONS OF THE BUILDING ACT,  
AND IT'S REGULATIONS AND ARE  
TO BE RETAINED ON THE JOB IN  
GOOD ORDER AND PRODUCED UPON  
REQUEST.

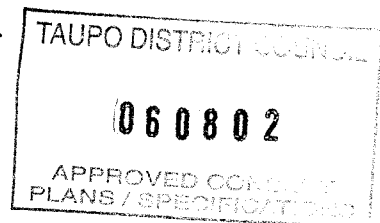
As an independent design professional covered by a current policy of Professional Indemnity Insurance to the value of \$200,000.00, I believe on reasonable grounds that structural design of the beam complies with the relevant provisions of the building code.

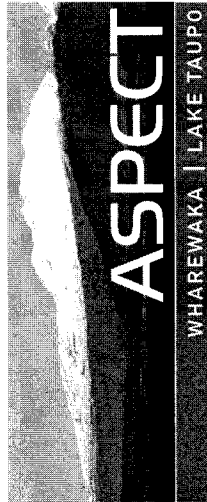
This consulting practice has not been engaged for supervision of the manufacture or installation of the beams.

Signed  Date 21 December 1999

ERB No. 7406

**FLETCHER**  
EASYSYSTEMS

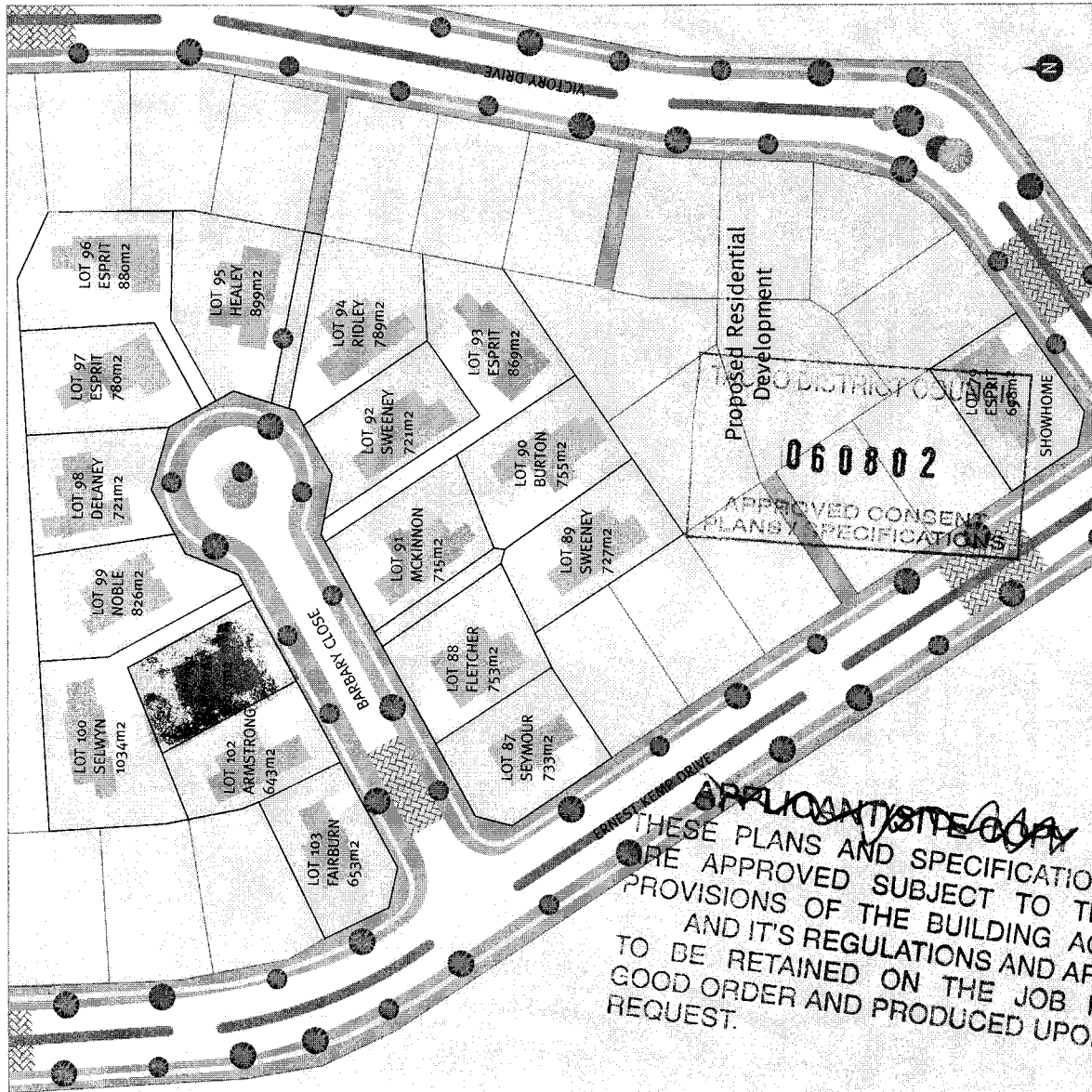
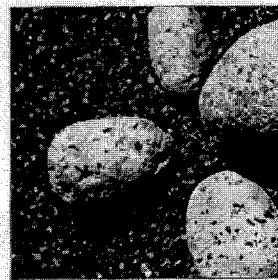




## Site Plan

Maximise your lifestyle with your homestyle. Choose from the 18 prestigious home and land packages designed for Aspect.

With generous sized sections ranging between 643m<sup>2</sup> to 1034m<sup>2</sup>, space has been allowed for each custom designed home to maximise indoor outdoor flow.



THESE PLANS AND SPECIFICATIONS ARE APPROVED SUBJECT TO THE PROVISIONS OF THE BUILDING ACT AND IT'S REGULATIONS AND ARE TO BE RETAINED ON THE JOB IN GOOD ORDER AND PRODUCED UPON REQUEST.



This plan is the property of Generation Developments Ltd and must not be copied, reproduced, or used for any other purpose without the written consent of the Directors. All areas and dimensions contained in this marketing material are indicative. Areas and dimensions are subject to final survey. The developer reserves the right to alter images or descriptions without notice after the day of printing. The developer makes no warranties about the accuracy of any information contained in this promotional material and the developer, including the Directors, officers and employees will not accept any liability for loss of damage.

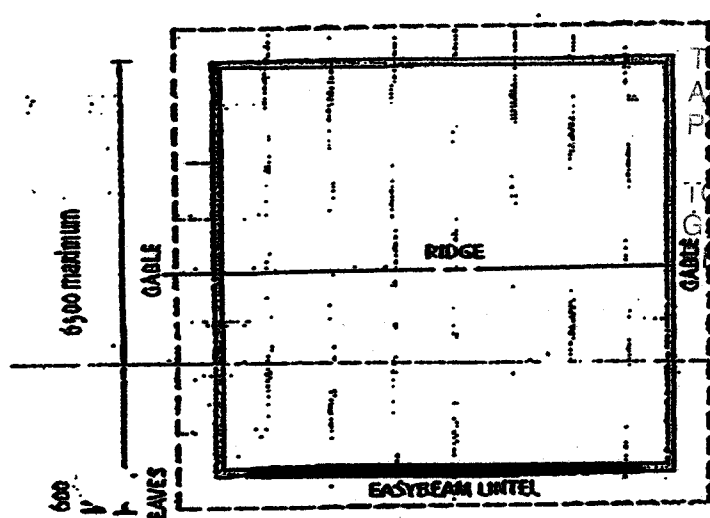
Phone 07 378 7727  
**Generation Developments Ltd** Aspect Showhome  
 150 Victory Drive, Wharewaka Point, Taupo  
 sales@generation.co.nz www.generation.co.nz



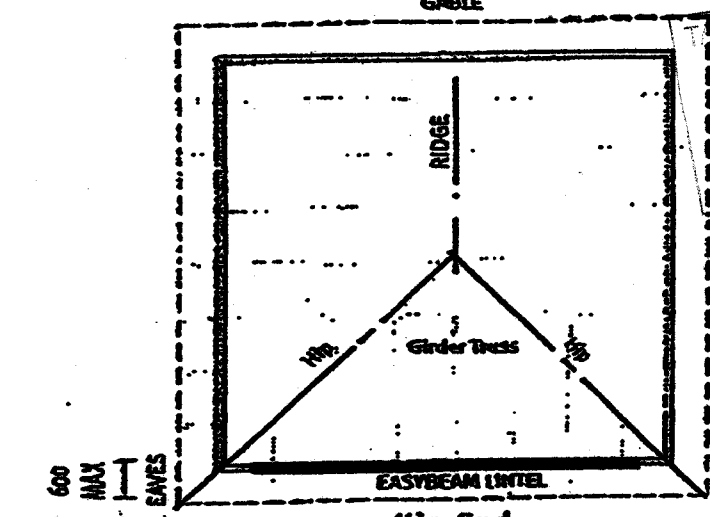
# easyBEAM

# Length, Speed & Strength

## Maximum spans

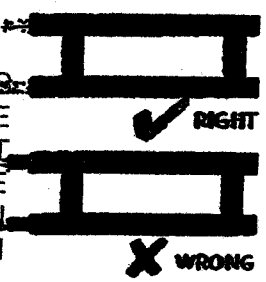


Rafter Trusses

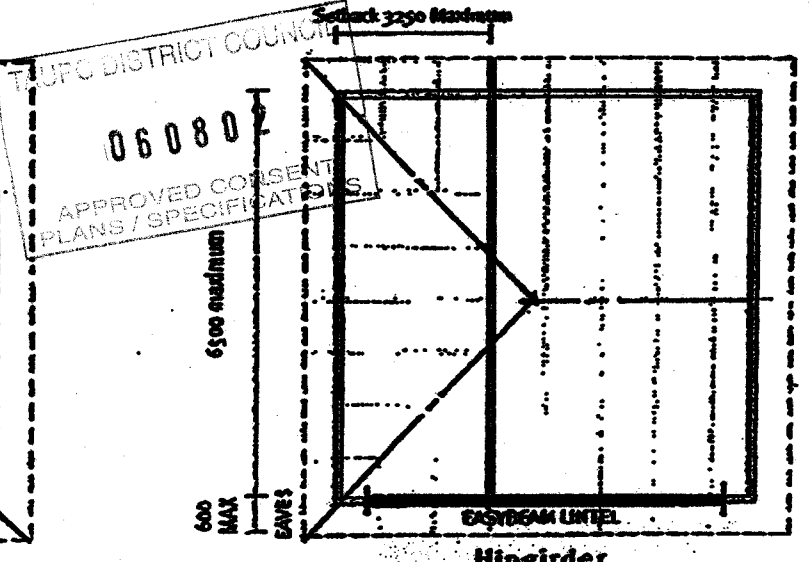


Hip End

COUNCIL / OFFICE COPY  
 THESE PLANS AND SPECIFICATIONS ARE APPROVED SUBJECT TO THE PROVISIONS OF THE BUILDING ACT AND IT'S REGULATIONS AND ARE TO BE RETAINED ON THE JOB IN GOOD ORDER AND PRODUCED UPON REQUEST.



**Very Important - Do Not slide the telescopic extension out of the beam further than the warning indicator strip 500mm for Light & 300mm for Heavy**



Hipgirder

## Selection chart

LOADS	MAXIMUM SPAN	EASYBEAM SIZE	CODE
LIGHT ROOF	5.0 metres	200 x 30 LIGHT DUTY	EB200D50
HEAVY ROOF	4.8 metres	300 x 40 HEAVY DUTY	EB300D48

## Loads

- Snow load, maximum altitudes:  
 Snow Zone 4 100m  
 Snow Zone 5 150m
- Wind, basic non-directional wind speed 45m/sec. Terrain Category 3, Shielding Multiplier 1.0, Hill Shape Multiplier 1.0 Structure risk Multiplier 1.0.
- Maximum roof weight is to be 0.45 Kpa for light roof and 0.85 Kpa for heavy roof, both include the ceiling lining.
- Where used as a lintel, maximum supported span is to be 6.5 metres with a hip and girder not supporting more than 3.25m setback.

Producer Statement- truss design - A121745

Job: C0606-21

Client: GENERATION DEVMENTS  
Phone:

Site: HAVANNAH 2

Description:  
Building Consent No.:

Phone: Printed: 09:48:48 30 Jun 2006

MITek 20/20 - Engineering 4.4 Gamma.1 (build 1597)

MITek New Zealand Ltd.

**PRODUCER STATEMENT  
MITek 20/20™ TRUSS DESIGN PROGRAM**

**Certification of MITek 20/20™ Truss Design Program**

The MITek 20/20™ truss design program has been developed by MITek New Zealand Ltd for the design of GANG-NAIL timber roof, floor and attic trusses in New Zealand. The truss designs computed by this program are prepared using sound and widely accepted engineering principles, and in accordance with NZS 4203, NZS 3603 and NZS 3604 as verification methods and acceptable solutions of the approved documents issued by the Building Industry Authority to satisfy the requirements of Clause B1:Structure of the Building Regulations 1992. This computer design for the proposed building complies with the relevant provisions of the NZ Building Code. This is subject to all proprietary products meeting their performance specification requirements, the provision of adequate bracing, fixings and the correct input of design data carried out by suitably trained personnel.

**Summary of MITek 20/20™ Truss Design Data and Output**

The MITek 20/20™ computer design output for this job titled and located at the site identified on the top of this page is based on the following parameters entered into the program. The owner must ensure that the following job details below are current and relevant to the project before fabrication and erection of the GANG-NAIL trusses.

**Job Details**

**Roof Truss**

Timber Group:	MSG10-12b	Pitch:	25.000 deg	Std Overhang:	590 mm
Roof:		Ceiling:		Wind:	
Material:	Monier Concrete Tiles	Material:	Standard	Area:	Medium (37.0 m/s)
Dead Load:	0.600 kPa	Dead Load:	0.200 kPa	Pressure Coeff:	Cpe = varies; Cpi = -0.30, 0.20
Restraints:	400 mm centres	Restraints:	400 mm centres		
Live Load:	Q <sub>ur</sub> = 0.250 kPa				
	Q <sub>c</sub> = 1.000 kN				

These trusses must be fabricated and erected in accordance with the GANG-NAIL manual. Proper erection bracing must be installed to hold the components true and plumb and in a safe condition until permanent bracing is fixed. All permanent bracing and fixing must be installed before any loads are applied. The specifications for timber shall be as shown on the output. The timber shall be standard gauged and treated to the requirements of NZMP 3640. Unless otherwise noted, this design assumes that the steel fixings and timber connectors are situated in a closed environment, as defined by NZS3604:1999 Section 4.

**Truss List**

Legend: \* = detail only, ? = input only, ~~X~~ = failed design, Unmarked trusses = designed successfully, LB = lateral bracing required

Truss	Qty	Span (mm)	Pitch (deg)	Spacing (mm)	Truss	Qty	Span (mm)	Pitch (deg)	Spacing (mm)	Truss	Qty	Span (mm)	Pitch (deg)	Spacing (mm)
EN01	1	4640	25.000	719	J04	1	2647	25.000	900	T08	1	1980	25.000	718
TG01	1	10400	25.000	900 LB	J04A	1	2647	25.000	900	T08A	1	1980	25.000	718
EN02	1	1980	25.000	718	J04B	1	2647	25.000	900	T09	1	1980	25.000	900
FG01	1	1980	0.000	900	J04C	1	2647	25.000	900	TG02	1	5940	25.000	900
GT01	1	4640	25.000	719	J04D	1	2647	25.000	900	TG03	1	5700	25.000	900
HT01	1	4505	25.000	737	J05	1	1747	25.000	900	TR01	1	10400	25.000	900
HT02	1	4505	25.000	737	J05A	1	1747	25.000	900	V01	1	1285	25.000	900
J01	1	3377	25.000	900	J05B	1	1747	25.000	900	V02	1	1848	25.000	900
J01A	1	3377	25.000	900	J05C	1	1747	25.000	900	V03	1	1175	25.000	900
J01B	1	3377	25.000	900	J06	1	2510	25.000	900	*FR01	1	5820	25.000	900
J01C	1	3377	25.000	900	J06A	1	2510	25.000	900	*FR02	1	2880	25.000	900
J01D	1	3377	25.000	900	J07	1	4505	25.000	737	*HB01	2	8134	18.249	900
J01E	1	3377	25.000	900	T01	1	10400	25.000	900	*HB02	2	5829	18.249	900
J01F	1	3377	25.000	900	T01A	4	10400	25.000	798	*HB03	1	2273	18.249	900
J02	1	2477	25.000	900	T01B	3	10400	25.000	798	*HB04	1	4019	18.249	900
J02A	1	2477	25.000	900	T01C	1	6590	25.000	900	*R01	1	1280	25.000	900
J02B	1	2477	25.000	900	T02	3	5940	25.000	900	*R01A	1	1280	25.000	900
J02C	1	2477	25.000	900	T02A	1	5940	25.000	900	*R02	4	903	25.000	900
J03	1	1577	25.000	900	T03	1	4640	25.000	719	*R02A	4	903	25.000	900
J03A	1	1577	25.000	900	T03A	1	4640	25.000	719	*R03	1	1450	25.000	900
J03B	1	1577	25.000	900	T03B	2	4505	25.000	783	*R03A	1	1450	25.000	900
J03C	1	1577	25.000	900	T04	1	4640	25.000	719	*R04	1	1298	25.000	900

Total quantity : 82

REQUEST  
 TO BE OBTAINED AND PRODUCED UPON  
 TO BE RETAINED ON THE JOB IN  
 AND ITS REGULATIONS AND ARE  
 PROVISIONS OF THE BUILDING ACT  
 THESE PLANS AND SPECIFICATIONS  
 ARE APPROVED SUBJECT TO THE  
 COUNCIL / OFFICE COPY

The computer design input has been carried out by:

Signed: [Signature] Date: 22/06/06

Name of Computer Operator: Tom Linder

Qualifications and Title: Designer

Company: PlaceMakers

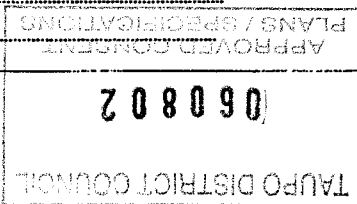


**Verification / Acceptance of Input Data:**

I have checked the input data against the construction drawings and specifications and verify that they are correct and suitable for this job.

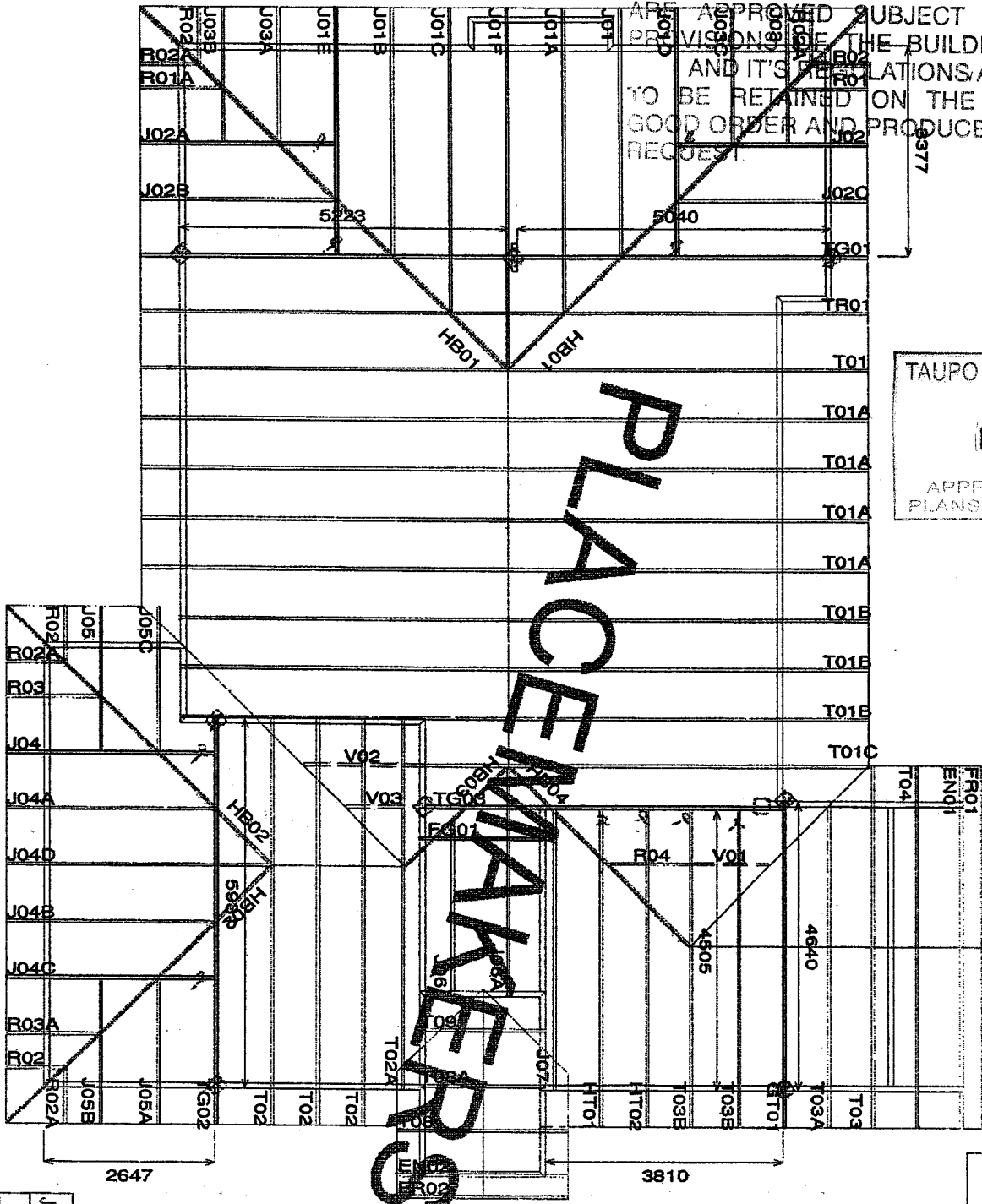
Signed: \_\_\_\_\_ Date: \_\_\_\_\_

Name: \_\_\_\_\_ Company: \_\_\_\_\_



COUNCIL / OFFICE COPY

THESE PLANS AND SPECIFICATIONS ARE APPROVED SUBJECT TO THE PROVISIONS OF THE BUILDING ACT AND ITS REGULATIONS AND ARE TO BE RETAINED ON THE JOB IN GOOD ORDER AND PRODUCED UPON REQUEST.



TAUPO DISTRICT COUNCIL  
**060802**  
 APPROVED CONSENT  
 PLANS / SPECIFICATIONS

**Placemakers**  
 Thermal Building Supplies  
 25 Mc Donald Street  
 Mt Maunganui  
 New Zealand  
 Telephone: phone = 07 5754039  
 Fax: fax = 07 5740823

Name: GIBBERNION  
 DENVERIS  
 Address: WAIWAKAMU 2  
 Telephone:

Job: 00606-21  
 Date: 30/06/2006  
 Drawn By: SCHWAB



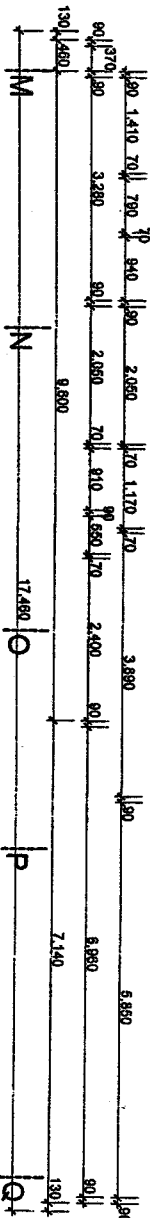
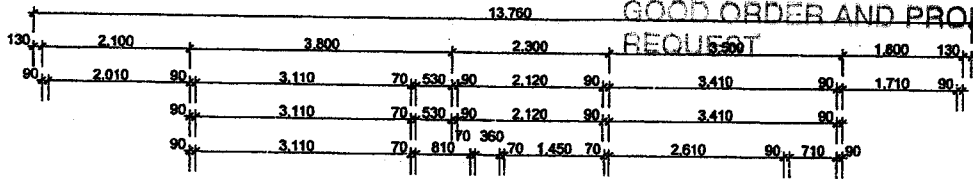
**FIXING SCHEDULE E**  
 Fix (Panel) to be fixed to top plate  
 Package - unless specified otherwise

Fix	Quantity
1. 1x10x100	1
2. 1x10x100	1
3. 1x10x100	1
4. 1x10x100	1
5. 1x10x100	1
6. 1x10x100	1
7. 1x10x100	1
8. 1x10x100	1
9. 1x10x100	1
10. 1x10x100	1
11. 1x10x100	1
12. 1x10x100	1
13. 1x10x100	1
14. 1x10x100	1
15. 1x10x100	1
16. 1x10x100	1
17. 1x10x100	1
18. 1x10x100	1
19. 1x10x100	1
20. 1x10x100	1
21. 1x10x100	1
22. 1x10x100	1
23. 1x10x100	1
24. 1x10x100	1
25. 1x10x100	1
26. 1x10x100	1
27. 1x10x100	1
28. 1x10x100	1
29. 1x10x100	1
30. 1x10x100	1
31. 1x10x100	1
32. 1x10x100	1
33. 1x10x100	1
34. 1x10x100	1
35. 1x10x100	1
36. 1x10x100	1
37. 1x10x100	1
38. 1x10x100	1
39. 1x10x100	1
40. 1x10x100	1
41. 1x10x100	1
42. 1x10x100	1
43. 1x10x100	1
44. 1x10x100	1
45. 1x10x100	1
46. 1x10x100	1
47. 1x10x100	1
48. 1x10x100	1
49. 1x10x100	1
50. 1x10x100	1
51. 1x10x100	1
52. 1x10x100	1
53. 1x10x100	1
54. 1x10x100	1
55. 1x10x100	1
56. 1x10x100	1
57. 1x10x100	1
58. 1x10x100	1
59. 1x10x100	1
60. 1x10x100	1
61. 1x10x100	1
62. 1x10x100	1
63. 1x10x100	1
64. 1x10x100	1
65. 1x10x100	1
66. 1x10x100	1
67. 1x10x100	1
68. 1x10x100	1
69. 1x10x100	1
70. 1x10x100	1
71. 1x10x100	1
72. 1x10x100	1
73. 1x10x100	1
74. 1x10x100	1
75. 1x10x100	1
76. 1x10x100	1
77. 1x10x100	1
78. 1x10x100	1
79. 1x10x100	1
80. 1x10x100	1
81. 1x10x100	1
82. 1x10x100	1
83. 1x10x100	1
84. 1x10x100	1
85. 1x10x100	1
86. 1x10x100	1
87. 1x10x100	1
88. 1x10x100	1
89. 1x10x100	1
90. 1x10x100	1
91. 1x10x100	1
92. 1x10x100	1
93. 1x10x100	1
94. 1x10x100	1
95. 1x10x100	1
96. 1x10x100	1
97. 1x10x100	1
98. 1x10x100	1
99. 1x10x100	1
100. 1x10x100	1

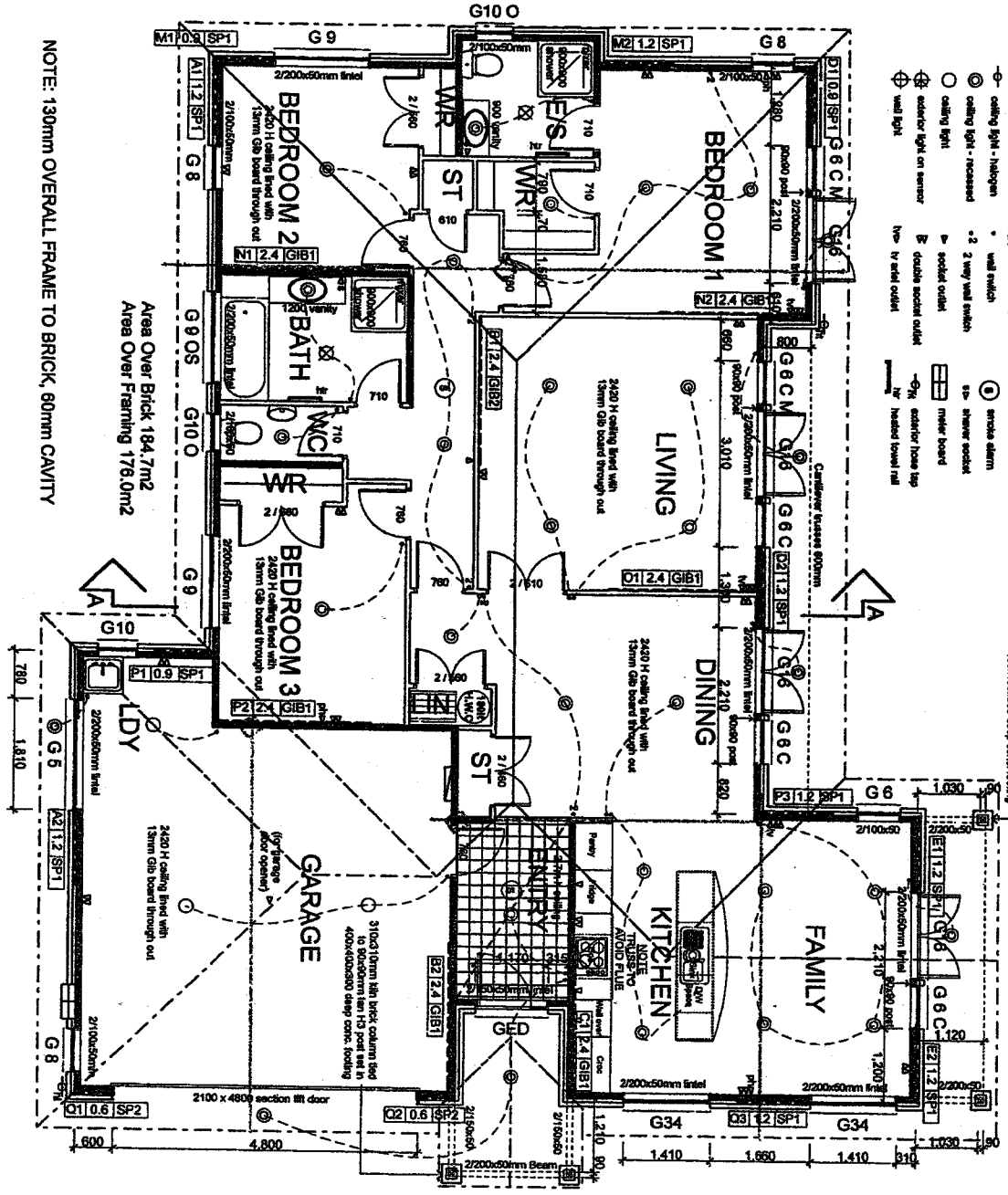
**Job Details:**

Wind Area:	Medium	Design Wind Speed:	37.0 m/s
TC Restraints:	400 mm EC Restraints:		400 mm
Roof Material:	Walter Concrete Tiles Ceiling Kerolite:		Standard
Roof Live Load:	0.250 kPa		
Roof Pitch:	25.000 deg	Truss Centres:	300 mm

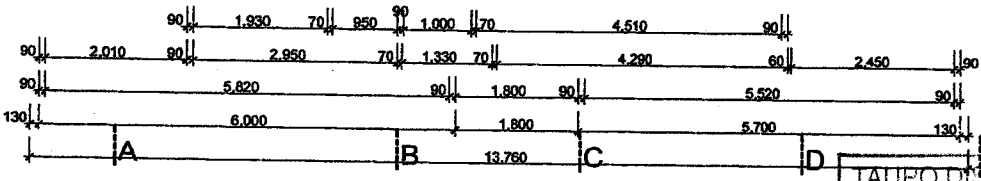
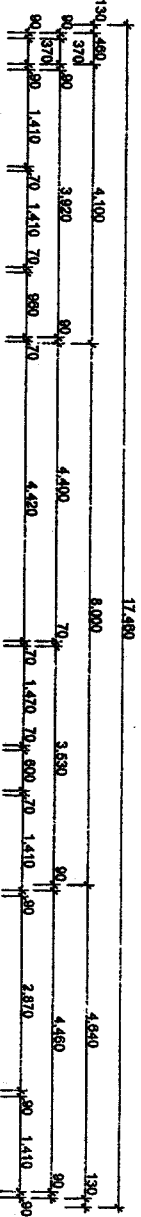
COUNCIL / OFFICE  
 THESE PLANS AND SPECIFICATIONS  
 ARE APPROVED SUBJECT TO THE  
 PROVISIONS OF THE BUILDING ACT  
 AND ITS REGULATIONS AND ARE  
 TO BE RETAINED ON THE JOB IN  
 GOOD ORDER AND PRODUCED UPON  
 REQUEST



NOTE: 130mm OVERALL FRAME TO BRICK, 60mm CAVITY



- ELECTRICAL**
- ⊙ ceiling light - halogen
  - ⊙ ceiling light - recessed
  - ⊙ ceiling light
  - ⊕ outdoor light on sensor
  - ⊕ wall light
  - ⊗ 3 in 1 headlight/film
  - ⊙ wall switch
  - ⊙ 2 way wall switch
  - ⊙ socket outlet
  - ⊙ double socket outlet
  - ⊙ 1/2 in end outlet
  - ⊙ phone point
  - ⊙ smoke alarm
  - ⊙ shower socket
  - ⊙ meter board
  - ⊙ outdoor hose tap
  - ⊙ headboard level
  - ⊙ 3 in x 1 in headlight/film
  - ⊙ 2 way wall switch
  - ⊙ socket outlet
  - ⊙ double socket outlet
  - ⊙ 1/2 in end outlet
  - ⊙ phone point
  - ⊙ smoke alarm
  - ⊙ shower socket
  - ⊙ meter board
  - ⊙ outdoor hose tap
  - ⊙ headboard level



TAUPO DISTRICT COUNCIL  
 060802  
 APPROVED CONSENT  
 PLANS / SPECIFICATIONS

# MiTek Beam

Lintel supporting girder / setback trusses

## DESIGN LOADS

Roof Live Load 0.25kPa, 1.0kN Point Load  
 Roof Dead Load 0.65kPa, Heavy  
 Ceiling Dead Load 0.20kPa, Standard  
 Seismic Zone A, B or C  
 Overhang of 750mm has been included  
 Spans are horizontal dimensions

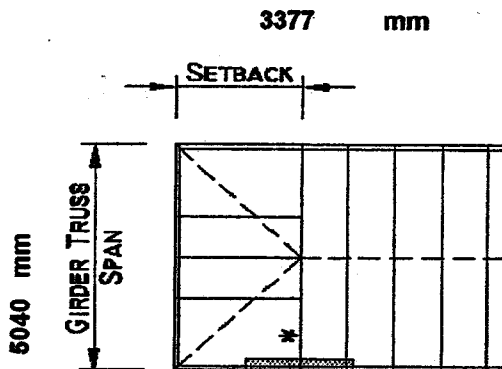
JOB NAME: Generation Develop  
 ADDRESS: Havannah 2 Gable  
 \*\*\*  
 \*\*\*  
 DATE: 30/06/2006  
 BEAM NAME: BED 1 G16

## JOB DATA

Roof Weight Heavy  
 Ceiling Weight Standard  
 Wind Load Medium  
 Snow load NIL  
 Is The Roof Pitch Greater than 30 deg. No

Beam type

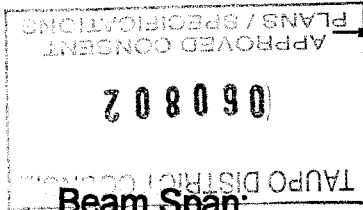
## LOAD CONDITIONS



### Certification of MiTek Beam Design Program

The MiTek Beam design program has been developed by MiTek New Zealand Ltd for the design of GANG-NAIL Beams and Lintels in New Zealand. The beam designs computed by this program are prepared using sound and widely accepted engineering principles, and in accordance with NZS 4203, NZS 3603 and NZS 3604 as verification methods and acceptable solutions of the approved documents issued by the Building Industry Authority to satisfy the requirements of Clause B1:Structure of the Building Regulations 1992. This computer design for the proposed building complies with the relevant provisions of the NZ Building Code. This is subject to all proprietary products meeting their performance specification requirements, the provision of adequate bracing, fixings and the correct input of design data carried out by suitably trained personnel.

