

INSPECTION SHEET**ABA 20040256**NAME: WINDLEBOURNE, R & BTelephone: 09 4081265MAILING ADDRESS: WIRELESS ROAD, R D 2, KAITAIA

BUILDER:

Telephone:

ADDRESS:

CONTACT PERSON: WINDLEBOURNE, ROGER

Telephone:

MAILING ADDRESS: WIRELESS ROAD, R D 2, KAITAIA**PROJECT**

- ☐ New building Area: _____ m² Intended Use(s):
- ☐ Relocated building Area: _____ m²
- ☐ Alteration Area: _____ m² Description of Work: **NEW DWELLING**
- ☐ Demolition Area: _____ m²
- ☐ Plumbing/Drainage only Intended life:
- ☐ Other ☐ Indefinite but not less than 50 years
☐ Specified as years.

PROJECT LOCATIONStreet Address: RATA STREET, WAIPAPAKAURILegal Description: SEC 8 MURIWHENUA TOWNArea: _____ m² Valuation No: 013-194-04

Ward:

Date of Inspection	Inspection Remarks / Comments
21-11-03	Footings - Ok to pour footings around 3 sides. Greg Phillips confirmed ok to move house to within 1.5m of boundary.
28-11-03	Footings - Ok to pour once perimeter bar completed.
12-12-03	STEEL - Ok to pour first lift of block to 1.2m
18-12-03	Beam - ok to pour 2nd lift top steel in place and retaining part ok. ✓
19-03-04	PILE as per yellow sheet

12-6-07 Final note for #7137

7.4.04. PRELIM: H2O 13 - 24% H2O OK TO LINE.

14.4.04 SHEET BRACING. All OK. SHee.

27.4.04: Drainage: All OK SHee.

12.2.07 Had reports of the roof & wall cladding being replaced, (c/s sum has reacted with s/s fixings). SHee.
Amended plans & inspection required.?

ROBIN FOUNTAIN

LLB, CORONER.

SOLICITOR

PO BOX 292
27 BEACH ROAD
MANGONUI, NORTHLAND
TELEPHONE (09) 406 0690
FAX (09) 406 0691
MOBILE (021) 871456
EMAIL: drf@robinfountain.co.nz

31 May 2003

Mr IR & Mrs BR Windlebourne
Wireless Road
RD 2
KAITAIA

Dear Roger and Bernadette

RE: PURCHASE OF PROPERTY AT WAIPAPAKAURI

Registration is now complete and enclosed herewith is a copy of your title. Once again thank you for your instructions herein.

Yours sincerely

ROBIN FOUNTAIN

DRF:DLH



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



Search Copy

R. W. Muir
Registrar-General
of Land

Identifier NA129A/721
Land Registration District North Auckland
Date Issued 27 April 2001

Prior References
NA78D/978

Estate Fee Simple
Area 911 square metres more or less
Legal Description Section 8 Muriwhenua Town
Proprietors
Roger Ian Windlebourne and Bernadette Ruhia Windlebourne

Interests

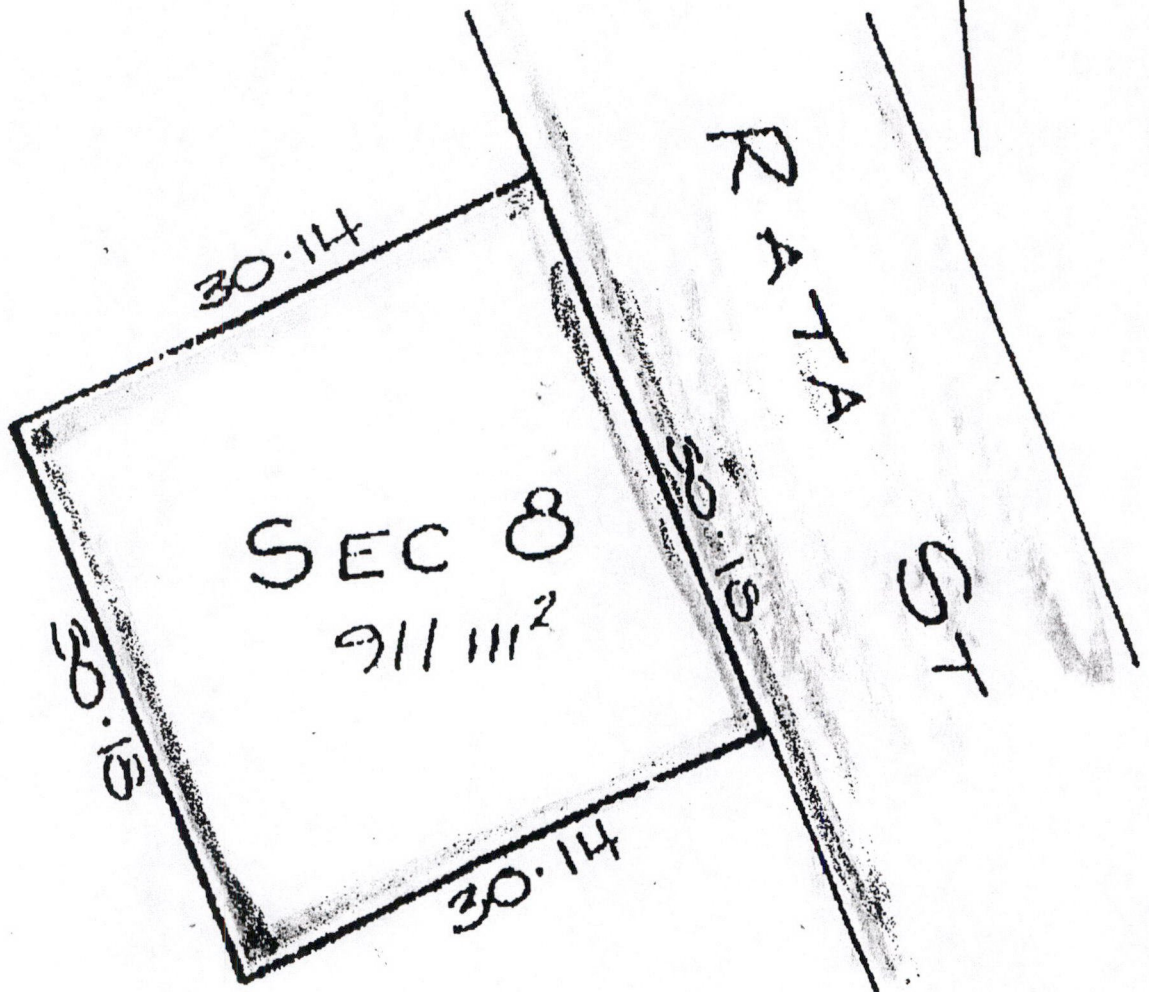
Subject to Section 27B State-Owned Enterprises Act 1986 (which provides for the resumption of land on the recommendation of the Waitangi Tribunal and which does not provide for third parties, such as the owner of the land, to be heard in relation to the making of any such recommendation)
Subject to Part IV A Conservation Act 1987
Subject to Section 3 Petroleum Act 1937
Subject to Section 3 Geothermal Energy Act 1953
Subject to Sections 6 and 8 Mining Act 1971
Subject to Sections 5 and 261 Coal Mines Act 1979
Subject to Section 8 Atomic Energy Act 1945

09 4060691 FAXADVANTAGE->
Lid 6494190296 To: Robyn Fountain

09 4060691 ; DAVID ROBIN FOUNTAIN Page 003
Date: 4/10/03 Time: 10:02:44 AM

Identifier

NA129A/721



**NORTH
DISTRICT COUNCIL**

752, Memorial Ave, KAIKOHE
Tel: 0800 920 029, Ph: (09) 405 2750, Fax: (09) 401 2137

No: 13-194-05

September 2002

Matt Harris
c/- North Arc Design
P O Box 280
KAITIAIA 0500

20040256.

-Zoning beyond challenge.
-8m rear yard under TDP.
→ S19?

Dear Sir

re: REQUEST UNDER SECTION 19 OF THE R M ACT -- RATA STREET WAIPAPAKAURI

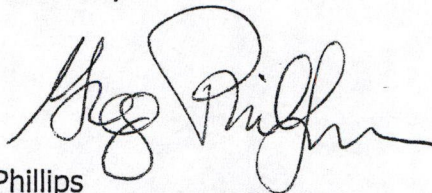
Thank you for your e-mail of 27 August 2002.

I have now analysed the submissions to the Proposed District Plan in respect of the Waipapakauri Ramp area, and the relevant rules of the new Coastal Residential Zone; and in particular the setback from boundaries rules, as requested. I can now advise that, since there were four submissions which sought to increase the setback from Coastal Residential boundaries, the provisions of Section 19 cannot apply (*ie* the proposed plan provision is not beyond statutory challenge). Therefore, it is not yet possible to deem the setback rules of the Mangonui Rural C zone inoperative.

With regard to the Coastal Residential Building Height rule, I can advise that there were 11 submissions seeking to increase the maximum height (ranging from 7m to 9m) and 2 submissions seeking to reduce or retain the 6m height limit. It is therefore possible that the rule could be relaxed, but that decision won't be known until the revised proposed plan is notified. The expected date for these amendments, which arise from the decisions on submissions, is approximately May 2003.

Trusting that this will be of *some* assistance.

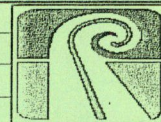
Yours faithfully



G F Phillips
ACTING POLICY PLANNER

NOTE: The information provided by the applicant in support of the request for this assessment has been relied upon in coming to the conclusions reached in this letter. Any errors, omissions or lack of specificity within that supporting information which is identified after the date of this assessment may render its applicability null and void. In particular, a determination regarding a specific rule does not negate compliance with other rules; nor does a determination which relates to a particular zone apply to all sites within that zone.

FINAL INSPECTION SHEET



Far North District Council

Date

19. 6. 07

Action 305

BC#

2004-256

Time

9.00

AM/PM

Applicant
/Builder

WINDLEBONNE R. + B.
B. SWITZER

Inspection
Description

2ND FINAL

Property
Address

10 RATA ST WAIPIAPARANGI BEACH

Issue CCC

Yes/No

Valuation

13-194-04

Reinspection Needed

Yes/No

Travelling Time

: 20

Officer

DKC

Inspection Time

: 30

Signature

[Signature]

FINAL Fireplaces Inspection

OK Not N/A

Comments

- 1 Smoke Alarms with Hush
- 2 Hearth size & secured
- 3 Fire Place clearances
- 4 Fire Place secured
- 5 Flue Shield
- 6 Flashings / Flue height
- 12 Wet back circulators correct size & fall

Items 1-9 from letter dated
14.6.07 now complete, except #6
'as built' drawings, check office records.
Hold until 'as built' received.

PLUMBING

OK Not N/A

Comments

- 1 Waste pipe correct support & gradient
- 2 Waste pipe for washing machine
- 3 Ceiling tank and tray with Seismic restraint
- 4 1 metre minimum of copper outlet of HWC
- 5 Hotwater cylinder seismic restraint
- 6 Hot water tempering valve set at 45/55 degrees
- 7 Hot water energy cut out switch to all valve vented systems
- 8 Hot water drain OK (falls to outside of building)
- 9 Filter, non return, stop, cold water expansion, pressure reducing & pressure relief valves
- 10 Notches & holes in joists & bearers
- 11 Waste pipes finished at gully trap
- 12 Soil pipe sizing / fall / support
- 13 Adequate support to water pipes
- 14 Back flow prevention where required

Place condition on C.C.C. regarding
maintenance of ext claddings & joinery.

Maintenance of ext. cladding/roofing
and alum joinery to be undertaken
strictly in accordance with
manufacturers instructions.

FINAL Internal Inspection

OK Not N/A

Comments

- 1 Smoke alarms with Hush
- 2 Sink insert secured correctly
- 3 Service rooms Impervious walls
- 4 Service rooms Impervious floors
- 5 Producer statement membrane in wet areas
- 9 Ceiling insulation (clear of Downlights)
- 10 Safety glass where required
- 11 Ventilation
- 13 Stairs gap / tread / rise
- 14 Barrier Height 1.0m / Stairs 900mm
- 15 Safe from Falling Balustrades
- 16 Access for disabled - Commercial only
- 17 Facilities for disabled - Commercial only
- 18 All surfaces Completed

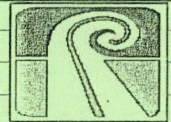
FINAL EXTERIOR Inspection		OK	Not	N/A	Comments
1	Conditions on consent				
1a	Landscaping				
2	Joints in bearers supported				
3	Ground clearance to u/side of floor				
4	Subfloor ventilation				
5	Subfloor bracing				
6	U/floor Insulation				
7	Finished ground level				
8	Cladding (joints, corner, scribes window flashing etc)				
9	Cladding- painted / penetrations sealed				
10	Brick veneer weep holes cleared				
11	Handrails & post fixings				
12	Roof, ridging & flashings fixed correctly				
13	Roof penetrations flashed correctly				
14	Spouting fixed correctly				
15	Down pipe clips at 1.2				
16	Vent pipe clips at 1.2				
17	Vent Discharge/Vermin Cage				
18	Stairs gap / tread / rise				
19	Barriers 1.0m / Stairs 900mm				
20	Safe from Falling Balustrades				
21	RAMPS grade / slip resistance				
22	Safety Glass (Glass Visible-commercial)				
Producer Statements		OK	Not	N/A	Comments
1	Engineer / Licenced Building Practitioner				
2	Membranes / Roof				
FINAL POOL Inspection		OK	Not	N/A	Comments
1	Pool Fencing Compliance				
2	Back flow prevention where required				
DRAINAGE		OK	Not	N/A	Comments
1	Asbuilt drainage plan s/water and sewer				
2	Gully dish 25 mm above sealed surface "A"				
3	Gully dish 75mm above unsealed surface "B"				
4	Relief gully installed				
5	Foulwater drain finished				
6	Ventilation to drains e.g. TV & or valves				
7	Stormwater drain finished				
8	Retaining wall drainage connected into stormwater drain				
9	Overflow to water tank				
10	Access for septic tank maintenance				
11	Commissioning statements				
12	Effluent Completed Barking/Planting				
ENERGY CERTIFICATES		OK	Not	N/A	Comments
1	Electrical				
2	Gas				
ROAD DAMAGE		OK	Not	N/A	Comments
1	Footpath & kerb damage				
2	Crossing installed				
COMMERCIAL		OK	Not	N/A	Comments
1	Compliance Schedule				
2	Fire Design Compliance				
3	FPIS report				
4	Certificate of Public Use				
5	Fire Service - Evacuation Scheme				
6	Fire Service - Conditions Meet				
7	Poducer Statemants- Fire alarm,Ventilation etc				



NORTH ELEVATION

B.C. 2004-0256 WINDLEBOURNE RATA ST.
WAIPAPAKAHI BEACH.

FINAL INSPECTION SHEET



Far North District Council

Date

12-6-07

Action 305

BC#

2004-0256

Time

2-00 AM/PM

Applicant
/Builder

WINDLEBOURNE C. B. SWITZER.

Inspection
Description

FINAL TO NEW DWELLING

Property
Address

Rata St Waipapakauri BCN

Issue CCC

Yes/No

Reinspection Needed

Yes/No

Valuation

Travelling Time

: 20

Officer

DKC.

Inspection Time

1 : 00

Signature

DKC.

FINAL Fireplaces Inspection

OK Not N/A

Comments

- 1 Smoke Alarms with Hush
- 2 Hearth size & secured
- 3 Fire Place clearances
- 4 Fire Place secured
- 5 Flue Shield
- 6 Flashings / Flue height
- 12 Wet back circulators correct size & fall

Refer Form# 7137

Reinspection required

PLUMBING

OK Not N/A

Comments

- 1 Waste pipe correct support & gradient
- 2 Waste pipe for washing machine
- 3 Ceiling tank and tray with Seismic restraint
- 4 1 metre minimum of copper outlet of HWC
- 5 Hotwater cylinder seismic restraint
- 6 Hot water tempering valve set at 45/55 degrees
- 7 Hot water energy cut out switch to all valve vented systems
- 8 Hot water drain OK (falls to outside of building)
- 9 Filter, non return, stop, cold water expansion, pressure reducing & pressure relief valves
- 10 Notches & holes in joists & bearers
- 11 Waste pipes finished at gully trap
- 12 Soil pipe sizing / fall / support
- 13 Adequate support to water pipes
- 14 Back flow prevention where required

FINAL Internal Inspection

OK Not N/A

Comments

- 1 Smoke alarms with Hush
- 2 Sink insert secured correctly
- 3 Service rooms Impervious walls
- 4 Service rooms Impervious floors
- 5 Producer statement membrane in wet areas
- 9 Ceiling insulation (clear of Downlights)
- 10 Safety glass where required
- 11 Ventilation
- 13 Stairs gap / tread / rise
- 14 Barrier Height 1.0m / Stairs 900mm
- 15 Safe from Falling Balustrades
- 16 Access for disabled - Commercial only
- 17 Facilities for disabled - Commercial only
- 18 All surfaces Completed

x 1 on ground floor.

P.S. from tiler for wet area membrane

Place condition on C.C.C. regarding maintenance of ext claddings & joinery.

FINAL EXTERIOR Inspection		OK	Not	N/A	Comments
1	Conditions on consent				
1a	Landscaping	✓			
2	Joints in bearers supported			✓	
3	Ground clearance to u/side of floor			✓	
4	Subfloor ventilation			✓	
5	Subfloor bracing			✓	
6	U/floor Insulation		✓		
7	Finished ground level	✓			
8	Cladding (joints, corner, scribes window flashing etc)	✓			
9	Cladding- painted / penetrations sealed	✓			
10	Brick veneer weep holes cleared			✓	
11	Handrails & post fixings	✓			
12	Roof, ridging & flashings fixed correctly	✓			
13	Roof penetrations flashed correctly	✓			
14	Spouting fixed correctly	✓			
15	Down pipe clips at 1.2	✓			
16	Vent pipe clips at 1.2			✓	
17	Vent Discharge/Vermin Cage	✓			
18	Stairs gap / tread / rise			✓	
19	Barriers 1.0m / Stairs 900mm	✓			
20	Safe from Falling Balustrades	✓			
21	RAMPS grade / slip resistance			✓	
22	Safety Glass (Glass Visible-commercial)	✓			
Producer Statements		OK	Not	N/A	Comments
1	Engineer / Licenced Building Practioneer		✓	✓	
2	Membranes / Roof		✓		
FINAL POOL Inspection		OK	Not	N/A	Comments
1	Pool Fencing Compliance			✓	
2	Back flow prevention where required			✓	
DRAINAGE		OK	Not	N/A	Comments
1	Asbuilt drainage plan s/water and sewer		✓		
2	Gully dish 25 mm above sealed surface "A"			✓	
3	Gully dish 75mm above unsealed surface "B"	✓			
4	Relief gully installed	✓			
5	Foulwater drain finished	✓			
6	Ventilation to drains e.g. TV & or valves	✓			
7	Stormwater drain finished	✓			
8	Retaining wall drainage connected into stormwater drain			✓	
9	Overflow to water tank	✓			
10	Access for septic tank maintenance	✓			
11	Commissioning statements			✓	
12	Effluent Completed Barking/Planting			✓	
ENERGY CERTIFICATES		OK	Not	N/A	Comments
1	Electrical		✓		
2	Gas		✓		
ROAD DAMAGE		OK	Not	N/A	Comments
1	Footpath & kerb damage			✓	
2	Crossing installed	✓			
COMMERCIAL		OK	Not	N/A	Comments
1	Compliance Schedule			✓	
2	Fire Design Compliance			✓	
3	FPIS report			✓	
4	Certificate of Public Use			✓	
5	Fire Service - Evacuation Scheme			✓	
6	Fire Service - Conditions Meet			✓	
7	Poducer Statemants- Fire alarm,Ventilation etc			✓	

Solid 200x50 nags required to centre
Spn at floor joists, garage area.
Insulation required to floor above garage

NB the ext. cladding (tjs pre painted
aluminum) has recently been replaced
with new same material. due to corrosion
around fixing screws.

Roof & ext. wall cladding warranty required

'As built' drainage plan required.

Gas certificate also check venting
requirements for gas bottle in
kitchen cupboard.



TOP. WEST ELEVATION
BTH. SOUTH ELEVATION



TOP: EAST ELEVATION

BTM: FLOOR FRAMING IN GARAGE - MID SPAN NOGS + INSULATION REQUIRED.

BUILDING INSPECTION SHEET

Date	19. 3. 04				Far North
BC#	2004 0 256			Time	4.00 AM/PM

Applicant	WINDLEBOURNE	phone #	
Builder	B. SWITZER		

Travelling Time	1 : 00		Officer	Dore C
Inspection Time	: 30		Signature	

205 SEEP Inspection	OK	Not	N/A	Comments	If further inspection needed
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1	Any Items under Sec. 36 ?				
2	Distance from power lines				
3	Footpath damage				
4	Wind zone				
5	Suitability of effluent design				
6	Council services				
7	Other				

209 FOUNDATION Inspection	OK	Not	N/A	Comments	If further inspection needed
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1	Correct site & building siting				
2	Ground bearing, fill, expansive clay				
3	reinforcing: spacing, size, clearance etc				
4	Excavation: depth, width				
5	Pile/pole holes: depth, diameter	✓			
6	Pile/pole: Correct grade, diameter	✓			
7	Driven Piles: Engineers Certification				
8	Retaining Wall: polythene underneath				
9	Other				

BRACE PILLS TO CHECK
TO BE 125mm² NOT
100 x 100 AS SHOWN
ON PLAN. DRC
CONFIRMED WITH BUILDER

213 SLAB/ UNDER SLAB PLUMBING Inspection	OK	Not	N/A	Comments	If further inspection needed
--	----	-----	-----	----------	------------------------------

1	Slab thickness: D.P.M., tape, rebates				
2	Slab Reinforcing: Thickenings, tying cover etc				
3	Fill: Compaction, depth, binding				
4	Pipes: gradient, protection, sizing, tested				
5	Other				

217 SUBFLOOR Inspection	OK	Not	N/A	Comments	If further inspection needed
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1	Sub floor brace connectors				
2	Bracing: washers, timber size etc				
3	Bearer/Joist: Size, spacing, joist hangers				
4	Notching/holes/blocking for lines of horizontal supports				
5	Ventilation & insulation				
6	Other				

221 BOND BEAM/ SUSPENDED SLAB Inspection	OK	Not	N/A	Comments	If further inspection needed
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1	Block Size				
2	Reinforcing: Size, grade, laps, tied				
3	Washouts: If pour exceed 1.2 m in height				
4	Design Calculation on site				
5	Retaining Wall: DPM & protection				
6	Adequate propping				
7	Services Installation (Fire Collars)				
8	Identify proprietary pre-stress components				
9	Other				

2	Texture coating				
3	EPS (polystyrene), nailing, flashings etc.				
4	Sheet Systems: layout, nailing, flashing, construction				
5	Weatherboard: grading, type, fixing, flashing				
6	Bricks/Blocks: fixings, control joints, flashing				
223	PRELIME BUILDING Inspection	OK	Not	N/A	
1	Trusses: fixing, spacing, bracing, support				
2	Pitched roof: fixing, spacing, bracing, strutting, span...				
3	Ceiling: joists/Batten: fixing, spacing, support				
4	Bottom-Top plate: fixing, size, DPC				
5	Bracing: Strapping, bolts, check plan				
6	Moisture content				
7	Frame; stud size, space, lintel fixings, grade				
8	Recheck Cladding: flashing, nog spacings(480mm-board/batten)				
9	Insulation: type, thickness				
10	Glazing: safety glass, thickness				
11	Fire & sound walls: sealer, staggered laps, fire collars				
233	PRELIME PLUMBING Inspection	OK	Not	N/A	
1	Pressure test				
2	Pipe material, size, support, insulation				
3	Stacks				
4	Wastes				
5	Supply tank				
6	Other				
237	POST LINING Inspection	OK	Not	N/A	
1	Sheet brace nailing				
2	Other				
241	DRAINAGE Inspection	OK	Not	N/A	
1	Accurate "As built" plan provided				
2	Depth of drain				
3	Bedding				
4	Gradient Line: Inspections, diameter correct				
5	Water test - connection to main				
6	Gullies: max 600mm depth, finish 25 mm above protected or 100mm above unprotected ground				
7	Drains within boundaries, too close to foundations				
8	Other				
245	SEPTIC TANKS Inspection	OK	Not	N/A	
1	TP58 on site - is it per design?				
2	Depth of beds, length, scoria, matting, cut off drain				
3	Tank installed properly on level				
4	Ventilation provided-distribution box				
5	Aerated mechanical systems installed to manufacturers specifications				
6	Access for tank maintenance(no vertical air loading)				
7	Other				
249	MISCELLANEOUS Inspection	OK	Not	N/A	
1	Solid fuel heating, chimney check, setback fixing, flue flashing, mantel shelf, hearth construction				
2	Swimming Pool: backwash, fencing, registration				
3	Other				

BUILDING INSPECTION SHEET

Date

27.5.04

Far N

BC#

20040256

Time

12-55 AM/PM

Applicant

WINDLE BOURNE

/Builder

B. SWITZER

phone #

Travelling Time

: 35

Officer

DKC

Inspection Time

: 20

Signature

DKC

205 STEEL Inspection

OK Not N/A Comments: If further inspection needed

1 Any Items under Sec. 36 ?

2 Distance from power lines

3 Footpath damage

4 Wind zone

5 Suitability of effluent design

6 Council services

7 Other

209 FOUNDATION Inspection

OK Not N/A

1 Correct site & building siting

2 Ground bearing, fill, expansive clay

3 reinforcing: spacing, size, clearance etc

4 Excavation: depth, width

5 Pile/pole holes: depth, diameter

6 Pile/pole: Correct grade, diameter

7 Driven Piles: Engineers Certification

8 Retaining Wall: polythene underneath

9 Other

213 SLAB/ UNDER SLAB PLUMBING Inspection

OK Not N/A

1 Slab thickness: D.P.M., tape, rebates

2 Slab Reinforcing: Thickenings, tying cover etc

3 Fill: Compaction, depth, binding

4 Pipes: gradient, protection, sizing, tested

5 Other

217 SUBFLOOR Inspection

OK Not N/A

1 Sub floor brace connectors

2 Bracing: washers, timber size etc

3 Bearer/Joist: Size, spacing, joist hangers

4 Notching/holes/blocking for lines of horizontal supports

5 Ventilation & insulation

6 Other

221 BOND BEAM- SUSPENDED SLAB Inspection

OK Not N/A

1 Block Size

2 Reinforcing: Size, grade, laps, tied

3 Washouts: If pour exceed 1.2 m in height

4 Design Calculation on site

5 Retaining Wall: DPM & protection

6 Adequate propping

7 Services Installation (Fire Collars)

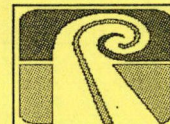
8 Identify proprietary pre-stress components

9 Other

P.T.O.

