

Inspector: M 17854
17853
Receipt No. 17852

File No. _____

Date Permit Issued 21/8/89

OWNER

Name D Selwyn

Mailing Address c/o Po
Rawene
Northland

BUILDER

Name Apex Homes Ltd

Mailing Address P.O Box 271
Whangarei
Northland

PROPERTY ON WHICH BUILDING IS TO BE ERECTED/DEMOLISHED

SITE

Street No. _____

Street Name Marriner St

Town/District Rawene

Riding Rawene

LEGAL DESCRIPTION

Valuation Roll No. 570-77/1

Lot _____ D.P. _____

Section 102 Block _____

Survey District Rawene Township

DESCRIPTION OF PROPOSED WORK AND MAIN PURPOSE OF USE

New Dwelling

FLOOR AREA Whole Sq. Metres 79.15

DWELLING UNITS Number Erected 1

ESTIMATED VALUES \$	Building	<u>51,500.00</u>
	Plumbing	
	Drainage	<u>6,500.00</u>
	G.S.T.	
TOTAL		<u>58,000.00</u>

NATURE OF PERMIT (TICK BOX)

NEW BUILDING
- exclude 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	\$ <u>253.00</u>	Water Connection	\$ _____
Street Damage Deposit	\$ _____		\$ _____
Building Research Levy	\$ <u>58.00</u>		\$ _____
Plumbing	\$ <u>125.00</u>		\$ _____
Drainage	\$ _____		\$ _____
Sewer Connection	\$ _____		\$ _____
Vehicle Crossing Levy	\$ _____	G.S.T.	\$ _____
M.S. Plumbing	\$ _____	TOTAL:	\$ <u>436.00</u>

Receipt No. 17852-17853-17854 ^{B L PID}

Date of Payment 4/8/89

Authorised Officer M.P. [Signature]

Special Conditions:

Engineers Report if required.

Work to comply with District Scheme

Work to comply with 3604

Footing Inspection

Preline Inspection

24hr Notice prior to inspection

Boundary pegs to be sited

Installed to manufacturers instructions



Date Inspected | REMARKS (e.g. stage reached with work)

APPLICATION FOR PERMIT FOR SANITARY PLUMBING OR DRAINAGE WORK
(TO BE COMPLETED BY A REGISTERED DRAINLAYER OR PLUMBER ONLY)

TO:

The Engineer,
The Hokianga County Council,
P.O. Box 3,
RAWENE

I, the undersigned APEX HOMES LTD. Full Name
of P.O. BOX 271 WHANGAREI. HEREBY APPLY

for a permit for the work described herein, and set out in the
plans attached hereto, to be carried out in/on the premises
situated in : -

Lot Number: 102. D.P. TOWNSHIP RAWENE.
Block: or S.D.
S.D. MARINE ST. or Street or Road

NAME AND ADDRESS of person for whom work is to be carried out
APEX HOMES LTD. P.O. BOX 271 WHANGAREI.

NAME AND ADDRESS of craftsman, plumber or ~~registered drainlayer~~
or other person entitled to do the work.

W. BAKER, RDY BALLY ACRES, WHANGAREI.

ESTIMATED VALUE OF :	*Labour	Total	Fee**
(a) Plumbing :	\$ <u>70.00</u>	\$ <u>70.00</u>	\$ _____
(b) Drainage :	\$ _____	\$ _____	\$ _____

SIGNATURE : [Signature] PP APEX HOMES LTD.

Dated this 25 day of MAY 1989.

*The Permit Fee is calculated on the value of the Labour content only of the work. Please note that where the labour content is NOT stated, it will be calculated as 40% of the total cost of Plumbing Work and 60% of the total cost of Drainage Work.
**The fee payable is ~~\$5.00~~ per \$100.00 estimated value of the work (labour only). \$6.25

HOKIANGA COUNTY COUNCIL

Information Required to Accompany Application for Permit for Sanitary Plumbing or Drainage Work

Description of Work : hot and cold water, W.C., hot water cylinder.

Soil Type : loam

Soakage Test Results (where applicable) : _____

Septic Tank Size : _____

Water Supply : Town supply

For drainage work a plan of the proposed work is to be drawn to scale on the reverse of this sheet and must show : section boundaries, buildings, drains, fittings, inspection pipes and junctions etc.

Signed : W. Baker

(Registered Drainlayer or Plumber)

APPLICATION FOR PERMIT FOR SANITARY PLUMBING OR DRAINAGE WORK
(TO BE COMPLETED BY A REGISTERED DRAINLAYER OR PLUMBER ONLY)

TO:

The Engineer,
The Hokianga County Council,
P.O. Box 3,
RAWENE

I, the undersigned APEX HOMES LTD Full Name
of P.O. BOX 271, WHANGAREI. HEREBY APPLY
for a permit for the work described herein, and set out in the
plans attached hereto, to be carried out in/on the premises
situated in : -

Lot Number: 102

D.P. TOWNSHIP RAWENE

Block:

or S.D.

S.D. MARINER ST.

or Street or Road

NAME AND ADDRESS of person for whom work is to be carried out

APEX HOMES LTD, P.O. BOX 271, WHANGAREI.

NAME AND ADDRESS of craftsman, ~~plumber~~ or registered drainlayer
or other person entitled to do the work.

W. AMBLER LTD, P.O. BOX 122 KAIKOHE.

ESTIMATED VALUE OF :	*Labour	Total	Fee**
(a) Plumbing :	\$ _____	\$ _____	\$ _____
(b) Drainage :	\$ <u>580.00</u>	\$ <u>580.00</u>	\$ _____

SIGNATURE : BCOL PP APEX HOMES

Dated this 19 day of MAY 1989.

*The Permit Fee is calculated on the value of the Labour content only of the work. Please note that where the labour content is NOT stated, it will be calculated as 40% of the total cost of Plumbing Work and 60% of the total cost of Drainage Work.
**The fee payable is ~~\$5.00~~ per \$100.00 estimated value of the work (labour only). \$6.25

FORM 1

HOKIANGA COUNTY COUNCIL

Information Required to Accompany Application for Permit for
Sanitary Plumbing or Drainage Work

Description of Work : Sewer and stormwater
drain's to connections.

Soil Type : Loam.

Soakage Test Results (where applicable) : _____

Septic Tank Size : _____

Water Supply : TOWN SUPPLY.

For drainage work a plan of the proposed work is to be drawn to scale on the reverse of this sheet and must show : section boundaries, buildings, drains, fittings, inspection pipes and junctions etc.

Signed : W. Amick

(Registered Drainlayer or Plumber)

FOR UNIT A

NAME:

ADDRESS:

STOREY

Single or Uppermost
Lower of two or middle of three
Lower of three

ROOF TYPE: Light / Heavy

ROOF PITCH: 0° - 25° / 26° - 45°

WIND AREA: High / Medium / Low

W = 45.6 B.U.'s/m 22 + 16 x 1.2

EARTHQUAKE ZONE: A / B / C

E = 2 B.U.'s/m²

ROOF OR BUILDING LENGTH

BL = 13.0m

ROOF OR BUILDING WIDTH

BW = 6.0 m

GROSS ROOF OR BUILDING PLAN AREA

GPA = 79.1m²

EARTHQUAKE: B.U.'s ALONG AND ACROSS

E x GPA = 2 x 79.1 = 158.2 B.U.'s

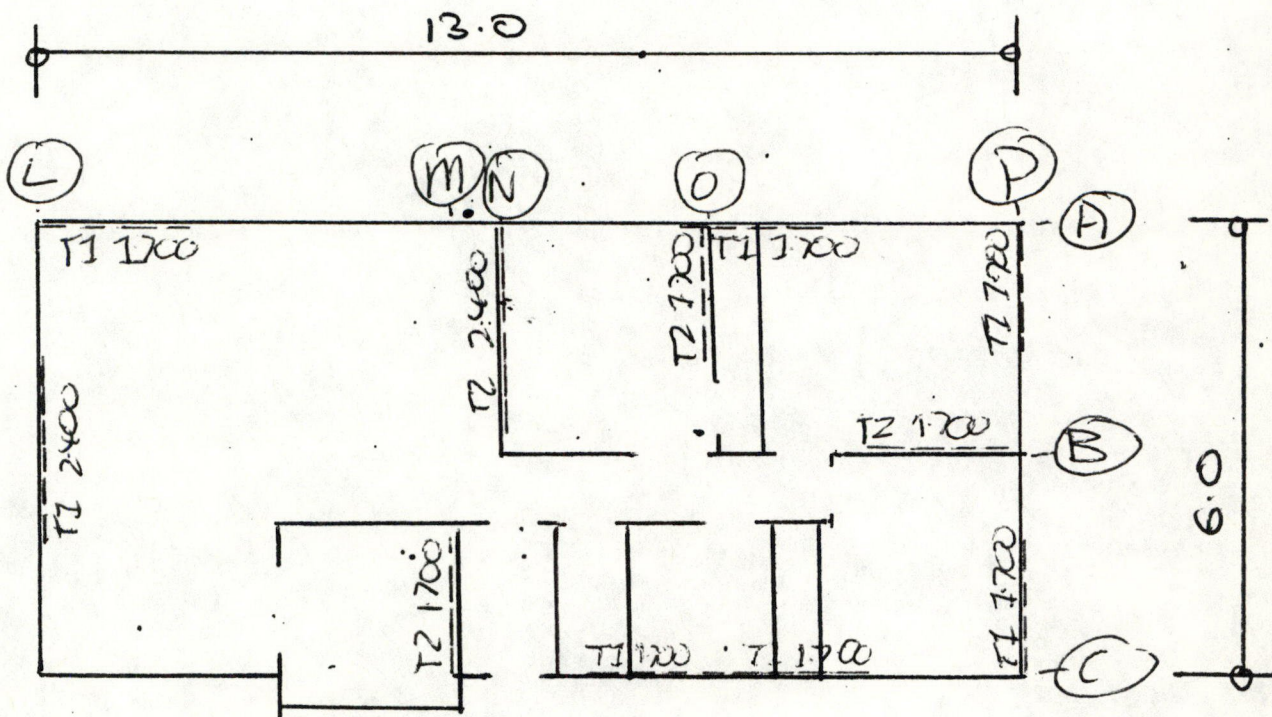
WIND: B.U.'s ALONG

W x BW = 45.6 x 6.0 = 273.6 B.U.'s

WIND: B.U.'s ACROSS

W x BL = 45.6 x 13.0 = 592.8 B.U.'s

SKETCH PLAN (external and internal walls) :



1
Total B.U.'s
Required

2
Wall Line

5
Wall Bracing Elements Provided.

1	2	3	5				8	
			4	5	6	7		
Total B.U.'s Required	Label	Minimum B.U.'s Required	Label No.	Type	Rating B.U./m	Length (m)	B.U.'s Provided	
ALONG	A		A1	T1	42	1.700	71.4	
			A2	T1	42	1.700	71.4	
		130				Sub-total	142.8	
	B		B1	T2	62	2.700	105.4	
		70				Sub-total	105.4	
	C			C1	T1	42	1.700	71.4
				C2	T1	42	1.700	71.4
		130				Sub-total	142.8	
D								
					Sub-total			
273.6	TOTAL				TOTAL	391.2		

ACROSS	L		L1	T1	42	2.400	100.8	
		60				Sub-total	100.8	
	M			M1	T2	62	1.700	105.4
		70				Sub-total	105.4	
	N			N1	T2	62	2.400	148.8
		70				Sub-total	148.8	
	O			O1	T2	62	1.700	105.4
	70				Sub-total	105.4		
P			P1	T1	42	1.700	71.4	
			P2	T1	42	1.700	71.4	
	60				Sub-total	142.8		
592.8	TOTAL				TOTAL	603.2		

FOR UNIT B.

NAME:

ADDRESS:

STORY: Single or Uppermost
Lower of two or middle of three
Lower of three

ROOF TYPE: Light / Heavy

ROOF PITCH: 0° - 25° / 26° - 45°

WIND AREA: High / Medium / Low

W = 38.4 B.U.'s/m $18+14 \times 1.2$

EARTHQUAKE ZONE: A / B / C

E = \geq B.U.'s/m²

ROOF OR BUILDING LENGTH

BL = 130m

ROOF OR BUILDING WIDTH

BW = 60m

GROSS ROOF OR BUILDING PLAN AREA

GPA = 7915m²

EARTHQUAKE: B.U.'s ALONG AND ACROSS

E x GPA = $2 \times 7915 = 1583$ B.U.'s

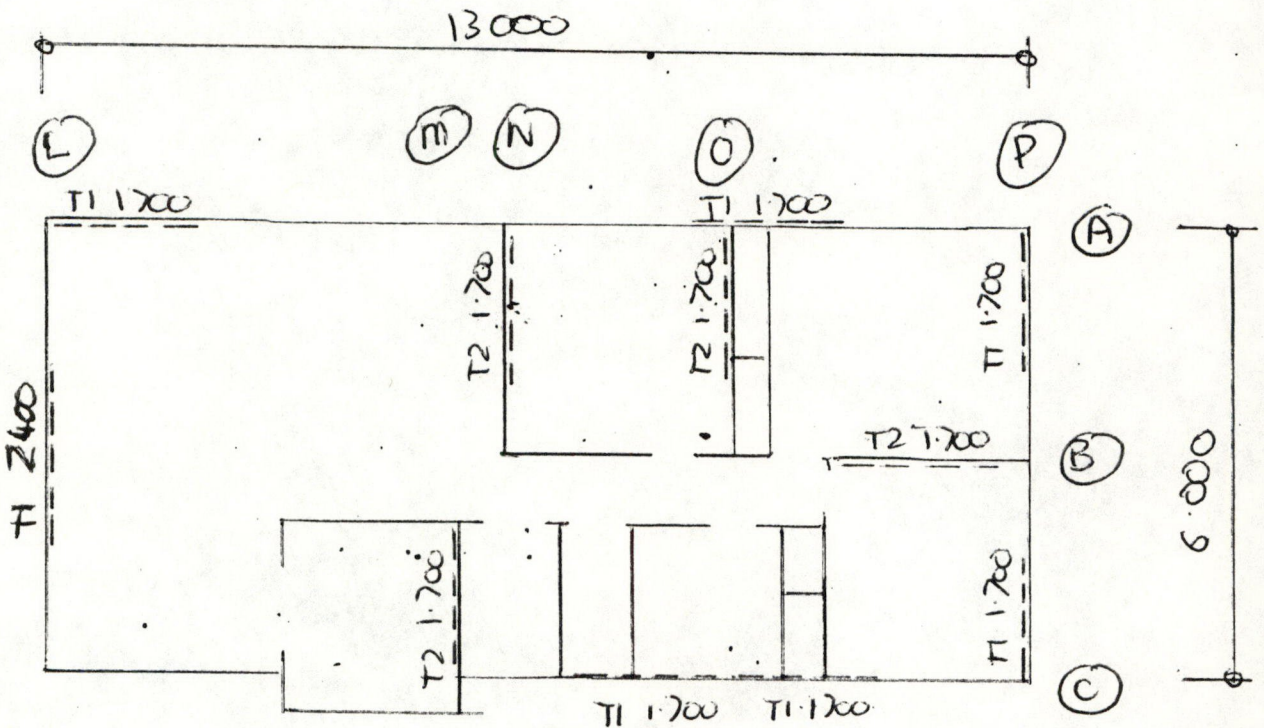
WIND: B.U.'s ALONG

W x BW = $384 \times 60 = 2304$ B.U.'s

WIND: B.U.'s ACROSS

W x BL = $384 \times 130 = 4992$ B.U.'s

SKETCH PLAN (external and internal walls) :