**MiTek New Zealand Ltd.**  
 HOME OF GANG-NAIL® BUILDING SYSTEMS  
**MiTek™**



Beam Span: 1410 mm  
 Beam Size: 200 x 100 Timber  
 Beam Camber: 5 mm

The computer design input has been carried out by:

Signed: *W. Walker* Date: 30/06/06  
 Name of Computer Operator: Tony Walker  
 Qualifications and Title: Detailer  
 Company: Placemakers Mount Maunganui

Application Project Information Memorandum - A121746

*Jamie!*

## Project Information Memorandum

Section 34, Building Act 2004

### Application

Generation Developments Ltd	No.	060802
C/- Helen Moffatt	Issue date	3/08/06
P O Box 14232	Application date	4/07/06
Tauranga		

### Project

Description	New (& prebuilt) House, Unit, Bach, Crib, Town House etc. Being Stage 1 of an intended 1 Stages Residential dwelling with attached garage
Intended Life	Indefinite, but not less than 50 years
Intended Use	
Estimated Value	\$168,245
Location	5 Barbary Close, Taupo
Legal Description	Lot 101 DP 363862
Valuation No.	0734180900

This project information memorandum is confirmation that the proposed building work maybe undertaken, once any **notices** and/or **certificates** attached to this memorandum have been complied with. Commencement of the work is also subject to the provisions of the Building Act 2004, and any requirements of the building consent. **THIS IS NOT A BUILDING CONSENT.**

No relevant information has been located for this property.

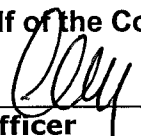
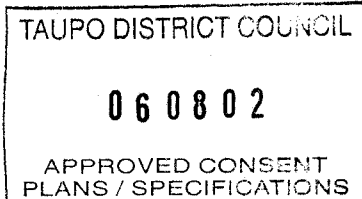
### COUNCIL / OFFICE COPY

THESE PLANS AND SPECIFICATIONS ARE APPROVED SUBJECT TO THE PROVISIONS OF THE BUILDING ACT AND IT'S REGULATIONS AND ARE TO BE RETAINED ON THE JOB IN GOOD ORDER AND PRODUCED UPON REQUEST.

Signed for and on behalf of the Council:

Name:

P.I.M.s Officer

Date:

3/8/06

Engineering Comments: All stormwater on this subdivision goes to soakage. A stormwater cutoff drain is required at the front boundary of the driveway to collect stormwater runoff from the paved area. This must be disposed of to the onsite soakholes. Note the requirements on the consent notice for the special vehicle crossing design required for the stormwater swales on this street.

**TAUPO DISTRICT COUNCIL  
CONSENT NOTICE**

**CONO 6869875.2 Consen**

Cpy - 01/01, Pgs - 004, 17/05/08, 16:48



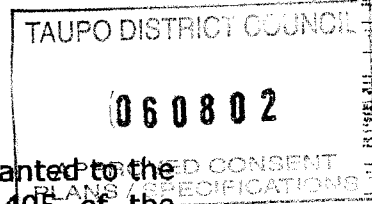
DocID: 611498384

**Section 221 Resource Management Act 1991**

**COUNCIL / OFFICE COPY**

**Subdivider:** Wharewaka (2003) Limited  
**Subdivision:** Lots 43-126, 162-179, 304, 307 and 325, 328 being a subdivision of Lot 320, DP 356786  
**Location:** Wharewaka Point, State Highway 1, Taupo  
**Plan No:** DP 363862

THESE PLANS AND SPECIFICATIONS ARE APPROVED SUBJECT TO THE PROVISIONS OF THE BUILDING ACT AND IT'S REGULATIONS AND ARE TO BE RETAINED ON THE JOB IN GOOD ORDER AND PRODUCED UPON REQUEST.



**TAKE NOTICE** that a resource consent [subdivision] has been granted to the subdivider pursuant to Sections 104, 104D, 108, 220 and 405 of the Resource Management Act 1991 upon condition that:

1. A consent notice shall be imposed on the titles to the lots with access to Barbary Close (i.e. Lots 87-103 (inclusive) DP363862) that any vehicle crossing on Barbary Close serving these lots shall be constructed in accordance with the attached engineering design (see Harrison Grierson plan 14359-650 Rev B attached) to protect the function of the grass swales for stormwater drainage purposes.
2. A consent notice shall be placed on the titles to all residential lots (i.e. Lots 43-126 and 162-179 (all inclusive) DP 363862) requiring that the development on each residential lot shall comply with the Residential Environment performance standards set out in the Proposed Taupo District Plan, any subsequent approved variation to the Proposed District Plan or any operative District Plan.
3. A consent notice shall be imposed on the titles to those lots able to have dwellings erected within 80 metres of the nearest part of the carriageway of State Highway 1 (i.e. Lots 59-78 (inclusive) and Lot 125 DP 363862 as shown on Harrison Grierson plan 014359-024 Rev 3 attached) that all dwellings shall be designed and constructed so that in all bedrooms, an internal noise level of no more than 30 dBA Leq and 45dBA  $L_{max}$  is to be achieved with all opening windows closed. The applicant for building consent shall provide written evidence from a suitably qualified acoustic consultant (i.e. an acoustic design certificate) showing how this level is to be achieved for each new dwelling (or any subsequent alterations to the dwelling) to be approved by Taupo District Council's Environmental Health Officer. For those buildings that are required to have windows closed in order to comply with the required 30 dBA Leq and 45 dBA  $L_{max}$ , they must be designed and constructed to



**COMPUTER FREEHOLD REGISTER  
UNDER LAND TRANSFER ACT 1952**



Search Copy

R. W. Muir  
Registrar-General  
of Land

**Identifier** 263233  
**Land Registration District** South Auckland  
**Date Issued** 18 May 2006

**Prior References**  
234770

---

<b>Estate</b>	Fee Simple
<b>Area</b>	642 square metres more or less
<b>Legal Description</b>	Lot 101 Deposited Plan 363862
<b>Proprietors</b>	Wharewaka (2003) Limited

---

**Interests**

Subject to Section 3 Geothermal Energy Act 1953  
Subject to Section 3 Petroleum Act 1937  
Subject to Section 8 Atomic Energy Act 1945  
Subject to Sections 6 and 8 Mining Act 1971  
Subject to Part IV A Conservation Act 1987  
Subject to Section 27B State-Owned Enterprises Act 1986 (which provides for the resumption of land on the recommendation of the Waitangi Tribunal and which does not provide for third parties, such as the owner of the land, to be heard in relation to the making of any such recommendation) - 29.11.1991 at 9.46 am  
Subject to Sections 5 and 261 Coal Mines Act 1979  
6703367.13 Encumbrance to Taupo District Council - 22.12.2005 at 9:00 am  
6869875.2 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 18.5.2006 at 9:00 am  
Land Covenant in Easement Instrument 6869875.9 - 18.5.2006 at 9:00 am  
Fencing Covenant in Easement Instrument 6869875.9 - 18.5.2006 at 9:00 am

**TAUPO DISTRICT COUNCIL**  
**CONSENT NOTICE**

**CONO 6869875.2 Consen**

Cpy - 01/01, Pgs - 004, 17/05/08, 16:48



DocID: 571490884

**Section 221 Resource Management Act 1991**

**Subdivider:** Wharewaka (2003) Limited  
**Subdivision:** Lots 43-126, 162-179, 304,307 and 325-328  
being a subdivision of Lot 320, DP 356786  
**Location:** Wharewaka Point, State Highway 1, Taupo  
**Plan No:** DP 363862

**TAKE NOTICE** that a resource consent [subdivision] has been granted to the subdivider pursuant to Sections 104, 104D, 108, 220 and 405 of the Resource Management Act 1991 upon condition that:

1. A consent notice shall be imposed on the titles to the lots with access to Barbary Close (i.e. Lots 87-103 (inclusive) DP363862) that any vehicle crossing on Barbary Close serving these lots shall be constructed in accordance with the attached engineering design (see Harrison Grierson plan 14359-650 Rev B attached) to protect the function of the grass swales for stormwater drainage purposes.
2. A consent notice shall be placed on the titles to all residential lots (i.e. Lots 43-126 and 162-179 (all inclusive) DP 363862) requiring that the development on each residential lot shall comply with the Residential Environment performance standards set out in the Proposed Taupo District Plan, any subsequent approved variation to the Proposed District Plan or any operative District Plan.
3. A consent notice shall be imposed on the titles to those lots able to have dwellings erected within 80 metres of the nearest part of the carriageway of State Highway 1 (i.e. Lots 59-78 (inclusive) and Lot 125 DP 363862 as shown on Harrison Grierson plan 014359-024 Rev 3 attached) that all dwellings shall be designed and constructed so that in all bedrooms, an internal noise level of no more than 30 dBA Leq and 45dBA  $L_{max}$  is to be achieved with all opening windows closed. The applicant for building consent shall provide written evidence from a suitably qualified acoustic consultant (i.e. an acoustic design certificate) showing how this level is to be achieved for each new dwelling (or any subsequent alterations to the dwelling) to be approved by Taupo District Council's Environmental Health Officer. For those buildings that are required to have windows closed in order to comply with the required 30 dBA Leq and 45 dBA  $L_{max}$ , they must be designed and constructed to

provide for other means of sufficient internal ventilation. This recognises that noise effects will arise from State Highway 1 traffic.

**TO:** The District Land Registrar  
South Auckland Registry

For registration please.

Dated this day 16<sup>th</sup> of May 2006

Signed:



---

Gareth Green  
Manager Resource Consents  
Taupo District Council

## MEMORANDUM

<b><u>TO</u></b>	Building Consents Technical Clerk
<b><u>FROM</u></b>	Development Contributions Officer
<b><u>SUBJECT</u></b>	PIM <u>060802</u>

Development Contribution required **YES** / **NO**

Development Contribution notice type:

**Additional Information**

~~Charge known~~ \$ \_\_\_\_\_

~~Please attach form to PIM and ask to provide the following information~~

~~Please advise a Development Contribution is payable and include the attached assessment.~~

Comments

New dwelling on a vacant lot.

lot created by RMO40050 before  
DC Policy.

Assessed [Signature] Date 5/7/06

Reviewed [Signature] Date 5/7/6



Private Bag 2005 Taupo  
New Zealand  
Telephone 07 376 0899  
Facsimile 07 378 0118

Head Office: 72 Lake Terrace Taupo

File Ref:	7092/002
TAUPO DISTRICT COUNCIL	
Received	- 2 AUG 2006
Send To: <b>Tax Invoice</b>	

**GST Reg No** 50-873-412  
**Date** 1/08/06  
**Customer No** BC060802  
**Invoice Number** 79264

Generation Developments Ltd  
C/- Helen Moffatt  
P O Box 14232  
Tauranga 3143

**060802 : 5 Barbary Close, Taupo**  
**Residential dwelling with attached garage**  
**Owner: Generation Developments Ltd**

Processing Fee	450.00	*
PIM Fee	100.00	*
BRANZ Levy	169.00	OG
Water Connection	40.00	*
Building Administration	250.00	*
Inspection	585.00	*
Certificate of Title	15.00	*
DHB Levy	332.93	*
	<b>BEFORE GST</b>	<b>1,744.94</b>
	<b>GST</b>	<b>196.99</b>
	<b>Total</b>	<b>\$1,941.93</b>

(\* Includes GST)  
Total

Any enquiries regarding this account please contact the Environmental Services Division on 07 376 0891.

On receiving payment for the balance of outstanding fees, your building consent is available, to be collected or posted out.

PAYMENT RECEIVED 1,200.00CR



**Remittance Advice**



Please detach and return with your payment to **Taupo District Council**.  
Please advise of any address changes overleaf.

Generation Developments Ltd  
C/- Helen Moffatt  
P O Box 14232  
Tauranga 3143

**Customer Number** BC060802  
**Invoice Date** 1/08/06  
**Invoice Number** 79264  
**Amount Due** \$ **741.93**

**NO RECEIPT ISSUED UNLESS REQUESTED**



Postal address  
Private Bag 2005  
Taupo, New Zealand

Ph: 07-376 0899  
Fax: 07-378 0114

PIM / APPLICATION No. BC 060802  
DATE RECEIVED 4.7.06  
DATE ISSUED 31/8/06  
SITE FILE No. 0825 0005

## APPLICATION FOR PROJECT INFORMATION MEMORANDUM AND/OR BUILDING CONSENT Section 33 or section 45, Building Act 2004

### THE BUILDING

**Street address of building:** *[for structures that do not have a street address, state the nearest street intersection and the distance and direction from that intersection]* 5 Barbary Close, Aspect, Wharewaka Taupo

**Legal description of land where building is located:** *[state legal description as at the date of application and, if the land is proposed to be subdivided, include details of relevant lot numbers and subdivision consent]*

**Subdivision Consent** *(if applicable)* \_\_\_\_\_  
**Valuation No.** 0734180900 **Lot No** 101  
**DPS** 363862 **Section** \_\_\_\_\_  
**Block** \_\_\_\_\_ **Survey District** \_\_\_\_\_

**Building name:** *[insert building name if applicable]* McClay

**Location of building within site/block number:** *[include nearest street access]* Lot 101 Aspect **Number of levels:** *[include ground level and any levels belowground]* one

**Level/unit number:** *[insert level/unit number if applicable]* \_\_\_\_\_ **Area:** *[total floor area; indicate area affected by the building work if less than the total area]* 177.1 m<sup>2</sup>

**Current, lawfully established, use:** *[include number of occupants per level and per use if more than 1]* Residential Dwelling

**Year first constructed:** *[insert year, approximate date is acceptable e.g: c1920s or 1960-1970]* 2006 **Expected completion date:** *[insert month year]* 2006

### THE OWNER

**Name of owner:** *[include preferred form of address, eg, Mr, Miss, Dr, if an individual]* GENERATION DEVELOPMENTS LTD.  
P.O. BOX 14232  
TAURANGA

**Contact person:** *[insert contact name]* Helen Moffatt

**Mailing address:** *[insert mailing address]* PO Box 14232, Tauranga

**Street address/registered office:** *[insert street address/registered office]* 36 Cameron Road, Tauranga

**Phone numbers:** Landline: \_\_\_\_\_ Daytime: \_\_\_\_\_  
 Mobile: \_\_\_\_\_

**Facsimile number:** \_\_\_\_\_

**Website:** *[website address if applicable]* \_\_\_\_\_

**The following is attached:** *[copy of certificate of compliance and other documents shown]*

**Helen Moffatt**  
Production Administrator



Generation Developments Ltd  
PO Box 14232, Tauranga  
Phone 07 928 3939  
Fax 07 578 8561  
Email: helen@generation.co.nz  
www.generation.co.nz

Agent: [only required if application is on behalf of the owner]

Contact person: [insert contact name]

Mailing address: [insert mailing address]

Street address/registered office:

[insert street address/registered office]

Phone numbers:

Landline:

Daytime:

Mobile:

After Hours:

Facsimile number:

Email address:

Website: [website address if applicable]

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:

[all invoices and refunds related to this application will be directed to this person in all instances]

## THE PROJECT

Description of the building work:

[provide sufficient description of building work to enable scope of work to be fully understood]

Residential dwelling with attached garage

Will the building work result in a change of use of the building? [Yes/No]

No

If Yes, provide details of the new use: [provide description of new use]

Intended life of the building if less than 50 years:

List building consents previously issued for this project (if any): [list who issued the consent, the date of issue and the consent number]

Estimated value of the building work on which the building levy will be calculated (including goods and services tax): [state estimated value as defined in section 7 of the Building Act 2004]

\$ 168,245

Number of Toilet Pans: (Commercial properties only)

## APPLICATION

I request that you issue a <sup>†</sup>[project information memorandum/project information memorandum and building consent/building consent] [delete which is not applicable] for the building work described in this application

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



Date: 3/7/06

**\*\*\* URGENT \*\*\***  
**Generation Developments**  
**Fax Message**

<b>COMPANY:</b> Attention: Carol Mitchell, PIMS Officer Taupo District Council	<b>COMPANY:</b> Generation Developments Ltd
<b>FAX No.</b> 07 378 0114	<b>SUBJECT:</b> Lot 101 Aspect, 5 Barbary Close, Taupo, Consent Number: 060802
<b>DATE</b> 31 July 2006	<b>FROM:</b> Helen Moffatt
<b>No. OF PAGES</b> 1 of 2	<b>FAX No.</b> 07 578 8561 <b>PHONE No.</b> 07 928 3939

Further to your fax on Friday requiring additional information I attach a copy of an amended Site Plan incorporating specific design for driveway in accordance with requirements on the Consent Notice.

I will phone you shortly to ensure that no further information is required in order to proceed with issue of PIM for this house.

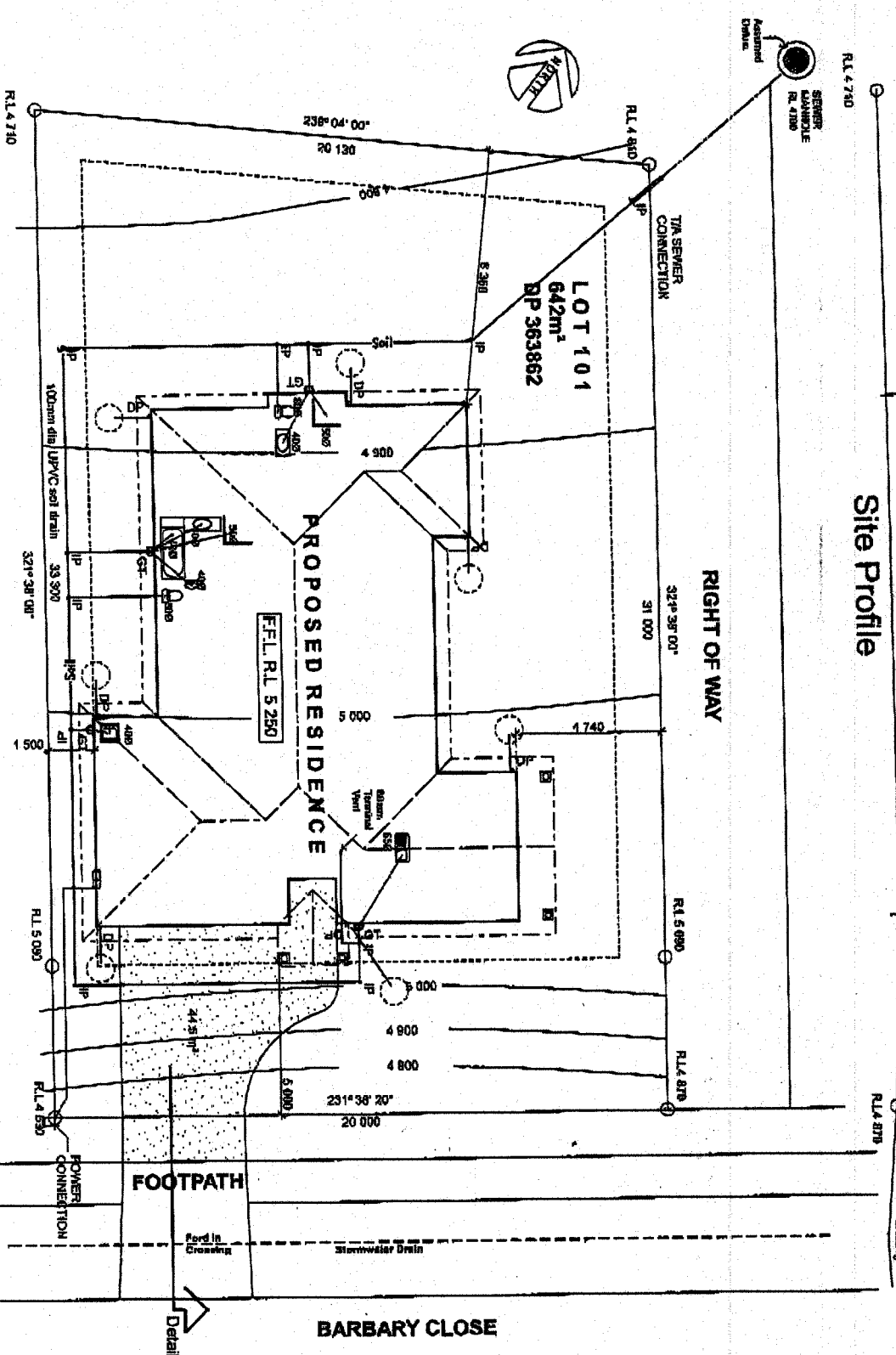
I will put originals on courier to you today.

Thanks so much for your help with this matter.

Cheers  
Helen

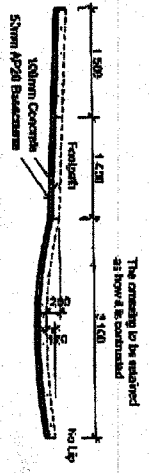


THIS PLAN IS THE PROPERTY OF GENERATION DEVELOPMENTS LTD. AND MUST NOT BE COPIED NOR USED BY ANY THIRD PARTY WITHOUT THE CONSENT OF THE COMPANY



F.F.L RL 5 250  
Site Profile

Detail 1 - Cross Section through Entrance for Cross Swale Entrances  
Scale: 1:50



- Maintenance:**
- Filter chambers to be placed at all pipe junctions.
  - Access for the maintenance be provided to catchpits.
  - Catchpits should be annually inspected and if necessary opened or any silt or debris which may have built up inside the pit.
  - All downpipes to catchpits - 7 x 800mm dia x 5m deep, or 7 x 800mm dia x 4m deep, to T/A Requirements.
  - SOIL DRAIN LENGTH - 65.63M
  - POWER LINE LENGTH - 12.77 LM

Coverage Area of 31 % site area 642 m<sup>2</sup> = 192.6 m<sup>2</sup>  
Coverage of Building including drives over 600mm = 190.5 m<sup>2</sup>

The crossing to be retained as shown is contained.  
Note: Any vehicle crossing on Barbary Close serving this site shall be constructed in accordance with the engineering design (Huron's design) to protect the function of the grass swales for stormwater drainage purposes.

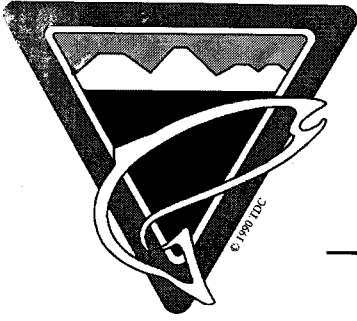
Master's Section

GENERATION DEVELOPMENTS LTD.	
Lot 101 Aspect	Site Plan
SCALE: 1:100	DATE: 08/06/06
DESIGN: CDR DONT	DATE: 08/06/06
DRAWN: S BUCK	DATE: 08/06/06
CHECKED: 31/07/2006	
SHEET NO.	01

\*\*\*\*\*  
\*\*\* RX REPORT \*\*\*  
\*\*\*\*\*

RECEPTION OK

JOB NO. 6564  
DESTINATION ADDRESS 5788561  
PSWD/SUBADDRESS  
DESTINATION ID  
ST. TIME 31/07 10:08  
USAGE T 00'23  
PGS. 2  
RESULT OK



# Taupo District Council

## Development Services Department

72 Lake Terrace, Taupo, New Zealand. Private Bag 2005, Taupo

Ph: 0-7-376-0893

Fax 0-7-378 0114

### FAX COVER SHEET

DATE: 28 July 2006

TO: FAX NO: 07-9283939 07 5788561

FROM: FAX NO -07-3780114

From: Direct Dial -3760893

SENT TO : Helen Moffatt -

SENT FROM: Carol Mitchell

ATTENTION

YOUR REF: Generation Deve Ltd

OUR REF:

TOTAL PAGES  
INCLUDING THIS COVER 2

CONFIDENTIALITY

If this fax has been sent to you by mistake, please ring us with the details, then destroy the fax. The fax may contain confidential or privileged information which may not be used in any way if you are not the intended recipient.

For your information

As Requested

Please action

Building consent 060802

**PIM SUSPENDED**

Further information requested. The Project Information Memorandum will be suspended until information has been received and approved.

Should you have any further queries please ask for Officer - named on attached sheet.

CAROL MITCHELL  
P.I.M.S. OFFICER

## Taupo District Council Building Consent Notes

---

**No:** 060802

**Applicant:** Generation Developments Ltd

**Project:** Residential dwelling with attached garage

**Location:** 5 Barbary Close, Taupo

---

**Done Date:**

**Officer:**

**Notes:**

[Delete This Note](#)

Copyright © 1997, Napier Computer Systems Limited. All rights reserved.

*Author: Lesley Marshall*

Pim Number 050802  
 DATE 28/7/06  
 Completed By Jamie T

## ENVIRONMENTAL PLANNING ASSESSMENT SECTION 37 OF THE BUILDING ACT

**DETAILS:**  
 NAME McClay  
 PROPERTY ADDRESS Lot 101, S Barbary Close, Wharewaka  
 DESCRIPTION OF ACTIVITY new dwelling

**TRANSITIONAL DISTRICT PLAN**

**PROPOSED DISTRICT PLAN**

TRANSITIONAL DISTRICT PLAN		PROPOSED DISTRICT PLAN	
Site Zoning: <u>Residential A</u>		Site: Environment: <u>Rural</u> <u>Residential By Consent</u>	
PERFORMANCE STANDARDS	COMPLIANCE Yes No n/a	PERFORMANCE STANDARDS	COMPLIANCE Yes No n/a
Maximum Building Height	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Maximum Building Height	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Daylighting	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Daylighting	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Max.site.coverage	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
Total area of accessory buildings:	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1. Building Coverage	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Building Separation distance	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	2. Total Coverage	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Min Building Setback	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	3. Plot Ratio	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Complying Garage Location	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Min Building Setback	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Max. Earthworks	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<u>Parking, Loading, &amp; Access</u>	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Retaining Walls/Fences	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Max Vehicle Movements	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Max Signage	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Max Signage	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
Parking	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Max Earthworks	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Driveway Width	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Rural Effects Area Radius	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
Landscaping	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Nominal Allotments	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
		<b>TOWN CENTRE ENVIRONMENT ONLY</b>	
		Shop Frontage	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
		Verandahs	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
		Vehicle Crossings	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>

**HAZARDS**

No

Yes: Details:

**ARCHEOLOGICAL SITE:**

No

Yes: Details

**DESIGNATED SITE:** Outline Plan Waiver  Outline Plan Required

**EXISTING CONSENTS: (n.b. check financial contribution conditions)**

No

Yes: Details

**RESOURCE CONSENTS REQUIRED FROM OTHER AUTHORITY**

**Check waste water issues (Environmental Waikato)**

No

Yes: Details *Access to Barbary Close - vehicle crossing requirements.*

**Certificate of Title - Check for Consent Notices ( etc )** No ↓ Yes

**STATUS**

**(Tick one of the following)**

Ok to process:

Resource Consent required:

Further information requested:

*There appears to be a difference in driveway (see vehicle crossing) design with that required as a consent notice, more details are needed to see if what is shown meets the design specifications required on the consent notice.*

\* Reviewed. 31/7/06 *[Signature]* (Jamie T)

**SCHEDULE**

ed systems for the building are as follows: *[specified systems are defined in regulations]*

N/A

The following specified systems are being altered, added to, or removed in the course of the building work: *[specify]*

N/A

There are no specified systems in the building.

**PROJECT INFORMATION MEMORANDUM**

**The following matters are involved in the project**

- Subdivision  New or altered locations and/or external dimensions of buildings
- Alterations to land contours  Building work over or adjacent to any road or public place
- New or altered connections to public utilities  Building work over any existing drains or sewers or in close proximity to wells or water mains
- New or altered access for vehicles  Other matters known to the applicant that may require authorisations from the territorial authority: *[specify]*
- Disposal of stormwater and wastewater

**BUILDING CONSENT**

**The following plans and specifications are attached to this application:**

05/A101

**ATTACHMENTS**

**The following documents are attached to this application:**

- Certificate attached to project information memorandum
- Plans and specifications *[list]* \_\_\_\_\_
- Project information memorandum
- Development contribution notice

**MATERIALS USED** *(Identify materials used. Required for Department of Building and Housing records)*

<b>Floor:</b>	Concrete Ribract		
<b>Roof:</b>	Concrete Tiles		
<b>Framing:</b>	Timber		
<b>Internal Lining:</b>	Gib-board		
<b>Exterior Cladding:</b>	Brick / Fosroc		
<b>Energy:</b>	Gas Fire		
<b>Cooking:</b>	Electric & Gas		
<b>Insulation</b>	Fibreglass		

# PROJECT INFORMATION MEMORANDUM COMMENTS

## CUSTOMER SERVICE

### ATTACH PLANS OF COUNCIL SERVICES

YES \_\_\_\_\_ NO \_\_\_\_\_

- SEWER
- STORMWATER
- WATER

(Services map) not available as yet.

<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

CIRCLE WHICH OF THE SERVICES CROSS THE PROPERTY - SEWER, WATER, STORMWATER  
OTHER EASEMENTS (ATTACH DETAILS)

Signed: ..... *Ally* .....

Dated: ..... 11/7/16 .....