2	Texture coating				
3	EPS (polystyrene), nailing, flashings etc.				
4	Sheet Systems: layout, nailing, flashing, construction				
5	Weatherboard: grading, type, fixing, flashing				
6	Bricks/Blocks: fixings, control joints, flashing				
232 PRELINE BUILDING Inspection		OK	Not	N/A	
1	Trusses: fixing, spacing, bracing, support				
2	Pitched roof: fixing, spacing, bracing, strutting, span...				
3	Ceiling: joists/Batten: fixing, spacing, support				
4	Bottom-Top plate: fixing, size, DPC				
5	Bracing: Strapping, bolts, check plan				
6	Moisture content				
7	Frame; stud size, space, lintel fixings, grade				
8	Recheck Cladding: flashing, nog spacings(480mm-board/batten)				
9	Insulation: type, thickness				
10	Glazing: safety glass, thickness				
11	Fire & sound walls: sealer, staggered laps, fire collars				
233 PRELINE PLUMBING Inspection		OK	Not	N/A	
1	Pressure test				
2	Pipe material, size, support, insulation				
3	Stacks				
4	Wastes				
5	Supply tank				
6	Other				
237 POST LINING Inspection		OK	Not	N/A	
1	Sheet brace nailing				
2	Other				
241 DRAINAGE Inspection		OK	Not	N/A	
1	Accurate "As built" plan provided		✓		TO BE SUPPLIED.
2	Depth of drain	✓			
3	Bedding	✓			
4	Gradient Line: Inspections, diameter correct	✓			
5	Water test - connection to main			✓	
6	Gullys: max 600mm depth, finish 25 mm above protected or 100mm above unprotected ground			✓	Put up Relief Gully
7	Drains within boundaries, too close to foundations	✓			
8	Other				
245 SEPTIC TANKS Inspection		OK	Not	N/A	
1	TP58 on site - is it per design?	✓			
2	Depth of beds, length, scoria, matting, cut off drain	✓			2 Double Soakage Rings
3	Tank installed properly on level	✓			
4	Ventilation provided-distribution box			✓	Single Soakage Ring to
5	Aerated mechanical systems installed to manufacturers specifications			✓	Stormwater
6	Access for tank maintenance(no vertical air loading)	✓			
7	Other				
249 MISCELLANEOUS Inspection		OK	Not	N/A	
1	Solid fuel heating, chimney check, setback fixing, flue flashing, mantel shelf, hearth construction				
2	Swimming Pool: backwash, fencing, registration				
3	Other				

BUILDING INSPECTION SHEET



Far North District Council

Date

27-2-04

13-194-04

Valuation Number:

Time

3301129 AM/PM

BC#

ABA 20040256

Applicant
/Builder

WINDLEBORN

phone #

Data street, Waipapakauri Beach

FRAME, fitting inspection ONLY

Travelling Time

:

Officer

Patricia

Inspection Time

1:30pm

Signature

[Signature]

205 SITE Inspection OK Not N/A Comments..... If further inspection needed please indicate

1	Any Items under Sec. 36 ?				
2	Distance from power lines				
3	Footpath damage				
4	Wind zone				
5	Suitability of effluent design				
6	Council services				
7	Other				

FRAME Fitting inspection
if fittings ok, Bracing in place
OK to line building.

209 FOUNDATION Inspection OK Not N/A

1	Correct site & building siting				
2	Ground bearing, fill, expansive clay				
3	reinforcing: spacing, size, clearance etc				
4	Excavation: depth, width				
5	Pile/pole holes: depth, diameter				
6	Pile/pole: Correct grade, diameter				
7	Driven Piles: Engineers Certification				
8	Retaining Wall: polythene underneath				
9	Other				

213 SLAB / UNDER SLAB PLUMBING Inspection OK Not N/A

1	Slab thickness: D.P.M., tape, rebates				
2	Slab Reinforcing: Thickenings, tying cover etc				
3	Fill: Compaction, depth, binding				
4	Pipes: gradient, protection, sizing, tested				
5	Other				

ENTERED

217 SUBFLOOR Inspection OK Not N/A

1	Sub floor brace connectors				
2	Bracing: washers, timber size etc				
3	Bearer/Joist: Size, spacing, joist hangers				
4	Notching/holes/blocking for lines of horizontal supports				
5	Ventilation & insulation				
6	Other				

221 BOND BEAM - SUPENDED SLAB Inspection OK Not N/A

1	Block Size				
2	Reinforcing: Size, grade, laps, tied				
3	Washouts: If pour exceed 1.2 m in height				
4	Design Calculation on site				
5	Retaining Wall: DPM & protection				
6	Adequate propping				
7	Services Installation (Fire Collars)				
8	Identify proprietary pre-stress components				
9	Other				

225 EXTERIOR CLADDING Inspection		OK	Not	N/A	Comments..... If further inspection needed please indicate
1	Plaster: reinforcing, flashings, sealants, construction				
2	Texture coating				
3	EPS (polystyrene), nailing, flashings etc.				
4	Sheet Systems: layout, nailing, flashing, construction				
5	Weatherboard: grading, type, fixing, flashing				
6	Bricks/Blocks: fixings, control joints, flashing				
229 PRELINE BUILDING Inspection		OK	Not	N/A	
1	Trusses: fixing, spacing, bracing, support				
2	Pitched roof: fixing, spacing, bracing, strutting, span				
3	Ceiling: joists/Batten: fixing, spacing, support				
4	Bottom-Top plate: fixing, size, DPC				
5	Bracing: Strapping, bolts, check plan				
6	Moisture content				
7	Frame; stud size, space, lintel fixings, grade				
8	Recheck Cladding: flashing, nog spacings(480mm-board/batten)				
9	Insulation: type, thickness				
10	Glazing: safety glass, thickness				
11	Fire & sound walls: sealer, staggered laps, fire collars				
233 PRELINE PLUMBING Inspection		OK	Not	N/A	
1	Pressure test				
2	Pipe material, size, support, insulation				
3	Stacks				
4	Wastes				
5	Supply tank				
6	Other				
237 POST LINING Inspection		OK	Not	N/A	
1	Sheet brace nailing				
2	Other				
241 DRAINAGE Inspection		OK	Not	N/A	
1	Accurate "As built" plan provided				
2	Depth of drain				
3	Bedding				
4	Gradient Line: Inspections, diameter correct				
5	Water test - connection to main				
6	Gullies: max 600mm depth, finish 25 mm above protected or 100mm above unprotected ground				
7	Drains within boundaries, too close to foundations				
8	Other				
245 SEPTIC TANKS Inspection		OK	Not	N/A	
1	TP58 on site - is it per design?				
2	Depth of beds, length, scoria, matting, cut off drain				
3	Tank installed properly on level				
4	Ventilation provided-distribution box				
5	Aerated mechanical systems installed to manufacturers specifications				
6	Access for tank maintenance(no vertical air loading)				
7	Other				
249 MISCELLANEOUS Inspection		OK	Not	N/A	
1	Solid fuel heating, chimney check, setback fixing, flue flashing, mantel shelf, hearth construction				
2	Swimming Pool: backwash, fencing, registration				
3	Other				

BUILDING INSPECTION SHEET

Date

14.4.04

Far N

BC#

20040256

Time

4.30 AM/PM

Applicant

/Builder

WINDLEBOURNE R & B

B. SWITZER

phone #

Travelling Time

: 5

Officer

DKC

Inspection Time

: 20

Signature

DK

205 SITE Inspection

OK Not N/A

Comments: If further inspection needed

- 1 Any Items under Sec. 36 ?
- 2 Distance from power lines
- 3 Footpath damage
- 4 Wind zone
- 5 Suitability of effluent design
- 6 Council services
- 7 Other

209 FOUNDATION Inspection

OK Not N/A

- 1 Correct site & building siting
- 2 Ground bearing, fill, expansive clay
- 3 reinforcing: spacing, size, clearance etc
- 4 Excavation: depth, width
- 5 Pile/pole holes: depth, diameter
- 6 Pile/pole: Correct grade, diameter
- 7 Driven Piles: Engineers Certification
- 8 Retaining Wall: polythene underneath
- 9 Other

213 SLAB / UNDER SLAB PLUMBING Inspection

OK Not N/A

- 1 Slab thickness: D.P.M., tape, rebates
- 2 Slab Reinforcing: Thickenings, tying cover etc
- 3 Fill: Compaction, depth, binding
- 4 Pipes: gradient, protection, sizing, tested
- 5 Other

217 SUBFLOOR Inspection

OK Not N/A

- 1 Sub floor brace connectors
- 2 Bracing: washers, timber size etc
- 3 Bearer/Joist: Size, spacing, joist hangers
- 4 Notching/holes/blocking for lines of horizontal supports
- 5 Ventilation & insulation
- 6 Other

221 BOND BEAM / SUSPENDED SLAB Inspection

OK Not N/A

- 1 Block Size
- 2 Reinforcing: Size, grade, laps, tied
- 3 Washouts: If pour exceed 1.2 m in height
- 4 Design Calculation on site
- 5 Retaining Wall: DPM & protection
- 6 Adequate propping
- 7 Services Installation (Fire Collars)
- 8 Identify proprietary pre-stress components
- 9 Other

P.T.O.

2	Texture coating				
3	EPS (polystyrene), nailing, flashings etc.				
4	Sheet Systems: layout, nailing, flashing, construction				
5	Weatherboard: grading, type, fixing, flashing				
6	Bricks/Blocks: fixings, control joints, flashing				
232	PRELIM BUILDING Inspection	OK	Not	N/A	
1	Trusses: fixing, spacing, bracing, support				
2	Pitched roof: fixing, spacing, bracing, strutting, span...				
3	Ceiling: joists/Batten: fixing, spacing, support				
4	Bottom-Top plate: fixing, size, DPC				
5	Bracing: Strapping, bolts, check plan				
6	Moisture content				
7	Frame; stud size, space, lintel fixings, grade				
8	Recheck Cladding: flashing, nog spacings(480mm-board/batten)				
9	Insulation: type, thickness				
10	Glazing: safety glass, thickness				
11	Fire & sound walls: sealer, staggered laps, fire collars				
233	PRELIM PLUMBING Inspection	OK	Not	N/A	
1	Pressure test				
2	Pipe material, size, support, insulation				
3	Stacks				
4	Wastes				
5	Supply tank				
6	Other				
237	POST LINING Inspection	OK	Not	N/A	
1	Sheet brace nailing				
2	Other				
241	DRAINAGE Inspection	OK	Not	N/A	
1	Accurate "As built" plan provided				
2	Depth of drain				
3	Bedding				
4	Gradient Line: Inspections, diameter correct				
5	Water test - connection to main				
6	Gullys: max 600mm depth, finish 25 mm above protected or 100mm above unprotected ground				
7	Drains within boundaries, too close to foundations				
8	Other				
245	SEPTIC TANKS Inspection	OK	Not	N/A	
1	TP58 on site - is it per design?				
2	Depth of beds, length, scoria, matting, cut off drain				
3	Tank installed properly on level				
4	Ventilation provided-distribution box				
5	Aerated mechanical systems installed to manufacturers specifications				
6	Access for tank maintenance(no vertical air loading)				
7	Other				
249	MISCELLANEOUS Inspection	OK	Not	N/A	
1	Solid fuel heating, chimney check, setback fixing, flue flashing, mantel shelf, hearth construction				
2	Swimming Pool: backwash, fencing, registration				
3	Other				

file OK.

the.

Date		7.4.04		Far North	
BC#		20040256		Time 10.10 AM/PM	
Applicant/Builder		WINDLE BOURNE. R B. SWITZEL		phone #	
Travelling Time		: 35		Officer D.K.C.	
Inspection Time		: 10		Signature <i>D.K.C.</i>	
205 SHED Inspection OK Not N/A Comments If further inspection needed					
1	Any Items under Sec. 36 ?				
2	Distance from power lines				
3	Footpath damage				
4	Wind zone				
5	Suitability of effluent design				
6	Council services				
7	Other				
209 FOUNDATION Inspection OK Not N/A					
1	Correct site & building siting				
2	Ground bearing, fill, expansive clay				
3	reinforcing: spacing, size, clearance etc				
4	Excavation: depth, width				
5	Pile/pole holes: depth, diameter				
6	Pile/pole: Correct grade, diameter				
7	Driven Piles: Engineers Certification				
8	Retaining Wall: polythene underneath				
9	Other				
213 SLAB/UNDER-SLAB PLUMBING Inspection OK Not N/A					
1	Slab thickness: D.P.M., tape, rebates				
2	Slab Reinforcing: Thickenings, tying cover etc				
3	Fill: Compaction, depth, binding				
4	Pipes: gradient, protection, sizing, tested				
5	Other				
217 SUBFLOOR Inspection OK Not N/A					
1	Sub floor brace connectors				
2	Bracing: washers, timber size etc				
3	Bearer/Joist: Size, spacing, joist hangers				
4	Notching/holes/blocking for lines of horizontal supports				
5	Ventilation & insulation				
6	Other				
221 BOND BEAM - SUSPENDED SLAB Inspection OK Not N/A					
1	Block Size				
2	Reinforcing: Size, grade, laps, tied				
3	Washouts: If pour exceed 1.2 m in height				
4	Design Calculation on site				
5	Retaining Wall: DPM & protection				
6	Adequate propping				
7	Services Installation (Fire Collars)				
8	Identify proprietary pre-stress components				
9	Other				

PTO

2	Texture coating				
3	EPS (polystyrene), nailing, flashings etc.				
4	Sheet Systems: layout, nailing, flashing, construction				
5	Weatherboard: grading, type, fixing, flashing				
6	Bricks/Blocks: fixings, control joints, flashing				
222	PRELIME BUILDING Inspection	OK	Not	N/A	
1	Trusses: fixing, spacing, bracing, support				
2	Pitched roof: fixing, spacing, bracing, strutting, span...				
3	Ceiling: joists/Batten: fixing, spacing, support				
4	Bottom-Top plate: fixing, size, DPC				
5	Bracing: Strapping, bolts, check plan				
6	Moisture content	✓			13-24% H2O OK to LINE
7	Frame; stud size, space, lintel fixings, grade				
8	Recheck Cladding: flashing, nog spacings(480mm-board/batten)				
9	Insulation: type, thickness	✓			Superfill to walls
10	Glazing: safety glass, thickness				Poly batts to ceiling between floors.
11	Fire & sound walls: sealer, staggered laps, fire collars				
233	PRELIME PLUMBING Inspection	OK	Not	N/A	
1	Pressure test	✓			
2	Pipe material, size, support, insulation	✓			
3	Stacks	✓			
4	Wastes	✓			
5	Supply tank			✓	
6	Other				
237	POST LINING Inspection	OK	Not	N/A	
1	Sheet brace nailing				
2	Other				
241	DRAINAGE Inspection	OK	Not	N/A	
1	Accurate "As built" plan provided				
2	Depth of drain				
3	Bedding				
4	Gradient Line: Inspections, diameter correct				
5	Water test - connection to main				
6	Gullies: max 600mm depth, finish 25 mm above protected or 100mm above unprotected ground				
7	Drains within boundaries, too close to foundations				
8	Other				
245	SEPTIC TANKS Inspection	OK	Not	N/A	
1	TP58 on site - is it per design?				
2	Depth of beds, length, scoria, matting, cut off drain				
3	Tank installed properly on level				
4	Ventilation provided-distribution box				
5	Aerated mechanical systems installed to manufacturers specifications				
6	Access for tank maintenance(no vertical air loading)				
7	Other				
249	MISCELLANEOUS Inspection	OK	Not	N/A	
1	Solid fuel heating, chimney check, setback fixing, flue flashing, mantel shelf, hearth construction				
2	Swimming Pool: backwash, fencing, registration				
3	Other				

CLADDING WARRANTY For Waipapakauri Ramp



Steel & Tube Roofing Products warrants that ColorCote® ARX™ coated steel materials supplied as detailed below, will perform as follows:

Durability

Wall Cladding will not perforate through corrosion within 15 years.

Coatings

Wall Cladding will not flake, peel or excessively fade within 15 years.

Drinking Water

Products will be a suitable surface for the collection of rainwater for drinking.

Performance

Products will perform in accordance with our published design literature current at the time of supply

Standards

**NZS/AS 1397-93 Steel sheet and strip -Hot dipped zinc coated or aluminium/zinc
NZS/AS 2728-97 Prefinished/prepainted sheet metal products for interior/exterior building applications.**

Issued to:	Roger & Bernadette Windlebourne	Profile:	.40 Custom Orb
Address:	Waipapakauri Ramp	Invoice No:	231876 SR
Environment:	Very Severe	Lift No:	246079

Installed by: Brett Switzer Builders

Supply Date: April 2004

Brett Switzer Builders warrants the product for five years against faulty workmanship or defects caused by poor installation. The installer does not warrant the product against mechanical damage occurring after installation.

Signed for Brett Switzer Builders

A handwritten signature in black ink, likely belonging to a representative of Brett Switzer Builders, written over a horizontal line.

Please Note: Colour is Beige

Important :This warranty is offered subject to maintenance by the occupier consisting of manual washing of unwashed areas and high risk areas every 3 months plus

-manual washing of Wall Cladding monthly

Please see overleaf for Terms and Conditions of warranty.

**Signed for Steel & Tube Roofing Products
8 June 2004**

Ref: RWH56

A handwritten signature in black ink, likely belonging to a representative of Steel & Tube Roofing Products, written over a horizontal line.

Terms & Conditions of Warranty

1. This warranty is issued according to information supplied to Steel & Tube Roofing Products.

Environmental classifications are as described in the table below.

The warranty shall not apply if the environment described herein is not an accurate assessment of the actual site details.

2. Maintenance must be carried out in accordance with the maintenance schedule printed on the front of this document.

3. Prepainted material is subject to normal wear and tear which may include uniform fading, chalking and dirt collection.

4. The product must be processed, installed and maintained in accordance with manufacturers published literature, Steel and Tube Roofing Products literature and accepted good trade practice.

5. The products must be sold as prime material.

6. Garage doors are not included in this warranty.

7. Damage or corrosion resulting from the following circumstances is not covered:

- Mechanical, chemical, heat or wet storage damages or contact with wet concrete.
- Contact with, or runoff from, dissimilar metals such as copper, stainless steel or lead.
- Water runoff onto galvanised materials from inert materials such as Zinc/Aluminium coated steel, painted surfaces, and translucent roof sheeting.
- Special Conditions as defined in New Zealand Steel or Pacific Coilcoaters Literature.
- Storm, volcanic activity or other causes beyond the control of the roofing manufacturer.

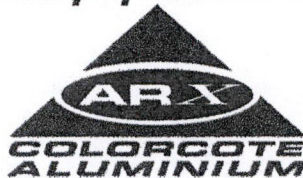
If the product has failed to perform as warranted, Steel and Tube Roofing Products will at its option repair or replace the affected material. A new warranty shall be issued to cover the balance of the original offer for perforation protection.

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

Environmental Categories

	Moderate	Severe	Very Severe
Coastal	Characterised by: • Little or no salt deposits. • The occasional smell of salt in the air. • Typically commences from 500m to 1km from breaking surf, <u>OR</u> • From the immediate area of calm salt water such as found in estuaries.	Characterised by: • Light salt deposits. • Frequent smell of salt in the air. • Typically commences 100-500 metres from breaking surf such as found on exposed coastlines, <u>OR</u> • From immediate vicinity of calm salt water such as harbour foreshores. • Can extend inland 1km or more.	Characterised by: • Heavy salt deposits. • Almost constant smell of salt in the air. • Close to breaking surf (typically within 100-500 metres), such as found on exposed coastlines. • Includes offshore islands.
Inland	Characterised by: • No obvious marine or industrial influences. • Typically more than 1000 metres from exposed coasts or more than 500 metres from industrial emissions.	Not Applicable	Not Applicable
Industrial	Characterised by: • Industrial smells only occasionally noticeable. • Typically 250-500 metres from industrial emissions and subject to little or no fallout from them.	Characterised by: • A frequent smell of industrial chemicals in the air. • Typically 100-250 metres from industrial emissions and subject to light fallout from them. This environment may be extended by prevailing winds and local conditions.	Characterised by: • The continuous presence of a smell of industrial chemicals such as sulphur in the air. • Close to corrosive industrial emissions (typically 0-100 metres) and subject to heavy fallout from them. This environment may be extended by prevailing winds and local conditions.

ROOFING WARRANTY
For Waipapakauri Ramp



Steel & Tube Roofing Products warrants that ColorCote® ARX™ coated steel materials supplied as detailed below, will perform as follows:

- Durability** *Roofing will not perforate through corrosion within 20 years.*
- Coatings** *Roofing will not flake, peel or excessively fade within 15 years.*
- Drinking Water** *Products will be a suitable surface for the collection of rainwater for drinking.*
- Performance** *Products will perform in accordance with our published design literature current at the time of supply*
- Standards** *NZS/AS 1397-93 Steel sheet and strip -Hot dipped zinc coated or aluminium/zinc
NZS/AS 2728-97 Prefinished/prepainted sheet metal products for interior/exterior building applications.*

Issued to:	Roger & Bernadette Windlebourne	Profile:	.40 Custom Orb
Address:	Waipapakauri Ramp	Invoice No:	231876 SR
Environment:	Very Severe	Lift No:	246079

Installed by: Brett Switzer Builders **Supply Date:** April 2004

Brett Switzer Builders warrants the product for five years against faulty workmanship or defects caused by poor installation. The installer does not warrant the product against mechanical damage occurring after installation.

Signed for Brett Switzer Builders

A handwritten signature in black ink, appearing to be 'B. Switzer', written over a horizontal line.

Please Note: Colour is Sandstone Grey

Important : This warranty is offered subject to maintenance by the occupier consisting of manual washing of unwashed areas and high risk areas every 3 months.

Please see overleaf for Terms and Conditions of warranty.

Signed for Steel & Tube Roofing Products
8 June 2004

Ref: RWH55

A handwritten signature in black ink, appearing to be 'Steel & Tube Roofing Products', written over a horizontal line.

Terms & Conditions of Warranty

1. This warranty is issued according to information supplied to Steel & Tube Roofing Products.

Environmental classifications are as described in the table below.

The warranty shall not apply if the environment described herein is not an accurate assessment of the actual site details.

2. Maintenance must be carried out in accordance with the maintenance schedule printed on the front of this document.

3. Prepainted material is subject to normal wear and tear which may include uniform fading, chalking and dirt collection.

4. The product must be processed, installed and maintained in accordance with manufacturers published literature, Steel and Tube Roofing Products literature and accepted good trade practice.

5. The products must be sold as prime material.

6. Garage doors are not included in this warranty.

7. Damage or corrosion resulting from the following circumstances is not covered:

- Mechanical, chemical, heat or wet storage damages or contact with wet concrete.
- Contact with, or runoff from, dissimilar metals such as copper, stainless steel or lead.
- Water runoff onto galvanised materials from inert materials such as Zinc/Aluminium coated steel, painted surfaces, and translucent roof sheeting.
- Special Conditions as defined in New Zealand Steel or Pacific Coilcoaters Literature.
- Storm, volcanic activity or other causes beyond the control of the roofing manufacturer.

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

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

Environmental Categories			
	Moderate	Severe	Very Severe
Coastal	Characterised by: • Little or no salt deposits. • The occasional smell of salt in the air. • Typically commences from 500m to 1km from breaking surf, <u>OR</u> • From the immediate area of calm salt water such as found in estuaries.	Characterised by: • Light salt deposits. • Frequent smell of salt in the air. • Typically commences 100-500 metres from breaking surf such as found on exposed coastlines, <u>OR</u> • From immediate vicinity of calm salt water such as harbour foreshores. • Can extend inland 1km or more.	Characterised by: • Heavy salt deposits. • Almost constant smell of salt in the air. • Close to breaking surf (typically within 100-500 metres), such as found on exposed coastlines. • Includes offshore islands.
Inland	Characterised by: • No obvious marine or industrial influences. • Typically more than 1000 metres from exposed coasts or more than 500 metres from industrial emissions.	Not Applicable	Not Applicable
Industrial	Characterised by: • Industrial smells only occasionally noticeable. • Typically 250-500 metres from industrial emissions and subject to little or no fallout from them.	Characterised by: • A frequent smell of industrial chemicals in the air. • Typically 100-250 metres from industrial emissions and subject to light fallout from them. This environment may be extended by prevailing winds and local conditions.	Characterised by: • The continuous presence of a smell of industrial chemicals such as sulphur in the air. • Close to corrosive industrial emissions (typically 0-100 metres) and subject to heavy fallout from them. This environment may be extended by prevailing winds and local conditions.

JF & MT Biddle Tiling Contractors

APPLICATOR'S PRODUCER STATEMENT

I John Biddle

Of JF + MT Biddle Tiling Contractors

Being an applicator for ASA Adhesives

Confirm that I have applied Damfix 3

At Rata St, Waipapakauri

Areas Downstairs - shower only
Upstairs Bathroom floor + shower walls

On 19/5/2004 For R + B Windlebourne

In accordance with the manufacturer's written application instructions.

The work has been certified by John Biddle (Appl No: 60508)

Signed [Signature]

Date 12/06/07

Name: Roger Winkler BC Number: 20040256
 Site Address: 80 Rata St Val. Ref. 13-194-04 -File
Wapapa-Kauri Date: 18/8/03

What is the ground topography:

- ☒ Gentle
☒ Moderate
☐ Steep

Wind Zone:

- ☐ High
☒ Very High
☐ Specific engineering design
☒ Sea Spray Zone

Vehicle Crossing:

- ☐ Required
☐ Is there footpath damage
☐ Is a deposit required

Council Services:

- ☒ Is sewage available
☒ Is water reticulation available

On-site effluent disposal:

- ☒ Is the area suitable
☒ Is there room for a reserve area
☐ Is there local knowledge of poor soakage
☐ Engineering Design required

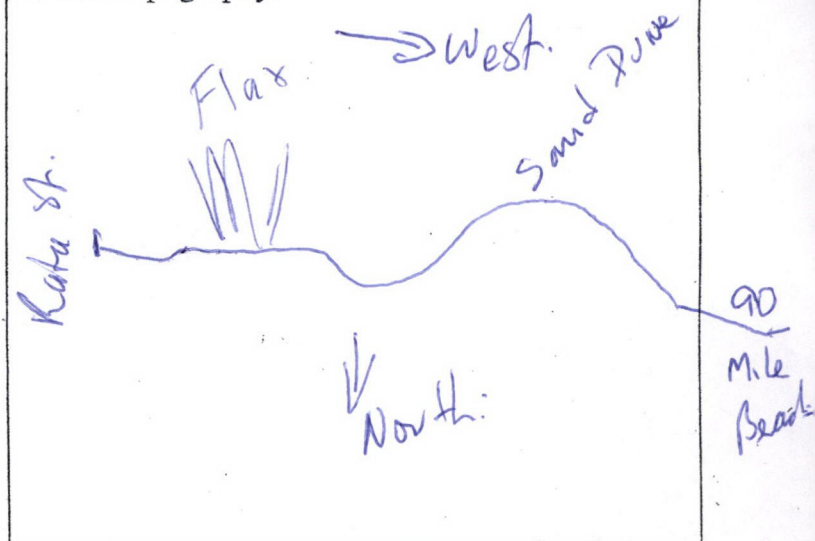
Engineering Required and Section 36 items:

- ☐ Signs of slippage
☐ Poor soils
☐ Fill on site
☐ Un-natural profiles
☐ Flooding
☐ Foundations

Council or Private Easements:

- ☐ Man hole covers
☐ Over land flow path
☐ Overhead wires

Sketch/Topography:



FAXED

DEFERRED

Other Comments:

Directly opp
Leon Winchester's House

Note: Enter √ or X in each box to indicate yes or no.

Inspector: B Ford Date of Inspection: 19.8.03

Last day of my 59th year!

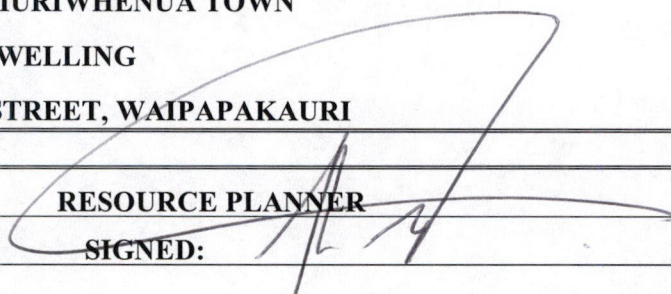
PRIORITY: TO BE PROCESSED UNDER BOTH TDP AND PDP PLANS

BUILDING CONSENT NO ABA 20040256
TRACKING SHEET

NAME: WINDLEBOURNE, R & B DATE: 18-Aug-03
VAL NO: 013-194-04 PROPERTY ID 3301129
LEGAL DESC: SEC 8 MURIWHENUA TOWN
BUILDING: NEW DWELLING
LOCATION RATA STREET, WAIPAPAKAURI

RESOURCE PLANNER

DATE: 23/9/03

SIGNED: 

CONDITIONS:

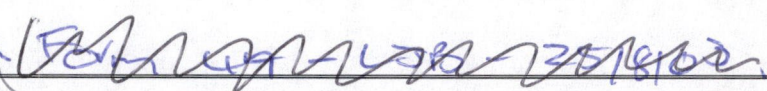
23/9/03
Hold
TPS
CAB

DEVELOPMENT ENGINEER

DATE:

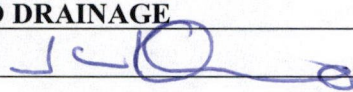
SIGNED:

CONDITIONS:

 23/9/03

PLUMBING AND DRAINAGE

DATE: 15 SEPT 03

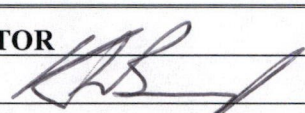
SIGNED: 

CONDITIONS:



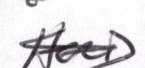
BUILDING INSPECTOR

DATE: 24/9/03

SIGNED: 

CONDITIONS: ROOFING SYSTEM INSTALLATION DETAILS TO BE KEPT ON SITE FOR LAPS & FIXINGS.

