

EDGE BEAM
Doc. Date 9/3/1999



Northland: 021 401388
Auckland: 09 5791114
Canterbury: 021 801984
Southern Lakes: 021 494586

www.wiltonjoubert.co.nz
email: jobs@wjlc.co.nz

Job Details: lot 2, 48 Eucalyptus Way

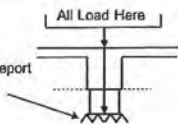
33104

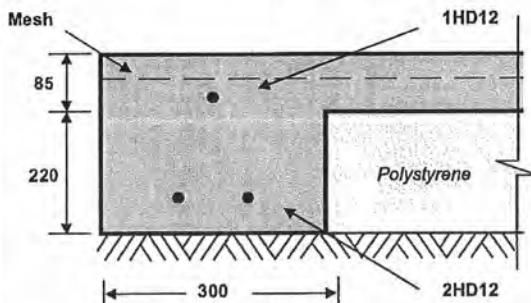
27/2/13

Working Loads	Dead	10.50	kN/m
	Live	2.57	kN/m
Ultimate Loads (1.2G + 1.5Q)	Dead	12.60	kN/m
	Live	3.86	kN/m
Total Ultimate Load on Edge	w = 16.46 kN/m		

Wall Construction Type	Brick Veneer min beam width 300mm		
Edge Beam Details	Beam Width =	300	mm
	Pod Depth =	220	mm
	Top slab Depth =	85	mm
	Self Weight =	2.20	kN/m
	Construction Type =	Standard Raft	

Standard Raft Construction	
dependable bearing capacity:	150 kPa
Bearing Check =	OK!
Working Pressure =	38 kPa
Steel Requirements - As Per Std Drg's	
Top Steel:	1HD12
Btm Steel:	2HD12

Continuous Piers	
(N.B. All Edge Beam Load in to 'strip' footing) Assume 100 kPa Bearing Under Edge Beam, unless a Soil Report Indicates otherwise.  100 kPa min or as specified in Report under loadbearing areas.	Bearing Capacity under Piers: kPa
	Bearing Check =
	Pressure = kPa
	Steel Requirements - As Per Std Drg's
Top Steel:	
Btm Steel:	

The prescribed Edge Beam design is:	
Location (ie: which wall): Edge Beam	Standard Raft Construction 300 mm wide edge beam with 1HD12 in top & 2HD12 in bottom 

INTERNAL RIB
Doc. Date 9/3/1999



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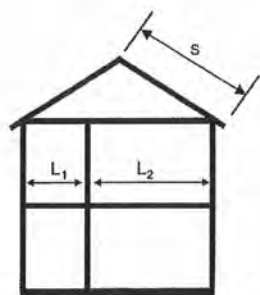
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RIBRAFT DESIGN - INTERNAL LOADBEARING RIB

<Job No.>: 33104
<Job Title>: lot 2, 48 Eucalyptus Way
<Description>: Internal thickening

Date: 27/02/2013
Designer: BB
Checker: DL

Loadings



Tributary Roof and Floor Lengths

WALLS

Lower: HOTBloc Solid
Light (North/South Taupo)
= 400 kg/m²
= 3.92 kPa
Height = m
Load/m = kN/m

Upper: HOTBloc Solid
Light (North/South Taupo)
= 400 kg/m²
= 3.92 kPa
Height = m
Load/m = kN/m

Other (Specify Wall Weight)

Weight = 30 kg/m²
= 0.29 kPa
Height = 2.40 m
Load = 1 kN/m

SUSPENDED MID-FLOOR

Tributary Length = (L₁+L₂)/2

Unit/Floor = Timber
Topping = N/A
= 0.38 kPa
Live Loading = 1.50 kPa
Super Imposed Dead = kPa
Tributary Span = m
Dead Load/m = kN/m
Live Load/m = kN/m

ROOF

Tributary Length = S (Check If Rafter or Truss)
Light = 0.46 kPa
Live Loading = 0.25 kPa
Tributary Span = 3.30 m
Dead Load/m = 1.52 kN/m
Live Load/m = 0.83 kN/m

Loadings Summary

Walls	0.71	kN/m	Dead
Mid Floors		kN/m	Dead
		kN/m	Live
Slab+Edgebeam	4.03	kN/m	Dead
	1.80	kN/m	Live
Roof	1.52	kN/m	Dead
	0.83	kN/m	Live [*]
Extra Dead		kN/m	Dead
Extra Live		kN/m	Live

* Includes Internal Rib Weight, SDL = 0.5 kPa LL = 1.5 kPa

[^] Roof LL not added if midfloor exists else LL = 0.25 kPa

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Job Details: lot 2, 48 Eucalyptus Way

Job Number: 33104

27/2/13

Working Loads	Dead	6.26	kN/m
	Live	2.63	kN/m
Ultimate Loads (1.2G + 1.5Q)	Dead	7.51	kN/m
	Live	3.94	kN/m
Total Ultimate Load on Internal	$w =$	11.45	kN/m

Internal Rib Details	Rib Width =	300	mm	
	Pod Depth =	220	mm	OK!
	Top slab Depth =	85	mm	
	Self Weight =	1.58	kN/m	
	Construction Type	Standard Raft v		

Standard Raft Construction	dependable bearing capacity:	150	kPa
	Bearing Check =	OK!	
	Working Pressure =	24	kPa
	Steel Requirements - As Per Std Drg's		
	Btm Steel:	2HD12	

Continuous Piers (N.B. All Internal Load in to 'strip' footing) Assume 100 kPa Bearing Under Loadbearing Rib, unless a Soil Report indicates otherwise.			
	Bearing Capacity:		kPa
	Bearing Check =		
	Pressure =		kPa
	Steel Requirements - As Per Std Drg's		
	Btm Steel:		

The prescribed internal rib design is:	Standard Raft Construction, 300 wide Rib required with 2HD12 in bottom		
	Location (ie: which wall): Internal thickening		

Job Number: 33104
Job Title: lot 2, 48 Eucalyptus Way
Description:

Date: #
By: BB
Chkd: DL

Calculation of Shear Pile Requirements

Use AS1170 design philosophy of preventing damaging movement up to an SLS event, and thereafter accepting increasing levels of damage as the event increases.

Assumed Class C soil:

City/town: Paraparaumu

$C(t) = Ch(t) Z R N(T,D)$

$Ch(t)$ 2.36

Z 0.4

R_s (25 yr) 0.25

R_u 500yr 1

$N(T,D)$ 1 SLS

$C(t)$ SLS 0.24

$C(t)$ ULS 0.94

Assume $T1 = 0.4$

$k_u = 1 + (u-1)T1/0.7$

$k_u = 1.14$

$C_d(T1) = C(t) Sp/k_u$

For base sliding $Sp = 1.0$

SLS $C_d(T1) = 0.24$

ULS $C_d(T1) = 0.83$

Note for Class D soil SLS $C_d(t1) = 0.30$

ULS $C_d(t1) = 1.05$

Testing by Dr McManus University of Canterbury (Geotechnical Society Symposium, 2003) found the friction coefficient of slab on polythene on sand had peak friction co-efficients of 0.42 for an unloaded slab and 0.53 for a loaded slab. Residual friction coefficient were 0.38 and 0.49 respectively.

These values are some what lower than that published by other sources, normally 0.7 peak and 0.5 residual.

Even using the lower values there will be no relative movement between the slab and the ground at SLS level event on either Class C or D. At ULS level event there may be relative movement between the slab and the ground, this may break services to the house, but will also serve to reduce the forces transferred to the structure of the house. This is acceptable within the intent of NZS 1170.5 2004.

Therefore, based on the above, shear key piles are unnecessary.



**WILTON
JOUBERT**

Consulting Engineers

Beams Analysis

Job Number: 33104 Date: 27/02/2013
Job Title: Lot 15, 48 Eucalyptus Way Designer: BB
Beam Description: Beam 1 Checker: DL

Beam Loadings: Primary Beam			Beam Span =	4.9
roof span:	1.85	m	floor A span:	m
roof weight:	0.46	kPa	floor A weight:	kPa
roof live load (Q):	0.25	kPa	floor A live load:	kPa
roof live load (Su or Wu):	-1.21	kPa	floor B span:	m
wall A height:		m	floor B weight:	kPa
wall A mass:	38	kg/m ²	floor B live load:	kPa
wall B height:		m	self weight:	0.25 kN/m
wall B mass:	38	kg/m ²		

Beam Loadings: Secondary Beam			Beam Span =	10.8
roof span:	2	m	floor A span:	m
roof weight:	0.46	kPa	floor A weight:	kPa
roof live load (Q):	0.25	kPa	floor A live load:	kPa
roof live load (Su or Wu):	-1.21	kPa	floor B span:	m
wall A height:		m	floor B weight:	kPa
wall A mass:		kg/m ²	floor B live load:	kPa
wall B height:		m	self weight:	kN/m
wall B mass:		kg/m ²		

Beam Loadings: Additional Point Load b (PL b)		
G:	5.2	kN
Q:	2.8	kN
Su or Wu:	-13.7	kN

Beam Loadings: Additional Point Load c (PL c)		
G:		kN
Q:		kN
Su or Wu:		kN

Loadings Summary			Point Load, G:	4.968	kN
UDL G:	1.009	kN/m	Q:	2.7	kN
Q:	0.4125	kN/m	Wu or Su:	-13.068	kN
Wu or Su:	-1.9965	kN/m			
Consider Load Combination:			1.2 G and	1.5 Q	Su or Wu
UDL:			1.82955	kN/m	
Sec Beam Point Load:			10.0116	kN	at 2.2 m from support 1
Additional Point Load (PL b):			10.44	kN	at 3.5 m from support 1
Additional Point Load (PL c):			0	kN	at m from support 1

Beam end support condition:		simply supported		M* =	24.1	kNm
Try:	250PFC			V* =	16.4	kN
Beam Type:		steel		support 1 reaction:	13.0	kN
				support 2 reaction:	16.4	kN
for timber &	b =	mm		max. long term deflection:	4.3	mm
flitched beams	d =	mm		max. short term deflection:	4.8	mm
	I =	mm ⁴		allowable defn (functionality), L/400 =	12.3	mm
for other beams	I =	4.51E+07 mm ⁴				OK
	E =	200000 MPa				



**WILTON
JOUBERT**

Consulting Engineers

Beams Analysis

Job Number: 33104
Job Title: Lot 15, 48 Eucalyptus Way
Beam Description: Beam 2

Date: 27/02/2013
Designer: BB
Checker: DL

Beam Loadings: Primary Beam

roof span: 2.2 m
roof weight: 0.46 kPa
roof live load (Q): 0.25 kPa
roof live load (Su or Wu): -1.21 kPa
wall A height: m
wall A mass: 38 kg/m²
wall B height: m
wall B mass: 38 kg/m²

Beam Span = 3.7
floor A span: m
floor A weight: kPa
floor A live load: kPa
floor B span: m
floor B weight: kPa
floor B live load: kPa
self weight: 0.1566 kN/m

Beam Loadings: Secondary Beam

roof span: m
roof weight: kPa
roof live load (Q): kPa
roof live load (Su or Wu): kPa
wall A height: m
wall A mass: kg/m²
wall B height: m
wall B mass: kg/m²

Beam Span =
floor A span: m
floor A weight: kPa
floor A live load: kPa
floor B span: m
floor B weight: kPa
floor B live load: kPa
self weight: kN/m

Beam Loadings: Additional Point Load b (PL b)

G: kN
Q: kN
Su or Wu: kN

Beam Loadings: Additional Point Load c (PL c)

G: kN
Q: kN
Su or Wu: kN

Loadings Summary

UDL G: 1.1686 kN/m Point Load, G: 0 kN
Q: 0.55 kN/m Q: 0 kN
Wu or Su: -2.662 kN/m Wu or Su: 0 kN
Consider Load Combination: 1.2 G and 1.5 Q Su or Wu
UDL: 2.22732 kN/m
Sec Beam Point Load: 0 kN at m from support 1
Additional Point Load (PL b): 0 kN at m from support 1
Additional Point Load (PL c): 0 kN at m from support 1

Beam end support condition:

simply supported

Try: 2/290x45 SG8

Beam Type: timber

for timber & b = 90 mm
flitched beams d = 290 mm
I = 182917500 mm⁴
for other beams I = mm⁴
E = 6700 MPa

M* = 3.8 kNm
V* = 4.1 kN
support 1 reaction: 4.1 kN
support 2 reaction: 4.1 kN
k2 = 2
max. long term deflection: 5.5 mm
max. short term deflection: 3.1 mm
allowable defn (functionality), L/400 = 9.3 mm
OK

Beam Design

ϕ = 0.8
k1 = 0.8
lay/b = 9
k8 = 1
 ϕ M = 11.3 kNm OK
 ϕ V = 42.3 kN OK

shear stress = 3.8 MPa
bending stress = 14 MPa
Z = 1261500 mm³



**WILTON
JOUBERT**

Consulting Engineers

Beams Analysis

Job Number: 33104 Date: 27/02/2013
Job Title: Lot 15, 48 Eucalyptus Way Designer: BB
Beam Description: Beam 3 Checker: DL

Beam Loadings: Primary Beam			Beam Span =	2.8
roof span:	1.6	m	floor A span:	m
roof weight:	0.46	kPa	floor A weight:	kPa
roof live load (Q):	0.25	kPa	floor A live load:	kPa
roof live load (Su or Wu):	-1.21	kPa	floor B span:	m
wall A height:		m	floor B weight:	kPa
wall A mass:	38	kg/m ²	floor B live load:	kPa
wall B height:		m	self weight:	0.1566 kN/m
wall B mass:	38	kg/m ²		

Beam Loadings: Secondary Beam			Beam Span =	8.8
roof span:	2.3	m	floor A span:	m
roof weight:	0.46	kPa	floor A weight:	kPa
roof live load (Q):	0.25	kPa	floor A live load:	kPa
roof live load (Su or Wu):	-1.21	kPa	floor B span:	m
wall A height:		m	floor B weight:	kPa
wall A mass:		kg/m ²	floor B live load:	kPa
wall B height:		m	self weight:	kN/m
wall B mass:		kg/m ²		

Beam Loadings: Additional Point Load b (PL b)		
G:		kN
Q:		kN
Su or Wu:		kN

Beam Loadings: Additional Point Load c (PL c)		
G:		kN
Q:		kN
Su or Wu:		kN

Loadings Summary		
UDL G:	0.8926	kN/m
Q:	0.4	kN/m
Wu or Su:	-1.936	kN/m
Point Load, G:	4.6552	kN
Q:	2.53	kN
Wu or Su:	-12.2452	kN
Consider Load Combination: 1.2 G and 1.5 Q Su or Wu		
UDL:	1.67112	kN/m
Sec Beam Point Load:	9.38124	kN
Additional Point Load (PL b):	0	kN
Additional Point Load (PL c):	0	kN
	at	0.8 m from support 1
	at	m from support 1
	at	m from support 1

Beam end support condition: simply supported		
Try: 2/290x45 SG8	M* = 6.7 kNm	
Beam Type: timber	V* = 9.0 kN	
	support 1 reaction:	9.0 kN
	support 2 reaction:	5.0 kN
for timber & flitched beams	b = 90 mm	k2 = 2
	d = 290 mm	max. long term deflection: 4.6 mm
	I = 182917500 mm ⁴	max. short term deflection: 2.6 mm
for other beams	I = mm ⁴	allowable defn (functionality), L/400 = 7.0 mm
	E = 6700 MPa	OK

Beam Design		
	φ = 0.8	shear stress = 3.8 MPa
	k1 = 0.8	bending stress = 14 MPa
	lay/b = 9	Z = 1261500 mm ³
	k8 = 1	
φ M =	11.3 kNm	OK
φ V =	42.3 kN	OK



**WILTON
JOUBERT**

Consulting Engineers

Beams Analysis

Job Number: 33104
Job Title: Lot 15, 48 Eucalyptus Way
Beam Description: Beam 4

Date: 27/02/2013
Designer: BB
Checker: DL

Beam Loadings: Primary Beam

roof span:	1.6	m	Beam Span =	2.5	
roof weight:	0.46	kPa	floor A span:		m
roof live load (Q):	0.25	kPa	floor A weight:		kPa
roof live load (Su or Wu):	-1.21	kPa	floor A live load:		kPa
wall A height:		m	floor B span:		m
wall A mass:	38	kg/m ²	floor B weight:		kPa
wall B height:		m	floor B live load:		kPa
wall B mass:	38	kg/m ²	self weight:	0.1296	kN/m

Beam Loadings: Secondary Beam

roof span:	1.9	m	Beam Span =	8.8	
roof weight:	0.46	kPa	floor A span:		m
roof live load (Q):	0.25	kPa	floor A weight:		kPa
roof live load (Su or Wu):	-1.21	kPa	floor A live load:		kPa
wall A height:		m	floor B span:		m
wall A mass:		kg/m ²	floor B weight:		kPa
wall B height:		m	floor B live load:		kPa
wall B mass:		kg/m ²	self weight:		kN/m

Beam Loadings: Additional Point Load b (PL b)

G: kN
Q: kN
Su or Wu: kN

Beam Loadings: Additional Point Load c (PL c)

G: kN
Q: kN
Su or Wu: kN

Loadings Summary

UDL G: 0.8656 kN/m Point Load, G: 3.8456 kN
Q: 0.4 kN/m Q: 2.09 kN
Wu or Su: -1.936 kN/m Wu or Su: -10.1156 kN

Consider Load Combination: 1.2 G and 1.5 Q Su or Wu

UDL: 1.63872 kN/m
Sec Beam Point Load: 7.74972 kN at 0.5 m from support 1
Additional Point Load (PL b): 0 kN at m from support 1
Additional Point Load (PL c): 0 kN at m from support 1

Beam end support condition:

simply supported

Try: 2/240x45 SG8

Beam Type: timber

for timber & b = 90 mm
flitched beams d = 240 mm
l = 103680000 mm⁴
for other beams l = mm⁴
E = 6700 MPa

M* = 3.9 kNm
V* = 8.2 kN
support 1 reaction: 8.2 kN
support 2 reaction: 3.6 kN
k2 = 2
max. long term deflection: 4.0 mm
max. short term deflection: 2.3 mm
allowable defn (functionality), L/400 = 6.3 mm
OK

Beam Design

ϕ = 0.8
k1 = 0.8
lay/b = 9
k8 = 1
shear stress = 3.8 MPa
bending stress = 14 MPa
Z = 864000 mm³
 ϕ M = 7.7 kNm OK
 ϕ V = 35.0 kN OK



**WILTON
JOUBERT**

Consulting Engineers

Beams Analysis

Job Number: 33104
Job Title: Lot 15, 48 Eucalyptus Way
Beam Description: Beam 5

Date: 27/02/2013
Designer: BB
Checker: DL

Beam Loadings: Primary Beam

roof span: 5.2 m
roof weight: 0.46 kPa
roof live load (Q): 0.25 kPa
roof live load (Su or Wu): -1.21 kPa
wall A height: m
wall A mass: 38 kg/m²
wall B height: m
wall B mass: 38 kg/m²

Beam Span = 3.2
floor A span: m
floor A weight: kPa
floor A live load: kPa
floor B span: m
floor B weight: kPa
floor B live load: kPa
self weight: 0.1296 kN/m

Beam Loadings: Secondary Beam

roof span: m
roof weight: kPa
roof live load (Q): kPa
roof live load (Su or Wu): kPa
wall A height: m
wall A mass: kg/m²
wall B height: m
wall B mass: kg/m²

Beam Span =
floor A span: m
floor A weight: kPa
floor A live load: kPa
floor B span: m
floor B weight: kPa
floor B live load: kPa
self weight: kN/m

Beam Loadings: Additional Point Load b (PL b)

G: kN
Q: kN
Su or Wu: kN

Beam Loadings: Additional Point Load c (PL c)

G: kN
Q: kN
Su or Wu: kN

Loadings Summary

UDL G: 2.5216 kN/m Point Load, G: 0 kN
Q: 1.3 kN/m Q: 0 kN
Wu or Su: -6.292 kN/m Wu or Su: 0 kN
Consider Load Combination: 1.2 G and 1.5 Q Su or Wu
UDL: 4.97592 kN/m
Sec Beam Point Load: 0 kN at m from support 1
Additional Point Load (PL b): 0 kN at m from support 1
Additional Point Load (PL c): 0 kN at m from support 1

Beam end support condition:

simply supported

Try: 2/240x45 hyspan

Beam Type: timber

for timber & b = 90 mm
flitched beams d = 240 mm
I = 103680000 mm⁴
for other beams I = mm⁴
E = 13200 MPa

M* = 6.4 kNm
V* = 8.0 kN
support 1 reaction: 8.0 kN
support 2 reaction: 8.0 kN
k2 = 2
max. long term deflection: 6.1 mm
max. short term deflection: 3.4 mm
allowable defn (functionality), L/400 = 8.0 mm
OK

Beam Design

ϕ = 0.9
k1 = 0.8
lay/b = 9
k8 = 1
 ϕ M = 26.5 kNm OK
 ϕ V = 48.8 kN OK

shear stress = 5.3 MPa
bending stress = 48 MPa
Z = 864000 mm³



MiTek New Zealand Limited

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MiTek 20/20 Engineering 4.6.6.169

30 APR 2013
BY: 0003
www.mitek.nz.co.nz

Printed: 13:31:55 05 Mar 2013

PRODUCER STATEMENT for MiTek 20/20® TRUSS DESIGN - Version 4.6

ISSUED BY: MiTek New Zealand Limited
TO: Katikati Building Supplies Ltd
IN RESPECT OF: MiTek® Truss Designs

This producer statement covers the MiTek 20/20® truss design and the structural performance of the GANG-NAIL® connector plate for the job reference **WN100A** and may be used by a Building Consent Authority to assist in determining compliance with the New Zealand Building Code.

The MiTek 20/20® truss design program has been developed by MiTek New Zealand Limited for the design of MiTek® timber roof, floor and attic trusses in New Zealand. The truss designs computed by MiTek 20/20® are prepared using sound and widely accepted engineering principles, and in accordance with compliance documents of the New Zealand Building Code and Verification Method B1/VM1; and internationally accepted standard ANSI/TPI 1 - 2002 as an alternative solution to satisfy the requirements of Clause B1 of the New Zealand Building Code.

On behalf of MiTek New Zealand Limited, and subject to:

- i) All proprietary products meeting their performance specification requirements
- ii) The provision of adequate roof bracing and overall building stability
- iii) Correct selection and placement of GANG-NAIL connector plates
- iv) Correct Input of Truss Design Data as shown in the Fabricator Design Statement for this job
- v) The design being undertaken by the accredited fabricator under the terms of the software licence

I believe on reasonable grounds that the trusses, if constructed in accordance with the MiTek 20/20® truss design and shop drawings, will comply with the relevant provisions of the New Zealand Building Code.

MiTek New Zealand Limited holds a current policy of Professional Indemnity Insurance no less than \$500,000.

On behalf of MiTek New Zealand Limited,

Date: Tuesday, 5 March 2013

In Ling Ng, BE (Hons), CPEng, IntPE, MIPENZ (ID: 146585)
TECHNICAL SERVICES MANAGER, MiTek New Zealand Limited

Job: WN100A

Client: Platinum Homes NZ Ltd
Phone:Site: PETER ALED ROBERTS
45 EUCALYPTUS WAY
NIKAU VALLEY
PARAPARAUMU

Phone:

Description:
Building Consent No.:
MITek 2020 Engineering 4.8.6.109

MITek New Zealand Limited

Printed: 13:21:55 05 Mar 2013

MITEK FABRICATOR DESIGN STATEMENT

This statement is issued by MITek accredited fabricator Katikati Building Supplies Ltd, being licensed to use the MITek 20/20[®] software, to the client listed above and may be used by the Building Consent Authority to assist in determining compliance with the New Zealand Building Code.

MITek 20/20[®] TRUSS DESIGN DATA

The MITek 20/20[®] computer design for this job is based on the following design parameters entered into the program. The Fabricator shall ensure that these job details are current and relevant to the project for the design of the MITek[®] trusses.

Job Details**Roof Truss**

Timber Group: MSG8x45-H1.2
Roof:
Material: Metal Tiles
Dead Load: 0.210 kPa
Restraints: 400 mm centres
Live Load: Q_{ur} = 0.250 kPa
Q_c = 1.100 kN

Importance Level: 2

Pitch: 25.000 deg
Ceiling:
Material: Rondo on clips
Dead Load: 0.200 kPa
Restraints: 1800 mm centres
Live Load: Q_c = 1.400 kN

Design Working Life: 50 years

Nominal Overhang: 600 mm
Wind:
Area: High (44.0 m/s)
Pressure Coeff: C_{pe} = varies; C_{pi} = -0.30, 0.20

The timber for these MITek[®] trusses shall be treated to the requirements of NZS 3602:2003 and shall be graded to the requirements of NZS 3603:1993. Unless otherwise noted, this design assumes that the steel fixings and timber connectors proposed are located in a "closed environment", as defined by NZS3604:2011 Section 4.

MITek[®] Truss List

Legend: * = detail only, ? = input only, ✕ = failed design, Ø = non certified, Unmarked trusses = designed successfully, LB = lateral bracing required
GB = gable brace 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)
T01	1	10760	25.000	900	J01H	1	2657	25.000	900	V02	1	1646	25.000	900
T01A	1	10760	25.000	900	J02	1	1757	25.000	900	V03	1	1155	25.000	900
T01B	1	10760	25.000	900	J02A	1	1757	25.000	900	V05	1	967	25.000	900
T02	1	9980	25.000	900	J02B	1	1757	25.000	900	*HB01	2	8425	18.249	900
T03	1	8760	25.000	900	J02C	1	1757	25.000	900	*HB02	1	4904	18.249	900
T04	3	8760	25.000	845	J03	1	2557	25.000	900	*HB03	1	4950	18.249	900
T05	1	5357	25.000	900	J03A	1	2557	25.000	900	*HB04	2	7011	18.249	900
T06	1D	5357	25.000	900	J03B	1	2557	25.000	900	*HB05	2	4621	18.249	900
TG01	1D	10760	25.000	900	J03C	1	2557	25.000	900	*R01	1	1470	25.000	900
TG02	1	8870	25.000	900	J03D	1	2557	25.000	900	*R01A	1	1470	25.000	900
TG03	1	8760	25.000	900	J03E	1	2557	25.000	900	*R02	6	913	25.000	900
TR01	1	10760	25.000	900	J03F	1	2557	25.000	900	*R02A	6	913	25.000	900
TR02	1	10760	25.000	900	J04	1	1657	25.000	900	*R03	1	3500	25.000	900
TR03	1	8870	25.000	900	J04A	1	1657	25.000	900	*R04	1	813	25.000	900
TR04	1	8870	25.000	900	J04B	1	1657	25.000	900	*R04A	1	813	25.000	900
TR05	1	8760	25.000	900	J04C	1	1657	25.000	900	*R05	1	1713	25.000	900
J01	1	2657	25.000	900	J05	1	2667	25.000	900	*R05A	1	1713	25.000	900
J01A	1	2657	25.000	900	J05A	1	2667	25.000	900	*R06	1	2613	25.000	900
J01B	1	2657	25.000	900	J05B	1	2667	25.000	900	*R06A	1	2613	25.000	900
J01C	1	2657	25.000	900	J06	1	1767	25.000	900	*R07	1	1370	25.000	900
J01D	1	2657	25.000	900	J06A	1	1767	25.000	900	*R07A	1	1370	25.000	900
J01E	1	2657	25.000	900	J06B	1	1767	25.000	900	*R08	1	1480	25.000	900
J01F	1	2657	25.000	900	J06C	1	1767	25.000	900	*R08A	1	1480	25.000	900
J01G	1	2657	25.000	900	V01	1	3448	25.000	900					

Total quantity : 86

The computer design input has been carried out by:

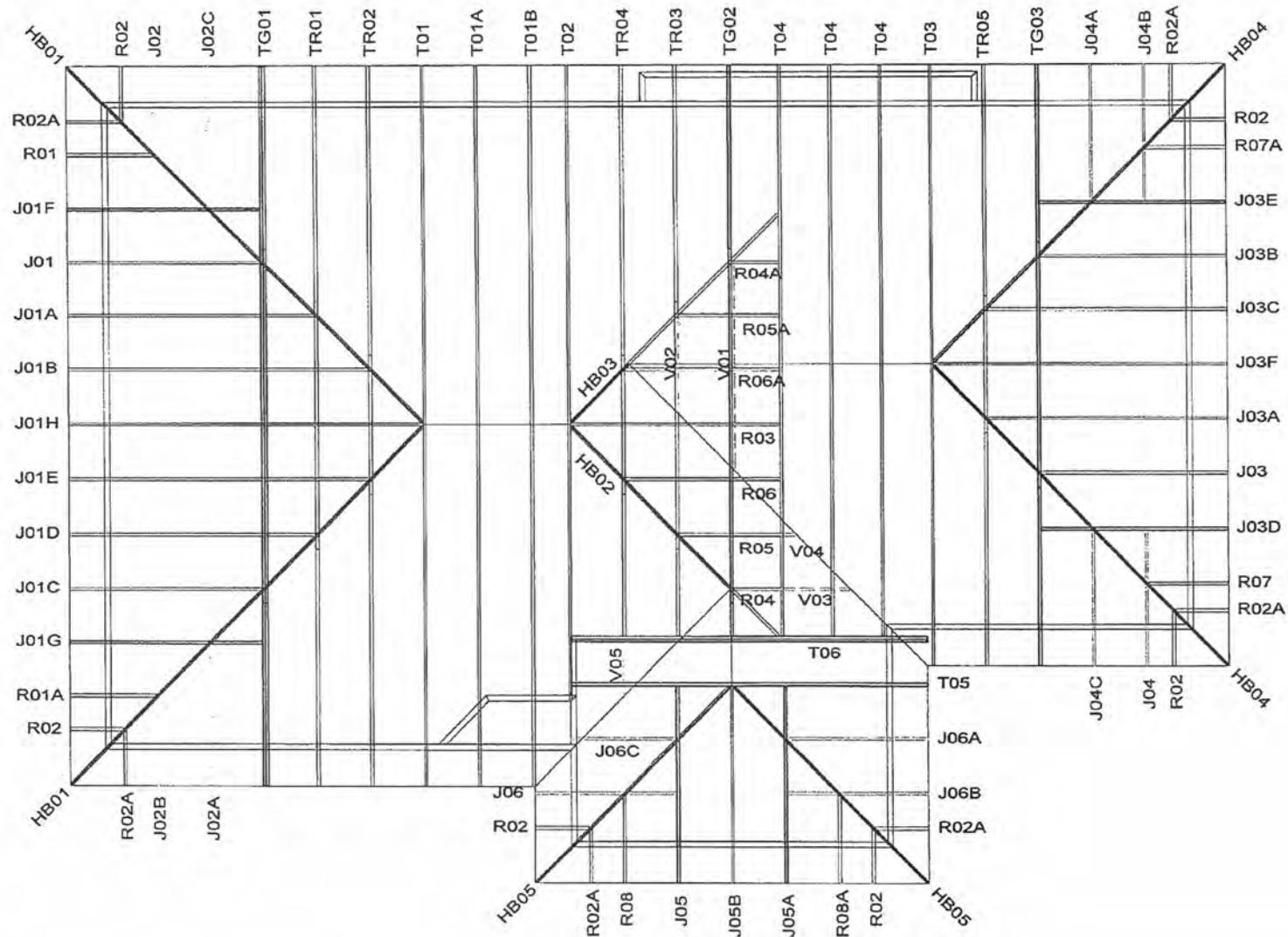
Signed: 

Date: ...Tuesday, 5 March 2013....

On behalf of:

Katikati Building Supplies Ltd

BC 130241



Katikati Building Supplies Ltd

12 Earl Drive
Katikati
New Zealand
Fax 07 549 0702
Telephone: Ph 07 549 0689

Name: Platinum Homes NZ Ltd
Address: 48 EUCALYPTUS WAY
NIKAU VALLEY
PARAPARAUMU

Job:
WN100A

Building Consent No.:

Scale: 1 : 100

Date: 11/02/2013

Drawn By: Dave

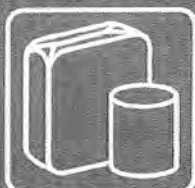
CONSTRUCTION CHEMICALS

Dribond

Liquid Flash II

2-PACK, FAST DRYING, REINFORCED, WATERPROOFING MEMBRANE

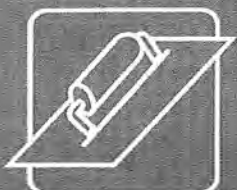
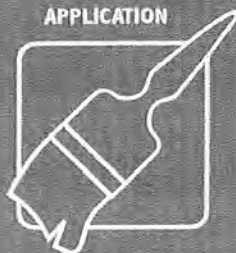
PACKAGING



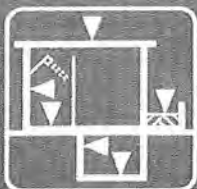
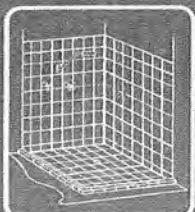
MIXING



APPLICATION



USES



SUBSTRATES

CONCRETE, BRICK
BLOCK
BUILDING BOARDS
ROOFS, DECKS,
BASEMENT, POOLS,
WET AREAS, TANKS

DESCRIPTION

Liquid Flash II is a two pack fast drying, reinforced, cement/acrylic flexible waterproofing membrane that is easily applied to form a resilient waterproof membrane between different building surfaces. Liquid Flash II will remain pliable and elastic and will bridge cracks and smooth irregular surfaces. Internal wet areas must be waterproofed in accordance with AS3740 and local regulations. For more details refer to brochure titled "Waterproofing Enclosed Shower Alcoves Prior to Tiling".

USES

A flashing material for roof vent pipes, parapet walls and roof sheeting/tiles. A waterproofing membrane for roofs, balconies, retaining walls, planter boxes, ponds, internal wet areas (eg bathrooms, kitchens, laundries and toilets). For use on cement render, concrete, brick, block and building boards such as gypsum and cement sheeting on walls and structural timber and compressed cement sheeting on floors, roof and gutter repairs.

FEATURES

- Pre-reinforced.
- Easy to apply.
- Suitable for internal and external uses.
- Fast drying.

COVERAGE (approximate)

10L/20kg pack covers 10-12m² (2 coats).

PERFORMANCE DATA

Tensile Strength 2.96 MPa (ASTM D412-92)

Elongation 46% (ASTM D412-92)

SPECIFICATION

The waterproof membrane shall be Liquid Flash II, a two part cementitious/acrylic membrane manufactured by Construction Chemicals and shall be applied in accordance with the manufacturer's application instructions.

SURFACE APPLICATION

Surfaces must be sound and clean of grease, oil, dust and other contaminants. Treat surfaces as follows before applying Liquid Flash II: – **Galvanised Iron** – new. Degrease with xylene or similar and wash clean with water and allow to dry. **Rusty Surfaces** – Wire brush to remove flaky rust and treat with a rust inhibitor. **Timber** – Prime with a timber primer. **Plastic Pipes** – Roughen area to be coated with sand paper. **Painted Surfaces** – Abrade with a wire brush or sand down to obtain a good mechanical key. Scrub thoroughly with detergent and water and allow to dry. **Cement sheet / Plaster Board** – Prime with 50:50 mix of Bonding Additive and water. **Masonry** – Render/Screed must be at least 7 days old, graded screed 24 hours, concrete 28 days old and a minimum 25 MPa. Smooth concrete must be mechanically abraded and primed with 50:50 mix of Bonding Additive and water before applying Liquid Flash II.

MIXING

Pour 2 litres of liquid into a mixing container and slowly add 4kg of powder. Mix using a slow speed electric drill and mixing paddle being sure to add powder to the liquid, mixing until all lumps are dispersed and the mix is creamy. Do not mix more than can be used in the pot life time. Hand mixing is not recommended.

MEMBRANE APPLICATION

Before applying Liquid Flash II apply 50mm bond breaking tape (masking tape) to the junction of walls/floors, walls/walls, structural cracks and joints in building boards to accommodate extremes in movement. Apply two coats. Apply the second coat at 90° to the first as soon as it is dry (recoat time is approximately 2 hours at 25°C). Apply each coat thickly (approximately 1.5mm wet) allowing it to flow rather than being brushed on. Use a soft brush for best results. Trowel applied adjust mix to suit. A final thickness of 1.5mm is required.

30 APR 2013
0003C

FLASHING APPLICATION

At the junction of two surfaces apply 50mm bond breaking tape (masking tape) equally to both surfaces. This will eliminate wastage of material dropping through the hole and allow for extremes of movement. On round pipes use 50mm square pieces of masking tape around the circumference of the pipe. To make a clean line at the edge of the flashing, apply masking tape to the outside of the area to be coated. Apply two coats 75mm or more to each surface. Can be painted to colour match surroundings using acrylic based paints. A final thickness of 1.5mm is required.

POT LIFE

30 MINS AT 25°C @ 50% R.H.

PRECAUTION

The membrane will crack on the surface if excess powder is used. Do not thin or add filler.

- Apply at temperatures between 10°C-30°C.
- At above 30°C temperatures the membrane exhibits thermoplastic characteristics.
- Not to be used over surfaces where continuous rising damp is a problem for hydrostatic pressure is present.
- Used in shower alcoves should be allowed approximately 72 hours at 20°C 50%RH (depending on conditions) before tiling. Allow 7 days after application of before using shower.
- It is advisable to flood test the shower after curing (approximately 72 hours at 20°C 50%RH). This should be done before tiling commences.

JOINTS/CRACKS

Apply 50mm wide bond breaking tape (masking tape) over the crack or the junction of the two surfaces. Bridge the crack by a minimum of 50mm each side.

CURING

4 hours 25°C @ 50% relative humidity. Protect from rain for the first 4 hours. Cold damp conditions – increases curing time. Hot dry conditions – reduces curing time.

Immersed applications i.e. ponds, must be allowed to cure for 7 days before being put into use.

FIRST AID

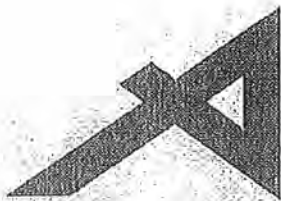
If swallowed, do not induce vomiting. Give a glass of water and seek medical advice.

CLEANUP

Clean up in water. Cured material with xylene solvent or similar.

**CONSTRUCTION
CHEMICALS**

• **ADELAIDE** 467 - 469 SOUTH RD REGENCY PARK 5010 PH: (08) 8346 8013 FAX: (08) 8340 2052
• **BRISBANE** 45 COULSON ST WACOL 4076 PH: (07) 3271 2944 FAX: (07) 3271 3892
• **MELBOURNE** 1 / 10 GABRIELLE CT BAYSWATER NORTH 3153 PH: (03) 9761 4711 FAX: (03) 9761 4748
• **PERTH** 61 DOWD ST WELSHPOOL 6106 PH: (08) 9358 6493 FAX: (08) 9358 6493
• **SYDNEY** 2/ 31-33 NEWTON RD WETHERILL PARK 2164 PH: (02) 9756 3533 FAX: (02) 9756 3534
• **AUCKLAND** 16 CARPENTER RD EAST TAMAKI PH: (09) 273 6444 FAX: 0800 266 236
• **KUALA LUMPUR** LOT 2 JALAN KEGAPI 33/2 ELITE INDUSTRIAL ESTATE OFF JALAN BUKIT KEMUNING
PH: (03) 622 2522 FAX: (03) 622 2526



BRANZ Appraised
Appraisal No.356 [2005]

BRANZ Appraisals

Technical Assessments of products
for building and construction

**BRANZ
APPRAISAL
CERTIFICATE**

No. 356 (2005)

This Certificate replaces BRANZ
Appraisal Certificate No. 356 (1998)
Issued June 1998.

**THERMAKRAFT
COVER-UP™
BREATHER-TYPE
BUILDING WRAP**

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RBW

30 APR 2013

BY: 00033

1.1 Thermakraft Cover-Up™ is a synthetic breather-type building wrap for use as a wall wrap and air barrier under direct and non-direct fixed wall cladding on timber framed buildings. The product is manufactured from tapes of high density polyethylene woven into sheet form, and is coated on both sides with pigmented low density polyethylene. Micro-perforations are made through the coated membrane to permit the passage of water vapour.



2.1 Thermakraft Cover-Up™ has been appraised for use as a wall wrap on timber framed buildings within the following scope:

- the scope limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1; and,
- with absorbent wall claddings directly fixed to framing; and,
- with absorbent and non-absorbent wall claddings installed over an 18 mm minimum drained cavity; and,
- with masonry veneer in accordance with NZS 3604:1999; and,
- situated in NZS 3604 Building Wind Zones up to, and including 'Very High'.

2.2 Thermakraft Cover-Up™ has also been appraised for use on buildings subject to specific weathertightness design. Building designers are responsible for the building design and for the incorporation of Thermakraft Cover-Up™ into their design in accordance with the declared properties and the instructions of Thermakraft Industries (NZ) Ltd.

Readers are advised to check the validity of this Certificate by referring to the Valid Certificates listing on the BRANZ website, or by contacting BRANZ.

RBW



Metrotile

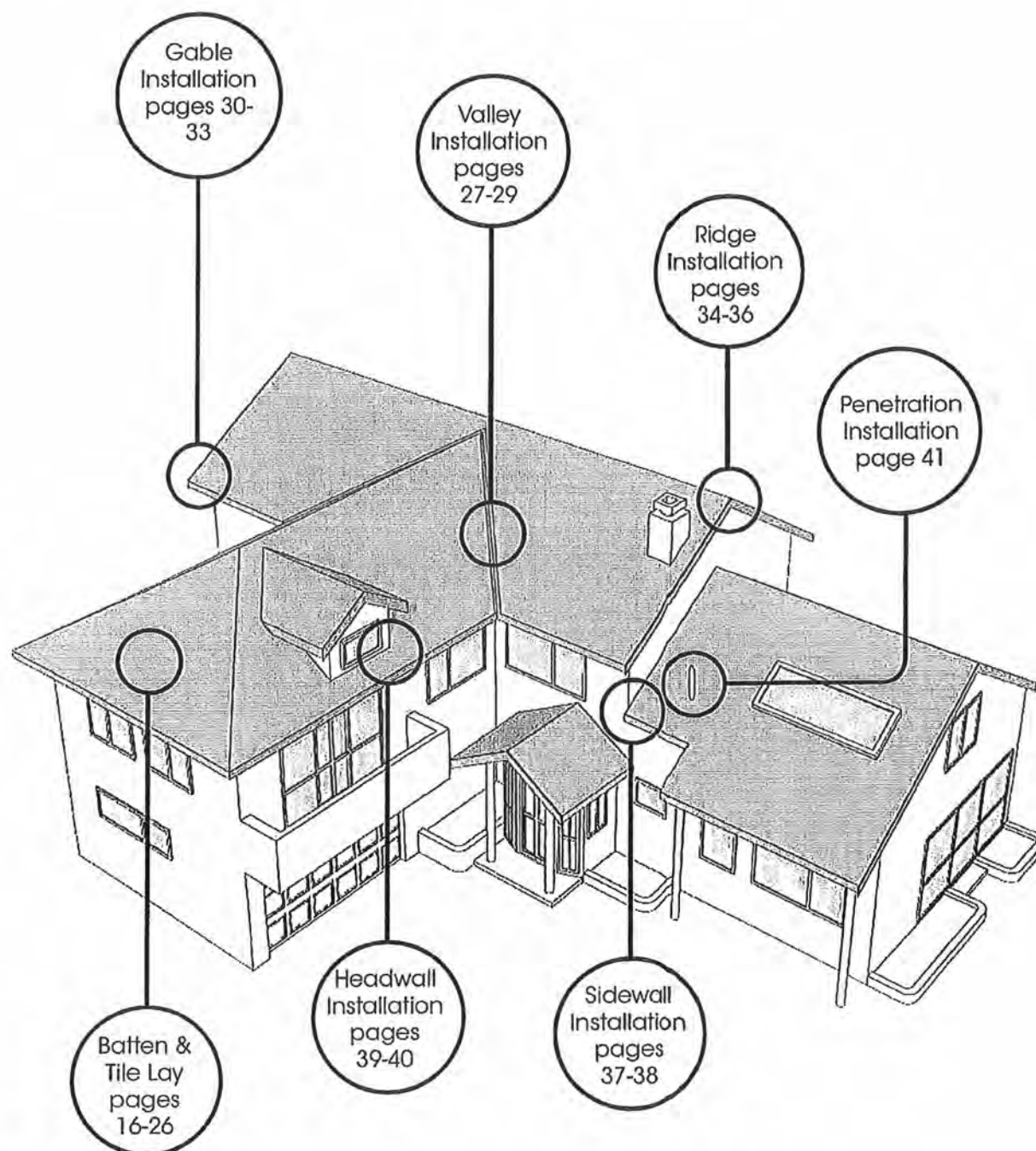
ROOFING SYSTEMS



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E: metromail@metrotile.com
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6. Detail Reference Guide



Preparatory Installation

1. Batten Spacing

Disclaimer: For purposes of uniformity, we have demonstrated 50x40mm battens as this is the most common batten size. This may be substituted for 50x25mm or 50x50mm for different rafter/truss spacings (see Tiling Batten Specifications).

A 50x40mm batten is placed directly behind the fascia around the entire roof. This will serve as the eave batten.

The next batten is placed 320mm from the outside edge of the fascia material to the front edge of the batten. Battens are then placed every 370mm (Satin) or 368mm (Textured) measured from the front edge of each batten continuing up the roof.

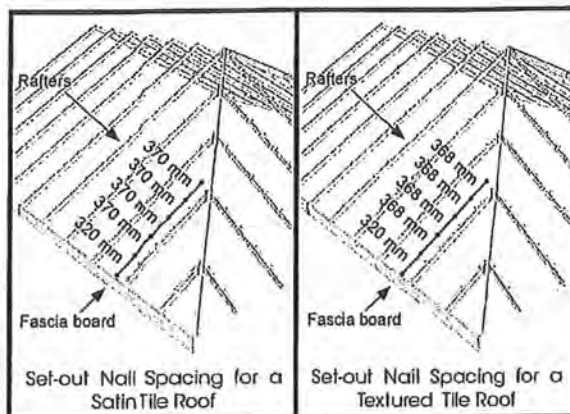
The set out can be done using a setout rod, which is made from a 50x40mm batten or measuring rod of similar thickness.

Measure every 370mm (Satin) or 368mm (Textured) measured up the setout rod and saw notches in the material, making sure the notches are accurate and that the bottom of the notch is square to the rod. The rod is then placed on the rafter and nails are placed in every notch so that you have a series of nails at 368mm or 370mm centres running up each rafter.

2. Batten Cutting

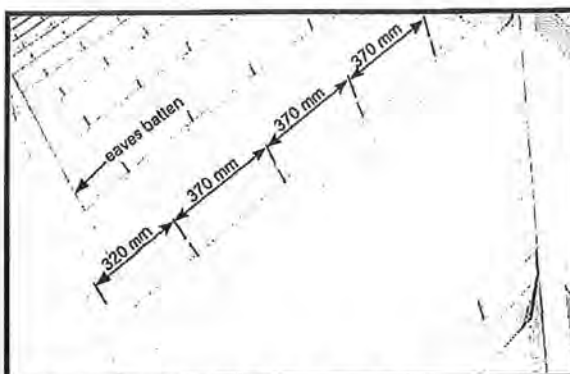
When placing the battens on the set out nails, care should be taken to stagger the joints across several rafters and not to have multiple joints on the same rafter going up the roof truss.

Place the battens on the setout nails mitring each batten onto the hip and valley boards. Make sure joining battens are centred on the rafters and cut ends off that are not straight. Then cut all other joints on the centre line of each rafter where each batten extends to. Then mitre cut each batten onto the hip and valley boards.

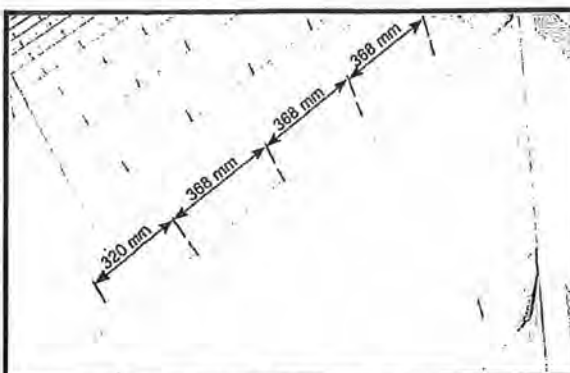


Set-out Nail Spacing for a Satin Tile Roof

Set-out Nail Spacing for a Textured Tile Roof



Set-out Nail Spacing for a Satin Tile Roof



Set-out Nail Spacing for a Textured Tile Roof

Preparatory Installation

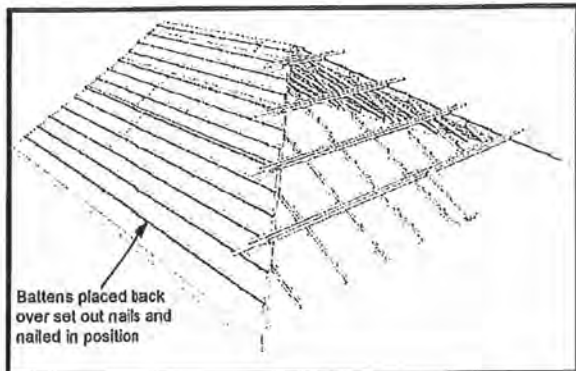
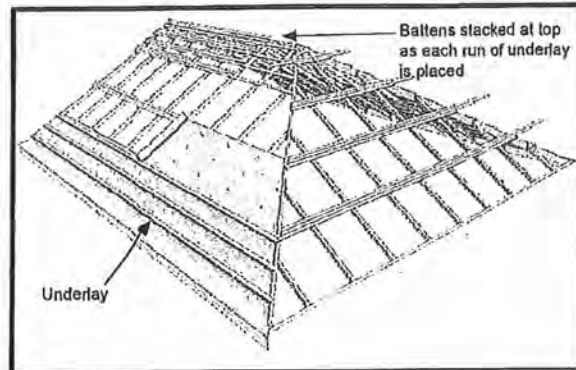
3. Underlay Installation

Once the battens are cut in completely the battens can be moved up to allow the underlay to be rolled out.

Self-supporting breather type building paper must be used. Starting at the bottom, roll out the underlay horizontally across the roof, ensuring that the lower edge of the underlay overhangs the outside edge of the fascia by a minimum of 40mm.

Once each run of underlay is run out, move the battens down to rest on pinout nails. This will enable the installer to continue up the roof plane by walking along these battens. Paper the whole roof, horizontal to the fascia line ensuring that each lap is no less than 150mm, unless it occurs directly underneath a batten, in which case it can be reduced to 75mm. Underlay is to be lapped over each hip and ridge line at least 150mm.

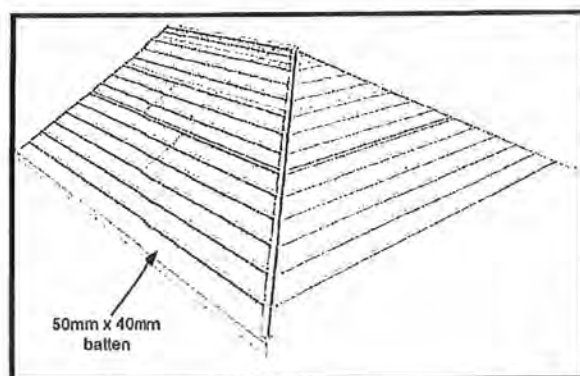
Where the roof meets a wall, the underlay must be folded and run up the wall no less than 200mm.



4. Batten Fastening

Battens shall be nailed through to the rafter with one 90 x 3.15mm nail at each intersection unless greater wind uplift resistance is necessary as stipulated in table 5.10 page 5.