## WORKS DEVELOPMENT ENGINEER

### ENGINEERING COMMENTS:

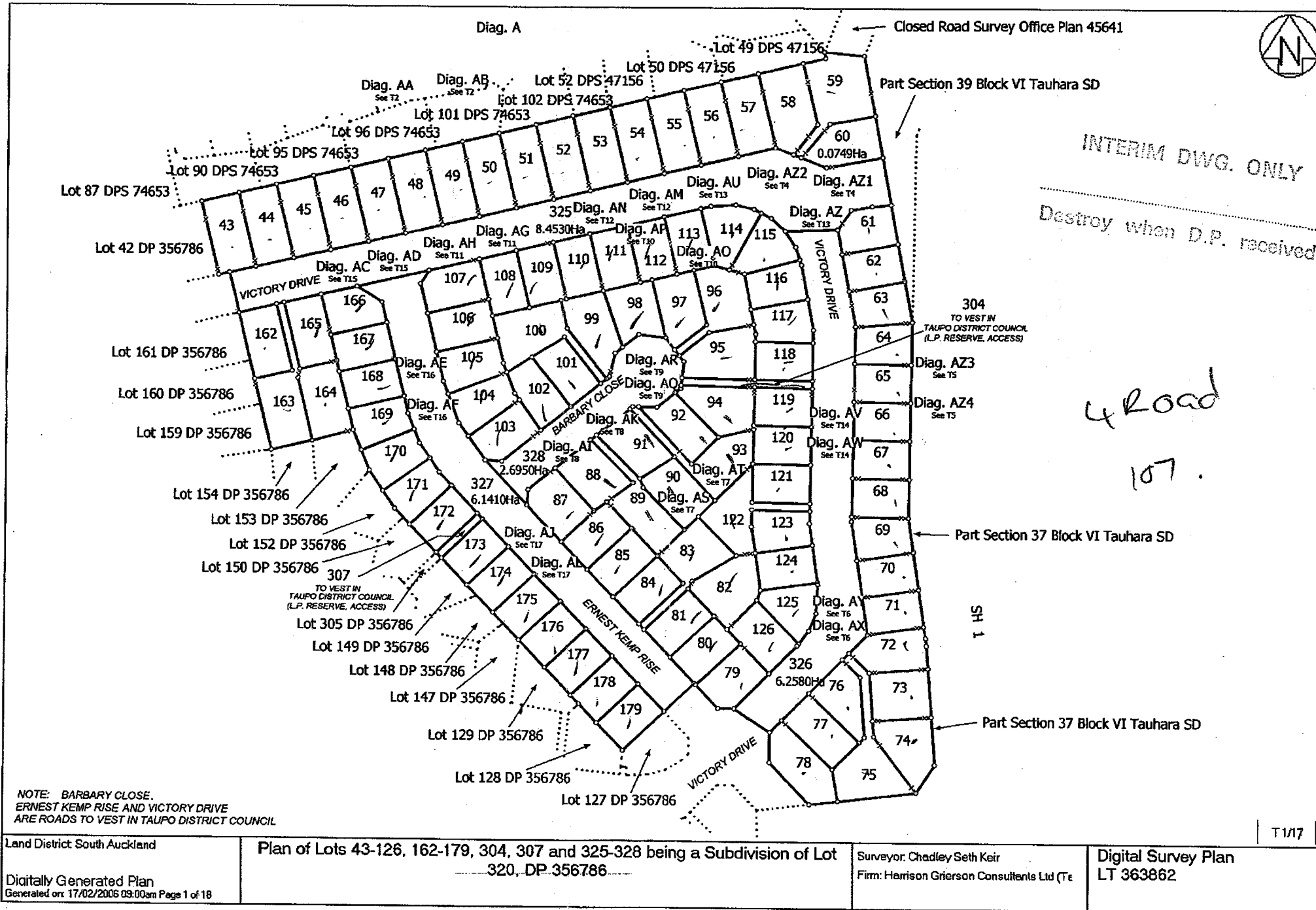
- All stormwater on this subdivision goes to soakage. A stormwater cutoff drain is required at the front ~~and~~ boundary of the driveway to collect stormwater runoff from the paved area. This must be disposed of to the onsite soakholes.

- Note the ~~special~~ requirements on the consent notice for the special vehicle crossing design required for the stormwater swales on this street.

Signed: ..... *fs* .....

Dated: ..... 5/7/16 .....

Rm 060036  
File: L15 1621



Specific Notes Building Consent - A121747

**TAUPO DISTRICT COUNCIL**  
**CONDITIONS/ NOTES FOR B/**

Owner/Builder to note special conditions under which the consent is issued.

**COMPONENTS TO BE INSPECTED  
IF APPLICABLE**

**Foundations**  
( Pile holes, footings, reinforcing steel, Ground bearing, earth fill etc.)

**Prefloor Plumbing.**  
( under slab floor drains and plumbing)

**Prefloor**  
( polythene, mesh, reinforcement, Bracing connections, etc.)

**Timber Floors**  
**Suspended Concrete Floors**  
**Precast Panels**  
(reinforcement, installation, thickness, Size, Shape of panels, Lifting eyes.)

**Bond Beams**  
( Reinforcing, wash outs, etc.)

**Drainage**  
( sewer connection, septic tank, stormwater, materials, falls, etc.)

**Precladding**  
( Cavities, head, jamb, sill wraps & flashings, penetrations, cavities, fixings, etc. prior to installation of exterior cladding. Brick veneer at 1/2 height.

**Preline Plumbing**  
( Internal pipework & fittings, Pressure test.)

**Preline, Building work**  
( Exterior cladding, joinery, insulation, Bracing, fixings, Moisture content, fire protection, glazing, building systems, etc.)

**Post line**  
( wall bracing, fixings, fire protection, etc.)

**Fire Appliance**  
( Installation in accordance with instructions.)

**Completion**  
**( Code Compliance )**  
( surface finishes, access & egress, fire safety, safety features, weather tightness, as per approved plans, etc.)

**Please ensure that all relevant components are inspected and, "signed off" by Taupo District Council before progressing to the next stage.**

**To book inspections,**

Phone Taupo, (07) 376 0752.  
Turangi, (07) 386 7017.  
Please provide 24 hrs. notice.

COUNCIL / OFFICE COPY  
 THESE PLANS AND SPECIFICATIONS  
 ARE APPROVED SUBJECT TO THE  
 PROVISIONS OF THE BUILDING ACT  
 AND ITS REGULATIONS AND ARE  
 TO BE RETAINED ON THE JOB IN  
 GOOD ORDER AND PRODUCED UPON  
 REQUEST.

No building work maybe undertaken until Resource Management authorisation has been obtained

The building is to comply with the District Plan's maximum height and height to boundary controls. Written confirmation of compliance maybe required from a registered surveyor.

To comply with the approved Resource Consent conditions, *& RMA conditions attached to the certificate of title, issued under Sec 221 of the RMA.*  
**CONSENT NOTICE**

Notwithstanding what is shown in the plans and specifications, all building work shall comply with the NZ Building Code, acceptable solutions and/or approved alternative solutions

Unless specifically designed, all timber construction is to comply with NZS:3604:1999 Timber Framed Buildings as a means of compliance with the NZ Building Code.

Specific design is required for any structural elements outside the scope of NZS: 3604:1999 and/or NZS:4229:1999. Details are to be provided for approval PRIOR to the commencement of work.

The finished floor level above adjacent ground level is to comply with E2/AS1 of the NZ Building Code.

Glazing is to comply with Clause F2 of the NZ Building Code. *REFER: TOC CONSENT NOTICE SEC 221 RMA.*

Unless specifically designed insulation is to comply with NZS:4218:1996 as a means of compliance with H1 of the NZ Building Code. Zone 3: Ceiling R2.5 minimum, walls R1.9 minimum.

060802

APPROVED CONSENT  
PLANS / SPECIFICATIONS

**TAUPO DISTRICT COUNCIL**  
**CONDITIONS/ NOTES FOR B/**

Fire Unit to be secured to the hearth by seismic restraints. Hearth slab is to be secured to the floor to comply with Clause 2.0 B1/AS3 of the Building Code.

**COMPONENTS TO BE INSPECTED  
IF APPLICABLE**

**Foundations**  
( Pile holes, footings, reinforcing steel, Ground bearing, earth fill etc.)

**Prefloor Plumbing.**  
( under slab floor drains and plumbing.)

**Prefloor**  
( polythene, mesh, reinforcement, Bracing connections, etc.)

**Timber Floors**  
**Suspended Concrete Floors**  
**Precast Panels**  
(reinforcement, installation, thickness, Size, Shape of panels, Lifting eyes.)

**Bond Beams**  
( Reinforcing, wash outs, etc.)

**Drainage**  
( sewer connection, septic tank, stormwater, materials, falls, etc.)

**Precladding**  
( Cavities, head, jamb, sill wraps & flashings, penetrations, cavities, fixings, etc. prior to installation of exterior cladding. Brick veneer at 1/2 height.

**Preline Plumbing**  
( Internal pipework & fittings, Pressure test.)

**Preline, Building work**  
( Exterior cladding, joinery, insulation, Bracing, fixings, Moisture content, fire protection, glazing, building systems, etc.)

**Post line**  
( wall bracing, fixings, fire protection, etc.)

**Fire Appliance**  
( Installation in accordance with instructions.)

**Completion**  
**( Code Compliance )**  
( surface finishes, access & egress, fire safety, safety features, weather tightness, as per approved plans, etc.)

**Please ensure that all relevant components are inspected and, "signed off" by Taupo District Council before progressing to the next stage.**

**To book inspections,**  
Phone Taupo, (07) 376 0752.  
Turangi, (07) 386 7017.  
Please provide 24 hrs. notice.

COUNCIL / OFFICE COPY  
 THESE PLANS AND SPECIFICATIONS  
 ARE APPROVED SUBJECT TO THE  
 PROVISIONS OF THE BUILDING ACT  
 AND ITS REGULATIONS AND ARE  
 TO BE RETAINED ON THE JOB IN  
 GOOD ORDER AND PRODUCED UPON  
 REQUEST.

All AS/NZS 3500:2:2: under slab plumbing to be inspected and tested with as-built supplied before pipe work is covered up.

All plumbing and drainage work to comply with the Building Code of NZ, in particular Clauses G1, G4, G12, G13 & E1. Also AS/NZS 3500:2003 – Residential & Low Rise Commercial.

If not already existing, a permanently surfaced vehicle crossing to Council standards is required. Before the crossing is done the Roading Division of Council is to inspect the ground conditions and give its approval of same. Failure to do this will result in a refusal to issue a Code Compliance Certificate for the work.

*REFER TOC CONSENT NOTICE  
SEC 221 RMA -*

All surface water from Buildings, paved areas and site work is to be disposed of on site or connected to stormwater services if provided. All in accordance with E1 of the NZ Building Code.

This household unit requires the installation of smoke alarms that comply with Clause F7 of the NZ Building Code and/or Clauses 3.1 -3.3 of the Acceptable Solution F7/AS1.

Drainage "as built" plans are to be provided, drawn to scale, and all parts clearly identified at the time of inspection. Failure to do this may result in the inspection not being carried out. A recheck will then be required, which will incur further charges.

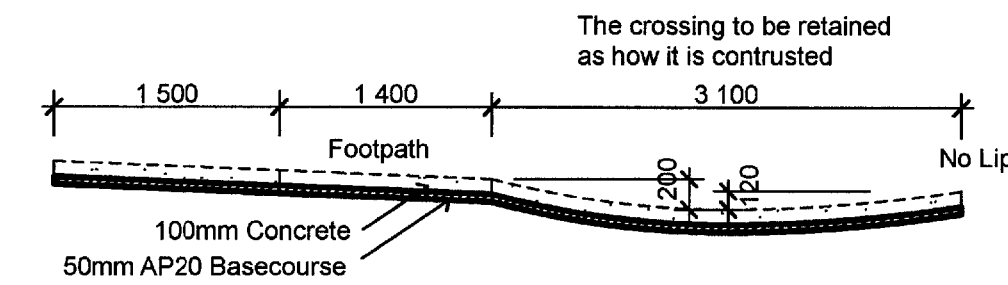
When all building work authorised by this building consent is complete written application must be made to Taupo District Council for a CODE OF COMPLIANCE CERTIFICATE. The application must be made no later than 2 years after the date on which the building consent was issued. An application form for this purpose is enclosed.

060802

APPROVED CONSENT  
PLANS / SPECIFICATIONS

Building plans - A123703

PLAN TYPE: 0148  
 CONSENT No: 06002  
 STREET CODE: 815-5  
 STREET ADDRESS: 5 BARBARY CLOSE WAKAMAKU

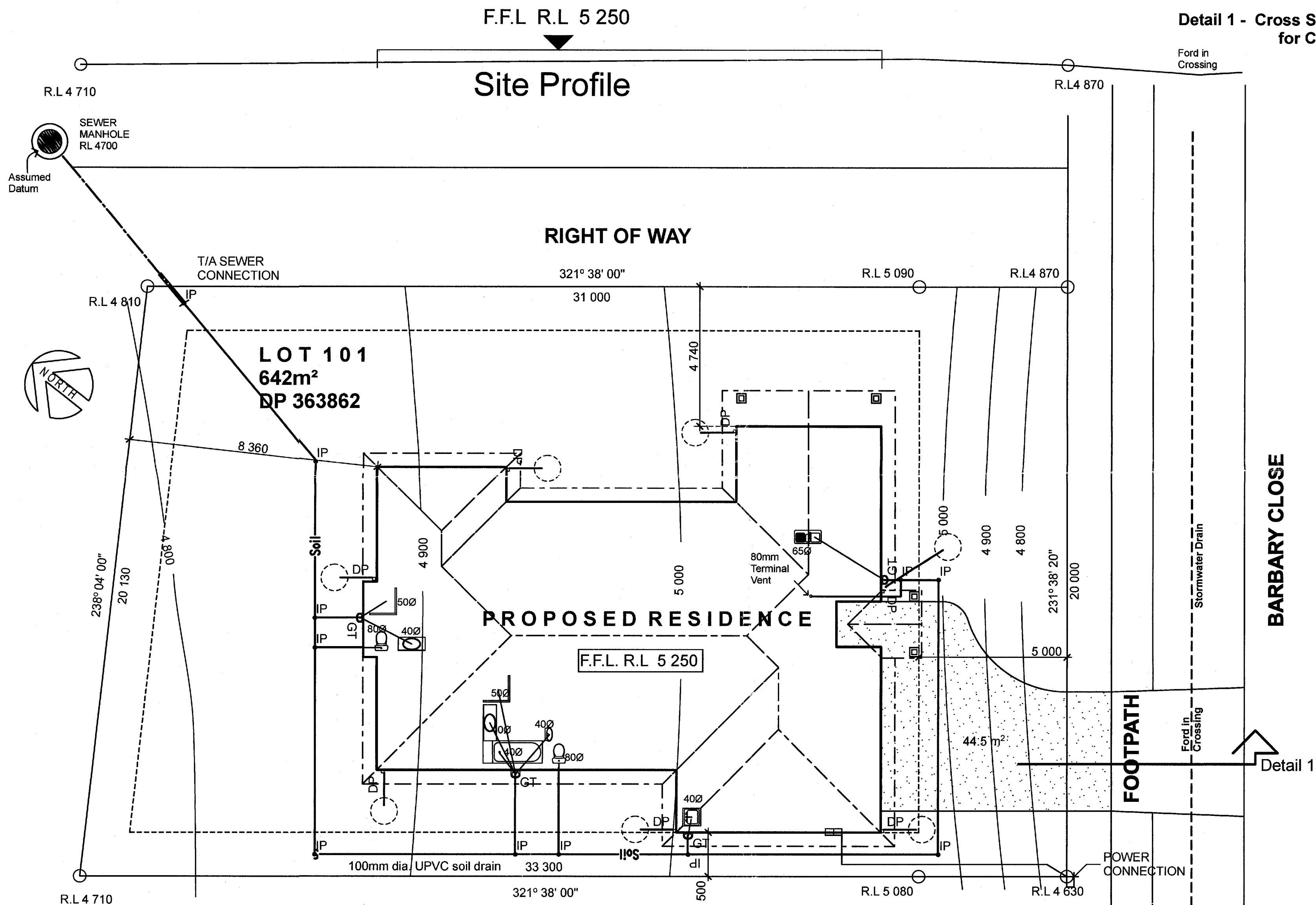


**Detail 1 - Cross Section through Entrance for Cross Swale Entrances**  
 scale 1 : 50

COUNCIL / OFFICE COPY  
 THESE PLANS AND SPECIFICATIONS ARE APPROVED SUBJECT TO THE PROVISIONS OF THE BUILDING ACT AND ITS REGULATIONS AND ARE TO BE RETAINED ON THE JOB IN GOOD ORDER AND PRODUCED UPON REQUEST.

TAUPO DISTRICT COUNCIL  
**06002**  
 APPROVED CONSENT PLANS / SPECIFICATIONS

**AMENDED**



**BARBARY CLOSE**

**FOOTPATH**

**AMENDED**

Maintenance:

- filter screens to be placed at all pipe intakes.
- Access for the maintenance be provided to soakholes.
- Soakholes should be annually inspected and if necessary cleaned of any silt or debris which may have built up inside the pit.

All downpipes to soakholes - 7 x 600mm dia. x 6m deep. or 7 x 900mm dia x 4m deep. to T/A Requirements.

SOIL DRAIN LENGTH - 65.63LM  
 POWER LINE LENGTH - 12.77 LM

Coverage Area off 30 % site area 642 m2 = 192.6 m<sup>2</sup>  
 Coverage of building including eaves over 600mm = 190.5 m<sup>2</sup>

The crossing to be retained as how it is constructed.

Note: Any vehicle crossing on Barbary Close serving these lots shall be constructed in accordance with the engineering design ( Harrison Grierson ) to protect the function of the grass swales for stormwater drainage purposes.

"McClay" 3 Bedroom  
**GENERATION DEVELOPMENTS LTD.**  
 Lot 101 Aspect  
**Site Plan**  
 SCALE: 1 : 100  
 DESIGN: Colin Davis  
 DRAWN: S Beck  
 ISSUED: 31/07/2006  
 SHEET No.

# "McClay" 3 Bedroom

COUNCIL / OFFICE COPY  
THESE PLANS AND SPECIFICATIONS  
ARE APPROVED SUBJECT TO THE  
PROVISIONS OF THE BUILDING ACT  
AND ITS REGULATIONS AND ARE  
TO BE RETAINED ON THE JOB IN  
GOOD ORDER AND PRODUCED UPON  
REQUEST.

PROPOSED NEW RESIDENCE FOR:

**Lot 101**  
**Aspect**  
**Taupo**

TAUPO DISTRICT COUNCIL  
050802  
/ APPROVING CONSENT  
PLANS / SPECIFICATIONS



PH 0508 GENERATION

[www.generation.co.nz](http://www.generation.co.nz)

THIS PLAN IS THE PROPERTY OF GENERATION DEVELOPMENTS LTD.  
AND MUST NOT BE COPIED NOR USED BY ANY THIRD PARTY  
WITHOUT THE CONSENT OF THE COMPANY

Job No. 05/A101

design and documentation by:

COLIN J DAVIS & Associates LTD

ADNZ NZCD (ARCH)

Architectural Design and Draughting

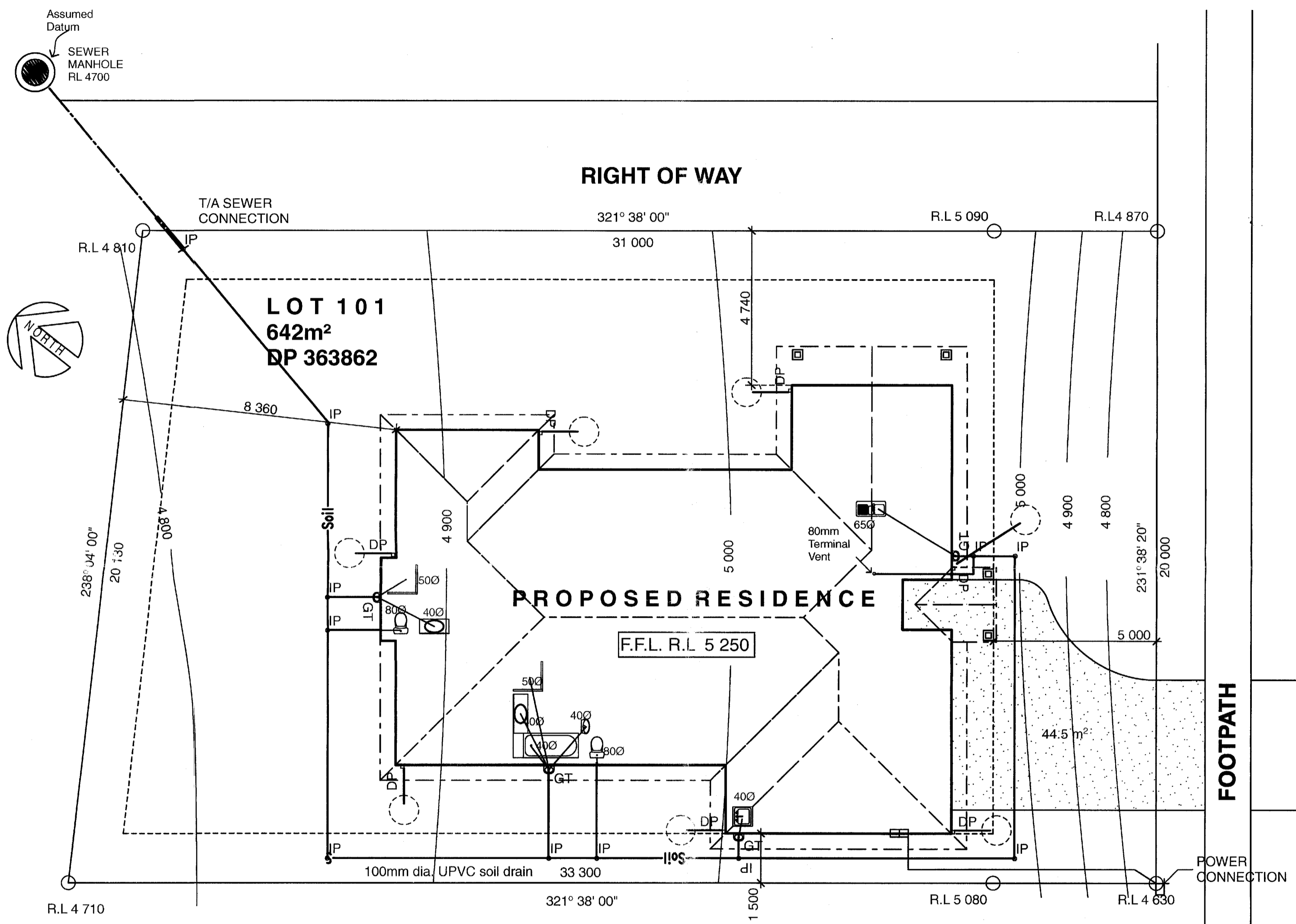
p.o box 884 TAURANGA Ph/Fax 578 3792

**A | D**  
**N | Z**  
architectural  
designers nz

THIS PLAN IS THE PROPERTY OF GENERATION DEVELOPMENTS LTD. AND MUST NOT BE COPIED NOR USED BY ANY THIRD PARTY WITHOUT THE CONSENT OF THE COMPANY

COUNCIL / OFFICE COPY  
 THESE PLANS AND SPECIFICATIONS ARE APPROVED SUBJECT TO THE PROVISIONS OF THE BUILDING ACT AND ITS REGULATIONS AND ARE TO BE RETAINED ON THE JOB IN GOOD ORDER AND PRODUCED UPON REQUEST.

**SUPERSEDED**



**Maintenance:**

- filter screens to be placed at all pipe intakes.
- Access for the maintenance be provided to soakholes.
- Soakholes should be annually inspected and if necessary cleaned of any silt or debris which may have built up inside the pit.

All downpipes to soakholes - 7 x 600mm dia. x 6m deep. or 7 x 900mm dia x 4m deep. to T/A Requirements.

SOIL DRAIN LENGTH - 65.63LM  
 POWER LINE LENGTH - 12.77 LM

Coverage Area off 30 % site area 642 m2 = 192.6 m²  
 Coverage of building including eaves over 600mm = 190.5 m²

**BARBARY CLOSE**

**FOOTPATH**

060802  
 APPROVED CONSENT  
 PLAN SPECIFICATIONS

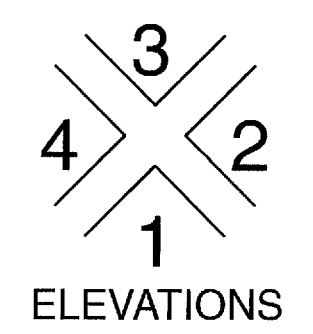
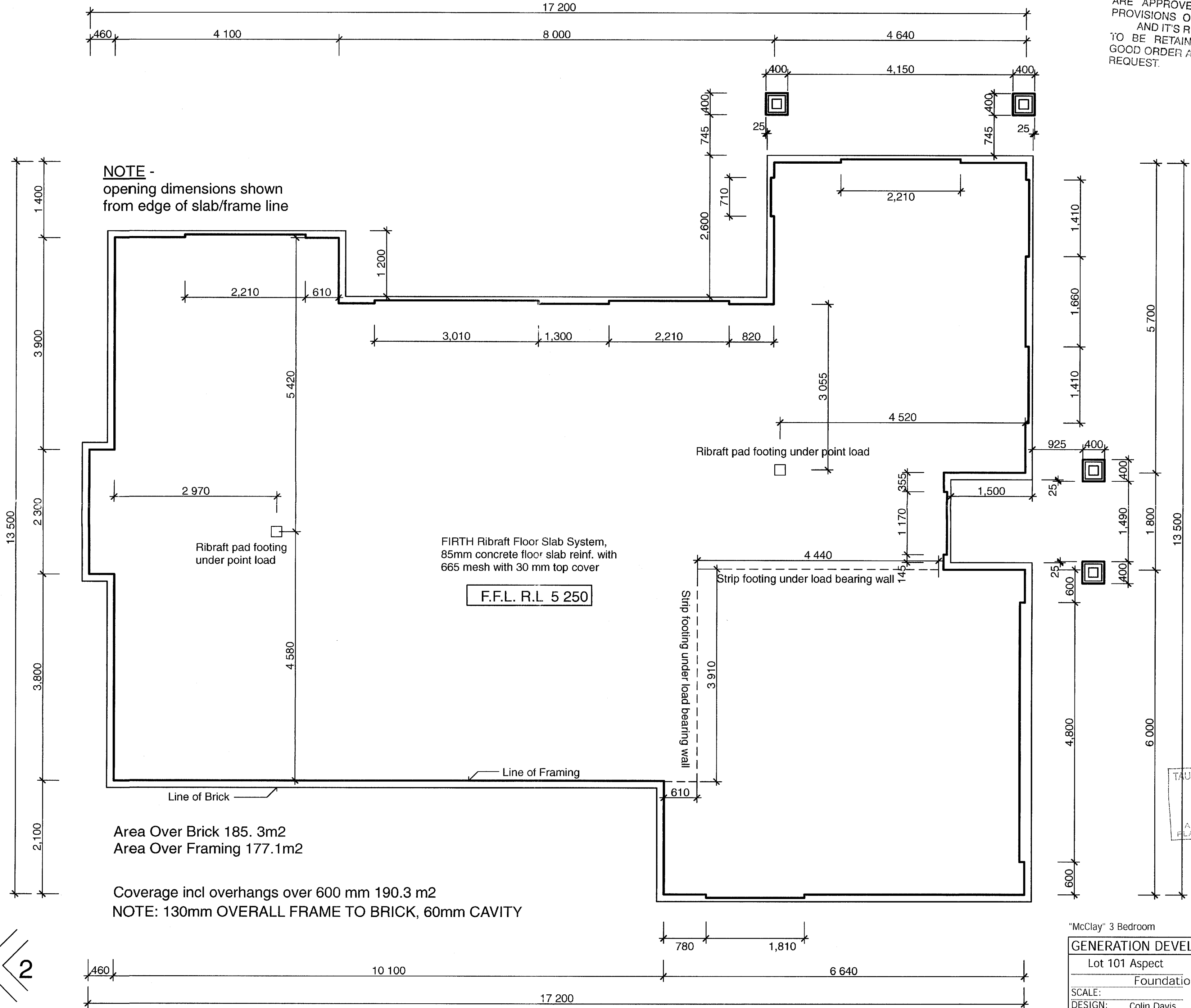
**SUPERSEDED**

"McClay" 3 Bedroom

GENERATION DEVELOPMENTS LTD.	
Lot 101 Aspect	
Site Plan	
SCALE:	1 : 100
DESIGN:	Colin Davis
DRAWN:	S Beck
ISSUED:	29/06/2006
SHEET No.	

THIS PLAN IS THE PROPERTY OF GENERATION DEVELOPMENTS LTD.  
 AND MUST NOT BE COPIED NOR USED BY ANY THIRD PARTY  
 WITHOUT THE CONSENT OF THE COMPANY

COUNCIL / OFFICE COPY  
 THESE PLANS AND SPECIFICATIONS  
 ARE APPROVED SUBJECT TO THE  
 PROVISIONS OF THE BUILDING ACT  
 AND ITS REGULATIONS AND ARE  
 TO BE RETAINED ON THE JOB IN  
 GOOD ORDER AND PRODUCED UPON  
 REQUEST.



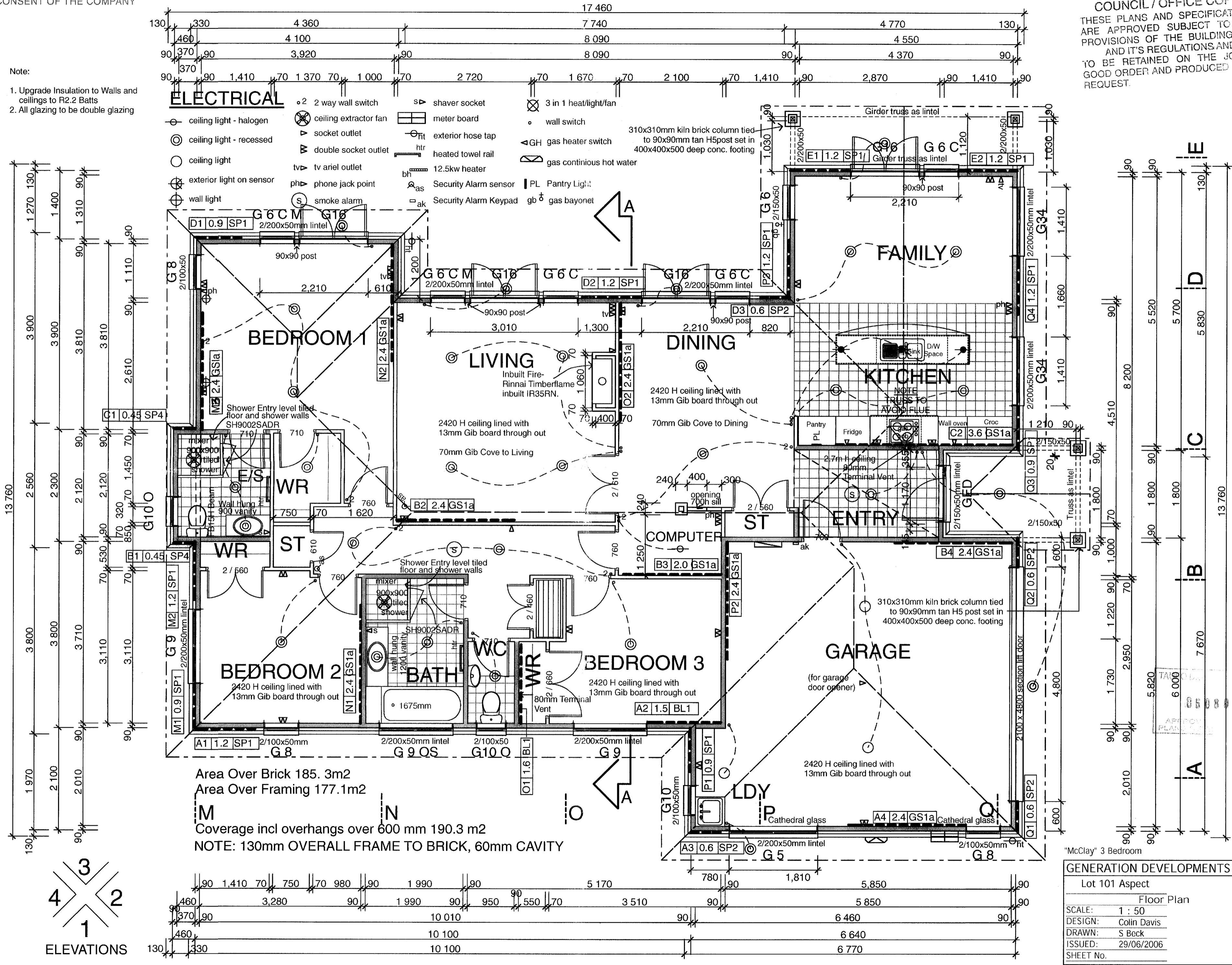
TAUPO DISTRICT COUNCIL  
 1060802  
 APPROVED COPIES  
 PLANS / ELEVATIONS

"McClay" 3 Bedroom  
 GENERATION DEVELOPMENTS LTD.  
 Lot 101 Aspect  
 Foundation Plan  
 SCALE:  
 DESIGN: Colin Davis  
 DRAWN: S Beck  
 ISSUED: 29/06/2006  
 SHEET No.

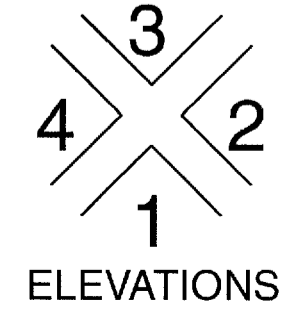
COUNCIL / OFFICE COPY  
 THESE PLANS AND SPECIFICATIONS ARE APPROVED SUBJECT TO THE PROVISIONS OF THE BUILDING ACT AND ITS REGULATIONS AND ARE TO BE RETAINED ON THE JOB IN GOOD ORDER AND PRODUCED UPON REQUEST.