1 Total B.U.'s Required	2 Wall Line		3 Wall Beaming Elements Provided.				8 B.U.'s Provided		
	Label	Minimum B.U.'s Required	Label No.	Type	Rating B.U./m	Length (m)			
ALONG	A	130	A1	T1	42	1.700	71		
			A2	T1	42	1.700	71		
	Sub-total						142 ✓		
	B	70	B1	T2	62	1.700	105.4		
			Sub-total						105.4
	C	130	C1	T1	42	1.700	71		
			C2	T1	42	1.700	71		
	Sub-total						142 ✓		
	D		Sub-total						
			Sub-total						
	230	TOTAL	TOTAL				389.4		
	ACROSS	L	60	L1	T1	42	2.400	100.8	
Sub-total						100.8			
M		70	M1	T2	62	1.700	105.4		
			Sub-total						105.4
N		70	N1	T2	62	1.700	105.4		
			Sub-total						105.4
O		70	O1	T2	62	1.700	105.4		
			Sub-total						105.4
P		60	P1	T1	42	1.700	71		
			P2	T1	42	1.700	71		
Sub-total						142 ✓			
499		TOTAL	TOTAL				559 ✓		

DESIGN CERTIFICATE

TO Apex Homes Ltd
Box 271
Whangarei

PROJECT TITLE Unit Marnor St Rawene OUR REF 1270/09

I, F. Muldowney being a Registered Engineer and holding a current Annual Practising Certificate, hereby certify that this Consulting Practice was briefed by yourself/~~your authorised agent~~ and engaged to carry out appropriate engineering calculations and/or drawings for this project, located at Marnor St LOT 102 D.P.

Your brief was limited to specific structural/civil elements and these matters only are covered in the calculations/specifications page 1 to 2 and drawings yours

Your brief was a full Engineering service described in our exchange of letters and documents prior to commencement, and covered by the calculations, drawings and specification.

I have exercised reasonable control over the design for the work described above which has been carried out in accordance with sound and widely accepted Engineering principles to support the loads specified in NZS 4203:1984 and comply, where applicable, with the requirements of the NZS 3603 by laws.

The calculated stresses in the various structural elements considered, under the design loads, are such as to ensure safety and stability, if the work is constructed in accordance with the design intention and complies with the specifications.

Signature [Signature] Date May 89 Reg. No 5648 Professional Qualifications BE MIPENZ

On behalf of FRANK MULDOWNEY LTD - Consulting Engineers Kowhai Court, 27 Rust Avenue, WHANGAREI

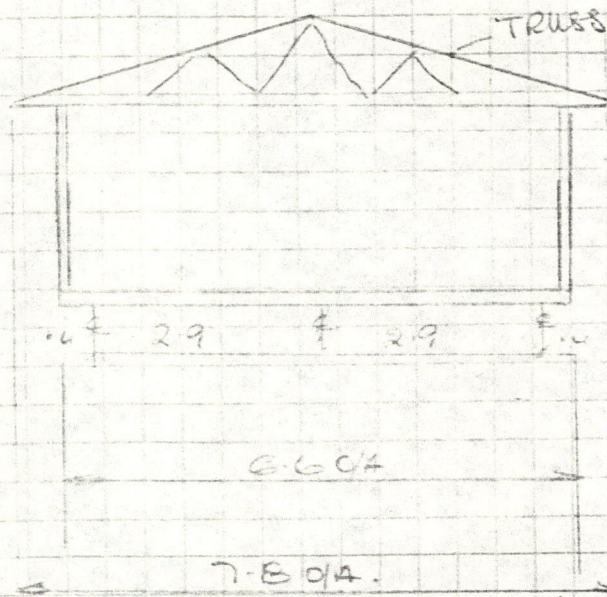
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ENGINEER NAME	ALDO S. ... LTD	PAGE	1
SECTION	STATIONER C-2 REGAL	DESIGNED	
JOB No.	1270100	CHECKED	FR
DATE	May 89		

REGAL

This plan is for a 2-BEDROOM DWELLING 11.5m by 6.6m wide.

ITS ROOF CONSTRUCTION IS PER DRIVEN RING POLES, EITHER CANTILEVERED OR BRACED. FOUNDATION FOR A BASEMENT IS MADE. ON ONE SIDE APPROX. 3M X 5M DIAPHRAGM FLOOR



FLOOR LOADING, DL = 0.5 LL = 1.5 kPa

LOAD ROOF ONLY DL = 0.30 LL = 0.25 (maintenance)

REACTION TO OUTER WALLS D. ROOF.

$$= 0.30 \times \frac{7.8}{2} = 1.17 \text{ kN/m}$$

$$\text{S.W. OF OUTER WALLS} = 0.5 \times 2.4 \text{ kN/m} = 1.2$$

$$\Sigma = 2.37 \text{ kN/m}$$

FLOOD HEAD = 2.0m

$$\text{TOTAL load from walls to posts} = 2.37 \times 11.5 = 27.255 \text{ kN}$$

$$\text{Cantilever Moment} = 27.255 \times 0.4 \text{ kNm} = 10.902 \text{ kNm}$$

CALCULATION SHEET

No. of Joists = 29

M. Joist = 316 mm

$d_{req} = \sqrt{\frac{6M}{f_b k_1}} = \sqrt{\frac{1.9 \times 10^6}{82 \times 1}} \quad k_1 = 1$

E.T. mm Center to center



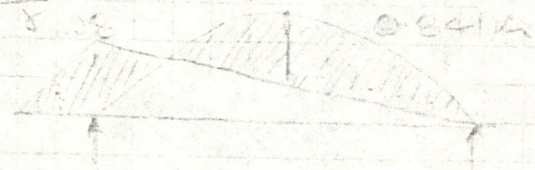
Joist @ 400 c/c

$UCL = 4 \times 2 = 0.8 \text{ kN/m}$

$d = 2.87 \times 1.4 = 0.9 \text{ m}$

$M_c = 1.9 \times 1.4 \times 1.4 = 0.38$

$M_{a-h} = \frac{w l^2}{8} = 0.841 \text{ kNm}$



$M_{max} = 0.841 \times \frac{1.4}{2} = 0.651 \text{ kNm}$

$b = 4.7 \quad k_1 = 1.35$

$d_{req} = \sqrt{\frac{6M}{f_b k_1}} = 101 \text{ mm}$

Based on Deflection & Torsion $D_L = 1.25 \text{ kPa}$ over 30 ft

$UCL = 1.25 \times 1.4 = 0.5 \text{ kN/m}$

$W = 1.5 \times 2.9 = 1.45 \text{ kN}$

$\delta = 0.03 \times 2.9 = 3.7 \text{ cm} = \frac{1}{2} = 435 \text{ mm}$

$d = \sqrt{\frac{60 \times 1.4 \times 1.4 \times 3.7^2}{30 \times 8000 \times 4.6 \times 1.35}} = 150 \text{ mm}$

