MIKE HORSLEY
Registered Engineer
Post Office Box 508
Tauranga
Phone 0-7-571 0897
Fax 0-7-578 1255

11th April 1994. REF: 079/94

The Manager Building Services
Tauranga District Council
Private Bag
TAURANGA

DESIGN CERTIFICATE

I, MICHAEL COLIN HORSLEY, being registered under the provision of the ENGINEERS REGISTRATION ACT 1924, and currently holding an Annual Practising Certificate, hereby certify that I have carried out the design of building elements as listed below for the Proposed Building designed

by .....LOCHHEAD DESIGN LIMITED.....

for.....JOCK HOLDINGS LTD.....

and to be erected at ...LOT BETHLEHEM HEIGHTS

Elements designed:-

Structural steel beam to first floor
Canterlevering double joist over garage
Garage lintel beam
Point loading to balcony trim
.....

The structural design for these elements is detailed in my structural calculations for job No 079/94 dated April 1994.

I further certify that the works defined above have been designed in accordance with sound and widely accepted engineering principles; that they have been designed to support the loads specified in NZS 4203: 1984

Signature .....(M C HORSLEY) Date 11/4/94
Professional Qualifications: B.E. M.I.P.E.N.Z, Registered Engineer

NOTE: Supervision by the Consulting Engineer does not apply on this project

Jock

Office Address
Post Bank House
554 Cameron Road

M.C. Horsley
REGISTERED ENGINEER

Postbank House, 11th Avenue, Tauranga
Phone 571-0897

Client: Jock Holobriz
Project: House
Ref:
Date: April/94
Page: Summary

(1) Garage lintel 180UB22. precamber (10)

(2) Beam to north 200UC46 ok
on 76×76×3.2 RHS

(3) cantilever Joists @ 2-300×50 ok

(4) Floor Joists to lounge ok
@ 250×50 @ 450crs

(5) Floor Joists to under deck cut down
ok

M.C. Horsley
REGISTERED ENGINEER

Postbank House, 11th Avenue, Tauranga
Phone 571-0697

Client: JOCK HOLDINGS.

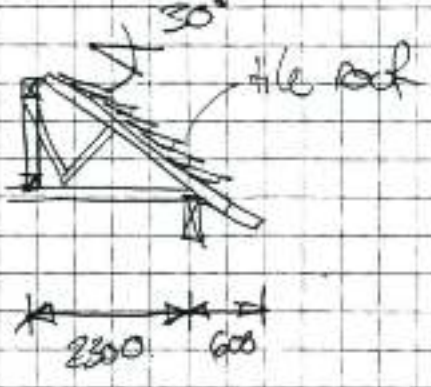
Project: HOUSE

Ref

Date 11/04/94

Page 1

GARAGE LINTEL. SPAN 5.2 M



(G)

Tiles & battens $= \frac{550\ Pa}{\cos 30} = 577\ Pa$

rafters $= \frac{100 \times 50 \times 6000 \times 9.81}{900 \times \cos 30} = 22\ Pa$

underpurlins $= \frac{15 + 100 \times 50 \times 5000 \times 9.81}{900 \cos 30} = 48\ Pa$

ceiling joist $= \frac{100 \times 50 \times 9.81 \times 500}{900} = 27\ Pa$

ceiling & battens $= 91\ Pa$

$775\ Pa$

$(G) = \left(\frac{2.3}{2} + 0.6\right) 775\ Pa = 1360\ N/m$

$(Q) = \left(\frac{2.3}{2} + 0.6\right) \times 250\ Pa = 440\ N/m$ or $1000\ N$.

$BM_G = 4600\ Nm$

$BM_Q = 1500\ Nm$ or 1300

$1.2G + 1.6Q = 7920\ Nm$

$M^* = 7.9\ kNm$

M.C. Horsley
REGISTERED ENGINEER

Postbank House, 11th Avenue, Tauranga
Phone 571-0897

Client: Jack Hobbing

Project:

Ref:

Date: 11/04/94

$R_{xnG} = 3540N$
$R_{xnQ} = 1144N$
$1.2G + 1.6Q = 6080N$

Try 150 UB 18 (wt = 180N $M^* = 608NM$) $M^* = 85NM$ (OK)

$\phi M_b = \phi \alpha_m \alpha_s M_s$

$\phi M_b = 11 KNM$ $\phi M_b = 11 KNM$

$\Delta_G = \frac{5}{384} \cdot \frac{(1360 + 180) \cdot 5200^4}{200 \cdot 905} = 8.1mm$

$\Delta_{allow} = \frac{5200}{300} = 17.3mm$ (OK)

ADOPT > 150UB18
GARAGE UNTEL

Adopt 180 UB 22

Precamber 10mm

M.C. Horsley
REGISTERED ENGINEER

Postbank House, 11th Avenue, Tauranga
Phone 571-0897

Client: Jack Holden (signature)

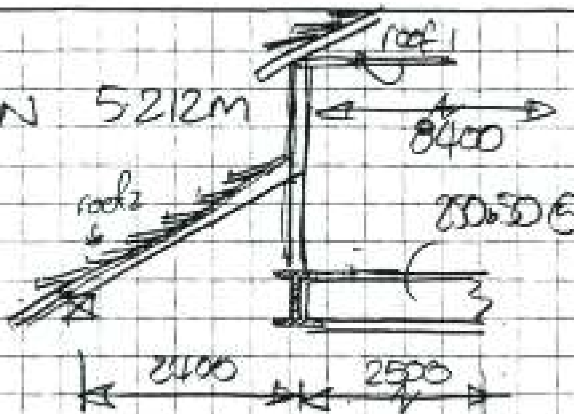
Project:

Ref:

Date: 11/04/93.

Page: 3.

BEAM IN NOOK. SPAN 5212M



- ROOFS — 775Pa.

(roof 2 ≈ roof 1.)

wall — T&B plates	2×100×50×500×9.81	=	100 N/m
nogs &	2×100×50×500×9.81	=	100 N/m
studs	2.4×100×50×500×9.81 / 600	=	98 N/m
lining	67Pa × 2.4	=	160 N/M.
stucco lining	110Pa × 2.4	=	264 N/m
			722 N/m

floor. — particle board		=	145Pa.
joists	250×50×550×9.81 / 450	=	140Pa.
ceiling & battens			91 Pa
			376 Pa

deck — (allowed for in roof 1 weight.)

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Postbank House, 11th Avenue, Tauranga
Phone 571-0897

Client Beach Holdings

Project

Ref

Date 11/04/94.

Page 4.

(G) roof, $\left(\frac{8.4m + 0.6m}{2}\right) \times 775Pa$ = 3720N/m.

roof 2 $\frac{2.4m}{2} \times 775Pa$ = 930N/m.

wall 722N/m.

floor $\frac{2.5m}{2} \times 516Pa$ = 470N/m

G 5850N/m

(Q) $\frac{2.5m}{2} \times 1500Pa$ Q 1875N/m.

$BM_G = 20540Nm$
$BM_Q = 6590Nm$
$1.2G + 1.6Q = 35200Nm = M^*$

$Rxn_G = 15503N$
$Rxn_Q = 4970N$
$1.2G + 1.6Q = 26600N$

Try 200UC46. (Wt = 460N M = 615Nm.)

$M^* = 37KNm.$

$\phi M_b = 80KNm$

$\phi M_b = 80KNm$ OK

$\Delta_{(G+\psi_l Q)} = \frac{5}{384} \frac{((5850+460)+0.4(1875)) \times 5.3^4}{200 \times 450}$

$\Delta = 8mm$

OK

$\Delta_{allow} = \frac{5300}{300} = 18mm$

M.C. Horsley
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Client: Jock Holding

Project:

Ref:

Date: 11/04/94

$$\Delta_{G+\psi_s Q} = \frac{5}{384} \left(\frac{(5850 + 460 + 0.7(1875)) \times 5.3^4}{200 \times 45.6} \right)$$

(0.7 noted above ψ_s)

$= 8.6\,mm$

$\Delta_{allow} = \frac{5300}{400} = 13\,mm$ (OK)

<u>COLUMNS.</u> $N^* = 26.6 + \frac{4.60}{2} = 26.8\,kN$

try 2-100x50.

$\phi N_c = \phi k_1 k_g f_c A$. $\frac{l_z}{b}$ $\frac{2400}{100} = 24$ ∴ $k_g = 0.48$.

$= 0.8 \times 0.8 \times 0.48 \times 20.9 \times 94^2$

$= 56.7\,kN$.

> ADOPT 200UC46 BEAM
> ON. 2-100x50 STUDS.

M.C. Horsley
REGISTERED ENGINEER

Postbank House, 11th Avenue, Tauranga
Phone 571-0897

Client Jack Holdaway

Project

Ref

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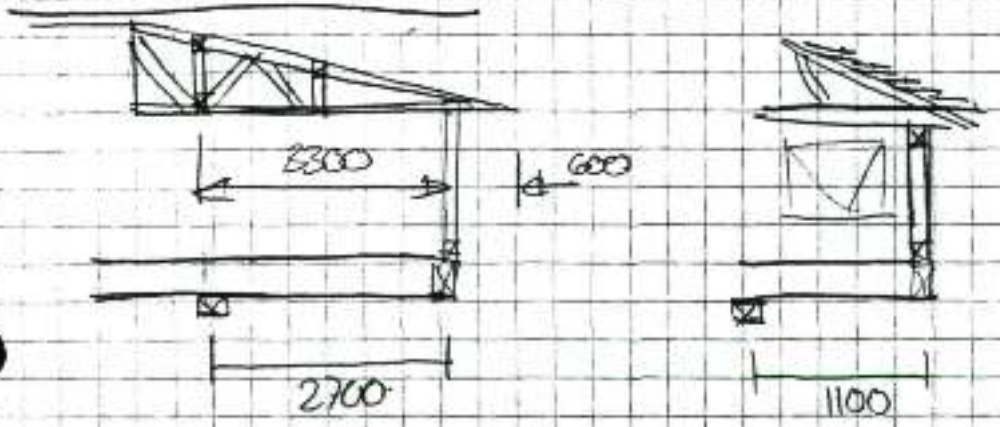
CANTILEVER JOISTS. SPAN 1·1M CANTILEVER.



Rxn on cantilever.

(G) Wall — 722N/m.

Floor — $\frac{0.45m}{2} \times 376Pa$ 85N/m

810N/m.

(Q) = $\frac{0.45}{2} \times 1500Pa$ 340N/m

Rxn G = 1100N

Rxn Q = ~~460N~~

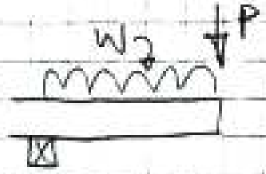
roof G $\left(\frac{3.3+0.6}{2}\right)^2 \times 755Pa$ = 3822N

Q $2.25^2 \times 250Pa$ = 1266N.

M.C. Horsley
REGISTERED ENGINEER

Postbank House, 11th Avenue, Tauranga
Phone 571-0897

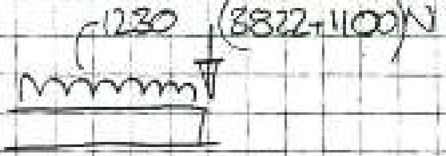
Client [signature]
Project

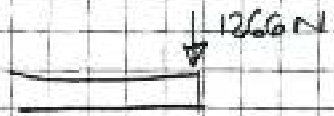


(G) wall = 722N/M

floor = $\frac{2.7M}{2} \times 376Pa$ 508N/M

G = 1230N/M

(G)


(Q)


$BM_G = \frac{wL^2}{2} + PL$ = 6160Nm

BM_Q = = 1400Nm

1.2G+1.6Q = 9640Nm

Try 2-250×50 Wt = 107 M^* = 66Nm

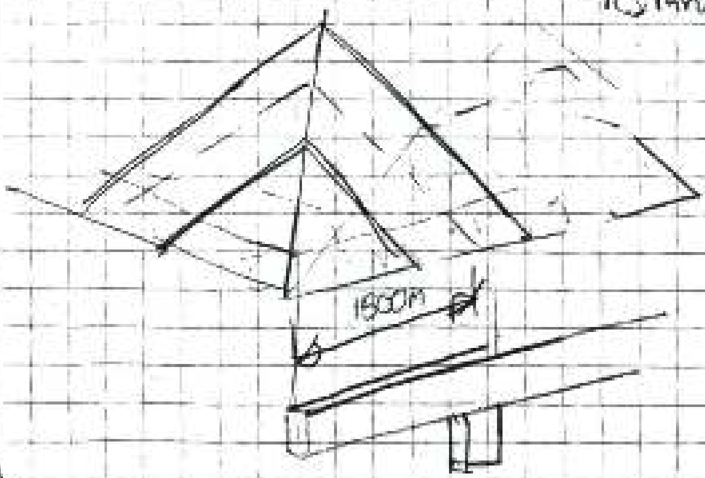
M^* 9.7kNm

$\phi M_n = \phi k_1 k_8 f_b Z$

= 0.8×0.8×1.0×17.7×864 =

(restrained comp edge)

ϕM_n = 9.8kNm



Above calculations
Too conservative for
deflection calc.

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Client

Project

Ref

Date 11-04-94

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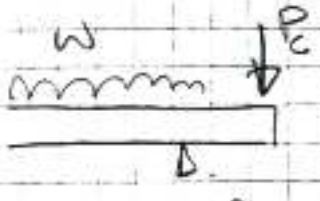


$P_G = 1.5^2 \times 755 = 1700 N/m$

$+R_{xA} = 1100$

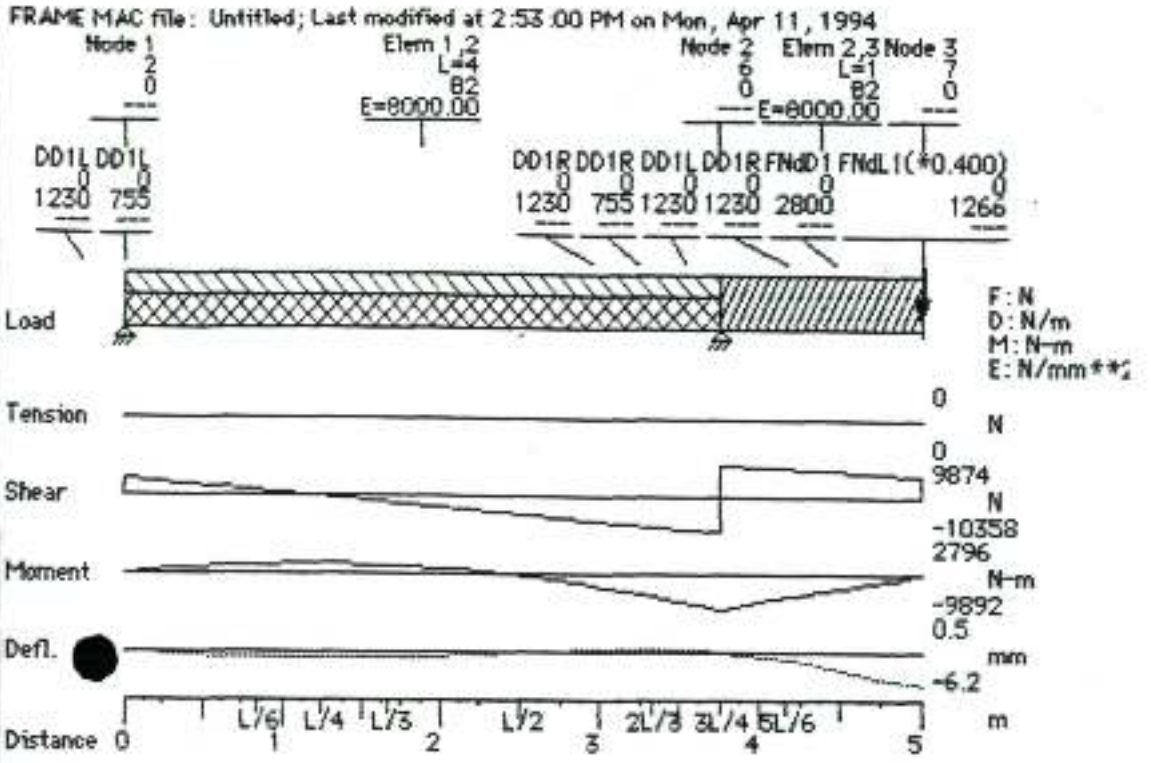
$2800 N/m$

$W_G = 1m \times 755 P_a = 755 N/m$

$\Delta_{G+Q} = 6.2mm$ ($k_2 = 20$ incl)

$\Delta_{allow} = \frac{1100}{150} = 7.3mm$ OK

ADOPT 2-300×50 CANTILEVER JOISTS



****

Input Data

****

FRAME MAC file: Untitled.
Last modified at 2:53:00 PM on Mon, Apr 11, 1994.
All coord. and distances are in m.
There are 3 nodes and 2 elements.
There are 5 degrees of freedom; the half-bandwidth is 4.

****

Node information:

Node No.	Location m (X)	Location m (X) (Y)	Restraint (FX)	Restraint (FY)	Restraint (MZ)	Hinge
1	2	0	Yes	Yes	No	No
2	6	0	Yes	Yes	No	No
3	7	0	No	No	No	No

****

Element characteristics:

From, To Nodes	Length m	Section name	E N/mm**2	Include self wt.top or left	Hinged at node(s)
1,2	4	B2	8000.00	Yes	Yes	---
2,3	1	B2	8000.00	Yes	Yes	---

****

Element characteristics (continued):

From, To Nodes	Area mm**2	Depth mm	Thickness mm	Weight N/m	Weight N
1,2	26253	300	50	129	464
2,3	26253	300	50	129	155

****

Element characteristics (continued):

From, To Nodes	Iz mm**4	Sec. mod. mm**3	Rad. gyr. mm	N.A.-edge mm	S,T,L
1,2	179700000	1254000	82	150	S
2,3	179700000	1254000	82	150	S

Total frame weight: 619 N.

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Client

Project

Ref

Date 11-04-94

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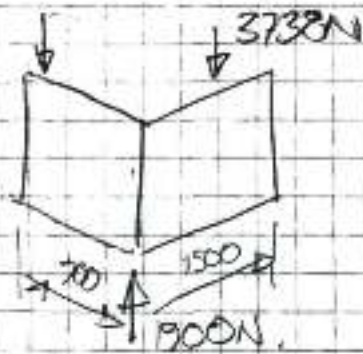
DOUBLE JOIST UNDER DECK

roof $5500 \times 900 \times 750\,Pa = 3738N$



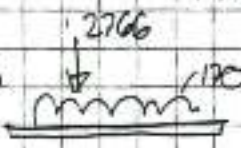
1900N

wall. $\frac{900+1500}{2}(722N/m) = 864N.$

2766N.

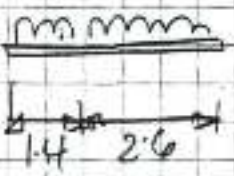
floor/deck $-0.45m \times 376Pa = 170N/m.$

(c)



(a) $0.45m \times 2000 = 900N/m.$

$0.45m \times 1500 = 675N/m$



$BM_c = 2520Nm + 340Nm$
$= 2860Nm$

$BM_a = 1800Nm$

$1.2G1G9 = 6312Nm$

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Phone 571-0897

Client: Jack Holdings

Project:

Ref:

Date: 11-04-14

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Try 2-250x50 (107N M = 214NM)
(fully restrained one edge)

$M^* = 65kNm$

$\phi M_n = 98kNm$ (OK)

$\phi M_n = 0.8 \times 0.8 \times 40 \times 17.7 \times 864$

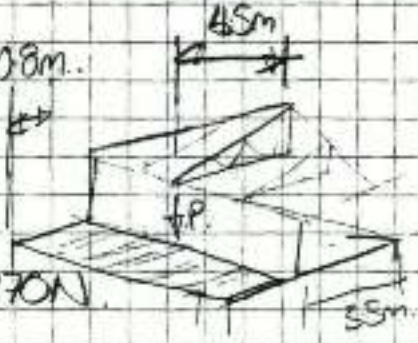
$\Delta_{(G+\psi_l Q)} = \frac{5}{384} \times \frac{(1.70 + 2.14 + 0.4 \times 2.00) \times 4^4}{3 \times 10^3 \times 2.7} \times 20^3$

$+ \frac{2.766 \times 4^3}{48EI} = 10.7mm$

$\Delta_{allow} = \frac{4000}{300} = 13.3mm$ (OK)

DOUBLE JOIST UNDER DECK (OK)
ADOPT 2-250x50

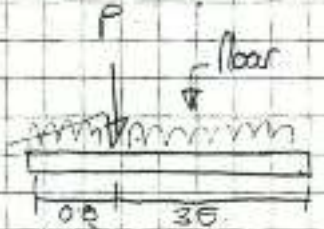
LOUNGE CEILING JOISTS
SPAN 4.3M



P.

Roof(G) $\frac{4.5m \times 0.9m \times 755}{2} = 770N$

at apex.



Wall $7.22 kPa \times 4.50 = 3.25N$ (G)

roof $0.45m \times 7.55 kPa = 3.40N/m$ $= 2.00N/m$ (G)

floor $0.45m \times 3.76 kPa = 1.70N/m$

(Q) $= 1.500 kPa \times 0.45 = 0.675N/m$ (Q)

M.C. Horsley
REGISTERED ENGINEER

Postbank House, 11th Avenue, Tauranga
Phone 571-0897

Client Jack Hobbs.

Project

Ref

Date 11-04-94

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(G) 1095N, 200 N/m (Q) 675

$BM_G = 713 + 463 = 1175 NM$

$BM_Q = 1560 Nm$

} $1.2G + 1.6Q = 3900 NM$

Try 250×50 (Wt = 53 M = 122NM)

$M^* = 4.01 KNm$

$\phi M_n = 0.8 \times 0.8 \times 10 \times 177 \times 432 = 4.9 KNm.$ (full restraint)

$\Delta_{(G+Q)} = \left(\frac{5}{384} \frac{(200+53+0.4(675))\,4.3^4}{8 \times 513}\right.$

$\left. + \frac{(\alpha \times 770 \times 4.3^3)}{48 \times 8 \times 513}\right) \times 20^{k_2} = 14.6mm$

$\alpha = 0.53$

$\left(\frac{3a}{L} - 4\left(\frac{a}{L}\right)^3\right)$

(OK)

$\Delta_{allow} = \frac{4300}{300} = 14.3mm$

BRANZ
THE RESOURCE CENTRE FOR BUILDING EXCELLENCE

SHEET A

APPROVED UNDER BUILDING ACT 1991

Name: Jack Holdings

1

Location of STOREY	foundation single upper of two (lower of two)
SITE WIND ZONE: (Table 2.4)	(low) / medium high / very high
EARTHQUAKE ZONE: (Fig 2.2, Table 2.3)	A (B) / C

SITE ADDRESS

City/Town or District: Bethlehem Heights

Street and Number: _____

or

LOT and D.P. Number: 26

2

FOR EARTHQUAKE

Roof weight :	light / (heavy)	E = 6.1 B.U.'s/m²
Average Roof Pitch:	30	
Type of Cladding:	light / heavy	
Earthquake zone:	B	
Storey in Roof space:	~~yes~~ / no	

3

FOR WIND

Building Height:	4.8 m	W = 88 B.U.'s/m
Roof Height	: 2.1 m	
Storey Height	: 2.1 m	
Design Wind Speed	: 32	

4

ROOF or BUILDING LENGTH	BL = 19.2	m
ROOF or BUILDING WIDTH	BW = 15	m
GROSS ROOF or BUILDING PLAN AREA	GPA = 288	m²

5

EARTHQUAKE LOAD (ACROSS and ALONG)		E x GPA = 288 x 6.1	= 17568 B.U.'s
WIND LOAD:	ACROSS	W x BL = 88 x 19.2	= 16896 B.U.'s
WIND LOAD:	ALONG	W x BW = 15 x 88	= 1320 B.U.'s

ALONG

LOCATION OF STOREY	Wall or Bracing Line		Bracing Elements Provided				
1	2	3	4	5	6	7	8
foundation single upper storey lower storey	Line Label	Minimum B.U.'s Required	Bracing Element NO.	Bracing Type	Rating B.U.'s	Length of Element (m)	B.U.'s Achieved
Total Bracing Units Required for foundation or this storey			1 2	BR4	85	900	76.5
	A		3 4	"	85	900	76.5
			5	GB2	56	3.0	168
			6	"	56	3.0	168
	B		7	"	64	2.2	140.8
for EARTHQUAKE (from sheet A)			8	BR6	112	1.2	134.4
			9	BR4	85	1.0	85
	C		10	BR6	112	1.2	134.4
			11	GB1	40	3.0	120
	D		12	BR5	87	1.2	104.4
			13	BR9	95	600	57
			15 14	BR4	85	900	76.5
	E		16	BR9	95	600	57
			17	"	95	600	57
			Hardiwall	Brace	H1 / HG		560
1757					TOTAL		1968.93
for WIND (from sheet A)			1 2	BR4	91	900	81.9
	A		3 4	BR4	91	900	81.9
			5	GB2	92	3.0	276
			6	"	92	3.0	276
	B		7	"	91	2.2	202.1
			8	BR6	142	1.2	170.4
	C		9	BR4	91	1.0	91
			10	BR6	142	1.2	170.4
	D		11	GB1	92	3.0	276
			12	BR5	98	1.2	117.6
			13	BR9	110	600	66
	E		15 14	BR9	110	600	66
			16	BR9	110	600	66
			17	"	110	600	66
			Hardiwall	brace	H1/HG		220
1689					TOTAL		295.4

ACROSS

LOCATION OF STOREY	Wall or Bracing Line		Bracing Elements Provided				
1	2	3	4	5	6	7	8
foundation single upper storey lower storey	Line Label	Minimum B.U.'s Required	Bracing Element NO.	Bracing Type	Rating B.U.'s	Length of Element (m)	B.U.'s Achieved
Total Bracing Units Required for foundation or this storey			20	BR5	87	1.2	104.4
			21	GB1	47	2.2	103.4
	M		22	BR5	87	1.2	104.4
			24	BR4	85	1.0	85
			25	GB2	56	3.0	168
	N		26	BR6	112	1.2	134.4
for EARTHQUAKE (from sheet A)			27	GB2	56	3.0	168
			28	BR5	87	1.2	104.4
	O		29	BR9	95	600	57
			30	BR4	85	1000	85
	P		31	BR4	85	1000	85
			32	BR9	95	600	57
			33	GB1	47	2.2	103.4
	Q		34	GB1	47	2.2	103.4
			Hardiwall	Brace	H1/HG		236
1757					TOTAL		2265.2
			20	BR5	98	1.2	117.6
	M		21	GB1	62	2.2	136.4
			22	BR5	98	1.2	117.6
			23	GB2	92	3.0	276
	N		24	BR4	91	1.0	91
for WIND (from sheet A)			25	GB2	92	3.0	276
	O		26	BR6	142	1.2	170.4
			27	GB2	92	3.0	276
			28	BR5	98	1.2	117.6
	P		29	BR9	110	1.2	66
			30	BR4	91	1.000	91
	Q		31	BR4	91	1.0	91
			32	BR9	110	600	66
			33 34	GB1	62	2.1	130.2
1320					TOTAL		2147.5

BRANZ
THE RESOURCE CENTRE FOR BUILDING EXCELLENCE

SHEET B

BRANZ
THE RESOURCE CENTRE FOR BUILDING EXCELLENCE

SHEET A

Name: Jock Holdaway

1

Location of STOREY	foundation single (upper of two) lower of two
SITE WIND ZONE: (Table 2.4)	(low) / medium high / very high
EARTHQUAKE ZONE: (Fig 2.2, Table 2.3)	A (B) / C

SITE ADDRESS

City/Town or District: Bethlehem Heights

Street and Number: _____

or

LOT and D.P. Number: 26

2

FOR EARTHQUAKE

Roof weight :	light / heavy	E = 3.5 B.U.'s/m²
Average Roof Pitch:		
Type of Cladding:	light / heavy	
Earthquake zone:		
Storey in Roof space:	yes / no	

3

FOR WIND

Building Height:	:5.0 m	W = 85 B.U.'s/m
Roof Height	:2.6 m	
Storey Height	:2.4 m	
Design Wind Speed	:32

4

ROOF or BUILDING LENGTH	BL =	13.2 m
ROOF or BUILDING WIDTH	BW =	9.1 m
GROSS ROOF or BUILDING PLAN AREA	GPA =	120.12 m²

5

EARTHQUAKE LOAD (ACROSS and ALONG)		E x GPA = 35 x 120.12	= 4204.2 B.U.'s
WIND LOAD:	ACROSS	W x BL = 85 x 13.2	= 1122 B.U.'s
WIND LOAD:	ALONG	W x BW = 85 x 9.1	= 774 B.U.'s

ALONG

LOCATION OF STOREY	Wall or Bracing Line		Bracing Elements Provided				
1	2	3	4	5	6	7	8
foundation single upper storey lower storey	Line Label	Minimum B.U.'s Required	Bracing Element NO.	Bracing Type	Rating B.U.'s	Length of Element (m)	B.U.'s Achieved
Total Bracing Units Required for foundation or this storey	A		1	B2A	85	1.0	85
			2	B2A	85	1.0	85
			3	B2S	87	1.2	104.4
	B		4	B2A	95	6.0	57
			5	GB2	56	3.0	168
			6	B2S	87	1.2	104.4
	C		7	GB2	56	2.1	117.6
			8	B2A	85	1.0	85
			9		85	1.0	85
	D		10	GB1	47	2.1	112.8
	E						
for EARTHQUAKE (from sheet A)							
A2					TOTAL		1021
for WIND (from sheet A)	A		1	B2A	91	1.0	91
			2	B2A	91	1.0	91
			3	B2S	99	1.2	118.8
	B		4	B2A	100	6.0	66
			5	GB2	92	3.0	276
			6	B2S	99	1.2	118.8
	C		7	GB2	97	2.1	220.5
			8	B2A	91	4.0	91
			9		91	1.0	91
	D		10	GB1	92	2.1	72.8
	E						
1122					TOTAL		13826

ACROSS

LOCATION OF STOREY	Wall or Bracing Line		Bracing Elements Provided				
1	2	3	4	5	6	7	8
foundation single upper storey lower storey	Line Label	Minimum B.U.'s Required	Bracing Element NO.	Bracing Type	Rating B.U.'s	Length of Element (m)	B.U.'s Achieved
Total Bracing Units Required for foundation or this storey	M		15	B2A	85	1.0	85
			16	GB1	40	3.0	120
			17	B2A	85	1.0	85
	N		18	GB2	56	3.0	168
			19	GB2	56	3.0	168
			20	GB2	56	3.0	168
	O		21	GB1	56	3.0	168
			22	B2A	85	1.0	85
			23	GB2	56	2.1	117.6
	P		24	B2A	85	1.0	85
			25	GB1	47	2.1	112.8
			26	B2S	87	1.2	104.4
	Q						
for EARTHQUAKE (from sheet A)							
A2					TOTAL		1491.4
for WIND (from sheet A)	M		15	B2A	91	1.0	91
			16	GB1	92	3.0	276
			17	B2A	91	1.0	91
	N		18	GB2	92	3.0	276
			19	GB2	92	3.0	276
			20	GB2	92	3.0	276
	O		21	GB2	92	3.0	276
			22	GB2	92	1.0	91
			23	GB2	92	3.0	276
	P		24	B2A	91	1.0	91
			25	GB1	92	2.1	220.8
			26	B2S	99	1.2	118.8
	Q						
774					TOTAL		23582

BRANZ
THE RESOURCE CENTRE FOR BUILDING EXCELLENCE

SHEET B

10 November 2020

James Allan Brown
3 BEAUMARIS BOULEVARD
BETHLEHEM
TAURANGA 3110

Dear Sir/Madam

Proposed Plan Changes to the operative Tauranga City Plan

Tauranga City Council is currently progressing the following plan changes to the operative Tauranga City Plan (City Plan):

- **Proposed Plan Change 26 (Housing choice)**
  This plan change proposes changes to the City Plan to make it easier for people to build a variety of more compact types of homes, like duplexes, terraced houses, townhouses and apartments, to better suit their needs.
- **Proposed Plan Change 27 (Flooding from intense rainfall events)**
  This plan change introduces a new rule framework to manage the effects of flooding in intense rainfall events on people, properties and infrastructure.
- **Proposed Plan Change 30 (Earthworks)**
  This plan change proposes to clarify wording of existing provisions to ensure that earthworks are undertaken in a safe manner, avoiding negative effects on the environment.

As the owner of the property at 3 BEAUMARIS BOULEVARD, you have been identified as likely to have an interest in the changes proposed for the following reasons.

- Your property is located within the Suburban Residential Zone where Plan Change 26 (housing choice) proposes to enable a greater choice of housing, including duplexes and townhouses.
- Plan Change 27 (flooding from intense rainfall) proposes to introduce provisions in this zone that limit the area of impervious surfaces. Proposed Plan Change 27 will have legal effect from Monday 16 November 2020. This means that all applications, where required, should have regard to the proposed objectives, policies and rules from the date of public notification.
- Plan Change 30 (Earthworks) proposes city-wide changes to improve existing rules for the control of earthworks at all stages of development (subdivision and post-subdivision), and sediment and erosion control.

Where to find more information

To help you understand the proposed plan changes and how they affect your property, the following information is available at www.tauranga.govt.nz/planchanges, at council's customer service centre and your local library:

- public notice as published in the Weekend Sun on Friday 30 October 2020 and Bay of Plenty Times Saturday 31 October 2020;
- annotated text showing the proposed changes to the City Plan and section 32 evaluation reports explaining the reasons for the proposed changes;
- online map viewer showing the location and extent of the plan change areas, including the City Plan zoning and flooding on your property;
- submission form to make a submission.

If you rent or lease your property, please ensure you notify your tenant or lessee about the contents of this letter.

These proposed plan changes have been initiated under the provisions of Schedule 1 of the Resource Management Act 1991.

Community open days

If you wish to discuss the proposed plan changes, please join us at one of the community open days listed below.

Date	Time	Location
Monday, 23 November	3pm to 6pm	Greerton Library, 139 Greerton Road
Tuesday, 24 November	3pm to 6pm	Arataki Community Centre, Zambuk Way
Wednesday, 25 November	3pm to 6pm	Otumoetai Golf Course, 25 Bureta Road
Thursday, 26 November	3pm to 6pm	Council offices, 91 Willow Street
Friday, 27 November	3pm to 6pm	Bethlehem Hall, 239A State Highway 2
Saturday, 28 November	9am to 12.00pm	Tauriko Hall, 776 State Highway 29
Monday, 30 November	3pm to 6pm	Papamoa Community Centre, 15 Gravatt Road
Tuesday, 1 December	3pm to 6pm	Mount Rugby Club, 49 Miro Street
Thursday, 3 December	3pm to 6pm	St Stephens Church, 15 Brookfield Terrace
Friday, 4 December	3pm to 6pm	Welcome Bay Community Centre, 242 Welcome Bay Road

Making a submission

Submissions on proposed plan change 26, 27 or 30 must be lodged in writing and either submitted online at www.tauranga.govt.nz/planchanges, emailed to city.plan@tauranga.govt.nz or posted to:

Manager: City and Infrastructure Planning
Tauranga City Council
Freepost Authority Number 370
Private Bag 12022
Tauranga 3143

Submissions are open until 5pm, Friday, 18 December 2020

The submission should be in the format of Form 5 of the Resource Management (Forms, Fees and Procedure) Regulations 2003 and must be dated and signed by you and include the following information:

(a) Your name, address, telephone and email address.
(b) The plan change number and details of the provisions to which the submission is being made.
(c) Whether you support or oppose the plan change provisions, in whole or in part.
(d) Reasons for your support or opposition.
(e) The decision you wish Tauranga City Council to make.
(f) Whether you wish to be heard in support of your submission.
(g) Whether or not you could gain advantage in trade competition through your submission.

For further information regarding the details of the amendments introduced by the proposed plan changes contact us on (07) 577 7000 or email city.plan@tauranga.govt.nz.

Yours sincerely

Janine Speedy
Team Leader: City Planning

We're growing up

New housing rules are coming soon

Submissions are open on proposed Plan Change 33 – Enabling Housing Supply

The Government is making some changes to housing rules that will change what you can do on your property. Your neighbourhood may change too, over time. In a nutshell, people will be able to build more on their residential sections without needing sign-off from council, or approval from neighbours.

Like all major cities, we're in the thick of a housing crisis. We're short of homes, and there's little choice in the type and size of dwellings we can live in. To help address these issues, Tauranga needs to grow up as well as out, and we've been given strict direction from the Government to enable this.

Through the Resource Management (Enabling Housing Supply and Other Matters) Amendment Act 2021, we've been instructed to amend the rules in our city plan so that we:

- allow people to build up to three dwellings of up to three storeys on most sections in residential zones, without needing to obtain a resource consent
- enable higher density housing with more building height around the city centre, and other identified commercial centres across the city and close to public transport.

This means it will be easier for homeowners looking to build or expand, and that people will have access to more types of houses. It also means there will be more multi-storied buildings popping up around our neighbourhoods and city, over time – which will gradually change where and how we live.

Open for submissions

It's time to give your feedback on Proposed Plan Change 33 – Enabling Housing Supply, which implements the direction from the Government in our city plan. Some of these changes are dictated by the Government, especially for buildings of three storeys or less, but other parts we can influence, like what developments of four storeys or more will look like, and where these higher density areas are located.

What's set in concrete

It will soon be easier to build townhouses across the city (medium density)

- No resource consent needed to build up to three dwellings of up to three storeys (11 metres height) on most residential sections
- **Applies from 20 August 2022** to all residential zones (most of the city)
- New rules for how close you can build to your boundary, amount of open space per house, overshadowing, and more
- Resource consent required for four or more dwellings or storeys.

Where will this apply? See on the map.