- Note:
- Upgrade Insulation to Walls and ceilings to R2.2 Batts
  - All glazing to be double glazing

- ELECTRICAL**
- ceiling light - halogen
  - ⊙ ceiling light - recessed
  - ceiling light
  - ⊕ exterior light on sensor
  - ⊕ wall light
  - ⊕ 2 way wall switch
  - ⊕ ceiling extractor fan
  - ⊕ socket outlet
  - ⊕ double socket outlet
  - tv tv ariel outlet
  - ⊕ phone jack point
  - ⊕ smoke alarm
  - ⊕ shaver socket
  - ⊕ meter board
  - ⊕ exterior hose tap
  - htr heated towel rail
  - bh 12.5kw heater
  - ⊕ Security Alarm sensor
  - ⊕ Security Alarm Keypad
  - ⊕ 3 in 1 heat/light/fan
  - wall switch
  - ⊕ GH gas heater switch
  - ⊕ gas continuous hot water
  - PL Pantry Light
  - gb gas bayonet



Area Over Brick 185.3m<sup>2</sup>  
 Area Over Framing 177.1m<sup>2</sup>  
 Coverage incl overhangs over 600 mm 190.3 m<sup>2</sup>  
 NOTE: 130mm OVERALL FRAME TO BRICK, 60mm CAVITY



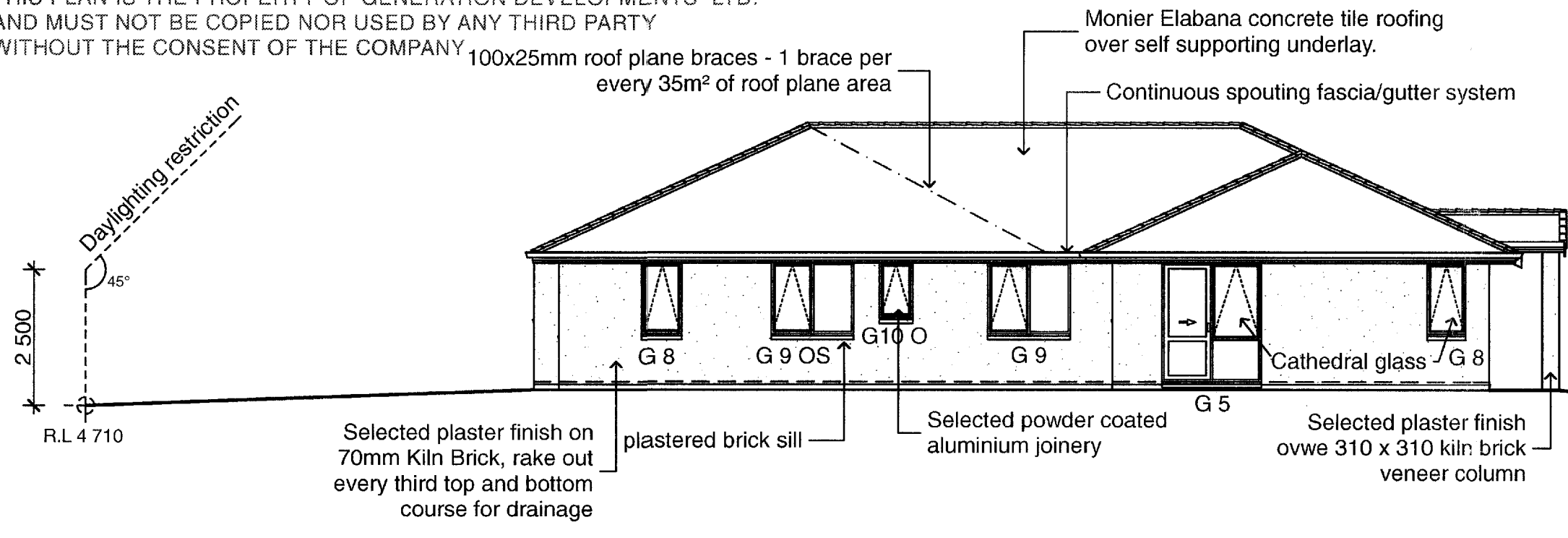
"McClay" 3 Bedroom

GENERATION DEVELOPMENTS LTD.	
Lot 101 Aspect	
Floor Plan	
SCALE:	1 : 50
DESIGN:	Colin Davis
DRAWN:	S Beck
ISSUED:	29/06/2006
SHEET No.	

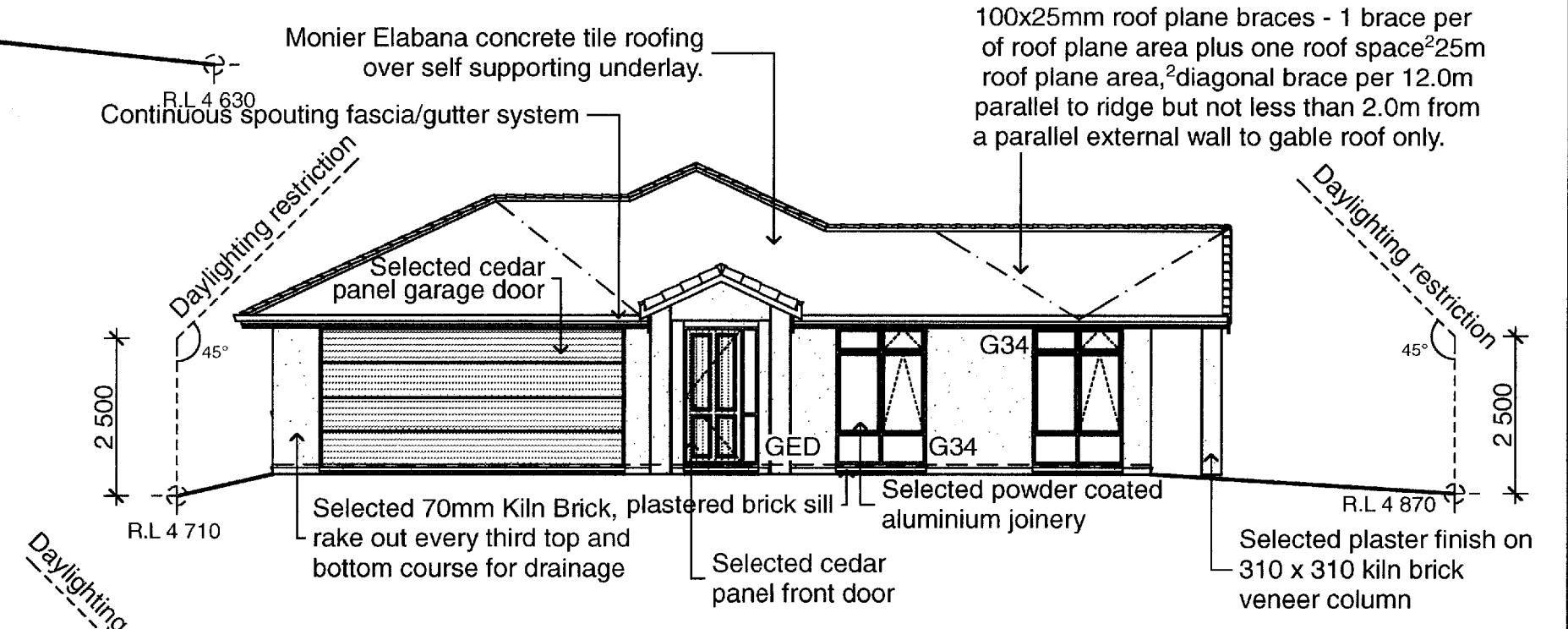
03

THIS PLAN IS THE PROPERTY OF GENERATION DEVELOPMENTS LTD. AND MUST NOT BE COPIED NOR USED BY ANY THIRD PARTY WITHOUT THE CONSENT OF THE COMPANY

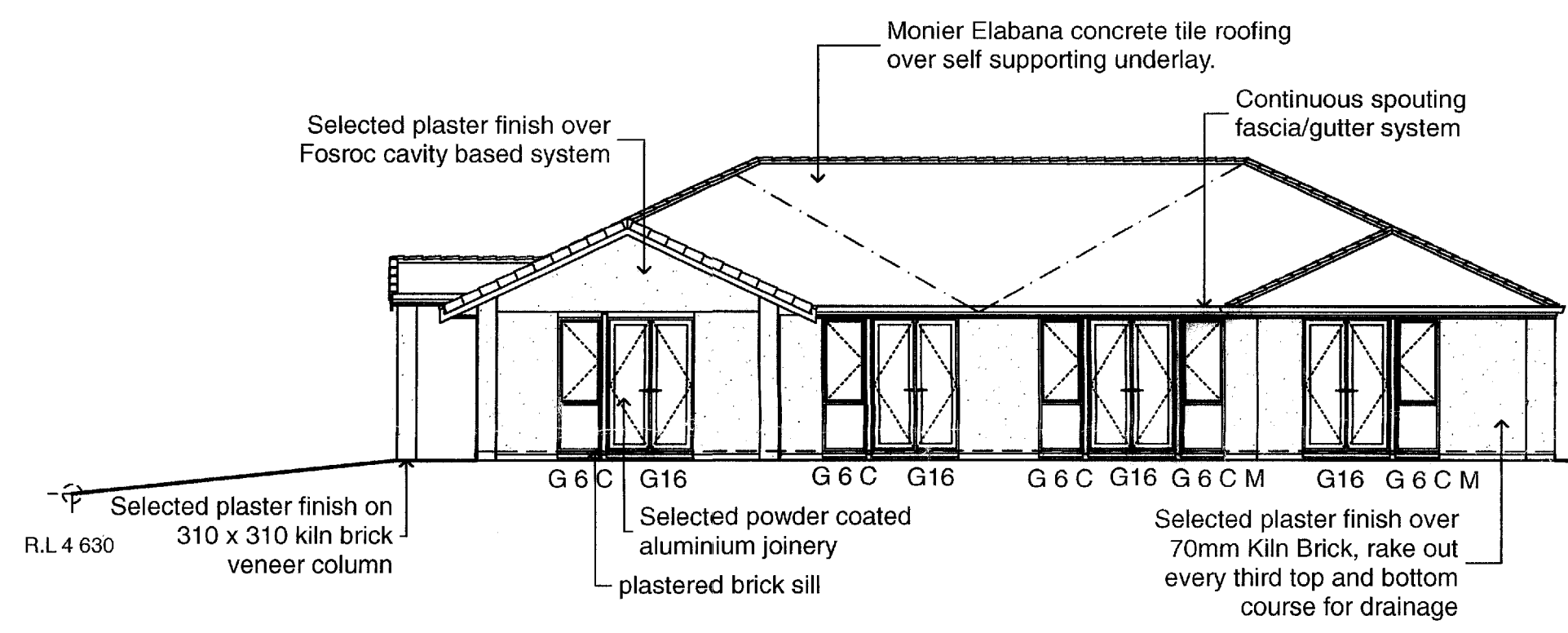
COUNCIL / OFFICE COPY  
 THESE PLANS AND SPECIFICATIONS ARE APPROVED SUBJECT TO THE PROVISIONS OF THE BUILDING ACT AND ITS REGULATIONS AND ARE TO BE RETAINED ON THE JOB IN GOOD ORDER AND PRODUCED UPON REQUEST.



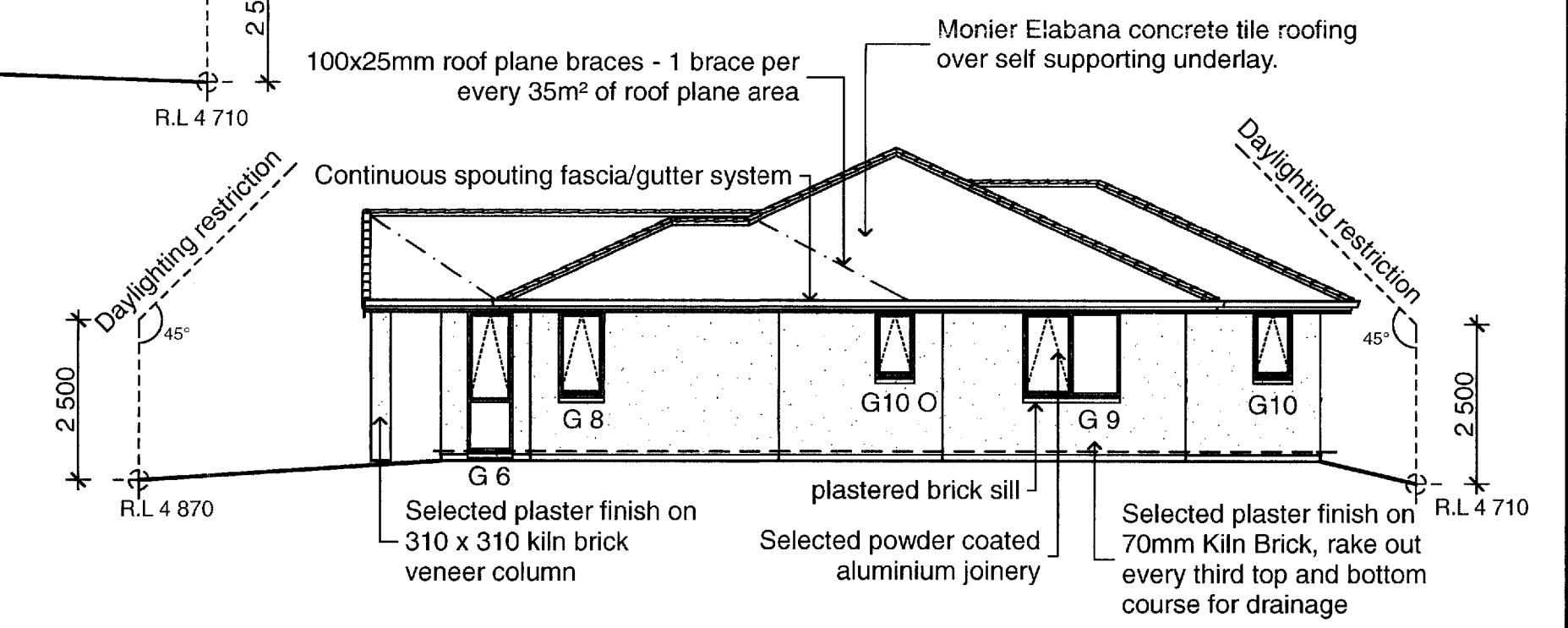
**Elevation 1**



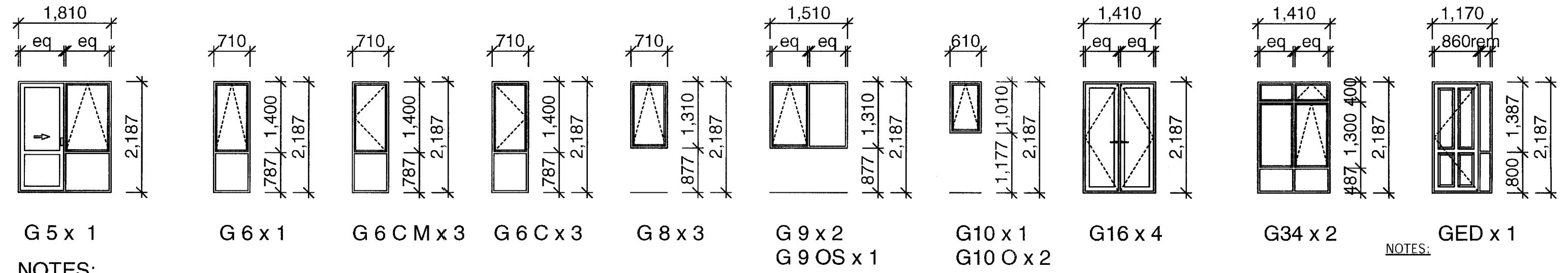
**Elevation 2**



**Elevation 3**



**Elevation 4**



G 5 x 1      G 6 x 1      G 6 C M x 3      G 6 C x 3      G 8 x 3      G 9 x 2  
 G 9 OS x 1      G 10 x 1      G 10 O x 2      G 16 x 4      G 34 x 2      GED x 1

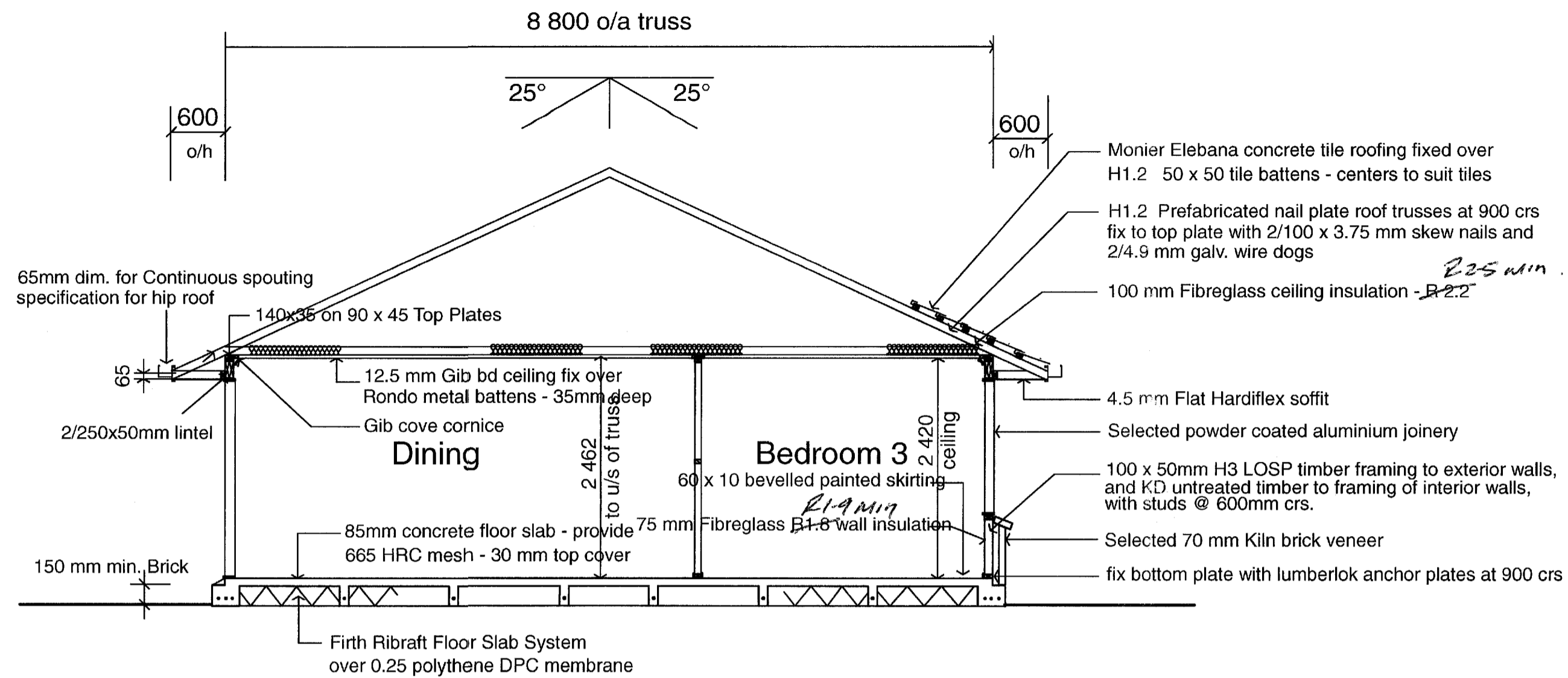
**NOTES:**  
 All glazing to be double Glazing

**Window Schedule**

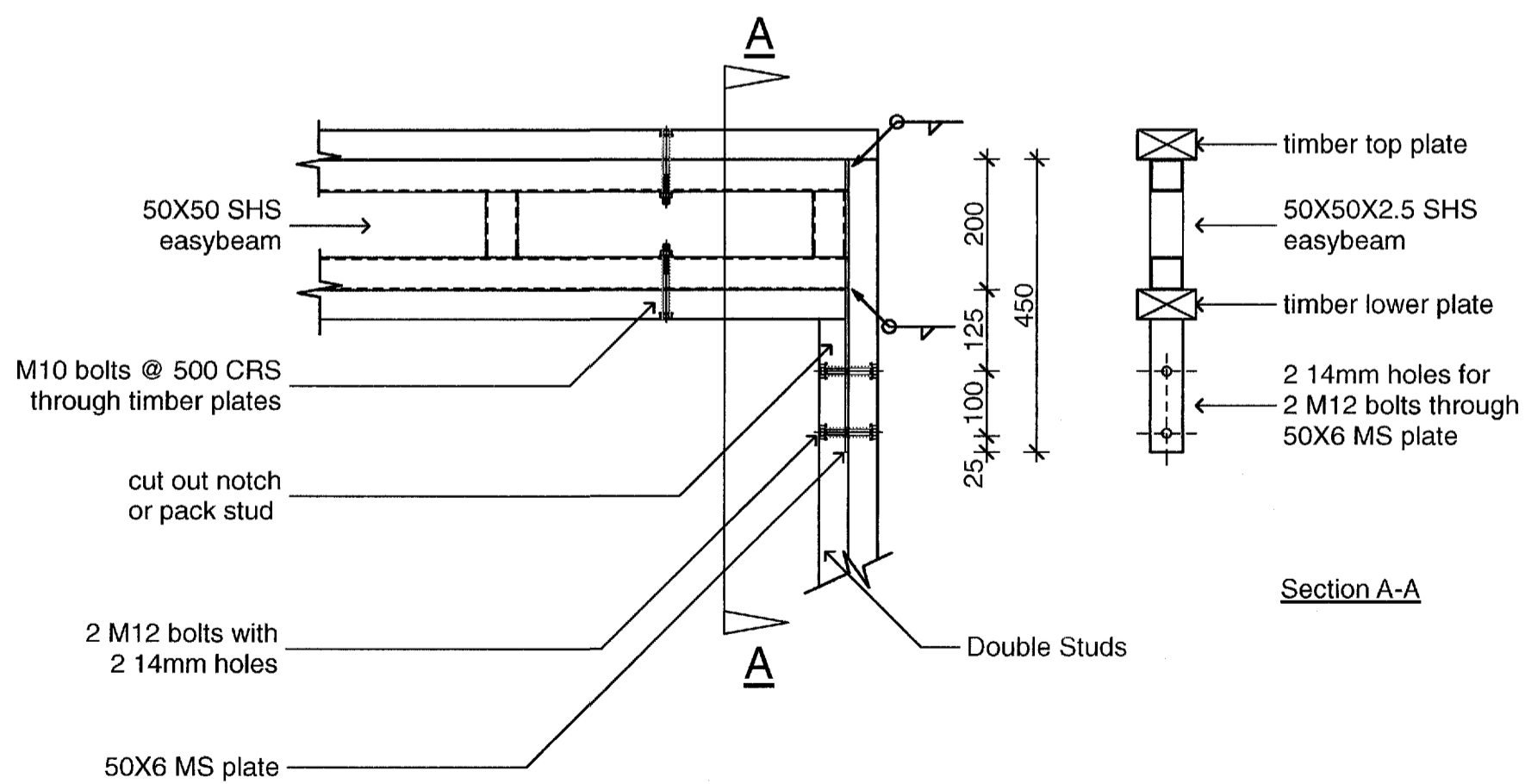
**NOTES:**  
 All joinery polyester powder coated  
 All glazing to NZS 4223:1985 Parts 1 and 2 and part 3:1993  
 All Glazing to bathroom / WC to be selected obscure  
 All Jamb's clear finger jointed 18mm pine - groove for linings  
 M - denotes window as drawn  
 O - denotes window as drawn but with obscure glass  
 S - denotes window as drawn but with safety glass

TAUPO DISTRICT COUNCIL  
 010002  
 PLAN/SECTION

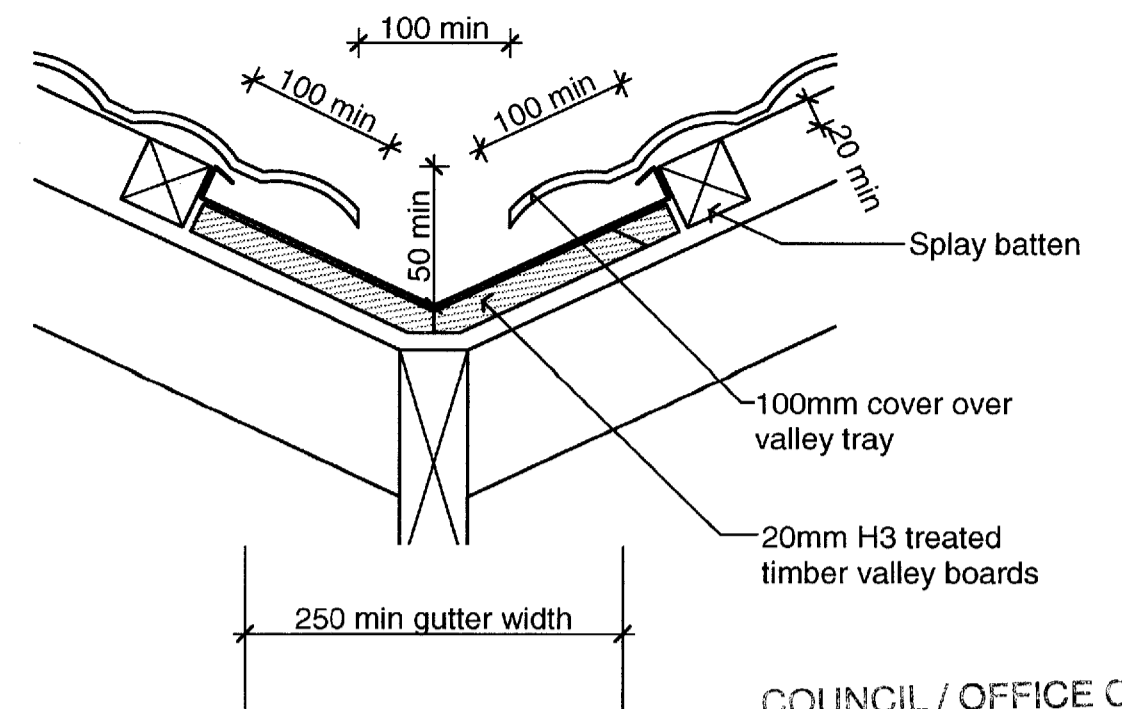
"McClay" 3 Bedroom  
**GENERATION DEVELOPMENTS LTD.**  
 Lot 101 Aspect  
 Elevations  
 SCALE: 1 : 100  
 DESIGN: Colin Davis  
 DRAWN: S Beck  
 ISSUED: 29/06/2006  
 SHEET No. 04



CROSS SECTION A:A



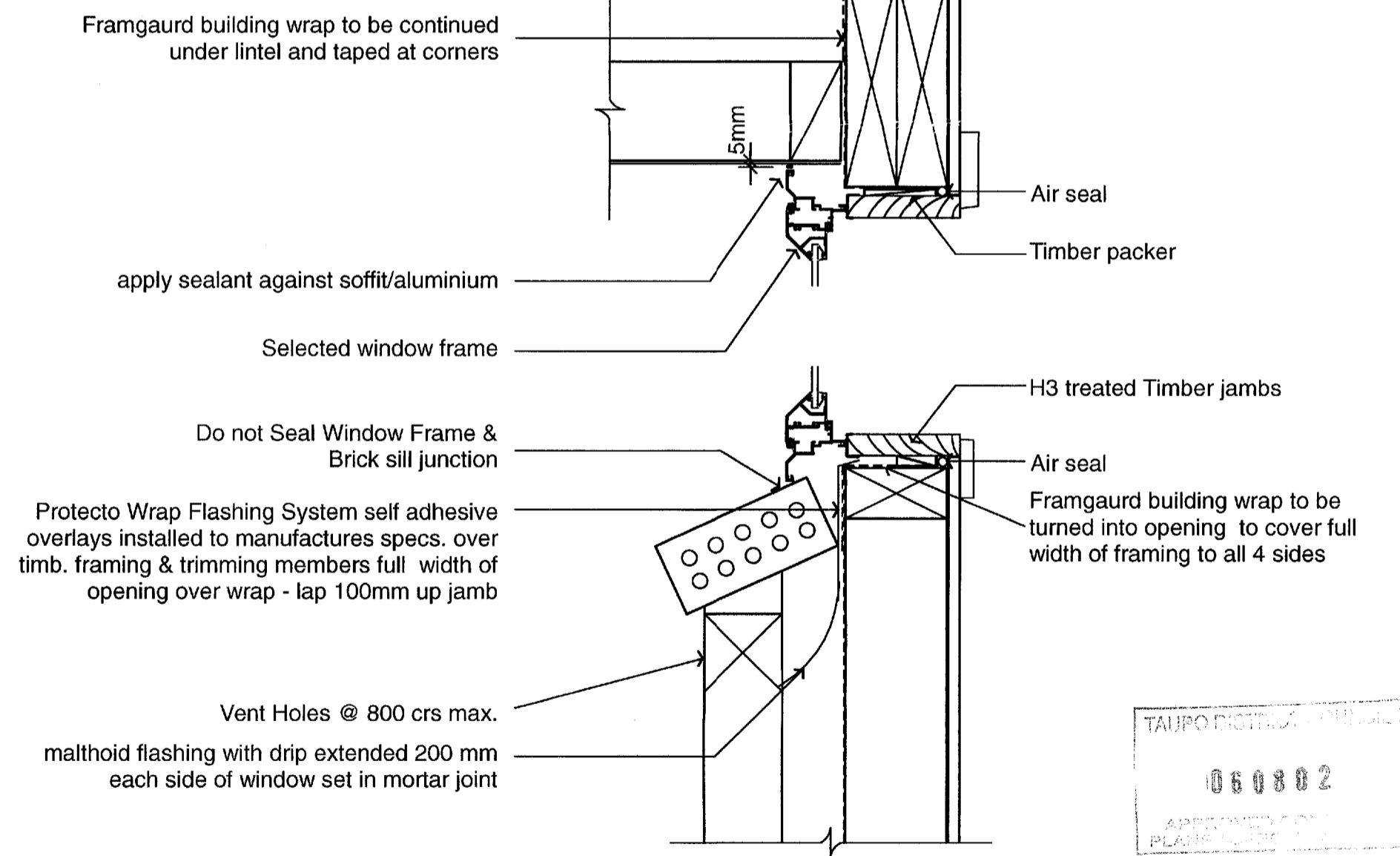
Section A-A



Valley Gutter

Scale 1:5

COUNCIL / OFFICE COPY  
THESE PLANS AND SPECIFICATIONS  
ARE APPROVED SUBJECT TO THE  
PROVISIONS OF THE BUILDING ACT  
AND ITS REGULATIONS AND ARE  
TO BE RETAINED ON THE JOB IN  
GOOD ORDER AND PRODUCED UPON  
REQUEST.

