Sharalyn Fraser
Agency

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KAPITI COAST
DISTRICT COUNCIL

CODE COMPLIANCE CERTIFICATE

SECTION 95, BUILDING ACT 2004

THE OWNER

Jaques William Thomas & Jaques Norma Elizabeth 53D Kotare Street WAIKANAE	No. Issue date	041339 5/09/05

THE BUILDING

Street Address	53D KOTARE STREET, WAIKANAE
Valuation No.	1496060805
Legal Description	LOT 5 DP 310492 - HAVING 1/6SH IN LOT 8 DP 310492 BEING 1292M2
Year Constructed	
Current Use	
Proposal	New Dwelling

Code Compliance

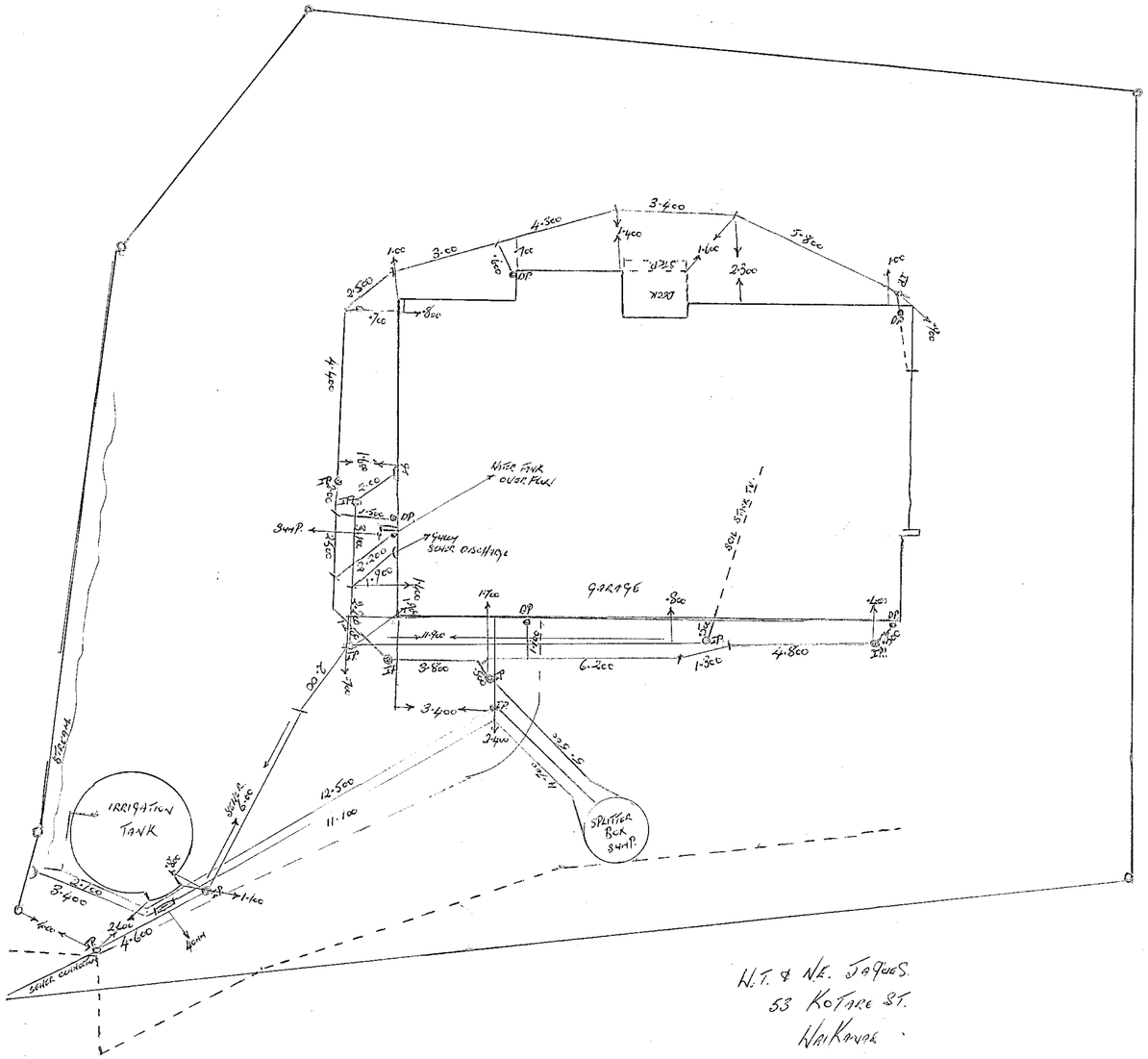
The building consent authority named below is satisfied, on reasonable grounds, that –