Find out about the rules at tauranga.govt.nz/housing-supply
These changes are dictated by Government.

We want to know what you think about

Making it easier to build apartments within walking distance of shops and facilities (higher density)

- We're proposing that building heights between four and six storeys (16m to 21m) should be enabled in areas within five to 10 minutes' walk (400m to 800m) of some of the city's commercial centres.
- We're proposing that building heights of eight storeys (27m) should be allowed along Cameron Road, as proposed through the Te Papa peninsula spatial plan.
- Resource consent would still be required for developments of four or more storeys, but it would be easier to obtain and you wouldn't need approval from your neighbours if all our rules are met (restricted discretionary activity).

Where would this apply? See on the map.

- We will also provide more direction on design and amenity outcomes for residential developments in commercial zones citywide, like apartments built above shops.

Tell us what you think about the areas we've identified and the different heights that would apply at tauranga.govt.nz/housing-supply

Going higher in the city centre

- We aim to maximise building heights and density in and around the city centre, to enable more people to live in the heart of our city.
- We're proposing building heights of eight storeys (27m) within 1500m (15 minutes' walk) of the city centre.
- Within the city centre, we're proposing to enable building heights up to 48.7m above sea level (approx. 13 storeys) in most locations, with new rules on design to be applied. Anything above that will also need to consider the Tauranga Airport flight path.

Where would this apply? See on the map.

Where the changes would apply

Use the map viewer at tauranga.govt.nz/housing-supply to find out which changes will apply to your property, or any other property in the city.

KEY

- Tauranga
- City Centre
- Te Papa peninsula
- Medium density in residential zones
- Higher density in and around commercial centres

There are some places and cases where the new rules may not apply

- **Qualifying matters**: some areas of the city, such as cultural and heritage sites, areas subject to natural hazards, and areas with outstanding natural features like Mauao, are considered unsuitable for higher density development. Find out more at tauranga.govt.nz/housing-supply
- **Existing legislation** such as the Building Act still applies.
- **Covenants** across the city restrict how owners can use their property. These are separate to the city plan and will continue to apply if you have one on your property.

Keeping good design in mind

To ensure new developments look good, meet community needs and are great spaces to live in, we're proposing new urban design criteria that larger developments would have to meet. These would apply to any development of four or more dwellings on a site, and within commercial areas including the city centre. This will be supported by a new urban design panel to review significant development proposals in Tauranga.

Roads and pipes to support growth

Direction from Government limits what rules we can add that would manage the pressure of increased density on our roads and water, wastewater and stormwater pipes. While we can't require checks for three dwellings/three storeys, we are proposing to require assessments on the impact to our infrastructure (roads and pipes) for four or more dwellings.

Find out more and tell us what you think

Submissions are open until Friday 23 September 2022. Find detailed information on the proposed changes and how they will apply to your property at tauranga.govt.nz/housing-supply and tell us what you think.

If you don't have a computer, head over to your local library to use one there for free, or look through the printed information we have available.

Need help making your submission?

If you would like some guidance to lodge a submission, talk to our 'Friend of the submitter'. The friend of the submitter is an independent planner who can advise you on the submission process and how you might present your views in a submission. This free service is provided by the Ministry for the Environment to help the public participate in this plan change. Email PlanChange33@resourceplanning.nz to set up a time to talk.

Any questions?

If you have questions about how these changes may apply to your property, please contact the city planning team on city.plan@tauranga.govt.nz or 07 577 7000.

Tauranga City

20 August 2022

BROWN, JAMES ALLAN
3 BEAUMARIS BOULEVARD
BETHLEHEM
TAURANGA 3110

Dear Sir/Madam

Proposed Plan Change 33 – Enabling Housing Supply to the Tauranga City Plan

This letter is to let you know that we're amending the Tauranga City Plan to help address our shortage of homes and help our city grow up as well as out.

Passed in December 2021, the Resource Management (Enabling Housing Supply and Other Matters) Amendment Act 2021 directs councils of high-growth cities, including Tauranga, to amend their city plans to enable increased housing density.

Plan Change 33 proposes changes to the City Plan to implement these requirements from central government, which will make it easier for people to build a variety of more compact types of homes, like townhouses and apartments. Exemptions, called qualifying matters, will apply to some areas.

Find out more about the changes and how they may apply to your property

The information enclosed with this letter gives an overview of the changes we're proposing and how you can make a submission on them.

More detailed information, including an online map viewer that shows how the changes would apply to your property, is available at www.tauranga.govt.nz/housing-supply. The map viewer also shows the proposed city plan zoning (medium density residential and higher density residential zones) and the building heights that would apply in any area.

If you don't have access to a computer, head over to your local library to use one there for free. Our library staff will be able to point you in the right direction.

At the library you will also be able to view the plan change information on paper:

- The public notice as published in the Weekend Sun on Friday 19 August 2022 and Bay of Plenty Times on Saturday 20 August 2022
- Background information explaining why we're progressing this plan change
- The complete annotated text and maps showing the proposed changes to the City Plan for each zone, and section 32 evaluation reports explaining the reasons for the proposed changes
- Paper forms to make a submission.

If you rent or lease your property, please notify your tenant or lessee about the contents of this letter.

The proposed plan change has been initiated under the provisions of Schedule 1 of the Resource Management Act 1991.

Tell us what you think: submissions are open until 5pm Friday, 23 September 2022.

Submissions on proposed Plan Change 33 must be lodged in writing and either submitted online at www.tauranga.govt.nz/housing-supply, emailed to city.plan@tauranga.govt.nz or posted to:

Manager: City Planning and Growth
Tauranga City Council
Freepost Authority Number 370
Private Bag 12022
Tauranga 3143

The easiest way to share your feedback is to use the online form on our website. If you choose to send your feedback via letter or email instead, please note that your submission should be in the format of Form 5 of the Resource Management (Forms, Fees and Procedure) Regulations 2003 and must be dated and signed by you and include the following information:

(a) Your name, address, telephone and email address.

(b) The plan change number and details of the provisions to which the submission is being made.

(c) Whether you support or oppose the plan change provisions, in whole or in part.

(d) Reasons for your support or opposition.

(e) The decision you wish Tauranga City Council to make.

(f) Whether you wish to be heard in support of your submission.

(g) Whether or not you could gain advantage in trade competition through your submission.

For further information regarding the details of the amendments introduced by the proposed plan change contact us on 07 577 7000 or email city.plan@tauranga.govt.nz.

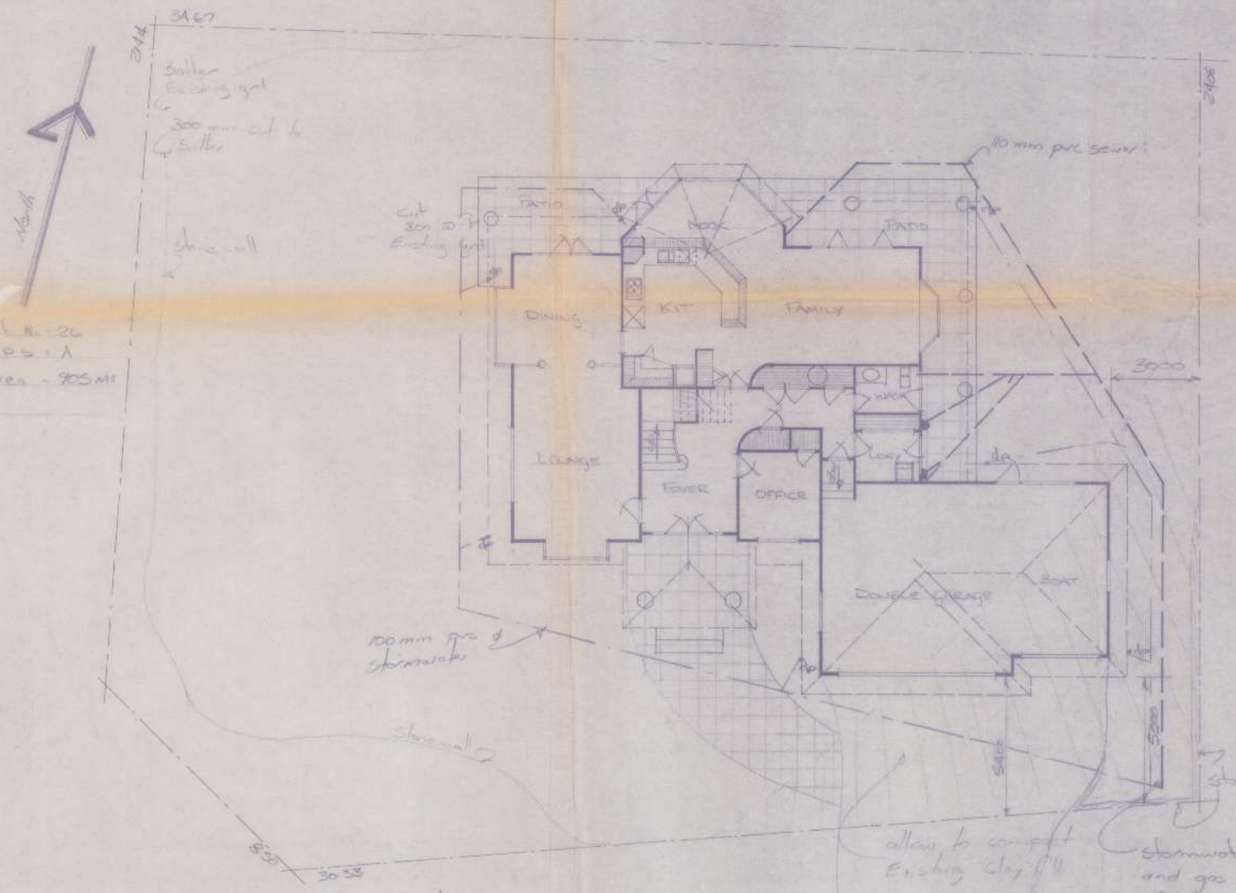
Yours sincerely

The City Planning team

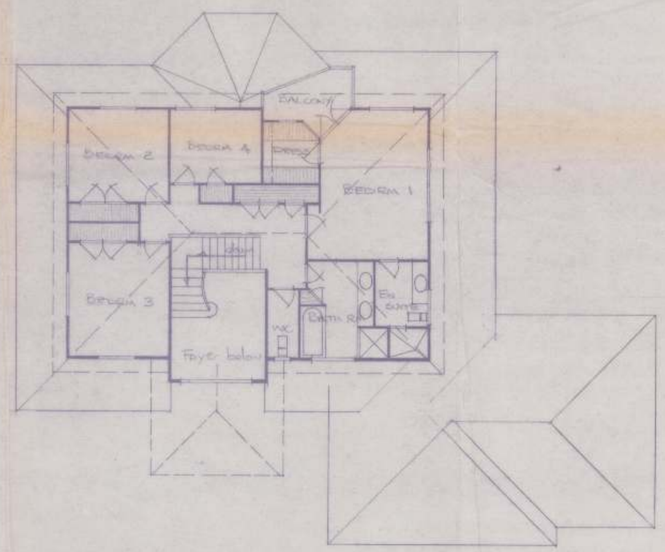
city.plan@tauranga.govt.nz

SOUTH WEST ELEVATION

NORTH WEST ELEVATION



GRD FLOOR LAYOUT PLAN



UPPER FLOOR LAYOUT

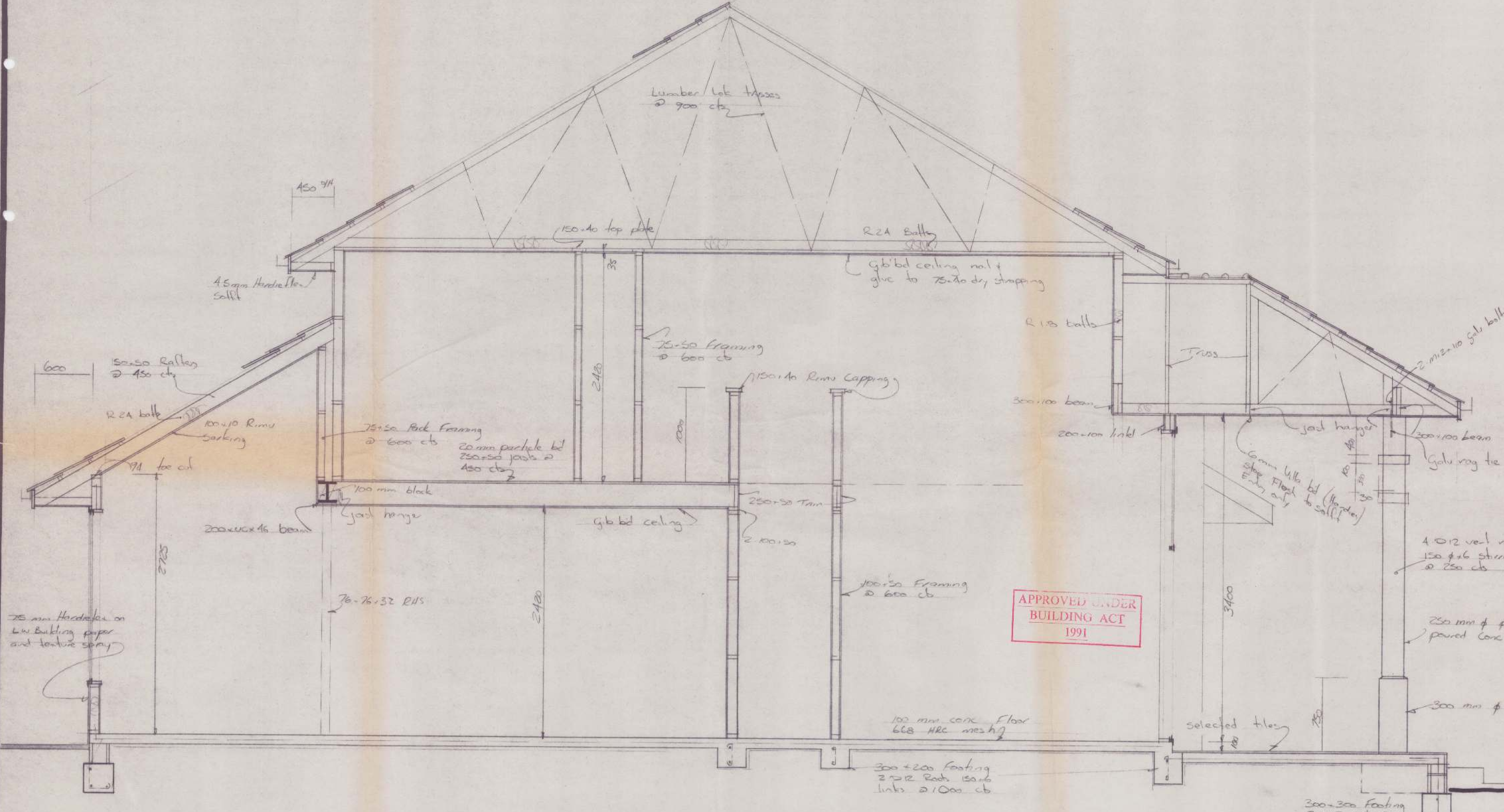
SITE LAYOUT PLAN

LOCHHEAD
Design ltd
ARCHITECTURAL DRAUGHTSMAN
PETER LOCHHEAD PHONE 07-5525410
JAMES ROAD TE PUNA TAURANGA Fax – A/Hr. 07-5524751
A.M.N.Z.I.D.

PROPOSED RESIDENCE for JOCK HOLDINGS
LOT 26 BETHLEHEM HEIGHTS TAURANGA

Scale 1 to 100 | Drawn 32-94 | Sht. 1 of 11

AMQUE



APPROVED UNDER
BUILDING ACT
1991

CROSS SECTION A-A

LOCHHEAD
Design ltd

ARCHITECTURAL DRAUGHTSMAN
PETER LOCHHEAD PHONE 07-5525410
JAMES ROAD TE PUNA TAURANGA Fax – A/Hr. 07-5524751

AMNZID

TCC331876

Scale	Drawn	Sht.
1 to 20	3.3.94	7 of 11

Images within this category are a true representation of the original document(s).

Attempts have been made to enhance the quality of the images where possible.

BUILDING CONSENT NO:

Project Information Memorandum No:

Section 35, Building Act 1991

ISSUED BY

(Insert a cross in each applicable box. Attach relevant documents).

APPLICANT

Name:

Mailing Address:

PROJECT

All ☐

Stage No of an intended stages of

New Building ☐

Alteration ☐

Intended Use(s) (in detail):

Intended Life:

Indefinite, but not less than 50 years ☐

Specified as years

Demolition ☐

Estimated Value: $

PROJECT LOCATION

Street Address:

675-5-1
5 Beaumaris Blvd

ENTERED

REFER TO BBO

LEGAL DESCRIPTION

Property Number:

Valuation Roll Number:

Lot: DP:

Section: Block:

Survey District:

COUNCIL CHARGES

The balance of Council's charges payable on uplifting of this building consent, in accordance with the tax invoice are:

RATES INVOICE FILED

Initial Date

REFER TO INVOICE

Total: $

ALL FEES ARE G.S.T. INCLUSIVE

Signed for and on behalf of the Council:

Name:

Position:

Date: / /

This building consent is a consent under the Building Act 1991 to undertake building work in accordance with the attached plans and specifications so as to comply with the provisions of the building code. It does not affect any duty or responsibility under any other Act nor permit any breach of any other Act.

This building consent is issued subject to endorsements shown on the approved plans and may be subject to any conditions as attached.

PROJECT INFORMATION MEMORANDUM NO:

Section 31 Building Act 1991

ISSUED BY

(Insert a cross in each applicable box. Attach relevant documents.)

APPLICANT

Name:

Mailing Address:

PROJECT LOCATION

Street Address:

LEGAL DESCRIPTION

Property Number:
Valuation Roll Number:
Lot: DP:
Section: Block:
Survey District:

COUNCIL CHARGES

The Council's total charges payable on uplifting of this project information memorandum, in accordance with the tax invoice are:

REFER TO INVOICE

ALL FEES ARE GST INCLUSIVE

PROJECT

New or Relocated building [X] Alteration [ ]

Intended use(s) (in detail):

Intended Life:
Indefinite, but not less than 50 years [ ] Demolition [ ]
Specified as: years

This is:

[X] Confirmation that the proposed building work may be undertaken, subject to the provisions of the Building Act 1991 and any requirements of the building consent.

Not yet applied for [ ]

No. .... attached [X]

[ ] Notification that other authorisations must be obtained before a building consent will be issued.

[ ] Notification that the proposed building work may not be undertaken because a necessary authorisation has been refused.

This project information memorandum includes *(cross each applicable box, attach relevant documents, and send a copy to any relevant network utility operators and organisations having the power to classify land and buildings)*:

[ ] Information identifying relevant special features of the land concerned.

[ ] Information about the land or buildings concerned notified to the Council by any statutory organisation having the power to classify land or buildings.

[ ] Details of relevant utility systems.

[X] Details of authorisations which have been granted.

[ ] Details of authorisations which must be obtained before a building consent will be issued.

[ ] Details of authorisations which have been refused.

Signed for and on behalf of the Council:

Name:

Position: Date: 01/07/94

TAURANGA
DISTRICT COUNCIL

File No: P3127-2-1

PROJECT INFORMATION MEMORANDUM

94/ 1532

DISTRICT PLAN

Complies with District Plan or resource consent

CONDITIONS [APPLICABLE CONDITIONS ARE TICKED]

1. If the dwelling as constructed is not in accordance with the provisions of the Tauranga Transitional District Plan all construction must cease immediately and the owner shall contact the Duty Planner at the Tauranga District Council. ☑

2. The owner is to certify at an appropriate time during construction that the dwelling as constructed is in accordance with the height relative to site boundary requirements of the District Plan. ☑

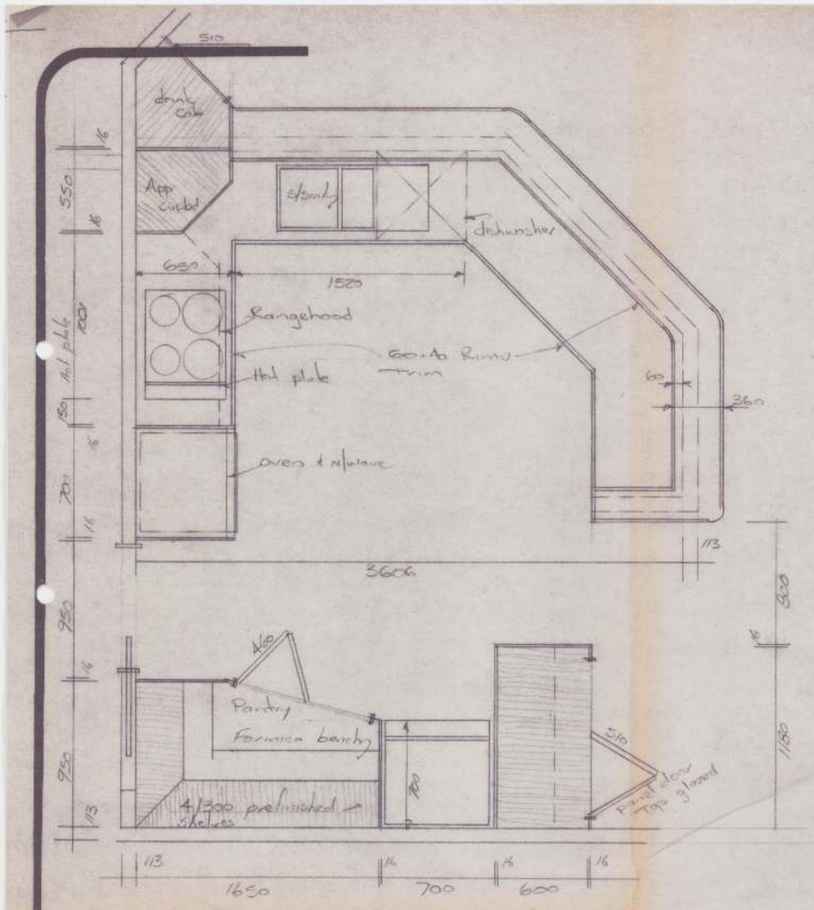
3. To be in accordance with Resource Consent conditions attached. ☑

4. A Residential Building Impact Fee of $ 765.00 is to be paid before the Building Consent is uplifted. ☑

P. Scott
AUTHORISED OFFICER

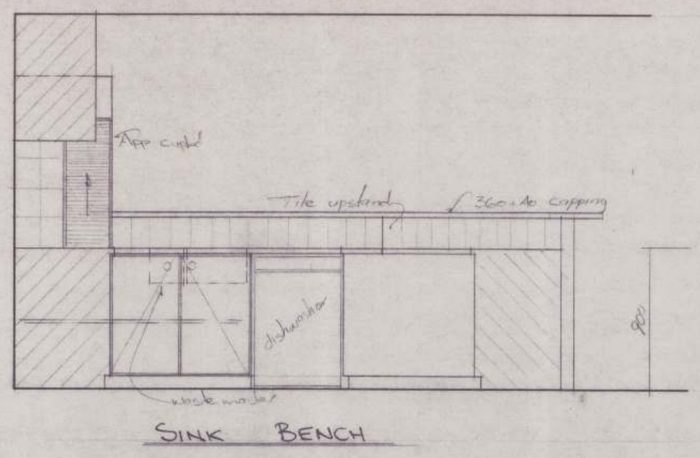
23-6-94
DATE

WILLOW STREET
PRIVATE BAG, TAURANGA
NEW ZEALAND
TELEPHONE (07) 577-7000
FAX (07) 577-7193

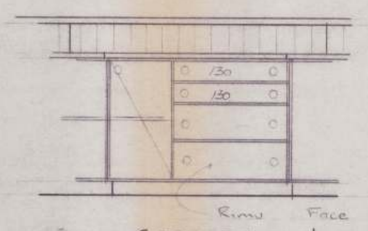


KITCHEN LAYOUT

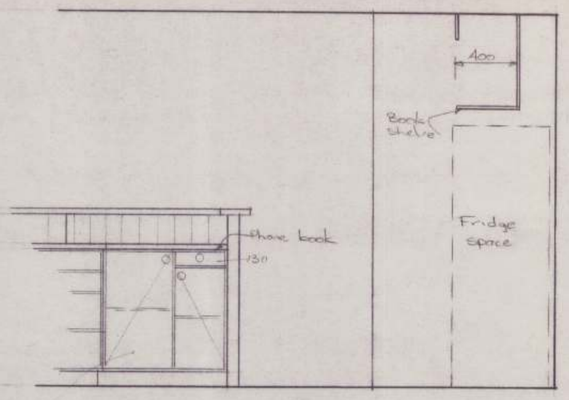
allow for 25 mesh Panel Frame doors to kitchen units and pantry. Crockery, drinks



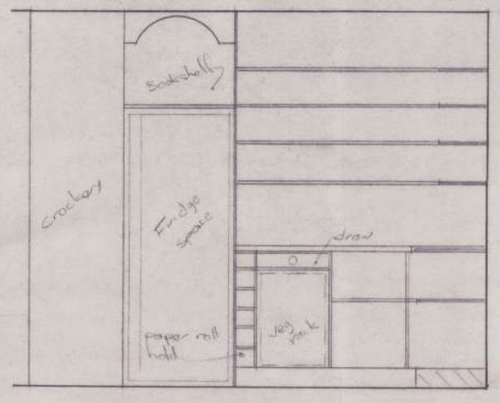
SINK BENCH



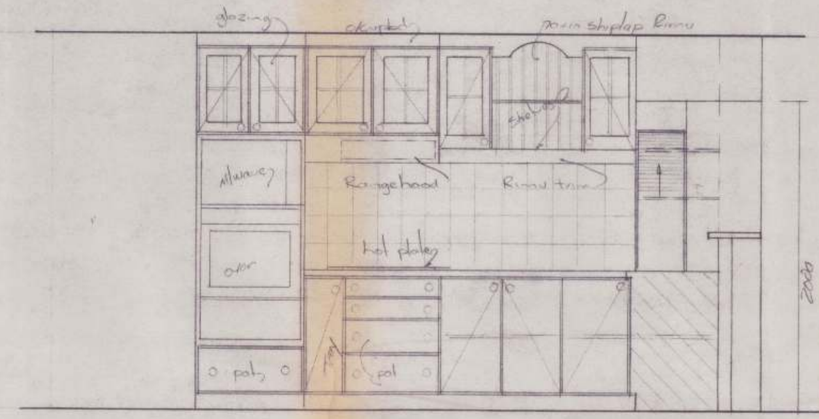
SERVERY angle



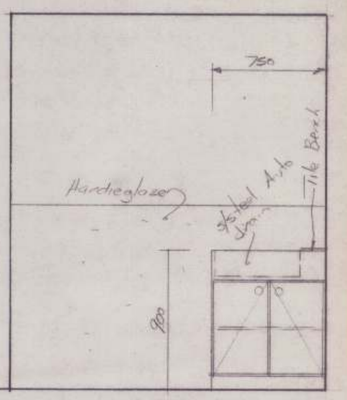
SERVERY



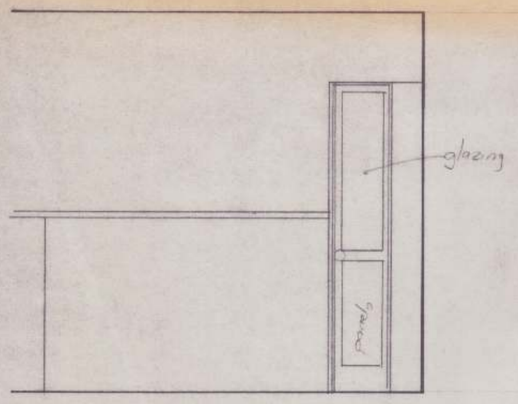
BACKWALL UNIT



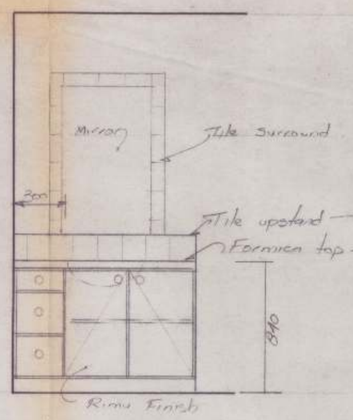
L.H RETURN



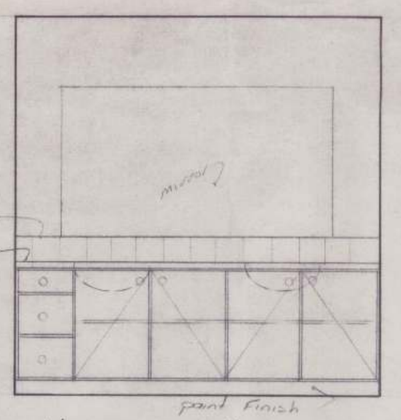
TUB UNIT



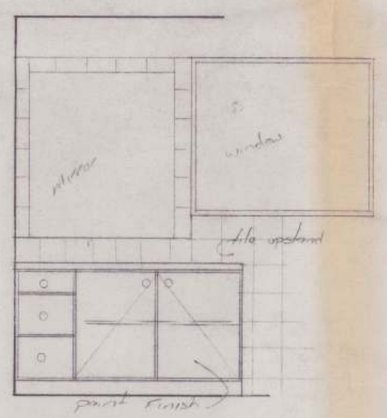
DRINKS CAB



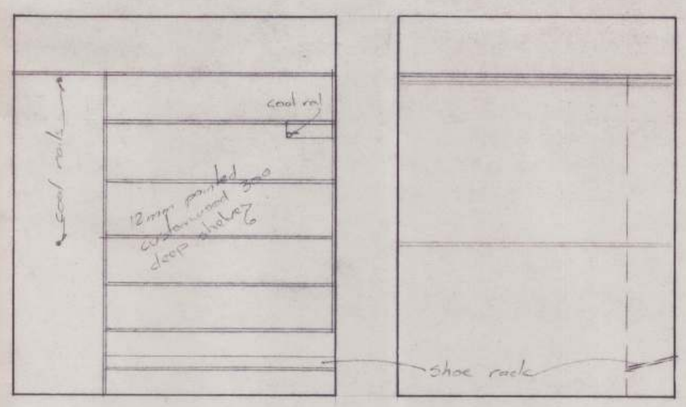
VANITY WC



VANITY Bathrm



VANITY En Suite



BACKWALL

L.H RETURN

DRESS RM UNIT

APPROVED UNDER BUILDING ACT 1991

LOCHHEAD Design ltd
ARCHITECTURAL DRAUGHTSMAN
PETER LOCHHEAD PHONE 07-5525410
JAMES ROAD TE PUNA TAURANGA Fax – A/Hr. 07-5524751
A.M.N.Z.I.D.

TAURANGA
DISTRICT COUNCIL

20 October 1995

Jock Holdings
PO Box 2440
TAURANGA

File:P3127 - 2 - 1

Dear Sir

NOTICE OF COMPLETION OF BUILDING WORKS CARRIED OUT AT 5 BEAUMARIS BOULEVARD - CONSENT 94/1532

Our records indicate that to date your Code Compliance Certificate for works carried out under the abovementioned building consent has not been issued. Before your Code Compliance Certificate can be issued all building works carried out under this consent must be inspected and completed in accordance with the New Zealand Building Code.

To arrange an inspection simply telephone (07) 577-7166, *quote the address where the work is taking place, your building consent number, your name and the type of inspection required and your booking will be accepted.*

To avoid unnecessary delays please give at least 24 hours notice when requesting an inspection. It is important to ensure that you have a full set of approved plans on site when the Building Officer calls.

It is also important to note that your building consent may lapse if we do not hear from you, in which case additional fees may be charged if at a later date you intend arranging an inspection.

Yours faithfully

Terry Wynyard
SENIOR BUILDING OFFICER

WILLOW STREET
PRIVATE BAG, TAURANGA
NEW ZEALAND
TELEPHONE (07) 577-7000
FAX (07) 577-7193

TAURANGA
DISTRICT COUNCIL

Owner/Occupier
5 Beaumaris Blvd
Bethlehem

JJ,

File: P675-5-1

Dear Sir/Madam

NOTICE OF COMPLETION OF BUILDING WORKS CARRIED OUT AT

CONSENT 94/1532 See Attached

Our records indicate that to date your Code Compliance Certificate for works carried out under the abovementioned building consent has not been issued. Before your Code Compliance Certificate can be issued all building works carried out under this consent must be inspected and completed in accordance with the New Zealand Building Code.

To arrange an inspection simply telephone (07) 577-7166, *quote the address where the work is taking place, your building consent number, your name and the type of inspection required and your booking will be accepted.*

To avoid unnecessary delays please give at least 24 hours notice when requesting an inspection. It is important to ensure that you have a full set of approved plans on site when the Building Officer calls.

It is also important to note that your building consent may lapse if we do not hear from you, in which case additional fees may be charged if at a later date you intend arranging an inspection.

Yours faithfully

GJBall

Gaylene Ball
Support Co-Ordinator

WILLOW STREET
PRIVATE BAG, TAURANGA
NEW ZEALAND
TELEPHONE (07) 577-7000
FAX (07) 577-7198

Property File: P675-S-1

Job history for Code Compliance Certificate No: 94/1532
as at Wednesday, 26 February 1997

Owner	Site Location
Jock Holdings PO Box 2440 Tauranga	34 Beaumaris Blvd Bethlehem Lot 26 D.P. 66392

Job Description		Consent	
WorkType	Dwelling - New	Number	94/1532
IntendedUse	Erect dwelling	Date	Monday, 4 July 1994
		Process Time	0. Hrs

Inspection Summary

	Required	Done	Passed	Failed	To Be Done
Building	6	10	5	5	1
Plumbing/Drainage	6	5	2	3	4
Structural	0	0	0	0	0
Total	12	15	7	8	5

Extra Inspections
3

Notes

15/10/96 Finals letter sent to site address

Inspection Details

Date	Time	Inspector	InspectionType	Result	Note
01-Jul-94	03:36 PM	Graham Lewis	Footing	Pass	
06-Jul-94	03:36 PM	Graham Lewis	Bond beam	Pass	
12-Jul-94	03:36 PM	Graham Lewis	Footing	Pass	Lower ftgs OK once starters into existing ftgs.
12-Jul-94	03:37 PM	Bruce Fisher	Underfloor	Pass	
13-Jul-94	03:37 PM	Graham Lewis	Slab	Pass	
30-Aug-94	03:37 PM	Bruce Fisher	Drainage	Pass	
13-Oct-94	10:45 AM	Brian Billing	Preline/Building	Fail	Rocwool fitted, MC OK, check BR9 braced and fixing of vent pipe.
28-Oct-94	02:15 PM	Bruce Fisher	Preline/Plumbing	Fail	Not complete.
01-Nov-94	01:15 PM	Bruce Fisher	Preline/Plumbing	Fail	No one on site.
01-Nov-94	04:30 PM	Graham Lewis	Preline/Building	Fail	Straps to BR9 sheet bracing required.
03-Nov-94	02:45 PM	Graham Lewis	Preline/Building	Pass	
09-Mar-95	04:23 PM	Brian Billing	Final/Building	Fail	Sent finals letter.
27-Jul-95	10:30 AM	Bruce Fisher	Final/Plumbing	Fail	Venting on upstairs basin to fix, recall.
27-Jul-95	10:30 AM	Graham Lewis	Final/Building	Fail	OK but safety glazing to be confirmed.
26-Feb-97	09:10 AM	Wayne Wellington	Final/Building	Fail	No Final Inspections requested.

5.653

P675-3-1 104035

FILE

K

REQUEST FOR VEHICLE CROSSING AND/OR
ASSET PROTECTION BOND REFUND

(ON COMPLETION OF WORKS TO
TDC REQUIREMENTS) (previously 2 Kenmure Place)

Address Of Property: 3 Beaumaris Blvd (Lot 26)

Name Of Owner: Alan Brown

Name Of Person/Company
Claiming Refund: Landmark Homes

Address Refund
To Be Sent: P.O. Box 2440
TAURANGA

Name Of Contractor:

Receipt Number: P30570 $500

Building Consent Number: 94 1532

Note: Audit procedures require that the refund be made only to the receipt holder. Written authorisation is required from the receipt holder to refund monies to another party.

DECLARATION

I declare that I am/we are entitled to the refund of the above bond.

Dulcie
SIGNATURE

16/12/99
DATE

Kara 5779986
DAYTIME PHONE NUMBER AND CONTACT NAME

FORWARD TO:

(Mrs) Dulcie Fisher
City Services
Administration Officer

Asset Development Executive
Department of City Services
Tauranga District Council
Private Bag
TAURANGA

TAURANGA
DISTRICT COUNCIL

VEHICLE CROSSING INSPECTION

ADDRESS 3 Beaumaris Blvd.

XING DATE 10/1/00

Comments: Could not find toby

WATER CONNECTION

Backflow type Could not find.

Depth to top of pipe _____

Meter type _____

Serial number _____

5653

In Reply Please Quote: P675-3-1

1 February 2000

2 kennure = same property

Landmark Homes
PO Box 2440
TAURANGA

Dear Sir/Madam

VEHICLE CROSSING BOND REFUNDS

Your request for the Vehicle Crossing Bond Refund was received for the property address listed below. A subsequent on-site inspection revealed shortcomings in various aspects and such are noted for this address:-

3 Beaumaris Boulevard

The water connection box is buried. Please raise this so the lid is visible and flush with the permanent ground surface.

As outlined in the Vehicle Crossing and Asset Protection Requirements Information Pamphlet, the Council may use the performance bond monies to construct/reconstruct/rectify substandard/non-standard works and damaged items. You are advised remedial measures should be completed within 28 days of the date of this letter.

Prior to approval of the release of the bond monies, it is requested that the above mentioned items be attended to. Following notification from you of the completion of these works, a final inspection will be arranged. An inspection fee may be deducted from the value of the bond.