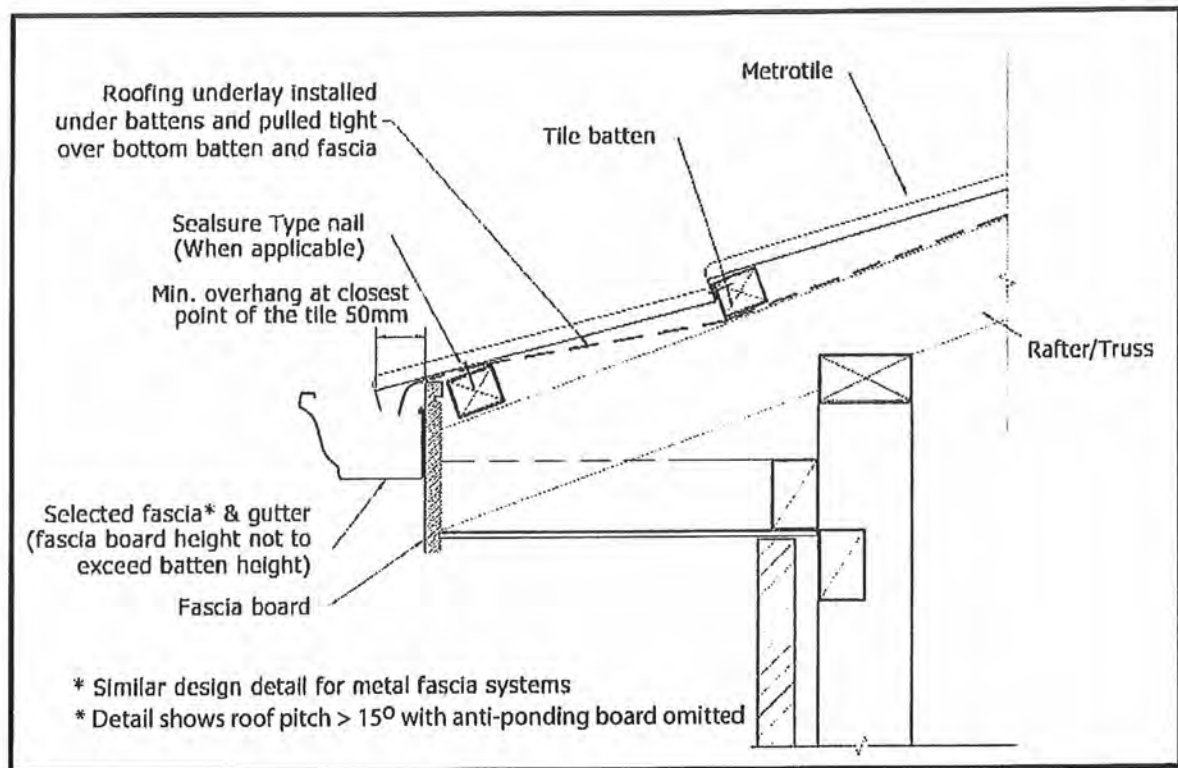
Refer to section 9.0 Tiling Battens on page 6 of the manual, within General Information.



Preparatory Installation Continued

Tiling battens must be:

- H1.2 treated
- Douglas fir of moisture content <20%
- 50 x 25mm for 450mm rafter/truss spacing,
- 50 x 40mm for 900mm rafter/truss spacing
- 50 x 50mm for 1200mm rafter/truss spacing



Tile Laying (Bond, Roman and Classic Specific)

Tile Laying

Tiles can be interlocked either right over left or vice versa (except Roman, only L over R) but should be laid with the laps facing away from prevailing winds or from discharging rain water pipes or valleys. Where possible the tiles should also be laid with the laps facing away from the normal line of sight. (Fig. 1.1)

Tiles are laid by lifting both tiles in the course above and sliding the next course under the nose of the tiles already in place. (Fig. 1.2)

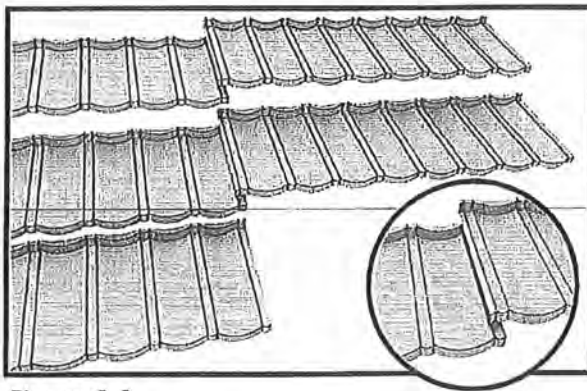


Figure 1.1

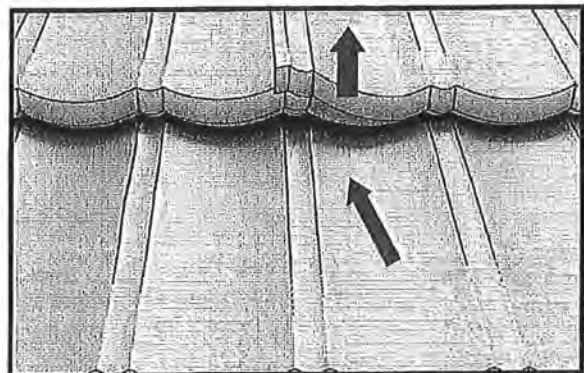


Figure 1.2

Tile Installation Procedure - Hip Roof

General instructions for tile laying as detailed above. On the second to top course (the higher most full tile course), lay the top corner of the first tile 150mm from the hip board. Continue to lay tiles towards the other hip until the last full tile will fit.

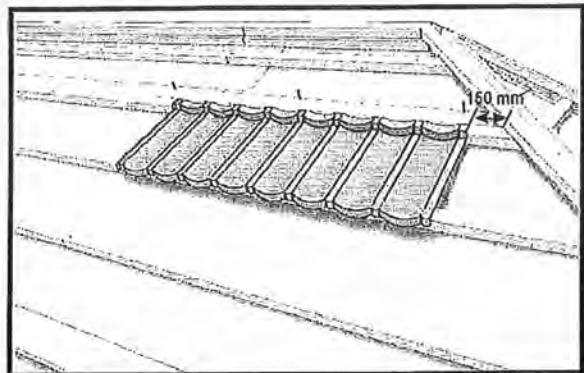


Figure 1.3

Secure these tiles by tacking through the back flange (Fig 1.3). Lay subsequent courses two at a time, both starting about the same distance from the hip board. (Fig 1.4 & 1.5)

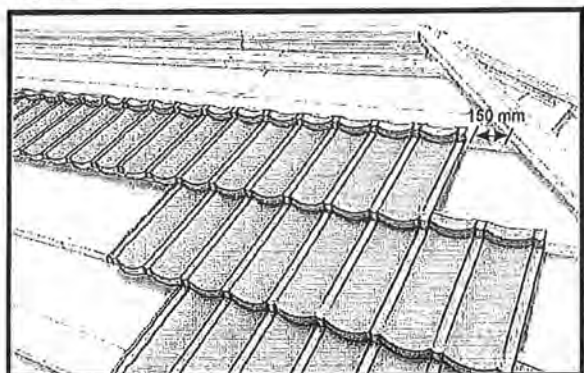


Figure 1.4

Tile Lay Continued

Care should be taken to line up the corrugations. To reduce waste, use part tiles to complete rows within approximately 150mm of hip board (Fig 1.6). This allows each end of a full tile to be cut and bent to fill the gaps.

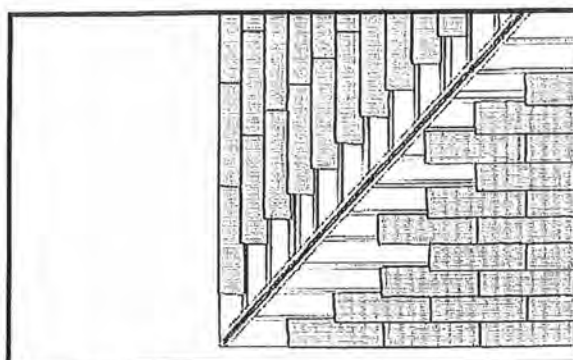


Figure 1.5

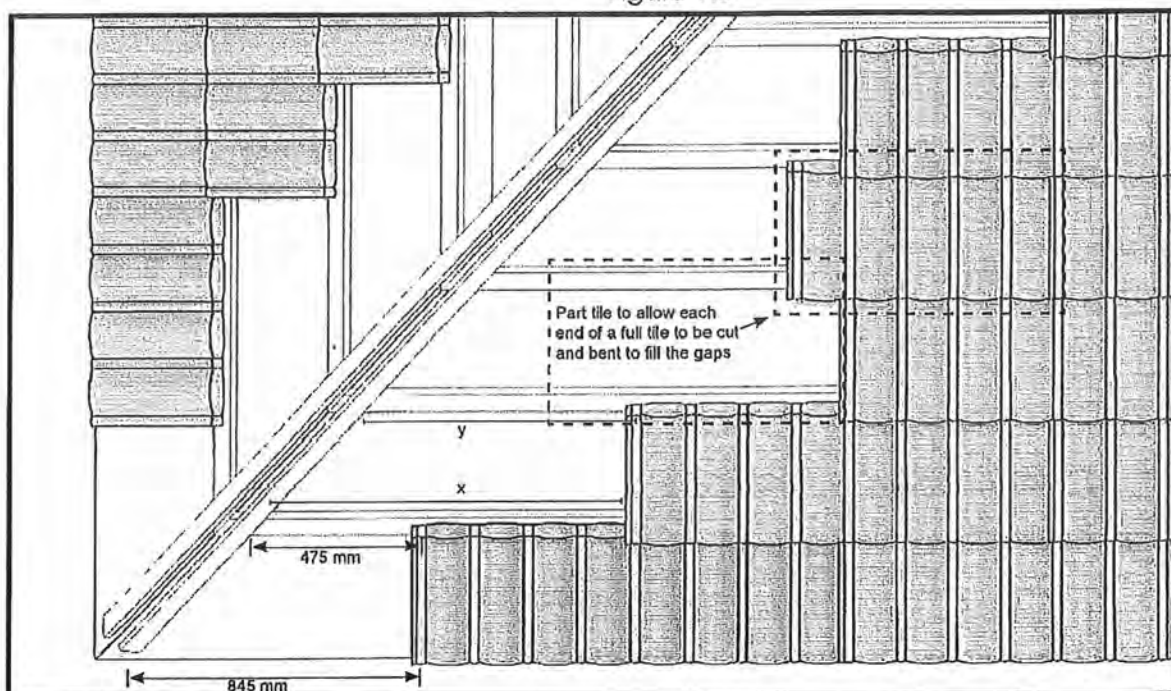


Figure 1.6

Measurements and Marking

Measurements are made on the roof, but tiles are normally marked, cut, bent and stacked on the ground.

To save time marking, cutting and bending each tile, it is best done by two installers - one to measure and the other to write the measurements down on a board or piece of paper as shown (Fig 1.7). To avoid confusion, cut, bend and stack tiles in strict order.

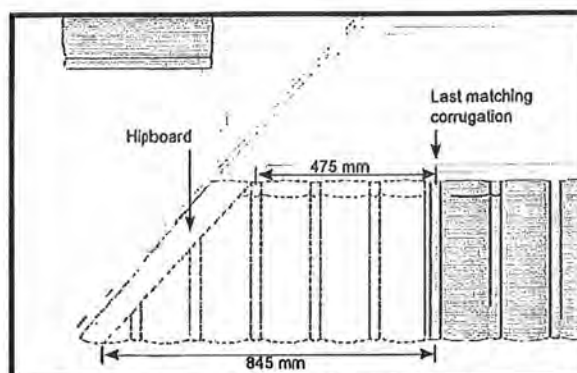


Figure 1.7

Tile Lay Continued

Note the following steps:

- (i) The basic measurement (recorded on paper or board) is taken from the last corrugation on the bottom corner of the last full tile, to the hip board, along the front edge of the batten (Fig 1.7).
- (ii) Measure and mark on the tiles with chalk or similar; the required measurements taken from the roof, ensuring the MATCHING corrugation of the overlapping tile to be cut, is taken as the measure starting point (Fig 1.7). This forms the BENDING line (Fig 1.9).

Add to the bending line measurement the height of the ridge board projection above the tile line 40mm. Mark on the tiles with chalk or similar. This forms the cutting line. (Fig. 1.9)

ALTERNATIVELY - Set a bevel to the angle formed by the hip board and tile batten. Place the bevel on the tile so that the measuring mark on the front of the tile lines up with the inside of the bevel. Mark along the inside of the bevel to give the BENDING line. Scribe the other side of the bevel to form the CUTTING line.

Each tile should supply two cut pieces leaving a minimum of wastage. Preferably a hip and valley cut from each tile will minimize this waste (Fig 1.9). However, two hip cuts will also provide a lower wastage factor.

Left-Hand Side Example

Top	475mm
Bottom	845mm

Top	x mm
Bottom	y mm

Top e.g.	342mm
Bottom e.g.	710mm

Right-Hand Side Example

Top	530mm
Bottom	900mm

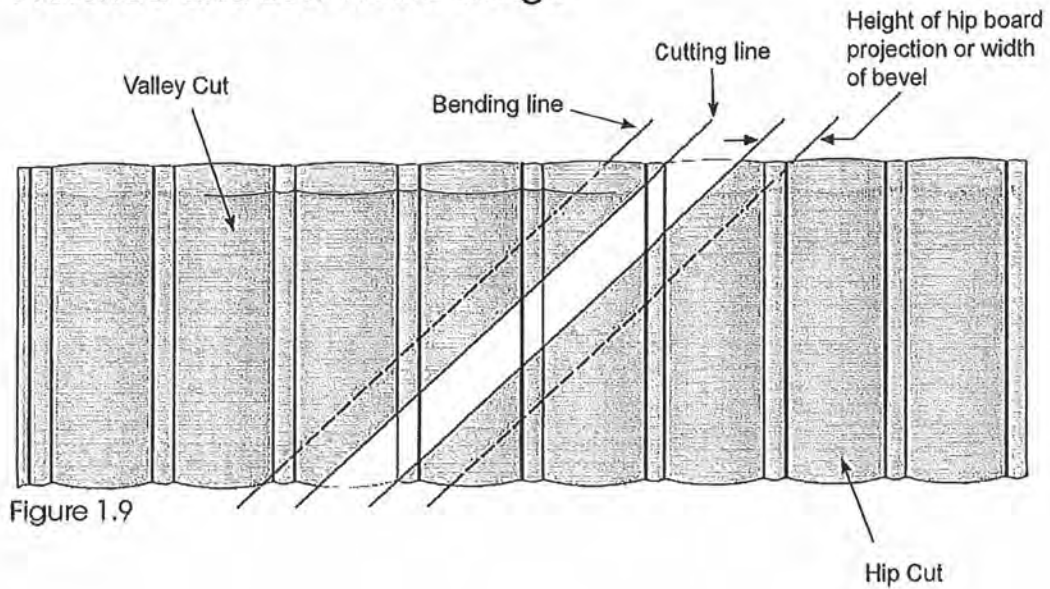
Top	600mm
Bottom	970mm

Top	380mm
Bottom	750mm

Figure 1.8

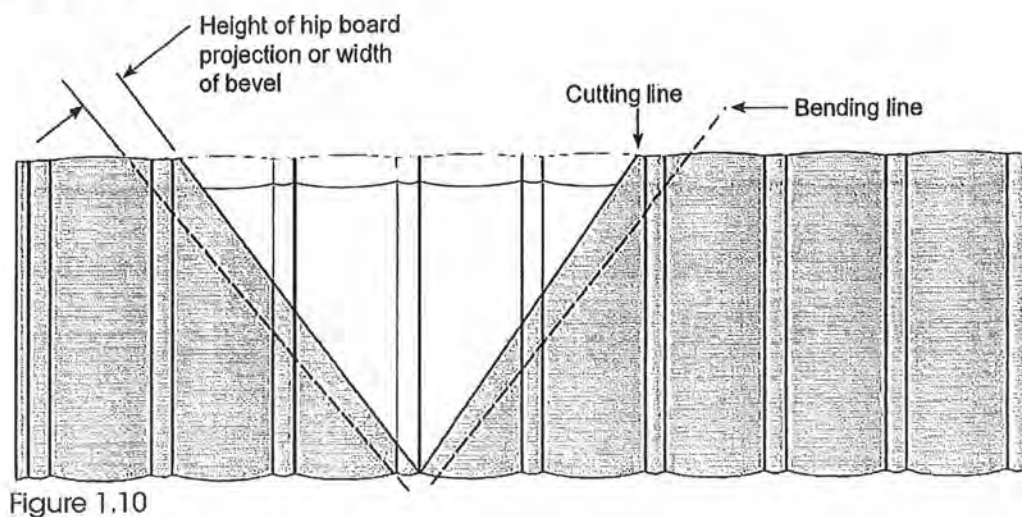
Tile Lay Continued

Preferred and Low Waste Usage



OR

Two Hip Cuts Per Tile



Tile Lay Continued

Hip Cutting

Use the guillotine to cut along the pre-marked cutting lines.

Hip Bending

Place the tile in the bender and line up the marks showing the bend line. Operate the foot controlled vice mechanism to hold the tile firmly, and bend the tile upwards. Each cut tile will vary slightly in size, and as cutting and bending are done on the ground, it is very important not to mix up the individually cut tiles. Stack them in the sequence that they will be used. A simple practice is to cut off tiles in order and re-stack in order and then move to bending, repeating the process (Fig 1.8).

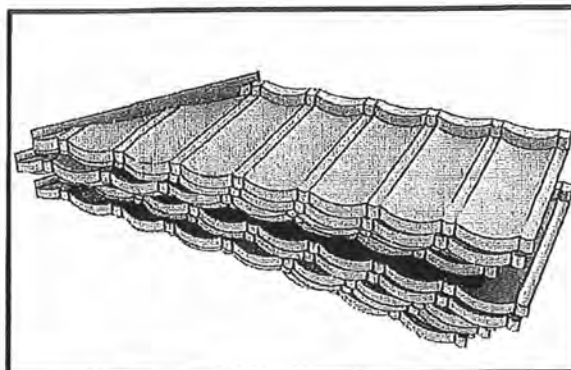


Figure 1.8

Installation of Cut Tiles

Start installing the cut tiles from the bottom course and work up the hip. Sometimes it is necessary to nail into the head of the tile to hold it in place before the next cut above is installed.

Install all cut tiles by nailing through the turn-up into the hip board, and one or more nails through the front edge into the battens (Fig 1.9).

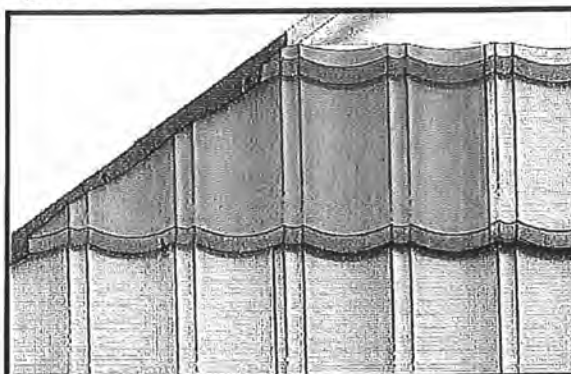


Figure 1.9

Tile Laying (Shake specific)

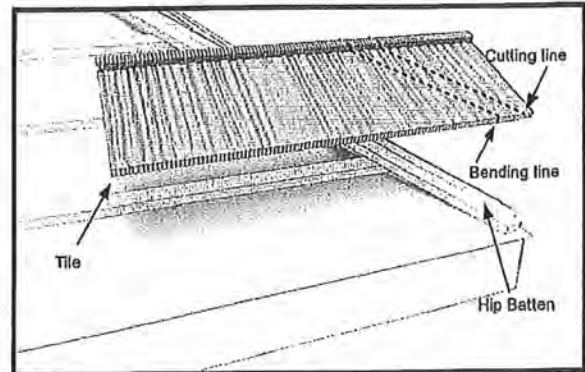
As the Shake profile has a straight head and nose, the tiles can be laid anywhere along the length of the tile.

For aesthetic reasons, tiles should not be straight laid.

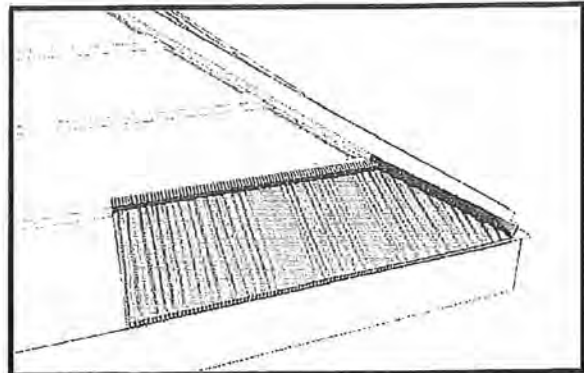
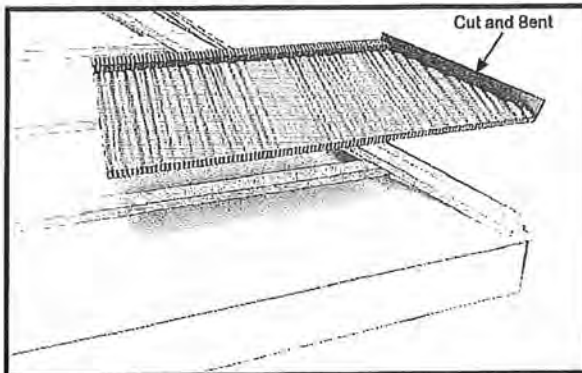
1.

Use a bevel to set the angle of the hip by placing the bevel in line with the batten and moving the bevel to meet the hip batten. Mark on the tile the cut and bend line allowing 40mm upturn. Proceed to cut and bend up enough cut tiles for the number of courses up the hip.

To minimise waste, it is advisable to use approximate half the tile for each cut so you can use the other half for a valley cut or another hip cut at the other end of the roof plane. These cut tiles should vary a little in size to try to avoid a pattern.

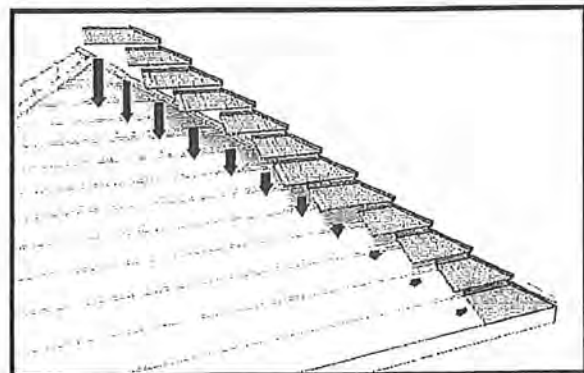


Note: Tiles must be turned up a minimum of 40mm against the hip battens, hip board or where they butt against a vertical or inclined surface.



2.

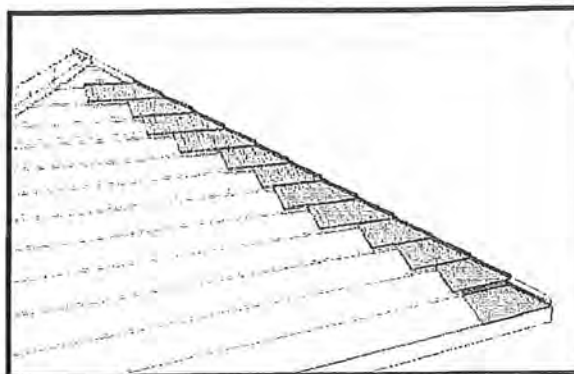
Install the cut tiles by starting at the bottom course and nailing the cut tiles to the hip batten. Proceed up the hip length one tile at a time.



Tile Lay Continued

3.

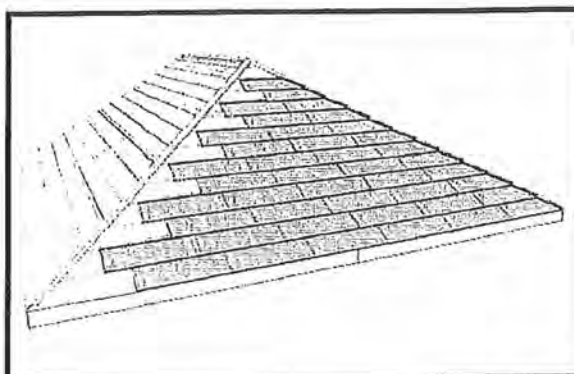
Secure tiles down on batten, ensuring that they butt against hip batten as shown in step 2.



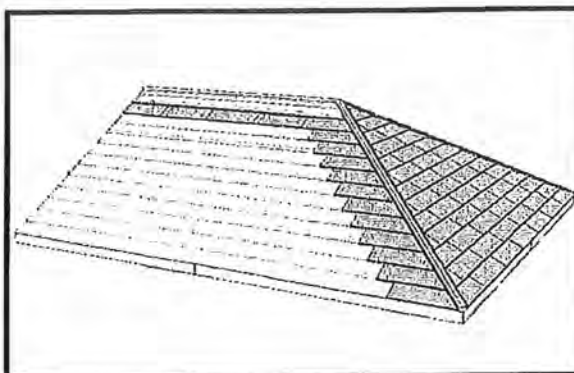
4.

In some instances it is desirable to cut and lay a half tile to ensure a cut tile is a desirable size.

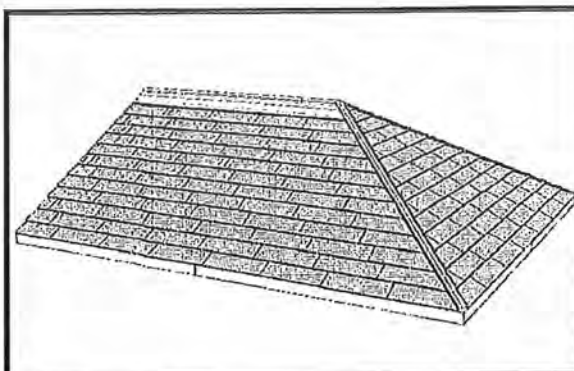
Proceed to lay and secure all tiles out across length of roof.



On the second to top course, continue to lay tiles towards the other hip until the last full tile will fit.



Then continue to lay tiles down to the fascia and then across the roof to complete the roof plane with full tiles.

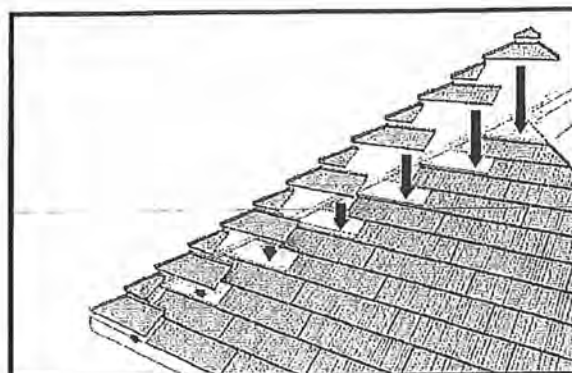


Tile Lay Continued

5.

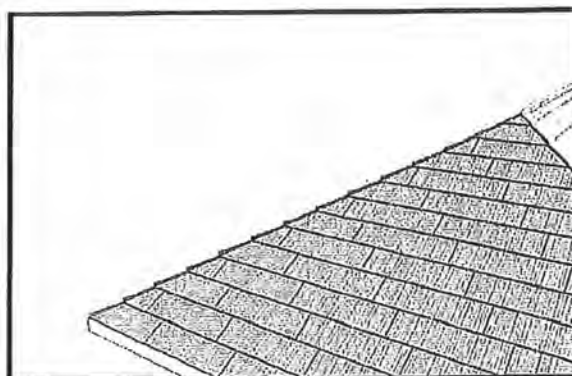
Measure the bottom length of each cut from the centre of the lap to the hip batten for each cut for the full length of the hip. Mark with bevel, cut and bend similar to the other side of the hip.

Fit cut tiles once again starting from the bottom course. Care should be taken to ensure the cut tile fits underneath the full tile above.



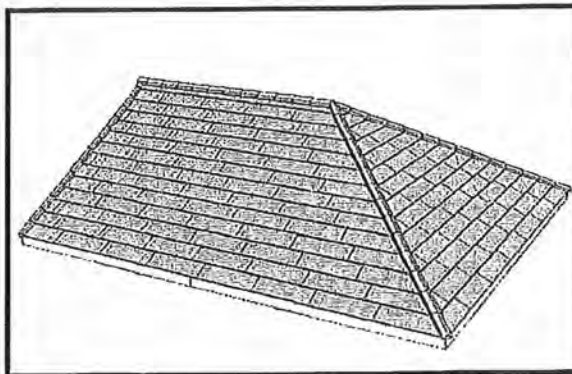
6.

Place in position and secure each tile at the lap, into the hip board and along the nose of the tile as required depending on the cut tile length.



7.

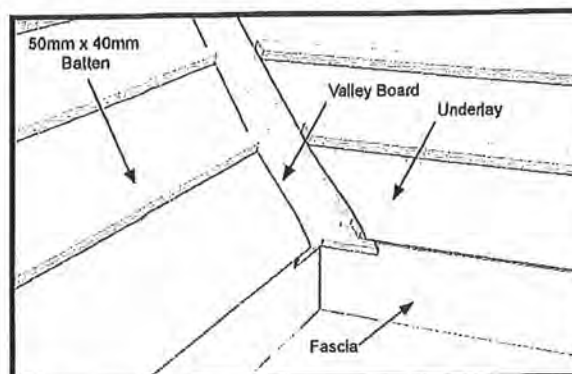
Once complete, The hip battens are then ready to be covered with V Ridge Caps.



Valley Installation (Bond, Classic, Roman and Shake)

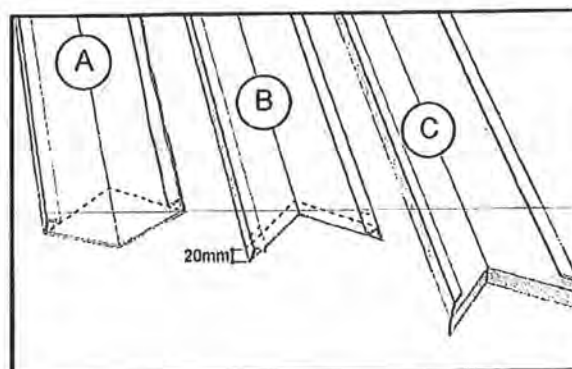
1.

The valley boards are installed between the valley jack rafters and flush with the roof plane to support the Metal Tile Valley. Valley boards are required to be set with their outer edge a minimum of 150mm (fig 1.11 pg 28) from the centre line of the valley. Valley boards are required to support a point load of 1.1.kN, which is taken to be the weight of a tradesperson with a bag of tools. Valleys are installed so that water discharges over the back of, and into, the eaves gutter.



Valley Tray

The valley tray is cut to match the angle of the fascia boards (A). It is then further cut to create a downturn of 20mm (B). The valley end is then corrected to discharge in to eaves gutter (C). The valley tray should protrude into the gutter in line with the bottom row of tiles (50mm).



Fastening

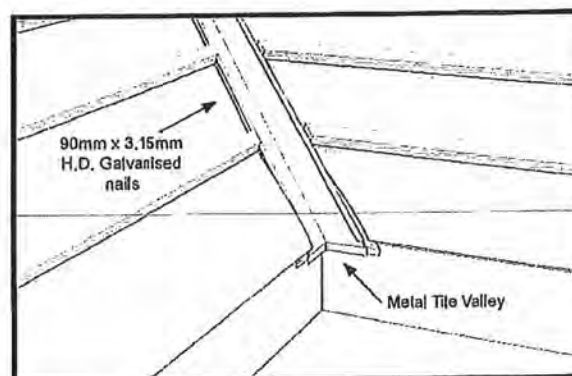
First run out a strip of roofing underlay over the valley board to prevent the valley tray from coming into direct contact with the valley board.

Valleys shall be secured by 90mm x 3.15mm H.D. Galvanised nails fixed into the valley board at no more than 1.0m centers and bent over the top lip of the valley to hold the valley tray in place.

2.

Under no circumstances must the fasteners penetrate the valley surface.

Where joins occur the minimum overlap is to be no less than 200mm.

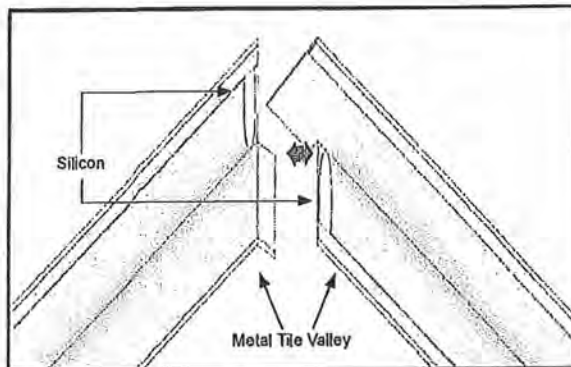


Valley Installation Continued

3.

Valley trays should be cut at the apex of the valley, as depicted in the right-hand picture. Silicon is placed on both trays before they are sealed in place.

The top end of the valley should be turned up against the hip or ridge battens to the height of the batten. Where two valleys meet over a dormer they are cut, shaped, joined and sealed so that they form a continuous valley.



Tile Measuring, Cutting and Bending

Tile measuring, cutting and bending for valleys is carried out as for hips, except that the bends are downwards.

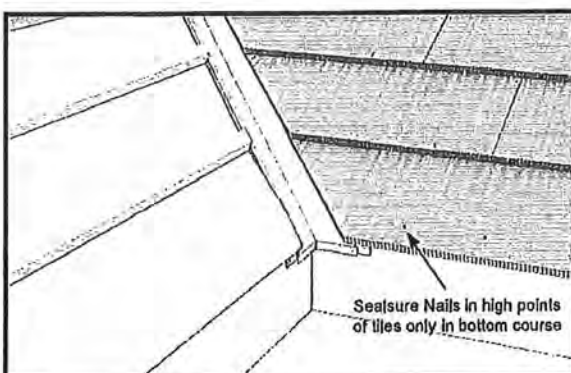
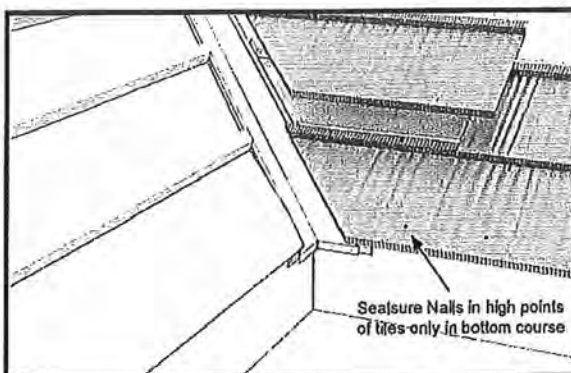
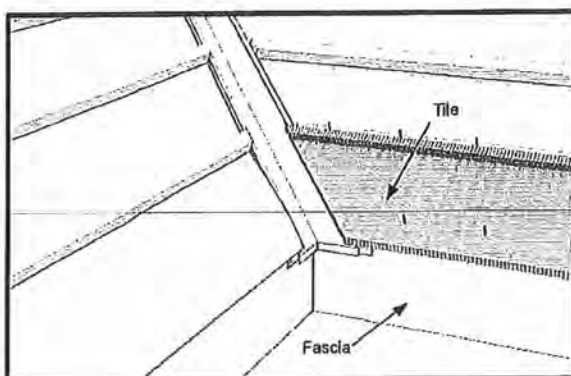
Measure the distance from the last corrugation of the installed tile to the desired finished tile line in the valley (approximately 40mm to each side of the valley centre line). This measurement is done at the top and bottom of the installed tile. This is the BEND line. To this measurement, add the depth of the valley from the FINISHED TILE line minus 10mm which is the amount the tile will drop into the valley. This is the CUTTING line and will result in a tapered downturn.

The tile edge should be bent down to a minimum of 5mm from the valley floor.

Cut with the guillotine and bend down the tile at the bend line.

Install in the normal manner, endeavouring to place one nail as close to the valley as possible to the end of the batten adjacent to the valley tray.

DO NOT nail in the valley itself.

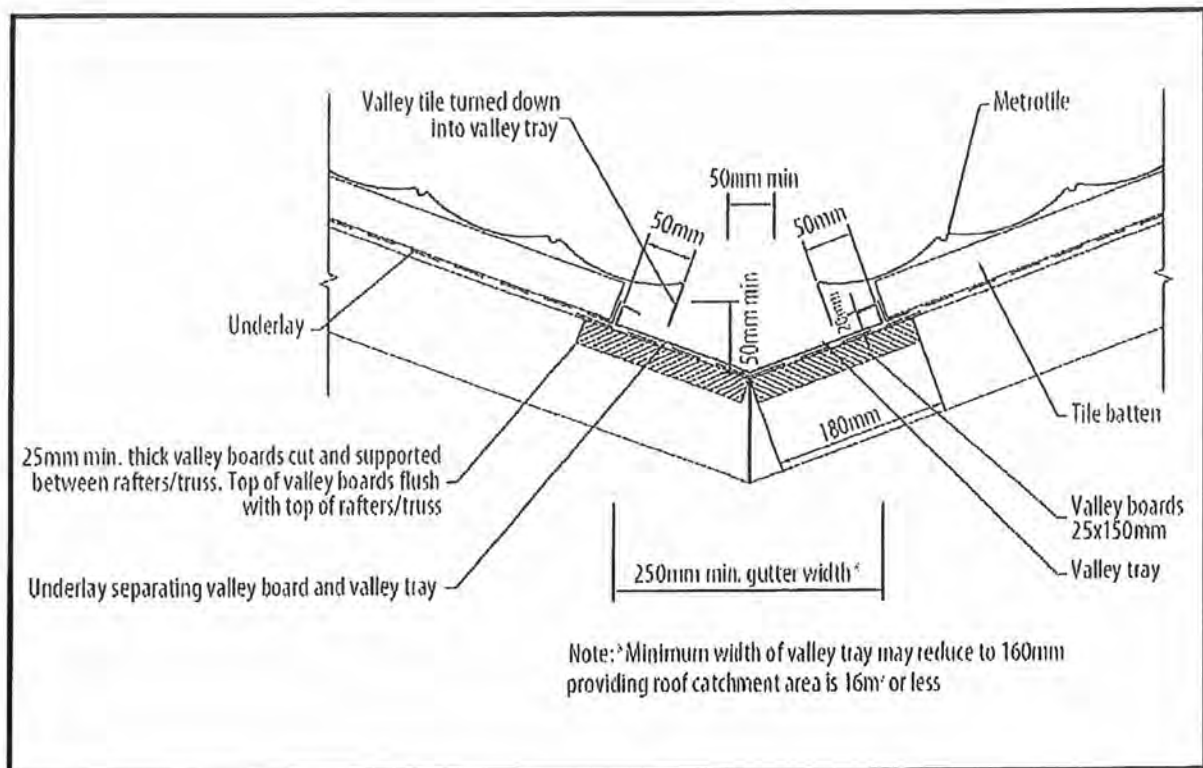
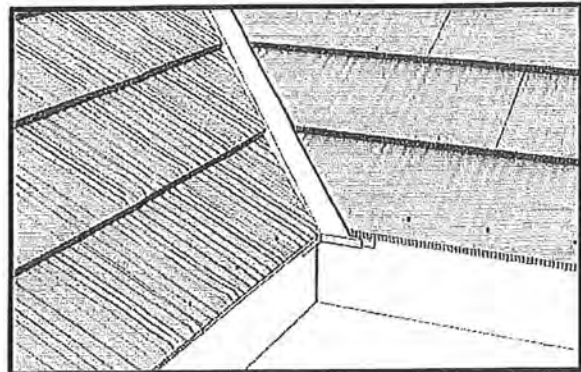


Valley Installation Continued

7.

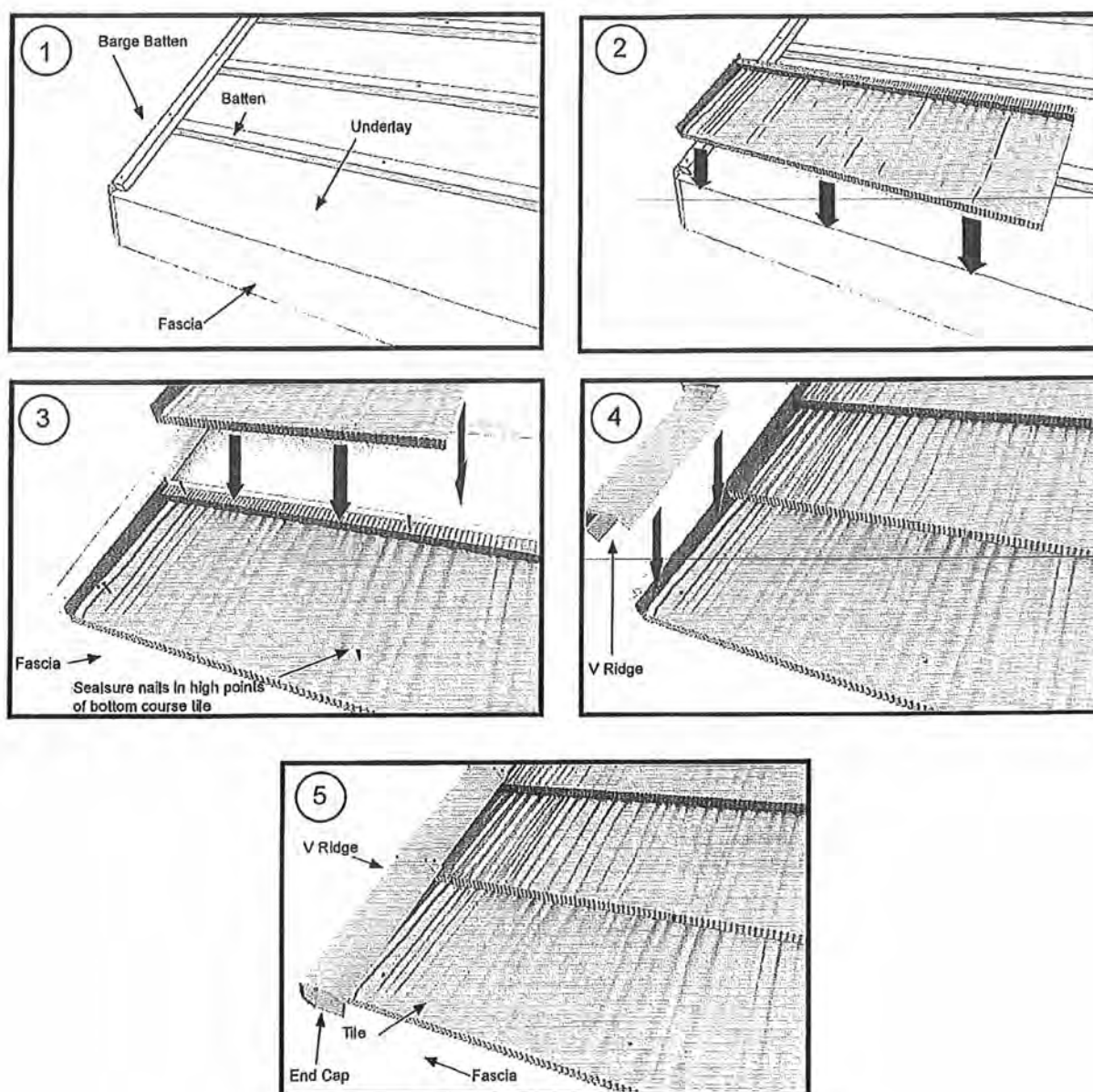
The gap between tiles on opposing sides of the valley must be a minimum of 50mm.

Valley boards must be treated H3.2 and must be separated with underlay between any tile or flashing and the treated timber,



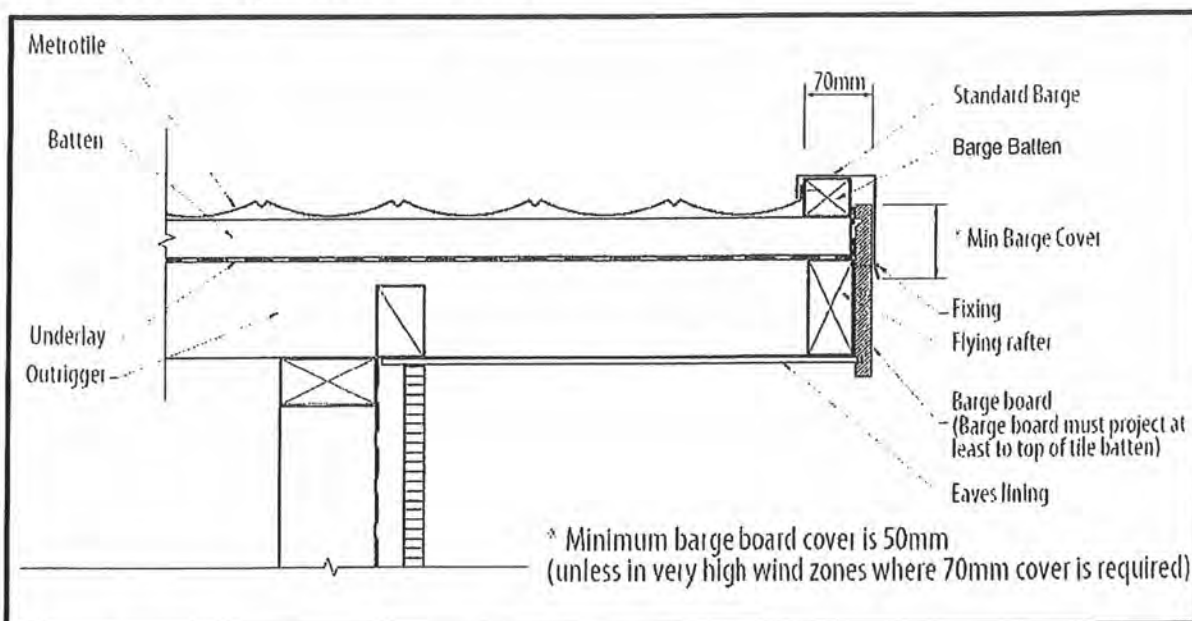
Gable Installation (Bond, Classic, Roman and Shake)

Tile ends are turned up a minimum of 40mm and installed against the barge batten that is covered by a Standard Barge, Barrel Trim or V Ridge (as shown). Alternatives include under a metal fascia system where there is no barge batten or a hidden gutter. Where a hidden gutter is used, tile edges should be turned down into the gutter by a minimum of 20mm.

