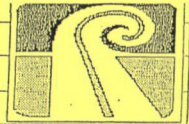


# BUILDING INSPECTION SHEET



Far North District Council

Date

17.6.05

Valuation Number: 611-281-00

BC#

20051399

Time

7.00

AM/PM

Applicant

MAIHL

phone #



\*BCAPP\*

Travelling Time

:

Officer

BZ

Inspection Time

:

Signature

B. Ece

5 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

ENVIRONMENTAL

17 JUN 2005

RECEIVED

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

OK TO POUR

SLAB/UNDER SLAB PLUMBING Inspection OK Not N/A

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

Slab Reinforcing: Thickenings, tying cover etc

Fill: Compaction, depth, binding

Pipes: gradient, protection, sizing, tested

Other

SUBFLOOR Inspection OK Not N/A

Sub floor brace connectors

Bracing: washers, timber size etc

Bearer/Joist: Size, spacing, joist hangers

Notching/holes/blocking for lines of horizontal supports

Ventilation & insulation

Other

CONCRETE - SUPENDED SLAB Inspection OK Not N/A

Block Size

Reinforcing: Size, grade, laps, tied

Washouts: If pour exceed 1.2 m in height

Design Calculation on site

Retaining Wall: DPM & protection

Adequate propping

Services Installation (Fire Collars)

Identify proprietary pre-stress components

Other

ENTERED



225 EXTERIOR CLADDING Inspection		OK	Not	N/A	Comments
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	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				



# BUILDING INSPECTION SHEET



Far North District Council

Date

21.4.05

BC#

20051399

Valuation Number:

611-281-00

Time

1.10 AM/PM

Applicant

MAIMI

phone #

/Builder

Travelling Time

:

Officer

BZ

Inspection Time

:

Signature

BZ

## 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			

## 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			

OK TO Pour

## 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			

ENTERED

## 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			



[illegible]

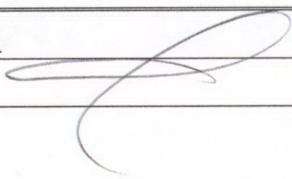


PRIORITY: TO BE PROCESSED UNDER BOTH TDP AND PDP PLANS

**BUILDING CONSENT NO ABA 20051399**  
**TRACKING SHEET**

NAME: AHL & NA Maihi DATE: 16.02.05  
VAL NO: 611-281-00 PROPERTY ID 3326177  
LEGAL DESC: Sec 64 Rawene TSHIP  
BUILDING: Block Shed  
LOCATION 86 Cochrane Street Rawene

**RESOURCE PLANNER**

DATE: 21/02/05 SIGNED:   
CONDITIONS:

**DEVELOPMENT ENGINEER**

DATE: SIGNED:  
CONDITIONS:

**PLUMBING AND DRAINAGE**

DATE: 18.2.05 SIGNED: B. Ewe  
CONDITIONS:

**BUILDING INSPECTOR**

DATE: 18.2.05 SIGNED: B. Ewe  
CONDITIONS:

**OTHER:**

DATE: SIGNED:  
CONDITIONS:

Enter Swimming Pool Register	BWOFF / Compliance Schedule Required	NRC Septic Tank Booklet	NRC (Consent on behalf)	<b>NUMBER OF INSPECTIONS</b>	
				PREPAID	CHARGE
					8



# PLANNING CHECK LIST

ABA 200 51399

## Transitional District Plan(TDP)

Zoning: RESIDENTIAL T.

Check CT (i.e. Consent Notices, Building line restrictions):

District Wide Issues:

Use:

Rules of Zone (i.e. Setback, Sunlight etc):

Setback:

Coverage:

Height:

H/Bdy:

## Revised Proposed District Plan(RPDP)

Zoning: Coastal Residential

Resources: al

CT: al

District Wide Issues:

Earthworks:

Parking:

Access:

TP 58: To be connected

Rules of Zone (i.e. Setback, Sunlight etc):

Setback:

Scale:

Sunlight:

Buildings:

Height:

Imp. Surf:

Res Int:

Traf. Int:

## Type of Activity under the Resource Management Act 1991?

PERM

PERM

Does the project require a resource consent under either Plan?

No ☒

Yes ☐

Resource Consent granted?

No ☐

Yes ☐

RC # \_\_\_\_\_ Date granted: \_\_\_\_\_

Conditions appropriate to this project?

No ☐

Yes ☐

Attached.

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: 86 COCHRANE ST RAWENE

Property Area: 0.349ha.