Use 150 x 50 joist @ 400 c/c

CALCULATION SHEET

NO 565

NAME	PAGE No
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$$2 \times R_1 = 15 \times \frac{3.3^2}{2} = 945 \times 3.3$$

$$R_1 = 2551 \text{ kN}$$

$$2 \times R_2 = 15 \times \frac{2.7^2}{2} = 15 \times \frac{147}{2} = 945 \times 1.1$$

$$= 1600.2 \text{ kN} \quad R_1 + R_2 = 3551 \text{ kN} = 355 \text{ T}$$

∴ load on entire beam = 2551 kN @ 4000mm

∴ load on beam = 2010 kN @ 4000mm

Base Design on entire Beam

$$\frac{2551}{14} = 64525 \text{ kN/m}$$

$$\text{Beams} = 2 / 200 \times 80$$

$$M = \frac{w l^2}{8} = \frac{64525 \times l^2}{8} = 8066 l^2$$

$$K_1 = 1.35 \quad b = 2 \times 47 \quad f = 6 \text{ MPa}$$

$$d = 194 \quad Z = 2 \times 47 \times \frac{194^2}{2} = 589,631 \text{ mm}^3$$

$$f_z K_1 = 4,776,028 \text{ kNm} = M = 8066 l^2$$

$$l = 2433 \text{ mm}$$

Tabular Distribution for def. calc. $Q_1 = 1.25 \text{ kPa}$ $R_1 = 2.0 \text{ T}$
 as per min. 2.0 T

$$\Rightarrow \text{UNI} = \frac{2.0 \text{ T}}{4} = 500 \text{ kN/m}$$

$$W = 500 \text{ k}$$

$$\text{Tabular } 2.4 \text{ m} = W = 12,105.3$$

$$\bar{c} = \frac{2400 \times 0.015}{3.6}$$

$$d = \sqrt[3]{\frac{60 \times W}{8 \times 10^6}} = 213 \text{ mm}$$

PACIFIC REF. No. 717

CALCULATION SHEET

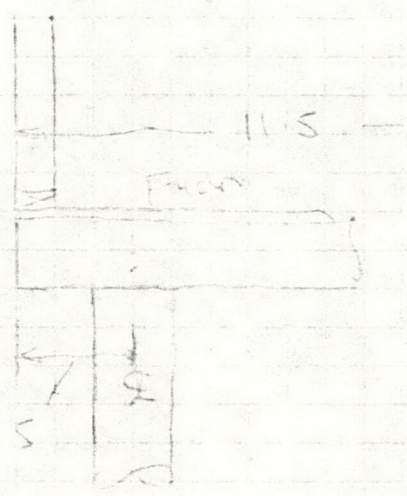
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D. No: <u>...</u>	DESIGNED: <u>...</u>
DATE: <u>...</u>	CHECKED: <u>...</u>

Fig. 2.2 $W = 11.5 \text{ m}$ $E = 3 \text{ D}$

$d_{rod} = 10.5 \text{ mm}$

for 2/200x30 Bars over 2.2 m. Spacing

$0.152 \text{ m} \times 15 = 11.5 \text{ m}$



$2.2 \times 5 = 11 \text{ m}$

$11.5 - 11 = 0.5$

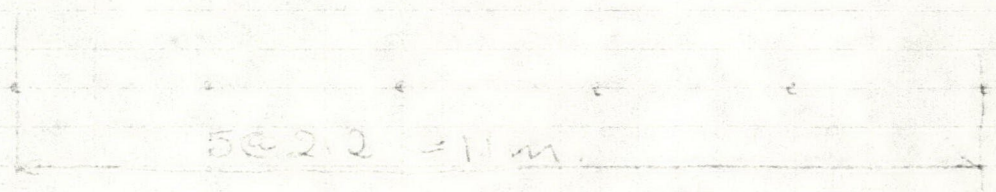
$\therefore 0.25 \text{ Carbon steel}$

Layout



2.4

2.4



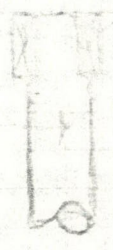
CALCULATION SHEET

1-565

DESIGNED	
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Blower
3000

at base
at top



Check stress @ BS = $R = 255 \text{ MPa}$

$$\frac{255 \times 10^3 \times 115}{100 \times 40} = 0.24 \text{ MPa} < 1.306$$

WIND LOADING

$R.P = 50 \text{ m/s}$ wind speed = 60 m/s

$S_1 = 1$ $S_2 = 0.6$ $V_0 = 26.7$

$$q_0 = 0.613 \times 26.7^2 \times 1.0^2 \times 1.0$$

$$= 0.43 \text{ kPa}$$

Laterally WIND LOAD

$$= 1.25 \times 2.4 \times 0.43 \times 1.5 \text{ m}$$

$$= 18 \text{ kN}$$

Longitudinally = $6.6 \times 1.0 \times 1.13 \times 0.2 = 1.0 \text{ kN}$

For Cantilever piles up to 2 km

$$\text{Load / pile} = \frac{18}{10} = 1.8 \text{ kN/pile}$$

CALCULATION SHEET

No. 127

DESIGNED

DATE May 19

CHECKED

Embossment of pole

Let $P = 400$

Radius of pole = 100 mm

$$A = \frac{P \times D}{E \times \delta} = \frac{400 \times 1}{100 \times 10} = 0.004$$

$$\begin{aligned} \text{Pole deflection } \delta &= A \left(1 + \sqrt{1 + \frac{2.18L}{A}} \right) \\ &= 0.004 \left(1 + \sqrt{1 + \frac{2.18 \times 2.4}{0.004}} \right) \\ &= 0.4215 \end{aligned}$$

Let $S = 50$ MPa $A = 0.0585$

$E D = 1618$

Min. Minimum embossment depth = 1.0 mm. below
SE line.

$$\frac{P \times L^3}{3EI}$$

$$\frac{\pi D^4}{64}$$

$P = 1000$ $L = 2.4$

DESIGNED DRIVEN
POLES

$$\delta = \frac{1000 \times 2.4^3 \times 64}{3 \times 20000 \times \pi \times 200^4} = 7.3 \text{ mm.}$$

Beam



PROJECT NAME	DESIGNED
DATE	CHECKED

3. Braces

For brace $\frac{L}{r} = \dots$



Tension load

$$F_{max} = C$$

$$F = \frac{E}{\cos \alpha} \approx \frac{6}{\cos 45}$$

$$S_{req} = (24^2 + 24^2)^{1/2} = 85 \text{ in}$$

Compression brace

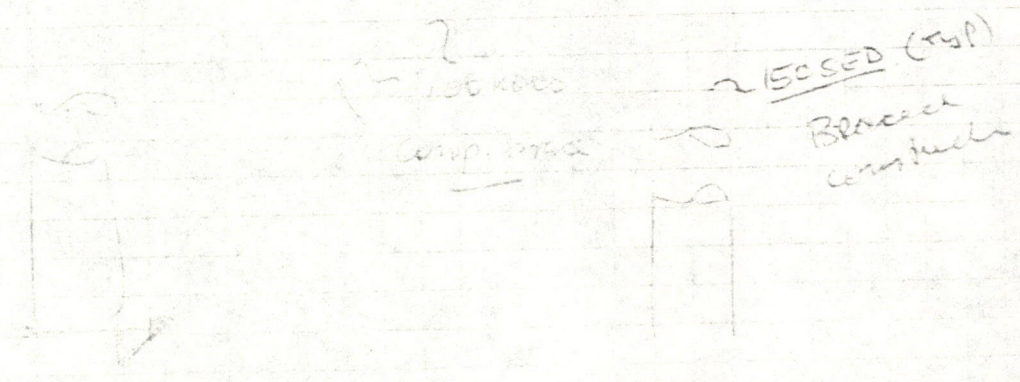
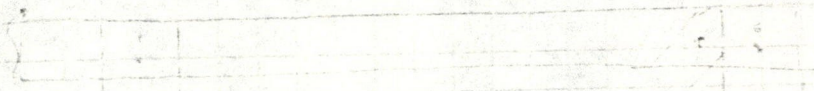
3.8