Should you have any questions, please do not hesitate to contact me at 577-7201 (office) of Graeme Dohnt (025) 273-5906 (mobile) for Mount Maunganui/Papamoa addresses or Nathan Wheeler (025) 275-5637 (mobile) for Tauranga addresses.

30/5/00 Kara of Landmark confirmed the work has been done Do Final check FonN

Yours faithfully

J. Nagels

Jos Nagels
ASSET DEVELOPMENT OFFICER

jn:ka

a/6/2000 jn
O.K.

No. OF INSPECTIONS: **BUILDING** 6 **P&D** 6

DATE INSPECTED	TYPE	COMMENTS
1/7/94	ftg	okay
6-7-94	ftg	okay
12-7-94	ftg	lower ftg okay once starters drilled into existing ftgs
		slab to step area okay
13-7-94	Slab.	lower slab okay
		REFER TO BBC

CODE COMPLIANCE CERTIFICATE O.K. TO ISSUE

DATE ____ / ____ / ____ **SIGNATURE** ________________

(Senior Building Officer)

please note the number of W/C's and urinals installed or removed for all commercial/industrial jobs

W/C's installed No. ____ *W/C's removed* No. ____

Urinals installed No. ____ *Urinals removed* No. ____

94/1532

PLUMBING and DRAINAGE INSPECTION RECORD.

LOCATION OF WORK:
Street: Kenmure Rd.
House No: 2 Lot No: 66392
DP: 66392 Val.No: Pt. 06560/17200

OWNERS NAME: Dock Holdings
Address:
Phone:

USE OF BUILDING:
Domestic: Dwelling
Commercial:

B.F. No: 3127 - 2 - 1
Plumbing permit No:
Drainage permit No:
PLUMBER: R. MacGregor
Address:
Phone:

DRAINLAYER: W. H. Holly
Address:
Phone:

SPECIFICATION OF PLUMBING WORK TO BE CARRIED OUT:

	W.C.	BATH	SHWR.	WHB.	SINK	TUB	HWC	URINAL	SLD. FUEL HEATER	OTHR:
INSTALL	3	1	2	4	1	1	19[00]			O/W. S/M.
RENEW										
SHIFT										
REMOVE										

SPECIFICATION OF DRAINAGE WORK TO BE CARRIED OUT:

Construct new drain with septic tank and effluent disposal:
(c) Construct new drain and connect to sewer:
Re-direct drains:
Extend drains:
Repair Drains:
(w) Construct stormwater drains and connect to services: existing
Construct stormwater drains and discharge to soak-hole.

PERMIT ENDORSEMENTS:

ISSUE OF PERMITS APPROVED BY: _____ (P+D OFFICER).
DATE OF APPROVAL: 14-6-94

SEWER CONNECTION DETAILS:

SEWER CONNECTION COMPLETED
P.Fisher P.S.D. Officer
30-8-94 Date
~~Commercial~~ — Domestic
No. of Fittings. W/C
Urinals

INSPECTION DETAILS.

DATE	TIME	OFFICER	INSP.	COMMENTS
12-7-96	1130	BH	MF.	
30-8-96	4-30	BH		
				REFER TO BBC

Lockhead Design
James Rd
Te Puna

2 Kenmore Pl.

26 66392.

① In this zone the front yard requirement is 5m. The site plan shows only 4.6m. Could you please amend the plans to comply.

② Maximum height in this zone is 8m and it is measured above ground level - not averaged as in the Tauranga City section of the District Plan. I have enclosed an explanatory diagram. The north and south east elevation exceed the 8m maximum. Could these also be amended to comply.

Yours faithfully

H Sathy.

Amended Plans Received 17/6/96.

PIM AND BUILDING CONSENT PRICING/CHECKSHEET

ZONE: Rod
CENSUS: 1.903720
DATE RECEIVED: / /
Land Use Consent received / /
To be paid with permit YES / NO

FILE NO: P 3127- 2-1
PIM/BC NO: 94/1532
TARGET DATE: 21/6/94
(Amend target date when requesting further information)

RECEIVED
03 JUN 1994

Checked & Approved by:

Further Info Requested/Received

Officer	Initial	Date	Requested	Received	BIN Days
Vetting		3.6.94			3
Admin		6-6-94			4
Planner		20/6/94	13/6	17/6	1
Dev Eng		12/6			0
Plumbing		14/6			2
Building		16/6			0
Structural					
Health					
Admin					

TOTAL:

FEES PAID:

		Date
Total amount paid	$342-09	
Invoice:	No: B23119	23/6/94
Receipt:	No: R030570	1/7/94
Bldg Consent Issued:	No: 94/1532	4/7/94
PIM Issued:	No: 94/1532	4/7/94

PLANNING:			FEE
Accessory/Minor Building	$ 17.00	Issue Building Consent	35-00
Dwelling	$ 55.00	Issue Compliance Cert	35-00
Commercial/Industrial	$112.50	Internal Certification	450-00
Land Use Consent		External Certification	590-00
Other B.I.F	$765.	Compliance Schedule	
DEVELOPMENT ENGINEER:		Building Research Levy	234-00
Development Engineering	—	Vehicle Crossing Bond	500
Other (W/C or S/C)	245	Water Connection	245
Crossing Bond	500	Sewer Connection	—
Other Bond	—	Stormwater Connection	—
Natural Features Assessment	30	Proportion Water Rate	1-59
Services/Siteworks Assessment	30	Proportion Sewer Rate	7-50
Footpath Levy	—	Project Info Mem	115-00
OTHER:		Resource Consent	
Environmental Health		Site Dev. Deposit	765-00
Dangerous Goods		Footpath Levy	234-00
Tradewaste		**TOTAL**	3442-09

INTERNAL CERTIFICATION FOR BUILDING CONSENT

	TIME	CHARGE
Building Officer P & D	30	
Building Officer	80	
Structural Engineer	15	
	TOTAL	$450-00

EXTERNAL CERTIFICATION FOR BUILDING CONSENT

	INSP REQ'D	CHARGE
Building Officer P & D	4	
Building Officer	5	$540-00

Comment:

100A03BB.WP5

PROJECT INFORMATION MEMORANDUM CHECKSHEET
(Attach to PIM Application with Draft PIM)

File No: 3127-2-1
PIM No: 94/1332

1. VETTING

Minor work:

YES/NO:

- Redirection of drains
- Reroofing/recladding of existing structure
- Internal plumbing
- Solid Fuel Heater

If YES, arrange issue of PIM confirming that building work may be undertaken (no charge)

If NO or unsure, refer application to Planning (Tick Planning box on checksheet)

2. ADMINISTRATION

PIM Information Included

- ☐ Information identifying relevant special features of the land concerned
- ☐ Information about the land or buildings concerned notified to the Council by any statutory organisation having the power to classify land or buildings
- ☐ Details of relevant utility systems
- ☐ Details of authorisations which have been granted
- ☐ Details of authorisations which must be obtained before a building consent will be issued
- ☐ Details of authorisations which have been refused

This is:

- ☐ Confirmation that the proposed building work may be undertaken, subject to the provisions of the Building Act 1991 and any requirements of the building consent

  Not yet applied for ☐

  No: ..... attached ☐

- ☐ Notification that other authorisations must be obtained before a building consent will be issued

- ☐ Notification that the proposed building work may not be undertaken because a necessary authorisation has been refused

3. PLANNING

DISTRICT PLAN

Complies with District Plan or Resource Consent — YES / NO

CONDITIONS [APPLICABLE CONDITIONS ARE TICKED]

1. If the dwelling as constructed is not in accordance with the provisions of the Tauranga Transitional District Plan all construction must cease immediately and the owner shall contact the Duty Planner at the Tauranga District Council — ☑

2. The owner is to certify at an appropriate time during construction that the dwelling as constructed is in accordance with the height relative to site boundary requirements of the District Plan. — ☑

3. To be in accordance with Resource Consent conditions attached. — ☑

4. A Residential Building Impact Fee of $765 is to be paid before the Building Consent is uplifted. — ☑

OFFICERS SIGNATURE: _____

NOTIFICATIONS

Notifications from Statutory Authority concerning classification of land or buildings	YES / NO

If YES, attach information on Draft PIM ticking appropriate boxes.

4. DEVELOPMENT ENGINEER

Conditions: _____

Comments: _____

OFFICERS SIGNATURE: _____

APPLICATION FOR BUILDING CONSENT and/or PROJECT INFORMATION MEMORANDUM

TAURANGA DISTRICT COUNCIL

in accordance with The Building Act 1991

3127-2-1

APPLICATION NO: 94/1532 FILE NO: P

RECEIVED
03 JUN 1994

(Please tick appropriate box)

☐ Building Consent (Please provide existing PIM number if applicable:)

☐ Project Information Memorandum Only

DETAILS OF OWNER

NAME: Jock Hawkes

MAILING ADDRESS: P.O Box 2440

Tauranga

PHONE: 5779986

FAX: 5789914

SIGNATURE OF OWNER: (Owners Agent)

SITE LOCATION

STREET ADDRESS: 2 Kenmure Place ✓

Tauranga

LOT NO: 26 DP NO: [illegible] ✓

FLAT NO:

VALUATION ROLL NO: Pt 06860 - 172 ✓

LOT AREA: 905 m²

(Please Note: Applicant must be the owner or lessee of the land on which the building work is contemplated.)

DESCRIPTION OF PROPOSED WORK

(Please tick appropriate box)

- ☑ new dwelling
- ☐ new carport
- ☐ plumbing
- ☐ new factory
- ☐ alter dwelling
- ☐ conservatory
- ☐ remove dwelling
- ☐ new shop
- ☐ new garage
- ☐ sewer drainage
- ☐ solid fuel heater
- ☐ new office

Other *(please give brief description)*:

INTENDED LIFE OF ABOVE WORK

☑ Indefinite but not less than 50 years or ☐ Specified as _____ years

VALUE OF PROPOSED WORK: (GST inclusive) $ 224,000

FLOOR AREA OF PROPOSED BUILDING: 220 sq metres

Enquiries: Phone 5777 046 Inspections: Phone 5777 166 Fax: 5777 144

101100B9.WPS

KEY PERSONNEL

DESIGNER(S)

Name: Lockwood Design

Address: James Rose

Tekuka

Phone: 552540

BUILDERS(S)

Name: Lawmark

Address: P.O Box 2440

TGA

Phone: 579986

CRAFTSMAN PLUMBER

Name: Ron MacGregor

Address: 12 Sherwood St

TGA.

Phone: 576 2657

or 929 204

REGISTERED DRAINLAYER

Name: L & L Kaua Ltd

Address: P.O Box 1030

TGA

Phone: 578603

(where possible please supply mobile phone numbers)

PROJECT INFORMATION MEMORANDUM DETAILS

Please describe fully intended use of proposed building(s):

Please tick the box(s) where relevant:

- ☐ Are you excavating/filling the site greater than 500mm.
- ☐ Are you building over road / reserve / other public area.
- ☐ Are you demolishing any existing buildings.
- ☐ Are you removing any trees over three metres height.
- ☐ Is the intended use of the building(s) for commercial / industrial use.

_____ Planner

___/___/___ Date

3127-2-1

APPLICATION FOR INSTALLATION OF SERVICES

INSTALLATION DETAILS
(to be completed by applicants)

DO YOU REQUIRE:

1. **A Vehicle Crossing?** YES / ~~NO~~

   Nominated Installer: _____

   Type: ☐ Residential ☐ Commercial/Industrial

   Crossing from footpath to boundary only

   Select type of finish between footpath and boundary

   ☐ Concrete ☐ Asphalt ☐ Concrete Pavers

   Distance from kerb to boundary _____ metres.

2. **A Water Connection?** YES / NO

   Nominated Installer: _____

   ☐ Standard 20mm dia. connection

   ☐ Other (state size) _____mm

3. **A Sewer Connection?** YES / ~~NO~~

   Nominated Installer: _____

   ☐ Standard 100mm connection

   ☐ Other: state size required _____mm

4. **Stormwater Connection?** YES / ~~NO~~

   Nominated Installer: _____

   ☐ Standard 100mm kerb connection

   ☐ Standard 100mm connection to main

   ☐ Other: state size & type required _____

   _____

For Office Use Only

Approved

Deposit $500
2 Kermure Pl
Lot 26 DP 66392.
Jock Holdings.
PH 5779986.
Permit 94/1532
Rec P030570

existing lateral
Metered/~~Unmetered~~
$245

Connection Marked.

SENT TO ASPEN CONTRACTORS
DATE 4.7.94

10110089.WPS

CHECKLIST

TO AVOID DELAYS IN THE PROCESSING OF YOUR APPLICATION PLEASE ENSURE YOU HAVE PROVIDED THE FOLLOWING INFORMATION

(please tick where information provided)

1. TWO SETS OF SPECIFICATIONS (i.e. proposed materials to be used)

2. TWO FULL SITE PLANS : Scale 1:100 showing:

- ☑ Position of proposed and existing building(s) in relation to the boundaries of the full site, showing height of buildings.
- ☑ Details of services, i.e. all existing and proposed water, sewer, stormwater (including tradewaste and contaminated stormwater), and vehicle crossing.
- ☐ Off-street parking, loading, access and turning areas.

3. TWO SETS OF CONSTRUCTION DRAWINGS : Scale 1:100 or 1:50 showing:

- ☑ Elevations (site levels relative to floor levels).
- ☑ Floor plans describing the function of each room showing all doors, windows and ventilation, plumbing layout, fireplaces and chimneys. For additions and alterations, the existing shall be shown separately and alongside the "proposed".
- ☑ Foundation details.
- ☑ Cross-sections of proposed building showing all construction details.
- ☑ Structural details, showing engineering calculations and Engineer's signature on plans.
- ☑ Sub-floor and wall bracing calculations.
- ☑ Diagram of all sanitary plumbing pipe work for all buildings greater than one floor. This diagram must show pipe sizes, materials and ventilation to be used.

4. SOLID FUEL HEATERS

- ☐ Completed application form together with manufacturers installation instructions.

5. PAYMENT OF FEES

Payment of your building consent/project information memorandum fees should be made on completion of processing. An invoice for such payment will be posted to the applicant.

6. BUILDING CERTIFIERS

If you intend to use building certifier(s) other than the Tauranga District Council please ensure you accompany this application with all relevant details.

P 3127-2-1

APPLICATION FOR INSTALLATION OF SERVICES

INSTALLATION DETAILS
(to be completed by applicant)

DO YOU REQUIRE:

1. **A Vehicle Crossing?** YES / ~~NO~~

   Nominated Installer: _____

   Type: ☐ Residential ☐ Commercial/Industrial

   Crossing from footpath to boundary only

   Select type of finish between footpath and boundary

   ☐ Concrete ☐ Asphalt ☐ Concrete Pavers

   Distance from kerb to boundary _____ metres.

2. **A Water Connection?** YES / ~~NO~~

   Nominated Installer: _____

   ☐ Standard 20mm dia. connection

   ☐ Other (state size) _____ mm

3. **A Sewer Connection?** YES / ~~NO~~

   Nominated Installer: _____

   ☐ Standard 100mm connection

   ☐ Other: state size required _____ mm

4. **Stormwater Connection?** YES / ~~NO~~

   Nominated Installer: _____

   ☐ Standard 100mm kerb connection

   ☐ Standard 100mm connection to main

   ☐ Other: state size & type required _____

   _____

For Office Use Only

Approved

6.2

Deposit $500

2 Kenmure Pl

Lot 26 DP 66392.

Jock Holdings.

PH 5779986.

Permit 94/1532

Rec P030570.

existing lateral

Metered/~~Unmetered~~

$245

Connection Marked.

4.7.94

10110089.WPS

DATE RECEIVED:	5-7-94	TO BE COMPLETED BY: 12-7-94	RATES OFFICE ONLY
DATE INSTALLED:	27/7/94	BY: Mac and Athol	
METER NUMBER:	12346606	READING: 00000 (Do not include decimal part digits)	
METER LOCATION:	300 mm R/H Boundary		
MULTIPLY METERS ONLY	LH/CENTRE/RH CIRCLE (mw)		JN: 539064

Images within this category are a true representation of the original document(s).

Attempts have been made to enhance the quality of the images where possible.

(12)

DEPARTMENT OF PLANNING & ENVIRONMENT
LAND INFORMATION

20-1-94

Land Information

File No: 7200-3
Attn: Mr T Bibby
Your ref:
TDC 516 797

Dear Sir/Madam

ISSUE OF STREET NUMBER NOTIFICATION

We wish to inform you that street number as shown has been allocated for:

Lot No: 3 + 4 + 2

DPS: 27240 27240

which is situated on: Moffat Road

Current Owners	*Lot No./Area*	*New Street No.*	*Previous Street No.*
Bethlehem	As shown on attached	P4500	- 1416
Heights Ltd		mgas	- 1844

The owners have been notified and we would appreciate it if you could check/amend your records.

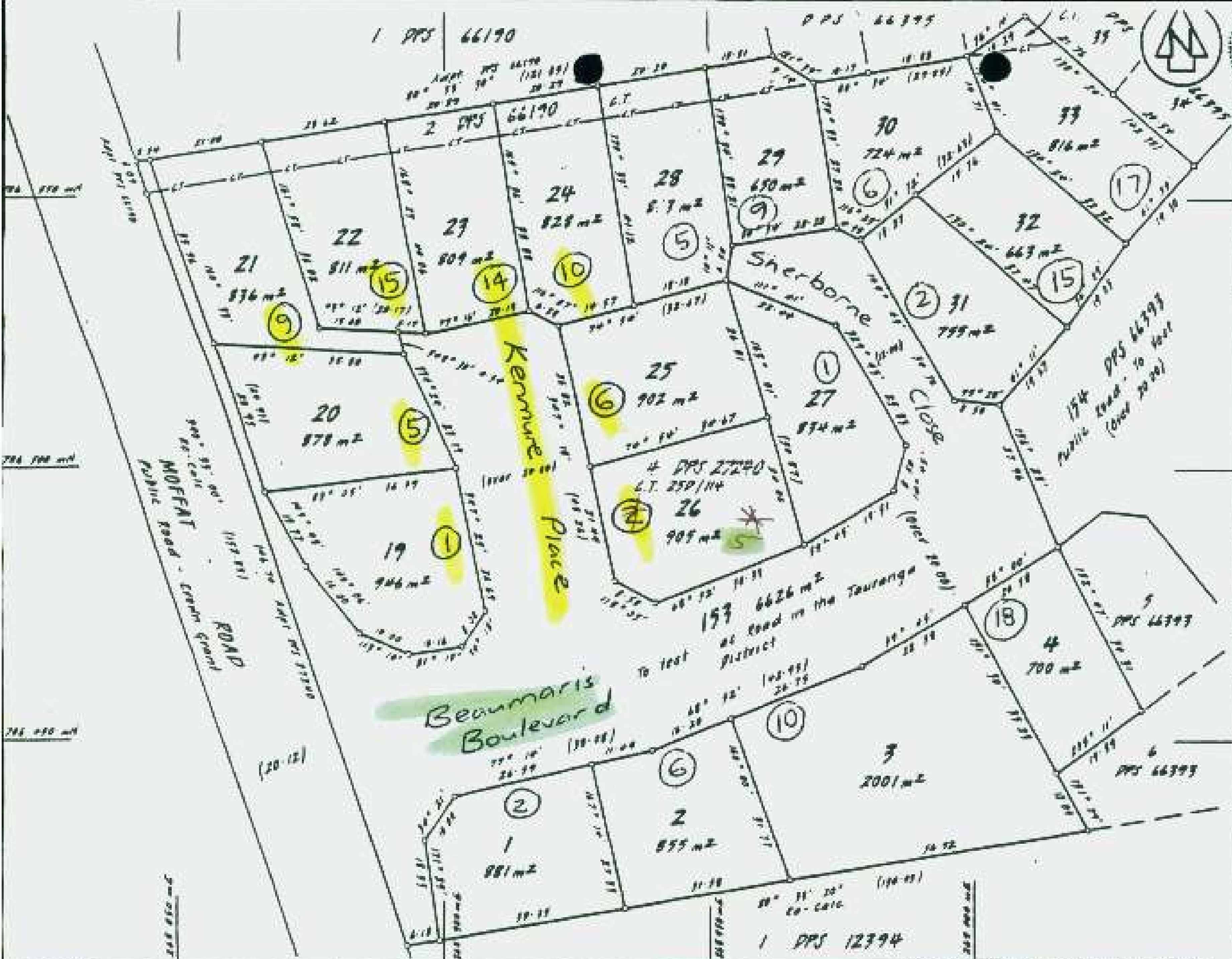
224 signed 16-12-93

Yours faithfully

Terry Bibby
TEAM LEADER
LAND INFORMATION

566391
66392
66393
66394
66395
66396
66397

100A0469.WP5



Registered Owners

Approved pursuant to Sec.223 of the Resource Management Act 1991 on the 22nd day of September 1993 the common seal of the Tauranga District Council is affixed hereto in the presence of:

Authorised Officer

This plan is concurrent with DPS 66391 & 66393 - 66397

Total Area .... ha

Comprised in C.T. 25D/114 (All), 26A/1219 (All)

TIMOTHY ANDREW McBRIDE

Registered Surveyor and holder of an annual practising certificate ... hereby certify that this plan has been made from surveys executed by me or under my direction ...

Dated at Tauranga this 23rd day of ... 1993

Approved as to Survey

Chief Surveyor

Deposited this .... day of .... 19...

District Land Registrar

LAND DISTRICT: SOUTH AUCKLAND	Lots 1 - 4, 19 - 33 & 153 Being a Subdivision of Lot 4 DPS 27240 & Lot 2 DPS 66190	TERRITORIAL AUTHORITY: TAURANGA DISTRICT
SURVEY BLK. & DIST.: IX TAURANGA		Surveyed by: CHRIMPTON & LIPINSKI LTD
NZMS 261 SHT: U14 RECORD MAP No		Scale: 1:500 Date: September 1993

DPS 66392

In Reply Please Quote: 7200-3
Attn: Mr T Bibby
Your Ref:

LAND INFORMATION

12/2/99

Records.

TDC SUB: —
224 Issued —
Valuation No: 06860/17408
New DPS: —

Dear Sir/Madam

ISSUE OF STREET NUMBER NOTIFICATION

We wish to inform you that street number as shown has been allocated for:

Lot No: 26

DPS: 66392

which is situated on: P807 Kenmure Place / P675 Beaumaris Boulevard

Current Owners	Lot No./Area	New Street No. Beaumaris Boulevard	Previous Street No. Kenmure Place
Brown	26	3	2

We would appreciate it if you could check/amend your records. Please inform your client.

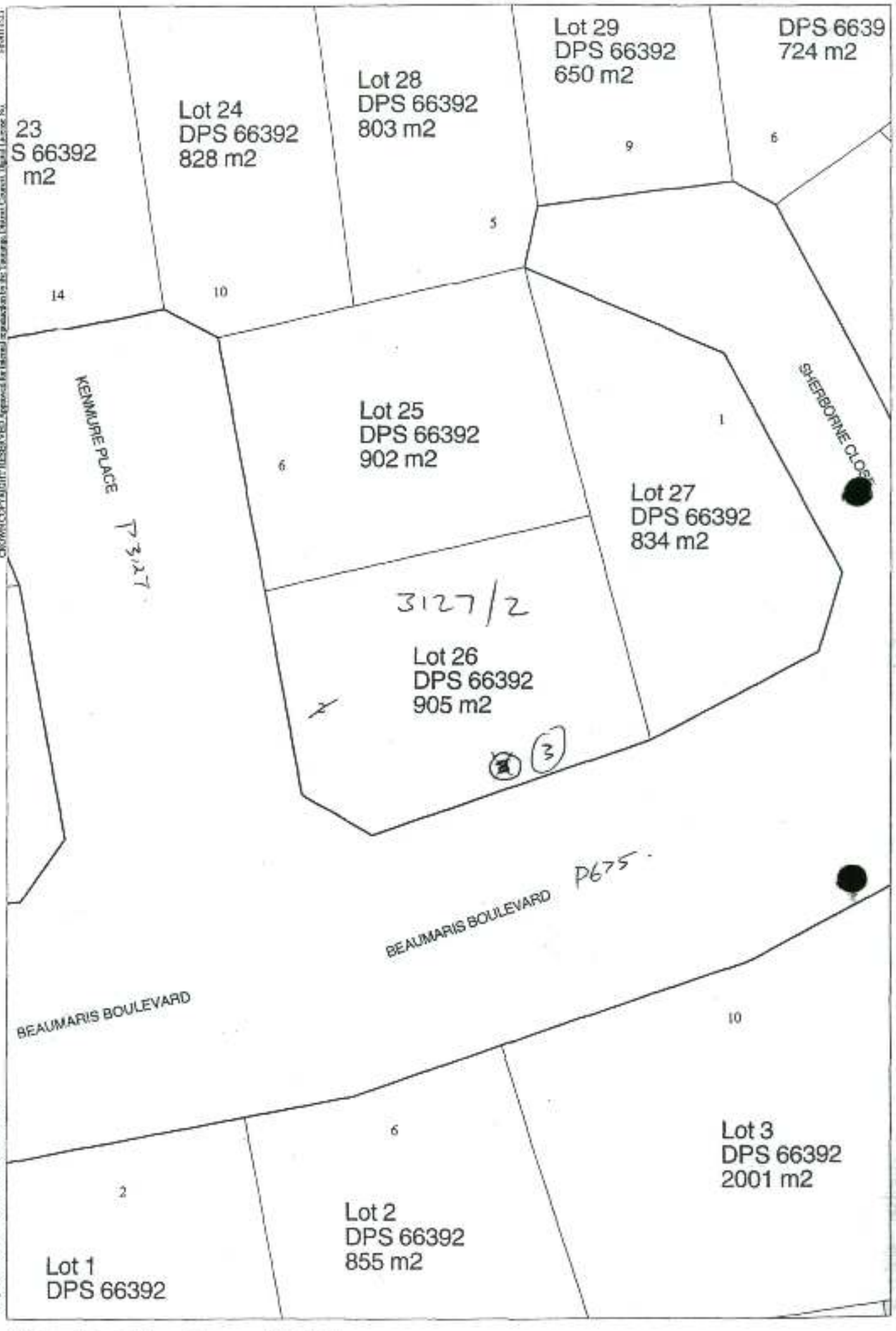
Yours faithfully

To refled number in use 94/1532.

Terry Bibby
ACCOUNT MANAGER
LAND INFORMATION

RECEIVED
23 FEB 1999
TAURANGA DISTRICT COUNCIL

0089353.01



Scale 1 : 500 on February 11, 1999

Approved pursuant to Sec 223 of the Resource Management Act 1991 on the 22nd day of September 1993 the common seal of the Tauranga District Council is affixed hereunto in the presence of:

Authorised Officer

Registered Officers

This plan is concurrent with DPS 66392 - 66…

Total Area 7.5660 ha

Comprised in CT 25D1/118, 26A1/219

Surveyor: Smethy Andrew Heaphy

Registered Surveyor and holder of an annual practising certificate…

Approved as to Survey

Deposited this ……… day of ………

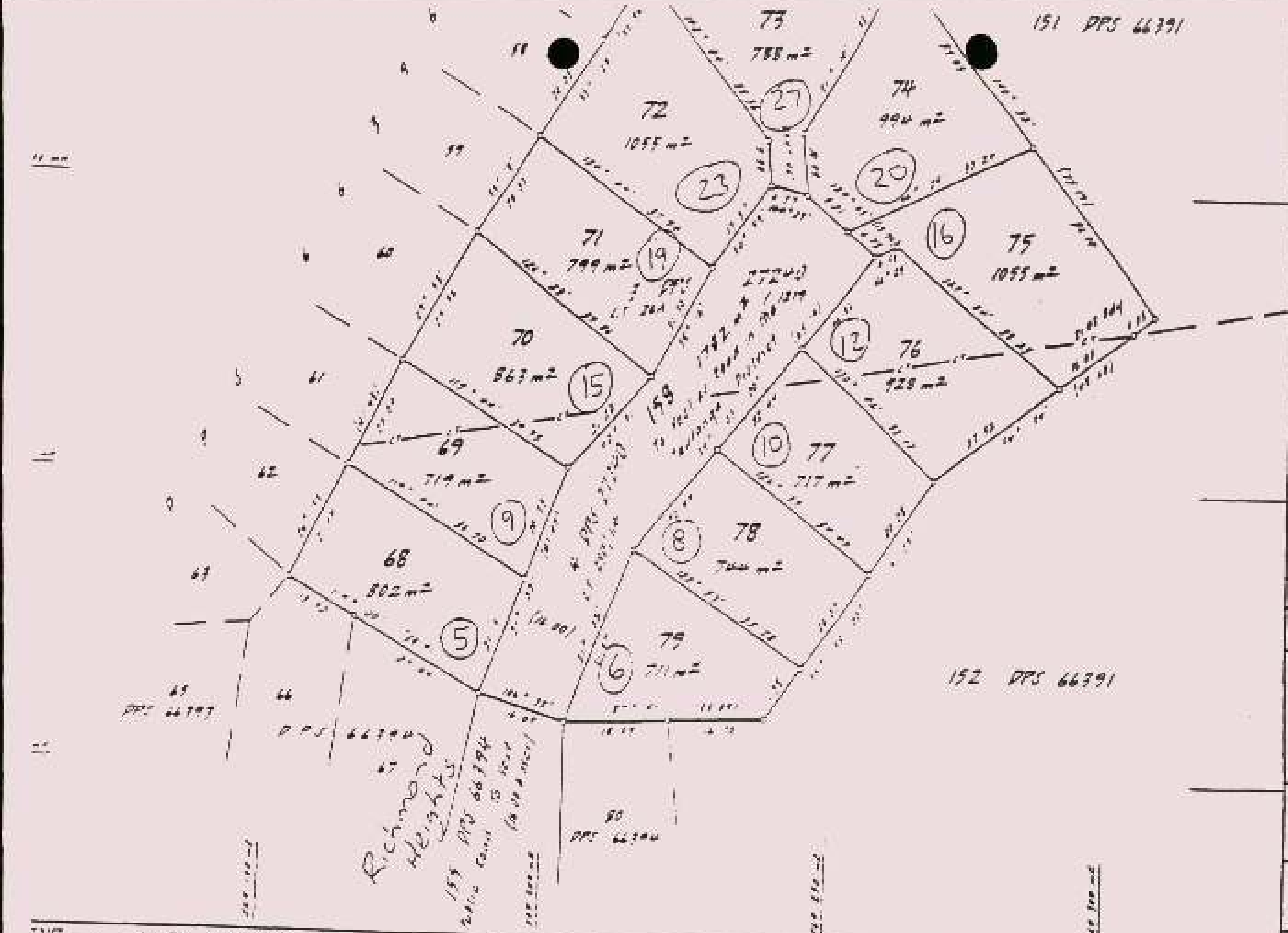
66391

DISTRICT SOUTH AUCKLAND

SY BLK. & DIST. Tauranga

Lots 151 & 152 Being a Subdivision of

TERRITORIAL AUTHORITY TAURANGA DISTRICT



Approved pursuant to Sec.223 of the Resource Management Act 1991 on the 23rd day of September 1993 the common seal of the Tauranga District Council is affixed
Authorised Officer

This plan is concurrent with DPS 66391 - 6639

Total Area 1.1957 ha

Timothy Andrew McBride

Dated at Tauranga 23rd of ... 93

Approved as to Survey

Deposited this .... day of ....

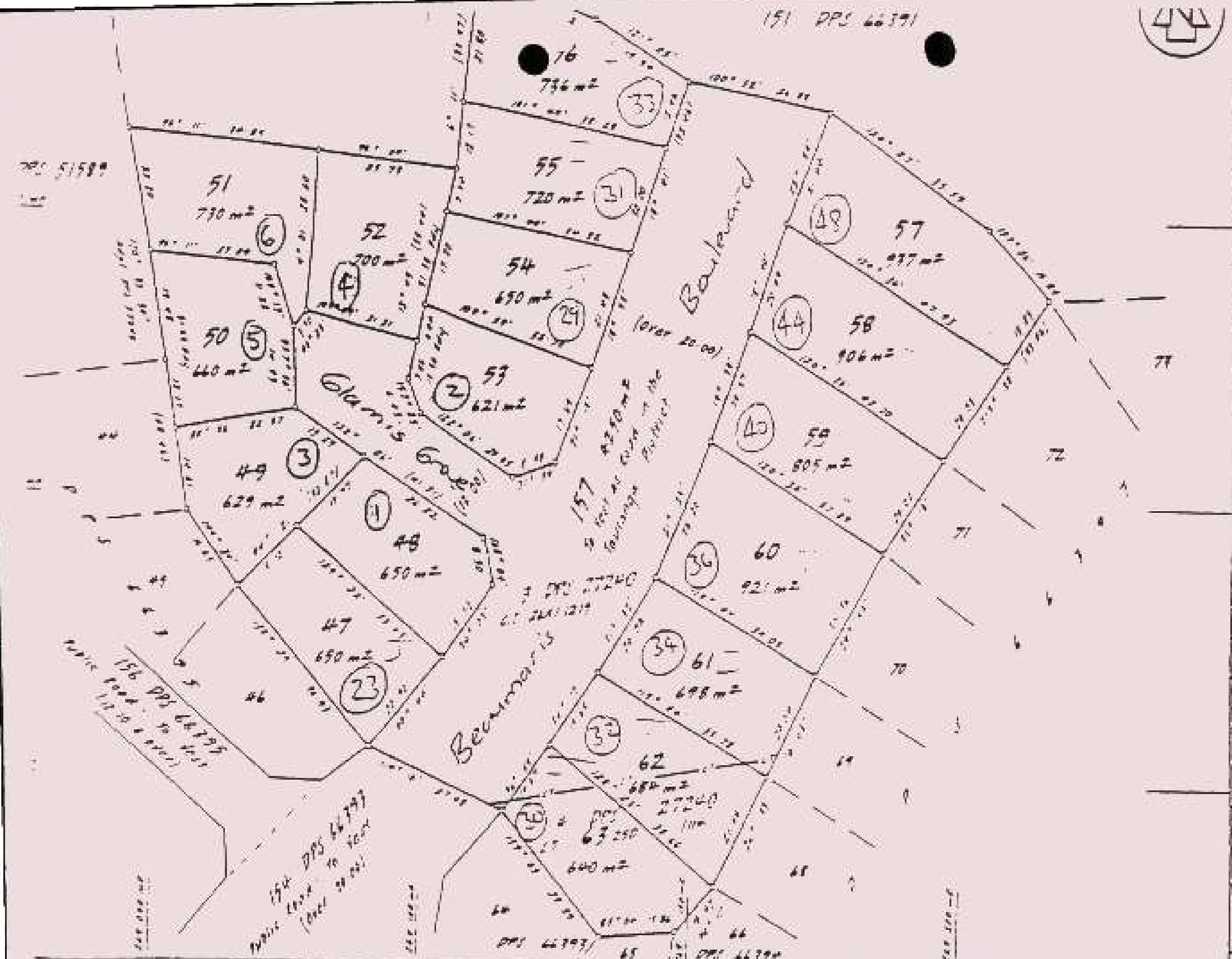
District Land Registrar

DPS 66

DISTRICT SOUTH AUCKLAND
LD. & DIST. IS TAURANGA
UNIT ... RECORD MAP No. ...

LOTS 68 - 79 & 159 Being a Subdivision of Lots 3 & 4 DPS 27240

TERRITORIAL AUTHORITY TAURANGA DISTRICT
Surveyed by SKRIMPTON & LIPINSKI LTD F. 10936
Scale 1:500 Date September 1993



Approved pursuant to Sec.223 of the Resource Management Act 1991 on the 2nd day of September 1993 the common seal of the Tauranga District Council is affixed hereunto in the presence of:

Authorised Officer

This plan is concurrent with DPS 66391 - 66395 66397

Total Area 1.6587 ha

Comprised in C.T. 26A/1219 ...