a) The building work complies with the building consent; and

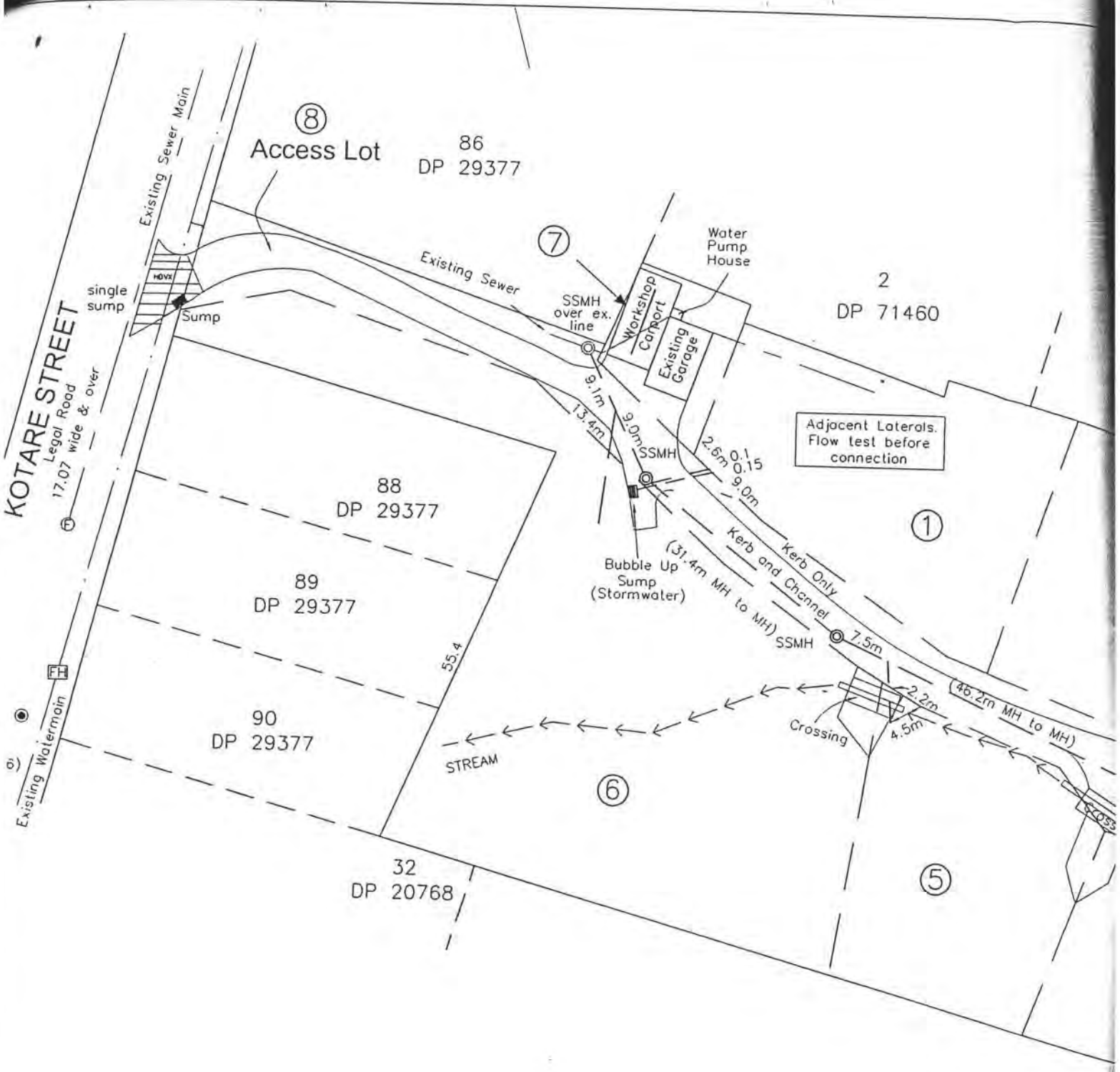
b) The property owner must follow and carry out the manufacturers prescribed maintenance procedures.

