

Land Information Memorandum

Application

Arizto Limited	No.	L260055
C/- Evolution Legal	Application date	29/01/2026
Suite 2A	Issue date	9/02/2026
109 Dominion Road	Phone	021 028 37125
Auckland 1024	Fax	

Please Note: This LIM report contains information for the entire legal description below.

Property

Valuation No.	0095004003
Location	Awakino Road, Dargaville
Legal Description	LOT 1 DP 355519
Owner	Faber Denise Gaye
Area (hectares)	0.2729

Rates

Government Valuation	
Land	\$315,000
Capital Value	\$600,000
Improvements	\$285,000
Current Rates Year 2025 to 2026	
Annual Rates	\$4,277.74
Current Instalment	\$1,069.44
Current Year - Outstanding Rates	\$1,069.44
Arrears for Previous Years	\$ 0.00
Next Instalment Due	20/02/2026
Note: Rates are charged in four instalments for the period commencing 1 July and ending 30 June each year.	
Please refer to the Kaipara District Council Long Term Plan 2024/2027 and to the Kaipara District Council Development Contribution Policy 2024 which can be found at the Council website www.kaipara.govt.nz .	

Planning/Resource Management

Zoning:	Kaipara District Plan 2013: Residential. See attached information regarding the District Plan.
Full details of the zone requirements are found in the current District Plan. Relevant zone ordinance can be found at the Council website .	
Note: Kaipara District Proposed District Plan was publicly notified Monday 28 April 2025. Submissions on the Proposed District Plan closed Monday June 30, 2025. Please refer to the Kaipara District Plan Review in relation to potential changes that may affect this property.	
17/05/05	RESOURCE CONSENT 050007: Amendment of lot sizes for RM040137 and the creation of a Right of Way in favour of Lot 1 – Created DP 355519 . Section 224 Issued 9/02/07: GRANTED UNDER DELEGATED AUTHORITY 26/04/05.

RM050007 Consent Notice. The registered proprietor for the time being of Lots 1 and 2 on the Plan will notify any prospective purchaser of such allotments that the driveway access to Lots 1 and 2 of the subdivision from Awakino Road is formed over legal Road and the maintenance of the driveway shall remain the responsibility of owners of Lots 1 and 2 until such time as the Road is fully formed to Kaipara District Council standards for a public Road and taken over as such by Kaipara District Council.

1/07/04 RESOURCE CONSENT 040137: SUBDIVISION OF LOT 2 DP 201626 INTO TWO LOTS Decision Notified 10/06/04: GRANTED UNDER DELEGATED AUTHORITY 10/06/04.

8/03/00 RESOURCE CONSENT 990200: SUBDIVISION OF PT LOT 3 DP 36083 - created DP201626 Section 224 Issued 17/11/00: GRANTED UNDER DELEGATED AUTHORITY 15/02/00.

Access is not maintained by Council.

No other information located.

Building

4/04/12 BUILDING CONSENT 120541: Install new Masport Minos 2 Fire: Code Compliance Certificate issued 18/03/13.

16/09/99 BUILDING CONSENT 990538: THREE BAY IMPLEMENT SHED: Code Compliance Certificate issued 11/12/01.

29/08/1990 BUILDING PERMIT H 028113 W A BROWNE/J D HASTINGS D STODDART LOG DWELLING: SEVERAL CONDITIONS TO BE MET.

16/12/1975 BUILDING PERMIT W A FITNESS APPLICANT SHED.

2/09/1974 BUILDING PERMIT F 21161 R A & WA FITNESS DWELLING PERMIT LAPSED.

30/08/1974 BUILDING PERMIT F 21160 R A & WA FITNESS ADD TO BARN.

12/06/1970 BUILDING PERMIT B 054712 W A & R A FITNESS R SMITH STORAGE BARN.

No other information located.

Sewer and Water

Sewer Connected – Dargaville Wastewater.

Stormwater Existing.

Water Water is metered.

Account: 24400102

Balance Owing: \$0.00

Previous Year Billed: \$1,005.99

Previous Year Consumed:189

Copy of drainage plan attached.

Public sewer line and manhole within property boundary. Public stormwater drain within property boundary.

No other information located.

Land and Building Classifications

No information located.

Refer to copy of map from District Plan for other classifications in the immediate vicinity.

Compliance with Swimming Pool Bylaw

No pool registered to this property.

Land Transport Requirements

No information located.

Natural Hazards

A Natural Hazard as defined under the Resource Management Act 1991 as meaning any atmospheric or earth or water related occurrence (including earthquake, tsunami, erosion, volcanic and geothermal activity, landslip, subsidence, sedimentation, wind, drought, fire, or flooding) the action of which adversely affects or may adversely affect human life, property, or other aspects of the environment.

Territorial authorities are required under sections 44A(2)(a) and section 44B of the Local Government Official Information and Meetings Act 1987 to include information that identifies the following, to the extent it is known by the territorial authority;

- natural hazards and potential natural hazards.
- impacts of climate change that exacerbate natural hazards or potential natural hazards; and
- the cumulative or combined effects of natural hazards or potential natural hazards as exacerbated by the impacts of climate change.
- information included in the District Plan identifying natural hazards is no longer excluded from the information to be included in a LIM.

Natural Hazard information for this property, to the extent it is known by the Kaipara District Council, is attached.

Additional site-specific Natural Hazard information may be provided via third parties as part of site development such as subdivision. This information when available will be provided with Planning or Building consent information.

Special Land Features

No information located.

Licences/Environmental Health

No information located.

Network Utility Operators

Information related to the availability of supply, authorisations etc (eg, electricity or gas) can be obtained from the relevant Network Utility Operator.

Other Information

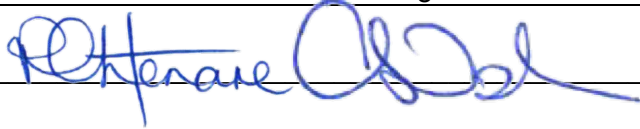
No title search has been done on this property.

Notes

1. Final inspections on buildings were not mandatory prior to 1 January 1993. Should an evaluation of the building be required an independent qualified person should be consulted. In the interests of safety, an inspection of any fireplace within the dwelling may be requested of Council at any time, after paying the appropriate fee.
2. Every care has been taken to ensure that the information supplied by the Council on this form is accurate. The Council relies on information available to it and will not be held responsible for incomplete or inaccurate information provided, or for any errors or omissions made in good faith.

3. Please note that the property was neither inspected nor visited during the preparation of this Land Information Memorandum. Information is based on a search of Council records only and no inspection of the land or any building on it will be undertaken for the purpose of preparing the Report.
4. Other information may be held by other authorities, for example the [Northland Regional Council](#) or [Heritage New Zealand](#).
5. This Land Information Memorandum is a disclosure of information (which may be historical) held by the Council at the time of application and is subject to change.
6. Any enquiry not accompanied by a fee will be invoiced separately. (All prices are GST inclusive).
7. No Record of Title was supplied with this application for this Land Information Memorandum. The Council therefore does not warrant that the information supplied is related to the correct property.
8. Any Resource or Building consents run with the land; if the project is incomplete, there may be existing/additional charges to pay for which the new owner will be liable.
9. A Development Contribution and or Financial Contribution may be payable if development is carried out, the effect of which is to require new or additional assets or assets of increased capacity and as a consequence Council incurs capital expenditure to provide appropriately for those assets and that capital expenditure is not otherwise funded or provided for. Future rating policies are outlined in Council's Long Term Plan 2024-2027.

Name:



Date: 9/02/2026.

Performance Standards of the Kaipara District Plan 2013

To view the performance standards (rules) for each zone please refer to the relevant chapter of the Kaipara District Plan 2013:

Rural - Chapter 12

Residential - Chapter 13

Business: Commercial and Industrial - Chapter 14

Māori Purposes: Māori Land – Chapter 15A

Māori Purposes: Treaty Settlement Land – Chapter 15B

Estuary Estates – Chapter 16

Estuary Estates - Chapter 16A – Trifecta Development Area

All Zones - Chapter 10 Network Utilities and Chapter 11 Transport Network

How can I view the Kaipara District Plan 2013?

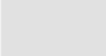
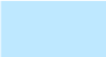
If you have access to the internet and want access to the most up to date information, visit the website

www.kaipara.govt.nz

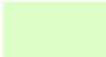
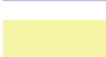
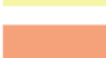
If you do not have access to a computer, you can visit one of the following locations to view a hard copy of the Plan:

Venue	Opening Hours	
Kaipara District Council Office – Dargaville 32 Hokianga Road Dargaville Telephone 0800 727 059	Monday – Tuesday Wednesday Thursday - Friday	8.00am to 4.30pm 9.00am to 4.30pm 8.00am to 4.30pm
Kaipara District Council Office – Mangawhai Unit 5, The Hub 6 Molesworth Drive Telephone 0800 727 059	Monday – Friday	9.30am to 3.00pm
Dargaville Library Corner Poto and Normanby Streets Dargaville Telephone 0800 534 542	Monday – Wednesday Thursday Friday Saturday	9.30am to 5.00pm 9.30am to 6.00pm 9.30am to 5.00pm 9.30am to 12.30pm
Mangawhai Library 45 Moir Street Mangawhai Telephone 0800 532 542	Tuesday - Wednesday Thursday Friday Saturday	10.00am to 5.00pm 10.00am to 6.00pm 10.00am to 5.00pm 10.00am to 1.00pm
Kaiwaka Library Corner State Highway 1 and Kaiwaka Mangawhai Road Kaiwaka Telephone (09) 431 2539	Monday Tuesday Wednesday - Saturday	4.00pm to 6.00pm Closed 10.00am to 2.00pm
Maungaturoto Library Centennial Building Hurdall Street Maungaturoto Telephone (09) 431 8811	Monday – Tuesday Wednesday Thursday – Saturday Friday Terms 1 & 4 also	10.30am to 1.00pm 10.30am to 4.00pm 10.30am to 1.00pm 4.00pm to 6.00pm
Paparoa Library Brook House 1980 Paparoa Valley Road State Highway 12 Paparoa Telephone (09) 431 7555	Monday Tuesday Wednesday Thursday Friday Saturday	2.00pm to 4.30pm 10.00am to 1.00pm 2.00pm to 4.30pm 10.00am to 4.00pm 11.00am to 1.30pm 10.00am to 12.00pm

All Maps

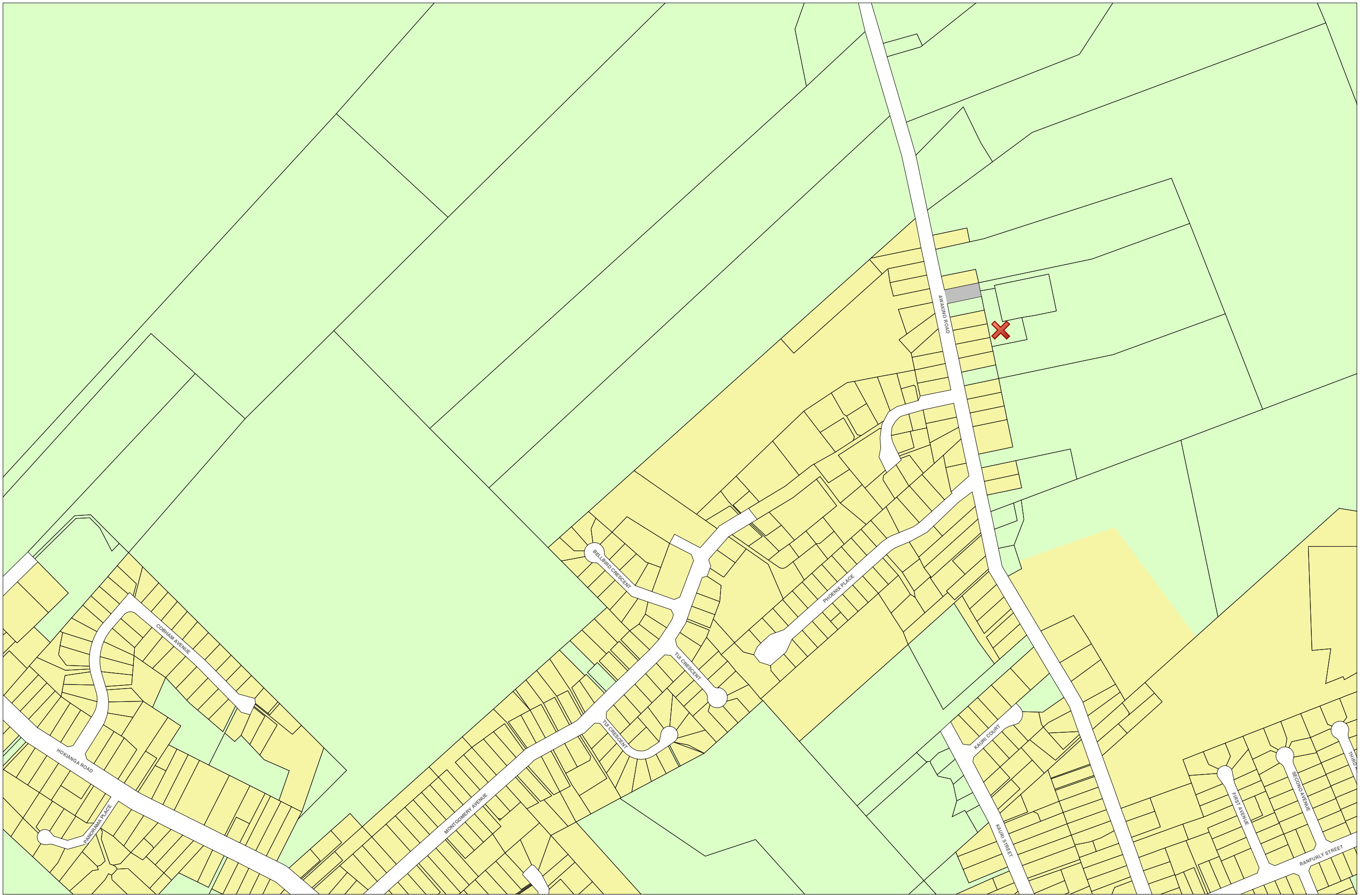
-  State Highway
-  Railway
-  Bridge or Causeway
-  Unformed Road
-  Sea, Lakes and Rivers
-  Parcel Boundary

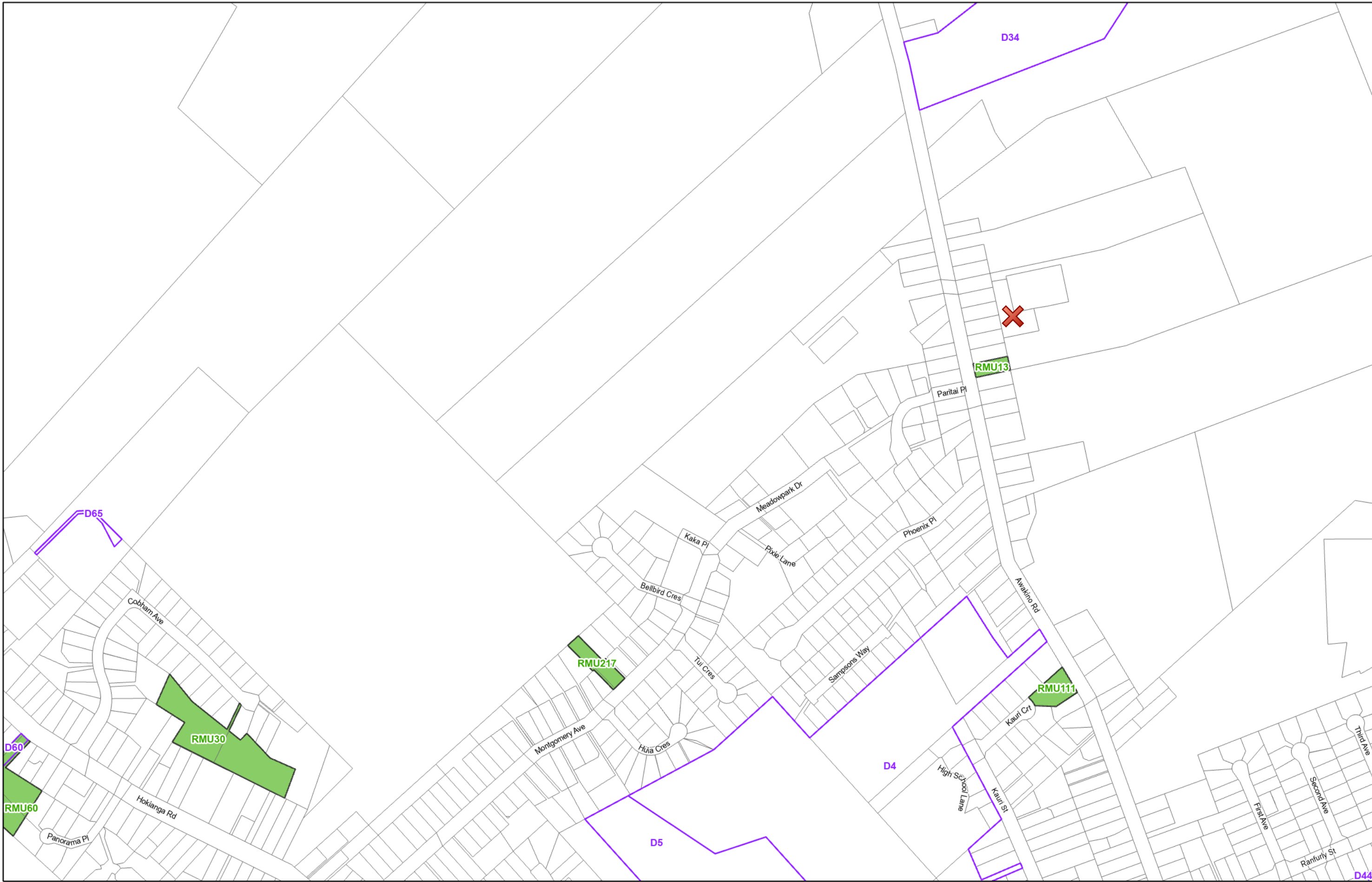
Map Series One - Land Use

-  Estuary Estates
-  Rural
-  8m Height Restriction
-  Business: Commercial
-  Business: Industrial
-  Residential
-  Maori Land
-  Treaty Settlement
-  Estuary Estates
-  East Coast Overlay
-  Harbour Overlay
-  Kai Iwi Lakes Overlay
-  West Coast Overlay

Map Series Two - Sites, Features and Units

-  Heritage Resource
-  Notable Tree
-  Maungaturoto Dairy Factory Wastewater Pipeline
-  110-220 kV Electricity Transmission Line
-  50 kV Electricity Transmission Line
-  Designation Areas
-  Outstanding Natural Landscape
-  Reserve Management Units
-  Areas of Significance to Maori
-  Maungaturoto Dairy Factory Noise Contour Boundary (45dBA leq)





Rates Information - 2025/26

Valuation ID	0095004003	Old Valuation ID	C:0095004000
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Property Description

Location (GIS)	Awakino Road, Dargaville
	View in Google Maps
Legal Description	LOT 1 DP 355519
Certificate of Title	226531
Service Flags	Water, Water-Meter

Use	09 Multi-use: Residential	Category	RD199
TORAS	111000	Category Group	Residential Dwelling fully or semi detached
Tenure	Property is not leased. Owner is also occupier.	Ward	1
Ownership	Private: Individual	Region	1
Rateability	Rateable	Zone	1A
Apportionment	Std property - Not Applicable, Not apportionment		

Valuations

Area (Hectares)	0.2729	Land Value	315,000
Improvements	285,000	Capital Value	600,000
Nature of Improvements	DWG FG OBS OI		
Valuation Date	1/09/23		

Rates for Current Year - 2025/26

Type	Description (Basis)	Factor	Amount \$
002	Uniform Annual General Charge - Rating Unit	1.00	725.00
010	Dargaville Stormwater - (L)	315,000.00	445.73
179	Dargaville Wastewater Connected - Rating Unit	1.00	1,357.76
230	General Rate Residential & Small Sized Lifestyle - (L)	315,000.00	707.62
235	CCTV Dargaville - (U)	1.00	7.70
239	Parks and Libraries Targeted Rate - (U)	1.00	384.34
242	Museums Targeted Rate - (U)	1.00	14.00
	** Kaipara District Council Sub-Total		3,642.15
250	NRC Targeted Council Services Rate - (U)	1.00	262.32
253	NRC Pest Management Rate - (U)	1.00	125.86
254	NRC Targeted Flood Infrastructure Rate - (U)	1.00	41.66
255	NRC Targeted Emergency and Hazard Management Rate - (U)	1.00	77.38
256	NRC Targeted Regional Rescue Services Rate - (U)	1.00	8.87
257	NRC Targeted Regional Sporting Facilities Rate - (U)	1.00	16.09
259	NRC Targeted Land and Freshwater Management Rate - (L)	315,000.00	93.96
260	NRC Targeted Regional Economic Development Rate - (L)	315,000.00	9.45
	** Regional Council Sub-Total		635.59
	Total Rates Levied 2025/26		4,277.74
	(GST on Rates Levied)		557.97
	Rates Last Year 2024/25		4,048.88
	Last Year's Final Instalment		1,012.22

Rates Last Year 4,048.88 Instalments YTD 3,208.31 Current Instalment 1,069.44

History

Year	Land Value	Capital Value	Annual Rates
2024/25	315,000	600,000	4,048.88
2023/24	190,000	510,000	3,456.94
2022/23	190,000	510,000	3,283.23
2021/22	190,000	510,000	3,113.44
2020/21	145,000	415,000	2,810.20
2019/20	145,000	415,000	2,828.13
2018/19	145,000	415,000	2,750.08
2017/18	95,000	305,000	2,519.12
2016/17	95,000	305,000	2,362.88
2015/16	95,000	305,000	2,288.05

COPY

IN THE MATTER of the Resource Management Act
1991 ("the Act")

AND

IN THE MATTER of a subdivision consent as
evidenced by Land Transfer Plan
No.DP355519

AND

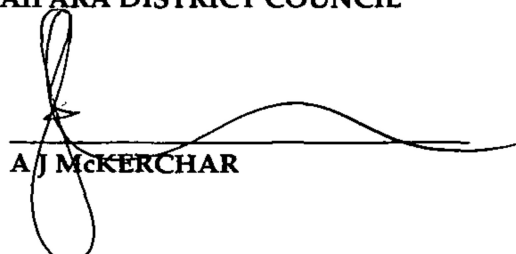
IN THE MATTER of a Consent Notice issued
pursuant to Section 221 of the Act
by THE KAIPARA DISTRICT
COUNCIL ("the Council")

I, ALAN JOHN McKERCHAR Chief Executive for the Council HEREBY CERTIFY
that the following conditions to be complied with by the Owner (as defined in the
Act) on a continuing basis were imposed by the Council as a condition of approval
for the subdivision as effected by Land Transfer Plan No. DP355519 ("the Plan") for
which consent was granted under No. RM050007:

The registered proprietor for the time being of Lots 1 and 2 on the Plan will notify
any prospective purchaser of such allotments that the driveway access to Lots 1 and
2 of the subdivision from Awakino Road is formed over legal road and the
maintenance of the driveway shall remain the responsibility of owners of Lots 1 and
2, until such time as the road is fully formed to Kaipara District Council standards
for a public road and taken over as such by Kaipara District Council.

DATED at Dargaville this 17th day of May 2006.

Authenticated by the said ALAN JOHN
McKERCHAR, Chief Executive Officer for
THE KAIPARA DISTRICT COUNCIL


A J McKERCHAR



Approvals

Roads shown are legal

I hereby certify that this plan was approved by the Kaipara District Council pursuant to Section 223 of the Resource Management Act 1991 on the day of2004 and subject to the granting or reserving of the easement set out in the Memorandum hereon.

Authorised Officer

MEMORANDUM OF EASEMENT

Purpose	Shown	Servient Tenement	Dominant Tenement
Right of Way	(A)	Lot 2 hereon	Lot 1 hereon

Note: All peripheral boundaries are adopted from DP36083

Approved

G.I. Banicevich

M.F. Banicevich

C.W. Gunson

Registered Owners

Class of Survey: Lot 1 – Class II
Lot 2 – Class III

New C'sT Allocated

Lot 1 –

Lot 2 –

Total Area 4.5999ha

Comprised in CT 1298/654

I, Ian David Gillespie of Whangarei being a person entitled to practice as a licensed cadastral surveyor, certify that –
(a) The surveys to which this dataset relates are accurate and were undertaken by me or under my direction in accordance with the Cadastral Survey Act 2002 and the Surveyor-General's Rules for Cadastral Survey 2002/2;
(b) This dataset is accurate, and has been created in accordance with that Act and those Rules.

(Signature)

(Date)

Field Book p. Traverse Book p.

Reference Plans

Examined Correct

Approved as to Survey by Land Information NZ on
.../.../...

Deposited by Land Information NZ on
.../.../...

File Approved AKLM 98/03
Received
Instructions LJR

Code Compliance Certificate 120541

Form 7, Section 95, Building Act 2004

K & D Glamuzina
145 Awakino Road
Dargaville 0310

Issue Date: 18/03/13

Overseer:

THE BUILDING:

Street Address of Building:	145 AWAKINO ROAD, DARGAVILLE
Valuation Number:	0095004003
Legal Description:	LOT 1 DP 355519
Building Name:	
Location of Building within site/block number:	
Level/Unit Number:	
Current Lawfully Established Use:	Housing Detached - New Fire
Year First Constructed:	

THE PROJECT:

Description:	Install new Masport Minos 2 Fire DOMESTIC FIREPLACES
Type of Work:	
Intended Use:	Housing Detached - New Fire Masport Minos2
Intended Life:	Indefinite, but not less than 50 years
Stages:	Being Stage 1 of an intended 1 Stages

THE OWNER:

Owners Name:	K & D Glamuzina		
Owners Mailing Address:	145 Awakino Road, Dargaville 0310		
Street Address/Registered Office:			
Phone	Landline: 09 439 8870	Daytime:	After Hours:
Number	Mobile: 021 1110 907	Fax: 09 439 8870	
Email: noiseco@igrin.co.nz	Website:		

FIRST POINT OF CONTACT:

First Point of Contact:	As above
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BUILDING WORK:

Building Consent Number:	120541
Issued By:	Kaipara District Council

This Code Compliance Certificate is issued by the Kaipara District Council. As the Building Consent Authority it is satisfied, on reasonable grounds that :

- the building work complies with the Building Consent 120541

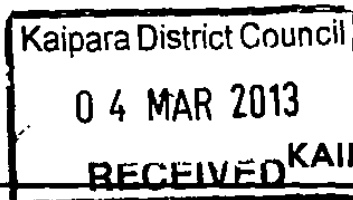
Signature



Date: 18/03/13

Position Building Services Officer

On behalf of: Kaipara District Council



KAIPARA DISTRICT COUNCIL

**Producer Statement Construction (PS3) – Solid Fuel Heating
Appliances**

Issued by: John Kellher being a licensed Home Heating
Association member or a Certifying Plumber on the Council approved authors register

In respect of the installation of the Solid fuel burning appliance for :

(Owner) Ken + Den Glenzina
At (Address) 145 Awakura Rd

Legal Description: Lot 1 DP 355519 Valuation 0095004003

I have sighted the issued building consent (BC120541) and have installed the solid fuel burning
appliance in accordance with the approved building consent, the New Zealand Building Code, and the
manufacturers specifications and requirements.

I have installed the solid fuel burning appliance as follows:

- ☒ Installed and tested the solid fuel burning appliance in compliance with the manufactures
requirements or as to AS/NZS 2918:2001 in compliance with the New Zealand Building Code
- ☒ Installed and tested the smoke alarms in compliance with clause F7 of the New Zealand
Building Code

I believe on reasonable grounds that the building works complies with the building code. The work
complies also with clauses B1, B2, C1, E2 of the New Zealand Building Code

I also understand that Kaipara District Council in accepting this producer statement construction
(PS3), will be relying on it to establish compliance at the completion of the building work.

Signature of Home Heating Association Member or Certifying plumber: [Signature]

Registration Number: 104664 Reg Expiry Date: 31-3-13

Date: 4-3-13

	MODEL	MINOS 2
		MINOS CLEAN AIR HW

INSTALLATION SPECIFICATION SHEET

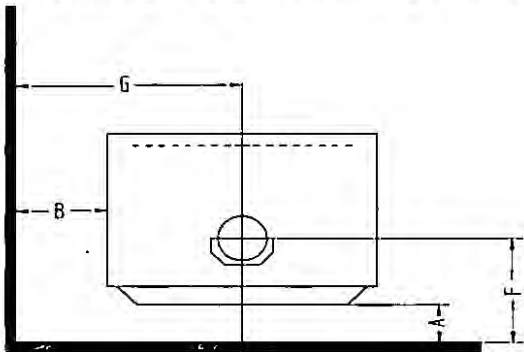
These instructions must be used in conjunction with the 'General Installation Instructions' for MASPORT wood fires.

CLEARANCE REQUIREMENTS

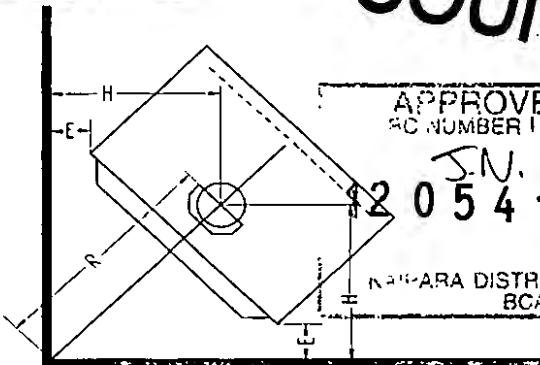
This fire has been tested to the Australian/New Zealand Standard AS/NZS 2918:2001 and all installations must be in accordance with the minimum clearances to combustibles indicated in these instructions.

The minimum clearances to combustables may be reduced if the combustable walls are shielded with an approved non-combustable material. Details of suitable materials and appropriate clearance reduction factors are present in Section 3 of AS/NZS 2918:2001.

POSITIONING YOUR FREE-STANDING WOODFIRE



PARALLEL INSTALLATION



CORNER INSTALLATION



NEW ZEALAND

MINIMUM DISTANCES TO HEAT SENSITIVE WALLS (mm)

MODEL	FLUE HEAT SHIELD	A	B	E	F	G	H	R§
MINOS 2	LOGAIRE DOUBLE SKIN S/S POLISHED	110	240	50	271	540	368	521

AUSTRALIA

MINIMUM DISTANCES TO HEAT SENSITIVE WALLS (mm)

MODEL	FLUE HEAT SHIELD	A	B	E	F	G	H	R§
MINOS CLEAN AIR HW	FLOMET UNIVERSAL FLUE SYSTEM	200	220	100	361	520	418	591
	AHD SPECIAL INSULATED FLUE KIT	100	200	100	261	500	418	591

§ Valid only when the room walls are at 90° to each other.

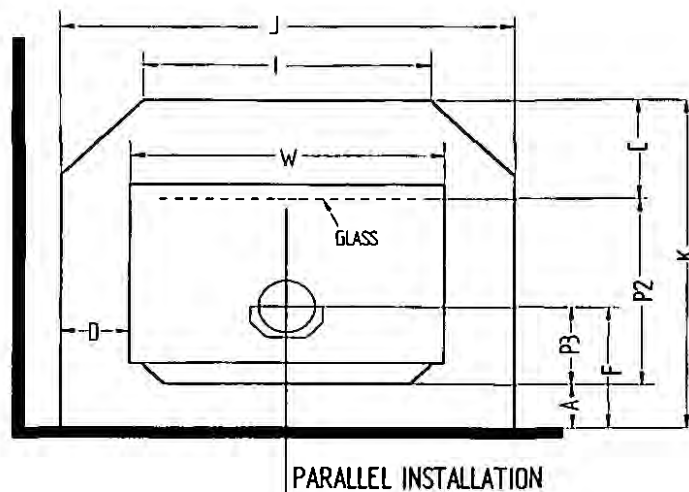
‡ Note: Clearances are for fire hazard only. For durability of finishes or surfaces you should contact the relevant manufacturer for their specification. Glen Dimplex Australasia Ltd accepts no responsibility for the deterioration of surfaces or finishes.

See " INSTALLING THE FLUE " for recommended Australian flue systems.

PRT. NO.	MIR2M738
DATE:	07.09.2010

FLOOR PROTECTOR (Hearth) REQUIREMENTS PARALLEL INSTALLATION

MINIMUM FLOOR PROTECTOR DIMENSIONS IN mm



DIMENSIONS IN THE TABLE ARE VALID ONLY WHEN THE FIRE IS EXACTLEY AT ITS MINIMUM ALLOWABLE WALL CLEARANCE.

NEW ZEALAND

MODEL	Flue Shield	Floor Protector height	A#	C#	D	F	I	J	K#	P2	P3	W	Floor Protector Type Ø
Minos 2	*		110	300	110	271	520	820	800	390	161	600	ASH

* Logaire double skin S/S polished 1200 mm shield

AUSTRALIA - ALL WITH FLUE HEATSHIELD

MODEL	Flue Shield	Floor Protector height	A#	C#	D	F	I	J	K#	P2	P3	W	Floor Protector Type Ø
MINOS CLEAN AIR HW	*		200	300	110	361	520	820	890	390	161	600	ASH
	**		100	300	110	261	520	820	790	390	161	600	ASH

* FLOMET UNIVERSAL FLUE SYSTEM

** AHD SPECIAL INSULATED FLUE KIT

Ø for minimum constructional requirements see general installation instructions.

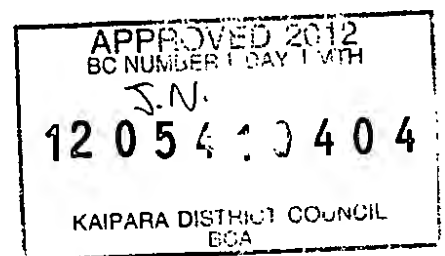
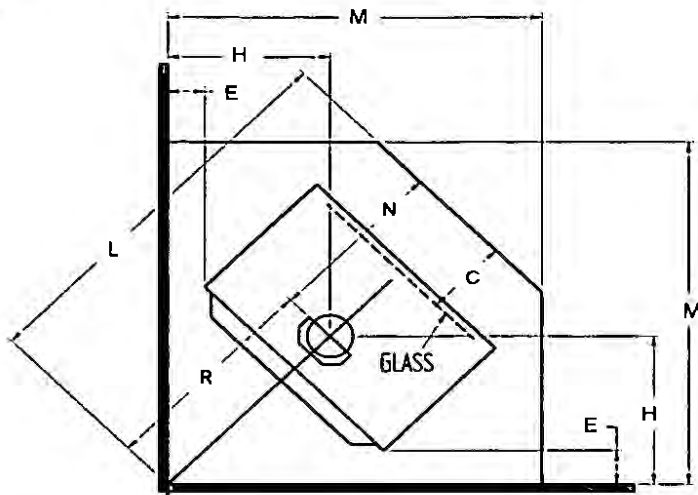
Valid only when the fire is exactly at its minimum allowable wall clearance.

NOTE: Where a fan is being fitted, you may prefer to increase the 'A' dimension to 100 mm to provide easier access for servicing. If so, the amount you add to 'A' to bring it to 100 mm must also be added to the 'C' and 'S' dimensions.

O:\W-F INSTALLATION SPECIFICATIONS\Individual Installation Data Sheets\INSTALLATION SPECIFICATIONS INDIVIDUAL LOGAIRE\MIR2M738_Minos2 & Minos Clean Air HW_Data Sheet-10-09-07.xls

FLOOR PROTECTORS (Hearth) REQUIREMENTS CORNER INSTALLATION

MINIMUM FLOOR PROTECTOR DIMENSIONS IN mm



DIMENSIONS IN THE TABLE ARE VALID ONLY WHEN THE FIRE IS EXACTLEY AT ITS MINIMUM ALLOWABLE WALL CLEARANCE.

NEW ZEALAND

MODEL	Flue Shield	Floor Protector Distance above Floor	C	E	H#	L#	M#	N	R#	FLOOR PROTECTOR
Minos 2	*		300	50	368	1050	926	529	521	ASH

* Logaire double skin S/S polished 1200 mm shield

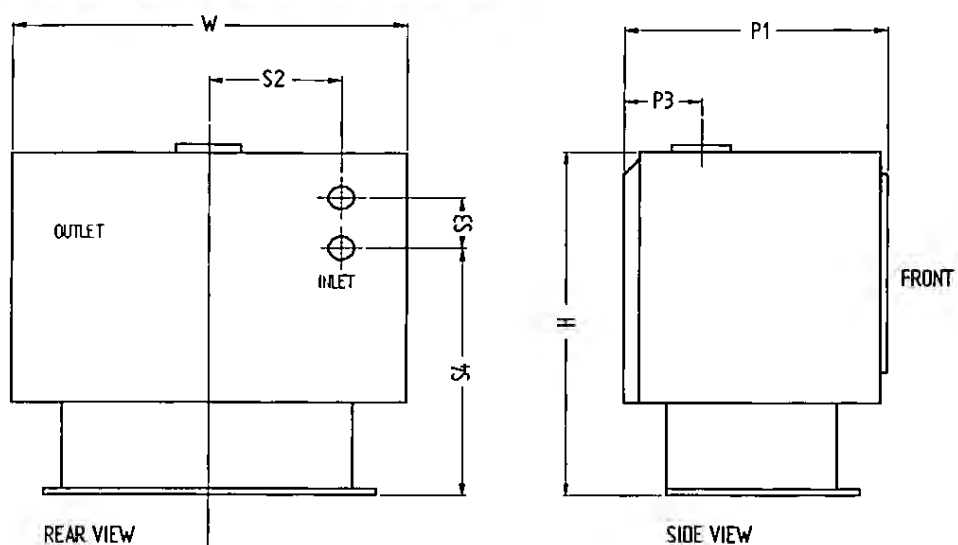
AUSTRALIA

MODEL	Flue Shield	Floor Protector Distance above Floor	C	E	H#	L#	M#	N	R#	FLOOR PROTECTOR
MINOS CLEAN AIR HW	*		300	100	418	1120	976	529	591	ASH
	**		300	100	418	1120	976	529	591	ASH

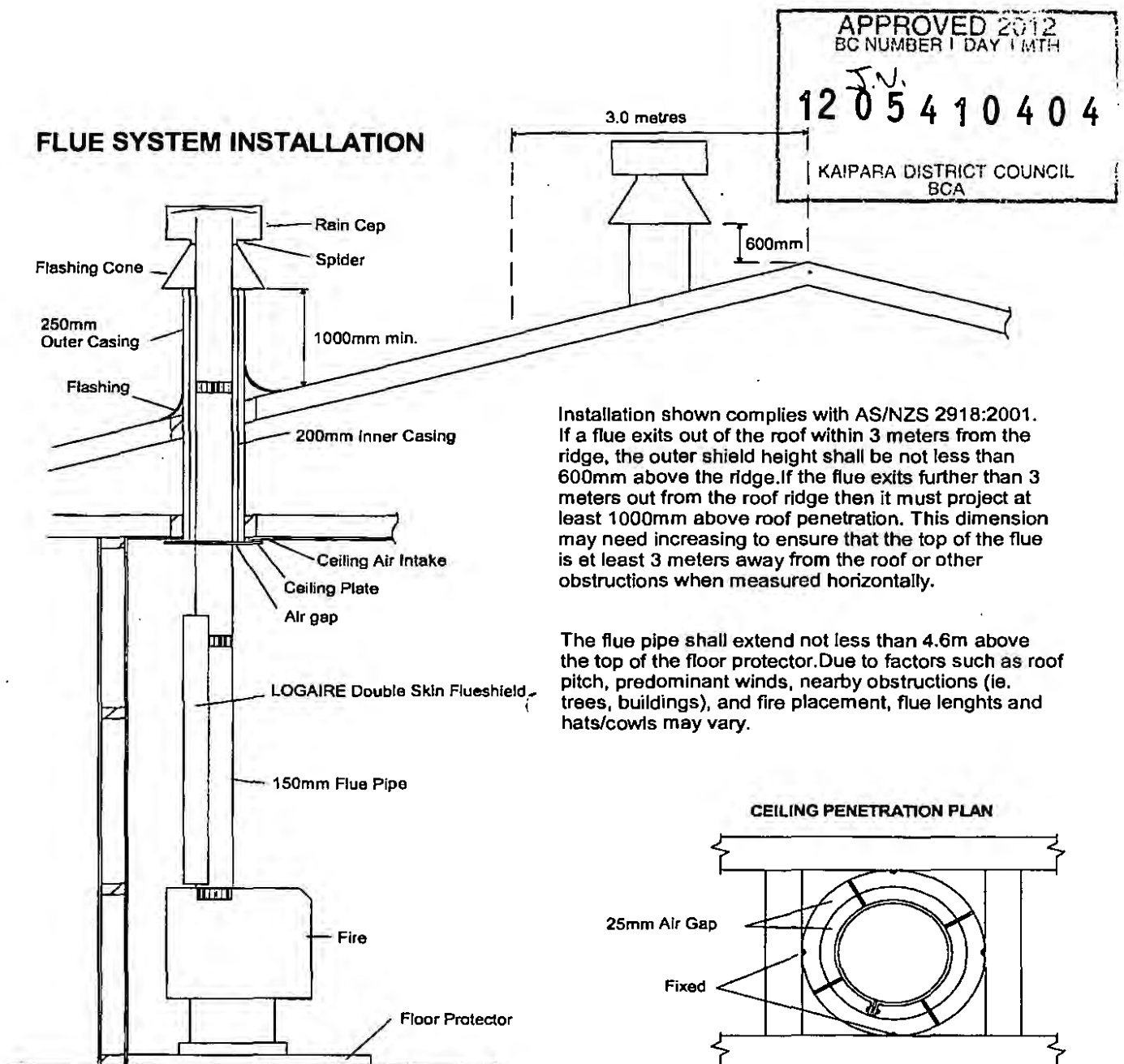
* FLOMET UNIVERSAL FLUE SYSTEM

** AHD SPECIAL INSULATED FLUE KIT

FREE STANDING FIRE DIMENSIONS



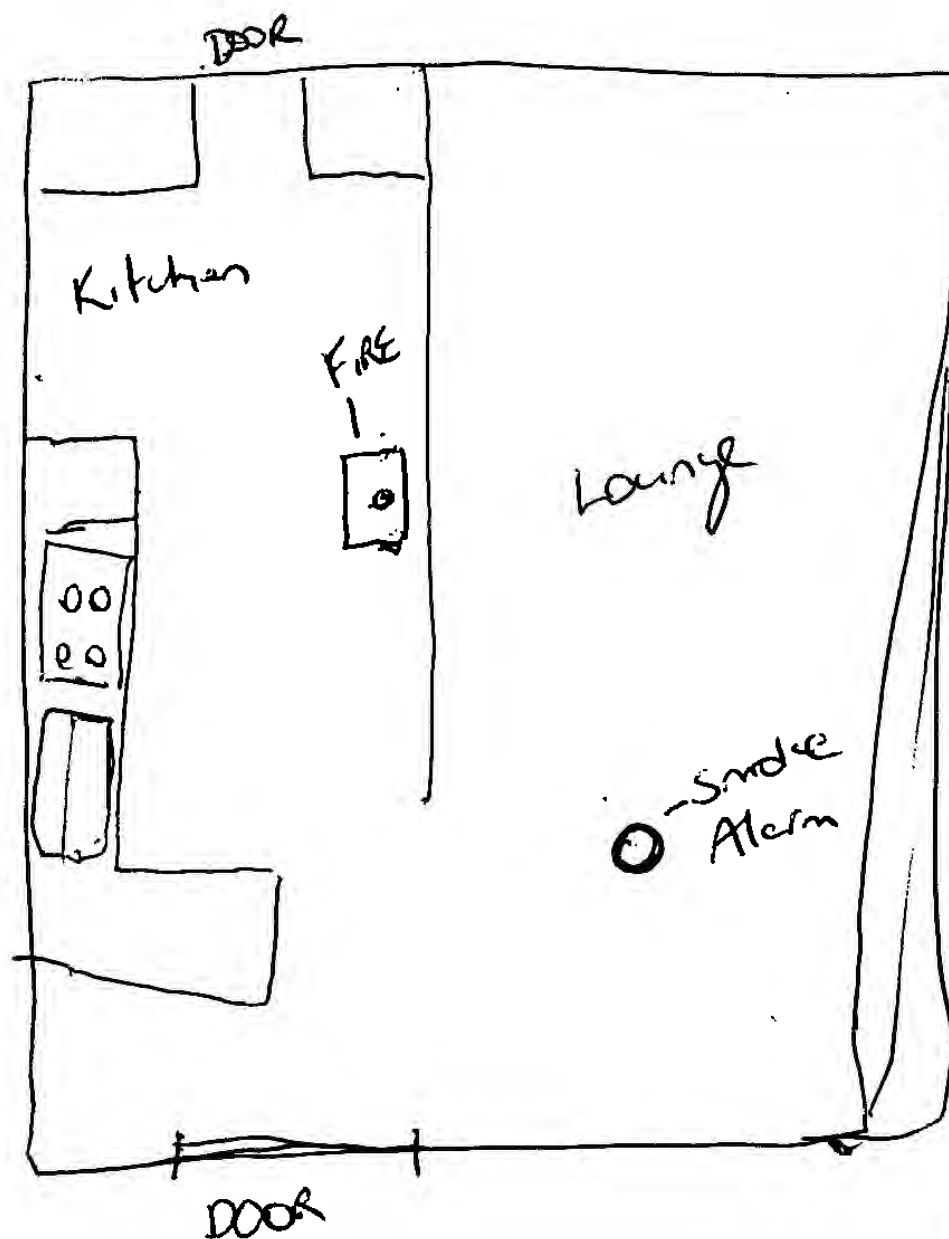
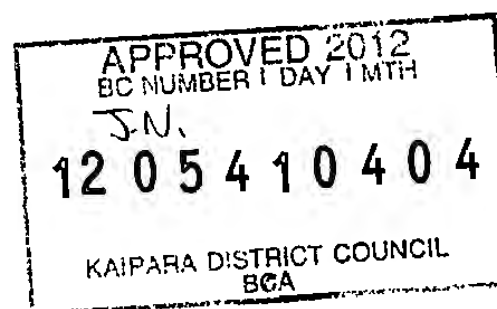
MODEL	P1	P3	H	W	S1	S2	S3	S4
MINOS 2	390	161	635	600	-	183	165	310
MINOS CLEAN AIR HW								



FLUE SYSTEM INSTALLATION 150mm

THIS DIAGRAM IS FOR NZ INSTALLATIONS

FOR AU INSTALLATIONS PLEASE REFER TO SPECIFIC FLUE INSTALLATION INSTRUCTIONS



Also smoke alarm upstairs.

Code Compliance Certificate

Section 43(3), Building Act 1991

Application

WAYNE & PAULA BROWNE
154 AWAKINO ROAD
DARGAVILLE

No. 990538
Issue date 11/12/01

Project

Description	New Construction Being Stage 1 of an intended 1 Stages THREE BAY IMPLEMENT SHED
Intended Life	Indefinite, but not less than 50 years
Intended Use	FARM USE
Estimated Value	\$5,000
Location	145 AWAKINO RD, DARGAVILLE
Legal Description	PT LOT 3 DP 36083
Valuation No.	0095004000

This is a final Code Compliance Certificate issued in respect of all the building work under the above building consent.

Signed for and on behalf of the Council:

Name: J. F. VALLANCE

Date: 11-12-01

KAIPARA DISTRICT COUNCIL Inspection Checklist

Note: This form is to be kept on site at all times together with the approved plans and specifications.

REQUIRED INSPECTIONS

BUILDING CONSENT NO. 990538

NOTE: One days notice is required for all inspections (A working day means one Council Working day) inspections relating to this consent are those highlighted in the following list.

CONTACT: KAIPARA DISTRICT COUNCIL			APPROVED	Re-	Initial
✓	Foundations	Ensure boundaries are defined survey pegs and string lines. house pegged. required for all driven pile foundations. Excavations level and clean.	✓		11/
	Floor Slab	Damp proofing and/or reinforcement in place. correct clearances, plumbing & drainage pipes in place and protected. damp proofing continuous to the exterior face of the building.			
	Masonry	Inc. bond beams. reinforcement in place. starters tied. bottom of core & ports clean. plumbing & drainage pipes in place.			
	Prelining	At the stage where exterior cladding and joinery is in place. but prior to the erection or fixing of internal linings. includes plumbing in walls under test, framing, bracing, moisture content. insulation, fixings for subfloor.			
	Insulation	Skillion roofs solid construction (where insulation cannot be seen at the preline stage).			
	Gib Nail	Sheet bracing and insulation. double skin firewalls.			
	Brick Veneer	When the veneer reaches sill height (brick ties. weep holes, clean cavities. steel lintels which support brickwork).			
	Sanitary Drainage	Manholes, benching, test on lines bedding SS connection, septic tank & irrigation installations prior to backfilling.			

✓

	Disconnect Sanitary Drainage				
	Disconnect Stormwater				
	Disconnect Water	Removal of water meter from Council supply.			
	Special Conditions	Where notice is required for specific items.			
✓	Completion	Weathertightness. flashings. doors. deviation iron- clans. building. plumbing. drainage, free standing fire unit completion of all work authorised by this consent required prior to the issue of the Code Compliance Certificate.	✓		11/

NOTE: DEPENDING ON THE FORM OF CONST
COULD BE OR, INTO ONE INSPE

SOME OF THESE INSPECTIONS



M-H Browne

IV

145 Awakino Rd

PH

Oargawille

1439678

section

Drive way

garden

yards

gate

fig house

Awakino Road

Section

shed

Drive way

Proposed shed

Greenhouse

10 mts

Paddock

gate

9 mts

Section

House

Section

Section

Paddock

KAIPARA DISTRICT COUNCIL

BC 990536


BUILDING INSPECTOR

ction

STRAPPING TENSIONERS

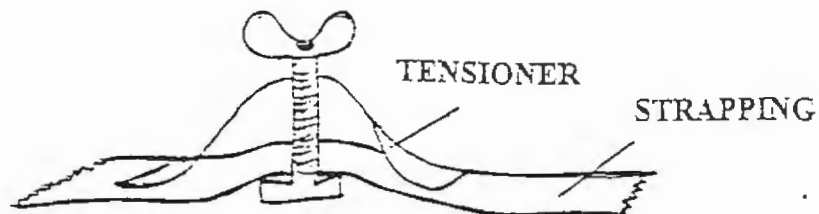
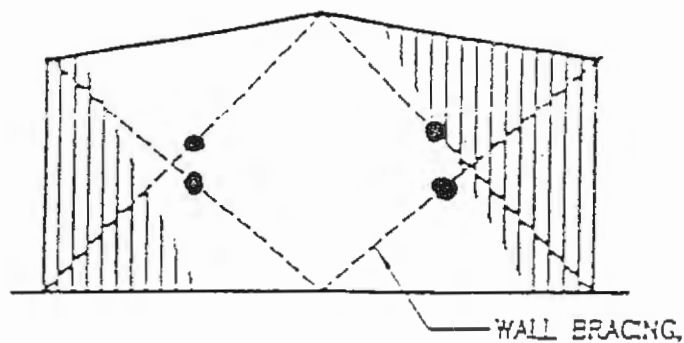
THESE HAVE BEEN INCLUDED WITH *YOUR KIT SET* OVER AND ABOVE STATED SPECIFICATIONS, TO ASSIST YOU IN TENSIONING THE STRAPPING IN THE ROOF AND WALLS.