00611-281-00

SEC 64 RAWENE TSHIP



**Far North District Council**

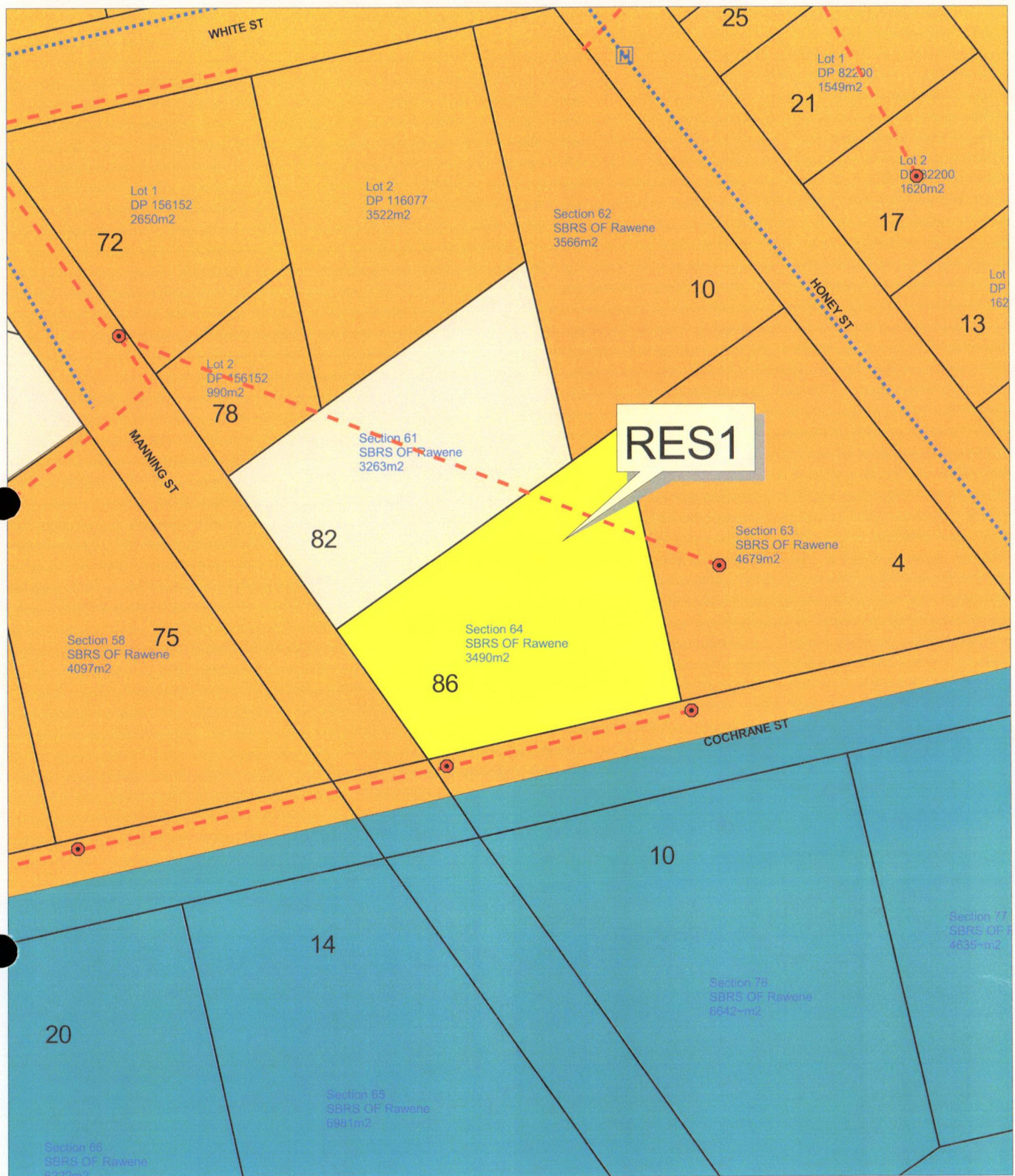
## PROPERTY INQUIRY

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 the information presented, Far North District Council assumes no responsibility for errors or omissions.

LINZ Digital Licence No AK 3501/1 CROWN COPYRIGHT RESERVED

Date: 17/2/5





Property Location: 86 COCHRANE ST RAWENE

Property Area: 0.349ha.

00611-281-00

SEC 64 RAWENE TSHIP



**Far North District Council**

## 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 the information presented, Far North District Council assumes no responsibility for errors or omissions.

LINZ Digital Licence No AK 3501/1 CROWN COPYRIGHT RESERVED

Date: 17/2/5



**Property Enquiry** \_ □ ×

File Field Options Help

✓ ? [Print] [Map] [X] [Zoom In] [Zoom Out] [Home]

---

**Property ID**  **Name**  
**Address** 86 COCHRANE STREET, RAWENE  
**Alt. Property ID**  
**Ended Date** **Road Use** **Corner Property** Public

---

People Rates Parcel Analysis Buildings **RFS** COP Licensing Water Volume Docs Animals

---

RFS	ID	Description	Link Type
<input type="text" value="ABA"/>	20051399	CURRENT COM:CONSTRUCT A BLOCK SHED	<div><div></div></div>

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gemini.fndc.govt.nz



16

**PART A : GENERAL**

ABA N° : 20051399 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 A.H.L & N.A MAIHI

Postal Address P.O. BOX 103 RAWENE  
HOKIANGA NORTHLAND

Phone N° (09)4057894 Fax N° (09)4057894

Name of previous property owner MARGARET THOMAS  
(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** : .....

Address 86 COCHRANE STREET, RAWENE, HOKIANGA,  
NORTHLAND

7. **LEGAL DESCRIPTION**

Valuation Roll Number 00611-28100  
(Can be obtained from your rates notice or a Customer Liaison Officer PH : 0800 920029)

Lot(s) or Section N° : 64 Suburb or Rawene

AREA OF SITE (M²) : ~~41879~~ 3490m²

Certificate of Title : N° 268/205 (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 :

BLOCK SHED.

Intended use(s) in detail :

STORAGE SHED. FOR  
TOOLS & TRUCK.

Total Floor Area of project : 162 m²

Ground floor area of project : 162 m²

Upper floor area of project : ..... m²

Estimated Value of Work \$36,000 (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 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 : PAUL HAYMAN  
PETER KING C.P. ENG. INT P.E.  
Address :  
Phone Number : 094343925  
Cell Phone Number : Fax Number : Email Address :

### BUILDER

Name : MAIHI BUILDERS  
Address : P.O. BOX 103 RAWENGE  
Phone Number : 094057894  
Cell Phone Number : 0210608209 Fax Number : 094057894 Email Address :

### REGISTERED DRAINLAYER

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

### REGISTERED PLUMBER

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

### REGISTERED ELECTRICIAN

Name : BEAZLEY ELECTRICAL Reg. N° Email Address :  
Address : P.O.C. RAWENGE  
Phone Number : 09 4057815 Cell Phone : Fax Number :

### CERTIFIER

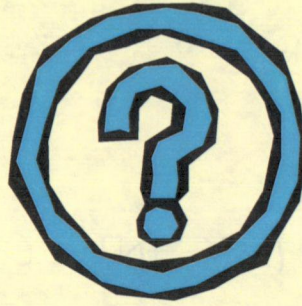
Name : Reg. N° Email Address :  
Address :  
Phone Number : Cell Phone : Fax Number :

### OTHER

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



## *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**

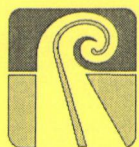
☒ (All applications. If information not yet available, please supply to Council as soon as possible).