$$C_b = \frac{55000 \times 0.85}{94} = 24 < 50$$

100 x 100 compression brace

$$P_{1/17} = \frac{8.5 \times 10^3}{94} = 90.3$$

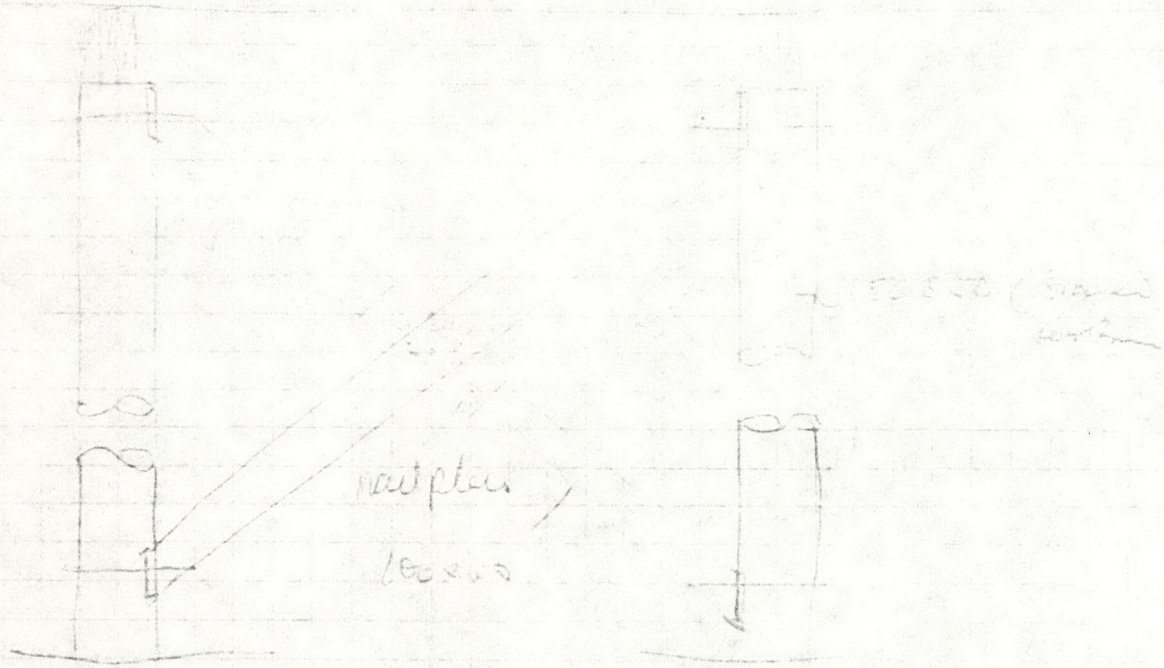
For brace construct embed 600mm.



CALCULATION SHEET

Project No. 490-565
 Date 1/2/8

DESIGNED	
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ENDEAVOUR

The is a slope unit 13 m long 6 m high
 Hence same beam & joint design as per 2nd
 Basement with can go to 3.0 m

Load to beam = $2 \times 3 = 6 \text{ kN/m}$

$$M = \frac{wl^2}{8} = \frac{6 \times 3^2}{8} = 6.75 \text{ kNm}$$

$$d = \sqrt{\frac{6M}{F_b}} = \sqrt{\frac{6 \times 6.75 \times 10^3}{16 \times 135 \times 9}} = 277 \text{ mm}$$

Based on def. $W = 2.5 \text{ kNm}$ $C = 0.5$

$$d = \frac{3 \times 0.5 \times 2.5 \times 10^3 \times 10^3}{16 \times 135 \times 9} = 277 \text{ mm}$$

Max opening = 300 mm for 100 beam

APEX HOMES LTD

7 Water Street Whangarei
P.O. Box 271

SPECIFICATION

FOR

APEX HOMES LTD.

AT

LOT 102, MARINER ST,
RAWENE.

CONTRACT: This contract includes the supply and delivery of all materials, labour, fittings, plant, etc., necessary for the due and proper completion of the building as shown on the drawings and herein specified in a workmanlike manner and in accordance with the local by-laws.

PERMITS: Contractor to comply with the labour and building by-laws of the district, to apply for and to obtain all the necessary permits and to pay all fees for same. Vehicles crossings and water meter charges are not included.

PROVIDE AND FIX: The words "provide and fix" shall be construed to mean "Provide" and "Fix" where mentioned separately, unless otherwise specified.

INSURANCE: The employer to have all his employees covered against accident by an "Employers Liability" policy and to take out insurance against fire with an insurance office for a sum sufficient to cover 100% of the contract sum, both to remain in force until the building is taken over by the owner.

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

INTERFRETATION: Work or materials shown on the plans and not specified, or specified and not shown must be supplied as though both shown and specified. Materials shown but not specified must be of the kinds commonly used for the service they are intended to perform. Figured dimensions shall supersede those to scale. Only items shown on the appropriate plan shall apply, whether or not they are included in the specifications.

ALTERATIONS: No alterations to plan or specifications will be permitted after the job has gone to production, except where the "Materials" clause is enforced, unless alterations are authorised and paid for prior to being carried out.

MATERIALS: Any materials herin specified that are not procurable at the time they are required, thus tending to retard the progress of the contract, may be substituted with materials that conform to the local by-laws and the Lending Institution. Any difference in cost will be adjusted at the completion of the contract.

/...

MAINTENANCE; Period to be thirty days after the owner has taken possession. Any parts that require adjusting, which have been included in this contract shall be adjusted or replaced as specified in this specification at the contractors own expense. One maintenance list only is required, in writing within the specified thirty days. Failure to do such absolves the contractor from further claim.

CONTINGENCIES; Provision is to be made by the builder and the owner to meet any contingencies that may arise due to fluctuations in the prices of various materials of labour. Should there be either a rise or fall in the price of labour or materials from the date the tender is submitted until the final payment, an adjustment to the Contract Price is to be made accordingly.

EXCAVATE: Excavate as required for all site levellings, foundations, footings, block walls, waterpipes, etc., to the various depths, levels and grades required for the erection of the building and its appurtenances. All sub-soil from the foundations and other excavations is to be deposited on the site unless otherwise specified. All top-soil and vegetation to be removed from under concrete floors.

ADDITIONAL WORK: Any additional work to that specified herein and in the said plans and specifications which shall be required by the local authority or by the Lending Institution, shall be notified by the builder to the client and the extra cost (if any) of such additional work shall be added on to the contract price and paid to the builder by the owner on the completion of the job.

SITE AND ACCESS: The owner will be responsible for ensuring that the section is fully pegged with survey pegs correctly numbered and flagged, and for the provision of all weather access for the vehicles of the builder and sub-trades. Owner to remove from building site all obstructions, trees, heavy growth, etc.

ROCKS: The removal of reef or large rocks from foundations or drainage excavations will be considered an extra to the contract.

DOUBTFULL BEARING: The owner shall be responsible for the cost of any additional costs to those provided for by this specification and the accompanying drawings, through encountering ground of doubtful bearing capacity or for landslides resulting from causes beyond the control of the contractor.

LIENS: All liens money to be lodged with the builders Solicitor upon completion, and released thirty days after the completion notice is signed by the owner.

MATERIALS: Cement must be Portland Cement, conforming in all respects to B.B.S.

SAND: All sand shall be clean, of mixed grades and free of organic matter.

WATER: Used for concrete must be clean and fresh.

CONCRETE: All concrete work to be carried out in accordance with the local by-laws and the Lending Institution requirements. For general purpose the mixture shall be of 6 parts of cement to 1 part of Portland Cement. All to be well mixed and tamped into trenches and boxing immediately after mixing.