SIMPLY DRILL A SMALL HOLE ~~THE~~ REQUIRED SIZE INTO YOUR STRAPPING, SLIDE THE BOLT THROUGH AND TIGHTEN THE WING NUT

CAUTION: DO NOT OVER TIGHTEN AS THIS CAN CAUSE WALLS TO PULL OUT OF PLUMB

NOTE: ONE TENSIONER PER BAY. PLACED AT MIDWAY POINT

EC:

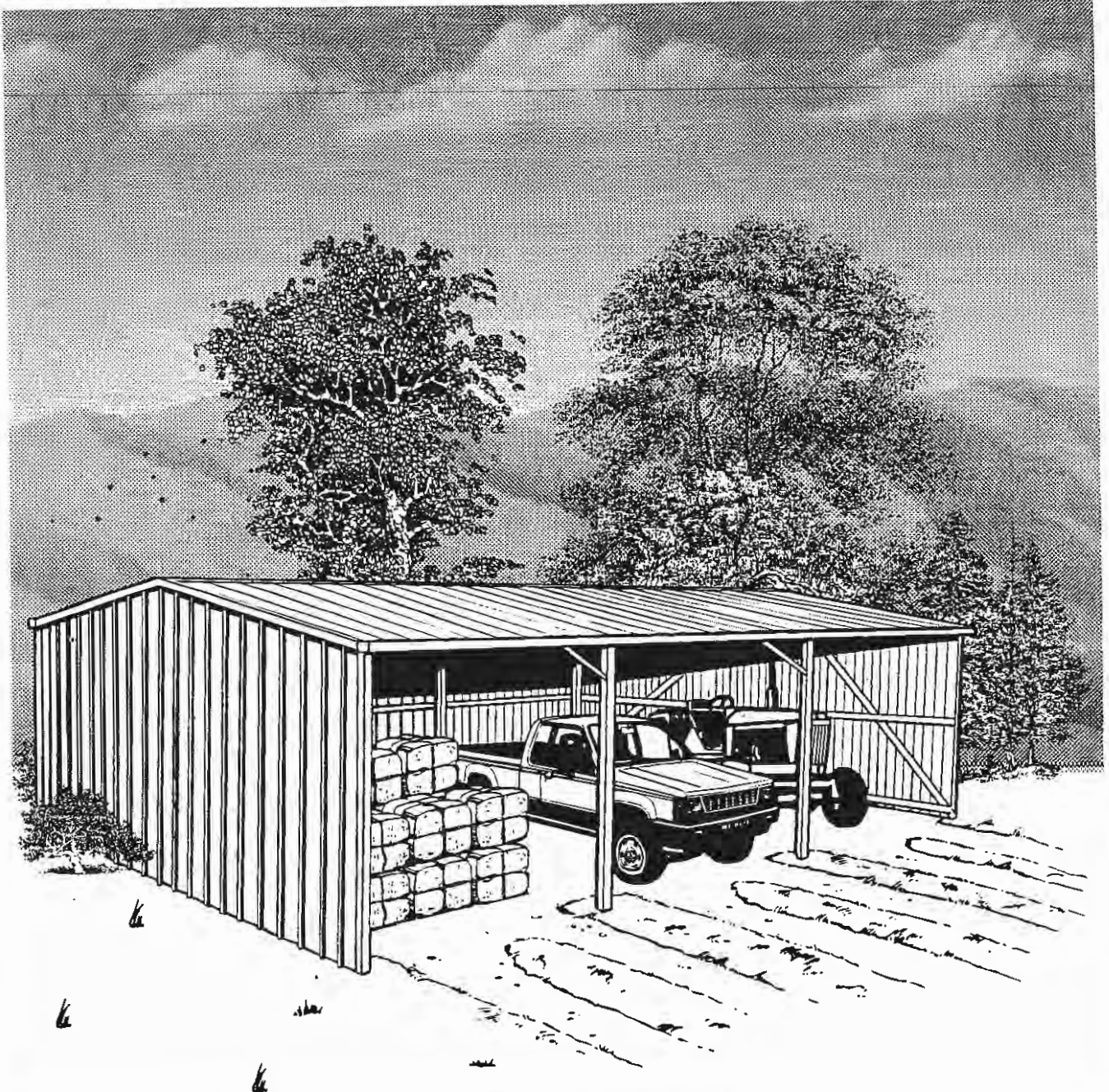


Budget Buildings

Do it yourself all steel kits

FARM SHED NZ

Parts List & Instruction Book



Measure and check each part off against the Parts List, (without mixing the packs together). If there is a discrepancy, do not contact the retailer who you purchased your Shed from, as they are not equipped to deal with such a problem. Call our office in your State and we will attend to the matter promptly.

IMPORTANT

GENERAL INFORMATION

This Shed has been designed to be assembled by the home handyman. Before commencing, please read through the instructions carefully. Installation is a 2 person job.

TOOLS REQUIRED

- Electric Drill 
- Tape Measure 
- Hacksaw 
- Tin Snips 
- Phillips Head Screwdriver
- 3/32 Steel Drill Bit 
- 12mm Steel Drill Bit 
- Spirit level 
- Step Ladder 
- Stringline 

Other Items Required:

- Silicone
- Lengths of Rope & Peg for Supporting Frames.
- Felt-Pen
- Chalk

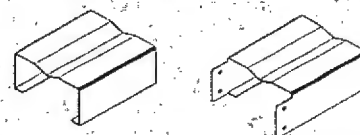
ITEMS NOT SUPPLIED IN KIT:

- Chemsets (Refer Step 1 for type and size)
- 10mm thick reinforcing Rod (Refer Step 1 Fig 1A for Detail)

COMPONENT SHAPES (END VIEW)



END DETAIL A END DETAIL B



The Shed is assembled with self drilling tec screws. Spic'n'Span have supplied a socket to fit your electric drill or cordless screwdriver. When installing screws, apply moderate pressure until screws are snug tight. **Over** tightening must be avoided or stripping will occur. If screws are placed in the wrong position, they can be unscrewed and repositioned.

Once you have selected your site and drawn a Site Plan, you must obtain your local Council or Building authorities approval.

OPTIONAL PARTITION KIT

If your Farm shed has been supplied with a partition Kit, the following procedure is to be followed. When constructing your End Frames, build one extra which will become the partition frame. This is to be fitted in place of a centre frame.

Please note, as the End Frame leg (Partition Frame) is 30mm wider than the centre frame leg, girts that join the Partition Frame will need to be shortened by 15mm so your Farm Shed remains at the correct length.

Fit Diagonal Strapping in the same manner as End Frame.

When sheeting the Partition Frame, **fix** sheet onto either side.

Cut around all purlins and girts to attain a neat fit.

PARTS MAY CONTAIN SHARP EDGES. CARE MUST BE TAKEN WHEN HANDLING THE VARIOUS PIECES TO AVOID A MISHAP. FOR SAFETY SAKE, PLEASE USE A PAIR OF WORK GLOVES WHEN ASSEMBLING OR PERFORMING ANY MAINTENANCE ON THE BUILDING.



Data Sheet

Customer Details

Customer Name	BURROWES 3432
Store Name	POWERCHIEF INTERNATIONAL
Store Order Number	505
Spic'N'Span invoice Number	
Date Received	29/ 611996
Dispatch Date	1/ 711996

Product Details

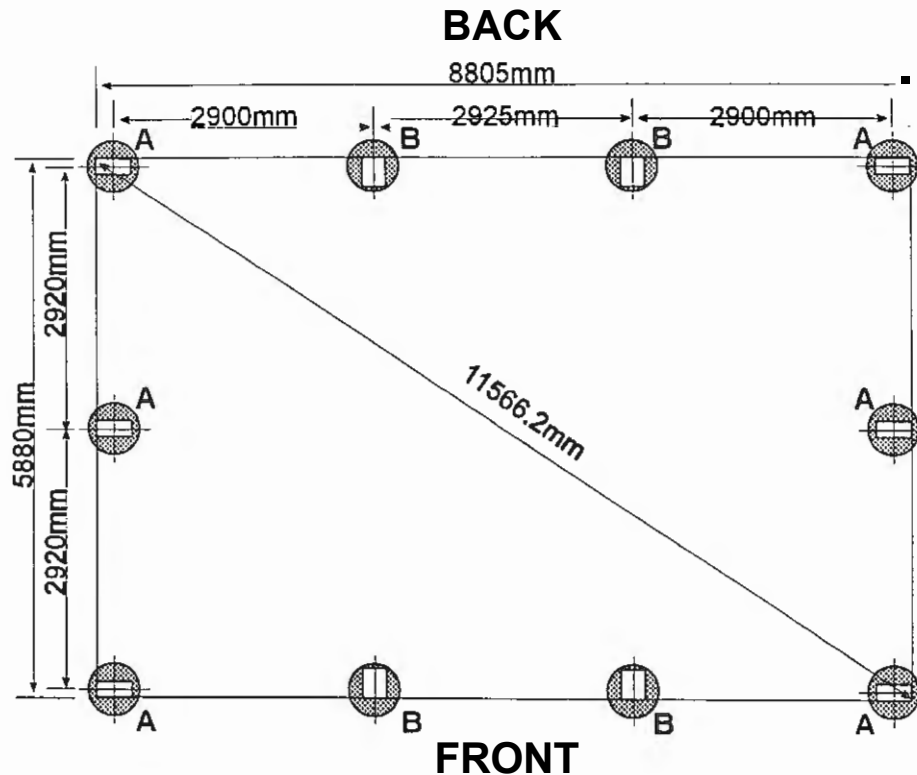
ID Code	F1014	ProductType	Farmshed
Size			
<i>Width</i>	9.0 m	<i>Wall Height</i>	3.0 m
<i>Depth</i>	6.0 m	<i>Wind Rating</i>	W35
No of Sliding Doors			
0			
P.A. Doors			
NIL			
Colours			
<i>Roof</i>	Zincalume	<i>Main Doors</i>	Zincalume
<i>Wails</i>	Zincalume	<i>P.A. Doors</i>	Zincalume
<i>Trim</i>	Zincalume		
Options			
<i>Partition</i>	0	<i>Partition (P.A. Door)</i>	0
<i>Closein</i>	0	<i>Closein (P.A. Door)</i>	0
<i>Skylights</i>	1	<i>Lifting Hooks</i>	0
		<i>Workbenches</i>	

6.0M DEEP FARM SHED NZ

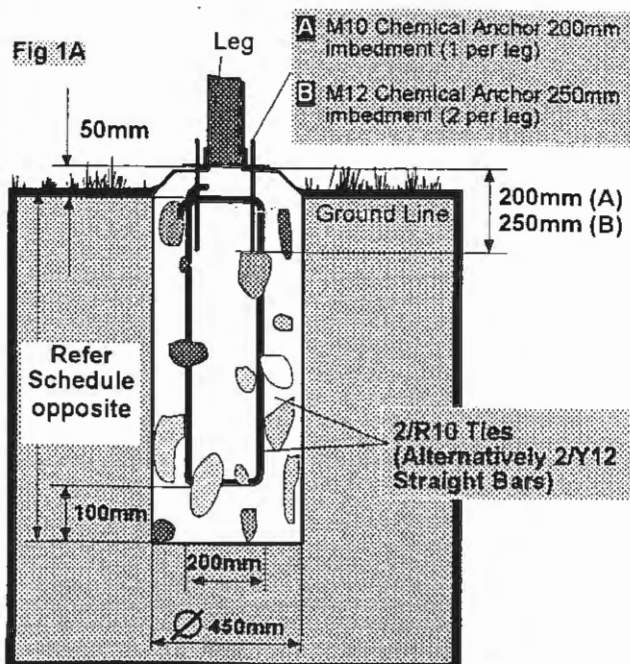
9M WIDE
2.4 13m Wall Height W37

1

Prepare a perfectly level site and dig holes to the specifications and in the positions shown.



Pour footings as shown in Fig. 1A

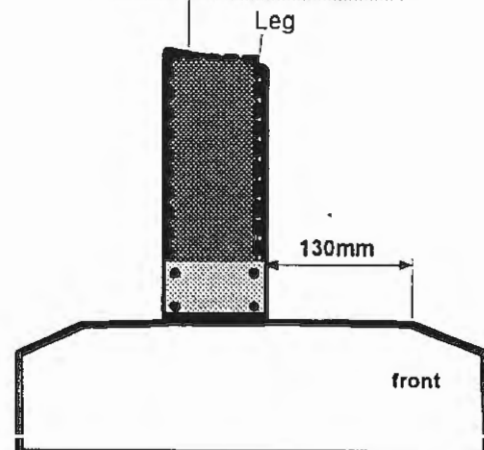


FOOTING DEPTH SCHEDULE (mm)

Wall height	A		B	
	20 kpa	10kpa	20 kpa	10kpa
2.4H.	900	1100	850	1300
3.0H.	900	1100	850	1300

NOTE: Most soils meet 20kpa requirements.
For soft soil use 10kpa value.

NOTE:
When fitting SLI WNG
DOORS.
carry the top of the footing
out 130mm at the front.



6.0M WIDE FARM SHED NZ

END FRAME CONSTRUCTION

two of these are to be constructed

2.4 / 3m Wall Height W37

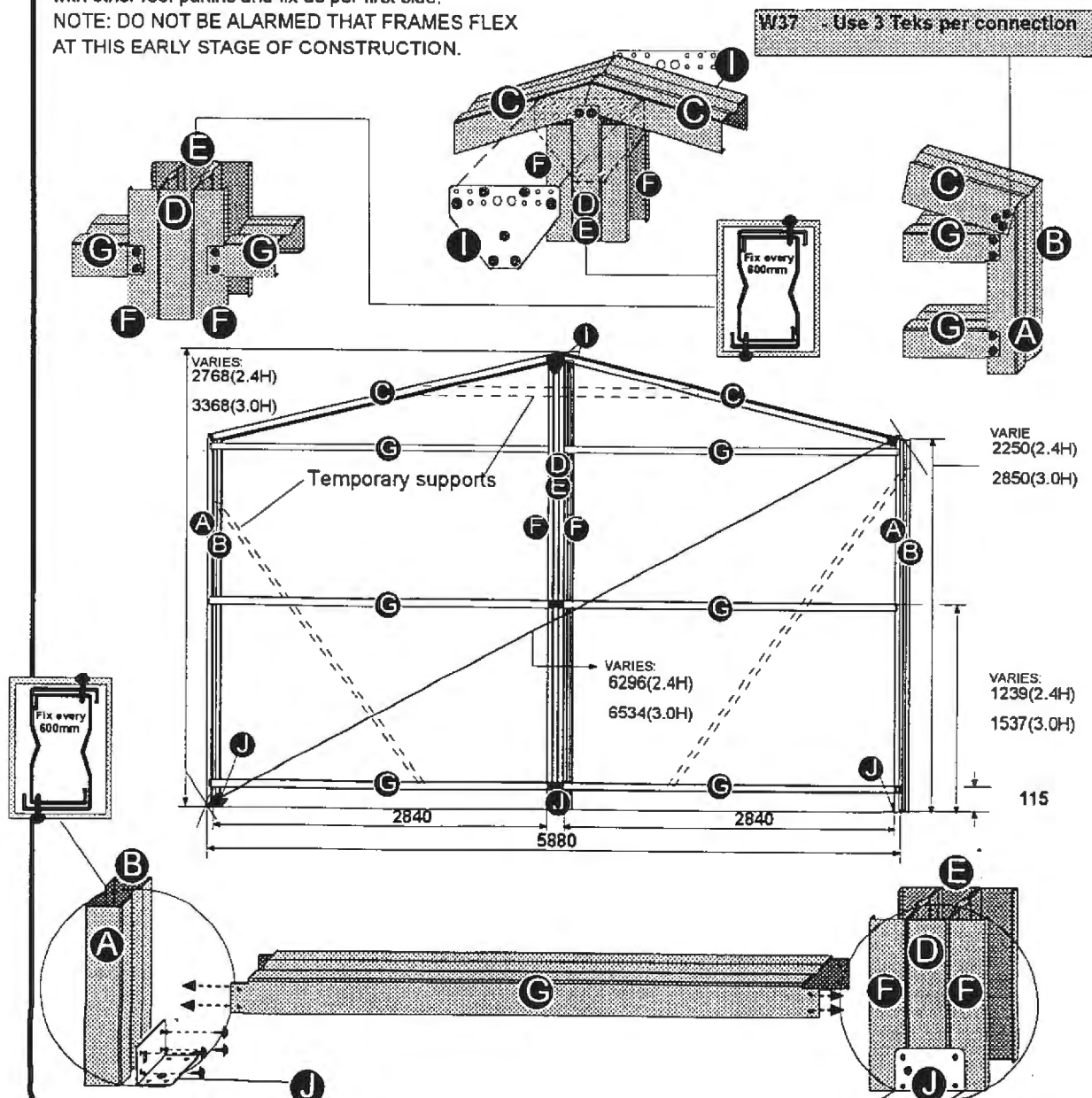
2

STEPS

- Join the Centre Upright to Centre Upright Boxing so that notched end protrudes, then fix Upright Outer Supports to either side of the Boxed Sections so that the notched end protrudes.
- Join Leg to Leg Boxing, using the same procedure as above, so that one end is flush and the other end has 45mm unboxed.
- Lay Parts out on a level area in the configuration shown below.
- Check diagonal measurements for squariness, then fix with screws in the positions marked.
- Use 3 roof purlins to temporarily support the structure (shown in dotted lines, use one screw per connection).
- Re-check dimensions, then mark around the outline of the frame with chalk so you have a templet for the remaining frames.
- Carefully turn the frame over, support each connection with other roof purlins and fix as per first side.

NOTE: DO NOT BE ALARMED THAT FRAMES FLEX AT THIS EARLY STAGE OF CONSTRUCTION.

Description	Qty	2.4M Wall:	3.0M Wall:
A Leg	2	2250mm	2850mm
B Leg Boxing	2	2205mm	2805mm
C Roof Beam	2	2985mm	2985mm
D Rear Upright	1	2744mm	3344mm
E Rear Upright Boxing	1	2720mm	3320mm
F Rear Upright Outer Support	2	2720mm	3320mm
G Girt	6	2880mm	2880mm
H Girt Boxing (3m Height ONLY)	2	N/A	2840mm
I Gusset Plate	2		
J 75mm Bracket	3		



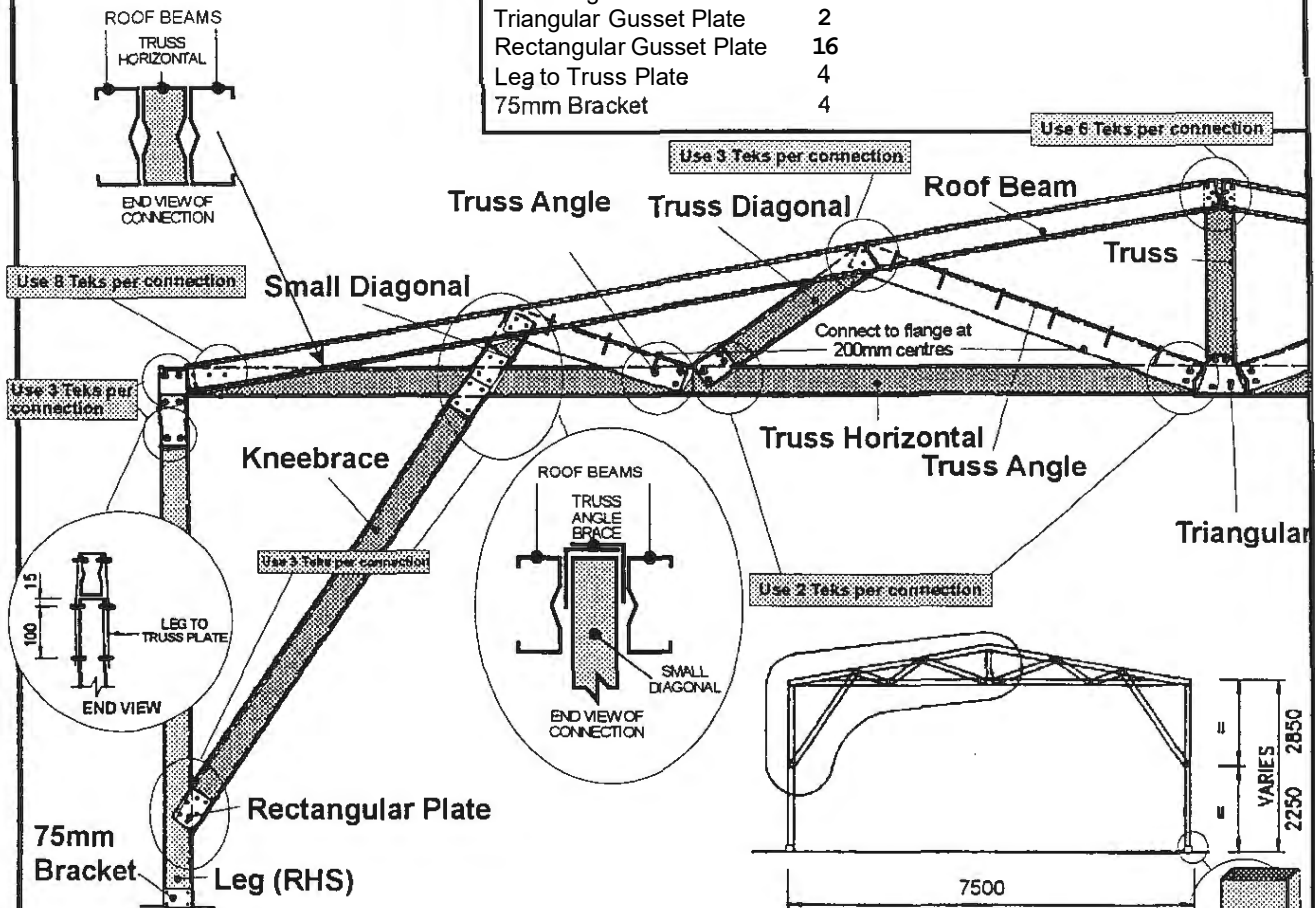
6.0M WIDE FARM SHED NZ

CENTRE FRAME CONSTRUCTION 2.4 / 3m Wall Height W37/ W41C

3

REFER TO STEP 1 SITE
PLAN FOR NUMBER OF
CENTRE FRAMES TO BE
CONSTRUCTED.

PARTS REQUIRED:	QTY	2.4m WALL:	3.0m WALL:
Leg (RHS)	2	2170mm	2770mm
Roof Beam	4	2890mm	2890mm
Truss Horizontal	2	2940mm	2940mm
Truss Horizontal Boxing	3	1960mm	1960mm
Truss Upright	1	1010mm	1010mm
Kneebrace/Truss Diagonal	4	2079mm	2342mm
Truss Angle Brace Inner	4	1000mm	1000mm
Truss Angle Brace Outer	4	515mm	515mm
Triangular Gusset Plate	2		
Rectangular Gusset Plate	16		
Leg to Truss Plate	4		
75mm Bracket	4		



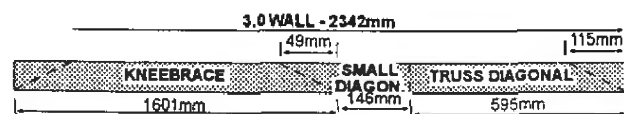
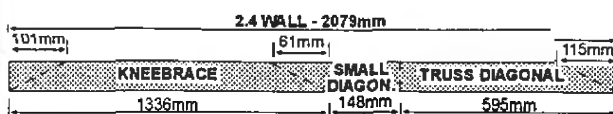
STEPS

- Using a Hacksaw, cut the 1010mm length into 2 x 505mm lengths and form a boxed section. This becomes the Truss Upright.
- Using the same procedure as above join the Horizontal Truss parts together to form 1 x 5880mm long member.

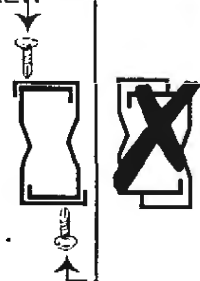


- Join 2 lengths of Kneebrace/truss Diagonal together to form a Boxed Section, then cut to the dimensions shown in the diagram below.

NOTE: Repeat this procedure with the remaining two lengths.



SCREW EVERY

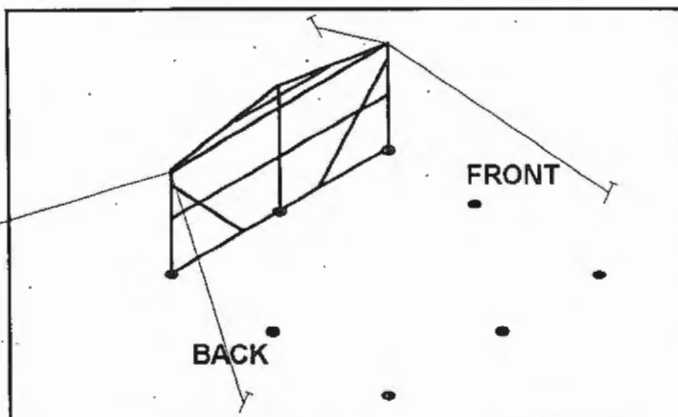


- Lay components out so that they follow exactly the outline chalk marks of the first frame, support the bottom of the legs, making sure they do not move and fix in the positions marked. Carefully turn Frame over and fix as per first side.

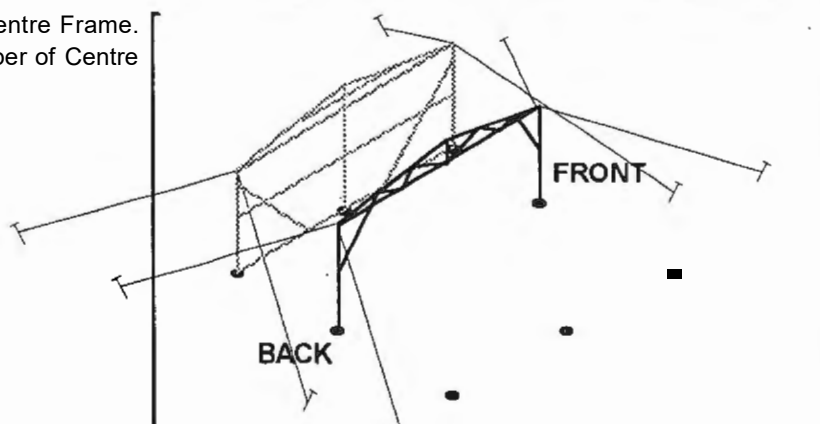
6.0M DEEP FARM SHED NZ

4

When concrete is cured stand the End Frame upright and position legs in the centre of each footing, brace into position with ropes and pegs. Fix each leg to footings with Chemsets nominated in step 1. **USE A SPIRIT LEVEL FOR ACCURACY.**

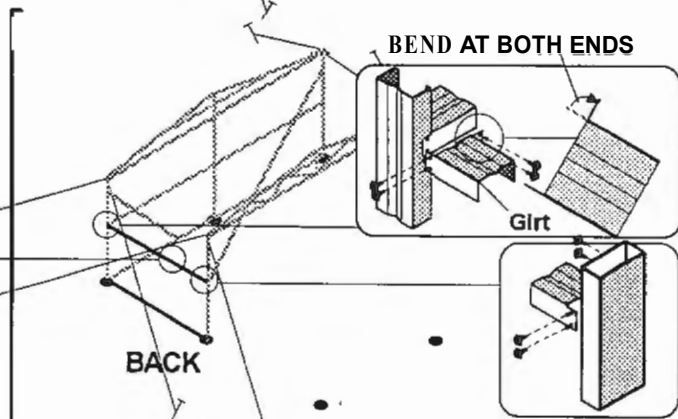


Repeat this procedure with the first Centre Frame. [Refer to **Step 1** Site Plan for the number of Centre Frames to be positioned).



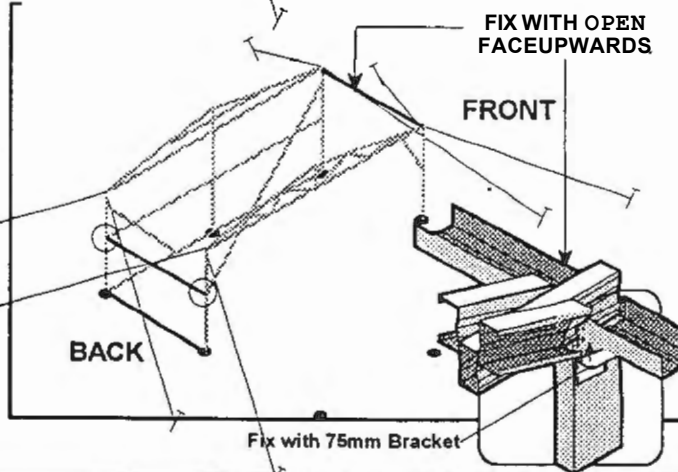
Fit 2875mm girts between the End and first Centre Frame at the same level as End Frame girts, except for the End Frame top girt as this is not necessary on the Back Wall.

Box midwall girts, with 2835mm girt boxing. Use a level for accuracy.



Next, fit 1 x 2875mm girt 40mm from the top of each FRONT leg. Note: this front girt is to be fixed with the open face upwards.

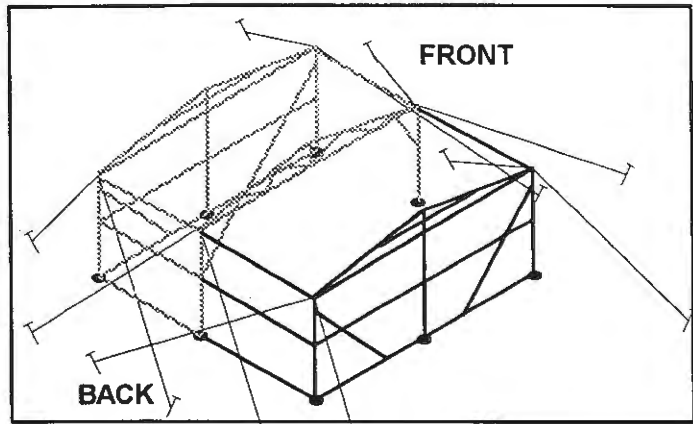
If your shed has more than 1 centre frame, repeat this procedure as many times as necessary but using 2915mm girts and 2875mm girt boxing.



6.0M DEEP FARM SHED NZ

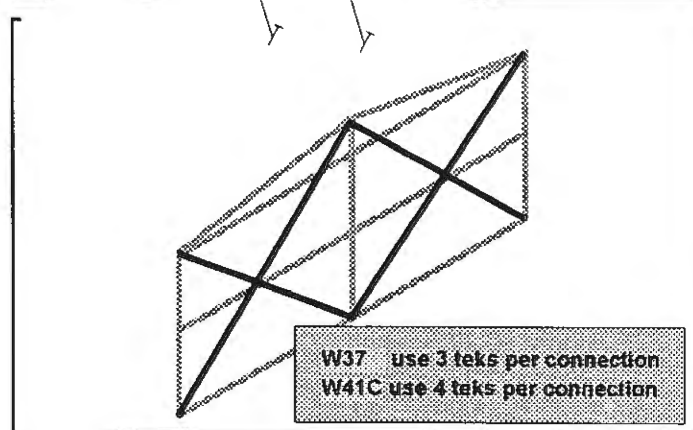
4 continued ..

Stand the final End Frame upright as with previous frames and fix 2875mm girts and 2835mm girt boxes in place

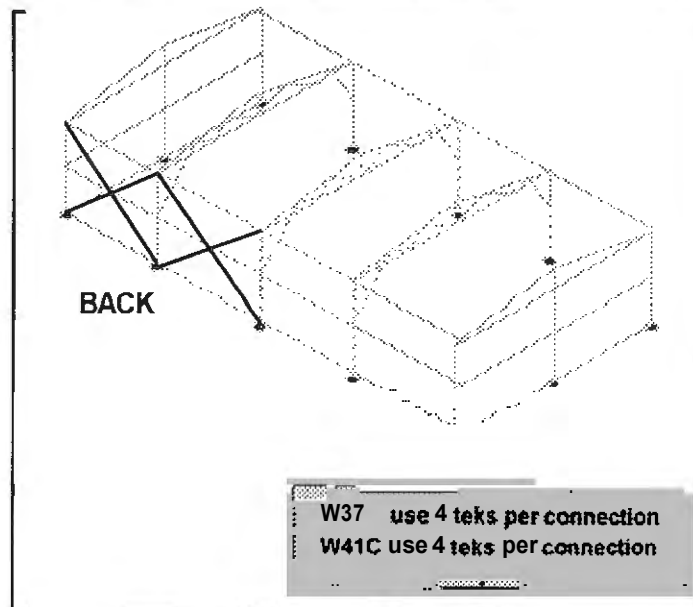


Fit diagonal strapping to both End Frames, pulling tightly and screwing into the Frame from the outside

Temporary End Frame Supports may now be removed.



Fit Diagonal Strapping to the outside of 2 consecutive Back Wall Bays.



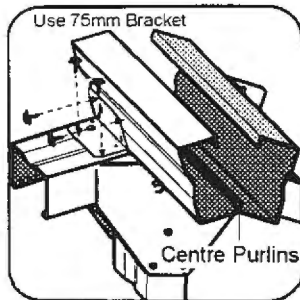
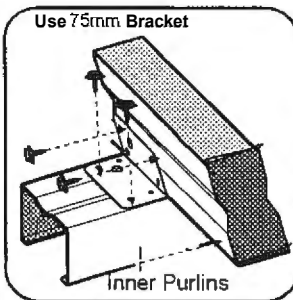
Ropes and pegs can now be removed

6.0M DEEP FARM SHED NZ

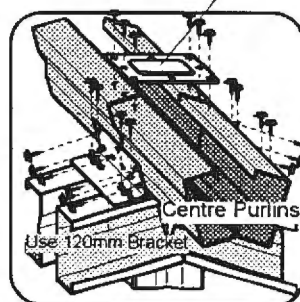
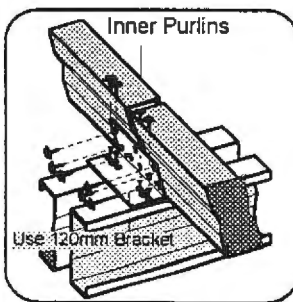
5

Fit Centre and Inner Purlins, so they finish flush with the outside of the End Frames. These are to be fitted into position as shown in the detailed drawings below. Inner Purlins **ONLY** are to be boxed.

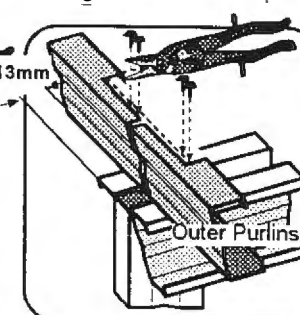
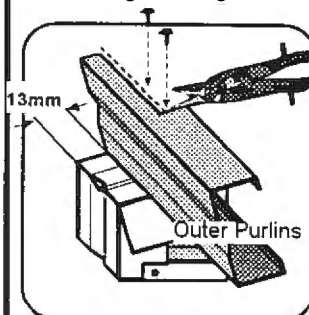
END FRAME



CENTRE FRAME

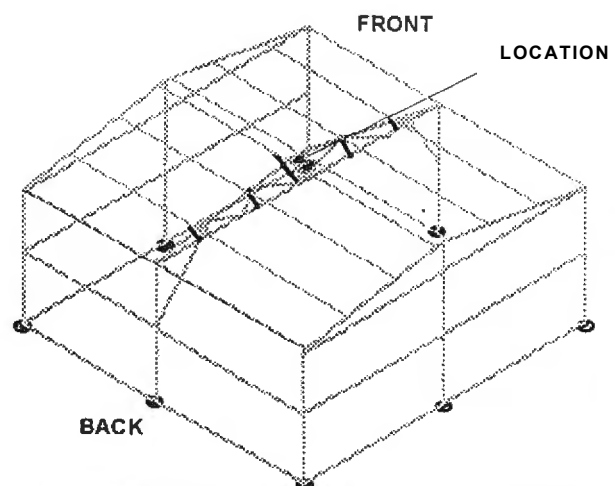
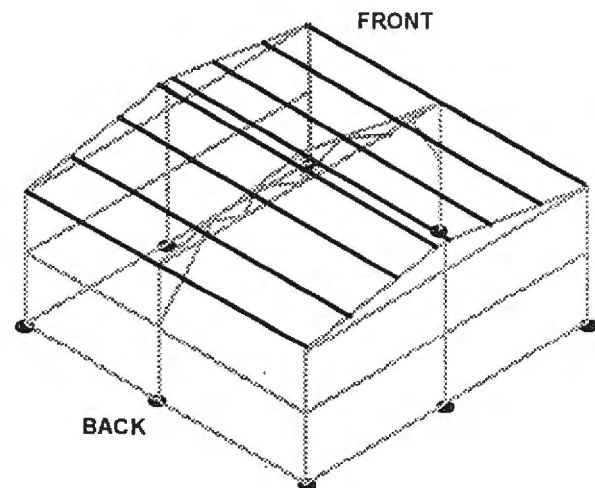
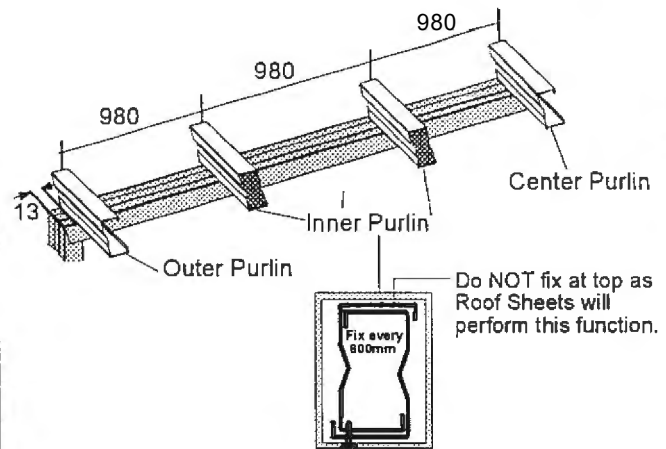
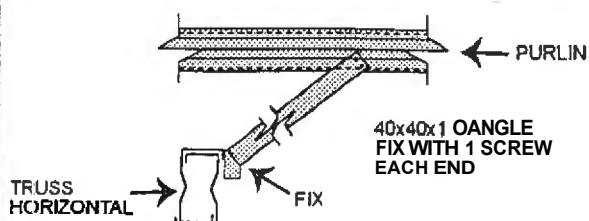


Fit Outer Purlins by notching top flange of purlins and screwing through bottom flange into Frame.



Fit 5 Centre Frame Sway Braces to Truss Horizontal and respective Purlins every Centre Frame, fit so they face the same direction.

- Centre Sway Brace use 810mm Angle
- Outer Sway Braces cut 810mm to Size, so they match the same angle as the Centre Sway Brace.



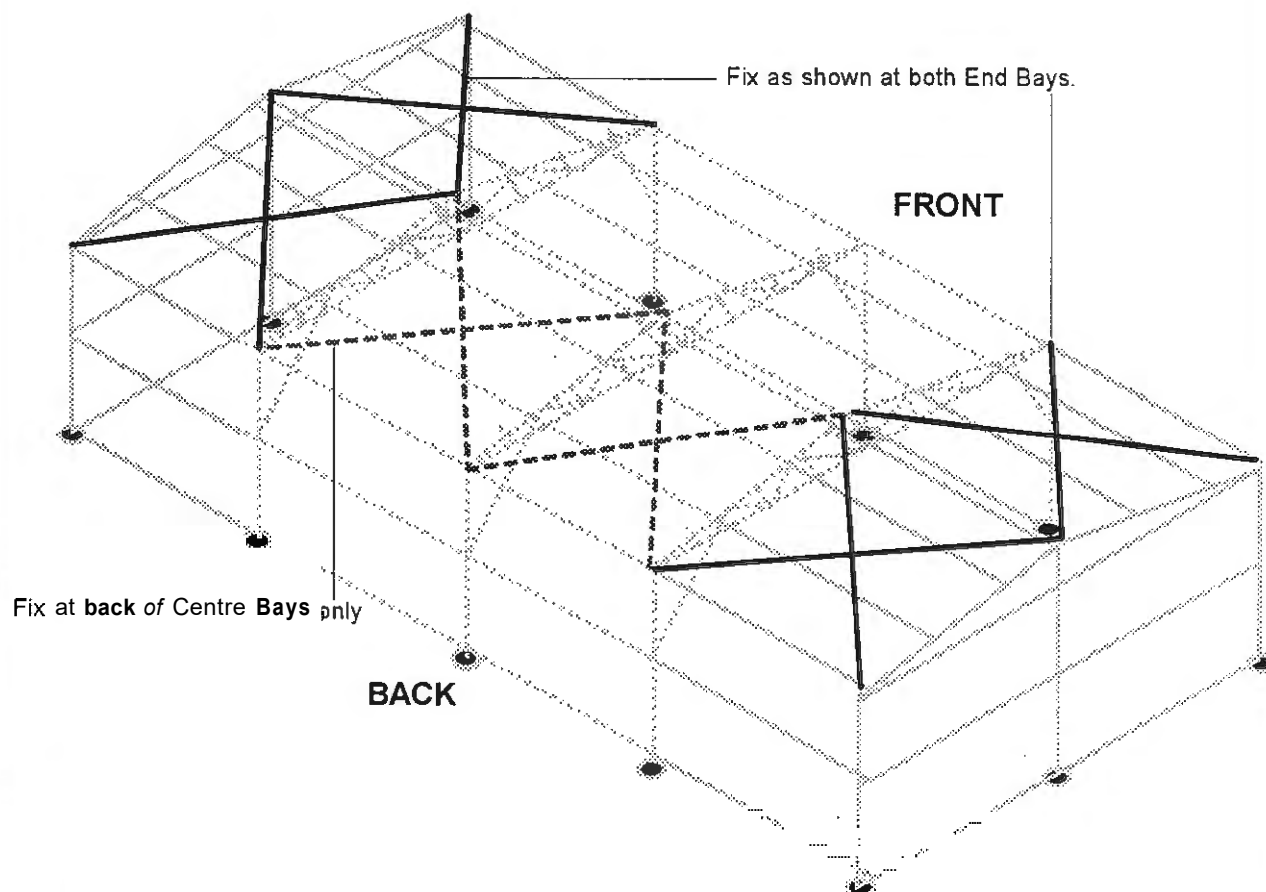
6.0M DEEP FARM SHED NZ

5

continued..

Fit Diagonal Roof Strapping to the top surface of the Roof Beam of each frame in the configuration shown below. Pull tightly and fix.

W37 - Use 3 Tek's per connection
W41C - Use 4 Tek's per connection



6.0M DEEP FARM SHED NZ

6

FIT WALL SHEETING USING SPIC'N'SPAN SHEETING PROFILE (160mm BETWEEN RIBS)

Please note: We do not supply colour matched Tek screws for Colorbond buildings.

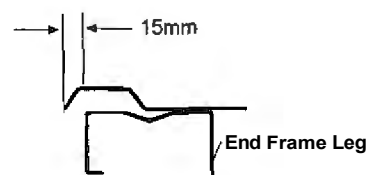
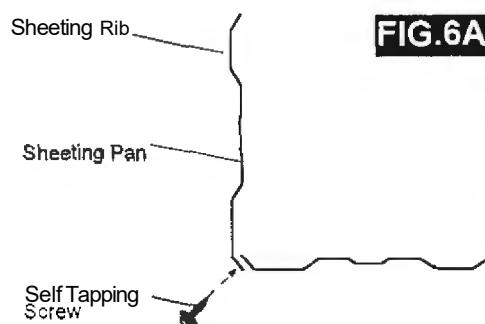
- Use a Stringline for accuracy
- Use a Spirit Level to make sure sheets are vertical
- Use screws without neo washers at every second pan
- Support Girt by hand, from inside, while screwing, to avoid it twisting
- Avoid fixing screws close to screw heads in frame, as this will distort the sheeting.
- Where final rib of one sheet overlaps the next sheet, fix screws as close as possible to rib, so the best possible seal is obtained.
- As coverage of each sheet can vary slightly, it is important that you keep a constant check on your progress as you fix each sheet. The aim is to finish each wall with a 15mm overlap so that the corners can be finished off neatly as shown in Fig. 6A. We suggest you lay the complete set of wall sheets along the ground next to the frame before fixing.
- If there is going to be any variation to this 15mm overlap, you can stretch or shrink each sheet as you go in order to finish up with the correct overlap.

Use a 3/32" Drill Bit and small self tapping screw to finish off corners (Fig. 6A)

When sheeting End Gables, sheets will need to be cut to the same level as the TOP of the roof purlins. Hold sheets into place, mark with felt pen, then cut sheet to correct angle, or the ground, before fixing into place. The small Front Sheets are to be fixed so that they finish flush with the bottom of the Top Girt.

Do not overtighten screws as this will distort the sheeting.

Start by fixing 1 Wall Sheet to the back corner of the Shed, so that it overhangs the end of the Frame by 15mm (see FIG.6B)



FIT WALL SHEETING USING STRAMIT SHEETING PROFILE (216mm BETWEEN RIBS)

Fix wall sheets, noting the following points:

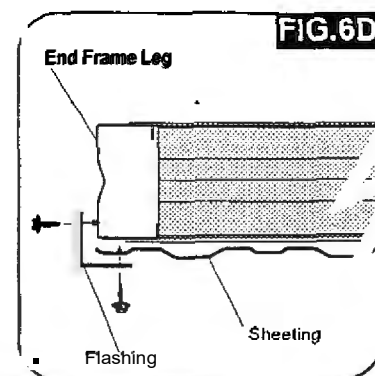
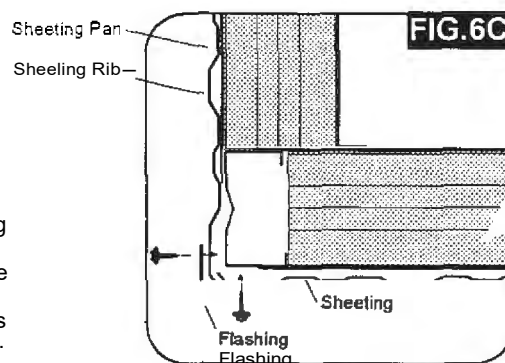
- Use a Stringline for accuracy
- Use a Spirit Level to make sure sheets are vertical
- Use screws without neo washers at every second pan
- Support Girt by hand, from inside, while screwing, to avoid it twisting
- Avoid fixing screws close to screw heads in frame, as this will distort the sheeting
- Where final rib of one sheet overlaps the next sheet, fix screws as close as possible to rib, so the best possible seal is obtained.

-Cutting sheet to size:

In most situations the sheet will need to be cut in order to finish off a corner detail correctly. When this is the case, it is necessary we have provided a Score & Snap Knife in your kit.

This operation is carried out by scoring 3 or 4 times down the area to be cut. Score next to one of the small or large ribs nearest to the desired cut, to keep a straight line. Once you have scored deeply, bend along the scoreline to achieve a neat break. Flash as shown in Fig. 6C (corner) and Fig. 6D (End Frame Leg).

- When sheeting gables, sheets will need to be cut to the same level as the top of the roof purlins. Hold sheets into place, mark with felt pen, then cut sheet to correct angle, on the ground, before fixing into place. **DO NOT overtighten** screws as this will distort the sheeting.

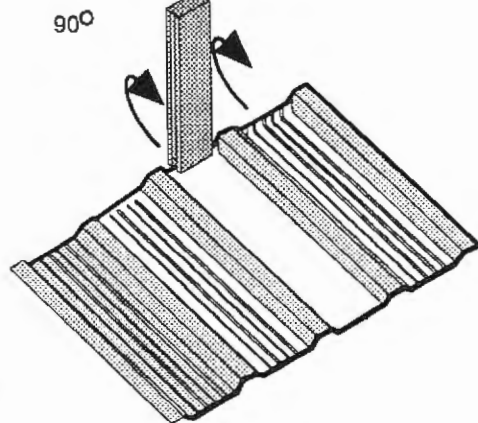


6.0M DEEP FARM SHED NZ

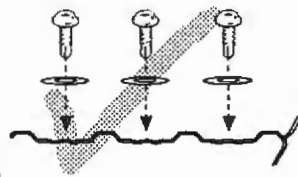
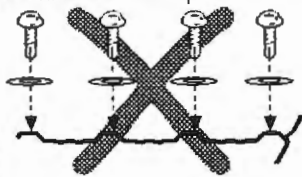
7

FIT SPIC'N'SPAN ROOF S

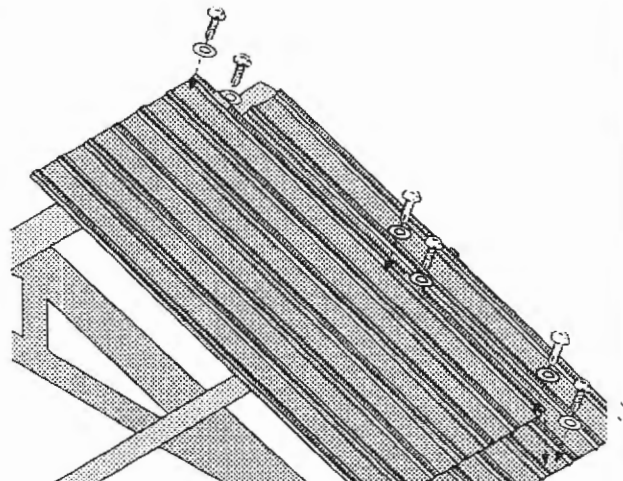
Turn up all valley ends to be fixed to Centre purlin, perform this operation on the ground. Use a block of timber with a slot cut in it as shown below.