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**'





# Far North District Council

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

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

## TAX INVOICE ONLY

MAIHI, AREPATA HEREMAIA  
P O BOX 103  
RAWENE 0452

ABA A/C: 128467  
INVOICE DATE: 21/02/2005  
INVOICE NO: 33422  
RFS NUMBER: ABA 20051399

### BUILDING CONSENT APPLICATION CHARGES

Details: CONSTRUCT A BLOCK SHED  
00611-281-00  
Site Address: 86 COCHRANE STREET

Description	Amount
BRANZ Levy	36.00
DBH Levy	23.40
Standard Building Inspection F	672.00

FAXED

*This Invoice Total is inclusive of GST except for any BRANZ Levy* **TOTAL \$ 731.40**

Please note that no Building Consent will be issued until all scheduled fees have been paid. These fees have been based on 8 inspections. Please note that if more inspections are carried out than specified on this account, then a further charge of \$84.00 per inspection will apply and must be paid prior to issue of a code of Compliance Certificate.

Please return with payment

#### NAME OF A/C:

MAIHI, AREPATA HEREMAIA  
P O BOX 103  
RAWENE 0452

ABA A/C: 128467  
INVOICE DATE: 21/02/2005  
INVOICE NO: 33422  
RFS NUMBER: ABA 20051399  
TOTAL: \$ 731.40



**ENVIRONMENTAL SERVICES**

**Far North District Council  
Private Bag 752  
KAIKOHE**

**Ph: 0800 920029  
Fax: 09 4010987**



**FACSIMILE MESSAGE**

**TO : NICKY & SIBBY MAIHI**

**COMPANY: MAIHI BUILDERS**

**FAX NO: 09 4057894**

**FROM : Catherine Leaf, TECHNICAL SUPPORT OFFICER, ENVIRONMENTAL SERVICES**

**DATE : 21-Feb-05**

**NO. OF PAGES : 5  
(INCL. THIS PAGE)**

**FAXED**

**MESSAGE re: ABA:20051399, STORAGE SHED, 86 COCHRANE STREET, RAWENE**

**PIM AND FINAL INVOICE ATTACHED FOR ABOVE MENTIONED BUILDING  
CONSENT APPLICATION, PLEASE PAY ON FINAL INVOICE.**

**BUILDING CONSENT WILL BE ISSUED ON RECEIPT OF PAYMENT.**

**Regards**

**Catherine Leaf  
SUPPORT OFFICER, ENVIRONMENTAL SERVICES**



ENVIRONMENTAL  
16 FEB 2005  
RECEIVED



# 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. **OR 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.





# 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 :

<input checked="" type="checkbox"/> Item Included	<input checked="" type="checkbox"/> Item not Included	<input checked="" type="checkbox"/> N/A Item not applicable	OFFICE
<input type="checkbox"/> <b>APPLICATION FORM</b> <input checked="" type="checkbox"/> 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). <input checked="" type="checkbox"/> Include the correct legal description (Can be obtained from your rates notice, Certificate of Title or from Council's Customer Liaison Team). <input checked="" type="checkbox"/> Name, address and phone numbers of all personnel relevant to your project, including person to receive accounts. <input checked="" type="checkbox"/> Copy of recent Certificate of Title ( <i>not more than six months old - obtained from Land Information NZ</i> ) or Proof of Purchase from Solicitor.			<input type="checkbox"/>
<input type="checkbox"/> <b>SPECIFICATIONS (3 Copies)(see Note 1)</b> <input checked="" type="checkbox"/> 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 <b>SPECIFIC DESIGN</b> (see over)			<input type="checkbox"/>
<input type="checkbox"/> <b>SITE PLAN (3 Copies)</b> <input checked="" type="checkbox"/> Show the floor area of the proposed building project and of all existing buildings to a minimum scale of 1:200. Use metric measurements. <input checked="" type="checkbox"/> 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. <input type="checkbox"/> Show the layout of existing and proposed sanitary and stormwater drains and mains, septic tanks and stormwater disposal. <input checked="" type="checkbox"/> Show the source of the water supply. <input checked="" type="checkbox"/> Show the location of vehicle entrance.			<input type="checkbox"/>
<input type="checkbox"/> <b>FLOOR PLAN (3 Copies)</b> <input checked="" type="checkbox"/> 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).			<input type="checkbox"/>
<input type="checkbox"/> <b>ELEVATIONS (3 Copies)</b> <input type="checkbox"/> An elevation of 1:100, each external wall showing heights and finished ground level at each external corner (see above for smaller scale allowances). <input type="checkbox"/> Location of wall and roof bracing to be shown on elevations. <input type="checkbox"/> Scaled elevations indicating height from ground level to top of roof line.			<input type="checkbox"/>
<input type="checkbox"/> <b>FOUNDATION PLAN (3 Copies)</b> <input checked="" type="checkbox"/> 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. <input checked="" type="checkbox"/> Wind zone calculations ( <b>Note : All areas within the Far North District are R.2.</b> ) <input checked="" type="checkbox"/> Sub-floor bracing calculations.			<input type="checkbox"/>