TIMOTHY ANDREW McBRIDE

Dated at Tauranga this 23rd ... 1993

Approved as to Survey

Chief Surveyor

Deposited this ...... day of 19

District Land Registrar

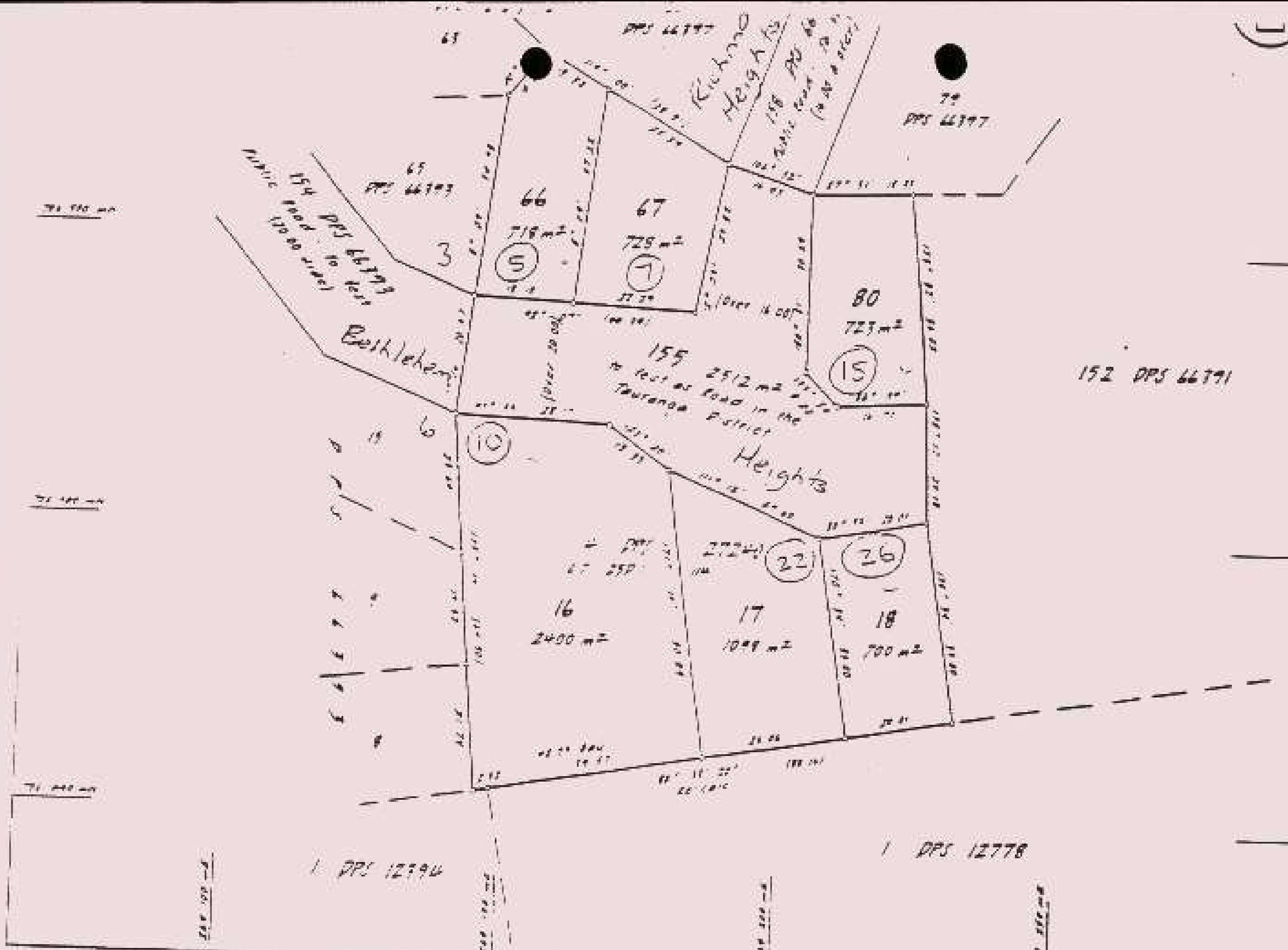
DPS 6639

DIST. SOUTH AUCKLAND	Lots 47-63 & 157 Being a Subdivision of Lots 3 & 4 DPS 27240
B. & DIST. IV TAURANGA	
SHT ... RECORD MAP No ...	

TERRITORIAL AUTHORITY TAURANGA DISTRICT

Surveyed by SHRIMPTON & LIPINSKI LTD F 10936

Scale 1:500 Date September 1993



This plan is con...
with DPS 66791 - ...
66795 ...

Total Area ...
Comprised in C.T. 25D/...

Approved as to Survey

Deposited this ... day of ...

LAND DISTRICT SOUTH AUCKLAND

SURVEY BLK. & DIST. II TAURANGA

NZMS 261 SHT U14 RECORD MAP No ...

Lots 16-18, 66, 67, 80 & 155 Being a Subdivision of Lot 4 DPS 27240

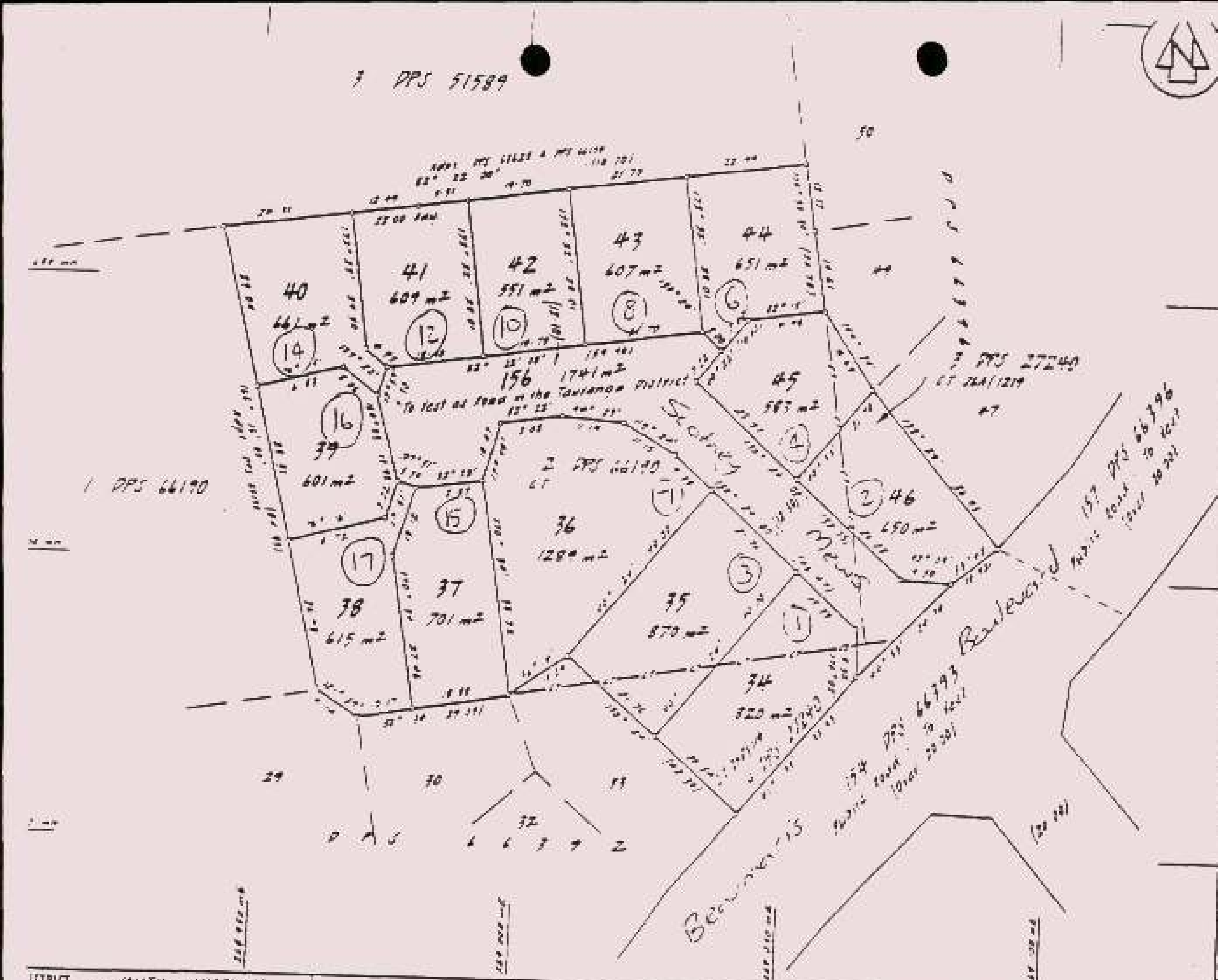
TERRITORIAL AUTHORITY TAURANGA DISTRICT

Surveyed by SHRIMPTON & LIPINSKI LTD

Scale 1:500 Date September 1993

DP

Tauranga HZ



Registered Owners

Approved pursuant to Sec.223 of Resource Management Act 1991 on ... day of September 1993 the common seal of the Tauranga District Council is affixed hereto in the presence of:

Authorised Officer

This plan is concurrent with DPS 66391 - 66394, 66396 & 66397

Total Area ... 1.0946 ha

Comprised in C.T. ...

TIMOTHY ANDREW McBRIDE

Field Book ... Traverse Book ...

Examined ... Correct ...

Approved as to Survey

Chief Surveyor

Deposited this ... day of ... 19

District Land Registrar

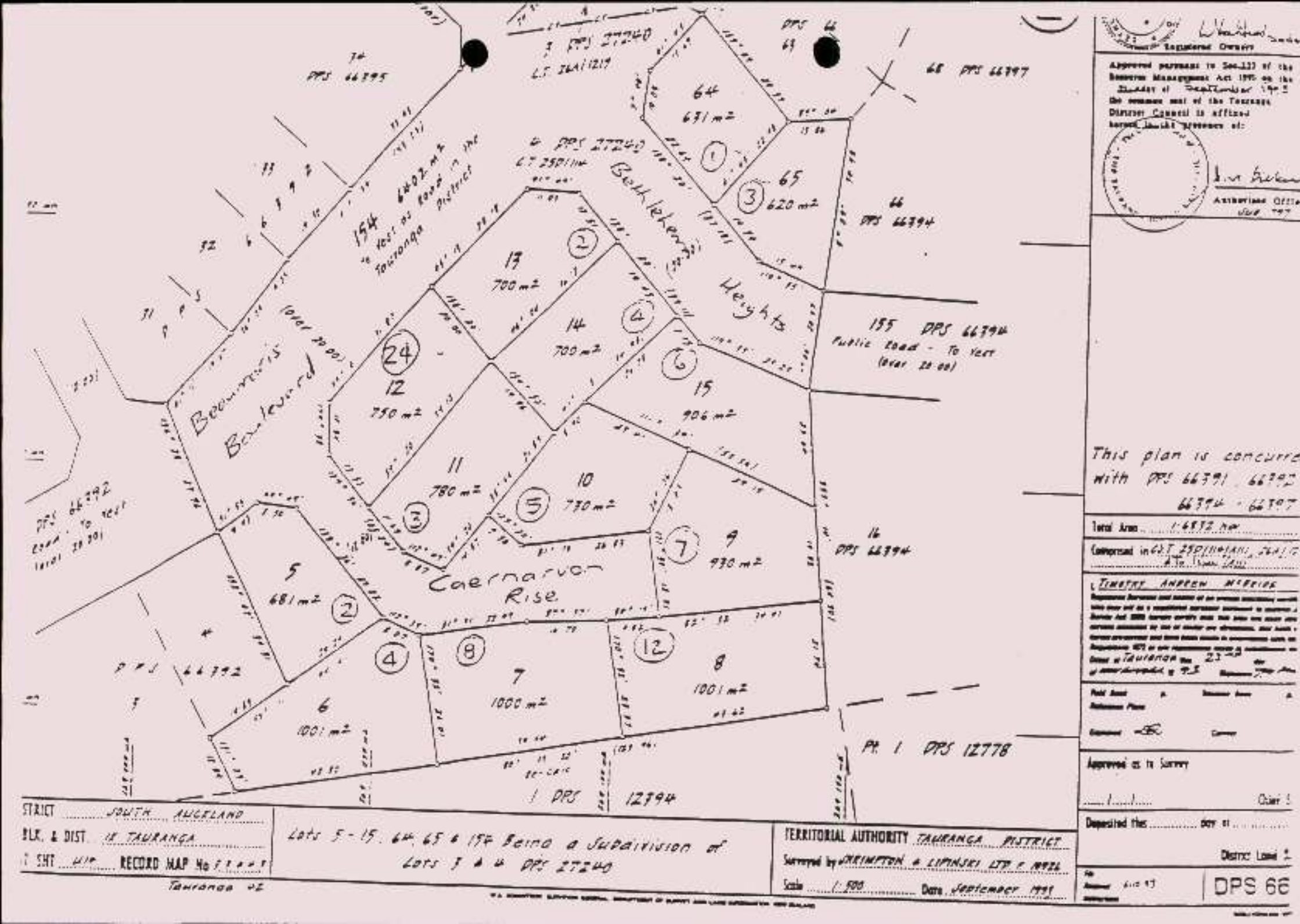
DISTRICT SOUTH AUCKLAND

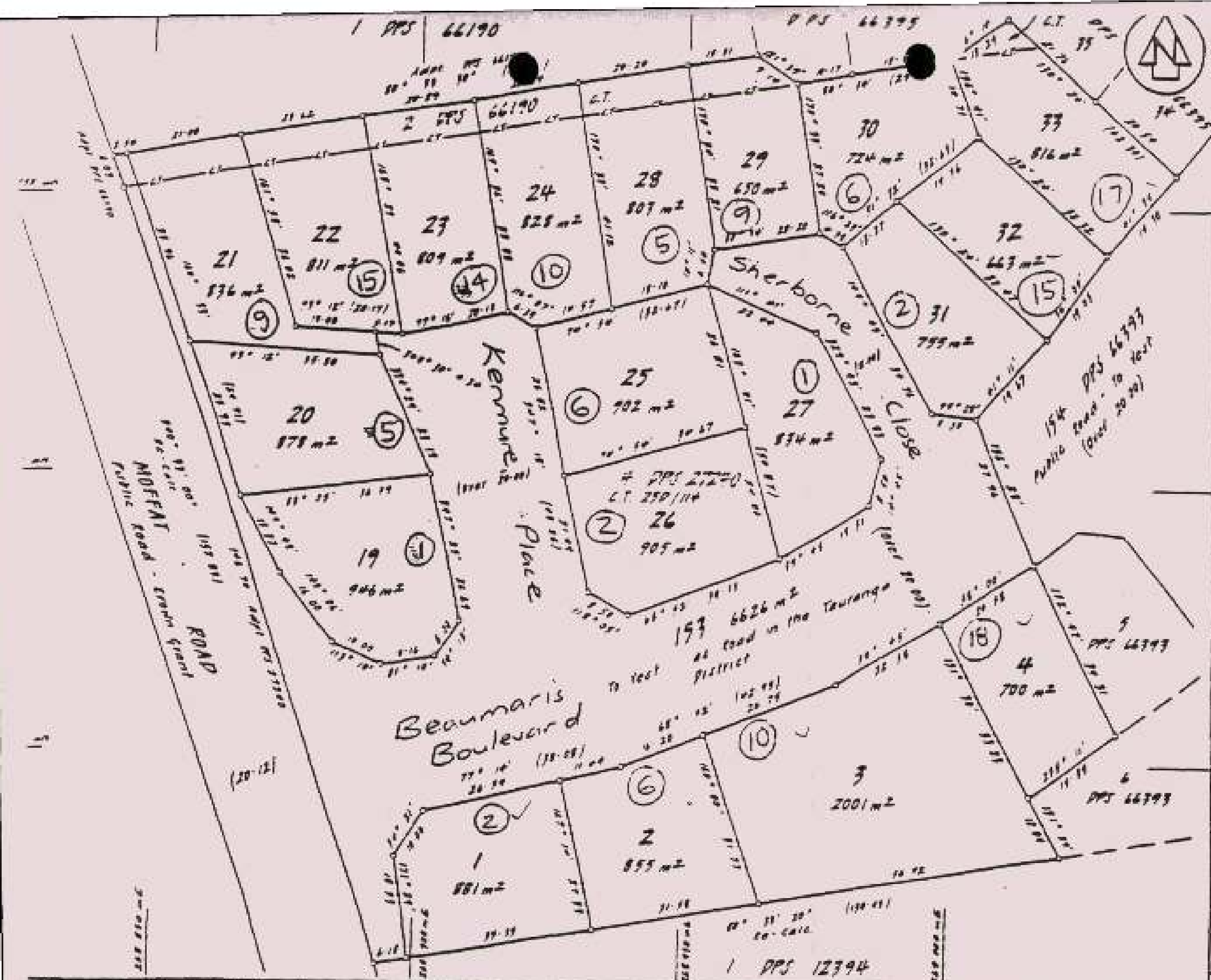
BLK. & DIST. ... TAURANGA

Lots 34 - 46 & 156 Being a Subdivision of Lots 3 & 4 DPS 27240 ...

TERRITORIAL AUTHORITY TAURANGA DISTRICT

Surveyed by ...


Beaumaris Boulevard
Caernarvon Rise
Bethlehem Heights
64 631 m²
65 620 m²
66 DPS 66794
155 DPS 66794
Public Road - To Vest
(Area 20 00)
17 700 m²
14 700 m²
12 750 m²
11 780 m²
10 730 m²
15 906 m²
9 930 m²
5 681 m²
6 1001 m²
7 1000 m²
8 1001 m²
Pt 1 DPS 12778
1 DPS 12794
Lots 5 - 15, 64, 65 & 154 Being a Subdivision of Lots 3 & 4 DPS 27240
This plan is concurrent with DPS 66791, 66792, 66794 - 66797
Total Area 1.6892 ha
Approved as to Survey
Chief Surveyor
Deposited this day of
District Land Registrar
DPS 66



Registered Owners

Approved pursuant to Sec.223 of the Resource Management Act 1991 on the 22nd day of September 199_ the common seal of the Tauranga District Council is affixed hereto in the presence of:

Authorised Officer

This plan is concurrent with DPS 66391 & 66393 66397

Total Area 2.7227 ha

Comprised in C.T. 250/114 (All), 2A/12 ...

TIMOTHY ANDREW McBRIDE

Registered Surveyor ... Dated at Tauranga this 23rd ...

Field Book ... Traverse Book ...

Approved as to Survey

...../...../..... Chief Surveyor

Deposited this .... day of 19

District Land Registrar

DISTRICT SOUTH AUCKLAND

BLK. & DIST. IX TAURANGA

Lots 1 - 4, 19 - 33 & 153 Being a Subdivision of Lot 4 DPS 27790 ...

TERRITORIAL AUTHORITY TAURANGA DISTRICT

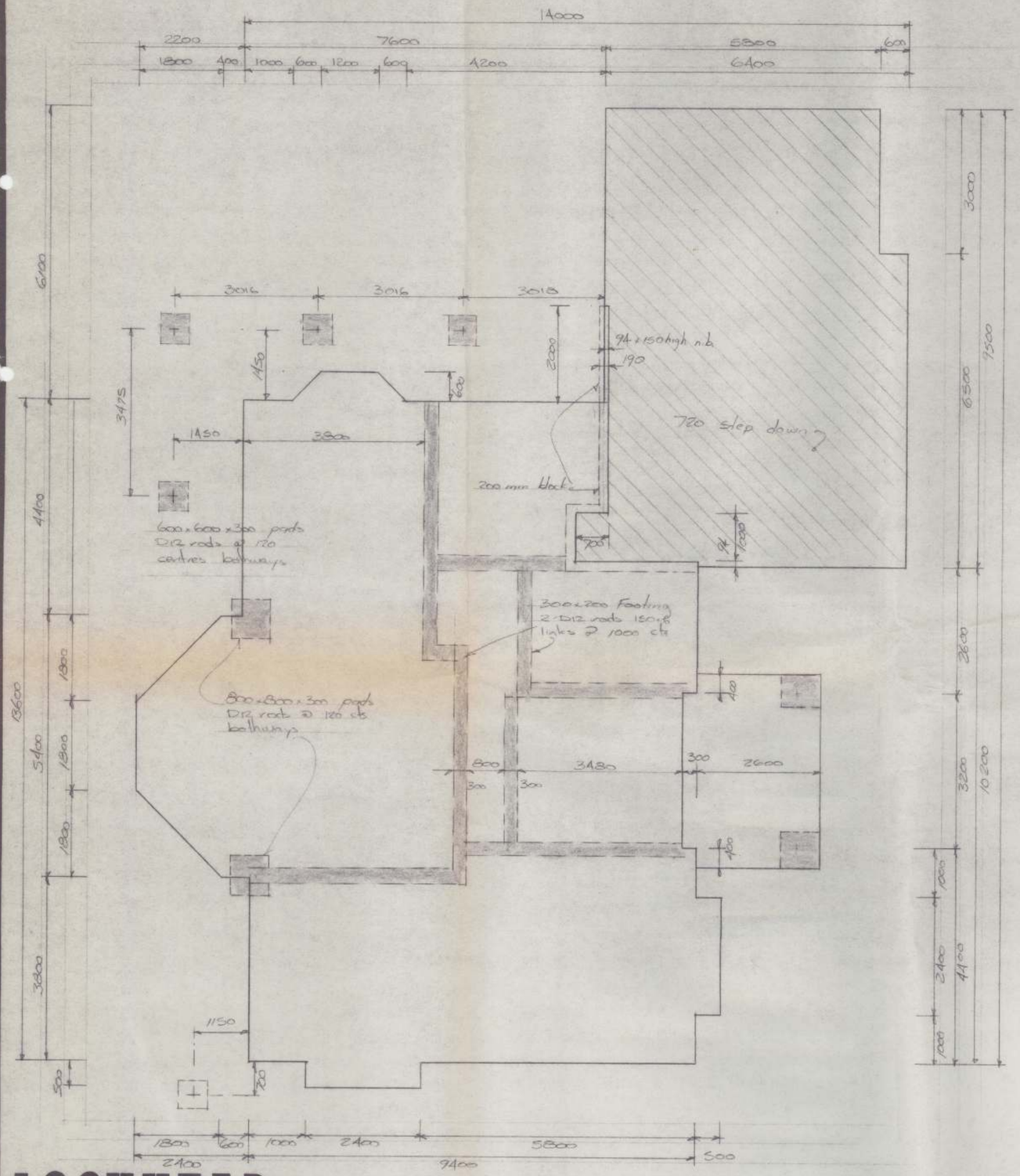
Surveyed by SHEMPTON & LIPINSKI LTD ...

SEE ALSO SUB FILE No. TDC SUB 797/1
SEE ALSO PROPERTY FILE(S) No.
PREVIOUSLY KNOWN AS
DATE OF CHANGE 224 16-12-93.

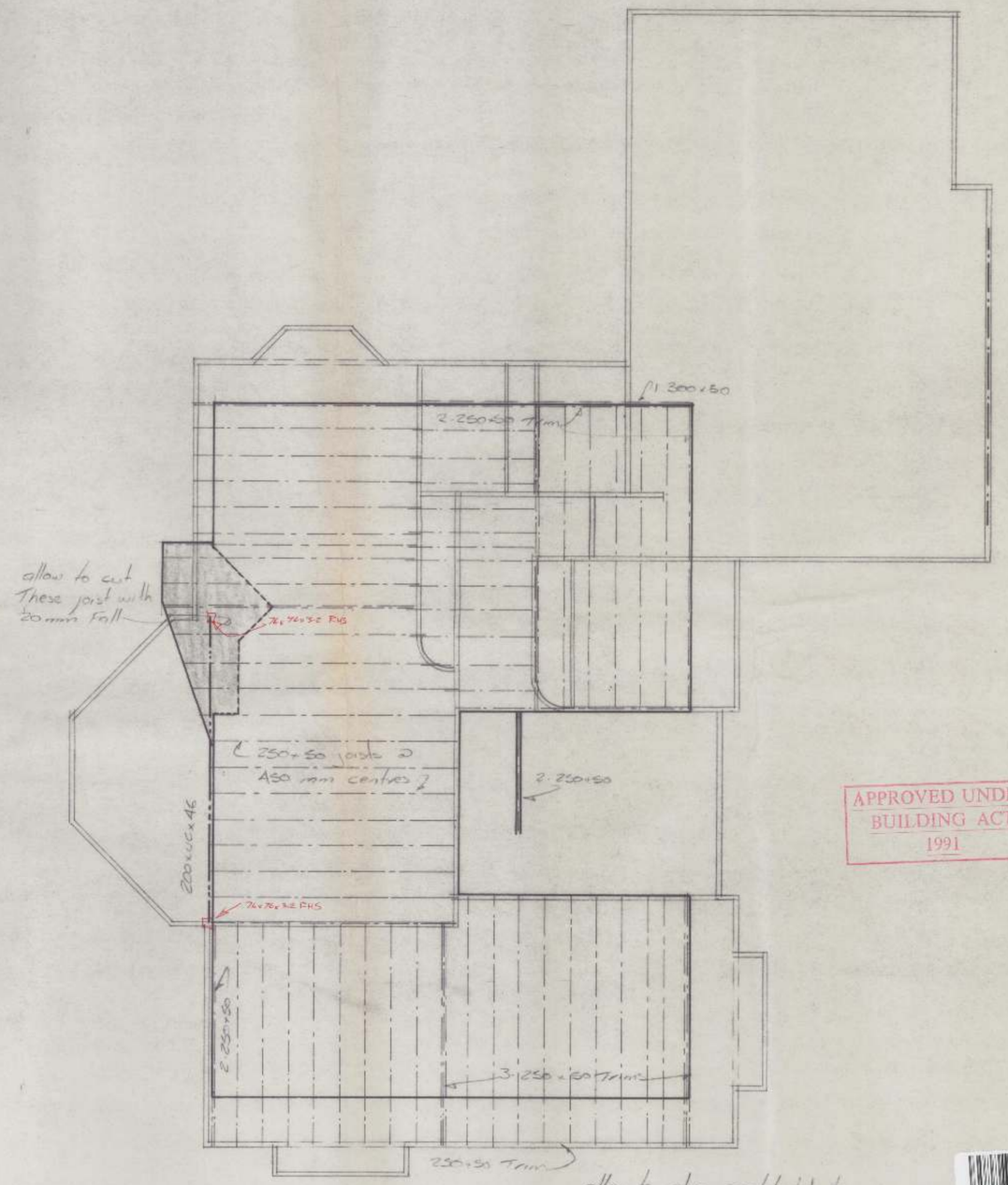
SEE ALSO SUB FILE No.
SEE ALSO PROPERTY FILE(S) No.
PREVIOUSLY KNOWN AS 2 Kenmure Place.
DATE OF CHANGE 4-8-94

SEE ALSO SUB FILE No.
SEE ALSO PROPERTY FILE(S) No.
PREVIOUSLY KNOWN AS 5 Kenmure Blvd
DATE OF CHANGE 12-2-99.

SEE ALSO SUB FILE No.
SEE ALSO PROPERTY FILE(S) No.
PREVIOUSLY KNOWN AS
DATE OF CHANGE



FOUNDATION LAYOUT PLAN



APPROVED UNDER BUILDING ACT 1991

FLOOR JOIST LAYOUT

TOC331873

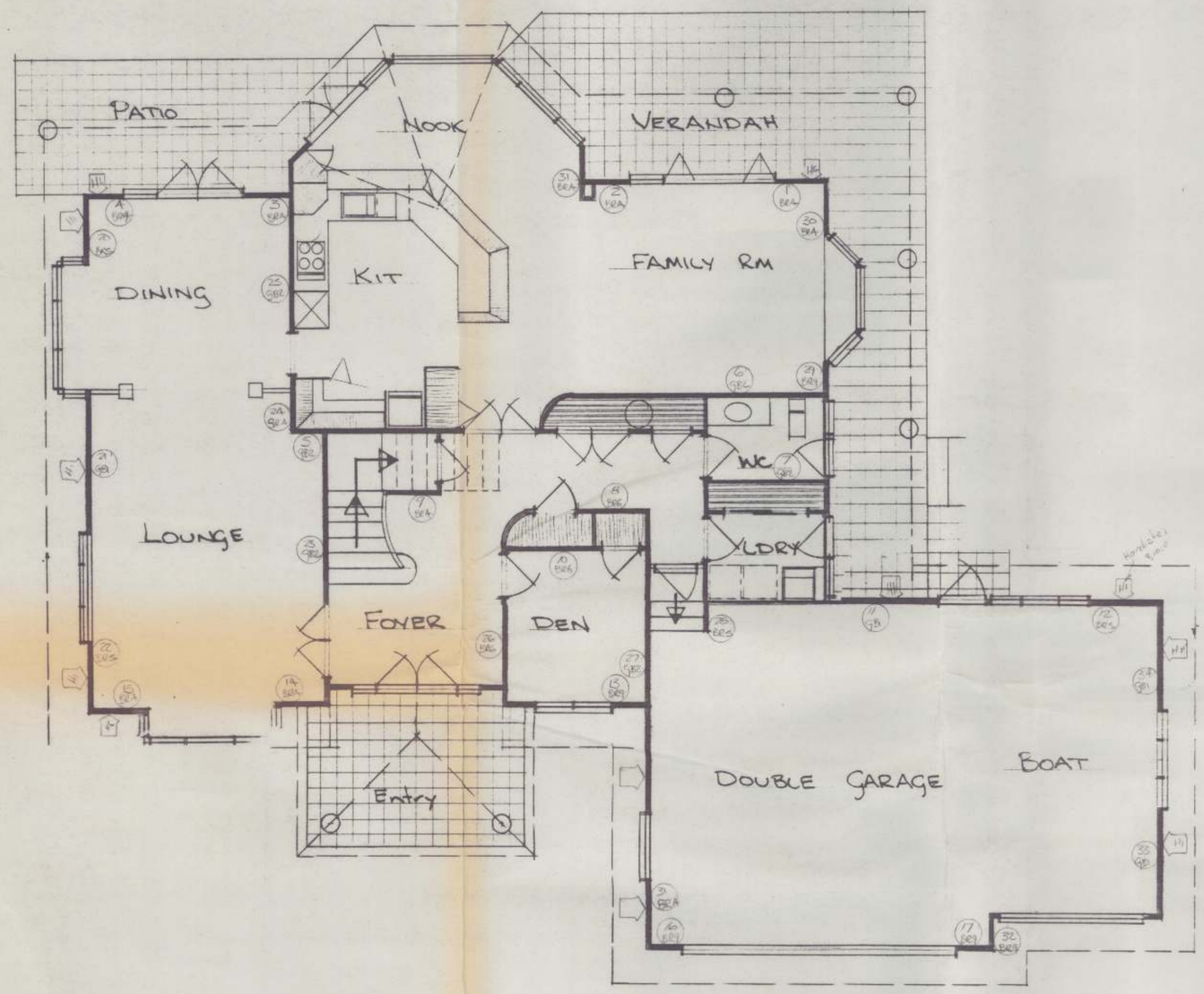
LOCHHEAD Design ltd

ARCHITECTURAL DRAUGHTSMAN
PETER LOCHHEAD PHONE 07-5525410
JAMES ROAD TE PUNA TAURANGA Fax – A/Hr. 07-5524751

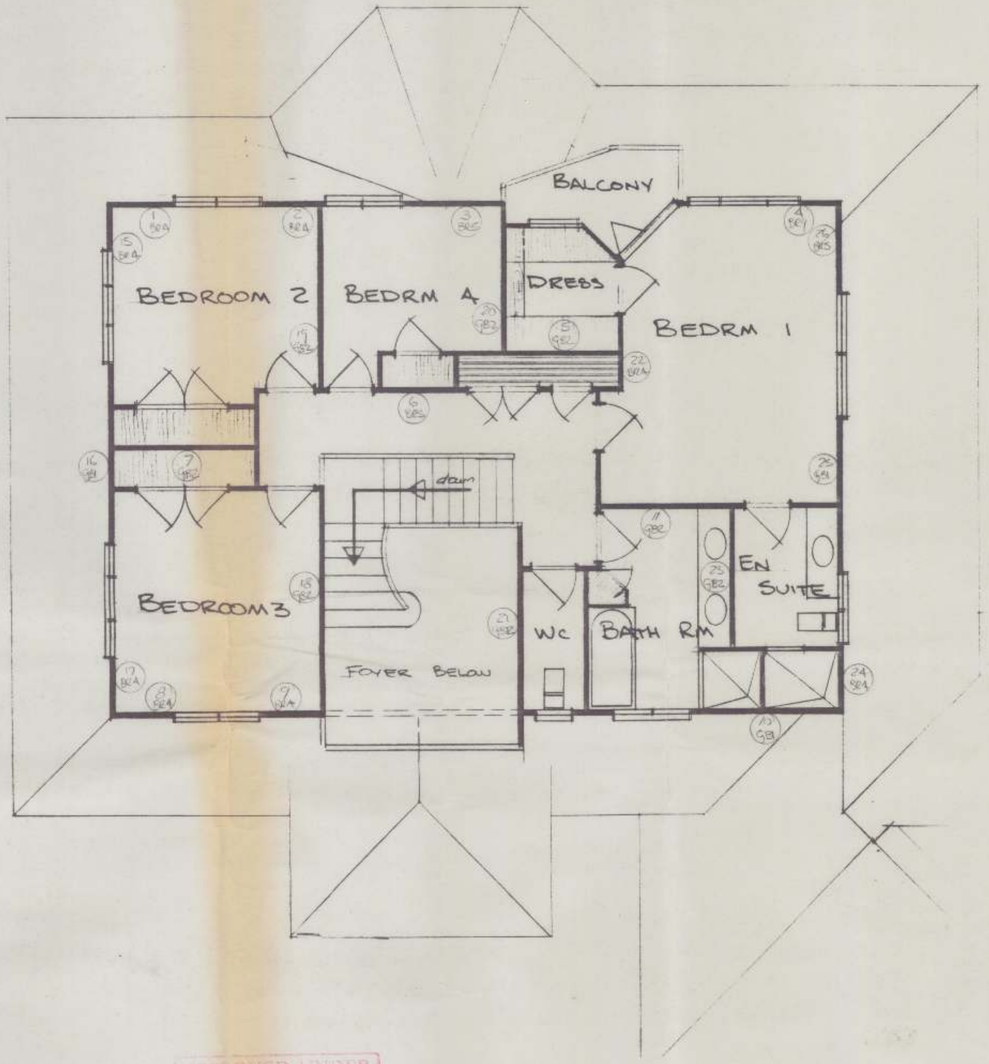
A.M.N.Z.I.D.

Scale	Drawn	Sht
1 to 50	28.2.94	4 of 11

AMROLE



GRD FLOOR LAYOUT



UPPER FLOOR LAYOUT

APPROVED UNDER BUILDING ACT 1991

BRACING PLAN LAYOUT

LOCHHEAD Design ltd

ARCHITECTURAL DRAUGHTSMAN
PETER LOCHHEAD PHONE 07-5525410
JAMES ROAD TE PUNA TAURANGA Fax – A/Hr 07-5524751

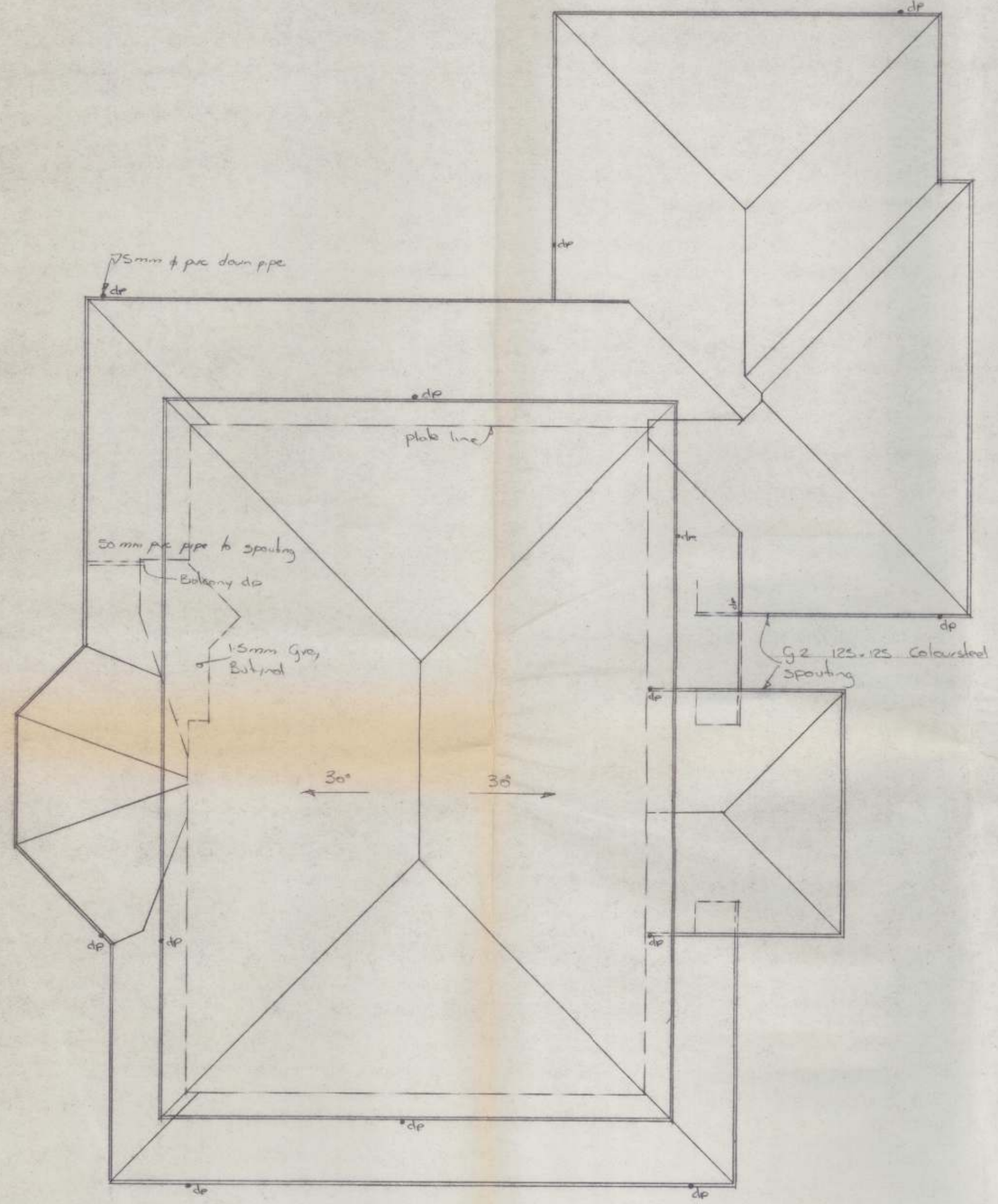
AMNZID

PROPOSED RESIDENCE for JOCK HOLDINGS
LOT 26 BETHLEHEM HEIGHTS TAURANGA

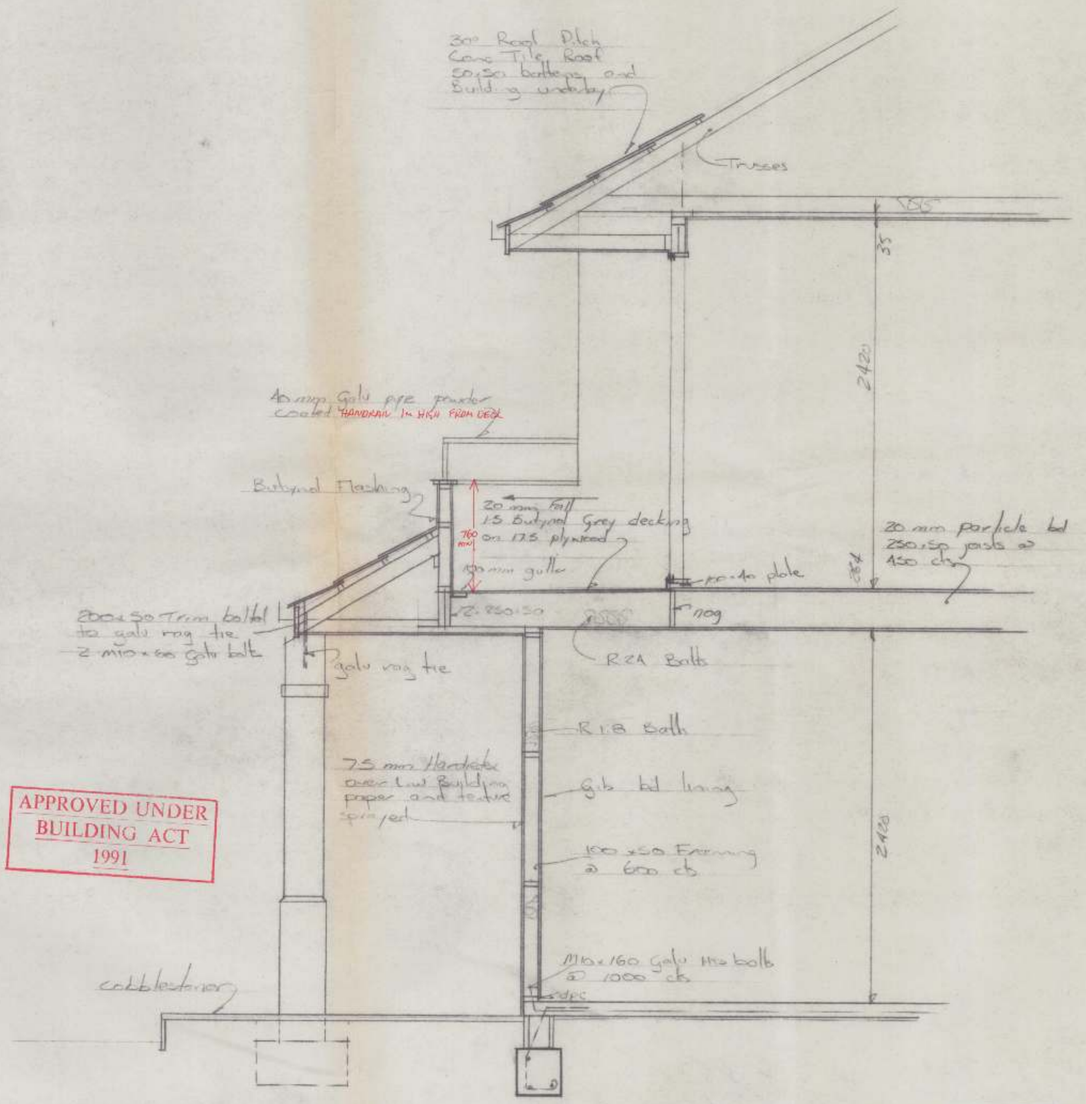
Scale 1 to 50 | Drawn E3 94 | Sht 10 of 11

TCC331879

AARQUE



ROOF LAYOUT PLAN



APPROVED UNDER BUILDING ACT 1991

PART SECTION B

LOCKHEAD Design ltd
ARCHITECTURAL DRAUGHTSMAN
PETER LOCKHEAD PHONE 07-5525410
JAMES ROAD TE PUNA TAURANGA Fax – A/Hr. 07-5524751
A.M.N.Z.I.D.