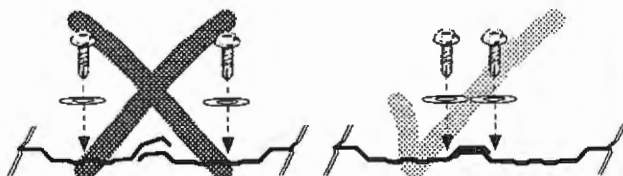
- Fix one side at a time
- Use 1 screw with neo washer at every pan not rib to centre and outer purlins.



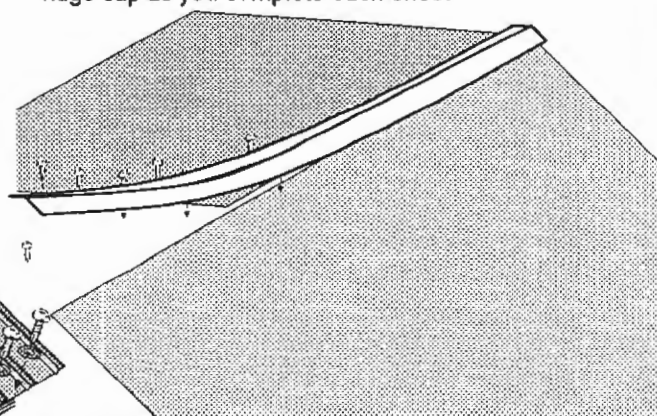
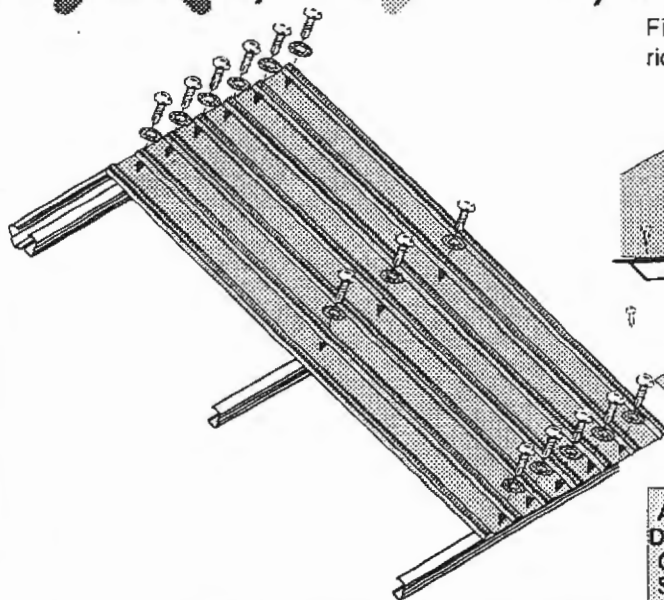
Start with 15mm overhang past the ends of purlins and aim to finish with the same distance at the other end.



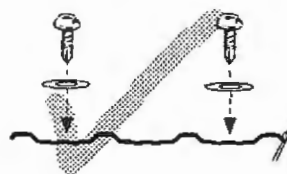
Where final rib of one sheet overlaps the next sheet, fix screws as close as possible to rib, so the best possible seal is obtained. It is recommended to seal joint with silicone.



Fix second side of roof into position sheet by sheet - fix ridge cap as you complete each sheet



- Use 1 screw with neo washer at every second pan not rib on inner purlins.



AVOID WALKING ON ROOF SO SHEETING IS NOT DAMAGED. IF NECESSARY WALK ONLY ON PANS OF SHEETING AT PURLIN LOCATIONS, AFTER SHEETING HAS BEEN FIXED CORRECTLY TO ALL PURLINS.

FIT STRAMIT ROOF SHEETING

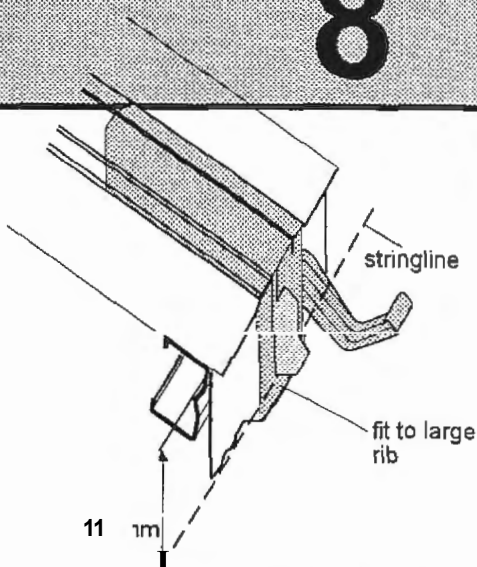
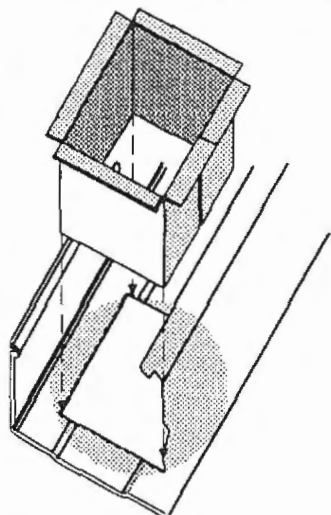
Start with 15mm overhang past the ends of purlins and aim to finish with the same distance at the other end. The last sheet will need to be cut in order to finish with a 15mm overlap. Cut to allow another 20mm overhang and bend this overhang down for waterproofing.

6.0M DEEP FARM SHED NZ

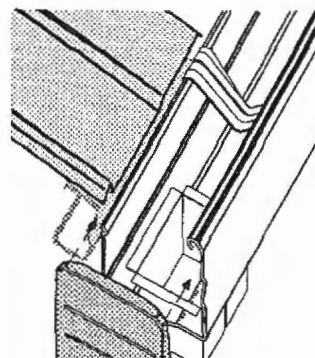
8

FIT GUTTERS

Mark a line 110mm down from the top of the Outer Purlin at each end of the Shed. Run a stringline between these marks and attach your Gutter Brackets to the **Ribs** of the **sheeting** at either end then at **approximately 1500mm** intervals along the string-line. Fix small screws so the **bottom of the Bracket is in line** with your string-line.



Mark the holes to be cut to accept the downpipe drop at the ends selected by you. Fix the Drop with silicone and small screws, then fix gutter caps to each end using the same method.



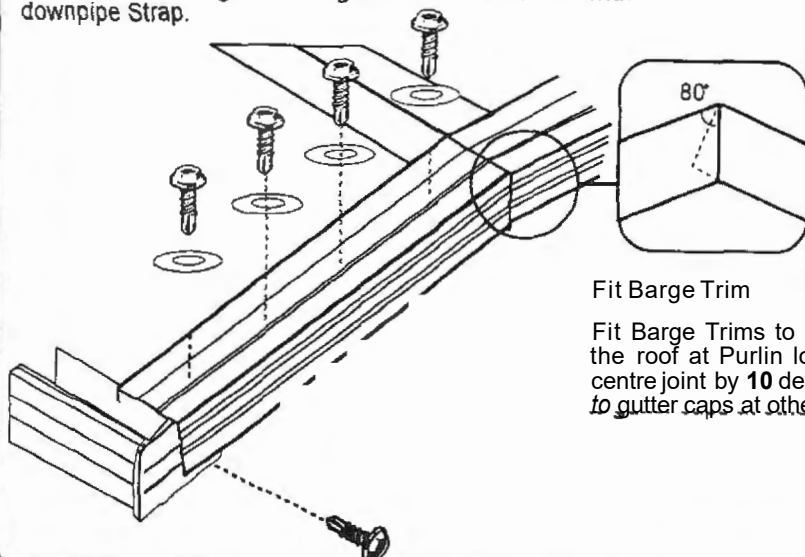
Sit the first length of Gutter into brackets so one end is flush with the outside of the end wall cladding; push top of bracket into outer roll of Gutter and bend small support down to retain inner face.

Join each length of gutter by notching the roll of one length to allow it to slide into the next length. Fix the lengths together with small screws and seal joint with silicone.

When fitting the final length, only notch enough material out of the rolled edge so the end of the Gutter is flush with the outside of the end wall cladding.

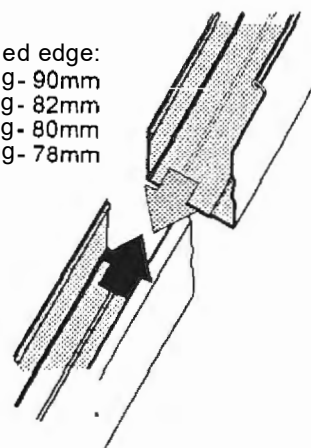
Fit downpipes to Drops with silicone and small screws, then secure through sheeting and into the Frame with downpipe Strap.

Notch rolled edge:
6m long - 90mm
9m long - 82mm
12m long - 80mm
15m long - 78mm



Fit Barge Trim

Fit Barge Trims to Gable Ends of Shed fixing through the roof at Purlin locations. Cut outer vertical edge at centre joint by **10 degree** and fix to Barge underneath. **Fix to gutter caps at other end.**



Dargaville Borough Council

Private Bag,
Dargaville.

Local Government Centre,
(Office, Hokianga Road,
Dargaville

Phone 7059
Dargaville

APPLICATION FOR BUILDING PERMIT

TO THE BOROUGH ENGINEER,

Sir,

I hereby make application to erect/re-erect/extend/alter/repair the building(s) according to the site plan, detailed plans, elevations, cross sections and specifications deposited herewith in duplicate.

Particulars of the land and buildings are:—

OWNER . Name WA BROWNE + J.D. HASTINGS
Postal Address 47 JERVOIS ST Phone (0884) 6789
BUILDER. Name D. STODART
Postal Address R.D. 1 WAIAU Phone _____
PLUMBER Name Kallihor + Doodan
Postal Address Dargaville Phone _____
DRAINLAYER Name Ditto
Postal Address _____ Phone _____

EXISTING USE OF SITE AND BUILDINGS Vacant land

NATURE OF PROPOSED BUILDING WORK LOG DWELLING
e.g., additions to Dwelling, Bedroom, Lounge extensions etc.

VALUATION DEPT. ASSESSMENT No.: (from rate demand) 95 - 40

LEGAL DESCRIPTION OF SITE: (from rate demand or title deeds) _____
PT. LOT 3 DP 36083

Road or Street: 145 AWAKINO RD

AREA OF SITE: 4.7002 HA Square Metres

NATURE OF SOIL: (rock, clay, sand, loam, etc.) CLAY

FLOOR AREA: (proposed work—square metres)

	Basement	Ground Floor	Other Floors	Total
Main Building		<u>63 sqm.</u>	<u>84 sqm.</u>	<u>147 sqm.</u>
Accessory Buildings				

ESTIMATED VALUE OF WORK:

Main Buildings (excluding plumbing and drainage) _____ \$55000

Accessory Buildings (excluding plumbing and drainage) _____ \$_____

Plumbing and Drainage — — — — — \$5000

Total of Work \$60000

CERTIFICATE: I hereby certify that the above information is correct in every respect and do hereby agree to abide by all provisions of the Dargaville Borough Council by-laws governing and regulating all matters the subject of the foregoing.

Signature of Applicant: J.D. Hastings

FOR OFFICE USE ONLY

TO ADMINISTRATIVE OFFICER:

Date Received

Check List:

Forms completed ()

Valuation No. ()

Fees receipted ()

Remarks:

Signature:

Date:

TO PLANNING OFFICER:

(Check with District Planning Scheme. Refer to Council if required).

Approved by Council

Minute No.

Date:

Checked and approved by Officer

Signature:

Date:

TO HEALTH INSPECTOR:

(Check for drainage, health, etc)

Checked and approved

Signature:

Date:

TO BUILDING INSPECTOR:

(Check for by-laws, etc.)

Checked and approved

Signature:

Date:

TO FIRE INSPECTOR:

(Check for by-laws, etc.)

Remarks:

Checked and approved

Signature:

Date:

TO STRUCTURAL ENGINEER:

(Check design calcs. etc.)

Remarks:

Checked and approved

Signature:

Date:

REMARKS:

PERMIT TO BE ISSUED SUBJECT TO:

GENERAL: INFORMATION

(1) The following MUST accompany this Application:

PLANS AND SPECIFICATIONS TO BE SUBMITTED IN DUPLICATE (in ink or on print paper) including—

- (a) Ground plans of proposed work showing position of all sanitary fittings and fixtures and sizes of various rooms.
- (b) Where the building is on a sloping site the correct height of foundations must be shown.
- (c) Front and side elevations.
- (d) Cross-section showing framing with bracing.
- (e) Where a building requires Plumbing and Drainage work a separate Application Form must be filled in and fee paid before a Building Permit can be issued.
- (f) Such drawings and information in detail as may be necessary to indicate that the proposed building or other work or change of use of land or buildings will comply in all respect with the District Planning Scheme and with the By-laws.
- (g) A report and calculations showing how the design complies with the By-laws in the case of buildings requiring specific designs.
- (h) Applications for (in so far applicable):
 - (1) Drainage and plumbing
 - (2) Sewer connections
 - (3) Water supply
 - (4) Crossing
 - (5) Footpath damage deposit
 - (6) Hoarding licence
 - (7) Vehicular crossing
 - (8) Stormwater connection
- (i) In duplicate a location drawing showing the site (all four boundaries) the buildings already on the site and the new proposed building shown in black. The measurements from the proposed building to all buildings on the site and the boundary lines should be given.

(2) FEES may be forwarded later on advice of availability of permit and the amount of fees required.

FOR OFFICE USE ONLY

FEES (includes GST)	Receipt No.	Date	Permit No.
Building Permit \$470:00	3711	23/8/90	
Building Research Levy \$ 60:00			
Plumbing and Drainage Permit — \$ 90:00			
Footpath Damage Deposit \$:			
Sewer Connection \$120:00			
water Connection \$ EXISTING			
Stormwater Inspection \$ 30:00			
Hoarding Licence \$:			
Vehicular Crossing \$ EXISTING			
Off-Street Parking			
Spaces			
Contribution \$:			
TOTAL FEES \$770:00			

SCALE OF FEES

For the examination of plans and specifications of any building and for the inspection of such building the following fees shall be payable according to the estimated value of the work

In any dispute as to value, the ^{borough} Engineer shall have the absolute determination of the value of the proposed work or building.

BUILDING PERMIT FEES

ESTIMATED VALUE OF WORK: (Value to exclude value of Plumbing and Drainage work).

<u>VALUE OF WORK</u>	<u>FEE</u>
0 - 1000	\$35
1001 - 2000	\$45
2001 - 2500	\$55
2501 - 3000	\$65
3001 - 3500	\$75
3501 - 4000	\$85
4001 - 5000	\$100
5001 - 6000	\$110
6001 - 7000	\$120
7001 - 8000	\$130
8001 - 9000	\$140
9001 - 10000	\$150
10001 - 12000	\$180
12001 - 14000	\$210
14001 - 16000	\$240
16001 - 18000	\$270
18001 - 20000	\$300
20001 - 25000	\$330
25001 - 30000	\$360
30001 - 35000	\$380
35001 - 40000	\$410
40001 - 50000	\$450
50001 - 60000	\$470
60001 - 70000	\$490
70001 - 80000	\$510
80001 - 90000	\$530
90001 - 100000	\$550
100901 - 120000	\$570
120001 - 140000	\$590
140001 - 160000	\$620
160001 - 180000	\$650
180001 - 200000	\$700
200001 - 250000	\$800
250001 - 300000	\$900

BUILDING RESEARCH LEVY FEE

In addition to the above fees there will also be payable a Building Research Levy in accordance with the Building Research Levy Act, 1969, which is set at \$1.00 in each \$1,000 or part thereof of the total value of each Building Permit issued. Permits for work to a value less than \$10,000 are exempted.

PLUMBING AND DRAINAGE PERMIT FEES

See Drainage and Plumbing Application Form.

Date Inspected

7/9/90

20/10/90

footing inspection: OK Down to hard pan, in excess of 45.0 cm
First layer of logs tied down to foundations:
copper naphthenate being used on logs.

Other types of preservative were recommended to the builder (such as A.P.S.) but as no person was prepared to give any written certification of their product it was felt best to stay with a product that has proven preservation qualities.

26/10/90

4th layer of logs being scribed.

Method of construction: ^{Green} Logs debarked and scribed into place, removed and brush coated with copper naphthenate before final placing.

29/10/90

General visit: Sixth layer going down

19/11/90

Floor going on: recommended they seal flooring from elements: create some form of end jointer on flooring.

4/12/90

General visit: roof sarking going on

7/12/90

Reminded builder that studs over 4m to be double

14/12/90

Drainage is, A - D.K.

3-3-92

General inspection: new checks have appeared in most logs. If not treated logs could be vulnerable to insect attack (contact owner)

12-11-92

General inspection: expected shrinkage has occurred. advised faster fixings to treat checks in logs during summer months.

15-12-94

General inspection: Odd common borer flight holes sighted & marked with small circle.

12-4-96

General inspection: very little signs of borer etc

6-12-01

A few areas of common borer flight holes. One or two holes could be powder post beetle.

COMPLETED (Signature) _____

Date _____

BC/MP/01A

BUILDING INSPECTOR'S
FIELD SHEET

AUTHORITY

Stats

No. H. 028113

Kaipara District Council

Inspector: M

File No.

Receipt No.

Date

Issued

OWNER

BUILDER

Name W. H. KROWE & S. D. HASTINGS

Name D. J. TODD

Mailing Address 47 JERVOIS ST

Mailing Address R.D. 1

DARGAVILLE

WHIRIO

PROPERTY ON WHICH BUILDING IS TO BE ERECTED/DEMOLISHED

SITE

LEGAL DESCRIPTION

Street No. 145

Valuation Roll No. 75/40

Street Name HAWKINS RD

Lot D.P. 260

Town/District DARGAVILLE

Section Block

Riding

Survey District

DESCRIPTION OF PROPOSED WORK AND MAIN PURPOSE OF USE

ERECT NEW DWELLING FOR OWNERS USE

FLOOR AREA

DWELLING UNITS

Whole
Sq. Metres

147

Number
Erected

ESTIMATED
VALUES

Building
Plumbing
Drainage
G.S.T.
TOTAL

5,000
5,000
60,000

NATURE OF PERMIT (TICK BOX)



BUILDING

includes domestic garages and domestic outbuildings



FOUNDATIONS ONLY



ALTERED, REPAIRED, EXTENDED, CONVERTED, RESITED
- include installation of heating appliances



NEW CONSTRUCTION
OTHER THAN BUILDINGS - include demolitions



DOMESTIC GARAGES
AND DOMESTIC OUTBUILDINGS

FEES APPLICABLE

Building permit	\$ 470	Water Connection	\$ 70
Street Damage, Deposit	\$ 60		
Building-Research Levy	\$ 60		
Plumbing	\$ 60		
Drainage	\$ 70		
Sewer Connection	\$ 170		
Vehicle Crossing Levy	\$		
M.S. Plumbing	\$		
		TOTAL:	\$ 770.00

Receipt No.

3711

Date of Payment

23 / 8 / 1996

Authorised Officer

Special Conditions:

AS PER LETTER DATED 15 AUGUST 1996

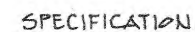
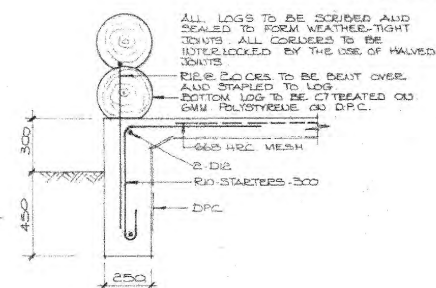
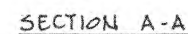
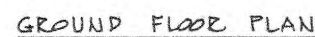
RE: APPLICATION TO ERECT A LOG DWELLING

AND LIST OF CONDITIONS APPROVED BY COUNCIL

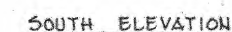
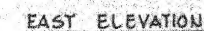
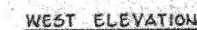
Date Inspected

REMARKS (e.g. stage reached with work)

(CONTINUED OVER)

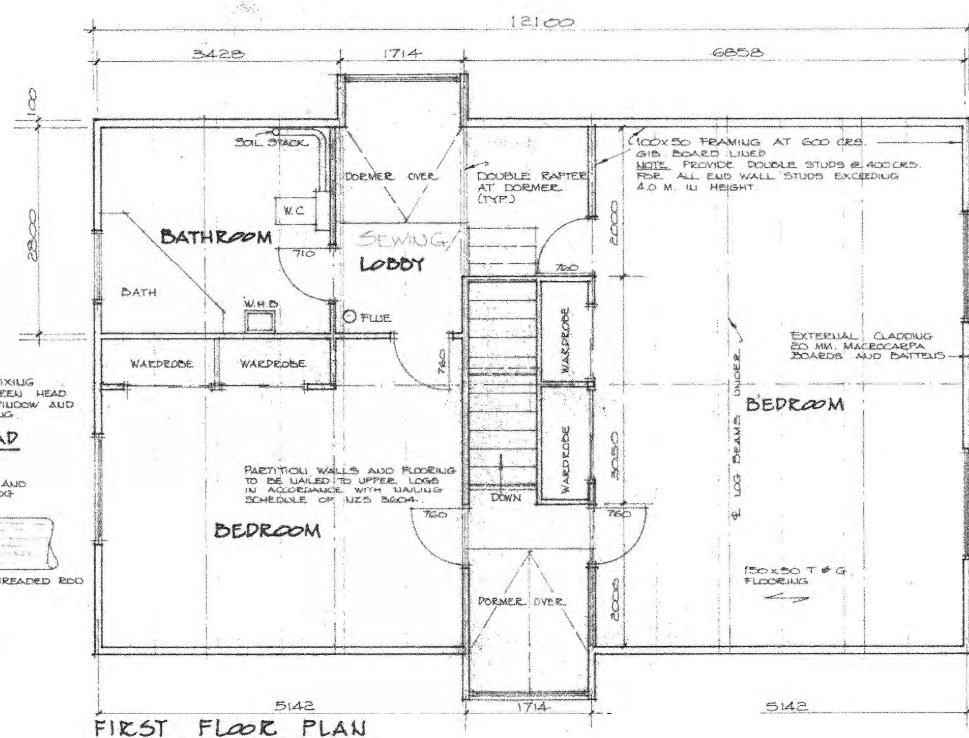
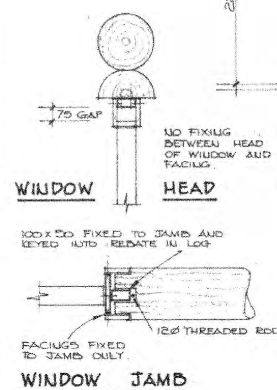


- (1) LOG WORK IS TO BE CONSTRUCTED IN ACCORDANCE WITH ACCEPTED LOG PRACTICE - REFER "LOG BUILDING BY MACKIE, AND THE DREDGE IS TO HAVE ATTENDED A LOG BUILDING COURSE HELD BY THE U.S. COOL BUILDERS ASSOCIATION.
- (2) ALL LOGS TO BE RADIATA PINE, PEELLED AND DRIED TO 20% MC, TREATED WITH 3 DAYS OF COPPER, 7 DAYS OF BORATE / BORIC ACID, AND COPPER. ALL CUT SURFACES ARE TO BE RE-TREATED AS ABOVE.
- (3) LOGS ARE TO BE 250 MM. DIAMETER.
- (4) PILING TO 30 MM. G. 8 MACROCARPA OR TREATED PINE, DRIED TO 14% MC, BEFORE LAYING. UPPER WAIL FRAMING TO BE 100% OX HEART MACROCARPA OR TREATED PINE STRICTLY IN ACCORDANCE WITH U.S. LOG BUILDING.
- (5) RAFTERS AND FELLIES: HEART MACROCARPA OR TREATED PINE TO THE GIRDS ILLUSTRATED ON THE DRAWING.
- (6) CLADDING TO BE EX 100% HEART MACROCARPA, PANANGIAN, OR OTHER HARDWOOD WITH GRAY GREEN TREATED SURFACES, JOINTS.
- (7) ALL CONCRETE WORK TO COMPLY WITH NZS 3103 - M1, CONC. COMPRESSIVE STRENGTH TO BE 17.5 MPa. AT 28 DAYS.
- (8) ALL PILING AND DRAINAGE TO BE STRICTLY IN ACCORDANCE WITH THE PILING AND DRAINAGE REGULATIONS 1978.



NOTE: ALLOW FOR 1 FULL LOG, MIN. 200 MM. OVER ALL WINDOWS AND DOORS

— 120 END WITH THREADED END EXTEND 200 INTO FOUNDATION (NYS) END TO 60 IN WINDOW ELEVATE ALL DOORS TOP LOG LEAVE 4 INSPACE TO TIGHTEN ON LOG SHIMMING



RICHARDSON- STEVENS CONSULTANTS LTD.
CIVIL AND STRUCTURAL ENGINEERS
2 SEAVIEW ROAD
WHANGAREI PH. 4

PH. 483-273

LOG HOUSE FOR BROWNE AND HASTINGS AT DARGAVILLE

FLOOR PLANS, SECTION,
ELEVATIONS AND DETAILS

DRAWN
TRACED

CHECKED
DATE JULY 1990

SCALES 1/50, 1/100, 1/20.	SERIES OF 1
	REF 144/90

SHEET

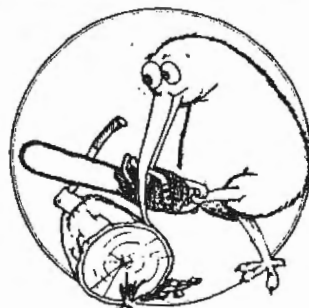
10

SERIES OF 1

REF 144/00

Log Builders Association

(in association with Mackie School of Log Building, B.C. Canada)



This is to certify that

DON STODART

has attended a course in log building (authorised by the Association) at... KAIKOHE

from .. August 23 1984 to .. August 31 1984 tutored by .. Allan Mackie

AB Deane

National Co-ordinator

Al Mackie

Tutor

Date .. Sept 8 1984

RD 2 Masterton

① Rafters @ 900 c/s

$$\text{Span } 5.0 \text{ m} = 1.55 \text{ kNm}$$

$$Z_{\text{reqd}} = 257$$

— Use 200 X 50's

→ Double rafter at dormer

→ No Ridge beam necessary
Since rafters are tied in
diaphragm floor

② Log beams

$$\text{Span } 6.8 \text{ m} @ 1.8 \text{ c/s}$$

$$\text{Moment } \Rightarrow = 18.20$$

$$Z_{\text{reqd}} = 1468$$

→ Use logs of min poked diam
250 mm. $I_b = 2$ — OK

③ Flooring to span 1.8 m

$$M = 708 \quad Z_{\text{reqd}} = 118$$

Use ex 100 x 50 + gfv flooring

$$Z / m = 322$$

Richardson, Stevens Consultants Ltd.

CONSULTING CIVIL & STRUCTURAL ENGINEERS

2 SEAVIEW ROAD, WHANGAREI. PHONE: 483-273

Refers to

Client

File No. (2)

Plan Ref. No.

Calculated by

Checked by

Date

lateral stability

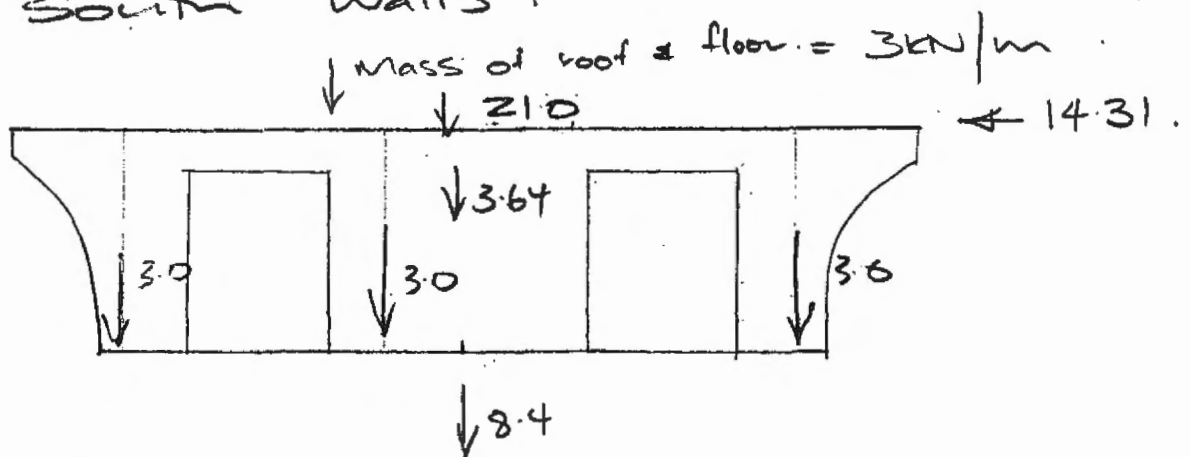
⇒ Design for wind pressure = 0.5 kPa

⇒ Wind to end elevation - upper
roof has structural diaphragm to
transfer loads to ^{upper} floor level

$$F = 10 \times 53\frac{1}{2} \times 1.3 \times 5 = 17.22 \rightarrow \text{Upper}$$

$$7.3 \times 2.4 \times 1.3 \times 5 = \frac{11.4}{28.62}$$

is to be resisted by North
& South walls.



Mass of Roof = 1.75

" " Wall = 0.32

" " Floor = 1.00

Mass of log wall

$$= (10.4 \times 2.7 - 2 \times 1.8 \times 2.0) \times 4$$
$$= 8.4 \text{ kN}$$

Return walls = 3.0 kN

OTM = 39 kNm

RM of central panel = 21.0 + 3.64 \times 1.75

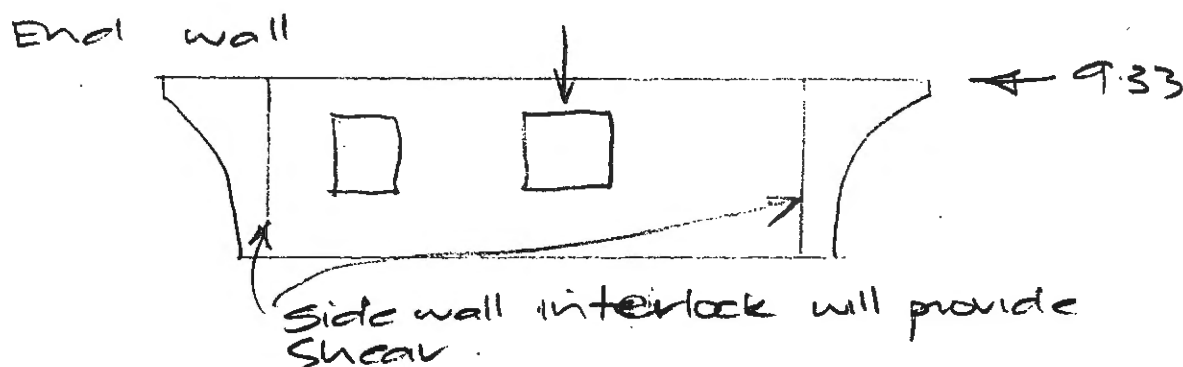
43.12 kNm - OK ✓

- To ensure panel action central panel to be drifted log to log with bottom log tied into the foundation

$$T_v \text{ load} = 10.5 \times 3 \times 1.3 \times 5 + 5 \times 3 \times 5 \times 10$$

$$= \underline{28 \text{ kN}}$$

→ Load to each wall = 9.33 kN



OTM = 25.19

RM > $8.2 \times 4 = 33$ - OK

Diff top 4 logs at windows to ensure panel action

Foundations

→ Load to side wall found

Wall =	$2.7 \times 4.5 =$	1.22
Roof =		3.00
Floor =		8.75
Found.		3.60
		<u>16.6</u>

Richardson Stevens Consultants Ltd.

CONSULTING CIVIL & STRUCTURAL ENGINEERS

2 SEAVIEW ROAD, WHANGAREI. PHONE: 483-273

Relers to

Client

File No.

Plan-Ref. No.

Calculated by

Checked by

Date

Bearing pressure = 66 kPa - OK for

250 wide foundation

⇒ Use 2 D12
bar @ R10
Starter/ties
at 300

DATED 8th October

1987

Correct for the purposes of
the Land Transfer Act

AND N STODART, DIAN MARY
AND STEPHEN KENNETH CARTER
and MARY ANNE CARTER

"the encumbrancers"

THE WHANGAREI COUNTY COUNCIL

"the 'Council"

MEMORANDUM OF ENCUMBRANCE

CONNELL LAMB GERARD & CO
SOLICITORS
WHANGAREI.

MEMORANDUM OF ENCUMBRANCE

WHEREAS DONALD IAN STODART, Engineer and DIANNE MARY *DM*
STODART, Librarian both of Okaihau, (Jointly) as to an
undivided one half share and STEPHEN KENNETH CARTER, Fitter
and Turner and MARY ANNE CARTER, Typist, both of Whangarei
(Jointly) as to an undivided one half share as tenants in
common in the said shares (hereinafter' called "the
Encumbrancers") are the registered proprietors of an estate
in fee simple in:

FIRST: 16.1871 hectares more or less being Section 297
Parish of Waipu and being the land comprised and described
in Certificate of Title 202/18 (North Auckland Registry)
SUBJECT TO: Proclamations 8490 and 17438, Compensation
Certificate 292272.1, Gazette Notices 403213.1 and 398599.1
and Mortgage B.571559.2

✓
Λ
SECONDLY: 136 square metres more or less being Lot 515
Parish of Waipu and being formerly portion of a Crown Grant
Road duly closed and being the land comprised and described
in Certificate of Title 650/179 (North Auckland Registry)
SUBJECT TO: Mortgage B.571559.2 (hereinafter called "the
said land")

AND WHEREAS the encumbrancers have applied to the WHANGAREI
COUNTY COUNCIL (hereinafter called "the Council") for a
building permit to erect a log dwelling on the said land

AND WHEREAS the construction of a log dwelling is not
covered by the Council's Bylaw and the application was
referred to and approved by the Council pursuant to Clause
3.1 of the Bylaw subject to the encumbrancers entering into
this Memorandum of Encumbrance

NOW THIS DEED WITNESSETH that, the encumbrancers encumber the
said land for the benefit of the Council for a term of 200
years from the 12th day of June 1987 with an annual rent
charge of 10cents to be paid on the 12th day of June in each
year if demanded by that date and the encumbrancers for
themselves and their successors in title hereby further
covenant:

H. D. S. DM
me

1. THAT the encumbrancers shall indemnify the Council from **all** actions proceedings and claims in respect of any liability to the Council for the design, construction or deterioration of the logs used whether through natural causes or otherwise to the intent that the Council shall be free from any liability whatsoever notwithstanding that the Council has agreed to issue a building permit to erect the said log dwelling.

2. THAT Section 104 of the Property Law Act 1952 applies to *this* Memorandum of Encumbrance.

3. THAT the covenants implied by Section 154 of the Land Transfer Act 1952 applies to this Memorandum of Encumbrance.

4. THAT notwithstanding anything hereinbefore contained the covenants herein shall be enforceable only against the registered proprietor or proprietors for the time being of the sale land or any part thereof and if there is more than one registered proprietor then against each registered proprietor.

5. THAT except as the Same are necessary to enforce the covenants herein none of the rights of an encumbrancee under the Land Transfer Act 1952 or the Property Law Act 1952 shall be vested in the Council hereunder but this clause shall be without prejudice to the Council's rights of action at common law as a rent-chargee.

6. THAT the Council shall if called upon execute a Memorandum of Priority **in** favour of any subsequent mortgagee of the encumbrancers or **any** of their successors in title and

Adm. me. [Signature]

the encumbrancers shall pay the costs of the Council's solicitors on perusal of the Memorandum of Priority and attending to execution thereof.

DATED this 8th day of October 1987

SIGNED by DONALD IAN)
STODART, DIANNE MARY)
STODART, STEPHEN KENNETH)
CARTER, and MARY ANNE)
CARTER as encumbrancers)
in the presence of:)

GW

[Handwritten signatures]
of last
interest,

J. G. Williamson

Law Clerk to Messrs.
Thomas Dallas & Partners,
Solicitors,
Whangarei.

THE COMMON SEAL of THE)
WHANGAREI COUNTY COUNCIL)
was hereunto affixed in)
the presence of:)



J. Fraser
CHAIRMAN

[Signature]
COUNTY CLERK

DESIGN CERTIFICATE



To **KAIPARA DISTRICT COUNCIL**

re **HOUSE FOR BROWNE & HASTINGS**
(Project Title)

I, **GRANT STEVENS**, being a Registered Engineer-
and holding a current Annual Practising Certificate and being a Member of the Association of Consulting
Engineers New Zealand and a Principal/Director of **RICHARDSON, STEVENS CONSULTANTS LTD.**
CONSULTING ENGINEERS
hereby certify that: **2 Seaview Road, Whangarei**

This Consulting Practice has been engaged to design and execute the appropriate engineering
calculations for **STRUCTURAL CALCULATIONS**
(Description & Type of Structure)

proposed to be constructed for **BROWNE & HASTINGS**
(Name of Owner)

located at
(Street Address)

on
(Legal Description of Site)

- The accompanying **1** sheets of Drawings titled and numbered **144/90/1**
(Number) and dated **13/7/90** and Specification Sections numbered
adequately illustrate the design of the structure.
- I have exercised reasonable control over the design processes for the works defined above which
have been designed in accordance with sound and widely accepted engineering principles to support
the loads specified in **NZS 4203**
and various aspects of the design are in accordance with the following relevant authorities
- I believe the stresses in the various materials of construction and force resisting elements of the
structure including the foundation strata under the above loads are such as to ensure the safety and
stability of the structure if the works are constructed in accordance with the above described
drawings and specifications.

The name and qualification of the principal structural designer are

Signature of ACENZ Member

Date **13/7/90**

Professional Qualifications

BE MIPENZ

Registration No. **7397**

For and on behalf of

Leese and Richardson Consulting Engineers

ASSOCIATION OF

2 Seaview Road
RICHARDSON, STEVENS CONSULTANTS LTD.
CONSULTING ENGINEERS
Whangarei

CONSULTING ENGINEERS NEW ZEALAND
A Division of the Institution of Professional Engineers New Zealand

2 Seaview Road, Whangarei

This Design Certificate is Valid Only for a Building Permit
Application Made Within One-Year of the Date of Issue of This Certificate

Winstone Wallboards Ltd

AUCKLAND (09)642-184

WELLINGTON (04)684-293 CHRISTCHURCH (03) 323-159

Spec's

Logs to have Anti Sap

Treatment after each Log is peeled.

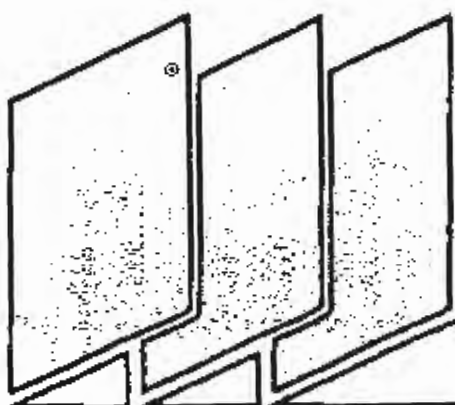
After preparation (Notch and lateral
groove) One full coat of Copper N
all over, (NAPHTHENATE)

Fit log To Building.

Every log to be prepared in this way.

When log work is Finished, one
more coat of Copper N is applied.
on all outer walls of Building.

After 3 Give one
coat of wood life 2. on all
log. work.



GIB BOARD

REINFORCING TAPE GIB COVE ADHESIVE SLIMLINE ANGLE

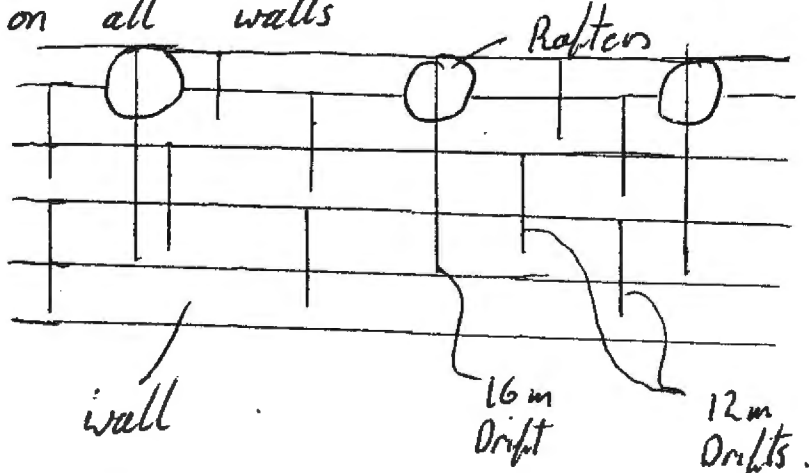
FOAM GIB COVE ARCH BEAD GIB VINYL GIB BEDDING

Winstone Wallboards Ltd

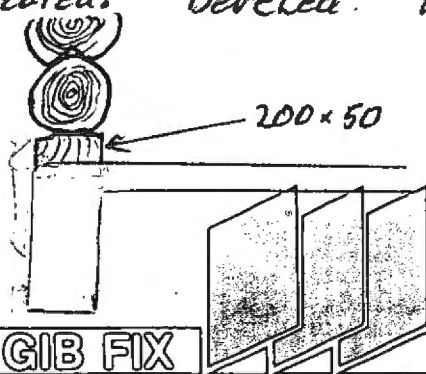
AUCKLAND (09) 642-184

WELLINGTON (04)684-293 CHRISTCHURCH (03)323-159

Spec,
12mm Drift To be Driven
into every Loo at 2m Spacings
on all walls



Bottom Plate To be 200x50
H4 Treated. Beveled. Edge.



CLOUTS GIB FIX

GIB FINISHING

GIB BOARD

47 Jarvis St
Dargaville
31. 7. 90
Ph. 6789 (0884)

To District Engineer
Hobson County Council
Dargaville

Dear Sir

We wish to make application
to construct a dwelling using
natural round logs in Awakere
Rd Dargaville. We have Engineers
drawings and specifications. And have
employed a ticked log builder
to construct the dwelling. We present
these for your consideration.

Yours Sincerely

J.D. Hastings

J.W.A. Browne

DARGAVILLE BOROUGH COUNCIL

APPLICATION FOR SEWERAGE AND/OR STORMWATER CONNECTION

NOTES

1. Applicants will pay the cost of exposing the nearest available drain and the cost of laying from that drain to their property. In the event that the nearest drain is in or across the road or footpath, Council will do the work and charge the applicant, or (at Council's discretion), the work may be done by the applicants drainlayer under Council's supervision.
2. The applicant will pay a connection fee of \$120.00, which will pay for Council staff to supply the materials for the connection and cut into the public drain.
3. No stormwater connection shall be made into a sanitary sewer (and vice versa).
4. Stormwater connections to a Borough Stormwater Sewer/open road drain may be made by a registered drainlayer provided that
 - (a) the inspection fee is paid
 - (b) the work is done under Council's supervision and
 - (c) before backfilling the connection must be inspected by the Drainage Inspector.

Any footpath, road, or berm shall be reinstated to approval or repaired by Council at the applicants expense as applicable.

5. Except as indicated in note 4, no connection shall be made to any sewer by a private individual.
6. The drainage inspector requires at least 24 hours notice for any inspection of work permitted in No. 4. He must also be notified before any work in a Borough Street may commence.
7. Any connection greater than 100 mm diameter must be connected to Borough sewers in a manhole.

I hereby apply to have the work done as indicated below:-

NAME OF OWNER WA. BROWNE + JD. HASTINGS

ADDRESS OF PROPERTY 145 AWAKINO RD.

VALUATION DEPT. ASS. NO. 95-40.

LEGAL DESCRIPTION PT LOT 3 DP 36083.

NAME OF APPLICANT WA. BROWNE + JD. HASTINGS

SIGNATURE OF APPLICANT J. Hastings

Work to be Done - tick box

☐	Make a connection to sewer drain	- \$120.00 ✓
☐	Make a connection to stormwater	- \$100.00
☐	Inspection fee for stormwater	- \$ 30.00 ✓
☐	Lay pipe to nearest drain (charged out at cost)	

RECEIPT NO: _____

DATE: _____

C.W. ASHBY

D241

CWA:KV

24 July 1990

MEMO TO: General Manager

FROM: Director Works/Services

SUBJECT: Construction of Log Houses

We have recently received an application for Building Permit to construct a house using natural round logs in similar fashion to the pioneer homesteads in Canada and North America where the logs interlock at the building corners and are stacked horizontally on top of each other to form the walls.

This type of construction falls outside the scope of the New Zealand Standard Bylaws. However, under Section 3.2 of Chapter 3 of NZS 1900 (attached), with the prior written approval of Council subject to certain conditions, such materials and forms of construction can be used.

- (i) A written application for permission to employ such materials and form of construction has been made and is attached together with the specification.
- (ii) Fortunately, the former Works Engineer, Mr Bill Walker had done a reasonable amount of research on building log houses back in 1982/83 and I have been able to thoroughly read this reference material over a weekend and now have a very good understanding of this technology.
 - (a) The Principle Proponent of log building is a Mr Allan Mackie of Canada who has written a reference book and lectured extensively on the subject and set up a training school. The reference book he produced is excellent and is to be used as a specification reference book in the construction of the proposed house.

(b) Log buildings in Scandinavia have been in existence for hundreds and possibly thousands of years. When properly constructed, they have good thermal insulation and acoustic properties, they are more fire resistant than framed construction, are highly earthquake resistant, cost effective to build and aesthetically pleasing.

(c) The one area of concern is resistance to rot and insect attack as the logs are not commercially treated. However, providing the detailing of the building is good, with larger eave overhangs and protection against ground ~~contact by~~ untreated logs, the battle is half won. Cutting of the trees at the right season to minimise sap content discourages fungi, etc. Further painting of the logs and in particular all cut joints with a preservative followed later by boiled linseed oil can offer reasonable protection. Even with conventional pressure treated timber, any cut ends are supposed to be painted with preservative, but I would bet that very few builders would normally bother. Hence, providing due care is exercised, it is probable that attack from rot or pests can be virtually eliminated and judging from overseas experience, the building could quite easily have a life of perhaps 300 years with adequate maintenance.

The normal accepted design life for a building in New Zealand is 50 years. With such strong construction it is highly probable that even with particularly severe bora attack the building would adequately serve out its life. The improvement on the Allan Mackie system, would be to use a C3 treated 200 x 50 bottom plate as has been done elsewhere in New Zealand.

(d) Historical experience overseas indicates that some of the old inadequate foundations tended to fail long before the building. However, with a good reinforced concrete foundation conforming with New Zealand codes, this problem can be easily overcome.

(iii) With the information available no further testing will be necessary as a pre-requisite to issuing a Building Permit. However, as this is a somewhat "experimental" building in our district, I believe some log off-cuts should be retained with various stages of treatment as applied to the house and left in ground contact on site so that accelerated deterioration can be monitored.

(iv) Recommendation:

I would recommend that Council grant permission subject to the following conditions:

(a) The trees to be used shall be cut at such season as to minimise sap content;

(b) The log building shall be constructed strictly in accordance with the book "Building With Logs" by Allan Mackie, unless otherwise approved herein or with the written approval of the Engineer;

(c) The builder shall be a member of the Log Builders Association (New Zealand) or hold a Certificate of Attendance at an accredited Log Building Course;

(d) The bottom plate, before laying any logs, shall be of C3 treated 200 x 50 timber;

(e) The bottom log shall be fastened to the foundations to the satisfaction of the Engineer;

(f) Log ends in the vicinity of door and window openings shall be inter-connected by the use of 12mm deformed bar drifts drilled through the first log and hammered into the second log and counter sunk sufficiently to ensure that the log above will not become "hung up" after **log** shrinkage and settlement has occurred;

(g) Any surfaces, cut or otherwise shall be treated with a preservative to a satisfactory standard as set out in the specification prior to butting together of members. The entire structure shall be suitably treated in accordance with a specification approved by the Engineer and that specification shall be strictly followed;

(h) A series of six or **so** log off-cut control samples shall be prepared and left on site in exposed, ground contact conditions **so** that accelerated deterioration can be monitored against the various stages of treatment applied to the building. The first control sample shall be untreated and they shall be identified with marked aluminium tags to prevent future confusion;

(i) The interfaces between logs shall be packed with approved insulation material prior to seating of each log;

(j) Eaves overhang shall not be less than 900mm;

(k) That a Design Certificate for the proposed building from a Registered Engineer be provided.

Conclusion:

This method of construction has considerable merit in Kaipara District, with its establishing resources of pine forests and high unemployment. These are labour intensive, low material cost houses and if built to a high standard would enhance the character of the district.

People could afford to build these houses themselves without becoming heavily mortgaged. The current building proposal is the forerunner and will set the tone and trend for things to come. With this in mind, building inspection will be given extra special attention on this project. With any innovative idea outside the scope of accepted standards, there is an element of risk. However, I am satisfied that risk to Council and future owners is minimal providing the building is properly constructed in accordance with the above recommendations.

This project is at the fore front of a brave new concept in building within the district and should be actively encouraged.

C.W. ASHBY
DIRECTOR WORKS/SERVICES

NEW ZEALAND STANDARD
MODEL BUILDING BYLAW

Chapter 3

GENERAL REQUIREMENTS

GENERAL

3.1 Scope

3.1.1 This chapter of this bylaw establishes requirements for matters of general application relating to the erection of buildings which are not fully established by other chapters of this bylaw. In addition clauses 3.16 to 3.21 inclusive state or draw attention to the requirements of this bylaw in connection with existing buildings.