Continued overleaf



<input checked="" type="checkbox"/> Item Included	<input checked="" type="checkbox"/> Item not Included	<input type="checkbox"/> N/A Item not applicable	OFFICE
<input type="checkbox"/> <b>CROSS SECTION DETAILS (3 Copies)</b> <input checked="" type="checkbox"/> Sufficient cross sections through the building to show foundation details, floor systems, wall construction, roof construction, location of wall claddings and roof covering. <input type="checkbox"/> Show construction details of terraces, steps, balustrades and any unusual items. <input type="checkbox"/> Details of thermal insulation to be shown (dimensions, type, value).			<input type="checkbox"/>
<input type="checkbox"/> <b>WALL AND FLOOR BRACING CALCULATIONS (3 Copies) (See Note 2)</b> <input checked="" type="checkbox"/> Submit wall and sub-floor bracing calculations, and plan, detailing location of bracing elements. <input type="checkbox"/> <b>NOTE :</b> One room additions. Locate requirements and their respective values on the elevations. (See Note 1. Below)			<input type="checkbox"/>
<b>EFFLUENT DESIGN ( TP 58 ) : (Consulting Engineer or Approved Designer)</b> <input type="checkbox"/> 3 Copies of T.P. 58, including producer statement and maintenance requirements.			<input type="checkbox"/>
<b>SPECIFIC DESIGN :</b> To facilitate processing of specific design applications, provide the following information: <input checked="" type="checkbox"/> Full engineering calculations and drawings. <input checked="" type="checkbox"/> Design Certificate/Producer Statement. <input type="checkbox"/> Soil report or geotechnical report (where applicable). <input checked="" type="checkbox"/> A written description of the building model and techniques used in construction. <input checked="" type="checkbox"/> Name and Address of Engineer.			

#### NOTES :

- Specifications for additions, alterations and garages under 40m<sup>2</sup> can be written on plans (No need for separate document).
- Garages and Carports will not require bracing schedules but may require posthole size calculation.
- Commercial and Industrial Buildings require a Fire Report (**FORM E - Commercial & Industrial** of application will be required).
- 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 <u>Rawene</u>	Office	Far North District Council Private Bag 752 KAIKOHE	Phone: 0800 920029 Fax: (09) 4012137 Email: gws@fndc.govt.nz
Date <u>15/2/05</u>	Receipt N° <u>393516</u>	Kaikohe Service Centre Memorial Avenue KAIKOHE	Kaero Service Centre Main Road KAEO
Fees Rec. \$ <u>385.00</u>	VAL N° <u>644-281-00</u>	Kawakawa Service Centre Gillies Street KAWAKAWA	Kaitia Service Centre Redan Road KAITAIA
ABA N° <u>20051399</u>		Kerikeri Service Centre Hobson Avenue KERIKERI	Rawene Service Centre Parnell Street RAWENE
Applicant I.D. N° <u>128467</u>			
Agent/Rep I.D. N°			
CHECKED BY <u>Lynne McCulloch</u>	Customer Liaison Officer		



28 NOV 2000

CCY

Land and Deeds 00

No 26B/205

References

Prior C/T 12B/1312

Transfer No. 232912

N/C. Order No.



REGISTER.

## CERTIFICATE OF TITLE UNDER LAND TRANSFER ACT

This Certificate dated the 25th day of May one thousand nine hundred and seventy-  
under the seal of the District Land Registrar of the Land Registration District of North Auckland. three

WITNESSETH that CATHERINE EMMA DONALDSON of Rawene, Draper

is seized of an estate in fee-simple (subject to such reservations, restrictions, encumbrances, liens, and interests as are notified by  
memorial underwritten or endorsed hereon) in the land hereinafter described, delineated with bold black lines on the plan heron,  
be the several admeasurements a little more or less, that is to say: All that parcel of land containing 3490 square  
metres more or less being Section 64 Suburbs of Rawene.



*Foran*  
Assistant Land Registrar

L.T.

041140.1 Transfer to Lionel John  
Orchard of Havelock, fisherman -  
22.6.1973 at 12.30 o'clock

626995.1 Transfer to Daniel Wallace  
Wienosky of Auckland launch hand -  
4.10.1976 at 11.45 o'clock

*D.L. Williams*  
for A.L.R.

C.851993.1 Transfer to Terry John Thomas  
of Rawene shop proprietor and Eve  
Margaret Thomas his wife - 8.6.1995 at  
3.23 oc.

*Curry*  
A.L.R.

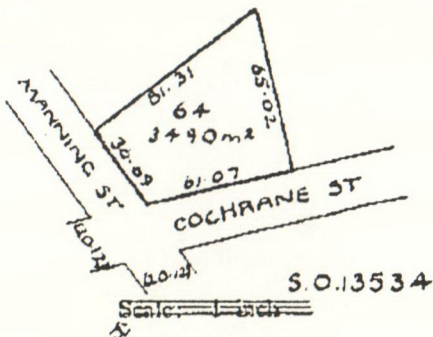
XIV Mangamuka S.D.

D.154241.1 Transfer to Eve Margaret Thomas of  
Welleford mother - 11.6.1997 at 10.25 o'clock

*Curry*  
A.L.R.

D.283338.1 STATUTORY LAND CHARGE UNDER  
SECTION 40 OF THE LEGAL SERVICES ACT 1991  
22.6.1998 at 9.32

*B. K. Kihara*  
for DLR



26B/205

GUARANTEED SEARCH pursuant to  
S172A Land Transfer Act 1952. Please  
note that the details of unregistered docu-  
ments may exist on the attached Journal  
printout. This copy must be produced with  
any claim or query.