ARQUE
Scale 1 to 50 1 to 20
Drawn 7 3 94
Sht 6 of 11

Property File: P3127-2-1

P.

TAURANGA
DISTRICT COUNCIL

As Built Drainage Plan

Department of Planning & Environment

As Built Drainage Plan

Drainage plan for:

Street No: 2

Street 2 Kenmure Plc ~~Beaumaris Blvd~~ Lot 26 D.P. 66392

Suburb BETHLEHEM HEIGHTS

Owner JACK HOLDINGS

Type of Building HOUSE

Drainlayer W.H. KELLY

Date of Inspection 30-8-94

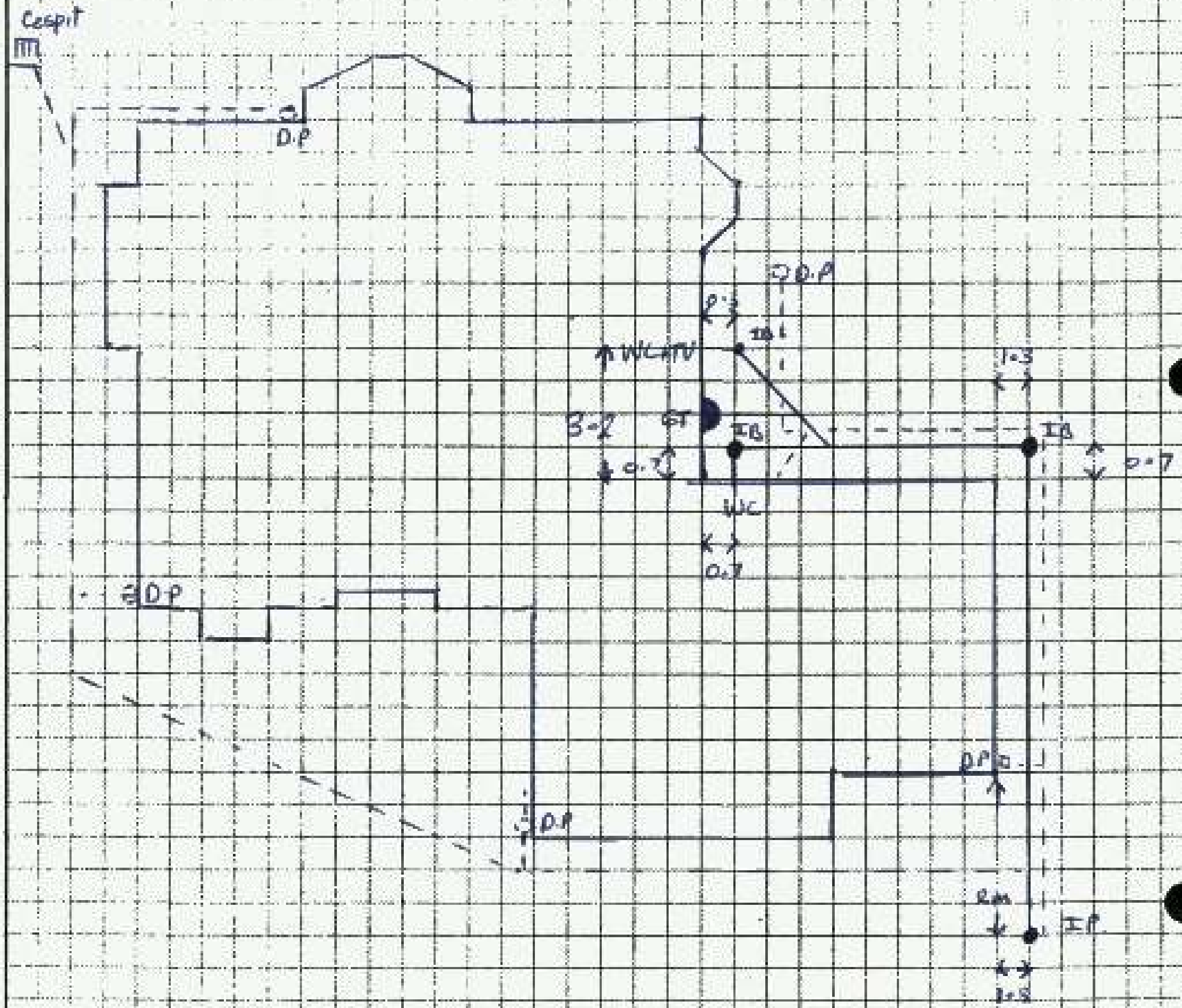
Inspector [signature]

Drainage Permit No.

NOTE: Plan to be drawn in black ballpoint on graph opposite.

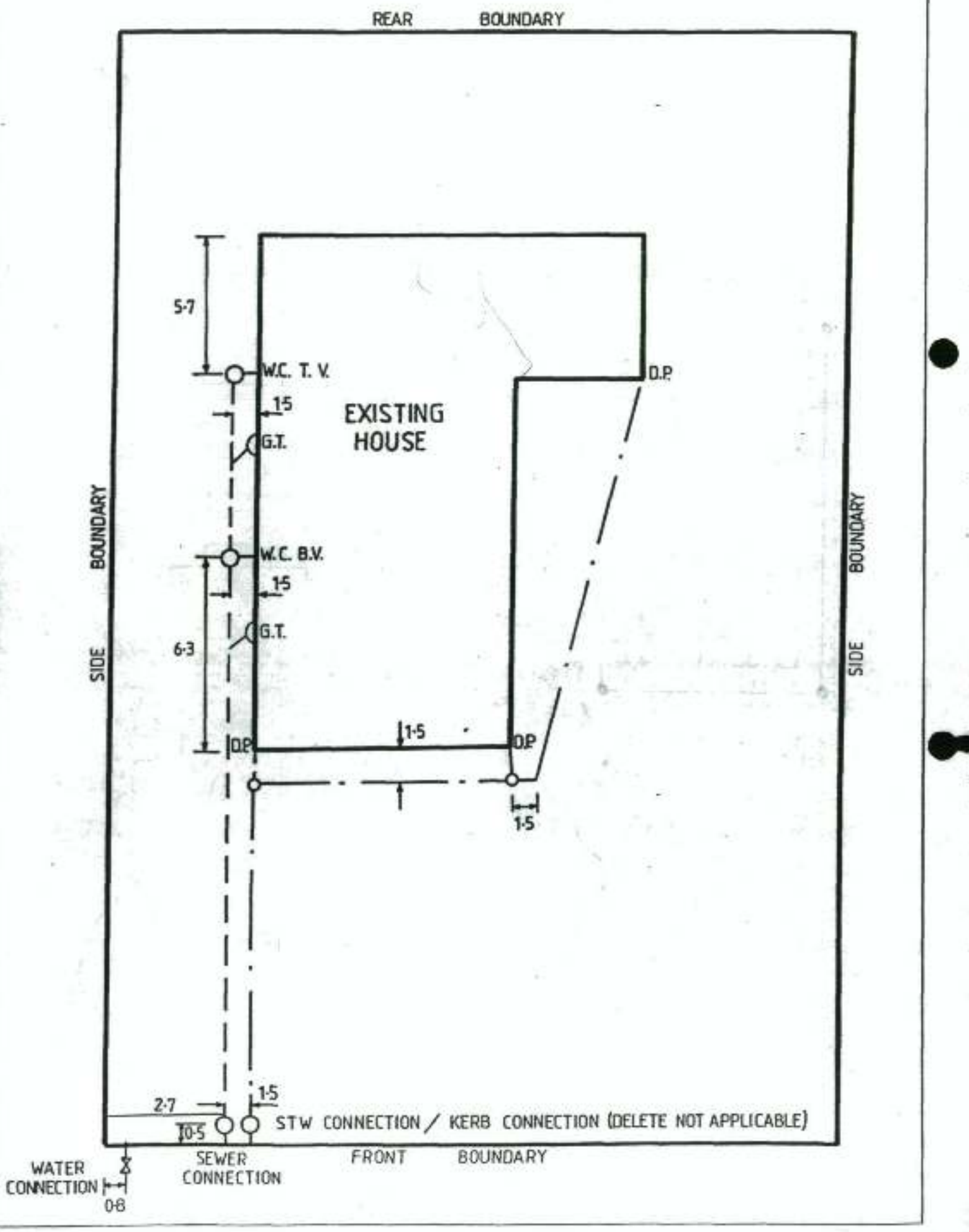
Plan to include:

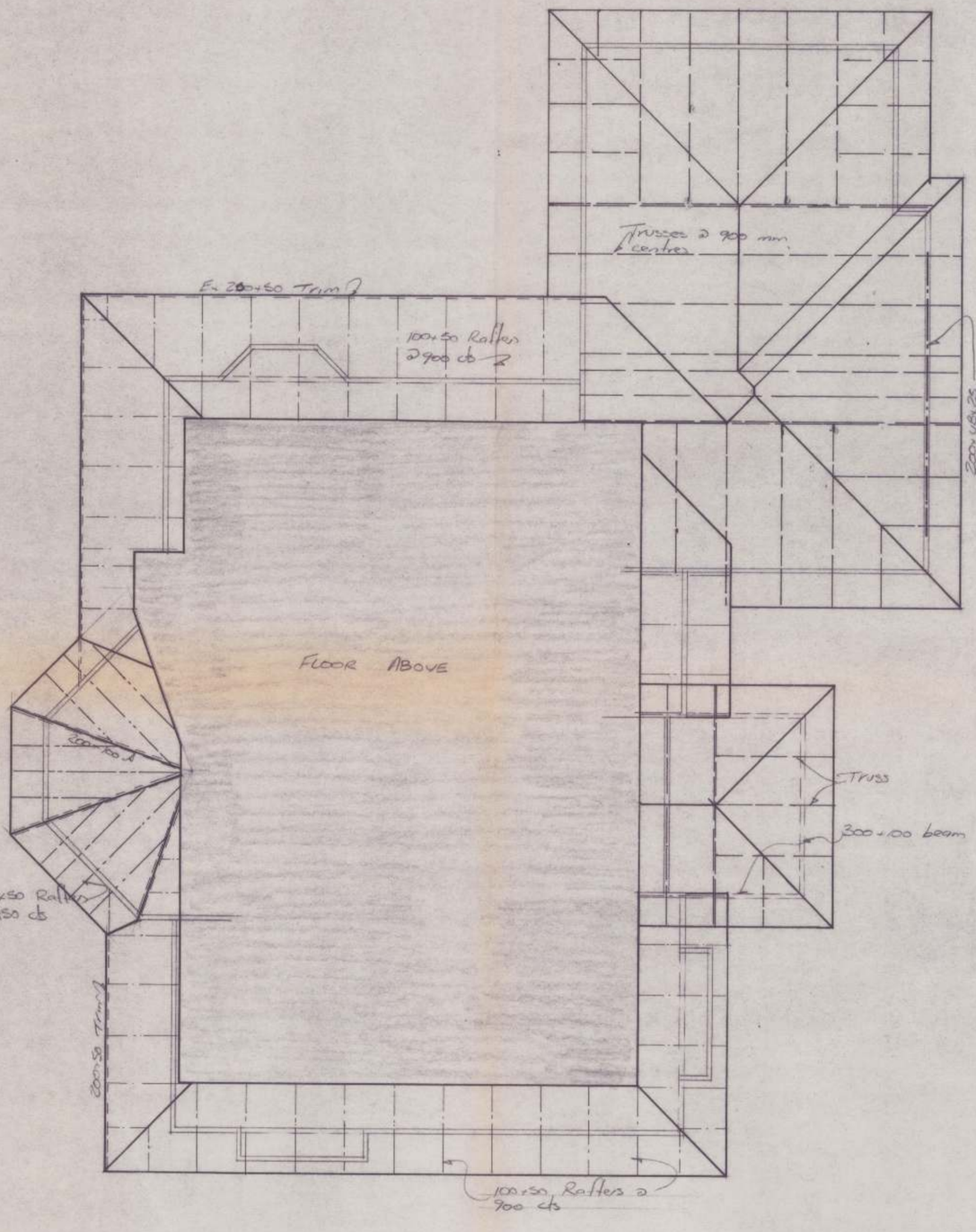
1. The correct position of the drains in relation to the building and boundaries.
2. The position of the street frontage.
3. Depth of drains at connection point.
4. Both foulwater and stormwater drains to be drawn.
5. Clearly define all Inspection openings, with accurate measurements from two points.
6. Clearly define all buildings and boundaries.
7. Refer to example drain plan back page.



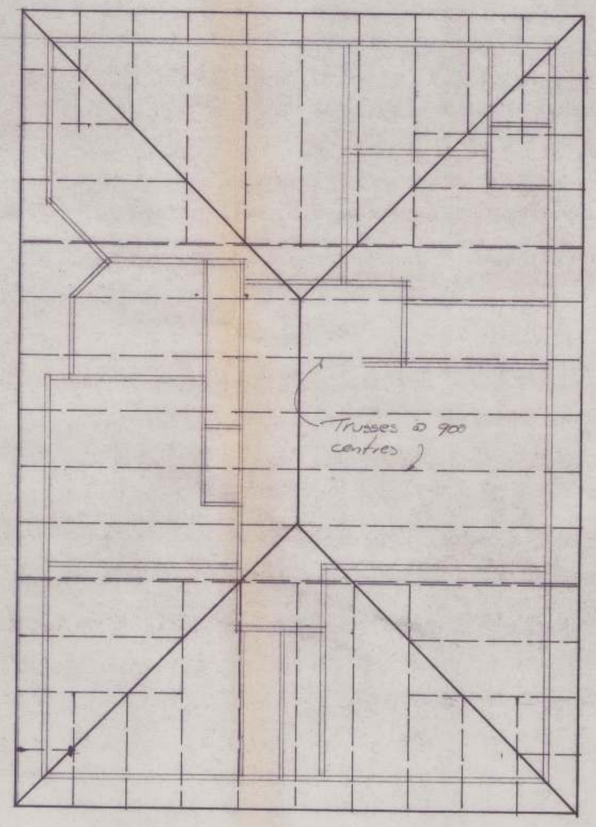
Cespit
D.P
D.P
2.3
IB
WC+W
3.2
GT
IB
0.7
WC
0.7
1.3
IB
0.7
DP
D.P
DP
IP
0.8

Plan Example





GRD FLOOR RAFTER/TRUSS LAYOUT



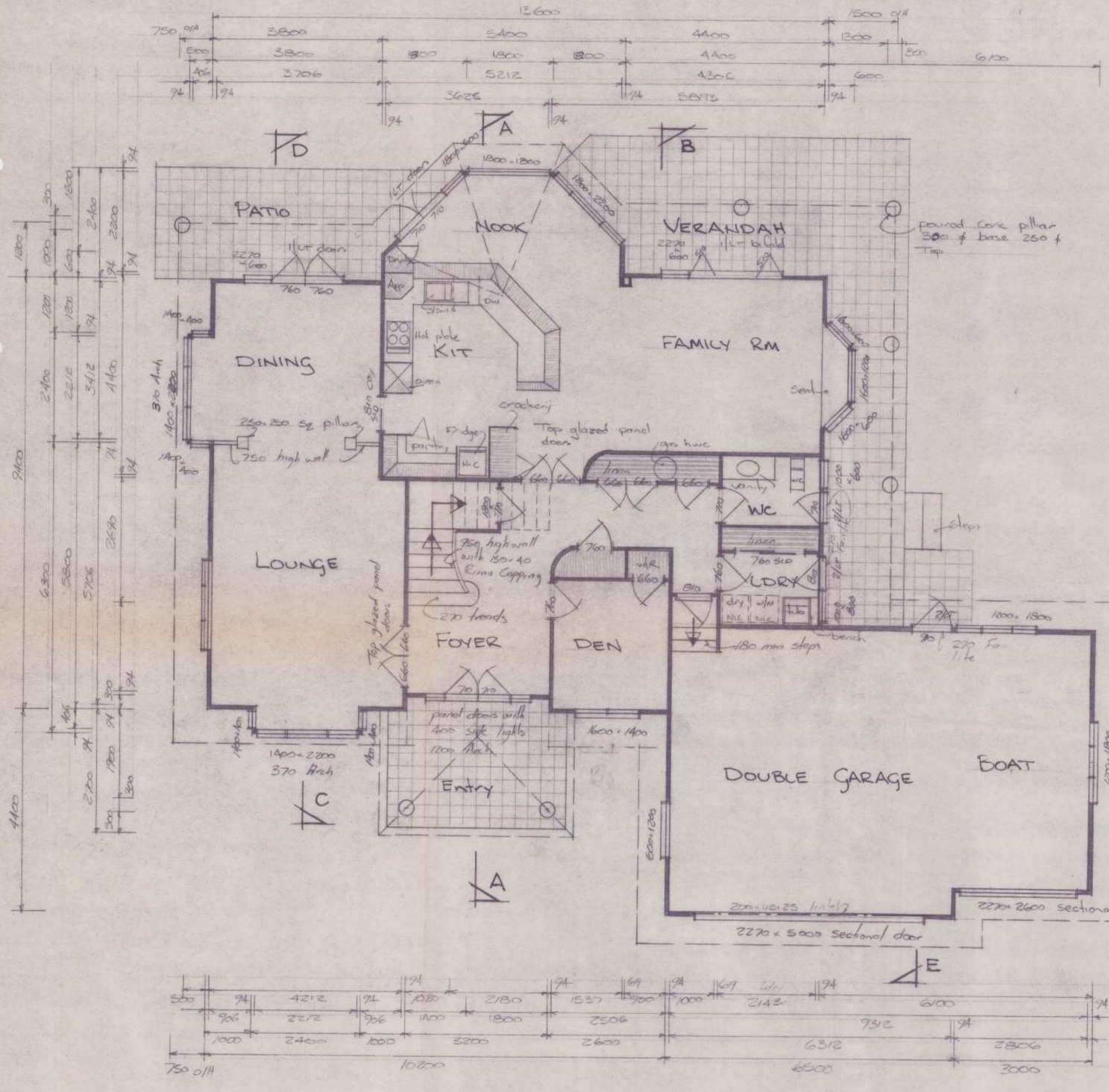
UPPER FLOOR TRUSS LAYOUT

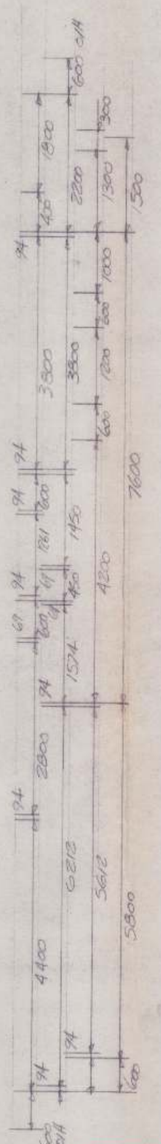
APPROVED UNDER
BUILDING ACT
1991

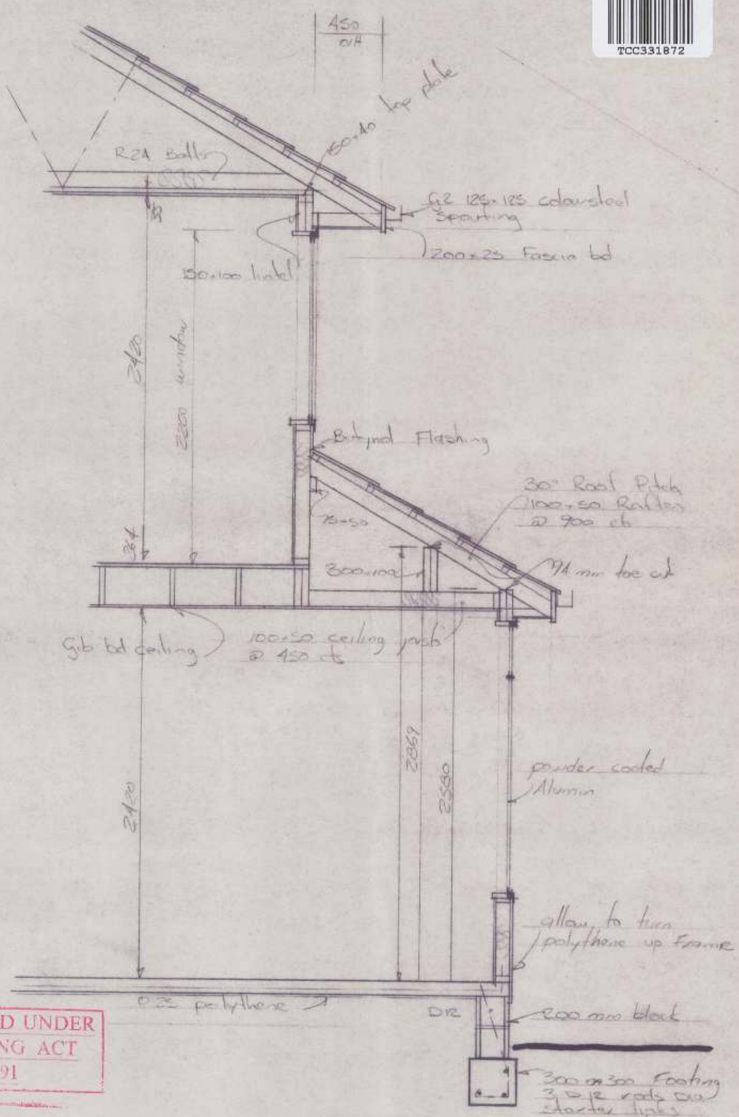
TCC331874

LOCKHEAD
Design ltd
ARCHITECTURAL DRAUGHTSMAN
PETER LOCHHEAD PHONE 07·5525410
JAMES ROAD TE PUNA TAURANGA Fax – A/Hr. 07·5524751
A.M.N.Z.I.D.

Scale 1 to 50 Drawn 2.3.94 Sht 5 of 11







APPROVED UNDER BUILDING ACT 1991

GRD FLOOR PLAN LAYOUT

Area: 133.13 M² (1433 Sq ft)
Garage . 59.16 M² (637 Sq ft)

PART SECTION C

LOCHHEAD Design ltd
ARCHITECTURAL DRAUGHTSMAN
PETER LOCHHEAD PHONE 07-5525410
JAMES ROAD TE PUNA TAURANGA Fax – A/Hr. 07-5524751
A.M.N.Z.I.D.

Scale 1 to 50, 1 to 20 | Drawn 27.2.94 | Sht. 3 of 11

11

SHRIMPTON & LIPINSKI LTD

CONSULTING SURVEYORS ENGINEERS TOWN PLANNERS

111 Cameron Road, Tauranga, New Zealand
P.O. Box 231 PHONE (07) 577-6069
FAX (07) 577-6065

BETHLEHEM HEIGHTS SUBDIVISION

STAGES 1 & 2

MOFFAT ROAD, BETHLEHEM

SITE DEVELOPMENT EARTHWORKS

DECEMBER 1993

REFERENCE: 10926

C O N T E N T S

1.0 INTRODUCTION

The roading and services for Stage 1 and the bulk earthworks for Stages 1 and 2 of the Bethlehem Heights Subdivision have been designed by Shrimpton and Lipinski Ltd (SL) and construction is complete. 80 residential lots are present on Stage 1 and a further 68 are proposed in Stage 2.

These areas include the streets currently unnamed but referred to as roads 1-13 inclusive.

This report describes the earthworks undertaken including the replacement of previous substandard filling, the improvement by recompaction of other previous filling and cut to fill operations as part of recontouring for the subdivision design. Also included in this report are descriptions of the relevant standards adopted and enforced and thee results and conclusions reached from extensive observation and testing during the earthworks.

During this report reference is made to drawing 10926-42 attached as appendix I which shows relevant road and lot locations, depths of filling, areas of ground improvement and compaction test locations.

2.0 SCOPE OF EARTHWORKS

The area in which the subdivision is constructed was formerly developed as a kiwifruit orchard. During the orchard development recontouring earthworks were undertaken to infill an original gully which was along the present alignment of road 1. Orchard recontouring was largely undertaken with a minimum of compaction in areas of filling to allow kiwifruit to establish and the soil to be free draining. This standard is opposite to that required for residential development in terms of the Tauranga District Council's (TDC) "Code of Practice for Development".

In determining areas of cut and fill that may have taken place before subdivision construction the following information was resourced.

- vertical aerial photography taken in the early and late 1970's which showed the area before and after horticultural development which included the orchard recontouring.

- a contour plan of the property dated July 1977 which identified ground levels different to those recorded during the preparation work for the design of the subdivision.

- the putting down of 35 machine and handaugered boreholes to identify the extent and limits of previous filling as well

as the type and degree of compaction applied to the filling.

These investigations were reported in the resource consent application to the TDC by SL dated December 1992.

The locations of the investigation boreholes and the areas of previous filling identified as a result of the review of historical data are plotted on drawing 10926-01 attached as appendix II.

Each borehole identified a number of the following soil types :

(a) Filling - generally firm to stiff, sometimes very stiff light brown or brown silt being borrowed soils from surface cutting elsewhere on both original properties. Some of the soil especially deep down in the fills contained organic inclusions.

(b) Peat - found below the filling and usually the former surface topsoil cover. In boreholes 2, 3, 4 and 5 the former gully floor had not been stripped of topsoil prior to filling. Further organic filling had been placed and this included farm refuse such as pieces of wire, and remnants of tree branches and twigs and old hedging.

(c) Younger Ashes - mantling the surface in undisturbed areas or found below the filling are the younger series of volcanic ashes, typically coarse friable silts, and pumiceous silty sands and sands. These ashes were identified below the filling overlay by their structure and homogeneous formation. In some cases the original topsoil cover to the natural ground was also in place under the filling. The orchard filling was also largely sourced from the younger ashes borrowed from elsewhere on the property.

(d) Old Ashes - underlaying the younger ashes are a sequence of older ashes typically more highly weathered to clays or silty clays. An indicator for the upper stratum of this sequence is a red brown paleosol known locally as the "chocolate layer".

In general the compaction of the orchard filling appeared to be relatively high with undrained shear strengths as measured with hand vane in excess of 100 kPa. Shear strengths reduced

however in areas of peat (both organic filling and the former topsoil). However, because the earthworks were not undertaken with the level of supervision required in NZS 4431:1989 "Code of Practice for Earthfill for Residential Development" the filled ground could not be specifically considered as universally acceptable for residential purposes. The presence of orchard or farm refuse in the boreholes (bores 2, 3, 4 and 5) suggested that the ground preparation work was not in accordance with NZS 4431.

The scope of work relating to earthworks was undertaken as follows :

(a) Replacement Filling

Areas of previous filling during orchard development were removed down to the underlying natural ground. This occurred generally along the road alignment of road 1 at the intersection with road 2 and at the current end of road 1 Replacement soils were either from areas of cut within the subdivision or where possible with selected soils from the removed poorly compacted filling. Before replacement filling former topsoil bands and any organic refuse at the base of original gully through the site was removed.

Drawing 10926-42 shows the extent of the replacement filling and additional filling to achieve final design contours to have been up to 3 metres deep at the intersection of roads 1 and 2.

(b) Additional Filling

To achieve design levels for road subgrades and to achieve reasonable contours for residential sites additional filling was placed within the subdivision in locations shown on drawing 10926-42. These areas were :

(i) At the Moffat Road intersection but extending into Lots 1, 2, 3, 19, 20, 25 and 26.

(ii) Along the rear boundaries of Lots 22, 23, 24, 28 and 29.

(iii) Within a shallow former gully features within Lots 92-95, 134-138 and 142-145.

(iv) Over sloping ground to reduce slope angles within Lots 102-108 inclusive. A corresponding area of cut or borrow occurred at the higher ground between Lots 102-108 and the area of filling described in (iii) above.

(v) Within a low lying area at Lots 30, 32-35 inclusive with a corresponding area of cut up the alignment of road 13 adjacent to these lots.

(c) Areas of Cut

As a guide to areas of cut which occurred on the subdivision construction drawings 10926-02, 03, 04 and 05 are reproduced at a reduced scale and are attached as appendix III. In general depths of cut did not exceed 1.5 metres on the lots except for Lots 85 to 88 inclusive where depths approached 3 metres. At these locations excavation was into the pumiceous silty sands within the younger ashes described above on page 2.

(d) Areas of Ground Improvement

The initial site investigations prior to construction identified areas of filling which was consistently close to the standards enforceable under NZS 4431.

To improve soil densities and therefore reduce the likelihood of future settlement when building loads are imposed ground improvement work was undertaken by :

- the removal of the surface topsoil
- the testing of the relative density of the soils present with a Scala penetrometer
- the compaction at the stripped surface with a 6 tonne vibrating drum roller under observation by SL
- retesting of the recompacted filling with a Scala penetrometer and the comparison of results with those before recompaction.

At all ground improvement sites relative densities were increased by this method. Retesting some days later showed further improvement as pore water pressures increased during the recompaction had dissipated.

After improvement additional filling was placed to raise the level of formation of road 1 adjacent to Lots 53 to 60 inclusive.

Lots on which this ground improvement work occurred were :

4, 5, 6
53, 54, 55, 56, 112, 113
57, 58, 59, 60

3.0 COMPACTION STANDARDS AND TEST RESULTS

Filling was placed in the areas described above during the subdivision construction using soils derived from the "younger ashes". These were mainly light brown silts and orange brown pumiceous sand silts.

The performance specification required of the contractor for the earthworks was based on the guidelines contained in NZS 4431. Enforcement of the compaction standards listed below satisfies the requirement of Section 7 of NZS 4431.

Air voids percentage (as defined in NZS 4402:Part 1:1980)
- General Fill
  - average value less than 10% (any 10 tests)
  - maximum single value 12%
- Within 500mm of road subgrade
  - average value less than 8%
  - maximum single vale 10%

Undrained shear strength (measured by insitu vane)
- General Fill
  - average value not less than 150 kPa (any 10 tests)
  - minimum single value 110 kPa
- Within 500mm of road subgrade
  - average value not less than 170 kPa
  - minimum single value 140 kPa

The earthworks were observed by an engineering technician of SL. Compaction and strength control testing was undertaken by the Tauranga Engineering Materials Laboratory of Works Consultancy Services. This laboratory is TELARC registered for the tests undertaken by them.

The sites of the tests were located in position and level and are plotted on 10926-42. Test results are also tabulated in appendix IV to this report.

Complying tests were completed at 59 sites corresponding to one test for every 60000 cubic metres of filling placed. In addition check tests were undertaken at unrecorded locations by both SL representatives and the contractors using a calibrated hand shear vane.

This incidence of testing complies with the minimum requirements of NZS 4431 and Section 206.4.4 of the TDC "Code of Practice for Development".

In areas of ground improvement by recompaction the target readings with a Scala penetrometer were to be not less than 4 blows per 100mm (equivalent SPT N value of 8). 25 test position were located in positions shown on 10926-42. These test results are tabulated in appendix IV.

4.0 GROUND BEARING CAPACITIES

In the filled areas complying with the specification described in Section 3.0 the soil strength developed would provide an allowable ground bearing capacity for foundations set below the topsoil level of 100 kPa. This should therefore permit the construction of buildings specified in accordance with NZS 3604 or NZS 4229.

In other areas within the subdivision the preconstruction investigation boreholes indicate that ground bearing capacities in the near surface light brown silts of volcanic ash origin of 100 kPa are also appropriate.

In areas of cut on lots adjacent to the roads excavation may have exposed the silty sands and sand being the lower strata of the younger ashes. The density of these soils vary and lower ground bearing capacities may be required for foundation support. This in turn may require surface foundations to be widened or footing excavations lowered to strata of higher strength. Where low bearing soils are exposed during excavation or are suspected specialist civil engineering advice should be sought.

5.0 AREAS OF BUILDING RESTRICTION

Each lot contains an area on which building can occur without any limitation except for the possibility of localised areas of low strength in natural ground as described in Section 4.0 of this report.

In Lot 6 remnants of recontouring on the adjacent property to the south (now known as the Huntington Estate) remain as identified by the test pit shown on 10926-42. As it was impractical to remove these remnants which may comprise organic filling containing old tree branches and foliage building should be restricted to not encroach closer than 4 metres from the rear (southern) boundary of Lot 6.

At the time of subdivision construction a large former orchard packhouse remained on Lots 8 and 9 and was due for removal during the first 6 months of 1994. (Refer to drawing 10926-02 in appendix II.

The building floor comprises a concrete slab elevated above original ground level at the north western corner by filling behind a subfloor retaining wall. A cut batter exists along the eastern boundary of Lots 8 and 9. It is likely that the subfloor filling may be placed over the site after the building removal and against the batter face. This work should be undertaken to the same standards as adopted for the subdivision filling work. If no record is taken of this work

when it occurs in the future specific subsurface investigations may be required to determine appropriate foundation details for buildings on Lots 8 and 9.

6.0 SUMMARY AND RECOMMENDATIONS

6.1 Subdivision Construction Filling

The filling shown on drawing 10926-42 was placed in accordance with the methods and standards quoted in NZS 4431 under the supervision of Shrimpton and Lipinski. Compaction testing on site confirmed that the project specification based on NZS 4431 was complied with. Compaction test results are appended to this report. The test results show that the required degree of compaction (less than 10% air voids) was obtained and the required undrained shear strength was also reached.

A certificate (appendix V of this report) in support of the suitability of the filled areas for the erection of dwellings in terms of NZS 3604 and NZS 4229 is appended (reference appendix C of Council's Code of Practice) for buildings constructed to these codes of practice on allowable ground bearing pressure of 100 kPa is appropriate.

However the possibility of variations of soil type and strength may exist away from observation locations or compaction test locations. The normal inspection of foundation conditions during construction of buildings by builders as described in NZS 3604 and by the local authority inspectors should be undertaken. If areas of low soil strength are found professional geotechnical advice should be sought.

6.2 Areas of Cut

In areas of cut where soils were obtained for filling in the subdivision pumiceous soils may be at or close to the finished ground level. Pre-subdivision investigations and observations in services trenches showed these soils to be of variable strength and density. Allowable ground bearing pressures may be found to be lower than 100 kPa on inspection or probing. Specialist engineering advice should be sought if low bearing capacity soils are encountered. Likely remedies may be to increase foundation widths or lower foundation levels to underlying soils of higher strength.

6.3 Undisturbed Ground

In areas where ground disturbance has not occurred either from previous orchard recontouring or from the later subdivision construction the surface soils comprise stiff light brown silts of volcanic ash origin. Allowable ground bearing capacities of 100 kPa should generally be appropriate for foundation design. As for the filled areas the normal inspection of foundation conditions during construction of

buildings by builders as described in NZS 3604 (appendix C) and by the local authority inspectors should be undertaken. If area of low soil strength are found professional geotechnical advice should be sought.