3

3.2 New forms of construction

3.2.1 Materials, forms of construction, and methods of design not provided for in this bylaw may be employed only in accordance with prior written approval of the Council and subject to the following conditions:

- (i) In every case application for permission to employ such materials, forms of construction, or methods of design shall be made in writing to the Engineer.
- (ii) The application shall be accompanied by all particulars necessary to enable the Engineer to consider the suitability of the materials, forms of construction, or methods of design which it is desired to use.
- (iii) The applicant shall at his own expense in all things have such tests made by an approved testing authority as may be required by the Engineer.
- (iv) After considering any application the council may refuse its permission to employ such materials, forms of construction, or methods of design, or grant its permission unconditionally, or subject to such conditions as it may deem necessary to impose.

3.2.2.1 Any material, form of construction, or method of design which has been approved by the Council may be authorised by the Engineer for use in the manner and to the extent so approved.

3.2.2.2 A copy of every approval given by the Council pursuant to subclause 3.2.1 shall be available to any applicant on demand.

3.2.3 Notwithstanding the provisions of this clause the Engineer may, with the concurrence of the applicant, refer any material, form of construction, or method of design together with the particulars submitted therewith to the Standards Council or to any Government Department or other organisation with a view to obtaining information which may assist him or the Council in determining an application.

to square one!

—Grant Umbers, Cambridge

Hello there! I am attending the Log Building course to be run by Bob Giles later this month at Twizel and I'm in the process of getting the gear together. While reading 'No Problem!' I noticed some items I can acquire through you (good reading and info too!)

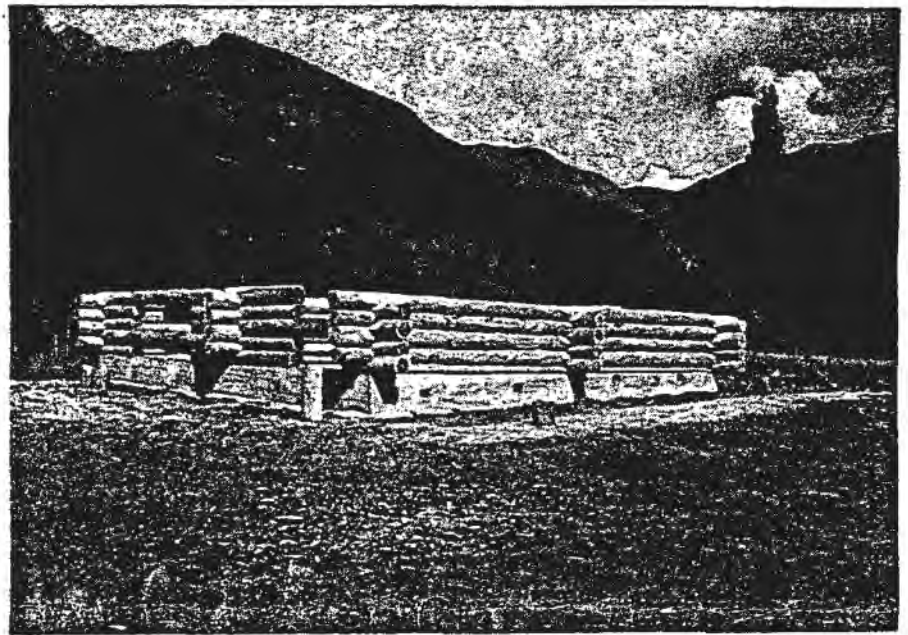
— Blair Williams, Mount Cook

I am sending some pics of Tony Ralfe's house at Pidgeon Valley, Wakefield. He has been working on the house in spars-time only for about two years. As you can see he has done an excellent job - his fits are first class. Tony did the same course as I did with Paul Grenier at Graham Hodges' place. He has used Larch logs. The outside is treated with Lion Oil whatever that is - but it looks good. He has still along my to go but it is coming on well. I have found out more about the old [log] house at Dovedale. A chap Parkinson was the Canadian from Nova Scotia that built it - probably from Totara logs. They were really big logs - about 18" diameter, and were chinked with clay. It also had attic rooms.

—Charles Brown, Richmond

Giddy Angus and Pat and Hello fellow logsmiths, thought I'd better drop you a line and fill you in on down here and here's a photo of the double garage we built over the winter for us to live in while we build the house. Yes! I know, there's another of those damn tandem trailers in the picture again. They seem to keep leaping into our cameras whenever we want a photo. It's still to be finished as well. The Douglas Fir logs are 9.5 to 10m long - should be nice and cosy with toilet/shower and all other facilities in I used the double-cur long groove taught by Robert [Chambers] and Andrew [Dixon] last Easter - would like to know if anyone else has used it. I'm very happy with it. The garage is situated on a lovely 14 acres in Geraldine and we hope to move in by the end of this year and then carry on Log Building maybe for some-one else. We're still both working at Mount Cook.

Thanks for the newsletter...here's me subs for the next couple of years. Oh I found the pens Robert [Chambers] used very good. You get a decent line to work to, they don't wear out...you don't break the lead and you can kink them with heat if your scriber tips aren't adjustable. So keep those tree houses going up - keep your log dogs on a leash (and frogs) and wash out for those tandem trailers. P.S. Dixon come and



Above: The results of the Andrew and Jane Dixon course at Alf and Jenny Smith's property at Motueka in March 1990. Below: Graeme and Inger Mould's double garage and temporary home.

try some home brew and we'll discuss the rabbits, or the whales or the green monkeys - or something!

—Graeme and Inger, Mount Cook

Also had a long, interesting and happy letter from Mary Mackie, from her and Allan's Pender Island home. We are in the process of making a tape in reply, Mary. But I suspect you'll get this first.

'Today is a sunny Sunday, Allan's on the Allonaa. I may get out amongst the daffodils. Happiness for me is spelled p-e-n-d-e-r-i-s-l-a-n-d, these days. Joy to your household too' is how the letter ends. Other quotes are - 'this past week has been made joyful by the Nelson and Winnie [Mandela] phenomenon.'

And this is not a quote but a precis - it appears that there is a lot of nonsense going on in some

quarters because some people claim that they have 'invented' a particular 'notch' or whatever and it is 'theirs'. In fact of course we all 'invent' slightly different ways of doing everyday tasks just about every day of our lives - but we cannot patent them. Who would want to anyway? But apparently that is not such a silly question as it might seem! Clearly over the last several years many people have made many contributions to Log Building. That is the way things progress - it is the only way. People must be allowed to build the way they want to build. If they are given their heads they will strive hardest and put their whole hearts into it.

'Better', says Mary, that people 'should build a slightly lop-sided, but happy family home. than to be prevented from building because it might not be Perfect.'

LOTTERY — in brief

Win this LOG BUILDING valued at \$30,000

PLUS \$3000 towards its removal - as one unit - to your property. Winner must remove Log Building from the Waikato Home Show in Hamilton with seven days from October 15 1990; **OR** the choice of the alternative prize of \$5,000 in cash.

Crafted by Derek Mullooly's New Zealand Log Homes, Rotorua from treated Corsican Pine.

Interior finish Linseed Oil - exterior, water repellent coating. Exterior size 10 by 6 metres (includes 2m front veranda); Interior 7.5 metres - with Cedar door with stained glass window; three windows (two opening, one fixed); floor T&G Douglas Fir; Douglas fir rafters; Pine sarking. Roof - Colour Steel.

Lottery closes Friday 31 Aug 1990

Drawn Oct. 1 1990. Results in N.Z. Herald, Dominion, The Press Christchurch on Friday 5 October 1990

**Limited to 15,000 tickets —
numbered 00001 to 15000**

It will be on display at the Ramsey Roundwood Display Stand at Hamilton's Mystery Creek World Agriculture Expo '90 - June 14 to 17. Tickets \$5.00 each — from organiser Angus McCallum, R.D.2., Masterton (059) 75.737

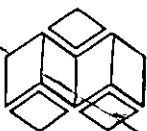
Object - To raise Development Funds for The Log Builders Association of NZ (Inc).



CONFERENCE NOTES

REVERTEX WISH YOU A HAPPY AND PRODUCTIVE CONFERENCE

1. *Costings*
2. Editorial No 20 March 1989 page 7 quote
while it takes a group of accomplished log builders
about 6 months to complete a log home, it often
takes the novice solo builder considerably longer.
3. judging by letters to the editor of news letters, some of
the log buildings have been on the go for a number
of years (lack of funds-)
4. Log building standard to be published
5. Editorial No 21 August 1989 Page 7.
Robert Chambers: Notches & sealants



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Editorial No. 20 March 1989 —

Next Newsletter August 1989

Hi there ! Isn't it dry ? Like many others round the country, we badly need rain - a nice warm gentle rain for a few days !

Our Biennial Get-together looks like being well attended, if the reports I'm getting are anything to go by. Groups are coming from places such as Christchurch, Nelson and the West Coast - to name but a few from the South Island. And from all over the North Island they're promising to be there in strength. The programme will be interesting and informative - and people are always fascinating, especially Log Builders. Pat and I hope to see you all there to renew old friendships and *make* new ones.

The Get-together will, we hope, see us constituted as an Incorporated Society whose first annual meeting **will** be held.

Any one who has any ideas or other matters that are likely to be of a controversial nature and that they would like to see discussed, during the week-end, please be ready to write them down in a few brief words so that we can judge what time we need for their discussion. This **will** NOT, of course,

de out other matters being raised from the floor as they come to mind - controversial or not.

At this time, very near the beginning of the financial year, there are still many subscriptions unpaid. To discover how much you owe - subtract the number in the right hand bottom corner of the address label on this letter from 89.

Multiply the answer by at least \$20 (the annual subscription) and **send** it to me by **return mail please** - then you won't forget!

If the number on the label is 89 or higher - smile smugly and enjoy a good read!

And - PLEASE - do be careful with chainsaws - they're **DANGEROUS** !

And if there is anything troubling you - don't worry about **THINK** about it - there is a subtle difference. Worrying **can** be harmful - thinking never hurt anyone!

Be happy - see you in Rotorua.

— Angus and Pat

Notice of Meeting

Notice is hereby given that the first Annual General Meeting of the Log Builders Association of New Zealand Incorporated will be held in the Conference Room of the Forestry Training Centre, Sala Street, Rotorua, on Sunday 4 June 1989 at 10 **am**.

Business

To receive and consider the Chairmans Report, Balance Sheet and Statement of Accounts for 1988.

To Elect a Committee.

General

Nominations for the Committee will be taken from the floor or may be sent to the Secretary prior to the meeting.

**Kopuaranga
March 10 1989**

**Angus McCallum
Secretary**

N.B. Only paid-up members will be allowed to vote.

Log Builders Committee

President:

Bill O'Connell
10 Delhi Street, Wairoa
(0724) 7282 (Business)
7283 (Home)
(0724-25) 523 (weekends)

Vice President:

Stu Bould
122 Main Road
Governors Bay
Lyttelton. RD. 1
(03) 299 846 (Home)
(03) 664 021 (Business)

National Co-ordinator & Secretary:

Angus McCallum
Perrymead, Kopuaranga
RD. 2, Masterton
(059) 25 737

Peter Hadley
R.D. 1, Whakatane
(076) 29069

Karen McCosh
Pahautea Road, R.D. 1
Featherton
(0553 - 27) 853

Jane Dixon
Onekaka, R.D. 2, Takaka
(0524) 59 241

Treasurer:

Dominic Stewart
Lochliddy Farm
Masterton, R.D. 6
(059) 83 199 Business

Taukiri Te Whata
Box 230, Kaikohe
(0887) 82 192

Arch Barclay
155 Vanguard Street
Nelson
(054) 84 358

Bill Frost
41 Branston Street
Christchurch 4
(03) 495 572

About Us

The aims of the Log Builders' Association of New Zealand are:-

1. To foster the highest possible standards of Log Building.
2. To monitor any revision of building codes as they affect Log Builders.
3. To offer an information service to Log Builders and the public.

I am the National Co-ordinator and Secretary - my name is Angus McCallum - R.D.2, Masterton, New Zealand. Phone Masterton (059) 25.737. I am responsible to the members for what I do, through the chairman and committee (named elsewhere in the newsletter). I send out three newsletters a year to all members.

Any one may join the Log Builders Association provided they pay the subscription annually. The Annual Subscription is \$20 per annum, or a joint subscription (with two votes) is \$30. Only paid-up members have voting rights.

Instructors & Courses

The Log Builder's Association of NZ recognised instructors are Paul Grenier and Bob Giles in the South Island, with John Gosling and Ken Bilyard in the North Island.

A number of courses and seminars are held regularly throughout the year catering for both those considering building their first log home or others with log building experience looking for instruction in more advanced techniques. Members are notified of upcoming courses through '**NoProblem**'.

Members may also organise their own courses through the Association.

I can help in setting up courses by supplying the broad outline of what needs to be done, finding an instructor and so ensuring - as far as possible - that the course is successful and that its students will have access to the best available tutoring and to advice and guidance when they come to do their own building later.

LOG BUILDERS' CONGRESS

Friday 2 June to Monday 5 June (Queen's Birthday Week-end) at Rotorua

Our Biennial Get-together **will** be held at the Forest Hostel, Forestry Training Centre, Sala Street, Rotorua from Friday Evening 2 June to Noon Monday 5 June.

The theme is -

Progress in Log Building Technology

The suggested programme is -

Friday 2 June -

Evening General Get-together
Licensed Bar at Forestry Centre

Saturday 3 June -

Morning Introductions • Conference theme etc.
Report from Log Building Standards Committee

* Afternoon Visit Derek Mullooly's home and demonstrations including EDER Bark Stripper, etc. and the JONSERED Chainsaws & other products.

* Evening Forest Research Presentation

Sunday 4 June -

Morning First Annual General Meeting
Log Builders Association of New Zealand (Incorporated)

* Lunch Visit Mal McHale's Otautu Bay home for barbecue

* Afternoon Visit Peter Dorflinger and Ard Zandvort Log Homes

* Evening Social Function at Bushman's Hut Restaurant • but if more than 100 wish to attend this function, it **will** be transferred to the Forestry Hostel.

Monday 5 June -

Morning General Meeting, Farewells and lunch.

N.B A CHILDREN'S PROGRAMME IS BEING ARRANGED (depending on numbers).

There could be a small charge to cover 'the minders' for this.

Other details -

Available at Hostel - dining room, swim and spa pools, recreation centre, tennis courts, conference room, licensed club and forest walks close to geysers etc.

Accommodation • at Forest Hostel, 70 Single Rooms \$11 per person per day • **can** be shared (with one mattress on floor). **All** bedding supplied, but bring towels.

Or at Redwood Park, a short distance down street from Hostel, there are available 3 Single bedroom units • sleep 2 for \$42 per day, or sleep 5 for \$69 per day. Also 5 2-bedroom units each **can** sleep 7 for \$89 per day. These units self-contained with fridge and TV.

Hostel meals - Breakfast, lunch, dinner and smoko all for \$23.30 per day.

Additional costs - all are maximums

- * \$20 per head bus hire for Log Home visits. This is necessary because of difficult access to, and lack of
- * parking space at some properties.
- * Social Function \$25 per head
- * Transport from airport, if required, \$5 per head.

Sounds like a really interesting and fun week-end for the whole log-building family • our thanks to all who have arranged it.

Please use form on back of newsletter for bookings to the Log Builders' Congress 1989.

There **will** be wall space available for your displays of photos or whatever • people always like to see what others are up to and how they have achieved it.

Please bring anything • loose photos or albums, newspaper cuttings, drawings etc (even poems are acceptable Vicky!), or any items of equipment • that may possibly interest others. **You** may have the answer to the problems of others.

SEE YOU THERE!

100 year old Log Building



This Canadian log building seen by David Prosser during a recent trip to his homeland is over 100 years old and still sound.

See David's letter on page 10.

"Have Saw ... Will Travel ..."

- says Bruce Jamieson
a young dairy farmer from
just out of Carterton.

[Bruce first got bitten by the log building bug in 1987 and set out for Canada to attend a six-week course at Del Radomske's Okanagan School of Log Building, Kelowna, British Columbia. He returned to attend Wayne Gunnell's Ohakune School of Log Building, in January 1988, also tutored by Del, before spending the rest of 1988 overseas working for him. This is Bruce's story of 1988.]

Gudday! Well it's twelve months since I was last here, but seems like it was just a couple of weeks ago we were in Ohakune on the eight week course with Tony and Wayne. Was a great course with a great bunch of guys. A lot of work accomplished and really good to see Tony's house well on the way to completion now.

After the course finished I headed back to Canada in late March and spent the next three months working for Del



The McMillan log home at Ohakune. The log work was done by the 1983 Course at the Ohakune School of Log Building tutored by Del Radomske. The log work has been treated with Sik's Oil, or Cetol, a product imported from one of the Scandinavian countries.

Ed Built a large workshop (framed) and enlarged the worksite.

In June I went to Japan and worked for the company that Del has been shipping to. Certainly an amazing country - I was amazed by how they run things over there. A bit of a culture shock for a misplaced worker, but had a fantastic time. I got treated real well and the time was had by all!

While I was in Japan at the moment. Saw a lot of log homes - from your average kit-house to top-of-the-line scribe fitted buildings. With more and more Japanese spending their recreation time outdoors, this type of log goes right along with their lifestyle.

Most of the building that is done in Japan is with logs from Oregon and Washington, so you can imagine the cost of scribe fitted homes. Although there is a lot of western influence in some of their buildings, they have their own distinct style in some respects.

Del arrived over there in September to do a six week course - the longest held in Japan. Using a trailer to teach several students in a fairly basic building all of it. I helped him for the first two weeks to fill the gap in Canada. Was nearly three months to the day when I left - certainly three months I'll never forget!

Was straight back into it in Canada. Helped to build a 1000 sq ft home (1200 sq ft upstairs) that went near the lake in Kelowna. What a beautiful place? All packed up with materials, a really nice home. It was basically two rectangles 16'

x 32' - set 20' apart - then joined at header height with a huge roof.

The last place we built was a 1000 sq ft building that we sent to Japan. Not such a big place, but a very busy design with arches, counters - and even a corner window. Was shipped in mid-January this year and two days later we got an extra foot of snow (to make three feet), so I took that as a hint and grabbed the next plane south.

89's Lining up to be a very busy year which will be good

Already have a couple of orders lined up and Del will be running the eight week course in Canada (starts June 11 1989) and the six week course in Japan again (starts August 21 1989).

'Have chainsaw - will travel' they keep telling me, so I hope that remains true and I can make it into Europe and see how it's done over there. Be great to see some of the really old places up there as well. A New Zealand project is in the works too, so we'll just have to wait and see.

A quick 'Hi' to Lon, Nevis, Duncan and Craig - and everyone else I didn't catch up with. See you's all next time!



Assembling roof trusses for the 1800 sq foot Del Radomske built home.



Site of the Del Radomske built 1800 sq foot house at Kelowna, overlooking Okanagan Lake.



And the snow lay all about ... the Del Radomske building site - the first that brought Bruce Jamieson flying back to NZ for a few weeks in January. A 1000 sq ft house is shown being packed into a container for shipping to Japan.

SAWDUST and CHIPS — cleaned from here and there

Thanks to Resene Paints for continuing to sponsor part of the cost of this newsletter.

They will have a display at our Get-together - please explore their products before buying wood coatings and the like - whether it be for logs or any other paint job.

Dave Ayres phoned from near Blenheim. He's starting to build soon and needed a certificate to say he had done a course way back in 1984 at Coalgate at John and Deidre Grenell's.

Bruce Jamieson - home from Canada for a few weeks - and I have had a couple of chats - his parents live in Carterton. about his experiences. He's been working with Del and Helen Radomske building Log Homes - including one for export to Japan, which country he has also visited to help Del. as well as to have a look round. Bruce has now returned to Canada to continue working with Del. See 'Havesaw - will travel' elsewhere in this newsletter. [Most sad to relate Bruce's elder brother was tragically killed in a motorcycle accident just a week after Bruce had returned to Canada. Our sadness and sympathy go to him and his family.]

Got a 'phone call from Iain Dephoff and Mary Caldwell re Woodlife 2 - they had been helping Joanne and Gary Clarke at Tapawera and were just going to start building what Mary called a 'logbog' - a small log building to house a (long-drop?) loo. This was to be the action-centre, so to speak, of their building site at Thorpe, Wakefield, out of Nelson.

I am still averaging a letter a day received - paying subs, ordering books, pencils, inquiring how to join us and the like,

to say nothing of one or two phone calls a week from members and others wanting information or help. Incidentally, if anyone phones or writes or whatever, and then gets no action within a reasonable period (depending on the request, of course) do not hesitate to give me a reminder.

I struck off about 60 people from the mailing list in December - all had been non-paying for at least two years. Total membership remains at about 400 however - new people are joining all the time, while some others re-join after a lapse of time. I use my discretion about this - for instance, if someone has joined, paid a sub and then nothing for a year or so, they're gone! While others who have shown great interest in whatever way and have obviously forgotten to pay, get a stern reminder - and usually pay, plus their arrears. I like that!

Sikkens Oil, or Cetol is the name of a product used in Canada on logs and log buildings. It is imported from Europe - a Scandinavian country? It is painted on logs as soon as they are peeled and then any saw cuts, grooves, notches etc are painted as building progresses. Then, when the building is complete and standing on its final site, the whole is given a final brush-on coat.

Had a lovely surprise in January. Lyn and John Secord - now living in Palmerston North - turned up on our doorstep. Hadn't seen them for years. The 'restructuring' of the economy - John was employed by what became 'Electricorp' and eventually became redundant - has changed their lives. They have just purchased the store and all that goes with it at Apiti - north east of Kimbolton. Call in and see them when you go that way.

N.Z. Timberlands — Contact Names & Addresses Log House Material

Timberlands (Northland)
P.O. Box 249
Kaikohe
contact: Rod Young
Only available species of suitable size is *P. radiata*.

Timberlands (Auckland)
P.O. Box 39
Auckland 1
Contact: Peter Hogan
Southern Pines, *Nigra* and *P. radiata* available to suitable specs. No other species.

Timberlands (East Coast)
P.O. Box 2022
Gisborne
Contact: Sheldon Drummond
Suitable Larch and Douglas Fir available.

Timberlands (Hawker Bay)
P.O. Box 348
Napier
Contact: Dave Lowry
Nothing large enough at this stage but would be interested to answer any queries. Have got some small *D. fir* thinnings.

Timberlands (Wanganui)
P.O. Box 1107
Wanganui
Contact: Bill Johnson
Corporation Forests in this district are too young to provide suitable material.

Timberlands (Wairarapa)
P.O. Box 191
Masterton
Contact: Steve Croskery
Douglas fir and possibly small quantities of *Macrocarpa* at Ngaumu. Are at present supplying log builders.

Timberlands (Turangi)
P.O. Box 304, Turangi
Contact: Dave Bryant
Suitable Lawson and Douglas Fir available at Karion

Timberlands (Bay of Plenty)
Private Bag
Kaiangaroa via Rotorua
Contact: Brian Williamson
Good quality Larch at present being supplied to Log House builders. Suitable size Lawsons, *P. radiata* and Corsican pine and various other different species also available.

Timberlands (Nelson)
Contact: Tony Harris
Suitable Douglas fir in large quantities. Also Corsican pine and small areas of *Macrocarpa* at Golden Downs.

Timberlands (North Canterbury)
Private Bag
Rangiora
Contact: Steve Chandler
Douglas fir and limited quantities of Larch available at Hammer Forest

Timberlands (Aorangi)
P.O. Box 555
Timaru
Contact: Neville Clemett
No suitable material at present.

Timberlands (Otago)
P.O. Box 50
Mosgiel
Contact: Alex Cassie
Some Douglas fir and Lawson available. Also have some *Macrocarpa* planted in 1948 but this may be a bit small.

Timberlands (Southland)
P.O. Box 740
Invercargill
Contact: D.H. Wilson
Good resource of *Macrocarpa*, Thuja, and Larch and Lawsons Cypress mostly from Longwoods and Hokonui. Small quantities of Larch. Are currently supplying material for log houses.

Timberlands (Westland)
Private Bag, Greymouth

Contact: Steve Boon
Have suitable stands of Thuja and Lawson mostly near Lake Mahinapoua, Hokitika.

NOTICE BOARD

Any one with Log Building books of any sort that they have finished with and are willing to sell/give to others, would they let me know so that I *can* advertise them in the next newsletter.

Any one wanting 'hands on' experience with a log builder. should contact Bill O'Connell at Delhi Street, Wairoa. Bill will shortly be building again at Mahia Peninsular and is able to house and feed such a person. Contact Bill and Margaret at Wairoa (0724) 7282 (business), or 7283 (home); or at weekends, at Mahia (0724.25) 523 to arrange details.

I shall suggest at the Get-together that we establish a list of people interested (and capable) of building commercially - either on their own account or working with/for others - so that when I get an inquiry for such people I can either circulate that inquiry to all on the list immediately, or the list can be given to the person looking for such a contact. Then it is up to those people to respond to the inquiry positively, or negatively, as they see fit. Would those not going to be at Rotorua in June give me their names in the meantime - then, if the idea is accepted, it can be put into operation straightaway.

Building Permits

When applying for a building permit remember that you probably know as much, if not more, about building with logs, as the building inspector. So don't push him - give him as much help and information as you can. Lend him *'Building with Logs; Log Span Tables; The Log Plans Book; and The Information Supplement to No Problem'*.

Let him read them and then approach him to see what he requires in order to give you a building permit. Our suggestion is that you have your plans checked by an experienced log builder and, if necessary, countersigned by an engineer, before submitting them to your building inspector.

It is doubtful whether the employment of an architect is worthwhile as few, if any, know much about the design of log building.

Why not use the Log House Plans book for your ideas and get a draughtsman to draw your plans. The money saved *can* then be spent on the best available logs.

Special Offer - JONSERED SAWS

The New Zealand Log Builders Association has obtained from a Jonsered (made in Sweden) dealer a worthwhile discount on all Jonsered Chainsaws sold to financial members of the Association - as well as a commission to the Association on each Jonsered Chainsaw sold.

Jonsered Chainsaws - the choice of the last seven World Chainsaw Champions.

When you are thinking of buying a new chainsaw - think Jonsered - and either phone or write to me for details. Angus McCallum, R.D.2, Masterton. Phone (059) 25.737.

Free delivery - as soon as your cheque with order has been cleared - plus 3 months guarantee.

And when you buy a new saw - buy an extra chain at the same time and use them week about. That way you get the maximum wear out of the two chains and the sprocket. Similarly, when you buy a new chain - buy two - and a new sprocket. That gives the greatest economy.

Other Jonsered products also available - logger tapes, calipers, Lifting hooks and tongs, canting hooks etc.

If Peeling Logs gets you down

If you want to arrange a demonstration - preferably for a group of interested people - of the EDER Bark-Stripper, call Robert Pool at Waitati (Otago) phone (02422) 837 to discover the name of your nearest agent.

Robert Pool advises that the German Company that makes the EDER Bark Stripper attachment for chainsaws also produces a cutter-head attachment that can cut a 'V' groove, or make plunge-cuts (minimum depth 55mm and up to 300mm deep) into logs.

For further information contact Robert Pool, P.O. Box 1, Waitati, Otago. Phone Waitati (02422) 837. Mention this Newsletter please.

Special offer - Woodlife 2

Already several members have made use of the Special Offer we have negotiated by a bulk purchase of Woodlife-2. This gives a significant price reduction to paid-up members of the Log Builders Association.

Woodlife-2 is a well-known water-based water repellent that many Log Builders use on their logs. Woodlife-2 can be used under most other surface treatments - each complements the other and so prolongs the useful life of both.

To qualify for the discount the Woodlife-2 must be purchased through me in 20-litre lots - cash with order including the cost of freight - but it's still cheaper! For full details phone or write Angus McCallum, R.D.2, Masterton - or phone (059) 25.737.

Wanted - Log Building Work

By Allan Cant - experienced Log Builder and electrician - labour only basis. Go any where - own accommodation in house truck. Contact c/o 9A Nola Avenue, RAUMATI. Phone (04) 72920

* * * * *

Paul Grenier - one of this Associations instructors - is looking for Log Building work. Will go anywhere - own camper-van accommodation. Contact at Pine Acres Motel, Kaiapoi - phone (0372) 5037.

Panelling and Other Timber for Sale

To provide the finishing touch to your log home, contact the Ministry of Forestry Office in Rotorua (073) 80089, Paul Carpenter - for all your panelling and sarking requirements. Timbers available include Lawsons Cypress, Macrocarpa, Larch, Douglas Fir, Redwood and a number of the Eucalypt species. We can even produce board and batten exterior cladding in many of these species, and beams.

For Sale

1200 sq. ft. log house for sale in Raetihi. Handcrafted in Douglas Fir built to Rodomske specifications and finished in Epiglass Enhance. 1 1/2 storeys of log walls, 3 log trusses, purlins, 2 m verandah at front and 1 m verandah at rear. 2m covered walkway on both sides of house. The logwork is for sale for \$45,000. Contact Gary Kristiansen, C/- P.O. Raetihi.

Wayne Gunnell has a log building for sale at Ohakune. Contact McMillan at Ohakune.

Sheepskins for sale. I have some lovely commercially cured naturally coloured sheepskins for sale. Grey, dark brown, mottled light and dark grey, etc. Priced at \$65 posted. Phone or write Angus McCallum.

Log home renaissance

By CHRISTOPHER MOORE

Photographs by DAVID WETHEY

FOR ANDREW DIXON, one person's log is another man's home.

He became almost rhapsodic when describing the practical and aesthetic pleasures of log building, an occupation once seen as the preserve of uncomplicated tartan-shirted mountain men and women deep in the heart of Texas or the Canadian Rockies.

Time was when the nearest a Kiwi home owner came to a log house was the backdrop for the local amateur operatic production of "Rose Marie."

Times and tastes change. A growing number of New Zealanders including Andrew Dixon, have become accomplished log builders. Log homes have become *bijou* retreats for the world-weary townsfolk seeking understated yet sophisticated living — and some log homes can be very sophisticated behind the rustic exterior.

An example of the evolution of log homes stands in a new Hanmer subdivision. The first of five time-share homes, the 1600 square foot home allows the Christchurch suburbanite to return to nature without sacrificing any of the creature comforts — the fitted modern kitchen, the master bedroom with ensuite bathroom, and the beamed lounge with colour television and tastefully subdued decor.

Elsewhere, log homes will also feature in a privately owned development on the slopes of Mt Lyford in the Seaward Kaimouras ... "rustic log homes to preserve the natural environment" according to the developer's advertising material. Prices range from \$22,000 for the smallest kit set home to \$128,000 for the largest.

A short distance hum the Hanmer development, the sound of chain-saws and hammering bounce off the surrounding hills.

Andrew Dixon, professional New Zealand log builder, has joined with an affable Minnesotan, Robert Chambers, to steer the operations of 17 student log builders through the 1989 log construction summer school.

Dixon built the time-share home and a second private house in Hanmer and is recognised as one of the country's leading log-building exponents. Robert Chamber is the president of the Canadian Log Builders' Association, an international grouping of builders which includes Japanese, Germans, New Zealanders and Scandinavians. Beneath a laconic and relaxed facade, lurks

the keen eye of a master craftsman.

The procedure appears perfectly simple. To paraphrase Mrs Beeton — first take your log, shave off all the bark, carefully measure and mark in pencil, cut two notches (one at either end) and fit into the top of another log. Continue until desired height and width have been reached and serve to new occupants. There are minor questions such as windows, doors and roof, but within an average time of six months, the new log home is standing in pristine wooden glory.

Log building is in reality arbo-

real hi-tech engineering. The measurements must be absolutely precise. Despite the size of the raw material, Chambers and Dixon display a considerable finesse in sizing and fitting logs.

Although professing to be a poor Salesman, Andrew Dixon talks enthusiastically about the strength, resilience and ease of construction — "but what I like the most about these homes is that they are very easy to live in ..."

"They are a nondemanding building virtually indestructible. In expanded-log work, sections can be extended and enlarged. We were limited to the size of

the available logs. By using this technique we can get good straight shorter logs and build a larger house which can be extended."

One of the joys, and the frustrations, of building with logs lies in the individual character of different woods and logs ... "you never know completely what they are going to do," Andrew Dixon says.

One of the pitfalls is something obliquely referred to by the logbuilders as "spiral grain." Spiral grain is not disastrous but logs suffering from it can "untwist" causing some minor gaps in the structure.

Log building is not simply a question of slipping the logs together, we use different joints and notches — a straight Saddle notch, also the shrink-fit notch which lightens the join as it weathers. Most of the building is done using green timbers. There are problems associated with using dry timber. The best way to dry logs is to erect them into walls and put a roof on," he says.

Equally suited for suburbia

Log homes are equally suited for the wilds of Kiwi Suburbia and the great outdoors, he suggests. It simply requires initiative and a dash of pioneering spirit to take the plunge in the suburbs.

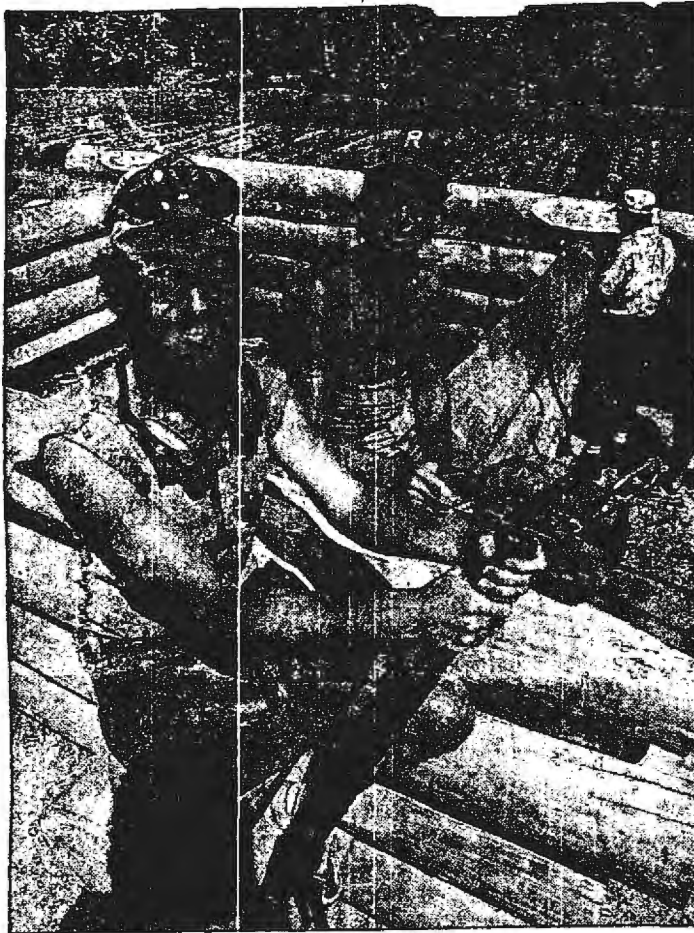
"What detracts from a log house are the homes surrounding it. The really good thing about this style of building is that it never seems to go out of fashion ..."

The timber walls provide their own insulation and are more fire resistant than a wooden house. Flames are fed through wall cavities in the conventional house. In a log house, walls tend to simply char.

"There are log houses in the United States and Canada which are up to 300 years old. In Scandinavia, there are 800-year-old log buildings," Andrew Dixon says.

In New Zealand, log homes are considered to be earthquake resistant, especially when reinforced with metal screws.

"During the Bay of Plenty earthquake, a two-storey log house eight kilometres from the centre of the quake was about the only home in the area which did not suffer any damage. pos-



Andrew Dixon, left, and Robert Chambers supervise the 17 apprentice logbuilders during a summer school at Hanmer.

ce stretches to N.Z.

only because of its inbuilt flexibility," he says.

Garages, woodsheds, and sleepouts have joined 60 to 70 log houses being built or completed in New Zealand. The Log Building Association of New Zealand contains about 400 members, including about four professional log house builders.

"This is precision engineering but once you get the hang of things, log building is easy. The hardest bit? Putting the roof on. Floors generally go in last because you don't want to drop a wood log on to them," he says.

Robert Chambers stands and watches approvingly as his New Zealand students explore the mysteries of log home building. "Never had such good students," he remarks.

Two years ago, he came to New Zealand for a fishing holiday. He also managed to see more than 40 log buildlogs and met their builders. He knew then that he wanted to return south.

Canada led the field in the scribe-fit log method which allows the perfect fit between the individual logs — a fit so tight that a cigarette paper will not fit between. "Looks like the logs grew together," Chambers says.

Canadian gets credit for surge

"Most of us trace the renaissance of log building to the Canadian builder Alan Mackie. I learnt at the Mackie school of log building at Prince George, British Columbia. Those who haven't learnt with him have read his books and articles. The Canadian Log Builders' Association is an international group, hence my crossing the border."

Association president for the

last three years, he leads an International membership.

"I can't see why a log house shouldn't fit in any environment. In fact, it would probably make the houses on either side look bad. Properly built and maintained, these building will last for centuries."

The advent of mechanised saw mills during the nineteenth century eclipsed log building by hand. While the tradition continued in the frontier states of North America, it was largely taken over by mechanised home building procedures.

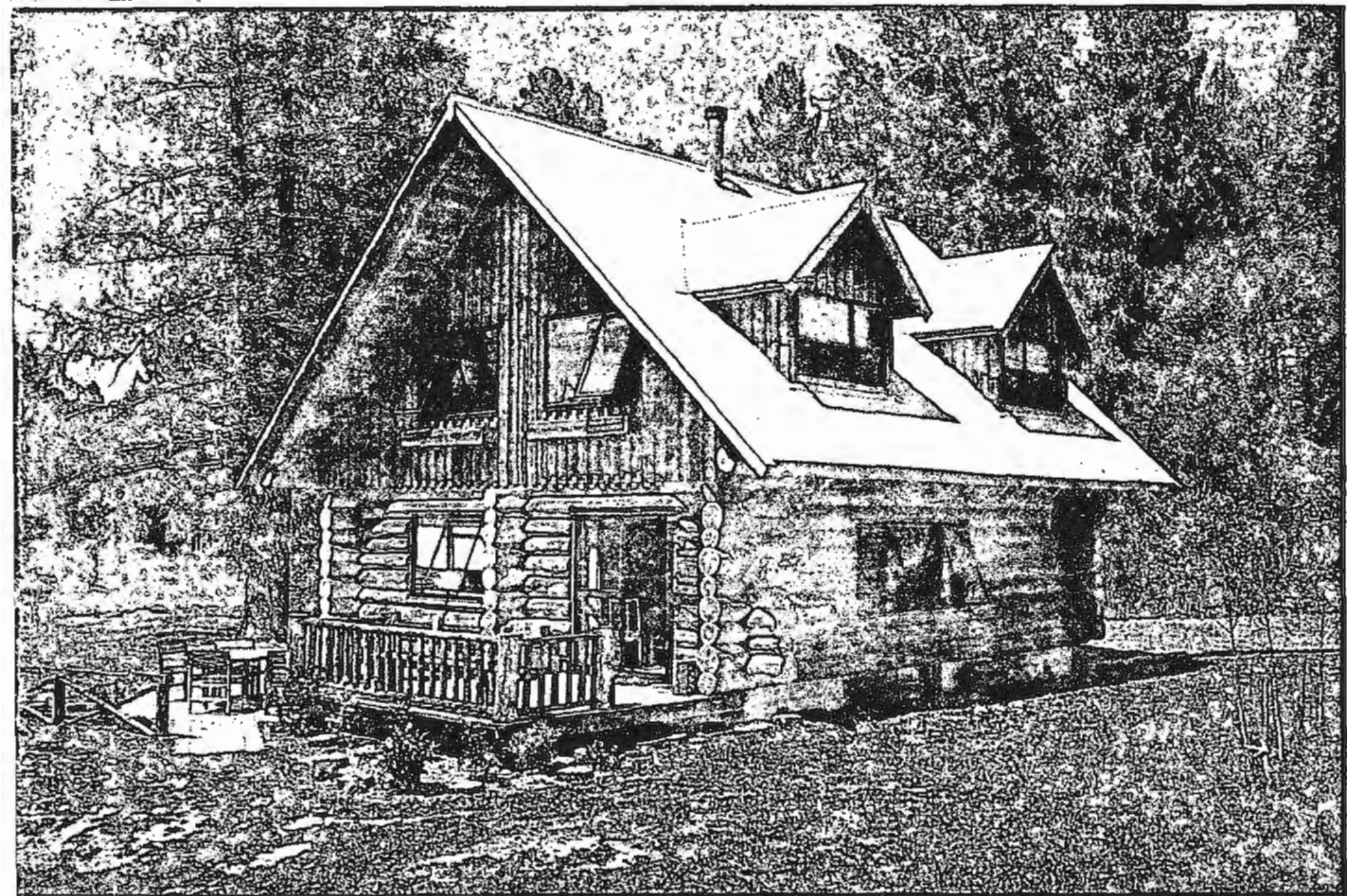
From 1880 to the early 1960s, the art of log building almost became extinct. Then the wood renaissance swung the pendulum back.

"It's a beautiful way to build. The results are often like sculpture with wood but it is a method which requires time and skill," Chambers says.

"I would urge anyone trying to build a log home to work initially

with someone experienced before tackling a project on their own. It is a technique which involves training and patience. It would be difficult to build a home without any carpentry skills. In the same way you cannot expect to buy a load of logs and expect to put up a log house. Reading and practice help, but it would be a good idea to study the work of a commercial log builder in your area ... otherwise you might not be too pleased with the results."

Andrew Dixon a m indicates that patience is a virtue in log building. While it takes a group of accomplished log builders about six months to complete a log home, it often takes the novice solo builder considerably longer.



A recently completed log house at Hanmer Springs: one of the retreats for the world-weary townie seeking understated yet sophisticated living..

Log House Bookshop - c/o Angus McCallum, Fi.D.2, Masterton. Ph: (059) 25 737

I hope usually to have in stock a few copies of Allan Mackie's *'Building with Logs'* — and I have plenty of Log Span Tables. All other book orders will be sent by me to Canada — in groups, at intervals of not more than a month, together with the draft for the appropriate amount of Canadian dollars. Your books will then be posted direct to you from Canada within a day or two of their receiving the order from me. This means a delay of several weeks from the time you place your order to the time you receive your books — due to the slow book postage between Canada and New Zealand. Allow at least 16 weeks for the time gap between order and receipt, although it can be a lot less.

I shall of course only be able to order books if you pay cash/cheque with your order to me. All prices include postage and packing. Please note that these prices COULD change — without notice — due to the floating exchange rate.

A Picture Book **Of Log Homes** by B. Allan Mackie.
180 12 x 12 pages, colour filled, large photos.
Allan Mackie's tribute to today's elite log builders.
27 beautiful Canadian homes — each a work of art.
At \$65, it is still a gift and a really fantastic publication. \$65.00

Log House Plans
37 different plans in the book. \$26.00

Notches Of All Kinds
More detail on notching \$26.00

Building with Logs
The Log Builders manual \$26.00

Log Span Tables by B. Allan Mackie.
enables log sizes to be calculated for floor joists,
beam and roof support systems — includes C.L.B.A.
building recommendations) \$16.00

Log House Magazines
In response to a reduced but on-going demand I have procured another 4 packs of the set of eight Log House Magazines (were \$80 per set) STILL only \$30 per set — including postage to anywhere in New Zealand. Rock bottom warehouse clearance price — courtesy Log House Publishing Company in Prince George, B.C. Canada.

Membership lists and lists of Log Buildings in NZ
Members may obtain a list of members by sending me \$4 plus a large stamped addressed envelope. The same applies to my list of Log Buildings but the charge is only \$1 plus SAE.

Miscellaneous

The Allan Mackie working drawings for making a set of scribers for \$2.00 posted.

Hard long-lasting indelible pencils at \$1 each plus 40c postage per order.

Specifications and a guide to making log building contracts — courtesy the Minnesota Log Crafters Association — copies (8 pages) of a survey (and the results) taken by them in 1988 for \$2.00 plus SAE please.

A simple one-page questionnaire (courtesy the same Association) that, when completed, gives a good summary of the cost of building a log home that could be useful for a valuation for insurance or sale purposes etc. This will be sent with the survey for no extra charge, or on its own for \$1.

Information Supplement to 'No Problem!' No 2 of December 1982 — includes paper on log preparation and

preservation and the 1982 Canadian Log Building Association's recommendations. \$1.00 per copy posted.

T-shirts

T-shirts New Zealand Log Builders — popular for that small gift! Features our logo. Very smart and really excellent quality.

Available in

- * black on golden yellow;
- * white on navy;
- * dark blue on light blue;
- * black on grey;
- * black on red;
- * blue, red or black on white.

Singlets....the same as above — and in the same colour combinations.

Sizes for both — M (fits average woman and smaller man), L and XL. Children's sizes available at slightly less cost — depending on size.

**T-shirts and singlets
both NOW \$19.00 each posted**

Video Tape

A Video Tape on VHS E60 cassette, lasting about 60 minutes, on Log Building construction. Includes 20 minute film of Allan Mackie demonstrating log notching etc; a TV interview with him; shots of work on courses, and the Accident Compensation Commission's film on chainsaw safety.

Loaned — to paid-up members only — for \$5 posted — please return within 4 weeks.

"Building with Logs in New Zealand by Bill Knight and Liz Brook

Yes! It's in the bookshops! And it's a magnificent first for New Zealand. If you want a good reference book on Log Building this is for you.

This 128 page book illustrates with 147 photographs and 47 diagrams the various stages of building a Log Home — covering cost, drawing up plans, selecting and felling trees, choosing a site, laying foundations, the tools for the job and how they work (each is illustrated) and the different building techniques. Also included are the notches used in log wall construction, the making of doors and windows etc. The photographs, drawings, diagrams and a glossary of terms add to the clarity and usefulness of this publication.

Retails at \$29.95.

What better present could you give a Log Building enthusiast?

Hedley's Bookshop Limited of Masterton will post you a copy of *'Building with Logs in New Zealand'* for just \$31.45 and providing you use the enclosed order form when ordering have very kindly offered to donate \$3 to the Log Builders' Association of New Zealand for every copy so sold.

Order form on back page

From Mv Mailbaa

Hardly any need to say 'Please keep writing' - but quite clearly, from the mail I receive, people love hearing about what others are up to. —Angus McCallum

Your magazine is very easy to read and I was most impressed by the friendliness and camaraderie of the letters and articles - almost like a big family writing to each other. My wife and I would like to look at some log homes in, around or close to Auckland as we have not yet had the opportunity to examine one close up. Sue and I hope to get to Rotorua for Queen's Birthday Weekend so we look forward to meeting you there.

- Chris and Sue Donovan, South Auckland

Thank you for the latest newsletter. We really appreciate the hours you put in getting it all together and printed with probably little reward for yourself. It is great to see all that is happening round the country and the continuing increase in interest in log building.

I obviously haven't written since the 'Better Home Show' because the box of spare newsletters is still here. I'll send them back with this. I should have put them in with the display boards when I sent them back to Ngahiwi in Napier.

The 'Better Home Show' created a lot of interest and brought new revelation to the masses. Derek Mullooly created a beautiful structure like a kiosk with an open front with bar height counter that he used to display photos on. Peter Hadley made a wall section with a cat-way window and archway complete with wiring etc.! Dave Alexander brought his massive photo display boards - so together we had a very comprehensive display. Unfortunately for a lot of the time the weather was bad news but during the fine spells a lot of people came through. It was good getting to know the other guys a little better and to catch up on news also.

We have had a Swiss family stay for a while and Meinroad, the son, has spent considerable time helping me in order to learn a little of the craft of log-building. He is a qualified joiner and forester - a very useful set of skills if one then learns log building! He is devouring the books we have - asking for interpretation all the time for the new words! I want to give him a copy of 'Building with Logs' and be and his sister both want T-shirts to take back so could you please send.

Mark & Helen Holmberg, Tauranga

Having just spent two weeks at Hanmer Springs participating in Andrew and Jane's Log Building Course we are now keen to keep up with the Log Building World. Please find enclosed sub. We look forward to continued

contact with I. Bs and of course one day, if and when we settle down (we're housestrucking at present), building our own Log Home. ... let it be known that Hanmer Springs was a great course and Robert Chambers was an excellent tutor. As a - Wairarapa-ians, from Kaitawa, Pahiatua I'm interested in seeing 'Tui Country'.

-Kerry and Kevin Ellis, Blenheim

Well! You probably won't be expecting this but here's the arrears of subs - very overdue, but better late than never! We moved into the house 5 years to the day after the first log was felled and it is a wonderful feeling. However, never again frankly! (Pictures below)

We've had enough of everything to do with building with logs - except the enjoyment of living in one!

- Geoff and Chris Mason, Twizel

Keep up the good work. Your last newsletter was keenly read and re-read and starts some good discussions in the family. At the moment it seems I can't get my hands on enough reading material - enclosed is cheque to get more.

- R.A. Jennings, Henderson, Auckland

The courses went very, very well. The students all learnt a lot and had a good time while doing so. I spent most of the month cooking for the 20 or so of us, which didn't leave much time to catch up on the latest techniques but I did enjoy the dove-tail demonstration on the last day. Andrew has gone back to Golden Bay to re-assemble Matt's building We hope to have the roof on Matt's and maybe windows in before the beginning of April. We are very pleased with our shingle roof, which we had finished before we left to come south. Now we have a bundle of cedar timber to turn into window joinery ... maybe this winter.

- Jane Dixon, Takaka

(Jane is a log builder in her own right - is a Committee member; clearly a good cook - and a lovely person - and last, but not least, is married to Andrew, our log building philosopher. Angus)

Nice to see our book mentioned in 'No problem!' The publisher is planning a second printing (which is great). Meantime we are re-designing our house and have cut it down to a modular style, which lets us build one module 8m x 8m, surrounded by verandahs, and another the same size later on to double the living space. Liz and I have shifted from Wellington having bought a farm at Beaconsfield Valley near Feilding. We left Wellington in May last year and packed all our gear into about two thousand boxes. they are currently in storage and in there somewhere are the names and addresses of the people we met at Tapawera who wanted to be into a raffle on the book. Unfortunately it turned out that we couldn't run that

raffle as the publisher wanted all copies to be sold through the regular book stores. Since he sells his other titles that way and wants to maintain his good relationship with them, it seemed only fair to accept it. So this letter is by my of letting people know that they haven't been forgotten and to encourage them. and anyone else who wants to learn how to build a log home to actually use the order form in 'No problem!' and buy a copy, or two, or three.... Support your friendly bookseller that's what we say! Meantime we have to get the Clydesdales mined for loghauling (and chainsaws?) ...