Signed for and on behalf of the Kapiti Coast District Council:

Name: _____ **Date:** 6/9/2005



H.T. & N.E. JAQUES.
53 KOTARE ST.
WAIKANAE.



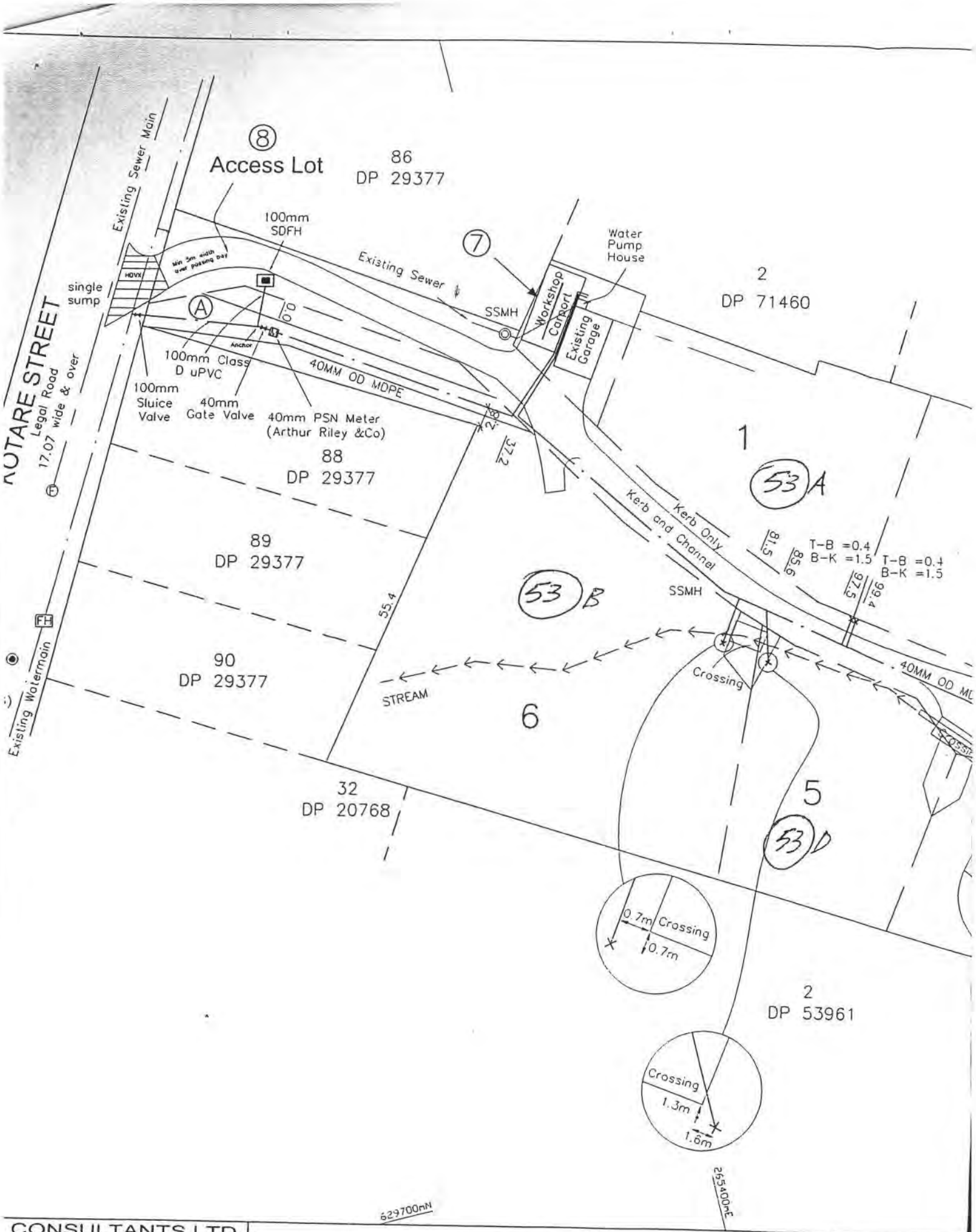
CONSULTANTS LTD
LOPMENT + LAND SURVEYING
IAGEMENT + DEVELOPMENT MANAGEMENT

TELEPHONE (04) 902-6161
FACSIMILE (04) 902-6162
E_MAIL contactus@landlink.co.nz
WEB SITE www.landlink.co.nz

623700mN

2654000mE

53 KOTARE STREET
for PETER AND PRUE HAWKER



629700mN

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53 KOTARE STREET
for PETER AND PRUE HAWKER

Producer Statement

Stormwater Drains

Construction Review

Issued by NOEL HENDERSON DRAINLAYER. **Registration Number** 07209

To Kapiti Coast District Council

In respect to the following

Stormwater Drains installed in accordance with E1 AS1 as shown on the approved plans or as per the attached amended plan

Installed at 53D KOTARE ST WAIKANAE.

Building Consent No 041339

As a registered drainlayer, currently holding an annual practicing license, certify that I, or personnel under my control, have carried out the installation of the above system and I believe on reasonable grounds that the installation complies with the New Zealand Building Code.

Signed ..... **Date** 29/7/05

Note: Fully dimensioned as built drain plan to be supplied. (scale 1:100)

Producer Statement

Piped Services
&
Sanitary Plumbing Stacks

Construction Review

Issued by KLEE PLUMBERS LTD **Registration Number** 00229

To Kapiti Coast District Council

In respect to the following

Piped Services installed in accordance with G12/AS1 as shown on the approved plans or as per the attached amended plan and Sanitary Plumbing Stacks installed in accordance with G13/AS1 or AS/NZS 3500.2.2

Installed at 53 KOTARE ST

Building Consent No.....

As a Craftsman plumber, currently holding an annual practicing license, certify that I, or personnel under my control, have carried out the installation of the above system and I believe on reasonable grounds that the installation complies with the New Zealand Building Code. Both hot and cold systems have been pressure tested for a period of 15 minutes at a pressure of 1500 kPa.

Signed.....**Date** 22/7/05

Producer Statement

Private Sewer Drains

Construction Review

Issued by Noel Henderson DRAINLAYER **Registration Number** 07209

To Kapiti Coast District Council

In respect to the following

Private Sewer Drains installed in accordance with G13 AS2 or AS/NZS 3500 .2.2 as shown on the approved plans or as per the attached amended plan

Installed at 530 ROTAPE ST WAIKANAE

Building Consent No 041339

As a registered drainlayer, currently holding an annual practicing license, certify that I, or personnel under my control, have carried out the installation of the above system and I believe on reasonable grounds that the installation complies with the New Zealand Building Code.