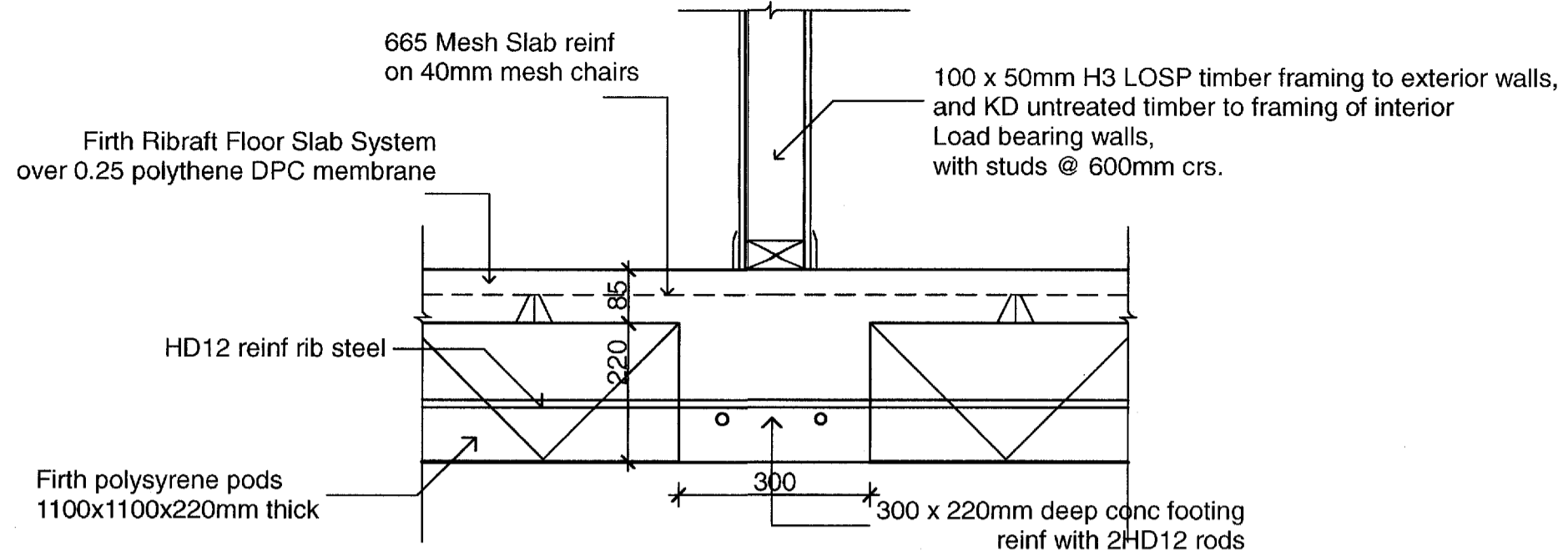


Brick Veneer Window Head & Sill Section

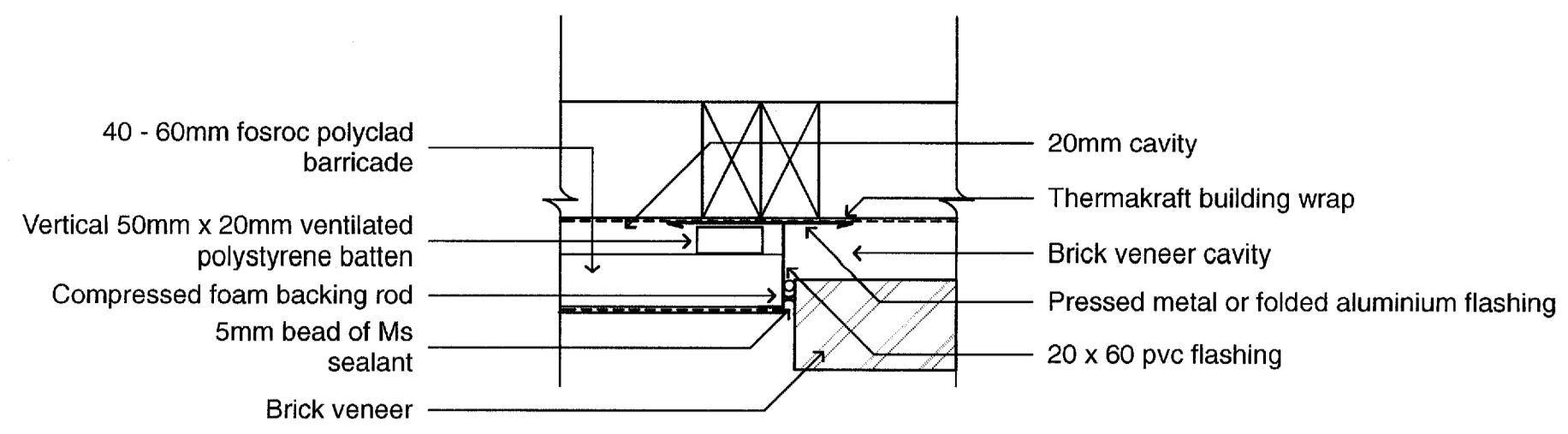
Scale 1:5

"McClay" 3 Bedroom

GENERATION DEVELOPMENTS LTD.	
Lot 101 Aspect	
Section A-A	
SCALE:	1 : 5
DESIGN:	Colin Davis
DRAWN:	S Beck
ISSUED:	29/06/2006
SHEET No.	05

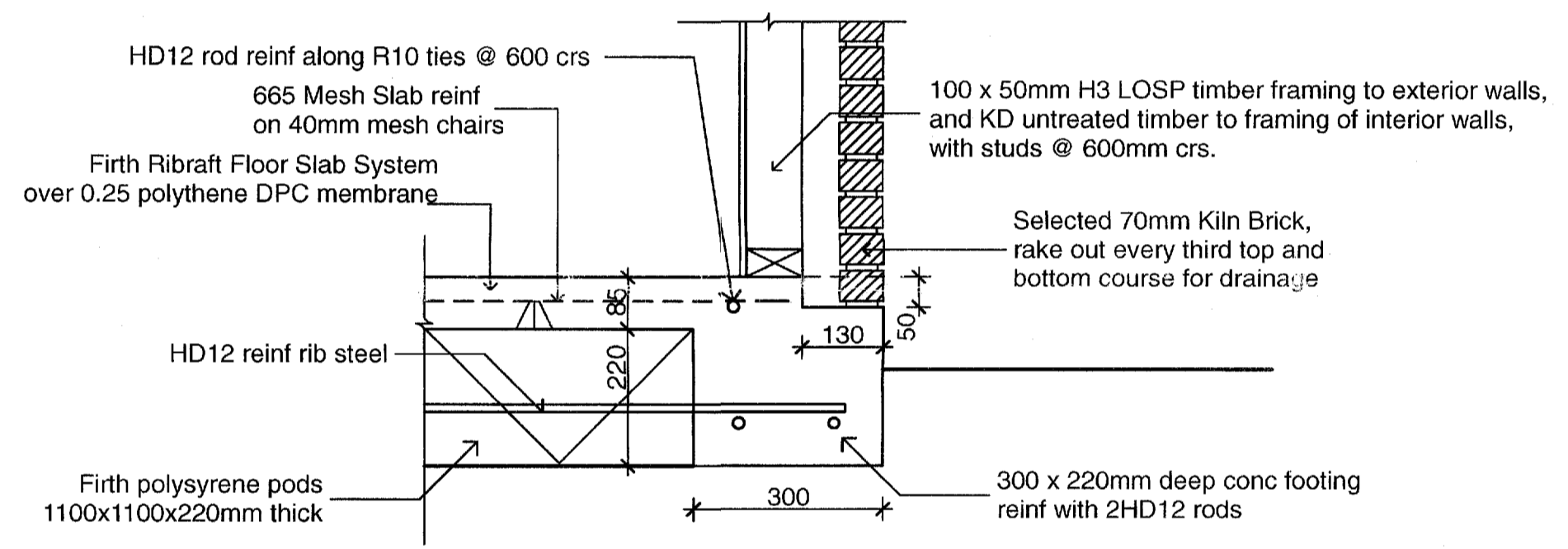


**RibRaft Load Bearing Wall, Footing Detail**  
Scale 1:10

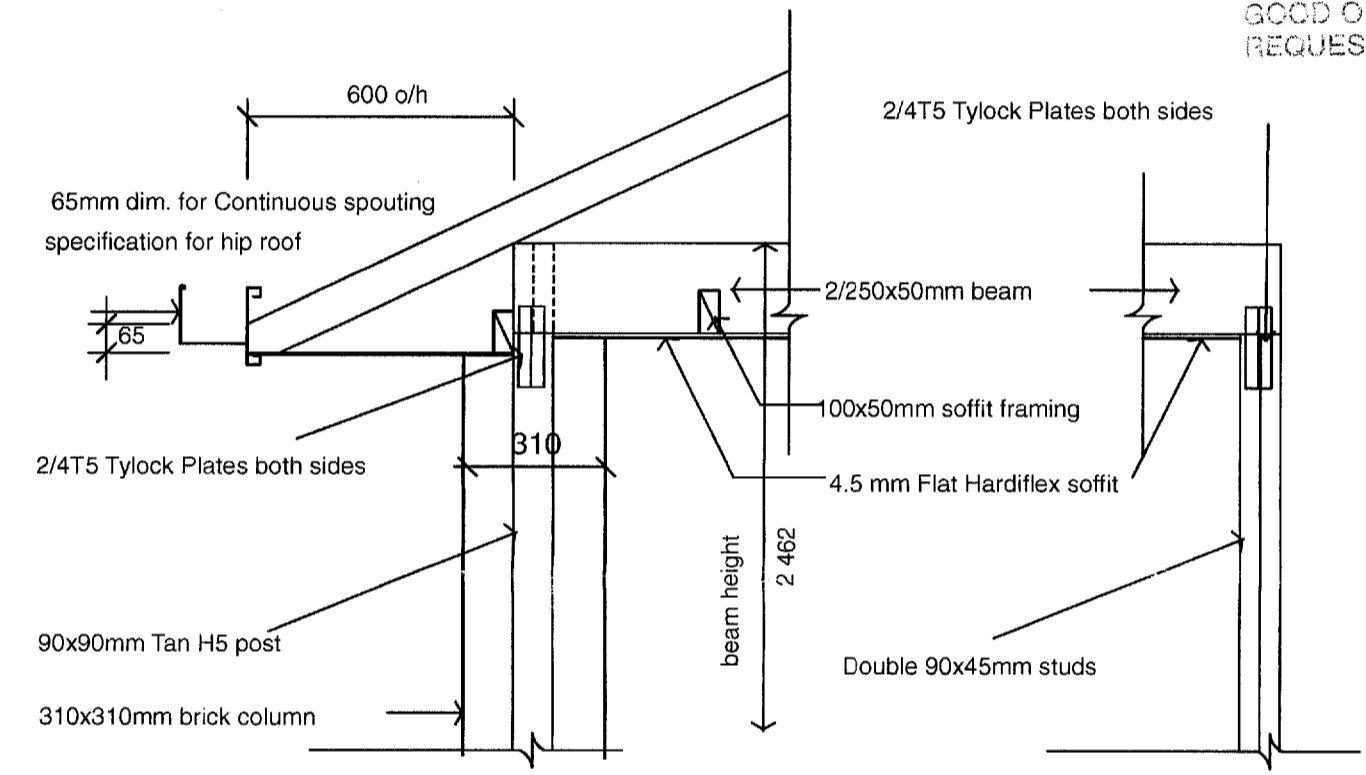


**Vertical Brick / Fosroc Polyclad Barricade Junction**  
Scale 1:5

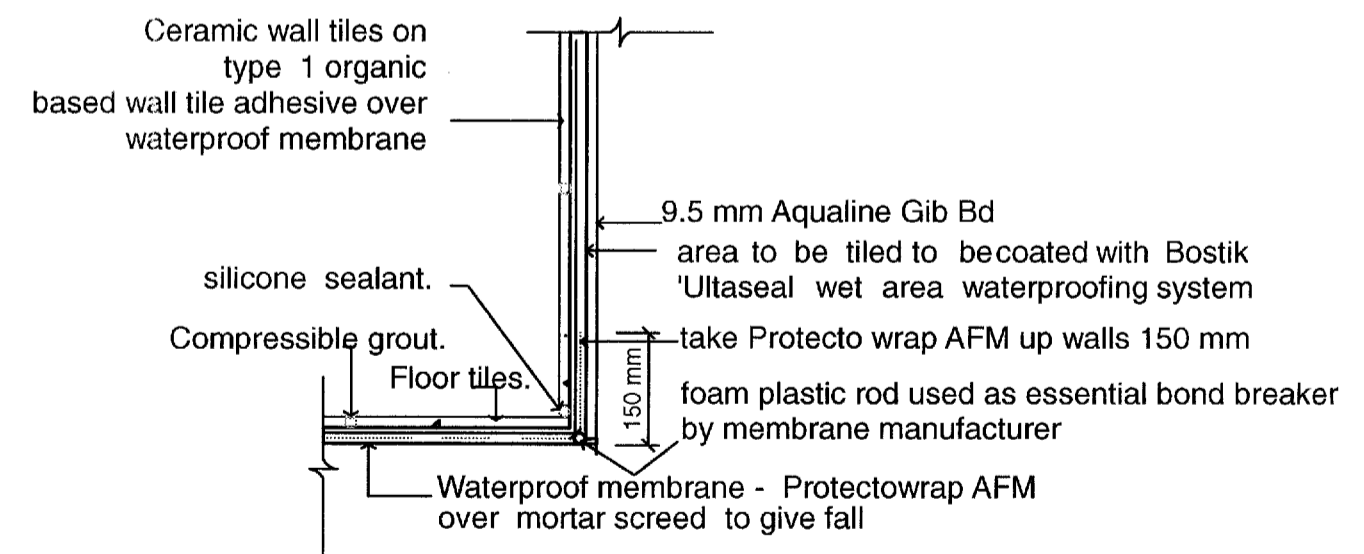
COUNCIL / OFFICE COPY  
THESE PLANS AND SPECIFICATIONS ARE APPROVED SUBJECT TO THE PROVISIONS OF THE BUILDING ACT AND ITS REGULATIONS AND ARE TO BE RETAINED ON THE JOB IN GOOD ORDER AND PRODUCED UPON REQUEST



**RibRaft Footing Detail**  
Scale 1:10

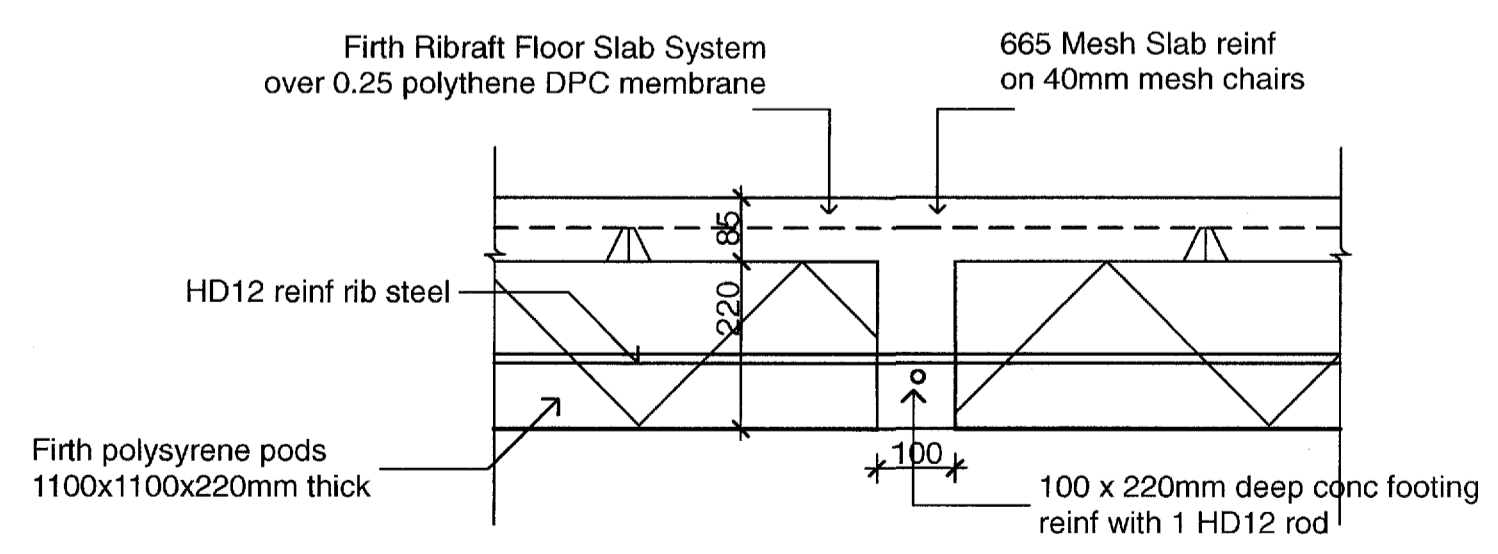


TAUPO DISTRICT COUNCIL  
060802  
APPROVED FOR BUILDING PLAN PURPOSES ONLY

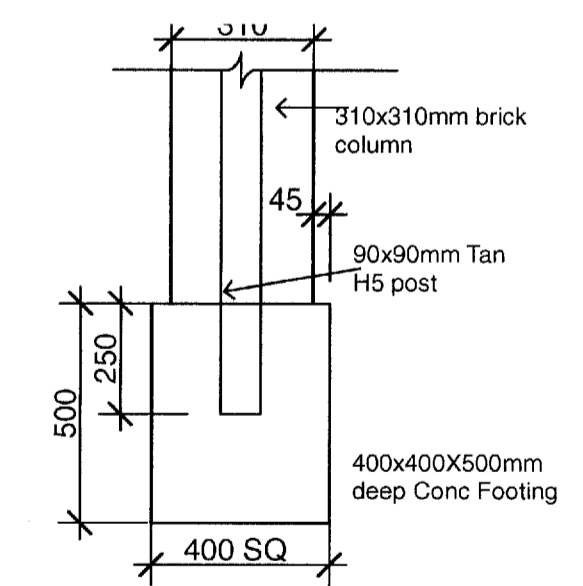


**Floor tile detail at wall junction**

specification for tile walls to shower  
to vertical corners fit 32 x 32 x 0.55 mm galvanised angle to max height of 1800 mm  
apply Gib paper reinforcing tape in Gib Bedding of Gib tradeset compound to tiled areas  
area to be tiled must be coated with Bostik 'Ultaseal' wet area waterproofing system



**RibRaft Pod Intersection, Footing Detail**  
Scale 1:10



**Entry Portico Footing Detail**

"McClay" 3 Bedroom

GENERATION DEVELOPMENTS LTD.	
Lot 101 Aspect	
Details	
SCALE:	1 : 50
DESIGN:	Colin Davis
DRAWN:	S Beck
ISSUED:	29/06/2006
SHEET No.	

Resoure consent inspection - A101954

**Taupo District Council**  
**Resource Consent Inspection Entry**

08250003

<b>No:</b>	060339
<b>Applicant:</b>	Generation Developments Limited
<b>Proposal:</b>	To erect 22 signs that exceed the maximum allowable face area for signs in the Residential
<b>Location:</b>	3 Barbary Close, Taupo

**Officer:** Glenn Johnson

**Type:** Signage

**Result:** Further Site Inspection Required

**Required Date:** 12/11/07

**Done Date:**

**Notes:** 13.11.06. Signs up - no issues. Consent expires 31.8.08, by which time all signs should be removed. Recheck 1 year.

Copyright © 1997, Napier Computer Systems Limited. All rights reserved.  
*Author: Lesley Marshall*

Signage - A132779

RM: 060339

File: 0825 3

## MEMORANDUM

<b>TO</b>	<b>Development Contributions Officer</b>
<b>FROM</b>	<u>Jamie</u> (PLANNER)
<b>SUBJECT</b>	<b>PROPOSED SUBDIVISION/LANDUSE:</b>

Development Contributions info form attached **YES / NO**

Please find attached correspondence as received for the above application for you comment and/or calculation.

Please note that under the Resource Management Act 1991 we have 20 working days to deal with this. Therefore your comment is required by 22/8/06.

Thank you.

<b>TO</b>	<b>Environmental Consents Co-ordinator</b>
<b>FROM</b>	<b>Development Contributions Officer</b>

Development Contribution required **YES / NO**

Financial Contribution required for Water   /    
 Wastewater   /  

Comments Signage only.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Assessed by [Signature] Date 29/8/06

Reviewed by [Signature] Date 29/8/06

Land use to applicant - A335716

4<sup>th</sup> September 2006

C Eagles  
Harrison Grierson Consultants Limited  
P O Box 1910  
**TAUPO**

File Number:  
0825 0003

Dear Catriona

**LAND USE CONSENT (DISCRETIONARY ACTIVITY) APPLICATION: RM 060339  
GENERATION DEVELOPMENTS LIMITED – BARBARY CLOSE AND ERNEST KEMP  
RISE, TAUPO**

I wish to advise that on the 31<sup>st</sup> August 2006, the Taupo District Council granted consent with regard to your application to erect 22 signs and the consent certificate is enclosed. Please note that this consent lapses five years after the date of commencement unless the consent is given effect to before the end of that period.

The consent holder is advised that this resource consent relates to the proposal outlined in the application. Should the proposal alter in terms of character, intensity or scale, then the consent authority and affected neighbours are required to be advised of any variation and is subsequently required to assess the proposal under the Resource Management Act 1991.

Please note that all archaeological sites are protected under the Historic Place Act whether or not they have been recorded or registered. If evidence of any historic site is found on the property, the Act requires that the Historic Places Trust be advised of the situation.

Pursuant to Section 357 of the Resource Management Act 1991, the applicant/s may, within 15 days of receiving this decision, object in writing to Council in respect of their decision. Having assessed such an objection, Council may dismiss the objection or uphold it wholly or in part.

As conditions have been imposed on this approval, you have been charged a non-refundable fee of \$100.00 to partially cover the cost involved in monitoring compliance. The cost of processing your application was \$500.00; therefore, the balance owing is nil [\$500.00 - \$500.00]. An invoice is also enclosed.

Yours faithfully

Dale McKavanagh  
**ENVIRONMENTAL CONSENTS OFFICER**

Resource consent inspection 13-11-2006 - A86586

**Taupo District Council**  
**Resource Consent Inspection Entry**

<b>No:</b>	060339
<b>Applicant:</b>	Generation Developments Limited
<b>Proposal:</b>	To erect 22 signs that exceed the maximum allowable face area for signs in the Residential
<b>Location:</b>	3 Barbary Close, Taupo

**Officer:** Glenn Johnson

**Type:** Signage

**Result:** Further Site Inspection Required

**Required Date:** 13/11/06

**Done Date:**

**Notes:** Ist inspection due 13.11.06

OK

Cancel

Copyright © 1997, Napier Computer Systems Limited. All rights reserved.

*Author: Lesley Marshall*

Land Use Consent - A86587

**RESOURCE CONSENT  
LANDUSE CONSENT – DISCRETIONARY ACTIVITY**

**APPLICANT:** GENERATION DEVELOPMENTS LIMITED  
**LOCATION:** BARBARY CLOSE, TAUPO  
**LEGAL DESCRIPTION:** LOTS 87 TO 103 DP 363862  
**VALUATION NO:** 0734180800

**SCHEDULE:**

**PERFORMANCE STANDARD**

TRANSITIONAL TAUPO DISTRICT PLAN  
(TAUPO BOROUGH SECTION)  
RURAL A  
Ordinance:

PROPOSED TAUPO DISTRICT PLAN  
RESIDENTIAL ENVIRONMENT  
Rule:  
4a.3.4 Minimum Building Setback  
4a.3.10 Maximum Signage

**CONSENT**

Due to Section 19 of the Resource Management Act 1991, those rules relevant to this proposal are considered to be notionally inoperative making this a Permitted Activity.

To erect 22 signs that exceed the maximum allowable face area for signs in the Residential Environment on 17 Lots in Barbary Close over a two year period. Consent is also sought to place these signs within the front building setback.

The proposal as described above and in the application is granted under Sections 104 and 104B of the Resource Management Act 1991. The following conditions are imposed under Section 108 of the Resource Management Act 1991 Act and must be complied with when exercising this resource consent.

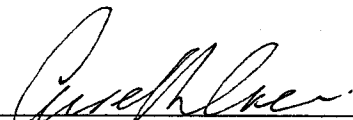
**THIS CONSENT IS GRANTED SUBJECT TO THE FOLLOWING CONDITIONS:**

1. The activity shall be undertaken in accordance with:
  - a. The application prepared by Harrison Grierson Consultants dated 4 August and formally received by Taupo District Council on 7 August 2006.
  - b. The plans have been prepared by Harrison Grierson Consultants and dated 4 August 2006. Referenced as "SITE PLAN GENERATION HOMES PROPERTIES" and stamped 'approved' following the issue of this consent.
2. The consent holder shall be responsible for the cost of repairing any damage to footpaths, kerbs or the berm as a result of building removal, earthworks or construction activity. Council may elect to carry out the repair work and invoice the consent holder,

or alternatively, by arrangement with Council, the consent holder may undertake the repair work themselves (at their cost) to the satisfaction of Council. All such repair work shall be carried out within two weeks of the damage occurring.

3. No sign shall be placed on any site outside of the area indicated to be "Barbary Close" and the area indicated on the "SITE PLAN".
4. The consent holder will ensure that no signs are erected in Taupo District Council sewer easement areas on any of the lots.
5. That prior to the movement of any larger sign (Type A and B) from its location shown on the plans for Lots 85, 95 and 103 the applicant shall submit a proposed location plan to the Planning Manager Environmental Services, for Council's information, monitoring and records.
6. Any large sign (Type A and B), will not be placed any closer than 1.5m from any boundary, including the front boundary. With the exception of the 'Type B' signs, no signs shall have a total height greater than two metres above natural ground level.
7. No more than two of the Type 'A' and 'B' signs shall be placed on the one lot at a time.
8. Signs types 'A' and 'B' shall be orientated so that no more than three of which are directly fronting the entrance to Barbary Close at any one time.
9. All work shall comply with Taupo District Council's Code of Practice for Development of Land (August 2001).
10. In accordance with Section 36 (1)(c) of the Resource Management Act 1991, the consent holder shall pay the Council's costs of any monitoring that may be necessary to ensure compliance with the conditions specified.
11. The consent holder is responsible for ensuring that contractors are made aware of the conditions of this consent and shall ensure compliance with these conditions.
12. The Consent shall expire within two years from the date of issue. From which time the applicant shall ensure that the signs are removed and the ground reinstated to its original state prior to the sign being placed on the Lot.

**GRANTED ON THE 31 DAY OF AUGUST 2006 BY WAY OF DELEGATED AUTHORITY DATED 1 DECEMBER 2005 TO THE PLANNING MANAGER: ENVIRONMENTAL SERVICES, PURSUANT TO SECTION 34A OF THE RESOURCE MANAGEMENT ACT 1991.**



**Gareth Green**  
**PLANNING MANAGER: ENVIRONMENTAL SERVICES**

**PLANNING REPORT TO THE MANAGER: RESOURCE CONSENTS  
LANDUSE CONSENT – DISCRETIONARY ACTIVITY**

**APPLICANT:** GENERATION DEVELOPMENTS LIMITED  
**LOCATION:** BARBARY CLOSE, TAUPO  
**LEGAL DESCRIPTION:** LOTS 87 TO 103 DP 363862  
**VALUATION NO:** 0734180800

**SCHEDULE:**

**PERFORMANCE STANDARD**

**CONSENT**

TRANSITIONAL TAUPO DISTRICT PLAN  
(TAUPO BOROUGH SECTION)  
RURAL A  
Ordinance:

Due to Section 19 of the Resource Management Act 1991, those rules relevant to this proposal are considered to be notionally inoperative making this a Permitted Activity.

PROPOSED TAUPO DISTRICT PLAN  
RESIDENTIAL ENVIRONMENT  
Rule:  
4a.3.4 Minimum Building Setback  
4a.3.10 Maximum Signage

To erect 22 signs that exceed the maximum allowable face area for signs in the Residential Environment on 17 Lots in Barbary Close over a two year period. Consent is also sought to place these signs within the front building setback.

**RSUANT TO SECTIONS 93 & 94A-D TAUPO DISTRICT COUNCIL DETERMINED THAT THE PROPOSAL BY GENERATION DEVELOPMENTS LIMITED TO PUT 5 LARGE AND 17 SMALLER SIGNS ON ANY OF THE 17 LOTS WITHIN BARBARY CLOSE IS DEEMED NOT TO REQUIRE PUBLIC NOTIFICATION OR SERVICE FOR THE FOLLOWING REASONS:**

- The placement of the signs will be only temporary, over a two year period. The signs will be located throughout 17 lots within a new subdivision which will therefore be moved on a semi regular basis, there by minimising any visual effects as a result.
- The maximum allowable signage over 17 Lots, for the purposes of the sale of land is 1.08m<sup>2</sup> per lot, or a total area of 18.36m<sup>2</sup> (Proposed District Plan 4a.3.10). The applicant proposes to have 5 larger signs and 17 smaller signs that combined will have a total area of 17.46m<sup>2</sup>. Therefore over the entire site the total area of signage will be within limits of the Proposed District Plan. It is considered that five larger signs will be less visually obtrusive and mitigate any visual clutter over the site.
- The signage proposed is for the purposes of advertising and for the sale of property. With the exception of those signs oriented to attract potential buyers into Barbary Close the signs are expected to be facing toward the centre of the cul-de-sac thereby creating an internal viewing area over the site. As such potential landowners outside

of this area are expected to view the rear of the signs and it is therefore considered that there will be no effects from the proposal.

- The applicant owns all the lots in Barbary Close and no other landowners are effected by the proposal.

## **EVALUATION UNDER SECTION 104 AND 104B OF THE RESOURCE MANAGEMENT ACT 1991:**

### **Proposal**

Consent is sought to erect five signs at the Wharewaka subdivision, Taupo. Two 1200mm by 1200mm, (Referred to as type A in Consent Conditions), billboard style and three 3000mm by 600mm, (referred to as Type B), vertical branding style signs will be required. The signs are for the purpose of advertising the sale of land, and will be located in the Barbary Close cul-de-sac over 17 lots within in a two year period. Consent is also sought to place these signs within the front building setback.

Smaller signs, (referred to as Type C), with a total face area of 9.18m<sup>2</sup> (0.54m<sup>2</sup> individually), will be placed on each of the 17 lots within the cul-de- sac.

### **Site and Surrounding Area Description**

The area at present is a part of Stage Two of the development of the new Wharewaka subdivision. At present no dwellings area located on any of the lots within Barbary Close or within the intermediate nearer area. The area around Barbary Close is still for sale however, services such as street lighting, roads, paths and individual service connections are on site. The signs which consent is currently sought for are already erected and located on Lots 87 and 103, Barbary Close facing south east and south west onto Earnest Kemp Rise.

### **Plan Requirements**

The site is located in the Rural A Zone of the Taupo Transitional (County Scheme) District Plan. The underlying Rural A Zone was amended by way of resource consent (RM040050), which requires any activity on the subject property to be assessed according to the Residential Environment standards. The activity fails to comply with the Residential Environment.

Under the Proposed District Plan the site is located within the Rural Environment. However, as part of the previously approved Subdivision and Landuse Consents the allotments within the development are now subject to the requirements of the Residential Environment.

The applicant is proposing to erect five signs each larger than two metres in height. Two signs will have a face area 1200mm by 1200mm, and be two metres in height. The remaining three signs will be three metres in height and 600mm wide, with approximately 300mm ground clearance. Rule 4a.3.10.v states that any temporary sign, one per lot, for the advertising and sale of land is allowed a total face area of 1.08m<sup>2</sup> and a maximum height of 4m. The proposed signs exceed the total allowable face area under this rule. Rule 4a.3.4 states that the Minimum Front Building Setback in the Residential Environment is to be five metres. The applicant has stated that the proposed signs are to be placed on each lot no closer than but to within 1.5 metres from any boundary. The signs will therefore be placed within this front setback and do not meet this rule.

The proposed 17 smaller signs, to be placed on each of the lots within the cul-de-sac will each be 0.54m<sup>2</sup> in total face area. The maximum allowable sign area is 0.25m<sup>2</sup>, under rule 4a.3.10.i.

The proposed five larger signs and the 17 smaller signs exceed the allowable total face area within each of the lots. The signs are also likely be placed in the front building setback and therefore the proposal shall be considered as a Discretionary Activity under this plan.

Overall, the application has been assessed as a **Discretionary Activity**.

Under the Proposed Taupo District Plan the relevant objective for the development is the maintenance and enhancement of the character and amenity of the Residential Environment (Obj 3a.2.1).

General criteria are provided in Section 4e.1.6 of the Proposed District Plan to give guidance when assessing Discretionary Activities. The relevant criteria will be assessed below.

### **Assessment**

The location of three of the proposed signs is currently on the two corner sections of Barbary Close inclusive of Lot 87 through to Lot 103. The signs are facing to the south west and to the south east. Consent is sought to move the location of each of these five signs over the entire 17 lots within the two year period. As the applicant intends to move the location of these signs any potential visual effect that may have resulted from the erection of the proposed signage would be expected to be avoided through moving their location. It is considered that with the exception of those signs designed to advertise the potential property buyer into Barbary close the proposed signs will be facing inwards toward the road front. It can be considered then that with the exception of those lots directly fronting the entrance to Barbary Close the other lots in the surrounding area to the cul-de-sac would be viewing the rear of the signs and therefore would not be considered to be affected by the proposal. A condition of consent will ensure that those lots that do directly front the entrance to Barbary Close will not have to view more than three of the larger signs at any one time. It can therefore be considered that these parties are not affected by the proposed activity.

The applicant proposes five signs with a total face area of 8.28m<sup>2</sup> and 17 smaller individual signs (Type C) with a total face area of 9.18m<sup>2</sup>. Collectively this would be a total of 17.46m<sup>2</sup>. Under the Proposed District Plan 1.08m<sup>2</sup> of signage is allowed on each site, for the sale of land or buildings. This would collectively be 18.36m<sup>2</sup>. By having 17 (Type C) signs and five larger signs this produces a smaller total area of signage over the entire Barbary Close site area. However consent is required as over the individual lots the allowable sign coverage is exceeded. It is considered that five larger signs and 17 smaller signs which cover less total area acts to mitigate the visual clutter caused by large amounts of signage in the area.

The site itself being a new subdivision is considered to be a developed site in a period of transition from vacant land to new dwellings on the vacant lots. As such the area is visually cluttered with construction works and other types of signage in the area. It is considered that the proposed signs will not be out of place in an environment dominated by change. The activity proposed is considered temporary over a two year period. A condition of consent will ensure the signs are removed at the end of this period. It would be expected that the amount of dwellings that could be erected over the next two years within Barbary Close and the surrounding area would be limited, with respect to time taken to erect a dwelling. Therefore it is envisaged that the proposed signs will not adversely affect the

amenity of the area because there will be only a limited number of dwellings and or occupants to be affected at this time.

The orientation, design and colour scheme of the proposed signs will further act to mitigate the anticipated minor visual effects caused by the erection of the signs. The colour scheme will be of mild ambient colours which will therefore not be visually intrusive. Furthermore the signs will not be illuminated nor will they have reflectors of any kind. The design of the signs is to be tall and slender in profile, which will act to minimise any obtrusive nature and or visual nuisance created by the signs. In terms of the signs orientation it is considered that their purpose is for advertising and as such there is a need for some of the larger signs to be placed so as to attract those potential property buyers into the cul-de-sac. The remaining signs are expected to face towards Barbary Close. This will effectively create an internal area where it is expected to not create any adverse effects outside of this area. Those lots directly fronting the entrance to Barbary Close, on Earnest Kemp Rise being Lots 173, 172 and 171 who continually overlook the site, are expected to be the only lots that will have a continual view of the proposed signs. A condition of consent will ensure that these parties are not affected by conditioning that only three of the larger signs directly face these lots at any one time.