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



R. W. Muir  
Registrar-General  
of Land

Identifier **NA26B/205**  
Land Registration District **North Auckland**  
Date Issued **25 May 1973**

**Prior References**  
NA12B/1312

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**Estate** Fee Simple  
**Area** 3490 square metres more or less  
**Legal Description** Section 64 Suburbs of Rawene  
**Proprietors**  
Arepata Heremaia Maihi and Nicola Ann Maihi

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**Interests**

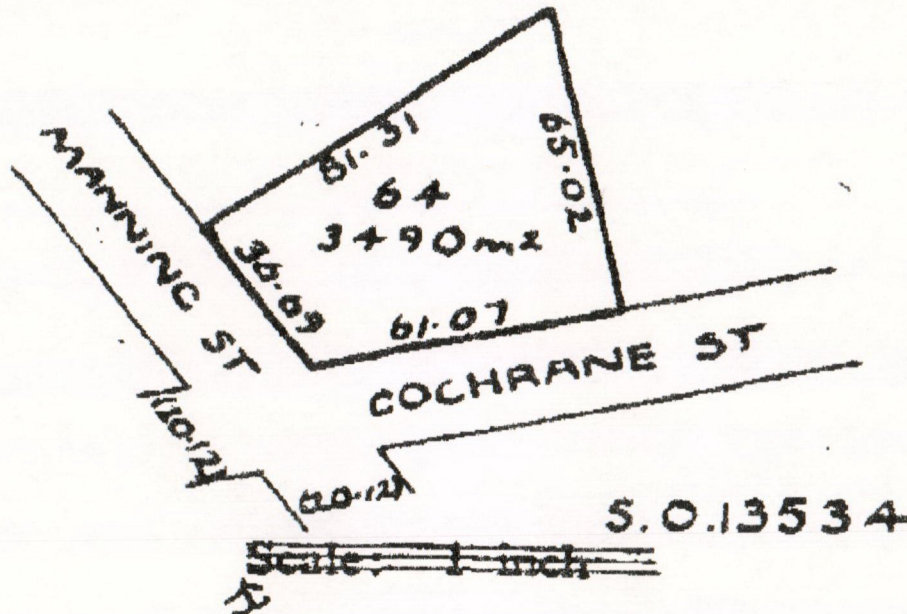
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Identifier

NA26B/205

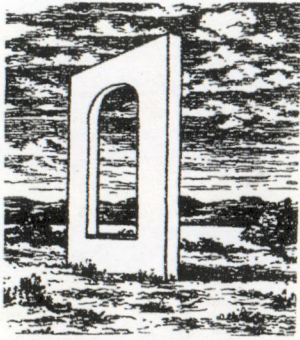
XIV Mangamuka S.D.



MEASUREMENTS ARE METRIC



Far North District  
Council  
Received



cad  
planz

WOODWORKS CONSTRUCTION LTD

Paul Hayman

P O Box 250, Kaeo, New Zealand.

Tel. 09 405 1816 Fax. 09 405 1861 Mob. 0274 505 471

[cadplanz@xtra.co.nz](mailto:cadplanz@xtra.co.nz)

## PLANS & SPECIFICATION

SHED FOR MAIHI  
HONEY ST  
RAWENE

Building Consent



# **SPECIFICATION FOR SHED FOR MAIHI**

Please note that these specifications are not designed to be used as contract documents.

## **PRELIMINARY AND GENERAL**

### **WORKMANSHIP:**

All workmanship must be in accordance with normal trade practice and all materials must be suitable for their proposed use.

**N Z BUILDING CODE:** All works and materials must comply with the N Z Building Act, NZS 3604, 1999 and related documents.

### **EXCAVATION:**

Excavate as required for all site levelling, foundations, footing, blockwalls, water-pipes etc, to the various depths, levels and grades required for the erection of the building and its appurtenances. All subsoil from the foundations and other excavations is to be deposited on the site unless otherwise specified. All topsoil and vegetation to be removed from under concrete floors.

## **CONCRETE**

### **MATERIALS:**

- a **Cement:** All cement shall be Portland cement conforming to the requirements of the NZS 3122.
- b **Aggregates:** Fine and coarse aggregates shall conform to the requirements of NZS 3121.
- c **Water:** Water shall be clean and fresh and shall comply with NZS 3121.
- d **Boxing:** Boxing shall be clean and dressed material in good condition.

### **WORKMANSHIP:**

All work shall be carried out in a tradesmanlike manner in accordance with best trade practice and in accordance with relevant standards, particularly NZS4229.

### **DAMP PROOF COURSE:**

Cover all concrete and brick faces in contact with timber work with one layer of three-ply maithoid or other approved damp course.

### **HARDFILL:**

Hardfill shall be clean material and shall be compacted in 150mm layers to 100Kpa.

### **CONCRETE FLOORS:**

To have a vapour barrier under laid to outside edge of floor footings. Lay vapour barrier on 50mm of sand. Lap joins by 150mm and tape.

Use 665 mesh central to slab unless specified otherwise on drawings.

Concrete to be batch mixed by a certified plant, strength to be 17.5MPa, unless specified elsewhere.

## **CONCRETE MASONRY**

### **CONCRETE BLOCKS**

Blocks shall be Class A quality and shall be sound, true to shape with sharp arrises, clean, dry and undamaged.

Blocks shall be 200 series type 2016 blocks for bondbeam courses and standard blocks elsewhere.

Blocks for door and window reveals shall be rebated blocks with concrete sill blocks.

### **MORTAR**

Mortar shall be composed of 2 parts cement. 1 part lime and 8 parts sand. All mortar when mixed shall



have a slump  
of 75mm +1- 6mm and comply with NZS 4210.  
Sand shall be clean, of sharp and gritty hard grade of varying sizes.

#### CONCRETE

Concrete used for filling cavities shall be ordinary grade having a crushing strength of 17.5MPa at 28 days.

All concrete block cells shall be filled with grout.

#### WORKMANSHIP

All workmanship shall be in accordance with NZS 4210 and 4229 the best trade practice, performed by registered blocklayers only.

All blocks shall be stacked on planks immediately after delivery to site and covered with tarpaulins to keep blocks perfectly dry prior to use. Blocks shall be DRY at the time of laying.

Blocks shall be laid with thicker end of face uppermost. Mortar beds shall be laid on shells only and not on webs.

Walls shall be built plumb and true to line and face vertically and horizontally. Mortar joints shall be tightly filled, flush on inside face, struck concave on exposed face. Joints shall be 10mm thick both vertically and horizontally.

All blockwork shall be kept clean from droppings as work proceeds and shall be scrubbed down with a stiff brush on completion.

Leave clean-out ports in bottom course and at any other level where debris can collect, so that all cells to be filled are capable of being cleaned.