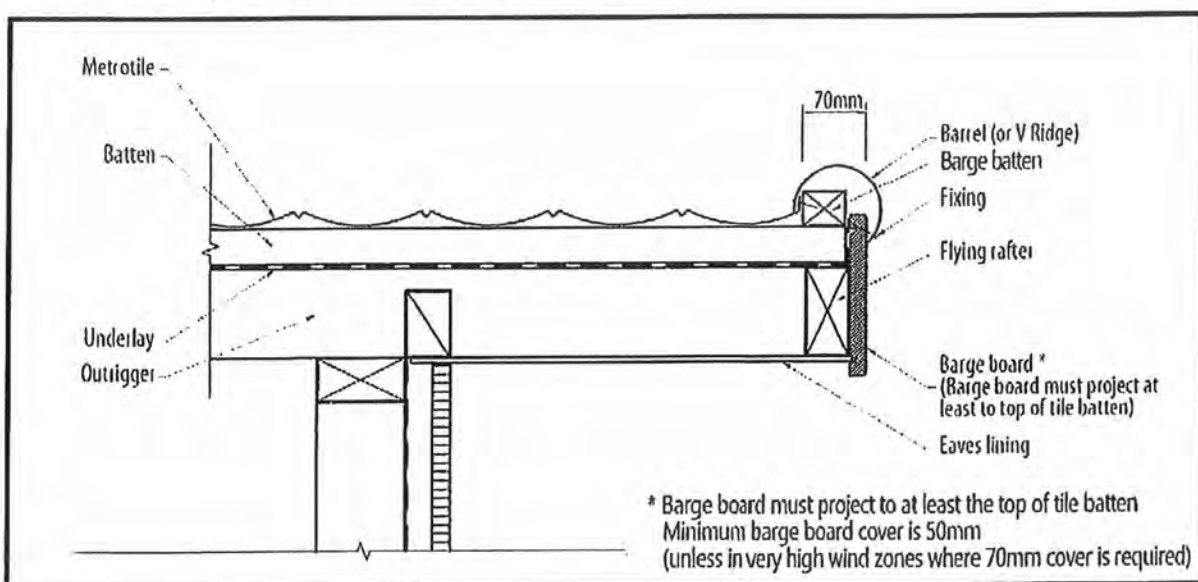


Gable Installation Continued

Standard barge Timber Fascia

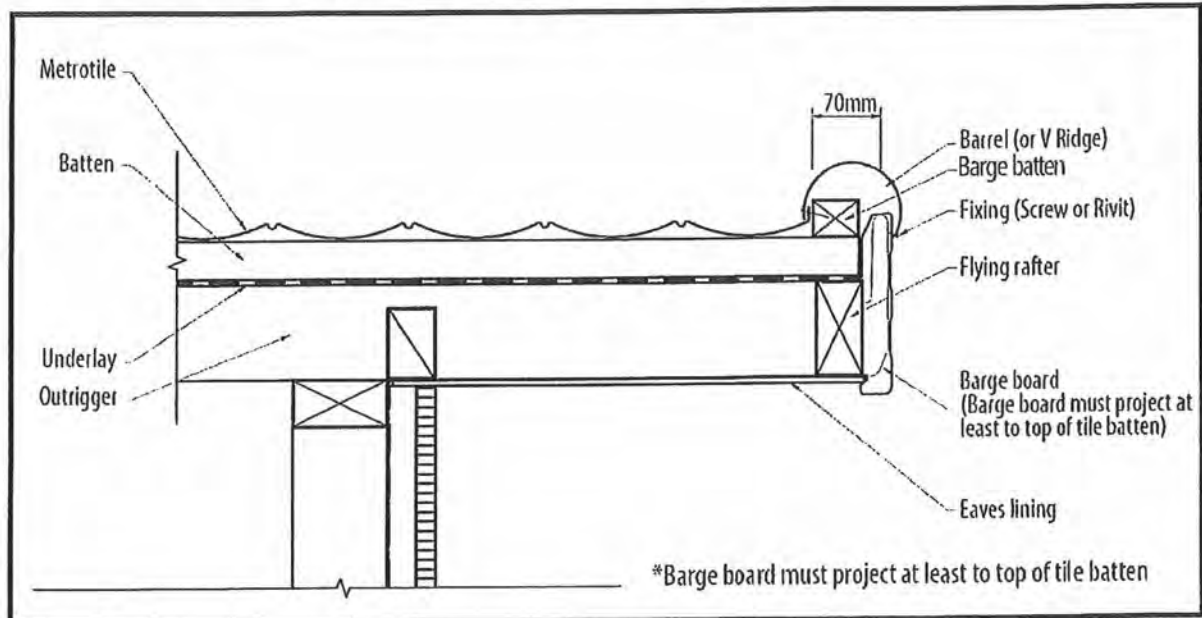


Barrel Trim (shown) or V Ridge Timber Fascia

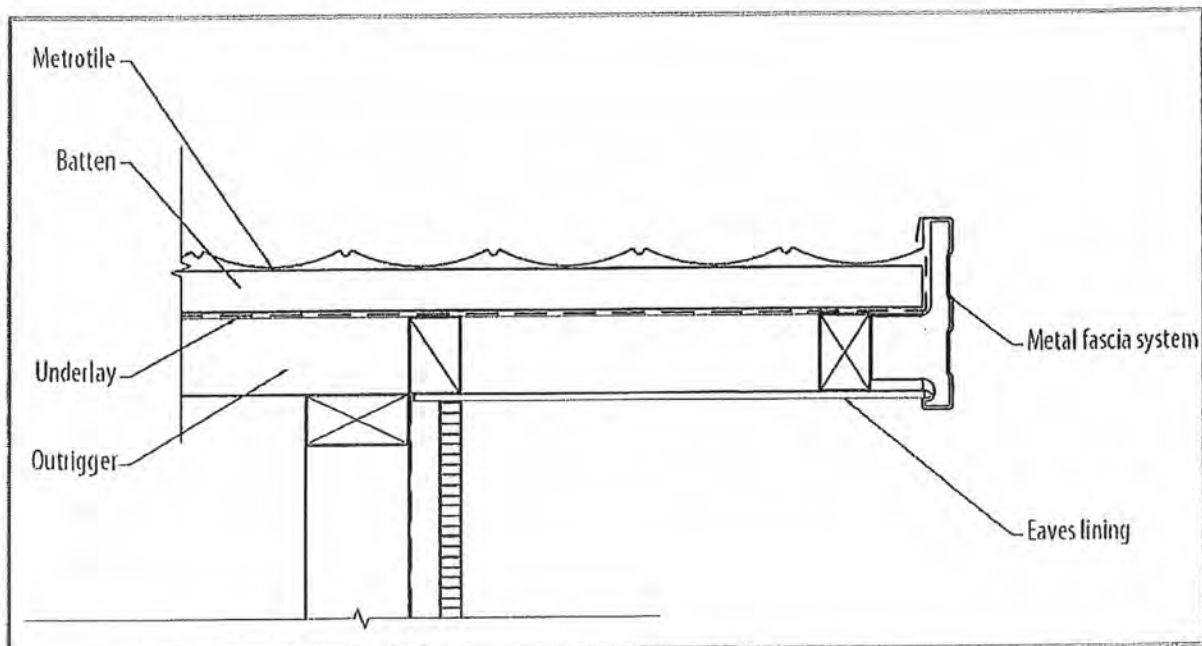


Gable Installation Continued

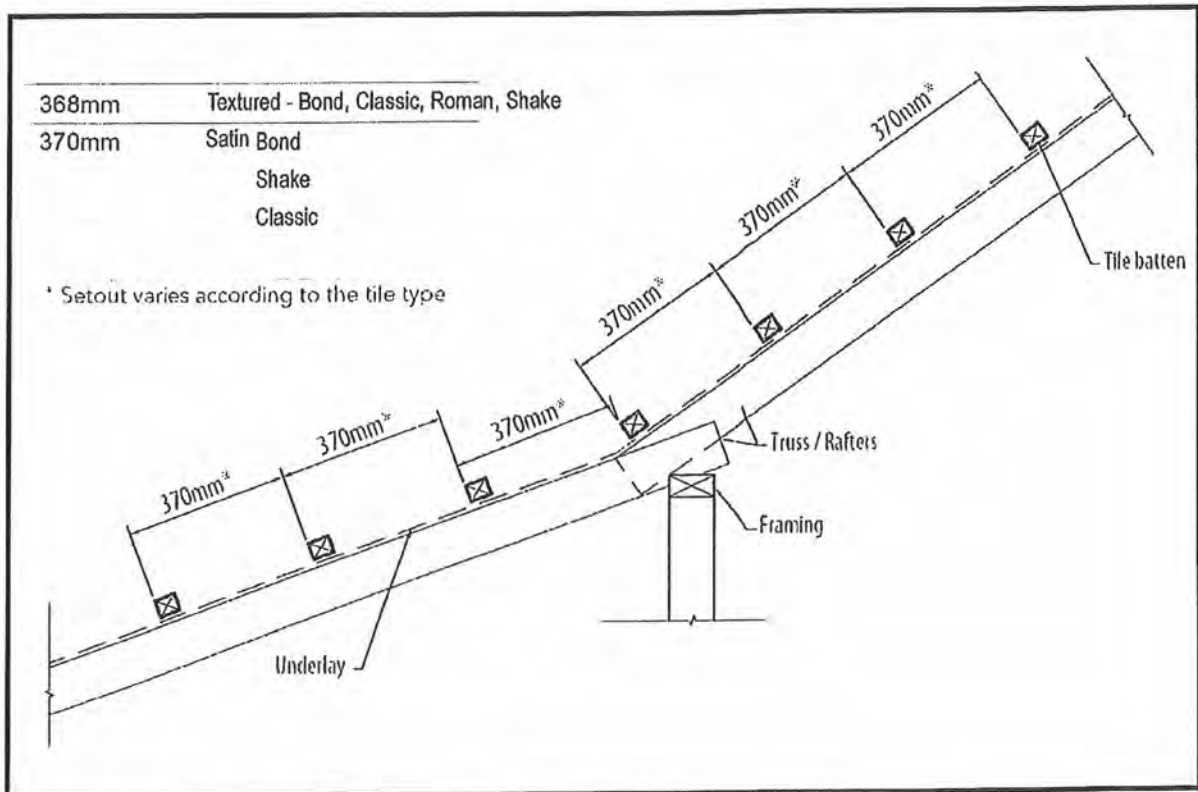
Barrel Trim (shown) or V Ridge or Standard Barge to Metal Fascia



Turn Up - Metal Fascia

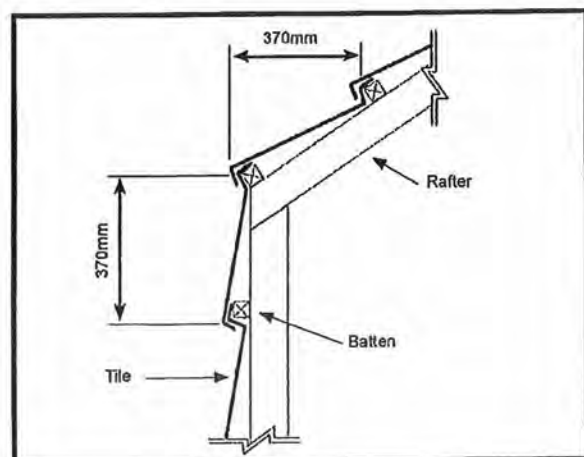


Mansard Roof Including a Change of Roof Pitch



Batten set out follows pitch change

As illustrated, where the roof line changes pitch, a batten is placed at this point. In situations where you have a pitch change and a specific number of full tiles cannot be laid down, it is suitable to bend a full tile lengthwise to compensate.

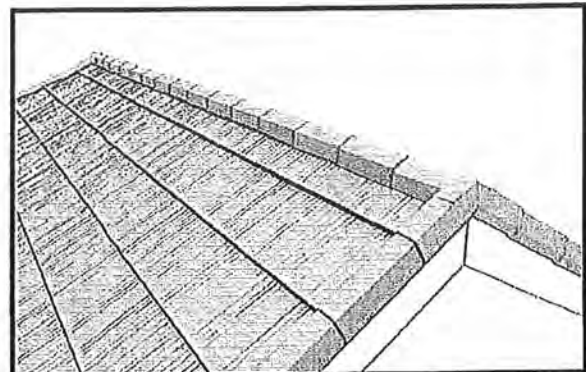
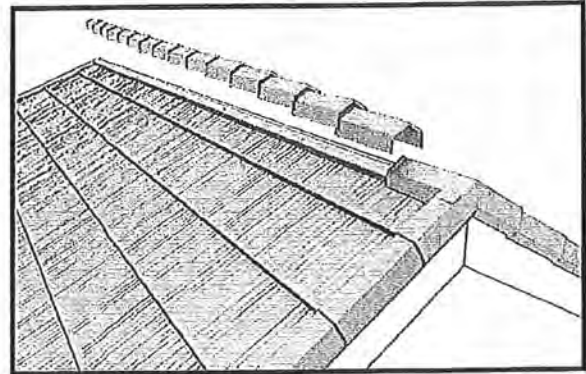
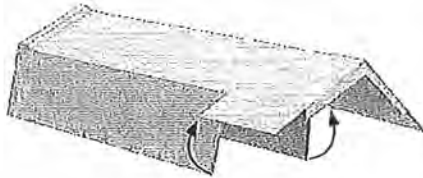


Ridge Installation

It is recommended to fit the V Ridge or Barrel Trim up all hips and gables before moving to the ridge. The starting and finishing trim on the ridge must be lapped over the hip or gable trim with silicon applied under the lap to create a waterproof seal. To ensure a watertight joint and prevent the ingress of water, a tight fit is required between the tile and the ridge cap.
Note: Tiles must be turned up a minimum of 40mm against the batten, hip board or where they butt against a vertical or an inclined surface.

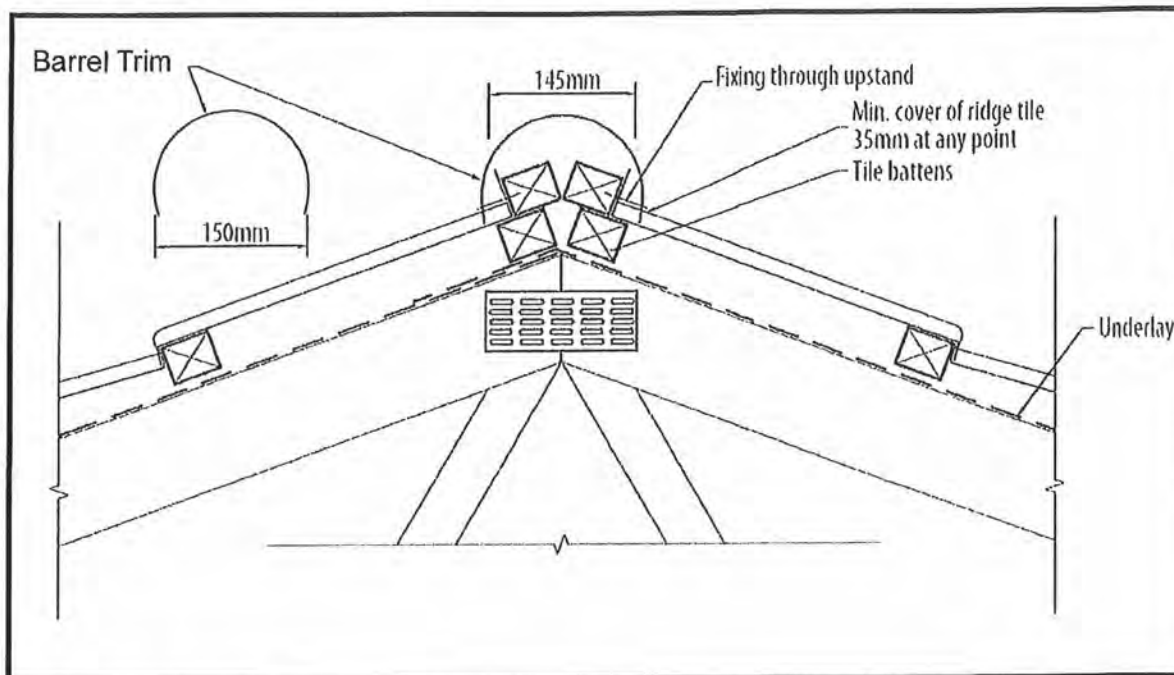
The ridge trim can be fixed through the side of the trim using fasteners. It is also recommended that the silicon spots be covered for aesthetic reasons using the Touch-Up Kit.

Gable Starter V Ridge

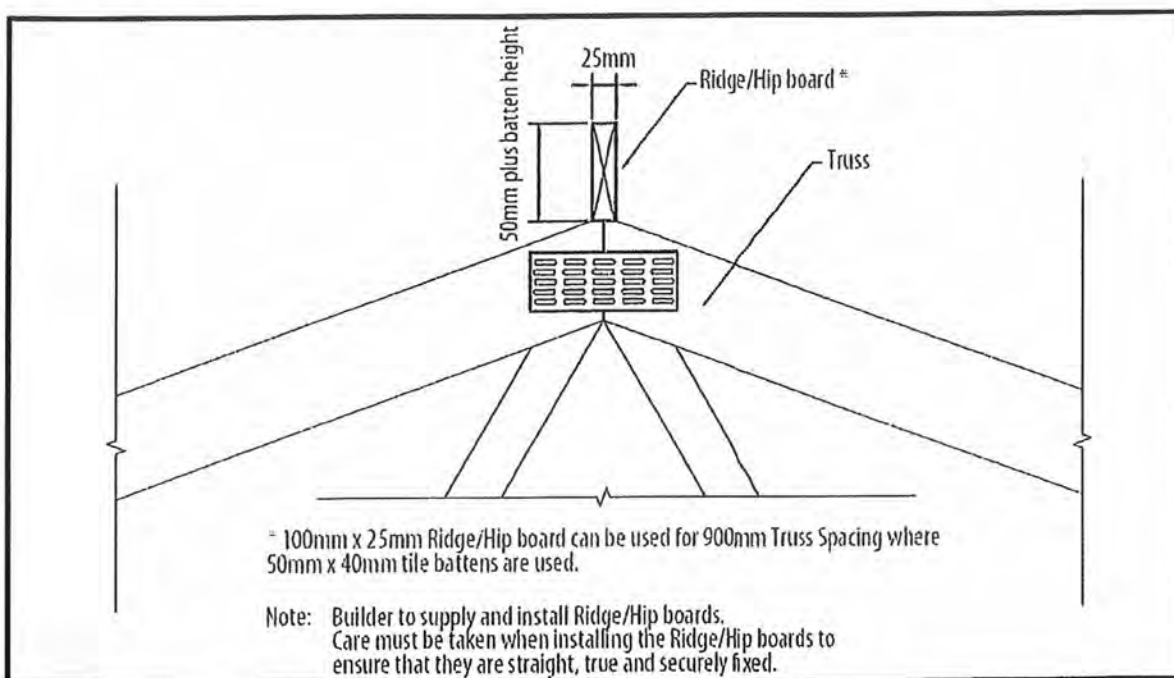


Ridge Installation Continued

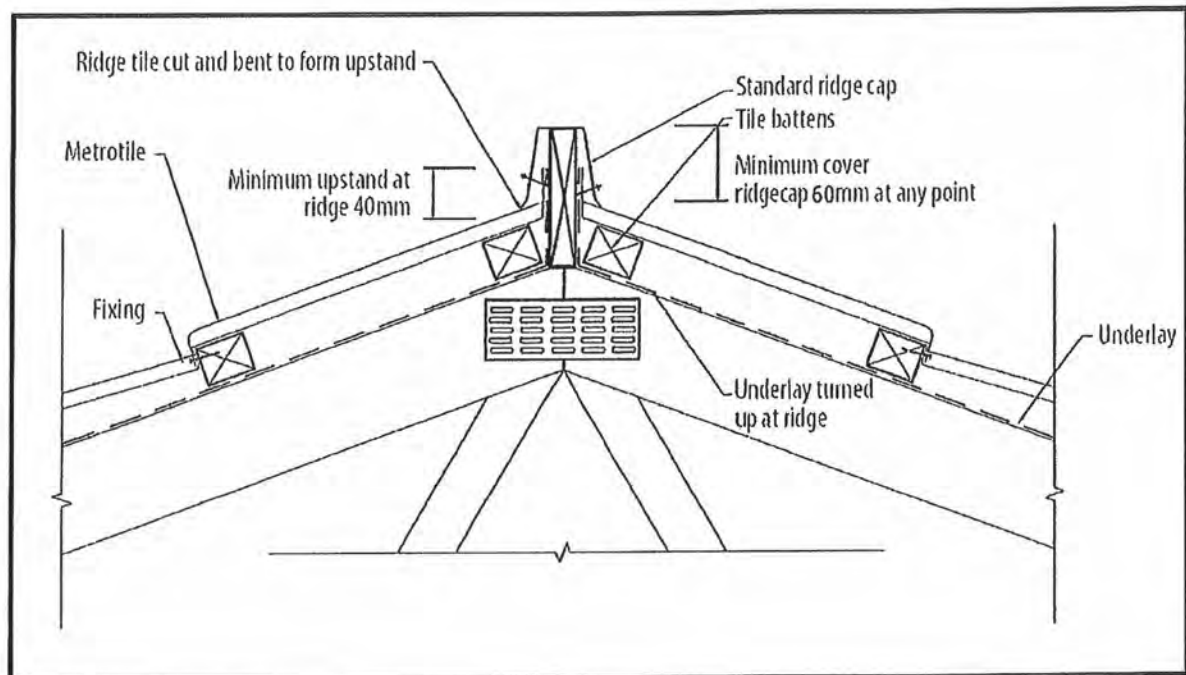
Barrel Trim (shown) or V Ridge



Standard Ridge

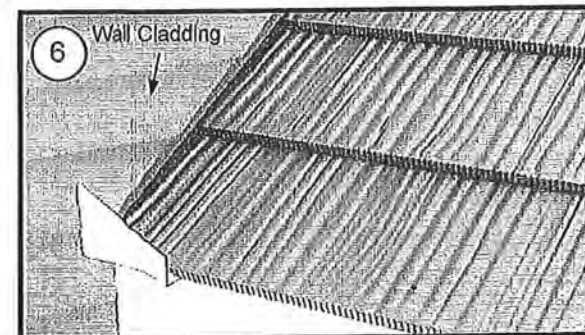
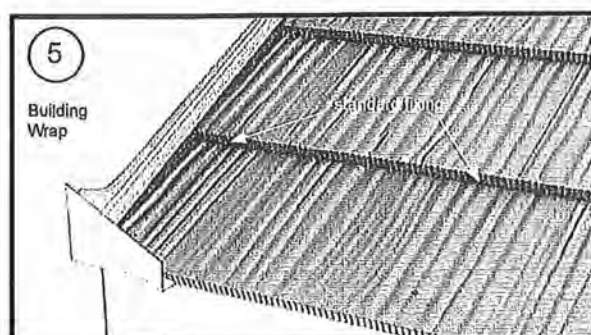
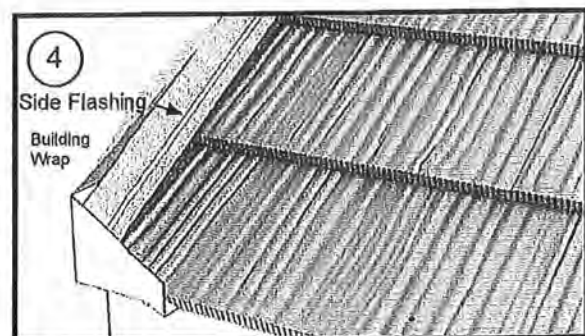
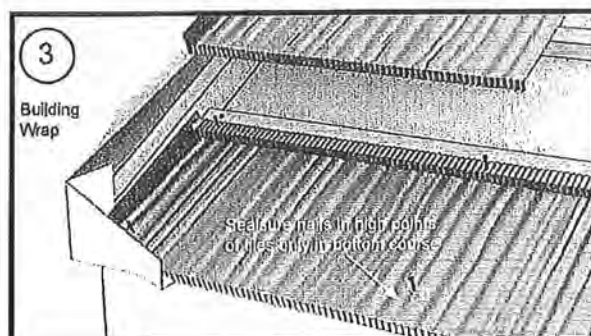
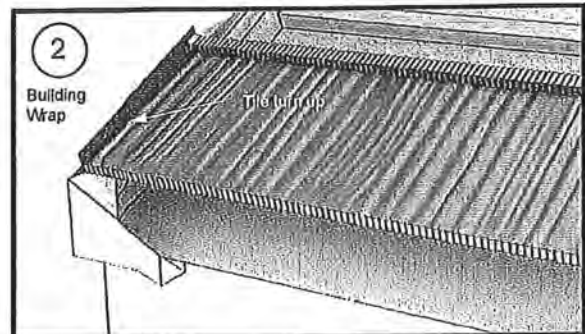
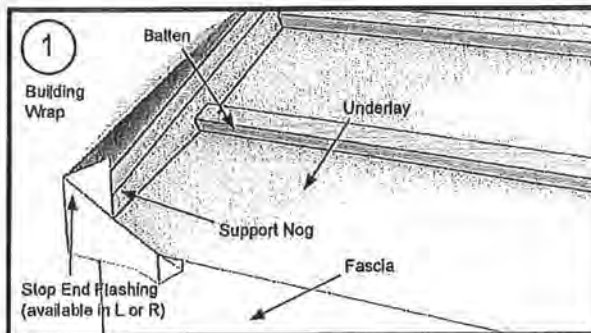


Ridge Installation Continued

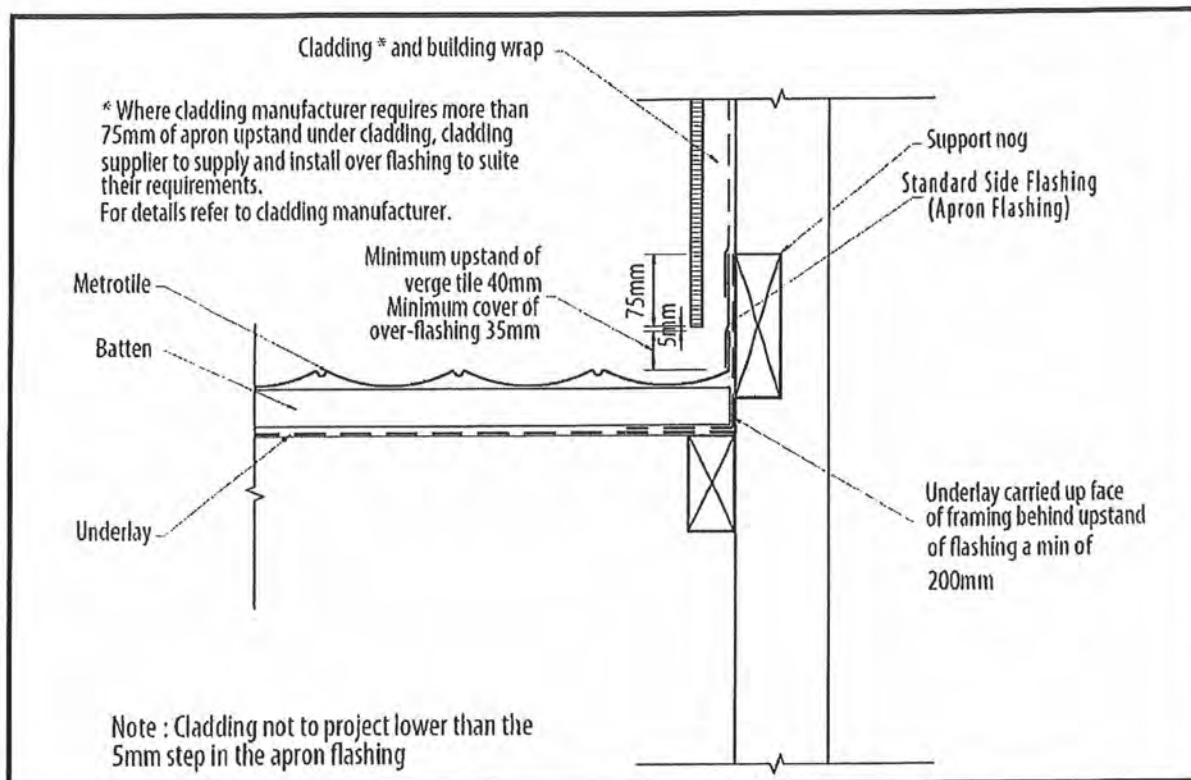


Sidewall Installation

Flashings at the ends of roofs, where the wall continues past the roof, require a stopend flashing that ensures water is directed into the gutter. Sufficient material should be left standing out from the wall so that cladding installers can ensure a weather secure finish.



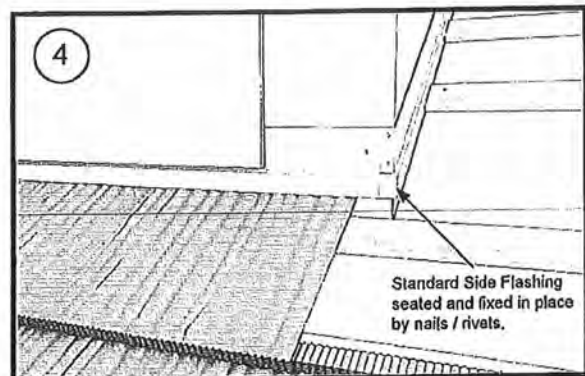
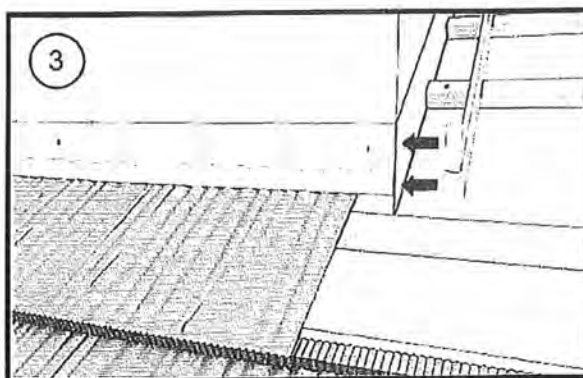
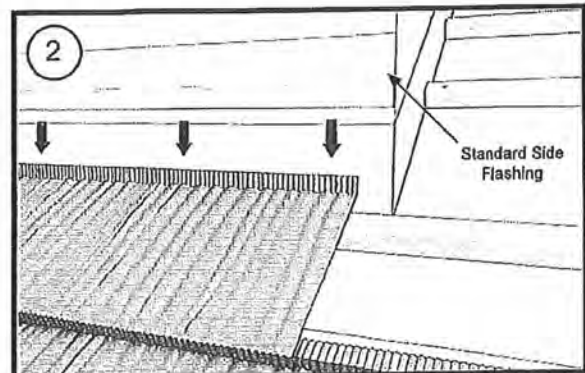
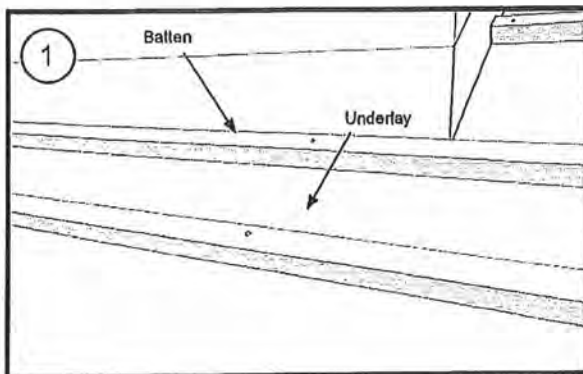
Sidewall Installation Continued



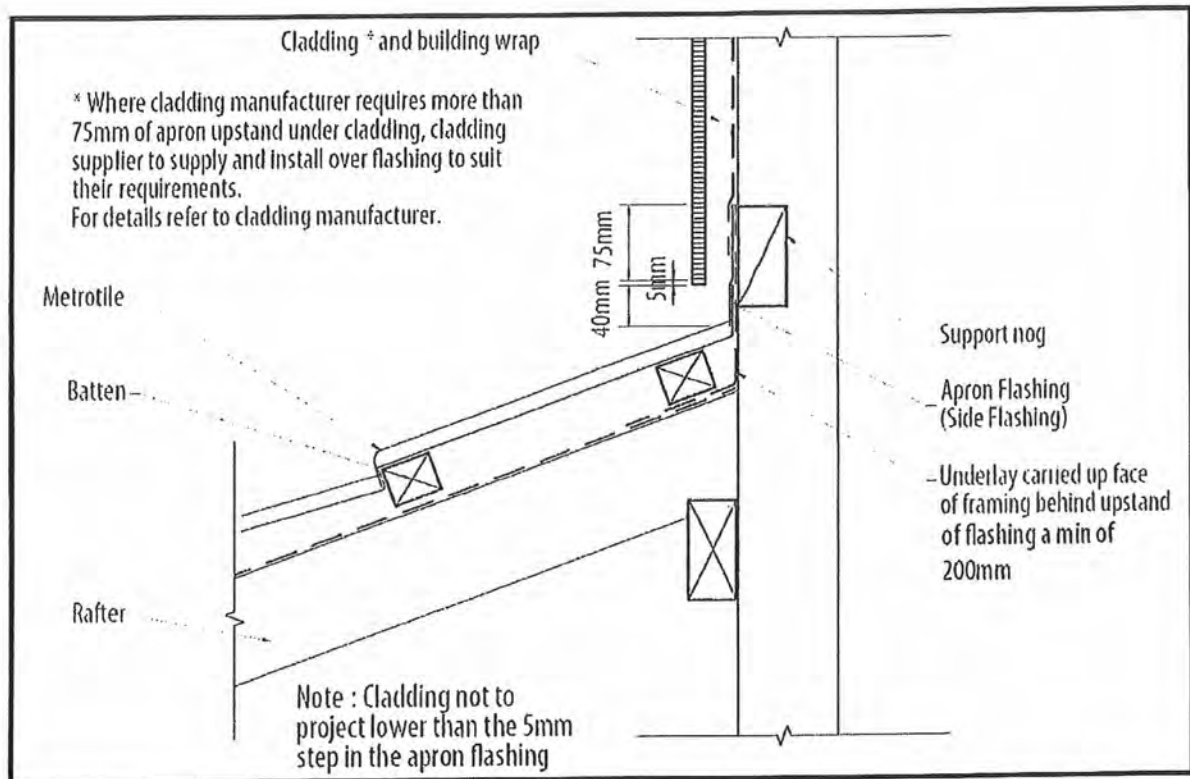
Headwall Installation

The wall cladding flashings must be positioned before the tiles and must be designed so that the turned up tile can be inserted behind the flashing.

Note: All preparatory work of under-flashing, fixing of eaves, gutters and valley gutters must be completed and all tiling battens must be in place before laying tiles.



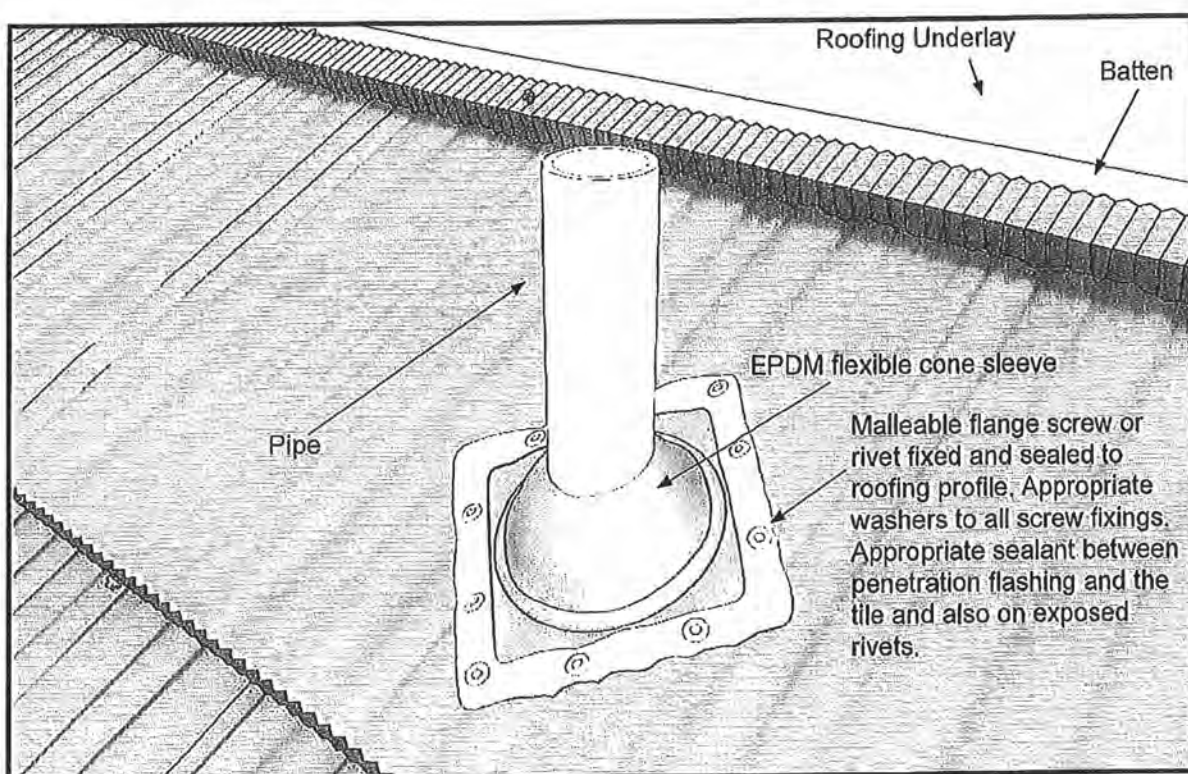
Headwall Installation Continued



Penetration Installation

Roof penetrations shall be flashed as follows:

- a) Pipe penetrations up to 60mm shall be flashed using an EPDM boot flashing as shown in below figure.





BC 130241



Building Code Clause(s)

PRODUCER STATEMENT – PS1 – DESIGN

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

ISSUED BY:.....Wilton Joubert Ltd.....
(Design Firm)TO: Platinum Homes (NZ) Ltd. Mass Construction.....
(Owner/Developer)TO BE SUPPLIED TO: Kapiti Coast District Council.....
(Building Consent Authority)IN RESPECT OF: raft floor slab, beams, timber retaining wall.....
(Description of Building Work)AT: Lot 2, 48 Eucalyptus Way, Paraparaumu, Wellington.....
(Address)

..... LOT 2..... DP 348721..... SO

We have been engaged by the owner/developer referred to above to provide engineering design & draughting services..

..... services in respect of the requirements of
(Extent of Engagement)

Clause(s) B1, B2 (structural durability only)..... of the Building Code for

☐ All or ☒ Part only (as specified in the attachment to this statement), of the proposed building work.

The design carried out by us has been prepared in accordance with:

☒ Compliance Documents issued by Department of Building & Housing B1, VM1.....
(verification method / acceptable solution)☐ Alternative solution as per the attached schedule

The proposed building work covered by this producer statement is described on the drawings titled.....

Lot 2, 48 Eucalyptus Way..... and numbered S1, sheet 4.....;

together with the specification, and other documents set out in the schedule attached to this statement.

On behalf of the Design Firm, and subject to:

(i) Site verification of the following design assumptions
as per soils assessment by Cuttriss Consultants Ltd. ref: Saywell/18703, dated: 9 June 2009

(ii) All proprietary products meeting their performance specification requirements;

I believe on reasonable grounds the building, if constructed in accordance with the drawings, specifications, and other documents provided or listed in the attached schedule, will comply with the relevant provisions of the Building Code.

I, David Lau..... am: ☒ CPEng 221906..... #
(Name of Design Professional)☐ Reg Arch #I am a Member of: ☒ IPENZ ☐ NZIA and hold the following qualifications: BE, PhD, MIPENZ, CPEng.....

The Design Firm issuing this statement holds a current policy of Professional Indemnity Insurance no less than \$200,000*.

The Design Firm is a member of ACENZ ☐ YES ☒ NOSIGNED BY David Lau..... ON BEHALF OF Wilton Joubert Ltd.....
(Design Firm)

Date: 27 Feb. 2013.... (signature).....

Note: This statement shall only be relied upon by the Building Consent Authority named above. Liability under this statement accrues to the Design Firm only. The total maximum amount of damages payable arising from this statement and all other statements provided to the Building Consent Authority in relation to this building work, whether in contract, tort or otherwise (including negligence), is limited to the sum of \$200,000*.

This form is to accompany Form 2 of the Building (Forms) Regulations 2004 for the application of a Building Consent.



**CONSENT NOTICE PURSUANT TO SECTION 221
OF THE RESOURCE MANAGEMENT ACT 1991**

**IN THE MATTER OF A PLAN LODGED FOR DEPOSIT UNDER
NUMBER 348721
AND RESOURCE CONSENT NO. RM 040145**

**(BEING THE SUBDIVISION OF LOTS 15 & 16 DP 82050),
AT 48 – 50 EUCALYPTUS WAY, PARAPARAUMU
FOR F HORNAK**

The Regional Regulatory Titles Officer at Wellington

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

1. **With respect to Lot 2:** Any on-site wastewater treatment and disposal system shall take into account the findings and recommendations within the report prepared by Cuttriss Consultants Limited relating to Site Stability, Water Supply and Effluent Disposal at 48 Eucalyptus Way, Paraparaumu, dated June 9, 2005 and submitted to Council in relation to application number RM040145. A copy of the report is available in Council's Office at any time the office is open to the public.

Any on-site wastewater treatment and disposal system shall be designed, constructed and operated to meet the following performance criteria:

- i. It shall be designed with sufficient wastewater retention time to enable adequate treatment in relation to any constraints identified in the site investigation;
- ii. The wastewater shall be evenly distributed to the entire filtration surface of the disposal field;
- iii. The bottom of the wastewater disposal system shall be sufficiently above the groundwater at its highest level, in relation to any constraints identified in the site investigation, to prevent any contamination of groundwater;
- iv. The area available for on-site treatment shall be appropriate for the volume of the discharge and any constraints identified in the site investigation

Note: Refer to Rule 7 of the Regional Plan for discharges to Land, Greater Wellington Regional Council.

It is the owner's ongoing responsibility to monitor and maintain any on-site wastewater disposal system so that any adverse effects on the environment are minor.

2. With respect to Lots 1 and 2: Further subdivision of the lots is prohibited (excluding any boundary adjustments as defined in the Kapiti Coast District Council District Plan).
3. With respect to Lots 1 and 2: Any on-site water supply system shall take into account the findings and recommendations within the report prepared by Cuttriss Consultants Limited relating to Site Stability, Water Supply and Effluent Disposal at 48 Eucalyptus Way, Paraparaumu, dated June 9, 2005 and submitted to Council in relation to application number RM040145. A copy of the report is available in Council's Office at any time the office is open to the public.

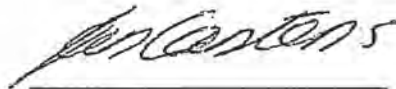
A minimum storage capacity of 25,000 litres shall be provided but it is recommended that 50,000 litres capacity is provided, particularly if it is intended that the property is to be used for permanent residence. It shall be the ongoing responsibility of the owner to maintain and monitor their water supply so that any adverse effects on the environment are minor.

Note: Refer to Rule 7 of the Regional Plan for discharges to Land, Greater Wellington Regional Council.

Issued in respect of application No. RM 040145 on this 6th day of July, 2005.



Wayne Gair
AUTHORISED OFFICER



Ian Carstens
AUTHORISED OFFICER

RBW

30 APR 2013

BY: 0003

Metrotile ROOFING SYSTEMS



Metrotile (NZ) Ltd

1c Inlet Road,
Takanini, Auckland, New Zealand

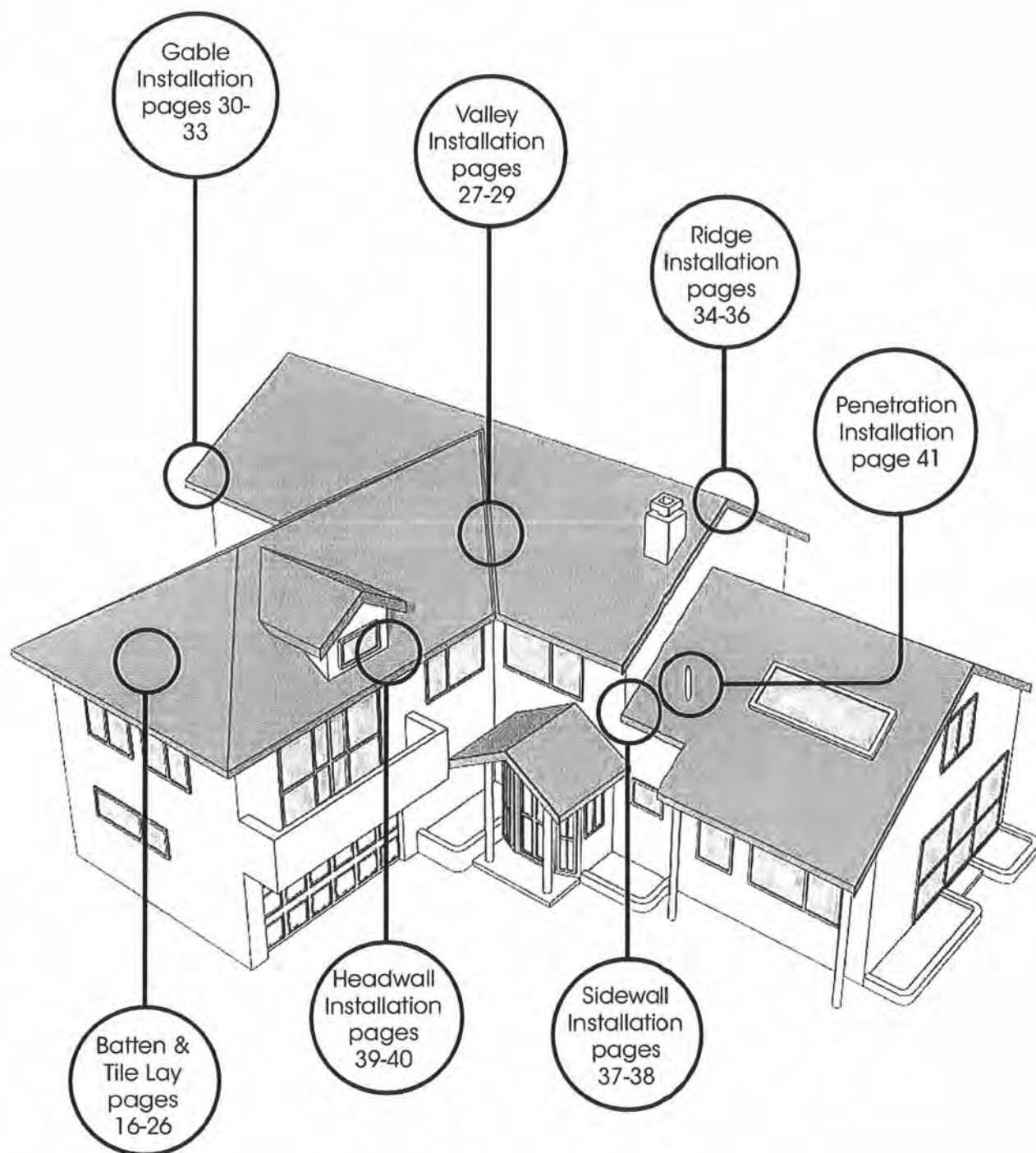
P: +64 9 299 9498

F: +64 9 298 4114

E: metromail@metrotile.com

W: www.metrotile.com

6. Detail Reference Guide



Preparatory Installation

1. Batten Spacing

Disclaimer: For purposes of uniformity, we have demonstrated 50x40mm battens as this is the most common batten size. This may be substituted for 50x25mm or 50x50mm for different rafter/truss spacings (see Tiling Batten Specifications).

A 50x40mm batten is placed directly behind the fascia around the entire roof. This will serve as the eave batten.

The next batten is placed 320mm from the outside edge of the fascia material to the front edge of the batten. Battens are then placed every 370mm (Satin) or 368mm (Textured) measured from the front edge of each batten continuing up the roof.

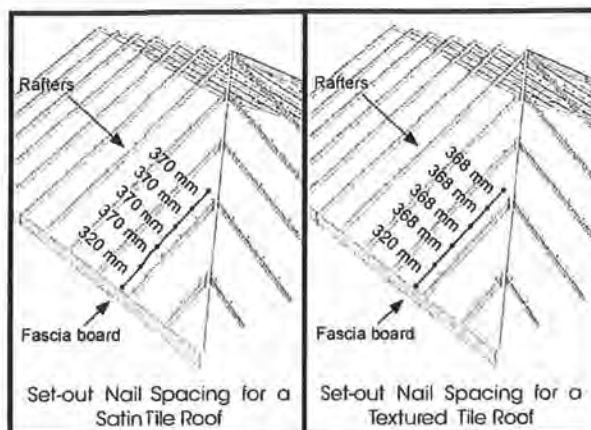
The set out can be done using a setout rod, which is made from a 50x40mm batten or measuring rod of similar thickness.

Measure every 370mm (Satin) or 368mm (Textured) measured up the setout rod and saw notches in the material, making sure the notches are accurate and that the bottom of the notch is square to the rod. The rod is then placed on the rafter and nails are placed in every notch so that you have a series of nails at 368mm or 370mm centres running up each rafter.

2. Batten Cutting

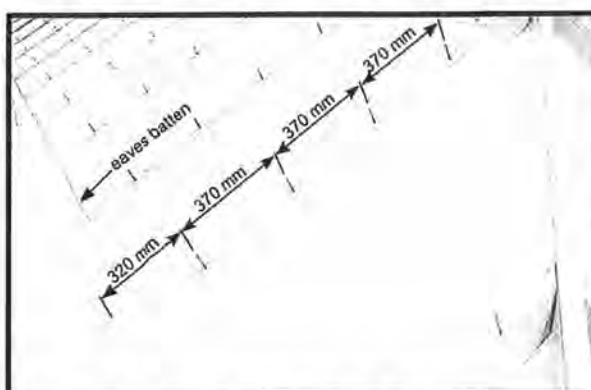
When placing the battens on the set out nails, care should be taken to stagger the joins across several rafters and not to have multiple joins on the same rafter going up the roof truss.

Place the battens on the setout nails mitring each batten onto the hip and valley boards. Make sure joining battens are centred on the rafters and cut ends off that are not straight. Then cut all other joins on the centre line of each rafter where each batten extends to. Then mitre cut each batten onto the hip and valley boards.

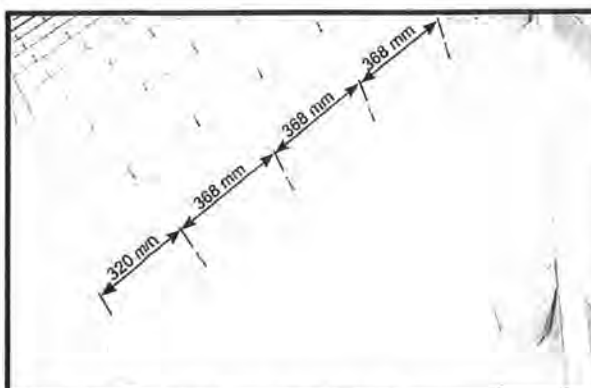


Set-out Nail Spacing for a Satin Tile Roof

Set-out Nail Spacing for a Textured Tile Roof



Set-out Nail Spacing for a Satin Tile Roof



Set-out Nail Spacing for a Textured Tile Roof

Preparatory Installation

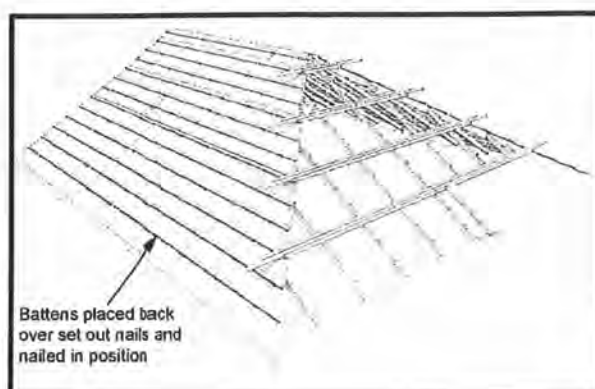
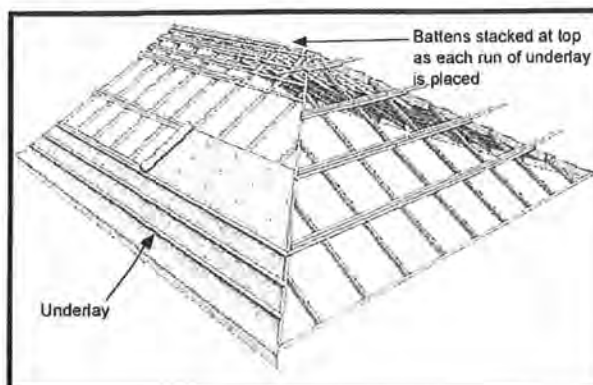
3. Underlay Installation

Once the battens are cut in completely the battens can be moved up to allow the underlay to be rolled out.

Self-supporting breather type building paper must be used. Starting at the bottom, roll out the underlay horizontally across the roof, ensuring that the lower edge of the underlay overhangs the outside edge of the fascia by a minimum of 40mm.

Once each run of underlay is run out, move the battens down to rest on pinout nails. This will enable the installer to continue up the roof plane by walking along these battens. Paper the whole roof, horizontal to the fascia line ensuring that each lap is no less than 150mm, unless it occurs directly underneath a batten, in which case it can be reduced to 75mm. Underlay is to be lapped over each hip and ridge line at least 150mm.

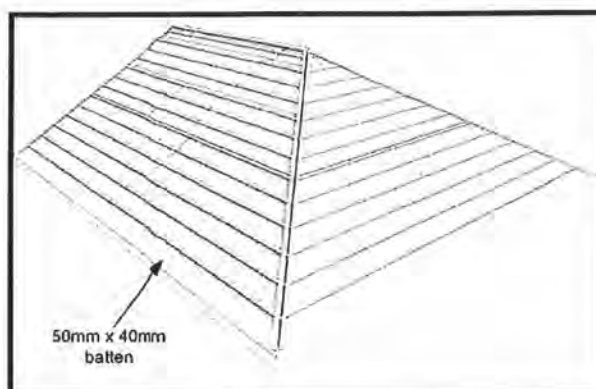
Where the roof meets a wall, the underlay must be folded and run up the wall no less than 200mm.



4. Batten Fastening

Battens shall be nailed through to the rafter with one 90 x 3.15mm nail at each intersection unless greater wind uplift resistance is necessary as stipulated in table 5.10 page 5.

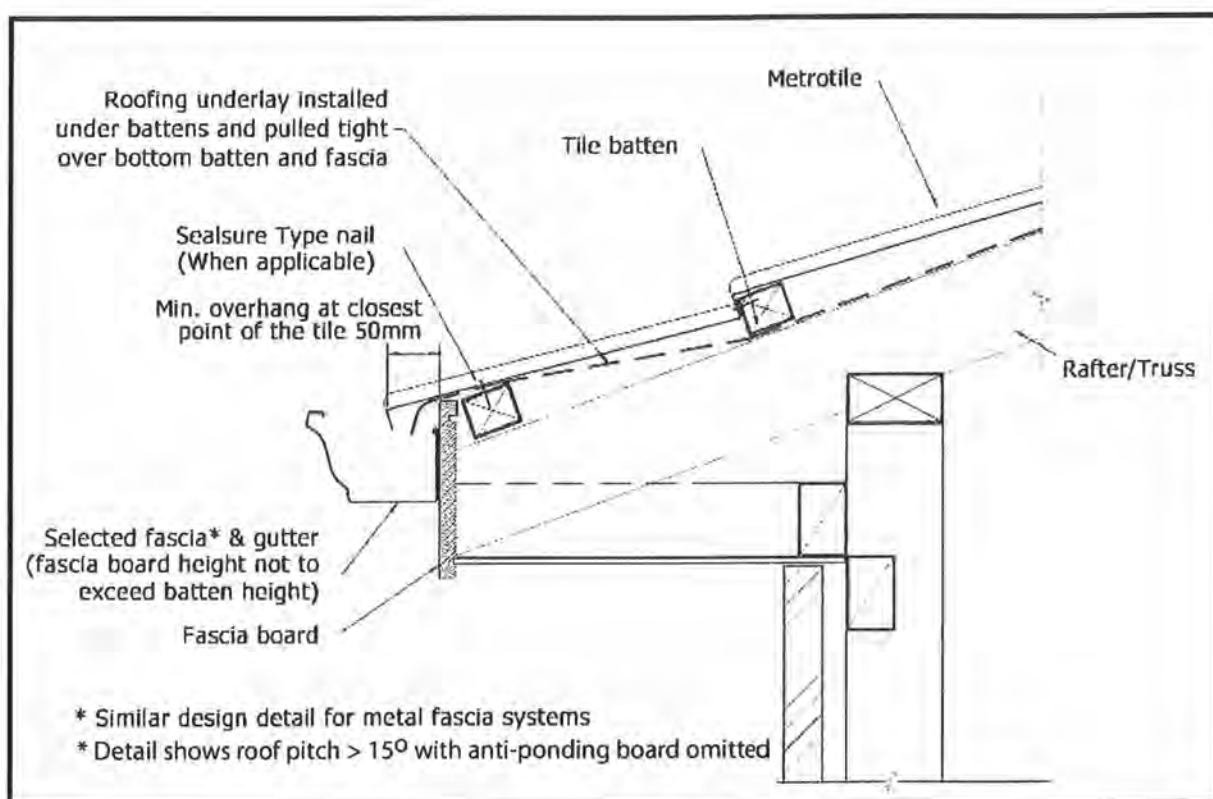
Refer to section 9.0 Tiling Battens on page 6 of the manual, within General Information.