- Bill Knight and Liz Brook, Feilding

(Needless to say, Bill and Liz produced 'Building with Logs in New Zealand' - they presently live in two caravans! There's an order form for it in this newsletter - the NZLBA receive \$3 from the bookseller for every copy ordered by using the said form - Angus)

Our log house continues to be a source of fascination and interest. Over the last several months have had three full bus loads, plus several groups in a number of cars, plus a great many single car visits - and for us it continues to be a home of comfort and pleasure, with bird song and view added for good measure. Thinking seriously about a journey to Rotorua next winter - might see you there.

- Harry and Joan Hancock,

The Log House, Tadmor Hill, Wakefield.

(If any one wants to see a really lovely log home, this is it - we loved our time staying with Joan and Harry. As Pat said - 'it envelopes you' - Angus)

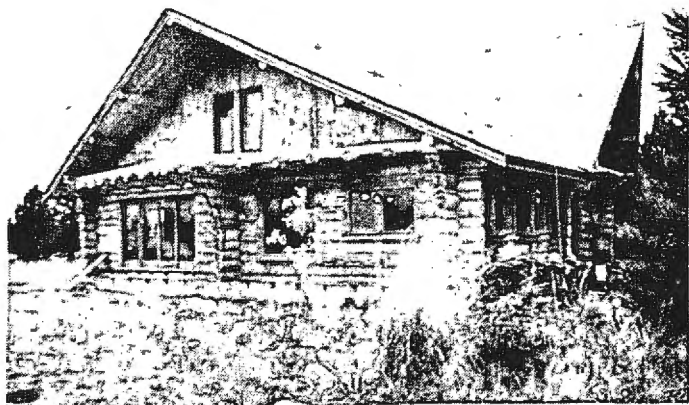
G'day Angus. Just received latest 'No problem!' and a copy of 'Building with Logs in New Zealand'. At the moment we are at sea and it would seem like fishing has been forgotten, in favour of a discussion of Log Homes. How to build them, costs etc. Hope to make it to Rotorua in June. Enclose sub - already looking forward to next 'No Problem!'.

- Roland Ryan (Cheviot),
at sea off East Coast of New Zealand

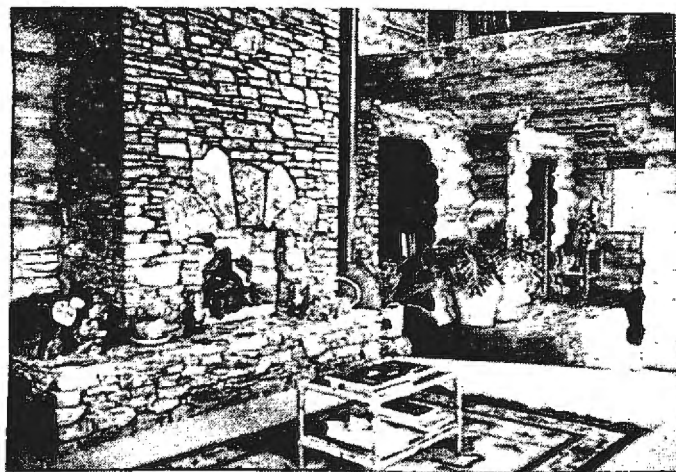
I have recently acquired and read the book 'Building with Logs in New Zealand' by Bill Knight and Liz Brook. Needless to say I found its content most informative - once having picked it up, finding it difficult to put down again. I would greatly appreciate any information you could forward.

- I.D.L., Waipukurau

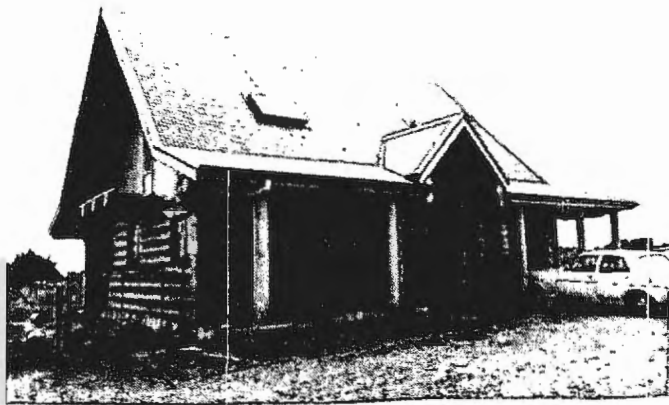
(Many similar comments have been made about 'Building with Logs in New Zealand' - Angus)



Geoff & Chris Mason's log home at Twizel



Interiorview of Geoff & Chris Mason's home.



Janice and Brian Harris's home near Sanson, built by John Gosling with Allan Cant.



The partly built home of Jenny and Taukiri Te Whata, out of Kaikohe. The log builder was Andrew Dixon. (See Jenny's letter below).

13/1/89 Who was the cynic that named the newsletter 'No Problem!'...there's the difficulty finding the time to put pen to paper, then the hassle of remembering to pay subs, let alone finding the money (I hope I've remembered to include last year's and this year's with this letter!). Peeling logs is a breeze of course as is moving over half a tonne weight each time it's necessary. One 'borrows' a tractor and discovers it has a cracked sleeve so getting logs off the ground is delayed and we still have 'No Problem!' The weather has let me have a couple of one-sided conversations with Him above and despite the volume the message still doesn't get through - although rain has allowed time to wire this. It is definitely making new people of us this log building experience. Pure insanity has driven us to build in Douglas Fir logs beginning with a simple square structure - all the help and advice is being gleaned from Dave Alexander and some of his physical expertise will shortly be required as we hope to start construction early February. I must take time to compliment the Timberlands team at Kaiangaroa, especially Brian Williamson (whom I've yet to meet as he managed unavoidably to avoid each appointment we've had) and Robin Peterson. I phoned them regarding supply of Douglas Fir and was told that we'd have to go down and see what they had - after all the other half-hearted and unenthusiastic responses I'd had this was a very promising start! Went down on Wednesday and saw suitable material and operation - confirmed an order the following Wednesday. Got a phone call on Friday - could I come down and inspect approx half my order of 62 logs. Went down following week and they had 80 poles for us to pick from which they laid out so we could individually measure and inspect each. I rejected 7. These [the chosen ones] were delivered on Saturday and they organised the transport for me and no complaints there either. Congratulations to all those guys and no hesitation in recommending them to any one for advice and supply.

25/1/89 A couple of fine days has enabled more cleaning up of logs and preparation, but building start will be delayed - as I would have expected. Still we've begun and perseverance will see us through. Time to head back to work - will take a break during Queen's Birthday to head to Rotorua.

- Rod Coe and Joan Davies, Paeroa

(Thanks for that delightful letter and all the other hundreds I get each year from all sorts of people, all lovely each in their own way. The name 'No Problem!' for our newsletter [and note the explanation mark, please] as I explained in our first newsletter in September 1982 [have I really been doing them since then?] was the favourite saying of Canadian Log Builder, Allan Mackie. He started it all [this log building business] by running a course in the Wairarapa in April 1981 - at the invitation of John Gosling. Allan's final remark after giving a student a simple answer to a complicated ques-

tion was always ... 'No Problem!'

I used it as a small tribute to the genius of the man to whom we owe our existence. And, of course, it's very positive - like the man himself - and like the attitude of most log builders. By the way Rod, you DID enclose that cheque. Angus)

{And, going back again to our beginnings, I recently received a letter from the first people (to my knowledge) to build a log house of the modern era in New Zealand. They built in the mid-1970s :-}

Thought that you might be interested in the attached photos taken while on a recent trip to Canada. The two new log houses under construction belong to a log building company that pre-fabricate on their site, disassemble and deliver them to the purchaser. A home this size is approx \$10,000 for logs and log work. The logs are rusticated spruce or fir. The location is near 100 Mile House, British Columbia. The old log shed was once a house and is of interest as it is about 100 years old and still sound. Note the excellent workmanship on the corners. The spaces between the logs are chinked with clay.

- David and Peggy Prosser, Glenbeim.

In 1983 I was on a log building course at Kumara. I am ready now to start attaining books relative to log houses. Could you please send me a list of books. Can you also tell me how much the sub is to join the Log Association so I can keep up to date with information. Over the last five years have been short of finance.

- G.R. Peart, Taylorville

Wonderful newsy newsletter as per usual. Also enclosed our subs for next two years - gives us more time to forget! We don't mind the newsletter being late, it's worth waiting for.

- Tom and Elizabeth York, Reporoa

wrote to you about a year ago and inquired about membership of the Log Builders Association. I mislaid the information you sent and it has just 'surfaced' with some other papers [nice to meet a kindred spirit - Angus]. Please let me know what the sub is for 1989.

- Alistair Stronach, Wellington

Hi! recently received latest issue of 'No Problem!' and really, this has been an interesting issue indeed. We thought we were building a large log house - certainly not by comparison with the Giant in Eastport, Idaho. Isn't that staggering! We have just returned from a visit with Derek and Gaylene Mullooly at Lake Okareka and were discussing that monstrous structure. Wow! We have sold our house and begun our building project at Great Barrier Island. The latest count is some 160 tonnes of wonderful Larch logs! Derek is doing a great job caretaking them for us. They have been mechanically peeled and then steam dried. We are not taking any risks with the Barrier climate. Now they will season for several months until we are ready for them on the Is-

land. So, at this point we would like to request a copy of the survey information of the Minnesota Log Crafters Association, including questionnaire which gives a summary of cost of building a log home. There is no doubt in my mind that in the very near future, New Zealand Log Builders/owners will be needing these kinds of summaries and valuations for mortgaging and insurance purposes. In the future we plan to register with the FRI so that our home can be monitored. In addition we are in a position to attend the Log Builders Congress 2-5 June at Rotorua - look forward to seeing you and others again after such a long time. It promises to be a fun and worthwhile event.

- Mary and Grant Haigh, Auckland

So sorry late with this sub but a very busy time with us what with house building, then trying to catch up with farm work and our exciting news that I had a baby girl - Nancy Joan - on 2 December. So we're in a real muddle at the moment. House made good progress until Andrew left in September. Unfortunately we ran out of money about then due to a very expensive truck breakdown and not being able to sell some machinery we had expected to. So had to slow down on house. We have just finished putting on sarking, blackpaper purlins and covered whole roof with black plastic to protect for summer. Hope to afford roofing iron before winter. We are very thrilled with the house. It is going to be even nicer than we imagined so we don't mind the extra time involved to get such a lovely home. Andrew [Dixon] is certainly a

craftsman and the log work much admired by a bus-load of Canadian visitors the other day - one of whom knew quite a bit about log homes. Have seen quite a bit of Malcolm (my eldest son - Angus) as he gave us his goats - he felt he couldn't manage them, so Taukiri and 3 sessions over there drenching and footrotting etc. Haven't time to write any more - but we will see you up this way soon?

- Jenny and Taukiri Te Whata, Kaikohe

Thanks for sending the plans of the scribe and I enclose the \$2. I attended the logbuilding course at Hanmer Springs which was a totally new building experience made interesting by instructors Andrew Dixon and Robert Chambers. The atmosphere created by a group of people with a common interest in building with logs was in itself a unique experience. [How often that has been said - Angus] the fact that we were involved in the actual construction of a house added purpose and stimulation to the course. The insight gained into logbuilding has given us great incentive towards going ahead with constructing our own log house on our land in the Grabam Valley, Motueka. Pending the sale of our house in the North Island we would hope to be able to start this year.

I hope if Andrew runs another course in the future the people who are involved get as much out of the course as I did.

- Alf and Jenny, Orewa

Order Form

Hedley's Bookshop Ltd.

Phone (059) 82875

150 Queen Street, P.O. Box 746

Masterton, New Zealand

'Building with Logs in New Zealand' by Bill Knight and Liz Brook

Retail price **\$29.95** (posted **\$31.45**)

Please send me ____ copy/copies

I understand you will kindly donate \$3.00 to the Log Builders Association of New Zealand for each copy ordered with this form.

I enclose cheque for \$

Name.

Address

.....

.....

LOG BUILDERS' CONGRESS 1989 **June 2 to 5 at Forestry Centre, Rotorua**

Number in party:- _____ Expected time of arrival _____

Adults _____

Children under 5 years. _____

Children under 12 years _____

Accommodation preferred: — Forestry Hostel or Redwood Park - cross out one.

If necessary, would you be prepared to share accomodation - **yes/no**

Do you require transport from airport ? **yes/no**

If yes - what is your expected arrival time? _____

(Please confirm this nearer day)

Will you be having ALL meals at Forestry Centre ? **yes/no**

If **not**, please indicate which meals you will require and for how many —

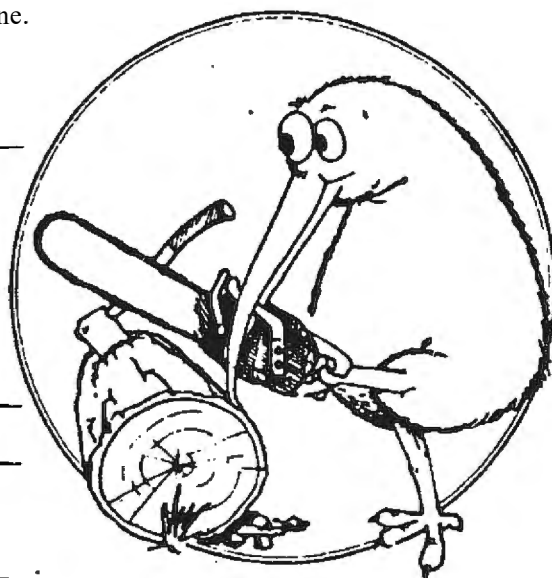
Friday Dinner _____

Saturday Breakfast _____ Lunch _____ Dinner _____

Sunday Breakfast _____ Lunch _____ Dinner _____

Monday Breakfast _____ Lunch _____

How many **will** be attending Sunday Evening Social Function _____



**To enable us to put down deposit and secure accomodation
will you please enclose your deposit of \$20 with registration form and return
by Friday 5 May 1989 to**

**W. O'Connell, 10 Delhi Street, Wairoa, Hawkes Bay.
Phone (weekdays) Wairoa (0724) 7282 (business) 7283 (home).**

NEW ZEALAND STANDARD
MODEL BUILDING BYLAW

Chapter 3

GENERAL REQUIREMENTS

GENERAL,

3.1 Scope

3.1.1 This chapter of this bylaw establishes requirements for matters of general application relating to the erection of buildings which are not fully established by other chapters of this bylaw. In addition clauses 3.16 to 3.21 inclusive state or draw attention to the requirements of this bylaw in connection with existing buildings.

3.2 New forms of construction

3.2.1 Materials, forms of construction, and methods of design **not** provided for in this bylaw may be employed only in accordance with prior written approval of the Council and subject to the following conditions:

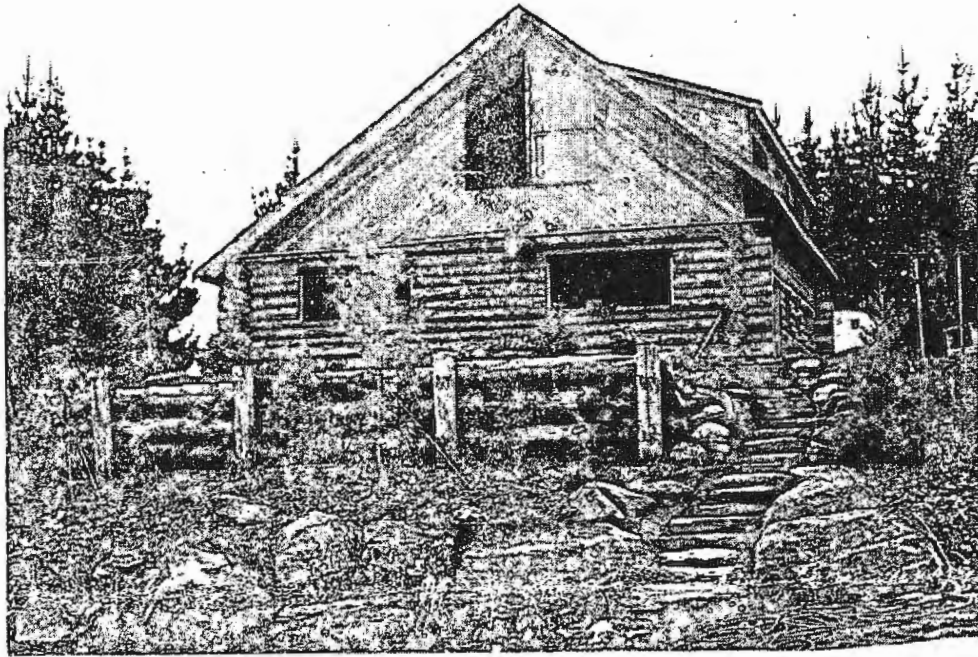
- (i) In every case application for permission to employ such materials, forms of construction, or methods of design shall be made in writing to the Engineer.
- (ii) The application shall be accompanied by all particulars necessary to enable the Engineer to consider the suitability of the materials, forms of construction, or methods of design which it is desired to use.
- (iii) The applicant shall at his own expense in all things have such tests made by an approved testing authority as may be required by the Engineer.
- (iv) After considering any application the council may refuse its permission to employ such materials, forms of construction, or methods of design, or grant its permission unconditionally, or subject to such conditions as it may deem necessary to impose.

3.2.2.1 Any material, form of construction, or method of design which has been approved by the Council may be authorised by the Engineer for use in the manner and to the extent so approved.

3.2.2.2 A copy of every approval given by the Council pursuant to subclause 3.2.1 shall be available to any applicant on demand.

3.2.3 Notwithstanding the provisions of this clause the Engineer may, with the concurrence of the applicant, refer any material, form of construction, or method of design together with the particulars submitted therewith to the Standards Council or to any Government Department or other organisation with a view to obtaining information which may assist him or the Council in determining an application.

BUILDING WITH LOGS IN NEW ZEALAND



- The risk of log decay is the major concern with building with logs.
- Logs generally available for building in New Zealand are not naturally durable.
- Spray or brush-on preservatives should not be regarded as substitutes for commercial treatment.
- The construction and performance of a log building will be enhanced if the logs are dried before installation.
- Immediately after felling, logs should be debarked, an antisapstain chemical treatment applied, and the logs stacked for drying.
- Log buildings require specific approval by local authority engineers before a building permit is issued. Potential problems with decay may necessitate a deed of indemnity which will be binding on subsequent owners.
- The Forest Service has adopted a policy on log building in response to increasing interest in this form of construction.

TREES & TIMBER



Introduction

In recent years there has been a growing interest in using logs for building construction. This interest has picked up following the visit to New Zealand in 1982 of a Canadian tutor in log building and the formation of the New Zealand Log Builders' Association later in the same year.

A number of questions are being asked on building with logs in New Zealand. Those most frequently answered by the NZ Forest Service relate to the suitability and availability of different species for this type of construction, the necessity of preservative treatment and the need to comply with local by-law requirements.

This publication discusses the inherent problems related to building with logs in New Zealand, by-law requirements, and the Forest Service policy on the use of logs in buildings. A list of references for those interested in log building constructions is also supplied.

Natural Durability and Decay

The major concern with log building is decay. In New Zealand there are no naturally durable logs as the sapwood of all logs is considered to be perishable. The heartwood of a few species show a high natural durability (Appendix A). However, these species are not generally of a suitable form nor are they readily available to the log builder. Even if logs from these species were available, it is unlikely the sapwood would be removed by the builder before construction.

In log buildings moisture, dust, and debris, can build up in joints and corner notches producing conditions suitable for decay. Moisture can become a problem through poor design, careless workmanship, and poor maintenance of the building. In exterior walls the lower logs are particularly susceptible to rain wetting, especially the bottom log. If the bottom log is in contact with the ground this poses an added decay risk. However, the risk of decay can be minimised with the use of good design, and logs treated with a timber Preservative.

Preservative Treatment

In the absence of logs with natural durability the application of a timber preservative is essential. Timber Preservation Authority (TPA) Specifications appropriate to exterior wall situations in conventional buildings are Hazard Class H1 (low decay hazard) if the wood is then protected, H3 (moderate decay hazard) if it is left with a natural unpainted finish or otherwise protected from the weather, or H4 if the timber is in ground contact. Brush or spray-on preservative treatments cannot meet these specifications. However, commercial treatments also pose problems for log builders:

- Some log builders prefer not to use any preservative chemicals whatsoever.
- Preservative treatment can add significantly to the cost of logs.
- Most of the species of log preferred for log buildings cannot be commercially pressure treated with copper-chrome-arsenic (CCA) salts. CCA treatment colours logs green. Boron treatments require a paint coating to avoid leaching. Oil based preservatives are unsuitable due to their toxicity, colour, smell and tendency to bleed oil.
- When notching of logs is carried out prior to preservative treatment some changes of shape may occur in later drying. This may affect the fit of the notches during assembly of the logs.
- Notching after preservative treatment can considerably reduce the zone of treated wood. A timber preservative can be sprayed or brushed on to the cut surfaces but little is known of the long term effectiveness of this method of application. (Appendix B lists some available spray or brush-on preservatives. However, not all of these are approved as in situ preservatives by the Timber Preservation Authority.)

Selection and Handling of Logs

Trees of good form should be selected. The form of trees, even of the same species, will change from region to region depending upon the seed source, the site, and stand history since planting. In general, closely grown stands are the best choice offering straight, round logs with light branching, only slight swelling about the branch whorls, and little taper. The logs should be of a fairly uniform size to assist construction.

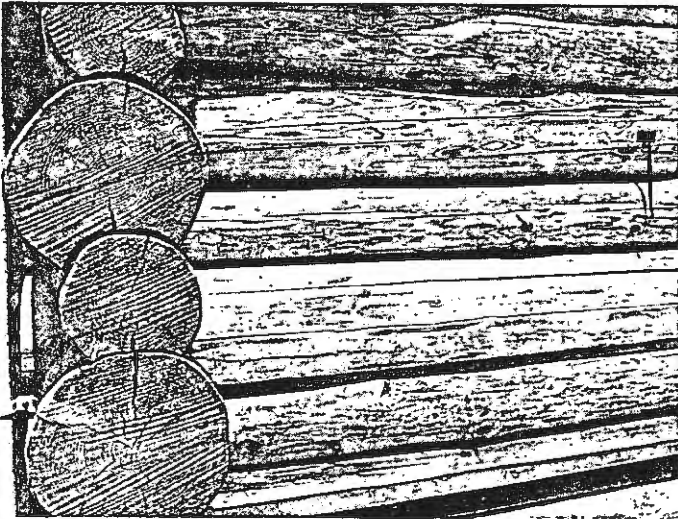
New Zealand grown Douglas fir is presently the most common species used for log building due to its appearance, availability and form. Larch, redwood, western red cedar, macrocarpa and Lawsoniana have also been used for similar reasons, although they are less commonly available.

Radiata pine logs, unless they are peeled, are often of poor form. Radiata and Corsican pines do have the advantage of being able to be commercially treated with CCA preservatives, which the other above mentioned species do not.

To provide some guidance on the sensible use of logs that are not commercially treated and/or are installed in the building in the green ("wet") condition, the following points should be noted:

- When logs are installed green ("wet") the risk of decay is increased due to the restricted air flow in buildings and the subsequent longer drying times. The design must allow for settling as the logs dry to avoid problems with doors, windows, roof supports and masonry. Spray and brush-on type preservatives cannot be effectively applied to green logs.

- The use of correctly dried logs will minimise subsequent surface checking, end checking, and splitting of logs. It also avoids the problem of uneven building settlement and enables a better uptake of any spray or brush-on type preservative applied at the time of construction. Dry logs are also lighter and easier to handle.
- Logs should be cut at the beginning of the winter period and stored under a protective cover for drying. Checking and splitting will be reduced with slow drying during winter. Fungal or insect attack is less of a problem during winter. Assuming commercial treatment was not being undertaken, the building work could commence the following summer.



As logs begin to dry they will check and develop length-wise splits that will open up fresh wood to fungal decay.

- The bark should be removed from the logs within 14 days of felling. Logs with intact bark are almost impossible to protect from deterioration over a long period of time. The bark slows down log drying to such an extent that some decay in the interior is almost certain to occur before drying is complete. It also encourages the attack of insects such as bark beetles and some wood borers.
- An antisapstain chemical should be applied when the bark is removed. (See Appendix C for a detailed listing of some antisapstain chemicals.) The chemical should be sprayed or brushed on within a day of peeling to avoid staining and fungal infection. Additional applications of an antisapstain chemical may be required over the warmer months when conditions are more suitable for insect attack and fungal infection. As logs begin to dry they will check and develop length-wise splits that will open up fresh wood to fungal attack.
- The peeled logs should be stacked for drying on an elevated, well drained and exposed site,

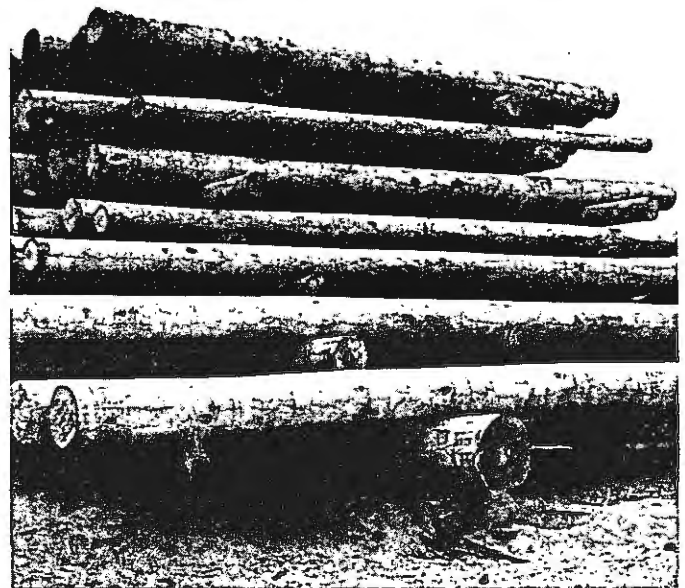
away from trees or buildings and at least 30 cm off the ground to allow heavy moist air to drain away from the stack. A good stacking method is to have full layers of logs alternating with layers of two logs at right angles to the full layer. Drying may take between 4 to 6 months.

- For improved drying, log stacks should be roofed to avoid rain wetting.

Building Construction

A number of excellent publications on log building construction are available to the builder. Construction techniques that reduce water wetting to a minimum, e.g., the use of wide overhanging roofing or verandahs, roof vents and a concrete, brick or stone foundation with good drainage, play an important part in reducing the risk of decay. In construction:

1. Cut ends and joints, especially notched joints, are particularly prone to moisture pick-up, which will promote decay. All cut surfaces and crevices should be liberally coated with a preservative solution at the time of building.
2. A preservative, preferably a solution with water repellent properties, should be applied to all exterior surfaces. The preservative should be applied within two months of the building having been completed. Thereafter, a two or three yearly maintenance programme would be advisable because as new checks develop in weathering, wood, which may not have previously been penetrated by the preservative solution, is exposed.



Logs peeled and stacked prior to building.

By-law Requirements

Building standards and associated material standards have been set in New Zealand and it is the responsibility of local authorities to apply and, where necessary, interpret them.

Log buildings are not covered by the New Zealand Standard NZS 3604: 1984 "Code of Practice for Light Timber Frame Buildings not Requiring Specific Design". In order to get a building permit, specific design by an engineer will usually be required by local authorities.

Generally, to comply with local by-law requirements, wood used for building in exterior out of ground situations is required to be treated to meet TPA Specifications H1 or H3. However, there is not enough experience of the service performance of logs in log buildings in New Zealand to be certain that this type of construction does not fall into the "high hazard" classification, which would require greater protection than that provided by H3 treatment.

A log builder should discuss requirements for preservative treatment with the local authority at an early stage of the building project to avoid future problems. A deed of indemnity, for the building which will be binding on subsequent owners, may be required by the authority.

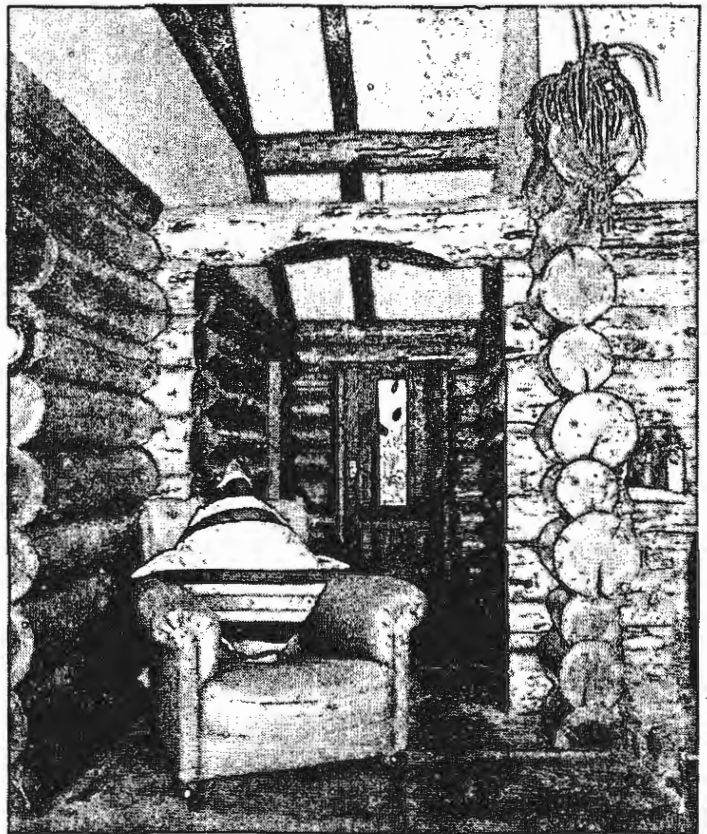
New Zealand Forest Service Policy on the Use of Logs in Buildings

The Forest Service recognises that the main problem in log building is the risk of decay of the logs and consequential mechanical failure. It also recognises that buildings using logs which have not been commercially treated, or which have been notched after treatment, are likely to continue to be constructed.

The limited amount of information on the performance of logs used in building prohibits the Forest Service from supporting the use of logs not treated in accordance with the TPA specifications. Forest Service is of the view that these buildings should be clearly understood to be experimental by builders, owners and local authorities. In the interim, the performance of selected buildings will be monitored by the Advisory Services Division of the Forest Service. Once sufficient information has been collected from the project, advice on this aspect of log building construction in New Zealand will be made available.

Further Information

Further information on building with logs can be obtained from an Advisory Officer of the New Zealand Forest Service or from Angus McCallum, National Co-ordinator, Log Builders' Association (New Zealand), RD 2, Masterton.



Log house interior showing the *different* ways logs can be used.

Further Reading

Advisory Services Division (New Zealand Forest Service) 1985, Trees and Timber publication, "A Guide to the Successful Seasoning of Roundwood".

Mackie, B. A., 1979, "Building with Logs", Prince George B.C., Log House Publ. Co.

Mackie, B. A., 1979, "Log House Plans", Prince George B.C., Log House Publ. Co.

Mackie, B. A., 1979, "Log Span Tables: for floor joints, beams and roof support systems", Prince George, B.C., Log House Publ. Co.

Mackie, B. A., 1977, "Notches of All Kinds: a book of timber joinery", Prince George, B.C., Log House Publ. Co.

New Zealand Forest Service, 1982, What's new in Forest Research No. 112. "The Natural Durability of Untreated Timbers".

New Zealand Forest Service, 1980, Reprint 1277 ODC 84, "Wood Preservation for the Farmer".

Standards Association of New Zealand, NZS 3602: 1975. "Code of Practice for Specifying Timber and Wood Based Products for Use in Building".

Timber Preservation Authority Specifications, 1986 (Revision).

USDA Forest Service, F.P. Lab., 1977. General Technical Report FPL-11, "Protecting Log Cabins from Decay".

APPENDIX A

Durability of the Heartwood of New Zealand-grown Timbers in Ground Contact

	Perishable (5 years)	Non-durable (5-10 years)	Moderately durable (10-15 years)	Durable (15-25 years)	Very durable (25 years)
Hardwood	Alder' Black poplar hybrid <i>E.gunnii</i> Kamahi' Kanuka ¹ Silver birch Tawa	<i>E.regnans</i> <i>E.viminalis</i> Hinau MangeaO Oak ¹ Osier willow' Pukatea	<i>E.globulus</i> <i>E.radiata</i> <i>E.sieberi</i> Black beech' ² Silver beech'	<i>E.amygdalina</i> <i>E.botryoides</i> ² <i>E.globoidea</i> <i>E.mullerana</i> <i>E.obliqua</i> ² <i>E.pilularis</i> ² <i>E.saligna</i> ² Hard beech ² Mountain beech' Red beech ² Southern rata	<i>E.cladocalyx</i> ² <i>E.cornuta</i> Robinia' ⁴
Softwoods	Austrian pine' Corsican pine Norway spruce' Ponderosa pine	Douglas fir' European larch ² Kauri Lodgepole pine Matai Miro Muricata pine Radiata pine Strobus pine Western red cedar	Californian redwood Kaikawaka Lawson's cypress Macrocarpa' Mexican cypress Rimu Sitka spruce Tanekaha		Silver pine Totara

- Notes: 1. Represented by posts only; durability of heartwood alone may be higher.
 2. Species exhibit a range of durability and have been assigned to the class representing the average of their range.
 3. Unusually variable (perishable—durable).
 4. Robinia specimens have not been installed long enough for an accurate assessment of their durability, but they are at least in the "Durable" class and more probably in the "Very durable" class.

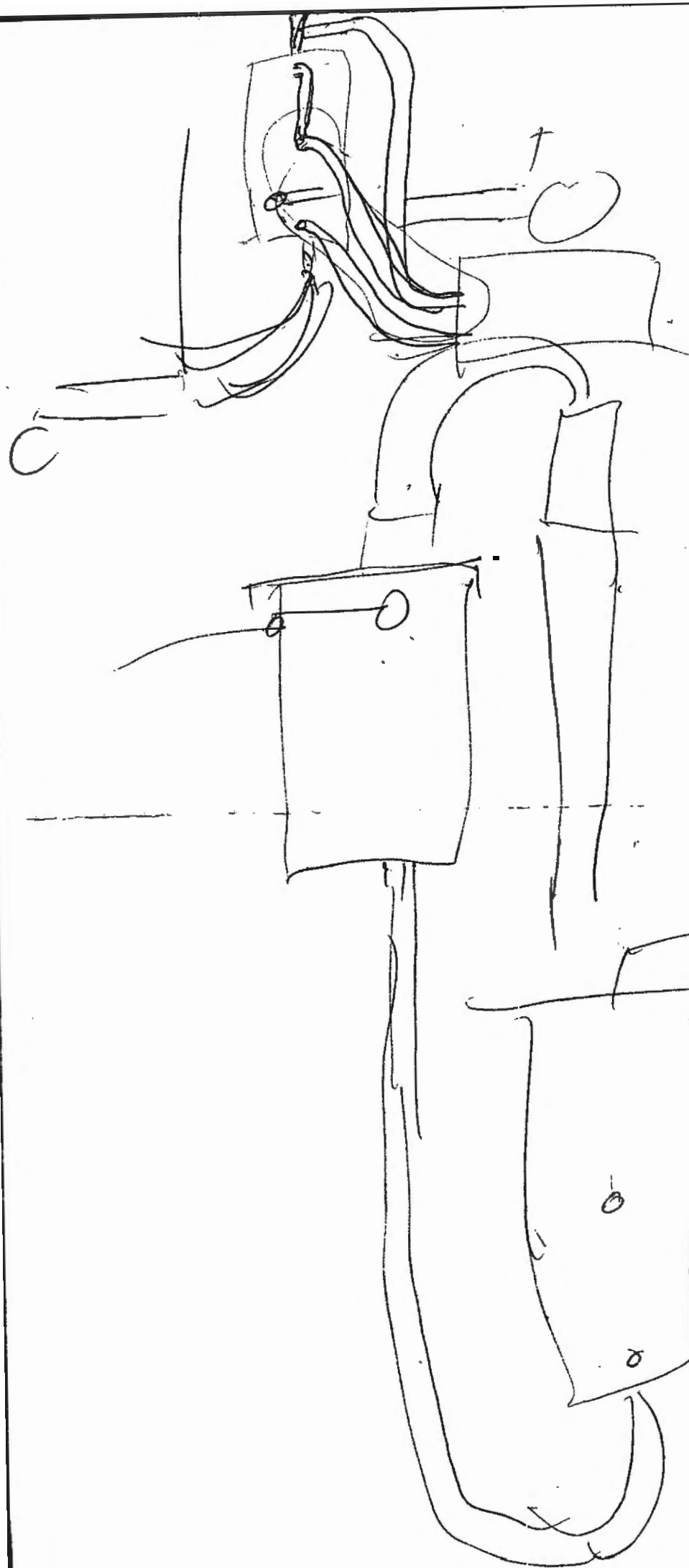
This classification indicates the expected service life of a species used in a ground contact situation. The same timbers used in an exposed, above-ground situation will not be subject to so great a decay hazard, so their service life will be extended. A reasonable estimate of a species' performance in an above-ground situation can be obtained by moving that species up to the next durability class, e.g., a species rated as "moderately durable" in ground contact becomes "durable" above ground.

APPENDIX B

Spray or Brush-on Preservative Chemicals

Commercial Name	Chemical	Supplier
Protectoil	PCP	Protectoil Products, 190 Durham Street. P.O. Box 315, Christchurch
Protim 95WR	TBTO	Healing Industries. Private Bag, Rosebank. Auckland.
Vascol Clear	TBTO	Hicksons, PO Box 37-240, Auckland.
Woodgard Woodtreat	TBTO and Copper naphthenate	Rentakil. PO Box 90, Drury, Auckland.
Celpruf	Copper naphthenate	Rentakil. PO Box 90, Drury, Auckland.
Protim 70	Copper naphthenate	Healing Industries, Private Bag, Rosebank, Auckland.
Vascol Green	Copper naphthenate	Hicksons. PO Box 37-240, Auckland.
Metalex	Copper naphthenate	Emken Industries, PO Box 9355, Wellington.
Tricunol	Copper naphthenate	Rentakil, PO Box 90, Drury, Auckland.
Protectex Green	Copper naphthenate	Dimet. PO Box 11-123, Ellerslie, Auckland.
Metalex Clear	Zinc naphthenate	Emken Industries, PO Box 9355, Wellington.
Protectex Clear	Zinc naphthenate	Dimet. PO Box 11-123, Ellerslie, Auckland.
Woodlife II*	Troysan polyphase	Eastern Agroforests Ltd. Taradale.
Timtex PQ56)*	Copper-8-quinolinolate	Timtex Chemicals Ltd, PO Box 65-107
Timtex PQ57}		Mairangi Bay. Auckland 10.

- Notes: 1. Spray or brush-on applications are not an effective substitute for commercial treatment processes as the preservatives used do not adequately penetrate into the timber.
 2*. Woodlife II and Timtex are waterborne preservatives and not as effective in penetrating roundwood as solvent based preservatives. Regular application particularly after surface checking is required.



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AN INFORMATION SUPPLEMENT to NO PROBLEM!

LOG PREPARATION and PRESERVATION a paper on the subject drawn up jointly by the New Zealand Forest Service and the Log Builders Association of New Zealand

An important question for log builders is how to get good performance and life out of logs with a minimum of cost in log preparation and protection against insect attack and decay.

I mentioned in the first newsletter that in an effort to get and give some authoritative guidance to log builders on this, Chris Livesey and I were meeting with Trevor Foley, Director, of the Utilisation Development Division of the New Zealand Forest Service.

The following points have emerged:

1. The main problem area in log building is how to minimise the risk of decay and thus prolong the life of the building. Best results in terms of durability and performance will come from using either naturally durable or preservative treated logs that have been prepared for use (notched etc) before preservative treatment, according to Timber Preservation Authority Specifications, and dried before use.

2. However, there are no naturally durable New Zealand grown species of the right form which are available in commercial quantities. Also, notched logs that are preservative treated according to Timber Preservation Authority Specifications and then dried before use, will undergo some change of shape during the treatment and subsequent drying with the result that they may not fit together accurately.

3. Given the unavailability of suitable naturally durable logs and the problems associated with giving conventional preservative treatment to logs after they have been notched, the next best results in terms of durability and performance will come from preservative treating logs according to Timber Preservation Authority Specifications before notching, and liberally coating all cut surfaces with a preservative solution at the time of building (see 9 below).

Disadvantages of this method are that the cost of conventional preservative treatment would boost the cost of construction considerably, and that some conventional preservative treatments colour the logs.

4. The comments that follow apply where it has been decided not to use conventional preservative treatment.

5. Having regard for the factors of availability of species with moderate heartwood durability and good form, Douglas fir and larch hold best promise. But, the sapwood of these species and indeed all species has a very low resistance to decay. Most other softwoods grown in New Zealand are more perishable than Douglas Fir and Larch.

6. Building with properly seasoned (dry) logs will minimise checking and splitting of the log ends and surfaces and possible problems of uneven building settlement. Also

the drier the logs are when used for building the better the surfaces will absorb superficially applied preservative solutions (see 9 below).

Prompt removal of bark and the application of an anti-sapstain chemical (see 16 below) by spraying or brushing immediately after felling will avoid fungal infection during drying.

Proper seasoning requires that the debarked logs be stacked for four to six months in an elevated, well drained and exposed site — away from trees or buildings, and well off the ground to allow heavy moist air from the stack to drain away. A good stacking method is to have full layers of logs alternating with layers of two logs at right angles to the full layer. If drying is during winter (April to October) log stacks should be roofed to avoid rain wetting and the real risk of decay.

7. The less preferred method of using logs for building while they are still green (i.e. with less than four to six months of drying out) increases the risk of sapstain and decay. To minimise this risk the following procedure should be followed. The bark should be removed promptly after felling, and if the logs are not then stacked as for proper seasoning (see 6 above) all surfaces should be coated with an anti-sapstain solution immediately after the bark is removed and subsequently at monthly intervals until the logs are in place.

If the building site has restricted airflows the drying of logs in the building will be slowed and the risks of building with green logs are further increased.

8. In order to obtain the maximum period of good drying conditions it is suggested that logs should be felled in September.

9. Cut ends and joints, especially notched joints and crevices are vulnerable to pick-up of moisture which will promote decay, therefore, with untreated logs all cut surfaces and crevices should be liberally coated with a preservative solution (see 16 below) at the time of building.

10. Assuming dry logs are used the same preservative or preferably one with a water repellent should again be applied to all exterior surfaces — with special attention to joints and log ends, within say two months of erection.

11. If green logs are used drying out will take four to six months after which the requirements in 10 should be followed.

12. Thereafter periodic — say every two years, spraying or brushing of all external surfaces with a water repellent preservative solution would be advisable.

13. A wide overhanging roof will do much to protect the logs and joints from deterioration.

14. Holes to allow the circulation of air through lateral grooves and notches will help logs to dry more quickly after moisture is blown inbetween them. Similarly the opened out style of finishing the protruding log ends will help to reduce the risk of decay. (On both these points refer to page 47, Notches of All Kinds.) Also, an effective drip cap on the bottom log will assist in shielding the underside of the bottom log (which is not self-draining) from moisture. (Refer to page 86, Notches of All Kinds.)

15. It should be pointed out that the New Zealand climate is more conducive to decay than the cooler and drier parts of North America where log building is popular, hence the reason for the need for greater attention to log preparation and protection in New Zealand.

16. Some anti-sapstain and preservative chemicals for “in situ” application are:

Anti-sapstain chemicals

- Sodium pentachlorophenoxide (Na PCP) plus borax is widely used and available from many sources. Concentrations required are 2 per cent NaPCP with 6 per cent borax pentahydrate. This is a highly toxic chemical, therefore, wear protection against skin or eye contact with the spray or liquid.

- Captafol (trade name “Haipen”); Concentration required is 0.4 per cent. It has low toxicity but has irritant properties.

Preservative chemicals

- Pentachlorophenol (PCP). The concentration should be at least 5 per cent w/w in a suitable solvent containing anti-blooming agents. Proprietary formulations are: “Enele” (clear) — a water repellent preservative; “Rentokil wood preservative” (clear, brown or black) — water repellent preservatives; “Rentokil dry rot fluid”.

Note: Pentachlorophenol should **never** be used inside the log building because of its toxicity.

- Copper Napthenate. The solution should contain at least 1 per cent w/w metal. Proprietary formulations include: “Protectex green concentrate”. Supplier: Dimet, Box 11-123, Ellerslie, Auckland, “Metalex green concentrate”, “Rentokil wood preservative — green”.

- Zinc Napthenate. The solution should contain about twice as much metal as the copper napthenate to be as effective. Proprietary formulations include: “Protectex clear concentrate”.

- “Woodlife 11”. A water-based formulation which has good fungicidal and insecticidal properties. Can be obtained either colourless or pigmented. Supplier: Roberts Co. NZ Ltd, Box 12-319, Auckland 6.

Sources of supply for the above preservatives are given in Part 4 of the paper “Wood Preservation for the Farmer” (see 18 below). Also refer to this paper for additional chemicals and their application.

17. Readers who are familiar with Allan Mackie’s writing will notice that his advice on the preservation of log buildings differs in several important respects from that given above by the New Zealand Forest Service.

In his book *Log House Plans* Mackie comments that “the tendency has become widespread to use chemicals instead of knowledge and skill, in the preservation of timber buildings. In some parts of the world, undoubtedly, where there is fungus, bacteria, and insects posing a real threat, the preservation of a wood building is a challenge. But for areas where this is not the case, I caution that chemicals should be avoided as much as possible”. He notes that the problem to health and to the general environment caused by the use of Pentachlorophenol indicates that PCPs should be avoided. In the North American context Mackie emphasises design and planning of the building, its construction, and the site to protect the building from moisture in the form of rain, condensation, or humidity; from the sun; from moisture-laden winds; and from mechanical damage.

In addition to the question of whether or not to treat logs with chemicals, Mackie’s advice on the best time of year to fell logs, on whether or not to remove the bark immediately after felling, and whether to build with green logs, differs from that given by the New Zealand Forest Service in points 6, 7, and 8 above. At this stage the New Zealand Forest Service considers that Mackie’s advice on these matters is inappropriate for New Zealand conditions.

However, it is interesting to note the experience with Wharepai Lodge. The logs for this building were felled in April or May and were put onto the building green in June. The roof was completed in July. Window and door spaces were left open and to many people’s surprise when the Forest Service tested the moisture content of the logs in mid September they were substantially dry (heartwood moisture content of about 23 per cent). Careful monitoring of other log buildings in NZ will tell us whether or not such good drying (even in winter) of logs put on a building green can be expected in most situations.

18. For further information about log preparation and wood preservation, see the series of articles in “NZ Farmer” (or New Zealand Forest Service Reprint 1277 ODC 84), entitled “Wood Preservation for the Farmer”. Also of relevance is the report “Protecting Log Cabins from Decay” by the US Department of Agriculture, Forest Service, Forest Products Laboratory, Madison, Wisconsin (reference: FPL-11, 1977).

(Thanks are due to Chris Livesey (Course 1) for the work put into the above paper, and to the NZ Forest Service.)

N.B. Moisture content of timber

The moisture content for freshly-felled Douglas Fir in NZ is typically:

Heartwood : 45%

Sapwood : 145%

The concept used is something like:

moisture content = $\frac{\text{weight of water in timber}}{\text{weight of dry timber}}$

i.e. when the timber is half water by weight, it is said to have a moisture content of 100%.

CANADIAN LOG BUILDERS ASSOCIATION

LOG BUILDING RECOMMENDATIONS 1982

Prepared as guide lines only.

It is the responsibility of every builder to understand and to conform to the best practices of the trade.

SECTION 1. FOUNDATIONS

- A. To conform to the standards of the region

SECTION 2 SILL (OR BOTTOM) LOGS

- A. To be not less than a mean diameter or midpoint diameter of 10 inches.
B. Bottom to be flattened the entire length to a width of not less than 2 inches.
C. To be treated with 1 coat of preservative where in contact with concrete.
D. To provide for an effective drip cap.
E. To be set on sufficient vapour seal and weather seal.

SECTION 3. MAIN FLOOR JOISTS

- A. If dimensional lumber, to conform to local by-laws.
B. If log, to conform to the following standards:
1. Notched to no more than one quarter of the height of the joists.
2. To conform to load bearing tables, such as Load Span Tables.
C. Where all joists are supported by logwork, joist to be set in no lower than midpoint of the full round sill log.

SECTION 4. WALLS

- A. To be built of horizontal logs to the following specifications:
1. 10 inch mean diameter. Recommended minimum top diameter 7 inches.
2. To be peeled and to have a self-draining, scribed fit.
3. Wall length shall be no more than 24 feet between supporting walls, except: spans in excess shall be braced with wood keys, dowels, smooth-shaft steel, steel bar, or log stub walls.
4. Greater wall spans may be effected with larger dimension wood.
5. Header logs shall be cut no more than halfway through at openings.
6. Wall plate logs shall be notched, drifted, or pegged to prevent roll.
7. There shall be no gap in fitted logs more than 1/8" over a 4-inch span at the time of fitting.
8. Excessive spiral grain is to be avoided.

SECTION 5. NOTCHES

- A. Shall be all forms of interlocking notches that:
1. Are self-draining.
2. Are roll-restraining.
3. Are done in a good and workmanlike manner

SECTION 6. WINDOW & DOOR OPENINGS

- A. Shall be supported with at least one of the following:
1. Wood key of 2" x 4" or better material set into log openings vertically.

2. Keying the logs vertically either side of openings with a minimum of 1 inch hardwood or angle-iron or T-section steel of an equivalent strength.

- B. 1. Windows and doors to be a minimum of 2 feet from centre-line of intersecting log walls OR provide additional support.
2. There shall be a minimum of 2 feet wall sections between openings, if horizontal log.
3. Height of openings must conform to the applicable building codes AFTER settling.

SECTION 7. SHRINKAGE

- A. Adequate provision is to be made for shrinkage and settling at all openings, bearing posts, chimneys, fireplaces, interior frame partitions, electrical entrance stacks, plumbing stacks, drains, second storey water and gas pipes, stairs, etc.