Signed ..... **Date** 29/7/05

Note: ***Fully dimensioned as built drain plan to be supplied.(scale 1:100)***

Drains may be laid and backfilled without inspection provided that the drain is left under test with a min of 1.0 m head and the inspection at the lateral left exposed.

APPLICATION FOR WATER SUPPLY AND CONNECTION PERMIT

The Borough Engineer
Private Bag
PARAPARAUMU

I, T+D. Jaques (full name)
PLEASE PRINT

c/o Tohay Homes P.O Box 54-162 (Postal a

hereby apply for an "ORDINARY" service to be laid from the Kapiti Borough Water Supply to the premises owned by me at:

(PROPERTY Address in full if different from above) 53d Kotare St

Lot 5 DP 310492

Fees Payable (on application)

Inspection $

Connection $

Total $ N/c

Note: All dwelling units to pay full inspection fees.

The connection fee to be divided equally between dwelling units situat on the same lot sharing a common late

Owners Signature Date

THIS PART TO BE COMPLETED BY PLUMBER

I, Sticklee (full name)

of (address)

being a Licensed Craftsman Plumber apply for permission to connect the above premises to the Kapiti Borough Water Supply. I agree to comply in every respect with the Kapiti Borough Water Supply By-l N.B. Connection NOT permitted until permit obtained.

(Signature) (Craftsman Licence No.) (Date)

1. Existing Water Supply ..... To be retained/dismantled
2. Pressure: high/low "Header Tank"/Pressure Reducing Valve
3. H/W Cylinder Type mewdwg Exhaust Pipe/Pressure Relief Valve
4. Approximate Age of Water Piping ..... Copper/PVC/Alkathene .....
5. If premises have swimming pool what capacity ..... Filter plant Yes/No
6. State precisely how it is proposed to make the new connection:

.....

OFFICE USE ONLY

Permit No.	Job Inspected	Building Register Entry
041339		
Date Issued	Connection Recored	
	NOV 05	

KAPITI COAST DISTRICT COUNCIL

APPLICATION FOR SEWER CONNECTION AND PERMIT

The Borough Engineer
Private Bag
PARAPARAUMU

I, T + N. Jaques (Full name)
PLEASE PRINT

c/o Tauhy Homes Ltd (Postal Address)

hereby apply for an ordinary connection to the Kapiti Borough Sewer from the premises owned by me at

(PROPERTY Address in full if different from above) 53d Kotare St

Lot 5 DP 310492

Fees Payable (on application)

Inspection $

Connection $

Total $ N/C

Note: All dwelling units to pay full inspection fees.
The connection fee to be divided equally between dwelling units situated on the same lot sharing a common lateral.

Owners Signature ..... Date .....

THIS PART TO BE COMPLETED BY DRAINLAYER

I, Axel Henderson (full name)

..... (address)

being a licensed Drainlayer apply for permission to connect the premises mentioned above to the Kapiti Borough Sewer.

N.B. Connection NOT permitted until permit obtained.

..... (Signature) ..... (License No.) ..... (Date)

OFFICE USE ONLY

Permit No.	Job Inspected	Building Register Entry
041339		
Date Issued	Connection Recored	
	NOV 05	

CERTIFIERS COPY

PLUMBERS, GASFITTERS AND DRAINLAYERS BOARD

GASFITTING CERTIFICATION CERTIFICATE
(Pursuant to the Gas Act 1992 and the Gas Regulations 1993 and amendments)

ENERGY WORK CERTIFICATE
(Pursuant to the Building Act 1991)

Certificate No **357478**

9th Floor, 70 The Terrace
PO Box 10655
WELLINGTON
Tel 04 494 2970
Fax 04 494 2975
website www.pgdb.co.nz

Installation address: (Box No's not acceptable) Please complete in block letters

(Number) 5/53 (Street name) KOTARE ST
WAIKANAE
(Suburb) KAPITI COAST

Customer: mr (Title) W T (Initials) JACQUES (Family/Business name)