PROVIDED &



OTHER:

DATE:

SIGNED:

CONDITIONS:

Enter Swimming Pool Register	BWOF / Compliance Schedule Required	NRC Septic Tank Booklet	New Sewer Connection	New Water Connection	Number of Inspections
		Yes			9

Transitional District Plan(TDP)Proposed District Plan(PDP)

Zoning:

Rural C.

Zoning:

Low Res

Standards/Rules not complied with:

OK
able to
s/a.

Use - controlled
height - OK
h/b - OK
yards - ~~OK~~ rear yard (exceeded)

CT - OK

resources - OK

TPS8 - ~~not applied~~ OK

height - OK

sun - OK

improvement - OK

setback - OK

Type of Activity under the Resource Management Act 1991?

~~Resource Consent~~
Res. Discr.

~~Depends on TPS8~~
Permitted

Does the project require a resource consent under either Plan?

No

☐

No

☐

Yes

☒

Yes

☐

Resource Consent granted?

No

☐

Yes

☐

RC #

Date granted:

Conditions appropriate to this project?

No

☐

Yes

☐

Attached.

Has this property been part of a subdivision?

No

☐

Yes

☐

Licenses that may be required to operate:

☐

Liquor license

☐

Health license

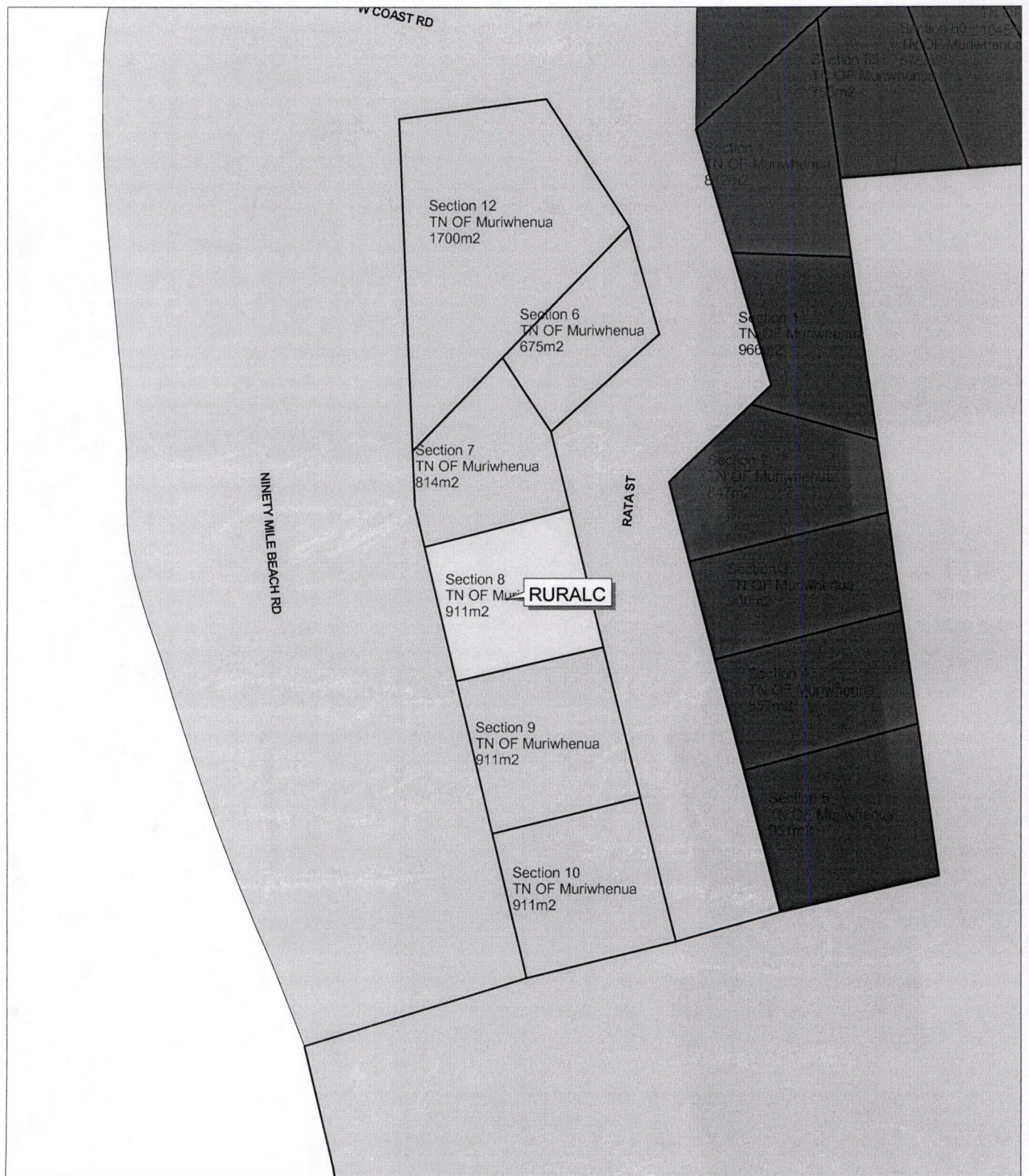
☐

Dangerous Goods license

☐

Other license

Note: This listing is not intended to contain all licenses, permits or other legal requirements relevant to the proposed project.



Property Location: RATA ST 13

Property Area: 0.0911ha.

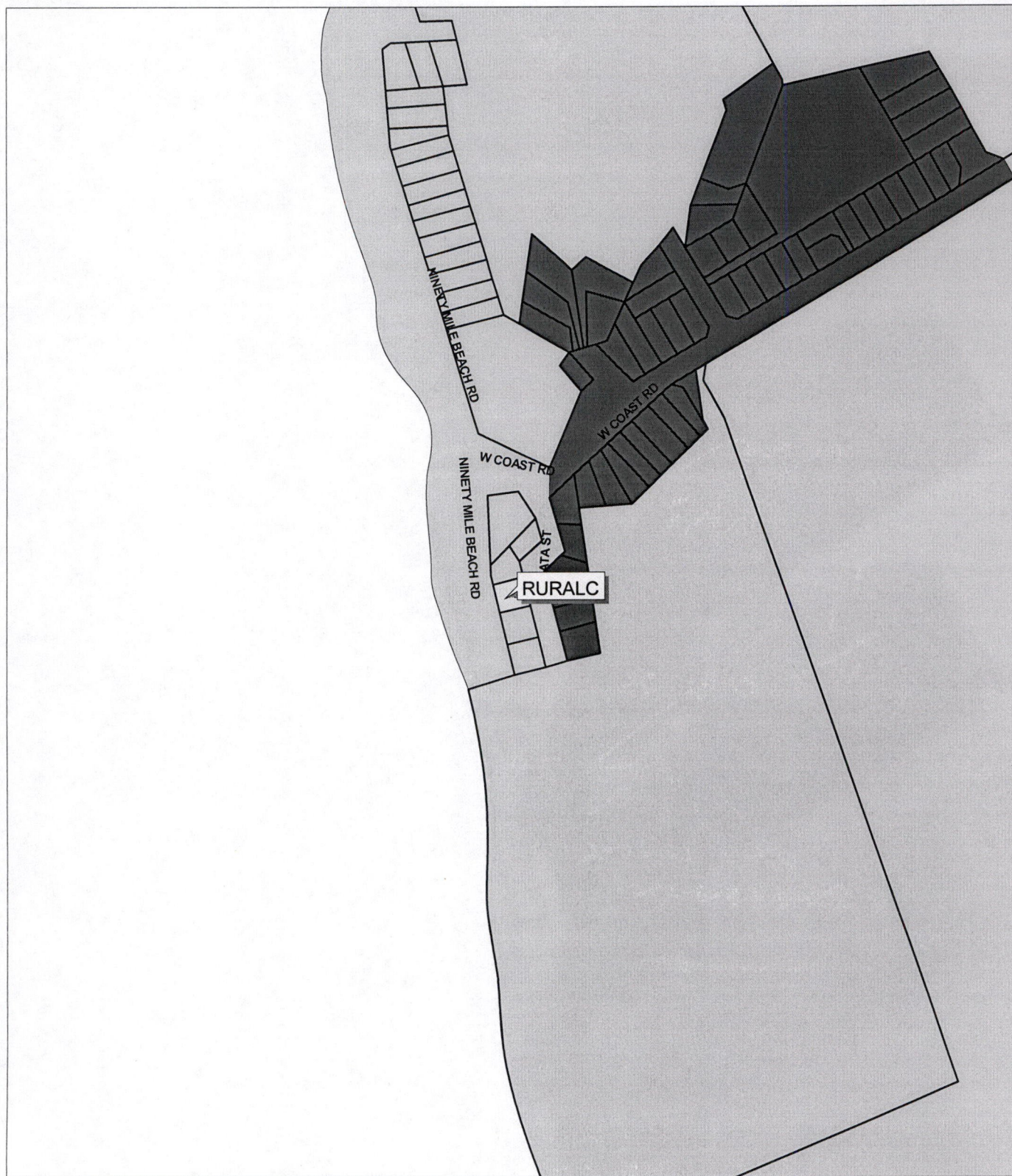
00013-194-04

SEC 8 MURIWHENUA TSHIP



PROPERTY INQUIRY

This map is for illustration purposes only and is not necessarily accurate to surveying, engineering or ortho-photographic standards. While every effort has been made to ensure correctness and timeliness of information presented, Far North District Council assumes no responsibility.

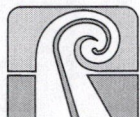


Property Location: RATA ST 13

Property Area: 0.0911ha.

00013-194-04

SEC 8 MURIWHENUA TSHIP



PROPERTY INQUIRY

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Property Enquiry

File Field Options Help

✓ ? [Print] [Save] [Close] [Find] [Home] [Back] [Forward]

Property ID 3301129 **Name**
Address RATA STREET, SOUTHERN AUPOURI 500
Alt. Property ID **Corner Property**
Ended Date **Road Use** Public

People	Rates	Parcel	Analysis	Buildings	RFS	COP	Licensing	Water	Volume	Docs	Animals
RFS	ID	Description									Link Type
ABA	20040256	CURRENT COM:NEW DWELLING									
RFS	114767	COMPLETED CSL:Street lights not working outside 3									

Property Report **Add Notes** **GIS Viewer** **Search Docs**

gemini.fndc.govt.nz

WED, 24-SEP-03 10:52

KAITIA TRAVEL

E

09 4086120

P.01

*ATTN Ken Darrroughs*24th September 2003

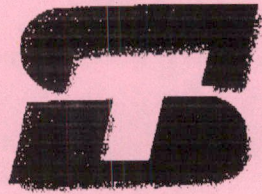
Far North District Council
Private Bag 752
Kaikohe

Dear Ken,

RE: REF ABA20040256:VRN 00013194-04

Please find enclosed Manufacturers specifications for roof cladding.

Thankyou and Regards
Roger Windlebourne
Phone 09 4080083

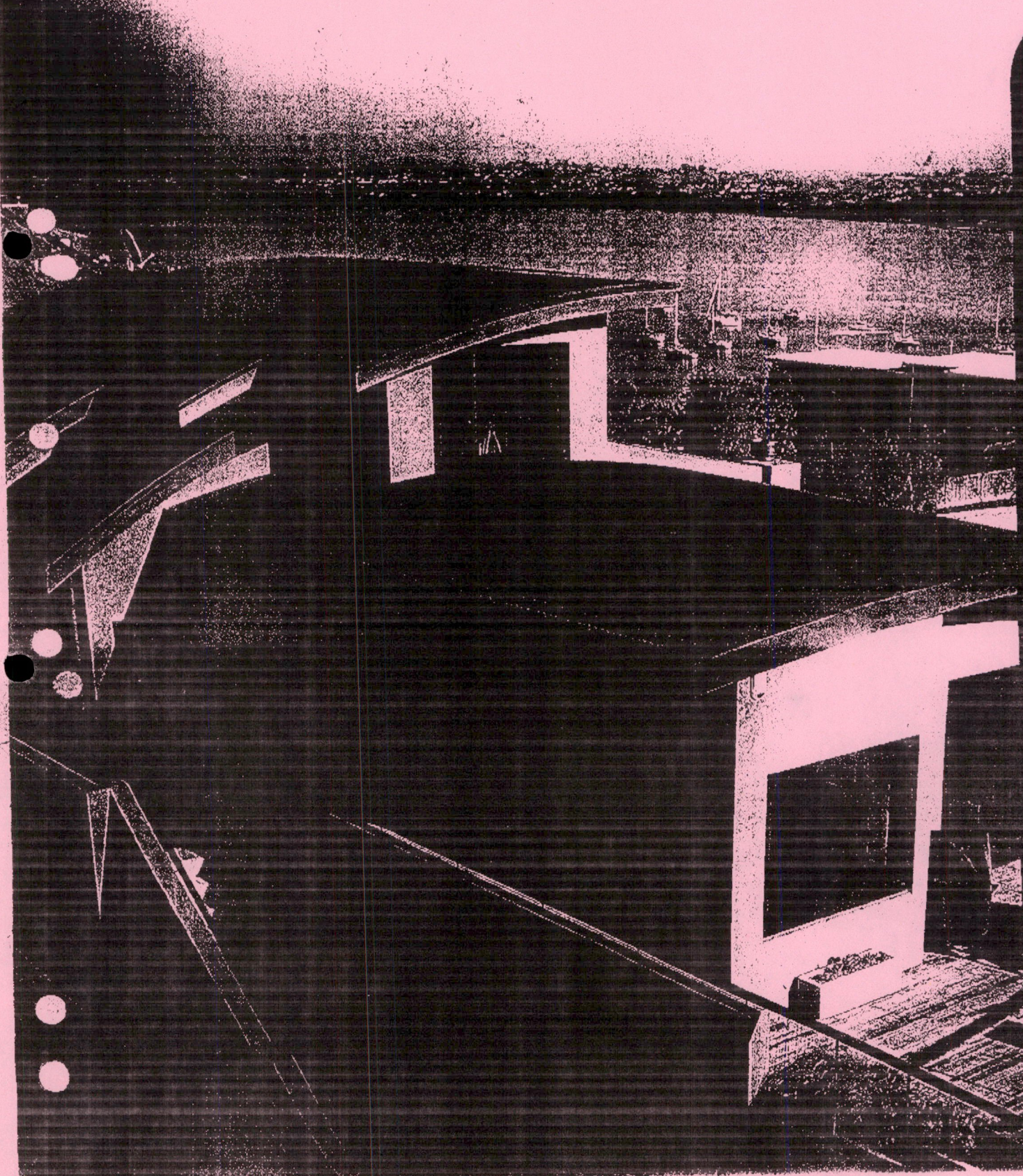


STEEL & TUBE

ROOFING PRODUCTS

Spring Curved Custom Orb

Design Guide



SEPTEMBER 2001

there are no obstructions to the free flow of water over the flat area, and the radius does not exceed 35 meters.

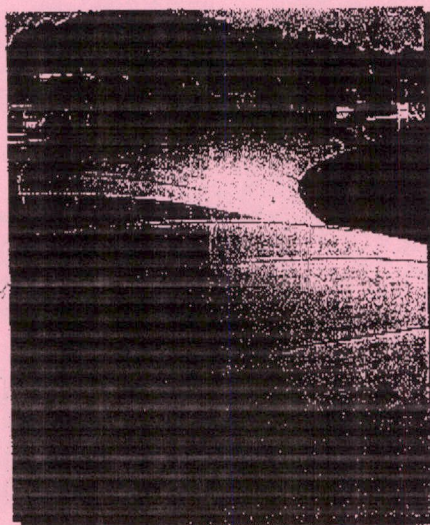
End laps should be avoided wherever possible, and must not occur where pitch is less than 5°. In all cases, they should be sealed with neutral cure silicon sealant or lap seal tape at both ends of the lap.

Other Design Issues

Aesthetics

Different material thicknesses and tensile strengths have different propensities for spring curving without distortion. As this is difficult to accurately predict in all cases, side laps should face away from the line of sight where practical. Purlin top edges should be in line with roof plane.

Minimum radii for different gauges and material strengths are shown in the accompanying chart. For radii less than 9 meters, roll curving in .55 mm G300 material is required.



Unwashed Areas

These are created when spring curved corrugate roofs are installed over outriggers at the gable ends and eaves, leaving the underneath of the roof exposed. Regular maintenance must be relied upon to achieve durability in these areas, which is often hard to achieve given site constrictions, human frailty and the difficulty in achieving a reliable watertight seal at the junction of walls and roof undersurfaces.

It is recommended that when installed over outriggers, particularly in a Severe or Very Severe marine environment, the exposed underneath surface is covered with a suitable flat sheet material.

Sheet ends

Sheet ends must be designed with sufficient fall to prevent water run back at the lower end, and leakage, or entrapment causing corrosion, at the top end.

Sheet lower ends occurring at less than 8° pitch should be drip formed to prevent run back, and should not occur at less than 5°. Exposed ends

should have profiled foam fitted under the roof to prevent wind borne moisture ingress.

Sheet upper end should not terminate at less than 3° pitch. Consideration should be given to head flashing detail at low pitches and exposed sites, with greater coverage and/or profiled foam required in severe conditions.

Ventilation

With spring curved design for a dwelling when the ceiling line is above the rafter and insulation is placed directly below the roofing, internal moisture and thermal noise problems can ensue. Ventilation requirements need to be addressed.

Where attic space is minimal, a vapour barrier must be placed between the ceiling and the insulation. Insulation should be overlaid with building paper on the top side, and a gap of at least 25 mm should be present between the building paper and the roofing. The roof must be allowed to breathe, profiled foam sealant under sheet ends should be avoided where possible, and vents should be considered at the apex of gable end soffits.

Any concentrated moisture sources from inside the building such as produced by cooking, bathing, or gas heating activities, should be ventilated directly to the outside of the building envelope.

Spring Curved Custom Orb Material Selection Guide

Gauge	Grade	Minimum Radius	Maximum Radius	Internal span pitch < 8°	End span pitch < 8°	Overhang (Stiffened)
.40 mm	G 550	12 meters	35 meters	.900	.800	.150 (.250)
.55 mm	G 300	10 meters	35 meters	1.000	.900	.200 (.300)
.55mm	G 550	9 meters	35 meters	1.200	1.000	.250 (.400)

Flashings

The need to curve barges affects their design. Metal barges may be sectional, crimp curved or lock-seamed, PVC waste pipe can also be used. Your local Steel & Tube branch representative will make recommendations for barge details that are available in your area.

Curved apron flashings are normally manufactured by ~~lock-seamed~~ crimped barges.

Installers

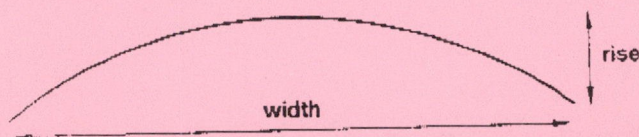
A list of recommended installers for your area is available from our website or your local Steel & Tube Roofing sales office

Warranties

Provided the advice contained herein is adhered to and the roof is designed, installed and maintained in accordance with good trade practice and manufacturer's published literature, the normal warranties available for the building type, material, and exposure condition will apply.
See Steel & Tube Roofing Product Guide for details.

Formulae

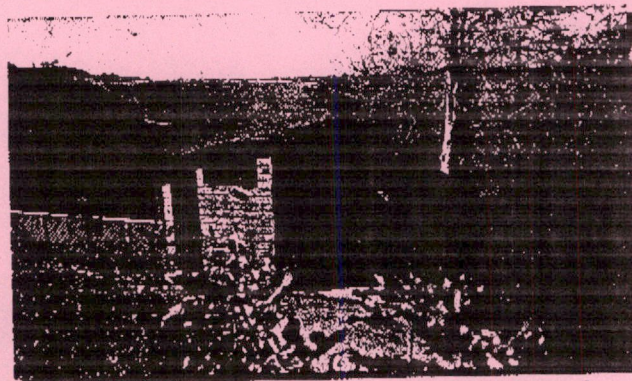
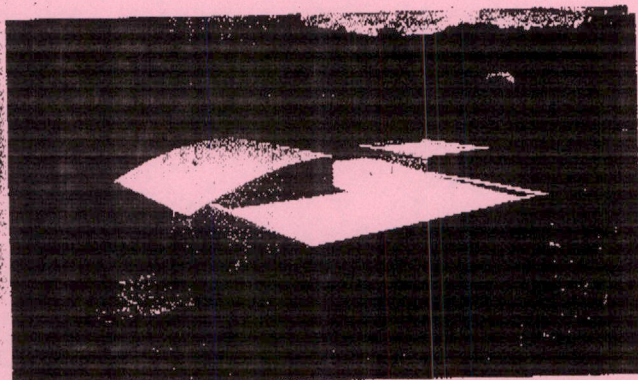
For determining the radius (r) of a curve, $r = (\text{width}^2 + (4 \times \text{rise}^2)) \div (8 \times \text{rise})$
For determining length of seal (s) to where pitch > 8°, $s = 0.035 \times r \times 8$



Disclaimer

ALL SCREW FIXED

The information contained in this brochure is correct to the best of our knowledge at time of printing and is based on experience with "typical" spring curved applications. It is designed as a general design guide and is not intended as a blueprint for suitability for any specific installation.



WHANGAREI
9 Southend Ave
Otata
PO Box 1869
Ph: 09 438 4600
Fax: 09 438 0342

NORTH SHORE
2 Ride Way
Nth Hbr Ind Estate
PO Box 100-182
Ph: 09 415 8080
Fax: 09 415 9192

AUCKLAND
14 Kerwyn Ave
East Tamaki
PO Box 58-216
Ph: 09 274 4056
Fax: 09 274 8972

HAMILTON
32 Kaimiro St
Pukete Ind Estate
PO 10 438
Ph: 07 850 9200
Fax: 07 850 9330

TAURANGA
67 Koromiko St
Judea
PO Box 2001
Ph: 07 578 1089
Fax: 07 577 0186

WELLINGTON
201 Gracefield Rd
Lower Hutt
PO Box 36 082
Ph: 04 568 4352
Fax: 04 568 6770

CHRISTCHURCH
106 Antigua St
Sydenham
PO Box 7306
Ph: 03 377 0994
Fax: 03 377 2680

Visit the Steel & Tube Holdings website: www.stroofing.co.nz

STEEL & TUBE
ROOFING PRODUCTS

R
MEMBER OF ROOFING
ASSOCIATION N.Z.

SPRING CURVED CUSTOM ORB

Design Guide

Introduction

Spring or drape curving is the name given to the roof installation process whereby straight sheets of roofing are fastened to a curved structure without prior curving of the sheets.

This Producer Statement is designed primarily for convex spring curving over an apex, however much of the information can be applied to pitched curved roof sections and concave spring curving.

Objective

The objective of this Producer Statement is to give advice on design and installation of sprung curved roofing over an apex utilising Steel & Tube CUSTOM ORB corrugated roofing.

Note: Due to varying dimensions and tolerances between manufacturers, it cannot be assumed that the advice contained herein is applicable to generic brands of corrugate roofing.

Functional Requirements

To meet the objective, the roofing installation must meet the performance requirements of the Building Act in terms of External Moisture, Strength, and Durability. Other design issues particular to this type of construction should also be considered such as aesthetics, ventilation, sheet end details and warranties.

Performance

External moisture

Maximum radius is determined by the ability of the roof section to discharge rainwater without flooding of the side lap. Greater radii result in longer regions of low pitched roofing about the apex, giving greater potential for water levels to rise above lap height. Maximum recommended radius is 35 meters.

In all cases laps should be sealed with 3 mm x 16 mm self-adhesive closed cell PVC nitrile tape (Lap Sealing Tape) where pitch is less than 8°. This provides a barrier to water, as well as ensuring that an effective capillary gap is present. Penetrations should be avoided where pitch < 5°.

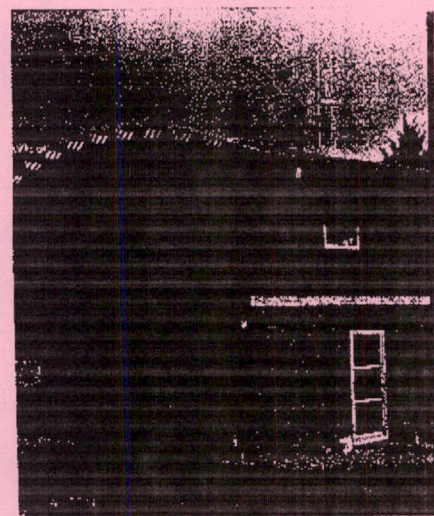
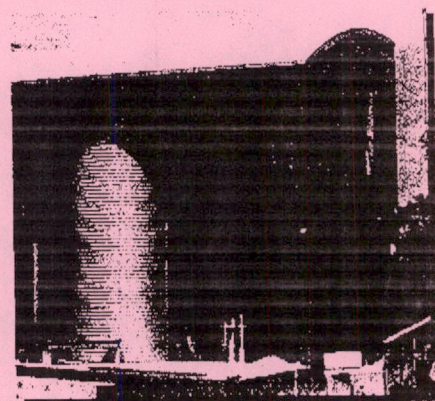
Strength

Bearing in mind that traffic damage to flat areas can be both more likely and have more severe consequences than with pitched roofs, it is recommended that internal purlin spacings be reduced where pitch is less than 5°. Details are shown on the accompanying Material Selection Chart.

As torsional forces from the roof sheeting will impose greater load on fasteners, screws are required rather than driven fasteners. Purlin to rafter connections should also be designed to accommodate these additional forces, particularly at the sheet ends.

Durability

Normally, Zinalume and Colorsteel® products are only warrantable where pitch is a minimum of 3°. Where Custom Orb roofing is curved over an apex, this can be relaxed provided that



Name: Rees, Windlebourne BC Number: 20040256
 Site Address: 80 Rata St Val. Ref. 13-194-04
Waipapa-Kaitia Date: 18/8/03

What is the ground topography:

- ☒ Gentle
☒ Moderate
☐ Steep

Wind Zone:

- ☐ High
☒ Very High
☐ Specific engineering design
☒ Sea Spray Zone

Vehicle Crossing:

- ☐ Required
☐ Is there footpath damage
☐ Is a deposit required

Council Services:

- ☒ Is sewage available
☒ Is water reticulation available

On-site effluent disposal:

- ☒ Is the area suitable
☒ Is there room for a reserve area
☐ Is there local knowledge of poor soakage
☐ Engineering Design required

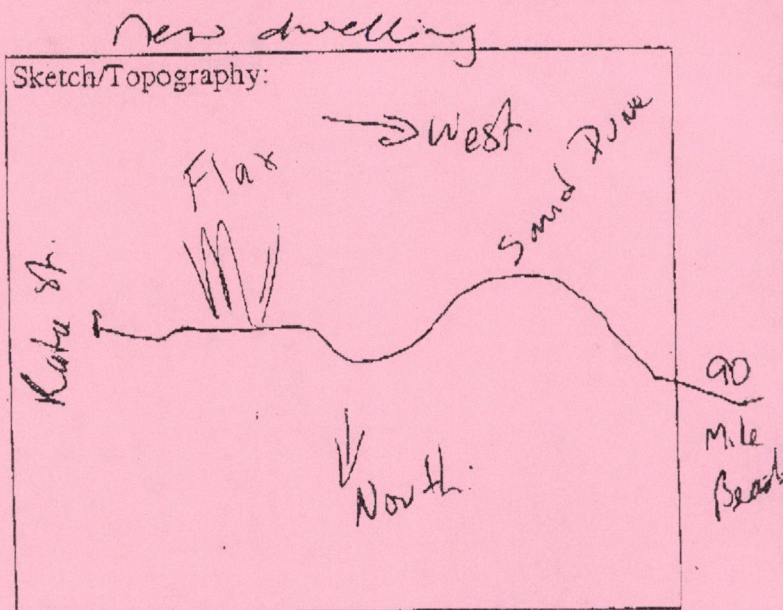
Engineering Required and Section 36 items:

- ☐ Signs of slippage
☐ Poor soils
☐ Fill on site
☐ Un-natural profiles
☐ Flooding
☐ Foundations

Council or Private Easements:

- ☐ Man hole covers
☐ Over land flow path
☐ Overhead wires

Sketch/Topography:



ENTERED

Other Comments:

Directly opp
Leoni Winches House

Note: Enter √ or X in each box to indicate yes or no.