Preparatory Installation Continued

Tiling battens must be:

- H1.2 treated
- Douglas fir of moisture content <20%
- 50 x 25mm for 450mm rafter/truss spacing,
- 50 x 40mm for 900mm rafter/truss spacing
- 50 x 50mm for 1200mm rafter/truss spacing



Tile Laying (Bond, Roman and Classic Specific)

Tile Laying

Tiles can be interlocked either right over left or vice versa (except Roman, only L over R) but should be laid with the laps facing away from prevailing winds or from discharging rain water pipes or valleys. Where possible the tiles should also be laid with the laps facing away from the normal line of sight. (Fig. 1.1)

Tiles are laid by lifting both tiles in the course above and sliding the next course under the nose of the tiles already in place. (Fig. 1.2)

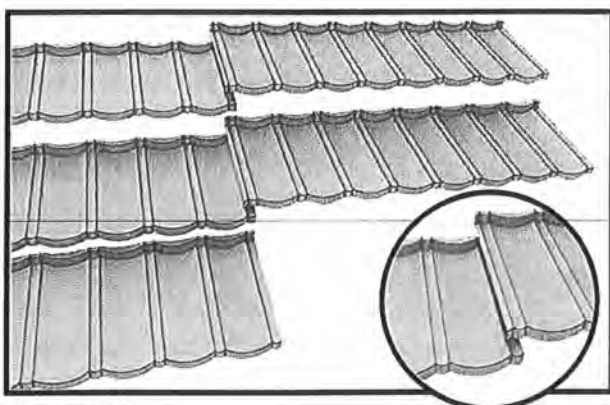


Figure 1.1

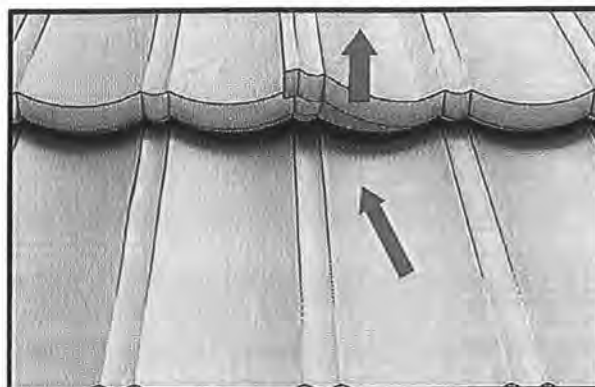


Figure 1.2

Tile Installation Procedure - Hip Roof

General instructions for tile laying as detailed above. On the second to top course (the higher most full tile course), lay the top corner of the first tile 150mm from the hip board. Continue to lay tiles towards the other hip until the last full tile will fit.

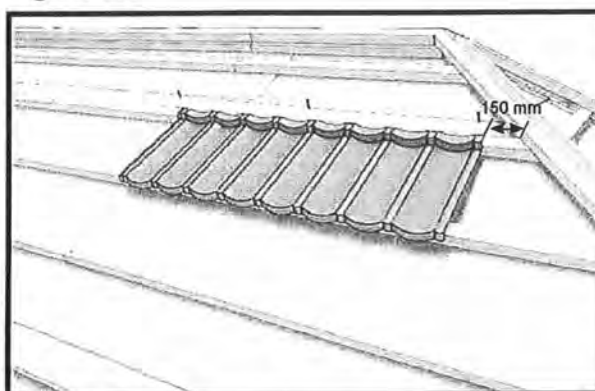


Figure 1.3

Secure these tiles by tacking through the back flange (Fig 1.3). Lay subsequent courses two at a time, both starting about the same distance from the hip board. (Fig 1.4 & 1.5)

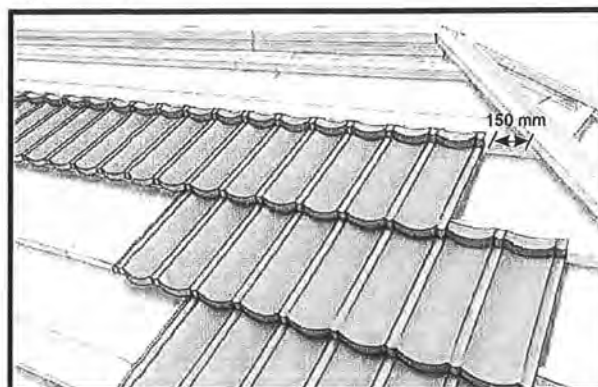


Figure 1.4

Tile Lay Continued

Care should be taken to line up the corrugations. To reduce waste, use part tiles to complete rows within approximately 150mm of hip board (Fig 1.6). This allows each end of a full tile to be cut and bent to fill the gaps.

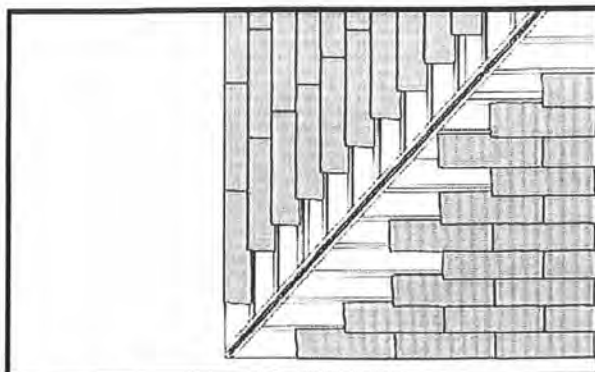


Figure 1.5

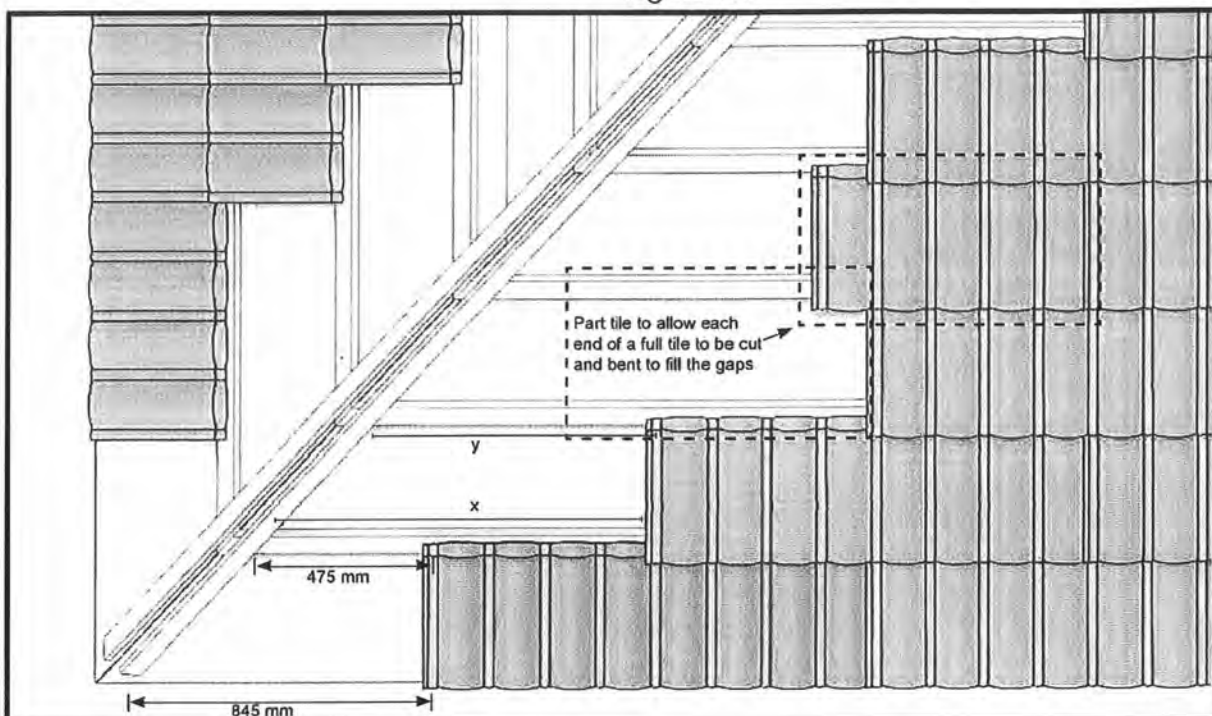


Figure 1.6

Measurements and Marking

Measurements are made on the roof, but tiles are normally marked, cut, bent and stacked on the ground.

To save time marking, cutting and bending each tile, it is best done by two installers - one to measure and the other to write the measurements down on a board or piece of paper as shown (Fig 1.7). To avoid confusion, cut, bend and stack tiles in strict order.

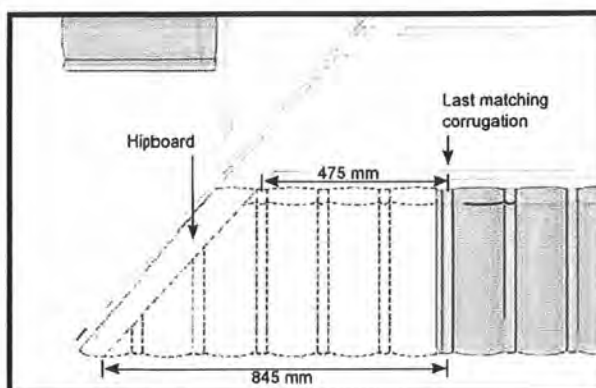


Figure 1.7

Tile Lay Continued

Note the following steps:

- (i) The basic measurement (recorded on paper or board) is taken from the last corrugation on the bottom corner of the last full tile, to the hip board, along the front edge of the batten (Fig 1.7).
- (ii) Measure and mark on the tiles with chalk or similar, the required measurements taken from the roof, ensuring the MATCHING corrugation of the overlapping tile to be cut, is taken as the measure starting point (Fig 1.7). This forms the BENDING line (Fig 1.9).

Add to the bending line measurement the height of the ridge board projection above the tile line 40mm. Mark on the tiles with chalk or similar. This forms the cutting line. (Fig. 1.9)

ALTERNATIVELY - Set a bevel to the angle formed by the hip board and tile batten. Place the bevel on the tile so that the measuring mark on the front of the tile lines up with the inside of the bevel. Mark along the inside of the bevel to give the BENDING line. Scribe the other side of the bevel to form the CUTTING line.

Each tile should supply two cut pieces leaving a minimum of wastage. Preferably a hip and valley cut from each tile will minimize this waste (Fig 1.9). However, two hip cuts will also provide a lower wastage factor.

Left-Hand Side Example

Top	475mm
Bottom	845mm

Top	x mm
Bottom	y mm

Top e.g.	342mm
Bottom e.g.	710mm

Right-Hand Side Example

Top	530mm
Bottom	900mm

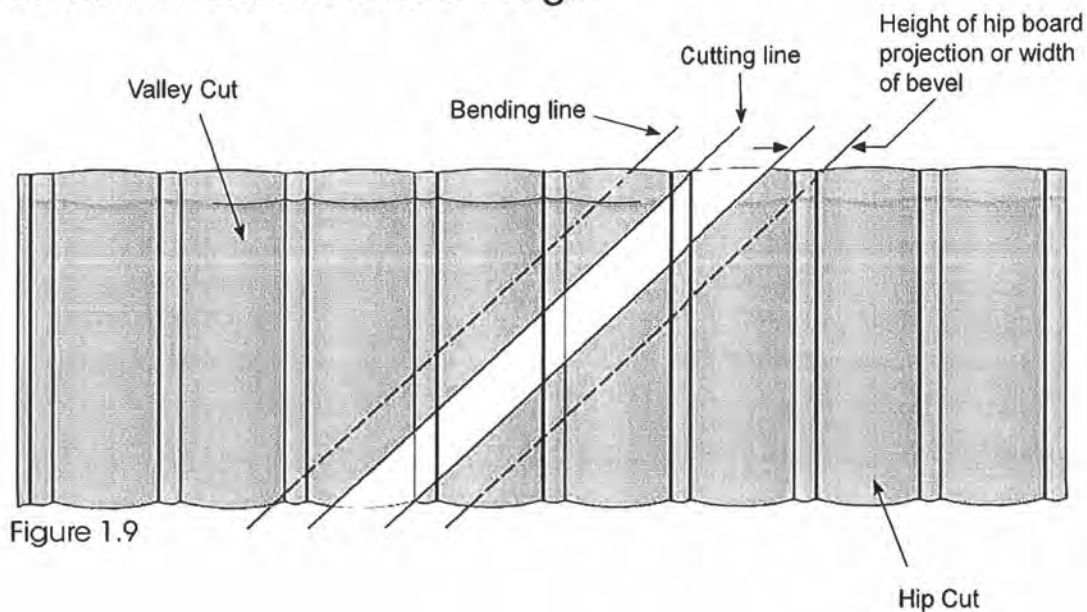
Top	600mm
Bottom	970mm

Top	380mm
Bottom	750mm

Figure 1.8

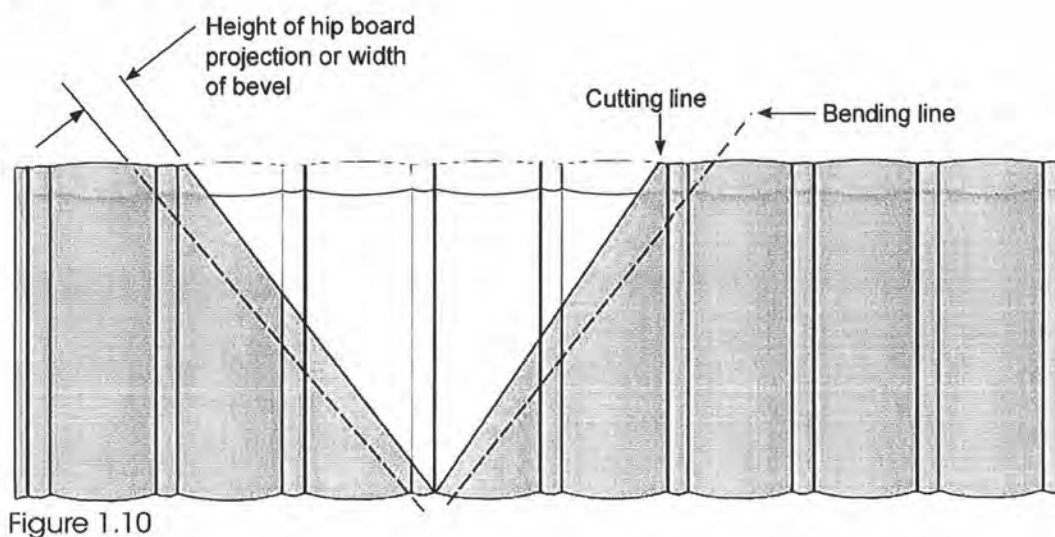
Tile Lay Continued

Preferred and Low Waste Usage



OR

Two Hip Cuts Per Tile



Tile Lay Continued

Hip Cutting

Use the guillotine to cut along the pre-marked cutting lines.

Hip Bending

Place the tile in the bender and line up the marks showing the bend line. Operate the foot controlled vice mechanism to hold the tile firmly, and bend the tile upwards. Each cut tile will vary slightly in size, and as cutting and bending are done on the ground, it is very important not to mix up the individually cut tiles. Stack them in the sequence that they will be used. A simple practice is to cut off tiles in order and re-stack in order and then move to bending, repeating the process (Fig 1.8).

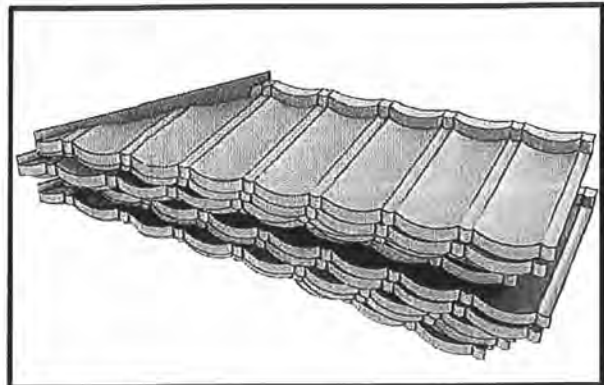


Figure 1.8

Installation of Cut Tiles

Start installing the cut tiles from the bottom course and work up the hip. Sometimes it is necessary to nail into the head of the tile to hold it in place before the next cut above is installed.

Install all cut tiles by nailing through the turn-up into the hip board, and one or more nails through the front edge into the battens (Fig 1.9).

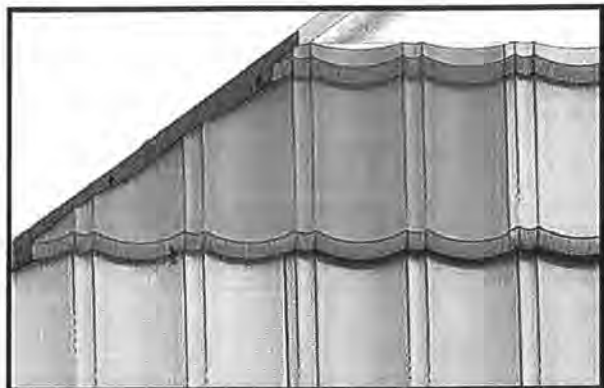


Figure 1.9

Tile Laying (Shake specific)

As the Shake profile has a straight head and nose, the tiles can be laid anywhere along the length of the tile.

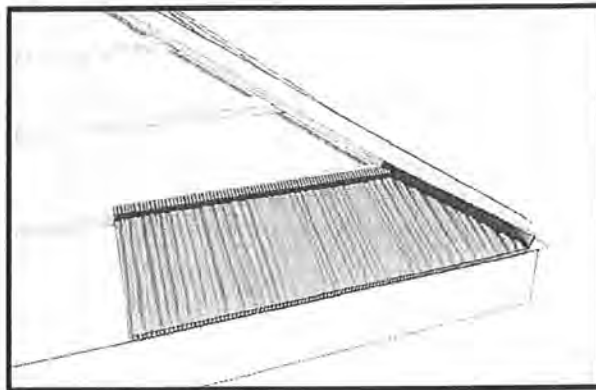
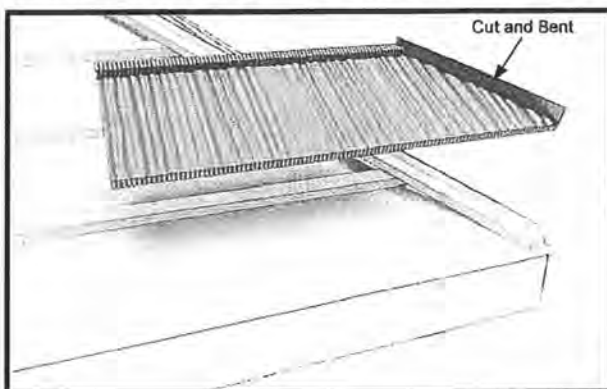
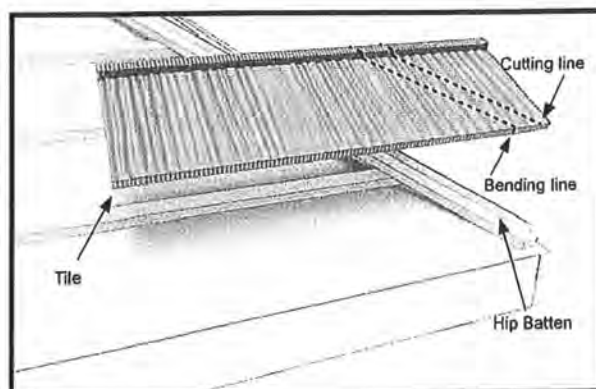
For aesthetic reasons, tiles should not be straight laid.

1.

Use a bevel to set the angle of the hip by placing the bevel in line with the batten and moving the bevel to meet the hip batten. Mark on the tile the cut and bend line allowing 40mm upturn. Proceed to cut and bend up enough cut tiles for the number of courses up the hip.

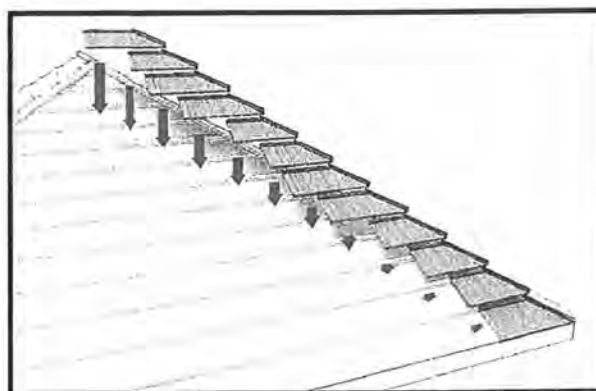
To minimise waste, it is advisable to use approximate half the tile for each cut so you can use the other half for a valley cut or another hip cut at the other end of the roof plane. These cut tiles should vary a little in size to try to avoid a pattern.

Note: Tiles must be turned up a minimum of 40mm against the hip battens, hip board or where they butt against a vertical or inclined surface.



2.

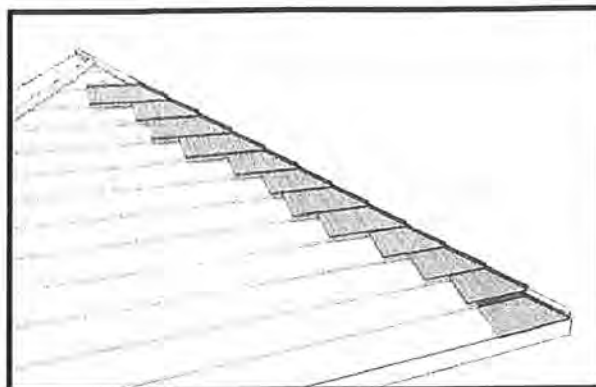
Install the cut tiles by starting at the bottom course and nailing the cut tiles to the hip batten. Proceed up the hip length one tile at a time.



Tile Lay Continued

3.

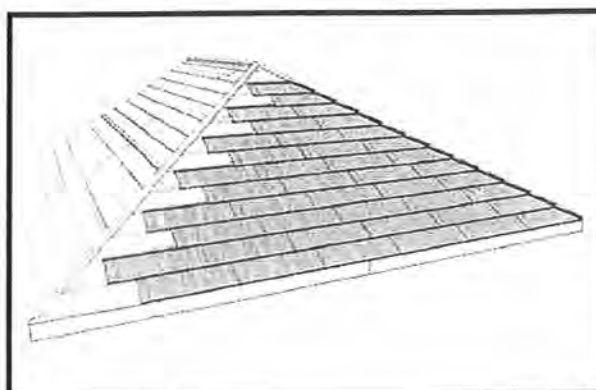
Secure tiles down on batten, ensuring that they butt against hip batten as shown in step 2.



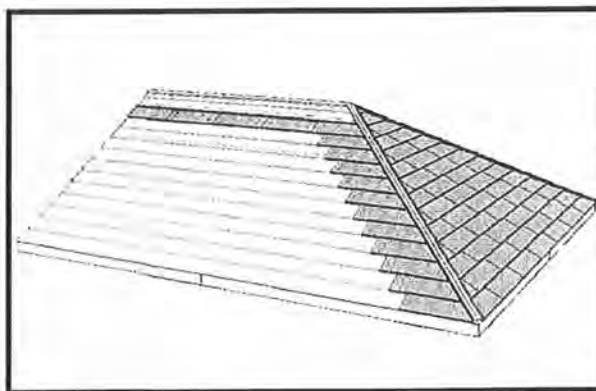
4.

In some instances it is desirable to cut and lay a half tile to ensure a cut tile is a desirable size.

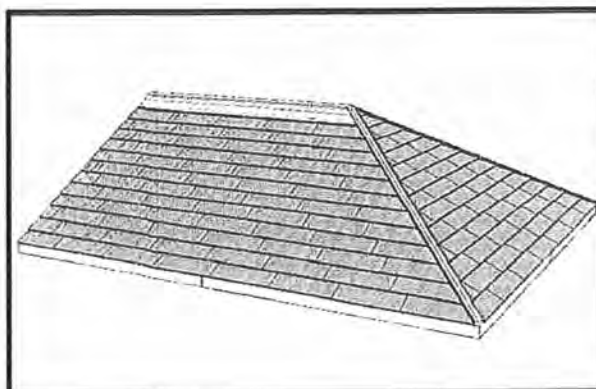
Proceed to lay and secure all tiles out across length of roof.



On the second to top course, continue to lay tiles towards the other hip until the last full tile will fit.



Then continue to lay tiles down to the fascia and then across the roof to complete the roof plane with full tiles.

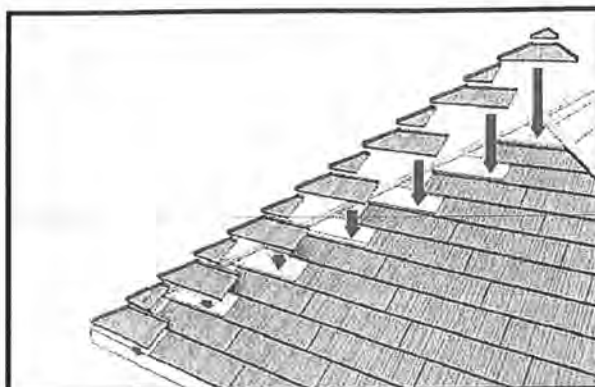


Tile Lay Continued

5.

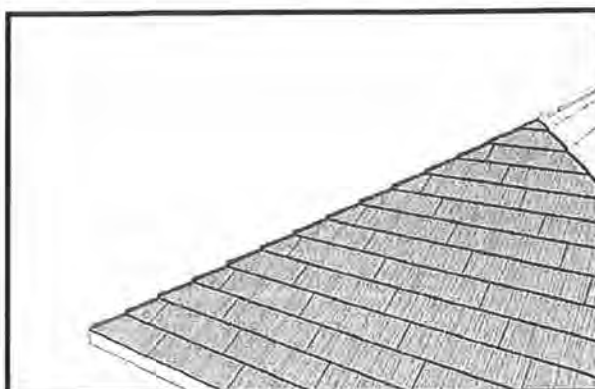
Measure the bottom length of each cut from the centre of the lap to the hip batten for each cut for the full length of the hip. Mark with bevel, cut and bend similar to the other side of the hip.

Fit cut tiles once again starting from the bottom course. Care should be taken to ensure the cut tile fits underneath the full tile above.



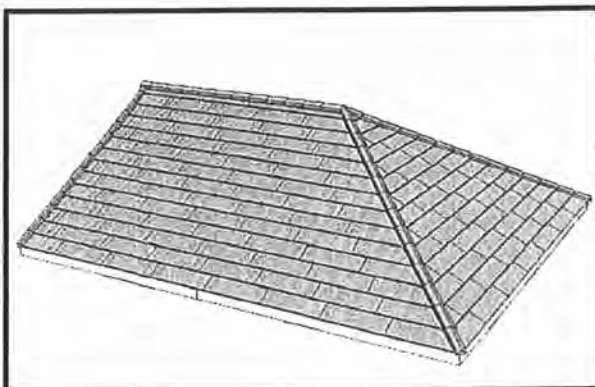
6.

Place in position and secure each tile at the lap, into the hip board and along the nose of the tile as required depending on the cut tile length.



7.

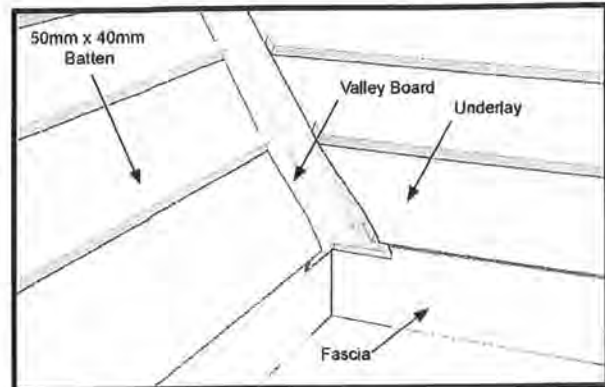
Once complete, The hip battens are then ready to be covered with V Ridge Caps.



Valley Installation (Bond, Classic, Roman and Shake)

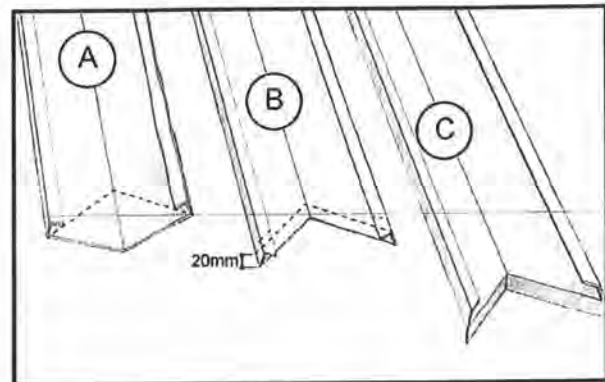
1.

The valley boards are installed between the valley jack rafters and flush with the roof plane to support the Metal Tile Valley. Valley boards are required to be set with their outer edge a minimum of 150mm (fig 1.11 pg 28) from the centre line of the valley. Valley boards are required to support a point load of 1.1.kN, which is taken to be the weight of a tradesperson with a bag of tools. Valleys are installed so that water discharges over the back of, and into, the eaves gutter.



Valley Tray

The valley tray is cut to match the angle of the fascia boards (A). It is then further cut to create a downturn of 20mm (B). The valley end is then corrected to discharge in to eaves gutter (C). The valley tray should protrude into the gutter in line with the bottom row of tiles (50mm).



Fastening

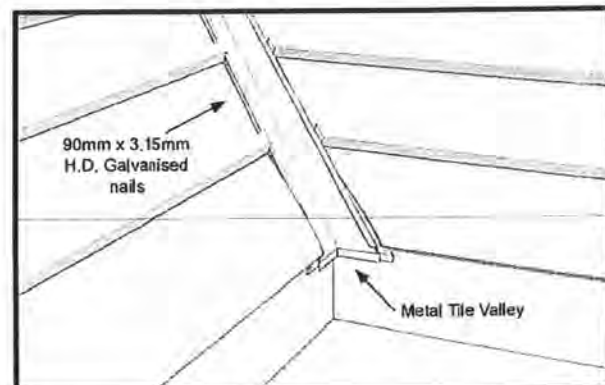
First run out a strip of roofing underlay over the valley board to prevent the valley tray from coming into direct contact with the valley board.

Valleys shall be secured by 90mm x 3.15mm H.D. Galvanised nails fixed into the valley board at no more than 1.0m centers and bent over the top lip of the valley to hold the valley tray in place.

2.

Under no circumstances must the fasteners penetrate the valley surface.

Where joins occur the minimum overlap is to be no less than 200mm.

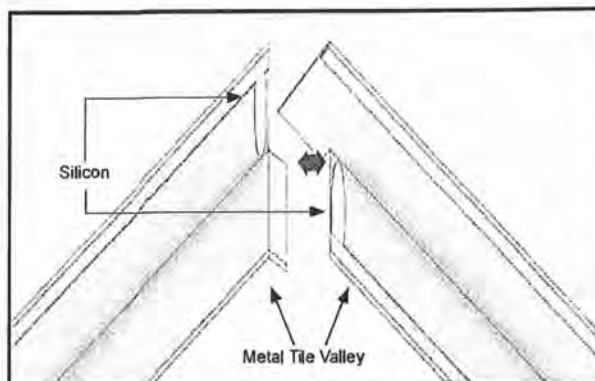


Valley Installation Continued

3.

Valley trays should be cut at the apex of the valley, as depicted in the right-hand picture. Silicon is placed on both trays before they are sealed in place.

The top end of the valley should be turned up against the hip or ridge battens to the height of the batten. Where two valleys meet over a dormer they are cut, shaped, joined and sealed so that they form a continuous valley.



Tile Measuring, Cutting and Bending

Tile measuring, cutting and bending for valleys is carried out as for hips, except that the bends are downwards.

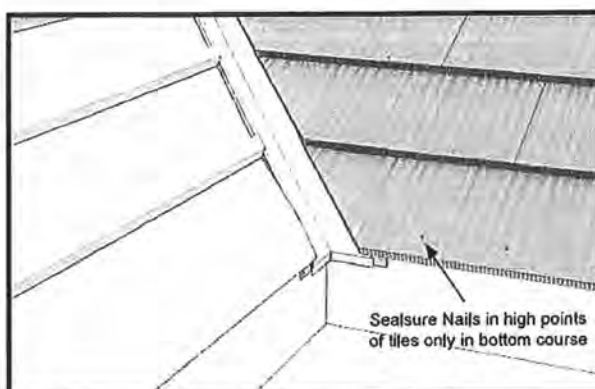
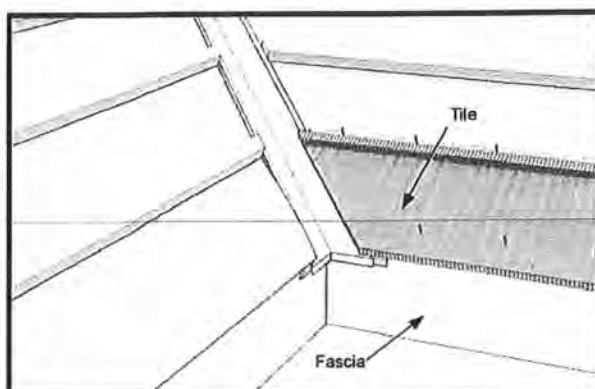
Measure the distance from the last corrugation of the installed tile to the desired finished tile line in the valley (approximately 40mm to each side of the valley centre line). This measurement is done at the top and bottom of the installed tile. This is the BEND line. To this measurement, add the depth of the valley from the FINISHED TILE line minus 10mm which is the amount the tile will drop into the valley. This is the CUTTING line and will result in a tapered downturn.

The tile edge should be bent down to a minimum of 5mm from the valley floor.

Cut with the guillotine and bend down the tile at the bend line.

Install in the normal manner, endeavouring to place one nail as close to the valley as possible to the end of the batten adjacent to the valley tray.

DO NOT nail in the valley itself.

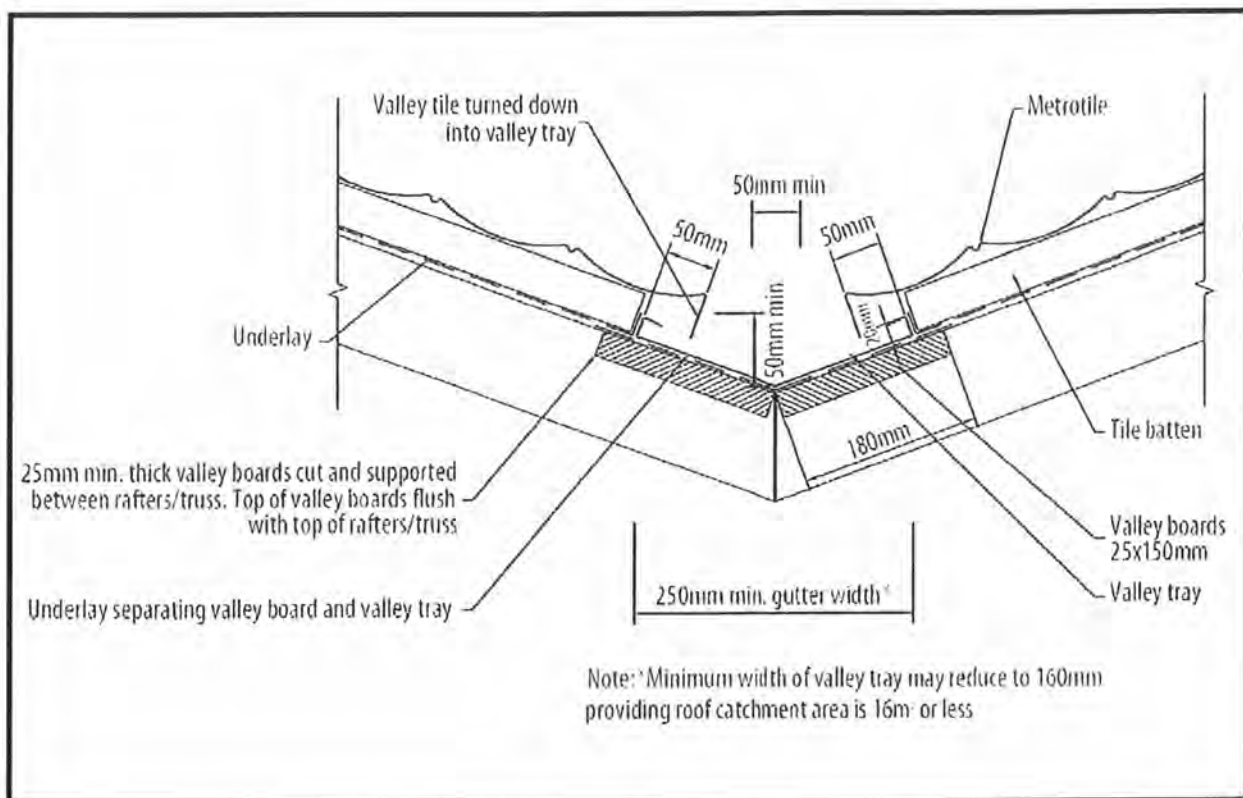
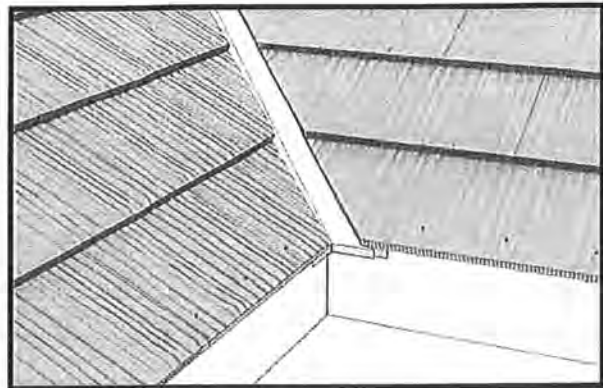


Valley Installation Continued

7.

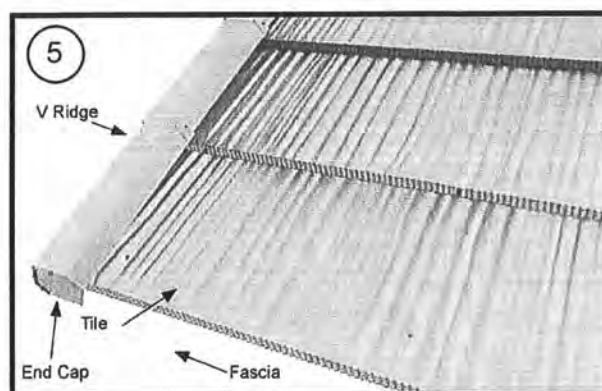
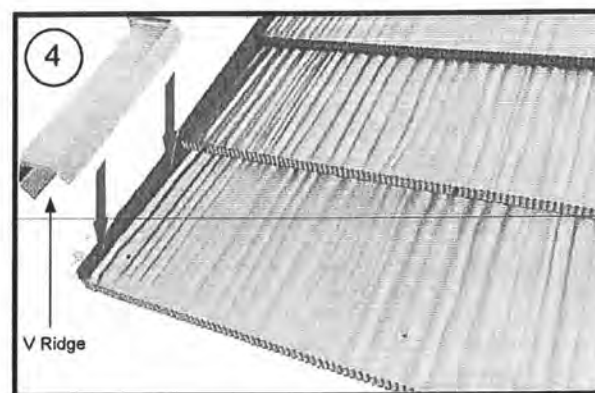
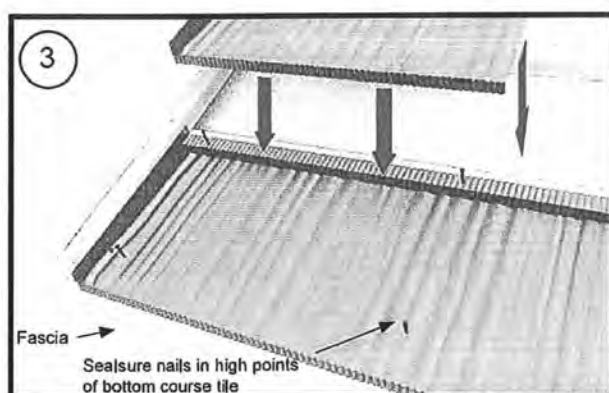
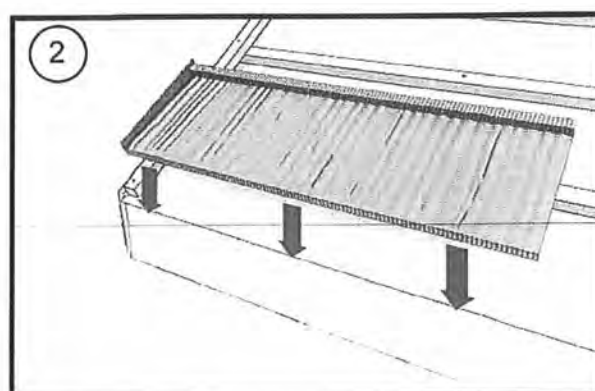
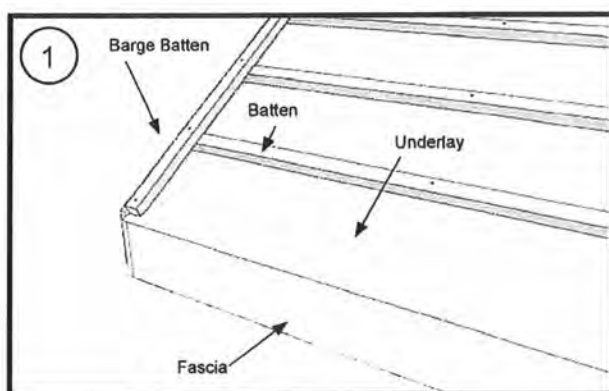
The gap between tiles on opposing sides of the valley must be a minimum of 50mm.

Valley boards must be treated H3.2 and must be separated with underlay between any tile or flashing and the treated timber.



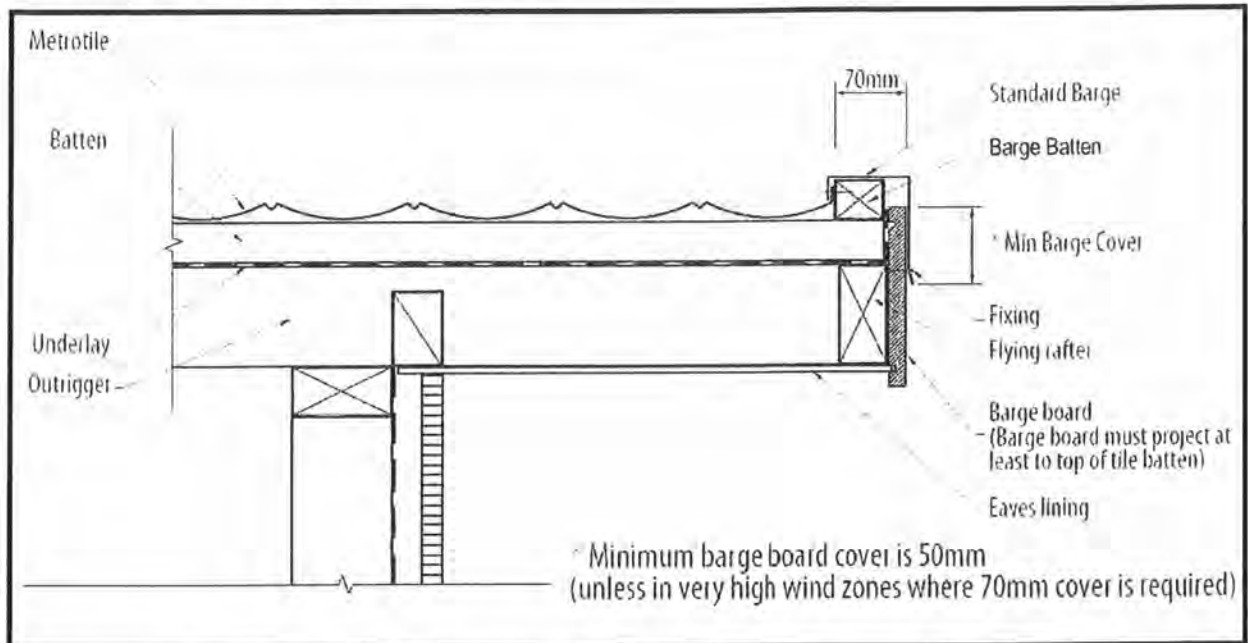
Gable Installation (Bond, Classic, Roman and Shake)

Tile ends are turned up a minimum of 40mm and installed against the barge batten that is covered by a Standard Barge, Barrel Trim or V Ridge (as shown). Alternatives include under a metal fascia system where there is no barge batten or a hidden gutter. Where a hidden gutter is used, tile edges should be turned down into the gutter by a minimum of 20mm.

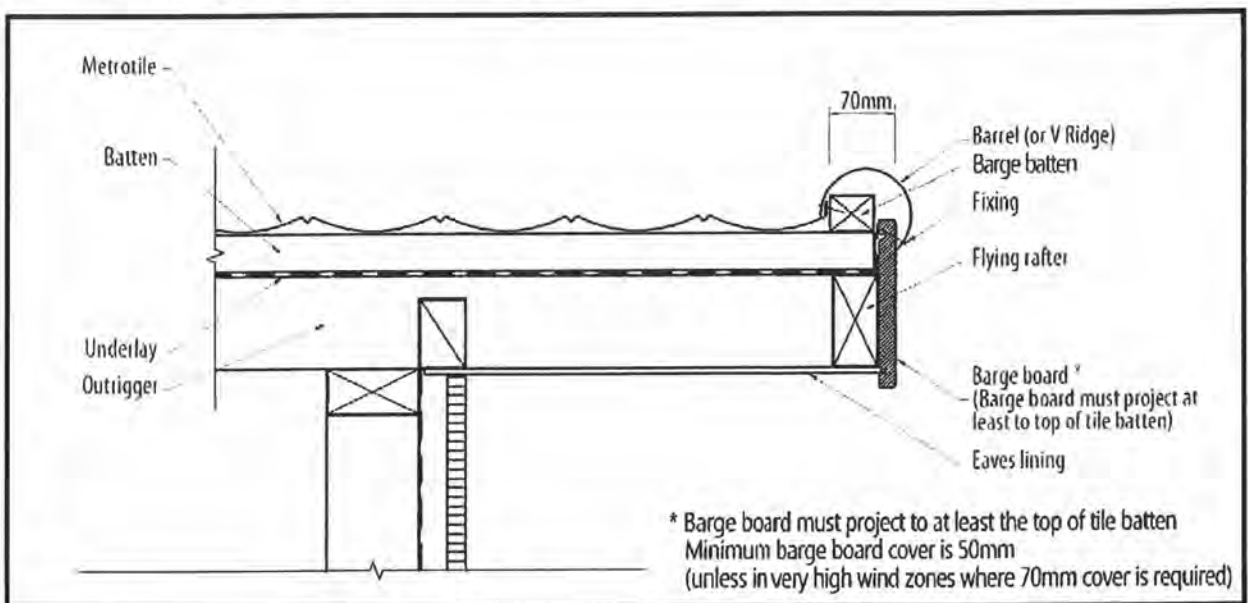


Gable Installation Continued

Standard barge Timber Fascia

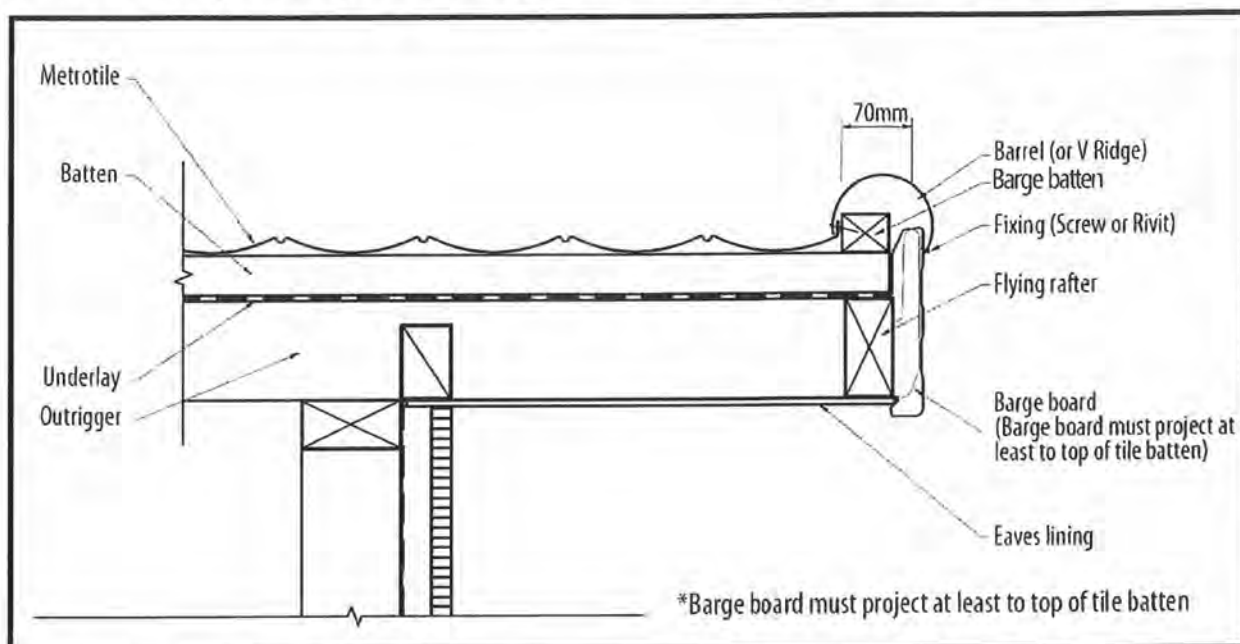


Barrel Trim (shown) or V Ridge Timber Fascia

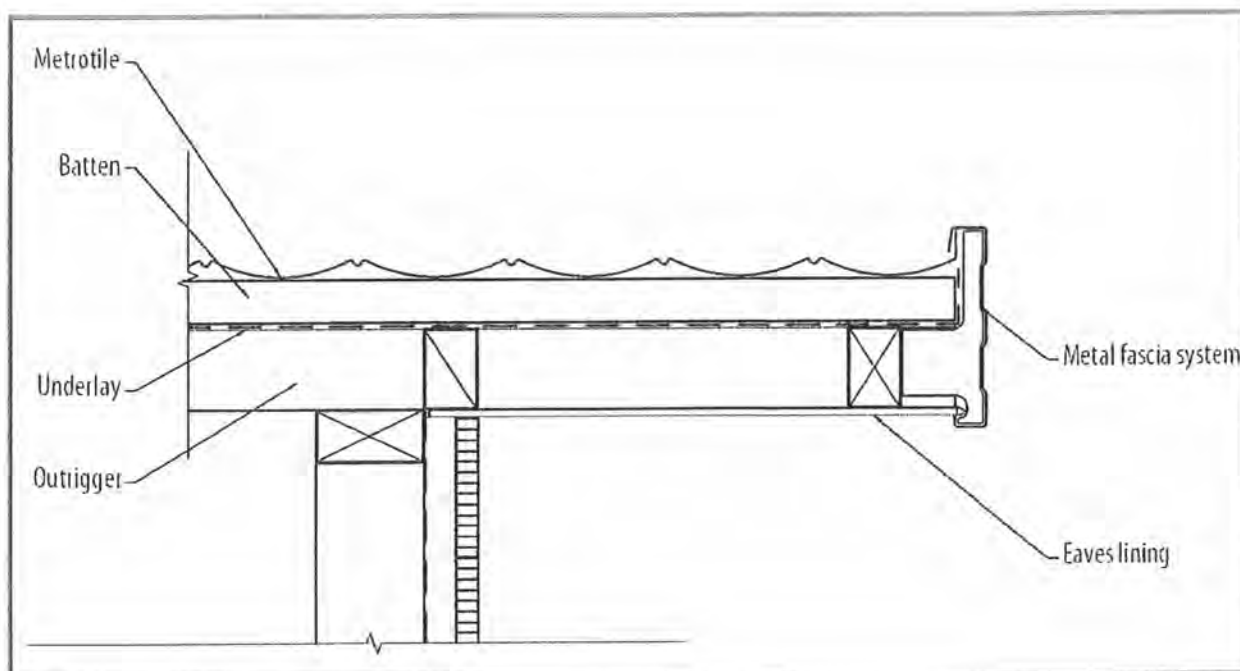


Gable Installation Continued

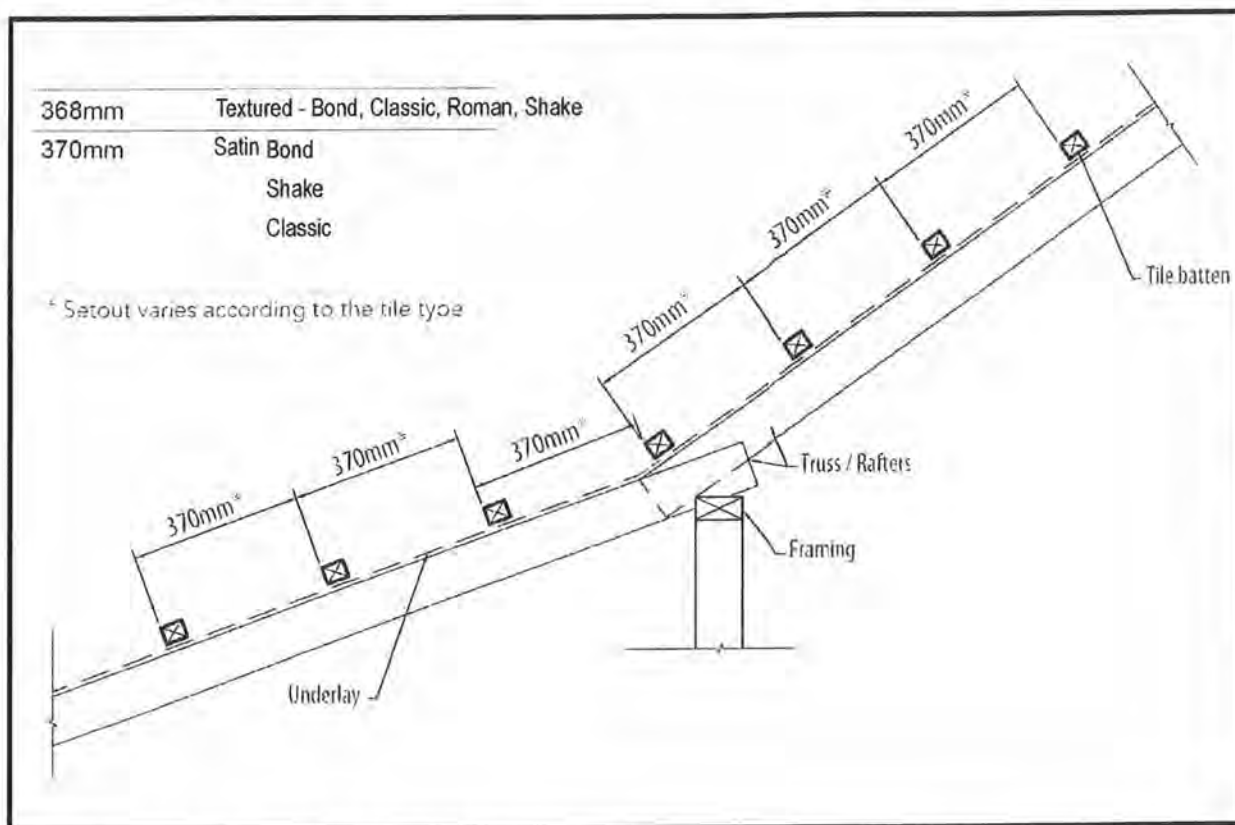
Barrel Trim (shown) or V Ridge or Standard Barge to Metal Fascia



Turn Up - Metal Fascia

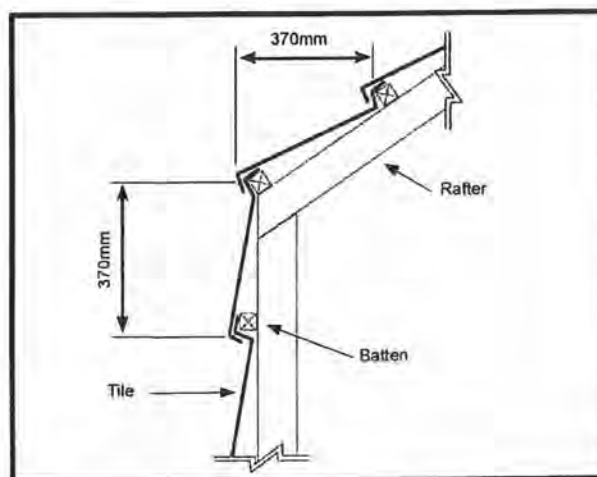


Mansard Roof Including a Change of Roof Pitch



Batten set out follows pitch change

As illustrated, where the roof line changes pitch, a batten is placed at this point. In situations where you have a pitch change and a specific number of full tiles cannot be laid down, it is suitable to bend a full tile lengthwise to compensate.