Category: ☑ Domestic ☐ Commercial ☐ Industrial ☐ Temporary

Type (Regulation 24(1)): ☑ New ☐ Addition ☐ Extension ☐ Replacement ☐ Alteration

Gas Type: ☑ NG ☐ LPG ☐ TLP ☐ Bio

Name of Gas Supplier Genesis

Pipework Installed (attach pipework diagram) ☑ YES ☐ NO

DESCRIPTION OF GASFITTING TO WHICH THIS CERTIFICATE APPLIES

Qty	Appliance: Type	Appliance: Location	Appliance: Make/model	Input rate	Flue: Type / Location	Ventilation: Type / Location
1	Water heat	Hallway Cupboard	Rheem 170 Litre	35	N/B Thru roof	Grille infer complies
1	Space heat	Rinnai 308 family room	Rinnai 308FTR	13	Insulcavity Thru roof	Complies
1	Space heat	Lounge	Rinnai 431 FTR	18	Insulcavity Thru roof	Complies
1	Space heat	Study	Rinnai R800	8	unflued	Complies
1	Hob	Kitchen	F+P 4 burner	35	unflued	complies

Test Results

10 min Duration
7 kPa Test pressure
none kPa Loss / gain
2.5 kPa Working pressure
Test Date 12.7.05

Other Testing

Combustion ☑ Yes ☐ No
Ventilation ☑ Yes ☐ No

I certify that :-

- All appliances and fittings worked on by me or by persons working under my supervision are safe and that all work carried out was in accordance with all applicable requirements of the Gas Act 1992 and Gas Regulations 1993 as amended.
- The gasfitting to which this certificate applies does not make other parts of the installation unsafe or otherwise non-compliant with the Gas Act 1992 and Gas Regulations 1993 as amended.
- Gasfitting work to which this certificate applies ☐ **does** ☑ **does not** include work on an appliance or fitting imported or manufactured by a person for their own use.

Certifiers Name Graham Sharrock
Address PO Box 656 Paraparaumu

Registration No. 15044
Signature [signature]
Date 12.7.05

Registered Gasfitter/s Supervised by certifier

Name Hugh Bloodworth
Registration No 12038
Name
Registration No

Certificate owner Klee Plumbers
Registration No
On behalf of
Address
(If other than certifying gasfitter)

NZ Metal Roofing Manufacturers Inc

RESIDENTIAL WARRANTY & MAINTENANCE REQUIREMENTS FOR ROOFING & RAINWATER PRODUCTS

COLORCOTE®
PRE-PAINTED METAL PRODUCTS

PROPERTY OWNER: Jacques Residence

SITE ADDRESS 53 Katare Street Waikanae

PHONE NO: **DATE:** April 05

You have chosen high quality **COLORCOTE®** prepainted metal products for your building which are designed to give you protection well into the future. The terms and conditions of this warranty are detailed below. To ensure you gain maximum value from your investment over time, the minimum maintenance program specified below **MUST BE STRICTLY ADHERED TO:**

This warrants the following material: Styleline ZR8 .40 colour Karaka

Lift No: DP197487A

	Roofing		Cladding	
Will not perforate through corrosion:	30	Years	n/a	Years
Will not flake, peel or excessively fade:	18	Years	n/a	Years
	Fascia		**Gutter**	
Will not perforate through corrosion:	n/a	Years	n/a	Years
Will not flake, peel or excessively fade:	n/a	Years	n/a	Years

This roof was installed by: Tooby Homes Signature of Installer

And carries a workmanship warranty for: Years

Signature of property owner or agent:

COLORCOTE®

COLORCOTE® products will inevitably weather, chalk and fade over time as a result of normal wear and tear. The environmental classifications are described in AS/NZS 2728:1997, and are as summarised in the Atmospheric Environment Usage Guide published by Pacific Coilcoaters. Determination of coating performance will be as per test methods described in Australian Standard AS1580.