Inspector:

B Ford

Date of Inspection:

19.8.03

Last day of my 59th year!



Scale 1:2420

0 25 50 75 100 125 150 175 200 225 250 275 300m

13/19403

Survey and Title Data as at 3-AUGUST-2003. Valuation and Sales Data as at 29-JULY-2003 and Geodetic Mark data as at 3-AUGUST-2003. For additional mark data visit www.linz.govt.nz. Cadastral information from LINZ Core Record System (CRS). CROWN COPYRIGHT

Queenie Harding

From: Dianne Bensemann
Sent: Thursday, 25 September 2003 16:04
To: Building Support
Subject: ABA 20040256

THE ABOVE HAS PAID \$906.00 TODAY AT THE KAITAIA OFFICE
PLEASE ISSUE BUILDING CONSENT
THANKS

Dianne Bensemann
Customer Liaison Officer
Kaitaia



FAR NORTH DISTRICT COUNCIL

G.S.T. REG No. 52-004-926

Private Bag 752, Memorial Ave, KAIKOHE 0400
Freephone: 0800 920 029, Ph: (09) 405 2750, Fax: (09) 401 2137
Email: ask.us@fndc.govt.nz, Website: www.fndc.govt.nz

TAX INVOICE ONLY

WINDLEBOURNE, ROGER IAN
WIRELESS ROAD
R D 2
KAITAIA 0500

ABA A/C: 121660
INVOICE DATE: 24/09/2003
INVOICE NO: 21996
RFS NUMBER: ABA 20040256

BUILDING CONSENT APPLICATION CHARGES

Details: NEW DWELLING
val 13-194-04
Site Address: RATA STREET

Description	Amount
BRANZ Levy	140.00
BIA Levy	91.00
Standard Building Inspection F	675.00

This invoice includes GST of: \$ 75.00

TOTAL \$ 906.00

Please note that no Building Consent will be issued until all scheduled fees have been paid. These fees have been based on 9 inspections. Please note that if more inspections are carried out than specified on this account, then a further charge of \$75.00 per inspection will apply and must be paid prior to issue of a code of Compliance Certificate.



FAR NORTH DISTRICT COUNCIL

Please detach and return this
portion with your payment

NAME OF A/C:

WINDLEBOURNE, ROGER IAN
WIRELESS ROAD
R D 2
KAITAIA 0500

ABA A/C: 121660
INVOICE DATE: 24/09/2003
INVOICE NO: 21996
RFS NUMBER: ABA 20040256
TOTAL: \$ 906.00

Lou-Ann Ballantyne

From: Alister Hartstone
Sent: Tuesday, 23 September 2003 08:31
To: Lou-Ann Ballantyne
Subject: FW: Resource Consent Dept

Lou-Ann

Re the Windlebourne BC for a dwelling at Waipapakauri - It looks like we can approve it without an RC as the zoning and setbacks for that site are unchallenged. You might like to make a note on the file to this effect, or put a copy of this e-mail on the file (or both!)

AL

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

From: Alison Newell
Sent: Tuesday, 23 September 2003 8:14 a.m.
To: Alister Hartstone
Subject: RE: Resource Consent Dept

Both greg and i both spoke to julie about this one yesterday and i gave her the wording to ask for the s.19. as far as i can tell there has been no appeal on either the zoning related to Mrs Rice's property or the setback relating to coastal res - alison

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

From: Alister Hartstone
Sent: Tuesday, 23 September 2003 08:03
To: Alison Newell; Greg Phillips
Subject: FW: Resource Consent Dept

How does this one look?? And is it possible to have a decision on the Windlebourne on yet out at Waipapakauri re 8 metre rear yard under TDP??

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

From: julierice [mailto:julierice@xtra.co.nz]
Sent: Tuesday, 23 September 2003 7:19 a.m.
To: Alister Hartstone
Subject: Resource Consent Dept

Dear Alistair

We are looking to build a garage on our rear site at Rangiputa which is zoned Residential under the Mangonui section of the Transitional District Plan and zoned as **Coastal Residential** under the Proposed District Plan.

We wish to build the garage 1.5 m from the boundary with the proposed zoning being boundary 1.2m set back (Residential zone 3.0m). Could you pls confirm with a section 19 that the revised Proposed District Plan (boundary set back) is beyond challenge.

Your prompt reply would be appreciated as we would like to apply for building consent as soon as possible. I can be contacted on 027 416 7562 if you have any queries.

Thanking you for your assistance.

Regards

Julie & Steve Rice
Ph: 09 528 4560

23/09/2003



FAR NORTH DISTRICT COUNCIL

Private Bag 752, Memorial Ave, KAIKOHE 0400
Freephone: 0800 920 029, Ph: (09) 405 2750, Fax: (09) 401 2137
Email: ask.us@fndc.govt.nz, Website: www.fndc.govt.nz

REF:ABA20040256 : VRN 00013-194-04

Wednesday, August 27, 2003

ENVIRONMENTAL
11 SEP 2003
RECEIVED

ROGER & BERNADETTE WINDLEBOURNE
WIRELESS RD
RD 2
KAITAIA 0500

Dear Sir or Madam,

RE: NEW DWELLING

Thank you for lodging your building application with the Far North District Council.

Initial vetting of your application has highlighted the need for further information to be provided to enable the process of issuing your consent to continue. The time period for processing your application has been suspended under Section 34 of The Building Act 1991, however this will be resumed as soon as the necessary information as listed below is received.

PLANNING ASPECT:

Please note that the site is zoned Rural C and Coastal Residential under the Transitional and Proposed District Plans respectively.

Resource Consent will need to be applied for in order to address the following issue:

- Development of one dwelling per site under the Rural C zoning is a controlled use.

Please complete the enclosed application form and submit to Council along with the minimum application fee of \$280 and a copy of the TP58 report (this will clarify if a Discharge Permit is required).

PLUMBING AND DRAINAGE:

Please supply 3 x sets of the following:

1. TP58 report required (the form is enclosed).

BUILDING ASPECT:

Please supply 3 x sets of the following:

1. Bracing calculations and layout required for decking over 2m wide.
2. Provide roofing system details for 0° pitch.
3. Building specifications.
4. Rumpus room block insulation details.
5. ✓ Curved gangnail truss system manufacturers details.
6. 2 Storey footing detail to NZS 3604 Fig 7.13 or ~~Engineered~~.

It would assist considerably if you would include your consent number (**ABA20040256**) when responding. This will ensure the information provided is included with your application and that processing continues with the minimum of delay.



FAR NORTH DISTRICT COUNCIL

Private Bag 752, Memorial Ave, KAIKOHE 0400
Freephone: 0800 920 029, Ph: (09) 405 2750, Fax: (09) 401 2137
Email: ask.us@fndc.govt.nz, Website: www.fndc.govt.nz

REF:ABA20040256 : VRN 00013-194-04

Wednesday, August 27, 2003

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WIRELESS RD
R D 2
KAITAIA 0500

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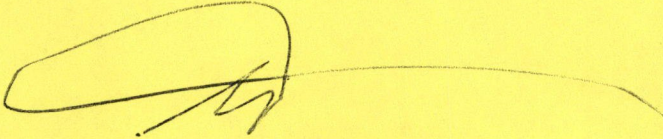
1. Bracing calculations and layout required for decking over 2m wide.
2. Provide roofing system details for 0° pitch. *supply 3 sets. manufactures Specific.*
3. Building specifications. *4 Roof cladding*
4. Rumpus room block insulation details.
5. Curved gannail truss system manufacturers details.
6. 2 Storey footing detail to NZS 3604 Fig 7.13 or Engineered.

It would assist considerably if you would include your consent number (**ABA20040256**) when responding. This will ensure the information provided is included with your application and that processing continues with the minimum of delay.

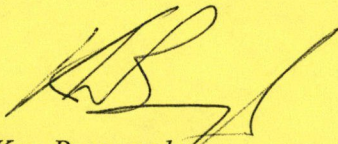
Please return the information to the Building Office at Kaikohe.

If I can provide further information in regard to this or any other matter, please contact me, as I will be more than happy to be of assistance.

Yours faithfully,

A handwritten signature in black ink, appearing to be 'L. Ballantyne', with a long horizontal flourish extending to the right.

Lou-Ann Ballantyne
Technical Planning Officer/Environmental Services

A handwritten signature in black ink, appearing to be 'K. Burroughs', with a long horizontal flourish extending to the right.

Ken Burroughs
Building Officer/Environmental Services

Far North District
Council
Received

FAX MESSAGE

Date: 25 June, 2003

Number of sheets: 2

To: Don Saunders
Ecohomes
408 2358

From: Richard I R Catterall, Consulting Engineer
P O Box 53, Mangonui

Phone/Fax 09-406 0668

Subject: WINDLEBOURNE

The beams over the garage the steel beams should be 310UB40. A central web stiffener is required as shown on the attached sketch. The lintel over the garage door should also be 310UB40.

The beams over the rumpus room should be 310UB32 again with a web stiffener at mid span.

Foundations under the beam supports should be 700 mm square and reinforced with D12 @ 200 both ways. Depth of footing to be 300 mm.

At the outside walls the blockwork will support the beams OK – hold down with 2 – 16 mm bolts.

Any queries please contact me.

Regards

A handwritten signature in black ink, consisting of a series of loops and a long horizontal stroke extending to the right.

PO BOX 53, MANGONUI, FAR NORTH. TEL/FAX 0-9-406 0668.

1

CHECKED:

$$\delta_{1K} = \frac{1000 \times 8000^3}{48 \times 205000 \times 88.2} = 0.61 \text{ m} \approx 1 \text{ O.K}$$

ULATION SHEET

RICHARD I.R. CATTERALL
M.A., M.I.C.E., M.I.P.E.N.Z.
CONSULTING ENGINEER

PO BOX 53, MANGONUI, FAR NORTH. TEL/FAX 0-9-406 0668.

JOB NAME: *Windle Garage*

PAGE No:

SECTION: *Frame details*

2

JOB No. *1898*

DESIGNED: *RC*

DATE: *23/6/03*

CHECKED:

Beams over Rumpus

main beam spans 6.8m

$$G = 0.35 \times 3.6 + 0.5 + 0.3 = 2.06$$

$$Q = 1.5 \times 3.6 = 5.4$$

$$\therefore 1.2G + 1.6Q = 11.11 \text{ kN/m}$$

$$\therefore m^* = 50$$

for 310UB32

$$G + 0.7Q = 5.84$$

$$\delta_s = 0.013 \times 5.84 \times 6800^3 = 12.5 \text{ mm}$$

$$205000 \times 63.2 \times 10^6$$

544 o.k.

ULS - 310UB32 ok - midspan stiffening req.

Beam span. 6.6m. support 4.4 floor

— use 310UB32 as above.

Beam span 5.4 supports 4.8.

— use 310UB32 as above.

Foundation:

Work. beam in overgarage - 43 kN.

— req min 655 mm sq.

— use 700 sq thickening D12 @ 200 both ways

ULATION SHEET

RICHARD I.R. CATTERALL
M.A., M.I.C.E., M.I.P.E.N.Z.
CONSULTING ENGINEER

PO BOX 53, MANGONUI, FAR NORTH. TEL/FAX 0-9-406 0668.

JOB NAME: *Windle Gann*

PAGE No:

SECTION: *House details*

3

JOB No. *1898*

DESIGNED: *AK*

DATE: *23/6/03*

CHECKED:

Columns:

Outside walls are blockwork - O.K.

inner supports - use 3-100 x 50 plates

A = 12690 Kg = 0.45

∴ ~~AK~~

∴ $N_v = 12.69 \times 20.8 \times 0.45 \times 0.8 = 95$ $\phi N_v = 76$ O.K.

Project : Windlebourne
Descriptn : Floor beams

Section : 310UB40 Grade 300+

Major Axis Bending

Design Action $M_x^* = 85.0 \text{ kNm}$

$$\alpha_m = 1.17$$

$$\alpha_s = 0.52$$

$\alpha_m \alpha_s < 1.0$, $\Rightarrow$ Segment NOT Fully Restrained

$$M_{bx} = 1.17 * 0.52 * 202.6 = 124.0$$

$$\begin{aligned} \text{Major axis capacity Ratio} &= M_x^* / \phi M_{bx} \\ &= 0.76, \quad \text{---- OK ----} \end{aligned}$$

Shear Calculations (Unstiffened Web)

Design Action $V_x^* = 42.4 \text{ kN}$

Nominal Shear Yield capacity $V_w = 356.0 \text{ kN}$

$$\alpha_v = 2.43 \geq 1.0 \Rightarrow \text{full web shear capacity}$$

$$V_u = V_w = 356.0 \text{ kN}$$

$$\begin{aligned} \text{Shear capacity ratio} &= V_x^* / \phi V_u \\ &= 0.13, \quad \text{---- OK ----} \end{aligned}$$

===== SUMMARY =====

**** U.L.S. Capacity Check Passed, Load Cap. Ratio = 0.76 ---- OK ----

Project : Windlebourne
Descriptn : Floor beams

Section : 310UB32 Grade 300+

Major Axis Bending

Design Action $M_x^* = 50.0 \text{ kNm}$

User provided value for $\alpha_m = 1.17$

$\alpha_s = 0.53$

$\alpha_m \alpha_s < 1.0$, $\Rightarrow$ Segment NOT Fully Restrained

$M_{bx} = 1.17 * 0.53 * 149.4 = 93.4$

Major axis capacity Ratio = $M_x^* / \phi M_{bx}$
= 0.60, ---- OK ----

Shear Calculations (Unstiffened Web)

Design Action $V_x^* = 37.8 \text{ kN}$

Nominal Shear Yield capacity $V_w = 314.7 \text{ kN}$

$\alpha_v = 2.00 \geq 1.0 \Rightarrow$ full web shear capacity

$V_u = V_w = 314.7 \text{ kN}$

Shear capacity ratio = $V_x^* / \phi V_u$
= 0.13, ---- OK ----

SUMMARY

**** U.L.S. Capacity Check Passed, Load Cap. Ratio = 0.60 ---- OK ----

RICHARD I.R. CATTERALL
M.A., M.I.C.E., M.I.P.E.N.Z.
CONSULTING ENGINEER

PO BOX 53, MANGONUI, FAR NORTH. TEL/FAX 0-9-406 0668.

JOB NAME: *WINDLE BOURNE*

PAGE No: *SK A*

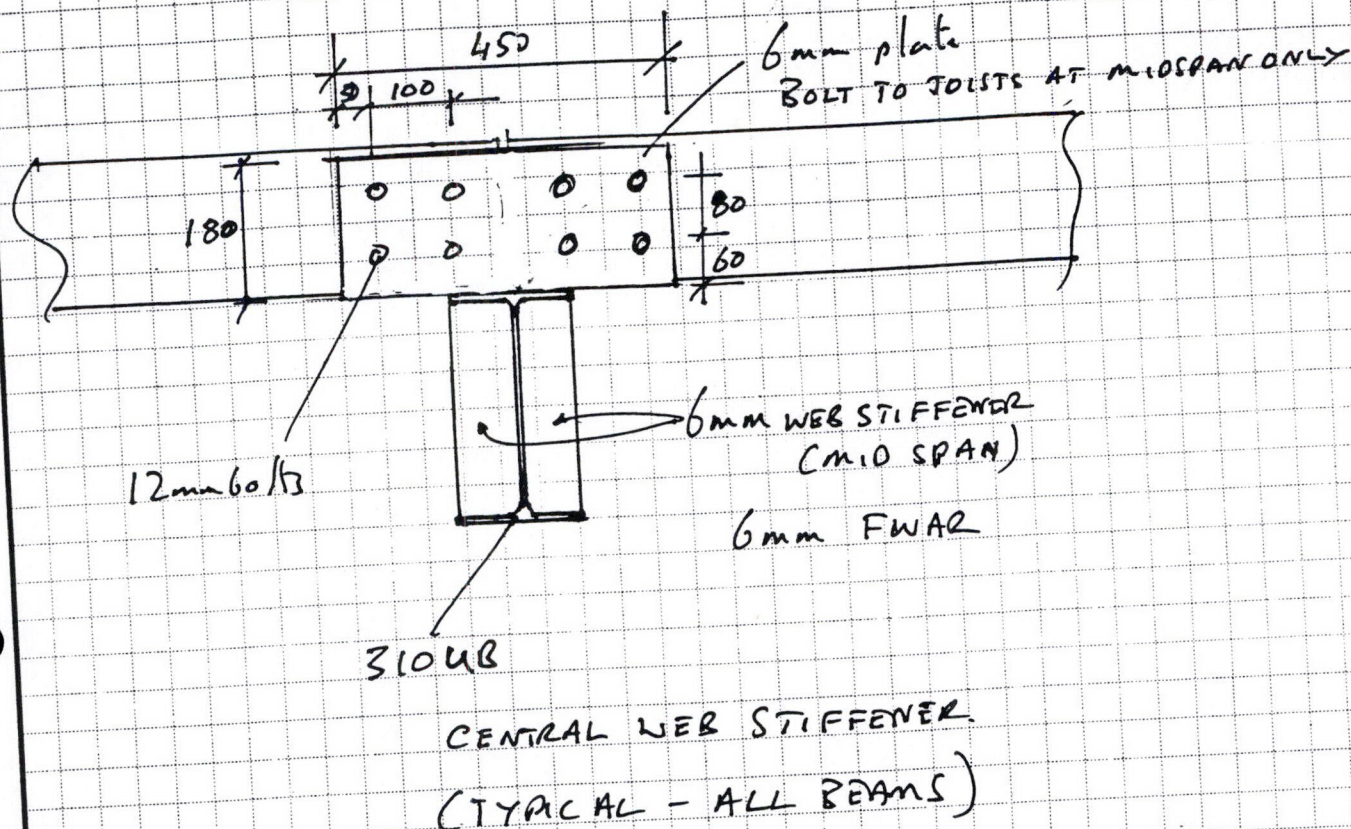
SECTION: *HOUSE DETAIL*

JOB No. *1898*

DESIGNED: *RE*

DATE: *23/6/03*

CHECKED:



ENDS OF BEAMS TO HAVE 6mm END PLATES.

BOLT BEAM TO BLOCKWALL - 2 - 16mm 60/B.

USE 3 - 100X50 STUDS UNDER BEAM AT TIMBERWALL

STRAP AND BOLT USING 2 - 12mm 60/B min.

Far North District
Council
Received

SPECIFICATIONS

WINDLEBORNE RESIDENCE

ECOHOMES™ LIMITED

SPECIFICATION

June 2003

Specification of the work to be done and the materials to be used in the erection and completion of a residence as per the accompanying plans.

for

Windleborne Residence

at

Rata Street, Ahipara

This specification is to be read in conjunction with the accompanying plans and any other drawing which may be issued during the currency of the contract. Any item in this specification and not shown on the plans and vice versa shall be equally binding as though included in both.

The contract and plans shall be signed and completed by all parties before the commencement of any work on the site. Any additions, omissions or variations to the contract shall be authorised in writing and agreed price stated.

Items specified in quote take precedence over this specification.

The owners are to ensure that all boundary marker pegs are in place and exposed for inspection.

CONTRACT DOCUMENTS

1. The accompanying plans
2. This specification
3. Construction - N.Z.S. 3604:1999
4. Letter of offer
5. Contract

PRELIMINARY & GENERAL (ALL TRADES)

1. Permits
The contractor shall arrange to obtain all permits to build. The contractor shall arrange all inspections and pay all fees as required by the local authorities.

2. Protection of work
All parts of the work liable to injury and all adjoining property, existing work, footways etc. are to be protected until completion of the contract.

3. P C Sums (Nett sums)
The P C sums quoted in this specification are nett and the contractor or sub-contractor concerned must add cartage, fixing charges and profit he required to all such items.

4. Site
Area to be built onto shall be cleared of all vegetation by contractor. Excavation is to be included by contractor. Any excess soil is to be left on the site. Access to the site to be provided by owner (all weather vehicle access).

5. By-laws
The whole of the work in this contract is to be carried out in strict accordance with the local authorities, and NZ Building Code.

6. Extent of work
This contract comprises the erection and completion in the soundest and most workmanlike manner of all the work shown on the accompanying plans and in accordance with this specification and the supply of all plant, tools, labour, materials, fixtures and fittings required for the due completion of this work.

7. Insurance

The contractor shall at all times, keep the whole of the works fully covered by insurance.

8. Temporary Services

The contractor shall arrange for all temporary services, pay all fees in connection therewith and remove same on completion of the contract. Sheds, power, water, scaffolding, unless otherwise noted in quote.

9. Maintenance

The contractor shall maintain the property for the period of 60 days after completion, and any damage done, arising during that time, through faulty workmanship or materials shall be made good at the contractor's expense.

10. Completion

On completion all trade debris is to be removed from the site and the building and windows left clean and ready for occupancy, with all services and mechanical parts in good working order.

EXCAVATOR

1. Generally

Remove all turf or other vegetation from the area to be built on.

Excavate the site to the levels shown on the plans (check original conditions).

Excavate as required for all wall footings, pile footings, steps etc. as shown on the plans. Footing excavations are to be taken down to a solid bearing and not to be less than 450mm deep. Excavations are to be stepped to suit the slope of the ground, and kept level at the bottom, maintained free from water or fallen material and shall be firm before placing reinforcing or concrete. Backfill and ram the earth around the foundations after concrete work has firmly set. Underfloor fill to be shale compacted in 150mm layers.

CONCRETER

1. Scope of Work

Comprises the setting out, boxing and placing of concrete in the foundations and floor slabs.

2. Materials

Concrete - All concrete shall satisfy the requirement of NZS 3109 and NZS 3104 with a specified strength of 20 MPa at 28 days. All concrete shall be supplied by an approved ready mixed concrete supplier.

Reinforcing - All reinforcing shall comply with NZS 3402:1973 and NZS 3422. All reinforcing is to be accurately placed.

Continuous Vapour Barrier - Lay 0.25mm polythene continuous vapour barrier complying with NZS 4229 Appendix E6 to all slabs except terraces, driveways, footpaths and carport slabs. Lap all joints and seal with pressure sensitive tape recommended by the manufacturer.

3. Formwork

Refer to NZS 3109 for methods of construction, removal, pouring and curing of concrete.

4. Concrete Footing and Foundation walls

Concrete footing and foundation walls shall be in accordance with NZS 4229 and as detailed on the drawings.

5. Concrete Ground Floor Slabs

All floor slabs shall be 100mm thick and comply with NZS 4229 Appendix E unless otherwise detailed. All ground floor slabs shall be laid on a Granular Base (refer to NZS 4229 Clause E5.2) compacted in layers not exceeding 100mm in thickness. Lay reinforcing mesh to all slabs. Locate reinforcing mesh 30mm from the top of the slab.

Finishing - All concrete ground floor slabs are to be true and straight surfaces, screeded, bull floated and finished with a steel float or power float to a finish. Tolerance on flatness to be within 3mm measured from a 3m straight edge.

Control Cuts - Cut control cuts 30mm deep to make slab areas no greater than 5m x 5m.

The contractor shall get the Local Authority Building Inspector to inspect the work prior to pouring any concrete.

BLOCKWORK

1. General

This section is to be read in conjunction with NZS 4229:1986 Concrete Masonry Buildings - not requiring specific design and NZS 4230:1990 The Design of Masonry Structures - requiring specific design.

2. Scope of Work

Supply and lay all grout solid-filled and partially-filled block foundation walls, concrete block retaining walls, concrete block walls, bond beams and concrete block columns as set out in NZS 4229 'Code of Practice for Concrete Masonry Buildings not Requiring Specific Design' and as shown on the plans.

3. Standards

All blockwork shall comply with NZS 3102, NZS 3109, NZS 3402, NZS 3133, NZS 4210, NZS 4229 and NZS 4230.

4. Materials

Blocks - All concrete blocks shall comply with NZS 3102

Mortar and Mortar Joints - All mortar and mortar joints shall comply with NZS 4210. All mortar joints shall be tooled with a rounded steel tooling iron immediately the initial setting of the mortar has occurred.

Water - Shall be fresh clean drinking quality.

Reinforcement - Shall be deformed type unless otherwise stated and shall comply with NZS 3402 Grade 300 or Grade 450.

Grout - All grout to be supplied by an approved ready mixed concrete supplier and comply with NZS 4210, 17.5 MPa compressive strength at 28 days cured, maximum aggregate size of 10mm.

CARPENTER

1. Generally

Allow to supervise and organise all sub-trades and excavations and arrange times of material deliveries.

2. Construction

All materials are to be the best of their respective kinds and grades, laid true to their various lines and levels and constructed in a proper tradesmanlike manner, to the whole of the works a sound construction in accordance with the local by-laws. All timber work abutting or resting on masonry units, concrete or brickwork is to be protected with bitumen-fabric damp proof course. All work to be done to NZS 3604:1999 standards.

Supply and fix the necessary trusses or rafters and braces as required to complete the roof framing and as detailed on the plans. Where detailed, the roof framing is to be constructed with engineer designed Gangnail trusses, fixed plumb, fastened to the plates with framing anchors, stiffened with runners and braced at each end of the building. Roof battens to be spaced to accommodate the roof covering and ridging and fastened to the trusses as detailed.

3. Exterior finish

All end grain joints are to be given a coat of primer.

Behind all wall linings and as detailed on the plans, fit Tyvek building paper lapped 100mm.

Supply and fit garage door as shown on plan (if applicable).

Grooved fascia and barge boards are to be fixed to level and straight lines, mitred, primed, where joined and fastened with galvanised nails. Veranda roof to be lined with flat Hardies 4.5mm sheets.

4. Interior finish

All joints screw holes and other imperfections are to be stopped flush by the painter.

Shower : To be specified by owner.

Bath : Allow to supply and install bath as specified by owner.

Ceiling linings to be as detailed on plans. Build in the various fittings as supplied under 'Plumber' and 'Joiner' trim around with splash boards primed and set in mastic and other finishing trim and moldings as required.

Skirtings : 60 x 10 FJ pine. Scotias all 40 x 18 pine to flat ceilings. Supply and fix the sundry internal moldings and trim as required.

Interior doors are to be fitted with three 90mm loose pin hinges. Architraves to be fitted in single lengths, fully glued 40 x 10 FJ pine. Interior doors flush paint quality.

All trim window and door frames FJ pine. All internal finishing timbers shall be sanded to remove machine marks and on completion, shall be free of all hammer marks, splits or other defects.

Cut for, attend on, and make good after all trades and provide and fix all necessary blocks for securing the work of all other trades.

All nail holes in exposed work (interior and exterior) are to be punched.

Insulation : all ceilings to be insulated with R2.0 Superfill. All external walls to be fitted with R1.8 insulation.

All gib-board to be stopped to Grade 4 painted finish.

Co-operate with the electrician in the building of a meter box.

WINDOWS

Powder colour aluminium windows with pine paint quality grooved reveals to be supplied and installed. All glazing to NZ safety standards.

ROOFER

1. Generally
Refer to plans.

Roofing fitted as per manufacturer's instructions. Allow galvanised nails and coloursteel apron flashings. Supply and fix all flashings, caps, pointing etc. to make the roof thoroughly watertight and birdproof. Coloursteel valleys.

PLUMBER AND DRAINLAYER

1. Generally
The whole of the plumbing and drainlaying shall be done in strict accordance with the local authorities by-laws and drains shall be laid by registered workmen only.

2. Exterior work
Supply and fix PVC Flowline spouting to all eaves, laid with even falls to 80mm diameter downpipes.

Contractor to supply all taps, shower mixers and roses as detailed in quote. Allow installation.

3. Water service
Lay on cold water from the tank, to a 180 litre mains pressure hot water cylinder. Supply and set up the cylinder, complete with casing, lagging and thermostatically controlled electric elements. Lay on hot and cold water services to the various fittings as shown on the plans and to two hose positions as directed. All water pipework butylene. PVC waste pipes.

4. Fittings
Provide and set up the fittings as shown on the plans and in the specification. Regular traps and wastes may be PVC.
WC - contractor to supply WC and vanities as specified by owner.
Washing machine - to be supplied by owner. Contractor to supply 1400 Supertub. Allow to fit and connect.

5. Drains
Stormwater to be taken in PVC pipes to 5500g water tank. Stormwater drainage to be completed as shown on plans. Sewer drains to be PVC pipes, 100mm laid with even falls and easy bends etc. as may be necessary to comply with the local authorities regulations.