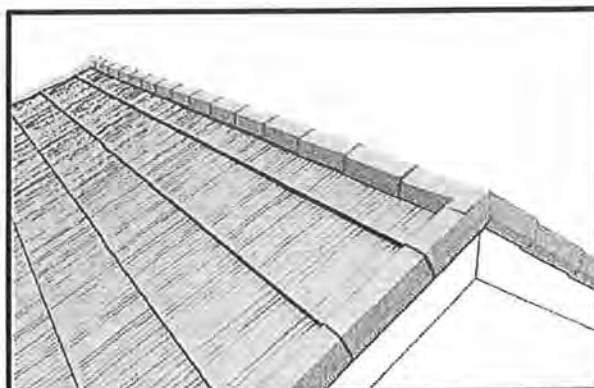
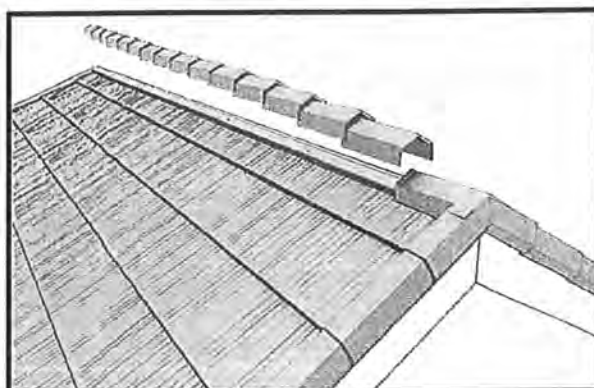
Ridge Installation

It is recommended to fit the V Ridge or Barrel Trim up all hips and gables before moving to the ridge. The starting and finishing trim on the ridge must be lapped over the hip or gable trim with silicon applied under the lap to create a waterproof seal. To ensure a watertight joint and prevent the ingress of water, a tight fit is required between the tile and the ridge cap.

Note: Tiles must be turned up a minimum of 40mm against the batten, hip board or where they butt against a vertical or an inclined surface.

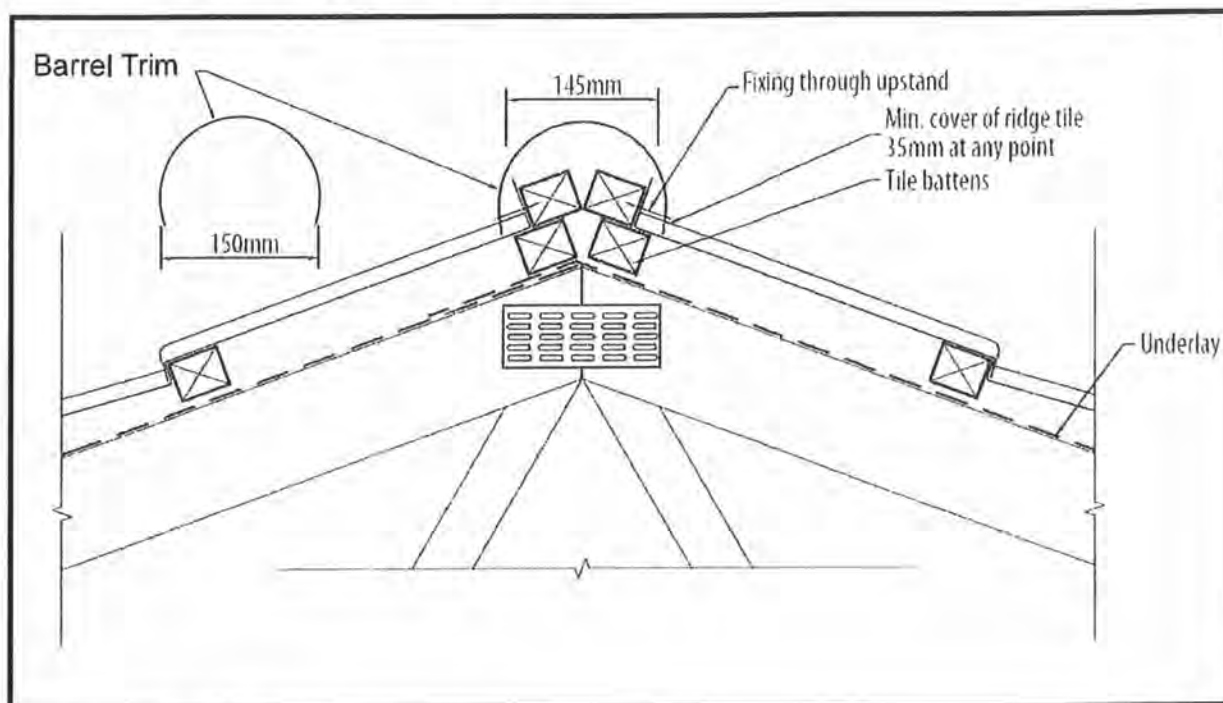
The ridge trim can be fixed through the side of the trim using fasteners. It is also recommended that the silicon spots be covered for aesthetic reasons using the Touch-Up Kit.

Gable Starter V Ridge

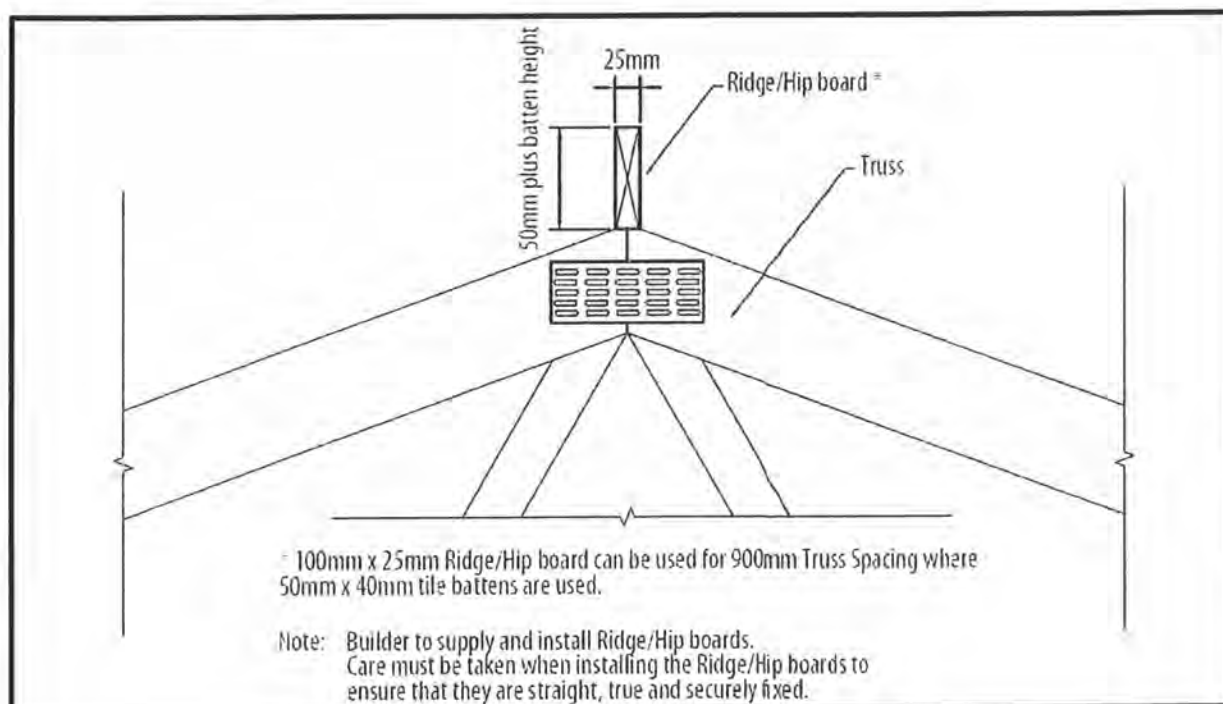


Ridge Installation Continued

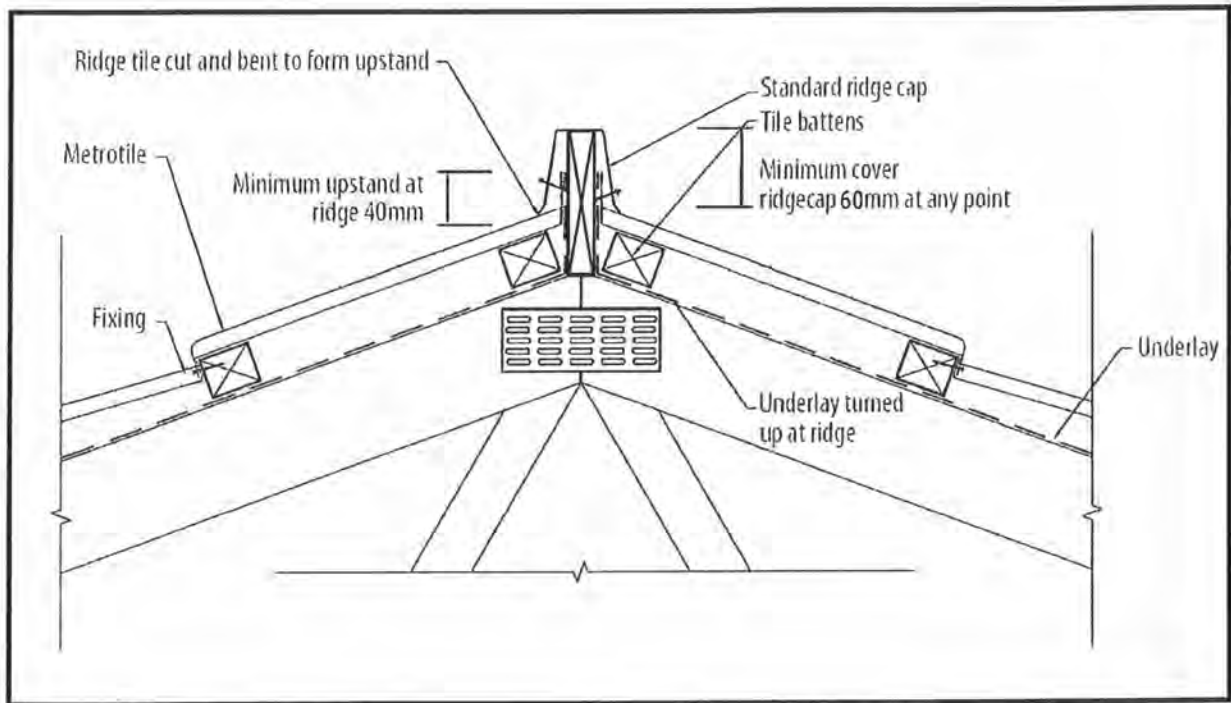
Barrel Trim (shown) or V Ridge



Standard Ridge

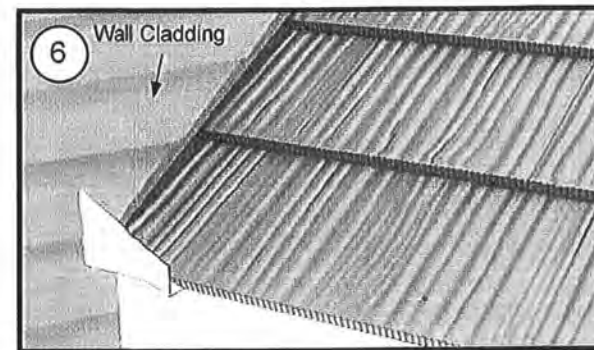
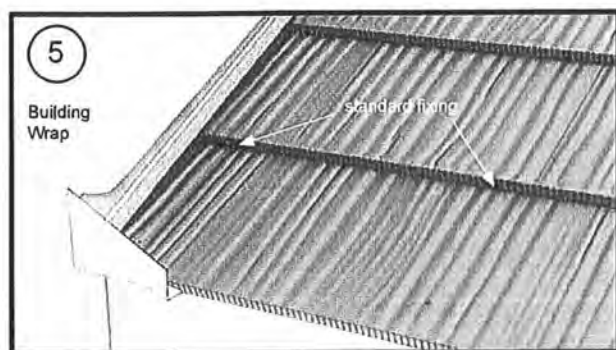
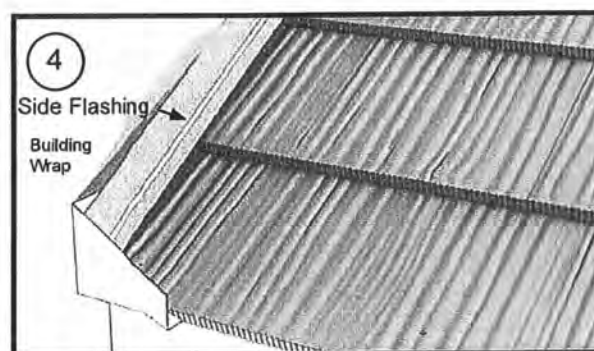
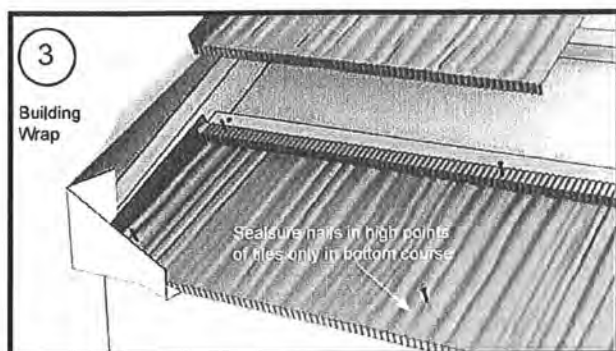
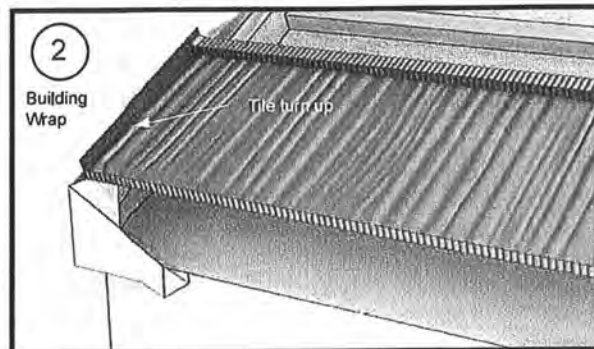
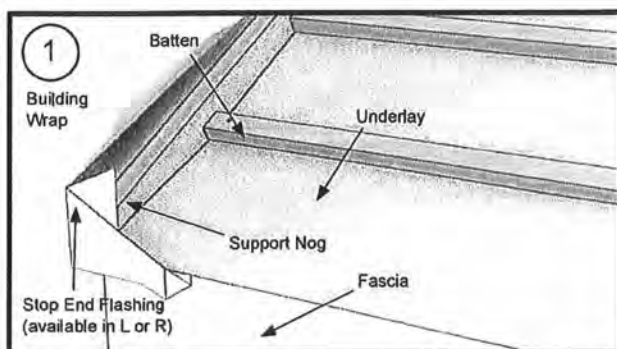


Ridge Installation Continued

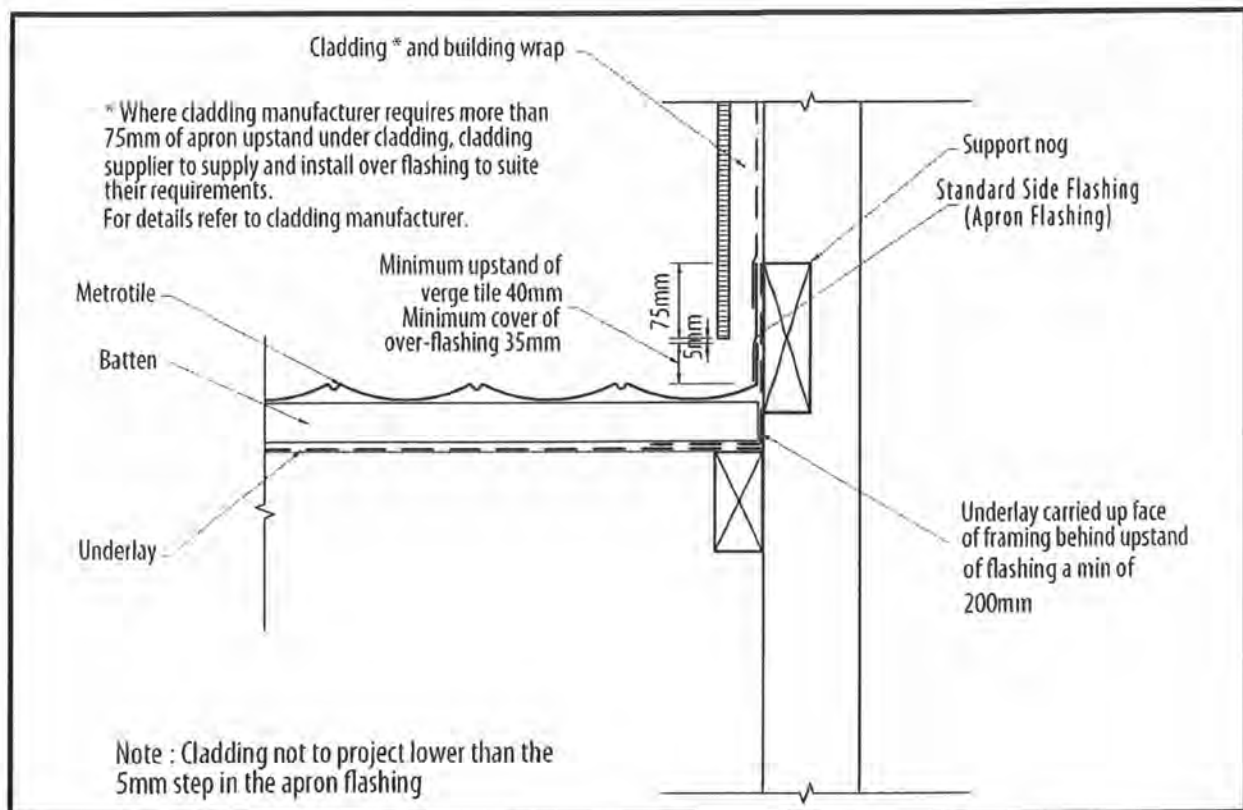


Sidewall Installation

Flashings at the ends of roofs, where the wall continues past the roof, require a stopend flashing that ensures water is directed into the gutter. Sufficient material should be left standing out from the wall so that cladding installers can ensure a weather secure finish.



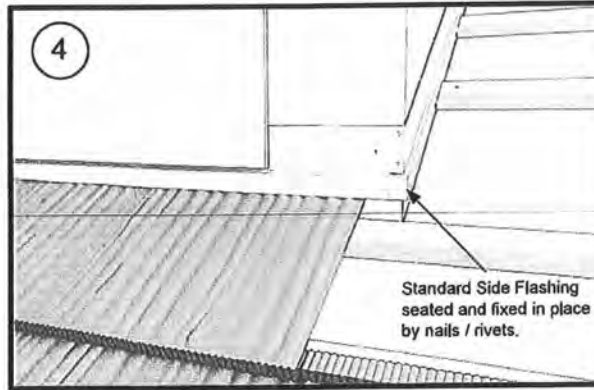
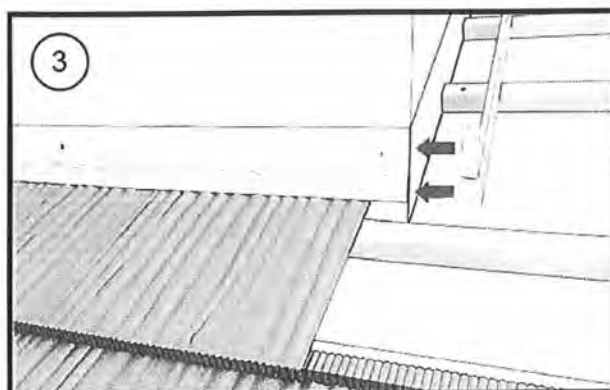
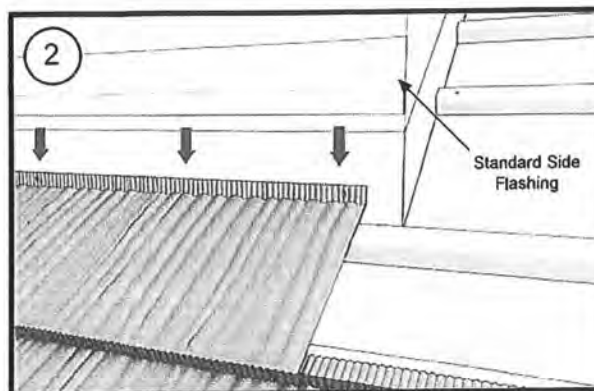
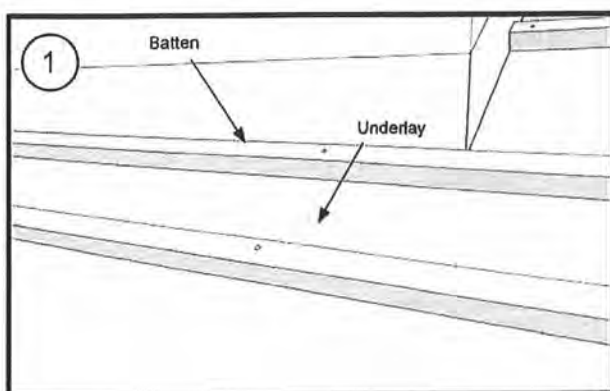
Sidewall Installation Continued



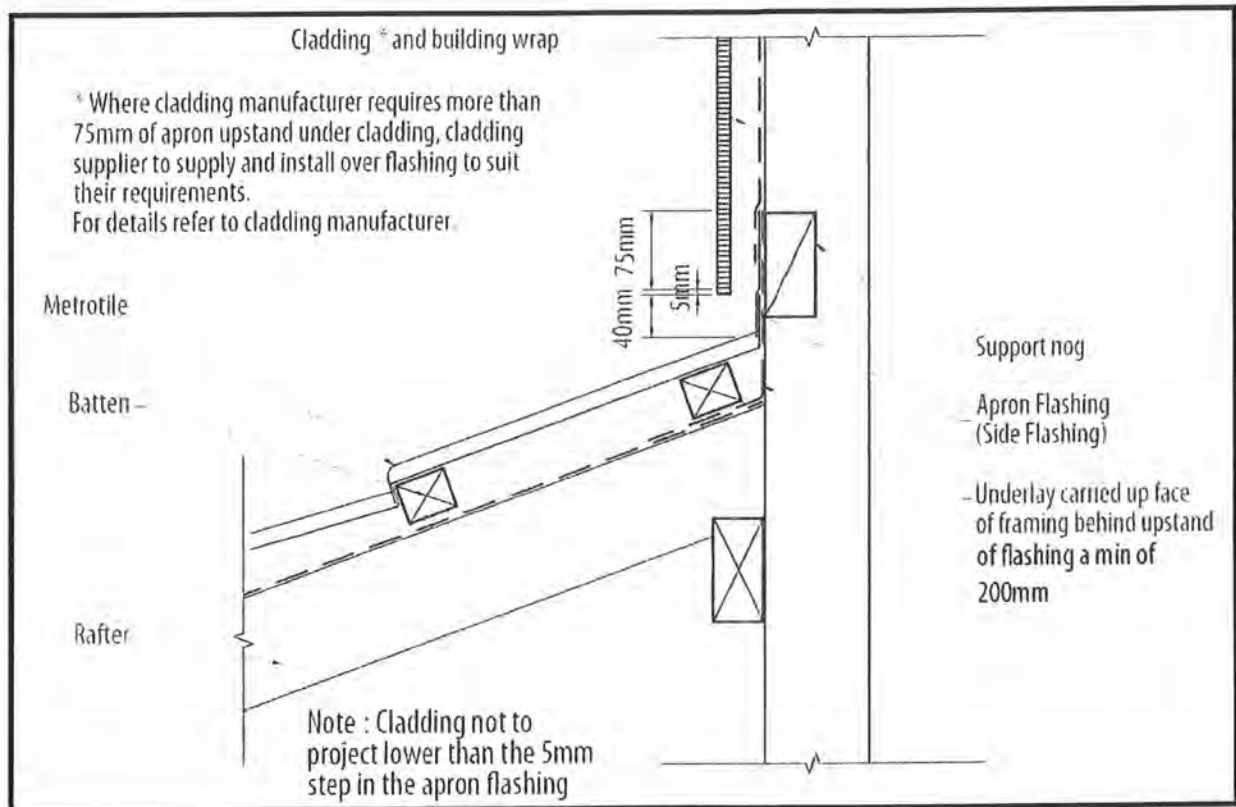
Headwall Installation

The wall cladding flashings must be positioned before the tiles and must be designed so that the turned up tile can be inserted behind the flashing.

Note: All preparatory work of under-flashing, fixing of eaves, gutters and valley gutters must be completed and all tiling battens must be in place before laying tiles.



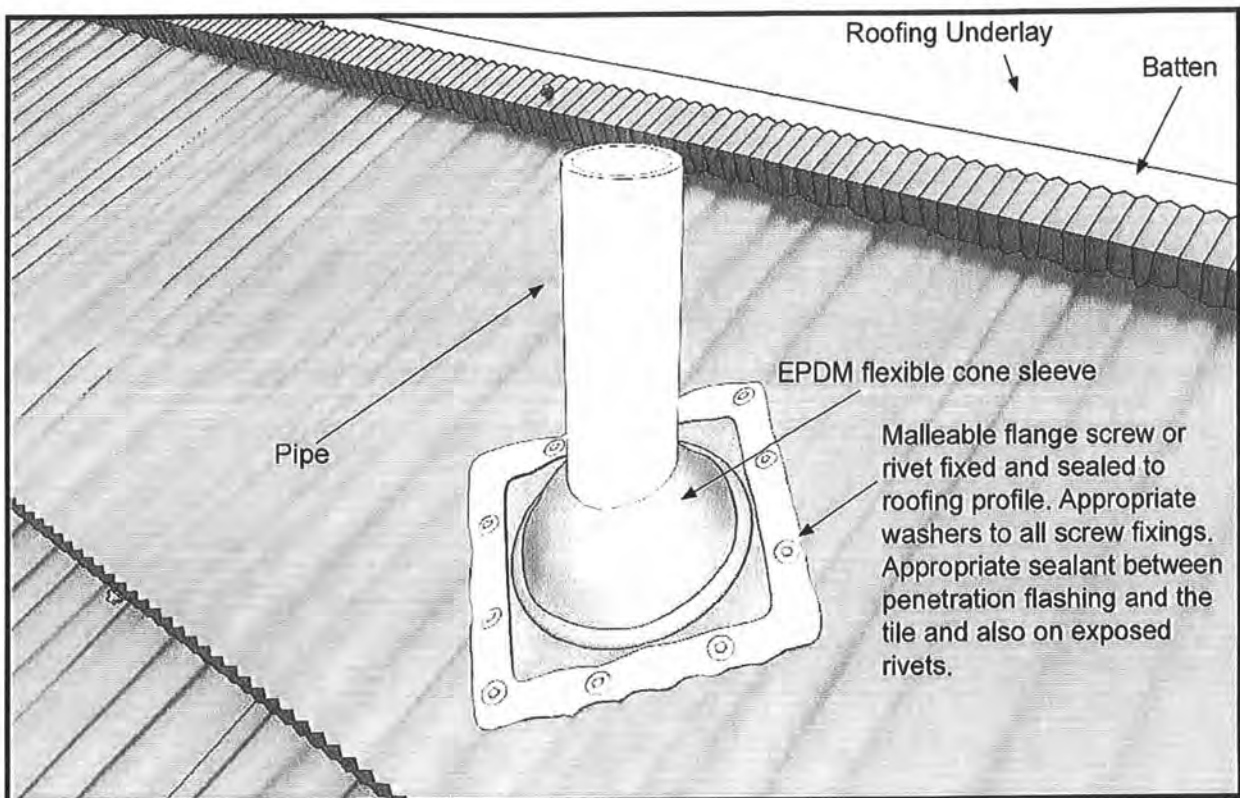
Headwall Installation Continued



Penetration Installation

Roof penetrations shall be flashed as follows:

- a) Pipe penetrations up to 60mm shall be flashed using an EPDM boot flashing as shown in below figure.





Thank you

for purchasing your new laminate benchtop
from Contour Surfaces.

Our company has provided quality
and value with its products since
1987 using the best equipment &
materials available.

We're so confident about the
quality of our products that we
offer something different to the
standard industry 5 Year warranty.

6

YEAR
WARRANTY

At no extra cost we offer
you 6 Years worth of
'PEACE OF MIND'

Caring for your laminate top

To help you get the most out of your new surface we have put together a few
tips to help keep your top looking good longer.

- ✓ **Wipe up** liquids spilt over joins, timber edges and tile inserts
immediately.
- ✗ Damage caused by leaving liquids on these areas is **not** covered by
our warranty.
- ✓ Use a heat shield (eg chopping board or surface saver) if placing hot
pans etc. directly onto the benchtop surface.
- ✗ **DO NOT** use "Ajax", "Jif", "Chemico", "Brasso" & oven cleaners etc.
Abrasive cleaners can permanently damage the laminate surface.
- ✗ Avoid placing hot items over joins. (eg. Electric frypans, jugs & toasters)

Cleaning your laminate top

Day to day

- ✓ Wipe with warm water & detergent. Wipe dry.
- ✓ Use non abrasive liquid cleaners.

Stubborn marks & stains

- ✓ Soak with hot water & wipe dry. (Avoid join areas) Apply "Handy Andy"
or "Janola" diluted 1 to 3 with water. Wipe dry.
- ✓ A soft bristle brush can be used to gently remove ingrained marks on
textured surfaces.

In the event of an accident

The following recommendations apply if things go wrong:

Neat bleaches or similar, oven cleaners & hair rinses

Apply hot soapy water. Rinse. Wipe dry.

Battery acid, glue hardeners

Rinse with cold water & wipe dry.

Fabric Dyes, Hydrogen Peroxide

Rinse with cold water & wipe dry. Then apply methylated spirits & wipe dry.

Leather dyes

Apply methylated spirits & wipe dry. Apply mineral turpentine & wipe dry.

30 APR 2013

BY: 00032

6
YEAR
WARRANTY

This warranty protects the purchaser against any manufacturing defects
providing this benchtop has been installed, maintained and used in
accordance with the manufacturer's instructions.

It does not apply to reasonable wear & tear, misuse, negligence or any
damage caused by liquids being left on joint areas.

This warranty does not affect your statutory rights.

This warranty is validated from the date of dispatch shown overleaf.



contour
SURFACES

The quality benchtop team



Your quality benchtop has been manufactured and factory inspected according to our "Best Practice" guidelines.

The product has been constructed using the best materials possible.

Should any problems arise please contact us on **Freephone 0800 867778** quoting the warranty number shown below:

DATE OF DISPATCH

BRAND OF LAMINATE

COLOUR / FINISH

QUALITY CHECK BY

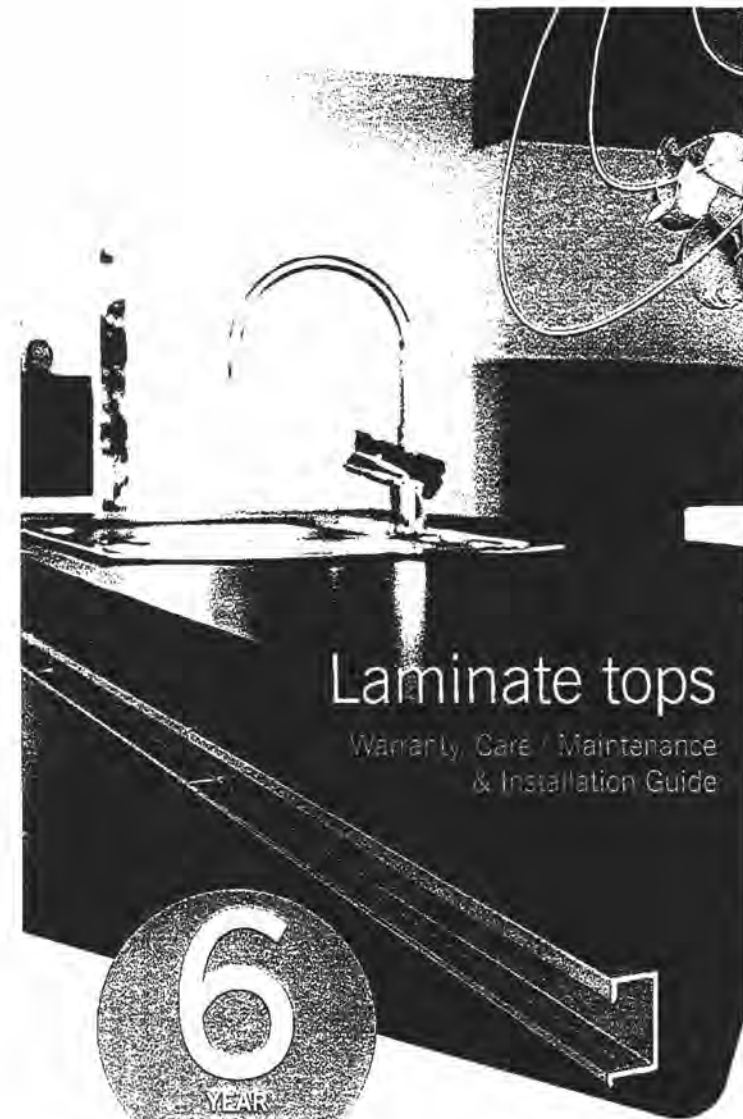


Installation instructions

- ✓ Ensure top is installed level & flat & is adequately supported. Approx 800mm fixing centers are required along front & back rails. Maximum unsupported overhang on 36mm solid top is 350mm-400mm.
- ✗ Do not stress the top during installation.
- ✓ If site joins are required we recommend that the tops be installed by an experienced tradesperson. Instructions for site joints are provided with each glue kit.
- ✓ Use a good quality silicone if fitting the overmount bowl on site.
- ✓ The use of a good quality primer on the underside of the benchtop over dishwasher areas is recommended.
- ✓ Adequately seal the rear edge of the sink section to prevent possible water damage.
- ⚠ Our warranty does not cover site workmanship unless the installation has been completed by one of our installers.

The quality benchtop team

Contour Surfaces Limited 24 Sir William Ave, East Tamaki, Auckland
PO Box 54 103, The Marina, Auckland 2144
T 09 274 7277 F 09 274 5533 E sales@contoursurfaces.co.nz
W www.contoursurfaces.co.nz



Laminate tops

Warranty, Care / Maintenance
& Installation Guide

Please keep this in a safe place.



RBW



**WILTON
JOUBERT**

Consulting Engineers

30 APR 2013

BY: 00036

Structural Design Calculations for:

Lot 2 : DP 348721

48 Eucalyptus Way,

Paraparaumu,

Wellington

NORTHLAND

PO Box 8130

Kensington

Whangarei 0145

T +64 9 945 4188

AUCKLAND

WAIKATO

PO Box 11-381

Ellerslie

Auckland 1524

T +64 9 579 1114

F +64 9 579 7778

CANTERBURY

PO Box 6312

Upper Riccarton

Christchurch 8442

T +64 3 341 1373

SOUTHERN LAKES

PO Box 169

Wanaka 9343

T +64 3 443 5322

Job #: 33104

February 2013



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Auckland: 09 5791114
Canterbury: 021 801984
Southern Lakes: 021 494586

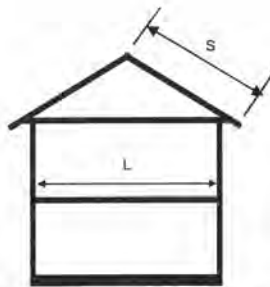
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email: jobs@wj.co.nz

RIBRAFT DESIGN - EDGE BEAM

<Job No.>: 33104
<Job Title>: lot 2, 48 Eucalyptus Way
<Description>: Edge Beam

Date: 27-Feb-13
Designer: BB
Checker: DL

Loadings



Tributary Roof and Floor Lengths

WALLS

Lower: HOTBloc 800 crs
Light (North/South Taupo)
= 220 kg/m²
= 2.16 kPa
Height = m
Load/m = kN/m

Upper: HOTBloc Solid
Light (North/South Taupo)
= 400 kg/m²
= 3.92 kPa
Height = m
Load/m = kN/m

Other (Specify Wall Weight)

Weight = 170 kg/m²
= 1.67 kPa
Height = 2.40 m
Load = 4 kN/m

SUSPENDED MID-FLOOR

Tributary Length L/2

Unit/Floor = Timber
Topping = N/A
= 0.38 kPa
Live Loading = 1.50 kPa
Super Imposed Dead = kPa
Tributary Span = m
Dead Load/m = kN/m
Live Load/m = kN/m

ROOF

Tributary Length = S

Light = 0.46 kPa
Live Loading = 0.25 kPa
Tributary Span = 6.70 m
Dead Load/m = 3.08 kN/m
Live Load/m = 1.67 kN/m

Loadings Summary

Walls	4.00	kN/m	Dead
Mid Floors		kN/m	Dead
		kN/m	Live
Slab+Edgebeam	3.42	kN/m	Dead
	0.90	kN/m	Live
Roof	3.08	kN/m	Dead
	1.67	kN/m	Live^
Extra Dead		kN/m	Dead
Extra Live		kN/m	Live

* Includes Edge Beam Weight, SDL = 0.5 kPa LL = 1.5 kPa

^ Roof LL not added if midfloor exists else LL = 0.25 kPa



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Job Details: lot 2, 48 Eucalyptus Way

33104

27/2/13

Working Loads	Dead	10.50	kN/m
	Live	2.57	kN/m
Ultimate Loads (1.2G + 1.5Q)	Dead	12.60	kN/m
	Live	3.86	kN/m
Total Ultimate Load on Edge	w =	16.46	kN/m

Wall Construction Type	Brick Veneer min beam width 300mm
Edge Beam Details	Beam Width = 300 mm Pod Depth = 220 mm Top slab Depth = 85 mm Self Weight = 2.20 kN/m Construction Type = Standard Raft

Standard Raft Construction	
dependable bearing capacity:	150 kPa
Bearing Check =	OK!
Working Pressure =	38 kPa
Steel Requirements - As Per Std Drg's	
Top Steel:	1HD12
Btm Steel:	2HD12

Continuous Piers	
(N.B. All Edge Beam Load in to 'strip' footing) Assume 100 kPa Bearing Under Edge Beam, unless a Soil Report indicates otherwise.	Bearing Capacity under Piers: kPa
100 kPa min or as specified in Report under loadbearing areas.	Bearing Check = Pressure = kPa Steel Requirements - As Per Std Drg's Top Steel: Btm Steel:

The prescribed Edge Beam design is:	Standard Raft Construction
	300 mm wide edge beam with 1HD12 in top & 2HD12 in bottom
Location (ie: which wall): Edge Beam	Mesh 85 220 300 1HD12 2HD12 Polystyrene



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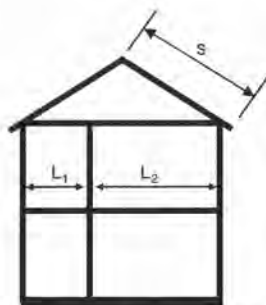
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RIBRAFT DESIGN - INTERNAL LOADBearing RIB

<Job No.>: 33104
<Job Title>: lot 2, 48 Eucalyptus Way
<Description>: internal thickening

Date: 27/02/2013
Designer: BB
Checker: DL

Loadings



Tributary Roof and Floor Lengths

WALLS

Lower: HOTBloc Solid
Light (North/South Taupo)
= 400 kg/m²
= 3.92 kPa
Height = m
Load/m = kN/m

Upper: HOTBloc Solid
Light (North/South Taupo)
= 400 kg/m²
= 3.92 kPa
Height = m
Load/m = kN/m

Other (Specify Wall Weight)

Weight = 30 kg/m²
= 0.29 kPa
Height = 2.40 m
Load = 1 kN/m

SUSPENDED MID-FLOOR

Tributary Length = (L₁+L₂)/2

Unit/Floor = Timber
Topping = N/A
= 0.38 kPa
Live Loading = 1.50 kPa
Super Imposed Dead = kPa
Tributary Span = m
Dead Load/m = kN/m
Live Load/m = kN/m

ROOF

Tributary Length = S (Check if Rafter or Truss)

Light = 0.46 kPa
Live Loading = 0.25 kPa
Tributary Span = 3.30 m
Dead Load/m = 1.52 kN/m
Live Load/m = 0.83 kN/m

Loadings Summary

Walls	0.71	kN/m	Dead
Mid Floors		kN/m	Dead
		kN/m	Live
Slab+Edgebeam	4.03	kN/m	Dead
	1.80	kN/m	Live
Roof	1.52	kN/m	Dead
	0.83	kN/m	Live [^]
Extra Dead		kN/m	Dead
Extra Live		kN/m	Live

* Includes Internal Rib Weight, SDL = 0.5 kPa LL = 1.5 kPa

[^] Roof LL not added if midfloor exists else LL = 0.25 kPa



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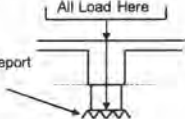
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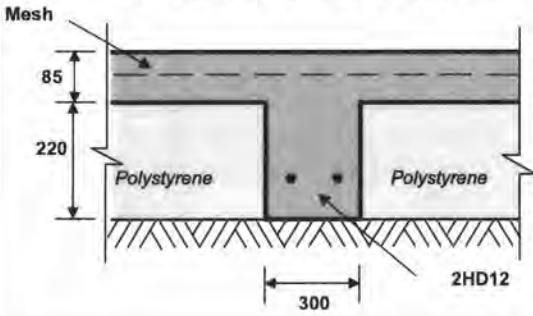
27/2/13

Working Loads	Dead	6.26	kN/m
	Live	2.63	kN/m
Ultimate Loads (1.2G + 1.5Q)	Dead	7.51	kN/m
	Live	3.94	kN/m
Total Ultimate Load on Internal	w =	11.45	kN/m

Internal Rib Details	Rib Width =	300	mm	OK!
	Pod Depth =	220	mm	
	Top slab Depth =	85	mm	
	Self Weight =	1.58	kN/m	
	Construction Type	Standard Raft		

Standard Raft Construction	dependable bearing capacity:	150	kPa
	Bearing Check =	OK!	
	Working Pressure =	24	kPa
	Steel Requirements - As Per Std Drg's		
	Btm Steel:	2HD12	

Continuous Piers (N.B. All Internal Load in to 'strip' footing) Assume 100 kPa Bearing Under Loadbearing Rib, unless a Soil Report indicates otherwise.		Bearing Capacity:	kPa
		Bearing Check =	
		Pressure =	kPa
		Steel Requirements - As Per Std Drg's	
		Btm Steel:	

The prescribed internal rib design is: Location (ie: which wall): internal thickening	Standard Raft Construction, 300 wide Rib required with 2HD12 in bottom	
		



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Job Number: 33104
Job Title: lot 2, 48 Eucalyptus Way
Description:

Date: #
By: BB
Chkd: DL

Calculation of Shear Pile Requirements

Use AS1170 design philosophy of preventing damaging movement up to an SLS event, and thereafter accepting increasing levels of damage as the event increases.

Assumed Class C soil:

City/town: Paraparaumu

$C(t) = Ch(t) Z R N(T, D)$

Ch(t) 2.36

Z 0.4

Rs (25 yr) 0.25

Ru 500yr 1

N(T, D) 1 SLS

C(t) SLS 0.24

C(t) ULS 0.94

Assume $T1 = 0.4$

$ku = 1 + (u-1)T1/0.7$

$ku = 1.14$

$Cd(T1) = C(t) Sp/ku$

For base sliding $Sp = 1.0$

SLS $Cd(T1) = 0.24$

Note for Class D soil SLS $Cd(t1) = 0.30$

ULS $Cd(T1) = 0.83$

ULS $Cd(t1) = 1.05$

Testing by Dr McManus University of Canterbury (Geotechnical Society Symposium, 2003) found the friction co-efficient of slab on polythene on sand had peak friction co-efficients of 0.42 for an unloaded slab and 0.53 for a loaded slab. Residual friction coefficient were 0.38 and 0.49 respectively.

These values are some what lower than that published by other sources, normally 0.7 peak and 0.5 residual.

Even using the lower values there will be no relative movement between the slab and the ground at SLS level event on either Class C or D. At ULS level event there may be relative movement between the slab and the ground, this may break services to the house, but will also serve to reduce the forces transferred to the structure of the house. This is acceptable within the intent of NZS 1170.5 2004.

Therefore, based on the above, shear key piles are unnecessary.