If any **COLORCOTE® ZR8™, ZRX™, AR8™ or ARX™** product fails to perform as warranted we will, at our sole option, repair or replace (including labour) the affected material.

Please note this warranty is subject to the following terms and conditions:

- This warranty will not apply to weathering, chalking or fading over time as a result of normal wear and tear.
- If the **COLORCOTE® ZR8™, ZRX™, AR8™ or ARX™** product has not been selected, processed or maintained in accordance with the published recommendations of Pacific Coilcoaters and accepted good trade practices, this warranty will not apply.
- If inappropriate fastenings are used this warranty will not apply.
- Defects caused by faulty design, or method of manufacture of residential buildings are not covered by this warranty.
- Garage doors are not covered by this warranty.
- Pacific Coilcoaters must be given the opportunity for inspection on site prior to any remedial action being offered or taken.
- The product must be manufactured from prime **COLORCOTE®** pre-painted metal products.
- Damage or corrosion resulting from the following is not covered by this warranty:
  1. Damage sustained during handling, storage, processing or installation.
  2. Damage sustained after installation.
  3. Damage caused after the product has left our control.
  4. Failure to remove debris leading to the accumulation of moisture retaining matter in gutters and downpipes.

Our liability under this warranty shall in all cases be limited to replacing or repairing the defective product as specified above including labour. Any repaired or replaced product will be covered by this warranty only for the unexpired portion of the warranty of the original product. Pacific Coilcoaters will not under any circumstances be liable for consequential loss or damage. All claims must be made promptly in writing and accompanied by the original warranty document. This warranty does not in any way affect the rights of a consumer under the Consumer Guarantees Act.

Minimum Maintenance Requirements

1. Washing of naturally unwashed areas every 6 months.
2. Removal of debris from gutters every 6 months.
3. Washing of any noticeable buildup of salty deposits and/or other contaminants are to be removed when identified.
4. When considering overpainting consult with your local distributor to ensure correct procedures are undertaken.

This Warranty is issued by: Dimond

Signed: S Barham
Position: Customer Services Rep
Date: 29 / 07 / 05

ELECTRICAL WORKERS REGISTRATION BOARD
Safety • Competency

EWRB 5

Electrical Certificate of Compliance

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

To be completed whether or not an Inspection is required.

No 1816092

No. of attachments

CUSTOMER INFORMATION - PLEASE PRINT CLEARLY

Name of customer: W.T + N.E JAQUES Phone:

Address of installation: 53 KOTARE ST WAIKANAE

Postal address of customer (if not as above):

WORK DETAILS

45 No. of lighting outlets

38 No. of socket outlets

Was any installation work carried out by the homeowner? ☐ Yes ☑ No

1 No. of ranges

GAS No. of water heaters

Please tick (✓) as appropriate where work includes:

☑ Mains ☑ Main earthing system

☑ Switchboard ☐ Electric lines

Description: NEW LOCKWOOD HOUSE. ELECTRICAL INSTALLATION, 16mm² 1Φ M/S MAINS (UNDERGROUND) OUTSIDE METER BOARD, INSIDE SUB BOARD, 3 BATHROOM EXTRACTOR FANS, 2 TOWEL OUTLETS, 2 BATHROOM HEATERS, RANGE HOOD & PUMP OUTLET.

If necessary attach any pages with sketches of work done

It is recommended that test results be recorded here:

- Visual Examination ☑
- Earth Continuity ☑
- Bonding ☑
- Polarity ☑
- Insulation Resistance 999 Mohm
- Other

CERTIFICATION OF WORK

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

ELECTRICAL WORKER DETAILS

Name	C.D. BUCK
Registration no.	I 2162.
Company	BUCK ELECTRICAL LTD
Signature	
Date	10/6/05.
Contact Ph No.	027 4425585.

CERTIFICATION OF ELECTRIC LINES

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

Name	
Registration no.	
Company	
Signature	
Date	
Contact Ph No.	