PROFILE CORNERS: To be constructed at external walls over 1200mm high as detailed.

BOXING: If boxing is required it must be well fitted together and wetted before the concrete is placed.

FOOTINGS: To be constructed in 6 : 1 concrete and reinforced with approved M.S. rods and lapped not less than 40 diameters for DMS steel (see plan for size).

PILES: To be 600 x 200 x 200 precast concrete or 125 x 125 square timber piles bedded on 100 x 300 x 300 concrete pads and brought up to 300mm above ground level. Arrange piles at not more than 1.350m centres in each row.

CHIMNEY: Chimney footings to be 150mm thick concrete slab reinforced with 12mm M.S. rods at 300mm centres both ways and taken down to at least 275mm and made 150mm wider than the chimney. Chimney to be built up in precast concrete blocks or bricks as shown on plan. Line inside of fireplace with firebricks and form firebricks back. Provide and fix a colonial grate and fire back and hobs on each side.

VENTILATORS: Build into base walls mouse proof ventilators of an approved manufacture and max. 1800 cms. and 750 cms. from corners. Recessed fibrolite bases do not require base ventilators.

PORCH FLOORS AND STEPS: Steps and porches will generally be reinforced concrete fixed in accordance with good trade practice or as indicated on plan.

DAMP PROOF COURSE: Cover all concrete and brick faces in contact with timber work with one layer of three ply malthoid or other approved damp proof course.

/...

BRICKLAYER

FOOTINGS: To be constructed in 6 : 1 concrete.

MATERIALS: Type as shown on plan.

MORTAR: Shall be composed of 1 part of ply mortar to 3 parts of clean sharp mixed washed sand, properly mixed on a water-tight platform not more than twenty minutes before using. Add 1 part of portland cement to 3 parts of the above. Lay 1 layer water proof mortar to render water proof.

WIRE TILES: To be at max. 500mm crs. horizontally and 335mm crs. vertically.

VERMIN PROOF: With 6mm netting to perimeter of building.

WORKMANSHIP: The whole of the brickwork is to be built up by skilled tradesmen, all joints must be struck jointed mortar. Angles and intersections shall be properly bonded. Required openings and chases to be, provided for as indicated on plans.

BRICK VENEER: Build brick work clear of the wooden framing, care being taken to keep the framing free from mortar droppings. Flush up the mortar on the back of the walls as the work proceeds. Build mouseproof galv. vermin strips secured to the bottom wall plate and taken 25mm into brickwork. Point the face joints as the work proceeds. Build in window frames as detailed and set on either brick or precast concrete sills. Clean down the face of all brickwork on completion. Brick cavity to be minimum 40mm.

BASEMENT GARAGE: Retaining walls if required to be 200mm blockwork to the satisfaction of the Local Authority Building Inspector.

FIRE SURROUND: To be constructed on site with random split stone. Tiled hearth, unless otherwise specified.

TERRACE: To be constructed if shown on plan, according to details.

CARPORT: Where shown on plan, construct carport to Local Authority's requirements and to plan.

/...

CARPENTER AND JOINER

FRAMING: All timber work shall be framed, trussed, braced and assembled in a workmanlike manner and in accordance with normal trade practice. All materials are to be laid true to their various levels and constructed in a proper tradesmanlike manner to make the whole of the works a sound construction and comply with local by-laws and to the satisfaction of the Building Inspector.

BEAMS: To N.Z.S.S. requirements.

JACK STUDS: To be 100 x 100mm as scheduled, wired to the blocks. Brace between jack studs with 100 x 50mm diagonal bracing where required. For jack studs over 1800mm see structural detail plan.

FIBROLITE BASE: The fibrolite shall be 6mm thick, fixed with 40mm x 20g galv. clouts. Support at 600mm centres vertically and 675mm horizontally. Framing timber to be heart native timber or treated timber. Where floor height is over 1200mm with fibrolite and weatherboard, there shall be a profile corner.

FLOOR JOISTS: To be 150 x 50 at 600mm centres, gauged to an even surface and nailed to all stringers and plates. (or as per plan) All joists to be over a solid bearing. Allow for double joists where main bearing partitions run parallel with the joists. Increase the size of joists where basement garage is shown on plan. Solid noggings required to spans of more than 2400mm.

CONCRETE FLOORS: To have 12mm \emptyset bolts at 1350mm crs. for fastening ext. plates.

PLATES: All to be straight and in long lengths.

STUDS: To be double nailed to all plates with 75mm and 100mm nails. Place 100 x 50 studs to openings over 900mm and trimmers to studs. Stud height to be average 2400mm to living areas.

BRACES: Wherever possible brace every 4500mm of external walls to all external corners with pryde bracing checked flush into studs. Brace internal bearing partition with pryde purpose made angle bracing diagonally.

NOGGINGS: Allow to two rows of noggings to all walls.

BEARER PLATES: To be 100 x 100mm spaced as shown. All joints to be made over piles.

/...

TRUSS ROOFS: If shown on plan to be of approved manufacture as per plan.

SOFFIT: Frame for flat soffit to eaves out of 75 x 25mm and 75 x 40 bearers and 150 x 25 fascia board. Line soffit of eaves with 4.75mm flat fibrolite or any other approved material and underlay.

EXTERIOR SHEATHING: As detailed on plan. (Building paper under fibrolite).

PORCH WALLS: To be lined with flat fibrolite sheets 4.75mm thick with building paper under, unless otherwise stated on plan.

D.P.C.: Place malthoid between all concrete or masonry and timber.

TIMBER JOINERY: All exterior door and window jambs and sills to be grooved, throated and constructed in a proper and tradesmanlike manner and primed before fitting.

ALUMINIUM JOINERY: To be of approved manufacture and sizes as shown on the plan.

FLOORING: All flooring shall be 20mm H.D. particleboard, fixed to manufacturer's specifications. There may be a colour variation after sanding. All floor surfaces must present a level face and be kept as clean as practicable during the construction of the job.

FLOOR SANDING: On completion of the house, finish all floors with first cut machine sanding. Not to varnish standard - if two cuts required, owners responsibility.

INTERIOR LININGS: All walls to be lined with gibraltar board sheets, or as per plan, except block walls. All ceilings to be lined with pinex sheets. Sheets to be nailed with 30mm galv. F.H. nails. All stopping to be done with stopping plaster to an even surface. Paper quality only in service rooms. This does not include basements, garages or basement garages unless otherwise stated on the plan.

CORNICES: Cornices to all rooms shall be stock wooden scotia except where shown otherwise on the plan.

DOORS AND THEIR FRAMES: External door frames and sills shall be of D.A. heart rimu or approved treated timber. Jambs and heads out of 100 x 50. Sills out of 150 x 62. Internal door frames shall be out of 25mm dressed pine or similar approved timber.

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DOOR SCHEDULE: (or as indicated on plan)

Interior (main)
1980 x 760mm
Fig. 2 flush 3/87mm A.C. Butts.

W.C. & Bathroom
1980 x 710
Fig. flush 3/87mm A.C. Butts.

Wardrobes
1980 x 610
Fig. 2 flush 2/87mm A.C. Butts.

Kit. Cupboards
12mm thick (minimum)
Surface mounted 2 op rebate butts.

Front
1980 x 810mm
(as on plan)

Back
1980 x 810mm
(as on plan)

If louvre doors required, no responsibility is taken for warping after doors have been fitted.

SINK TOP: Builders special formica or as indicted on plan.

KITCHEN CUPBOARDS: All kitchen cupboard units shall be built of an approved manufacture and shall be to the dimensions shown on the plan. They shall be positioned as shown on the floor plan. Allow for false floors and toe spaces on units standing on the floor proper. Kitchen cupboard doors shall be hung on one pair of hinges and shall have fasteners fitted. Dresser and buffet tips shall be formica unless otherwise shown on plan.