ELECTRICIAN

1. Generally

This contract includes the supply and installation of the electric wiring system complete. The whole of the work should be carried out strictly in accordance with the local authorities by-law and the electrical contractor is to obtain all permits from the supply authority, pay all fees in connection therewith and arrange all inspections required.

2. Supply

Arrange a main supply to the building from pedestal including phone wiring.

3. Boards

Provide and set up where directed a switchboard panel with all necessary fuses, switches and mains switches properly mounted and labelled, and hinged on one side.

4. Lights

Provide and fix the light switches and power outlets as shown on the plans. All lights recessed downlights. with white plastic shades unless noted otherwise on plan. Contractor to supply and fit all lights. Exterior lights bulkhead type, supply and install sealed units.

5. Fittings

Allow to install stove. Allow to wire up the thermostatically controlled hot water cylinder element, supplied under 'Plumber'.

Earth all metal waste pipes and metal fittings as required by the regulations. Supply TV aerial sockets and aerial wiring. Supply phone sockets and wiring. TV aerial supply and installation not in contract. Phone connection and jackpoints not in contract.

PAINTER AND PAPERHANGER

1. General

Refer to all other sections which may have clauses affecting work done under this section.

2. Regulations and Standards

All work and materials shall be in accordance with the requirements of the Building Regulations 1992 and with the New Zealand Building Code Handbook and Approved Documents.

The contractor and sub-contractors undertaking this work shall obtain copies of the relevant sections of the New Zealand Building Code and documents relating to acceptable solutions. Where applicable the following Standards and their related documents shall form part of this Specification NZS/AS 2312:1984, NZS 3602:1995, NZS 7703:1985, NZMP 2312:1987, BS 4800:1981. Where there is conflict between any two Standards the requirements of the New Zealand Standard shall apply.

3. Scope

Paint materials shall be delivered in sound and sealed containers labelled clearly.

Work covered by this Specification is to provide all materials and execute all work necessary for the completion of the building decoration and includes all painting, varnishing, staining and polyurethaning.

Interior : All the walls and ceilings except bathrooms and laundry sealed with gib sealer/undercoat, sanded and given two coats of ultra-low-sheen acrylic (light colour throughout). All doors, window jambs, door frames and wet areas to be given two undercoats and one top coat of semi-gloss enamel. Exterior : any cedar to be given two coats Cabots natural stain. Fascia and over windows to be given two coats acrylic Timbacryl or Lumbersider.

4. Inspection of Previous Work

The painter shall inspect the finish of all surfaces to be painted, varnished etc. and report to the main contractor any deficiencies, defects, blemishes or contamination which could affect the provision of a first class, permanent finish. Any defects shall be corrected.

5. Workmanship

All work shall be executed in accordance with the requirements of the New Zealand Building Code, the relevant New Zealand Standard, the manufacturer's recommendation and to the best of trade practice. Before commencing any painting work, all exposed hardware and fittings which would be subject to damage by paint shall be removed and carefully stored ready for re-fixing in first class condition on completion of the painting work.

6. Completion

Remove all scaffolding, planks, rubbish and debris, thoroughly sweep up, clean windows inside and out, replace all hardware removed during the course of the work and leave the premises ready for occupation.

HEALTH AND SAFETY IN EMPLOYMENT

The sub-contractor shall diligently fulfill its obligations under the Health and Safety in Employment Act 1992 and shall hold harmless the Principal by attending to all matters contained in the following list:

The sub-contractor shall comply with the following : Government statutes, Council by-laws, Codes of Practice, guidelines, manufacturers specifications of equipment used. The sub-contractor will have, prior to the commencement of the Contract : identified hazards to employees, eliminated and/or isolated hazards if practicable, minimised hazards and protected employees where elimination and isolation are impractical.

The sub-contractors Health and Safety Policy and programme and the implementation of that policy and programme shall include : Health and Safety rules, safe work practices, accident investigation procedures, hazard investigation and control, standards, of training to ensure that staff are adequately trained, emergency procedure, safety equipment, specific job instructions, procedures and work permits applicable.

COMPLETION

On completion the building is to be left clean and tidy, windows and other glasswork cleaned, and all trade debris is to be removed from the site and the building left clean and ready for occupancy.

FLOOR COVERINGS

By owner.

Far North District
Council
Received

24th September 2003

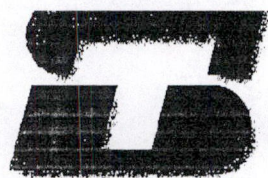
Far North District Council
Private Bag 752
Kaikohe

Dear Ken,

RE: REF ABA20040256:VRN 00013194-04

Please find enclosed Manufacturers specifications for roof cladding.

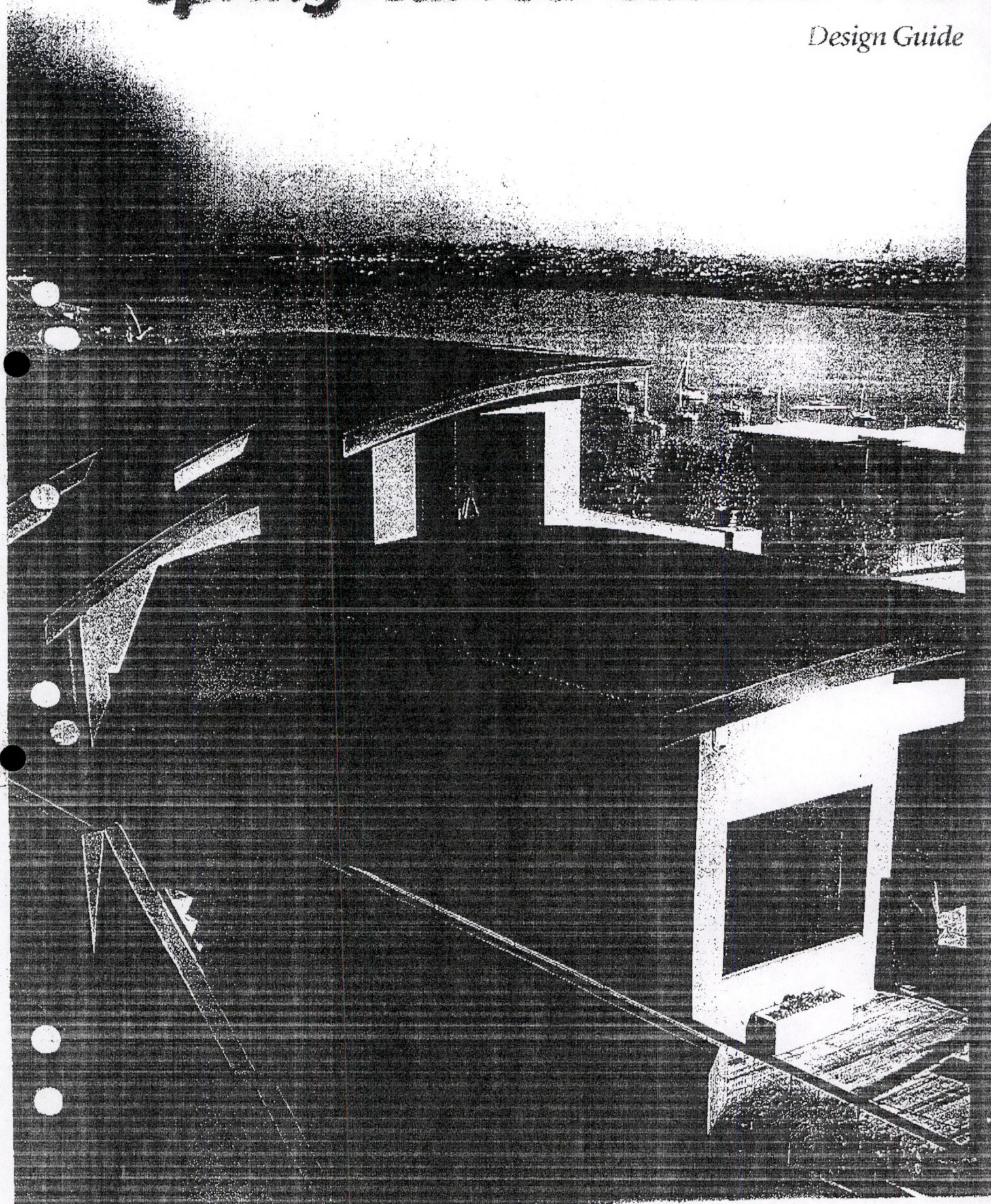
Thankyou and Regards
Roger Windlebourne
Phone 09 4080083



STEEL & TUBE
ROOFING PRODUCTS

Spring Curved Custom Orb

Design Guide



SPRING CURVED CUSTOM ORB

Design Guide

Introduction

Spring or drape curving is the name given to the roof installation process whereby straight sheets of roofing are fastened to a curved structure without prior curving of the sheets.

This Producer Statement is designed primarily for convex spring curving over an apex, however much of the information can be applied to pitched curved roof sections and concave spring curving.

Objective

The objective of this Producer Statement is to give advice on design and installation of sprung curved roofing over an apex utilising Steel & Tube CUSTOM ORB corrugated roofing.

Note: Due to varying dimensions and tolerances between manufacturers, it cannot be assumed that the advice contained herein is applicable to generic brands of corrugate roofing.

Functional Requirements

To meet the objective, the roofing installation must meet the performance requirements of the Building Act in terms of External Moisture, Strength, and Durability. Other design issues particular to this type of construction should also be considered such as aesthetics, ventilation, sheet end details and warranties.

Performance

External moisture

Maximum radius is determined by the ability of the roof section to discharge rainwater without flooding of the side lap. Greater radii result in longer regions of low pitched roofing about the apex, giving greater potential for water levels to rise above lap height. Maximum recommended radius is 35 meters.

In all cases laps should be sealed with 3 mm x 16 mm self-adhesive closed cell PVC nitrile tape (Lap Sealing Tape) where pitch is less than 8°. This provides a barrier to water, as well as ensuring that an effective capillary gap is present. Penetrations should be avoided where pitch < 5°.

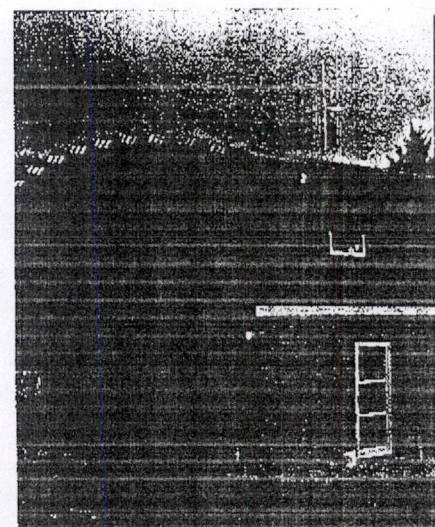
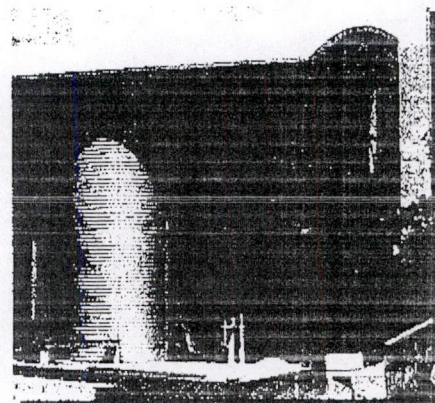
Strength

Bearing in mind that traffic damage to flat areas can be both more likely and have more severe consequences than with pitched roofs, it is recommended that internal purlin spacings be reduced where pitch is less than 5°. Details are shown on the accompanying Material Selection Chart.

As torsional forces from the roof sheeting will impose greater load on fasteners, screws are required rather than driven fasteners. Purlin to rafter connections should also be designed to accommodate these additional forces, particularly at the sheet ends.

Durability

Normally, Zincalume and Colorsteel® products are only warrantable where pitch is a minimum of 3°. Where Custom Orb roofing is curved over an apex, this can be relaxed provided that



there are no obstructions to the free flow of water over the roof area, and the pitch is at least 5°.

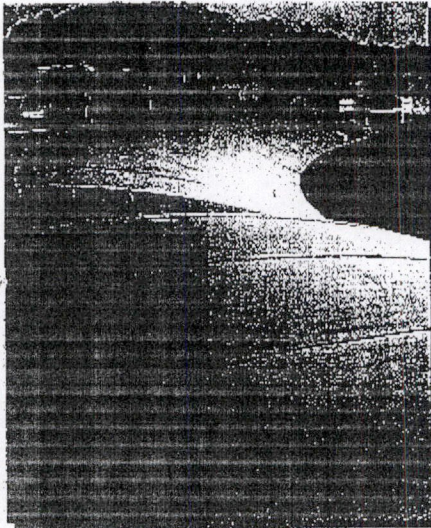
End laps should be avoided wherever possible, and must not occur where pitch is less than 5°. In all cases, they should be sealed with neutral cure silicon sealant or lap seal tape at both ends of the lap.

Other Design Issues

Aesthetics

Different material thicknesses and tensile strengths have different propensities for spring curving without distortion. As this is difficult to accurately predict in all cases, side laps should face away from the line of sight where practical. Purlin top edges should be in line with roof plane.

Minimum radii for different gauges and material strengths are shown in the accompanying chart. For radii less than 9 meters, roll curving in .55 mm G300 material is required.



Unwashed Areas

These are created when spring curved corrugate roofs are installed over outriggers at the gable ends and eaves, leaving the underneath of the roof exposed. Regular maintenance must be relied upon to achieve durability in these areas, which is often hard to achieve given site constrictions, human frailty and the difficulty in achieving a reliable watertight seal at the junction of walls and roof undersurfaces.

It is recommended that when installed over outriggers, particularly in a Severe or Very Severe marine environment, the exposed underneath surface is covered with a suitable flat sheet material.

Sheet ends

Sheet ends must be designed with sufficient fall to prevent water run back at the lower end, and leakage, or entrapment causing corrosion, at the top end.

Sheet lower ends occurring at less than 8° pitch should be drip formed to prevent run back, and should not occur at less than 5°. Exposed ends

should have profiled foam fitted under the roof to prevent wind borne moisture ingress.

Sheet upper end should not terminate at less than 3° pitch. Consideration should be given to head flashing detail at low pitches and exposed sites, with greater coverage and/or profiled foam required in severe conditions.

Ventilation

With spring curved design for a dwelling when the ceiling line is above the rafter and insulation is placed directly below the roofing, internal moisture and thermal noise problems can ensue. Ventilation requirements need to be addressed.

Where attic space is minimal, a vapour barrier must be placed between the ceiling and the insulation. Insulation should be overlaid with building paper on the top side, and a gap of at least 25 mm should be present between the building paper and the roofing. The roof must be allowed to breathe, profiled foam sealant under sheet ends should be avoided where possible, and vents should be considered at the apex of gable end soffits.

Any concentrated moisture sources from inside the building such as produced by cooking, bathing, or gas heating activities, should be ventilated directly to the outside of the building envelope.

Spring Curved Custom Orb Material Selection Guide

Gauge	Grade	Minimum Radius	Maximum Radius	Internal span pitch < 8°	End span pitch < 8°	Overhang (Stiffened)
.40 mm	G 550	12 meters	35 meters	.900	.800	.150 (.250)
.55 mm	G300	10 meters	35 meters	1.000	.900	.200 (.300)
.55mm	G550	9 meters	35 meters	1.200	1.000	.250 (.400)

Flashings

The need to curve barges affects their design. Metal barges may be sectional, crimp curved or lock-seamed, PVC waste pipe can also be used. Your local Steel & Tube branch representative will make recommendations for barge details that are available in your area.

Curved apron flashings are normally manufactured by ~~lock seaming~~ crimped barges.

Installers

A list of recommended installers for your area is available from our website or your local Steel & Tube Roofing sales office

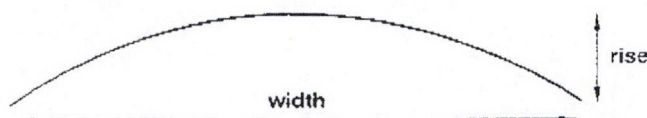
Warranties

Provided the advice contained herein is adhered to and the roof is designed, installed and maintained in accordance with good trade practice and manufacturer's published literature, the normal warranties available for the building type, material, and exposure condition will apply.
See Steel & Tube Roofing Product Guide for details.

Formulae

For determining the radius (r) of a curve, $r = (\text{width}^2 + (4 \times \text{rise}^2)) \div (8 \times \text{rise})$

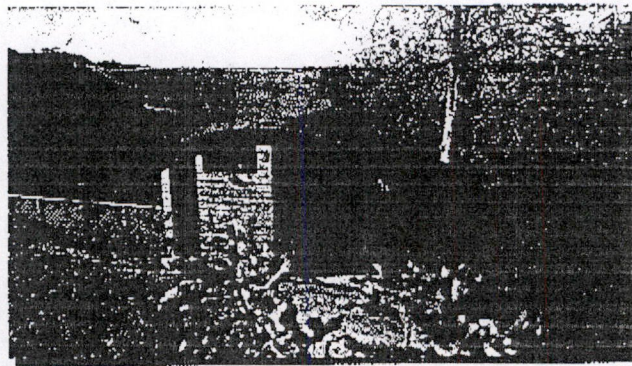
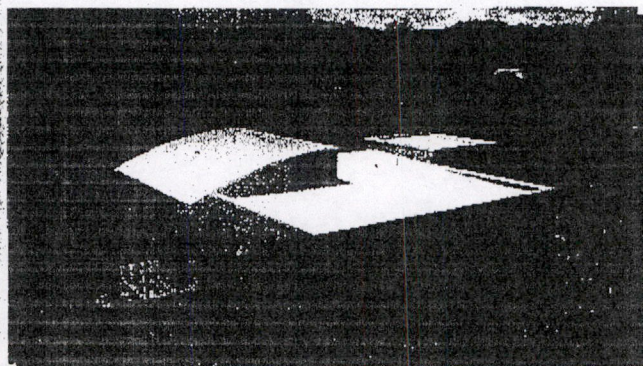
For determining length of seal (s) to where pitch > 8°, $s = 0.035 \times r \times 8$



Disclaimer

ALL SCREW FIXED

The information contained in this brochure is correct to the best of our knowledge at time of printing and is based on experience with "typical" spring curved applications. It is designed as a general design guide and is not intended as a blueprint for suitability for any specific installation.



WHANGAREI
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Otaika
PO Box 1869
Ph: 09 438 4600
Fax: 09 438 0342

NORTH SHORE
2 Ride Way
Nth Hbr Ind Estate
PO Box 100-182
Ph: 09 415 8080
Fax: 09 415 9192

AUCKLAND
14 Kenwyn Ave
East Tamaki
PO Box 58-216
Ph: 09 274 4056
Fax: 09 274 8972

HAMILTON
32 Kaimiro St
Pukete Ind Estate
PO 10 458
Ph: 07 850 9200
Fax: 07 850 9330

TAURANGA
67 Koromiko St
Judea
PO Box 2001
Ph: 07 578 1089
Fax: 07 577 0186

WELLINGTON
201 Gracefield Rd
Lower Hutt
PO Box 36 082
Ph: 04 568 4359
Fax: 04 568 6740

CHRISTCHURCH
106 Antigua St
Sydenham
PO Box 7306
Ph: 03 377 0994
Fax: 03 377 2680

Visit the Steel & Tube Holdings website: www.stroofing.co.nz

STEEL & TUBE
ROOFING PRODUCTS

R
MEMBER OF ROOFING
ASSOCIATION N.Z.



REF: ABA: BC-2004-256
PROPERTY: 10 Rata Street, Waipapakauri 0486

14 June 2007

Roger Ian Windlebourne and Bernadette Ruhia Windlebourne
Wireless Rd
RD 2
Kaitaia 0482

Dear Sir / Madam

RE: NEW DWELLING val 13-194-04, 10 Rata Street, Waipapakauri 0486

An inspection on 12 June 2007 at 10 Rata Street, Waipapakauri 0486, revealed the following will need attention.

- ✓ 1. Underfloor insulation required to garage area.
- ✓ 2. Solid 200 x 50 nogs required to centre span of floor joist, garage area as shown (1 bay).
- ✓ 3. Roofing and exterior wall cladding manufacturers warranty required.
- ✓ 4. PS from exterior plaster applicator/manufacture required.
- ✓ 5. PS from tiler for wet area membrane to tiled showers.
- * 6. As Built drainage plan required. (Kaitaia Plumbing). *check office records.*
- ✓ 7. Electrical Code Compliance required.
- ✓ 8. Gas Certificate for gas oven installation, also check venting requirement (if any) for gas bottle in kitchen cupboard.
- ✓ 9. Please find attached an invoice for 3 extra invoices as only 9 were pre paid.

Once this has been completed you will need to re-book a final inspection at the Kaitaia Service Centre by phoning 0800 920 029 and ask to be put through to this office and quote your **Building Consent Number ABA BC-2004-256**.

Please do not hesitate to contact Kaikohe Customer Services (Building) staff or myself on 0800 920 029 should you wish to discuss this matter further.

Yours faithfully

Dave Currie
BUILDING OFFICER



FAR NORTH DISTRICT COUNCIL

Private Bag 752, Memorial Ave, KAIKOHE 0400
Freephone: 0800 920 029, Ph: (09) 405 2750, Fax: (09) 401 2137
Email: ask.us@fndc.govt.nz, Website: www.fndc.govt.nz

REF:ABA20040256 : VRN 00013-194-04

Thursday, September 18, 2003

**ROGER & BERNADETTE WINDLEBOURNE
WIRELESS RD
RD 2
KAITAIA 0500**

Dear Sir or Madam,

RE: NEW DWELLING

Thank you for lodging your building application with the Far North District Council.

Initial vetting of your application has highlighted the need for further information to be provided to enable the process of issuing your consent to continue. The time period for processing your application has been suspended under Section 34 of The Building Act 1991, however this will be resumed as soon as the necessary information as listed below is received.

BUILDING ASPECT:

Please supply 3 x sets of the following:

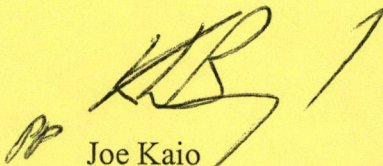
1. Manufacturers specifications for roof cladding.

It would assist considerably if you would include your consent number (**ABA20040256**) when responding. This will ensure the information provided is included with your application and that processing continues with the minimum of delay.

Please return the information to the Building Office at Kaikohe.

If I can provide further information in regard to this or any other matter, please contact me, as I will be more than happy to be of assistance.

Yours faithfully,



Joe Kaio

BUILDING OFFICER/ENVIRONMENTAL SERVICES

REQUEST FOR INFORMATION (S 30)

NAME: <u>WINDLEBOURNE</u>	DATE: <u>15.9.03</u>	PIM/BC: _____
VALUATION No: _____	LEGAL Desc: _____	
BUILDING: _____	LOCATION: _____	

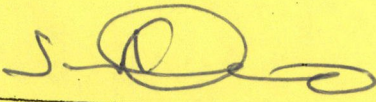
Re: PIM / BC / BOTH

In order to process your application for a project information memorandum, the following information is requested. The time period for processing is hereby suspended as provided for under S30 and will not be issued until the information is received.

Resource Planner: _____ Date: _____

Engineer: _____ Date: _____

Plumbing & Drainage
Inspector: _____ Date: _____

Building Inspector:  Date: 15.9.03

PLEASE SUPPLY 3 x SETS OF MANUFACTURES SPECIFICATIONS
FOR ROOF CLADDING.

Far North District
Council
Received

24th September 2003

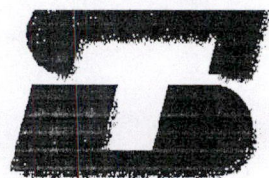
Far North District Council
Private Bag 752
Kaikohe

Dear Ken,

RE: REF ABA20040256:VRN 00013194-04

Please find enclosed Manufacturers specifications for roof cladding.

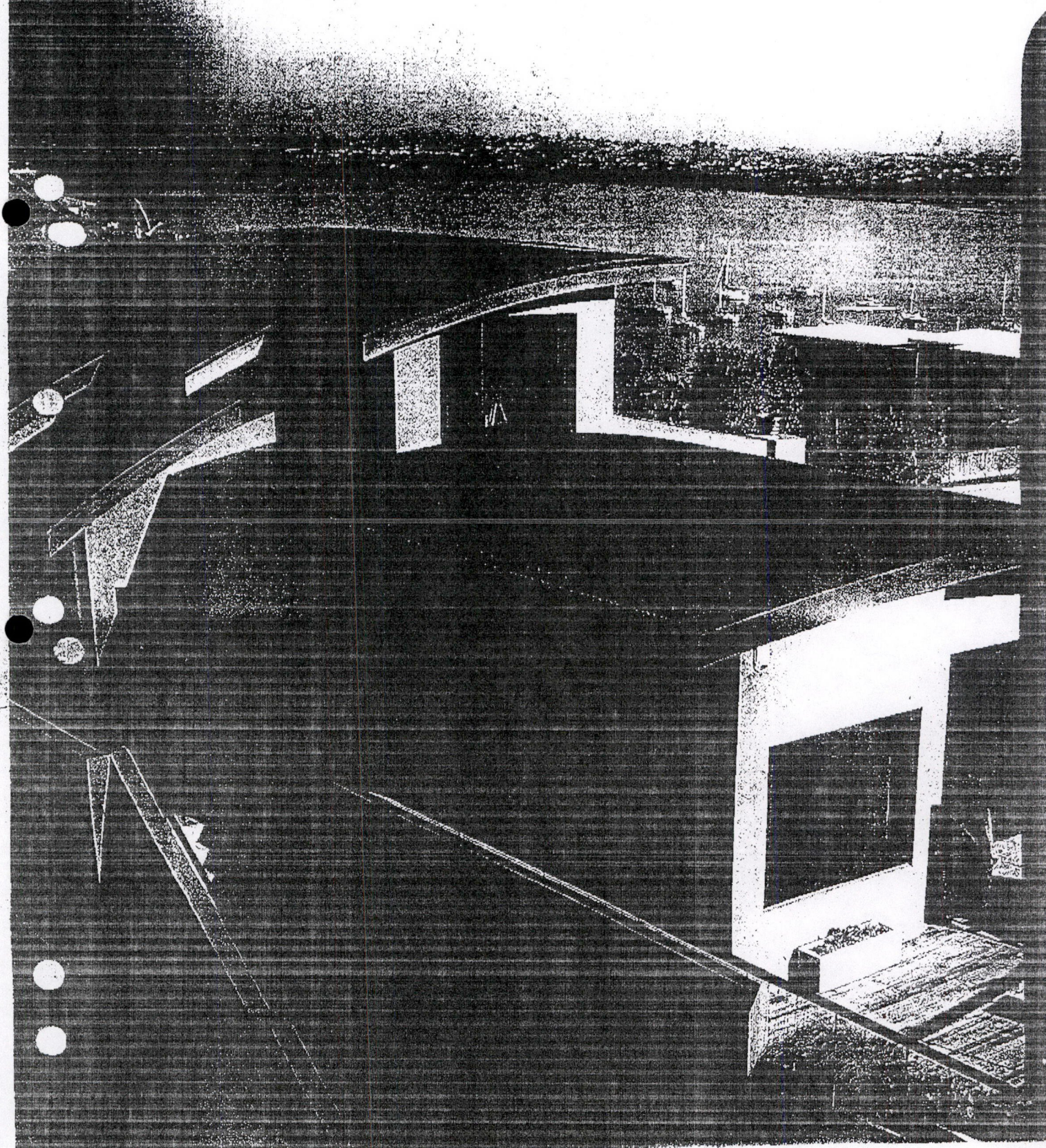
Thankyou and Regards
Roger Windlebourne
Phone 09 4080083



STEEL & TUBE
ROOFING PRODUCTS

Spring Curved Custom Orb

Design Guide



SPRING CURVED CUSTOM ORB

Design Guide

Introduction

Spring or drape curving is the name given to the roof installation process whereby straight sheets of roofing are fastened to a curved structure without prior curving of the sheets.

This Producer Statement is designed primarily for convex spring curving over an apex, however much of the information can be applied to pitched curved roof sections and concave spring curving.

Objective

The objective of this Producer Statement is to give advice on design and installation of sprung curved roofing over an apex utilising Steel & Tube CUSTOM ORB corrugated roofing.

Note: Due to varying dimensions and tolerances between manufacturers, it cannot be assumed that the advice contained herein is applicable to generic brands of corrugate roofing.