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Beams Analysis

Job Number: 33104
Job Title: Lot 15, 48 Eucalyptus Way
Beam Description: Beam 1

Date: 27/02/2013
Designer: BB
Checker: DL

Beam Loadings: Primary Beam

roof span: 1.65 m
roof weight: 0.46 kPa
roof live load (Q): 0.25 kPa
roof live load (Su or Wu): -1.21 kPa
wall A height: m
wall A mass: 38 kg/m²
wall B height: m
wall B mass: 38 kg/m²

Beam Span = 4.9
floor A span: m
floor A weight: kPa
floor A live load: kPa
floor B span: m
floor B weight: kPa
floor B live load: kPa
self weight: 0.25 kN/m

Beam Loadings: Secondary Beam

roof span: 2 m
roof weight: 0.46 kPa
roof live load (Q): 0.25 kPa
roof live load (Su or Wu): -1.21 kPa
wall A height: m
wall A mass: kg/m²
wall B height: m
wall B mass: kg/m²

Beam Span = 10.8
floor A span: m
floor A weight: kPa
floor A live load: kPa
floor B span: m
floor B weight: kPa
floor B live load: kPa
self weight: kN/m

Beam Loadings: Additional Point Load b (PL b)

G: 5.2 kN
Q: 2.8 kN
Su or Wu: -13.7 kN

Beam Loadings: Additional Point Load c (PL c)

G: kN
Q: kN
Su or Wu: kN

Loadings Summary

UDL G: 1.009 kN/m
Q: 0.4125 kN/m
Wu or Su: -1.9965 kN/m
Point Load, G: 4.968 kN
Q: 2.7 kN
Wu or Su: -13.068 kN
Consider Load Combination: 1.2 G and 1.5 Q Su or Wu
UDL: 1.82955 kN/m
Sec Beam Point Load: 10.0116 kN at 2.2 m from support 1
Additional Point Load (PL b): 10.44 kN at 3.5 m from support 1
Additional Point Load (PL c): 0 kN at m from support 1

Beam end support condition:

simply supported ▼

Try: 250PFC

Beam Type: steel ▼

for timber & b = mm
flitched beams d = mm
I = mm⁴
for other beams I = 4.51E+07 mm⁴
E = 200000 MPa

M* = 24.1 kNm
V* = 16.4 kN
support 1 reaction: 13.0 kN
support 2 reaction: 16.4 kN

max. long term deflection: 4.3 mm
max. short term deflection: 4.8 mm
allowable defn (functionality), L/400 = 12.3 mm

OK



**WILTON
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Consulting Engineers

Beams Analysis

Job Number: 33104 Date: 27/02/2013
Job Title: Lot 15, 48 Eucalyptus Way Designer: BB
Beam Description: Beam 2 Checker: DL

Beam Loadings: Primary Beam

roof span:	2.2	m	Beam Span =	3.7	
roof weight:	0.46	kPa	floor A span:		m
roof live load (Q):	0.25	kPa	floor A weight:		kPa
roof live load (Su or Wu):	-1.21	kPa	floor A live load:		kPa
wall A height:		m	floor B span:		m
wall A mass:	38	kg/m ²	floor B weight:		kPa
wall B height:		m	floor B live load:		kPa
wall B mass:	38	kg/m ²	self weight:	0.1566	kN/m

Beam Loadings: Secondary Beam

roof span:		m	Beam Span =		
roof weight:		kPa	floor A span:		m
roof live load (Q):		kPa	floor A weight:		kPa
roof live load (Su or Wu):		kPa	floor A live load:		kPa
wall A height:		m	floor B span:		m
wall A mass:		kg/m ²	floor B weight:		kPa
wall B height:		m	floor B live load:		kPa
wall B mass:		kg/m ²	self weight:		kN/m

Beam Loadings: Additional Point Load b (PL b)

G: kN
Q: kN
Su or Wu: kN

Beam Loadings: Additional Point Load c (PL c)

G: kN
Q: kN
Su or Wu: kN

Loadings Summary

UDL G:	1.1686	kN/m	Point Load, G:	0	kN
Q:	0.55	kN/m	Q:	0	kN
Wu or Su:	-2.662	kN/m	Wu or Su:	0	kN

Consider Load Combination: 1.2 G and 1.5 Q Su or Wu

UDL:	2.22732	kN/m			
Sec Beam Point Load:	0	kN	at		m from support 1
Additional Point Load (PL b):	0	kN	at		m from support 1
Additional Point Load (PL c):	0	kN	at		m from support 1

Beam end support condition:

simply supported ▼

Try: 2/290x45 SG8

Beam Type:

timber ▼

for timber & b = 90 mm
flitched beams d = 290 mm
I = 182917500 mm⁴
for other beams I = mm⁴
E = 6700 MPa

M* = 3.8 kNm
V* = 4.1 kN
support 1 reaction: 4.1 kN
support 2 reaction: 4.1 kN
k2 = 2
max. long term deflection: 5.5 mm
max. short term deflection: 3.1 mm
allowable defn (functionality), L/400 = 9.3 mm
OK

Beam Design

φ =	0.8		shear stress =	3.8	MPa
k1 =	0.8		bending stress =	14	MPa
lay/b =	9		Z =	1261500	mm ³
k8 =	1				
φ M =	11.3	kNm	OK		
φ V =	42.3	kN	OK		



**WILTON
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Consulting Engineers

Beams Analysis

Job Number: 33104
Job Title: Lot 15, 48 Eucalyptus Way
Beam Description: Beam 3

Date: 27/02/2013
Designer: BB
Checker: DL

Beam Loadings: Primary Beam

roof span: 1.6 m
roof weight: 0.46 kPa
roof live load (Q): 0.25 kPa
roof live load (Su or Wu): -1.21 kPa
wall A height: m
wall A mass: 38 kg/m²
wall B height: m
wall B mass: 38 kg/m²

Beam Span = 2.8
floor A span: m
floor A weight: kPa
floor A live load: kPa
floor B span: m
floor B weight: kPa
floor B live load: kPa
self weight: 0.1566 kN/m

Beam Loadings: Secondary Beam

roof span: 2.3 m
roof weight: 0.46 kPa
roof live load (Q): 0.25 kPa
roof live load (Su or Wu): -1.21 kPa
wall A height: m
wall A mass: kg/m²
wall B height: m
wall B mass: kg/m²

Beam Span = 8.8
floor A span: m
floor A weight: kPa
floor A live load: kPa
floor B span: m
floor B weight: kPa
floor B live load: kPa
self weight: kN/m

Beam Loadings: Additional Point Load b (PL b)

G: kN
Q: kN
Su or Wu: kN

Beam Loadings: Additional Point Load c (PL c)

G: kN
Q: kN
Su or Wu: kN

Loadings Summary

UDL G: 0.8926 kN/m Point Load, G: 4.6552 kN
Q: 0.4 kN/m Q: 2.53 kN
Wu or Su: -1.936 kN/m Wu or Su: -12.2452 kN
Consider Load Combination: 1.2 G and 1.5 Q Su or Wu
UDL: 1.67112 kN/m
Sec Beam Point Load: 9.38124 kN at 0.8 m from support 1
Additional Point Load (PL b): 0 kN at m from support 1
Additional Point Load (PL c): 0 kN at m from support 1

Beam end support condition:

simply supported

Try: 2/290x45 SG8

Beam Type: timber

for timber & b = 90 mm
flitched beams d = 290 mm
I = 182917500 mm⁴
for other beams I = mm⁴
E = 6700 MPa

M* = 6.7 kNm
V* = 9.0 kN
support 1 reaction: 9.0 kN
support 2 reaction: 5.0 kN
k2 = 2
max. long term deflection: 4.6 mm
max. short term deflection: 2.6 mm
allowable defn (functionality), L/400 = 7.0 mm
OK

Beam Design

ϕ = 0.8
k1 = 0.8
lay/b = 9
k8 = 1
 ϕ M = 11.3 kNm OK
 ϕ V = 42.3 kN OK

shear stress = 3.8 MPa
bending stress = 14 MPa
Z = 1261500 mm³



**WILTON
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Consulting Engineers

Beams Analysis

Job Number: 33104
Job Title: Lot 15, 48 Eucalyptus Way
Beam Description: Beam 4

Date: 27/02/2013
Designer: BB
Checker: DL

Beam Loadings: Primary Beam

roof span: 1.6 m
roof weight: 0.46 kPa
roof live load (Q): 0.25 kPa
roof live load (Su or Wu): -1.21 kPa
wall A height: m
wall A mass: 38 kg/m²
wall B height: m
wall B mass: 38 kg/m²

Beam Span = 2.5
floor A span: m
floor A weight: kPa
floor A live load: kPa
floor B span: m
floor B weight: kPa
floor B live load: kPa
self weight: 0.1296 kN/m

Beam Loadings: Secondary Beam

roof span: 1.9 m
roof weight: 0.46 kPa
roof live load (Q): 0.25 kPa
roof live load (Su or Wu): -1.21 kPa
wall A height: m
wall A mass: kg/m²
wall B height: m
wall B mass: kg/m²

Beam Span = 8.8
floor A span: m
floor A weight: kPa
floor A live load: kPa
floor B span: m
floor B weight: kPa
floor B live load: kPa
self weight: kN/m

Beam Loadings: Additional Point Load b (PL b)

G: kN
Q: kN
Su or Wu: kN

Beam Loadings: Additional Point Load c (PL c)

G: kN
Q: kN
Su or Wu: kN

Loadings Summary

UDL G: 0.8656 kN/m Point Load, G: 3.8456 kN
Q: 0.4 kN/m Q: 2.09 kN
Wu or Su: -1.936 kN/m Wu or Su: -10.1156 kN
Consider Load Combination: 1.2 G and 1.5 Q Su or Wu
UDL: 1.63872 kN/m
Sec Beam Point Load: 7.74972 kN at 0.5 m from support 1
Additional Point Load (PL b): 0 kN at m from support 1
Additional Point Load (PL c): 0 kN at m from support 1

Beam end support condition:

simply supported

Try: 2/240x45 SG8

Beam Type: timber

for timber & b = 90 mm
flitched beams d = 240 mm
I = 103680000 mm⁴
for other beams I = mm⁴
E = 6700 MPa

M* = 3.9 kNm
V* = 8.2 kN
support 1 reaction: 8.2 kN
support 2 reaction: 3.6 kN
k2 = 2
max. long term deflection: 4.0 mm
max. short term deflection: 2.3 mm
allowable defn (functionality), L/400 = 6.3 mm
OK

Beam Design

ϕ = 0.8
k1 = 0.8
lay/b = 9
k8 = 1
 ϕ M = 7.7 kNm OK
 ϕ V = 35.0 kN OK

shear stress = 3.8 MPa
bending stress = 14 MPa
Z = 864000 mm³



**WILTON
JOUBERT**

Consulting Engineers

Beams Analysis

Job Number: 33104
Job Title: Lot 15, 48 Eucalyptus Way
Beam Description: Beam 5

Date: 27/02/2013
Designer: BB
Checker: DL

Beam Loadings: Primary Beam

roof span: 5.2 m
roof weight: 0.46 kPa
roof live load (Q): 0.25 kPa
roof live load (Su or Wu): -1.21 kPa
wall A height: m
wall A mass: 38 kg/m²
wall B height: m
wall B mass: 38 kg/m²

Beam Span = 3.2
floor A span: m
floor A weight: kPa
floor A live load: kPa
floor B span: m
floor B weight: kPa
floor B live load: kPa
self weight: 0.1296 kN/m

Beam Loadings: Secondary Beam

roof span: m
roof weight: kPa
roof live load (Q): kPa
roof live load (Su or Wu): kPa
wall A height: m
wall A mass: kg/m²
wall B height: m
wall B mass: kg/m²

Beam Span =
floor A span: m
floor A weight: kPa
floor A live load: kPa
floor B span: m
floor B weight: kPa
floor B live load: kPa
self weight: kN/m

Beam Loadings: Additional Point Load b (PL b)

G: kN
Q: kN
Su or Wu: kN

Beam Loadings: Additional Point Load c (PL c)

G: kN
Q: kN
Su or Wu: kN

Loadings Summary

UDL G: 2.5216 kN/m Point Load, G: 0 kN
Q: 1.3 kN/m Q: 0 kN
Wu or Su: -6.292 kN/m Wu or Su: 0 kN
Consider Load Combination: 1.2 G and 1.5 Q Su or Wu
UDL: 4.97592 kN/m
Sec Beam Point Load: 0 kN at m from support 1
Additional Point Load (PL b): 0 kN at m from support 1
Additional Point Load (PL c): 0 kN at m from support 1

Beam end support condition:

simply supported

Try: 2/240x45 hyspan

Beam Type: timber

for timber & b = 90 mm
flitched beams d = 240 mm
l = 103680000 mm²
for other beams l = mm²
E = 13200 MPa

M* = 6.4 kNm
V* = 8.0 kN
support 1 reaction: 8.0 kN
support 2 reaction: 8.0 kN
k2 = 2
max. long term deflection: 6.1 mm
max. short term deflection: 3.4 mm
allowable defn (functionality), L/400 = 8.0 mm
OK

Beam Design

φ = 0.9 shear stress = 5.3 MPa
k1 = 0.8 bending stress = 48 MPa
lay/b = 9 Z = 864000 mm³
k8 = 1
φ M = 26.5 kNm OK
φ V = 48.8 kN OK



MiTek New Zealand Limited

Correspondence from: **AUCKLAND**
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PO Box 58-014, Botany 2163
Phone: 09 274 7109
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CHRISTCHURCH
14 Pilkington Way, Wigram 8042
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MiTek 20/20 Engineering 4.6.6.169

BY: 0003 www.mitek.nz.co.nz

Printed: 13:31:55 05 Mar 2013

PRODUCER STATEMENT for MiTek 20/20® TRUSS DESIGN - Version 4.6

ISSUED BY: **MiTek New Zealand Limited**
TO: **Katikati Building Supplies Ltd**
IN RESPECT OF: **MiTek® Truss Designs**

This producer statement covers the MiTek 20/20® truss design and the structural performance of the GANG-NAIL® connector plate for the job reference **WN100A** and may be used by a Building Consent Authority to assist in determining compliance with the New Zealand Building Code.

The MiTek 20/20® truss design program has been developed by MiTek New Zealand Limited for the design of MiTek® timber roof, floor and attic trusses in New Zealand. The truss designs computed by MiTek 20/20® are prepared using sound and widely accepted engineering principles, and in accordance with compliance documents of the New Zealand Building Code and Verification Method B1/VM1; and internationally accepted standard ANSI/TPI 1 - 2002 as an alternative solution to satisfy the requirements of Clause B1 of the New Zealand Building Code.

On behalf of MiTek New Zealand Limited, and subject to:

- i) All proprietary products meeting their performance specification requirements
- ii) The provision of adequate roof bracing and overall building stability
- iii) Correct selection and placement of GANG-NAIL connector plates
- iv) Correct input of Truss Design Data as shown in the Fabricator Design Statement for this job
- v) The design being undertaken by the accredited fabricator under the terms of the software licence

I believe on reasonable grounds that the trusses, if constructed in accordance with the MiTek 20/20® truss design and shop drawings, will comply with the relevant provisions of the New Zealand Building Code.

MiTek New Zealand Limited holds a current policy of Professional Indemnity Insurance no less than \$500,000.

On behalf of MiTek New Zealand Limited,

Date: Tuesday, 5 March 2013

In Ling Ng, BE (Hons), CPEng, IntPE, MIPENZ (ID: 146585)
TECHNICAL SERVICES MANAGER, MiTek New Zealand Limited

Job: WN100A

Client: Platinum Homes NZ Ltd
Phone:Site: PETER ALED ROBERTS
48 EUCALYPTUS WAY
NIKAU VALLEY
PARAPARAUMU

Phone:

Description:
Building Consent No.:
MITek 20/20 Engineering 4.6.5.169

MITek New Zealand Limited

Printed: 13:21:55 05 Mar 2013

MITEK FABRICATOR DESIGN STATEMENT

This statement is issued by MiTek accredited fabricator Katikati Building Supplies Ltd, being licensed to use the MiTek 20/20® software, to the client listed above and may be used by the Building Consent Authority to assist in determining compliance with the New Zealand Building Code.

MiTek 20/20® TRUSS DESIGN DATA

The MiTek 20/20® computer design for this job is based on the following design parameters entered into the program. The Fabricator shall ensure that these job details are current and relevant to the project for the design of the MiTek® trusses.

Job Details**Roof Truss**

Timber Group: MSG8x45-H1.2
Roof:
Material: Metal Tiles
Dead Load: 0.210 kPa
Restraints: 400 mm centres
Live Load: Q_{ur} = 0.250 kPa
Q_c = 1.100 kN

Importance Level: 2

Pitch: 25.000 deg
Ceiling:
Material: Rondo on clips
Dead Load: 0.200 kPa
Restraints: 1800 mm centres
Live Load: Q_c = 1.400 kN

Design Working Life: 50 years

Nominal Overhang: 600 mm
Wind:
Area: High (44.0 m/s)
Pressure Coeff: C_{pe} = varies; C_{pi} = -0.30, 0.20

The timber for these MiTek® trusses shall be treated to the requirements of NZS 3602:2003 and shall be graded to the requirements of NZS 3603:1993. Unless otherwise noted, this design assumes that the steel fixings and timber connectors proposed are located in a "closed environment", as defined by NZS3604:2011 Section 4.

MiTek® Truss List

Legend: * = detail only, ? = input only, Fek = failed design, Ø = non certified. Unmarked trusses = designed successfully. LB = lateral bracing required
GB = gable brace 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)
T01	1	10760	25.000	900	J01H	1	2657	25.000	900	V02	1	1646	25.000	900
T01A	1	10760	25.000	900	J02	1	1757	25.000	900	V03	1	1155	25.000	900
T01B	1	10760	25.000	900	J02A	1	1757	25.000	900	V05	1	967	25.000	900
T02	1	9960	25.000	900	J02B	1	1757	25.000	900	*HB01	2	8425	18.249	900
T03	1	8760	25.000	900	J02C	1	1757	25.000	900	*HB02	1	4904	18.249	900
T04	3	8760	25.000	845	J03	1	2557	25.000	900	*HB03	1	4950	18.249	900
T05	1	5357	25.000	900	J03A	1	2557	25.000	900	*HB04	2	7011	18.249	900
T06	1D	5357	25.000	900	J03B	1	2557	25.000	900	*HB05	2	4621	18.249	900
TG01	1D	10760	25.000	900	J03C	1	2557	25.000	900	*R01	1	1470	25.000	900
TG02	1	8870	25.000	900	J03D	1	2557	25.000	900	*R01A	1	1470	25.000	900
TG03	1	8760	25.000	900	J03E	1	2557	25.000	900	*R02	6	913	25.000	900
TR01	1	10760	25.000	900	J03F	1	2557	25.000	900	*R02A	6	913	25.000	900
TR02	1	10760	25.000	900	J04	1	1657	25.000	900	*R03	1	3500	25.000	900
TR03	1	8870	25.000	900	J04A	1	1657	25.000	900	*R04	1	813	25.000	900
TR04	1	8870	25.000	900	J04B	1	1657	25.000	900	*R04A	1	813	25.000	900
TR05	1	8760	25.000	900	J04C	1	1657	25.000	900	*R05	1	1713	25.000	900
J01	1	2657	25.000	900	J05	1	2667	25.000	900	*R05A	1	1713	25.000	900
J01A	1	2657	25.000	900	J05A	1	2667	25.000	900	*R06	1	2613	25.000	900
J01B	1	2657	25.000	900	J05B	1	2667	25.000	900	*R06A	1	2613	25.000	900
J01C	1	2657	25.000	900	J06	1	1767	25.000	900	*R07	1	1370	25.000	900
J01D	1	2657	25.000	900	J06A	1	1767	25.000	900	*R07A	1	1370	25.000	900
J01E	1	2657	25.000	900	J06B	1	1767	25.000	900	*R08	1	1480	25.000	900
J01F	1	2657	25.000	900	J06C	1	1767	25.000	900	*R08A	1	1480	25.000	900
J01G	1	2657	25.000	900	V01	1	3446	25.000	900					

Total quantity: 86

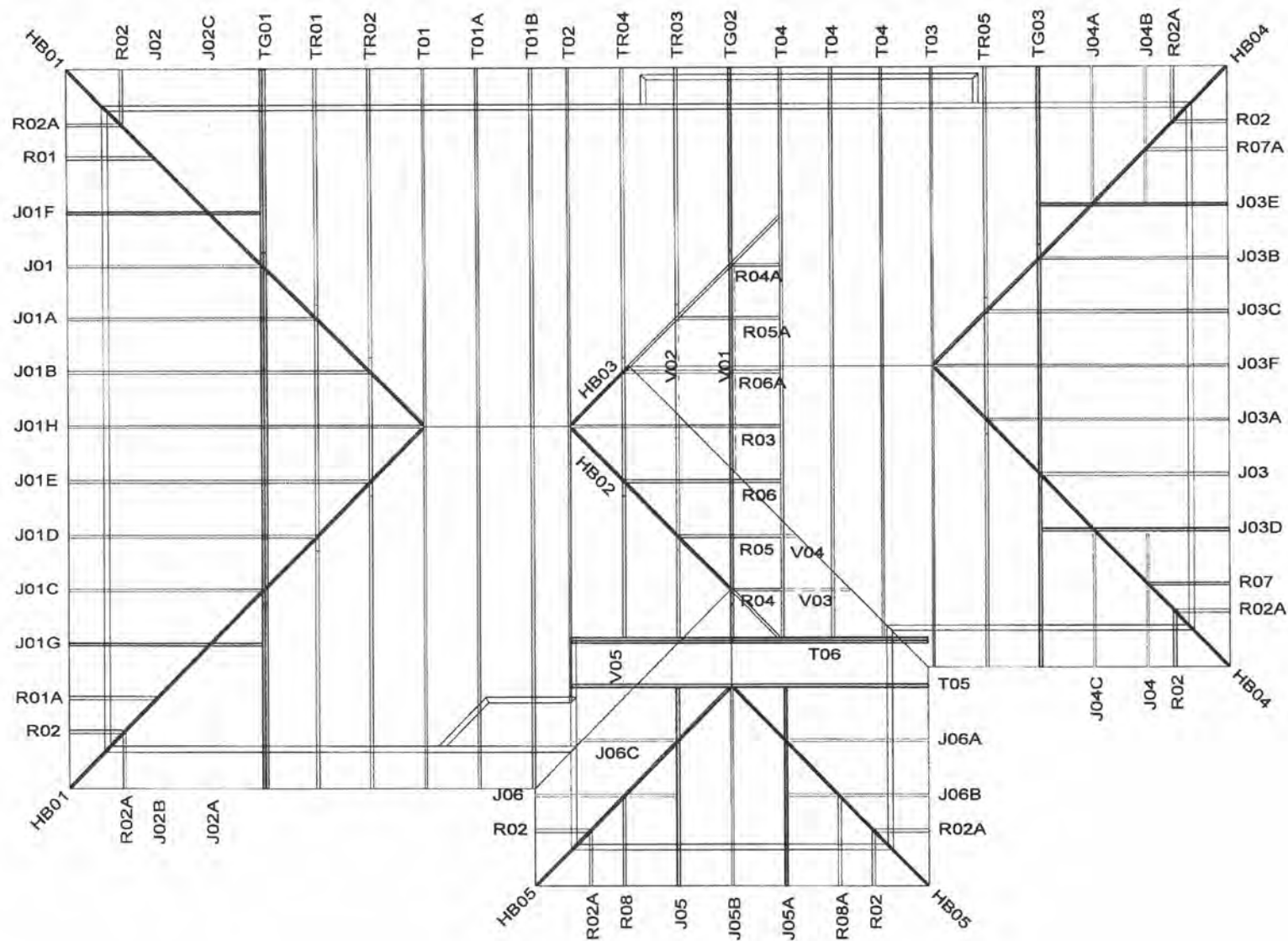
The computer design input has been carried out by:

Signed: 

Date: Tuesday, 5 March 2013

On behalf of:

Katikati Building Supplies Ltd



Katikati Building Supplies Ltd

12 Earl Drive
 Katikati
 New Zealand
 Fax 07 549 0702
 Telephone: Ph 07 549 0689

Name: Platinum Homes NZ Ltd
 Address: 48 EUCALYPTUS WAY
 NIKAU VALLEY
 PARAPARAUMU

Job: **WN100A**

Building Consent No.:

Scale: 1 : 100

Date: 11/02/2013

Drawn By: Dave



RBW

Platinum Homes

Building Standards/ Codes referred to herein relate to the latest issue available

Specifications 2013

MASS Construction WN Ltd

Lot No: 2

DPS: 348721

CT: 199972

Street: 48 Eucalyptus Way
Nikau Valley

Town: Paraparaumu

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Platinum Homes Specifications

A.1 SITE AND SETTING OUT

Approximate ground lines are shown on the drawings but the Contractor is advised to visit the site to ascertain any variations regarding levels for foundations, boundaries, etc. The Contractor shall perform all setting out of work and shall be responsible for the accuracy thereof.

A.2 CLEANING UP

The Contractor shall maintain the whole of the work site in a clean and tidy state and shall clean the whole of the site of the work at the completion of the contract. The whole of the work, including windows shall be cleaned ready for immediate occupation.

A.3 MAINTENANCE

The Contractor shall maintain the work and make good all defects, which may occur within 60 days after the completion of the contract, due to faults which may occur in the materials or labour supplied.

A.4 CONNECTIONS

The Owner shall be responsible for the payment for all connections to public utilities such as water, sewer, telephone, storm water (not within own property), electricity.

A.5 CONTRACTS

This specification has been drawn up for complete contracts and is only applicable for that type of contract. Where the work is carried out under "Labour Only" or other types of contracts, the Owner becomes the Contractor and is responsible to ensure that the limits of the work to be carried out is clearly defined. It is also the Owner's responsibility to obtain and pay for all insurance policies.

Platinum Homes Specifications

EXCAVATION AND WATERPROOFING

B.1 EXCAVATION

Excavate for all foundations to the sizes and depths shown on the drawings or specified herein. Excavation shall be carried to solid bearing. If foundation material is not satisfactory, excavate to solid bearing and backfill with compacted hard fill, or 10 MPa concrete. Remove grass, topsoil and excavate to a minimum of 200mm below underside of floor slab. Shape ground to fall from centre of building.

B.2 BACKFILLING

Backfill against foundations, under floor slab with compacted hard fill. Backfill under floor slab with compacted, hard drainage metal, graded 40mm to 12mm. This layer may be topped with clean sand or crusher dust. Backfill against all other foundations with sound excavated material (not topsoil) and compact. Backfill against retaining walls and basement walls with permeable drainage metal.

B.3 HARD FILL

Where hard fill is required, this shall be graded river run metal or graded crushed metal.

B.4 WATERPROOF MEMBRANE

Lay waterproof membrane as noted on the drawings or in this specification. All joints to be lapped 100mm and sealed with 50mm wide tape. At perimeter of slab, seal the membrane into the joint between the foundation wall and the slab. Where pipes, etc. penetrate the membrane, adequate protection against seepage shall be made by sealing the membrane to the penetration, with tape. Care shall be taken at all times to ensure that the membrane forms a complete waterproof barrier and that it is not punctured during casting of the floor slab.

B.5 WATERPROOFING

Waterproofing shall be carried out to areas as noted on the drawings or in this specification using "Mulseal" or equivalent. Coating shall be carried out strictly in accordance with the manufacturer's recommendations, especially the cleaning of the surfaces and priming.

In addition to the areas noted in the Variation Schedule or on the drawings, the following areas shall be coated:

1. Concrete Floors - Top of foundation wall where wall slab will rest and where a veneer will rest.

B.6 DRAINAGE

Where a concrete floor slab is used, the area around the building shall be graded so that surface water drains clear of the building site. At retaining walls, lay "Novaflo" or similar drain at the base of the wall, falling to a suitable outlet. Back fill around the drainage pipes using 12mm drainage chip, as per acceptable solution in AS/NZS 3500.2 figure 7.

CONCRETE

C.1 MATERIALS

Concrete materials shall be from approved sources and conform to the following:

- *NZS 3121 - Specification for Water and Aggregates for Concrete.
- *NZS 3122 - Specification for Portland Cement.

C.2 CONCRETE

Concrete shall conform to one of the following:

- *NZS 3104 - Specification for Concrete Production: High Grade and Special Grade.
- *NZS 3604 - 2011 - Specification for Concrete Production: Ordinary unless specifically noted otherwise, concrete strength shall be 20 MPa.

C.3 REINFORCING

Reinforcing shall conform to the following:

- *AS/NZS 4671 - 2001 - Steel Reinforcement materials.

Reinforcing rods shall be deformed mild steel, clean and free from rust and scale. Laps where required shall be 40 x rod diameter.

C.4 CONSTRUCTION

Concrete Construction shall conform to:

- *NZS 3124 - Specification for Concrete Construction for Minor Works.
- Slab is engineered design by Wilton Joubert Ltd, as a Rib Raft Floor.

C.5 FORMWORK

All concrete shall be placed in property-constructed formwork which is securely braced and held in position. All formwork shall be carefully removed from concrete.

C.6 FLOOR SLAB

Floor slabs including verandahs, porches, carports and garages shall be 85mm thick, and reinforced with 665 welded mesh. Slabs shall be cast in one layer and shall be finished off by power floating unless otherwise indicated. .

CONCRETE BLOCKWORK

D.1 MATERIALS

Concrete wall masonry shall be manufactured in sound unchipped units in compliance with the appropriate clause of units specified in ASNZ 4455. Mortar shall be of materials and proportions in accordance with the requirements of ASNZ 4210. Filling and reinforcing steel - see concrete work.

D.2 WORKMANSHIP

General: All masonry walls shall be laid true and plumb and to the plain surface in running metric bond.

Joints: Mortar joints shall be straight, clean and uniform in thickness and shall be tooled as shown in the plans. Where no joint detail is shown, exposed walls shall have joints tooled with a round bar to produce a dense, slightly concave surface well bonded to the block at the edges. Tooling shall be done when the mortar is partially set, but still sufficiently plastic to bond. All tooling shall be done with a tool, which compacts the mortar, pressing the excess mortar out of the joint rather than dragging it out. Where walls are to receive plaster, the joints shall be struck flush to provide uniform bending surface.

Provision for other trades: The masonry contractor shall provide chases, openings, install anchors, nailing strips, bolt hanger, etc. in masonry walls where shown on the drawings.

Mortar droppings: Extreme care shall be taken to prevent mortar droppings. All frameworks shall be made tight, and any concrete or mortar spilled on the wall shall be wadded off before it can set.

Weep holes are to drain moisture to the outside. Grout spaces when called for shall be cleaned out before grout is poured.

Clean Up: At the conclusion of the masonry work, the masonry contractor shall clean down all masonry walls, remove his scaffolding and equipment, clean up all debris and surplus materials and remove them from the site.

D.3 200mm BLOCKWORK

Lay 200mm block work as shown: solid fill all corners and jambs to openings and reinforce with D12 rods. Allow for continuous concrete beams reinforced with 2/D20 rods to top bond beam. Allow for concrete lintels as required. These are to be reinforced as stated on the plans. Joints are to be tooled to a smooth concave finish, not exceeding 6mm in depth (both side's where seen).

CARPENTER

E.1 GENERAL

All work shall be carried out strictly in accordance with the NZ Building Code Handbook and the relevant approved documents, including NZS 3604 - Code of Practice for Light Timber Frame Buildings not Requiring Specific Design.

E.2 TIMBER

Timber grading shall conform to NZS 3631 - New Zealand National Timber Grading Rules.

Timber shall conform to NZS 3602 - Code of Practice for Specifying Timber and Wood-Based Products for use in Building.

In general this shall be as follows:

Wall Framing	Radiata Pine, MSG8 Framing, H1.2 treated.
Exposed Framing	Radiata Pine, MSG8 Framing, H3.2 treated.
Exterior Finish	Radiata Pine, Clears or finger jointed, H3.2 treated.
Interior Finish	Radiata Pine, Clears or Finger jointed, treated or Custom wood or similar moldings.
Bracing Ply	7.5mm ply H3.2 treated.

NB; All Structural Timber and Lintels to be minimum Machine Stress Grade 8 Timber

E.3 WORKMANSHIP

All timber shall be nailed or suitably fixed in accordance with the best trade practice and in accordance with the NZ Building Code Handbook and any Standards or as detailed on the drawings. All work shall be accurately set out and neatly executed.

E.4 FRAMING

Construct framing in accordance with NZS 3604, or as required to support the sheathings or linings. The sheathing or lining manufacturer's recommendations for frame member spacing shall be strictly adhered to. All timber fixings shall be in accordance with NZS 3604 unless otherwise indicated. Plumb and straighten all walls. Lay floor and ceiling lining to true line and level. Provide all dwangs and noggings for the fixing of cupboards, benches, fittings, switches, etc. Fix all bracing as detailed in the Bracing Schedule and as required to maintain the structure in a stable condition.

E.5 PRE-NAILED FRAMES

Where pre-nailed frames are used, these shall be supplied complete with all dwangs and bracing.

E.6 ROOF TRUSSES

Roof trusses shall be from an approved manufacturer and shall be designed for their particular application. The truss manufacturer shall supply a truss layout plan, and Producer Statement.

E.7 EXTERIOR FINISHING

Fix all fascias, bargeboards and other finishes as necessary. Finishes shall conform to NZS 3617 Specification for Profiles of Weatherboards, Fascia Boards, and Flooring. Install all necessary flashings, beads, etc., and use sealants only as absolutely required. All joints shall be made so as to render the work watertight. All timber shall be primed before fixing.

E.8 DOORS AND WINDOWS

Install doors and windows as shown or noted and as specified under Joiner. Aluminum doors and windows shall be fixed in accordance with the manufacturer's instructions. Frames shall be installed plumb and level and shall be securely fixed in place. Supply and install all necessary flashings and scribes.

E.9 SOFFIT

Soffits are to be lined as noted, with joints made with UPVC jointers. Fascia as shown shall be grooved to take soffit lining. Unless otherwise noted, soffit linings shall include verandahs, porches, carports, and ceilings to terraces.

E.10 INTERIOR LININGS

Framing and battens shall have a moisture content below 18% before linings are fixed. Fix all interior linings as noted on the drawings in accordance with the manufacturer's instructions and recommendations. Where no instructions exist for any linings, they shall be securely fixed so as to prevent any movement and in accordance with the best trade practices. Unless otherwise specified linings will be : ceilings 13mm Gypsum plasterboard, walls 10mm Gypsum plasterboard, wet areas 10mm Aqua line Gypsum plasterboard.

The following is a summary of fixings for linings:

Gib Board:

Sheets are to be fixed horizontally or vertically on walls in as long a length as possible. Fix with adhesive and Gib Clouts. Where Gib Board is used on ceilings, fixing shall be with adhesive and screws.

E.11 INTERIOR FINISHINGS

Architraves:

Fix architraves to all window and doorframes. Mitre all corners, neatly fit and securely fix.

Skirting's:

Fix skirting's around base of walls unless otherwise specified. Mitre external corners, scribe internal corners and securely fix to wall. Where floor is to remain exposed, the skirting's shall be scribed to floor as necessary.

Cornice:

Fix cornice as per manufacturer's specification.

Special Finishing's:

All internal linings will be covered with either Paint, or Vinyl Wallpaper (walls), with Painted ceilings; Where Wet Areas are painted, Paint will be Low Sheen Aqua-enamel.

Pelmets:

Construct using 100x25mm top and 125mm wide facing as noted in the Variation Schedule.

Built-in Pelmets:

Construct 100mm out from wall and extending from ceiling to 20mm below window head. Unless otherwise noted, pelmets shall be faced with the same material as the wall lining.

E.12 INTERIOR DOORS AND FRAMES

Install doors and frames ensuring they are plumb and securely held in place.

E.13 CUPBOARDS

Construct cupboards as indicated on the drawings or in the Variation Schedule. Cupboards shall generally be fitted with five wire shelves.

E.14 WARDROBES

Wardrobes shall be constructed as detailed on the plan with 300mm Wire shelving, fitted with integrated closet bar.

E.15 HARDWARE

Supply and fix all necessary hardware to complete the works and as noted in the Variation Schedule. Neatly and accurately fit all hardware and on completion of work adjust all fittings.

E.16 DOORSTOPS

Provide and fix doorstops as required.

E.17 KITCHEN JOINERY

Platinum Homes Specifications

Install Kitchen joinery as supplied, neatly scribe units, to walls and floor and neatly fit benches to walls to avoid the use of cover moulds, Seal benches to walls. Fit range hood and vent through soffit to the exterior of dwelling.

E.18 TRAPDOORS

Install Hometech Attic Stairs LWS2800 in ceiling.

E.19 INSULATION

Install Bradford Gold insulation as specified, in accordance with the manufacturer's recommendations.

E.20 STOPPING

Gib Board Stopping shall be carried out in accordance with the wallboard manufacturer's recommendations.

JOINER

F.1 ALUMINUM DOORS AND WINDOWS

Aluminum doors and windows shall be from an approved manufacturer.

Doors and windows shall conform to NZS 3504, NZS 4211, NZS 4223 - Specification for Aluminum Windows.

Doors and windows are to be fitted with timber reveals

F.2 INTERIOR DOORS AND FRAMES

Doors shall be hung on three 90mm, loose pin, butt hinges.

F.3 GLAZING

Glaze all windows and glaze all doors where required.

Glass and glazing shall be carried out in accordance with the N.Z. Building Code Handbook and NZS 4223 - Code of Practice for Glazing in Buildings.

F.4 KITCHEN JOINERY

Construct Kitchen joinery as indicated on the drawings or in the Variation Schedule.

BRICKLAYER

I.1 MATERIALS

All Bricks shall be from an approved manufacturer and shall conform to one of the following:

NZS 4210 Clay Building Bricks

ASNZ 4455 Concrete Masonry Units

Materials for mortar shall conform to the following:

NZS 3103 Specification for Sands for Mortars and Internal and External Renderings

NZS 3122 Specification for Portland Cement

NZS 3122 - 2009 Specification for Pigments for Portland Cement and Portland Cement Products. Natural stone shall be approved for use as noted in NZS 4210

I.2 WORKMANSHIP

All brickwork shall be carried out by qualified and experienced tradesman.

Work shall conform to the following:

NZS 3604 Code of Practice for Light Timber Frame Buildings not Requiring Specific Design

NZS 4210 Code of Practice for Masonry Construction: Materials and Workmanship. Masonry manufacturer's codes of practice.

I.3 DAMP COURSE

Set damp course layer at foundation with a slope outwards to deflect any moisture to the weep holes in the veneer.

I.4 MORTAR

Mortar shall be mixed in the following proportions:

Clean Sand - 5 parts by volume

Portland Cement - 1 part by volume

Plasticizer - according to the manufacturer's instructions.

Mineral Oxide Pigment shall not exceed 3% by weight of cement.

Materials shall be mixed in a batch mixer for not less than 5 minutes. Mortar shall be used within 90 minutes of mixing. Compressive strength shall be not less than 12.5 MPa at 28 days.

I.5 LAYING

Lay bricks in stretcher bond, true to line, level and plumb, and in accordance with good trade practice. Bricks shall be laid 40mm clear of the timber frame. No corner shall be raised by more than one metre above the wall line. Corners shall be racked back. Lay bricks on an even bed of mortar, with ends buttered. Care shall be taken to keep the cavity between the veneer and the frame free from mortar droppings. Leave weep holes at every third joint at the base of the veneer and leave a ventilation gap at the top.

I.6 TIES

Brickwork shall be tied to the timber frame with heavy-duty wall ties, face fixed to framing. Spacing shall not exceed 600mm horizontally and 350mm vertically.

I.7 POINTING

Unless indicated otherwise in the Variation Schedule, all joints shall be tooled to a hard concave finish.

Platinum Homes Specifications

I.8 LINTELS

Where bricks are laid above openings, they shall be supported on galvanized steel angles as noted in NZS 3604 or other approved system and according to manufacturer's specification.

ROOFER

J.1 MATERIALS

All materials shall be from a recognized manufacturer and shall conform to their respective NZ Standards. All materials used shall be compatible one with the other.

J.2 WORKMANSHIP

All roofing work shall be carried out by accredited fixing agents or if the manufacturer does not require this, by qualified roofing tradesmen. The work shall be carried out strictly in accordance with the manufacturer's recommendations. On completion, the roof shall be left free from defects and watertight.

J.3 ROOFING UNDERLAY

Where building paper is specified, lay self supporting breather type building paper or roof underlay as required by the roofing manufacturer. 215 Thermakraft self supporting paper

J.4 METROTILE SHAKE TILES

Fix battens and tiles in accordance with the manufacturer's instructions.

Finish at ridges, hips, barges with capping moulds. Paper optional unless specified by Building Code due to coastal or other requirements.

J.5 FLASHINGS

Fix 0.6mm galvanized steel valleys and associated flashings. Fix flashings to all roof penetrations, etc.

J.6 SPOUTING & DOWNPIPES

Fix spouting and down pipes as shown on plan. Spouting shall be installed in accordance with the manufacturer's recommendations, with falls to down pipes (80mm unless otherwise specified).

Install sufficient down pipes to ensure the efficient removal of water from the spouting.

J.12 GUARANTEE Provide the owner with a year minimum, written guarantee or as determined by the manufacturer, in respect of materials and workmanship.

Platinum Homes Specifications

PLUMBER

K.1 MATERIALS

All materials shall conform to their respective N.Z. Building Code and its approved documents. AS/NZS 3500

K.2 WORKMANSHIP

All works shall be carried out under the supervision of a qualified and experienced tradesman and shall be executed in accordance with the best trade practices.

All work shall conform to the N Z Building Code and its approved documents.

K.3 INSTALLATIONS

All installations shall be carried out strictly in accordance with the manufacturer's recommendations and with the N Z Building Code and its approved documents.

K.4 WATER SUPPLY

Run 20mm pipe from connection to building.

K.5 WATER PIPING

All piping shall be Fusiotherm or similar food graded Thermal rated plastic piping, or 1.0mm thick copper joined by an approved brazing, welding, or crimping system.

Run 15mm branches to all fittings as required. Where a hot water storage cylinder is installed, this shall be fed by a 20mm branch.

K.6 HOT WATER SUPPLY

Supply and install Rheems (or similar) mains pressure 180 litre hot water cylinder as per plan, complete with element and thermostat, and complete with isolating stopcock and tempering valve.

Support cylinder and supply tank as detailed in the NZ Building Code with suitable seismic restraint.

K.7 WASTE PIPING

All waste pipes to be an approved UPVC piping.

Run waste pipes from all fittings to gully traps in accordance with the NZBC G13 or AS/NZS 3500 and its approved documents. Install back vents to fittings as required.

K.8 FITTINGS

Supply and install all fittings as shown on the drawings, complete with all taps, traps etc.

K.9 TAPS

Install matching taps as required.

Install outlets and taps for an automatic washing machine.

K.10 SHOWERS

Showers, unless specified otherwise, will consist of a sealed Liner and Tray unit, with safety glass door.

Platinum Homes Specifications

DRAINLAYER

L.1 MATERIALS

All materials shall be the best of their respective kinds and shall conform to their respective N Z Standards. Only materials permitted by the N Z Building Code and its approved documents shall be issued.

L.2 WORKMANSHIP

All work shall be carried out under the supervision of a qualified and experienced tradesman and shall be executed in accordance with the best trade practices.

L.3 INSTALLATIONS

All installations shall be carried out strictly in accordance with the manufacturer's recommendations and in accordance with the N Z Building Code and its approved documents.

L.4 EXCAVATIONS

Excavate for all drains to required depths and gradients. On completion of laying drains, carefully backfill around pipes.

L.5 SANITARY SEWER

Lay 100mm diameter drain from building to disposal as per plan. Pipes shall be approved UPVC. Install all necessary cleaning eyes, inspection pipes, etc.

Cover to the drains shall be in accordance with the N Z Building Code Handbook.

L.6 FITTINGS

Supply and connect all necessary gully traps, terminal vents, etc. and complete in accordance with the N Z Building Code and its approved documents.

L.7 WASTEWATER TREATMENT SYSTEM

Where no Town Supply is available, supply and install system as per plan and suppliers recommendations.

Run overflow as required.

Septic tank shall conform to ASNZS 1547 and the required documents.

WRIGHT TANKS LTD

Proposed Sewage System Installation

30 APR 2013
Date: 00033
Client: Roberts Property
Site Address: 48 Eucalyptus Way
Legal Description: Lot 2 DP 348721
District Authority: Kapiti Coast District Council
Regional Authority: Greater Wellington Regional Council

This report is a review of onsite wastewater treatment requirements and design of the land application field for the proposed 4 bedroom dwelling at 48 Eucalyptus Way.

Site Inspection Report – to be read in conjunction with enclosed site plan.

We have carried out our assessment of the above reference site for the purpose of determining the requirement for the onsite treatment and land application of domestic wastewater (effluent) generated from the proposed 4 bedroom dwelling. The purpose of this report therefore is to determine the suitability and satisfactory position of a new sewage system and land application area.

After a site visit of the Roberts property on the 4th October 2012 inspection of the soil structure within the proposed land application area revealed that there was a brown topsoil ranging in depth between 0 - 200mm, this was overlaying a silty clay structure to a depth of 1m+. At this point there was no ground water encountered.

These results place the property in category 3 - 5, indicating that the area has poorly to imperfectly drained soils also indicating that an evapotranspiration sewage land application system is required in order to obtain a suitable evapotranspiration rate and a low hydraulic loading rate to have a nil environmental impact.

Good evaporation will occur within the upper soils while an average amount of soakage will occur within the silty clay structure present beneath, suggesting that the effluent land application area would have an LTAR of 6 - 8L of secondary treated effluent/m²/day. However, the proposed sewage treatment plant will have a DLR of 2.8L/m²/day.

The drip irrigation lines have emitters at 600mm centers' and will release effluent at 2.3L/hr/emitter. There will be an effluent land application area of 450m² resulting in the DLR rate of 2.8L/m²/day.

The 4 bedroom dwelling will provide accommodation for no more than 7 people. 7 people @ 180L/person/day = 1260L/day. $1260L \div 450m^2 = 2.8L/m^2/day$.

The proposed sewage system is a five stage Wright ProTec 10,000 Wastewater Treatment Plant, which has an average power consumption rate of 28 – 38c/day complete process. Independent testing has verified that the Wright ProTec 10,000 Wastewater Treatment Plant not only meets the relevant standards imposed but has exceeded them on all 12 plants tested. The plant will be located 5m to 6m on the Northeastern side of the proposed dwelling, as indicated on the enclosed site plan.

There will be 12 rows of drip irrigation lines from 30m to 45m in length and 1m apart. These drip irrigation lines will be on the Southern side of the dwelling, as indicated on the enclosed site plan.



WRIGHT TANKS LTD

The drip irrigation lines will be buried to a depth of 150-200mm using a small chain digger or excavator and will then be covered with the existing soil. The disturbed soil will return to its normal state and therefore there are no beds as such.

The land application area will be more than 20m away from any open waterway, open water drain and neighbouring land application area. The drip irrigation line at its closest point will be 2m from the Southern boundary as indicated on the enclosed site plan.

We strongly advise clients to plant small trees and shrubs over the land application area in order to increase the volume of discharged treated effluent that is transpired as this greatly assists the treatment of released effluent and a list of suitable plants will be supplied to the client. Planting is advised with a soil category over 3 or in an environmentally sensitive area. This area has been designated as an effluent land application area and no stock or vehicle access is allowed on the land application area itself.

This effluent site plan and the Wright ProTec 10,000 Wastewater Treatment Plant is installed in general accordance with AS/NZS1547:2012. Wright Tanks Limited also constructs in general accordance to AS/NZS 1546.1:2008, 3106.1986 and TP58 standards. Wright Tanks Limited is a member of the New Zealand Concrete Tank Manufacturers Association. Wright Tanks Limited have installed a number of tanks in this area from LPED systems to treatment plants utilizing drip irrigation lines and ETS beds, and all systems to date are working well with service and maintenance contracts.

The installation of a Wright ProTec 10,000 Wastewater Treatment Plant includes a three year service contract and thereafter the owner enters into a maintenance contract with Wright Tanks Limited that allows for bi-annual services at an approximate cost of \$100.00+gst per visit (subject to change). These services are to be conducted only by Wright Tanks Limited employees or approved installers. This sewage system will be installed by Wright Tanks Limited or their nominated installers. Wright Tanks Limited will not 'sign off' work conducted by any other drain layer, plumber or person who carries out any aspect of the above for mentioned work.

The following practices are strongly recommended to assist in the continual smooth operation of the treatment plant:

- 1: Minimal sanitary products and no nappies should be introduced into the tank
 - 2: Water should be conserved
 - 3: No strong chemicals or cleaners should be introduced into the tank, and we recommend the use of environmentally friendly products
 - 4: The tank should be pumped out regularly; the average period between emptying is three to five years however this may vary depending on the use of the particular system.
- All fixtures, vent pipes and fittings required by the building code are to be supplied and fitted by the owners' drain layer. The concrete treatment plant is guaranteed for a period of ten years, pumps for two years and electrical fittings are guaranteed for one year.

Regards



Andrew Wright
Director
Registration Number: 23958

t:06 353 6157 f:06 353 3020
e: wrighttanks@inspire.net.nz web: www.wrighttanks.co.nz
PO Box 4777 Palmerston North



WRIGHT TANKS LTD

10th April 2013

Kapiti Coast District Council
Private Bag 601
Paraparaumu
Attention: Building Inspector

Dear Building Inspector,

Re: PS 1
Roberts Property
28 Eucalyptus Way
Nikau Valley
Lot 2 DP 348721

I write to confirm that the enclosed plans for the above named property and reports and all specifications to do with the sewage disposal system for the proposed installation is in general accordance with NZ Building Code Clause G13/AS2. The system is installed and constructed in general accordance with AS/NZS1547:2012, AS/NZS1546.1:2008, NZS3106:1986 and TP58 standards. Wright Tanks Limited is also member of the New Zealand Concrete Tank Manufacturers Association.

All plans and drawings have been drawn up and assessed by a suitably qualified professional and as an independent suitably qualified professional to complete this work (and covered by a current policy of professional indemnity insurance to a minimum value of \$250,000) I hereby declare that all of the work to be completed by Wright Tanks Limited specifications will be signed off by the writer.

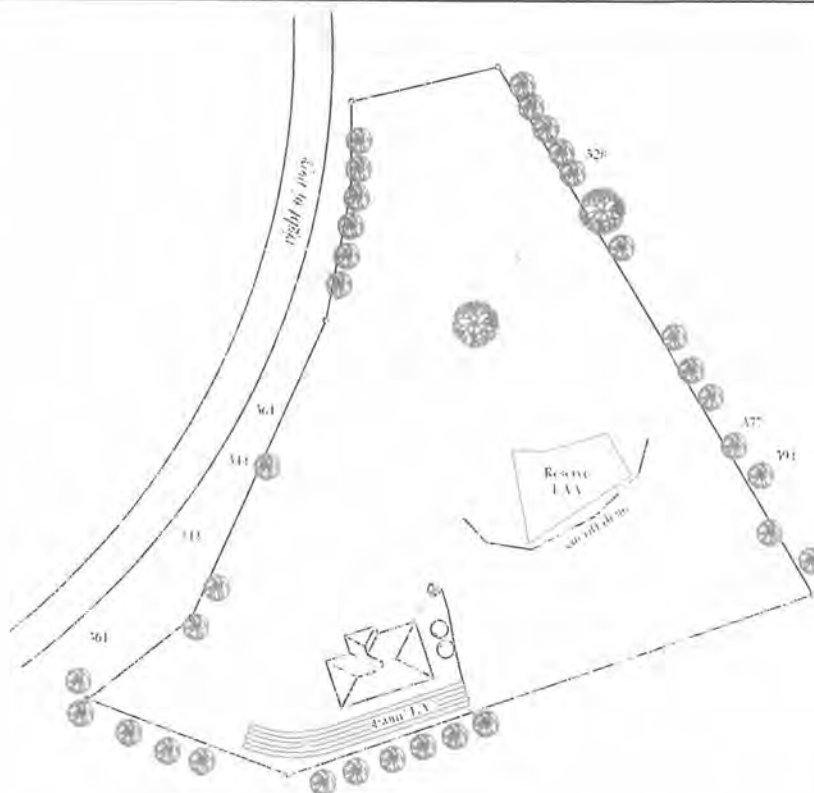
Producer Statement will also be issued after the installation of the above work has been completed.

Regards



Andrew Wright
Director
Registration Number: 23958





There will be 12 mm of dip off from track from the 25 m form and the apex (measured from 100 m) 26 mm deep.

As Bulk plans are drawn off the supplied drawing from the sub contractor, Wright Tanks Ltd do not survey the site and therefore take no responsibility for the accuracy of such plots.

Plans are drawn off a supplied drawing. Wright Tanks Ltd do not survey the site for boundary dimensions or building or driveway location. These are approximate and may vary to exact locations. See architectural site plan for exact measurements and locations. Wright Tanks Ltd therefore take no responsibility for the accuracy of such dimensions.

See film to be read in conjunction with the background site inspection report.

Name:	James T. Felt
Address:	261 California Way
Drawn By:	JTF
Scale:	1:10000 A2
Date:	10/01/2013
Ref #:	100 218 278721
Signed:	

(p: 0800 253 273
t: 06 353 6157 f: 06 353 3020
PO Box 4777 Palmerston North 4442
email: adrian@wrightbanks.co.nz

This design remains the property of Wright Tanks Limited and may not be altered, reproduced or installed (wholly or in part) by any person not accredited as a Wright Tanks Limited approved installer.

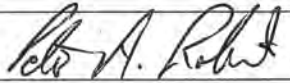
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Authorised Agent Form

30 APR 2013
00043

Job No:	WN100A		
Client Name:	Peter Aled Roberts		
Site Address:	48 Eucalyptus Way, Nikau Valley, Paraparaumu, 5032		
Lot:	2	DP:	348721
CT:	199972	Land Area:	1.0007

We hereby give authorisation to MASS Construction NZ Ltd to act on our behalf as an authorized agent for the building consent application process and all council dealings for the build of our home.