6.4 Sloping Ground

The sloping ground on some properties is not considered steep so that slope instability is likely.

In the development of lots on sloping ground it is likely that additional earthworks will be required to provide flat building platforms for concrete floor slabs terraced areas for gardens and flatter areas for driveways and vehicle manoeuvring. The following recommendations are made as a guide for the developer when preparing building details for a construction consent and also for the District Council when considering such applications.

(a) Minor cut batters should remain stable under most circumstances although some form of weather protective facing is recommended. Cuts higher than 1.8 metres should be stabilised by a lateral restraining structure (retaining wall) specifically designed and approved by way of a construction consent from the District Council. In the specific design the designer should assess the effect of the cutting with respect to the possibility of removing support to upslope development or putting an adjacent structure such as a house or driveway at risk.

(b) Any further filling placed on properties on sloping ground should be undertaken according to the techniques and principles of NZS 4431:1989 in which standards for ground preparation prior to filling and the compaction of the filling are listed. Fills up to 1.5 metres deep and correctly placed should not promote instability of the existing slopes. Fills greater than this depth should be undertaken under profession civil engineering advice. This advice should assess the effect of the filling surcharge loads on any development on downslope properties.

6.5 Stormwater Disposal

All lots are provided with a connection to the piped stormwater reticulation systems. While permeable naturally occurring subsoils do exist in some areas all stormwater runoff reticulation from roofs and hardstanding areas should be connected to the subdivision disposal system. Soakholes for stormwater disposal should not be permitted.

7.0 LIMITATION

Recommendations contained in this document are based on data from boreholes, soil exposures and test results. Inferences about the nature and continuity of subsoils away from these locations are made but cannot be guaranteed.

In all circumstances, if variations in the subsoils occur which differ from that described or assumed to exist the sites should be inspected by an engineer suitability qualified to make an informed judgement and provide advice on appropriate improvement measures.

This report has been prepared specifically for the first two stages of the Bethlehem Heights subdivision and no responsibility is accepted by Shrimpton and Lipinski Ltd for the use of any part of this report for other development sites or in other contexts or for any other purpose.

Shrimpton and Lipinski Ltd
Consulting Engineers, Registered Surveyors
Town Planners

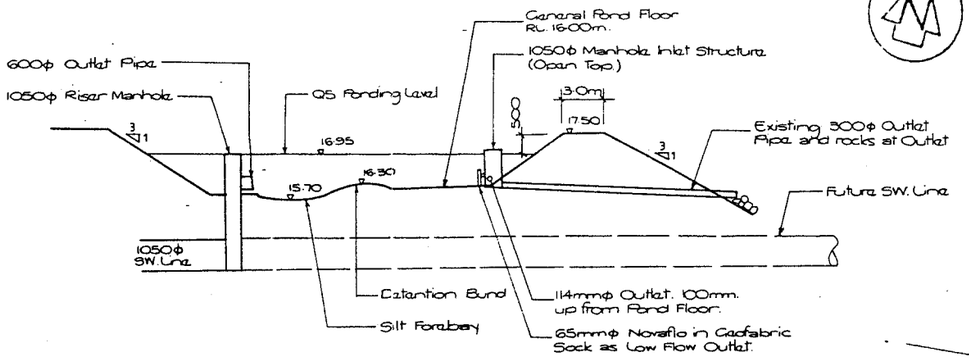
Prepared by M W Hughes

BETHLEHEM HEIGHTS SUBDIVISION

STAGES 1 AND 2

APPENDIX I

Drawing 10926-42 Earthworks As Built Plan



NORTH DISCHARGE DETAIL HORZ. 1:200
VERT. 1:100

KEY

EXTENT OF UNCERTIFIED FILL TO BE REMOVED AND REPLACED

BETHLEHEM HEIGHTS

RESIDENTIAL DEVELOPMENT

EARTHWORKS PLAN

No.	REVISION	DATE
2.	Detention Pond added for Discharge Permit Application	7/12/93
1.	Issued for Tender	7/93

SHRIMPTON & LIPINSKI LTD.

REGISTERED SURVEYORS
CONSULTING ENGINEERS
TOWN PLANNERS

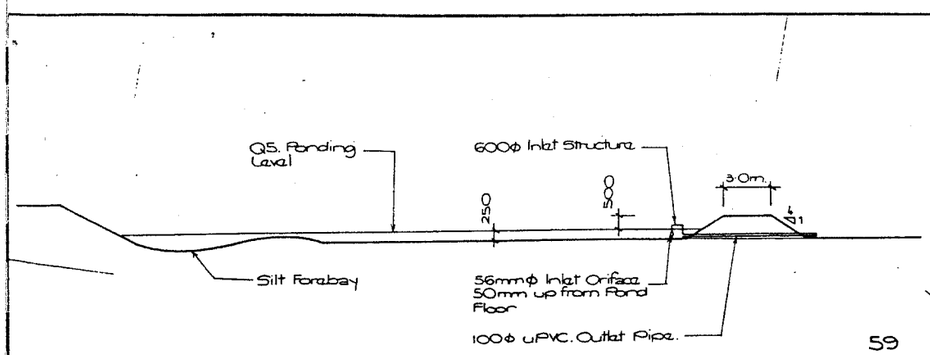
111 Cameron Road, Tauranga, New Zealand
P.O. Box 231. Ph. (07) 577-8080

ORIGINAL SCALE 1 : 500

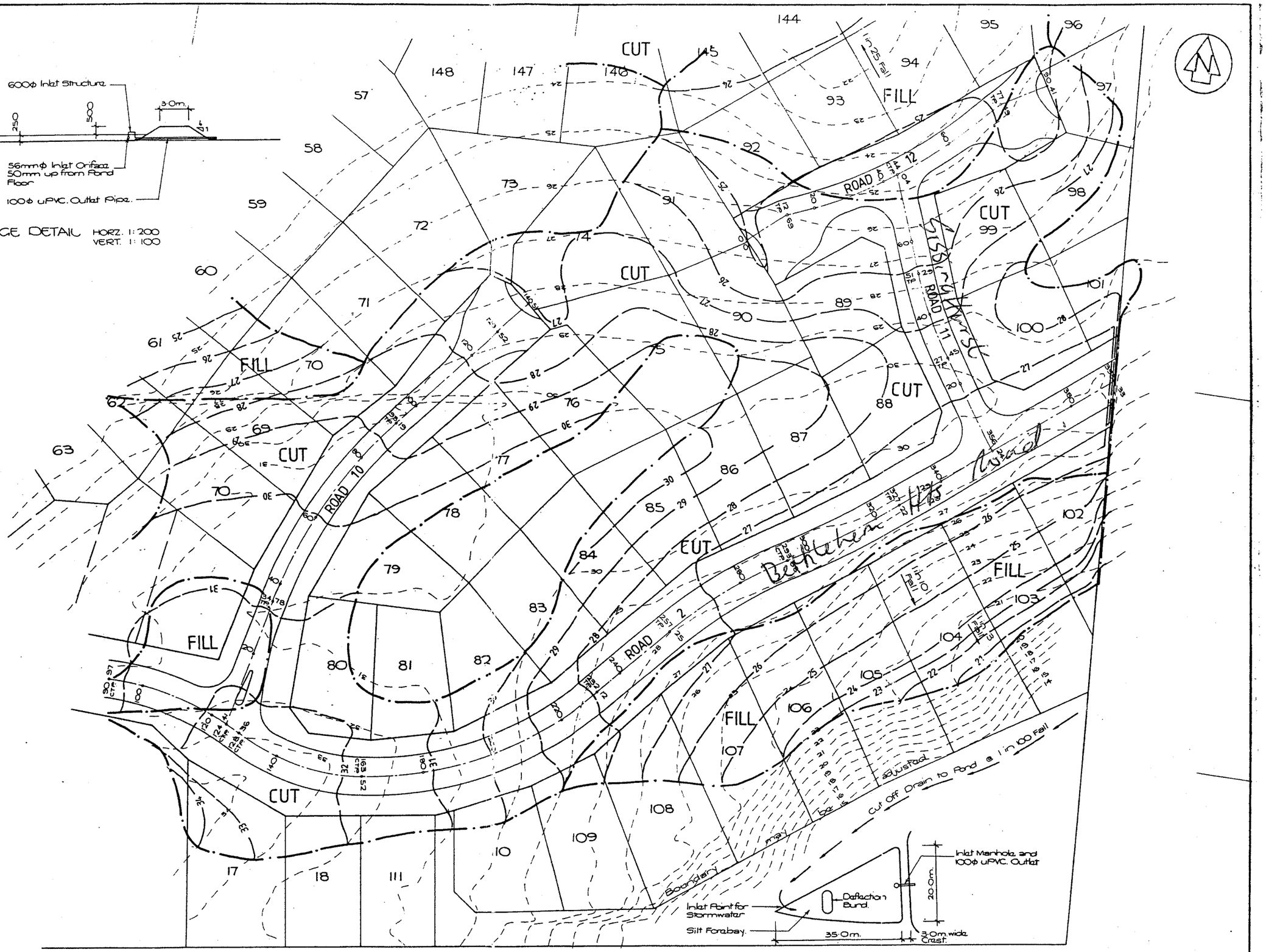
DATE 7 / 1993

DRAWING No 10926-4

1 2



SOUTH DISCHARGE DETAIL HORZ. 1:200 VERT. 1:100



BETHLEHEM HEIGHTS

RESIDENTIAL DEVELOPMENT

EARTHWORKS PLAN

2.	Detention Pond added for Discharge Permit Application	7/12/93
1	Issued for Tender	7/93

SHRIMPTON & LIPINSKI LTD.

REGISTERED SURVEYORS
CONSULTING ENGINEERS
TOWN PLANNERS

111 Cameron Road, Tauranga, New Zealand

ORIGINAL SCALE 1 : 500	DATE 7/1993
DRAWING No. 10926-5	

KEY

- Proof Roll Area & Penetrometer Test
- ●23 Compaction Test
- Test Pit
- —2— Depth of fill contour

0- Appendix I to Geotechnical Report

CKD	REVISION	DATE

	NAME	DATE	FIELD BOOK
Surveyed			
Designed			
Drawn			
Checked		12/03	
Approved		12/03	

REFERENCES

SHRIMPTON & LIPINSKI LTD.
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111 Cameron Road, Tauranga, New Zealand
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Fax (07) 577 9665

TITLE

BETHLEHEM HEIGHTS SUBDIVISION - BETHLEHEM

Stages 1 and 2

EARTHWORKS AS BUILT PLAN

ORIGINAL SCALES

DATE

DRAWING No 10926-42

ORIGINAL SCALE Inches 0 1 2 3 4 5 6 7 8 9 10 11 12 — mm 0 100 200 300

GRAPHIC SCALE

BETHLEHEM HEIGHTS SUBDIVISION

STAGES 1 AND 2

APPENDIX II

Drawing 10926-01 Investigation Boreholes and Areas of Previous Filling

AREAS REQUIRING REMOVAL OF UNSUITABLE FILLING SHOWN HATCHED (REFER ALSO TO SUBDIVISION APPLICATION REPORT)

EXTENT OF FILLING AS IDENTIFIED FROM PREVIOUS CONTOUR PLANS AND AERIAL PHOTOGRAPHS (CONFIRMED BY BOREHOLE INFORMATION)

LOT NUMBERS HAVE CHANGED

PRELIMINARY ONLY

USE OTHER PLANS

PROPOSED SUBDIVISION OF LOTS 3&4 DPS 27240

PREPARED FOR

SHRIMPTON & LIPINSKI LTD.
REGISTERED SURVEYORS
CONSULTING ENGINEERS
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P.O. Box 231 Ph. 0754 74069

SCALE NTS | JOB No. 10926-0

BETHLEHEM HEIGHTS

INVESTIGATION BOREHOLES & AREAS OF PREVIOUS FILLING.

BETHLEHEM HEIGHTS SUBDIVISION

STAGES 1 AND 2

APPENDIX III

Drawings	10926-03	1	Earthworks
	10926-04	1	Construction
	10926-05	1	Drawings

BETHLEHEM HEIGHTS SUBDIVISION

STAGES 1 AND 2

APPENDIX IV

Filling - Compaction Test Results

Recompaction Test Results

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278 Chadwick Road, Greerton, PO Box 9057, Tauranga, New Zealand
Phone (07) 578-5425, Fax (07) 578-3382, Mobile 025-954-228

AGGREGATE COMPACTION RESULTS

TEST: NUCLEAR DENSITY, SHEAR STRESS, WATER CONTENT

METHOD: NZS 4407 : 1991
TRL 1 / 84
NZS 4402 : 1986

JOB: BETHLEHAM HEIGHTS SUBDIVISION QUALITY CONTROL TESTING
NUCLEAR DENSOMETER NO: 3411 B-5920
MATERIAL DESCRIPTION: BULK FILL MATERIAL
TESTED BY: WORKS LABORATORY : MIKE CONAGHAN

JOB NO: WDR01.62
SAMPLE NO: 3675
TASK No: 000TL
ORDER No: --
TEST DATE: 31/08/93

Test Number	1A	1B	2A	2B
Test Location	Road #1 72 metres 6.5 metres right of centreline	Road #1 72 metres 6.5 metres right of centreline	Road #1 24 metres 4.5 metres left of centreline	Road #1 24 metres 4.5 metres left of centreline
Reduced Level	Unknown	Unknown	Unknown	Unknown
Test Probe Depth (mm)	200	200	200	200
Bulk Density (t/m3)	1.65	1.68	1.54	1.54
Dry Density (t/m3)	1.09	1.11	0.96	0.98
Water Content by Oven (%)	52.1	51.4	60.6	57.7
Air Voids (%)	2.3	1.1	5.8	6.6
Average Air Voids (%)	1.7		6.2	
Shear Stress (kN/m2)	101	107	205	221
Average Shear Stress (kN/m2)	104		213	

COMMENTS: The test positions were selected by Mr D Rasmussen on site on 31 August 1993.

Transcribed By : [signature] Date : 8-9-93
Checked By : M.B. Conaghan Date : 8-9-93

APPROVED SIGNATORY : [signature]

DESIGNATION : Laboratory Technician
DATE : 8-9-93

REGISTERED LABORATORY

All tests reported herein have been performed in accordance with the laboratory's terms of registration

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278 Chadwick Road, Greerton, PO Box 9057, Tauranga, New Zealand
Phone (07) 578-5425, Fax (07) 578-3382, Mobile 025-954-228

SOIL COMPACTION RESULTS

TEST: NUCLEAR DENSITY, SHEAR STRESS, WATER CONTENT
METHOD: NZS 4407 : 1991
TRL 1 /.84
NZS 4402 : 1986

JOB: BETHLEHAM HEIGHTS SUBDIVISION QUALITY CONTROL TESTING
NUCLEAR DENSOMETER NO: 3411 B-5920
MATERIAL DESCRIPTION: BULK FILL A
TESTED BY: WORKS LABORATORY : BRUCE HUDSON

JOB NO: WDR01.62
SAMPLE NO: 3683
TASK No: 000TL
ORDER No: --
TEST DATE: 08/09/93

Test Number	3A	3B	4A	4B
Test Location	Road #1 14 metres 9.0 metres left of centreline	Road #1 14 metres 9.0 metres left of centreline	Road #1 21 metres 14 metres right of centreline	Road #1 21 metres 14 metres right of centreline
Level Below Subgrade (m)	1.0	1.0	1.0	1.0
Test Probe Depth (mm)	200	200	200	200
Bulk Density (t/m3)	1.65	1.64	1.63	1.63
Dry Density (t/m3)	1.16	1.14	1.08	1.06
Water Content by Oven (%)	42.3	43.1	51.3	54.3
Air Voids (%)	7.0	7.6	3.9	2.6
Average Air Voids (%)	7.3		3.3	
Shear Stress (kN/m2)	113	104	170	180
Average Shear Stress (kN/m2)	109		175	

COMMENTS: The test positions were selected by Mr B Andrews on site on 8 September 1993.

Transcribed By : [signature] Date : 20-9-93
Checked By : M.B. Cargo Date : 20-9-93

APPROVED SIGNATORY : [signature]

DESIGNATION : Laboratory Technician
DATE : 20-9-93

REGISTERED LABORATORY

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SOIL COMPACTION RESULTS

TEST: NUCLEAR DENSITY, SHEAR STRESS, WATER CONTENT
METHOD: NZS 4407 : 1991
TRL 1 / 84
NZS 4402 : 1986

JOB: BETHLEHAM HEIGHTS SUBDIVISION QUALITY CONTROL TESTING
NUCLEAR DENSOMETER NO: 3411 B-5920
MATERIAL DESCRIPTION: BULK FILL A
TESTED BY: WORKS LABORATORY : BRUCE HUDSON

JOB NO: WDR01.62
SAMPLE NO: 3683
TASK No: 000TL
ORDER No: --
TEST DATE: 08/09/93

Test Number	5A	5B	---	---
Test Location	Road #1 48 metres 1.0 metres right of centreline	Road #1 48 metres 1.0 metres right of centreline	--- --- --- --- ---	--- --- --- --- ---
Level Below Subgrade (m)	1.5	1.5	---	---
Test Probe Depth (mm)	200	200	---	---
Bulk Density (t/m3)	1.54	1.55	---	---
Dry Density (t/m3)	0.97	1.02	---	---
Water Content by Oven (%)	58.4	52.5	---	---
Air Voids (%)	6.7	8.3	---	---
Average Air Voids (%)	7.5		---	
Shear Stress (kN/m2)	162	157	---	---
Average Shear Stress (kN/m2)	160		---	

COMMENTS: The test positions were selected by Mr B Andrews on site on 8 September 1993.

Transcribed By : [signature] Date : 20-9-93
Checked By : M.B. [signature] Date : 20-9-93

APPROVED SIGNATORY : [signature]

DESIGNATION : Laboratory Technician
DATE : 20-9-93

REGISTERED LABORATORY

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SOIL COMPACTION RESULTS

TEST: NUCLEAR DENSITY, SHEAR STRESS, WATER CONTENT
METHOD: NZS 4407 : 1991
TRL 1 / 84
NZS 4402 : 1986

JOB: BETHLEHAM HEIGHTS SUBDIVISION QUALITY CONTROL TESTING
NUCLEAR DENSOMETER NO: 3411 B-5920
MATERIAL DESCRIPTION: BULK FILL G
TESTED BY: WORKS LABORATORY : BRUCE HUDSON

JOB NO: WDR01.62
SAMPLE NO: 3683
TASK No: 000TL
ORDER No: --
TEST DATE: 08/09/93

Test Number	6A	6B	---	---
Test Location	See comments for location	See comments for location	--- --- --- --- ---	--- --- --- --- ---
Level Below Subgrade (m)	0.0	0.0	---	---
Test Probe Depth (mm)	200	200	---	---
Bulk Density (t/m3)	1.59	1.58	---	---
Dry Density (t/m3)	1.04	1.01	---	---
Water Content by Oven (%)	53.1	56.4	---	---
Air Voids (%)	5.8	4.7	---	---
Average Air Voids (%)	5.3		---	
Shear Stress (kN/m2)	187	179	---	---
Average Shear Stress (kN/m2)	183		---	

COMMENTS: The test positions were selected by Mr B Andrews on site on 8 September 1993.
Site 6 Test location - 4.0 metres from northern boundary
- 25 metres east of peg 23
- 59 metres west of peg 29/38

Transcribed By : [signature] Date : 20-9-93
Checked By : M.B. Langer Date : 20-9-93

APPROVED SIGNATORY : [signature]

DESIGNATION : Laboratory Technician
DATE : 20-9-93

REGISTERED LABORATORY

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SOIL COMPACTION RESULTS
TEST: NUCLEAR DENSITY, SHEAR STRESS, WATER CONTENT
METHOD: NZS 4407 : 1991
TRL 1 / 84
NZS 4402 : 1986

JOB: BETHLEHAM HEIGHTS SUBDIVISION QUALITY CONTROL TESTING
NUCLEAR DENSOMETER NO: 3411 B-5920
MATERIAL DESCRIPTION: BULK FILL A
TESTED BY: WORKS LABORATORY : BRUCE HUDSON

JOB NO: WDR01.62
SAMPLE NO: 3684
TASK No: 000TL
ORDER No: --
TEST DATE: 10/09/93

Test Number	7A	7B	8A	8B
Test Location	Road #1 42 metres 3.0 metres left of centreline	Road #1 42 metres 3.0 metres left of centreline	Road #1 61 metres 1.0 metre right of centreline	Road #1 61 metres 1.0 metre right of centreline
Level Below Subgrade (m)	0.5	0.5	0.5	0.5
Test Probe Depth (mm)	200	200	200	200
Bulk Density (t/m3)	1.70	1.73	1.63	1.61
Dry Density (t/m3)	1.17	1.21	1.06	1.07
Water Content by Oven (%)	45.7	43.7	53.1	50.7
Air Voids (%)	2.5	1.9	3.5	5.6
Average Air Voids (%)	2.2		4.6	
Shear Stress (kN/m2)	121	111	156	157
Average Shear Stress (kN/m2)	116		157	

COMMENTS: The test positions were selected by Mr B Andrews on site on 10 September 1993.

Transcribed By : [signature] Date : 20-9-93
Checked By : M.B. Langley. Date : 20-9-93

APPROVED SIGNATORY : [signature]

DESIGNATION : Laboratory Technician
DATE : 20-9-93

REGISTERED LABORATORY

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SOIL COMPACTION RESULTS

TEST: NUCLEAR DENSITY, SHEAR STRESS, WATER CONTENT
METHOD: NZS 4407 : 1991
TRL 1 / 84
NZS 4402 : 1986

JOB: BETHLEHAM HEIGHTS SUBDIVISION QUALITY CONTROL TESTING
NUCLEAR DENSOMETER NO: 3411 B-5920
MATERIAL DESCRIPTION: BULK FILL A
TESTED BY: WORKS LABORATORY : BRUCE HUDSON

JOB NO: WDR01.62
SAMPLE NO: 3684
TASK No: 000TL
ORDER No: --
TEST DATE: 10/09/93

Test Number	9A	9B	10A	10B
Test Location	Road #1 79 metres 1.0 metre left of centreline	Road #1 79 metres 1.0 metre left of centreline	See comments for location	See comments for location
Level Below Subgrade (m)	0.2	0.2	0.5	0.5
Test Probe Depth (mm)	200	200	200	200
Bulk Density (t/m3)	1.61	1.59	1.65	1.62
Dry Density (t/m3)	1.06	1.04	1.12	1.10
Water Content by Oven (%)	52.0	53.0	46.7	46.7
Air Voids (%)	5.1	5.5	5.2	7.0
Average Air Voids (%)	5.3		6.1	
Shear Stress (kN/m2)	>207	204	123	100
Average Shear Stress (kN/m2)	>206		112	

COMMENTS: The test positions were selected by Mr B Andrews on site on 10 September 1993.
Site 10 Test Location - 30 metres left of road #1
- 36 metres left of road #3

Transcribed By : [signature] Date : 20-9-93
Checked By : M.B Langer Date : 20-9-93

APPROVED SIGNATORY : [signature]

DESIGNATION : Laboratory Technician
DATE : 20-9-93

REGISTERED LABORATORY

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SOIL COMPACTION RESULTS
TEST: NUCLEAR DENSITY, SHEAR STRESS, WATER CONTENT
METHOD: NZS 4407 : 1991
TRL 1 / 84
NZS 4402 : 1986

JOB: BETHLEHAM HEIGHTS SUBDIVISION QUALITY CONTROL TESTING
NUCLEAR DENSOMETER NO: 3411 B-5920
MATERIAL DESCRIPTION: BULK FILL A
TESTED BY: WORKS LABORATORY : BRUCE HUDSON

JOB NO: W0011.01
SAMPLE NO: 3686
TASK No: 000TL
ORDER No: --
TEST DATE: 15/09/93

Test Number	11A	11B	12A	12B
Test Location	Road #1 25 metres 5.0 metres right of centreline	Road #1 25 metres 5.0 metres right of centreline	Road #1 22 metres 2.0 metre left of centreline	Road #1 22 metres 2.0 metre left of centreline
Level Below Subgrade (m)	0.0	0.0	0.0	0.0
Test Probe Depth (mm)	200	200	200	200
Bulk Density (t/m3)	1.58	1.59	1.58	1.54
Dry Density (t/m3)	1.11	1.06	1.00	0.99
Water Content by Oven (%)	42.0	49.2	58.0	55.9
Air Voids (%)	11.5	7.6	4.5	7.4
Average Air Voids (%)	9.1		6.0	
Shear Stress (kN/m2)	203	172	190	>212
Average Shear Stress (kN/m2)	188		>201	

COMMENTS: The test positions were selected by Mr B Andrews on site on 15 September 1993.

Transcribed By : [signature] Date : 22-9-93
Checked By : M.B. [signature] Date : 22-9-93

APPROVED SIGNATORY : [signature]

DESIGNATION : Laboratory Technician
DATE : 22-9-93

REGISTERED LABORATORY

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SOIL COMPACTION RESULTS
TEST: NUCLEAR DENSITY, SHEAR STRESS, WATER CONTENT
METHOD: NZS 4407 : 1991
TRL 1 / 84
NZS 4402 : 1986

JOB: BETHLEHAM HEIGHTS SUBDIVISION QUALITY CONTROL TESTING
NUCLEAR DENSOMETER NO: 3411 B-5920
MATERIAL DESCRIPTION: BULK FILL A
TESTED BY: WORKS LABORATORY : BRUCE HUDSON

JOB NO: W0011.01
SAMPLE NO: 3686
TASK No: 000TL
ORDER No: --
TEST DATE: 15/09/93

Test Number	13A	13B	14A	14B
Test Location	Road #1 40 metres 3.0 metres left of centreline	Road #1 40 metres 3.0 metres left of centreline	Road #1 64 metres on centreline	Road #1 64 metres on centreline
Level Below Subgrade (m)	0.0	0.0	0.0	0.0
Test Probe Depth (mm)	200	200	200	200
Bulk Density (t/m3)	1.60	1.59	1.59	1.56
Dry Density (t/m3)	1.01	1.00	1.04	1.03
Water Content by Oven (%)	58.1	60.0	52.7	52.0
Air Voids (%)	2.9	2.7	6.0	7.8
Average Air Voids (%)	2.8		6.9	
Shear Stress (kN/m2)	>201	>214	197	201
Average Shear Stress (kN/m2)	>208		199	

COMMENTS: The test positions were selected by Mr B Andrews on site on 15 September 1993.

Transcribed By : [signature] Date : 22-9-93
Checked By : M.B. Langton. Date : 22-9-93

APPROVED SIGNATORY : [signature]

DESIGNATION : Laboratory Technician
DATE : 22-9-93

REGISTERED LABORATORY

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SOIL COMPACTION RESULTS
TEST: NUCLEAR DENSITY, SHEAR STRESS, WATER CONTENT
METHOD: NZS 4407 : 1991
TRL 1 / 84
NZS 4402 : 1986

JOB: BETHLEHAM HEIGHTS SUBDIVISION QUALITY CONTROL TESTING
NUCLEAR DENSOMETER NO: 3411 B-5920
MATERIAL DESCRIPTION: BULK FILL B
TESTED BY: WORKS LABORATORY : BRUCE HUDSON

JOB NO: W0011.01
SAMPLE NO: 3686
TASK No: 000TL
ORDER No: --
TEST DATE: 15/09/93

Test Number	15A	15B	--	--
Test Location	Road #1 417 metres 5.0 metres left of centreline	Road #1 417 metres 5.0 metres left of centreline	-- -- -- -- --	-- -- -- -- --
Level Below Subgrade (m)	0.5	0.5	--	--
Test Probe Depth (mm)	200	200	--	--
Bulk Density (t/m3)	1.66	1.65	--	--
Dry Density (t/m3)	1.12	1.14	--	--
Water Content by Oven (%)	48.1	45.3	--	--
Air Voids (%)	4.0	5.5	--	--
Average Air Voids (%)	4.8		---	
Shear Stress (kN/m2)	192	175	--	--
Average Shear Stress (kN/m2)	184		---	

COMMENTS: The test positions were selected by Mr B Andrews on site on 15 September 1993.

Transcribed By : [signature] Date : 22-9-93
Checked By : M.B. Langs Date : 22-9-93

APPROVED SIGNATORY : [signature]

DESIGNATION : Laboratory Technician
DATE : 22-9-93

REGISTERED LABORATORY

All tests reported herein have been performed in accordance with the laboratory's terms of registration

WORKS Consultancy Services

TAURANGA ENGINEERING MATERIALS LABORATORY
278 Chadwick Road, Greerton, PO Box 9057, Tauranga, New Zealand
Phone (07) 578-5425, Fax (07) 578-3382, Mobile 025-954-228

SOIL COMPACTION RESULTS

TEST: NUCLEAR DENSITY, SHEAR STRESS, WATER CONTENT

METHOD: NZS 4407 : 1991
TRL 1 / 84
NZS 4402 : 1986

JOB: BETHLEHAM HEIGHTS SUBDIVISION QUALITY CONTROL TESTING
NUCLEAR DENSOMETER NO: 3411 B-5920
MATERIAL DESCRIPTION: UNDERCUT
TESTED BY: WORKS LABORATORY : BRUCE HUDSON

JOB NO: W0011.01
SAMPLE NO: 3688
TASK No: 000TL
ORDER No: --
TEST DATE: 28/09/93

Test Number	16A	16B	17A	17B
Test Location	Road #1 210 metres 7.0 metres right of centreline	Road #1 210 metres 7.0 metres right of centreline	Road #1 245 metres 5.0 metres left of centreline	Road #1 245 metres 5.0 metres left of centreline
Level	BASE OF UNDERCUT		BASE OF UNDERCUT	
Test Probe Depth (mm)	200	200	200	200
Bulk Density (t/m3)	1.73	1.73	1.65	1.66
Dry Density (t/m3)	1.23	1.24	1.15	1.16
Water Content by Oven (%)	40.5	40.2	43.5	42.9
Air Voids (%)	1.8	1.9	4.8	4.7
Average Air Voids (%)	1.9		4.8	
Shear Stress (kN/m2)	>214	>214	>214	>214
Average Shear Stress (kN/m2)	>214		>214	

COMMENTS: The test positions were selected by Mr B Andrews on site on 28 September 1993.
Solid Density of 2.55 t/m3 is ASSUMED.

Transcribed By : [signature] Date : 5-10-93
Checked By : M.B. [signature] Date : 6-10-93

APPROVED SIGNATORY : [signature]

DESIGNATION : Laboratory Technician
DATE : 5-10-93

REGISTERED LABORATORY

All tests reported herein have been performed in accordance with the laboratory's terms of registration

WORKS Consultancy Services

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278 Chadwick Road, Greerton, PO Box 9057, Tauranga, New Zealand
Phone (07) 578-5425, Fax (07) 578-3382, Mobile 025-954-228

SOIL COMPACTION RESULTS

TEST: NUCLEAR DENSITY, SHEAR STRESS, WATER CONTENT
METHOD: NZS 4407 : 1991
TRL 1 / 84
NZS 4402 : 1986

JOB: BETHLEHAM HEIGHTS SUBDIVISION QUALITY CONTROL TESTING
NUCLEAR DENSOMETER NO: 3411 B-5920
MATERIAL DESCRIPTION: UNDERCUT
TESTED BY: WORKS LABORATORY : BRUCE HUDSON

JOB NO: W0011.01
SAMPLE NO: 3688
TASK No: 000TL
ORDER No: --
TEST DATE: 28/09/93

Test Number	18A	18B	19A	19B
Test Location	Road #1 288 metres 7.0 metres right of centreline	Road #1 288 metres 7.0 metres right of centreline	Road #1 334 metres 4.0 metres left of centreline	Road #1 334 metres 4.0 metres left of centreline
Level	BASE OF UNDERCUT		BASE OF UNDERCUT	
Test Probe Depth (mm)	200	200	200	200
Bulk Density (t/m3)	1.59	1.55	1.65	1.64
Dry Density (t/m3)	1.07	1.03	1.16	1.14
Water Content by Oven (%)	48.2	50.5	42.8	44.0
Air Voids (%)	6.4	7.3	5.0	5.1
Average Air Voids (%)	6.9		5.1	
Shear Stress (kN/m2)	>205	210	192	>195
Average Shear Stress (kN/m2)	>208		>194	

COMMENTS: The test positions were selected by Mr B Andrews on site on 28 September 1993.
Solid Density of 2.55 t/m3 is ASSUMED.

Transcribed By : [signature] Date : 5-10-93
Checked By : M.B. [signature] Date : 6-10-93

APPROVED SIGNATORY : [signature]

DESIGNATION : Laboratory Technician
DATE : 5-10-93

REGISTERED LABORATORY

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WORKS Consultancy Services

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278 Chadwick Road, Greerton, PO Box 9057, Tauranga, New Zealand
Phone (07) 578-5425, Fax (07) 578-3382, Mobile 025-954-228

SOIL COMPACTION RESULTS
TEST: NUCLEAR DENSITY, SHEAR STRESS, WATER CONTENT
METHOD: NZS 4407 : 1991
TRL 1 / 84
NZS 4402 : 1986

JOB: BETHLEHAM HEIGHTS SUBDIVISION QUALITY CONTROL TESTING
NUCLEAR DENSOMETER NO: 3411 B-5920
MATERIAL DESCRIPTION: BULK FILL C
TESTED BY: WORKS LABORATORY : BRUCE HUDSON

JOB NO: W0011.01
SAMPLE NO: 3688
TASK No: 000TL
ORDER No: --
TEST DATE: 28/09/93

Test Number	20A	20B	--	--
Test Location	Road #7 160 metres 2.0 metres right of centreline	Road #7 160 metres 2.0 metres right of centreline	-- -- -- -- --	-- -- -- -- --
Level Below Subgrade (m)	0.6	0.6	--	--
Test Probe Depth (mm)	200	200	--	--
Bulk Density (t/m3)	1.61	1.58	--	--
Dry Density (t/m3)	1.08	1.06	--	--
Water Content by Oven (%)	48.9	49.3	--	--
Air Voids (%)	4.7	6.2	--	--
Average Air Voids (%)	5.5		-	
Shear Stress (kN/m2)	>214	>214	--	--
Average Shear Stress (kN/m2)	>214		-	

COMMENTS: The test positions were selected by Mr B Andrews on site on 28 September 1993.
Solid Density of 2.55 t/m3 is ASSUMED.

Transcribed By : [signature] Date : 5-10-93
Checked By : M.B. Langa Date : 6-10-93

APPROVED SIGNATORY : [signature]

DESIGNATION : Laboratory Technician
DATE : 5-10-93

REGISTERED LABORATORY

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WORKS Consultancy Services

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SOIL COMPACTION RESULTS

TEST: NUCLEAR DENSITY, SHEAR STRESS, WATER CONTENT

METHOD: NZS 4407 : 1991
TRL 1 / 84
NZS 4402 : 1986

JOB: BETHLEHAM HEIGHTS SUBDIVISION QUALITY CONTROL TESTING
NUCLEAR DENSOMETER NO: 3411 B-5920
MATERIAL DESCRIPTION: BACKFILL OF UNDERCUT
TESTED BY: WORKS LABORATORY : BRUCE HUDSON

JOB NO: W0011.01
SAMPLE NO: 3691
TASK No: 000TL
ORDER No: --
TEST DATE: 30/09/93

Test Number	21A	21B	22A	22B
Test Location	Road #1 203 metres 5.0 metres left of centreline	Road #1 203 metres 5.0 metres left of centreline	Road #1 180 metres 1.0 metre left of centreline	Road #1 180 metres 1.0 metre left of centreline
Level Below Subgrade (m)	1.0	1.0	1.0	1.0
Test Probe Depth (mm)	200	200	200	200
Bulk Density (t/m3)	1.59	1.57	1.56	1.57
Dry Density (t/m3)	1.06	1.06	1.01	1.03
Water Content by Oven (%)	50.5	48.6	54.1	51.4
Air Voids (%)	5.1	7.0	5.4	6.3
Average Air Voids (%)	6.1		5.9	
Shear Stress (kN/m2)	188	170	177	174
Average Shear Stress (kN/m2)	179		176	

COMMENTS: The test positions were selected by Mr B Andrews on site on 30 September 1993.
Solid Density of 2.55 t/m3 is ASSUMED.

Transcribed By : [signature] Date : 5-10-93
Checked By : M.B. [signature] Date : 6-10-93

APPROVED SIGNATORY : [signature]

DESIGNATION : Laboratory Technician
DATE : 5-10-93

REGISTERED LABORATORY

All tests reported herein have been performed in accordance with the laboratory's terms of registration

WORKS Consultancy Services

TAURANGA ENGINEERING MATERIALS LABORATORY
278 Chadwick Road, Greerton, PO Box 9057, Tauranga, New Zealand
Phone (07) 578-5425, Fax (07) 578-3382, Mobile 025-954-228

SOIL COMPACTION RESULTS

TEST: NUCLEAR DENSITY, SHEAR STRESS, WATER CONTENT

METHOD: NZS 4407 : 1991
TRL 1 / 84
NZS 4402 : 1986

JOB: BETHLEHAM HEIGHTS SUBDIVISION QUALITY CONTROL TESTING
NUCLEAR DENSOMETER NO: 3411 B-5920
MATERIAL DESCRIPTION: BACKFILL OF UNDERCUT
TESTED BY: WORKS LABORATORY : BRUCE HUDSON

JOB NO: W0011.01
SAMPLE NO: 3691
TASK No: 000TL
ORDER No: --
TEST DATE: 30/09/93

Test Number	23A	23B	24A	24B
Test Location	Road #1 234 metres 2.0 metres left of centreline	Road #1 234 metres 2.0 metres left of centreline	Road #1 286 metres 2.0 metres right of centreline	Road #1 286 metres 2.0 metres right of centreline
Level Below Subgrade (m)	1.0	1.0	1.0	1.0
Test Probe Depth (mm)	200	200	200	200
Bulk Density (t/m3)	1.54	1.55	1.60	1.61
Dry Density (t/m3)	0.97	0.98	1.05	1.05
Water Content by Oven (%)	59.5	57.9	52.7	53.2
Air Voids (%)	4.6	4.9	3.7	2.9
Average Air Voids (%)	4.8		3.3	
Shear Stress (kN/m2)	165	172	110	115
Average Shear Stress (kN/m2)	169		113	

COMMENTS: The test positions were selected by Mr B Andrews on site on 30 September 1993.
Solid Density of 2.55 t/m3 is ASSUMED.