Where cores and bond beams are to be filled by hand, maximum lift shall be 5 courses. Where a grout pump is to be used walls may be fully constructed. Concrete shall be well worked around reinforcing rods. Concrete filling to bond beams shall be sloped minimum of 10mm down towards exterior face of block to finish below line of joint.

When work is to be stopped for more than one hour, a horizontal construction joint shall be made by stopping concrete 50mm below the top of the uppermost unit.

Build timber grounds, pipes, conduits, bolts etc as required by Main Contractor.

Construct control joints in walls as per NZS 4210 with continuous unbonded vertical joints. Rake out face mortar for 10mm and caulk joints with Thioflex or other approved caulking compound.

All blockwork shall be cleaned of mortar and cement splashes as the work proceeds and shall be scrubbed down with a stiff brush on completion.

Where blockwork comes up to aluminium ensure that the anodized surface is protected from contact with the mortar.

#### TIMBER FRAMING

##### FRAMING:

All timber work shall be framed with 140 x 45 H1.2 machine gauged materials, trussed, braced and assembled in a workmanlike manner and in accordance with normal trade practice. All materials are to be laid true to their various levels, constructed in a proper tradesmanlike manner to make the whole of the works a sound construction.

##### NAILING AND FIXING:

As set out in NZS 3604 nailing schedule.

##### TIMBER TREATMENT:

The following timber treatments are to be adhered to for the following building elements.

BUILDING ELEMENT	TREATMENT LEVELS
Piles	H5
Bearers (closer than 300mm to G.L.)	H4
Bearers (further than 300mm from G.L.)	H3.2
Deck joists (closer than 300mm to G.L.)	H4



Deck joists (further than 300mm to G.L.)	H3.2
Decking, external stair components, Handrails & balustrades	H3.2
Framing for enclosed decks & balconies	H3.1
Floor joists & nogs	H1.2
Edge Joists	H3.2
Wall bottom plates	H1.2
Wall framings (studs, nogs, & top plates)	H1.2
Ceiling battens, joists, trusses	untreated kiln dried radiata pine
Purlins & other enclosed roof framing	H1.2
Exterior exposed rafters (excluding edge rafters)	H3.1
Exterior exposed roof beams, edge rafters etc.	H3.2

#### ROOF FRAMING:

Purlins are to be 150/18 HST steel purlins at 3m centres.

Each bay is to have one set of sag rods/ bracing channel fitted as per manufacturers specifications.

Purlins are to be fixed to timber framing with 2-m8 galv screws.

Studs either side of purlin fixing is to have strap nails fastened each side of top and bottom plate as per detail drawings.

### PLUMBER

#### MATERIALS:

All materials used by the Plumber must be of accepted standard and must conform to Building Code 1992. Any part or parts omitted from this Specification which are useful or necessary to complete this work in proper manner shall be taken as though specially mentioned.

#### FLASHINGS:

Flash all openings through the roof where necessary to make a water-tight job as required.

#### ROOFING:

To be multispan coloursteel endura roofing with heavy weight building paper and netting under. Install roofing and recommended accessories strictly as per manufacturers specifications and also best trade practice.

#### SPOUTING:

Unless otherwise specified, provide and fix 125mm<sup>2</sup> coloursteel endura. spouting supported on purpose made brackets fixed at 500mm centres. Spouting to have graded fall to down pipes.

#### DOWN-PIPES:

Provide and fix 80mm P.V.C. downpipes in suitable positions or as shown on plans. Downpipes are to be laid to existing stormwater system.

### ELECTRICIAN

#### MATERIALS:

Materials used by the electrician must be of an approved manufacturer and must comply with the NZ Building Code and approved documents.

#### WORKMANSHIP:

The whole of the electricians work must be carried out in compliance with the Regulations of the said Power Board and Underwriters Association by duly licensed tradesmen.

#### WIRING:

Wire the new electrical fittings and fixtures with tough plastic sheathed and insulated cables. Connection



boxes shall be used with the plastic cable and wiring shall be concealed where practical.

POWER POINTS:

Provide and fix flush switch plates to all points.

PAINTER

MATERIALS:

All materials used in this trade must be of approved manufacture and used according to the specifications of the manufacturer.

WORKMANSHIP:

Must be of good standard and carried out by skilled tradesmen.

EXTERIOR WOODWORK:

All exterior woodwork to be cleaned down and prepared. Putty all nail holes and finish with two coats of approved paint or stain as selected.



## PRODUCER STATEMENT – PS1 – DESIGN

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

ISSUED BY: PETER KING  
(Suitably qualified Design Professional)

TO: SIRI MAHI  
(Owner)

TO BE SUPPLIED TO: FAR NORTH DISTRICT COUNCIL  
(Territorial Authority)

IN RESPECT OF: NEW STORAGE SHED  
(Description of Building Work)

AT: HONEY ST  
LAURENCE  
(Address)

LOT ..... DP ..... SO .....  
PETER KING CONSULTING has been engaged by OWNER  
(Design Firm) (Owner/Developer/Contractor)

to provide STRUCTURAL DESIGN services in respect of the  
(Extent of Engagement)  
requirements of Clause(s) B1 of the Building Regulations 1992 for

☐ All

☒ Part only as specified

of the building work. The design has been prepared in accordance with N/S  
(verification method(s)/acceptable solutions(s))

(respectively) of the approved documents issued by the Building Industry Authority and the work is described on  
CAD PLAN 2 drawings titled PROPOSED STORAGE SHED  
(Design Firm)

and numbered 2-8 and the specification and other documents according to which the building is proposed to be constructed.

As an independent design professional covered by a current policy of Professional Indemnity Insurance to a minimum value of \$200,000. **I BELIEVE ON REASONABLE GROUNDS** that subject to:

(i) the site verification of the following design assumptions  
FOUNDATION TO N2S 3604 (NOT VISITED)

and (ii) all proprietary products meeting the performance specification requirements, the drawings, specifications, and other documents according to which the building is proposed to be constructed comply with the relevant provisions of the building code.