- B. Shrinkage to be calculated on a basis of a MINIMUM of 3/4" of settling per foot of log wall height from green to "kiln dry".

*Note: Log buildings do not finish settling by air-drying alone, but must be expected to finish settling only after they have been heated for at least one winter and, in some areas and some wood species, longer.

SECTION 8. CEILING JOISTS

- A. To conform to SECTION 3, MAIN FLOOR JOISTS, substitute "sill log" for plate log or wall log.
B. If notched, to conform to engineering standards for structural members.
C. To be set with undersides a MINIMUM of 8 ft. from finished floor AFTER SETTLING - OR - to conform to Building Code AFTER SETTLING.

SECTION 9. ROOF SUPPORT SYSTEMS

- A. If dimensional lumber, to conform to local by-laws. STANDARDS CANADA, Appendix D.
B. If log, to conform to engineering standards for structural members (see LOG SPAN TABLES)

SECTION 10. ELECTRICAL

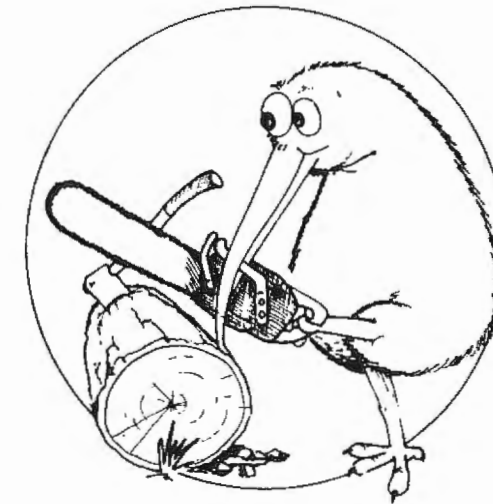
- A. As per code with allowance made for pre-wiring and wall settling considerations. See SECTION 7, SHRINKAGE.
B. Preliminary inspection of wall receptacle wiring required by electrical inspector or according to local provincial requirements.

SECTION 11. PLUMBING

- A. According to code, with settling considerations. See SECTION 7, SHRINKAGE.

SECTION 12. FIREPLACES

- A. To conform to local by-laws.
B. Flashing to conform to code with settling considerations. See SECTION 7, SHRINKAGE.



AN INFORMATION SUPPLEMENT to NO PROBLEM!

NEWSLETTER of the LOG BUILDERS ASSOCIATION (NEW ZEALAND)
(in association with MACKIE SCHOOL OF LOG BUILDING B.C. CANADA)
A NZ Post Office registered publication.

Inquiries (stamped addressed envelope - please - for a reply) to:-

The National Co-ordinator, Log Builders Association,
New Zealand.

Angus McCallum.
R.D. 2, Masterton.
Phone: 25 737

NO PROBLEM!

Newsletter of the Logbuilders
Association of New Zealand Inc.

Editorial No. 23 February 1990



Hello again! And what a grand regional! We held to 1990! As Dame Cath T... Day... the exciting... moving dramas of the magnificent... James seen to have uncorked... spirit of community... this fact... again just be... the surface in New Zealand.

Our Log Builders Association... has been going beginning to new decade. The Log Building Course just north of Masterton was an outstanding success... it was a... the... 1990... of the... City Polytechnic... was a memorable event. Indeed, it may

be said that the Log Builders were the life and soul of the party! They too, as has become the custom for Log Builders, developed a great community of spirit. There were sixteen of them on the five-day course and they crafted the walls for two open-sided shelters shortly to be sited on the banks of the newly developed Henley Lake on the eastern outskirts of Masterton. And for those

who may be thinking of taking a course in Log Building in the next twelve months, it looks as though there will be another course at the Wairarapa Summer School in January 1991. Start your saving and planning for it now! I'll keep you informed. And then, on the afternoon of Wednesday 31 January, the tutor of this year's course, Andrew Dixon, and his wife Jane, were interviewed by Wayne Mowat on National Radio about Log Building.

All good publicity - oh! and photographic cover of the course made the front page of the local Times Age and the inside pages of The Dominion.

Thanks to Juliet Wheeler for her work in all this and to the Wairarapa Community Polytechnic for giving us the chance to be part of the Wairarapa Summer School. Thanks also to the Henley Lake Trust for supplying the logs; to Transport Wairarapa for donating the transport of them from Ngaumu Forest to Rathkeale College; to Faulkners Service Station for a generous donation towards the fuel and oil used in the chainsaws and to Rathkeale College for allowing the building to stay where it is until the foundations are ready.

In early January I purged from the roll about 50 members who had not paid any subs since 1987. A forold friends were among them, but paid-up members cannot for ever pay for those who aren't! In spite of this our

membership remains healthy. We gained around fifty new members last calendar year. And there are those who pay for at least two years in arrears and forward into the future for the same period, as well as some who have rejoined after a period of absence.

The moral - pay your sub when it is due. Just check the number on the address label.

Finally - I beg you - take care on the roads and please be extremely watchful when using chainsaws. Both they and vehicles on the road can be lethal - often they don't give you a second chance. And plant at least two trees for every one you fell. Regards to all in Log Building

— Angus and Pat

About Us

The aims of the Log Builders' Association of New Zealand (Inc) are:

1. To foster the highest possible standards of Log Building
2. To monitor any revision of building codes as they affect Log Builders.
3. To offer an information service to Log Builders

I am the National Chairman and Secretary - my name is Angus R.D.2, Masterton, New Zealand. Phone Masterton (059) 25.737. I am responsible to the members for what I do, through the chairman and committee (named elsewhere in the newsletter).

I send out four newsletters a year to all members.

Any one may join the Log Builders Association provided they pay the subscription annually.

The Annual Subscription is \$20 per annum, or a joint subscription (with two votes) is \$30. Only paid-up members have voting rights. ●

STOP PRESS — Course Available Now

**April 22 to May 4 1990 (inclusive)
at Twizel- tutor Bob Giles**

Another good chance, especially for people in the South Island, to learn something of the craft of Log Building.

For a \$200 tuition fee, plus cheap accommodation and reasonable meal charges, you can learn round and shrink-fit notching taught by a Canadian trained Log Builder.

For ALL details, registrations, queries etc contact Log Building Course, Twizel Area School, Mount Cook Street, Twizel. Phone (05620) 650 between hours 9 to 3 on school-days, or (05620) 741 after hours.

**Please inquire immediately!
places could fill quickly**

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Be careful with chainsaws!

More thoughts from Andrew Dixon

[Our Log Building philosopher's thoughts are always well worthwhile reading and I thank Andrew for taking the time to put pen to paper in late November at Highbank near Methven.]

So another year has almost gone and I must say I am looking forward in getting back home again for the summer - to leaving these norwesters behind; to getting back to the sea; back to the house which one day we will live in. It's been an interesting year for us. Running courses and building houses. Met a heap of real nice people. Travelled a heap of miles - made a heap of sawdust. Learnt a few new tricks. Now the gypsy log builders are moving on again.

Keep it small ... keep it simple

Here's one from the ideas department. U there's one recommendation that I'd make to the prospective owner-builder it's 'keep it small, keep it simple'. I've seen so many houses now, mostly unfinished, that have nearly killed their owners. If not physically, then spiritually - and if not that, then their personal relationships have been shattered. Building a house is a hell of a job - and, for the first time, not to be taken lightly. It's hard enough, when you actually know what you're doing to keep things rolling along - to keep the enthusiasm up. You might end up with a mortgage-free home, but what's the use if it owes you five years of pleasure and your sanity. I'm not trying to put anyone off building their own home. To build your own home is one of the most satisfying things you can do. I'd just like to see that

satisfaction come from the pleasure that one gets from success and not the pleasure one gets when the pain is over. I've seen some really nice owner-built log houses. I've also seen a lot of time and effort going into producing a lot of square metres of space that will never be used. And space that never could be used. I've just finished a house that measures 7 X 6.5 metres to the outside of the foundations. That's small! Two bedrooms upstairs, living/kitchen/bathroom/laundry/toilet downstairs. It's nice to build a place and know for sure that every square centimetre is going to be used. It's nice to know that every square centimetre can be afforded and finished. I built a place once that had the downstairs floor area of this house in just its hallway. A great place for putting a sort of things that don't seem to fit anywhere else in the house. I think it's a bit yet either.

There is beauty in a little

There's beauty in a little. When you're building a log house, you don't need fancy roof lines and quirky angles here and there to make it interesting. There's nothing very interesting about joinery, which is often what it results in. I find nothing relaxing about a lot of windows and a lot of doors. This could have been kept a lot more simply - a lot more easily within the budget. I think I'm not saying that it's wrong to present yourself with a challenge. I'd be the first one to take on something that'd never been done before - that's how I learn. But the one thing I've learnt

over these years of building houses is that there's a hell of a lot of work involved in making the whole thing come together. The actual physical building process - the easy bit - is only half of it. The log work only half of that. Everything takes longer than it should. Everything costs more than you expect. You might have a bunch of fancy ideas and grandiose aspirations, but if you want a house to live in and a happy house to live in, then keep them in your head. Dreams are free - but only while they are dreams. Brought to reality they often run into nightmares. I build log houses because they're honest. They tell no lies. It doesn't matter what you do - everything is revealed. Every how tells a story. The good days and the bad days; and the bits you should have thought more about beforehand; and the bits that you still don't really know how to finish. There - to remind you every day.

I don't really like going into other people's homes to be entertained by a constant stream of excuses why it's not yet finished. I know all that. I have to deal with that sort of thing on my own jobs. I'd rather talk about controlling the rabbits or saving the whales or not buying frigates. I'd rather relax in a finished house with owners who are proud of what they've done.

So here's to the small house. Here's to simplicity. Here's to the log cabin!

(Now I guess I'd better get home and finish our mansion off - in a hurry!) ●

SAWDUST AND CHIPS ... cleaned from here and there

Resene Paints continue to sponsor part of the cost of this newsletter - for which we thank them sincerely. Please explore their products before buying wood coatings and the like - whether it be for logs or any other paint job.

Every two months as part of my duties as a council member of the Wairarapa Community Polytechnic I attend a meeting in the Log-built administrative building of what is now the Tararua Agricultural Training Centre just outside Masterton. It was built by the 63 members of the first two 'official' courses tutored in New Zealand by Allan Mackie in 1982. Sitting there I feel I know every log - even though I had nothing to do with the actual log work. I was, among other things, Allan's gofer. Another interesting point - though of little real importance - is that the Wairarapa Community Polytechnic has as its main campus the Empire Hotel (it had been closed for some years) in Masterton's main (Queen) street. We have recently expanded into what was the hotel's luxury wing. Indeed the room in which Allan and Mary slept before undertaking the W courses at Tardah in 1982, is now an executive's office complete with en suite bathroom. Perhaps there should be a plaque on the wall 'Allan and Mary slept here May 1982'. When all is said and done the Queen and the Duke slept in the hotel in 1954!

Roof Shingles The controversy has been amicably settled! Colin Pernis kindly wrote to wish me 'Seasons Greetings' and reported that he and Stu Bould (who had already written to him on the subject) had met by coincidence in Christchurch. We spent quite some time in discussion. I am very pleased to be able to report that for my part at least it was a most pleasant and amicable meeting. We aired our respective points of view and the outcome was beneficial to us both. Suffice it to say that a good deal of information was shared by us both and I certainly felt that Stu and I parted as friends. Stu confirmed all this in very similar terms. [In my lengthy

experience, people are usually good to deal with. It's the unknown that frightens them. If you can put them in the picture - Angus.] So if you're interested in having a shingle roof contact South Pacific Shingles (1984) Ltd, P.O. Box 13,571, Auckland - phone (09) 644009 to see what Colin Pernis can offer you.

From the President's Table Bill O'Connell, with whom I am in constant touch these days, reports that Derek Mullooly has built a small Log House for display at the International Forestry Conference and Exhibition at Rotorua from February 8 to 11. Bill and his wife Margaret, and Peter Hadley, will be on hand to promote the Log Builders' Association and Log Building.

We are also greatly indebted to Bill for updating our display of Log Building photographs with very smart frames and leg for each of its four sections, so that, as a whole, they fit together to be self-supporting. We had it at the Summer School and it will also be on display at Rotorua - and is available to any one for a similar purpose.

The Log Building Standards are now with an engineer for his approval and Bill expects them back soon for printing.

Bill and Derek have been working on our display for Mystery Creek's World Agricultural Expo '90 from June 14 to 17 (inclusive). It will probably include a Derek Mullooly house, and in order to raise funds for the Association at the Expo, it is intended to raffie log garden furniture and possibly a small log building. Our 1990 AGM will be held at Mystery Creek on Sunday 17 June.

Two useful books on Log Building are The Short Log Timber Building Book by James Mitchell available from Hartley and Marks Limited, P.O. Box 147, Pt. Roberts, Washington, 98281, USA. Also 'The Craft of Log Building' by Hermann Phleps, available from Lee Valley Tools Limited, Ottawa, K2B 3J9, Canada.

The Minister of Forestry, Dr. Peter Tapsell who is very interested in Log Building has been unable to respond to a request from the Log

Builders Association for funding to enable us to commission the Forest Research Institute to complete another round of inspections of ten selected Log Buildings. The position at the moment (since the demise of the Form Service) is that FRI personnel will inspect Log Buildings when they are near them (in the course of their otherwork) and have the time to do so. Obviously this means there is now no set pattern of inspections which we believe is a retrograde step. Individual owners may still have their log buildings inspected at around a cost of \$350-400 per inspection. The FRI are regularly given an updated list - as known to us - of Log Buildings.

The Log Crafter is a new magazine in full colour for Log Builders published at 2820 South Highway 169, Grand Rapids, Minnesota 55744, USA. We were sent a free copy of the first one. It is published four times a year for \$US 11.50 per annum, or \$US 3.50 per issue.

The Secretary of Canadian Log Builders Association, International Tom Hahney, wrote me recently and, inter alia, noted 'your newsletters, by the way, I gobbled up at our annual meeting. In fast some have been borrowed for weeks at a time, and then fortunately returned.'

In recent times at least three Log Homes have been sold - in very different parts of the country. All have fetched extremely good prices, well up to those of conventional houses of a similar size in their areas.

A new break-through in wood treatment technology has apparently been made in the USA and I have recently received some detail of it. This is being assessed by a New Zealand paint company and I will keep you informed. Very briefly 'Resinlock' uses the protective qualities of resin to form a completely interlocked, weatherproof grid that reaches from the surface of the log deep into the wood. 'Resinlock' is water-based for ap-

Continued on page 6

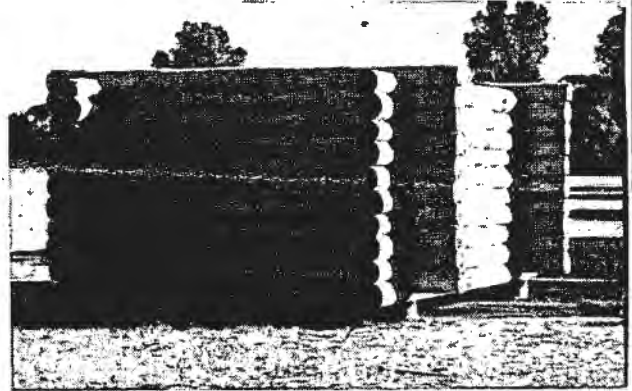
Pictures from Log Building Course Jan. 7-12, 1990



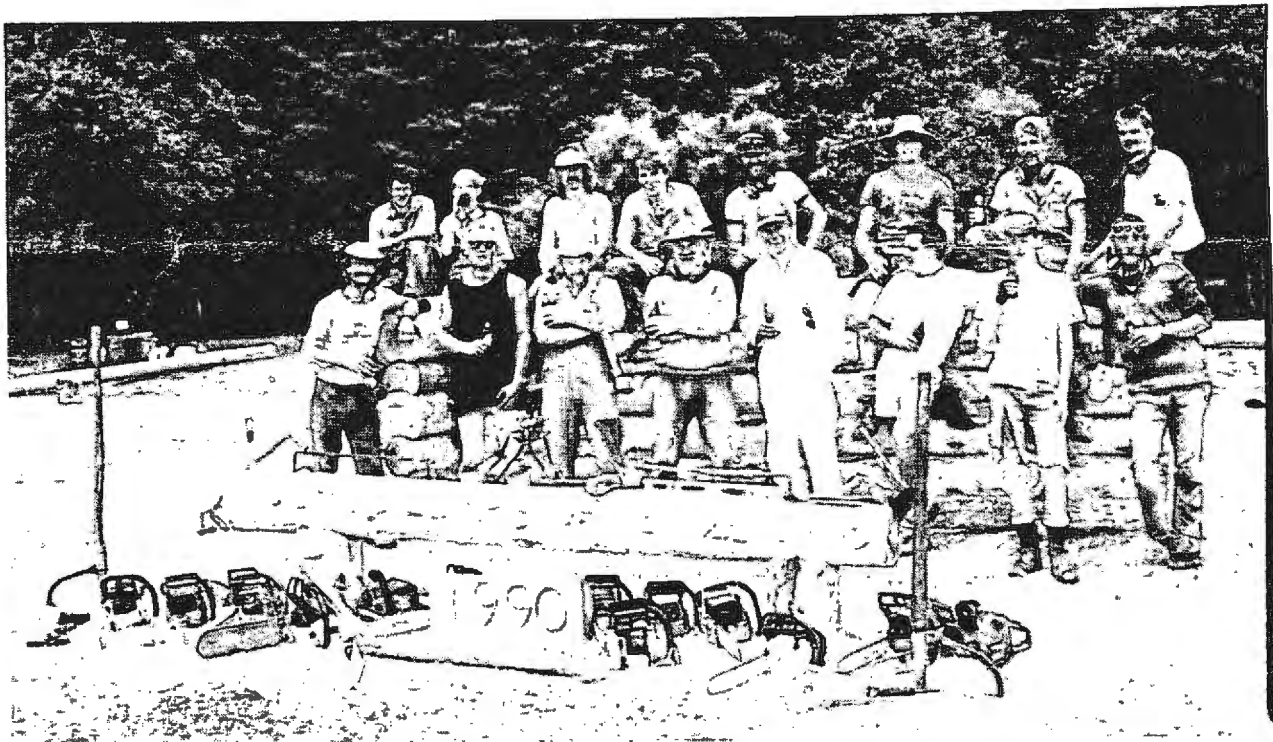
Log Building is thirsty work — but what a community spirit!



Getting started at the Wairarapa Summer School.



The finished logwork for the walls waiting for removal to Henley Lake in Masterton



Logbuilders final group at the Wairarapa Summer School. Left to right - back row: Peter Tunnicliffe, Nigel McGill, Ian Hemiman, Craig Hall, Andrew Dixon, Larry Gough, Henry Bolliger, Eddie Henrard. Front row - Eric Haskell, Paul Brownless, Tom Ewart, Bob Hall, Brett Magee, Shaun Haraki, Damion McGill, Ricki Byl. (Absent Linton McGill).

NOTICEBOARD

The American publication 'Log Home Guide' is available from Carson's Bookshop, P.O. Box 26, Thames - phone (0843) 86301.

Always submit your log building design to an experienced log builder for comment - could save you a lot of time, money and headache.

off-cuts of polystyrene are available from Bill O'Connell, Delhi Street, Wairoa for only the cost of packing and freight. Cut into strips and soaked in bituminous 'Colas', before being put through an old-fashioned wringer, this material makes excellent waterproof filling for insertion into grooves.

Allan and Mary Mackie's address is R.R.1., Pender Island, B.C., CANADA, V0N 2M0. Phone (604) 629.6521

The Mackie School of Log Building's address is P.O. Box 1925, Prince George, B.C. CANADA, V2L 5E3. Phone (604) 563.8738. The manager is Arone Kleamyck.

The Del Radomske Okanagan School of Log Building's address is R.R.5, S-13F, C- (Philpott Rd. Kelowna, B.C. CANADA, V1X 4K4.

Phone (604) 765.5166 Fax (604) 765.5166.

Do you want ...

Log building tools made? Or furniture for doors and windows (i.e. fittings - catches for doors and windows). Then contact Brian McDonald and Son, Huka Forge, Huka Village, P.O. Box 1417, TAUPU. Phone (074) 84338. Or just call in and see him - you won't regret it.

WARNING!

Log Building is labour intensive. It is NOT a cheap method of building. Building with logs is a highly skilled craft that requires practice and experience before setting out to build a Log Home. On the other hand, good tuition can readily give the basics of the craft to the average handyperson. It should be remembered, however, that during a course of instruction only the rudiments of log building may be acquired.

Special Offer - JONSERED SAWS

The NZLBA (Inc) has a worthwhile discount from a Jonsered (made in Sweden) dealer on all Jonsered Chainsaws sold to financial members of the Association, as well as a commission to the Association on each Jonsered Chainsaw sold. When you are thinking of buying a new chainsaw, think Jonsered - and either phone or write to me for details. Angus McCallum, R.D.2, Masterton. Phone (059) 25.737. Free delivery, as soon as your cheque with order has been cleared, plus 3 months guarantee. And when you buy a new saw buy an extra chain at the same time and use them week about. That way you get the maximum wear out of the two chains and the sprocket. Similarly, when you buy a new chain, buy two, and a new sprocket. That gives the greatest economy. Other Jonsered products also available, logger tapes, calipers, lifting hooks and tongs, canting hooks etc.

Arrange a demonstration - preferably for a group of interested people - of the EDER Bark-Stripper, call Robert Pool at Waitati (Otago) phone (024) 822 837 to discover the name of your nearest agent. And Robert Pool also advises that the German Company that makes the EDER Bark Stripper attachment for chainsaws also produces a cutter-head attachment that can cut a 'V' groove, or make plunge-cuts (minimum depth 55mm and up to 300mm deep) into logs. Mention this Newsletter please.

Subscriptions and Things

Please take note that in future I may purge from the mailing list, without further notice, all those who have been

unfinancial for more than a year. In other words all whose newsletter has a number less than 89 on its address label. Post your subscription right now - it may be YOUR LAST CHANCE to maintain your membership. And to those of you who may change your address - please let me know! I get too many newsletters returned 'Gone - no address' - and usually they are paid-up members. I simply lose touch with them - and that's a pity. Remember - to discover what you owe, subtract the number in the right hand bottom corner of the address label on this letter from 90 then (if the answer is 1 or more) multiply it by at least \$20 (the annual subscription) and send it to me by return mail please - then you won't forget! And remember to put your name and address on your cheques please.

Please send me photographs of your Log Building or of anything that may appeal to other log builders. Quite often members say they will let me have a photo and then they forget to send it. If necessary I will pay the cost of the print - or if you send me the negative I will return it to you as soon as I have a print from it.

Please write me about your log building efforts. You love reading about others, others want to read about you. On the other hand, if you do not want extracts from your letters printed, please tell me, though I try to be very discreet! Or you can be anonymous!

Wanted - Log building work

By Allan Cant, experienced Log Builder and electrician, labour only basis. Go anywhere, own accommodation in house truck. Contact c/o 9A Nola Avenue, RAUMATI. Phone (04) 72920

For Sale

Reasonably priced House Loads of Logs for sale. Douglas fir - 12" base with 60 foot length. Inquiries and Orders - phone Mike and Debbie Baugen (064) 44480 or write - P.O. Box 78 Wanganui.

URGENT - I am presently felling - to be completed by the end of March - a stand of excellent 50 year old Douglas Fir. To arrange inspection, price and delivery, please contact me immediately - Chris Jenkins, 50 Patapu Street, Wanganui. Phone Wanganui (064) 37750.

When applying for a building permit, know as much about log building as the building inspector. Don't push him, give him as much information as you can about the craft - lend him 'Building with Logs', 'Information Supplement to No Problem!' and 'Guidelines for Log Building' (as soon as it becomes available) to read. In our experience it pays to have your plans checked by an experienced log builder. It may also be a requirement to have your plans countersigned by an engineer, unless it is a well-used design. Unless an architect is experienced in log building, it is doubtful if the employment of one is worthwhile. It is a specialist business. Use the Log Plans Book to get your ideas and use a draughts person to draw your plans. The money saved can then be spent on the best available logs.

A design and plan drawing service is offered by Andrew and Jane Dixon, Onekaka, R.D.2, Takaka [phone (0524) 59241] who are commercial Log Builders.

Panelling and other timber (boards, battens, exterior cladding and beams) for sale from Ministry of Forestry Office in Rotorua (073) 80089 - ask for Paul Carpenter. Timbers include Lawsons Cypress, Macrocarpa, Larch, Douglas Fir, Redwood and a number of Eucalypt species.

Dry logs won't rot - why not put a veranda right round your log building and always keep the walls dry? ●

KN OTTY P R O B L E M S by LOG DOG

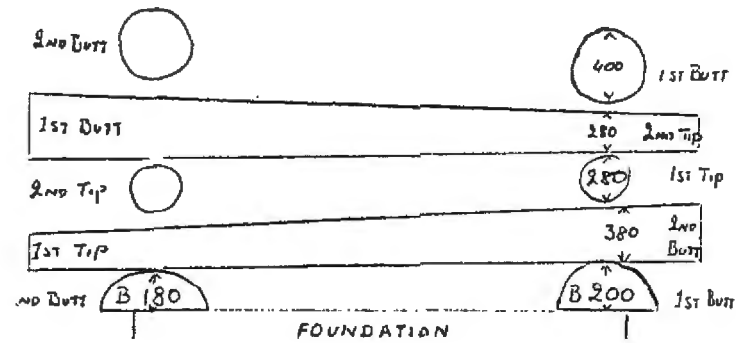
The first in a series of anonymous questions about log building, together with possible answers. BUT, to keep the series going, I depend on readers to send me their queries. If you have answers you've discovered for them, that's fine - send them as well. If you want answers, I will try and find them and print them here; or I will just print the question and see if any one has an answer. If you disagree with any answers given, or have alternative ones, please write in with them.

Question 1. When building with logs I know the butts end tips of the logs in a wall must alternate, but how do you determine how much to cut out in a notch and still leave enough for the next round? Is there a formula for this?

Answer 1. There is a formula. At a corner the logs are set tip, tip; butt, butt; tip, tip, and so on. The formula is first tip - leave half or less than half a tip. Second tip - leave more than half a tip and less than half a butt. First butt - leave half or more than half a butt. Second butt - leave half or less than half a tip.

Comment - the important thing to learn is to think ahead and remember what is to go over the round after the one you work on at the moment. If the logs in your pile are all the same size (and that would be exceptional) then there would be little problem, so it pays to check the diameter of your logs - both tips and butts - to get an idea of the range of sizes you have to choose from. This makes it easier when trying to calculate how much to leave after scribing and fitting a log.

In the diagram you notice the butt of the sill log on the left is smaller than that on the right. This is to accommodate the tip which will go over it. Starting from the sill log on the right, which we will call '1st Butt' - you need to cut 200mm out of the 2nd Butt (380mm diameter) to bring it down to the foundation. This leaves 180mm which is slightly more than half the First Tip of 280mm.



So now when 180mm is cut out of the 280mm First Tip, it will leave 100mm which is less than half the 2nd Tip of 280mm. Again 100mm cut from 280mm leaves 180mm which is less than half the First Butt of 400mm. Now 180mm from 400mm leaves 220mm which is more than half the 2nd Butt - and so on.

That takes care of one corner - what about the rest? The same formula applies, but you notice the sill log on the left in the diagram is classed as the 2nd Butt, because it has a lip over it. Now you can practice by drawing similar diagrams and changing the sizes of the logs. Most builders cut what is termed a rough notch first, in order to bring the log down to as near an even gap between the logs as possible and so make it easier to do the final scribe. I find 60mm a comfortable distance to manage. This of course is affected by any hollows or kinks in the logs and actually the final setting of your scribers will be slightly more than 60mm. If at one end of a log you need to take out 200mm, the first scribe for

the rough notch would be 200mm minus 60 = 140. And at the other end you need to take out 150mm - the first scribe would be 150mm minus 60mm = 90mm. The log should then sit down with approximately 60mm gap for the whole length.

Question 2. what are the advantages of building a log building 'off site' and then relocating it on its permanent site.

Answer 2. (a) It saves making a mess on the final house site - tractors can churn up the ground around a building; log off-cuts, rippings etc. have to be cleared away - both of which will mean a lot of extra work later.

(b) Holes for electrical airing etc are best drilled from the top of the wall down - as the building is being dismantled prior to moving.

(c) Sometimes the size of the house site does not allow a builder enough room to work efficiently. ♦

Fish and Chips anyone ...

Before the students on the Fly Fishing Course at the Wairarapa Summer School caught a fish, the Log Builders presented them with a fish and chips (all carved from wood!)



Logbuilder's Lament

Written by Bob I : d sung I k Log Build n i the sing ig of the i i up Summe: h - with references to other courses. To the tune of 'Old S k p'.

We don't play much croquet.
Or dress up for show.
Some say we're too noisy,
And others too slow.

But we get so much pleasure,
From tending our logs,
While revving our chainsaw,
And adjusting our frogs.

For we work with nature.
In sweet harmony,
All greenies together,
It's touching to see.

How much we accomplish.
In the course of a day
Hours like the chips fly,
When the fish are away.

We master our art form.
Like learning to paint,
Just one step at a time mate,
Or a painter you ain't.

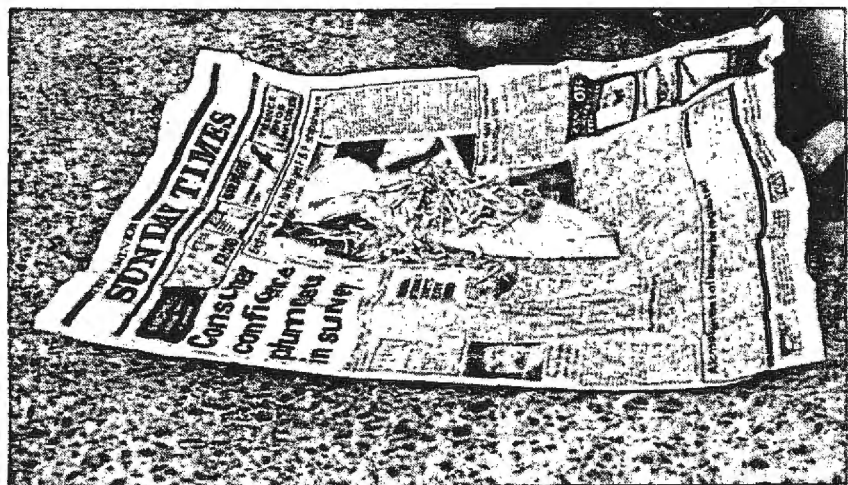
We're creating new history,
Though oral it's not,
Of homes to remember,
When the rest be forgot.

While not into marbling.
It's not a concern,
Cos 'we've got enough wood chips,
For paper to burn.

So come all ye gardeners,
And listen to me.
Won't you make a nice garden
For a Log House to be?

Then we all can make money,
As well as have fun,
Cos one needs the other,
When it's all said and done.

Unless you're like us
We're FUN and we're FREE,
So give us a hand now,
Or we may charge a fee!



FROM MY MAILBAG

Please note that when you write to me I may quote from your letter in 'From my Mailbag'. If you do not wish this to happen - or if you wish to remain anonymous - please tell me so in your letter. But do remember that people love to hear what others are up to! And do write - and send photographs, please!

A Greeting to all

By our Poet L(og)aireate Vicky Frost

Merry Christmas to you,
We've so much to do.
The '90s are near.
Bill has to get his A's into gear.
If I thought the '80s were hectic,
Next year will better it.

Happy New Year to all -
With houses big and small,
To new friends and old.
Hope the new decade will hold
New memories and dreams
You aspire to fulfil.
We can't wait until
You share them with us
At the next L.B. convention, down South.

The Log Builden Feast turned a very wet Saturday into a cheerful day of chatter for twenty or so Log Builden, families and friends. We've just had a quick trip down south and visited a variety of Log Homes and met some of their hard working m e r - builders. As usual we were most grateful for the hospitality shown us upon our unexpected arrivals - especially on a Sunday morning! We're heading home in a couple of week. It will be nice to spend some time in Onekaka before heading up your way in January.

- Jane Dixon - then at Rakaia
[Jane enjoyed the painting course at the Wairarapa Summer School in January, while Andrew tutored the Log Builden.]

The first thing to absolutely impress us with this residence was the workmanship of the joinery. They were so well done that even feeler gauges (I'm a marine engineer) could not penetrate them. Thanks for your immediate trust and we look forward to on-ping contact with other members.

- Philip Cameron - Auckland

[Philip and his family have just bought a Derek Mullmly built home.]

We've been living in our log home for vv

years now and think it's great. Often do too - some mmc to visit, some to stay. Our visitors book is filling up fast! Hope we see you in Queenstown soon.

- Stuart and Doreen McKenzie, Queenstown
[Thank you for the photos - you are definitely on our visiting list and we look forward to meeting you - Angus]

I have recently been researching Log Building after a friend asked for my assistance to build a Log House. I am also interested in building one for myself and maybe making an effort to specialise in Log Building. I'm a builder by trade but would like to specialise in buildings with more character than hardiflex and weatherboard.

- A builder

I've had a busy year. Mostly things of a family nature....

Our small family tends to link up in far-off places. In October, while Montreal Symphony Orchestra was on tour, Nadina [she plays the bassoon] and Allan were able to spend a day or two together in Tokyo, Japan. Allan spent a total of 9 weeks (2 trip) in Japan this year. His regular teaching-month of August was my busiest too, with many summer guests to enjoy. His second journey was my opportunity to paint our upstairs bedroom. Sounds simple enough. But it's 36 feet long....it took me five weeks of working on the painting, sanding, fetching, cleaning etc and of phoning and hiring and waiting for workmen. I was exhausted by the time it got finished (night before it was time to run to the Vancouver Airport to pickup Allan) but worth it.

- from the desk of Mary Mackie,
Pender Island, BC, Canada.

(Clearly there's life in the 'Founding Mother' yet!)

The newsletter (No Problem!) and visitors have kept us somewhat up-to-date with life in New Zealand not to mention a CBC TV programme called The Fifth Estate that was filmed in Masterton. All going well here - we've had a very productive year building and making improvements to the place. Our crew is first class and made it so much easier for Del to be away. First, teaching in Japan for two months (I joined him in Japan then we spent a few days in Hong Kong M d Hawaii) Then Del was off to Germany where he and another fellow did a homeshow, then he toddled off to Norway, his Norwegian on his mum's side

- Helen Radomske, Canada

Just a brief note to catch you up with the local gossip and pay my debts. The building programme is going well with the plumbing connected recently. We have fitted a modern coal range and a hot water heating system which so far

looks to be a winner. Hope to move in before Christmas. [Bob rang a few days ago and they had just moved in - still much finishing work to do.] Went along to the Get-together with Andrew and friends at Rakaia. Renewing friendships is good fun especially over a few bottles of Andrew's homebrew and a bottle of Paul Grenier's Canadian Club. Andrew's building project was, as expected, very impressive Logwork. There are now two large Log Homes here in Twizel which should make us worthy of a visit.

- Bob and Helen Giles, Twizel

[Our South Island itinerary is building itself!

- Angus]

Andrew and Jane [Dixon] called in the other day to cast expert eyes over my logs. Andrew picked out the roughest looking one and declared that if they were all as good as that he'd be happy. I was interested in Peggy Prosser's comments about a log house here, I've spoken to one of my neighbours who is a third generation farmer here and he remembers an old log place about 100 metres or so across the river from my place where he said he used to go to shoot rats when he was a kid. Apparently all the Dovedale valley was heavily bushed when the early settlers arrived. - Beech and Matai king the main species. This info has only been obtained through casual conversations, but I'll try to find out more and let you know.

- Iain Dephoff, Wakefield

We have just changed our address - we now live on our land (at last!) in what will be my garage-workshop eventually! It's 1200 sq.ft. 2-storied board and batten barn type place in which we have installed all the interior fitting for our log house and which took me nine months to build in my spare time. We were shocked at the cost of putting water/power/septic-tank and driveway onto the land - nearly \$20,000...I have just spent a week looking, learning and helping Dave Alexander and co constructing another log home for a lady in Waihi township. Dave and his family made me feel very welcome as I pitched my tent in their paddock for the week. Dave gave me some constructive advice on my house plans after a long hot day behind a chain-saw. He has a very good set-up for building log-houses (15 to date and 3 waiting) and does an excellent job. I really appreciated what he showed and taught me and I now have the confidence to try to build something small as a build-up for the start of my log home in the next year. So 'thank-you' to Dave for the time, help and encouragement he gave me.

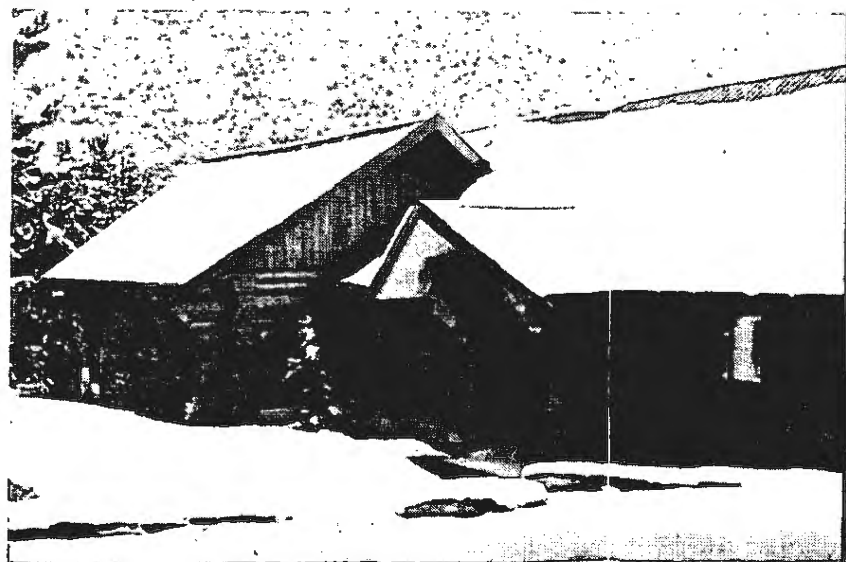
- Russell Jennings, Auckland

SAWDUST & CHIPS ... from page 2

plication by sprayer or brush. It penetrates, say the makers, the capillary system of the log to form a smooth interlocked protective grid. The makers, who also produce a colour matched acrylic sealant and chinking material, are Sasheo, 3900 East 68th Avenue, Commerce City, Colorado 80022, USA. Phone (303) 286.0400 Fax (303) 286.0400 Any one who is really interested should send me \$6 for photocopies of the 35 sheets of the full publicity pack - or \$2 for photocopies of just the 'Resinlock' log treatment publicity pack

Mary Mackie is honoured in the latest Log Building News, No 3 of January 1990 - just received. The Canadian Log Builden Association International have voted to recognize Mary Mackie as a 'Founding Mother' of the Association in appreciation of her early work. She has accepted the designation.

Hahney on roof trusses part 2 is also in Log Building News No 3. A SAE plus a loose 40c stamp sent to me will procure you a copy. The first part - 'Keeping the roof on' - is still available from me for the same cost - an SAE plus a loose 40c stamp - or two of them if you need both Tom Hahney pieces. •



Stuart and Doreen McKenzie's 'Tulach Ard' in the snow out of Queenstown.

Log House Bookshop - c/o Angus McCallum, R.D.2, Masterton. Ph: (059) 25 737

I hope usually to have in stock a few copies of Allan Mackie's 'Building with Logs' — and I have plenty of Log Span Tables. All other book orders will be sent by me to Canada — in groups, at intervals of not more than a month, together with the draft for the appropriate amount of Canadian dollars. Your books will then be posted direct to you from Canada within a day or two of their receiving the order from me. This means a delay of several weeks from the time you place your order to the time you receive your books — due to the slow book postage between Canada and New Zealand. Allow at least 16 weeks for the time gap between order and receipt, although it can be a lot less.

I shall of course only be able to order books if you pay cash/cheque with your order to me. All prices include postage and packing. Please note that these prices COULD change — without notice — due to the floating exchange rate.

A Picture Book **Of Log Homes** by B. Allan Mackie.
180 U x U pages, colour Elled, large photos.
Allan Mackie's tribute to today's elite log builders.
27 beautiful Canadian homes — each a work of art.
At \$65, it is still a gift and a really fantastic publication. \$65.00

Log House Plans
48 different plans in the book. \$31.00

Notches **Of All Kinds**
More detail on notching \$26.00

Building with Logs
The Log Builders manual \$31.00

Log Span Tables by E. Allan Mackie.
enables log sizes to be calculated for floor joists,
beam and rood support systems — includes C.L.B.A.
building recommendations \$16.00

Log House Magazines
STILL only \$30 per set — including postage to anywhere in New Zealand. Rock bottom warehouse clearance price — courtesy Log House Publishing Company in Prince George, B.C. Canada. By order only.

Membership lists and lists of Log Buildings in NZ
Members may obtain a list of members by sending me \$4 plus a large stamped addressed envelope. The same applies to my list of Log Buildings but the charge is only \$1 plus SAE.

Miscellaneous

The Allan Mackie working drawings for making a set of scribes for \$2.00 posted.

Hard long-lasting indelible pencils at \$1 each plus 40c postage per order.

Specifications and a guide to making log building contracts — courtesy the Minnesota Log Crafters Association — copies (8 pages) of a survey (and the results) taken by them in 1988 for \$2.00 plus SAE please.

A simple one-page questionnaire (courtesy the same Association) that, when completed, gives a good summary of the cost of building a log home that could be useful for a valuation for insurance or sale purposes etc. This will be sent with the

survey for no extra charge, or on its own for \$1.

Information Supplement to 'No Problem!' No 2 of December 1982 — includes paper on log preparation and preservation and the 1982 Canadian Log Building Association's recommendations. \$1.00 per copy posted.

Also available — thanks to Robert Chambers — a sample contract to build. Please send a SAE plus an extra 40c stamp loose to cover photocopying costs.

T-shirts

T-shirts New Zealand Log Builders — popular for that small gift! Features our logo. Very a really excellent quality.

Available in

- * black on golden yellow;
- * white on navy
- * dark blue on light blue;
- * black on grey;
- * black on red;
- * blue, red or black on white.



Singlets the same as above — and in the same colour combinations.

Sizes for both — M (fits average woman and smaller man), L and XL. Children's sizes available at slightly less cost — depending on size.

T-shirts and singlets
both NOW \$19.00 each posted

Video Tape

A Video Tape on VHS E60 cassette, lasting about 60 minutes, on Log Building construction. Includes 20 minute film of Allan Mackie demonstrating log notching etc; a TV interview with him, shots of work on courses, and the Accident Compensation Commission's film on chainsaw safety.

Loaned — to paid-up members only — for \$5 posted — please return within 4 weeks.

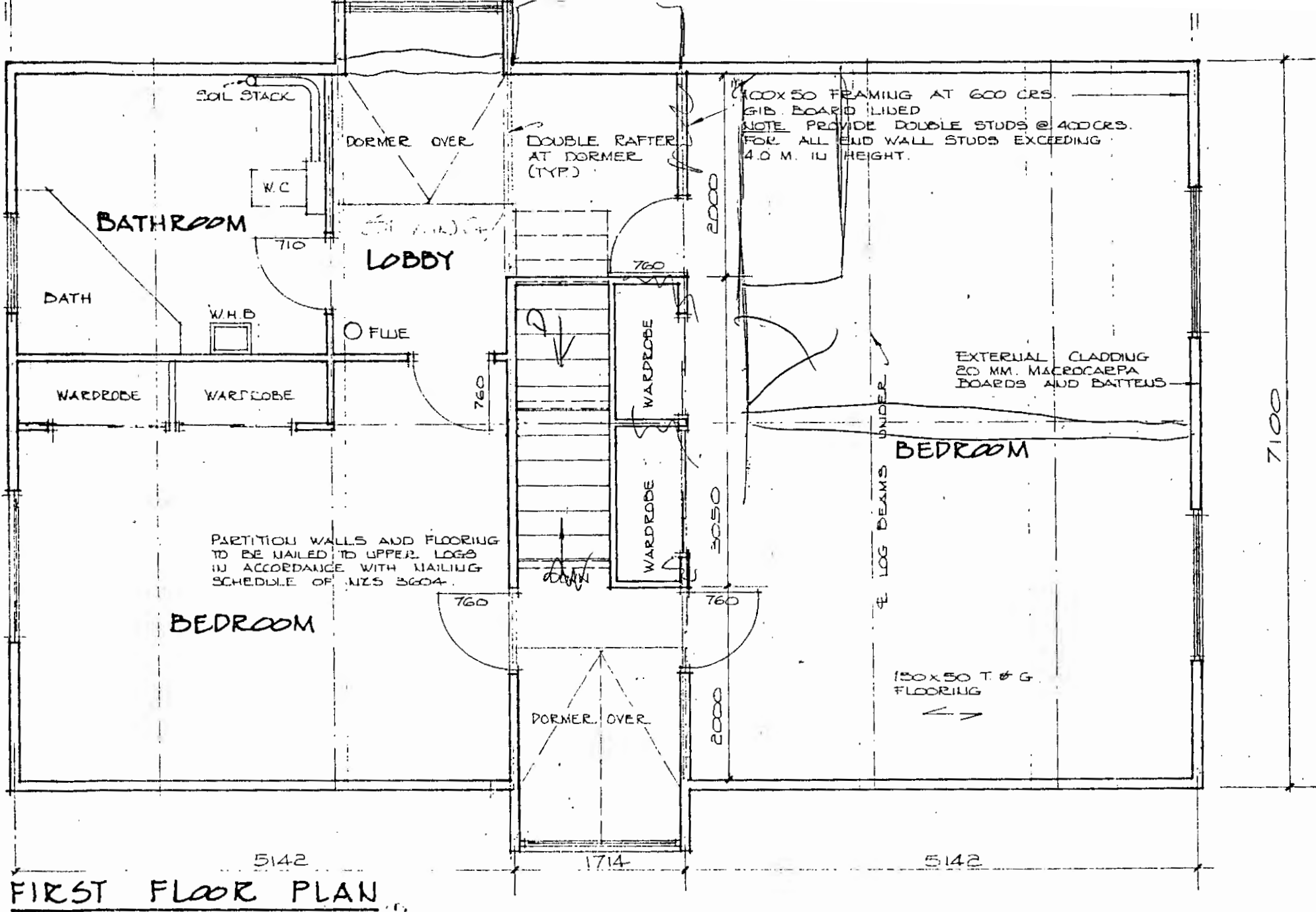
"Building with Logs in New Zealand" by Bill Knight and Liz Brook

This 128 page book illustrates with 147 photographs and 47 diagrams the various stages of building a Log Home — covering cost, drawing up plans, selecting and felling trees, choosing a site, laying foundations, the tool for the job and how they work (each is illustrated) and the different building techniques. Also included are the notches used in log wall construction, the making of doors and windows etc. The photographs, drawings, diagrams and a glossary of terms add to the clarity and usefulness of this publication.

Retails at \$29.95.

What better Christmas present could you give a Log Building enthusiast?

Hedley's Bookshop Limited of Masterton will post you a copy of 'Building with Logs in New Zealand' for just \$31.45 and providing you use the enclosed order form when ordering have very kindly offered to donate \$3 to the Log Builders' Association of New Zealand for every copy so sold.



FIRST FLOOR PLAN

1)
2)
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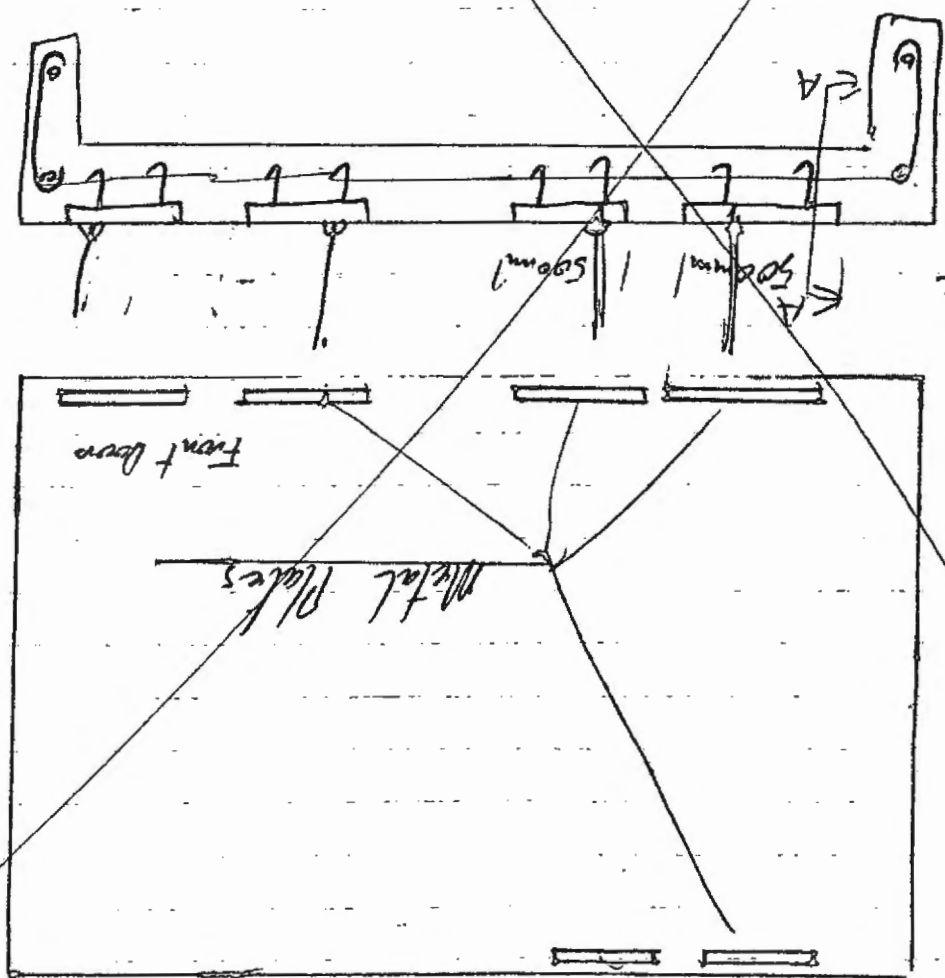
4720554

Ph 084

D. I. STODART

are going to be
Don't really know how wide floor
are
Very difficult to fit logs
Recess

Plates to be connected in
Foundation at front & back to
weld 12" rod onto where
log work is finished.