The proposed signs will not be highly visible from State Highway One, as there is significant separation distance from the highway. The natural ground level slopes away from the State Highway meaning that this will act to reduce any potential effect. Considering the colour scheme and the overall brightness of the proposed signs the main vantage point from which to view the signs will be from within in Barbary Close itself, and as such the potential for visually adverse affects on other sites from outside this area will be no more than minor.

Under S104(3)(b) the effects on parties who have given their written approval to the proposal must be disregarded. No written consent has been given in relation to this application. The applicant at present owns all the lots in Barbary Close and is therefore considered not affected. The proposed signs with the exception of those used to attract buyers into Barbary Close are expected to face inward toward the cul-de-sac and no parties outside this area are considered to be effected.

### **Other Matters For Consideration**

There are no relevant structure plans or other policy documents considered to be relevant to the assessment of this proposal. The proposal is not considered to be inconsistent with the Regional Policy Statement or Plan.

### **Conclusion**

It is considered the proposal meets the intent of the Objectives and Policies of both District Plans and that any potential environmental effects will be no more than minor. The proposal is considered to be consistent with the purpose and principles of the Resource Management Act 1991. The application is therefore recommended for approval.

**RECOMMENDATION:**

**PURSUANT TO SECTIONS 104, 104B AND 108 OF THE RESOURCE MANAGEMENT ACT 1991, TAUPO DISTRICT COUNCIL GRANTS RESOURCE CONSENT BY WAY OF A NON-NOTIFIED APPLICATION TO GENERATION DEVELOPMENTS LIMITED TO ERECT 5 SIGNS ON ANY OF THE 17 LOTS WITHIN BARBARY CLOSE, ON THE PROPERTY DESCRIBED AS BARBARY CLOSE, TAUPO, BEING LOTS 87 TO 103 INCLUSIVE DP 363862.**

**THIS CONSENT IS GRANTED SUBJECT TO THE FOLLOWING CONDITIONS:**

1. The activity shall be undertaken in accordance with:
  - a. The application prepared by Harrison Grierson Consultants dated 4 August and formally received by Taupo District Council on 7 August 2006.
  - b. The plans have been prepared by Harrison Grierson Consultants and dated 4 August 2006. Referenced as "SITE PLAN GENERATION HOMES PROPERTIES" and stamped 'approved' following the issue of this consent.
2. The consent holder shall be responsible for the cost of repairing any damage to footpaths, kerbs or the berm as a result of building removal, earthworks or construction activity. Council may elect to carry out the repair work and invoice the consent holder, or alternatively, by arrangement with Council, the consent holder may undertake the repair work themselves (at their cost) to the satisfaction of Council. All such repair work shall be carried out within two weeks of the damage occurring.
3. No sign shall be placed on any site outside of the area indicated to be "Barbary Close" and the area indicated on the "SITE PLAN".
4. The consent holder will ensure that no signs are erected in Taupo District Council sewer easement areas on any of the lots.

That prior to the movement of any larger sign (Type A and B) from its location shown on the plans for Lots 85, 95 and 103 the applicant shall submit a proposed location plan to the Planning Manager: Environmental Services for Council's information, monitoring and records.

6. Any large sign (Type A and B), will not be placed any closer than 1.5m from any boundary, including the front boundary. With the exception of the 'Type B' signs, no signs shall have a total height greater than two metres above natural ground level.
7. No more than two of the Type 'A' and 'B' signs shall be placed on the one lot at a time.
8. Signs types 'A' and 'B' shall be orientated so that no more than three of which are directly fronting the entrance to Barbary Close at any one time.
9. All work shall comply with Taupo District Council's Code of Practice for Development of Land (August 2001).

10. In accordance with Section 36 (1)(c) of the Resource Management Act 1991, the consent holder shall pay the Council's costs of any monitoring that may be necessary to ensure compliance with the conditions specified.
11. The consent holder is responsible for ensuring that contractors are made aware of the conditions of this consent and shall ensure compliance with these conditions.
12. The Consent shall expire within two years from the date of issue. From which time the applicant shall ensure that the signs are removed and the ground reinstated to its original state prior to the sign being placed on the Lot.

**Advice Notes:**


1. The resource consent shall lapse five years after the date of consent unless:
  - a. it is given effect to before the end of that period or
  - b. upon application made prior to the expiry of that period, the Council fixes a longer period.

**Report Prepared By:**

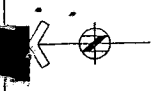


**Jamie Torrance**  
ENVIRONMENTAL CONSENTS PLANNER

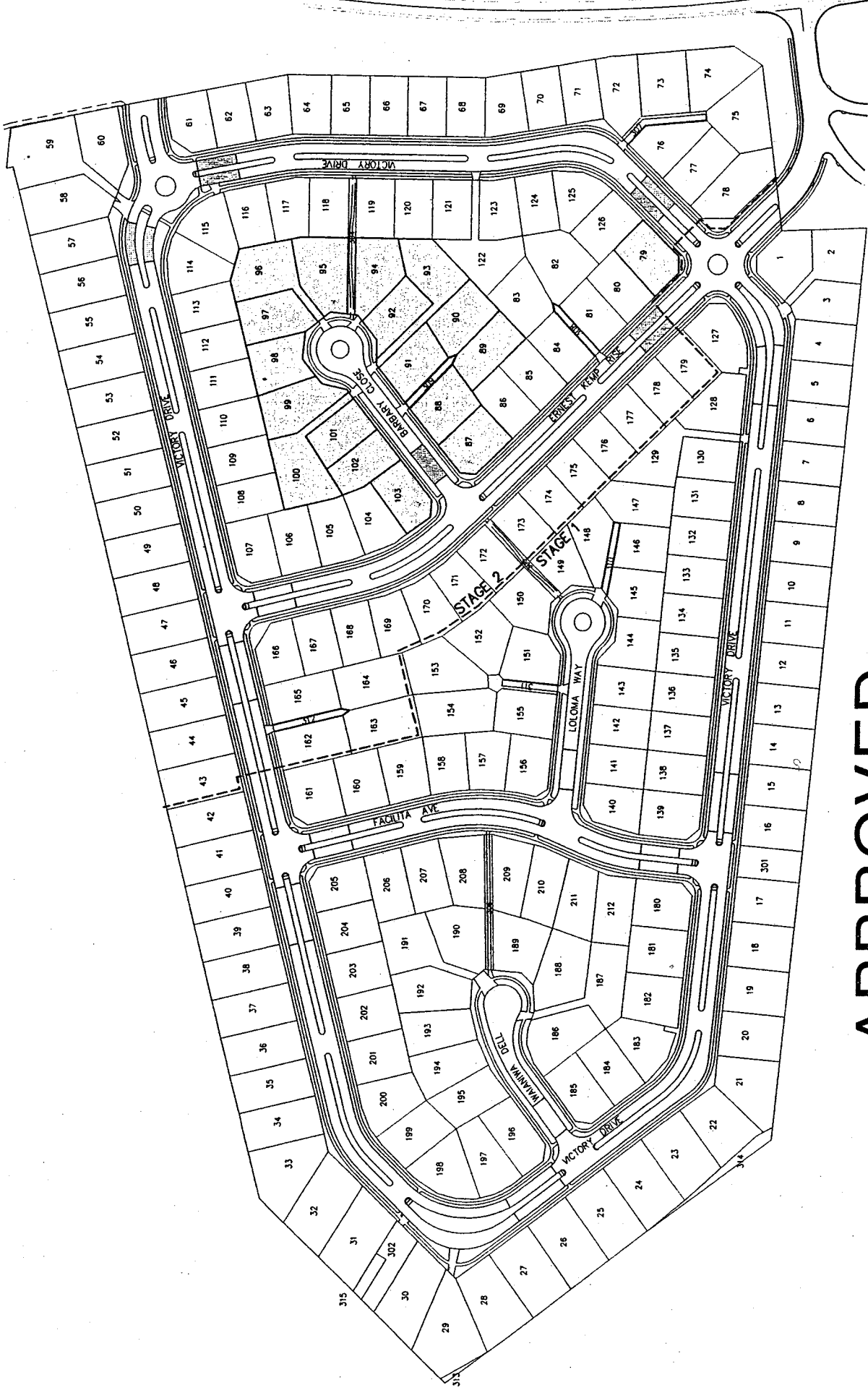
**Report Reviewed By:**



**David Greaves**  
PRINCIPAL PLANNER RESOURCE CONSENTS

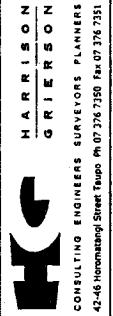


STATE HIGHWAY 1



APPROVED

PROJECT:	WHAREWAKA POINT SUBDIVISION TAUPO	TITLE:	SITE PLAN GENERATION HOMES PROPERTIES	NO. DRAWING:	123030-300	RESOURCE CONSENT REF. ABBREVIATION:	
ISO 9001 ASSURED	ASSOCIATION OF ENGINEERS NEW ZEALAND	ISO 9001 ASSURED	ISO 9001 ASSURED	SCALE:	1:1000 (A1) 1:2000 (C3)	REV:	1
PROJECT NO:	123030-300-DWG	DATE:	20/07/2008	DESIGNED BY:		DATE:	
CLIENT:	14359-REF	DATE:	20/07/2008	CHECKED BY:		DATE:	
PROJECT NO:	14359-REF	DATE:	20/07/2008	APPROVED BY:		DATE:	
PROJECT NO:	14359-REF	DATE:	20/07/2008	APPROVED BY:		DATE:	



ISO 9001 ASSURED  
ASSOCIATION OF ENGINEERS NEW ZEALAND  
THE DRAWING AND DESIGN ARE THE PROPERTY OF HARRISON GRIERSON CONSULTING ENGINEERS SURVEYORS PLANNERS. ACCEPTANCE FOR UNLIMITED USE IS NOT GRANTED.



4<sup>th</sup> September 2006

C Eagles  
Harrison Grierson Consultants Limited  
P O Box 1910  
**TAUPO**

Dear Catriona

**LAND USE CONSENT (DISCRETIONARY ACTIVITY) APPLICATION: RM 060339  
GENERATION DEVELOPMENTS LIMITED – BARBARY CLOSE AND ERNEST KEMP  
RISE, TAUPO**

I wish to advise that on the 31<sup>st</sup> August 2006, the Taupo District Council granted consent with regard to your application to erect 22 signs and the consent certificate is enclosed. Please note that this consent lapses five years after the date of commencement unless the consent is given effect to before the end of that period.

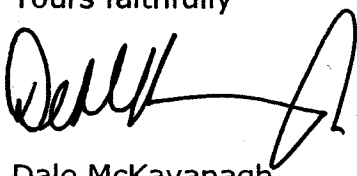
The consent holder is advised that this resource consent relates to the proposal outlined in the application. Should the proposal alter in terms of character, intensity or scale, then the consent authority and affected neighbours are required to be advised of any variation and is subsequently required to assess the proposal under the Resource Management Act 1991.

Please note that all archaeological sites are protected under the Historic Place Act whether or not they have been recorded or registered. If evidence of any historic site is found on the property, the Act requires that the Historic Places Trust be advised of the situation.

Pursuant to Section 357 of the Resource Management Act 1991, the applicant/s may, within 15 days of receiving this decision, object in writing to Council in respect of their decision. Having assessed such an objection, Council may dismiss the objection or uphold it wholly or in part.

As conditions have been imposed on this approval, you have been charged a non-refundable fee of \$100.00 to partially cover the cost involved in monitoring compliance. The cost of processing your application was \$500.00; therefore, the balance owing is nil [\$500.00 - \$500.00]. An invoice is also enclosed.

Yours faithfully



Dale McKavanagh  
**ENVIRONMENTAL CONSENTS OFFICER**





Acceptance of application - A86589

72 Lake Terrace, Taupo 3330  
Private Bag 2005  
Taupo Mail Centre, Taupo 3352  
New Zealand

16 August 2006

C Eagles  
Harrison Grierson Consultants  
P O Box 1910  
**TAUPO**

**Telephone** 07 376 0899  
**Facsimile** 07 378 0118  
**www.taupo.govt.nz**

File Number:  
0825 0003

Dear Catriona

**PROCESSING OF RESOURCE CONSENT APPLICATION RM060339  
GENERATION DEVELOPMENTS LIMITED - 3 BARBARY CLOSE, TAUPO**

Your application for resource consent for the proposal at the above address was lodged with Taupo District Council on 7 August 2006.

Having checked the application for content required under Section 88 and 92 of the Resource Management Act 1991, the application has been formally received.

Your application will now be processed by Environmental Consents Planner Jamie Torrance.

I acknowledge receipt of your \$500 lodgement fee, and advise that an invoice will be issued following the Taupo District Council Decision. Should the actual cost of processing exceed the lodgement fee already paid you will be advised.

Yours faithfully



Shelley Dunham  
**ENVIRONMENTAL CONSENTS OFFICER**



Checklist for section 88 & 92 - A86592

Provided Adequate CHECK LIST FOR SECTIONS 88 & 92 RMA 1991

- |   |   |  |
|---|---|--|
| S88                                     | S92                                     |  |
| <input checked="" type="checkbox"/>     | <input checked="" type="checkbox"/>     | <b>Description of Activity</b> (Consent Type: <u>Land Use/Subdivision</u> /Unit Title/ Variation to Consent Condition/Outline Plan/Xlease)   |
| <input checked="" type="checkbox"/>     |   | <b>Location</b> (legal description/valuation number/maps)  |
| <input checked="" type="checkbox"/>     |   | <b>Certificate of Title</b>  |
| <input checked="" type="checkbox"/>     |   | <b>Lodgement Fee</b>   |
| <input checked="" type="checkbox"/>     | <input checked="" type="checkbox"/>     | <b>AEE:</b> Statement made regarding effects, consultation letters/affected persons consent forms etc  |
| <input checked="" type="checkbox"/> N/A | <input checked="" type="checkbox"/>     | <b>Site plans:</b> Rd / legal desc / North point / scale   |
| <input checked="" type="checkbox"/>     | <input checked="" type="checkbox"/>     | <b>Allotment plan:</b> boundaries /existing & proposed buildings / distances to boundaries / uses of the site/ utility services / vehicle parking & access/contours  |
| <input checked="" type="checkbox"/> N/A | <input checked="" type="checkbox"/>     | <b>Earthworks:</b> Statement made if required (Qty ____)   |
| <input checked="" type="checkbox"/> N/A | <input checked="" type="checkbox"/>     | <b>Floor plan:</b> use of all areas / number of floors   |
| <input checked="" type="checkbox"/>     | <input checked="" type="checkbox"/>     | <b>Elevations:</b> <u>max height</u> / <u>daylight plane</u> / natural ground level  |
| <input checked="" type="checkbox"/>     | <input checked="" type="checkbox"/>     | <b>External appearance</b> of building ie building materials / photo of relocated dwelling   |
| <input checked="" type="checkbox"/> N/A | <input checked="" type="checkbox"/> N/A | <b>Subdivision:</b> existing easements / right of ways / covenants / building line restrictions / numbers, areas & dimensions of all lots / proposed roads, service lanes, accessways with relevant width & gradient / proposed easements / Rural: water supply and waste disposal / service providers - electricity/phone/gas/environment waikato |

S88  Application Accepted OR  Application rejected  
 S92  Application Accepted OR  Further Information Required

i.e. Notes to self  
 - affect of transit - of usable SHL - transit - I want to notify? is gemma  
 - add ~~DE~~ conditions

Peer review checklist - A86593

## RESOURCE CONSENT PEER-REVIEW CHECKLIST

Date of Report: 31/8/2006  
 Consent Number: Rm060339  
 Applicant: Horizon Ereson / for generation homes

	✓ or N/A	
	Author	Peer Review
<b>General</b>		
Application read from Cover to Cover	✓	
Spelling and Grammar correct	✓	
Correct Applicant Details	✓	
Correct Site Details	✓	
<b>Decision</b>		
Resolution under Section 93 & 94	✓	
Resolution under Section 104	✓	
Activity Status Referenced	✓	
Correct District Plan Reference(s)	✓	
Does decision reflect what was applied for? (Consent <b>can not</b> be granted for things not applied for)	✓	
Are Conditions enforceable?	✓	
Is reference made to "approved plans", including who prepared them, reference number (and issue) and date.	✓	
Is an advice note required for Development Contributions?	✓	
Has an Advice Note been added re. Archaeological Sites & HPT?	✓	
Have issues relating to notable trees/archaeological sites/height restrictions/consent notices/hazard areas etc been addressed?	✓	
<b>Affected Parties</b>		
Have all affected parties been identified?	✓	
Has written approval been obtained from all affected parties?	N/A	
Have Plans been signed by affected parties?	N/A	
<b>Administration Requirements</b>		
Time recorded correctly	✓	
Monitoring Requirements recorded	✓	
Further Information Requests recorded		
35(1A) uplifted if applicable		

Comments: Minor Changes. Spelling/grammar  
rewording some sections

Signed: [Signature] Date: 31/8 (Planner)

Signed: PP [Signature] Date: 30/8 (Reviewer)

Landuse engineering assessment cost - A86594

RM: 060339

File: 0825 3

<b>MEMORANDUM</b>	
<b>TO</b>	<b>DEVELOPMENT ENGINEER</b>
<b>FROM</b>	<u>Jamie</u> (PLANNER)
<b>SUBJECT</b>	PROPOSED SUBDIVISION/ <u>LANDUSE</u> : RM <u>060339</u>

Please find attached correspondence as received for the above application for you comment and report.

Please note that under the Resource Management Act 1991 we have 20 working days to deal with this. Therefore your comment is required by 22/8/06.

If the attached application relates to any of the following please circulate to **Engineering Officer: Stormwater**

- Stormwater Assets
- Stormwater / Drainage Easements
- Potential flood hazard areas
- Other \_\_\_\_\_

If the attached application relates to any of the following please circulate to **Engineering Officer: Roading**

- Located in the CBD
- Located on a State Highway or Arterial Route
- Sites with Historic parking problems
- Other \_\_\_\_\_

If the attached application involves any **Cash in lieu** for parking Please forward to **Manager: Works Division**

Hi Jamie,  
 proposed condition: no signs are to be erected within the TDC sewer easement areas on the lots.

[This is to avoid them digging over the sewer to mount the signboards]

Thanks  
 Roger Stokes  
 8/8/06

## PLANNING AND DEVELOPMENT PROJECTS ENGINEERING ASSESSMENT COST

DEVELOPER : \_\_\_\_\_

FILE NO \_\_\_\_\_

LOCATION : \_\_\_\_\_

REF NO \_\_\_\_\_

TYPE OF PROJECT : \_\_\_\_\_

	Works Manager	KM	RES.E	KM	Area E	KM		KM		KM		KM		KM
Initial Approval														
Research			✓											
Site Visit														
Report Writing														
Report Checking														
Other Council														
Total Hours			10 mins		DE								Total Km @ .50c	
Hourly Rate Base X 150%														
Total \$														

Recovery Code	:	\$	\$
Code	:	\$	\$
Code	:	\$	\$
Code	:	\$	\$
Total Cost to Recover	:	\$	\$
		[GST Excl]	[GST Incl]

FORWARD TO PLAN DEPT      DATE : \_\_\_\_\_

RECOVERY RECEIVED      DATE : \_\_\_\_\_

W[Div]ACC

NON-CHARGEABLE TIME      HOURS : \_\_\_\_\_

TYPE OF WORK \_\_\_\_\_

Application for resource consent - A86595



HARRISON

GRIERSON

Rm060339

File Ref:	0825 3
TAUPO DISTRICT COUNCIL	
Received	- 7 AUG 2006
Serial No.	057

Records Entered

4 August 2006

Taupo District Council  
Private Bag 2005  
**TAUPO**

Attention Manager: Resource Consents

Dear Gareth

**Application for Resource Consent for Signage at Barbary Close, Wharewaka, Taupo**

Please find attached an application for signage at Barbary Close (being Lots 87 - 103), Wharewaka Taupo.

The proposal is for the erection of 5 signs on any of the 17 lots within Barbary Close. These 5 signs would be in place for a two year period and be moved within the 17 lots during this period.

The proposal incorporates the erection of the following five signs:

- one 1200x1200 Brand billboard, total height 2m,
- on 1200x1200 Site billboard, total height 2m, and
- three 3000x600 vertical signs, total height 3m.

Each of the 17 sites would also have a 900x600 sales sign on it.

This application does not comply with the signage or boundary setback requirements of the Residential Environment of the Proposed District Plan. As such the application is a Discretionary Activity under the Proposed District Plan.

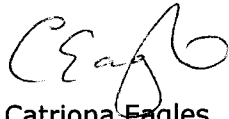
It is considered that the effects from this proposal are minor and as such please find enclosed a \$500 deposit for a non-notified application.

WAC

We would appreciate the opportunity to discuss any issues with the application prior to any decision relating to further information requests or notification.

Yours faithfully

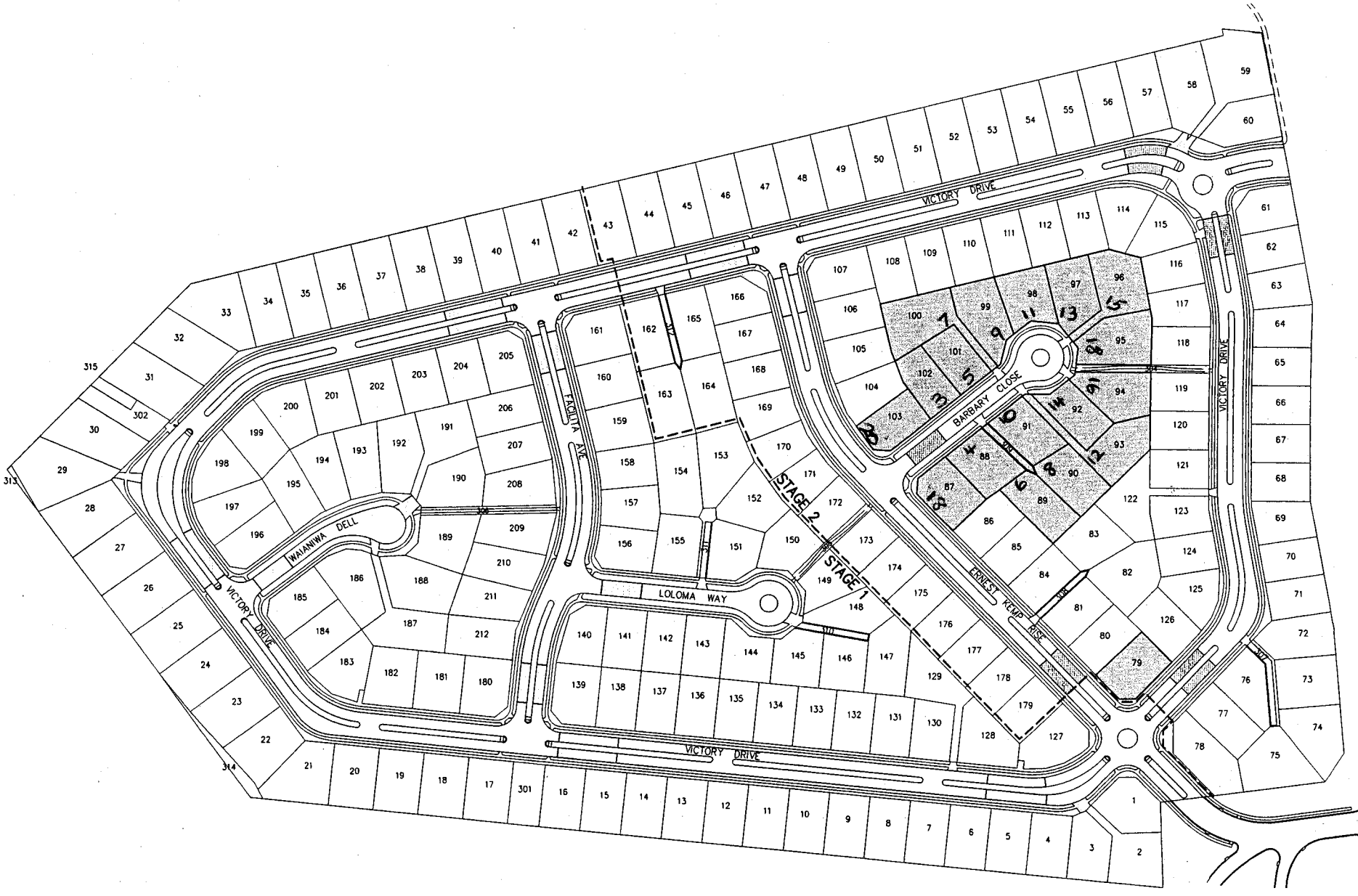
**Harrison Grierson Consultants Limited**



Catriona Eagles  
Senior Planner

enc 4 copies of application for resource consent  
\$500 cheque to Taupo District Council

N:\2020\123030\_02\300 Comms\310 Ext\Let-tdc-001-cme.doc



DESIGNED:	DATE:	SIGNATURE:	DATE:	SIGNATURE:
DRAWN:	DATE:	SIGNATURE:	DATE:	SIGNATURE:
CHECKED:	DATE:	SIGNATURE:	DATE:	SIGNATURE:
APPROVED:	DATE:	SIGNATURE:	DATE:	SIGNATURE:
BY:	DATE:	BY:	DATE:	BY:

ISO 9001  
QUALITY ASSURED

ASSOCIATION OF  
CONSULTING ENGINEERS  
NEW ZEALAND

AGENZ

**HG** HARRISON  
GRIERSON

CONSULTING ENGINEERS SURVEYORS PLANNERS

42-46 Horomatangi Street Taupo Ph 07 376 7350 Fax 07 376 7351

PROJECT: WHAREWAKA SUBDIVISION

TITLE: SITE PLAN  
GENERATION HOMES PROPERTIES

PLOT STATUS: RESOURCE CONSENT

PROJECT NO: 2020-123030-01

DRAWING NO: 123030-300

SCALE: 1:1000 (A1)  
1:2000 (A3)

REV A

1 RESOURCE CONSENT  
REF AMENDMENT

CDM 26/2006



HARRISON  
GRIERSON


GENERATION DEVELOPMENTS LIMITED

---

Signage at Barbary Close, Taupo

---

Resource Consent Application and  
Assessment of Environmental Effects



August 2006  
Reference 2020-123030-02

GENERATION DEVELOPMENTS LIMITED

---

Signage at Barbary Close, Taupo

---

Resource Consent Application and  
Assessment of Environmental Effects

**HARRISON GRIERSON CONSULTANTS LIMITED**

***Document Control Record***

**Client** Generation Developments Limited  
**Project** Signage at Barbary Close, Taupo  
**Project No.** 2020-123030-02  
**Document** Resource Consent Application for Land Use

**ISSUE AND REVISION RECORD**

**Status/Revision No.** Final  
**Date of Issue** August 2006  
**Originator** .....  
Catriona Eagles - Senior Planner  
**Checked** .....  
Hayley Chamberlin - Officer Manager/Associate  
**Approved** .....  
Hayley Chamberlin - Officer Manager/Associate  
**Office of Origin** Taupo  
**Telephone** 07 376 7350  
**Facsimile** 07 376 7351  
**Email** c.eagles@harrisingrierson.com

# GENERATION DEVELOPMENTS LIMITED

## Signage at Barbary Close, Taupo

### Resource Consent Application for Land Use

August 2006

Reference 2020-123030-02

## CONTENTS

	Page
<b>1.0 THE APPLICANT AND PROPERTY DETAILS</b>	<b>1</b>
<b>2.0 THE SUBJECT SITE AND ITS IMMEDIATE SURROUNDS</b>	<b>1</b>
<b>3.0 THE PROPOSAL AND BACKGROUND</b>	<b>1</b>
<b>4.0 DISTRICT PLAN</b>	<b>2</b>
4.1 PLAN STATUS	2
4.2 ACTIVITY STATUS	3
4.3 ASSESSMENT CRITERIA	4
4.4 OBJECTIVES AND POLICIES	5
4.5 OTHER CONSENT REQUIREMENTS	5
4.5.1 Regional Council Requirements	5
4.5.2 District Council Bylaws	6
<b>5.0 ASSESSMENT</b>	<b>6</b>
5.1 STATUTORY REQUIREMENTS	6
5.2 SECTION 104B	6
5.3 OTHER MATTERS	6
5.4 PART II	7
<b>6.0 ACTUAL AND POTENTIAL EFFECTS</b>	<b>7</b>
6.1.1 Effects Permitted by the Plan	7
6.1.2 Amenity Effects	7
6.1.3 Distraction to Motorists	9
6.1.4 Conclusion	9
<b>7.0 CONSULTATION</b>	<b>9</b>
<b>8.0 SECTION 93/94 CONSIDERATIONS</b>	<b>9</b>
<b>9.0 CONDITIONS</b>	<b>10</b>
<b>10.0 CONCLUSION</b>	<b>11</b>

## APPENDICES

Appendix 1	Certificate of Titles & Locality Plan
Appendix 2	Application Drawings and Location Plan

**FORM 9 (LAND USE)**  
**APPLICATION FOR RESOURCE CONSENT**  
***Under Section 88, Resource Management Act 1991***

To: Manager Consents  
Taupo District Council  
Private Bag 2005  
TAUPO

Generation Developments Limited, **applies for the following type (s) of resource consent:** Discretionary Land Use Consent for Signage

**The location of the proposed activity is as follows:**

Lots 87 – 103, Barbary Close, Wharewaka, Taupo

**The following additional resource consents are needed for the proposed activity and have been applied for:**

No additional consents are necessary. Subdivision consent and land use consent granted for the underlying subdivision in 2004.

**Attached, in accordance with the Fourth Schedule of the Resource Management Act 1991, is an assessment of environmental effects in the detail that corresponds with the scale and significance of the effects that the proposed activity may have on the environment.**

**Attached is relevant information required to be included in this application by the District Plan and the Resource Management Act 1991, or any regulations made under that Act.**

.....  
Signature of applicant (or person  
Authorised to sign on behalf of applicant)

.....  
Date

Address for service of applicant:

Harrison Grierson Consultants Limited  
P O Box 1910  
TAUPO

Attention: Catriona Eagles

Telephone No: 376 7350  
Fax: 376 7351  
Email: c.eagles@harrisingrierson.com

## 1.0 THE APPLICANT AND PROPERTY DETAILS

<b>Applicant</b>	Generation Developments Limited
<b>Site Address</b>	Lots 87 – 103, Barbary Close, Wharewaka, Taupo
<b>Address for Service</b>	Generation Developments Limited C/- Harrison Grierson Consultants Limited P O Box 1910 <b>TAUPO</b>  <b>Attention: Catriona Eagles</b>
<b>Legal Description</b>	Lots 87 - 103 DP 363862
<b>District Plan</b>	Proposed Taupo District Plan
<b>Zoning</b>	Residential Environment

## 2.0 THE SUBJECT SITE AND ITS IMMEDIATE SURROUNDS

The subject site includes all of the lots on Barbary Close, being Lots 87 – 103 (inclusive) DP 363862, Wharewaka, Taupo. Barbary Close is located off Ernest Kemp Drive.

This cul-de-sac was part of Stage 2 of the development. Approval to the development pursuant to 224C of the Resource Management Act 1991 has been obtained for Stage 2 and titles for these lots have been issued.

The immediate surrounds are the unoccupied residential lots forming part of the subdivision with State Highway 1 to the east.

## 3.0 THE PROPOSAL AND BACKGROUND

The proposal is for the erection of 5 signs over any of the 17 lots within Barbary Close. These 5 signs would be in place for a two year period and be moved within the 17 lots during this period.

The proposal incorporates the erection of the following five signs:

- one 1200x1200 Brand billboard, total height 2m,
- one 1200x1200 Site billboard, total height 2m, and
- three 3000x600 vertical signs, total height 3m.

Each of the 17 sites would also have a 900x600 sales sign on it.

The signs will initially be placed on Lots 87, 95 and 103 as detailed in Appendix 2. Following the sale and construction of houses on these lots, the applicant wishes to move the signs to other locations within Barbary Close.

The applicant proposes that:

- on all of the 17 lots, the signs will be placed no closer than 1.5m to any boundary including the front boundary, and, with the exception of the 3000x600 vertical signs, no higher than 2m above natural ground,
- prior to the movement of any sign from its location shown on plans for Lot 87, 95, 103, they will provide a plan showing the new location to the Manager: Resource Consent for Council's information, monitoring and records, and
- no more than three signs will be placed on any one lot.

The details of the proposed signage are set out in Appendix 2 to this report. A copy of the Sales Plan is also included in Appendix 1 which shows the lot layout of the Wharewaka subdivision, Barbary Close and Generation Homes properties.

Generation Homes owns 18 lots within the Wharewaka Subdivision as part of their "Aspect" house and land packages. Lot 79 on the corner of Ernest Kemp and Victory Drives is the Generation Homes sales office/show home. The 17 lots within Barbary Close are intended to be developed as house and land packages.