(Signature suitably qualified Design Professional)

Date 14/10/04

(Professional Qualifications)

ERB/AERB Reg No 10284

Member ACENZ ☐  
IPENZ ☒ NZIA

(Address)

This form to accompany Form 3 of the Building Regulations 1992 for the application of a Building Consent.



7 The Bluff  
WHANGAREI  
Ph: 027 233 4903

# King Consulting

Client:	MAHAI			Date:	26/9/04
Project/Job:	New Shed - Blk	Steel U.B.	Job No:	L002	Sheet No: 1
Subject:	WIND LOADING			By:	BR

New Shed = Blk walls

Steel U.B. to carry 3.5 tonne pallet.

Very High Wind Zone / Category.

Wind loading to NZS 1170

Allow for Terrain Cat 3

$$P = P_{ref} \left( \frac{z}{z_{ref}} \right)^{\alpha} \quad \text{where } z_{ref} = 50$$

$$P_{ref} = 1/500$$

$$V_{500} = 46 \text{ m/sec} \quad V_{des} = 46 \cdot 0.83 = 38 \text{ m/sec}$$

$$\left( M_{exposed} = 0.83 \text{ (Terrain Cat 3)} \quad M_s = 1.0 \quad M_f = 1.0 \right)$$

(take  $M_{exposed}$  be 1.0 (worst case))

$$So \quad p = 0.5 \cdot 38^2 \cdot 1.2 / 1000 \quad k_{fa} = 0.87 k_{fa}$$

- 1) Require Calcs for the Blk walls
- 2) Steel U.B.'s. Frame roof off U.B. Beam to carry 3.5 T pallet.
- 3) Roof Structure



7 The Bluff  
WHANGAREI  
Ph: 027 233 4903

# King Consulting

Client: MAINI.	Date: 26/9/04
Project/Job: New Shed	Job No: 1002
Subject: STEEL UB	Sheet No: 2
	By: PSB

## STEEL ROOF BEAMS

Service factor

Span 9.0m  
Ultimate

DL	0.30 kPa	1.2	$0.36 \times 6 = 2.16 \text{ kN/m}$
Post LL	0.25 kPa	1.6	$0.4 \times 6 = 2.4 \text{ kN/m}$
Post Load	35.00 kN	1.6	56 kN

$$M^d = \frac{55.8 \times 4}{4} = 11.7.6$$

$$+ \frac{4.55.8 \times 4}{8} = \frac{40}{157.6 \text{ kNm}}$$

$$\Rightarrow \frac{157 \times 10^6}{0.9 \times 300} = 5.83 \times 10^5$$

Can use 360 UB 40

$$\sigma_b = \frac{104.7 \times 10^6}{569 \times 10^3} = 184 \text{ MPa}$$

$M_{elastic} = \frac{36.8 \times 4}{4} = 75.$   
 $(0.55.6) \frac{8.4^2}{8} = 29.$   
 104

$$\delta = \frac{5 \times 2.7 \times 10^3 \times 8400}{384 \times 86.4 \times 10^6 \times 2.1 \times 10^5} = 11.7$$

$$+ \frac{35 \times 10^3 \times 8400}{48 \times 86.4 \times 10^6 \times 2.1 \times 10^5} = 26 \text{ mm}$$

35.7

Recommend using a 360 UB 45 to reduce deflection



Client: <u>MAHAI</u>	Date: <u>26/9/04</u>
Project/Job: <u>New Shed</u>	Job No: <u>1002</u>
Subject: <u>Block Walls</u>	Sheet No: <u>3</u>
	By: <u>PS</u>

Block Walls

Height of wall 4.0m  
" to top of roof 5.0m



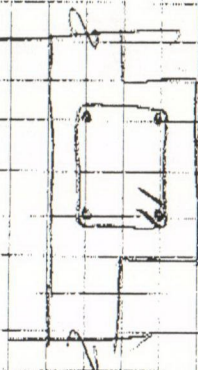
PLASTER

If a plaster is provided at each beam

$$m^2 = \frac{(5.0 \times 0.8 \times 0.87) 2.5 + (4.3 \times 0.5 \times 0.87) 2.5}{2}$$

This allows for front and back walls to share load

$$= (8.7 + 4.02) 6 / 2 = 38 \text{ kNm}$$



$$M / b d^2 f_m = \frac{38 \times 10^6}{450 \times 300^2 \times 8} = 0.13$$

$$R = 0.13$$

$$z = 300 \left( 0.5 + \sqrt{(0.25 - \frac{0.13}{0.9})} \right)$$

$$= 247$$

$$A_s \text{ reqd} = \frac{38 \times 10^6}{0.85 \times 450 \times 247} = 402 \text{ mm}^2$$

Use 2 H20 Bars.



Client:	MAHNI	Date:	26/9/04
Project/Job:	New Shed	Job No:	1002
Subject:	Blockwork & DETAILS	Sheet No:	4
		By:	PSK

$$V_c = \frac{0.80 \times 114 \times 10^3 \times 0.8}{1000} = 73 \text{ kN}$$

$$V^* = 8.4 \text{ kN} \quad V^* < V_c$$

Use minimum steel R6 spiral @ 100 pitch.

$$\text{area} = 380,300 \\ = 114 \times 10^3$$

## WALL STEEL

Span from floor to top - effectively a propped cantilever.