Back door

Jim Wallace

Rot sets into Kaikohe cabin

Bugs, fungi invade logs

Kaikohe. — Borer and huhu grubs are making a 'meal' of Kaikohe's log cabin while rot and fungi have invaded lower logs.

An eye-catching feature at the eastern end of Kaikohe's commercial area, the cabin has served mainly as a tourist information centre since it was built seven years ago.

In another two or three years the cabin might be no longer habitable. Kaikohe Community Board member and retired district forest ranger Colin Sutherland says.

The many huhu beetle exit holes indicated the grub was demolishing the inside of those logs while an infestation of house borer was indicated by their flight holes, he said.

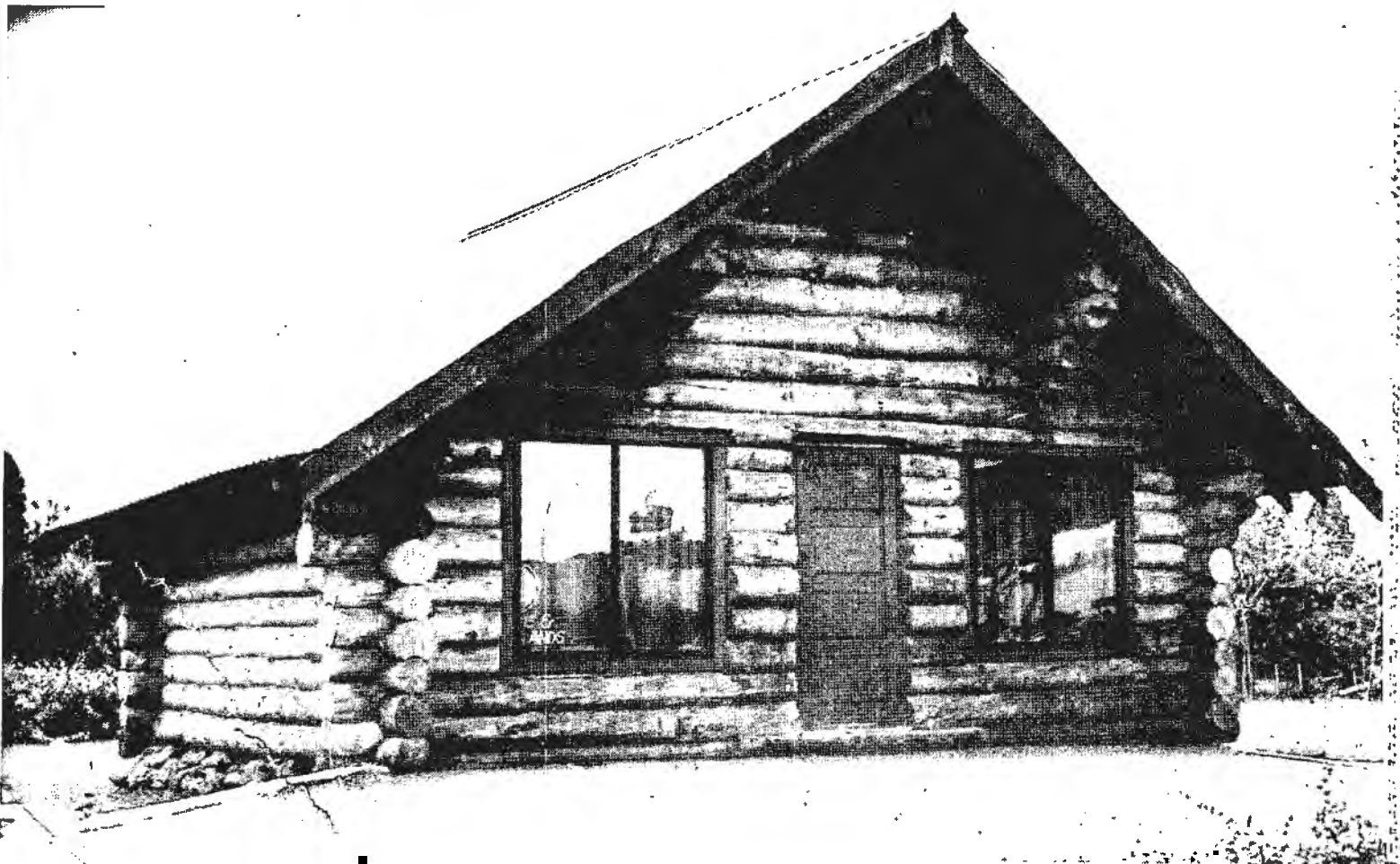
The problem was the use of untreated radiata pine logs when the building was erected as a skills training exercise about seven years ago.

Surface treatment after building was inadequate because the treatment could not reach all surfaces and would not penetrate to the centre of the logs, Mr Sutherland said.

He believed nothing could be done for the log cabin short of rebuilding it. It would eventually have to be demolished.



□ Mr Sutherland examines the deterioration of logs in the Kaikohe cabin.



□ The days of Kaikohe's eye-catching tourist information centre appear to be numbered.

Kaikohe log cabin can't be compared With Dargaville home

Claims that Kaikohe's seven year old log cabin "Information Centre has deteriorated to the point where it may soon become uninhabitable, have failed to worry either the owners or builders of Dargaville's new log home in Awakino Road.

Recently, it was reported that Kaikohe Community Board member and retired district forest ranger, Colin Sutherland, had suggested that **huhu grubs** were demolishing the insides of the logs which had also become infested with **borer**, while rot and fungi had invaded the lower walls.

Mr. Sutherland believed that nothing short of rebuilding would save the cabin which was originally built with untreated logs as a training exercise.

The owners of Dargaville's log home Jacqui Hastings and Wayne Browne, and Dianne Stodart wife of the builder who lives in a similar home, said the Kaikohe cabin could not be compared with the Dargaville home.

Mrs Stodart said the Kaikohe building had been the first of its type built Northland and a number of lunders" had been made during construction.

These included the lack of overhanging eaves to keep the weather off the

logs, poorly fitting logs with gaps letting in moisture, and the use of 'batts' in the grooves interlocking the logs, which acted as a sponge soaking up moisture. Also, the exterior had been varnished, which prevented the logs breathing, and no insect preventative was used.

"The Okaihau Scout Den which was built a year later is still as solid as a rock and has no problems," she said.

Ms Hastings said she was aware of the deterioration in the Kaikohe Information Centre when deciding to build with logs, but had no worries because of the differences in treatment and construction.

She pointed out that the Kaikohe building is sitting on asphalt, but her home has fully treated base plates, and the logs have received several coats of copper naphthenate and will be subjected to an ongoing treatment programme, starting with a thorough spray with wood preserver in 12 months time.

Although their home still has considerable finishing work to do, Jacqui and Wayne moved in two weeks ago and pronounce it, "just great - better than expectations."

Rotting log cabin to be given extra protection

By John Griffiths

Kaikohe. — Kaikohe Community Board is moving to slow the early demise of the town's log cabin.

Built with untreated radiata pine logs as a skills training Project about seven years ago, the lower wall logs have been invaded by huhu beetles, house borer and rot-inducing fungi.

The base logs were rapidly deteriorating through lack of Preservation treatment at the time of construction, forest Protection officer for the Ministry Forestry, Dave Rattray said in a report to the board meeting yesterday.

Removing the logs and replacing them with treated logs would be expensive and an engineering opinion should first be sought.

While the upper structure appeared sound at present it might not remain insect-free for long, he said.

Building inspector Malcolm Stevenson said he could not understand why the building was ever allowed to be erected with untreated timber. Treatment could have been given for a minor cost leaving an asset and not a liability, he said.

He believed it was too late to fumigate and apply preservatives. The lower logs were far too decayed to be worth replacing.

It was just a matter of time before the building became totally useless. However provision of guttering and flashing to the roof should be provided in an effort to slow deterioration, he said.

Board member Colin Sutherland recommended that the building be dismantled and removed. He also said proposals for other log cabins in the district should not proceed with untreated wood.

The board decided to carry out work suggested by Mr Stevenson including addi-



□ Colin Sutherland

tional floor support, and to use the building for community purposes meanwhile with regular inspections.

It will also request further research into any possible means of treating the deteriorating logs.

Log cabins

I refer to the article on the demise of the log building that is Kaikohe's information centre (Advocate, January 2.)

The building is obviously rotting, but not for the reason stated. It is feasible and practical in terms of longevity to construct an untreated pine log cabin. but to do that, there are certain "musts".

Firstly, two metre eaves must be built all around the building to keep the logs protected from the weather. Secondly, as each log is fitted, it must be treated with up to three coats of a reasonably low or non-toxic wood preservative (for health reasons, and hence the non-use of treated logs).

Thirdly, the logs must be treated yearly with a brush or spray-on application of a water repellent.

The Kaikohe building contains several blunders: there are no eaves; the logs are not well-fitted, allowing in moisture; there are Batts in between the logs which have soaked up moisture; the outside has been varnished, sealing in all the moisture. All this has added up to extensive rot.

A well-designed and crafted pine-log building will not rot. There are now three in Northland, and hopefully many more to come as people see the advantages of these cost-efficient and energy-efficient build-

KAIPARA

DISTRICT

COUNCIL

PRIVATE BAG, DARGAVILLE
Please Address All Correspondence
to the General Manager.

TELEPHONE (0884) 7059 (5 LINES)
FAX No. (0884) 6756
DISTRICT OFFICE, HOKIANGA ROAD,
DARGAVILLE, N.Z.

REFER ... C.W. ASHBY

FILE ~~B242R~~

CWA:KV

Building Inspectors.
Copy For your information

24 July 990

MEMO TO: General Manager

FROM: 'DirectorWorks/Services

SUBJECT: Construction of Lop Houses

We have recently received an application for Building Permit to construct a house using natural round logs in similar fashion to the pioneer homesteads in Canada and North America where the logs interlock at the building corners and are stacked horizontally on top of each other to form the walls.

This type of construction falls outside the scope of the New Zealand Standard Bylaws. However, under Section 3.2 of Chapter 3 of NZS 1900 (attached), with the prior written approval of Council subject to certain conditions, such materials and forms of construction can be used.

- (i) A written application for permission to employ such materials and form of construction has been made and is attached together with the specification.
- (ii) Fortunately, the former Works Engineer, Mr Bill Walker had done a reasonable amount of research on building log houses back in 1982/83 and I have been able to thoroughly read this reference material over a weekend and now have a very good understanding of this technology.
 - (a) The Principle Proponent of log building is a Mr Allan Mackie of Canada who has written a reference book and lectured extensively on the subject and set up a training school. The reference book he produced is excellent and is to be used as a specification reference book in the construction of the proposed house.

(b) Log buildings in Scandinavia have been in existence for hundreds and possibly thousands of years. When properly constructed, they have good thermal insulation and acoustic properties. They are more fire resistant than framed construction, are highly earthquake resistant, cost effective to build and aesthetically pleasing.

(c) The one area of concern is resistance to rot and insect attack as the logs are not commercially treated. However, providing the detailing of the building is good, with larger eave overhangs and protection against ground contact by untreated logs, the battle is half won. Cutting of the trees at the right season to minimise sap content discourages fungi, etc. Further painting of the logs and in particular all cut joints with a preservative followed later by boiled linseed oil can offer reasonable protection. Even with conventional pressure treated timber, any cut ends are supposed to be painted with preservative, but I would bet that very few builders would normally bother. Hence, providing due care is exercised, it is probable that attack from rot or pests can be virtually eliminated and judging from overseas experience, the building could quite easily have a life of perhaps 300 years with adequate maintenance.

The normal accepted design life for a building in New Zealand is 50 years. With such strong construction it is highly probable that even with particularly severe bora attack the building would adequately serve out its life. The improvement on the Allan Mackie system, would be to use a C3 treated 200 x 50 bottom plate as has been done elsewhere in New Zealand.

(d) Historical experience overseas indicates that some of the old inadequate foundations tended to fail long before the building. However, with a good reinforced concrete foundation conforming with New Zealand codes, this problem can be easily overcome.

(iii) With the information available no further testing will be necessary as a pre-requisite to issuing a Building Permit. However, as this is a somewhat "experimental" building in our district, I believe some log off-cuts should be retained with various stages of treatment as applied to the house and left in ground contact on site **so** that accelerated deterioration can be monitored.

(iv) Recommendation:

I would recommend that Council grant permission subject to the following 'conditions':

(a) The trees to be used shall be cut at such season as to minimise sap content;

(b) The log building shall be constructed strictly in accordance with the book "Building With Logs" by Allan Mackie, unless otherwise approved herein or with the written approval of the Engineer;

(c) The builder shall be a member of the Log Builders Association (New Zealand), or hold a Certificate of Attendance at an accredited Log Building Course;

(d) The bottom plate, before laying any logs, shall be of C3 treated 200 x 50 timber;

(e) The bottom log shall be fastened to the foundations to the satisfaction of the Engineer;

(f) Log ends in the vicinity of door and window openings shall be inter-connected by the use of 12mm deformed bar drifts drilled through the first log and hammered into the second log and counter sunk sufficiently to ensure that the log above will not become "hung up" after log shrinkage and settlement has occurred;

(g) Any surfaces, cut or otherwise shall be treated with a preservative to a satisfactory standard as set out in the specification prior to butting together of members. The entire structure shall be suitably treated in accordance with a specification approved by the Engineer and that specification shall be strictly followed;

(h) A series of six or so log off-cut control samples shall be prepared and left on site in exposed, ground contact conditions so that accelerated deterioration can be monitored against the various stages of treatment applied to the building. The first control sample shall be untreated and they shall be identified with marked aluminium tags to prevent future confusion;

(i) The interfaces between logs shall be packed with approved insulation material prior to seating of each log;

(j) Eaves overhang shall not be less than 900mm;

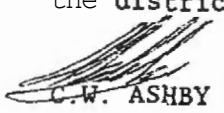
(k) That a Design Certificate for the proposed building from a Registered Engineer be provided.

Conclusion:

This method of construction has considerable merit in Kaipara District, with its establishing resources of pine forests and high unemployment. These are labour Intensive, low material cost houses and if built to a high standard would enhance the character of the district.

People could afford to build these houses themselves without becoming heavily mortgaged. The current building proposal is the forerunner and will set the tone and trend for things to come. With this in mind, building inspection will be given extra special attention on this project. With any innovative idea outside the scope of accepted standards, there is an element of risk. However, I am satisfied that risk to Council and future owners is minimal providing the building is properly constructed in accordance with the above recommendations.

This project is at the fore front of a brave new concept in building within the **district** and should be actively encouraged.


C.W. ASHBY

DIRECTOR WORKS/SERVICES

NEW ZEALAND STANDARD
MODEL BUILDING BYLAW

Chapter 3

GENERAL REQUIREMENTS

GENERAL

3.1 Scope

3.1.1 This chapter of this bylaw establishes requirements for matters of general application relating to the erection of buildings which are not fully established by other chapters of this bylaw. In addition clauses 3.16 to 3.21 inclusive state or draw attention to the requirements of this bylaw in connection with existing buildings.

3.2 New forms of construction

3.2.1 Materials, forms of construction, and methods of design not provided for in this bylaw may be employed only in accordance with prior written approval of the Council and subject to the following conditions:

- (i) In every case application for permission to employ such materials, forms of construction, or methods of design shall be made in writing to the Engineer.
- (ii) The application shall be accompanied by all particulars necessary to enable the Engineer to consider the suitability of the materials, forms of construction, or methods of design which it is desired to use.
- (iii) The applicant shall at his own expense in all things have such tests made by an approved testing authority as may be required by the Engineer.
- (iv) After considering any application the council may refuse its permission to employ such materials, forms of construction, or methods of design, or grant its permission unconditionally, or subject to such conditions as it may deem necessary to impose.

3.2.2.1 Any material, form of construction, or method of design which has been approved by the Council may be authorised by the Engineer for use in the manner and to the extent so approved.

3.2.2.2 A copy of every approval given by the Council pursuant to subclause 3.2.1 shall be available to any applicant on demand.

3.2.3 Notwithstanding the provisions of this clause the Engineer may, with the concurrence of the applicant, refer any material, form of construction, or method of design together with the particulars submitted therewith to the Standards Council or to any Government Department or other organisation with a view to obtaining information which may assist him or the Council in determining an application.

U KAIPARA

DISTRICT

COUNCIL

PRIVATE BAG, DARGAVILLE
Please Address All Correspondence
to the General Manager.

TELEPHONE (0884) 7059 (5 LINES)
FAX No. (0884) 6756
DISTRICT OFFICE, HOKIANGA ROAD,
DARGAVILLE, N.Z.

Mr Ashby

D 636

REFER

FILE REFER

August 15, 1990

J D Hastings
W A Browne
41 Jervois Street
DARGAVILLE

Copy For your
information
(Building Inspector)

Dear Sir/Madam

Re: Application to Erect a Log Dwelling

Please find attached a list of conditions as approved by Council and also a copy of my report as presented to council, for your information.

of particular concern is the need for adequate treatment against borer which as I understand is **not** a problem in Canada or Scandinavia. It may be worthwhile setting up a boron treatment bath to immerse the **logs** in. We would draw your attention in particular to condition K on the attached list.

Basically, I would like to see this building completed to an exceptionally high standard as it is to some degree experimental and the reputation of log construction within the district will be largely dependant on this project.

Yours faithfully

C W **ASHBY**
DIRECTOR OF WORKS AND SERVICES

10.4 CONSTRUCTION OF LOG HOUSES - REPORT OF THE DIRECTOR OF WORKS AND SERVICES

Council considered the report and

RESOLVED

"THAT THE COUNCIL GRANT PERMISSION FOR THE ERECTION OF A LOG HOUSE SUBJECT TO THE FOLLOWING CONDITIONS:

- A. THE TREES TO BE USED SHALL BE CUT AT SUCH SEASON AS TO MINIMISE SAP CONTENT.
- B. THE LOG BUILDING SHALL BE CONSTRUCTED STRICTLY IN ACCORDANCE WITH THE BOOK 'BUILDING WITH LOGS' BY ALLAN MACKIE, UNLESS OTHERWISE APPROVED HEREIN OR WITH THE WRITTEN APPROVAL OF THE ENGINEER.
- C. THE BUILDER SHALL BE A MEMBER OF THE LOG BUILDERS ASSOCIATION (NEW ZEALAND) OR HOLD A CERTIFICATE OF ATTENDANCE AT AN ACCREDITED LOG BUILDING COURSE.
- D. THE BOTTOM PLATE, BEFORE LAYING ANY LOGS, SHALL BE OF (C3) TREATED 200 X 500 TIMBER.
- E. THE BOTTOM LOG SHALL BE FASTENED TO THE FOUNDATIONS TO THE SATISFACTION OF THE ENGINEER.
- F. LOG ENDS IN THE VICINITY OF DOOR AND WINDOW OPENINGS SHALL BE INTER-CONNECTED BY THE USE OF 12MM DEFORMED BAR DRIFTS DRILLED THROUGH THE FIRST LOG AND HAMMERED INTO THE SECOND LOG AND COUNTER SUNK SUFFICIENTLY TO ENSURE THAT THE LOG ABOVE WILL NOT BECOME "HUNG UP" AFTER LOG SHRINKAGE AND SETTLEMENT HAS OCCURRED.
- G. ANY SURFACES, CUT OR OTHERWISE SHALL BE TREATED WITH A PRESERVATIVE TO A SATISFACTORY STANDARD AS SET OUT IN THE SPECIFICATION OR TO BUTTING TOGETHER OF MEMBERS. THE ENTIRE STRUCTURE SHALL BE SUITABLY TREATED IN ACCORDANCE WITH A SPECIFICATION APPROVED BY THE ENGINEER AND THAT SPECIFICATION SHALL BE STRICTLY FOLLOWED.
- H. A SERIES OF SIX OR SO LOG OFF-CUT CONTROL SAMPLES SHALL BE PREPARED AND LEFT ON SITE IN EXPOSED, GROUND CONTACT CONDITIONS SO THAT ACCELERATED DETERIORATION CAN BE MONITORED AGAINST THE VARIOUS STAGES OF TREATMENT APPLIED TO THE BUILDING. THE FIRST CONTROL SAMPLE SHALL BE UNTREATED AND THEY SHALL BE IDENTIFIED WITH MARKED ALUMINIUM TAGS TO PREVENT FUTURE CONFUSION.
- I. THE INTERFACES BETWEEN LOGS SHALL BE PACKED WITH APPROVED INSULATION MATERIAL PRIOR TO SEATING OF EACH LOG.
- J. EAVES OVERHANG SHALL NOT BE LESS THAN 900MM.
- K. THAT A DESIGN CERTIFICATE FOR THE PROPOSED BUILDING, AND A CERTIFICATE WITH REGARD TO THE TREATMENT OF THE LOGS, FROM A REGISTERED ENGINEER, BE PROVIDED."

Cr Campbell/Cr Newlove

KAIPARA DISTRICT COUNCIL

PRIVATE BAG, DARGAVILLE
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to the General Manager.

TELEPHONE 10884) 7059 (5 LINES)
FAX NO. (0884) 6756
DISTRICT OFFICE, HOKIANGA ROAD,
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Mr Ashby

D 636

REFER

FILE REFER

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DARGAVILLE

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Please find attached a list of conditions as approved by Council and also a copy of my report as presented to Council, for your information.

Of particular concern is the need for adequate treatment against borer which as I understand is not a problem in Canada or Scandinavia. It may be worthwhile setting **up** a boron treatment bath to immerse the logs in. We would draw your attention in particular to condition X on the attached list.

Basically, I would like to see this building completed to an exceptionally high standard as it is to some degree experimental and the reputation of log construction within the district will be largely dependant on this project.

Yours faithfully

C W ASHBY
DIRECTOR OF WORKS AND SERVICES

Memorandum

To: General Manager

From: Director of Works & Services

Subject: Construction of Log Houses.

We have recently received an application for Building Permit to construct a house using natural round logs in similar fashion to the pioneer homesteads in Canada and North America where the logs interlock at the building corners and are stacked horizontally on top of each other to form the walls.

This type of construction falls outside the scope of the New Zealand Standard bylaws. However, under section 3.2 of Chapter 3 of NZS 1900, ^(attached) the matter can be satisfactorily dealt with with the prior written approval of council subject to certain conditions (see attached extract from bylaws).

with the prior written approval of council subject to certain conditions such materials and forms of construction can be used.

(i) A written application is ~~currently being~~ for permission to employ such materials and form of construction has been made and is attached together with the specification.

(ii) Fortunately the former Works Engineer, Mr. Bill Walker had done a reasonable amount of research on Building Log Houses back in 1982/83 and I have been able to thoroughly read this reference material over a weekend, and now have a very good understanding of this Technology.

a. The principle proponent of Log Building is a Mr Allan Mackie of Canada who has written ~~substantive~~ a reference book and lectured extensively on the subject, and set up a training school. He has installed ~~training in his~~ log buildings to which the Builder lodging the

The reference book he produced is excellent although it does not cover timber preservation to the extent I would desire, and is to be used as a specification reference book in the construction of the proposed house.

b. Log buildings in Scandinavia have been in existence for hundreds and possibly thousands of years. When properly constructed they

have good thermal insulation, ~~prop~~ and acoustic properties, they are more fire resistant than framed construction, are highly earthquake resistant, cost effective to build, and aesthetically pleasing.

- c. The one area of concern is resistance to rot and insect attack as ~~the logs~~ are not commercially treated. However, providing the detailing of the building is good with large eave overhangs and protection against ground contact by untreated logs, the battle is half won. Cutting of the trees at the right season to minimise sap content discourages fungi etc. Further painting of the logs and in particular all cut joints with a preservative followed later by boiled linseed oil can offer reasonable protection. Even with ^{convenient} pressure treated timber any cut ends are supposed to be painted with preservative but I would bet that very few builders would normally bother, hence providing due care is exercised it is probable that ~~protection~~ ^{attack} from rot or pests can be virtually eliminated and judging from overseas experience the building could quite easily have a life of perhaps 300 years with adequate maintenance.

The normal accepted design life for a building in New Zealand is 50 years. With such strong construction it is ~~certainly~~ ^{highly probable} that even with particularly severe termite attack the building would adequately serve out its life. ^{Historical} experience overseas indicates that ~~foundations~~ ^{tend to} some of the old inadequate foundations tended to fail long before the building. However with a good reinforced concrete foundation conforming with NZ codes, this ^{problem} can easily be overcome.

The only improvement on the Allan Mackie system, would be to use a C3 treated 200x50 bottom plate as has been done elsewhere in NZ to protect the bottom log which would be the most susceptible to rot.

- (iii) With the information available no further testing will be necessary as a prerequisite to issuing a building permit. However as this is a somewhat "experimental" building in our district I believe some log off cuts should be retained with various stages of treatment as applied to the house, and left in ground contact on site so that accelerated deterioration can be monitored.
- (iv) ~~Recommendation~~ ^{Recommendation} I would recommend that council grant permission subject to the following conditions:
- The trees to be used shall be cut at such season as to minimise sap content.
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otherwise approved here in or with the written approval of the Engineer.

- c. The builder shall be a member of the Log Builders Association (New Zealand) or hold a certificate of attendance at an ~~any~~ ~~Be~~ accredited Log Building Course.
- d. The bottom plate, before laying any logs shall be of 143 treated 200 x 50 timber.
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- f. logs ~~ends~~ ^{ends} in the vicinity of door and window openings shall be inter-connected by the use of 12mm deformed bar drifts drilled through the first log and hammered into the second log and counter sunk sufficiently to ensure that the log above will not become "hung up" after log shrinkage and settlement has occurred.
- g. Any ~~cut~~ surfaces, cut or otherwise shall be ~~hand~~ treated with a preservative to ~~the~~ ^{standards as set out in the specification} satisfactory ~~at the Engineer~~, prior to butting together ^{of timbers}. The entire structure shall be suitably treated in accordance with a specification approved by the Engineer, and that specification shall be strictly followed.
- h. A series of six or so log off-cut control samples shall be prepared and left on site in exposed, ground contact conditions so that accelerated deterioration can be monitored against the various stages of treatment applied to the building. The first control sample shall be untreated, and they shall all be identified with ~~an~~ marked aluminium tag to prevent future confusion.
- i. The interfaces between logs shall be packed with fibreglass insulation prior to seating of each log.
- j. Eaves overhang shall not be less than 900 mm.
- k. That a design certificate for the propose building from a registered Engineer be provided.

Conclusion

This method of construction has considerable merit in Kaipara District, with its establishing resources of pine forests, & high unemployment. These are labour intensive, low ^{material} cost houses ~~to construct~~ and if ~~accounted~~ built to a high standard would enhance the character of the district.

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Colin Ashby.



Yours faithfully

set the tone and trend for things to come, ^{accepted} With any innovative idea outside the scope of standards there is an element of risk. However, I am satisfied that risk in this area is minimal to council, ~~the~~ and future owners is minimal providing the building is properly constructed in accordance with the above recommendations. This project is at the forefront of a brave new concept in building within the district, and should be actively encouraged.

with this in mind, building inspection will give extra special attention on this project.

NEW ZEALAND STANDARD

MODEL BUILDING BYLAW

Chapter 3

GENERAL REQUIREMENTS

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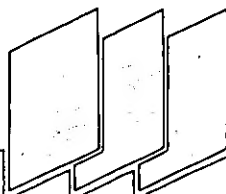
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DR. MIKE HEDLEY

MIXTURE P.G.

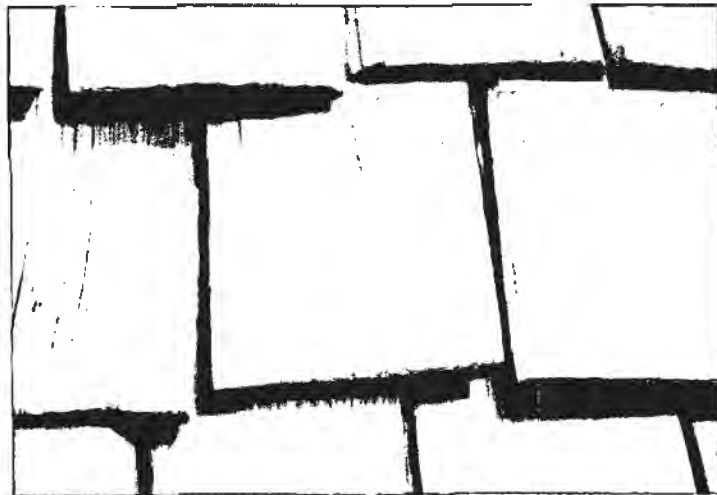
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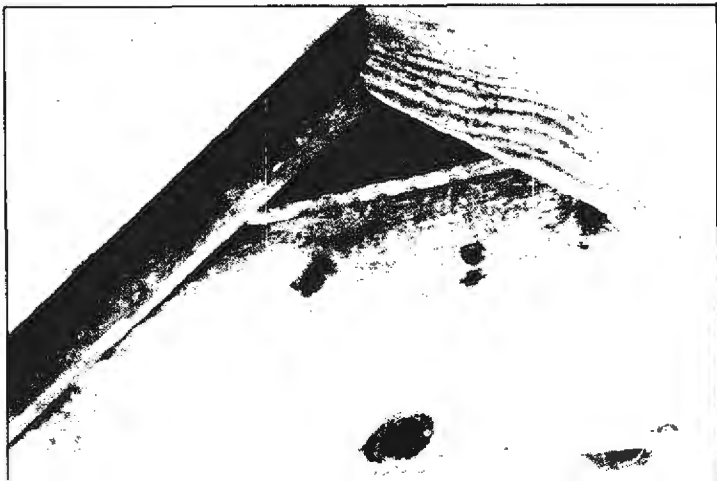
GIB BOARD



SHINGLES and SHAKES

Shakes and shingles go through wet-dry cycles causing them to swell, shrink, cup, split and become brittle. Water erodes the surface and removes the wood's natural resistance to decay.

C.D.50 protects the shingles from excessive moisture absorption and reduces cupping, splitting and warping. It replaces the lost natural preservatives in weathered shingles and protects it with an exceptional water repellent.



SIDING

Years of service life are added with a single treatment of C.D.50.

C.D.50 is a clear finish that will allow your siding to weather naturally.

C.D.50 protects against decay and enhances the appearance of clear siding.



FENCES

PROTECT YOUR INVESTMENT WITH C.D.50

It will ... Protect Against Decay

Increase Service Life.

C.D.50

**A SUPERIOR
TREATMENT
FOR WOOD**

- * CONTROLS MOULD MILDEW AND ROT
- * NON-FILM FORMING WILL NOT CRACK OR PEEL
- * EXTENDS THE SERVICE LIFE OF THE TIMBER
- * HELPS CONTROL WARPING, CUPPING, AND SPLITTING
- * ESPECIALLY SUITED FOR ROUGH SAWN SURFACES
- * INCREASES THE SURFACE TENSION OF TIMBER ENHANCING ITS WATER REPELACY

C D.50

C.D.50 is a transparent treatment specially designed for wood shingle roofs, sidings and fences. It is also suitable for many other wood items and for all wood surfaces - new or old, rough or smooth. C.D.50 combines excellent mould and decay control with unique and **EXCEPTIONAL WATER REPEL- LENCY THAT WITHSTANDS OUTDOOR WEATHERING FOR YEARS, EVEN ON OLD CRACKED WEATHERED WOOD.**

C.D.50 cannot chip, crack or peel. It applies easily and very rapidly and leaves a uniform, appearance. C.D.50 protects and extends service life at low cost by inhibiting mould and decay, cupping and warping. **FOR LONG TERM, CONTINUING PROTECTION:** Under normal or average circumstances where CD50 is used on exterior timber you can expect to recoat again when the timber changes in colour tone. If this procedure is followed the timbers should remain stable as long as the cycle is repeated.

C.D.50 cleans up with water and detergent - quickly and completely.

C.D.50 temporarily darkens wood colour which lightens with time. Some wood species eventually turn a honey colour.

DIRECTIONS FOR USE

Apply liberally and evenly over the complete timber surface.

SPRAY - Standard spray equipment - set nozzle to deliver a low pressure, coarse spray.

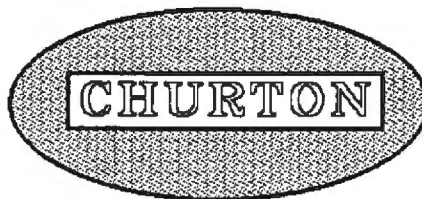
BRUSH - For uneven shingle or rough surfaces, use a good quality bristle paint brush.

ROLLER - Use long nap for rough surfaces.

CONDITIONS - Timber must be clean and dry at time of application. Do not apply if rain is expected within 24 hours. Minimum of two coats must be applied with sufficient soak time between coats. Product must be stirred thoroughly immediately prior to use. Product must be used as supplied (no thinning or additives).

CLEAN-UP - Use laundry detergent and water - spray equipment, brushes, hands, clothes. Water/detergent removes overspray or accidental spillage on unwanted surfaces such as windows - use a wiping rag on smooth surfaces and a brush on rough surfaces.

PLANT CONTACT - Avoid contact with grass, shrubs and trees. In case of accidental contact, damage is often minimal.



CHURTON DISTRIBUTORS LIMITED
EXCLUSIVE DISTRIBUTORS FOR C.D.50

1 MOSMAN PLACE
CHATSWOOD,
AUCKLAND, 10

(WAREHOUSE)
36 ENTERPRISE ST,
BIRKENHEAD, AK, 10.

PHONE / FAX: (09) 418-1876

C.D.50

**A SUPERIOR
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WOOD PRESERVATIVE**



CHURTON DISTRIBUTORS LIMITED

1 MOSMAN PLACE
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AUCKLAND 10
Phone (09) 4181876

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AUCKLAND
Fax (09) 4181876

===== Distributor REIDPAINTS =====

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DATA SHEET

AP5

(Antimicrobial Preservative)

Characteristic.

Water Soluble Concentrate
~~Low Toxicity~~ Solution

Controls Moulds, Fungii and Bacteria on timber.
Active ingredient - **Copper 8 quinolinolate**

Features.

Safe to use.
Stable to Ultra Violet light
Substantive to timber.
Excellent leach resistance.
Fixes within **five** minutes of application.
Can be painted or mated **over**.

Directions.

When diluting ~~always~~ **ADD CONCENTRATE to WATER**.
Can be applied by brush, spray, roller or dipping.
For dip soak applications it is best to obtain dilution and soak time factors from Churton Distributors Ltd.
If adding concentrate to paint allow for possible yellowing light colours.
For this reason it is best to add only to **undercoat or first** m a t
AP5 should be used only in plastic or stainless containers.
For most brushing applications use 1 part AP5 to 5 parts water.
Paintable after 48 hours.

Typical Uses.

Wood
Controls Decay, Rot Mould, Mildew and Termites.
General wood preservation and wood in contact with Fruit, Vegetables and Foodstuffs, Boxes, Bins, Trays, **Pallets**, Stakes, Fences, Shingles, Weatherboards, Furniture, Millwork, Beehives etc.
Control of Termites. Reinspect annually and treat if necessary..
Environmental Surfaces
Control of Mould and Mildew on Paint, Varnish. Concrete, Brick **Tile**, Fibrolite, Wood, Paper, Leather, Textiles. Rope, Nets, Canvas, Shingles, Gibbboard, Plaster etc.

Warranty Statement

Neither the manufacturer nor the seller makes **any** representation or **warranty**, expressed or implied concerning this product except that it is of the Manufacturers standard quality. Neither shall be held responsible in any manner for **any** personal injury, property damage or **other type of loss** resulting from the improper handling, storage and use of this product. The buyer accepts and uses this product on these conditions.

Information.

For information relating to the purchase and handling of this product contact Churton Distributors Ltd. / Fax (09) 4181876

CHURTON DISTRIBUTORS LIMITED

1 MOSMAN PLACE
CHATSWOOD
AUCKLAND 10
Phone (09) 4181876

Warehouse 36 ENTERPRISE ST
BIRKENHEAD
AUCKLAND
Fax (09) 4181876

CHURTON TIMBER TREATMENTS
===== Distributor REIDPAINTS =====

10th September 1990

Stoddart Log Homes
RD 2
waipu NZ

Mention: Don Stoddart

Dew Sir,

Re: Timber Reservation and Surface Treatment of Log Homes

Further to our phone conversation today we confirm herewith **our prices** and enclose some brochures along with other relevant information as follows.

AP 5

Price: GST Exdusive	1 Litre	4 Litre	20 Litre	200 Litre
	\$12.00	\$48.00	\$240.00	\$2320.00
Dilution:	For anti sap stain treatment only -----	1 Part AP 5	to	30 Parts Clean Water.
	For anti sap and preservation -----	1 part AP 5	to	10 parts Clean Water
Method:	Hand spray to saturation.			

CD 50

Price:: GST Exdusive	1 litre	4 Litre	20 litre
	\$14.06	\$54.48	\$262.50

Method: Use as directed on label. Do not dilute

CC 100

Price: Exdusive GST	1 Litre	4 Litre	20 Litre
	\$8.80	\$30.25	\$111.65
	\$8.80	\$22.00	\$82.50

Dilution: For both items follow data sheets.

Polyurethanes

price: Exclusive GST	1 Litre	4 L i e	20 Litre
Polyurethane Clear Gloss	\$11.00	\$27.50	\$125.13
" " " Satin	11.00	28.88	134.75

"	"	"	Matt	12.38	39.25	137.50
"	"	"	Moisture Cured	13.75	39.88	187.00
"	"	"	"			
(Exterior Ultra Violet Stable)				24.75	91.58	445.50

*All the above prices are ~~Net ex warehouse~~ Auckland and represent list less 45%.
Invoices will be item discounted at 38% with provision for a further total discount of 10% if paid by the 20th of the following month. This deduction on total inclusive of GST equates to the agreed discount of 45%.

Thank you for your interest in our products and services, please contact us if you need further advice at any time.

Yours faithfully



Arthur J Reid
Managing Director

*** CHURTON DISTRIBUTORS LIMITED ***

1 MOSMAN PLACE
CHATSWOOD
AUCKLAND 10
Phone (09)4181876

Exclusive Distributor Timber Treatment & Preservatives
----- also Distributor Reid Paints =====

Warehouse 36 ENTERPRISE ST
BIRKENHEAD
AUCKLAND
Fw (09)4181876

INTRODUCING *NEW ----- CD50 Oil Preservative*
A Superior Treatment for Wood !

Never before seen in New Zealand this product represents a major break-through in the finishing and preservation of Cedar and other timbers.

CD50 is a totally different concept in the treatment of cedar and other timbers and is far superior to conventional oil stains and acrylic stains for a number of reasons which are outlined below.

CD 50 is guaranteed to be non film-forming which means that it will never peel, or crack like many currently used timber stains. CD50 is formulated to extend the surface tension of the timber and therefore greatly enhances its water repellancy. CD50 also contains an anti-oxidant which retards UV degradation and preserves the natural appearance of new timber.

CD 50 works by migrating deeply into the timber cell structure, preserving the timber against fungal attack and reducing the onset of blackspots and the greying effect which is common to timbers such as cedar etc.

The duration and preservation of the natural timber appearance is dependent on the condition of the timber at the time of application. Where the timber has been properly treated with CD50 according to the manufacturers directions, the natural colour will remain stable until the surface requires recoating at the time when the timber changes in colour tone.

Prior to our selective pilot marketing of this product to builders, private home owners and development companies, CD50 has been field tested in the New Zealand environment for twelve years on cedar and redwood with outstanding results. We found that our exterior test panels only required one re-coat to maintain colour retention after eight years of exposure.

In summary, the initial users of the product were extremely enthusiastic concerning its effectiveness and performance, clearly demonstrating that CD50 is unparalleled by any other similar product.

We encourage you to contact us regarding retail - wholesale - trade prices or other relevant information. Please reply to above address or phone us --- (09) 4181876

Yours faithfully

Arthur J Reid
Managing Director



CHURTON DISTRIBUTORS LIMITED

1 MOSMAN PLACE
CHATSWOOD
AUCKLAND 10
Phone (09) 4181876

Warehouse 36 ENTERPRISE ST
BIRKENHEAD
AUCKLAND
Fax (09) 4181876

===== Distributor REIDPAINTS =====

DATA SHEET

CC 100

(Cleaner Concentrate)

Use only as directed

Characteristic	Water Soluble -- General Cleaner Non-Toxic Solution May be safely used on wood, aluminium, glass, paint and most surfaces.
Features.	Does not leave streak stains. Formulated for use with water pressure sprayer (minimum 600psi) Can be used with ordinary hose pressure if water pressure sprayer not available. No brushing action required.
Directions.	Add 4 parts of CC100 to 100 parts of water. Apply to surface to be cleaned either by brush, spray or hose. Leave for at least 15 minutes or longer if necessary before washing off with water pressure sprayer or strong hose pressure using clean water only. NB. CC100 concentrate should be ADDED TO WATER.
Typical Uses.	Cleaning Windows especially where brush washing access is difficult. Washing Cars, Boats, Trucks and Vans without the need to brush clean. Cleaning down External Building surfaces prior to painting etc. Cleaning domestic Paths and Driveways. Removing Mould and Fungal growth from exterior surfaces. (See data sheet MFN20)
Warranty Statement	Neither the manufacturer nor the seller makes any representation or warranty , expressed or implied concerning this product except that it is of the Manufacturers standard quality. Neither shall be held responsible in any manner for any personal injury, properly damage or other type of loss resulting from the improper handling, storage and use of this product . The buyer accepts and uses this product on these conditions.
Information.	Specific information relating to the application and handling of this product may be obtained solely from Churton Distributors Limited. Telephone / Fax (09) 4181876

=====

CHURTON DISTRIBUTORS LIMITED

1 MOSMAN PLACE
CHATSWOOD
AUCKLAND 10
Phone (09) 4181876

Warehouse 36 ENTERPRISE ST
BIRKENHEAD
AUCKLAND
Fax (09) 4181876

===== Distributor REIDPAINTS =====

DATA SHEET

CC 100 Special Instructions for the removal of
----- Mould and Fungus with the addition of
(Cleaner Concentrate) "MFN20"

Use only as directed

Characteristic. Water Soluble -- General Cleaner
Non-Toxic Solution
May be safely used on wood, aluminium, glass, paint and most surfaces.

Features.

Formulated for use with water pressure sprayer (minimum 600psi)
~~Can~~ be used with ordinary hose pressure if water pressure sprayer not available.
No brushing action required.

Directions.

CAUTION : Follow mixing instructions carefully. Both concentrates must be
ADDED to WATER only as directed. Chemicals CC100 and MFN20 are
supplied as concentrates and must not be combined in this form!

Mixing instructions:

Step 1. Add 4 parts of MFN20 to 100 parts of water.
Step 2. Add 4 parts of CC100 to the solution mixed in Step 1.
Apply to surface to be cleaned either by brush, spray or hose.
Leave for at least 15 minutes or longer if necessary before washing off with
water pressure sprayer or strong hose pressure using clean water only.

NB. This procedure may be used successfully for the restoration of silvered
or aged Cedar timber. **Care** should be taken when using water pressure sprayer
at approximately 600psi not to damage or "scour" the soft timber surface.
Ideally this treatment when completed and dry should be followed by a 2 coat
application of CD50 to preserve the natural colour and surface of the timber.

Typical Uses.

Cleaning down External Buildings surfaces prior to painting etc where mould
and fungus deposits need to be removed.
Cleaning Shingles, Shakes, Tiles, Bricks, Blockwork, Timber, Fibrolite and Concrete.
Cleaning Paths and Driveways etc.
Removing Mould and Fungal growth generally.

Warranty Statement

Neither the manufacturer nor the seller makes any representation or warranty, expressed or
implied concerning this product except that it is of the Manufacturers standard quality.
Neither shall be held responsible in any manner for any personal injury, property damage or
other type of loss resulting from the improper handling, storage and use of this product.
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solely from Churton Distributors Limited. Telephone/ Fax (09) 4181876

saw the kiln-fired brick rapidly become the main building material for most buildings including the cheaper type of house.

A development of the 'pise' method has been the addition of cement to the earth and is now known as soil-cement construction. Some soil-cement houses have been built in New Zealand and their quality and performance have varied according to their design, workmanship and maintenance.

The problem facing the New Zealand soil-cement builder is to provide a design suitable to withstand the effects of earthquakes and storms. This has resulted in several pilot schemes not proceeding beyond the experimental stage. Some earthy material (e.g. clay) can, after being shaped and fired in a kiln, become a durable and acceptable material. Usually in brick form, it is often used in New Zealand as an external veneer to a conventional timber framed house.

Log Houses

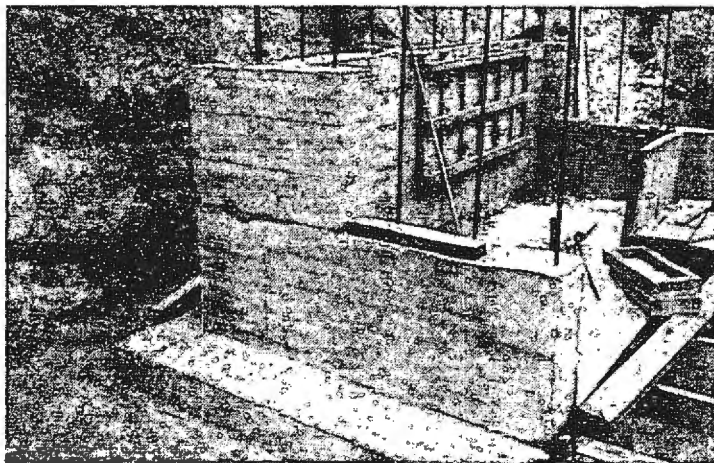
The construction of a house using unprocessed logs as the main building material requires special skills. Many of these skills were developed by experienced woodsmen in Europe and in the pioneering days of North America, when trees were plentiful and mechanical methods of processing timber almost unknown. Most log houses were built not because they were the best type for the situation but because they were the cheapest and easiest to build under the circumstances.

A number of problems face the New Zealand log house builder, particularly in design, maintenance and durability. Because there is no naturally dura-

ble species of timber available in commercial quantities in New Zealand, the New Zealand Forest Service recommends that all logs selected for house construction, be prepared for use (debarked, notched etc), then treated according to Timber Preservation Authority Specifications and dried before use. This preservative treatment can add significantly to the total building cost and can also colour the logs. The uneven texture of the logs both inside and outside the completed houses can make cleaning and maintenance difficult. Some species of timber (e.g. Douglas fir) are not particularly suitable for treatment with preservative thus becoming more susceptible to decay and attack by insects. Most local authorities regard log house construction as 'experimental building' and require plans certified by a professional structural engineer, often issuing a permit with the condition that the builder has had approved training in log construction.

Because of the infrequent use of many alternative building materials, they are not easily placed within the scope of recognised Standards. This poses difficulties for local authorities who have the ultimate responsibility for the soundness of any building erected in their area.

Those contemplating using alternative building materials should contact their local authority first to acquaint themselves with the necessary requirements and procedures. This could save a lot of time and money.



Rammed earth construction

DARGAVILLE: BOROUGH COUNCIL - APPLICATION FOR BUILDING PERMIT

POSTAL ADDRESS

P.O. Box 414
DARGAVILLE

The Borough Engineer,
Dargaville Borough Council,
P.O. Box 34,
DARGAVILLE.

Sir,

I hereby apply for permission to REMOVE SHED

at HOKIANGA RD TO AWAKINO RD Street/Road, Dargaville
for W.A. FITNESS of P.O. Box 414 DARGAVILLE
(Owner's Name) (Owner's Address)

according to locality plan, detailed plans, elevations, cross sections and
building specifications which are deposited herewith.

PROPOSED PURPOSE FOR WHICH EVERY PART OF BUILDING TO BE OCCUPIED
(Describe separately the intended use for each part of building)

GENERAL FARM USE - STORAGE

Nature of ground on which building is to be placed, and nature of subjacent strata

TEKODURU SANDSTONE PAN

PARTICULARS OF BUILDING

Foundations CONCRETE
Walls IRON
Roof IRON
Area Ground Floor 150 Sq. Ft
Area Outbuildings — Sq. Ft

ESTIMATE VALUE

Building \$
Plumbing & Drainage \$
TOTAL VALUE \$ 500.00

PARTICULARS OF LAND Roll No 95/40
Lot PT 3 D.P. 36083
Block KALHU 2B NO 1 Area

Yours faithfully,

Builder or Owner

THIS BLOCK FOR

OFFICE USE

FEES (Where applicable)

Building Permit \$ 3.00
Building Research Levy \$
Plumbing & Drainage Permit \$
Footpath Damage Deposit \$
Sewer Connection \$
Water Connection \$
Stormwater Inspection \$
Hoarding License \$
Vehicular Crossing \$
Off-Street Parking
Spaces
Contribution \$

Total Fees

\$ 3.00

FEES CHECKED

Date 16/12/75
Signature [Signature]

APPROVED FOR PERMIT

Date 16-12-75
[Signature]
Building Inspector

Permit No. 6554
Receipt No. 6554
Date Fees Paid 16/12/75
Initials [Signature]

To obtain a building permit it is required to submit together with the application:

1. In duplicate, detailed plans, elevation of all outside walls, cross-section, details of foundation and specification, to furnish complete details, quantities and description of all material used (scale of drawing 1/8" or 1/4" to the foot.)
These drawings to show the exact nature and character of the proposed undertaking.
2. In duplicate a location drawing showing the site (all four boundaries) the buildings already on the site and the new proposed building shown in black. The measurements from the proposed building to all buildings on the site and the boundary line (see example.)
3. Applications for (in so far applicable).
(a) Drainage and plumbing.
(b) Sewer Connections.
(c) Water supply Connection.
(d) Crossing.
(e) Footpath Damage Deposit.
(f) Hoarding License.
(g) Vehicular Crossing.
4. In addition to above for commercial builders.
Stress diagrams and calculations for steel construction spanning 10ft or more, and all cantilevered structures.
5. Stress calculation for concrete lintels and beams spanning more than 10ft columns etc., drawings in duplicate of reinforcing are required (special attention shall be paid to beam on wall or beam column connections).

PLEASE NOTE THAT BUILDING PERMIT FEES MUST BE ASSESSED ON THE COMBINED COST OF BUILDING AND DRAINAGE.