HOT WATER CUPBOARD: To be constructed where shown and to be fitted with two shelves.

WARDROBES: To be lined with wall board and to have 300mm wide full length hat shelf and one coat rail.

LINEN CUPBOARD: To be constructed as wardrobes except that it will have fitted shelves.

TOWEL RAILS: Provide and fix one chrome plated towel rail in bathroom (900mm long approx).

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<u>MATERIALS</u>	<u>SIZE</u>	<u>GRADE</u>	<u>REMARKS</u>
Jack Studs	100 x 100	Approved by Local Authority	See Sub Floor Plan
Stringers	100 x 75 & 100 x 100	" "	
Wall Plates	100 x 50 & 100 x 75	" "	
Studs Exterior	100 x 50 & 100 x 75	" "	400 cntr
Braces Exterior	Pryde / 100 x 50	" "	
Approved Trusses	100 x 50	" "	900 "
Or Rafters Iron Roof	100 x 50 & 150 x 50	" "	900 "
Rafters Dec. Tile	100 x 50 & 150 x 50	" "	900 "
Rafters Tile Roof	100 x 50 & 150 x 50	" "	450 "
Purlins	75 x 50	" "	750 "
Valley Boards	150 x 25	" "	
Ridges Iron & Tile Roof	150 x 25	" "	
Eves Board	75 x 25	" "	Dependent on
Nogging Exterior	100 x 50	" "	spacing and
Studs Interior	75 x 50 & 100 x 50	" "	loading 600
Plates Interior	75 x 50 & 100 x 50	" "	
Noggings Interior	75 x 50	" "	675 max.
Ceiling Joists	100 x 50	" "	Iron Roof
Roof Struts	100 x 50	" "	Iron Roof (1.800 cntr.) Tile Roof (1.380 cntr.)

/...

<u>MATERIALS</u>	<u>SIZE</u>	<u>GRADE</u>	<u>REMARKS</u>
Collar Ties	150 x 50	Approved by	1800 crs.
Ceiling Batens	75 x 31	Local Authortiy	400 crs.
Facing Exterior	75 x 25 & 100 x 25	" "	
Flooring	20 Particle Board	" "	
Window Jambs & Sills	Finger Jointed Pine	" "	
Door Sills Exterior	150 x 50	" "	
Door Jambs Exterior	150 x 50	" "	
Scotia	40 x 18 Bevelled	" "	
Door Jambs Interior	Ex 150 x 25	" "	
Architrave	40 x 10 Single Splay	" "	
Skirting	60 x 10 " "	" "	
Floor Joists Spans	125 x 50	Spans	2,000mm
	150 x 50	"	2,400mm
	200 x 50	"	3,300mm
	225 x 50	"	3,600mm
	250 x 50	"	4,150mm
	300 x 50	"	5,000mm

METER RECESS: Provide recess for electric meter board where directed. Recess to be lined with Gibraltar board or similar approved material.

MANHOLE: Provide ceiling access with removable panel.

PLUMBER:

MATERIALS: All materials used by the plumber must be of accepted standard and must conform to all or any governing regulations or by-laws. Any part or parts omitted from this specification which are useful or necessary to complete this work in a proper manner, shall be taken as though specially mentioned.

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

SPOUTING: Unless otherwise specified, provide and fix 24g. galv. iron spouting supported on heavy galv. iron brackets fixed at 900mm centres. Spouting to have graded fall to down pipes.

DOWNPIPES: Provide and fix 75mm Marley downpipes in suitable positions, unless otherwise shown on plan.

WASTEPIPES: Vent pipes and waste pipes to be P.V.C. unless otherwise shown on plan. Carry waste pipes from all fittings with traps, cleaning eyes, etc., as required. All P.V.C. installations to comply with local body specifications.

COLD WATER SUPPLY: Lay a cold water supply from main at boundary in 18mm dia. piping. Provide and fix stopcock in suitable accessible position. Lead 12mm branches to sink, bath, basin, shower and tub. All piping and fittings must be of approved brand.

HOT WATER SUPPLY: All piping in connection with the hot water system shall be in copper. Lead from cold water supply line to hot water system in 12mm piping. Provide and fix "Ajax" valve or similar. Provide and fix a 30 gallon hot water cylinder and take 18mm branches to bath, 12mm sink, basin shower and tub. All pipe fittings must be of approved brand with flanges for securing to framing. Provide drain pipe from H.W.C. subject to Council requirements.

/...

W.C. PAN: To be flushed by a 3 gallon capacity cistern of approved manufacture and fitted with all necessary fittings. Connect to pan with 37mm flush pipe.

TAPS: (Streamline pattern). The bath to have 18mm C.P. taps with 75mm ext. Basin and Kitchen sink to have 2 12mm C.P. pillar cocks. The laundry to have 2 x 12mm C.P. taps. There is to be one brass exterior tap. Interior taps to be marked "Hot" and "Cold" respectively.

BATH: Provide and fix one first quality 1500mm white standard bath, or as indicated on the plan.

BASIN: Provide and fix one Plix wall basin on cupboard where shown on plan. If vanity unit, please refer to plan for details.

WASTES: To be P.V.C. subject to Council requirements. Bath, sink and tub to have 37mm traps and wastes. Basin to have 30mm trap and waste. All wastes to discharge into gully traps. Provide any necessary antisiphonage. All sanitary plumbing to be installed by a registered plumber approved by the Health Department and the Health Inspector.

HARDWARE

GENERAL: Provide and fix all ironmongery and metalwork to complete the contract in standard chrome hardware unless otherwise specified.

DOORS: To be fitted with chrome Legge Fortune sets. Front door, lockset. Back door, lock set. Main interior doors, latch set. W.C. and Bathroom, snibset. Base door, pad both. Kitchen cupboards, fit cupboard catches and handles. Wardrobe, linen H.W. etc., one roller catch C.P. handle.

ELECTRICIAN

MATERIALS: Materials used by the electrician must be of an approved manufacture and must conform to the regulations of the Power Board and Local Authority.

WORKMANSHIP: The whole of the electrician's work must be carried out in compliance with the regulations of the said Power Board and the Underwriters Association by a duly licensed Tradesman.

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WIRING: Wire the electrical system with tough plastic sheathed and insulated cables. Connection boxes shall be used with the plastic cable and wiring shall be concealed where practical.

MAINS: Where tough rubber sheathed or plastic sheathed cables are installed as service mains, the cable terminate in an approved mains entry box fixed to the outside of the building as close as practicable to the service line termination. Subject to the supply authority's approval, point shall be installed with the service mains where so required by the Local Authority.

METER PANEL: Provide and fix one meter panel where directed.

POWER POINTS: Provide and fix points and fix flush plates to all points, in addition to a T.V. point. 7.

LIGHTS: Provide and fix lights. 12

WATER HEATER: Wire element and thermostat to switchboard and fix control switch.

STOVE: P.C. sum of \$ 100-00.

ELECTRIC WASHER: Not supplied in contract.

HOT WATER SERVICE: Supply with 75cw element and thermostatic control to H.W. cylinder (Plumber to install).

DRAINLAYER

SCOPE: To provide and supply a system of house waste drainage in conformity with the local authority by-laws and the inspectors approval.

DRAINAGE: All drainage work to be undertaken by a registered drainlayer and approved by a drainage inspector. Excavate for and lay all necessary drains from gully traps and W.C. to sewer. All sanitary sewer pipes and connections to be 100mm of approved system. Pipes to be laid true and to a fall. All joints to be flexible type. Site drainage owners responsibility.

STORMWATER: As directed by the Inspector, or as per site plan.