Client signature:		Date:	08 / 04 / 2013
Client signature:		Date:	/ / 20

16 May 2013

Mass Construction NZ Ltd
PO Box 1703
Paraparaumu

Emailed to Brett

Building Consent: 130241

Dear Sir/Madam

Request for further information

Description: *New Dwelling*
Location: 48 Eucalyptus Way, Paraparaumu
Legal Description: LOT 2 DP 348721

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

Information Needed:

- 1) 48 Eucalyptus Way is situated within a variable wind zone. Please provide a site specific wind calculation.

We have suspended your application and will not proceed any further with its processing until the above information is received.

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

Yours faithfully

Stuart Nepia
CONSENTS
Direct line tel. no. (04) 296 4858

Author/generator ID data

Stuart Nepia

From: Brett Rollander [Brett.Rollander@platinumhomes.co.nz]
Sent: Friday, 12 July 2013 2:12 p.m.
To: Stuart Nepia
Subject: 130241 RFI 48 Eucalyptus Way, Paraparaumu
Follow Up Flag: Follow up
Flag Status: Orange

Hi Stuart

You wont believe this , but I have just got the wind design from Hamish Wells. Not sure where this guys has been fir the two month's but we are only just starting to get information from him.

We are still waiting for him to submit the resource consent for this project, so there is another four weeks cause I think that has to go through wellington council because of the water ways ?.

Thanks

Brett Rollander
Construction Director

MASS Construction NZ Ltd
MASS Construction STH Ltd
MASS Construction WRP Ltd

M 021 820 671 **T** (04) 298 9289 **F** (04) 298 9285

www.platinumhomes.co.nz

Office: Level 2, 169 Rimu Road, Paraparaumu
PO Box 1703, Paraparaumu Beach 5252



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Stuart Nepia

From: Brett Rollander [Brett.Rollander@platinumhomes.co.nz]
Sent: Friday, 12 July 2013 2:13 p.m.
To: Stuart Nepia
Subject: FW: 130241 RFI 48 Eucalyptus Way, Paraparaumu
Follow Up Flag: Follow up
Flag Status: Orange
Attachments: Wind 1170 & 3604.pdf

Sorry forgot to attached the report

Brett Rollander
Construction Director

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MASS Construction STH Ltd
MASS Construction WRP Ltd

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This email and any attachments may be confidential or legally privileged. If you have received this message in error please destroy this email and any attachments or copies and inform us of the delivery error by return e-mail.

From: Brett Rollander
Sent: Friday, 12 July 2013 2:10 p.m.
To: 'Stuart Nepia'
Subject: 130241 RFI 48 Eucalyptus Way, Paraparaumu

Hi Stuart

You wont believe this , but I have just got the wind design from Hamish Wells. Not sure where this guys has been fir the two month's but we are only just starting to get information from him.

We are still waiting for him to submit the resource consent for this project, so there is another four weeks cause I think that has to go through wellington council because of the water ways ?.

Thanks

Brett Rollander
Construction Director

MASS Construction NZ Ltd
MASS Construction STH Ltd
MASS Construction WRP Ltd

9/10/2013

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Wind speed by NZS 1170.2 & 3604:2011

11/07/2013

Site location 48 Eucalyptus Way Nikau Valley Paraparaumu

60 G 333 870 mE

5 468 214mS

119m msl

By 1170.2

By 3604:2011

VsitB = VrMd(MzcatMsMt)

Vr 39
Md 1
Mzcat 1.16
Ms 0.9
Mt 1
Mh 1

V50 region A7
Any direction region A7
terrain cat 3

Region W
lee zone no
ground roughness open
site exposure sheltered
Topo class T1

VsitB 40.716 m/s

Wind zone H <44m/s

Wind Bracing Demand

For detailed information consult NZS 3604:2011

Wind Zone

Many Building Consent Authorities have wind zone maps prepared to assist designers. Contact your local authority for further information. This information is a guide only. The wind zone can be determined more accurately by following the procedure outlined in Table 5.1 from NZS 3604:2011

Table 5.1 – Procedure for determination of wind zones

Steps	Action	Reference	Values available
1	Determine wind region	Figure 5.1	A, W
2	Determine if in a lee zone	Figure 5.1	See table 5.4
3	Determine ground roughness	5.2.3 (NZS 3604:2011) see page 6	Urban terrain Open terrain
4	Determine site exposure	5.2.4 (NZS 3604:2011) see page 7	Sheltered / exposed
5	Determine topographic class	From tables 5.2, 5.3 and figure 5.2	Gentle to steep
6	Determine wind zone	Table 5.4	L, M, H, VH, EH

Site exposure

Determine the site exposure for a building by assessing the shielding effects of obstructions around the site, for wind from any direction.

Sheltered: At least 2 rows of similarly sized permanent obstructions at the same ground level all around.

Exposed: Deep sites as defined in table 5.2 or sites adjacent to open spaces such as playing fields, beachfronts, large rivers, motorways, or sites adjacent to wind channels greater than 100m in width.

Topographic Class

Follow tables 5.2 and 5.3 to determine the topographic class for the site. The 'smoothed gradient' is measured over a horizontal distance from the crest to the lesser of 3 times the height of the hill, or 500 m. It is the change in elevation divided by the relevant distance (mL).

An escarpment is defined as the region beyond the crest having a slope less than 1:20 (see figure 5.2).

Table 5.2 – Procedure for determination of topographic class, T1 – T4

Steps	Action	Reference	Values available
1	Determine hill height and formation	Figure 5.2	Hill, Escarpment
2	Determine smoothed gradient value and class	Figure 5.2	Low to Steep
3	Determine topography	Figure 5.2	Crest / Outer
4	Determine site exposure	As above or 5.2.4 (NZS 3604:2011)	Sheltered/Exposed
5	Determine topographic class	As above and table 5.3 or 5.2.5 (NZS 3604:2011)	-

In this table	Gentle = Low = Mild = Moderate = Steep =	Gradient Gradient Gradient Gradient Gradient	< 0.05 0.05 < 0.1 0.1 < 0.15 0.15 < 0.2 > 0.2	i.e. slope max. i.e. slope max. i.e. slope max. i.e. slope max. i.e. slope max.	1:20 1:10 1:6.7 1:5 > 1:5
---------------	--	--	---	---	---------------------------------------

Table 5.3 – Determination of topographic class

Topography	Gentle	Low	Mild	Moderate	Steep
Crest	T1	T2	T3	T4	T4
Outer	T1	T1	T2	T2	T3

All sites outside the outer and crest zones are topographic class T1 except that:

- (1) Sites within valleys which are known to have accelerated wind flows within them because of their shape and exposed mouths shall be classed as T4.
- (2) Sites in areas with undulations of less than 10m in height, and gradients less than 1:20 shall be classed as T1.

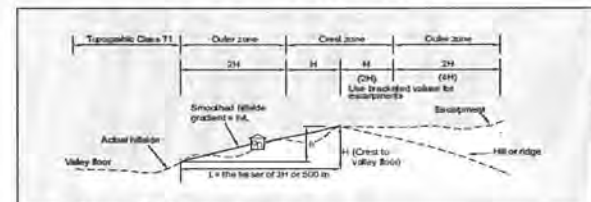


Figure 5.3 – Topography (including escarpment conditions)

Wind region and lee zone

Figure 5.1 from NZS 3604:2011 gives the wind region. Lee zones are shaded and attract higher wind speeds resulting in a higher design wind zone as given in Table 5.4.

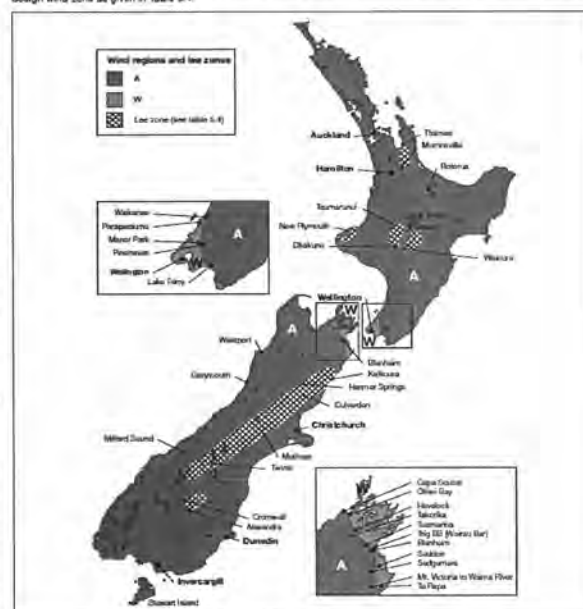


Figure 5.1 – Wind regions and lee zones

Ground roughness

The ground roughness is determined by considering the number, type and height of obstructions over which the wind must pass as it approaches the site. Use the most severe direction to establish the ground roughness for the site.

Urban terrain: more than 10 obstructions, houses or trees more than 3m high, per hectare.

Open terrain: grazed pastures, cropping, or areas adjacent to beaches and the sea or airfields and other areas with isolated trees or shelter.

Sites within a 500m wide fringe of the boundary between urban and open terrain shall be considered open terrain.

Determination of Wind Zone

The wind zone can be determined from Table 5.4 once steps 1 to 5 have been completed. Note that the GIB EzyBrace® software determines the wind zone automatically once these parameters have been entered.

Table 5.4 – Determination of wind zone

Region	Ground roughness	Topographic class and site exposure							
		T1		T2		T3		T4	
		Sheltered	Exposed	Sheltered	Exposed	Sheltered	Exposed	Sheltered	Exposed
A	Urban	L	M	M	H	H	H	H	VH
	Open	M	H	H	VH	H	VH	VH	EH
W	Urban	M	H	H	VH	H	VH	EH	EH
	Open	H	VH	VH	EH	VH	EH	SED	SED

NOTE –

Wind speeds below are the maximum ultimate limit state wind speed for each wind zone

L = Low wind speed of 32 m/s M = Medium wind speed of 37 m/s

H = High wind speed of 44 m/s VH = Very high wind speed of 50 m/s

EH = Extra high wind speed of 55 m/s

SED = Specific engineering design (not covered by this Standard)

Winds in lee zones shall be increased as follows:

Low wind becomes High

Medium wind becomes Very High

High wind, and above become SED

Hamish Wells
CPEng # 186323
MIPENZ

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DN: cn=Hamish Wells, o=Hamish Wells
Consulting Civil Engineer, ou,
email=engennr@xtra.co.nz, c=NZ
Date: 2013.07.11 14:29:38 +12'00'

Hamish Wells

PACKAGING



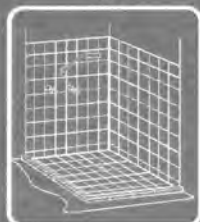
MIXING



APPLICATION



USES



SUBSTRATES

CONCRETE, BRICK
BLOCK
BUILDING BOARDS
ROOFS, DECKS,
BASEMENT, POOLS,
WET AREAS, TANKS

DESCRIPTION

Liquid Flash II is a two pack fast drying, reinforced, cement/acrylic flexible waterproofing membrane that is easily applied to form a resilient waterproof membrane between different building surfaces. Liquid Flash II will remain pliable and elastic and will bridge cracks and smooth irregular surfaces. Internal wet areas must be waterproofed in accordance with AS3740 and local regulations. For more details refer to brochure titled "Waterproofing Enclosed Shower Alcoves Prior to Tiling".

USES

A flashing material for roof vent pipes, parapet walls and roof sheeting/tiles. A waterproofing membrane for roofs, balconies, retaining walls, planter boxes, ponds, internal wet areas (eg bathrooms, kitchens, laundries and toilets). For use on cement render, concrete, brick, block and building boards such as gypsum and cement sheeting on walls and structural timber and compressed cement sheeting on floors, roof and gutter repairs.

FEATURES

- Pre-reinforced.
- Easy to apply.
- Suitable for internal and external uses.
- Fast drying.

COVERAGE (approximate)

10L/20kg pack covers 10-12m² (2 coats).

PERFORMANCE DATA

Tensile Strength 2.96 MPa (ASTM D412-92)

Elongation 46% (ASTM D412-92)

SPECIFICATION

The waterproof membrane shall be Liquid Flash II, a two part cementitious/acrylic membrane manufactured by Construction Chemicals and shall be applied in accordance with the manufacturer's application instructions.

SURFACE APPLICATION

Surfaces must be sound and clean of grease, oil, dust and other contaminants. Treat surfaces as follows before applying Liquid Flash II: – **Galvanised Iron** – new. Degrease with xylene or similar and wash clean with water and allow to dry. **Rusty Surfaces** – Wire brush to remove flaky rust and treat with a rust inhibitor. **Timber** – Prime with a timber primer. **Plastic Pipes** – Roughen area to be coated with sand paper. **Painted Surfaces** – Abrade with a wire brush or sand down to obtain a good mechanical key. Scrub thoroughly with detergent and water and allow to dry. **Cement sheet / Plaster Board** – Prime with 50:50 mix of Bonding Additive and water. **Masonry** – Render/Screed must be at least 7 days old, graded screed 24 hours, concrete 28 days old and a minimum 25 MPa. Smooth concrete must be mechanically abraded and primed with 50:50 mix of Bonding Additive and water before applying Liquid Flash II.

MIXING

Pour 2 litres of liquid into a mixing container and slowly add 4kg of powder. Mix using a slow speed electric drill and mixing paddle being sure to add powder to the liquid, mixing until all lumps are dispersed and the mix is creamy. Do not mix more than can be used in the pot life time. Hand mixing is not recommended.

MEMBRANE APPLICATION

Before applying Liquid Flash II apply 50mm bond breaking tape (masking tape) to the junction of walls/floors, walls/walls, structural cracks and joints in building boards to accommodate extremes in movement. Apply two coats. Apply the second coat at 90° to the first as soon as it is dry (recoat time is approximately 2 hours at 25°C). Apply each coat thickly (approximately 1.5mm wet) allowing it to flow rather than being brushed on. Use a soft brush for best results. Trowel applied adjust mix to suit. A final thickness of 1.5mm is required.

FLASHING APPLICATION

At the junction of two surfaces apply 50mm bond breaking tape (masking tape) equally to both surfaces. This will eliminate wastage of material dropping through the hole and allow for extremes of movement. On round pipes use 50mm square pieces of masking tape around the circumference of the pipe. To make a clean line at the edge of the flashing, apply masking tape to the outside of the area to be coated. Apply two coats 75mm or more to each surface. Can be painted to colour match surroundings using acrylic based paints. A final thickness of 1.5mm is required.

POT LIFE

30 MINS AT 25°C @ 50% R.H.

PRECAUTION

The membrane will crack on the surface if excess powder is used. Do not thin or add filler.

- Apply at temperatures between 10°C-30°C.
- At above 30°C temperatures the membrane exhibits thermoplastic characteristics.
- Not to be used over surfaces where continuous rising damp is a problem for hydrostatic pressure is present.
- Used in shower alcoves should be allowed approximately 72 hours at 20°C 50%RH (depending on conditions) before tiling. Allow 7 days after application of before using shower.
- It is advisable to flood test the shower after curing (approximately 72 hours at 20°C 50%RH). This should be done before tiling commences.

JOINTS/CRACKS

Apply 50mm wide bond breaking tape (masking tape) over the crack or the junction of the two surfaces. Bridge the crack by a minimum of 50mm each side.

CURING

4 hours 25°C @ 50% relative humidity. Protect from rain for the first 4 hours. Cold damp conditions – increases curing time. Hot dry conditions – reduces curing time.

Immersed applications i.e. ponds, must be allowed to cure for 7 days before being put into use.

FIRST AID

If swallowed, do not induce vomiting. Give a glass of water and seek medical advice.

CLEANUP

Clean up in water. Cured material with xylene solvent or similar.

**CONSTRUCTION
CHEMICALS**

• **ADELAIDE** 467 - 489 SOUTH RD REGENCY PARK 5010 PH: (08) 8346 8013 FAX: (08) 8340 2052
• **BRISBANE** 45 COULSON ST WACOL 4076 PH: (07) 3271 2944 FAX: (07) 3271 3892
• **MELBOURNE** 1 / 10 GABRIELLE CT BAYSWATER NORTH 3153 PH: (03) 9761 4711 FAX: (03) 9761 4748
• **PERTH** 61 DOWD ST WELSHPOOL 6106 PH: (08) 9358 6493 FAX: (08) 9358 6493
• **SYDNEY** 2/ 31-33 NEWTON RD. WETHERILL PARK 2164 PH: (02) 9756 3533 FAX: (02) 9756 3534
• **AUCKLAND** 16 CARPENTER RD. EAST TAMAKI PH: (09) 273 5444 FAX: 0800 266 236
• **KUALA LUMPUR** LOT 2 JALAN KECAP1 33/2 ELITE INDUSTRIAL ESTATE OFF JALAN BUKIT KEMUNING
PH: (03) 522 2522 FAX: (03) 522 2526

R B W

KNIGHT TILE TECHNICAL DATA



Standard

	Thickness	2mm
	Wear layer	0.3mm
	Guarantee	Commercial Duty 6 Years* Domestic Heavy Duty 12 Years*
	Bevelled edge	No
	Standards	EN 549 ASTM F-1700
	Classification	Light Commercial use Heavy Domestic use
	Reaction to fire	AS 9239.1: 2003

	Slip resistance	AS/NZS 4386: 2004	CRF: 8.6 kN/m ² Smoke value: 56% min.
	Staining resistance	EN 423 ASTM F-925	Class 0 Pass
	Light fastness	ISO 105-B02 ASTM F-1515	≤ 6 ≤ 8
	Abrasion resistance	EN 660-2 ASTM 3884	Group T Pass
	Dimensional stability	EN 434 ASTM F-2199	≤ 0.25% Pass
	Acoustic impact noise reduction	EN ISO 140-8 EN ISO 717-2	$\Delta L_m = 2dB^1$
	Electrical behaviour body voltage	EN 1815	Pass
	Indentation - residual	EN 433 ASTM F-1914	≤ 0.1mm ≤ 8%
	Castor chair continuous use	EN 425	Pass
	Thermal conductivity Suitable for underfloor heating	ISO 8302	0.0100kW/m ²
	Adhesive	General use: Karndean Mega-Bond High temperature: Karndean 9000 2-part Polyurethane	
	Recycling	Suitable	

¹ Subject to terms
Result: $\Delta L_m - C = 57dB$ when installed on Regupol 4515 acoustic underlay

Product Code	Size (mm)	Slip Resistance	
		Oil-Wet Ramp	Wet Pendulum
ST5, ST8, ST9, ST10, T100, T101, T102 T98, T99	305 x 305		X
T82, T84, T86, T87, T88, T89		R10	
KP35, KP37, KP39, KP50, KP51, KP52, KP53, KP54, KP55, KP67, KP69, KP90, KP91, KP92, KP93, KP107	915 x 102		Y

For full test results please contact Karndean International.



Manufactured to:



FOR MORE INFORMATION:

Australia

Freecall: 1800 33 11 70

Email: enquiries@karndean.com.au

Website: www.karndean.com.au

New Zealand

Freecall: 0800 44 21 01

Email: info@karndean.co.nz

Visit: www.karndean.co.nz





BRANZ Appraised
Appraisal No.356 [2005]

BRANZ Appraisals

Technical Assessments of products
for building and construction

**BRANZ
APPRAISAL
CERTIFICATE**

No. 356 (2005)

This Certificate replaces BRANZ
Appraisal Certificate No. 356 (1998)
issued June 1998.

**THERMAKRAFT
COVER-UP™
BREATHER-TYPE
BUILDING WRAP**

Thermakraft Industries (NZ) Ltd
P O Box 58 112
Greenmount
Auckland

Tel: 09 273 3727
Fax: 09 273 3726
Free phone: 0800 806 595



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Private Bag 50 908
Porirua City
New Zealand
Tel: +64 4 237 1170
Fax: +64 4 237 1171
www.branz.co.nz

BRANZ Pty Ltd
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Brookvale
NSW 2100
Australia
Tel: +61 2 9938 6011
Fax: +61 2 9938 6911
www.branz.com.au



RBW

30 APR 2013

BY: 00033

1.1 Thermakraft Cover-Up™ is a synthetic breather-type building wrap for use as a wall wrap and air barrier under direct and non-direct fixed wall cladding on timber framed buildings. The product is manufactured from tapes of high density polyethylene woven into sheet form, and is coated on both sides with pigmented low density polyethylene. Micro-perforations are made through the coated membrane to permit the passage of water vapour.



2.1 Thermakraft Cover-Up™ has been appraised for use as a wall wrap on timber framed buildings within the following scope:

- the scope limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1; and,
- with absorbent wall claddings directly fixed to framing; and,
- with absorbent and non-absorbent wall claddings installed over an 18 mm minimum drained cavity; and,
- with masonry veneer in accordance with NZS 3604:1999; and,
- situated in NZS 3604 Building Wind Zones up to, and including 'Very High'.

2.2 Thermakraft Cover-Up™ has also been appraised for use on buildings subject to specific weathertightness design. Building designers are responsible for the building design and for the incorporation of Thermakraft Cover-Up™ into their design in accordance with the declared properties and the instructions of Thermakraft Industries (NZ) Ltd.

Readers are advised to check the validity of this Certificate by referring to the Valid Certificates listing on the BRANZ website, or by contacting BRANZ.

New Zealand Building Code (NZBC)

3.1 In the opinion of BRANZ, Thermakraft Cover-Up™ Breather-Type Building Wrap, if used, designed, installed and maintained in accordance with the statements and conditions of this Certificate, will meet, or contribute to meeting the following provisions of the NZBC:

Clause B2 DURABILITY: Performance B2.3.1(a), 50 years and B2.3.1(b), 15 years. Thermakraft Cover-Up™ meets these requirements. See Paragraphs 8.1 and 8.2.

Clause E2 EXTERNAL MOISTURE: Performance E2.3.2. When used as part of the cladding system, Thermakraft Cover-Up™ will contribute to meeting this requirement. See Paragraphs 11.1 - 11.3.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1. Thermakraft Cover-Up™ meets this requirement and will not present a health hazard to people.

3.2 This Certificate appraises an **Acceptable Solution** in terms of the New Zealand Building Code compliance. Thermakraft Cover-Up™ meets the requirements for wall wraps and air barriers specified in accordance with NZBC Acceptable Solution E2/AS1, Table 23.

4.1 Thermakraft Cover-Up™ is a 95 g/m² white sheet membrane material approximately 0.25 mm thick.

4.2 The product is supplied in rolls 2.54 and 2.74 m wide by 18.5, 27.5 and 36.5 m long and 1.37 m wide by 18.5, 27.5 and 73.0 m long. The product is printed with a two colour Thermakraft Cover-Up™ logo repeated along the length of the roll and is labelled with the marketing or construction company's name. The rolls are wrapped in clear polythene film.

Accessories

4.3 Accessories used with Thermakraft Cover-Up™ which are supplied by the installer are:

- Fixings - staples, clouts or proprietary wrap fixings, or other temporary fixings to attach the wall wrap to the framing.
- Building wrap support - polypropylene strap, 75 mm galvanised mesh or galvanised wire, or vertical cavity battens where required to support the wall wrap in accordance with NZBC Acceptable Solution E2/AS1, Paragraph 9.1.8.5.

Handling and Storage

5.1 Handling and storage of the product, whether on or off site, is under the control of the installer. The rolls must be protected from damage and weather. They must be stored on end, under cover, in clean, dry conditions and must not be crushed.

6.1 Refer to the Appraisals listings on the BRANZ website for details of the current Technical Literature for Thermakraft Cover-Up™. The Technical Literature must be read in conjunction with this Certificate. All aspects of design, use, installation and maintenance contained in the Technical Literature and within the scope of this Certificate must be followed.

Timber Framing

7.1 Studs must be provided at maximum 600 mm centres. Dwangs must be fitted flush between the studs at maximum 1200 mm centres.

General

7.2 Thermakraft Cover-Up™ is intended for use as an alternative to conventional building papers which are fixed over timber framed walls in order to limit the entry of wind into building cavities, and to act as a secondary barrier to wind-driven rain.

7.3 The material also provides a degree of temporary weather protection during early construction. However, the product will not make the building weathertight and some wetting of the underlying structure is always possible before the building is closed in. Hence, the building must be closed-in and made weatherproof before moisture sensitive materials such as wall or ceiling linings and insulation materials are installed.

7.4 Thermakraft Cover-Up™ is suitable for use under wall claddings as a wall wrap and air barrier as called up in NZBC Acceptable Solution E2/AS1, Table 23, except that it must not be used with non-absorbent wall claddings such as vinyl or metal based sidings or weatherboards in direct fixed installations. Refer to Table 1.

Table 1: NZBC E2/AS1 Table 23 Requirements

NZBC E2/AS1 Table 23 Wall Wrap Properties	Property Performance Requirement	Actual Property Performance
Absorbency	≥ 100 g/m ²	Does not comply
Vapour Resistance	≤ 7 MN s/g	2.7 MN s/g
Water Resistance	≥ 20 mm	Pass
pH of Extract	≥ 6 and ≤ 9	6.8
Shrinkage	≥ 0.5%	-0.015%
Mechanical	Edge tear and tensile strength	Edge tear: Machine direction = 380 N Cross direction = 299 N Tensile strength: Machine direction = 7.82 kN/m Cross direction = 5.90 kN/m
Air Barrier	Edge tear strength: 90 N Air resistance: ≥ 0.1 MN s/m ³	Pass 0.205 MN s/m ³

7.5 In cavity installations where the cavity battens are installed at greater than 450 mm centres, the building wrap must be supported between the battens to prevent the wrap bulging into the cavity space when bulk insulation is installed in the wall frame cavity in accordance with the requirements of NZBC Acceptable Solution E2/AS1, Paragraph 9.1.8.5.

7.6 Thermakraft Cover-Up™ is suitable for use as a non-rigid backing material for stucco plaster in accordance with the requirements of NZBC Acceptable Solution E2/AS1, Paragraph 9.3.5.1. The wrap must be supported with 75 mm galvanised mesh or plastic tape or wire at 150 mm centres run

across the cavity battens to limit deflection to a maximum of 5 mm in accordance with the requirements of NZBC Acceptable Solution E2/AS1, Paragraph 9.3.5.2.

7.7 Thermakraft Cover-Up™ may also be used as a slip layer over rigid backings for stucco plaster in accordance with the requirements of NZBC Acceptable Solution E2/AS1, Paragraph 9.3.3(b).

Structure

7.8 Thermakraft Cover-Up™ is suitable for use in all Building Wind Zones of NZS 3604 up to, and including, 'Very High'.

Durability

8.1 Thermakraft Cover-Up™ meets code compliance with NZBC Clause B2.3.1 (a), 50 years for building wraps used where the cladding durability requirement or expected serviceable life is not less than 50 years, and code compliance with NZBC Clause B2.3.1 (b), 15 years for building wraps used where the cladding durability requirement is 15 years.

Serviceable Life

8.2 Provided it is not exposed to the weather or ultra-violet light for a total of more than 60 days, Thermakraft Cover-Up™ is expected to have a serviceable life of at least 50 years.

Control of Internal Fire and Smoke Spread

9.1 Thermakraft Cover-Up™ has an AS 1530 Part 2 Flammability Index of 1 and meets the requirements of NZBC Acceptable Solution C/AS1 Part 6, Table 6.2 for surface finish requirements for suspended flexible fabrics, and therefore it may be used with no restrictions in all buildings.

Outbreak of Fire

10.1 Thermakraft Cover-Up™ must be separated from fireplaces, heating appliances, flues and chimneys in accordance with the requirements of NZBC Acceptable Solution C/AS1 Part 9 for the protection of combustible materials.

External Moisture

11.1 Thermakraft Cover-Up™ must be used behind claddings that meet the requirements of the NZBC, e.g. such as those covered by NZBC Acceptable Solution E2/AS1, or claddings covered by a valid BRANZ Appraisal Certificate.

11.2 Thermakraft Cover-Up™, when installed in accordance with the Technical Literature and this Certificate, will assist in the total cladding systems compliance with NZBC Clause E2.

11.3 When used as an air barrier, particular care must be taken to ensure an air tight barrier is achieved, and weather sealing at all openings and penetrations through the cladding meets the requirements of the NZBC.

Installation Skill Level Requirements

12.1 Installation must always be carried out in accordance with the Technical Literature and this Certificate, by competent tradespersons with an understanding of wall wrap installation.

Wrap Installation

13.1 Thermakraft Cover-Up™ must be fixed to all framing members at maximum 300 mm centres with hot-dip galvanised, large-head clouts 20 mm long, zinc plated 6-8 mm staples, or proprietary wrap fixings. The membrane must be pulled taut over the framing before fixing.

13.2 Thermakraft Cover-Up™ must be run horizontally and must extend from the upper-side of the top plate to the under-side of the bearers or wall plates supporting ground floor joists, or below bottom plates on concrete slabs. Horizontal laps must be no less than 75 mm wide, with the direction of the lap ensuring that water is shed to the outer face of the membrane. End laps must be made over framing and be no less than 150 mm wide.

13.3 The wall wrap should be run over openings and these left covered until windows and doors are ready to be installed. Openings are formed in the membrane by cutting on a 45 degree diagonal from each corner of the penetration. The flaps of the cut membrane must be folded inside the opening and stapled to the penetration framing. Excess wrap may be cut off flush with the internal face of the wall frame.

13.4 Thermakraft Cover-Up™ can be added as a second layer over head flashings in accordance with the requirements of NZBC Acceptable Solution E2/AS1, Paragraph 9.1.7(e).

13.5 When fixing the product in windy conditions, care must be taken due to the large sail area created by the wide roll width.

13.6 Any damaged areas of Thermakraft Cover-Up™, such as tears, holes or gaps around service penetrations, must be repaired. Damaged areas can be repaired by covering with new material lapping the damaged area by at least 150 mm and taping, or by taping small tears.

The following is a summary of the technical investigations carried out:

Tests

14.1 The following tests have been carried out on Thermakraft Cover-Up™ by Ensic Papro: Cold extract pH in accordance with AS/NZS 1301.421s; edge tear resistance and tensile strength in accordance with AS/NZS 4200.1; shrinkage in accordance with AS/NZS 4201.3, water resistance in accordance with AS/NZS 4201.4, and air resistance in accordance with BS 6538-3.

14.2 The following tests have been carried out on Thermakraft Cover-Up™ (marketed in Canada as Airgard®) by an independent laboratory for the Canadian Construction Materials Centre (CCMC), in accordance with the requirements of CAN/CGSB-51.32-M77: pliability; tensile strength; water vapour permeance, and water ponding.

14.3 The following tests have been carried out on Thermakraft Cover-Up™ by BRANZ: flammability in accordance with AS 1530.2, and tensile tear strength before and after two months of natural UV aging.

Other Investigations

15.1 A durability opinion was given by BRANZ technical experts.

15.2 Site inspections were carried out by BRANZ to assess methods used for the installation of Thermakraft Cover-Up™, and to examine completed installations.

15.3 The marketer's Technical Literature, including installation instructions, has been examined by BRANZ and found to be satisfactory.

Quality

16.1 The manufacture of Thermakraft Cover-Up™ has not been examined by BRANZ, but details of the methods adopted for quality control and the quality of the materials used, have been obtained.

16.2 The quality management system of the wrap manufacturer, Fabrene Corporation, has been assessed and registered as meeting the requirements of ISO 9001: 2000 by TUV ESSEN, Registration Number 02-1308.

16.3 The quality of supply to the market is the responsibility of Thermakraft Industries (NZ) Ltd.

16.4 Building designers are responsible for the design of the building, and for the incorporation of the wall wrap into their design in accordance with the instructions Thermakraft Industries (NZ) Ltd.

16.5 Quality of installation is the responsibility of the installer in accordance with the instructions of Thermakraft Industries (NZ) Ltd.

Sources of Information

- AS 1530.2 - 1993 Test for flammability of materials.
- AS/NZS 1301.421s: 1988 Determination of the pH value of aqueous extracts of paper, board and pulp - cold extraction method.
- AS/NZS 4200.1: 1994 Pliable building membranes and underlays - materials.
- AS/NZS 4201.3: 1994 Pliable building membranes and underlays - Methods of test - Shrinkage.
- BS 6538-3: 1987 Method for determination of air permeance using the Garley apparatus.
- CAN/CGSB-51.32-M77 Technical Guide for Sheathing, Membrane, Breather-Type.
- NZS 3604: 1999 Timber Framed Buildings.
- Compliance Document for the New Zealand Building Code External Moisture Clause E2, Department of Building and Housing, Third Edition July 2005.
- New Zealand Building Code Handbook and Approved Documents, Building Industry Authority, 1992.
- The Building Regulations 1992, up to, and including October 2004 Amendment.



In the opinion of BRANZ, Thermakraft Cover-Up™ Breather-Type Building Wrap is fit for purpose and will comply with the Building Code to the extent specified in this Certificate provided it is used, designed, installed and maintained as set out in this Certificate.

The Appraisal Certificate is issued only to the Certificate Holder, Thermakraft Industries (NZ) Ltd, and is valid until further notice, subject to the Conditions of Certification.

Conditions of Certification

1. This Certificate:
 - a) relates only to the product as described herein;
 - b) must be read, considered and used in full together with the technical literature;
 - c) does not address any Legislation, Regulations, Codes or Standards, not specifically named herein;
 - d) is copyright of BRANZ.
2. The Certificate Holder:
 - a) continues to have the product reviewed by BRANZ;
 - b) shall notify BRANZ of any changes in product specification or quality assurance measures prior to the product being marketed;
 - c) abides by the BRANZ Appraisals Services Terms and Conditions.
3. The product and the manufacture are maintained at or above the standards, levels and quality assessed and found satisfactory by BRANZ.
4. BRANZ makes no representation as to:
 - a) the nature of individual examples of, batches of, or individual installations of the product, including methods and workmanship;
 - b) the presence or absence of any patent or similar rights subsisting in the product or any other product;
 - c) any guarantee or warranty offered by the Certificate Holder.
5. Any reference in this Certificate to any other publication shall be read as a reference to the version of the publication specified in this Certificate.

For BRANZ

P Robertson
Chief Executive

Date of issue: 13 December 2005

Building Act 2004, section 87

Advice of licensed building practitioner(s)

Owner must notify names of licensed building practitioners before restricted building work commences

Send or deliver this form to:

Building Control, Kapiti Coast District Council, Private Bag 60-601, Paraparaumu 5254.
For enquiries, phone (04)296 4700. eMail: kapiti.council@kapiticoast.govt.nz

Council use only:
BC Application #

The building (project location)

Building name (if applicable)	
Building street address	48 Eucalyptus Way NIKAU Valley Paraparaumu

The project

Building consent number	130241
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The owner (must be completed and all details must be the owner's)

Owner's name (for individuals, state the preferred form of title, e.g. Mr, Mrs, Ms, Miss, Dr. For companies, trusts and other organisations provide a contact person's name)	Peter Roberts		
Address	82 Brandon Street FEATHERSTON	Date:	
Owner's contact details	Landline: — Mobile: 027 329 0711 After hours:	Fax:	Email:

Licensed building practitioners engaged to carry out/supervise restricted building work

Particular work to be carried out or supervised	Name	Licensing class	Licensed building practitioner number (or registration number if treated as being licensed under section 291 of Act)
ENGINEER	William Teubert		221 906
RFL (SLAB)	RELIABLE Foundations		122213
Builder	DHK BUILDERS LTD		111606
Plumbing/DRAIN	MANA Plumbing & DRAINAGE		14434
ELECTRICAL	LARRY ELECTRICAL Paraparaumu		41330

Note: Continue over page if necessary

Licensed building practitioners engaged to carry out/supervise restricted building work (cont.)

[illegible]

Council use only:
Comments:

LBP(s) checked: ☐

All OK: ☐ yes

☐ no

30 APR 2013

00045

Building Consent Application — use this Checksheet for: Single Residential Dwelling and Accessory Buildings

— including single stand-alone dwellings, dwelling additions and/or alterations, re-piling, garages, decks, gazebos, sheds, retaining walls etc.

— An Application Form is attached to this checksheet —

(Please include this checksheet with your application)

Address of project:

48 Eucalyptus Way, Mtau Valley, Paraparaumu.

This checksheet shows you the information that has to be supplied with your building consent application. Please attach **2 copies** of the following information (unless otherwise specified) with your completed Building Consent Application form.

Please tick relevant box in the Customer Use column as you attach the information. If the box is not relevant to your application, write NA across the box. Please check each section carefully and complete those sections that are relevant to your project.

Once you have attached all the required information, please check for completeness as an incomplete application or lack of any supporting information will mean that your application cannot be accepted for processing.

CUSTOMER USE

COUNCIL USE



1. GENERAL

Complete this section for all applications



a. Building Consent Application Form (1 copy)

Completed and signed by the owner or by an agent on behalf of the owner.



b. Proof of ownership (1 copy)

One recent copy of current certificates/s of title (i.e. not older than 3 months) or where applicable one copy of purchase agreement (if recently purchased) or one copy of relevant portions of current lease



c. Locality Plan (1:500) showing:

Physical location of the subject building in relation to streets or landmarks, north point, name of building and lot and DP number.



d. Site Plan (1:100) showing:

Dimensions of all boundaries, north point, finished floor levels, ground contours (extended to boundaries) and/or levels, site area, street name and number, lot and DP number, outline of building, distance to boundaries and the position of swimming or spa pools. Include on the site plan the designated wind zone of the site (e.g. specific design, very high, high, medium or low).



e. Application Fee

Applications will not be accepted without payment of the appropriate fees. Fees payable are set out in the published fee schedule of the council that has jurisdiction over the project site.



\$3157.21

For office use only Receiving Officer:

Information supplied sufficient to warrant acceptance of this application for Building Consent

Form 335 C (Documents and Software published Desktop by CHECKSHEET Jan 08/10)

Page 1 of 6

23-04-2013

CUSTOMER USE



COUNCIL USE



2. CHANGE OF USE

Complete for all existing buildings where the proposal involves forming a household unit where one did not exist before

Example: the conversion of a garage or shed into a residential unit



a. Assessment of the building for compliance with the building code

Section 115(a) of the Building Act 2004 requires that the building, in its new use, complies fully with all clauses of the building code.



b. Reasonably practicable

The above assessment must relate to all building code clauses. If the proposal is for the project to meet anything less than full compliance with any clauses, your application must clearly state your reasoning, with supporting documentation, and show how you will meet the highest level of compliance that can be considered reasonably practicable.



3. FOUNDATIONS / FLOOR

Complete for all new buildings, for existing buildings where the footprint of the building will change or where an additional storey is being added.



a. Foundation Plan (1:100 / 1:50) showing:

- Dimensions of all new foundations
- Sub-floor, including bracing
- Footing details
- If a concrete slab, show basic details including reinforcing and contractions joints
- Piles and footing
- If the addition is an upper storey show details on upgrading existing foundations, joints, piles etc
- Indicate ventilation to sub floor spaces



b. Subfloor bracing

Provide subfloor bracing plan and calculations for all piled structures. Where the structure is specifically engineered, this should be included with the structural calculations.

Subfloor bracing plan and calculations are required where an additional storey is to be added.



4. CONSTRUCTION

Complete for all new structures or alterations to existing structures.



a. Existing floor plan (1:100 / 1:50) showing:

(For additions and alterations only)

- All levels
- All designated spaces
- All removals
- Sanitary fixtures
- Smoke detectors



CUSTOMER USE



COUNCIL USE



b. Proposed floor plans (1:100 / 1:50) showing:

- Room dimensions
- Location of partitions
- All designated spaces
- All floors (new or altered)
- Location of sanitary fixtures
- Stairs, barriers, handrails, floor joists and beams
- Floor joist layout for each level with timber floors
- Smoke detectors
- Note where wall will form part of the swimming pool fence



c. Pre-nail Truss and Frames:

- Specific design wall framing requires clarification
- Truss layout must be supported by design certification and design of fixing details, including consideration of load paths to ground
- Lintels carrying point loads, such as from girder trusses, require specific engineering design



d. Wall bracing plan (1:100 / 1:50) showing:

- Bracing details and calculations for wall bracing (also required for existing lower storeys where an additional storey is being added)
- Sub-floor bracing for decks projecting more than 2m from the house
- Location, type and number of bracing elements to indicate compliance with NZS 3604:1999 (include calculations)
- If the bracing was specifically designed by a structural engineer, provide calculations (required for specific design wind zones and lateral distribution of upper floor loads where lower storey bracing is provided in walls beyond the upper storey footprint)



e. Sections and details (1:50 / 1:20 / 1:10) showing:

- Foundation details involving reinforcing and connections
- Stairs, handrails, decks and decking
- Insulation systems and materials to floors, walls and roof
- Barriers providing safety from falling. Specific engineering design required where detail does not comply with NZBC B1/AS2
- Framing sizes, beams, lintels
- Roof cladding, eaves, fascias, gutters
- Flashings to openings
- Fire rated systems on all walls – closer than 1 metre to boundary
- Stud heights of rooms and total height from lowest ground floor level to top of ridge
- Window and door installation details
- Retaining wall details e.g. type, height of retained ground, relationship to boundary, waterproof membrane and proposed drainage



f. Fire Report:

For domestic dwellings of 4 storeys or more, or buildings providing more than one household unit





5. EXTERNAL

Complete for new buildings or existing buildings with alternations to the external shell



a. Elevations (1:100 / 1:50) showing:

Accurate lines form boundary to boundary on each elevation, relevant District Plan daylight control lines, the maximum height on each elevation, location of door and window openings, fixed and opening sashes, sill heights, floor levels in relation to ground levels, exterior cladding nominated to all elevations, down pipes and spouting, ventilators to sub-floor area (suspended floors only)



b. Risk assessment

(Risk matrix in E2/AS1 may be used for buildings within scope)

Consider exposure, design and detailing to support appropriate selection of cladding



c. Cladding details (1:50 / 1:20 / 1:10)

Provide details around all penetrations, joinery and other junctions at a level appropriate to the level of risk e.g. roof/wall, balcony/wall, junction of different types of cladding, back flashing details for cavity systems



d. Production certification

Supply copies of product certificates relied on as compliance documents



e. Alternative solutions

If the proposal uses products or systems that are not covered in the Acceptable Solutions of clause E2 of the building code provide supporting current information including test results (fully signed reports), case studies, expert opinion (including evidence of experience/qualification, basis for forming opinion and statement of independence) etc to demonstrate compliance.



6. SERVICES

Complete for all projects with new installations or alteration of plumbing or drainage services



a. Plumbing and Drainage plan 1:100 / 1:50) showing:

Note: if you have supplied drainage details for surface water disposal on the site plan, no drainage plan is required.



- Sizes of pipe work and drains
- Fixtures and fittings, hot water system(s)
- If the building is more than one storey with sanitary fittings on upper floors, provide an isometric layout showing wastes, pipes and falls
- Drainage layout with inspection bends and junctions indicated for both sewer and storm water
- Any other drainage on site including council mains and retaining wall field drains
- Ventilation of sanitary rooms
- Calculations for sizing of down pipes
- Gully traps including overflow relief gullies

CUSTOMER USE



COUNCIL USE



7. STRUCTURAL

Complete for all projects incorporating specific structural design



a. Structural calculations

If any design work required the services of a structural engineer, attach 2 copies of the calculations with this. The calculations must be prefaced with information explaining the design philosophy and justification of assumptions and methodologies used in analysis



b. Expert Opinion (Producer Statements):

If this application for consent relies on any expert opinion including producer statements certifying compliance with the New Zealand Building Code, a copy must be attached with this application. (Note all structural producer statements are required to have accompanying calculations)



8. SPECIFICATIONS

Complete for all applications

Note: the specification must be specific to the project and cover all aspects of the proposed work.



a. Specification: General

- Elements of structure (size, spacing, timber treatment)
- Finish or fixings to meet durability requirements
- Plumbing and drainage materials and design that installation is to comply with
- Wet area surfaces
- Ventilation systems
- Flooring slip resistance for access routes
- Glazing
- Type of smoke detectors (including existing smoke detectors where they will remain)



b. External claddings

For each of the following claddings provide details of the product name, manufacturer, maintenance requirements and warranties offered

- Building wraps
- Wall claddings
- Roof claddings
- Membranes (roof and decks)
- Tanking
- Joinery



9. DEMOLITION / REMOVAL

Complete for all projects involving demolition of significant parts of buildings or the demolition or removal of whole buildings.



a. Means of barricading the site

Provide details of temporary barriers, gates which swing inwards or other means of restricting public access to the area



CUSTOMER USE



COUNCIL USE



☒
☒
☒
☒
☒
☒
☒
☒

b. Proposed tipping location for demolition materials (address/landfill)

☐

c. Hazardous building material

☐

Provide safety plan detailing the safe handling and disposal of hazardous materials

d. Site management plan covering

☐

Management to control silt runoff, noise and dust

e. Proposed destination for relocate building

☐

f. Access to and from the site including (use of kerb crossings)

NA

☐

g. Specify termination of existing services

☐

- Water
- Sewer
- Storm water

h. Details about the building such as:

☐

Number of storeys, type of materials the building is constructed (Photographs of the building would be useful)

Note

You will need to contact the relevant service authorities specified below to advise them of the extent of your work:

Electricity, gas, drainage, water, transport, telecommunications, cable television or any other services that may be affected.

Transportation of relocated building

You will be required to contact and provide details to Councils Transportation and Traffic Department.

10. OTHER APPROVALS

Please check territorial authority regarding the requirement for other approvals required and fees payable. These may include:

- Consents under the Resource Management Act
- Approvals under bylaws including earthworks, vehicle crossings, road openings and water connections.

Show the location of swimming or spa pools on the property and describe how compliance with the fencing of Swimming Pools Act will be achieved.

The issuing of a building consent does not relieve the owner of any duty or responsibility under any other act.

The following Councils developed this checklist in partnership: Kāpiti Coast District, Porirua City, Wellington City, Hutt City, and Upper Hutt City.

Fences/Retaining Wall		N/A		
Airport Noise 45dbI				
Other Provisions				
	Yes	No	Action reqd	Actioned
Does the building straddle Title/crosslease boundary		✓		
Existing Resource Consent?	✓		RM040145 - Bdy Adj. RM130194.	
Resource Consent Required?	✓		Apply Section 37 and advise Plan Vetting Team. <i>Earthquakes</i>	
Section 72 or 77 Required?		✓	Advise Plan Vetting Team and send letters out.	\$124.00
Section 221 Consent Notice	✓		Advise Plan Vetting Team	
DIF Required?		✓	Advise Plan Vetting Team and send letter out.	
Calculate DIF Fees				Amount
			2 nd Comm / Ind Floor area X \$12.65	
			Non-residential 0.002 X area	
Invoice codes	RM		Water Supply	
	RM		Sewage	
	RM	79	Community Facilities	
	RM		Roads	
	RM		Flood Mitigation	
	RM		Reserves	
Send DIF letter out			TOTAL	

Additional Comments

* ALL WORK TO BE IN ACCORDANCE WITH RM040145 & SEC 221 CONSENT NOTICE

* ~~ALL WORK SHALL BE IN ACCORDANCE WITH RM130194~~ *

ALL WORK SHALL BE IN ACCORDANCE WITH RM130194 WHEN GRANTED *

Decision: (delete item that does not apply)

- Application complies with District Plan requirements
- Application does not comply with District Plan – BC to be issued subject to s37

**S37 CERTIFICATE ISSUED
- REFER TO CERTIFICATE
ENCLOSED**

Officer's Name & Signature: *J. Burke*

Date: 14-11-13.

Planning Processing Check Sheet

Building Consent Number : BC 130241

Property Information				
Property Address	48 Eucalyptus Way, Paraparaumu.			
Legal Description	Lot 2 DP 348721			
Planning Zone	Rural			
Building Project	Dwelling			
	Yes	No	Action reqd	Action
Certificate of Title	✓		199972	
Easements		✓		
Section 221	✓		Include copy attached	
District Plan Items to Check				
	Yes	No	Action Reqd	Actioned
Designations	✓		Outstanding Landscape.	
Heritage Register		✓		
Flood Hazards		✓		
Min Floor Level		✓		
Coastal Hazards		✓		
Other Hazards		✓		
EQ Faults		✓		
Eco-site/Native Veg		✓		
	Complies?		Action Reqd	Actioned
Yards (+water bodies)	✓		Neighbours Approval??	
HIRB	✓			
Max Height	✓			
Site Coverage	✓			
Permeable Surface	✓			
Earthworks		✓	SEC 39. RM required RM130194	
Water Tank / Siting	✓✓			
Parking	✓			



Kāpiti Coast District Council

Private Bag 60 601
Paraparaumu 5254
New Zealand

Tel (04) 296 4700
or 0800 486 486

Fax (04) 296 4830 ■
kapiti.council@kapiticoast.govt.nz ■
www.kapiticoast.govt.nz ■

Certificate attached to project information memorandum 130241

Section 37, Building Act 2004

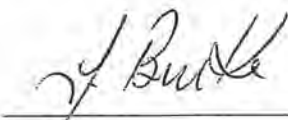
Restrictions on commencing building work under the Resource Management Act 1991

The building work referred to in the attached project information memorandum is also required to have the following resource consents under the Resource Management Act 1991:

Resource Consent is required for Earthworks within 20 metres of a waterbody.

As these resource consents will or may materially affect the building work to which the attached project information memorandum relates, until they have been granted no building work may proceed.

Failure to comply with the requirements of this notice may result in legal action being taken against you under the Resource Management Act 1991.



Signature

Projects Officer

On behalf of: KAPITI COAST DISTRICT COUNCIL

Date: 10/05/13



COPY
BC 130241.

**CONSENT NOTICE PURSUANT TO SECTION 221
OF THE RESOURCE MANAGEMENT ACT 1991**

**IN THE MATTER OF A PLAN LODGED FOR DEPOSIT UNDER
NUMBER 348721
AND RESOURCE CONSENT NO. RM 040145**

**(BEING THE SUBDIVISION OF LOTS 15 & 16 DP 82050),
AT 48 – 50 EUCALYPTUS WAY, PARAPARAUMU
FOR F HORNAK**

The Regional Regulatory Titles Officer at Wellington

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

1. With respect to Lot 2: Any on-site wastewater treatment and disposal system shall take into account the findings and recommendations within the report prepared by Cuttriss Consultants Limited relating to Site Stability, Water Supply and Effluent Disposal at 48 Eucalyptus Way, Paraparaumu, dated June 9, 2005 and submitted to Council in relation to application number RM040145. A copy of the report is available in Council's Office at any time the office is open to the public.

Any on-site wastewater treatment and disposal system shall be designed, constructed and operated to meet the following performance criteria:

- i. It shall be designed with sufficient wastewater retention time to enable adequate treatment in relation to any constraints identified in the site investigation;
- ii. The wastewater shall be evenly distributed to the entire filtration surface of the disposal field;
- iii. The bottom of the wastewater disposal system shall be sufficiently above the groundwater at its highest level, in relation to any constraints identified in the site investigation, to prevent any contamination of groundwater;
- iv. The area available for on-site treatment shall be appropriate for the volume of the discharge and any constraints identified in the site investigation

Note: Refer to Rule 7 of the Regional Plan for discharges to Land, Greater Wellington Regional Council.

It is the owner's ongoing responsibility to monitor and maintain any on-site wastewater disposal system so that any adverse effects on the environment are minor.

Kapiti Coast District Council

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

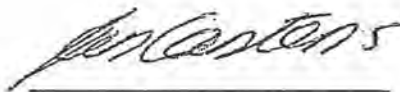
2. With respect to Lots 1 and 2: Further subdivision of the lots is prohibited (excluding any boundary adjustments as defined in the Kapiti Coast District Council District Plan).
3. With respect to Lots 1 and 2: Any on-site water supply system shall take into account the findings and recommendations within the report prepared by Cuttriss Consultants Limited relating to Site Stability, Water Supply and Effluent Disposal at 48 Eucalyptus Way, Paraparaumu, dated June 9, 2005 and submitted to Council in relation to application number RM040145. A copy of the report is available in Council's Office at any time the office is open to the public.