Transcribed By : [signature] Date : 5-10-93
Checked By : M.B. Long Date : 6-10-93

APPROVED SIGNATORY : [signature]

DESIGNATION : Laboratory Technician
DATE : 5-10-93

REGISTERED LABORATORY

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WORKS Consultancy Services

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278 Chadwick Road, Greerton, PO Box 9057, Tauranga, New Zealand
Phone (07) 578-5425, Fax (07) 578-3382, Mobile 025-954-228

SOIL COMPACTION RESULTS

TEST: NUCLEAR DENSITY, SHEAR STRESS, WATER CONTENT

METHOD: NZS 4407 : 1991
TRL 1 / .84
NZS 4402 : 1986

JOB: BETHLEHAM HEIGHTS SUBDIVISION QUALITY CONTROL TESTING
NUCLEAR DENSOMETER NO: 3411 B-5920
MATERIAL DESCRIPTION: BACKFILL OF UNDERCUT
TESTED BY: WORKS LABORATORY : BRUCE HUDSON

JOB NO: W0011.01
SAMPLE NO: 3691
TASK No: 000TL
ORDER No: --
TEST DATE: 30/09/93

Test Number	25A	25B	26A	26B
Test Location	Road #1 311 metres 5.0 metres left of centreline	Road #1 311 metres 5.0 metres left of centreline	Road #1 344 metres 4.0 metres left of centreline	Road #1 344 metres 4.0 metres left of centreline
Level Below Subgrade (m)	1.0	1.0	1.0	1.0
Test Probe Depth (mm)	200	200	200	200
Bulk Density (t/m3)	1.58	1.56	1.56	1.53
Dry Density (t/m3)	0.97	0.97	1.02	0.99
Water Content by Oven (%)	62.7	61.3	53.6	54.8
Air Voids (%)	1.0	2.6	5.5	7.1
Average Air Voids (%)	1.8		6.3	
Shear Stress (kN/m2)	161	145	144	149
Average Shear Stress (kN/m2)	153		147	

COMMENTS: The test positions were selected by Mr B Andrews on site on 30 September 1993.
Solid Density of 2.55 t/m3 is ASSUMED.

Transcribed By : [signature] Date : 5-10-93
Checked By : M.B. Cowan Date : 6-10-93

APPROVED SIGNATORY : [signature]

DESIGNATION : Laboratory Technician
DATE : 5-10-93

REGISTERED LABORATORY

All tests reported herein have been performed in accordance with the laboratory's terms of registration

WORKS Consultancy Services

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278 Chadwick Road, Greerton, PO Box 9057, Tauranga, New Zealand
Phone (07) 578-5425, Fax (07) 578-3382, Mobile 025-954-228

SOIL COMPACTION RESULTS
TEST: NUCLEAR DENSITY, SHEAR STRESS, WATER CONTENT
METHOD: NZS 4407 : 1991
TRL 1 / 84
NZS 4402 : 1986

JOB: BETHLEHEM HEIGHTS SUBDIVISION QUALITY CONTROL TESTING
NUCLEAR DENSOMETER NO: 3411 B-5920
MATERIAL DESCRIPTION: FILL B BULK FILL MATERIAL
TESTED BY: WORKS LABORATORY : MIKE CONAGHAN

JOB NO: W0011.01
SAMPLE NO: 3694
TASK No: 000TL
ORDER No: --
TEST DATE: 01/10/93

Test Number	27A	27B	28A	28B
Test Location	Road #1 200 metres 5.0 metres right of centreline	Road #1 200 metres 5.0 metres right of centreline	Road #1 230 metres 2.5 metres left of centreline	Road #1 230 metres 2.5 metres left of centreline
Level Below Subgrade (m)	0.5	0.5	0.5	0.5
Test Probe Depth (mm)	200	200	200	200
Bulk Density (t/m3)	1.65	1.65	1.59	1.58
Dry Density (t/m3)	1.09	1.11	1.11	1.09
Water Content by Oven (%)	51.7	48.8	43.6	44.8
Air Voids (%) *	0.9	2.6	8.2	8.6
Average Air Voids (%) *	1.8		8.4	
Shear Stress (kN/m2)	158	139	>214	>214
Average Shear Stress (kN/m2)	149		>214	

COMMENTS: The test positions were selected by Mr B Andrews.
* The solid density of 2.55 t/m3 is assumed.

Transcribed By : M.B. Conaghan. Date : 6-10-93
Checked By : [signature] Date : 7-10-93

APPROVED SIGNATORY : M.B. Conaghan.

DESIGNATION : Laboratory Manager
DATE : 6-10-93

REGISTERED LABORATORY

All tests reported herein have been performed in accordance with the laboratory's terms of registration

WORKS Consultancy Services

TAURANGA ENGINEERING MATERIALS LABORATORY
278 Chadwick Road, Greerton, PO Box 9057, Tauranga, New Zealand
Phone (07) 578-5425, Fax (07) 578-3382, Mobile 025-954-228

SOIL COMPACTION RESULTS
TEST: NUCLEAR DENSITY, SHEAR STRESS, WATER CONTENT
METHOD: NZS 4407 : 1991
TRL 1 / 84
NZS 4402 : 1986

JOB: BETHLEHEM HEIGHTS SUBDIVISION QUALITY CONTROL TESTING
NUCLEAR DENSOMETER NO: 3411 B-5920
MATERIAL DESCRIPTION: FILL B BULK FILL MATERIAL
TESTED BY: WORKS LABORATORY : MIKE CONAGHAN

JOB NO: W0011.01
SAMPLE NO: 3694
TASK No: 000TL
ORDER No: --
TEST DATE: 01/10/93

Test Number	29A	29B	30A	30B
Test Location	Road #1 254 metres 2.0 metres right of centreline	Road #1 254 metres 2.0 metres right of centreline	Road #1 288 metres 5.5 metres left of centreline	Road #1 288 metres 5.5 metres left of centreline
Level Below Subgrade (m)	0.5	0.5	0.5	0.5
Test Probe Depth (mm)	200	200	200	200
Bulk Density (t/m3)	1.67	1.62	1.61	1.59
Dry Density (t/m3)	1.13	1.11	0.99	0.99
Water Content by Oven (%)	47.2	45.7	62.5	59.8
Air Voids (%) *	2.0	5.9	0.0	1.6
Average Air Voids (%) *	4.0		0.8	
Shear Stress (kN/m2)	>214	>214	165	167
Average Shear Stress (kN/m2)	>214		166	

COMMENTS: The test positions were selected by Mr B Andrews.
* The solid density of 2.55 t/m3 is assumed.

Transcribed By : M.B. Conaghan. Date : 6-10-93
Checked By : [signature] Date : 7-10-93

APPROVED SIGNATORY : M.B. Conaghan.
DESIGNATION : Laboratory Manager
DATE : 6-10-93

REGISTERED LABORATORY

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WORKS Consultancy Services

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Phone (07) 578-5425, Fax (07) 578-3382, Mobile 025-954-228

SOIL COMPACTION RESULTS
TEST: NUCLEAR DENSITY, SHEAR STRESS, WATER CONTENT
METHOD: NZS 4407 : 1991
TRL 1 / 84
NZS 4402 : 1986

JOB: BETHLEHEM HEIGHTS SUBDIVISION QUALITY CONTROL TESTING
NUCLEAR DENSOMETER NO: 3411 B-5920
MATERIAL DESCRIPTION: FILL B BULK FILL MATERIAL
TESTED BY: WORKS LABORATORY : MIKE CONAGHAN

JOB NO: W0011.01
SAMPLE NO: 3694
TASK No: 000TL
ORDER No: --
TEST DATE: 01/10/93

Test Number	31A	31B	32A	32B
Test Location	Road #1 325 metres 4.0 metres right of centreline	Road #1 325 metres 4.0 metres right of centreline	Road #1 369 metres 1.0 metre right of centreline	Road #1 369 metres 1.0 metre right of centreline
Level Below Subgrade (m)	0.5	0.5	0.5	0.5
Test Probe Depth (mm)	200	200	200	200
Bulk Density (t/m3)	1.64	1.62	1.66	1.69
Dry Density (t/m3)	1.08	1.08	1.12	1.06
Water Content by Oven (%)	52.1	50.2	48.8	59.9
Air Voids (%) *	1.8	3.3	1.8	0.0
Average Air Voids (%) *	2.6		0.9	
Shear Stress (kN/m2)	198	177	>214	>214
Average Shear Stress (kN/m2)	188		>214	

COMMENTS: The test positions were selected by Mr B Andrews.
* The solid density of 2.55 t/m3 is assumed.

Transcribed By : M.B. Conaghan. Date : 6-10-93
Checked By : [signature] Date : 7-10-93

APPROVED SIGNATORY : M.B. Conaghan.
DESIGNATION : Laboratory Manager
DATE : 6-10-93

REGISTERED LABORATORY

All tests reported herein have been performed in accordance with the laboratory's terms of registration

WORKS Consultancy Services

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Phone (07) 578-5425, Fax (07) 578-3382, Mobile 025-954-228

SOIL COMPACTION RESULTS
TEST: NUCLEAR DENSITY, SHEAR STRESS, WATER CONTENT
METHOD: NZS 4407 : 1991
TRL 1 / 84
NZS 4402 : 1986

JOB: BETHLEHEM HEIGHTS SUBDIVISION QUALITY CONTROL TESTING
NUCLEAR DENSOMETER NO: 3411 B-5920
MATERIAL DESCRIPTION: FILL B TOP OF SUBGRADE
TESTED BY: WORKS LABORATORY : MIKE CONAGHAN

JOB NO: W0011.01
SAMPLE NO: 3695
TASK No: 000TL
ORDER No: --
TEST DATE: 04/10/93

Test Number	33A	33B	34A	34B
Test Location	Road #1 208 metres 3.0 metres right of centreline	Road #1 208 metres 3.0 metres right of centreline	Road #1 240 metres 4.0 metres left of centreline	Road #1 240 metres 4.0 metres left of centreline
Level Below Subgrade (m)	0.0	0.0	0.0	0.0
Test Probe Depth (mm)	200	200	200	200
Bulk Density (t/m3)	1.66	1.66	1.63	1.62
Dry Density (t/m3)	1.12	1.12	1.13	1.09
Water Content by Oven (%)	48.5	47.8	44.2	48.3
Air Voids (%) *	2.1	2.2	6.0	4.7
Average Air Voids (%) *	2.2		5.4	
Shear Stress (kN/m2)	211	206	>214	>214
Average Shear Stress (kN/m2)	209		>214	

COMMENTS: The test positions were selected by Mike Conaghan of Works Laboratory.
* The solid density of 2.55 t/m3 is assumed.

Transcribed By : M.B. Conaghan Date : 7-10-93
Checked By : [signature] Date : 7-10-93

APPROVED SIGNATORY : M.B. Conaghan.
DESIGNATION : Laboratory Manager
DATE : 7-10-93

REGISTERED LABORATORY

All tests reported herein have been performed in accordance with the laboratory's terms of registration

WORKS Consultancy Services

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278 Chadwick Road, Greerton, PO Box 9057, Tauranga, New Zealand
Phone (07) 578-5425, Fax (07) 578-3382, Mobile 025-954-228

SOIL COMPACTION RESULTS
TEST: NUCLEAR DENSITY, SHEAR STRESS, WATER CONTENT
METHOD: NZS 4407 : 1991
TRL 1 / 84
NZS 4402 : 1986

JOB: BETHLEHEM HEIGHTS SUBDIVISION QUALITY CONTROL TESTING
NUCLEAR DENSOMETER NO: 3411 B-5920
MATERIAL DESCRIPTION: FILL B TOP OF SUBGRADE
TESTED BY: WORKS LABORATORY : MIKE CONAGHAN

JOB NO: W0011.01
SAMPLE NO: 3695
TASK No: 000TL
ORDER No: --
TEST DATE: 04/10/93

Test Number	35A	35B	36A	36B
Test Location	Road #1 264 metres 2.0 metres right of centreline	Road #1 264 metres 2.0 metres right of centreline	Road #1 309 metres 1.5 metres left of centreline	Road #1 309 metres 1.5 metres left of centreline
Level Below Subgrade (m)	0.0	0.0	0.0	0.0
Test Probe Depth (mm)	200	200	200	200
Bulk Density (t/m3)	1.64	1.63	1.62	1.60
Dry Density (t/m3)	1.13	1.13	1.08	1.05
Water Content by Oven (%)	44.3	44.2	50.1	51.7
Air Voids (%) *	5.3	5.7	3.6	4.2
Average Air Voids (%) *	5.5		3.9	
Shear Stress (kN/m2)	>214	>214	>214	>214
Average Shear Stress (kN/m2)	>214		>214	

COMMENTS: The test positions were selected by Mike Conaghan of Works Laboratory.
* The solid density of 2.55 t/m3 is assumed.

Transcribed By : M.B. Conaghan Date : 1-10-93
Checked By : [signature] Date : 7-10-93

APPROVED SIGNATORY : M.B. Conaghan
DESIGNATION : Laboratory Manager
DATE : 7-10-93

REGISTERED LABORATORY

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WORKS Consultancy Services

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278 Chadwick Road, Greerton, PO Box 9057, Tauranga, New Zealand
Phone (07) 578-5425, Fax (07) 578-3382, Mobile 025-954-228

SOIL COMPACTION RESULTS
TEST: NUCLEAR DENSITY, SHEAR STRESS, WATER CONTENT
METHOD: NZS 4407 : 1991
TRL 1 / 84
NZS 4402 : 1986

JOB: BETHLEHEM HEIGHTS SUBDIVISION QUALITY CONTROL TESTING
NUCLEAR DENSOMETER NO: 3411 B-5920
MATERIAL DESCRIPTION: FILL B TOP OF SUBGRADE
TESTED BY: WORKS LABORATORY : MIKE CONAGHAN

JOB NO: W0011.01
SAMPLE NO: 3695
TASK No: 000TL
ORDER No: --
TEST DATE: 04/10/93

Test Number	37A	37B	38A	38B
Test Location	Road #1 343 metres 2.5 metres right of centreline	Road #1 343 metres 2.5 metres right of centreline	Road #1 420 metres centreline	Road #1 420 metres centreline
Level Below Subgrade (m)	0.0	0.0	0.0	0.0
Test Probe Depth (mm)	200	200	200	200
Bulk Density (t/m3)	1.65	1.63	1.67	1.64
Dry Density (t/m3)	1.12	1.09	1.16	1.11
Water Content by Oven (%)	47.7	49.4	44.1	48.4
Air Voids (%) *	3.1	3.1	3.5	3.1
Average Air Voids (%) *	3.1		3.3	
Shear Stress (kN/m2)	>214	>214	195	203
Average Shear Stress (kN/m2)	>214		199	

COMMENTS: The test positions were selected by Mike Conaghan of Works Laboratory.
* The solid density of 2.55 t/m3 is assumed.

Transcribed By : M.B. Conaghan. Date : 7-10-93
Checked By : [signature] Date : 7-10-93

APPROVED SIGNATORY : M.B. Conaghan.
DESIGNATION : Laboratory Manager
DATE : 7-10-93

REGISTERED LABORATORY

All tests reported herein have been performed in accordance with the laboratory's terms of registration

WORKS Consultancy Services

TAURANGA ENGINEERING MATERIALS LABORATORY
278 Chadwick Road, Greerton, PO Box 9057, Tauranga, New Zealand
Phone (07) 578-5425, Fax (07) 578-3382, Mobile 025-954-228

SOIL COMPACTION RESULTS
TEST: NUCLEAR DENSITY, SHEAR STRESS, WATER CONTENT
METHOD: NZS 4407 : 1991
TRL 1 / 84
NZS 4402 : 1986

JOB: BETHLEHEM HEIGHTS SUBDIVISION QUALITY CONTROL TESTING
NUCLEAR DENSOMETER NO: 3411 B-5920
MATERIAL DESCRIPTION: ROAD 7 TOP OF SUBGRADE
TESTED BY: WORKS LABORATORY : MIKE CONAGHAN

JOB NO: W0011.01
SAMPLE NO: 3696
TASK No: 000TL
ORDER No: --
TEST DATE: 05/10/93

Test Number	39A	39B	40A	40B
Test Location	Road #7 121 metres centreline	Road #7 121 metres centreline	Road #7 132 metres 7.5 metres right of centreline	Road #7 132 metres 7.5 metres right of centreline
Level Below Subgrade (m)	0.0	0.0	0.0	0.0
Test Probe Depth (mm)	200	200	200	200
Bulk Density (t/m3)	1.69	1.65	1.67	1.69
Dry Density (t/m3)	1.17	1.14	1.13	1.10
Water Content by Oven (%)	44.3	45.2	48.0	52.8
Air Voids (%) *	2.3	3.9	1.8	0.0
Average Air Voids (%) *	3.1		0.9	
Shear Stress (kN/m2)	>214	>214	>212	>208
Average Shear Stress (kN/m2)	>214		>210	

COMMENTS: The test positions were selected by Mike Conaghan of Works Laboratory.
* The solid density of 2.55 t/m3 is assumed.

Transcribed By : M.B. Conaghan . Date : 7-10-93
Checked By : [signature] Date : 8-10-93

APPROVED SIGNATORY : M.B. Conaghan.

DESIGNATION : Laboratory Manager
DATE : 7-10-93

REGISTERED LABORATORY

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SOIL COMPACTION RESULTS
TEST: NUCLEAR DENSITY, SHEAR STRESS, WATER CONTENT
METHOD: NZS 4407 : 1991
TRL 1 / 84
NZS 4402 : 1986

JOB: BETHLEHEM HEIGHTS SUBDIVISION QUALITY CONTROL TESTING
NUCLEAR DENSOMETER NO: 3411 B-5920
MATERIAL DESCRIPTION: FILL C BULK FILL MATERIAL
TESTED BY: WORKS LABORATORY : MIKE CONAGHAN

JOB NO: W0011.01
SAMPLE NO: 3696
TASK No: 000TL
ORDER No: --
TEST DATE: 05/10/93

Test Number	41A	41B	42A	42B
Test Location	33m right of centreline of Road 7 at 117m	33m right of centreline of Road 7 at 117m	26m left of centreline of Road 12 at 80m	26m left of centreline of Road 12 at 80m
Level Below Subgrade (m)	1.0	1.0	1.0	1.0
Test Probe Depth (mm)	200	200	200	200
Bulk Density (t/m3)	1.69	1.69	1.64	1.63
Dry Density (t/m3)	1.15	1.16	1.13	1.09
Water Content by Oven (%)	46.7	46.4	45.3	48.9
Air Voids (%) *	1.2	1.0	4.8	3.7
Average Air Voids (%) *	1.1		4.3	
Shear Stress (kN/m2)	206	>214	>214	>211
Average Shear Stress (kN/m2)	>210		>213	

COMMENTS: The test positions were selected by Mike Conaghan of Works Laboratory.
* The solid density of 2.55 t/m3 is assumed.

Transcribed By : M.B. Conaghan. Date : 7-10-93
Checked By : [signature] Date : 8-10-93

APPROVED SIGNATORY : M.B. Conaghan.

DESIGNATION : Laboratory Manager
DATE : 7-10-93

REGISTERED LABORATORY

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SOIL COMPACTION RESULTS

TEST: NUCLEAR DENSITY, SHEAR STRESS, WATER CONTENT

METHOD: NZS 4407:1991 TEST 4.2.1, TRL 1/84 & NZS 4402:1986

JOB: BETHLEHEM HEIGHTS SUBDIVISION QUALITY CONTROL TESTING
NUCLEAR DENSOMETER NO: 3411 B-5920
MATERIAL DESCRIPTION: BULK FILL MATERIALS
TESTED BY: WORKS LABORATORY : MIKE CONAGHAN

JOB NO: W0011.01
SAMPLE NO: 3720
TASK No: 000TL
ORDER No: --
TEST DATE: 23/10/93

Test Number	43A	43B	44A	44B
Test Location	Fill F 25 metres right of centreline Road 2 at 282 metres		Fill F 27 metres right of centreline Road 2 at 325 metres	
Dist. below finished level	1.0m	1.0m	1.0m	1.0m
Test Probe Depth (mm)	200	200	200	200
Bulk Density (t/m3)	1.72	1.68	1.67	1.66
Dry Density (t/m3)	1.22	1.20	1.11	1.11
Water Content by Oven (%)	40.6	40.5	49.8	49.1
Air Voids (%) *	2.6	4.7	0.8	1.9
Average Air Voids (%) *	3.7		1.4	
Shear Stress (kN/m3)	>214	>214	184	>210
Average Shear Stress (kN/m3)	> 214		> 197	

COMMENTS: **Test positions were selected by Mike Conaghan of Works Laboratory.**
*** Solid density of 2.55 t/m3 is ASSUMED.**

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Transcribed By : M.B. Conaghan Date : 1-11-93
Checked By : [signature] Date : 2-11-93

APPROVED SIGNATORY : M.B. Conaghan
DESIGNATION : Laboratory Manager
DATE : 1-11-93

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SOIL COMPACTION RESULTS
TEST: NUCLEAR DENSITY, SHEAR STRESS, WATER CONTENT
METHOD: NZS 4407:1991 TEST 4.2.1, TRL 1/84 & NZS 4402:1986

JOB: BETHLEHEM HEIGHTS SUBDIVISION QUALITY CONTROL TESTING
NUCLEAR DENSOMETER NO: 3411 B-5920
MATERIAL DESCRIPTION: BULK FILL MATERIALS
TESTED BY: WORKS LABORATORY : MIKE CONAGHAN

JOB NO: W0011.01
SAMPLE NO: 3720
TASK No: 000TL
ORDER No: --
TEST DATE: 23/10/93

Test Number	45A	45B	46A	46B
Test Location	Fill F 28 metres right of centreline Road 2 at 350 metres		Fill C 24 metres left of centreline Road 12 at 77.5 metres	
Depth below finished level	1.0m	1.0m	0.0m	0.0m
Test Probe Depth (mm)	200	200	200	200
Bulk Density (t/m3)	1.66	1.64	1.80	1.76
Dry Density (t/m3)	1.07	1.04	1.43	1.35
Water Content by Oven (%)	55.4	58.3	26.2	30.1
Air Voids (%) *	0.0	0.0	6.6	6.4
Average Air Voids (%) *	0.0		6.5	
Shear Stress (kN/m3)	149	192	>214	>214
Average Shear Stress (kN/m3)	171		>214	

COMMENTS: Test positions were selected by Mike Conaghan of Works Laboratory.
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Transcribed By : M.B. Conaghan. Date : 1-11-93
Checked By : [signature] Date : 2-11-93

APPROVED SIGNATORY : M.B. Conaghan.
DESIGNATION : Laboratory Manager
DATE : 1-11-93

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SOIL COMPACTION RESULTS

TEST: NUCLEAR DENSITY, SHEAR STRESS, WATER CONTENT

METHOD: NZS 4407:1991 TEST 4.2.1, TRL 1/84 & NZS 4402:1986

JOB: BETHLEHEM HEIGHTS SUBDIVISION QUALITY CONTROL TESTING
NUCLEAR DENSOMETER NO: 3411 B-5920
MATERIAL DESCRIPTION: BULK FILL MATERIALS
TESTED BY: WORKS LABORATORY : MIKE CONAGHAN

JOB NO: W0011.01
SAMPLE NO: 3720
TASK No: 000TL
ORDER No: --
TEST DATE: 23/10/93

Test Number	47A	47B	48A	48B
Test Location	Fill C 20 metres right of centreline Road 7 at 170 metres		Fill C 22 metres right of centreline Road 7 at 140 metres	
Depth below finished level	0.0m	0.0m	0.0m	0.0m
Test Probe Depth (mm)	200	200	200	200
Bulk Density (t/m3)	1.79	1.73	1.78	1.79
Dry Density (t/m3)	1.21	1.20	1.34	1.31
Water Content by Oven (%)	47.9	44.0	32.4	36.6
Air Voids (%) *	0.0	0.2	3.9	0.5
Average Air Voids (%) *	0.1		2.2	
Shear Stress (kN/m3)	>214	>214	>214	>214
Average Shear Stress (kN/m3)	>214		>214	

COMMENTS: Test positions were selected by Mike Conaghan of Works Laboratory.
* Solid density of 2.55 t/m3 is ASSUMED.

REGISTERED LABORATORY

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Transcribed By : M.B. Conaghan. Date : 1-11-93
Checked By : [signature] Date : 2-11-93

APPROVED SIGNATORY : M.B. Conaghan.
DESIGNATION : Laboratory Manager
DATE : 1-11-93

WORKS Consultancy Services

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SOIL COMPACTION RESULTS

TEST: NUCLEAR DENSITY, SHEAR STRESS, WATER CONTENT

METHOD: NZS 4407:1991 TEST 4.2.1, TRL 1/84 & NZS 4402:1986

JOB: BETHLEHEM HEIGHTS SUBDIVISION QUALITY CONTROL TESTING
NUCLEAR DENSOMETER NO: 3411 B-5920
MATERIAL DESCRIPTION: BULK FILL MATERIALS
TESTED BY: WORKS LABORATORY : MIKE CONAGHAN

JOB NO: W0011.01
SAMPLE NO: 3720
TASK No: 000TL
ORDER No: --
TEST DATE: 23/10/93

Test Number	49A	49B	50A	50B
Test Location	Fill A 14 m from RH kerb Road 1 Common boundary of Lots 1 and 2		Moffat Road 13m from peg 1594 towards Moffat Road	
Depth below finished level	0.0m	0.0m	0.0m	0.0m
Test Probe Depth (mm)	200	200	200	200
Bulk Density (t/m3)	1.72	1.69	1.72	1.70
Dry Density (t/m3)	1.22	1.19	1.23	1.21
Water Content by Oven (%)	41.7	41.7	39.2	40.7
Air Voids (%) *	1.5	3.7	3.3	3.7
Average Air Voids (%) *	2.6		3.5	
Shear Stress (kN/m3)	>214	>214	>214	>214
Average Shear Stress (kN/m3)	>214		>214	

COMMENTS: Test positions were selected by Mike Conaghan of Works Laboratory.
* Solid density of 2.55 t/m3 is ASSUMED.

Transcribed By : M.B. Conaghan. Date : 1-11-93
Checked By : [signature] Date : 2-11-93

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APPROVED SIGNATORY : M.B. Conaghan.
DESIGNATION : Laboratory Manager
DATE : 1-11-93

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SOIL COMPACTION RESULTS

TEST: NUCLEAR DENSITY, SHEAR STRESS, WATER CONTENT

METHOD: NZS 4407:1991 TEST 4.2.1, TRL 1/84 & NZS 4402:1986

JOB: **BETHLEHEM HEIGHTS SUBDIVISION QUALITY CONTROL TESTING**
NUCLEAR DENSOMETER NO: **3411 B-5920**
MATERIAL DESCRIPTION: **BULK FILL MATERIALS**
TESTED BY: **WORKS LABORATORY : MIKE CONAGHAN**

JOB NO: **W0011.01**
SAMPLE NO: 3720
TASK No: 000TL
ORDER No: --
TEST DATE: 23/10/93

Test Number	51A	51B	52A	52B
Test Location	Moffat Road 7.5m from peg 1630 towards Moffat Road		Fill H Approximate common boundary of Lots 33, 34 and 35	
Depth below finished level	0.0m	0.0m	0.0m	0.0m
Test Probe Depth (mm)	200	200	200	200
Bulk Density (t/m3)	1.59	1.60	1.64	1.59
Dry Density (t/m3)	1.06	1.08	1.07	1.06
Water Content by Oven (%)	49.4	47.9	53.4	49.8
Air Voids (%) *	6.0	5.7	0.8	5.6
Average Air Voids (%) *	5.9		3.2	
Shear Stress (kN/m3)	>214	>214	>214	>214
Average Shear Stress (kN/m3)	>214		>214	

COMMENTS: **Test positions were selected by Mike Conaghan of Works Laboratory.**
*** Solid density of 2.55 t/m3 is ASSUMED.**

All tests reported herein have been performed in accordance with the laboratory's terms of registration

Transcribed By : M.B. Conaghan. Date : 1-11-93
Checked By : [signature] Date : 2-11-93

APPROVED SIGNATORY : M.B. Conaghan.
DESIGNATION : Laboratory Manager
DATE : 1-11-93

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Phone (07) 578-5425, Fax (07) 578-3382, Mobile 025-954-228

SOIL COMPACTION RESULTS

TEST: NUCLEAR DENSITY, SHEAR STRESS, WATER CONTENT

METHOD: NZS 4407:1991 TEST 4.2.1, TRL 1/84 & NZS 4402:1986

JOB: BETHLEHEM HEIGHTS SUBDIVISION QUALITY CONTROL TESTING
NUCLEAR DENSOMETER NO: 3411 B-5920
MATERIAL DESCRIPTION: BULK FILL MATERIALS
TESTED BY: WORKS LABORATORY : MIKE CONAGHAN

JOB NO: W0011.01
SAMPLE NO: 3720
TASK No: 000TL
ORDER No: --
TEST DATE: 23/10/93

Test Number	53A	53B	-	-
Test Location	Fill H Approximate common boundary of Lots 30, 32 and 33		-	
Depth below finished level	0.0m	0.0m	-	-
Test Probe Depth (mm)	200	200	-	-
Bulk Density (t/m3)	1.67	1.62	-	-
Dry Density (t/m3)	1.26	1.21	-	-
Water Content by Oven (%)	33.2	34.3	-	-
Air Voids (%) *	9.1	11.2	-	-
Average Air Voids (%) *	10.2		-	
Shear Stress (kN/m3)	>214	>214	-	-
Average Shear Stress (kN/m3)	>214		-	

COMMENTS: Test positions were selected by Mike Conaghan of Works Laboratory.
* Solid density of 2.55 t/m3 is ASSUMED.

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Transcribed By : M.B. Conaghan. Date : 1-11-93
Checked By : [signature] Date : 2-11-93

APPROVED SIGNATORY : M.B. Conaghan.
DESIGNATION : Laboratory Manager
DATE : 1-11-93

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SOIL COMPACTION RESULTS

TEST: NUCLEAR DENSITY, SHEAR STRESS, WATER CONTENT

METHOD: NZS 4407:1991 TEST 4.2.1, TRL 1/84 & NZS 4402:1986

JOB: BETHLEHEM HEIGHTS SUBDIVISION QUALITY CONTROL TESTING
NUCLEAR DENSOMETER NO: 3411 B-5920
MATERIAL DESCRIPTION: BULK FILL MATERIAL
TESTED BY: WORKS LABORATORY : MIKE CONAGHAN

JOB NO: W0011.01
SAMPLE NO: 3724
TASK No: 000TL
ORDER No: --
TEST DATE: 28/10/93

Test Number	54A	54B	55A	55B
Test Position	Fill F 28m right of centreline Road 2 at 284m		Fill F 32m right of centreline Road 2 at 314m	
Distance below finished level	0.5m	0.5m	0.5m	0.5m
Test Probe Depth (mm)	200	200	200	200
Bulk Density (t/m3)	1.80	1.75	1.64	1.61
Dry Density (t/m3)	1.28	1.27	1.05	1.02
Water Content by Oven (%)	41.1	38.6	55.5	57.3
Air Voids (%) *	0.0	1.5	0.2	1.2
Average Air Voids (%) *	0.8		0.7	
Shear Stress (kN/m3)	Too Hard	Too Hard	Too Hard	Too Hard
Average Shear Stress (kN/m3)	>214		>214	

COMMENTS: **Test positions were selected by Mike Conaghan of Works Laboratory.**
*** Solid density of 2.55 t/m3 is ASSUMED.**

Transcribed By : M.B. Conaghan. Date : 4-11-93
Checked By : [signature] Date : 11-11-93

APPROVED SIGNATORY : M.B. Conaghan.
DESIGNATION : Laboratory Manager
DATE : 4-11-93

REGISTERED LABORATORY

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WORKS Consultancy Services

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SOIL COMPACTION RESULTS

TEST: NUCLEAR DENSITY, SHEAR STRESS, WATER CONTENT

METHOD: NZS 4407:1991 TEST 4.2.1, TRL 1/84 & NZS 4402:1986

JOB: **BETHLEHEM HEIGHTS SUBDIVISION QUALITY CONTROL TESTING**
NUCLEAR DENSOMETER NO: **3411 B-5920**
MATERIAL DESCRIPTION: **BULK FILL MATERIAL**
TESTED BY: **WORKS LABORATORY : MIKE CONAGHAN**

JOB NO: **W0011.01**
SAMPLE NO: **3724**
TASK No: **000TL**
ORDER No: **--**
TEST DATE: **28/10/93**

Test Number	56A	56B	-	-
Test Position	Fill F 20m right of centreline Road 2 at 348m		-	
Distance below finished level	0.5m	0.5m	-	-
Test Probe Depth (mm)	200	200	-	-
Bulk Density (t/m3)	1.61	1.58	-	-
Dry Density (t/m3)	1.19	1.12	-	-
Water Content by Oven (%)	35.3	40.9	-	-
Air Voids (%) *	11.5	10.2	-	-
Average Air Voids (%) *	10.9		-	
Shear Stress (kN/m3)	Too Hard	Too Hard	-	-
Average Shear Stress (kN/m3)	>214		-	

COMMENTS: **Test positions were selected by Mike Conaghan of Works Laboratory.**
*** Solid density of 2.55 t/m3 is ASSUMED.**

Transcribed By : M.B. Conaghan. Date : 4-11-93
Checked By : [signature] Date : 11-11-93

APPROVED SIGNATORY : M.B. Conaghan.
DESIGNATION : Laboratory Manager
DATE : 4-11-93

REGISTERED LABORATORY

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SOIL COMPACTION RESULTS

TEST: NUCLEAR DENSITY, SHEAR STRESS, WATER CONTENT

METHOD: NZS 4407:1991 TEST 4.2.1, TRL 1/84 & NZS 4402:1986

JOB: BETHLEHEM HEIGHTS SUBDIVISION QUALITY CONTROL TESTING
NUCLEAR DENSOMETER NO: 3411 B-5920
MATERIAL DESCRIPTION: BULK FILL MATERIAL
TESTED BY: WORKS LABORATORY : MIKE CONAGHAN

JOB NO: W0011.01
SAMPLE NO: 3735
TASK No: 000TL
ORDER No: --
TEST DATE: 02/11/93

Test Number	57A	57B	58A	58B
Test Position	Fill F 20m right of centreline Road 2 at 257.25m		Fill F 20m right of centreline Road 2 at 300m	
Distance below finished level	0.0m	0.0m	0.0m	0.0m
Test Probe Depth (mm)	200	200	200	200
Bulk Density (t/m3)	1.54	1.55	1.64	1.61
Dry Density (t/m3)	1.03	1.04	1.07	1.05
Water Content by Oven (%)	49.2	49.4	52.6	52.9
Air Voids (%) *	8.6	8.0	1.5	3.1
Average Air Voids (%) *	8.3		2.3	
Shear Stress (kN/m3)	>214	>214	>214	>214
Average Shear Stress (kN/m3)	>214		>214	

COMMENTS: Test positions were selected by Mr B Andrews.
* Solid density of 2.55 t/m3 is ASSUMED.

Transcribed By : M.B. Conaghan Date : 16-11-93
Checked By : [signature] Date : 22-11-93

All tests reported herein have been performed in accordance with the laboratory's terms of registration

APPROVED SIGNATORY : M.B. Conaghan.
DESIGNATION : Laboratory Manager
DATE : 16-11-93

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SOIL COMPACTION RESULTS

TEST: NUCLEAR DENSITY, SHEAR STRESS, WATER CONTENT

METHOD: NZS 4407:1991 TEST 4.2.1, TRL 1/84 & NZS 4402:1986

JOB: BETHLEHEM HEIGHTS SUBDIVISION QUALITY CONTROL TESTING
NUCLEAR DENSOMETER NO: 3411 B-5920
MATERIAL DESCRIPTION: BULK FILL MATERIAL
TESTED BY: WORKS LABORATORY : MIKE CONAGHAN

JOB NO: W0011.01
SAMPLE NO: 3735
TASK No: 000TL
ORDER No: --
TEST DATE: 02/11/93

Test Number	59A	59B	60A	60B
Test Position	Fill C 15m left centreline Road 7 at 162m Common boundary Lots 136 & 137		Fill C 15m left centreline Road 7 at 140m Common boundary Lots 135 & 136	
Distance below finished level	0.0m	0.0m	0.0m	0.0m
Test Probe Depth (mm)	200	200	200	200
Bulk Density (t/m3)	1.67	1.69	1.86	1.83
Dry Density (t/m3)	1.15	1.22	1.46	1.45
Water Content by Oven (%)	44.7	38.4	27.0	26.3
Air Voids (%) *	3.2	5.2	3.3	4.9
Average Air Voids (%) *	4.2		4.1	
Shear Stress (kN/m3)	>214	>214	152	154
Average Shear Stress (kN/m3)	>214		153	

COMMENTS: Test positions were selected by Mr B Andrews.
* Solid density of 2.55 t/m3 is ASSUMED.