/...

COMPLETION: Arrange for all drainage to be inspected and tested by the Inspector or the Local Authority. After inspection, testing and approval by the Inspector, refill the trenches and leave the area affected by the drainage operations reasonably tidy. Any excess spoil is the responsibility of the owner.

PAINTER

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

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

EXTERIOR WOODWORK: All exterior woodwork to receive one coat of approved priming. Putty all nail holes and finish with two coats of approved paint as selected, except where weather proof stain is used (two coats only).

INTERIOR FINISH: Woodwork to have a priming coat and one finishing coat.

Ceilings to have two coats PVA flat, (semi gloss in service rooms).

Gib. board walls - recommended to be papered. If painted, to have sealing coat, undercoat and one finishing coat, in shades as selected. The builder cannot be held responsible for hairline cracks to Gib. board painted surfaces due to initial house settling down period.

Inside of window surrounds to be painted.

Interior of all cupboards and pantry, unpainted.

Wardrobes to receive one coat only of PVA flat.

All interior timber not painted to have one coat of an approved clear seal.

Stop all nail holes and defects with matching putty and apply two coats of clear varnish, or two coats of Polyurethane.

CEMENT ASBESTOS SURFACES AND FIBREBOARD: Finish with two coats of PVA or acrylic resin emulsion paint where necessary. Base not included.

BASES: Block and fibrolite bases - unpainted.

/...

NUMBER OF COLOURS : Maximum allowance of three different colours per room.

ROOF: Not included in contract.

GLAZIER

Sashes generally shall be glazed by an experienced glazing firm. All bathroom and W.C. sashes shall be obscured glazed. All clear glass to be of drawn plate quality.

PAPERHANGER

All walls except where otherwise specified shall be papered with selected papers. The paperhanger must ensure that all walls are free from blemishes of any sort that will show on the finished work. Allowance of P.C. \$12.00..... per roll, average, for the purchase of selected wallpapers. All paper shall be hung true and plumb and neatly cut to all architraves, skirtings, fittings, etc. Apex Homes Ltd. accept no responsibility for white or gold wallpapers. Extra will be charged for hanging vinyl or fabrene and grass weave type wallpaper.

SOLID PLASTERER

Where steps are plastered, the finish to be the equal of a fine plastered finish.

PLEASE NOTE

If type of range, formica and paint colours are not to hand when required, builder will determine.

Janet Stephenson

29 November 1989

Reyburn & Bryant

PO Box 191

WHANGAREI

ATTENTION : R S Bryant

Dear Sir

RE : Flat Plan 134735

Please find enclosed the plan of flats on Section 102, Town of Rawene approved in terms of Section 314 of the Local Government Act 1974.

I also enclose an invoice for the fee.

Yours faithfully

Janet Stephenson (Planning Officer)
for AREA MANAGER

JS:RT

OFFICIAL RECEIPT
FAR NORTH DISTRICT COUNCIL

Hokianga County Council
P.O.BOX 3
RAWENE

Date:06Dec89

REYBURN & BRYANT
FLAT PLAN 7
RE:APEX HOMES/RAWENE

Receipt : C 22093 1

TAX INVOICE TAX INCLUSIVE
GST No 10-587-964

Received
\$140.00

G/ 2450/ /131 PLANNING FEE

Telephone 829 Rawene

TAX INVOICE

M. Reburn & Bryant
Whangarei

P.O. BOX 3
RAWENE, 29-11-1989

No 4221

Dr. to

~~HOKIANGA COUNTY COUNCIL~~
FAR NORTH DISTRICT COUNCIL

G.S.T. No. 10-587-964

Planning Fee

Flats Plan Certification

140 00

CHP 904248

Apex Homes - Mariner St
Job 1721

incl

Sub Total

G.S.T.

TOTAL

140 00

Planning Fee
Flats Plan 7.

Re: Apex Homes.
Rawene.

pd 6 Dec 89.

Flats 1 & 2 on Sec 102
Township of Rawene.

(Mariner Street)

6712

REYBURN & BRYANT

Mo

HOKIANGA

9 October 1989

10 OCT 1989

COUNTY COUNCIL

7 Hunt St.,
Whangarei
P.O. Box 191
Phones:
(089) 483-563
(089) 489-487
Fax:
(089) 480-251

The County Clerk
Hokianga County Council
P.O. Box 3
RAWENE

Ref.12/1721/B

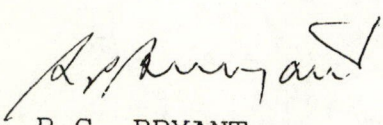
Dear Sir

RE: PLAN OF FLATS ON SEC 102 - TOWN OF RAWENE
APEX HOMES LTD - MARRINER ST

Herewith are copies of the above plan, the original of which has been lodged with the Chief Surveyor for approval. A copy of the approved plan, when available, will be forwarded to you for certification in terms of Sec. 314 of the Local Government Act 1974.

In the meantime will you please complete the necessary inspection and processing to ensure that the plan copy, when available, can be signed without delay.

Yours faithfully



R.S. BRYANT
REYBURN & BRYANT

encl.

PARTNERS:

R.W. HENRY — WHANGAREI
R. GILKISON — PAIHIA
D.B. VON STURMER — MANGONUI

CONSULTANTS:

D.D. REYBURN
R.S. BRYANT

REGISTERED SURVEYORS

No.

FAR NORTH DISTRICT COUNCIL

Our Reference

HRG:MFJ

If calling, please ask for
Mr Green

FAR NORTH

24 NOV 1989

DISTRICT COUNCIL

22nd November, 1989

The Area Manager,
Rawene Service Centre,
Far North District Council,
P. O. Box 3,
RAWENE.

Dear Graham,

Flats 1 and 2, Section 102, Rawene.

The enclosed plan and covering letter were sent to this office for certification under Section 314 of the Local Government Act. Would you kindly deal with this matter.

Yours faithfully,



H. Richard Green,
Director Area Services.

encl.

Sewerage contribution.

REYBURN & BRYANT

7 Hunt St.,
Whangarei
P.O. Box 191
Phones:
(089) 483-563
(089) 489-487
Fax:
(089) 480-251

2 November 1989

The General Manager
Far North District Council
P.O. Box 246
KAIKOHE

Ref.14/1721

Dear Sir

FLAT PLAN 134735

PLAN OF FLATS ON SEC 102, TOWN OF RAWENE

APEX HOMES LTD - MARRINER STREET

We refer to our letter of 9th October 1989 and now enclose a copy of the approved plan for Certification in terms of Sec 314 of the Local Government Act 1974.

Yours faithfully


R.S. BRYANT
REYBURN & BRYANT

encl.

Received:	
6-11-89	
ACTION	INFORMATION
<i>file</i>	

PARTNERS:

R.W. HENRY — WHANGAREI
R. GILKISON — PAIHIA
D.B. VON STURMER — MANGONUI

CONSULTANTS:

D.D. REYBURN
R.S. BRYANT

REGISTERED SURVEYORS

141

APEX HOMES LTD

Water Street, P.O. Box 271, Whangarei. Telephone 484-422

21st November 1989

FAR NORTH

22 NOV 1989

Far North District Council
P O Box 3
RAWENE

DISTRICT COUNCIL

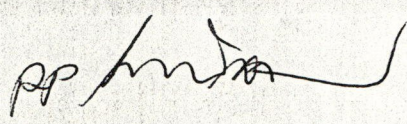
Dear Sir

re : Plan flats on Section 102 - Rawene

We wish to advise that all works detailed as per building permit will be completed within three months of to-day's date.

We trust that this undertaking will allow the plan to be certified and released to the Surveyor.

Yours faithfully
APEX HOMES LTD



R K Potter
Managing Director