Functional Requirements

To meet the objective, the roofing installation must meet the performance requirements of the Building Act in terms of External Moisture, Strength, and Durability. Other design issues particular to this type of construction should also be considered such as aesthetics, ventilation, sheet end details and warranties.

Performance

External moisture

Maximum radius is determined by the ability of the roof section to discharge rainwater without flooding of the side lap. Greater radii result in longer regions of low pitched roofing about the apex, giving greater potential for water levels to rise above lap height. Maximum recommended radius is 35 meters.

In all cases laps should be sealed with 3 mm x 16 mm self-adhesive closed cell PVC nitrile tape (Lap Sealing Tape) where pitch is less than 8°. This provides a barrier to water, as well as ensuring that an effective capillary gap is present. Penetrations should be avoided where pitch < 5°.

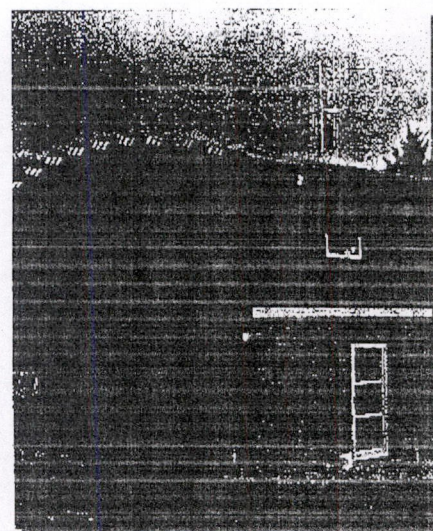
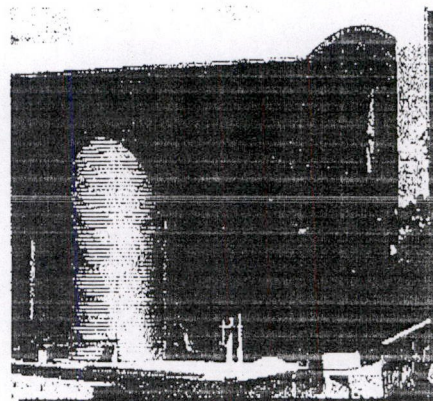
Strength

Bearing in mind that traffic damage to flat areas can be both more likely and have more severe consequences than with pitched roofs, it is recommended that internal purlin spacings be reduced where pitch is less than 5°. Details are shown on the accompanying Material Selection Chart.

As torsional forces from the roof sheeting will impose greater load on fasteners, screws are required rather than driven fasteners. Purlin to rafter connections should also be designed to accommodate these additional forces, particularly at the sheet ends.

Durability

Normally, Zinalume and Colorsteel® products are only warrantable where pitch is a minimum of 3°. Where Custom Orb roofing is curved over an apex, this can be relaxed provided that



There are no restrictions to the free flow of water over the material, and the material must be installed in a way that allows water to flow freely over the material.

End laps should be avoided wherever possible, and must not occur where pitch is less than 5°. In all cases, they should be sealed with neutral cure silicon sealant or lap seal tape at both ends of the lap.

Other Design Issues

Aesthetics

Different material thicknesses and tensile strengths have different propensities for spring curving without distortion. As this is difficult to accurately predict in all cases, side laps should face away from the line of sight where practical. Purlin top edges should be in line with roof plane.

Minimum radii for different gauges and material strengths are shown in the accompanying chart. For radii less than 9 meters, roll curving in .55 mm G300 material is required.



Unwashed Areas

These are created when spring curved corrugate roofs are installed over outriggers at the gable ends and eaves, leaving the underneath of the roof exposed. Regular maintenance must be relied upon to achieve durability in these areas, which is often hard to achieve given site constrictions, human frailty and the difficulty in achieving a reliable watertight seal at the junction of walls and roof undersurfaces.

It is recommended that when installed over outriggers, particularly in a Severe or Very Severe marine environment, the exposed underneath surface is covered with a suitable flat sheet material.

Sheet ends

Sheet ends must be designed with sufficient fall to prevent water run back at the lower end, and leakage, or entrapment causing corrosion, at the top end.

Sheet lower ends occurring at less than 8° pitch should be drip formed to prevent run back, and should not occur at less than 5°. Exposed ends

should have profiled foam fitted under the roof to prevent wind borne moisture ingress.

Sheet upper end should not terminate at less than 3° pitch. Consideration should be given to head flashing detail at low pitches and exposed sites, with greater coverage and/or profiled foam required in severe conditions.

Ventilation

With spring curved design for a dwelling when the ceiling line is above the rafter and insulation is placed directly below the roofing, internal moisture and thermal noise problems can ensue. Ventilation requirements need to be addressed.

Where attic space is minimal, a vapour barrier must be placed between the ceiling and the insulation. Insulation should be overlaid with building paper on the top side, and a gap of at least 25 mm should be present between the building paper and the roofing. The roof must be allowed to breathe, profiled foam sealant under sheet ends should be avoided where possible, and vents should be considered at the apex of gable end soffits.

Any concentrated moisture sources from inside the building such as produced by cooking, bathing, or gas heating activities, should be ventilated directly to the outside of the building envelope.

Spring Curved Custom Orb Material Selection Guide

Gauge	Grade	Minimum Radius	Maximum Radius	Internal span pitch < 8°	End span pitch < 8°	Overhang (Stiffened)
.40 mm	G 550	12 meters	35 meters	.900	.800	.150 (.250)
.55 mm	G300	10 meters	35 meters	1.000	.900	.200 (.300)
.55mm	G550	9 meters	35 meters	1.200	1.000	.250 (.400)

Flashings

The need to curve barges affects their design. Metal barges may be sectional, crimp curved or lock-seamed, PVC waste pipe can also be used. Your local Steel & Tube branch representative will make recommendations for barge details that are available in your area.

Curved apron flashings are normally manufactured by ~~lock seaming~~ crimped barges.

Installers

A list of recommended installers for your area is available from our website or your local Steel & Tube Roofing sales office

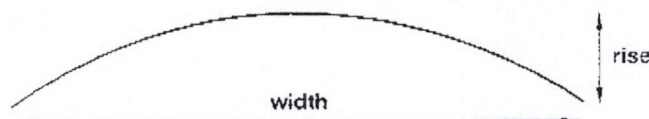
Warranties

Provided the advice contained herein is adhered to and the roof is designed, installed and maintained in accordance with good trade practice and manufacturer's published literature, the normal warranties available for the building type, material, and exposure condition will apply.
See Steel & Tube Roofing Product Guide for details.

Formulae

For determining the radius (r) of a curve, $r = (\text{width}^2 + (4 \times \text{rise}^2)) \div (8 \times \text{rise})$

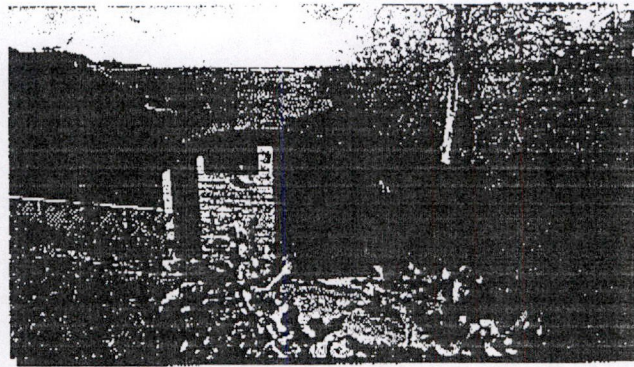
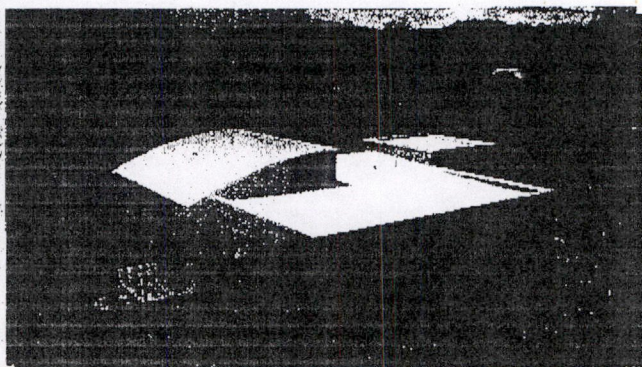
For determining length of seal (s) to where pitch > 8°, $s = 0.035 \times r \times 8$



Disclaimer

ALL SCREW FIXED

The information contained in this brochure is correct to the best of our knowledge at time of printing and is based on experience with "typical" spring curved applications. It is designed as a general design guide and is not intended as a blueprint for suitability for any specific installation.



WHANGAREI
9 Southend Ave
Otaika
PO Box 1869
Ph: 09 438 4600
Fax: 09 438 0342

NORTH SHORE
2 Ride Way
Nth Hbr Ind Estate
PO Box 100-182
Ph: 09 415 8080
Fax: 09 415 9192

AUCKLAND
14 Kenwyn Ave
East Tamaki
PO Box 58-216
Ph: 09 274 4056
Fax: 09 274 8972

HAMILTON
32 Kaimiro St
Pukete Ind Estate
PO 10 458
Ph: 07 850 9200
Fax: 07 850 9330

TAURANGA
67 Koromiko St
Judea
PO Box 2001
Ph: 07 578 1089
Fax: 07 577 0186

WELLINGTON
201 Gracefield Rd
Lower Hutt
PO Box 36 082
Ph: 04 568 4359
Fax: 04 568 6270

CHRISTCHURCH
106 Antigua St
Sydenham
PO Box 7306
Ph: 03 377 0994
Fax: 03 377 2680

Visit the Steel & Tube Holdings website: www.stroofing.co.nz



STEEL & TUBE
ROOFING PRODUCTS



PRODUCER STATEMENT

DESIGN: ON-SITE EFFLUENT DISPOSAL SYSTEMS (T.P.58)

ISSUED BY: Graeme Festes (approved qualified design professional)

TO: Roger Windleborne (owner)

TO BE SUPPLIED TO: Far North District Council

PROPERTY LOCATION: Rata street Waipap Rump

LOT.....DP.....VALUATION NUMBER.....

TO PROVIDE : Design an on-site effluent disposal system in accordance with Technical paper 58 and provide a schedule to the owner for the systems maintenance.

THE DESIGN: Has been in accordance with G13 (Foul Water) G14 (Industrial Liquid Waste) B2 (durability 15 years) of the Building Regulations 1992.

As an independent approved design professional covered by a current policy of Professional Indemnity Insurance (Design) to a minimum value of \$200,000.00, I BELIEVE ON REASONABLE GROUNDS that subject to:

(1) The site verification of the soil types.

(2) All proprietary products met the performance requirements.

The proposed design will met the relevant provisions of the Building Code and 8.15 of The Far North District Council Engineering Standards.

Graeme Festes (Signature of approved design professional)

Registered draughtsman (Professional qualifications)

10570 (Licence Number or professional Registration number)

Address 14 Allen Bell Drive

Kaitiaki

Phone Number 094080210

Fax Number

Cell Phone

Date 8/9/03

Note: This form is to accompany every application for a Building Consent incorporating a T.P.58. Approval as a design professional is at Councils discretion.

APPENDIX E: ON-SITE WASTEWATER DISPOSAL SITE EVALUATION - SITE ASSESSMENT AND SUBSOIL INVESTIGATION CHECKLIST

1.0 SITE EVALUATOR(S)		
1.1 Name:	Company/Agency:	
<i>Graeme Foster</i>	<i>Kaitiaki Plumbing</i>	
Designation:	Address:	
<i>Drainlayer</i>	<i>14 Allen Bay Drive</i>	
	<i>Kaitiaki</i>	
	Phone: <i>(09) 4080210</i> Fax:	
1.2 Additional Staff Involved:		
Name(s):	\	
Designation(s):	\	
Involvement:	\	
2.0 SITE INFORMATION		
2.1 Location Details:		
Locality:		
Owner:	<i>Roger Windleborne</i>	
Address:		
Survey Plan Details:		
Regional Council Area:	<i>Northern</i>	
Local Council Area:	<i>Far North</i>	
Size/Shape/Layout: (Sketch Plan Details Attached, Ref. No.)		
Photograph Attached: (delete one) YES / NO (Specify details)		
2.2 Work Undertaken:		
Details	Date (month, day)	Weather (on day, and over preceding week)
<i>site inspection</i>	<i>8/10/03</i>	<i>showers / rain</i>
\	\	\
\	\	\
\	\	\

3.0 SITE ASSESSMENT

3.1 Topography

Slope:

Ground Cover:

*grass / low scrub.**undulating*

Geology:

sand over sand dune base.

Drainage Patterns: (sketch details attached)

Available Clearance: (sketch details attached)

Boundaries

✓

Wells, Bores

✓

Waterways

✓

Embankments

Stands of trees, shrubs

Buildings

Other (specify)

3.2 Site Stability:

Is expert evaluation necessary? (delete one) YES / NO

If NO, why not?

Natural undisturbed site.

If YES, attached stability report and give details here of:

Author:

Designation:

Company/Agency:

Date of Report:

3.3 Drainage Controls:

Depth of seasonal watertable:

WINTER

SUMMER

not encountered with test bore.

Need for groundwater cut off drains?

Need for surface water collector drains?

*To be diverted away from
soakage area.*

3.4 Climate:

Annual rainfall:

1500

mm

Annual Potential :

15-20

mm

Evapo-transpiration

General comment: (rainfall intensities, seasonal variation, etc)

Some heavy seasonal falls.

3.5 Intended Water Supply Source:Rainwater (roof collection): ☒

Bore/Well:

Public supply:

3.6 Local Experience (existing on-site systems):

Number of systems in locality:

Performance: % Satisfactory % Failed % Problems evident

Reasons: for satisfactory performance *soakage is this area**is generally very good.*for problems *no known problems.*

for failures (give type/nature of failure)

3.7 Availability of Reserve/Buffer Areas:Reserve area available for extensions*; *100* % of design area.

Buffer area*; (between site development and on-site disposal design and reserve areas)

% of total site area (*Show details on sketch plan).

4.0 SUBSOIL INVESTIGATION4.1 Soil Profile Determination:Method: Test Pit Borehole ☒

Other (specify)

Reporting: (attach detailed soil report as appropriate, Ref.)

4.2 Percolation Testing:

Carried out: (delete one) YES/NO

If YES, specify method: *bore holes.*Test results: (attach detailed report as appropriate, Ref.) ☒

4.3 Estimated Soil Category

<u>Soil Category</u>	<u>Description</u>	<u>Tick One</u>
1	Gravel, coarse sand; rapid draining	☐
2	Coarse to medium sand; free draining	☒
3	Medium-fine and loamy sand; good drainage	☒
4	Sandy loam, loam and silt loam; moderate drainage	☐
5	Sandy clay-loam, clay-loam and silty clay-loam; moderate to slow drainage	☐
6	Sandy clay, non-swelling clay and silty clay; slowly draining	☐
7	Swelling clay, grey clay, hardpan; poorly or non-draining	☐

Reasons for placing in Stated Category: *Result of soak test*

Neighbouring properties do not have any problems with soakage disposal.

5.0 GENERAL COMMENTS5.1 Need for Groundwater Quality Protection:

5.2 Type of Disposal System considered best suited to Site(s): *5m wide trenches or soakage rings*

5.3 Minimum Disposal area Recommended for the Site *1000m²* (comprising disposal field, space between and surrounding the disposal field elements, and the reserve area).

5.4 Design Considerations:

Any specific environmental constraints?

Any specific public health constraints?

5.5 Other Comment:

Soakage is very good on this site.

Signature: *C. White*Date: *8/9/03*

APPENDIX F: DESIGN SIZE AND DISPOSAL AREA REQUIREMENTS

Disposal Systems and Site Conditions	Design Size (Level or Slightly Sloping Sites Most Conservative Design Loading)		Design Area Requirements
	3 bedroom 5 persons 700 litres/day	2 bedroom 4 persons 450 litres/day (full water saving devices)	
1.0 TRENCHES <u>Soil Category</u> <u>Loading Rate</u> 2 35 mm/day 3 20 mm/day 4 15 mm/day 5 10 mm/day	20 m ² 35 m ² 47 m ² 70 m ²	13 m ² 23 m ² 30 m ² 45 m ²	(a) 20 m ² gives 3 trenches 450 mm wide and 15 m length, 2.0 m centres, overall enclosing area 102 m ² (with reserve area 102 m ² , total is 204 m ²). (b) 70 m ² gives 5 trenches 450 mm wide and (2 x 15) m length. 2.0 m centres, overall enclosing area 340 m ² (with reserve area 340 m ² , total is 680 m ²).
2.0 BEDS <u>Soil Category</u> <u>Loading Rate</u> 2 20 mm/day 3 12.5 mm/day 4 10 mm/day	35 m ² 56 m ² 70 m ²	23 m ² 36 m ² 45 m ²	(a) 35 m ² gives 2 beds 1500 mm wide and 12 m length at 3 m centres, overall enclosing area 90 m ² (with reserve area 90 m ² , total is 180 m ²). (b) 70 m ² gives 4 beds 1500 mm wide and 12 m length at 3 m centres, overall enclosing area 180 m ² (with reserve area 180 m ² , total is 360 m ²).
3.0 INFILTRATIVE SYSTEMS Loading rate 200 mm/day (Soil Categories 1 and 2 with no site constraints)	3.5 m ²	2.25 m ²	(a) 3.5 m ² gives 3 of 1200 mm dia. soakage holes (3.0 m clearance between each) overall enclosing area 53 m ² (with reserve area 53 m ² , total is 106 m ²). (b) 3.5 m ² gives one rectangular pit, 1200 mm by 3000 mm, overall enclosing area 25 m ² (with reserve area 25 m ² total is 50 m ²).

Disposal Systems and Site Conditions	Design Size (Level or Slightly Sloping Sites Most Conservative Design Loading)		Design Area Requirements
4.0 ETS (EVAPO-TRANSPIRATION SEEPAGE) AND ASB (AEROBIC SEEPAGE BED) Loading rate 10 mm/day (Soil Categories 5 and 6)	70 m ²	45 m ²	(a) Pre-treatment via two septic tanks in series (2700 litres plus 1800 litres) or "Ecotank". Pumped dose loading. (b) Bed width 1500 mm with crowned and grassed (or ET planted) surface, plus surface water and groundwater controls. (c) 70 m² gives 4 beds 1500 mm wide and 12 m length at 3 m centres, overall enclosing area 180 m² (with reserve area 180 m², total is 360 m²).
5.0 TET (TOTAL EVAPO-TRANSPIRATION WITH OVERFLOW) Loading rate 7 mm/day (Soil Categories 1 and 2, and which have potential for significant groundwater impacts)	100 m ²	65 m ²	(a) Pre-treatment via two septic tanks in series (2700 litres plus 1800 litres) or "Ecotank". (b) Bed width 3.0 m with crowned surface planted in canna lilies or other high transpiration plantings; bed fully sealed with plastic liner. (c) 100 m² gives 2 beds each 16.7 m length, spacing 2 m between each, overall enclosing area (including overflow trench) 255 m² (with 50% reserve bed area at 120 m², total is 375 m²). (d) Overflow trench length, 15 m.

FNDX

I Ma Elaine Lusar (being a registered drainlayer) hereby submit the following details of a soak test carried out by me in accordance with the Code of Recommended Practice for Household Septic Tank Systems, N.Z.S. 4610 : 1982.

Owner's name in full: Roger Wroblewski Date of Test: 6/9/03

Address: Rita St Wai-papa Kura Ring

Legal description of property: Lot _____ D.P. _____ Section _____ Block _____

Survey District _____ Road/Street _____

Nearest Township: _____ Area (m²) _____

Suggested Procedure for Testing:

- Day One

- * (1) Up to six test holes of 100mm diameter spaced uniformly over the proposed disposal field should be bored to the depth of the proposed disposal trench or soak hole.
- * (2) Record details of the soil types/layers on the diagram below.
- * (3) Prepare the holes carefully by scratching the sides with a sharp pointed tool to remove any smeared soil surfaces and to provide a natural soil interface through which water may infiltrate.
- * (4) Fill the holes with water and leave for a minimum of four hours, but preferably overnight, before continuing with the test.

- Day Two (or after presoaking for minimum of four hours)

- * (5) Note on the table below how much water remained in each hole from previous day.
- * (6) Place a stick or nail in the side of each hole about 100mm below ground level and fill each hole up to the marker and record the time against each hole on the table below.
- * (7) Record the total drop in the water level every fifteen minutes for the first hour, and then every hour for the next three hours.

	1	2	3	4	5	6
*1 Depth of Hole	900	900	800			
*5 Water Remaining						

*2 Describe Soil Profile

Sandy topsoil
800
to
900
deep
Sand

*6 Refill Holes

Time	Total Fall					
15 Minutes						
30 Minutes	450	400	450			
45 Minutes						
1 Hour	600	580	600			
2 Hours	900	900	900			
3 Hours						
4 Hours						

Use back of form and draw an accurate diagram showing the position of the holes correctly numbered. Please show position of roads; etc., and add any further comments.

Drainlayer: C. C. C.

Phone: 094080210

OWNER: WINDLEBOONE DATE: _____
 SITE ADDRESS: RATA STREET COUNCIL: _____
 CITY / TOWN: AMIRARA BUILDER: _____
 LOT NO. _____ D.P. NO: _____

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STEP 1 BUILDING STOREY TYPE: One / Two / Three / Attic Yes / No (See Sheets 4 and 5)

STEP 2 ROOF WEIGHT: Light / Heavy
 AVERAGE ROOF PITCH: 2 Degrees

STEP 3 TYPE OF CLADDING: Light / Heavy

STEP 4 BUILDING HEIGHT: B.H = _____ m
 ROOF HEIGHT: R.H = _____ m

STEP 5A FLOOR PLAN: Length BL = 7.5 m x Width BW = 3.5 m = Area G.P.A. = _____ m²

STEP 5B ROOF PLAN: Length RL = _____ m x Width RW = _____ m = Area G.R.A. = _____ m²

STEP 6 WIND ZONE (W): Light / Medium / High / Very High / Specific Design (See Sheet 3)

STEP 7 EARTHQUAKE ZONE (E): Table 2.3 A B C

STEP 8 TYPE OF FOUNDATION: Table 4.1 _____
 Square Timber Pile / Round Timber Pile - Concrete Embedded/ Driven
 Other _____

STEP 9 RATING OF BRACING ELEMENTS: Table 4.8

TYPE	DESCRIPTION	RATING
10 & 14	Anchor Pile or Brace	E = 70 BU's W = 160 BU's
13	Deep Cantilever Pile	E = 30 BU's W = 70 BU's
		E = W = BU's

STEP 10 BRACING CALCULATION:

BRACING UNITS REQUIRED		BRACING ELEMENTS REQUIRED	
① When Single Storey has an Attic Less than 50% of Ground Floor Area Add 1 BU to Table 4.7.	② TOTAL BU'S	③ No. of Anchor Piles or Braces	
E: Across *G.P.A _____ m ² x Table 4.7A _____ BU's = _____ BU's & Along *G.R.A		_____ BU = _____ 70	
W: Across BL <u>7.5</u> m x Table 4.7B <u>95</u> BU's = <u>363</u> BU's		_____ BU = <u>3</u> 160	
W: Along BW <u>3.5</u> m x Table 4.7B <u>111</u> BU's = <u>194</u> BU's		_____ BU = <u>2</u> 160	
* For Light Roof Use G..P.A. (Gross Plan Area) For Heavy Roof Use G.R.A. (Gross Roof Area)		Transfer This Inform	

Far North District
Council
Received

SPECIFICATIONS

WINDLEBORNE RESIDENCE

ECOHOMES™ LIMITED

SPECIFICATION

June 2003

Specification of the work to be done and the materials to be used in the erection and completion of a residence as per the accompanying plans.

for

Windleborne Residence

at

Rata Street, Ahipara

This specification is to be read in conjunction with the accompanying plans and any other drawing which may be issued during the currency of the contract. Any item in this specification and not shown on the plans and vice versa shall be equally binding as though included in both.

The contract and plans shall be signed and completed by all parties before the commencement of any work on the site. Any additions, omissions or variations to the contract shall be authorised in writing and agreed price stated.

Items specified in quote take precedence over this specification.

The owners are to ensure that all boundary marker pegs are in place and exposed for inspection.

CONTRACT DOCUMENTS

1. The accompanying plans
2. This specification
3. Construction - N.Z.S. 3604:1999
4. Letter of offer
5. Contract

PRELIMINARY & GENERAL (ALL TRADES)

1. Permits
The contractor shall arrange to obtain all permits to build. The contractor shall arrange all inspections and pay all fees as required by the local authorities.

2. Protection of work
All parts of the work liable to injury and all adjoining property, existing work, footways etc. are to be protected until completion of the contract.

3. P C Sums (Nett sums)
The P C sums quoted in this specification are nett and the contractor or sub-contractor concerned must add cartage, fixing charges and profit he required to all such items.

4. Site
Area to be built onto shall be cleared of all vegetation by contractor. Excavation is to be included by contractor. Any excess soil is to be left on the site. Access to the site to be provided by owner (all weather vehicle access).

5. By-laws
The whole of the work in this contract is to be carried out in strict accordance with the local authorities, and NZ Building Code.

6. Extent of work
This contract comprises the erection and completion in the soundest and most workmanlike manner of all the work shown on the accompanying plans and in accordance with this specification and the supply of all plant, tools, labour, materials, fixtures and fittings required for the due completion of this work.

7. Insurance

The contractor shall at all times, keep the whole of the works fully covered by insurance.

8. Temporary Services

The contractor shall arrange for all temporary services, pay all fees in connection therewith and remove same on completion of the contract. Sheds, power, water, scaffolding, unless otherwise noted in quote.

9. Maintenance

The contractor shall maintain the property for the period of 60 days after completion, and any damage done, arising during that time, through faulty workmanship or materials shall be made good at the contractor's expense.

10. Completion

On completion all trade debris is to be removed from the site and the building and windows left clean and ready for occupancy, with all services and mechanical parts in good working order.

EXCAVATOR

1. Generally

Remove all turf or other vegetation from the area to be built on.

Excavate the site to the levels shown on the plans (check original conditions).

Excavate as required for all wall footings, pile footings, steps etc. as shown on the plans. Footing excavations are to be taken down to a solid bearing and not to be less than 450mm deep. Excavations are to be stepped to suit the slope of the ground, and kept level at the bottom, maintained free from water or fallen material and shall be firm before placing reinforcing or concrete. Backfill and ram the earth around the foundations after concrete work has firmly set. Underfloor fill to be shale compacted in 150mm layers.

CONCRETER

1. Scope of Work

Comprises the setting out, boxing and placing of concrete in the foundations and floor slabs.

2. Materials

Concrete - All concrete shall satisfy the requirement of NZS 3109 and NZS 3104 with a specified strength of 20 MPa at 28 days. All concrete shall be supplied by an approved ready mixed concrete supplier.

Reinforcing - All reinforcing shall comply with NZS 3402:1973 and NZS 3422. All reinforcing is to be accurately placed.

Continuous Vapour Barrier - Lay 0.25mm polythene continuous vapour barrier complying with NZS 4229 Appendix E6 to all slabs except terraces, driveways, footpaths and carport slabs. Lap all joints and seal with pressure sensitive tape recommended by the manufacturer.

3. Formwork

Refer to NZS 3109 for methods of construction, removal, pouring and curing of concrete.

4. Concrete Footing and Foundation walls

Concrete footing and foundation walls shall be in accordance with NZS 4229 and as detailed on the drawings.

5. Concrete Ground Floor Slabs

All floor slabs shall be 100mm thick and comply with NZS 4229 Appendix E unless otherwise detailed. All ground floor slabs shall be laid on a Granular Base (refer to NZS 4229 Clause E5.2) compacted in layers not exceeding 100mm in thickness. Lay reinforcing mesh to all slabs. Locate reinforcing mesh 30mm from the top of the slab.

Finishing - All concrete ground floor slabs are to be true and straight surfaces, screeded, bull floated and finished with a steel float or power float to a finish. Tolerance on flatness to be within 3mm measured from a 3m straight edge.

Control Cuts - Cut control cuts 30mm deep to make slab areas no greater than 5m x 5m.

The contractor shall get the Local Authority Building Inspector to inspect the work prior to pouring any concrete.

BLOCKWORK

1. General

This section is to be read in conjunction with NZS 4229:1986 Concrete Masonry Buildings - not requiring specific design and NZS 4230:1990 The Design of Masonry Structures - requiring specific design.