## **4.0 DISTRICT PLAN**

### **4.1 PLAN STATUS**

The Proposed District Plan (PDP) was publicly notified in July 2000. Hearings of submissions have been completed, decisions issued and the period for lodging any appeals has closed. An "appeals" version of the PDP is now the relevant planning document to be considered. Additionally, the Taupo District Council (TDC) has publicly advised that the application of Section 19(1) of the Resource Management Act 1991 (RMA) is now effective. Section 19(1) states:

*"1) A rule in a proposed plan is to be treated as if it is operative and any previous rule is inoperative if the time for making submissions or lodging appeals on the rule has expired and—*

- (a) no submissions in opposition have been made or appeals have been lodged; or*
- (b) all submissions in opposition and appeals have been determined; or*
- (c) all submissions in opposition have been withdrawn and all appeals withdrawn or dismissed."*

Section 19 is relevant only to rules of the PDP that do not have appeals pending.

Variation 17 has not affected the status of the signage rules. Therefore the Proposed District Plan is the only Plan to be considered in this application.

#### 4.2 ACTIVITY STATUS

The subject land has been shown in the planning maps as being within the "Rural Environment" (refer to Map 43b). However, Variation 15 has recently amended the planning map to show it as Residential Environment. In addition the land use and subdivision consent for this development provides that the Residential Environment Standards of the Plan shall apply.

The activity subject of this application is provided for in the Proposed District Plan subject to compliance with general and specific performance standards. The following sets out the criteria relevant to this application:

Residential Environment Performance Standards		Complies?
4a.3.10	<i>Maximum Signage</i>	No
4a.3.4	<i>Minimum Building Setback</i>	No

##### Rule 4a.3.10 - Maximum Signage

The allowable signage for the Residential Environment is one 0.25 m<sup>2</sup> sign on the property or one 1.08 m<sup>2</sup> of signage at a maximum of 4m high for the sale of land and buildings. The proposal incorporates the erection of the following five signs:

- one 1200x1200 Brand billboard, total height 2m,
- one 1200x1200 Site billboard, total height 2m, and
- three 3000x600 vertical signs, total height 3m.

The total area of signage on the site will be 8.28 m<sup>2</sup>. The design of the signs is detailed in the drawings included in Appendix 2.

##### Rule 4a.3.4 - Minimum Building Setback

The 3m high vertical signs are considered to be a building under the PDP definition of a building as they are over 2m in height. They will be located 1.5m from boundaries and therefore the signs will infringe the front boundary Minimum Building Setback rule.

The two 1200x1200 signs will be no higher than 2m in height and less than 6 m<sup>2</sup> in area. Therefore they are not considered to be a building (as defined in the PDP) and not subject to this rule.

#### Activity Status

As the proposal does not comply with these performance standards, the activity is identified as a **Discretionary Activity** in the Residential Environment of the PDP. This is set out in the following rule:

*4a.1.8 Any activity that is not a permitted, controlled activity or restricted discretionary activity, is a **discretionary activity**.*

### **4.3 ASSESSMENT CRITERIA**

In addition to the rules and performance standards, the PDP contains a number of assessment criteria, which sets out the criteria to be used when assessing the effects of the particular non-compliance.

Those relevant to this application are considered to be:

#### **4a.2.11 Signage**

- i. Location (off or on the allotment), design and appearance of the sign.*
- ii. Compatibility with the scale and character of the allotment and of the surrounding Residential Environment, including the nature and proximity of other signage within the area.*
- iii. Any adverse effects on the visual amenity of the locality and whether the proposed sign would be visibly obtrusive, particularly from roads or public open spaces in the vicinity.*
- iv. Effect on the openness and attractiveness of the streetscape.*
- v. Effect on the amenity of adjoining allotment in terms of such matters as noise, artificial light and glare occurring as a result of the sign.*
- vi. Necessity of the sign to direct people to the activity.*
- vii. Effect on the safe and efficient operation of the roading network within the area including the possible distraction or confusion of motorists.*

#### **4a.2.6 Minimum Building Setback**

- i. The extent to which the reduced setback will:*
  - > adversely affect the amenity of the area including the effect on reserves and foreshore Protection Area, including the ability to maintain and enhance the openness and existing character and avoid the visual dominance of buildings in relation to those areas;*
  - > significantly reduce the privacy of adjacent allotments by comparison to the effect of a complying activity;*

- *limit the safe and visible access of vehicles using the allotments.*
- ii. The extent to which the reduction in the setback is necessary due to the shape or nature and physical feature of the allotment.*
- iii. Proposed methods for avoiding, remedying or mitigating any potential adverse effects, and the degree to which they would be successful including:*
  - *the ability of existing topography or vegetation to mitigate any adverse visual effects on the streetscape;*
  - *the ability to mitigate adverse effects of the reduced setback through screening, landscaping, planting and alternative design.*

The Assessment of Environmental Effects (AEE) section of this report, addresses these issues.

#### **4.4 OBJECTIVES AND POLICIES**

As there are no specific policies for signage in the District Plan, the objectives and policies of the Residential Environment (Section 3a of the PDP) that are relevant to this proposal are:

*Objective 1 - The maintenance and enhancement of the character and amenity of the Residential Environment.*

*Policy (i) - Maintain and enhance the character and amenity of the Residential Environment by controlling the bulk, location and nature of activities, to ensure activities are consistent with a residential scale of development, including an appropriate density and level of environmental effects.*

*Policy (ii) - Encourage a wide range of appropriate activities and development within the Residential Environment while ensuring any adverse effects are avoided, remedied or mitigated.*

As discussed in the AEE of this report, the short-term nature of the signage provides considerable certainty that following the two year period the signage will be removed and the site will continue as a normal residential activity. In the intervening period, whilst the total area of signage is larger than what is allowed for, it is disbursed in a small number of signs that minimises the impact the proposed signage has on the surrounding environment. Therefore it is considered that the signage does not affect the amenity of Residential Environment and is considered to be in accordance with the relevant objectives and policies of the PDP.

#### **4.5 OTHER CONSENT REQUIREMENTS**

##### **4.5.1 Regional Council Requirements**

No consent issues from the Regional Council arise

#### **4.5.2 District Council Bylaws**

No issues regarding compliance with by-laws arise

### **5.0 ASSESSMENT**

#### **5.1 STATUTORY REQUIREMENTS**

Section 88(2)(b) of the Resource Management Act 1991 (the "Act") stipulates that an application shall include an assessment of environmental effects prepared in accordance with the Fourth Schedule and be in such detail as corresponds with the scale and significance of the effects that the activity may have on the environment.

Matters to be considered by the Council when assessing an application for resource consent under section 104(1) of the Act include (subject to Part II), any actual and potential effects on the environment and any relevant objectives, policies, rules or other provisions of a Plan or Proposed Plan.

Where an application is assessed under both an operative plan and a proposed plan change, a weighting of the plans is considered appropriate as such consideration is given to the advances through the statutory process that have been made by a proposed plan change, with more weight placed on the controls of an operative plan until such time as the proposed plan change is effectively operative in terms of Section 19 of the Act. As previously stated in this case the proposal requires consideration in terms of the Proposed Plan Change provisions only.

Overall, the Council is required to assess this application for resource consent against the purpose and principles of sustainable management set out in Part II of the Act.

#### **5.2 SECTION 104B**

The proposed activity is deemed to be a Discretionary Activity under the provisions of the District Plan. Accordingly, the Council may grant or refuse the application. If it grants the application, the Council may impose conditions under Section 108 of the Act.

#### **5.3 OTHER MATTERS**

Section 104(1)(c) of the Act also directs the Council to consider:

*"any other matters that the consent authority considers relevant and reasonably necessary to determine the application."*

No other matters are considered applicable to this application.

## **5.4 PART II**

With respect to the purpose and principles of the Resource Management Act 1991 which are contained in sections 5 to 8 of the Act, it is considered that the proposed development will be an appropriate and sustainable use of the site.

The signage is not anticipated to adversely affect the amenity of neighbouring residents due to the short period of time the activity is anticipated to occur, the limited number of residential dwellings in the area and the construction phase the area is currently in. There are no special ecosystems or environmental values of the site, which would be compromised by the proposal.

## **6.0 ACTUAL AND POTENTIAL EFFECTS**

The effects that need to be considered are those from the increased signage displayed. The assessment of these effects is discussed below.

### **6.1.1 Effects Permitted by the Plan**

The effects permitted include all those associated with signage for a normal residential property. The exceptions to the sign rules provide for 1.08 m<sup>2</sup> of signage for the sale of a property. In this circumstance each lot could have a 1.08 m<sup>2</sup> 'For Sale' sign. Collectively over the 17 lots this signage would total 18.36 m<sup>2</sup> and would be permitted by the plan.

The applicant is proposing to use 900x600 'For Sale' signs for each lot at a total area of 9.18 m<sup>2</sup>. The five large signs total 8.28 m<sup>2</sup> in area. Collectively the applicant is therefore proposing a total signage area of 17.46 m<sup>2</sup>.

Therefore this signage area proposed is, in fact, 0.9 m<sup>2</sup> less than that permitted by the plan over the 17 lots.

It is considered that the effects to be considered in this application relate to effects on amenity resulting from the clustering of the proposed signs, and any distraction to motorists.

### **6.1.2 Amenity Effects**

The amenity of the area is characterised as a greenfield subdivision that, by the time the show home and sales office is in operation, is expected to be finished awaiting sales and construction of homes. The amenity of a new area after completion of subdivision, goes through a transition period where house construction commences through to a completed neighbourhood. During this transitional stage the appearance of the area is cluttered with different construction vehicles and individual sites in different array of completeness. Many of the sites have multiple advertising signs for builders, landscapers, electricians etc. Therefore, in this environment the signage associated with the

development of Barbary Close will not be out of place while construction of houses in the subdivision occurs.

The main amenity effect of signage is to the street/streetscape and the general appearance of the area. Whilst initially it is proposed to place four of the signs on Ernest Kemp Drive, as these sites are developed the signs will be moved further down Barbary Close. The placement of the signs down Barbary Close will limit their visibility to passing traffic unless the motorist chooses to enter the close. The whole cul-de-sac is owned by the applicant and they will be unwilling to create a poor or unpleasant appearance of the street as this will only detract from their sales of house and land packages.

While the size of each sign is larger than that provided for in the district plan, it is considered that the visual effects of sign clutter are reduced by placing half the area of signage permitted by the plan into only 5 signs. The district plan allows for 17, 1.08 m<sup>2</sup> signs. When placed on each lot this signage will present significant visual clutter on Barbary Close. The proposal involves the placement of 17, 0.54 m<sup>2</sup> signs and 5 larger signs. The smaller 'For Sale' signs therefore present a lower and smaller area of signage. The three vertical signs, whilst 1.8 m<sup>2</sup>, are slender in profile and do not present significant visual clutter. Overall it is considered that the proposal in fact minimises the size of signs on the cul-de-sac and reduces the visual clutter possible by the permitted signage rules.

Over the next two years there will be a limited number of people living in this area whilst dwellings are constructed. The applicant owns every lot on the cul-de-sac and therefore is not considered to be affected by its own proposal. The proposed limitations on the location and heights of the signage will prevent the signs from affecting any other adjoining property owners. In addition the signs are likely to be oriented to Barbary Close to maximise their visibility from this vantage point.

The signage has been designed to a high standard and is not considered to be unsightly which could have been the case if bright or inappropriate colouring had been used. When coupled with the short period of time the sign will be used on site, any effects on the surrounding environment are less than minor.

The placement of the vertical signs inside the front boundary setback (up to 1.5m from the front and side boundaries) is considered to have a minor effect as the signs are slender in profile and have no volume, i.e they cover very little ground space. Again the whole cul-de-sac is owned by the applicant and any poor or unpleasant appearance of the street will only detract from the sales of house and land packages.

Given the matters covered above and the fact that over the next two years there will be a limited number of residents in the area, it is considered any concern over effects on the streetscape, amenity or other matters set out in the assessment criteria set out in 4a.2.11 of the PDP have been addressed.

### **6.1.3 Distraction to Motorists**

There are two sets of motorists to consider in this application; those using Barbary Close, Ernest Kemp and Victory Drives, and those using State Highway 1.

The closest any of the Generation Homes lots are to State Highway 1 is 110m. Barbary Close is also sloped slightly down hill from State Highway 1. It is therefore considered that the signs are not highly visible from this location and no distraction will occur. At no time will the signs be lit or illuminated with any flashing or neon lights. Therefore the effects to the State Highway from the signage are considered minor.

Motorists using Barbary Close, Ernest Kemp and Victory Drive will be subject to a range of construction and trade vehicles during the period the signage is in place and will therefore be travelling at low speeds. At no time will the signs be lit or illuminated with any flashing or neon lights, nor are any flags to be used. The signs will be placed a minimum of 1.5m from the front boundaries in order to provide clear visibility from driveways and to footpaths to minimise any traffic/pedestrian conflict. Therefore any effects to motorists are considered minor due to the location of the signage back from the front boundaries of the lots.

### **6.1.4 Conclusion**

It is concluded that the proposal is a suitable and appropriate use for the site, is a temporary use and will be consistent with the principle of sustainable resource management. Any adverse effects identified are considered to be less than minor.

## **7.0 CONSULTATION**

The Fourth Schedule to the Act requires that this assessment of effects include a description of the consultation undertaken in relation to the proposal (if any) and any response to the views of those consulted. Given the nature, scale and intensity of the proposal and that the applicant owns every property in Barbary Close, it is not considered that any consultation was warranted. It is considered that there are no affected parties.

## **8.0 SECTION 93/94 CONSIDERATIONS**

Section 93(1) requires a resource consent application to be publicly notified unless the consent authority is satisfied that the adverse effects of the activity will be no more than minor (or the application is for a controlled activity).

Section 94 (1) requires that:

*"If notification is not required under Section 93(1) the consent authority must serve notice on all persons who, in the opinion of the consent authority, may be adversely affected by the activity, even if some of those persons have given their written approval to the activity."*

However, where all persons considered adversely affected have given their written approval, an application may be considered on a non-notified basis (s94(2)).

Section 94A(a) of the Act states that:

*"when forming an opinion for the purposes of section 93 of an activity on the environment will be minor, a consent authority may disregard an adverse effect of the activity on the environment if the Plan permits an activity with that effect".*

As discussed in the Assessment of Effects section of this report, it has been demonstrated that there are no more than minor adverse effects on the surrounding environment that will arise as a result of this proposal and no persons are considered to be adversely affected. The main effect of the signage is to be amenity and streetscape. The proposed location of the signs, their size and the reduced number of them compared to what is permitted is considered to minimise the visual effects. The minor effects of the proposal are considered temporary as the application is for a period of only two years. Following this period the site will return to a normal residential use and the signage will be removed.

Accordingly, it is considered that this proposal meets the tests of sections 93 and 94 and can be processed without notification, and without any requirement for further written approvals or service of the application on any other third parties.

## **9.0 CONDITIONS**

The applicant is willing to offer the following conditions as mitigation:

1. that the consent is for a two year period only.
2. that prior to the movement of any large sign from its location shown on plans for Lot 87, 95, 103, the applicant will provide a plan showing the new location to the Manager: Resource Consent for Council's information, monitoring and records.
3. that the large signs will be placed no closer than 1.5m to any boundary including the front boundary, and, with the exception of the 3000x600 vertical signs, no higher than 2m above natural ground.

4. that no more than three of the large signs shall be placed on any one lot.

The applicant is open to discussion with Council on additional conditions that may assist in clarifying the location of the signs.

## 10.0 CONCLUSION

The proposal is considered to be a suitable use of the site, and one that is in accordance with the relevant objectives, policies and assessment criteria of the District Plan.

The proposal is therefore considered to be consistent with the purpose and principles of the Resource Management Act 1991. The granting of the resource consent for the proposal would provide for an appropriate use of the site with no more than minor adverse effects on surrounding properties or the wider locality.

Consent, subject to appropriate conditions, can therefore be supported. Hence, in accordance with section 104 of the Act, it is considered appropriate for consent to be granted subject to fair and reasonable conditions.

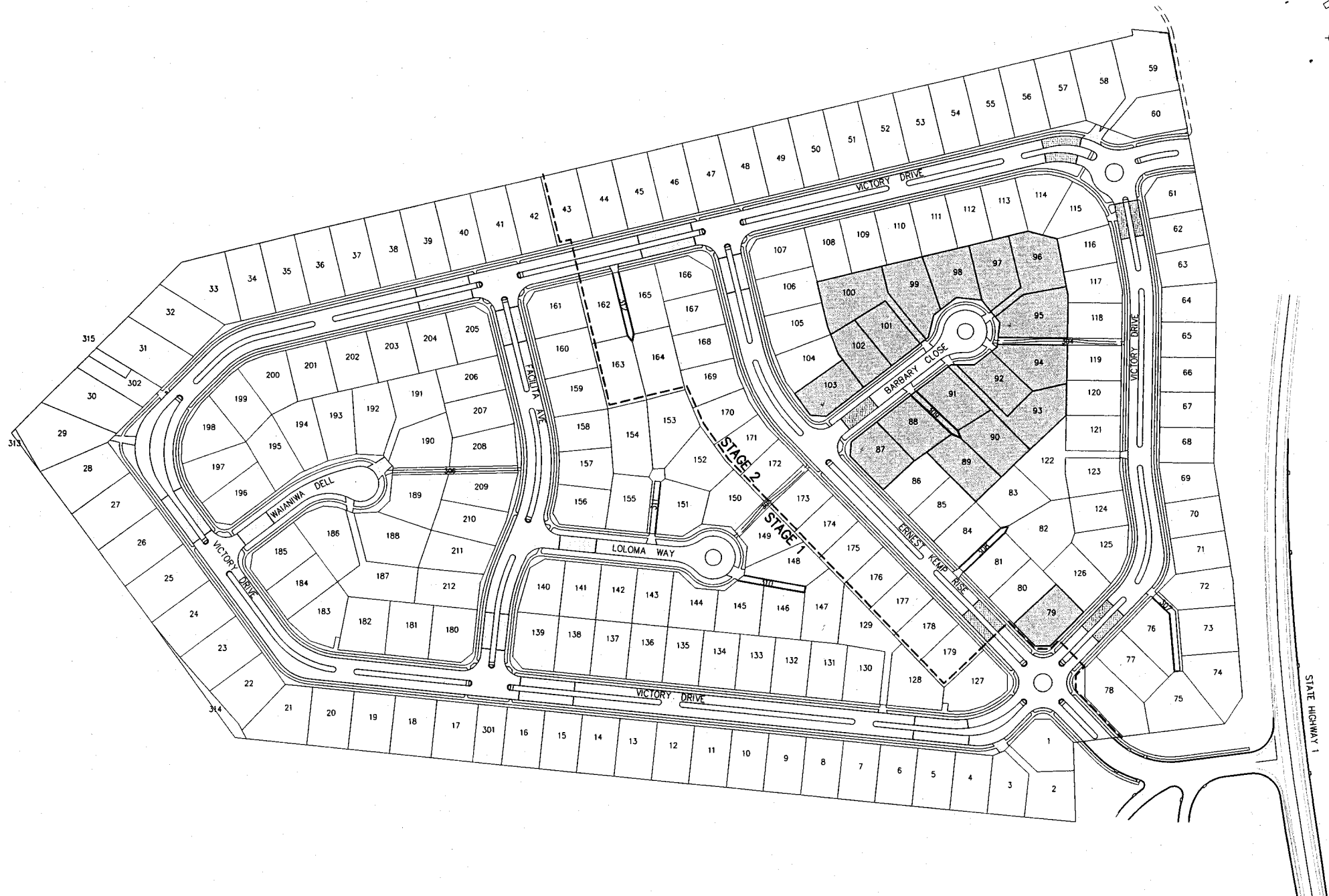
### *Limitations:*

*This report has been prepared for the particular project described to us and its extent is limited to the scope of work agreed between the client and Harrison Grierson Consultants Limited. No responsibility is accepted by Harrison Grierson Consultants Limited or its directors, servants, agents, staff or employees for the accuracy of information provided by third parties and/or the use of any part of this report in any other context or for any other purposes.*


*This assessment is for use by Generation Developments Limited only, and should not be used or relied upon by any other person or for any other project.*

N:\2020\123030\_01\500 Del\510 Rpts\R01 Application1.doc

**APPENDIX 1**  
**Certificate of Titles**  
**&**  
**Locality Plan**



DESIGNED:	DATE:	SIGNATURE:	PLOT DATE: 20/07/2006 CAD REF: 123030-300.DWG CAD XREF: 14359-XREF
CDM:	DATE:	SIGNATURE:	
CHECKED:	DATE:	SIGNATURE:	
APPROVED:	DATE:	SIGNATURE:	
BY:	DATE:		


**ASSOCIATION OF CONSULTING ENGINEERS NEW ZEALAND**  
THIS DRAWING AND DESIGN REMAINS THE PROPERTY OF AND MAY NOT BE REPRODUCED OR ALTERED WITHOUT THE WRITTEN PERMISSION OF HARRISON GRIERSON CONSULTANTS LIMITED. NO LIABILITY SHALL BE ACCEPTED FOR UNAUTHORIZED USE OF THIS DRAWING.


**HARRISON GRIERSON**  
 CONSULTING ENGINEERS SURVEYORS PLANNERS  
 42-46 Horomatangi Street Taupo Ph 07 376 7350 Fax 07 376 7351

PROJECT: **WHAREWAKA POINT SUBDIVISION TAUPO**

TITLE: **SITE PLAN GENERATION HOMES PROPERTIES**

PLOT STATUS: <b>RESOURCE CONSENT</b>	
PROJECT No: 2020-123030-01	SCALES: 1:1000 (A1) 1:2000 (A3)
DRAWING No: 123030-300	REV: 1



**COMPUTER FREEHOLD REGISTER  
UNDER LAND TRANSFER ACT 1952**



Search Copy

R.W. Muir  
Registrar-General  
of Land

**Identifier** 263219  
**Land Registration District** South Auckland  
**Date Issued** 18 May 2006

**Prior References**

234770

---

**Estate** Fee Simple  
**Area** 732 square metres more or less  
**Legal Description** Lot 87 Deposited Plan 363862

**Proprietors**

Wharewaka (2003) Limited

---

**Interests**

Subject to Section 3 Geothermal Energy Act 1953

Subject to Section 3 Petroleum Act 1937

Subject to Section 8 Atomic Energy Act 1945

Subject to Sections 6 and 8 Mining Act 1971

Subject to Part IV A Conservation Act 1987

Subject to Section 27B State-Owned Enterprises Act 1986 (which provides for the resumption of land on the recommendation of the Waitangi Tribunal and which does not provide for third parties, such as the owner of the land, to be heard in relation to the making of any such recommendation) - 29.11.1991 at 9.46 am

Subject to Sections 5 and 261 Coal Mines Act 1979

6703367.13 Encumbrance to Taupo District Council - 22.12.2005 at 9:00 am

6869875.2 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 18.5.2006 at 9:00 am

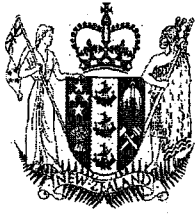
Subject to a right (in gross) to drain sewage over part marked BH on DP 363862 in favour of The Taupo District Council created by Easement Instrument 6869875.4 - 18.5.2006 at 9:00 am

The easements created by Easement Instrument 6869875.4 are subject to Section 243 (a) Resource Management Act 1991

Land Covenant in Easement Instrument 6869875.9 - 18.5.2006 at 9:00 am

Fencing Covenant in Easement Instrument 6869875.9 - 18.5.2006 at 9:00 am

6920964.1 CAVEAT BY GENERATION LAND LIMITED - 26.6.2006 at 9:00 am



**COMPUTER FREEHOLD REGISTER  
UNDER LAND TRANSFER ACT 1952**



**Search Copy**

  
R.W. Muir  
Registrar-General  
of Land

**Identifier** 263220  
**Land Registration District** South Auckland  
**Date Issued** 18 May 2006

**Prior References**  
234770

---

**Estate** Fee Simple  
**Area** 753 square metres more or less  
**Legal Description** Lot 88 Deposited Plan 363862

**Proprietors**  
Wharewaka (2003) Limited

---

**Interests**

Subject to Section 3 Geothermal Energy Act 1953  
Subject to Section 3 Petroleum Act 1937  
Subject to Section 8 Atomic Energy Act 1945  
Subject to Sections 6 and 8 Mining Act 1971  
Subject to Part IV A Conservation Act 1987  
Subject to Section 27B State-Owned Enterprises Act 1986 (which provides for the resumption of land on the recommendation of the Waitangi Tribunal and which does not provide for third parties, such as the owner of the land, to be heard in relation to the making of any such recommendation) - 29.11.1991 at 9.46 am  
Subject to Sections 5 and 261 Coal Mines Act 1979  
6703367.13 Encumbrance to Taupo District Council - 22.12.2005 at 9:00 am  
6869875.2 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 18.5.2006 at 9:00 am  
Land Covenant in Easement Instrument 6869875.9 - 18.5.2006 at 9:00 am  
Fencing Covenant in Easement Instrument 6869875.9 - 18.5.2006 at 9:00 am  
6920964.1 CAVEAT BY GENERATION LAND LIMITED - 26.6.2006 at 9:00 am



**COMPUTER FREEHOLD REGISTER  
UNDER LAND TRANSFER ACT 1952**



**Search Copy**

R. W. Muir  
Registrar-General  
of Land

**Identifier** 263221  
**Land Registration District** South Auckland  
**Date Issued** 18 May 2006

**Prior References**  
234770

---

**Estate** Fee Simple  
**Area** 860 square metres more or less  
**Legal Description** Lot 89 Deposited Plan 363862

**Proprietors**  
Wharewaka (2003) Limited

---

**Interests**

Subject to Section 3 Geothermal Energy Act 1953

Subject to Section 3 Petroleum Act 1937

Subject to Section 8 Atomic Energy Act 1945

Subject to Sections 6 and 8 Mining Act 1971

Subject to Part IV A Conservation Act 1987

Subject to Section 27B State-Owned Enterprises Act 1986 (which provides for the resumption of land on the recommendation of the Waitangi Tribunal and which does not provide for third parties, such as the owner of the land, to be heard in relation to the making of any such recommendation) - 29.11.1991 at 9.46 am

Subject to Sections 5 and 261 Coal Mines Act 1979

6703367.13 Encumbrance to Taupo District Council - 22.12.2005 at 9:00 am

6869875.2 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 18.5.2006 at 9:00 am

Subject to a right (in gross) to drain sewage over part marked BF on DP 363862 in favour of The Taupo District Council created by Easement Instrument 6869875.4 - 18.5.2006 at 9:00 am

The easements created by Easement Instrument 6869875.4 are subject to Section 243 (a) Resource Management Act 1991

Subject to a right (in gross) to convey electricity over part marked BI in favour of WEL Networks Limited created by Easement Instrument 6869875.5 - 18.5.2006 at 9:00 am

The easements created by Easement Instrument 6869875.5 are subject to Section 243 (a) Resource Management Act 1991

Subject to a right (in gross) to convey gas over part marked BI on DP 363862 in favour of NGC New Zealand Limited created by Easement Instrument 6869875.6 - 18.5.2006 at 9:00 am

The easements created by Easement Instrument 6869875.6 are subject to Section 243 (a) Resource Management Act 1991

Subject to a right (in gross) to convey telecommunications and computer media over part marked BI on DP 363862 in favour of Telecom New Zealand Limited created by Easement Instrument 6869875.7 - 18.5.2006 at 9:00 am

The easements created by Easement Instrument 6869875.7 are subject to Section 243 (a) Resource Management Act 1991

Subject to a right to convey water and to a right of way over part marked BI on DP 363862 created by Easement Instrument 6869875.8 - 18.5.2006 at 9:00 am

The easements created by Easement Instrument 6869875.8 are subject to Section 243 (a) Resource Management Act 1991

Land Covenant in Easement Instrument 6869875.9 - 18.5.2006 at 9:00 am

Fencing Covenant in Easement Instrument 6869875.9 - 18.5.2006 at 9:00 am

Identifier

263221

6920964.1 CAVEAT BY GENERATION LAND LIMITED - 26.6.2006 at 9:00 am



**COMPUTER FREEHOLD REGISTER  
UNDER LAND TRANSFER ACT 1952**



Search Copy

  
R.W. Muir  
Registrar-General  
of Land

**Identifier** 263222  
**Land Registration District** South Auckland  
**Date Issued** 18 May 2006

**Prior References**  
234770

---

**Estate** Fee Simple  
**Area** 751 square metres more or less  
**Legal Description** Lot 90 Deposited Plan 363862  
**Proprietors**  
Wharewaka (2003) Limited

---

**Interests**

Subject to Section 3 Geothermal Energy Act 1953  
Subject to Section 3 Petroleum Act 1937  
Subject to Section 8 Atomic Energy Act 1945  
Subject to Sections 6 and 8 Mining Act 1971  
Subject to Part IV A Conservation Act 1987  
Subject to Section 27B State-Owned Enterprises Act 1986 (which provides for the resumption of land on the recommendation of the Waitangi Tribunal and which does not provide for third parties, such as the owner of the land, to be heard in relation to the making of any such recommendation) - 29.11.1991 at 9.46 am  
Subject to Sections 5 and 261 Coal Mines Act 1979  
6703367.13 Encumbrance to Taupo District Council - 22.12.2005 at 9:00 am  
6869875.2 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 18.5.2006 at 9:00 am  
Appurtenant hereto is a right to convey water and a right of way created by Easement Instrument 6869875.8 - 18.5.2006 at 9:00 am  
The easements created by Easement Instrument 6869875.8 are subject to Section 243 (a) Resource Management Act 1991  
Land Covenant in Easement Instrument 6869875.9 - 18.5.2006 at 9:00 am  
Fencing Covenant in Easement Instrument 6869875.9 - 18.5.2006 at 9:00 am  
6920964.1 CAVEAT BY GENERATION LAND LIMITED - 26.6.2006 at 9:00 am



**COMPUTER FREEHOLD REGISTER  
UNDER LAND TRANSFER ACT 1952**



**Search Copy**

  
R. W. Muir  
Registrar-General  
of Land

**Identifier** 263223  
**Land Registration District** South Auckland  
**Date Issued** 18 May 2006

**Prior References**  
234770

---

**Estate** Fee Simple  
**Area** 715 square metres more or less  
**Legal Description** Lot 91 Deposited Plan 363862  
**Proprietors**  
Wharewaka (2003) Limited

---

**Interests**

Subject to Section 3 Geothermal Energy Act 1953  
Subject to Section 3 Petroleum Act 1937  
Subject to Section 8 Atomic Energy Act 1945  
Subject to Sections 6 and 8 Mining Act 1971  
Subject to Part IV A Conservation Act 1987  
Subject to Section 27B State-Owned Enterprises Act 1986 (which provides for the resumption of land on the recommendation of the Waitangi Tribunal and which does not provide for third parties, such as the owner of the land, to be heard in relation to the making of any such recommendation) - 29.11.1991 at 9.46 am  
Subject to Sections 5 and 261 Coal Mines Act 1979  
6703367.13 Encumbrance to Taupo District Council - 22.12.2005 at 9:00 am  
6869875.2 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 18.5.2006 at 9:00 am  
Land Covenant in Easement Instrument 6869875.9 - 18.5.2006 at 9:00 am  
Fencing Covenant in Easement Instrument 6869875.9 - 18.5.2006 at 9:00 am  
6920964.1 CAVEAT BY GENERATION LAND LIMITED - 26.6.2006 at 9:00 am



**COMPUTER FREEHOLD REGISTER  
UNDER LAND TRANSFER ACT 1952**



Search Copy

  
R.W. Muir  
Registrar-General  
of Land

**Identifier** 263224  
**Land Registration District** South Auckland  
**Date Issued** 18 May 2006

**Prior References**  
234770

---

**Estate** Fee Simple  
**Area** 681 square metres more or less  
**Legal Description** Lot 92 Deposited Plan 363862  
**Proprietors**  
Wharewaka (2003) Limited

---

**Interests**

Subject to Section 3 Geothermal Energy Act 1953  
Subject to Section 3 Petroleum Act 1937  
Subject to Section 8 Atomic Energy Act 1945  
Subject to Sections 6 and 8 Mining Act 1971  
Subject to Part IV A Conservation Act 1987  
Subject to Section 27B State-Owned Enterprises Act 1986 (which provides for the resumption of land on the recommendation of the Waitangi Tribunal and which does not provide for third parties, such as the owner of the land, to be heard in relation to the making of any such recommendation) - 29.11.1991 at 9.46 am  
Subject to Sections 5 and 261 Coal Mines Act 1979  
6703367.13 Encumbrance to Taupo District Council - 22.12.2005 at 9:00 am  
6869875.2 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 18.5.2006 at 9:00 am  
Land Covenant in Easement Instrument 6869875.9 - 18.5.2006 at 9:00 am  
Fencing Covenant in Easement Instrument 6869875.9 - 18.5.2006 at 9:00 am  
6920964.1 CAVEAT BY GENERATION LAND LIMITED - 26.6.2006 at 9:00 am