Seismic - with  $C_d = 0.2$  @ 600 c/c.

$$U.O.L. = (0.2 \cdot 14) \cdot 0.2 \cdot 0.4 = 0.224 \text{ kN/m}$$

Wind -

$$U.O.L. = (1.1 \cdot 0.85) \cdot 0.4 = 0.38 \text{ kN/m}$$

$$W_n = \frac{0.38 \cdot 3.2^2}{8} = 0.49 \text{ kNm}$$

$$R = \frac{m}{bd^3 f_{cr}} = \frac{0.49 \times 10^6}{600 \cdot 90^2 \cdot 4} = 0.025 \quad (\text{Grade C Masonry})$$

$$z = 90 \left( 0.5 + \sqrt{\frac{0.25 - 0.025}{0.9}} \right) = 87 \text{ mm}$$

$$A_{s_{eq}} = \frac{0.49 \times 10^6}{0.85 \cdot 300 \cdot 87} = 20.3 \text{ mm}^2$$

Use D12 @ 400 c/c. Verb D12 @ 300 c/c block



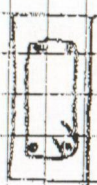
7 The Bluff  
WHANGAREI  
Ph: 027 233 4903

# King Consulting

Client: MAINI	Date: 28/9/04
Project/Job: New Shed	Job No: 4002
Subject: ROOFWORK	Sheet No: 5
	By: [Signature]

Top Bond Beam

$$V.D.L. = (2.1.1.0.87) \cdot \frac{6^2}{12} = 5.70 \text{ kNm}$$



$$M_{\text{bal}} = \frac{5.70 \times b^3}{100 \cdot 120^2} = 0.126$$

$$z = 120 \left( 0.5 + \sqrt{0.25 - \frac{0.126}{0.9}} \right)$$

$$= 100$$

$$A_{\text{req}} = \frac{5.70 \times b^3}{0.85 \cdot 100 \cdot 500} = 136 \text{ mm}^2$$

Use a 16 HR Band Beam  
R6 bars @ 200 c/c

All 200 Blot.

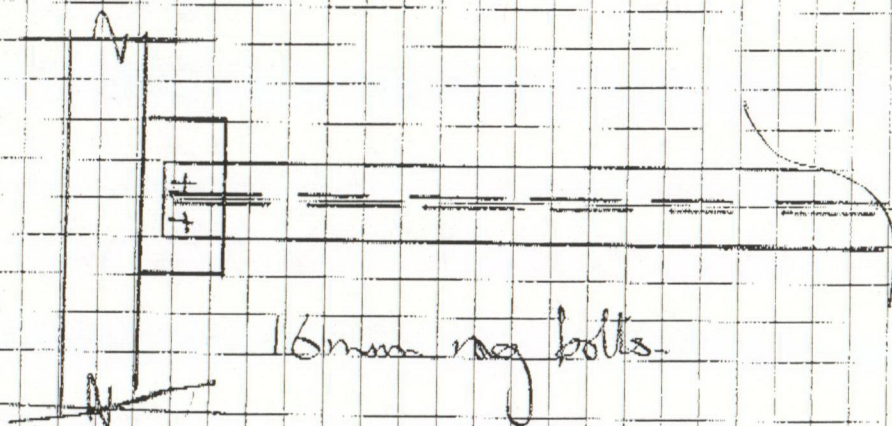


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WHANGAREI  
Ph: 027 233 4903

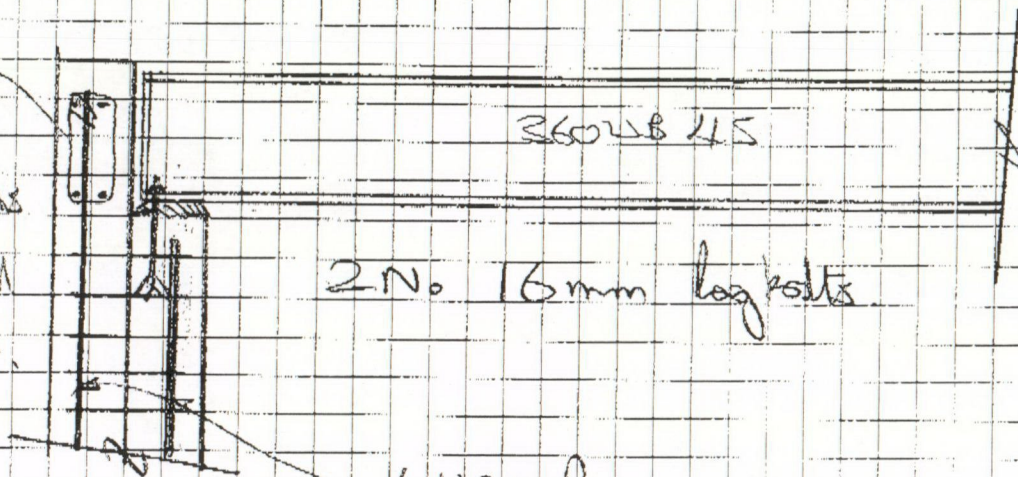
# King Consulting

Client:	MAINI	Date:	28/2/04
Project/Job:	New Shop / Steel U.B.	Job No:	1002
Subject:		Sheet No:	6
		By:	PSD

Roof Bracing.



Row  
Beam is  
continuous  
around full  
perimeter.



4H20 Bars  
R6 ties @

Provide a piler in the side wall removes the  
need for roof bracing.



Roof beam only

$$\underline{\delta}_{\text{req}} = \frac{40 \times 10^6}{0.9 \times 300} = 1.48 \times 10^5$$

With 200 UB 25 under dead load.

$$\delta = \frac{5}{384} \frac{17.6 \times 10^3 \cdot 8400^3}{24 \times 10^6 \cdot 2.1 \times 10^5} = 27 \text{ mm}$$

provide 15mm  
prescribed

If not to be loaded by lifting etc } can use 200 UB 25

With 360 UB 45

$$\delta = \frac{5}{384} \frac{27.7 \times 10^3 \cdot 8400^3}{2.1 \times 10^5 \cdot 121 \times 10^6} = 8.4 \text{ mm}$$

$$\delta = \frac{35 \times 10^3 \cdot 8400^3}{48 \cdot 2.1 \times 10^5 \cdot 121 \times 10^6} = \frac{17 \text{ mm}}{25.4 \text{ mm}}$$

provide 15mm  
prescribed.