2. Scope of Work

Supply and lay all grout solid-filled and partially-filled block foundation walls, concrete block retaining walls, concrete block walls, bond beams and concrete block columns as set out in NZS 4229 'Code of Practice for Concrete Masonry Buildings not Requiring Specific Design' and as shown on the plans.

3. Standards

All blockwork shall comply with NZS 3102, NZS 3109, NZS 3402, NZS 3133, NZS 4210, NZS 4229 and NZS 4230.

4. Materials

Blocks - All concrete blocks shall comply with NZS 3102

Mortar and Mortar Joints - All mortar and mortar joints shall comply with NZS 4210. All mortar joints shall be tooled with a rounded steel tooling iron immediately the initial setting of the mortar has occurred.

Water - Shall be fresh clean drinking quality.

Reinforcement - Shall be deformed type unless otherwise stated and shall comply with NZS 3402 Grade 300 or Grade 450.

Grout - All grout to be supplied by an approved ready mixed concrete supplier and comply with NZS 4210, 17.5 MPa compressive strength at 28 days cured, maximum aggregate size of 10mm.

CARPENTER

1. Generally

Allow to supervise and organise all sub-trades and excavations and arrange times of material deliveries.

2. Construction

All materials are to be the best of their respective kinds and grades, laid true to their various lines and levels and constructed in a proper tradesmanlike manner, to the whole of the works a sound construction in accordance with the local by-laws. All timber work abutting or resting on masonry units, concrete or brickwork is to be protected with bitumen-fabric damp proof course. All work to be done to NZS 3604:1999 standards.

Supply and fix the necessary trusses or rafters and braces as required to complete the roof framing and as detailed on the plans. Where detailed, the roof framing is to be constructed with engineer designed Gangnail trusses, fixed plumb, fastened to the plates with framing anchors, stiffened with runners and braced at each end of the building. Roof battens to be spaced to accommodate the roof covering and ridging and fastened to the trusses as detailed.

3. Exterior finish

All end grain joints are to be given a coat of primer.

Behind all wall linings and as detailed on the plans, fit Tyvek building paper lapped 100mm.

Supply and fit garage door as shown on plan (if applicable).

Grooved fascia and barge boards are to be fixed to level and straight lines, mitred, primed, where joined and fastened with galvanised nails. Veranda roof to be lined with flat Hardies 4.5mm sheets.

4. Interior finish

All joints screw holes and other imperfections are to be stopped flush by the painter.

Shower : To be specified by owner.

Bath : Allow to supply and install bath as specified by owner.

Ceiling linings to be as detailed on plans. Build in the various fittings as supplied under 'Plumber' and 'Joiner' trim around with splash boards primed and set in mastic and other finishing trim and moldings as required.

Skirtings : 60 x 10 FJ pine. Scotias all 40 x 18 pine to flat ceilings. Supply and fix the sundry internal moldings and trim as required.
Interior doors are to be fitted with three 90mm loose pin hinges. Architraves to be fitted in single lengths, fully glued 40 x 10 FJ pine. Interior doors flush paint quality.
All trim window and door frames FJ pine. All internal finishing timbers shall be sanded to remove machine marks and on completion, shall be free of all hammer marks, splits or other defects.

Cut for, attend on, and make good after all trades and provide and fix all necessary blocks for securing the work of all other trades.

All nail holes in exposed work (interior and exterior) are to be punched.

Insulation : all ceilings to be insulated with R2.0 Superfill. All external walls to be fitted with R1.8 insulation.

All gib-board to be stopped to Grade 4 painted finish.

Co-operate with the electrician in the building of a meter box.

WINDOWS

Powder colour aluminium windows with pine paint quality grooved reveals to be supplied and installed.
All glazing to NZ safety standards.

ROOFER

1. Generally
Refer to plans.

Roofing fitted as per manufacturer's instructions. Allow galvanised nails and coloursteel apron flashings. Supply and fix all flashings, caps, pointing etc. to make the roof thoroughly watertight and birdproof. Coloursteel valleys.

PLUMBER AND DRAINLAYER

1. Generally

The whole of the plumbing and drainlaying shall be done in strict accordance with the local authorities by-laws and drains shall be laid by registered workmen only.

2. Exterior work

Supply and fix PVC Flowline spouting to all eaves, laid with even falls to 80mm diameter downpipes.

Contractor to supply all taps, shower mixers and roses as detailed in quote. Allow installation.

3. Water service

Lay on cold water from the tank, to a 180 litre mains pressure hot water cylinder. Supply and set up the cylinder, complete with casing, lagging and thermostatically controlled electric elements. Lay on hot and cold water services to the various fittings as shown on the plans and to two hose positions as directed. All water pipework butylene. PVC waste pipes.

4. Fittings

Provide and set up the fittings as shown on the plans and in the specification. Regular traps and wastes may be PVC.

WC - contractor to supply WC and vanities as specified by owner.

Washing machine - to be supplied by owner. Contractor to supply 1400 Supertub. Allow to fit and connect.

5. Drains

Stormwater to be taken in PVC pipes to 5500g water tank. Stormwater drainage to be completed as shown on plans. Sewer drains to be PVC pipes, 100mm laid with even falls and easy bends etc. as may be necessary to comply with the local authorities regulations.

ELECTRICIAN

1. Generally

This contract includes the supply and installation of the electric wiring system complete. The whole of the work should be carried out strictly in accordance with the local authorities by-law and the electrical contractor is to obtain all permits from the supply authority, pay all fees in connection therewith and arrange all inspections required.

2. Supply

Arrange a main supply to the building from pedestal including phone wiring.

3. Boards

Provide and set up where directed a switchboard panel with all necessary fuses, switches and mains switches properly mounted and labelled, and hinged on one side.

4. Lights

Provide and fix the light switches and power outlets as shown on the plans. All lights recessed downlights. with white plastic shades unless noted otherwise on plan. Contractor to supply and fit all lights. Exterior lights bulkhead type, supply and install sealed units.

5. Fittings

Allow to install stove. Allow to wire up the thermostatically controlled hot water cylinder element, supplied under 'Plumber'.

Earth all metal waste pipes and metal fittings as required by the regulations. Supply TV aerial sockets and aerial wiring. Supply phone sockets and wiring. TV aerial supply and installation not in contract. Phone connection and jackpoints not in contract.

PAINTER AND PAPERHANGER

1. General

Refer to all other sections which may have clauses affecting work done under this section.

2. Regulations and Standards

All work and materials shall be in accordance with the requirements of the Building Regulations 1992 and with the New Zealand Building Code Handbook and Approved Documents.

The contractor and sub-contractors undertaking this work shall obtain copies of the relevant sections of the New Zealand Building Code and documents relating to acceptable solutions. Where applicable the following Standards and their related documents shall form part of this Specification NZS/AS 2312:1984, NZS 3602:1995, NZS 7703:1985, NZMP 2312:1987, BS 4800:1981. Where there is conflict between any two Standards the requirements of the New Zealand Standard shall apply.

3. Scope

Paint materials shall be delivered in sound and sealed containers labelled clearly.

Work covered by this Specification is to provide all materials and execute all work necessary for the completion of the building decoration and includes all painting, varnishing, staining and polyurethaning.

Interior : All the walls and ceilings except bathrooms and laundry sealed with gib sealer/undercoat, sanded and given two coats of ultra-low-sheen acrylic (light colour throughout). All doors, window jambs, door frames and wet areas to be given two undercoats and one top coat of semi-gloss enamel. Exterior : any cedar to be given two coats Cabots natural stain. Fascia and over windows to be given two coats acrylic Timbacyl or Lumbersider.

✓

4. Inspection of Previous Work

The painter shall inspect the finish of all surfaces to be painted, varnished etc. and report to the main contractor any deficiencies, defects, blemishes or contamination which could affect the provision of a first class, permanent finish. Any defects shall be corrected.

5. Workmanship

All work shall be executed in accordance with the requirements of the New Zealand Building Code, the relevant New Zealand Standard, the manufacturer's recommendation and to the best of trade practice. Before commencing any painting work, all exposed hardware and fittings which would be subject to damage by paint shall be removed and carefully stored ready for re-fixing in first class condition on completion of the painting work.

6. Completion

Remove all scaffolding, planks, rubbish and debris, thoroughly sweep up, clean windows inside and out, replace all hardware removed during the course of the work and leave the premises ready for occupation.

HEALTH AND SAFETY IN EMPLOYMENT

The sub-contractor shall diligently fulfill its obligations under the Health and Safety in Employment Act 1992 and shall hold harmless the Principal by attending to all matters contained in the following list:

The sub-contractor shall comply with the following : Government statutes, Council by-laws, Codes of Practice, guidelines, manufacturers specifications of equipment used. The sub-contractor will have, prior to the commencement of the Contract : identified hazards to employees, eliminated and/or isolated hazards if practicable, minimised hazards and protected employees where elimination and isolation are impractical.

The sub-contractors Health and Safety Policy and programme and the implementation of that policy and programme shall include : Health and Safety rules, safe work practices, accident investigation procedures, hazard investigation and control, standards, of training to ensure that staff are adequately trained, emergency procedure, safety equipment, specific job instructions, procedures and work permits applicable.

COMPLETION

On completion the building is to be left clean and tidy, windows and other glasswork cleaned, and all trade debris is to be removed from the site and the building left clean and ready for occupancy.

FLOOR COVERINGS

By owner.

Please Photocopy

For a software version
phone Gib® Information
Helpline 0800 100 442

Wall Bracing Calculation Sheet B

Along

Wall or Bracing Line		Bracing Elements Provided			Wind		Earthquake	
1	2	3	4	5	6 W	7 W	6 E	7 E
Line Label	Minimum BUs Required	Bracing Element No.	Bracing Type	Length Element (m) L	Rating BU/m W	BUs Achieved (BU/m x L) W	Rating BU/m E	BUs Achieved (BU/m x L) E
A		1	GIB1A	1.8	55	99		
		2	QIB1A	1.8	55	99		
B		3	GIB3	1.2	65	78		
		4	GIB3	1.2	65	78		
C		5	B29	1.0	110	110		
		6	B29	1.2	110	132		
D								
E								

Totals Achieved		516	W		E	
From Sheet A	Totals Required	567	W		E	
Wreq/Ereq =		*				

*If Wreq/Ereq is 1 or less complete E column only
If Wreq/Ereq is 1.5 or more complete W column only
Otherwise complete both W and E

Across

Wall or Bracing Line		Bracing Elements Provided			Wind		Earthquake	
1	2	3	4	5	6 W	7 W	6 E	7 E
Line Label	Minimum BUs Required	Bracing Element No.	Bracing Type	Length Element (m) L	Rating BU/m W	BUs Achieved (BU/m x L) W	Rating BU/m E	BUs Achieved (BU/m x L) E
M		7	B29	1.0	110	110		
		8	B29	1.0	110	110		
N		9	GIB3	1.8	65	117		
O		10	GIB3	1.8	65	117		
P		11	B29	0.6	110	66		
		12	B29	1.2	110	132		
Q		13	B29	0.6	110	66		

Totals Achieved		713	W		E	
From Sheet A	Totals Required	695	W		E	
Wreq/Ereq =		*				

Please Photocopy

For a software version
phone Gib® Information
Helpline 0800 100 442

Wall Bracing Calculation Sheet A

Job Details

box 1

Name <u>WINALEBOURNE</u>			
Street and Number <u>RATA STREET</u>			
Lot and DP Number _____			
City/Town/District <u>AKHAPARA</u>			
Location of Storey:		single <u>upper of two</u> lower of two	Floor load: 2kPa/3kPa
Building height to apex	<u>5.6</u> m	Roof weight	light/heavy
Roof height above eaves	<u>0.8</u> m	Cladding weights:	
Stud height	<u>2.4</u> m	Subfloor	light/medium/heavy <u>heavy</u>
Average roof pitch		Lower Storey	light/medium/heavy <u>heavy</u>
		Upper Storey	light/medium/heavy <u>heavy</u>
		Room in Roof Space	Yes <u>No</u>
Building length BL =	<u>15.6</u> m	Gross Building	
Building width BW =	<u>9.0</u> m	Plan Area,	GPA = _____ m ²

Note: When the average roof pitch is over 25 degrees, use the eaves length and width to determine BL and BW.

Wind Zone

box 2

Region:	Terrain:	Exposure:	Topography:
R1 0 _____	Inland 0 _____	Sheltered 0 _____	Gentle 0 _____
<u>R2</u> 1 _____	<u>Coastal</u> 1 _____	<u>Exposed</u> 1 _____	Moderate 1 _____
			Extreme 3 _____
Total points _____			
Wind Zone: _____ Low (0)		_____ <u>Very high</u> (3)	
_____ Medium (1)		_____ Specific Design (4)	
_____ High (2)			

Earthquake Zone

box 3

From figure EQ1 select Earthquake Zone:	A	B	<u>C</u>
---	---	---	----------

BUs required Wind

box 4

From Table W1A/W1B
W along = <u>63</u> BU/m
W across = <u>44</u> BU/m
Total wind load,
W ALONG:
W along x BW = <u>567</u> BU
W ACROSS
W across x BL = <u>695</u> BU

BUs required Earthquake

box 5

From Table EQ1/EQ2/EQ3/EQ4/EQ5/EQ6
E = _____ BU/m ²
Note: For a room in the roof space use E + 3
Total earthquake load,
EQ ALONG and EQ ACROSS
E x GPA BU = _____ BU

BUILDING INSPECTION SHEET

Date

26. 3. 04

Far North

BC#

20040256

Time

11.30 AM/PM

Applicant

WINDLEBOURNE

phone #

/Builder

BART. SWITZER

Travelling Time

:20

Officer

Dave C.

Inspection Time

:30

Signature

[Signature]

205 SITE Inspection

OK (NOT) N/A COMMENTS If further inspection needed

- 1 Any Items under Sec. 36 ?
- 2 Distance from power lines
- 3 Footpath damage
- 4 Wind zone
- 5 Suitability of effluent design
- 6 Council services
- 7 Other

Dave,
Presume you left
Windlebournes' a
field advice notice
to advise your
comments?
SPOKE to Bouwse
on SITE
OK.

209 FOUNDATION Inspection

OK

- 1 Correct site & building siting
- 2 Ground bearing, fill, expansive clay
- 3 reinforcing: spacing, size, clearance etc
- 4 Excavation: depth, width
- 5 Pile/pole holes: depth, diameter
- 6 Pile/pole: Correct grade, diameter
- 7 Driven Piles: Engineers Certification
- 8 Retaining Wall: polythene underneath
- 9 Other

213 SLAB/ UNDER SLAB PLUMBING Inspection

OK Not N/A

- 1 Slab thickness: D.P.M., tape, rebates
- 2 Slab Reinforcing: Thickenings, tying cover etc
- 3 Fill: Compaction, depth, binding
- 4 Pipes: gradient, protection, sizing, tested
- 5 Other

217 SUBFLOOR Inspection

OK Not N/A

- 1 Sub floor brace connectors
- 2 Bracing: washers, timber size etc
- 3 Bearer/Joist: Size, spacing, joist hangers
- 4 Notching/holes/blocking for lines of horizontal supports
- 5 Ventilation & insulation
- 6 Other

221 BOND BEAM- SUPENDED SLAB Inspection

OK Not N/A

- 1 Block Size
- 2 Reinforcing: Size, grade, laps, tied
- 3 Washouts: If pour exceed 1.2 m in height
- 4 Design Calculation on site
- 5 Retaining Wall: DPM & protection
- 6 Adequate propping
- 7 Services Installation (Fire Collars)
- 8 Identify proprietary pre-stress components
- 9 Other

P.T.O. RE INSPECTION
NEEDS

2	Texture coating				
3	EPS (polystyrene), nailing, flashings etc.				
4	Sheet Systems: layout, nailing, flashing, construction				
5	Weatherboard: grading, type, fixing, flashing				
6	Bricks/Blocks: fixings, control joints, flashing				
22	PRELIME BUILDING Inspection	OK	Not	N/A	
1	Trusses: fixing, spacing, bracing, support	✓			
2	Pitched roof: fixing, spacing, bracing, strutting, span	✓			
3	Ceiling: joists/Batten: fixing, spacing, support	✓			
4	Bottom-Top plate: fixing, size, DPC	✓			
5	Bracing: Strapping, bolts, check plan	✓			
6	Moisture content		✓		15 - 32% H2O. BTM PLATE
7	Frame; stud size, space, lintel fixings, grade				
8	Recheck Cladding: flashing, nog spacings(480mm-board/batten)				SPOLE TO BUILD ON SITE
9	Insulation: type, thickness		✓		Super-fill TO BE PUT IN
10	Glazing: safety glass, thickness	✓			
11	Fire & sound walls: sealer, staggered laps, fire collars				
23	PRELIME PLUMBING Inspection	OK	Not	N/A	
1	Pressure test				
2	Pipe material, size, support, insulation				
3	Stacks				
4	Wastes				
5	Supply tank				
6	Other				
23	POST FINING Inspection	OK	Not	N/A	
1	Sheet brace nailing				
2	Other				
24	DRAINAGE Inspection	OK	Not	N/A	
1	Accurate "As built" plan provided				
2	Depth of drain				
3	Bedding				
4	Gradient Line: Inspections, diameter correct				
5	Water test - connection to main				
6	Gullys: max 600mm depth, finish 25 mm above protected or 100mm above unprotected ground				
7	Drains within boundaries, too close to foundations				
8	Other				
24	SEPTIC TANKS Inspection	OK	Not	N/A	
1	TP58 on site - is it per design?				
2	Depth of beds, length, scoria, matting, cut off drain				
3	Tank installed properly on level				
4	Ventilation provided-distribution box				
5	Aerated mechanical systems installed to manufacturers specifications				
6	Access for tank maintenance(no vertical air loading)				
7	Other				
24	MISCELLANEOUS Inspection	OK	Not	N/A	
1	Solid fuel heating, chimney check, setback fixing, flue flashing, mantel shelf, hearth construction				
2	Swimming Pool: backwash, fencing, registration				
3	Other				

ELECTRICAL WORKERS
REGISTRATION BOARD

Safety • Competency

Electrical Certificate of Compliance

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

To be completed whether or not an inspection is required.No. **1495953**No. of attachments *Roger Windelburne***CUSTOMER INFORMATION - PLEASE PRINT CLEARLY**

Name of customer

*Ross Masters*Phone:

Address of installation

*Naipap Ramp*Postal address of customer (if not as above) **WORK DETAILS****53**

No. of lighting outlets

☒

No. of ranges

34

No. of socket outlets

☒

No. of water heaters

Was any installation work carried out by the homeowner?

☒

Yes

☐

No

Please tick (✓) as appropriate where work includes:

☐

Mains

☐

Main earthing system

☐

Switchboard

☐

Electric lines

Description

*Completion of
New House.
Main B/ Below M/Box*

It is recommended that test results be recorded here:

Visual Examination

☐

Earth Continuity

☐

Bonding

☐

Polarity

☐

Insulation Resistance _____ Mohm

Other _____

If necessary attach any pages with sketches of work done

CERTIFICATION OF WORK

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

ELECTRICAL WORKER DETAILS

Name

D Morrogh

Registration no.

E5856

Company

D Morrogh

Signature

[Signature]

Date

18-05-04

Contact Ph No.

CERTIFICATION OF ELECTRIC LINES

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

Name

Registration no.

Company

Signature

Date

Contact Ph No.

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

New mains

☒

Switchboard

☒

Earthing system

☒

Installation work in hazardous areas

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

Name

Tim Stork

Registration no.

1831

Signature

[Signature]

Date

18.5.04

Contact Ph No.

*094089206***CUSTOMER COPY - THIS IS AN IMPORTANT DOCUMENT AND SHOULD BE RETAINED**

TAX INVOICE/STATEMENT

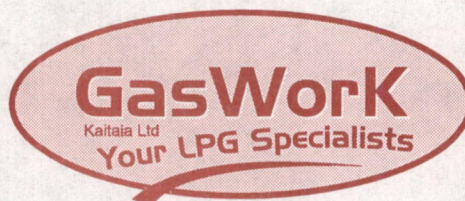
SERVICE REPAIR ORDER

OWNERS NAME, AND PHONE NO.

Rob. Wireborn
Wireless Rd
RD 2
Radburg

HOME
PHONE:

BUSINESS
PHONE:



Gas and Plumbing

PO BOX 613, KAITAIA 0500
Mobile 027 281 8189, A/hrs 09 408 8857
Email: gaswork@xtra.co.nz

DOCKET NUMBER	
31054.2	
DATE COMPLETED	TECH INITIAL
3/1/80	BB
TYPE OF SERVICE ORDER	
Invoice	Estimate
Quote	2

[illegible]

PAYMENT DUE ON COMPLETION

INTEREST IS CHARGED @ 5% PER MONTH ON OVERDUE ACCOUNTS.

No Receipt will be issued

**FULL PAYMENT
WITHIN 14 DAYS
*please!***

PLEASE READ THIS

I hereby authorize the above repair work to be done along with the necessary materials, and hereby grant you or your employees permission to enter the premises to recover the goods or other goods to a similar auction value in the event of non payment of this account by any means they deem necessary. All goods shall remain the property of GasWork and an express tradersman lien is hereby acknowledged on the goods to secure the amount of the work done until paid in full including all debit collection costs over and above the invoice cost. An invoicing fee of \$20.00 is payable on all charged accounts.

X

AUTHORIZED BY

TOTAL PARTS	74	01
TOTAL TECHNICAL SERVICES	80	00
VEHICLE	30	10
FREIGHT/TOLLS		
CERTIFICATION		
- DEPOSIT		
SUB TOTAL	184	41
GST	23	65
TOTAL AMOUNT	207	46

CUSTOMERS COPY



BUILDING CONSENT AND PROJECT INFORMATION MEMORANDUM APPLICATION

For the Far North District

Section 33, Building Act 1991

IMPORTANT INFORMATION
TO ASSIST IN COMPLETING THE APPLICATION FORM

CHECK LIST

Please Ensure all information as listed on the check box, is provided when lodging your application. Your application cannot be accepted unless it is complete.

Information is required in triplicate :

- an approved copy of plans etc., is returned to the owner or contact when consent is issued
- one copy is held by Council and becomes part of the property file; and
- a further copy is carried by the Building Officer to ensure compliance when carrying out inspections.



- Under The Building Act 1991, a Building Consent Application and a Project Information Memorandum (PIM) can be applied for together.
- You may however apply for a Project Information Memorandum (PIM) as a 1st step in obtaining your Building Consent.
- If you have already obtained a PIM, it is important to include the PIM N° at question 2 overleaf.

NOTE : A PIM is not required for a fire place or a residential internal alteration

Please read notes overleaf thoroughly.....

NOTES : PLEASE READ NOTES PRIOR TO COMPLETING PART A

1. Please indicate whether your project is **Domestic, Commercial or Industrial**. If your project is Commercial or Industrial, you must also complete supplementary application form E, for **systems necessitating a compliance schedule**. For the purpose of this application, all farm buildings are regarded as domestic.
2. **PIM or BC only, or Combined Application** : Under the Building Act, a Building Consent application (BC) and a Project Information Memorandum (PIM) can be applied for together or separately. You must however obtain a PIM prior to a BC being issued. If you are applying for a PIM only, you need to complete **Part B** (over page) of this form also. If you already have a PIM, tick box **B** and write the PIM number in the space provided, you are not then required to complete **Part B** of this form, but you must complete **Part C : Building Details**. If you are applying for both Building Consent and PIM together, you must complete both **Part B : Project Details** and **Part C : Building Details**.
3. **Owner** : For the purposes of the Building Act the owner of the land may be :
 - * The owner of the fee simple of the land; OR
 - * Any person who has agreed in writing, either conditionally or unconditionally, to purchase the land or any leasehold estate or interest in the land, or take out a lease of the land, while the agreement remains in force. If you have purchased this property within the last 6 months, please give name of previous owner.
4. **Contact Person** : The contact may be your builder or other agent. Provide the contact/agents name, address and other particulars so that we may address verbal or written correspondence to them. **Only complete this section if the contact person is not the owner.**
5. **Correspondence/Refunds** : If you are the owner and paying your fees direct to Council, tick box 1. Tick box 2, if the consent fees are to be paid by the applicant (builder/agent or other as detailed in box 4), then the application must be signed by the contact person in question 4. All communication and any invoices/refunds will then be sent to the applicant.
6. **Proposed Location of Building Work** : Give the street or road address, including **RAPID** number. If possible give proximity to any well known landmark, river or stream to assist in locating the property.
7. The **legal description** is usually the Lot and Deposited Plan number of the land. You can get this information from the rates assessment notice or the certificate of title. The Valuation Roll Number can be found on the rates assessment also. If you cannot obtain the information from these sources, our Customer Liaison Team may be able to assist you. You can obtain a copy of your Certificate of Title from : "Land Information New Zealand, PO Box 92016, Auckland" a small fee is charged.
8. **Project** : Identify the project being undertaken by ticking the appropriate box—e.g. a new house would be a New Building. You may specify the actual life of the building being constructed or you can assume it to be 50 years, which is the time-frame under the Building Act.
Description of Work : Describe the work—e.g. 3 bedroom dwelling and attached garage.
Intended Use : e.g. private or communal housing, or a particular commercial, industrial, service or farming use. **Estimated Value of Work** : Refers to the value of the completed project. i.e. The amount you would expect to obtain if you were to sell and must be GST inclusive.

The information supplied with this application is true and complete to the best of my knowledge :

Signed by the owner.

Signature:

Name:

Date:

OR - Signed by the contact person.

Signature:

Name:

Date:

Please Note :

Council is unable to accept your application until all details and all relevant information is provided, including completed **check list** and the application is signed and the processing fee paid. See the Pamphlet : 'Building Consent Fees and Charges' for a full breakdown of the fee structure.

PART A : GENERALABA N° : 20040286 Office Use Only**Complete Part A in all cases - Read Notes Opposite First !**

1. THIS APPLICATION IS IN RELATION TO : ☒ Domestic (incl. farm buildings)
(Tick boxes as appropriate). ☐ Commercial
☐ Industrial

If your project is Commercial or Industrial you must complete :

'Application Form E - COMPLIANCE SCHEDULE - 'Commercial or Industrial Buildings'**2. Tick box A or B below**

- A ☐ Application is for a Project Information Memorandum (PIM) only
B ☐ Application is for Building Consent only, in accordance with PIM N° :
C ☒ Application is for Building Consent (BC) and Project Information Memorandum (PIM).

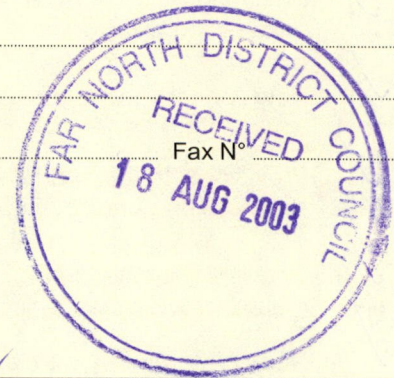
3. OWNER (Provide owner details in all cases - if also applicant, tick box ☐)

Name Roger & Bernadette Windlebourne
Postal Address Wireless Road R02
KAITIA
Phone N° 094081265 Fax N° 121660

Name of previous property owner
(if property has been recently sold a copy of Sale and Purchase Agreement is required).

4. CONTACT PERSON (If not owner)

Business Name
Name
Postal Address
Phone N° Fax N°



5. CORRESPONDENCE/REFUNDS to : 1. OWNER (as above) ☒ or 2. CONTACT ☐

6. PROPOSED LOCATION OF BUILDING WORK : RAPID Number : 8

Address RATA Street Waipapakauri Ramp 330129.

7. LEGAL DESCRIPTION

Valuation Roll Number 00013-19404
(Can be obtained from your rates notice or a Customer Liaison Officer PH : 0800 920029)

Lot(s) or Section N° : SEC 8. MURWENUA
TSHIP

AREA OF SITE (M²) : 0.0911 HA

Certificate of Title : NW129A/721 (Not more than 6 months old)

8. PROJECT

New Building ☒
Alteration ☐
Relocation ☐
Demolition ☐
Other ☐

Intended Life :
NOT less than 50 years

OR

Less than 50 years ☒
Specified as years

Description of work :

NEW HOME

Intended use(s) in detail :

RESIDENTIAL HOME

Total Floor Area of project : 260 m²

Ground floor area of project : 130 m²

Upper floor area of project : 130 m²

Estimated Value of Work \$140,000.00 (GST incl.)