**COMPUTER FREEHOLD REGISTER  
UNDER LAND TRANSFER ACT 1952**



R.W. Muir  
Registrar-General  
of Land

**Search Copy**

**Identifier** 263225  
**Land Registration District** South Auckland  
**Date Issued** 18 May 2006

**Prior References**

234770

---

**Estate** Fee Simple  
**Area** 908 square metres more or less  
**Legal Description** Lot 93 Deposited Plan 363862

**Proprietors**

Wharewaka (2003) Limited

---

**Interests**

Subject to Section 3 Geothermal Energy Act 1953

Subject to Section 3 Petroleum Act 1937

Subject to Section 8 Atomic Energy Act 1945

Subject to Sections 6 and 8 Mining Act 1971

Subject to Part IV A Conservation Act 1987

Subject to Section 27B State-Owned Enterprises Act 1986 (which provides for the resumption of land on the recommendation of the Waitangi Tribunal and which does not provide for third parties, such as the owner of the land, to be heard in relation to the making of any such recommendation) - 29.11.1991 at 9.46 am

Subject to Sections 5 and 261 Coal Mines Act 1979

6703367.13 Encumbrance to Taupo District Council - 22.12.2005 at 9:00 am

6869875.2 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 18.5.2006 at 9:00 am

Subject to a right (in gross) to drain sewage over parts marked BJ and CA on DP 363862 in favour of The Taupo District Council created by Easement Instrument 6869875.4 - 18.5.2006 at 9:00 am

The easements created by Easement Instrument 6869875.4 are subject to Section 243 (a) Resource Management Act 1991

Land Covenant in Easement Instrument 6869875.9 - 18.5.2006 at 9:00 am

Fencing Covenant in Easement Instrument 6869875.9 - 18.5.2006 at 9:00 am

6920964.1 CAVEAT BY GENERATION LAND LIMITED - 26.6.2006 at 9:00 am



**COMPUTER FREEHOLD REGISTER  
UNDER LAND TRANSFER ACT 1952**



Search Copy

  
R. W. Muir  
Registrar-General  
of Land

**Identifier** 263226  
**Land Registration District** South Auckland  
**Date Issued** 18 May 2006

**Prior References**  
234770

---

**Estate** Fee Simple  
**Area** 789 square metres more or less  
**Legal Description** Lot 94 Deposited Plan 363862

**Proprietors**  
Wharewaka (2003) Limited

---

**Interests**

Subject to Section 3 Geothermal Energy Act 1953  
Subject to Section 3 Petroleum Act 1937  
Subject to Section 8 Atomic Energy Act 1945  
Subject to Sections 6 and 8 Mining Act 1971  
Subject to Part IV A Conservation Act 1987  
Subject to Section 27B State-Owned Enterprises Act 1986 (which provides for the resumption of land on the recommendation of the Waitangi Tribunal and which does not provide for third parties, such as the owner of the land, to be heard in relation to the making of any such recommendation) - 29.11.1991 at 9.46 am  
Subject to Sections 5 and 261 Coal Mines Act 1979  
6703367.13 Encumbrance to Taupo District Council - 22.12.2005 at 9:00 am  
6869875.2 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 18.5.2006 at 9:00 am  
Subject to a right (in gross) to drain sewage over part marked BZ on DP 363862 in favour of The Taupo District Council created by Easement Instrument 6869875.4 - 18.5.2006 at 9:00 am  
The easements created by Easement Instrument 6869875.4 are subject to Section 243 (a) Resource Management Act 1991  
Land Covenant in Easement Instrument 6869875.9 - 18.5.2006 at 9:00 am  
Fencing Covenant in Easement Instrument 6869875.9 - 18.5.2006 at 9:00 am  
6920964.1 CAVEAT BY GENERATION LAND LIMITED - 26.6.2006 at 9:00 am



**COMPUTER FREEHOLD REGISTER  
UNDER LAND TRANSFER ACT 1952**



Search Copy

  
R. W. Muir  
Registrar-General  
of Land

**Identifier** 263227  
**Land Registration District** South Auckland  
**Date Issued** 18 May 2006

**Prior References**

234770

---

**Estate** Fee Simple  
**Area** 898 square metres more or less  
**Legal Description** Lot 95 Deposited Plan 363862

**Proprietors**

Wharewaka (2003) Limited

---

**Interests**

Subject to Section 3 Geothermal Energy Act 1953

Subject to Section 3 Petroleum Act 1937

Subject to Section 8 Atomic Energy Act 1945

Subject to Sections 6 and 8 Mining Act 1971

Subject to Part IV A Conservation Act 1987

Subject to Section 27B State-Owned Enterprises Act 1986 (which provides for the resumption of land on the recommendation of the Waitangi Tribunal and which does not provide for third parties, such as the owner of the land, to be heard in relation to the making of any such recommendation) - 29.11.1991 at 9.46 am

Subject to Sections 5 and 261 Coal Mines Act 1979

6703367.13 Encumbrance to Taupo District Council - 22.12.2005 at 9:00 am

6869875.2 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 18.5.2006 at 9:00 am

Subject to a right (in gross) to drain sewage over part marked BY on DP 363862 in favour of The Taupo District Council created by Easement Instrument 6869875.4 - 18.5.2006 at 9:00 am

The easements created by Easement Instrument 6869875.4 are subject to Section 243 (a) Resource Management Act 1991

Land Covenant in Easement Instrument 6869875.9 - 18.5.2006 at 9:00 am

Fencing Covenant in Easement Instrument 6869875.9 - 18.5.2006 at 9:00 am

6920964.1 CAVEAT BY GENERATION LAND LIMITED - 26.6.2006 at 9:00 am



**COMPUTER FREEHOLD REGISTER  
UNDER LAND TRANSFER ACT 1952**



**Search Copy**

  
R. W. Muir  
Registrar-General  
of Land

**Identifier** 263228  
**Land Registration District** South Auckland  
**Date Issued** 18 May 2006

**Prior References**  
234770

---

**Estate** Fee Simple  
**Area** 880 square metres more or less  
**Legal Description** Lot 96 Deposited Plan 363862  
**Proprietors**  
Wharewaka (2003) Limited

---

**Interests**

Subject to Section 3 Geothermal Energy Act 1953  
Subject to Section 3 Petroleum Act 1937  
Subject to Section 8 Atomic Energy Act 1945  
Subject to Sections 6 and 8 Mining Act 1971  
Subject to Part IV A Conservation Act 1987  
Subject to Section 27B State-Owned Enterprises Act 1986 (which provides for the resumption of land on the recommendation of the Waitangi Tribunal and which does not provide for third parties, such as the owner of the land, to be heard in relation to the making of any such recommendation) - 29.11.1991 at 9.46 am  
Subject to Sections 5 and 261 Coal Mines Act 1979  
6703367.13 Encumbrance to Taupo District Council - 22.12.2005 at 9:00 am  
6869875.2 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 18.5.2006 at 9:00 am  
Subject to a right (in gross) to drain sewage over part marked BX on DP 363862 in favour of The Taupo District Council created by Easement Instrument 6869875.4 - 18.5.2006 at 9:00 am  
The easements created by Easement Instrument 6869875.4 are subject to Section 243 (a) Resource Management Act 1991  
Land Covenant in Easement Instrument 6869875.9 - 18.5.2006 at 9:00 am  
Fencing Covenant in Easement Instrument 6869875.9 - 18.5.2006 at 9:00 am  
6920964.1 CAVEAT BY GENERATION LAND LIMITED - 26.6.2006 at 9:00 am



**COMPUTER FREEHOLD REGISTER  
UNDER LAND TRANSFER ACT 1952**



Search Copy

  
R.W. Muir  
Registrar-General  
of Land

**Identifier** 263229  
**Land Registration District** South Auckland  
**Date Issued** 18 May 2006

**Prior References**  
234770

---

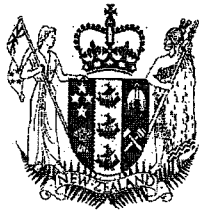
**Estate** Fee Simple  
**Area** 779 square metres more or less  
**Legal Description** Lot 97 Deposited Plan 363862

**Proprietors**  
Wharewaka (2003) Limited

---

**Interests**

Subject to Section 3 Geothermal Energy Act 1953  
Subject to Section 3 Petroleum Act 1937  
Subject to Section 8 Atomic Energy Act 1945  
Subject to Sections 6 and 8 Mining Act 1971  
Subject to Part IV A Conservation Act 1987  
Subject to Section 27B State-Owned Enterprises Act 1986 (which provides for the resumption of land on the recommendation of the Waitangi Tribunal and which does not provide for third parties, such as the owner of the land, to be heard in relation to the making of any such recommendation) - 29.11.1991 at 9.46 am  
Subject to Sections 5 and 261 Coal Mines Act 1979  
6703367.13 Encumbrance to Taupo District Council - 22.12.2005 at 9:00 am  
6869875.2 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 18.5.2006 at 9:00 am  
Land Covenant in Easement Instrument 6869875.9 - 18.5.2006 at 9:00 am  
Fencing Covenant in Easement Instrument 6869875.9 - 18.5.2006 at 9:00 am  
6920964.1 CAVEAT BY GENERATION LAND LIMITED - 26.6.2006 at 9:00 am



**COMPUTER FREEHOLD REGISTER  
UNDER LAND TRANSFER ACT 1952**



**Search Copy**

  
R.W. Muir  
Registrar-General  
of Land

**Identifier** 263230  
**Land Registration District** South Auckland  
**Date Issued** 18 May 2006

**Prior References**

234770

---

**Estate** Fee Simple  
**Area** 721 square metres more or less  
**Legal Description** Lot 98 Deposited Plan 363862

**Proprietors**

Wharewaka (2003) Limited

---

**Interests**

Subject to Section 3 Geothermal Energy Act 1953

Subject to Section 3 Petroleum Act 1937

Subject to Section 8 Atomic Energy Act 1945

Subject to Sections 6 and 8 Mining Act 1971

Subject to Part IV A Conservation Act 1987

Subject to Section 27B State-Owned Enterprises Act 1986 (which provides for the resumption of land on the recommendation of the Waitangi Tribunal and which does not provide for third parties, such as the owner of the land, to be heard in relation to the making of any such recommendation) - 29.11.1991 at 9.46 am

Subject to Sections 5 and 261 Coal Mines Act 1979

6703367.13 Encumbrance to Taupo District Council - 22.12.2005 at 9:00 am

6869875.2 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 18.5.2006 at 9:00 am

Land Covenant in Easement Instrument 6869875.9 - 18.5.2006 at 9:00 am

Fencing Covenant in Easement Instrument 6869875.9 - 18.5.2006 at 9:00 am

6920964.1 CAVEAT BY GENERATION LAND LIMITED - 26.6.2006 at 9:00 am



**COMPUTER FREEHOLD REGISTER  
UNDER LAND TRANSFER ACT 1952**



Search Copy

  
R. W. Muir  
Registrar-General  
of Land

**Identifier** 263231  
**Land Registration District** South Auckland  
**Date Issued** 18 May 2006

**Prior References**  
234770

---

**Estate** Fee Simple  
**Area** 826 square metres more or less  
**Legal Description** Lot 99 Deposited Plan 363862

**Proprietors**  
Wharewaka (2003) Limited

---

**Interests**

Subject to Section 3 Geothermal Energy Act 1953

Subject to Section 3 Petroleum Act 1937

Subject to Section 8 Atomic Energy Act 1945

Subject to Sections 6 and 8 Mining Act 1971

Subject to Part IV A Conservation Act 1987

Subject to Section 27B State-Owned Enterprises Act 1986 (which provides for the resumption of land on the recommendation of the Waitangi Tribunal and which does not provide for third parties, such as the owner of the land, to be heard in relation to the making of any such recommendation) - 29.11.1991 at 9.46 am

Subject to Sections 5 and 261 Coal Mines Act 1979

6703367.13 Encumbrance to Taupo District Council - 22.12.2005 at 9:00 am

6869875.2 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 18.5.2006 at 9:00 am

Subject to a right (in gross) to drain sewage over part marked BK on DP 363862 in favour of The Taupo District Council created by Easement Instrument 6869875.4 - 18.5.2006 at 9:00 am

The easements created by Easement Instrument 6869875.4 are subject to Section 243 (a) Resource Management Act 1991

Land Covenant in Easement Instrument 6869875.9 - 18.5.2006 at 9:00 am

Fencing Covenant in Easement Instrument 6869875.9 - 18.5.2006 at 9:00 am

6920964.1 CAVEAT BY GENERATION LAND LIMITED - 26.6.2006 at 9:00 am



**COMPUTER FREEHOLD REGISTER  
UNDER LAND TRANSFER ACT 1952**



Search Copy

  
R. W. Muir  
Registrar-General  
of Land

**Identifier** 263232  
**Land Registration District** South Auckland  
**Date Issued** 18 May 2006

**Prior References**  
234770

---

**Estate** Fee Simple  
**Area** 1034 square metres more or less  
**Legal Description** Lot 100 Deposited Plan 363862

**Proprietors**  
Wharewaka (2003) Limited

---

**Interests**

Subject to Section 3 Geothermal Energy Act 1953  
Subject to Section 3 Petroleum Act 1937  
Subject to Section 8 Atomic Energy Act 1945  
Subject to Sections 6 and 8 Mining Act 1971  
Subject to Part IV A Conservation Act 1987  
Subject to Section 27B State-Owned Enterprises Act 1986 (which provides for the resumption of land on the recommendation of the Waitangi Tribunal and which does not provide for third parties, such as the owner of the land, to be heard in relation to the making of any such recommendation) - 29.11.1991 at 9.46 am  
Subject to Sections 5 and 261 Coal Mines Act 1979  
6703367.13 Encumbrance to Taupo District Council - 22.12.2005 at 9:00 am  
6869875.2 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 18.5.2006 at 9:00 am  
Land Covenant in Easement Instrument 6869875.9 - 18.5.2006 at 9:00 am  
Fencing Covenant in Easement Instrument 6869875.9 - 18.5.2006 at 9:00 am  
6920964.1 CAVEAT BY GENERATION LAND LIMITED - 26.6.2006 at 9:00 am



**COMPUTER FREEHOLD REGISTER  
UNDER LAND TRANSFER ACT 1952**



Search Copy

R. W. Muir  
Registrar-General  
of Land

**Identifier** 263233  
**Land Registration District** South Auckland  
**Date Issued** 18 May 2006

**Prior References**  
234770

---

**Estate** Fee Simple  
**Area** 642 square metres more or less  
**Legal Description** Lot 101 Deposited Plan 363862

**Proprietors**  
Wharewaka (2003) Limited

---

**Interests**

Subject to Section 3 Geothermal Energy Act 1953  
Subject to Section 3 Petroleum Act 1937  
Subject to Section 8 Atomic Energy Act 1945  
Subject to Sections 6 and 8 Mining Act 1971  
Subject to Part IV A Conservation Act 1987  
Subject to Section 27B State-Owned Enterprises Act 1986 (which provides for the resumption of land on the recommendation of the Waitangi Tribunal and which does not provide for third parties, such as the owner of the land, to be heard in relation to the making of any such recommendation) - 29.11.1991 at 9.46 am  
Subject to Sections 5 and 261 Coal Mines Act 1979  
6703367.13 Encumbrance to Taupo District Council - 22.12.2005 at 9:00 am  
6869875.2 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 18.5.2006 at 9:00 am  
Land Covenant in Easement Instrument 6869875.9 - 18.5.2006 at 9:00 am  
Fencing Covenant in Easement Instrument 6869875.9 - 18.5.2006 at 9:00 am  
6920964.1 CAVEAT BY GENERATION LAND LIMITED - 26.6.2006 at 9:00 am



**COMPUTER FREEHOLD REGISTER  
UNDER LAND TRANSFER ACT 1952**



Search Copy

  
R. W. Muir  
Registrar-General  
of Land

**Identifier** 263234  
**Land Registration District** South Auckland  
**Date Issued** 18 May 2006

**Prior References**

234770

---

<b>Estate</b>	Fee Simple
<b>Area</b>	643 square metres more or less
<b>Legal Description</b>	Lot 102 Deposited Plan 363862

**Proprietors**

Wharewaka (2003) Limited

---

**Interests**

Subject to Section 3 Geothermal Energy Act 1953

Subject to Section 3 Petroleum Act 1937

Subject to Section 8 Atomic Energy Act 1945

Subject to Sections 6 and 8 Mining Act 1971

Subject to Part IV A Conservation Act 1987

Subject to Section 27B State-Owned Enterprises Act 1986 (which provides for the resumption of land on the recommendation of the Waitangi Tribunal and which does not provide for third parties, such as the owner of the land, to be heard in relation to the making of any such recommendation) - 29.11.1991 at 9.46 am

Subject to Sections 5 and 261 Coal Mines Act 1979

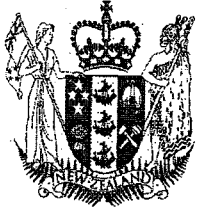
6703367.13 Encumbrance to Taupo District Council - 22.12.2005 at 9:00 am

6869875.2 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 18.5.2006 at 9:00 am

Land Covenant in Easement Instrument 6869875.9 - 18.5.2006 at 9:00 am

Fencing Covenant in Easement Instrument 6869875.9 - 18.5.2006 at 9:00 am

6920964.1 CAVEAT BY GENERATION LAND LIMITED - 26.6.2006 at 9:00 am



**COMPUTER FREEHOLD REGISTER  
UNDER LAND TRANSFER ACT 1952**



  
R.W. Muir  
Registrar-General  
of Land

**Search Copy**

**Identifier** 263235  
**Land Registration District** South Auckland  
**Date Issued** 18 May 2006

**Prior References**  
234770

---

**Estate** Fee Simple  
**Area** 652 square metres more or less  
**Legal Description** Lot 103 Deposited Plan 363862

**Proprietors**  
Wharewaka (2003) Limited

---

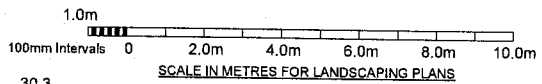
**Interests**

Subject to Section 3 Geothermal Energy Act 1953  
Subject to Section 3 Petroleum Act 1937  
Subject to Section 8 Atomic Energy Act 1945  
Subject to Sections 6 and 8 Mining Act 1971  
Subject to Part IV A Conservation Act 1987  
Subject to Section 27B State-Owned Enterprises Act 1986 (which provides for the resumption of land on the recommendation of the Waitangi Tribunal and which does not provide for third parties, such as the owner of the land, to be heard in relation to the making of any such recommendation) - 29.11.1991 at 9.46 am  
Subject to Sections 5 and 261 Coal Mines Act 1979  
6703367.13 Encumbrance to Taupo District Council - 22.12.2005 at 9:00 am  
6869875.2 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 18.5.2006 at 9:00 am  
Subject to a right (in gross) to drain sewage over part marked BL on DP 363862 in favour of The Taupo District Council created by Easement Instrument 6869875.4 - 18.5.2006 at 9:00 am  
The easements created by Easement Instrument 6869875.4 are subject to Section 243 (a) Resource Management Act 1991  
Land Covenant in Easement Instrument 6869875.9 - 18.5.2006 at 9:00 am  
Fencing Covenant in Easement Instrument 6869875.9 - 18.5.2006 at 9:00 am  
6920964.1 CAVEAT BY GENERATION LAND LIMITED - 26.6.2006 at 9:00 am

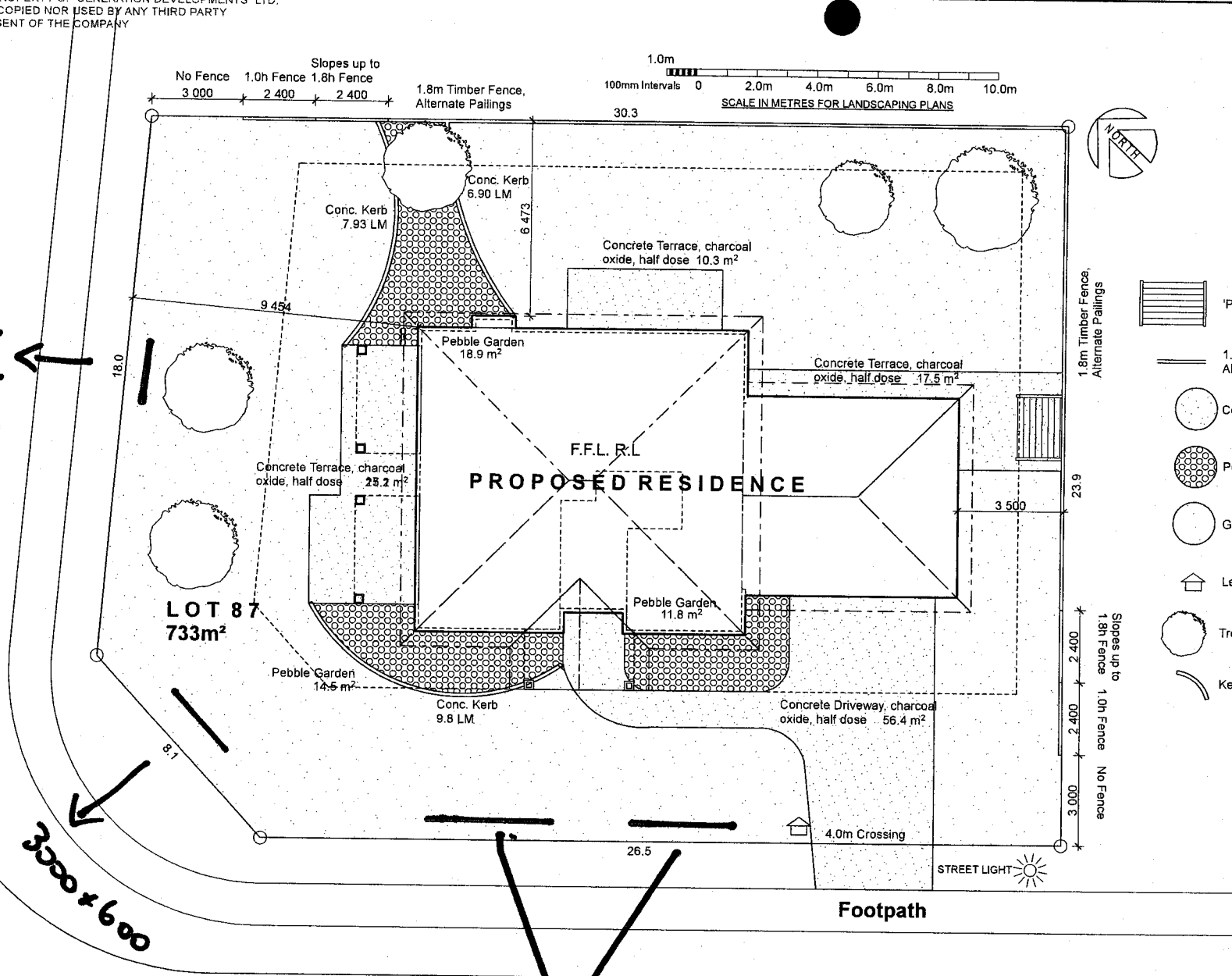
**APPENDIX 2**

**Application Drawings**

© THIS PLAN IS THE PROPERTY OF GENERATION DEVELOPMENTS LTD.  
AND MUST NOT BE COPIED NOR USED BY ANY THIRD PARTY  
WITHOUT THE CONSENT OF THE COMPANY



Lot Sign  
600 x 600



"Seymour"

**GENERATION DEVELOPMENTS LTD.**

Lot 87 Aspect

**Landscape Plan**

SCALE: \_\_\_\_\_

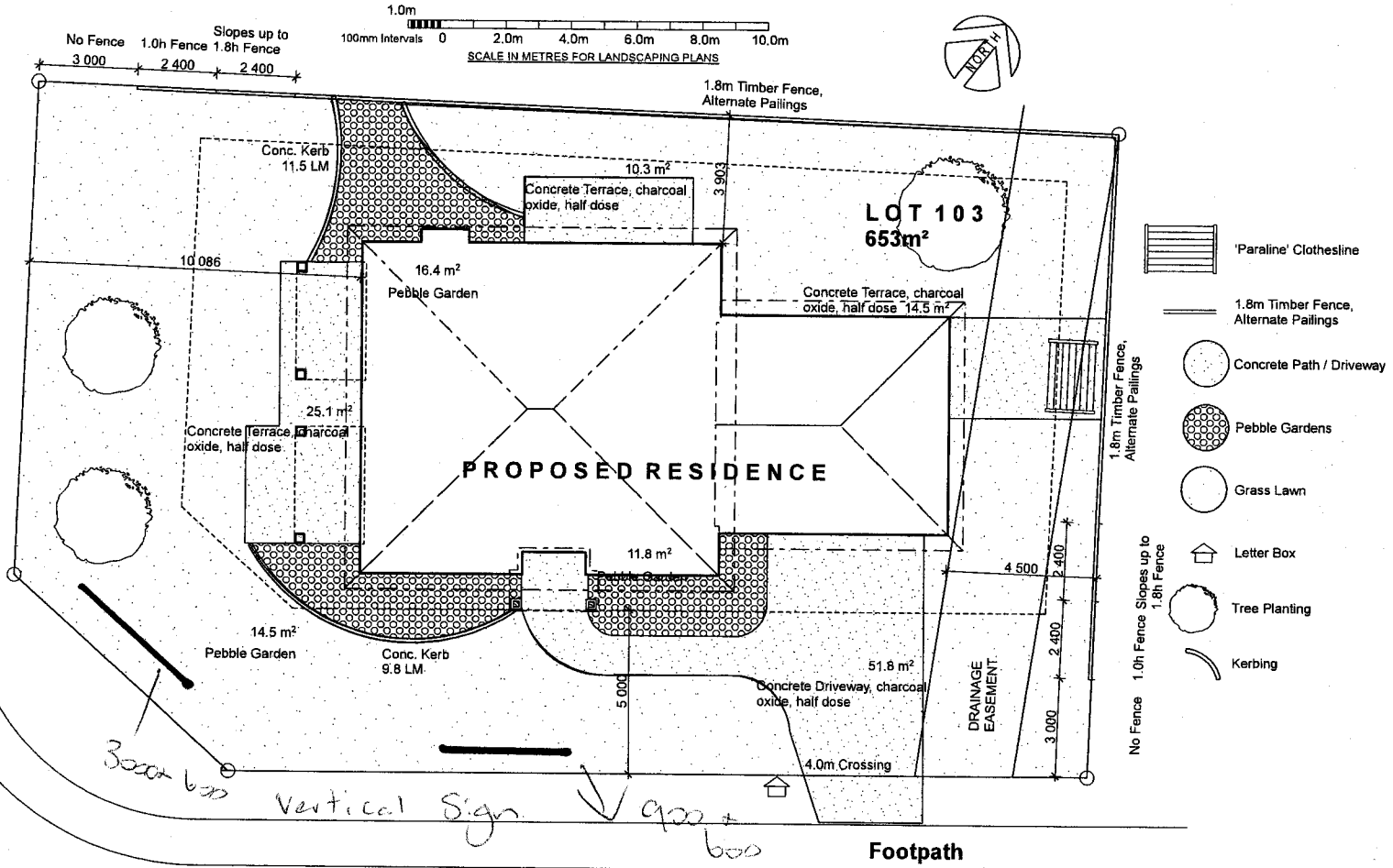
DESIGN: Colin Davis

DRAWN: S Beck

ISSUED: 7/03/2006

SHEET No. \_\_\_\_\_

© THIS PLAN IS THE PROPERTY OF GENERATION DEVELOPMENTS LTD.  
 AND MUST NOT BE COPIED NOR USED BY ANY THIRD PARTY  
 WITHOUT THE CONSENT OF THE COMPANY

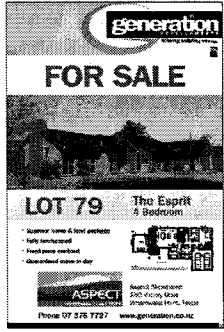


"Fairburn"  
**GENERATION DEVELOPMENTS LTD.**  
 Lot 103 Aspect  
**Landscape Plan**  
 SCALE:  
 DESIGN: Colin Davis  
 DRAWN: S Beck  
 ISSUED: 30/06/2006  
 SHEET No. 04

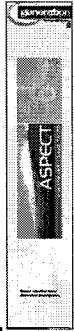


# Signage Plan for Aspect, Wharewaka Point, Taupo

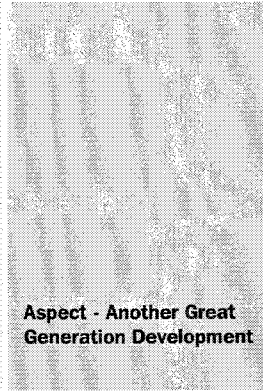
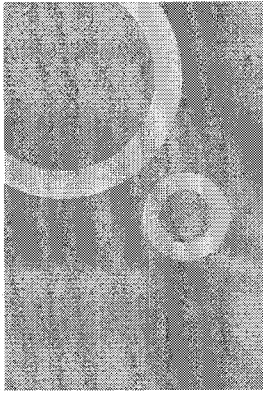
Show home 'For Sale' Lot Sign x 1 – 900x600



Vertical Brand x 1– 3000x600



**3000x600 Vertical Brand Sign**



Aspect - Another Great  
Generation Development

**1200x1200 Brand Billboard  
&  
1200x1200 Site Billboard**

# generation

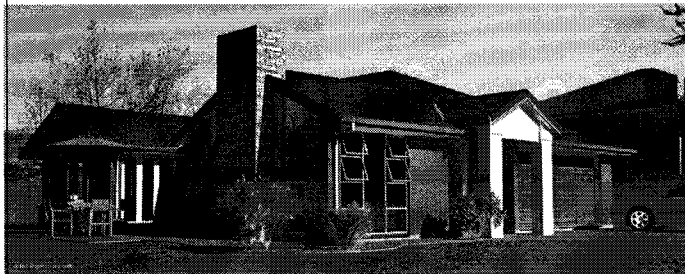
DEVELOPMENTS

Making building easy...



enjoy the Generation experience

- Guaranteed move-in day
- Fixed price contract
- Keeping you informed



**ASPECT**

WHAREWAKA | LAKE TAUPO

Aspect  
a special place

Aspect - Another Great Generation Development

150 Victory Drive, Wharewaka Point, Taupo  
Ph 07 378 7727 sales@generation.co.nz

www.generation.co.nz

# generation

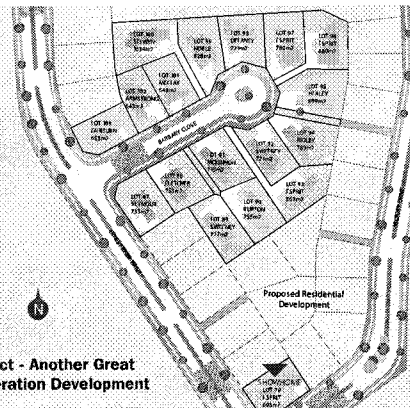
DEVELOPMENTS

Making building easy...

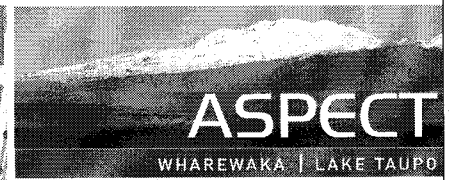


18 Prestigious Home and Land Packages

**SELLING NOW**



Aspect - Another Great Generation Development



**ASPECT**

WHAREWAKA | LAKE TAUPO

**VISIT OUR SHOWHOME TODAY**  
Open Friday to Tuesday  
10.00am - 4.00pm

150 Victory Drive, Wharewaka Point, Taupo  
Ph 07 378 7727

www.generation.co.nz

Asbuilt - Toby Connection - A592252

Contract No. 530

2/1/07

Water Supply Maintenance 2003 - 2006

Asset Identifier HEB Contractors Ltd

Taupo District Council  
Private Bag 2005  
72 Lake Terrace  
TAUPO

DRAINAGE OR WATER SERVICE  
PIPELINE

W30 0122  
S27 0094

Date of Call 16/08/2006 Scheme Taupo

Work Order No. 2459

Pipe Type and Joint Description

Description of Action:  
TURNED ON NEW SERVICE.

Soil Type and Loading Description

System Fault NO

Pipe Sample Taken  Nominal Internal Diameter 0 mm

Visual Condition Assessment

Pipe Class Top of Pipe Depth 0 m

Operating Pressure 0 m 0 kpa

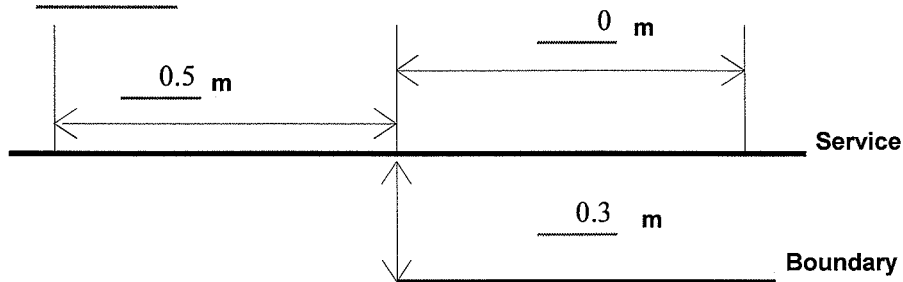
Sample Length 0 500mm

How Pipe was Repaired

Year Pipe Installed

Location of Sample: Suburb / Villa Taupo

House No. 5



Street Name BARBARY CLOSE LOT

**RESPONSE PERFORMANCE DATA**

**Notified**

Date	Time
16/08/2006	8:00 a.m.

**Actioned**

Date	Time
16/08/2006	10:00 a.m.

**Completed**

Date	Time
16/08/2006	11:30 a.m.