Transcribed By : M.B. Conaghan. Date : 16-11-93
Checked By : [signature] Date : 22-11-93

All tests reported herein have been performed in accordance with the laboratory's terms of registration

APPROVED SIGNATORY : M.B. Conaghan.
DESIGNATION : Laboratory Manager
DATE : 16-11-93

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SOIL COMPACTION RESULTS

TEST: NUCLEAR DENSITY, SHEAR STRESS, WATER CONTENT

METHOD: NZS 4407:1991 TEST 4.2.1, TRL 1/84 & NZS 4402:1986

JOB: BETHLEHEM HEIGHTS SUBDIVISION QUALITY CONTROL TESTING
NUCLEAR DENSOMETER NO: 3411 B-5920
MATERIAL DESCRIPTION: BULK FILL MATERIAL
TESTED BY: WORKS LABORATORY : MIKE CONAGHAN

JOB NO: W0011.01
SAMPLE NO: 3735
TASK No: 000TL
ORDER No: --
TEST DATE: 02/11/93

Test Number	61A	61B	62A	62B
Test Position	Fill C 15m left centreline Road 7 at 120m Common boundary Lots 134 & 135		Fill D Common boundary Lots 60, 61, 69 & 70	
Distance below finished level	0.0m	0.0m	0.0m	0.0m
Test Probe Depth (mm)	200	200	200	200
Bulk Density (t/m3)	1.65	1.62	1.52	1.52
Dry Density (t/m3)	1.17	1.15	1.01	1.02
Water Content by Oven (%)	41.0	41.4	50.8	48.1
Air Voids (%) *	5.9	7.5	9.0	10.6
Average Air Voids (%) *	6.7		9.8	
Shear Stress (kN/m3)	>212	>214	>214	>214
Average Shear Stress (kN/m3)	>213		>214	

COMMENTS: **Test positions were selected by Mr B Andrews.**
*** Solid density of 2.55 t/m3 is ASSUMED.**

Transcribed By : M.B. Conaghan. Date : 16-11-93
Checked By : [signature] Date : 22-11-93

APPROVED SIGNATORY : M.B. Conaghan.
DESIGNATION : Laboratory Manager
DATE : 16-11-93

All tests reported herein have been performed in accordance with the laboratory's terms of registration

BETHLEHEM HEIGHTS SUBDIVISION
STAGES 1 AND 2

Ground Improvement Work by Surface Compaction
Summary of Test Results

Scala Penetrometer Blow Counts

Depth	Lot No.6 Test No.A		Lot No.5 Test No.B	
	Before	After	Before	After
0-100	4	4	4	6
100-200	5	5	5	6
200-300	4	5	5	4
300-400	5	6	6	4
400-500	3	4	5	4
500-600	2	5	5	6
600-700	1	3	4	6
700-800	3	4	3	6
800-900	3	4	4	4
900-1000	5	4	5	4
1000-1100	4	5	6	5
1100-1200	4	4	6	4
1200-1300	4	4	6	5
1300-1400	3	3	3	3

Depth	Lot No.4 Test No.C		Lot No.53 Test No.D	
	Before	After	Before	After
0-100	2	3		
100-200	4	4	2	
200-300	3	3	2	2
300-400	2	3	2	2
400-500	1	2	2	2
500-600	2	2	2	2
600-700	2	2	2	4
700-800	3	3	2.5	4
800-900	2	2	2	4
900-1000	4	4	2	3
1000-1100	2	3	2	3
1100-1200	2	3	3	3
1200-1300	5	2	3	3
1300-1400	2	3	3	3

Depth	Lot No.53 Test No.J		Lot No.53 Test No.K	
	Before	After	Before	After
0-100		3		
100-200		4		3
200-300		5		3.5
300-400		5		4
400-500		4		3.5
500-600		4		3.5
600-700		3.5		3
700-800		3		3
800-900		3		2
900-1000		3		2
1000-1100		3		3
1100-1200		3.5		3
1200-1300		4		4
1300-1400		4		5

Depth	Lot No.54 Test No.E		Lot No.54 Test No.L	
	Before	After	Before	After
0-100				
100-200	1			4
200-300	1	2		5
300-400	1	2		4
400-500	1	2		4
500-600	1	5		5
600-700	2	5		5
700-800	2	5		5
800-900	3	7		3
900-1000	3	7		3
1000-1100	5	6		9
1100-1200	4	3		9
1200-1300	4	3		7
1300-1400	3	4		7

Depth	Lot No.54 Test No.M	
	Before	After
0-100		3
100-200		4
200-300		6
300-400		6
400-500		6
500-600		6
600-700		4
700-800		3
800-900		3
900-1000		3
1000-1100		3
1100-1200		4
1200-1300		7
1300-1400		8

Depth	Lot No.55 Test No.F		Lot No.55 Test No.N	
	Before	After	Before	After
0-100				
100-200	3		4	
200-300	3	3	4	
300-400	3	5	3	
400-500	5	3	3	
500-600	4	4	3	
600-700	4	4	2	
700-800	5	4	3	
800-900	6	3	5	
900-1000	4	4	5	
1000-1100	4	7	5	
1100-1200	5	7	6	
1200-1300	7	9	5	
1300-1400	7			

Depth	Lot No.55 Test No.O		Lot No.55 Test No.G	
	Before	After	Before	After
0-100				
100-200		2	2	2
200-300		2	2	3
300-400		2	2	2
400-500		2	3	2
500-600		2	3	2
600-700		3	3	1
700-800		4	3	3
800-900		5	2	4
900-1000		7	2	2.5
1000-1100		10	2.5	3
1100-1200		5	3	4
1200-1300		3	4	4
1300-1400			4	4

Depth	Lot No.56 Test No.I		Lot No.56 Test No.P	
	Before	After	Before	After
0-100				
100-200	1			3
200-300	3	4		3
300-400	3	5		4
400-500	3	5		5
500-600	4	6		4
600-700	5	6		3
700-800	6	5		3
800-900	6	6		3
900-1000	4	5		3
1000-1100	3	5		3
1100-1200	4	6		5
1200-1300	4	6		6
1300-1400	4	6		5

Depth	Lot No.56 Test No.Q		Lot No.113 Test No.H	
	Before	After	Before	After
0-100				
100-200	5		1	
200-300	4		1	3
300-400	3		2	3
400-500	4		2	4
500-600	6		3	4
600-700	6		5	5
700-800	5		6	6
800-900	6		7	6
900-1000	4		6	6
1000-1100	4		6	5
1100-1200	7		6	5
1200-1300	7		10	4
1300-1400	7			4

Depth	Lot No.113 Test No.R		Lot No.113 Test No.S	
	Before	After	Before	After
0-100				
100-200	5			3
200-300	5			4
300-400	4			5
400-500	3			3
500-600	3			3
600-700	3			4
700-800	4			3
800-900	3			4
900-1000	3			3
1000-1100	4			4
1100-1200	4			11
1200-1300	5			8
1300-1400	3			5

Depth	Lot No.112 Test No.T		Lot No.112 Test No.U	
	Before	After	Before	After
0-100				
100-200		2		5
200-300		5		7
300-400		5		5
400-500		6		4
500-600		6		4
600-700		5		4
700-800		5		3
800-900		5		3
900-1000		4		4
1000-1100		4		5
1100-1200		5		6
1200-1300		5		6
1300-1400		6		5

Depth	Lot No.57 Test No.W		Lot No.57 Test No.V	
	Before	After	Before	After
0-100				
100-200				
200-300	4	4	3	5
300-400	5	4	3	5
400-500	5	4	3	4
500-600	4	6	4	4
600-700	5	5	4	3.5
700-800	4	5	4	5
800-900	4	4	3.5	5
900-1000	5	4	3	4
1000-1100	5	4	2.5	5
1100-1200	5	6	3	5
1200-1300	6	6	3	4
1300-1400	6	5	4	4

Depth	Lot No.58 Test No.X		Lot No.58 Test No.Y	
	Before	After	Before	After
0-100				
100-200				
200-300	5	6	4	3
300-400	5	6	3	3
400-500	5	6	3	3
500-600	6	6	3	3
600-700	6	5	3	3
700-800	6	6	4	4
800-900	5	6	3	3
900-1000	6	5	3	3
1000-1100	7	6	4	4
1100-1200	6	7	4	4
1200-1300	10	6	4	4
1300-1400		5	4	3

Depth	Lot No.59 Test No.Z		Lot No.59 Test No.AA	
	Before	After	Before	After
0-100				
100-200				
200-300	2	3	4	2
300-400	3	4	3	2
400-500	3	4	3	2
500-600	2.5	3	3	2
600-700	2	3	4	4
700-800	2	3	5	5
800-900	2	3	5	5
900-1000	3	3	7	4
1000-1100	5	4	6	8
1100-1200	6	7	7	7
1200-1300	5	6	6	3
1300-1400	5	5	5	3

Depth	Lot No.60 Test No.AB		Lot No.60 Test No.AC	
	Before	After	Before	After
0-100				
100-200				
200-300	3	3	3	4
300-400	3	3	4	4
400-500	4	3	6	6
500-600	3	3	5	5
600-700	3	3	4	4
700-800	2	3	4	4
800-900	4	4	4	4
900-1000	4	4	5	5
1000-1100	4	4	7	7
1100-1200	5	3	7	7
1200-1300	6	4	6	6
1300-1400	5	4	6	6

BETHLEHEM HEIGHTS SUBDIVISION

STAGES 1 AND 2

APPENDIX V

Statement of Professional Opinion as to
Suitability of Land for Building Development

TO: The Director of Planning & Environment

STATEMENT OF PROFESSIONAL OPINION AS TO SUITABILITY OF LAND FOR BUILDING DEVELOPMENT

DEVELOPMENT: BETHLEHEM HEIGHTS - STAGES 1 AND 2

OWNER: BETHLEHEM HEIGHTS LTD

LOCATION: MOFFAT ROAD, BETHLEHEM

I, Michael William Hughes (full name) of Shrimpton and Lipinski Ltd

PO Box 231, Tauranga (name and address of firm)

Hereby confirm that:

1. I am a Registered Engineer experienced in the field of soils engineering and was retained by the owners as the Soils Engineer on the above development.

2. Site investigations have been carried out under my direction and are described in my report dated reference 10926 dated December 1993.

3. In my professional opinion, not to be construed as a guarantee, I consider that:

   (a) The earth fills shown on the attached Plan No. 10926-42 have been placed in compliance with the Code of Practice of the Tauranga District Council.

   (b) The completed works give due regard to land slope and foundation stability considerations.

   (c) The filled ground is suitable for the erection thereon of residential buildings not requiring specific design in terms of NZS 3604 and related documents providing that:

   (i) An area of building restriction exists on Lot 6 (refer Section 5 of report)

   (ii) Refilling is required on Lots 8 and 9 at a later time (refer Section 5)

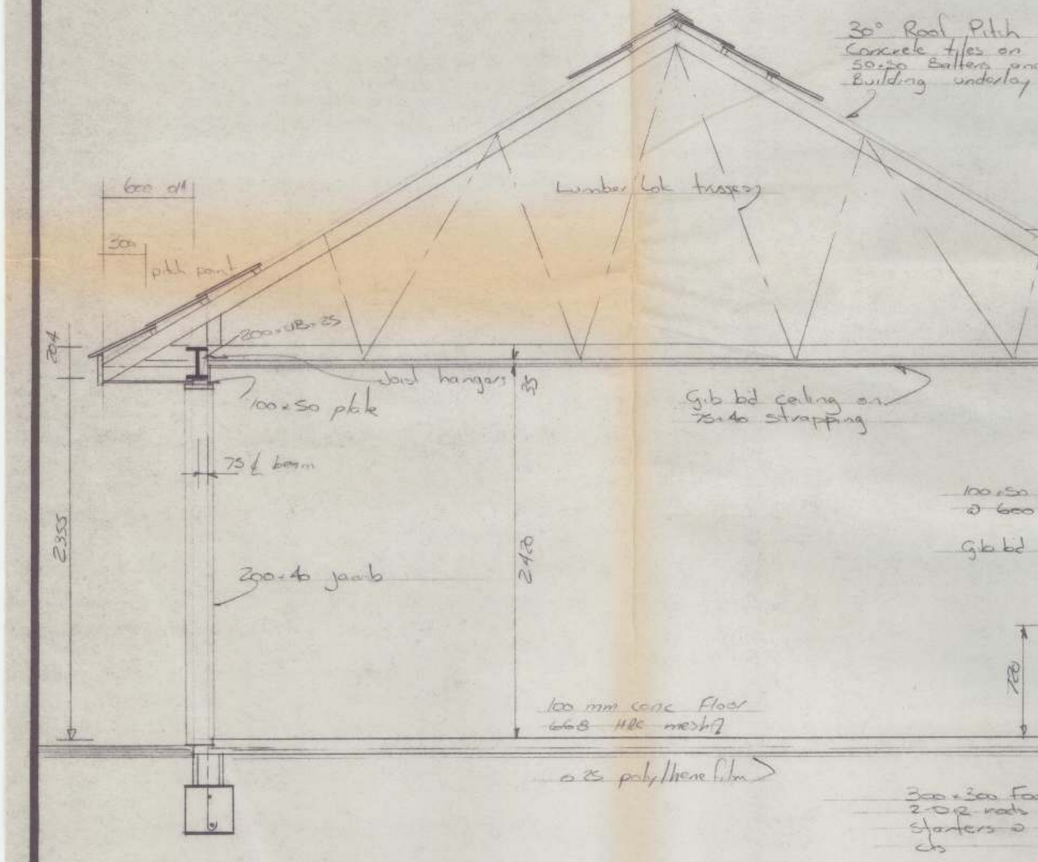
   (iii) _____

   (d) The original ground not affected by filling is suitable for the erection thereon of residential buildings not requiring specific design in terms of NZS 3604 and related documents providing that:

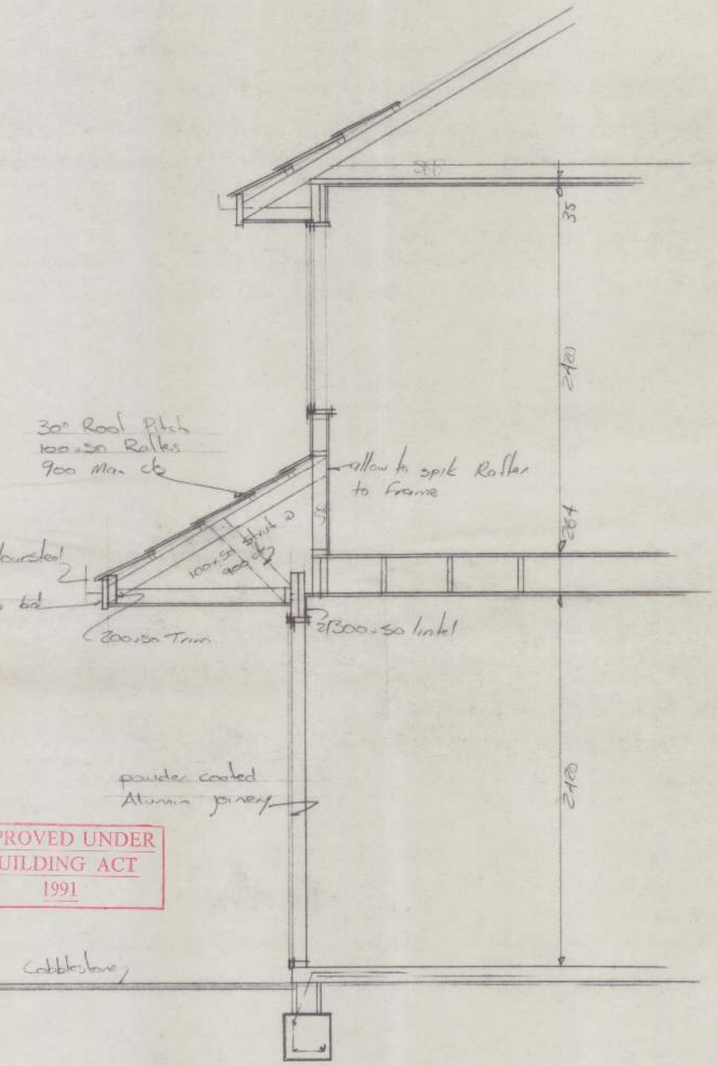
   Subject to limitations which may exist due to the presence of lower strength soils in areas of cut. Refer to Section 4.0 of the report of December 1993.

4. This professional opinion is furnished to Council and the owner for their purposes alone on the express condition that it will not be relied upon by any other person and does not remove the necessity for the normal inspection of foundation conditions at the time of erection for any dwelling.

Signed: _____ **Date:** _____



CROSS SECTION E

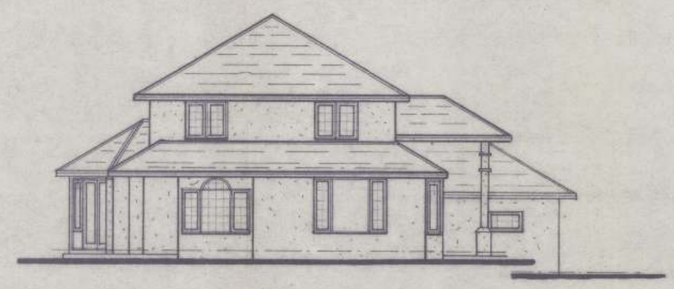


PART SECTION D

LOCKHEAD Design ltd
ARCHITECTURAL DRAUGHTSMAN
PETER LOCHHEAD PHONE 07-5525410
JAMES ROAD TE PUNA TAURANGA Fax – A/Hr. 07-5524751
A.M.N.Z.I.D.

Scale 1 to 20 | Drawn 4 3 94 | Sht 8 of 11

SOUTH WEST ELEVATION

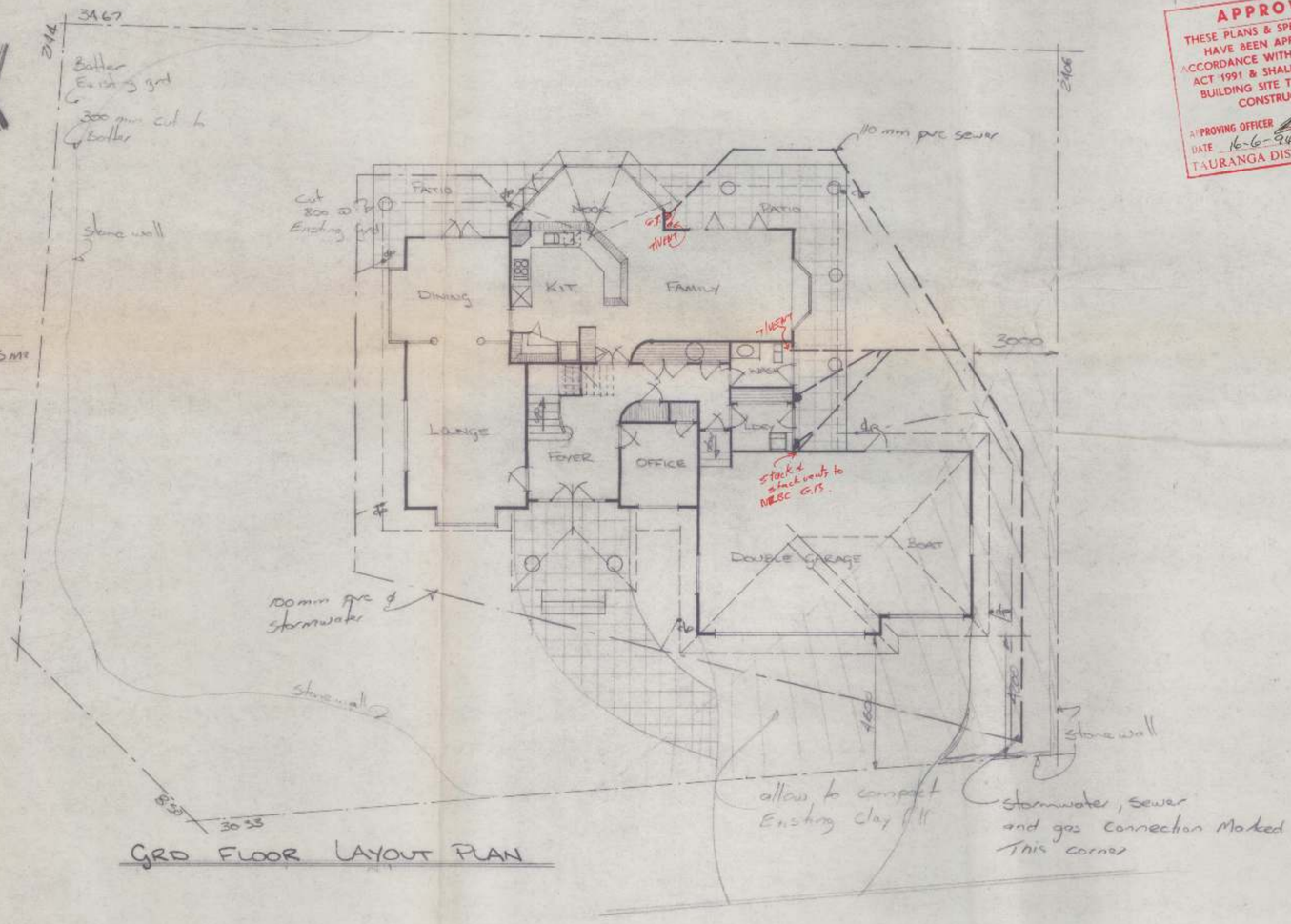


NORTH WEST ELEVATION

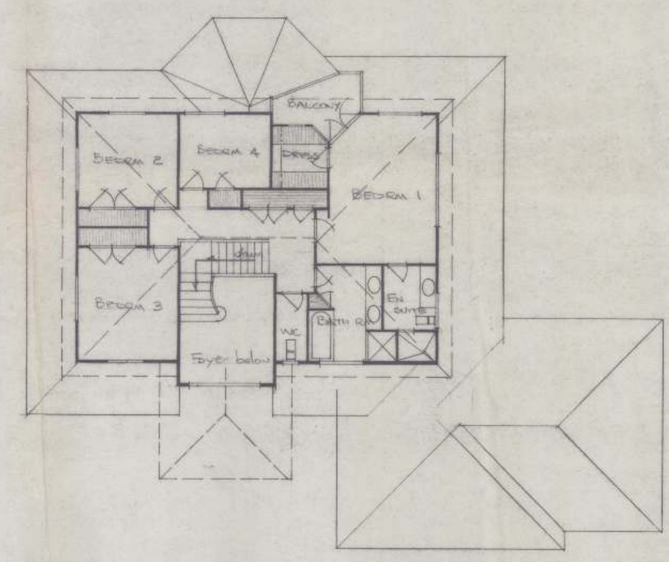
Site Suitable for proposed Building subject to confirmation of ground conditions at time of footing inspection.

CW 19-6-94
Authorised Officer Date

APPROVED
THESE PLANS & SPECIFICATIONS HAVE BEEN APPROVED IN ACCORDANCE WITH THE BUILDING ACT 1991 & SHALL REMAIN ON BUILDING SITE THROUGHOUT CONSTRUCTION.
APPROVING OFFICER
DATE 16-6-94
TAURANGA DISTRICT COUNCIL



GRD FLOOR LAYOUT PLAN



UPPER FLOOR LAYOUT

SITE LAYOUT PLAN

TCC331871

LOCKHEAD Design ltd
ARCHITECTURAL DRAUGHTSMAN
PETER LOCHHEAD PHONE 07-5525410
JAMES ROAD TE PUNA TAURANGA Fax – A/Hr. 07-5524751

A.M.N.Z.I.D

PROPOSED RESIDENCE for JOCK HOLDINGS
LOT 26 BETHLEHEM HEIGHTS TAURANGA

Scale 1 to 100 | Drawn 32-94 | Sht. 1 of 11

AARQUE

From: Rob.Wickman@tauranga.govt.nz
Sent: Monday, 28 November 2011 1:47 p.m.
To: Rob Wickman
Subject: 3 Beaumaris Blvd

From: Rob Wickman [Rob.Wickman@tauranga.govt.nz]
Sent: Monday, 28 November 2011 1:47 p.m.
To: 'john.f@remaxproperty.co.nz'
Subject: 3 Beaumaris Blvd

Dear Sir, I understand that you have requested that Tauranga City Council issue a code compliance certificate for a dwelling constructed in 1994 seventeen years after the commencement of building work. I have reviewed the approved plans for the dwelling and as you will be aware the dwelling has been clad with a face-fixed fibre cement type product.

As you will be aware this type of product is one of the main issues for the leaky building crisis that is currently an issue being dealt with throughout New Zealand. The dwelling is now outside the ten year long stop period stated in the Building Act where Council could possibly be held for some liability if the cladding failed on this dwelling. By law Council no longer has any statutory liability to issue a code compliance certificate for the dwelling. The only option that is available to the owner would be to apply to the Department of Building and Housing for a determination on whether it is possible to issue a code compliance certificate. If the owner requests a formal refusal by Council then that can be arranged.

Thanks Rob Wickman

Manager: Building Services
Tauranga City Council
Ph 07)5777 000
email Rob.Wickman@tauranga.govt.nz

TAURANGA DISTRICT COUNCIL

CONSENT NOTICE PURSUANT TO SECTION 221 RESOURCE MANAGEMENT ACT 1991

Stages 1+2, Bethlehem Heights, Moffat Rd

TDC SUB NO: 797

IN THE MATTER OF PLAN S 66392

AND

IN THE MATTER OF Subdivision Consent pursuant to Sections 104, 105, 108, 220 & 221 of the Resource Management Act 1991

Pursuant to Section 252(1)(a) of the Local Government Act 1974, I, **ALAN NORMAN BICKERS**, Chief Executive of the Tauranga District Council, hereby certify that, by way of resolution passed under delegated authority on 10 September 1993, the following condition was imposed on the subdivision consent for Lots 3 and 4 DPS 27240 and Part Lot 2 DPS 63628.

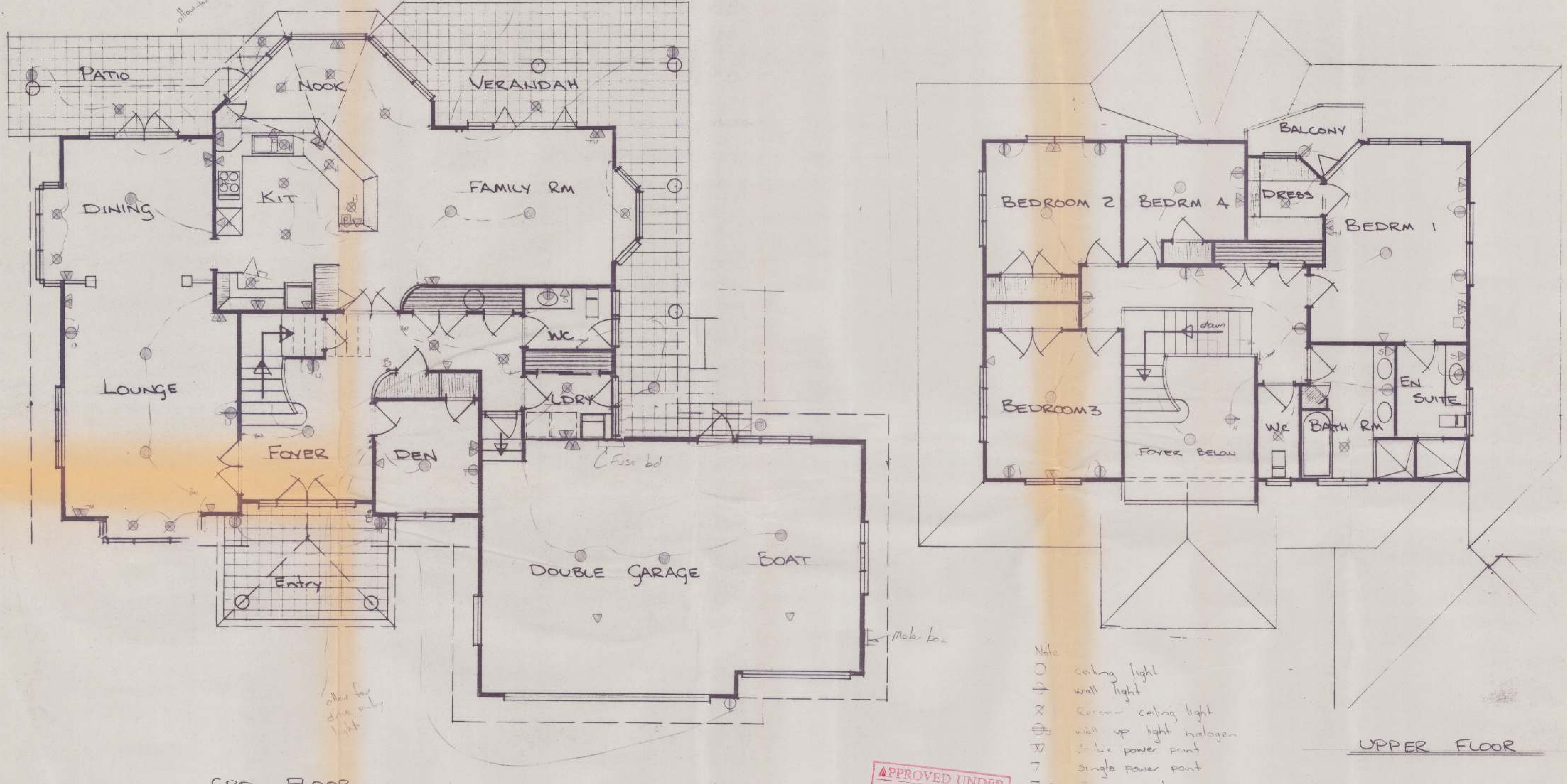
(1) That a consent notice be registered on the Certificates of Title for Lots 21-29 requiring that:

The destruction or irreparable damage to native trees standing higher than 3.0 metres or having a trunk circumference of more than 0.5 metres or to exotic trees standing higher than 10 metres and having a trunk circumference of more than 0.5 metres may not be undertaken without the prior consent of Council.

DATED at Tauranga this 13th day of September 1993.

A N Bickers
CHIEF EXECUTIVE

106C0422.WP5



GRD FLOOR

UPPER FLOOR

Note
- ○ ceiling light
- wall light
- Recessed ceiling light
- wall up light halogen
- double power point
- single power point
- R range point
- dishwasher power point
- TV TV connection
- earth leakage power point
- P phone connection
- light switch
- 2 way light switch
- D dimmer light switch
- B door bell
- H recessed down light halogen

APPROVED UNDER BUILDING ACT 1991

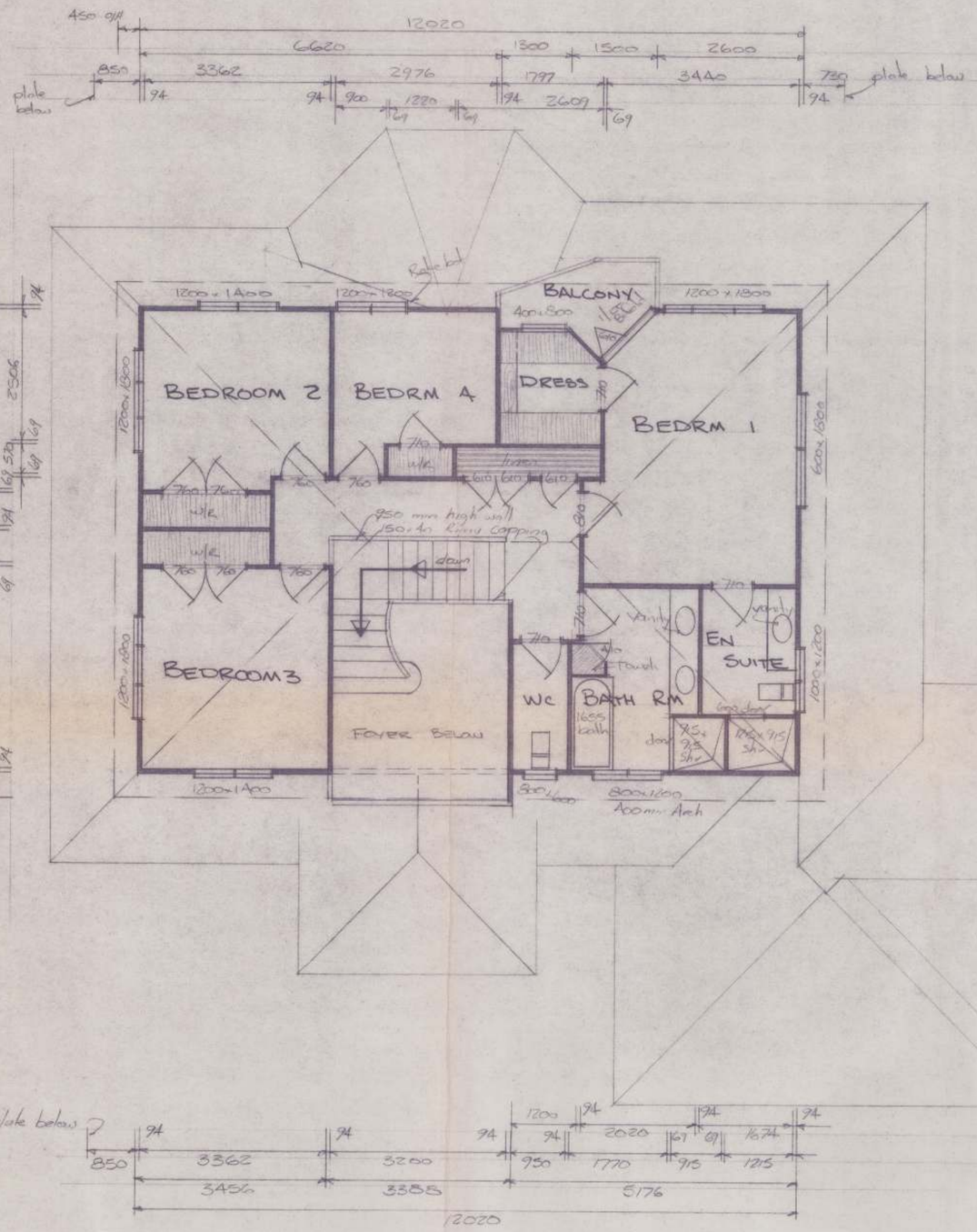
ELECTRICAL LAYOUT PLANS

PROPOSED RESIDENCE for JOCK HOLDINGS
LOT ... SIENNA HEIGHTS TAURANGA

LOCHHEAD Design ltd
ARCHITECTURAL DRAUGHTSMAN
PETER LOCHHEAD PHONE 07-5525410
JAMES ROAD TE PUNA TAURANGA Fax – A/Hr. 07-5524751
AMNZID

Scale | Drawn | Sht 11 of 11

TCC331880



NORTH ELEVATION

SOUTH EAST ELEVATION

FLOOR PLAN LAYOUT

Area : 87.12 M² (938 Sq ft)

APPROVED UNDER BUILDING ACT 1991

Notes
- allow for 10c tinted glazing to Lounge, Dining, Family, and Nook
- allow for Casement windows to all Main windows to main rooms
- allow for powder coated Alumin joinery in 25 mm painted rebated jambs
- Gib bd ceilings and walls painted
- 90 mm Gib Cove to all main Rooms
- 60 mm to remainder
- allow for painted skirting RA 135/18 paint profile
- all internal doors shall be panel painted in painted Architrave jambs (RA 85/18

LOCKHEAD Design ltd
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JAMES ROAD TE PUNA TAURANGA Fax – A/Hr. 07-5524751
A.M.N.Z.I.D.

Scale 1 to 50 | Drawn 27.2.93 | Sht. 2 of 11

05 April 2019

THE RESIDENT
3 BEAUMARIS BOULEVARD
TAURANGA 3110

Dear resident,

Pollution Incident – Discharge of unknown eco-toxic contaminant to the stormwater network and Beaumaris Boulevard Stormwater Pond, Bethlehem.

Over the weekend of the 23 and 24 February Tauranga City Council (TCC) and the Bay of Plenty Regional Council (BoPRC) were notified of dead Eels floating in the Beaumaris Boulevard Stormwater Pond.

We have been unable to source the pollution incident to a specific business or residence. Due to the lack of rainfall throughout January and February, the pollution event could have happened as far back as early January, making tracking the source very hard.

During a site visit, no visual evidence that could be linked to the indecent could be found. Samples taken by TCC staff for Dissolved Oxygen and E.Coli indicate these were not factors in the deaths of the Eels.

It is most likely the incident is the result of a contractor or local resident discharging a toxic substance to the stormwater network directly upstream of the stormwater pond. In total 270 Eels were removed from the site by TCC contractors.

Baited Fyke nets have been installed as part of the ecological survey at locations around the pond to determine the extent of the damage to the Eel population. Over a 24-hour period none of the nets captured any Eels indicating the whole population has been wiped out.

Going forward, TCC will continue to monitor the Eel population over the coming months (see Photo A6). Upgrades to the Storm Water outlet have been planned to allow Eels to repopulate the pond more easily.

The drains around a house, including roof downpipes and the drains on driveway's and the street, all lead directly into waterways which discharge to waterways or the sea untreated. Anything spilled or washed into these can have a serious impact on wildlife.

Some handy tips to prevent pollution:

- Contain all waste from concrete cutting or acid washing through slurry control.
- Wash your car on the grass, or better yet take it to the carwash.
- Contain water from water blasting and outdoor cleaning, or divert it onto a grass area.
- Do not use chemicals. Even cleaners labelled “eco-friendly” or “biodegradable” are in fact toxic to fish and other aquatic life.
- Wash out paint brushes into an indoor sink (these should lead to the sewage treatment plant).
- Pick up your rubbish and cigarette butts.

Should you have any questions on this incident please contact TCC’s Pollution Prevention Officer – Jim Summers or Jess Allpress on (07) 577 7000 or jim.summers@tauranga.govt.nz and jess.allpress@tauranga.govt.nz

Photos show the impact on the ponds eel population:

Remember: “The drain is just for rain” – anything washed down a stormwater drain flows directly into waterways and the sea.

To report stormwater pollution, call Tauranga City Council on 07 577 7000.