BUILDING PERMIT FEES					
ESTIMATED VALUE OF WORK		FEE	ESTIMATED VALUE OF WORK		FEE
Not exceeding \$20		50	Over \$9000 and not exceeding \$10000		36.00
Over \$20 and not exceeding \$200		1.00	\$10000	\$12300	40.00
\$200	\$400	2.00	\$12000	\$14000	44.00
\$400	\$600	3.00	\$14000	\$16000	48.00
\$600	\$800	4.00	\$16000	\$18000	52.00
\$800	\$1000	5.00	\$18000	\$20000	56.00
\$1000	\$1200	6.00	\$20000	\$25000	64.00
\$1200	\$1400	7.00	\$25000	\$30000	72.00
\$1400	\$1600	8.00	\$30000	\$35000	80.00
\$1600	\$1800	9.00	\$35000	\$40000	88.00
\$1800	\$2000	10.00	\$40000	\$50000	98.00
\$2000	\$2500	12.00	\$50000	\$60000	108.00
\$2500	\$3000	14.00	\$60000	\$70000	118.00
\$3000	\$3500	16.00	\$70000	\$80000	128.00
\$3500	\$4000	18.00	\$80000	\$90000	138.00
\$4000	\$5000	21.00	\$90000	\$100000	148.00
\$5000	\$6000	24.00	\$100000	\$120000	158.00
\$6000	\$7000	27.00	\$120000	\$140000	168.00
\$7000	\$8000	30.00	\$140000	\$160000	178.00
\$8000	\$9000	33.00	\$160000	\$180000	188.00

BUILDING RESEARCH LEVIES

Up to a total permit value (building plus drainage) of \$3000 Nil
From a total permit value (building plus drainage) of \$3001 to \$4000 \$2
Plus \$0.50 for each \$1000 or part thereof over \$4000

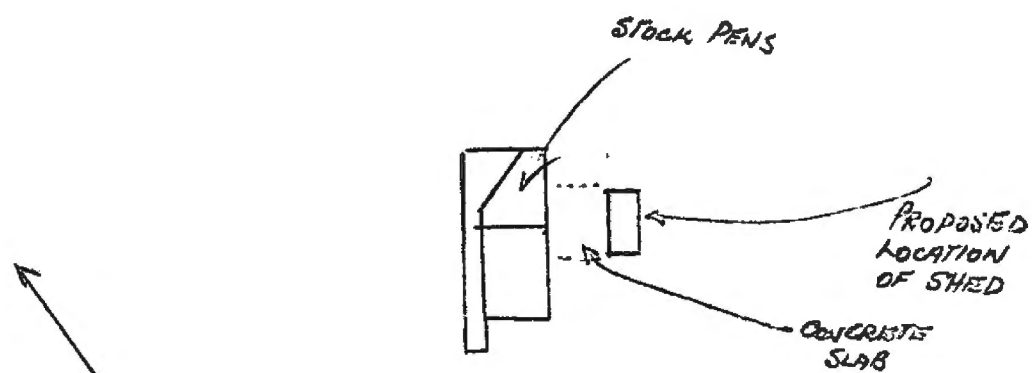
THUS A BUILDING COSTING \$10000 FOR BUILDING
PLUS 300 FOR DRAINAGE

= \$10300 IN TOTAL WILL INCUR A LEVY OF
UP TO \$4000 \$2.00

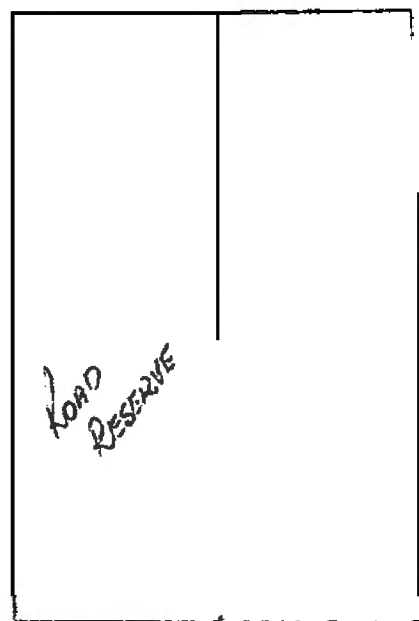
\$5300 = \$0.50 x 7 \$3.50

TOTAL LEVY \$5.50

W.A. FITNESS
 PROPOSED SHED ERECTION
 REMOVED FROM HOKIAKA RD.



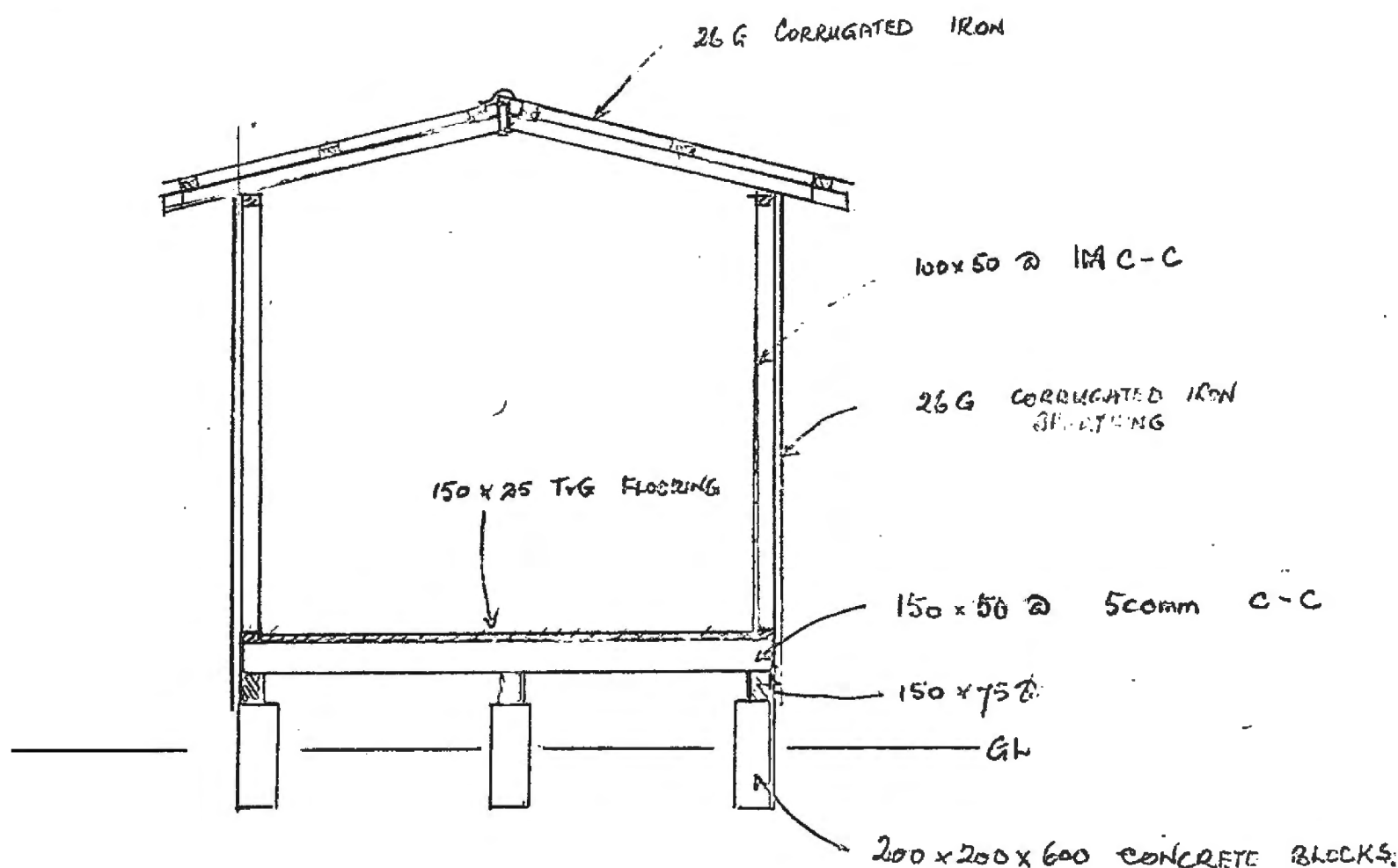
U



SCALE 1cm = 10 metres

AWAKING RD

SCALE 2cm = 1 metre.



DARGAVILLE BOROUGH COUNCIL - APPLICATION FOR BUILDING PERMIT

POSTAL ADDRESS :

*Box 414
Dargaville
8 August 1974*

The Borough Engineer,
Dargaville Borough Council,
P.O. Box 34,
DARGAVILLE,

Sir,

I hereby apply for permission to *erect an*
extension to a steel-framed barn
at *Quakers* Street/Road, Dargaville
for *R.A. & W.A. FITNESS* of *Box 414 Dargaville*
(Owner's Name) (Owner's Address)
according to locality plan, detailed plans, elevations, cross sections and
building specifications which are deposited herewith.

PROPOSED PURPOSE FOR WHICH EVERY PART OF BUILDING TO BE OCCUPIED
(Describe separately the use intended for each separate unit of building)

*Lean-to extension is to house machinery,
appliances and hay*

Nature of ground on which building is to be placed, and nature of subjacent strata
Kaipara clay on sandstone

<u>PARTICULARS OF 'BUILDING</u>	
Foundations	<i>Concrete Block</i>
Walls	<i>N.A.</i>
Roof	<i>Longspan iron</i>
Area Ground Floor	<i>540 sq ft</i> .Sq. Ft.
Area Outbuildings	.Sq. Ft.
<u>PARTICULARS OF LAND</u> Roll No <i>95/40</i>	
Lot <i>PT. 3</i> .D.P. <i>36083</i>	
Block <i>Kahu 2B. Val</i> . Area <i>11.36 acres</i>	

	<u>ESTIMATED VALUE</u>
Building	\$ <i>400-600</i>
Plumbing & Drainage	\$ <i>N/A</i>
TOTAL VALUE	\$ <u><u>400-600</u></u>

Yours faithfully,

W.A. Jones
Builder or Owner..

THIS BLOCK FOR 'OFFICE USE

<u>FEES (Where applicable)</u>	
Building Permit	\$ <i>3.00</i>
Building Research Levy	\$. . .
Plumbing & Drainage Permit	\$. . .
Footpath Damage Deposit	\$. . .
Sewer Connection	\$. . .
Water Connection	\$. . .
Stormwater Inspection	\$. . .
Hoarding License	\$. . .
Vehicular Crossing	\$ <i>6</i> . . .
<u>Off-Street Parking</u>	
Spaces	. . .
Contribution	\$. . .
	\$. . .
<u>Total Fees</u>	<u><u>\$ <i>3.-</i></u></u>

<u>FEES CHECKED</u>	
Date.	<i>13/8/74</i>
Signature	<i>A. Desmond</i>
<u>APPROVED FOR PERMIT</u>	
Date.	<i>12-8-74</i>
	<i>W. Newby</i>
	<u>Building Inspector</u>
Permit No.	<i>F. 21160</i>
Receipt No.	<i>338.1</i>
Date Fees Paid	<i>30/8/74</i>
Initials	<i>[Signature]</i>

To obtain a building permit it is required to submit together with the application:

1. In duplicate, detailed plans, elevation of all outside walls, cross section, details of foundation and specification, to furnish complete details, qualities and discription of all material used (scale of drawing $\frac{1}{8}$ " or $\frac{1}{4}$ " to the foot.)
These drawings to show the exact nature and charactor of the proposed undertaking.
2. In duplicate a location drawing showing the site (all four boundaries) the buildings already on the site and the new proposed building shown in black. The measurements Prom the proposed building to all buildings on the site and the boundary liner (see example.)
3. Applications for (in so far applicable).

(a) Drainage and plumbing.
(b) Swer Connections.
(c) Water supply Connection.
(d) Crossing.
(e) Footpath Damage Deposit.
(f) Hoarding License.
(g) Vehicular Crossing.
4. In addition to above for commercial builders.
Stress diagrams and calculations for steel construction spanning 10ft or more, an? all cantilevered structures.
5. Stress calculation for concrete lintels and beams spanning more than 10ft columns etc., drawings in duplicate of reinforcing are required (special attention shall be paid to beam on wall or beam column connections).

PLEASE NOTE THAT BUILDING PERMIT FEES MUST BE ASSESSED ON THE COMBINED COST OF BUILDING AND DRAINAGE.

BUILDING PERMIT FEES											
ESTIMATED VALUE OF WORK				FEE	ESTIMATED VALUE OF WORK				FEE		
Not exceeding \$20				53	Over \$9000 and not exceeding \$10000				36.00		
Over \$20 and not exceeding \$200				1.00	" \$10000 " " \$12000				40.00		
" \$200 "	" "	" \$400	" "	2.00	" \$12300 "	" "	" \$14000	" "	44.00		
" \$400 "	" "	" \$600	" "	3.00	" \$14000 "	" "	" \$16000	" "	48.00		
" \$600 "	" "	" \$800	" "	4.00	" \$15000 "	" "	" \$1 8000	" "	52.00		
" \$800 "	" "	" \$1000	" "	5.30	" \$18000 "	" "	" \$20000	" "	56.00		
" \$1000 "	" "	" \$1200	" "	6.00	" \$20000 "	" "	" \$25000	" "	64.00		
" \$1200 "	" "	" \$1400	" "	7.00	" \$25300 "	" "	" \$30000	" "	72.00		
" \$1400 "	" "	" \$1600	" "	8.00	" \$30000 "	" "	" \$35000	" "	80.00		
" \$1600 "	" "	" \$1800	" "	9.00	" \$35000 "	" "	" \$40000	" "	88.00		
" \$1800 "	" "	" \$2000	" "	10.00	" \$40000 "	" "	" \$50000	" "	98.00		
" \$2000 "	" "	" \$2500	" "	12.00	" \$50000 "	" "	" \$60000	" "	108.00		
" \$2500 "	" "	" \$3000	" "	14.00	" \$60000 "	" "	" \$70000	" "	118.00		
" \$3000 "	" "	" \$3500	" "	16.00	" \$70000 "	" "	" \$80000	" "	128.00		
" \$3500 "	" "	" \$4000	" "	18.00	" \$80000 "	" "	" \$90000	" "	138.00		
" \$4000 "	" "	" \$5990	" "	21.03	" \$90000 "	" "	" \$100000	" "	148.00		
" \$5000 "	" "	" \$6000	" "	24.00	" \$100000 "	" "	" \$120000	" "	158.00		
" \$6000 "	" "	" \$7000	" "	27.00	" \$120900 "	" "	" \$140000	" "	168.00		
" \$7000 "	" "	" \$8000	" "	30.00	" \$140000 "	" "	" \$160000	" "	178.00		
" \$8000 "	" "	" \$9000	" "	33.00	" \$160000 "	" "	" \$180000	" "	188.00		

BUILDING RESEARCH LEVIES

- Up to a total permit value (building plus drainage) of \$3000 Nil
- From a total permit value (building plus drainage) of \$3001 to \$4000 \$2
- plus \$0.50 for each \$1000 or part thereof over \$4000

THUS A BUILDING COSTING \$10000 FOR BUILDING
PLUS 300 FOR DRAINAGE

= \$10300 IN TOTAL WILL INCUR A LEVY OF UP TO \$4000 \$2.00

\$6300 = \$0.50 x 7 \$3.50

TOTAL LEVY \$5.50

D A R G A V I L L E B O R O U G H C O U N C I L

Box 34,
Dargaville.

M. R. H. & W. H. FITNESS
Box 34
Dargaville.

Dear Sir,

This is to advise that your application for a permit to *ADD*.....

...CARPENTRY... THE... ROAD... ..

..... has been approved and the relevant permits are available for issue upon payment of the following fees:-

Building Research Levy	\$
Building Permit	\$ <i>3.00</i>
Plumbing & Drainage Permit	\$
Vehicle Crossing	\$
Footpath/Street Damage Deposit	\$
Sewerage Connection	\$
Water Connection	\$
Hoarding Licence	\$
Stormwater Inspection	\$
<u>TOTAL</u>	<u><u><i>\$3.00.</i></u></u>

Yours faithfully,

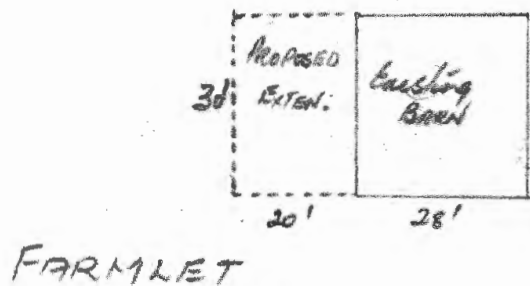
Borough Engineer.

Pert

PROPOSED BARN-EXTENSION

R.A. W.A. FITNESS

SITE PLAN



LOT No. PT3
D.P. No. 36083
BLOCK Kaihu 2B No.1.

ANAKINO RD

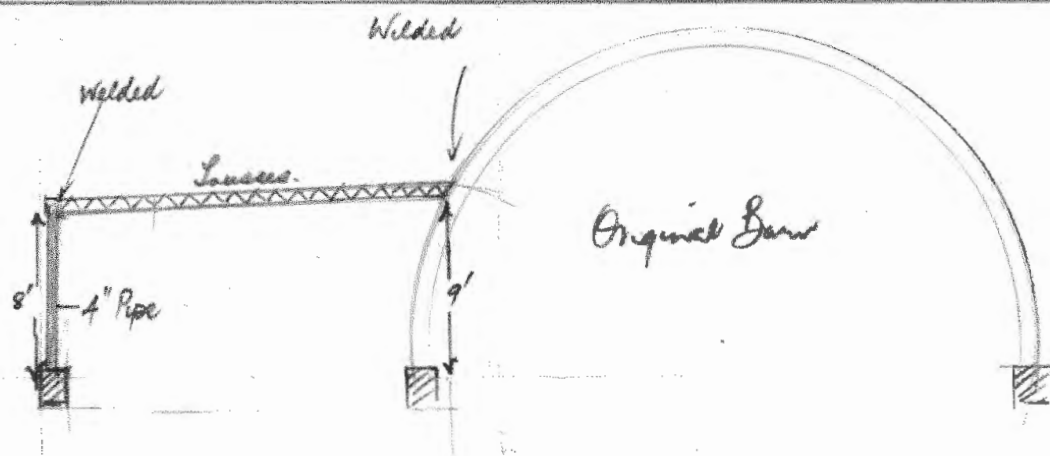
RD RESERVE

165'

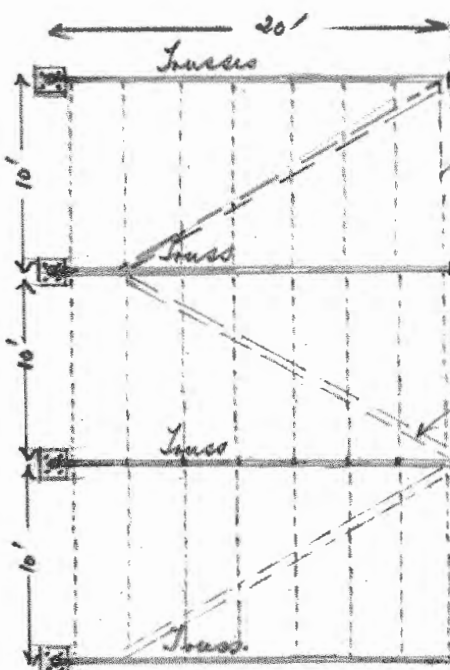


199'

END ELEVATION



PLAN



6"x2" Purlins at 2'6" centres or at 5' centres as required

6"x1" Braces (if required)

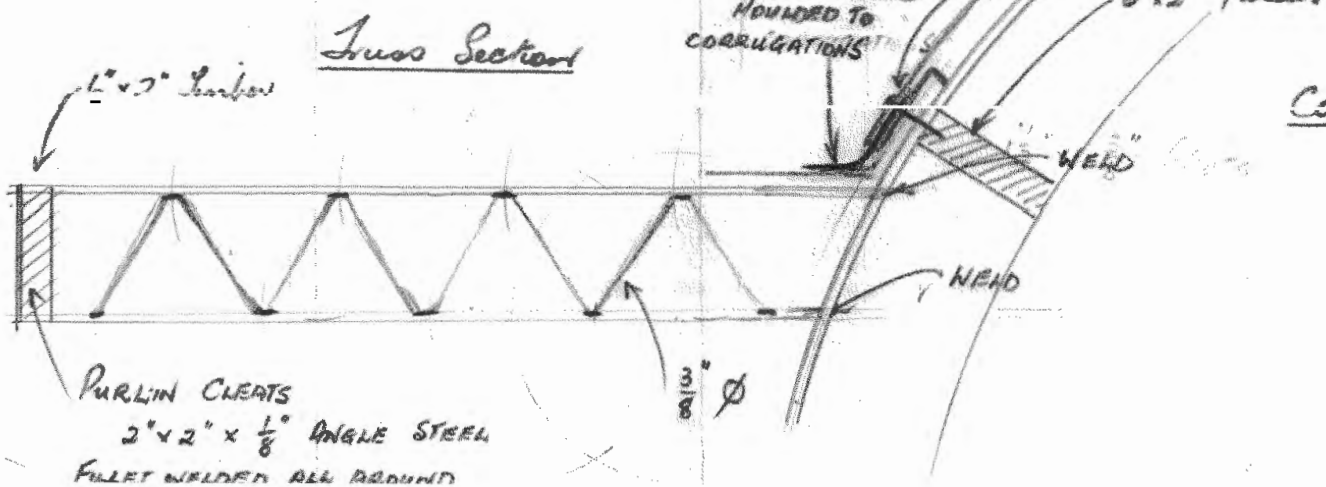
24 x 12

SPRING HEAD GALVANISED NAILS

LIGHT GAUGE SHEET HEAD NAIL TO CORRUGATIONS

6"x2" Purlin

CONNECTION DETAIL



Roofing - Long run iron - lead flashed to barn outer wall

DAFGAVILLE BOROUGH COUNCIL

APPLICATION FOR BUILDING PERMIT

POSTAL ADDRESS: 181 VICTORIA ST

DARGAVILLE

DATE 20 May 1970

The Engineer,
Dargaville Borough Council,
DARGAVILLE.

I hereby apply for permission to

Erect a Barn for storage etc

at 141 Awakins ~~Street~~ / Road

for W. A. and R. H. FINNIESS
(Owners Name)

of 181 VICTORIA ST according
to locality plan and detailed plans, elevations, cross sections, and specifications
of building deposited herewith.

PARTICULARS OF LAND FARM LAND

Valuation Number 9.5/40

Lot Number Pt 3

D.P. Number 36083

Block Kaitani 2B NO 1

Area 11 acres 2 rods 18 perches

ESTIMATED VALUE:

PARTICULARS OF BUILDING Barn

Foundations Concrete blocks

Walls Corrugated G.R.

Roof Corrugated G.R.

Area of Ground Floor 8' 11" x 20' 20' 20' sq.ft.

Area of Outbuildings 30' x 24' 40' x 28' sq.ft.

Building \$ 550

Plumbing & Drainage \$ N/A

TOTAL \$ 550

Proposed purpose for which every part of building is to be used or occupied,
(describing separately each part intended for the use or occupation—for a separate
purpose.)

Barn to be used for storage of farm equipment
and private vehicles & later for simple repair ops to
own farm equipments etc.

Nature of ground on which building is to be placed and of the subjacent strata.

Glassland - Te Kopuru Sand Stone

Yours faithfully, W. A. Finnies 905

Builder or Owner.

FOR OFFICE USE

FOR OFFICE USE:

Fees where applicable.

Approved for Permit.....
Permit No. **BO54712**.....
Receipt No. **1097**.....
Date. **12-6-98**.....

Building Permit **\$300**.....
Plumbing & Drainage Permit.....
Footpath Damage Deposit.....
Sewer Connection
Water Connection.....
Hoarding Licence.....
Vehicular Crossing.....

To obtain a building permit it is required to submit together with the application:

1. In duplicate, detailed plans, elevation of all outside walls, cross section, details of foundation and specification, to furnish complete details, quantities and description of all material used (scale of drawings $\frac{1}{8}$ " or $\frac{1}{4}$ " to the foot.)
These drawings to show the exact nature and character of the proposed undertaking.
2. In duplicate a location drawing showing the site (all four boundaries), the buildings already on the site and the new proposed building shown in black. The measurements from the proposed building to all buildings on the site and the boundary line (see example.)
3. Applications for (as far as applicable).
 - (a) Drainage and plumbing.
 - (b) Sewer Connections.
 - (c) Water supply Connection.
 - (d) Crossing.
 - (e) Footpath Damage Deposit.
 - (f) Hoarding Licence.
 - (g) Vehicular Crossing.
4. In addition to above for commercial builders.
Stress diagrams and calculations for steel construction spanning 10ft or more, and all cantilevered structures.
5. Stress calculation for concrete lintels and beams spanning more than 10ft columns etc., drawings in duplicate of reinforcing are required (special attention shall be paid to beam on wall or beam column connections).

Head Office marked

16 11/12/98 178 Vol 98

vested in council

Norm please hold

DARGAVILLE BOROUGH COUNCIL

CHECKED

TOWN PLANNING

FIRE & EGRESS

DRAINAGE

STRUCTURAL

PERMIT AUTHORISED

DATE

BDG. INSPECTOR

ANAKING RD.

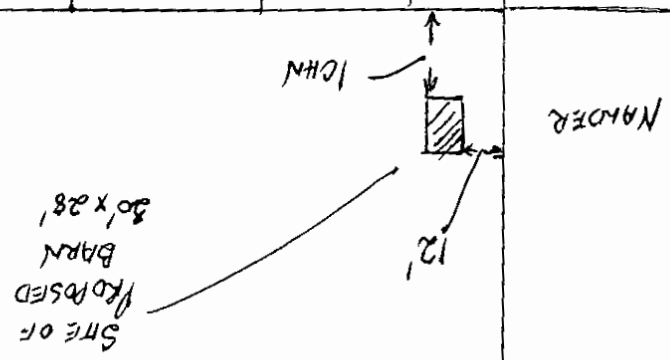
D.B.C.
Road
RESERVE

141

31' →
36' x 28'
5'

Amended Site Plan
27/5/70

AWAKINO RD					
NANDER	66	66	141	5	5
	MORSON			SMITH	CROSS
					HANDLEY



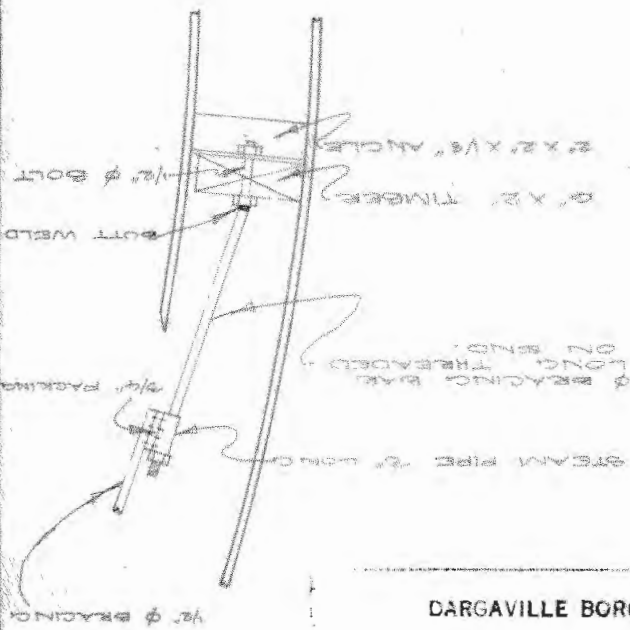
Client MR. R. SMITH	Job HAYBARN	Drawing PLAN, ELEVATION & DETAILS	Amendments	Date 1/10/70	Scale 1/4" = 1'-0"	Checked 344
				Drawn 344	Date 1/10/70	Drawing No. 344

E. T. SMITH, SINCLAIR, McNAUGHT & ASSOCIATES
 ENGINEERS AND ARCHITECTS
 110 Bank Street, Whangarei Box 684. Telephone 84-184
 76 Grafton Rd, Auckland, Box 3174. Telephone 34-625

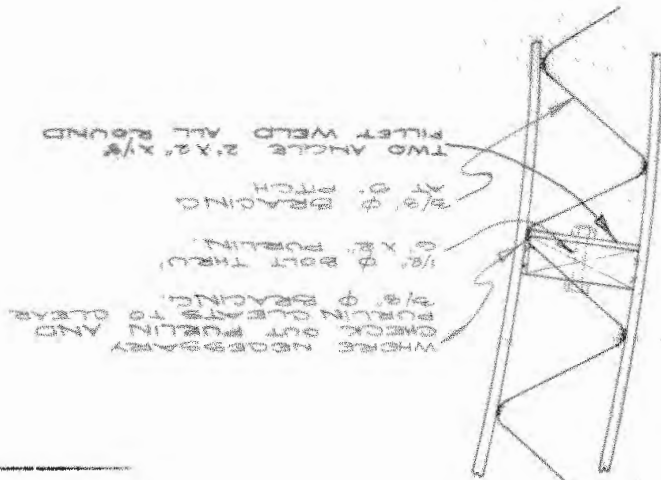
CONTRACTOR MUST VERIFY ALL DIMENSIONS ON THE SITE BEFORE PUTTING WORK IN HAND. USE FIGURED DIMENSIONS IN PREFERENCE TO SCALED. USE LARGE SCALE DRAWINGS IN PREFERENCE TO SMALL.

ORIGINAL DESIGN BY
 F.C.C. DE WIT
 CONSULTING ENGINEER

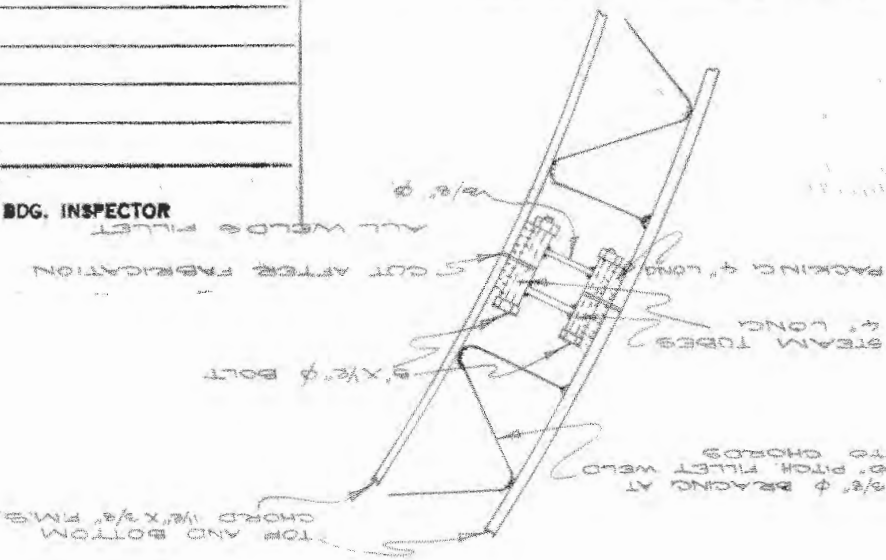
BRACING DETAIL



ELEVATION PURLIN CLEAT

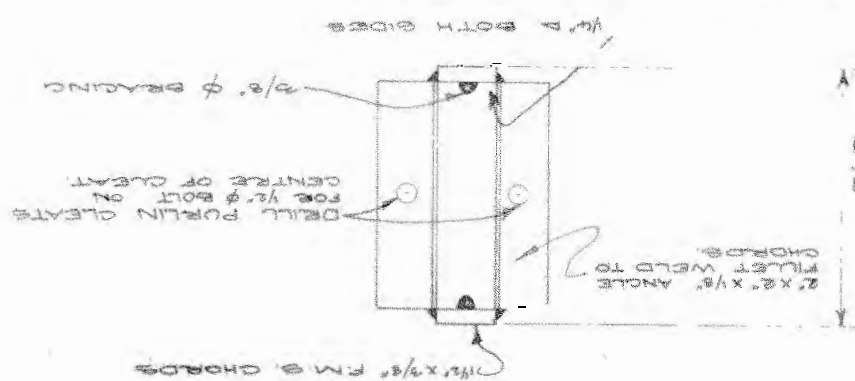


CONNECTION DETAIL

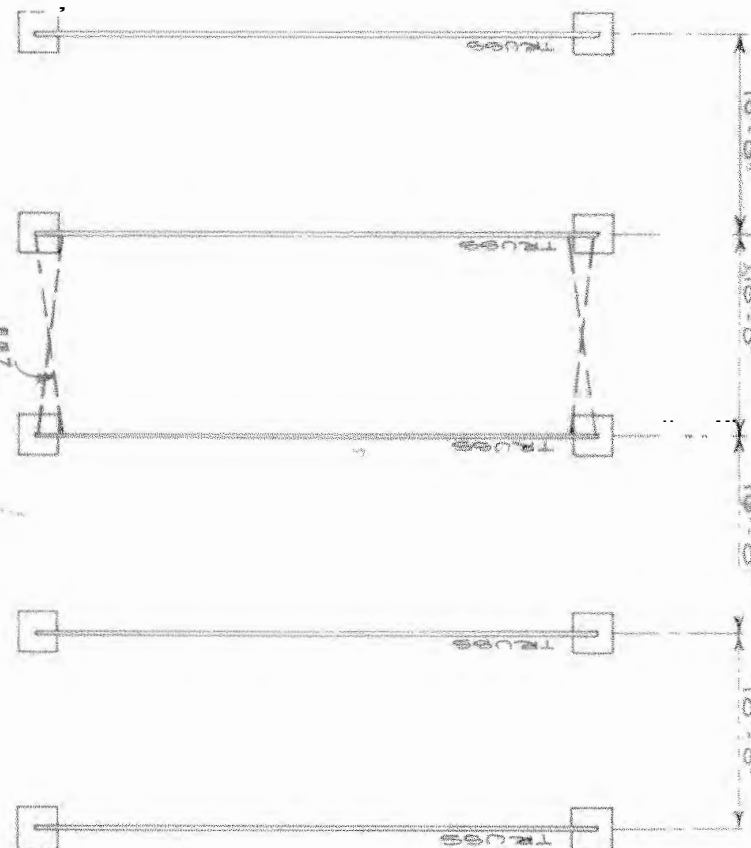


DARGAVILLE BOROUGH COUNCIL	
IN PLANNING	CHECKED
IN PROGRESS	
DRAINAGE	
STRUCTURAL	
PERMIT AUTHORISED	
DATE	BDG. INSPECTOR

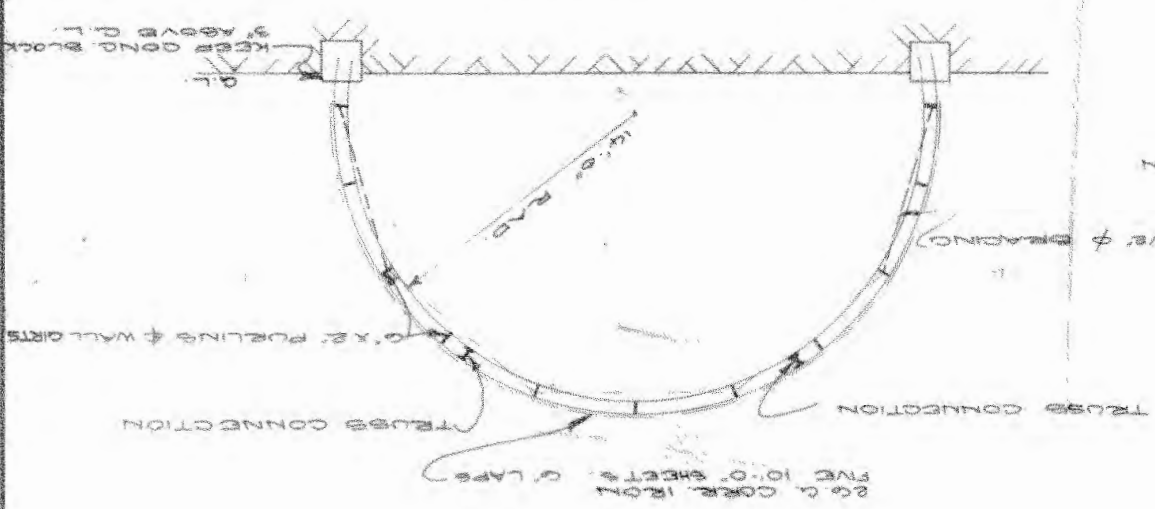
SECTION AT CLEAT



TYPICAL PLAN



TRUSS ELEVATION



2'-0" X 2'-0" X 2'-0" CONE. FOUNDATION
 BLOCKS

181 Victoria St.,
Dargaville.
20 May, 1970

The Engineer,
Dargaville Borough.

Dear Sir,

Attached are plans of
the site & building of a barn to be erected
on our property in Awakino Rd.
Please advise as soon as possible
if the details meet with your
approval so that we can inform
the contractor W. A. Smith of Maungakuriro
to proceed before the really difficult
weather comes on.

Yours faithfully,
R. A. Fitness
for

R. A. . W. A. Fitness

181 Victoria St.
Dargaville.
26 May, 1970

The Engineer
Dargaville Borough Council

Dear Sir,

Pursuant to a conversation with Mr Shaw re the siting of a barn on our property in Awakino Rd., I have agreed to inform you that this building is of a semi-permanent nature, and will be removed at no cost to the Borough in the event of the land being sub-divided, as we hope to be able to do in the near future.

Yours faithfully
R. A. FITNESS

~~W.A.~~
27/5/70

for on behalf of
W.A. & R.A. FITNESS.

1. Mr Shaw
2. Town Clerk

181 Velona St.

27 May, 1970.

The Engineer
Dargaville Borough Council

Dear Sir, BARN 141 ANAKINO RD.

I received your letter
re siting the proposed barn
and after further discussion
my son, I have decided
that it would be in our interest
to resite the barn as per
attached plans.

Please disregard my
letter of the 26th May.

May I express my appreciation
of the assistance and courtesy I
have received from your staff
over this matter and I trust that
the new site will receive your
favourable approval

Yours faithfully,

R. A. Fitness

for R. A. FITNESS AND W. A. FITNESS

Natural Hazards S44B(2)(a)

Drought

Kaipara District Council has no known information about this natural hazard, including as exacerbated by climate change, that would affect the property. Please consult the Northland Regional Council Hazard attachment for further information, provided by the Northland Regional Council, in relation to this natural hazard.

Earthquake, Geothermal and Volcanic

Kaipara District Council commissioned ENGEO Limited to undertake an assessment of engineering geology and geotechnical hazards and their associated risk for development within certain growth areas of the Kaipara District. ENGEO Limited summarized its findings on these matters in a report to the Council dated 17th June 2019 and 10th May 2019 (**ENGEO Report**).

Kaipara District Council is providing the ENGEO Report as it is information relating to natural hazards that is known to the Council.

The information contained in the ENGEO Report was current as at the date of the report and has been provided in good faith. The Kaipara District Council makes no representation, warranty or undertaking as to the accuracy, completeness, quality or fitness for any particular purpose of the information contained in the ENGEO Report.

The information contained in the ENGEO Report is provided on a regional/catchment basis and in most cases is not site specific. Any users of the information must obtain advice from suitably qualified practitioners if site specific information is required.

Users must also note that natural hazards outlined in the ENGEO Report do not consider any interventions that may modify the natural hazard risks to a specific site.

Dargaville Technical Report

Scope of report	<i>This report presents a geotechnical assessment and hazard mapping for the Dargaville Area</i>
Report Title:	<i>Geotechnical Assessment Dargaville</i>
Report date:	<i>10.05.2019</i>
Entity/Person who prepared the report:	<i>Engeo Limited</i>
Entity/person who commissioned the report:	<i>Kaipara District Council</i>
Purpose of the report:	<i>The purpose of this geotechnical assessment is to provide the Kaipara District Council (KDC) with information on land stability and other geotechnical hazards that could constrain development of the area defined by KDC as 'Future Residential and Business Growth Area' and 'Greater Structure Plan Policy Area' of Dargaville.</i>
Where or how to access report	<u>Engeo Reports</u>

Kaipara District Technical Report

Scope of report	<i>This report presents a geotechnical assessment and hazard mapping for the Kaipara District</i>
Report Title:	<i>Geotechnical Assessment Kaipara District</i>
Report date:	<i>17.06.2019</i>
Entity/Person who prepared the report:	<i>Engeo Limited</i>
Entity/person who commissioned the report:	<i>Kaipara District Council</i>
Purpose of the report:	<i>The purpose of this geotechnical assessment is to provide the Kaipara District Council (KDC) with information on land stability and other geotechnical hazards that could constrain development of the area defined by KDC as 'Future Residential and Business Growth Area' and 'Greater Structure Plan Policy Area' of Kaipara District.</i>
Where or how to access report	<u>Engeo Reports</u>

Northland Regional Council may provide further data regarding this Natural Hazard. Please refer to the Northland Regional Council attachment for any applicable information.

Erosion and Landslide

Kaipara District Council commissioned ENGEO Limited to undertake an assessment of engineering geology and geotechnical hazards and their associated risk for development within certain growth areas of the Kaipara District. ENGEO Limited summarized its findings on these matters in a report to the Council dated 17th June 2019 and 10th May 2019 (ENGEO Report).

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Where or how to access report	<u>Engeo Reports</u>

Kaipara District Technical Report

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Where or how to access report	<u>Engeo Reports</u>

Northland Regional Council may provide further data regarding this Natural Hazard. Please refer to the Northland Regional Council attachment for any applicable information.

Flooding

Kaipara District Council relies on flooding information provided by the Northland Regional Council. Northland Regional Council may provide further data regarding this Natural Hazard. Please refer to the Northland Regional Council attachment for any applicable information.

Fire

Kaipara District Council has no known information about this natural hazard, including as exacerbated by climate change, that would affect the property.

Wind

Kaipara District Council has no known information about this natural hazard, including as exacerbated by climate change, that would affect the property.

S44B(2)(a) Natural Hazards

Dated 30 October 2025

The information in this report has been prepared by the Northland Regional Council for the purposes of providing information to the Territorial Authorities in Northland in accordance with Part 6A of the Local Government Official Information and Meetings Act 1987.

The information contained in this report is current as at the date of the report and has been provided in good faith. Best efforts have been made to ensure the accuracy and completeness of the information however Northland Regional Council makes no representation, warranty or undertaking as to the accuracy, completeness, quality or fitness for any particular purpose. Where information is provided in draft form, that information may not have been peer reviewed or accepted by Northland Regional Council as correct.

The information is provided on a regional/catchment basis and in most cases is not site specific. Any users of the information must obtain advice from suitably qualified practitioners if site specific information is required.

Users must also note that natural hazards outlined in this report do not take into account any interventions that may modify the natural hazard risks to a specific site.

Flooding

Not applicable

Flood susceptible lands

Not applicable

Erosion and Landslide

Not applicable

Coastal erosion

Not applicable

Tsunami

Not applicable

Drought

Drought in Te Taitokerau Northland is a complex hazard to define and detect, and its impacts vary from one area to the other.

Technical Report for Northland Drought Assessment

1. Scope of report	<i>Regional</i>
2. Report Title:	<i>Droughts in Northland: A Local and Regional Analysis</i>
1. Report date:	<i>2024</i>
2. Report prepared by:	<i>National Institute of Water and Atmosphere</i>
3. Report commissioned by	<i>Northland Regional Council</i>
4. Purpose of the report:	<i>Analysis of the development, occurrence and severity of droughts in Northland Region.</i>

5. Where or how to access report	<i>Envirolink website</i> Droughts in Northland: A local and regional analysis
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In September 2024 the Ministry for the Environment and NIWA published national climate projections. Droughts are expected to become more frequent and more severe in Te Taitokerau Northland by 2090.

Volcanic, Geothermal and Earthquake

There are many processes associated with volcanic eruptions, and these can be hazardous when they interact with people and/or infrastructure. The type and intensity of volcanic process will vary from volcano to volcano. There are two areas of past local volcanic activity in Northland, at Puhipuhi-Whangārei and at Kaikohe-Bay of Islands. While climate change does not affect volcanic eruptions, it can affect the risk from volcanic hazards such as lahars (volcanic mudflows) because of the forecast changes in rainfall.

Earthquakes occur when stress that has built up along a fault – a break in the Earth’s crust – is suddenly released. Earthquakes can cause ground shaking, fault rupture, permanent ground movement, subsidence or lateral spreading, liquefaction, landslides, rock falls and tsunamis. Although climate change does not affect earthquakes, it can make some of the problems earthquakes cause, such as subsidence, liquefaction, and landslides, more likely or more severe. This is because climate change affects rainfall and groundwater, which play roles in these hazards.

While the earthquake risk in Northland is low, there have been earthquakes recorded in the region.

Northland Regional Council does not have a map of volcanic, geothermal or earthquake risk but did commission information on volcanic hazards as part of the review of natural hazards information for Northland region. This information relates to region-wide studies and may not reflect the on-site situation or natural hazard investigations and mitigation done on a site-specific property level.

Technical Report for earthquake information

1. Scope of report	<i>Regional</i>
1. Report Title:	<i>A review of natural hazards information for Northland region Section 2.0 Seismic Hazards</i>
2. Report date:	<i>2004</i>
3. Report prepared by:	<i>Institute of Geological & Nuclear Sciences Limited</i>
4. Report commissioned by	<i>Northland Regional Council and Whangarei District Council</i>
5. Purpose of the report:	<i>The aim of this report is to assemble and present a review of existing information on natural hazards, including earthquakes. The report identifies gaps and possible future work.</i> <i>Please note sections on flooding and erosion prone land have been superseded by more recent work and modelling.</i>
6. Where or how to access report	<i>Northland Regional Council Website</i> https://www.nrc.govt.nz/media/2itixwuo/naturalhazards.pdf

Asset Map 0095004003

Legend

RAMM Drainage Points

 Side Culvert

Stormwater Lines (Internal)

 Culvert

 Open Drain

 Service

 Other Drain

Water Service Points

 Fire Hydrant

 Meter

 Valve

Water Service Lines

 Pipe Main

 Service

Wastewater Points

 Inspection Shaft / Manhole

Wastewater Lines (Internal)

 Gravity Main

 Service

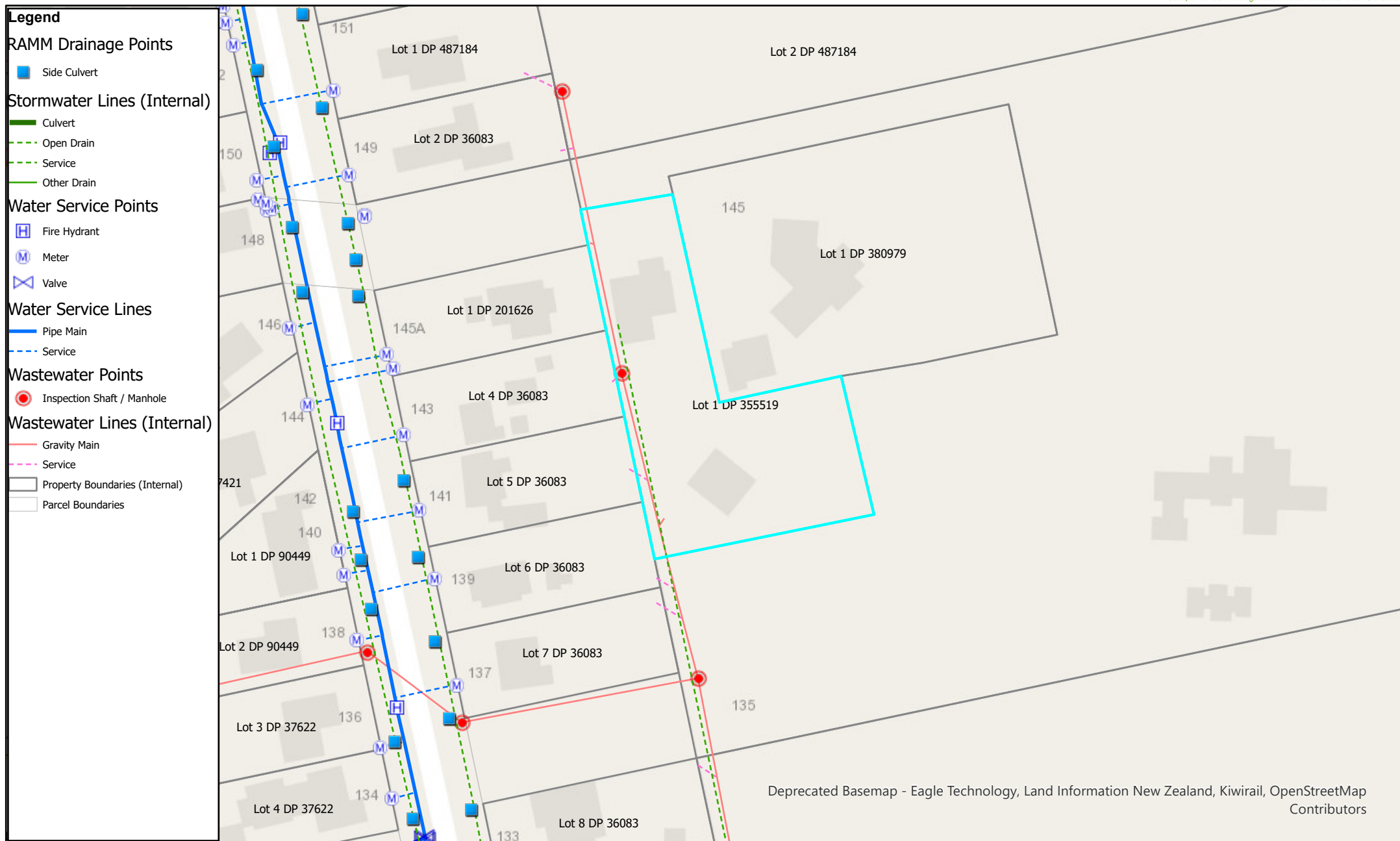
 Property Boundaries (Internal)

 Parcel Boundaries



Eagle Technology, Land Information New Zealand, GEBCO, Community maps contributors

Asset Map 0095004003



Scale: 1:1,128
Original Sheet Size: A4

Projection: NZGD 2000 New Zealand Transverse Mercator
Bounds: 1678263.972692E 6024126.322713N
1678585.930679E 6023933.603608N

The information provided is an indication only and needs to be validated in the field.
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