A minimum storage capacity of 25,000 litres shall be provided but it is recommended that 50,000 litres capacity is provided, particularly if it is intended that the property is to be used for permanent residence. It shall be the ongoing responsibility of the owner to maintain and monitor their water supply so that any adverse effects on the environment are minor.

Note: Refer to Rule 7 of the Regional Plan for discharges to Land, Greater Wellington Regional Council.

Issued in respect of application No. RM 040145 on this 6th day of July, 2005.



Wayne Gair
AUTHORISED OFFICER

Ian Carstens
AUTHORISED OFFICER



Kāpiti Coast District Council

Private Bag 60 601
Paraparaumu 5254
New Zealand

Tel (04) 296 4700
or 0800 486 486

Fax (04) 296 4830 ■
kapiti.council@kapiticoast.govt.nz ■
www.kapiticoast.govt.nz ■

10 May 2013

Mass Construction NZ Ltd
PO Box 1703
Paraparaumu

Building Consent: 130241

Attention : Brett Rollander

Dear Brett

Building Consent Application requiring Resource Consent

Description: New Dwelling
Location: 48 Eucalyptus Way, Paraparaumu
Legal Description: LOT 2 DP 348721

We recently received an application from you for a building consent for the above property.

I have just completed a preliminary assessment of the application's compliance with the Council's District Plan.

Under the provisions of the District Plan, the site is within the Rural Zone.

Your application does not comply with the Earthworks standards permitted in this zone.

"Earthworks shall not be undertaken within 20 metres of a waterbody and shall not involve the disturbance of more than 100m³ of land and alter the existing ground level by more than 1.0 metre, measured vertically"

Please provide calculations showing the quantity of proposed earthworks.

A certificate will be attached to the building consent advising that a resource consent is required and restricting the work until the resource consent is obtained. I have therefore enclosed an application form and information relating to applying for a resource consent under the Resource Management Act, 1991. A fee of \$ 740 is payable with this application.

Your application for resource consent should be submitted together with a set of the related drawings. Council reserves the right to assess this application for other dispensations that may be required.

Under the Building Act 2004, section 37, Council has the right to determine what building work, **if any**, may proceed before a resource consent has been obtained. The extent to which any building work may proceed on your project will be detailed on the certificate attached to the building consent.



Kāpiti Coast District Council

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Please contact me urgently should you wish to voluntarily suspend processing of this building consent while you reassess your options. You may wish to consider altering your proposal to make it comply with the District rules.

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

Yours faithfully

Jill Burke
Projects Officer - Resource Consents

Enclosures: 1. Resource Consent Application form and information



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

30 APR 2013
00040

RBW
Search Copy



R. W. Muir
Registrar-General
of Land

Identifier 199972
Land Registration District Wellington
Date Issued 23 December 2005

Prior References

WN48D/188 WN48D/189

Estate Fee Simple
Area 1.0006 hectares more or less
Legal Description Lot 2 Deposited Plan 348721

Proprietors

Peter Aled Roberts

Interests

516880 Subject to reservations as to Coal, Gold and Silver

Appurtenant hereto are water supply rights specified in Easement Certificate B400853.7

B531004.4 Consent Notice pursuant to Section 221 Resource Management Act 1991 imposing ongoing conditions - 26.7.1996 at 12.34 pm

Appurtenant hereto are rights of way and rights to telephone, water supply, electricity and gas supply specified in Easement Certificate B531004.10 - 26.7.1996 at 12.34 pm

Some of the easements specified in Easement Certificate B531004.10 are subject to Section 243 (a) Resource Management Act 1991

Land Covenants in Transfer B531004.12 - 26.7.1996 at 12.34 pm

Land Covenant in Transfer B739251.2 - 13.8.1999 at 1.42 pm (Affects the part formerly in CFR WN48D/188)

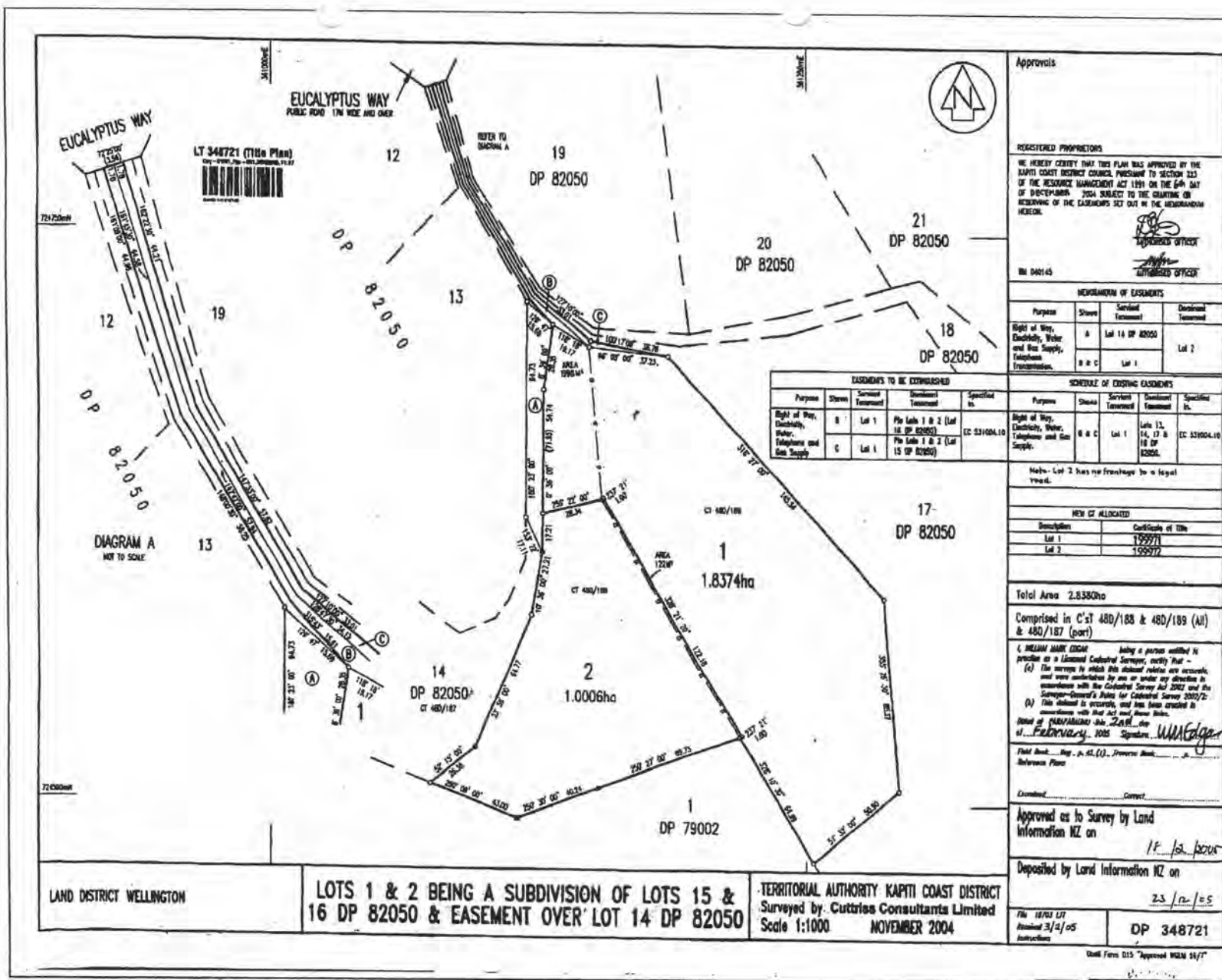
6706211.4 Partial Surrender of the rights of way and rights to telephone, water supply, electricity and gas supply specified in Easement Certificate B531004.10 - 23.12.2005 at 9:00 am

6706211.3 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 23.12.2005 at 9:00 am

Appurtenant hereto is a right of way, electricity, water and gas supply and telephone transmission rights created by Easement Instrument 6706211.5 - 23.12.2005 at 9:00 am

The easements created by Easement Instrument 6706211.5 are subject to Section 243 (a) Resource Management Act 1991

7070181.2 Mortgage to TSB Bank Limited - 20.10.2006 at 2:13 pm



30 APR 2013

BY: 00044

Memorandum from licensed building practitioner: Certificate of design work

Section 45 and section 30c, Building Act 2004

Please fill in the form as fully and correctly as possible.

If there is insufficient room on the form for requested details, please continue on another sheet and attach the additional sheet(s) to this form.

THE BUILDING

Street address: 48 EUCALYPTUS WAY

Suburb: NIKAU VALLEY

Town/City: PARAPARAUMU

Postcode: 5032

THE OWNER(S)

Name(s): PETER ALED ROBERTS

Mailing address: 82 BRANDON STREET

Suburb: FEATHERSTON

PO Box/Private Bag:

Town/City: FEATHERSTON

Postcode: 5710

Phone number: 027 329 0711

Email address:



IDENTIFICATION OF DESIGN WORK THAT IS RESTRICTED BUILDING WORK

I John (Ken) Inglis carried out/supervised the following design work that is restricted building work

PRIMARY STRUCTURE

Design work that is restricted building work	Description of restricted building work	Carried out or supervised	Reference to plans and specifications
Tick ☒	If appropriate, provide details of the restricted building work	Tick ☒ whether you carried out this design work or supervised someone else carrying out this design work	If appropriate, specify references
Foundations and subfloor framing ☒	TO ENGINEERS DESIGN CERTIFICATE AND PLANS	☒ Carried out ☐ Supervised	As per supplied plans Note: Specifications not supplied by this designer. Specifications supplied by Platinum Homes
Walls ☒	WALLS TO NZS3604:2011	☐ Carried out ☒ Supervised	As per supplied plans Note: Specifications not supplied by this designer. Specifications supplied by Platinum Homes
Roof ☒	TRUSSES AND FIXINGS TO NZS3604:2011 MITEK LUMBERLOCK DETAILS	☐ Carried out ☒ Supervised	As per supplied plans Note: Specifications not supplied by this designer. Specifications supplied by Platinum Homes
Columns and beams ☒	LINTELS TO NZS3604:2011	☐ Carried out ☒ Supervised	As per supplied plans Note: Specifications not supplied by this designer. Specifications supplied by Platinum Homes
Bracing ☒	GIB CALCS 2011	☐ Carried out ☒ Supervised	As per supplied plans Note: Specifications not supplied by this designer. Specifications supplied by Platinum Homes
Other ☒	INSULATION - DESIGN NAVIGATOR	☐ Carried out ☒ Supervised	As per supplied plans Note: Specifications not supplied by this designer. Specifications supplied by Platinum Homes



EXTERNAL MOISTURE MANAGEMENT SYSTEMS			
Design work that is restricted building work	Description of restricted building work	Carried out or supervised	Reference to plans and specifications
Tick ☒	If appropriate, provide details of the restricted building work	Tick ☒ whether you carried out this design work or supervised someone else carrying out this design work	If appropriate, specify references
Damp proofing ☒	0.25MM POLYTHONE VAPOUR BARRIER DPC BOTTOM PLATES	☐ Carried out ☒ Supervised	As per supplied plans Note: Specifications not supplied by this designer. Specifications supplied by Platinum Homes
Roof cladding or roof cladding system ☒	METROTILE SHAKE METAL TILE TO NZS4206 CODE OF PRACTICE	☐ Carried out ☒ Supervised	As per supplied plans Note: Specifications not supplied by this designer. Specifications supplied by Platinum Homes
Ventilation system (for example, subfloor or cavity) ☒	WINDOWS AND BRICK CAVITY	☐ Carried out ☒ Supervised	As per supplied plans Note: Specifications not supplied by this designer. Specifications supplied by Platinum Homes
Wall cladding or wall cladding system ☒	BRICK VENEER	☐ Carried out ☒ Supervised	As per supplied plans Note: Specifications not supplied by this designer. Specifications supplied by Platinum Homes
Waterproofing ☒	INTERNAL LININGS TO E3/ASI	☐ Carried out ☒ Supervised	As per supplied plans Note: Specifications not supplied by this designer. Specifications supplied by Platinum Homes
Other ☐		☐ Carried out ☐ Supervised	



FIRE SAFETY SYSTEMS			
Design work that is restricted building work	Description of restricted building work	Carried out or supervised	Reference to plans and specifications
Tick ☒ if appropriate	If appropriate, provide details of the restricted building work	Tick ☒ whether you carried out this design work or supervised someone else carrying out this design work	If appropriate, specify references
Emergency warning systems ☒ Evacuation and fire-service operation systems Suppression or control systems Other	SMOKE ALARM	☐ Carried out ☒ Supervised	As per supplied plans Note: Specifications not supplied by this designer. Specifications supplied by Platinum Homes
Note: The design of fire safety systems is only restricted building work when it involves small-to-medium apartment buildings as defined by the Building (Definition of Restricted Building Work) Order 2011.			



WAIVERS AND MODIFICATIONS

Waivers or modifications of the Building Code are required. ☐ Yes ☒ No

If Yes, provide details of the waivers or modifications below:

Clause	Waiver/modification required
List relevant clause numbers of building code	Specify nature of waiver or modification of building code required



ISSUED BY

Name and contact details of the licensed building practitioner who is licensed to carry out or supervise design work that is restricted building work.

Name: **John (Ken) Inglis**

LBP or Registration number: **113346**

The practitioner is a: ☒ Design LBP ☐ Registered architect ☐ Chartered professional engineer

Mailing address (if different from below): **PO Box 561, ROTORUA**

Street address/Registered office: **Unit 1 419 Pukehangi Road**

Suburb: **Pukehangi**

Town/City: **ROTORUA**

PO Box/Private Bag: **561**

Postcode: **3040**

Phone number: **07 350 1101**

Mobile:

After hours:

Fax: **07 350 1124**

Email address: **marita@platinumdesign.net.nz**

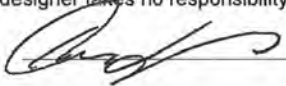
Website:

DECLARATION

I **John (Ken) Inglis** certify that the design work that is restricted building work identified on this form:

- Complies with the building code, or
- Complies with the building code subject to any waiver or modification of the building code recorded on this form

Note: This designer takes no responsibility for the Specifications. Specifications supplied by Platinum Homes not this designer.

Signature: 

Date: **05/03/2013**

Section 88, Building Act 2004

If there is specific information on the form for requested details, please continue on another sheet and attach the additional sheet(s) to this form.

Street address 48 Eucalyptus Way	
Suburb Paraparaumu	
Town/City	Postcode 5032
Building consent number 130241	
Name: Roberts	
Mailing address: 48 Eucalyptus Way	
Suburb Paraparaumu	
Town/City	Postcode 5032
Phone number	Email address

PRIMARY STRUCTURE		
Work that is restricted building work	Description of restricted building work	Carried out or supervised
Yes ☒	If necessary, describe the restricted building work	Yes ☒ or No ☐ If checked on the restricted building work or supervised someone else carrying out the restricted building work
Foundations and subfloor framing ☐		Carried out Supervised
Walls ☐		Carried out Supervised
Roof ☐		Carried out Supervised
Columns and beams ☐		Carried out Supervised
Grading ☐		Carried out Supervised
Other ☐		Carried out Supervised

EXTERNAL MOISTURE MANAGEMENT SYSTEMS

Work that is restricted building work	Description of restricted building work	Carried out or supervised
Yes ☒	If necessary, describe the restricted building work.	☒ Designer Carried out by the restricted building work subcontractor, supervised by the person carrying out the work, or by the person carrying out the work, or by the person carrying out the work.
Damp proofing ☒	215 Thermakraft heavyweight roofing underlay	Carried out ☒ Supervised
Roof cladding or roof cladding system ☒	Installation of Metrotile Roofing System Tile battens installed	Carried out ☒ Supervised
Ventilation system (for example, subfloor or cavity) ☐		Carried out Supervised
Wall cladding or wall cladding system ☐		Carried out Supervised
Waterproofing ☐		Carried out Supervised
Other ☐		Carried out Supervised

Name and contact details of the licensed building practitioner who is licensed to carry out or supervise restricted building work.	
Name Ben Kendall	IBP number BP121518
Classification R2 / R3 / R4	
Plumber / Gasfitter and Draughtfitter registration number (if applicable)	
Mailing address (if different from below)	
Street address/Registered office 64 Englefield Road	
Suburb Northwood	Town/City Christchurch
PO Box/Private Bag 76228	Postcode 8548
Phone number 021-248-9095	Mobile
After hours	Fax
E-mail address coastal.roofing@xtra.co.nz	Website

DECLARATION	
I Ben Kendall carried out or supervised the restricted building work recorded on this form.	
Signature	
Date	11 / 5 / 2014

Validity authenticated

13 MAY 2014

Signature: 

Memorandum from licensed building practitioner: Record of building work

Section 88, Building Act 2004

Please fill in the form as fully and correctly as possible.

If there is insufficient room on the form for requested details, please continue on another sheet and attach the additional sheet(s) to this form.

THE BUILDING	
Street address:	
Suburb:	
Town/City:	Postcode:

THE PROJECT
Building consent number:

THE OWNER(S)	
Name(s):	
Mailing address:	
Suburb:	PO Box/Private Bag:
Town/City:	Postcode:
Phone number:	Email address:

RECORD OF WORK THAT IS RESTRICTED BUILDING WORK

PRIMARY STRUCTURE

Work that is restricted building work	Description of restricted building work	Carried out or supervised
Tick ☒	If necessary, describe the restricted building work.	Tick ☒ whether you carried out the restricted building work or supervised someone else carrying out the restricted building work.
Foundations and subfloor framing ☒	Installed Ribraft concrete foundation to engineers design and as per consented plans. Inspection was passed by WCC inspector.	☒ Carried out ☐ Supervised
Walls ☐	n/a	☐ Carried out ☐ Supervised
Roof ☐	n/a	☐ Carried out ☐ Supervised
Columns and beams ☐	n/a	☐ Carried out ☐ Supervised
Bracing ☐	n/a	☐ Carried out ☐ Supervised
Other ☐	n/a	☐ Carried out ☐ Supervised

EXTERNAL MOISTURE MANAGEMENT SYSTEMS

Work that is restricted building work	Description of restricted building work	Carried out or supervised
Tick ☒	If necessary, describe the restricted building work.	Tick ☒ whether you carried out the restricted building work or supervised someone else carrying out the restricted building work.
Damp proofing ☒	Installed polythene to underside of concrete foundation as per rafter design shown in consented plans	☒ Carried out ☐ Supervised
Roof cladding or roof cladding system ☐	n/a	☐ Carried out ☐ Supervised
Ventilation system (for example, subfloor or cavity) ☐	n/a	☐ Carried out ☐ Supervised
Wall cladding or wall cladding system ☐	n/a	☐ Carried out ☐ Supervised
Waterproofing ☐	n/a	☐ Carried out ☐ Supervised
Other ☐	n/a	☐ Carried out ☐ Supervised

Name and contact details of the licensed building practitioner who is licensed to carry out or supervise restricted building work.	
Name: <u>Kirima Williams</u>	LBP number: <u>106230</u>
Class(es) licensed in: <u>Foundations</u>	
Plumbers, Gasfitters and Drainlayers registration number (if applicable):	
Mailing address (if different from below): <u>59 Elizabeth st</u>	
Street address/Registered office:	
Suburb:	Town/City: <u>Waikanae</u>
PO Box/Private Bag	Postcode:
Phone number:	Mobile: <u>0274801111</u>
After hours:	Fax:
Email address: <u>maddikconstructions@gmail.com</u>	Website:

DECLARATION	
I <u>Kirima Williams</u> carried out or supervised the restricted building work recorded on this form.	
Signature: <u>[Signature]</u>	
Date: _____	

Validity authenticated

13 MAY 2014

Signature: [Signature]

Memorandum from Licensed Building Practitioner:
Record of building work
 Section 88, Building Act 2004



THE BUILDING		
Street address: <u>48 Eucalyptus Way</u>		
Suburb:		
Town/City: <u>Paraparaumu</u>		Postcode:
THE PROJECT		
Building consent number: <u>130 241</u>		
THE OWNER(S)		
Name(s): <u>Roberts</u>		
Mailing address: <u>48 Eucalyptus Way</u>		
Suburb:		PO Box/Private Bag:
Town/City: <u>Paraparaumu</u>		Postcode:
Phone number:		Email address:
RECORD OF WORK THAT IS RESTRICTED BUILDING WORK		
PRIMARY STRUCTURE		
Work that is restricted building work Tick	Description of restricted building work If necessary, describe the restricted building work	Carried out or supervised Tick (✓) whether you carried out the RBW or supervised someone else.
Foundations and subfloor framing ☐		☐ Carried out ☐ Supervised
Walls ☒	<u>Frame done as per consent plans</u>	☒ Carried out ☒ Supervised
Roof ☒	<u>Truss as per consent plans</u>	☒ Carried out ☒ Supervised
Columns and beams ☒	<u>Beams as per consent plans</u>	☒ Carried out ☒ Supervised
Bracing ☒	<u>ply Bracing done as per consent plans</u>	☒ Carried out ☒ Supervised
Other ☐		☐ Carried out ☐ Supervised

RECORD OF WORK THAT IS RESTRICTED BUILDING WORK

EXTERNAL MOISTURE MANAGEMENT SYSTEMS

Damp proofing ☐		☐ Carried out ☐ Supervised
Roof cladding or roof cladding system ☐		☐ Carried out ☐ Supervised
Ventilation system (for example, subfloor or cavity) ☐		☐ Carried out ☐ Supervised
Wall cladding or wall cladding system ☐		☐ Carried out ☐ Supervised
Waterproofing ☐		☐ Carried out ☐ Supervised
Other ☐		☐ Carried out ☐ Supervised

ISSUED BY

Name and contact details of the licensed building practitioner who is licensed to carry out or supervise restricted building work.

Name: Douglas Kouring	LBP number: 111 606
Class(es) licensed in: Carpentry	
Plumbers, Gasfitters and Drainlayers registration number (if applicable):	
Mailing address (if different from below):	
Street address/Registered office: 3 Matenga Street	
Suburb:	Town/City: Waikeano
PO Box/Private Bag:	Postcode:
Phone number:	Mobile: 027 6005504
After hours:	Fax:
Email address: dhkbuilders@xtra.co.nz	Website:

DECLARATION

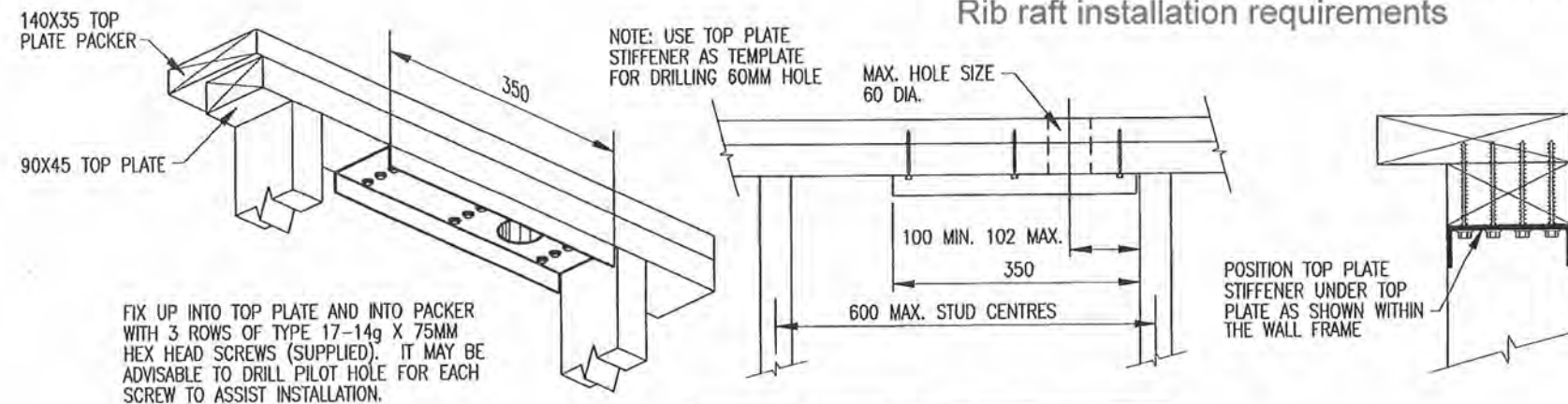
I, Douglas Kouring, carried out or supervised the restricted building work recorded on this form.

Signature: *[Signature]* Date: 11/05/2014

Water test all drainage under the slab at the time of the preslab plumbing inspection.

ensure pipework under /through Rib raft floor is installed to Rib raft installation requirements

A drainage inspection is required



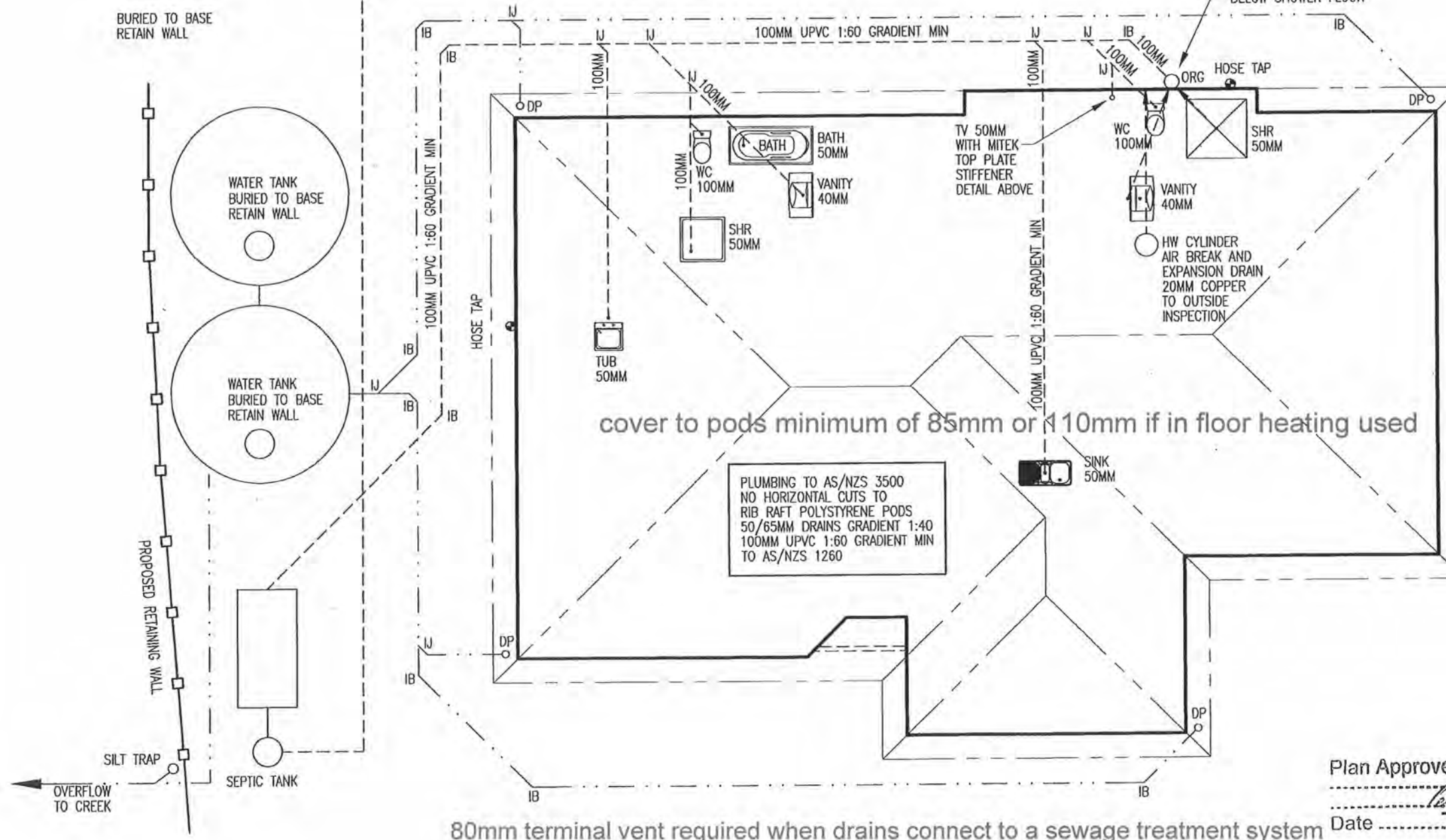
TOP PLATE STIFFENER DETAILS

Pipes under the slab to be inspected before covering

30 APR 2013
00004

APPROVED
BY
PLUMBING
AND
DRAINAGE
Simon C
8/5/2013

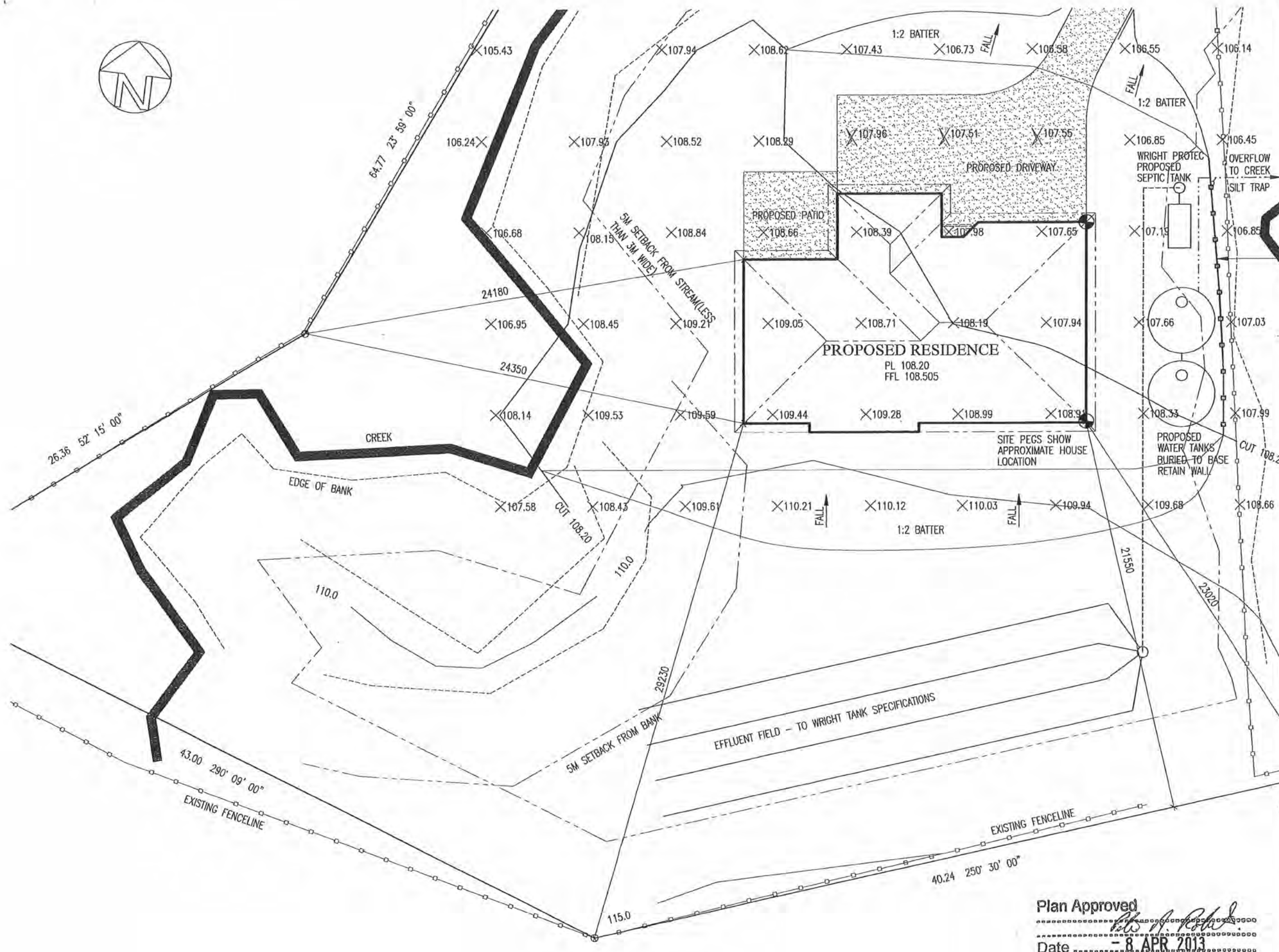
NOTE
ALL FLOOR PENETRATIONS TO HAVE
ADEQUATE FREEPLAY IN EVENT OF
EARTHQUAKE
ALLOW MIN 115MM HOLE FOR 65MM PIPES
ALLOW MIN 150MM HOLE FOR 100MM PIPE
ALLOW 90MM FOR 40MM PIPE
HOLES TO BE FORMED BY POLYSTYRENE
OR SLEEVE



Plan Approved

Date - 8 APR 2013

	
KILLKENNY ALTERED	
NOTES	
1. 100MM PIPES FROM WATER CLOSETS ALL OTHER FOULWATER PIPEWORK TO BE 65MM UNLESS INDICATED OTHERWISE. 2. 80MM DOWNPIPES THROUGHOUT. 100MM UPVC STORMWATER 1:120 GRADIENT TO AS/NZS 1260	
LEGAL DESCRIPTION	
LOT NO	2
DP	348721
AREA	10007 SQ. METRES
STREET NO	48
© COPYRIGHT OF THIS DRAWING REMAINS THE PROPERTY OF PLATINUM DESIGN LIMITED NOT TO BE REPRODUCED WITHOUT PERMISSION	
SALES PAULO PELASIO	
DRAWN M.T	DATE 18/02/2013
REVISED	
REVISED	
WN100A	DRAINAGE PLAN
PETER ALED ROBERTS	
48 EUCALYPTUS WAY	
NIKAU VLY, PARAPARAUMU	
SCALE 1:100 ON A3	SHEET 3



30 APR 2013

BY: 00003

TIMBER RETAINING WALL
 MAX HEIGHT 1.75 METRES
 MAX BACKSLOPE 0 DEGREES
 MAX SURCHARGE 0 KPA
 MAX FRONT SLOPE 10 DEGREE
 WATER AND SEPTIC TANKS
 BURIED IN LINE WITH
 RETAINING WALL BASE (APPROX
 1.75 BELOW FGL.)
 TO ENGRS CALCS & DESIGN

PROPOSED RESIDENCE

PLATFORM	108.20
FLOOR	108.505
% COVERAGE	2.05%
FLOOR INCL ALL ROOF COVERED OUTDOOR AREAS	205.22 SQ M
SITE AREA	10007.00 SQ M



KILLKENNY ALTERED

NOTES

- 100MM PIPES FROM WATER CLOSETS ALL OTHER FOULWATER PIPEWORK TO BE 65MM UNLESS INDICATED OTHERWISE.
- 80MM DOWNPIPES THROUGHOUT. 100MM UPVC STORMWATER 1:120 GRADIENT TO AS/NZS 1260

LEGAL DESCRIPTION

LOT NO	2
DP	348721
AREA	10007 SQ. METRES
STREET NO	48

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SALES PAULO PELASIO	
DRAWN MIKE. E	DATE 25/10/2012
REVISED	28/2/2013
REVISED	

WN100A SITE PLAN

PETER ALED ROBERTS
 48 EUCALYPTUS WAY
 NIKAU VLY, PARAPARAUMU

SCALE 1:200 ON A3 SHEET 2

Plan Approved

Date - 8 APR 2013

Check the potability of the water supply on a regular basis.

BC 130241

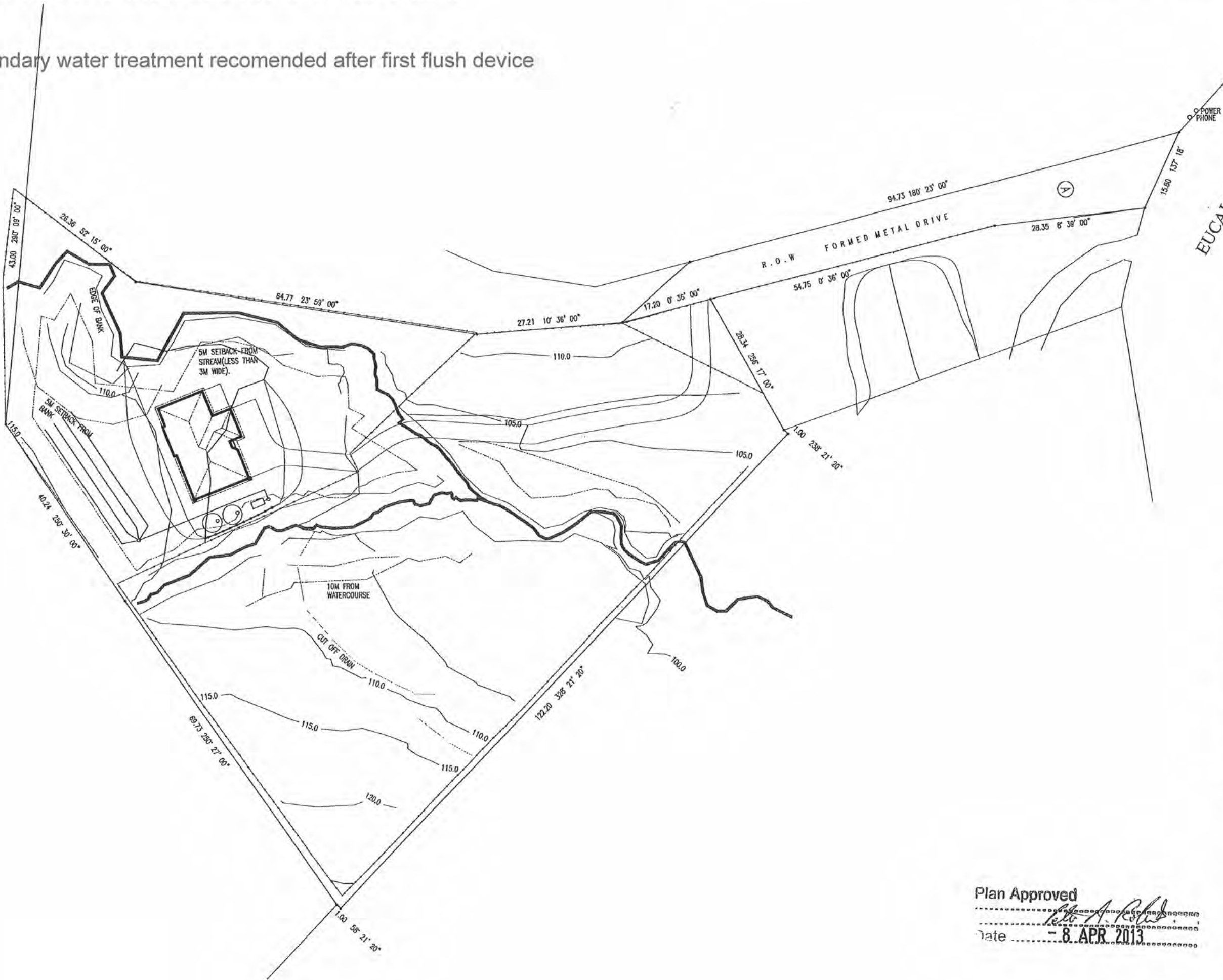
WATER STORAGE TANK NEED TO BE CLEANED OUT ON A REGULAR BASIS

Some secondary water treatment recommended after first flush device



EUCALYPTUS WAY

RECEIVED
30 APR 2013
BY: 00002



Plan Approved
- 8 APR 2013

PROPOSED RESIDENCE	
PLATFORM	108.20
FLOOR	108.505
% COVERAGE	2.05%
FLOOR INCL ALL ROOF COVERED OUTDOOR AREAS	205.22 SQ M
SITE AREA	10007.00 SQ M
KILLKENNY ALTERED	
NOTES	
1. 100MM PIPES FROM WATER CLOSETS ALL OTHER FOULWATER PIPEWORK TO BE 65MM UNLESS INDICATED OTHERWISE. 2. 80MM DOWNPIPES THROUGHOUT. 100MM UPVC STORMWATER 1:120 GRADIENT TO AS/NZS 1260	
LEGAL DESCRIPTION	
LOT NO	2
DP	348721
AREA	10007 SQ. METRES
STREET NO	48
© COPYRIGHT OF THIS DRAWING REMAINS THE PROPERTY OF PLATINUM DESIGN LIMITED NOT TO BE REPRODUCED WITHOUT PERMISSION	
SALES PAULO PELASIO	
DRAWN MIKE, E	DATE 25/10/2012
REVISED	
REVISED	
WN100A	FULL SITE PLAN
PETER ALED ROBERTS	
48 EUCALYPTUS WAY	
NIKAU VLY, PARAPARAUMU	
SCALE 1:500 ON A2	SHEET 1

preline plumbing inspection required.

All frost prone water pipes are to be lagged with a suitable type of insulation.

BC 130241

30 APR 2013

00005



KILLKENNY ALTERED

NOTES

- 45MM TRIMMER STUDS TO INTERNAL DOORS & 25MM JAMBS AND ARCHITRAVES.
- GRADE A & B SAFETY GLASS TO BE USED IN ACCORDANCE WITH NZSS 4223 & NZ BUILDING CODE.
- ALL ASPECTS OF THIS PROJECT MUST FULLY COMPLY WITH NZS 3604 & ALL RELEVANT RELATED APPROVED DOCUMENTS AND PROVISIONS OF THE NZ BUILDING CODE WHETHER OR NOT DETAILED IN THESE PLANS.
- GARAGE TO BE LINED AND PAINTED.
- SEALED LINER SHOWER TRAY UNITS CIB AQUALINE AROUND.
- TILED SHOWERS WITH APPROVED WATERPROOFING TO DETAIL SHEET 23 TILES TO BE COMPATIBLE WITH FIXING TO 10MM AQUALINE SHEET ON WALLS.

ZONES

WIND ZONE	HIGH (A)
EXPOSURE ZONE	C
EARTHQUAKE ZONE	3
SNOW LOADING	N1

TIMBER GRADING

STUDS 90X45, H1.2 UNLESS SPECIFIED. ALL STRUCTURAL TIMBER TO BE MINIMUM STRESS GRADE 8 TIMBER. H1.2 TREATED TO INTERNAL WET AREAS. ALL LINTELS TO BE MINIMUM STRESS GRADE 8 TIMBER.

WINDOW CODES

AW12/20/1SL	— WINDOW TYPE AND SIZE
1216X2016 T	— TRIM SIZE FOR PRECUT
190X90 L	— LINTEL SIZE

AREAS

FLOOR AREA HOUSE	162.12 SQ. METRES
DOUBLE GARAGE	41.82 SQ. METRES
TOTAL AREA	203.94 SQ. METRES
PERIMETER FRAME	63.35 METRES
SOFFIT/GABLE LENGTH	66.12 METRES
ROOF AREA	233.77 SQ. METRES

LEGAL DESCRIPTION

LOT NO	2
DP	348721
AREA	10007 SQ. METRES
STREET NO	48

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SALES PAULO PELASIO

DRAWN M.T	DATE 18/02/2013
REVISED	28/2/2013
ENGINEER	B.B. 33104

WN100A FLOOR PLAN

PETER ALED ROBERTS
48 EUCALYPTUS WAY
NIKAU VLY, PARAPARAUMU

SCALE 1:100 ON A3 SHEET 4

BATTEN HOLDER & 100W LAMP IN CEILING CAVITY - NEON MESH SWITH FOR LOFT LIGHT

R2.2 INSULATION TO GARAGE EXTERIOR WALLS

HEATED TOWEL RAILS INSTALLED IN ENSUITE & BATHROOM

MIRROR & TOILET ROLL HOLDER IN ENSUITE & BATHROOM

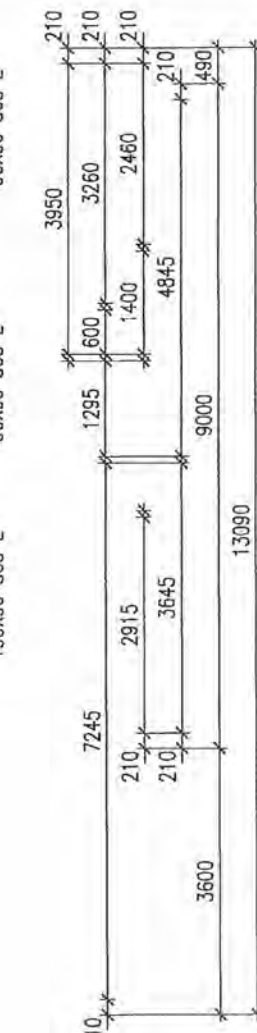
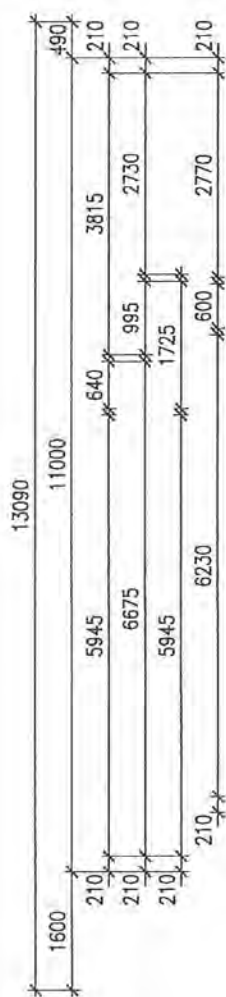
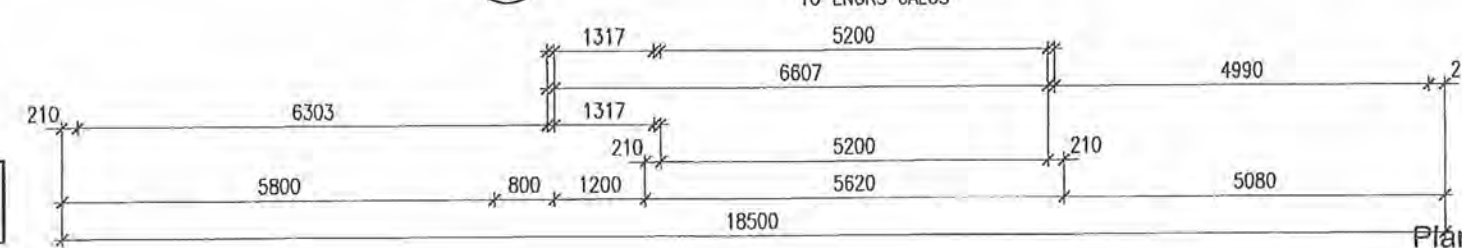
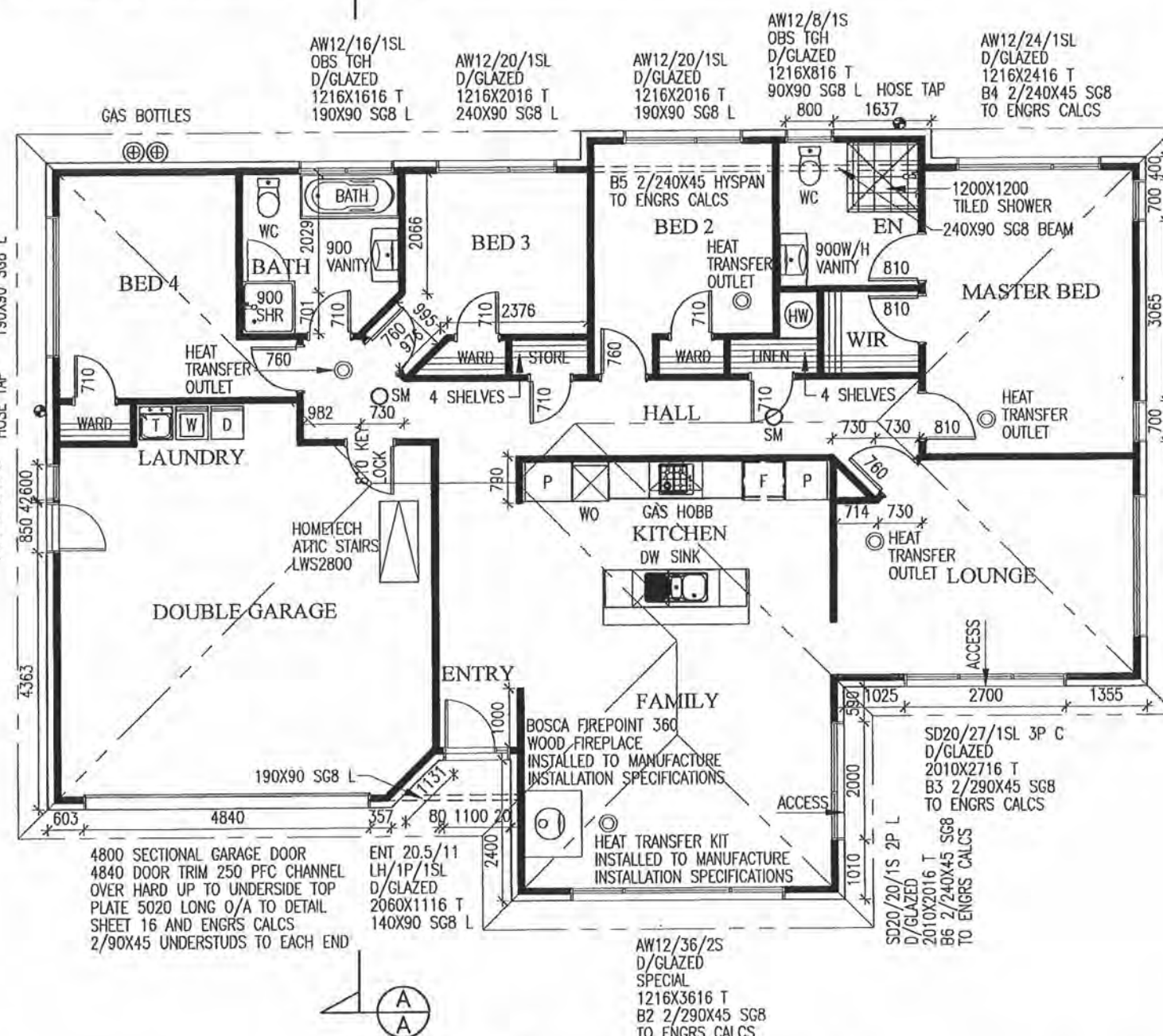
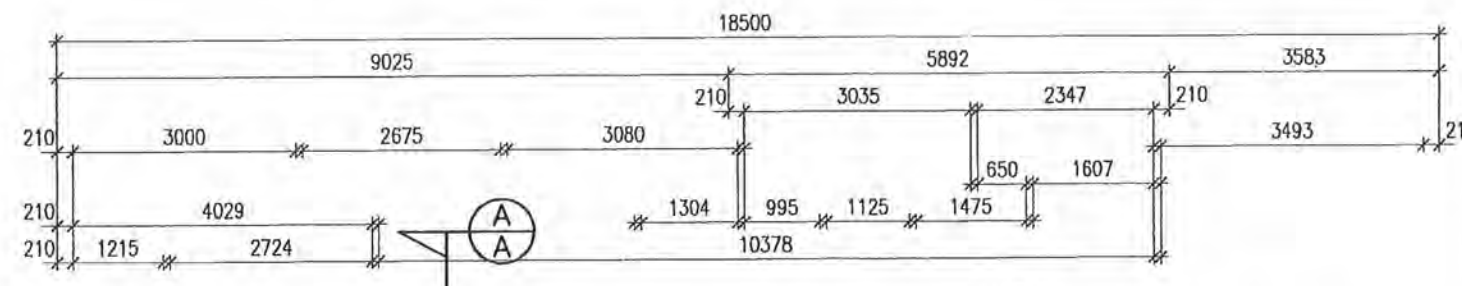
METER BOX LOCATED ON POWER PLINTH

LINTEL NOTE:

ALL SGB LINTELS MAY BE SUBSTITUTED FOR GLB GLULAM LINTELS OF SAME SIZE. REFER TO ENGRS CALCULATIONS

Plan Approved

Date 8 APR 2013



REFER INSULATION SCHEDULE SHEET 17

REFER DRAGON TIES AND CNR BRACES TO SHEET 11