PART B : PROJECT DETAILS

6. Project Information Memorandum (Complete Part B only when applying for a PIM)

The project involves the following matters. Tick each applicable box, and attach relevant information in **triplicate**.

- (a) ☒ Location, in relation to legal boundaries, and external dimensions of new, relocated, or altered buildings (Site Plan with elevations, Topography, drawn to scale).
- (b) ☒ Details of any known or potential erosion, avulsion, falling debris, filled ground, subsidence, slippage, alluvion, inundation, hazardous contaminants on or near the site.
- (c) ☒ Provisions to be made for vehicular access, including parking. (To be shown on site plan)
- (d) ☒ Provisions to be made in building over or adjacent to any road, or public place.
- (e) ☒ Provisions to be made for disposing of stormwater and wastewater. (To be shown on site plan)
- (f) ☒ Precautions to be taken where building work is to take place over existing drains or sewers or in Close proximity to wells or water mains.
- (g) ☒ New connections to public utilities i.e. water supply, stormwater system, wastewater system.
- (h) ☒ Provisions to be made in any demolition work for the protection of the public, suppression of dust, suppression of noise, disposal of debris and disconnection from public utilities.
- (i) ☒ Details of any cultural or heritage significance of the building or building site, including whether it is on a marae, or waahi tapu.
- (j) ☒ Copy of/or reference to, any resource consent or planning approval for this project.
- (k) ☒ Details of volume of proposed excavations: Include volumes for site preparation, basement and driveway.

PART C : BUILDING DETAILS

Complete Part C only when applying for a Building Consent

This Application is accompanied by (tick each applicable box, attach relevant documents in triplicate).

- 7. ☒ The drawings, specifications and other documents according to which the building is proposed to be constructed to comply with the provisions of the New Zealand Building Code, with supporting documents, if any, including :
- 8. ☒ Building certificates.
- 9. ☒ Producer statements (including TP 58 Effluent Design).
- 10. ☒ References to accreditation certificates issued by the Building Industry Authority.
- 11. ☒ References to determinations issued by the Building Industry authority.

For details on drawings and specifications etc., see checklist form. If applying for PIM and Building Consent together, then plans for (a) can be included in (7). If a PIM has already been applied for then include a copy of any relevant authorisations (e.g. Resource Consents) with this application.

PART D : PROJECT DETAILS

COMPLETE AS FAR AS POSSIBLE IN ALL CASES (GIVE NAME, ADDRESSES, TELEPHONE NUMBERS, GIVE RELEVANT REGISTRATION NUMBERS IF KNOWN)

DESIGNER(S)

Name : ALAN SIMPKIN
49 MATTHEWS AVE KAITIARA
Address :
Phone Number : 4082233
Cell Phone Number : Fax Number : Email Address :

BUILDER

Name : RONN SMITH
614 KAKA ST AHIPARA
Address :
Phone Number : 4094066
Cell Phone Number : Fax Number : Email Address :

REGISTERED DRAINLAYER

Name : GREGG FOSTER
24 NORTH ROAD
Reg. N° :
Address :
Phone Number : 4081723
Cell Phone : Fax Number : Email Address :

REGISTERED PLUMBER

Name : GREGG FOSTER
24 NORTH ROAD
Reg. N° :
Address :
Phone Number : 4081723
Cell Phone : Fax Number : Email Address :

REGISTERED ELECTRICIAN

Name : DAVID MORGAN
32 KORORA ST AHIPARA
Reg. N° : ES856
Address :
Phone Number : 4094515
Cell Phone : Fax Number : Email Address :

CERTIFIER

Name : RICHARD CATTERALL
P.O. Box 53 MANGONUI
Reg. N° :
Address :
Phone Number : 09 406 0668
Cell Phone : Fax Number : 09 406 0668
Email Address :

OTHER

Name :
Reg. N° :
Address :
Phone Number : Cell Phone : Fax Number : Email Address :

A final Check!



*Have you provided
all relevant information?*

*My Project is **domestic***

*I have completed the form '**Building Consent and Project Information Memorandum Application**', including :*

PART A

☒ (All applications)

PART B

☒ (When applying for a PIM)

PART C

☒ (When applying for a BC)

PART D

☒ (All applications. If information not yet available, please supply to Council as soon as possible).

I have also included the completed and signed 'Check List for Building Consent Applications' form.

*My project is **Commercial or Industrial***

I have provided all information as for **Domestic** (above) and also completed '**Application Form E—Compliance Schedule**'



CHECK LIST FOR BUILDING CONSENT APPLICATIONS

In The Far North District

- RETURN THIS CHECKLIST WITH YOUR APPLICATION
- INCLUDE ALL THE INFORMATION AND DOCUMENTS REQUESTED
- MARK EACH CHECKBOX AS FOLLOWS :

☒ Item Included	☒ Item not Included	☒ N/A Item not applicable	OFFICE
☐ APPLICATION FORM			☒
☐ All items relevant to your application are to be completed on the application form. Include accurate 'Values' of the work to be undertaken (GST Inclusive).			☒
☐ Include the correct legal description (Can be obtained from your rates notice, Certificate of Title or from Council's Customer Liaison Team).			☒
☐ Name, address and phone numbers of all personnel relevant to your project, including person to receive accounts.			☒
☐ Copy of recent Certificate of Title (<i>not more than two months old - obtained from Land Information NZ</i>) or Proof of Purchase from Solicitor.			☒
☐ SPECIFICATIONS (3 Copies)(see Note 1)			☒
☐ Written specifications, adequately describing all building work, components, materials and fixings including their size and type. Show compliance with the functionality and performance requirements of the Building Code i.e. NZS 3604 1999 or SPECIFIC DESIGN (see over)			
☐ SITE PLAN (3 Copies)			☐
☐ Show the floor area of the proposed building project and of all existing buildings to a minimum scale of 1:200. Use metric measurements.			
☐ Show the distance of the proposed and existing buildings from all legal boundaries. These measurements are to be to the walls or nearest part of the building and show any easements, overland flow-paths and/or any Council stormwater and drainage services.			
☐ Show the layout of existing and proposed sanitary and stormwater drains and mains, septic tanks and stormwater disposal.			
☐ Show the source of the water supply.			
☐ Show the location of vehicle entrance.			
☐ FLOOR PLAN (3 Copies)			☐
☐ A floor plan of each floor level to a minimum scale of 1:100. Plan to include floor layout and use of each section and show the location of all plumbing, gas and electrical fittings. Show all waste and vent pipes (can be on separate plans).			
☐ ELEVATIONS (3 Copies)			☐
☐ An elevation of 1:100, each external wall showing heights and finished ground level at each external corner (see above for smaller scale allowances).			
☐ Location of wall and roof bracing to be shown on elevations.			
☐ Scaled elevations indicating height from ground level to top of roof line.			
☐ FOUNDATION PLAN (3 Copies)			☐
☐ For timber floors show location of all piles and sub-floor timber braces, foundation perimeter walls and internal piling system. For concrete floors, a detailed cross-section is required.			
☐ Wind zone calculations (Note : All areas within the Far North District are R.2.).			
☐ Sub-floor bracing calculations.			

Continued overleaf

☒ Item Included	☒ Item not Included	☐ N/A Item not applicable	OFFICE
☐ CROSS SECTION DETAILS (3 Copies) ☐ Sufficient cross sections through the building to show foundation details, floor systems, wall construction, roof construction, location of wall claddings and roof covering. ☐ Show construction details of terraces, steps, balustrades and any unusual items. ☐ Details of thermal insulation to be shown (dimensions, type, value).			☐
☐ WALL AND FLOOR BRACING CALCULATIONS (3 Copies) (See Note 2) ☐ Submit wall and sub-floor bracing calculations, and plan, detailing location of bracing elements. ☐ NOTE : One room additions. Locate requirements and their respective values on the elevations. (See Note 1. Below)			☐
EFFLUENT DESIGN (TP 58) : (Consulting Engineer or Approved Designer) ☐ 3 Copies of T.P. 58, including producer statement and maintenance requirements.			☐
SPECIFIC DESIGN : To facilitate processing of specific design applications, provide the following information: ☐ Full engineering calculations and drawings. ☐ Design Certificate/Producer Statement. ☐ Soil report or geotechnical report (where applicable). ☐ A written description of the building model and techniques used in construction. ☐ Name and Address of Engineer.			
NOTES : 1. Specifications for additions, alterations and garages under 40m ² can be written on plans (No need for separate document). 2. Garages and Carports will not require bracing schedules but may require posthole size calculation. 3. Commercial and Industrial Buildings require a Fire Report (FORM E - Commercial & Industrial of application will be required). 4. The Legislative timeframe for processing a Building Consent or Project Information Memorandum (PIM) is 10 working days or 20 working days where the value of the building exceeds \$500,000 in value.			
APPLICATION FEES : Check with your nearest Council Service Centre (addresses below) for the processing and other fees that will be payable. The pamphlet ' Far North District Council - Schedule of Building Fees ', shows these fees in detail and is also available at any Service Centre.			

SPECIALIST STAFF

Specialist Staff are available by appointment only.

Dialing **0800 920029** will connect you with your nearest Service Centre. The Customer Liaison Officer will assist in making an appointment with the appropriate officer.

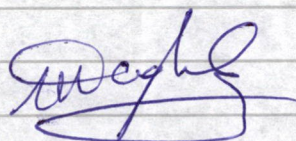
FOR OFFICE USE ONLY		Far North District Council	
Received at	KAITIAIA	Office	
Date	18/8/03	Receipt N°	
Fees Rec. \$	125.00	VAL N°	13-194-04
ABA N°	20040256		
Applicant I.D. N°	121660		
Agent/Rep I.D. N°			
CHECKED BY	TWH		
	Customer Liaison Officer		
Far North District Council Private Bag 752 KAIKOHE		Phone: 0800 920029 Fax: (09) 4012137 Email: gws@fndc.govt.nz	
Kaikohe Service Centre Memorial Avenue KAIKOHE		Kaeo Service Centre Main Road KAEO	
Kawakawa Service Centre Gillies Street KAWAKAWA		Kaitia Service Centre Redan Road KAITIAIA	
Kerikeri Service Centre Hobson Avenue KERIKERI		Rawene Service Centre Parnell Street RAWENE	

A.H. CRAGHILL
PLASTERING SERVICES
09 4094741.

A.H. CRAGHILL
336 FORESHORE Rd
AHIPARA RDI
14-6-07

TO FAR NORTH DISTRICT COUNCIL

THE EXTERNAL PLASTERING OF
ROGER WINDELBORN'S HOUSE AT WAIPAPAKAURI RAMP
WAS DONE BY ME TO ALL SPEC'S OF PUTZ TECHNIC.
THE SUPPLIERS AND MAKERS OF THE PRODUCT.



BUILDING CONSENT
REQUEST FOR INFORMATION (S 30)

NAME: <u>WINDLEBOURNE</u>	DATE: _____	PIM/BC: <u>20040286</u>
VALUATION No: _____	LEGAL Desc: _____	
BUILDING: _____	LOCATION: _____	

Re: PIM / BC / BOTH

In order to process your application for a project information memorandum, the following information is requested. The time period for processing is hereby suspended as provided for under S30 and will not be issued until the information is received.

Resource Planner: haram Date: 25/8/03

Engineer: _____ Date: _____

Plumbing & Drainage Inspector: KLB Date: 25/8/03
1) TP58 Reg

Building Inspector: KLB Date: 25/8/03

- 1) BRACING CARCS + LAYOUT REQ. FOR DECKING OVER 2M WIDE.
- 2) PROVIDE ROOFING SYSTEM DETAILS FOR 0° PITCH.
- 3) BUILDING SPEC REQ.
- 4) RUMPOS ROOM BLOCK INSULATION DETAILS REQ.
- 5) CURVED GANGNAIL TRUSS SYSTEM MANUFACTURERS DETAILS REQ.
- 6) 2 STORY FUTURE DETAIL TO L253604 FIG 7.13 OR ENGINEERED

ABA: 20040256

Please note that the site is zoned Rural C and Coastal Residential under the Transitional and Proposed District Plans respectively.

Resource Consent will need to be applied for in order to address the following issue:

- Development of one dwelling per site under the Rural C zoning is a controlled use.

Please complete the enclosed application form and submit to Council along with the minimum application fee of \$280. *to a copy of the TRS8 report.*



FAR NORTH DISTRICT COUNCIL

Private Bag 752, Memorial Ave, KAIKOHE

Freephone: 0800 920 029

Ph: (09) 405 2750

Fax: (09) 401 2137

FIELD ADVICE NOTICE

7137

To: R + B. NINDLE HOME
Premises: NEW DWELLING
Address: RATA ST WAIPAPA KAHAI BEACH
Val No: _____

Date: 12.6.07
Licence No: _____
R.C. _____
B.C. 2004-0256
R.F.S. _____

An inspection of the above mentioned premises has been undertaken and the matters as listed below must be completed within days or as otherwise stated.

- ① under floor insulation required to garage area.
- ② Solid 200x50 nogs required to carry span of floor joist, garage area as shown (1 bays).
- ③ Roofing & ext. wall cladding manufacturers warranty required.
- ④ P.S. from ext. plaster applicator/manufacturer required.
- ⑤ P.S. from tiler for wet area membrane to tiled shower.
- ⑥ 'As Built' drainage plan (Kaitiaki Plumbing).
- ⑦ Electrical Code of compliance required.
- ⑧ Gas Certificate for gas oven installation, also check venting requirement (if any) for gas bottle in kitchen cupboard.

When above items complete book a 2nd Final inspection with FNDC Kaitiaki.

Issued by: [Signature]

Designation: B.C.O.

This notice received by: x [Signature]

Time: 3.00 am/pm Date: 12.6.07

Office use only:

Type of Inspection:

Annual

☐

Second

☐

Reinspection

☐

Bring up

☐

Reinspection required:

Yes / No

Additional Fee:

Yes / No

OK to issue licence: Yes / No

Inspection Text Notes:

REINSPECTION FEE DETAILS:

Inspection Time:

Travel Time:

Mileage:

FAX MESSAGE

Date: 25 June, 2003

Number of sheets: 2

To: Don Saunders
Ecohomes
408 2358

From: Richard I R Catterall, Consulting Engineer
P O Box 53, Mangonui

Phone/Fax 09-406 0668

Subject: WINDLEBOURNE

The beams over the garage the steel beams should be 310UB40. A central web stiffener is required as shown on the attached sketch. The lintel over the garage door should also be 310UB40.

The beams over the rumpus room should be 310UB32 again with a web stiffener at mid span.

Foundations under the beam supports should be 700 mm square and reinforced with D12 @ 200 both ways. Depth of footing to be 300 mm.

At the outside walls the blockwork will support the beams OK – hold down with 2 – 16 mm bolts.

Any queries please contact me.

Regards



LOADING SHEET

RICHARD I.R. CATTERALL

M.A., M.I.C.E., M.I.P.E.N.Z.

CONSULTING ENGINEER

PO BOX 53, MANGONUI, FAR NORTH. TEL/FAX 0-9-406 0668.

JOB NAME: *Windlebourne*

PAGE No:

SECTION: *House detail 1*

1

JOB No. *1898*

DESIGNED: *RE*

DATE: *25/6/03*

CHECKED:

Floor beams. - over garage area

Span is 8.0m.

Beams support upper level floor.

Floor spans are equal @ 2.67m

$$\therefore G = 0.35 \times 2.67 + 0.5 + 0.3 = 1.75$$

$$Q = 1.5 \times 2.67 = 4.01 \quad \text{Kw/m}$$

$$\therefore 1.2G + 1.6Q = 8.5 \text{ Kw/m} \quad \times 1.25 = 10.6$$

$$\therefore m^* = 68 \text{ Kw-m.} \quad \times = 85 \quad \text{for continuous floor joists}$$

Garage level spans 6.0m

$$G = 0.35 \times 1.34 + 0.5 + 0.67 + 0.3 \times 4 = 2.84 + 0.3 = 3.14$$

$$Q = 1.5 \times 1.34 + 0.25 \times 4 = 3.01$$

$$1.2G + 1.6Q = 8.6 \quad \therefore m^* = 68.7 \text{ Kw-m}$$

SLS $G + 0.7Q = 5.7$ (continuous joists)

$$\text{for } 310 \text{UB} 40 \quad \delta_s = \frac{0.03 \times 5.7 \times 8000^3}{205000 \times 85.2 \times 10^6} = 17 \text{ mm}$$

P/470

310UB40 OK for strength provided mid span web stiffening is provided. - see Memos

check for springy

$$\delta_{1K} = \frac{1000 \times 8000^3}{48 \times 205000 \times 85.2} = 0.61 \text{ m} \quad \text{OK}$$

ULATION SHEET

RICHARD I.R. CATTERALL
M.A., M.I.C.E., M.I.P.E.N.Z.
CONSULTING ENGINEER

PO BOX 53, MANGONUI, FAR NORTH. TEL/FAX 0-9-406 0668.

JOB NAME: *Windle Garage*

PAGE No:

SECTION: *Frame details*

2

JOB No. *1898*

DESIGNED: *AK*

DATE: *23/6/03*

CHECKED:

Beams over Runways

main beam spans 6.8m

$$G = 0.35 \times 3.6 + 0.5 + 0.3 = 2.06$$

$$Q = 1.5 \times 3.6 = 5.4$$

$$\therefore 1.2G + 1.6Q = 11.11 \text{ kN/m}$$

$$\therefore m^* = 50$$

For 310UB32

$$G + 0.7Q = 5.84$$

$$\delta_s = 0.013 \times 5.84 \times 6800^3 = 12.5$$

$$20500 \times 63.2 \times 10^6$$

544 o.k.

ULS - 310UB32 ok — midspan stiffening req.

Beam span. 6.6m. Support 4.4 clear

— use 310UB32 as above.

Beam span 5.4 supports 4.8.

— use 310UB32 as above

Foundation:

Worst beam in overgarage — 43 kN.

— req min 655 mm —

— use 700 sq thickening D12 @ 200 both ways

ULATION SHEET

RICHARD I.R. CATTERALL
M.A., M.I.C.E., M.I.P.E.N.Z.
CONSULTING ENGINEER

PO BOX 53, MANGONUI, FAR NORTH. TEL/FAX 0-9-406 0668.

JOB NAME: *Windle Gann*

PAGE No:

SECTION: *House details*

3

JOB No. *1898*

DESIGNED: *AK*

DATE: *23/6/03*

CHECKED:

Columns:

Outside walls, one blockwork - O.K.

inner supports - use 3-100 x 50 slabs

$A = 12690$ $K_g = 0.45$

$\therefore \frac{A}{K_g}$

$\therefore N_v = 12.69 \times 20.8 \times 0.45 \times 0.8 = 95$ $\phi N_v = 76$ O.K.

Project : Windlebourne
Descriptn : Floor beams

Section : 310UB40 Grade 300+

Major Axis Bending

Design Action $M_x^* = 85.0 \text{ kNm}$

$$\alpha_m = 1.17$$

$$\alpha_s = 0.52$$

$\alpha_m \alpha_s < 1.0$, $\Rightarrow$ Segment NOT Fully Restrained

$$M_{bx} = 1.17 * 0.52 * 202.6 = 124.0$$

$$\begin{aligned} \text{Major axis capacity Ratio} &= M_x^* / \phi M_{bx} \\ &= 0.76, \quad \text{---- OK ----} \end{aligned}$$

Shear Calculations (Unstiffened Web)

Design Action $V_x^* = 42.4 \text{ kN}$

Nominal Shear Yield capacity $V_w = 356.0 \text{ kN}$

$$\alpha_v = 2.43 \geq 1.0 \Rightarrow \text{full web shear capacity}$$

$$V_u = V_w = 356.0 \text{ kN}$$

$$\begin{aligned} \text{Shear capacity ratio} &= V_x^* / \phi V_u \\ &= 0.13, \quad \text{---- OK ----} \end{aligned}$$

SUMMARY

**** U.L.S. Capacity Check Passed, Load Cap. Ratio = 0.76 ---- OK ----

Project : Windlebourne
Descriptn : Floor beams

Section : 310UB32 Grade 300+

Major Axis Bending

Design Action $M_x^* = 50.0 \text{ kNm}$

User provided value for $\alpha_m = 1.17$

$\alpha_s = 0.53$

$\alpha_m \alpha_s < 1.0$, $\Rightarrow$ Segment NOT Fully Restrained

$M_{bx} = 1.17 * 0.53 * 149.4 = 93.4$

Major axis capacity Ratio = $M_x^* / \phi M_{bx}$
= 0.60, ---- OK ----

Shear Calculations (Unstiffened Web)

Design Action $V_x^* = 37.8 \text{ kN}$

Nominal Shear Yield capacity $V_w = 314.7 \text{ kN}$

$\alpha_v = 2.00 \geq 1.0 \Rightarrow$ full web shear capacity

$V_u = V_w = 314.7 \text{ kN}$

Shear capacity ratio = $V_x^* / \phi V_u$
= 0.13, ---- OK ----

===== SUMMARY =====

**** U.L.S. Capacity Check Passed, Load Cap. Ratio = 0.60 ---- OK ----

RICHARD I.R. CATTERALL
M.A., M.I.C.E., M.I.P.E.N.Z.
CONSULTING ENGINEER

PO BOX 53, MANGONUI, FAR NORTH. TEL/FAX 0-9-406 0668.

JOB NAME: WINDLE BOURNE

SECTION: HOUSE DETAIL

JOB No. 1898

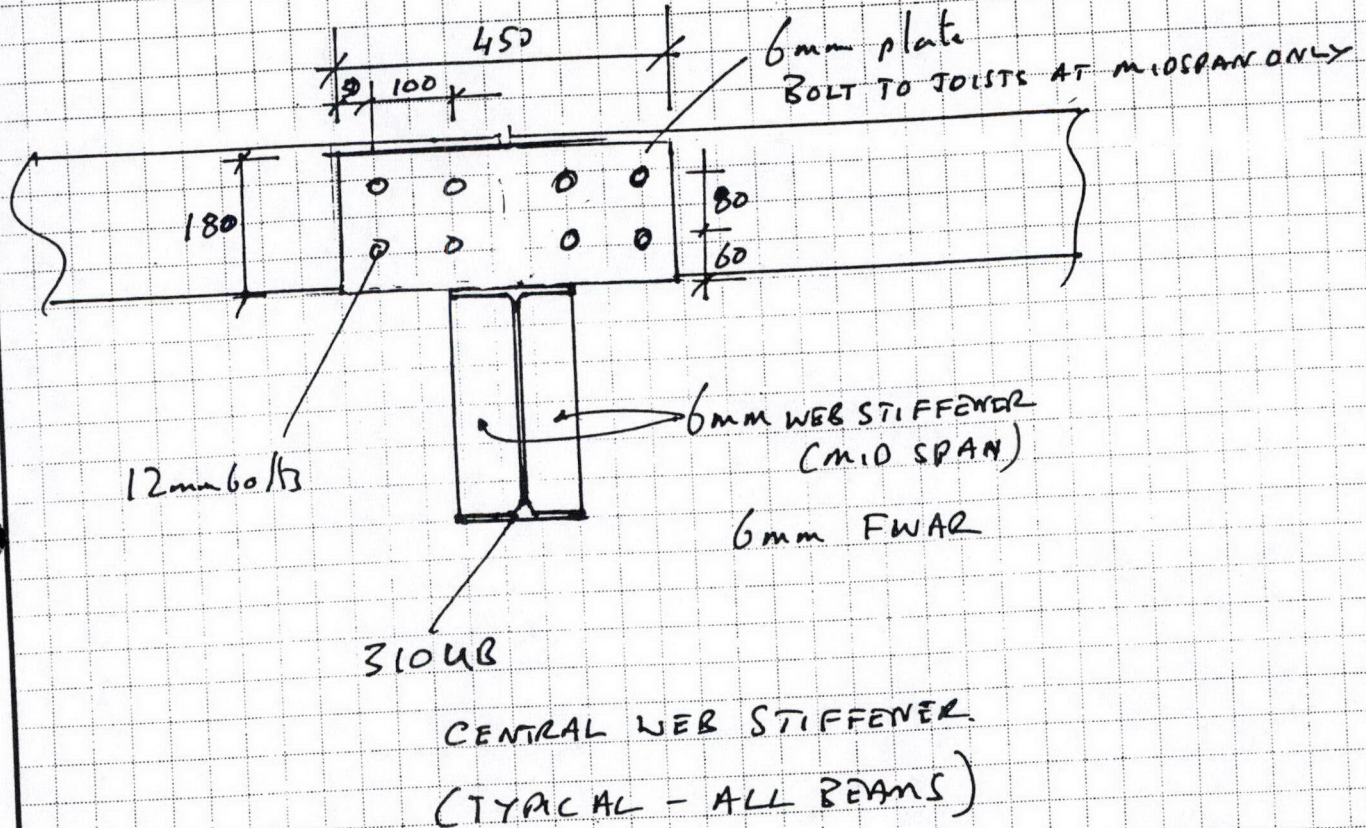
DATE: 23/6/08

PAGE No:

SK A

DESIGNED: RE

CHECKED:

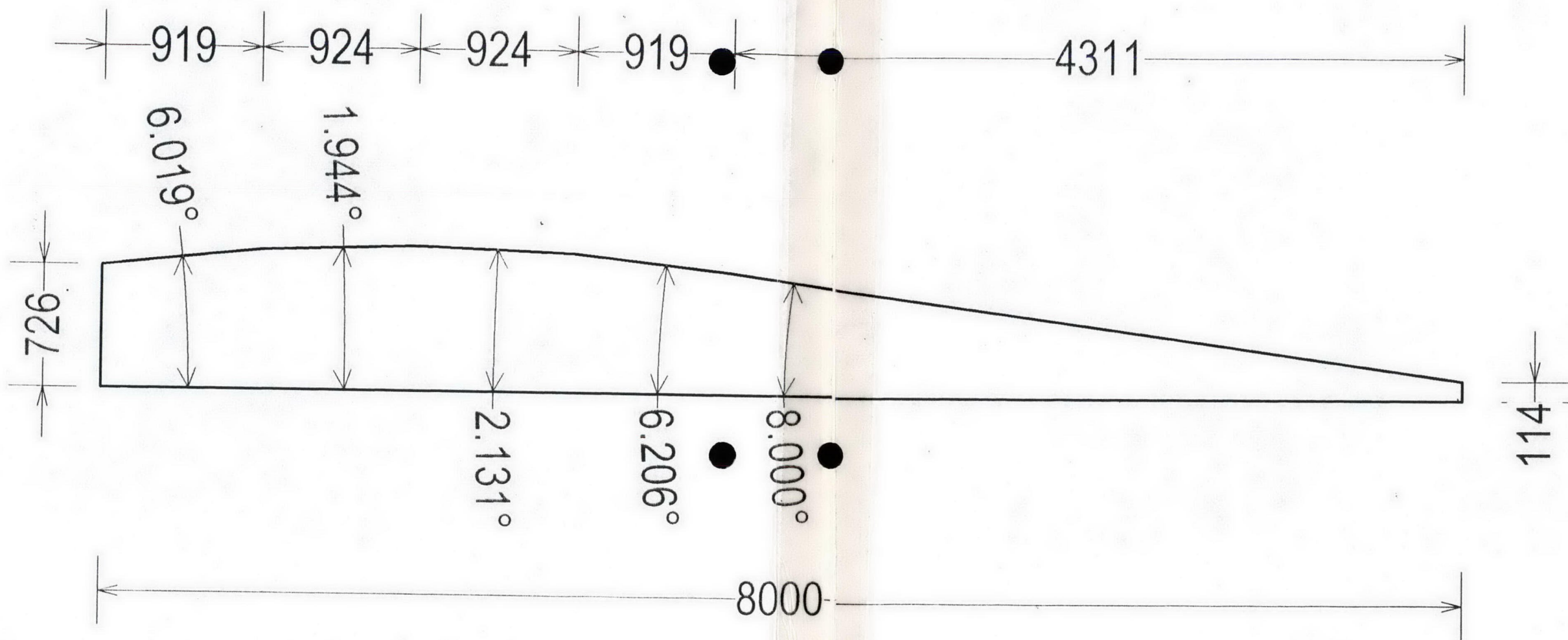


ENDS OF BEAMS TO HAVE 6mm END PLATE.

BOLT BEAM TO BLOCKWALL - 2 - 16mm 60/B.

USE 3 - 100X50 STUDS UNDER BEAM AT TIMBERWALL

STRAP AND BOLT USING 2 - 12mm BOLTS MIN.



Far North District
Council
Received