INSPECTION DETAILS

Electrical work requiring inspection by a registered electrical inspector

☑ New mains ☑ Switchboard ☑ Earthing system ☒ Installation work in hazardous areas

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

Name	AJ STILLINGWERF
Signature	
Registration no.	I 2866
Date	10.6.05.
Contact Ph No.	

TO BE RETAINED BY THE WORKER RESPONSIBLE FOR CERTIFYING THE WORK

P.I.M. No. 041339
Building Regulation Clause(s) B1

PRODUCER STATEMENT – PS4 – CONSTRUCTION REVIEW

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

ISSUED BY: D. N. UNDRILL
(Suitably qualified Design Professional)

TO: T. JAQUES
(Owner)

TO BE SUPPLIED TO: KAPITI COAST DISTRICT COUNCIL
(Territorial Authority)

IN RESPECT OF: NEW HOUSE
(Description of Building Work)

AT: 53 D. KOTARE ST
WAIKANAE
(Address)

LOT ..... **DP** ..... **SO** .....

UNDRILL (Design Firm) has been engaged by TIMBY HOMES (Owner/Developer/Contractor)

to provide DESIGN & OBSERVATION (Extent of Engagement) services

in respect of clause(s) B1, of the Building Regulations 1992 for the building work described by the drawings and specifications prepared by TIMBY HOMES (Design Firm)

titled JAQUES and numbered 1-12 DATED 17-8-2004

Authorised variation(s) No. — (copies attached) have been issued during the course of the works. I have sighted Building Consent No. 041339 and the attached conditions of building consent. As an independent design professional covered by a current policy of Professional Indemnity Insurance to a minimum value of $1,000,000, I or personnel under my control have carried out periodic reviews of the work appropriate to the engagement and based upon these reviews and information supplied by the contractor during the course of the works

I BELIEVE ON REASONABLE GROUNDS that ☑ All ☐ Part only as specified in the attached particulars of the building work under the above Building Consent with respect to Clause(s) B1 of the Building Regulations 1992 has been completed to the extent required by that Building Consent.

..... Date 29-7-2005
(Signature suitably qualified Design Professional)

.....BE (Civil), MIPENZ (Structural), CPEng..... CPEng.No: ...27756.....
(Professional Qualifications)

Member ACENZ ☐
IPENZ ☐ ☐ NZIA

.....18 Hathaway Avenue, LOWER HUTT.....
(Address)

This form to accompany Form 6 of the Building Regulations 1992 for the issue of a Code Compliance Certificate.

KAPITI COAST
DISTRICT COUNCIL

SITE INSPECTIONS - BC 041339

Application Details

Applicant Name :	T and N Jaques
Contact Address :	c/- Ross Kerry Tuohy Homes Ltd PO Box 54-162
Location :	53D KOTARE STREET, WAIKANAE
Legal Description :	LOT 5 DP 310492 - HAVING 1/6SH IN LOT 8 DP 3104
Proposal :	New Dwelling

INITIAL INSPECTION

COMMENTS

Tick (✓) approved inspections Cross (x) inspections not approved Strike out inspections not applicable

WORK CANNOT PROCEED PAST EACH STEP UNTIL THAT STEP HAS BEEN INSPECTED, APPROVED AND THIS FORM SIGNED BY THE RELEVANT INSPECTOR

FOUNDATIONS

Date: ..... Officer: ..... Builder/Contractor/Owner: .....

Approved building consent documents on site: (YES) / NO

SITING: AS PER SITE PLAN

Front yard	☐	Left hand side yard	☐	Conforms with approved plan	YES / NO
Rear yard	☐	Right hand side yard	☐	If no, has new site plan been requested	YES / NO

Minimum floor level	☐	Footing size	☐	Foundation wall reinforcing	☐
Pile hole size	☐	Footing reinforcing	☐	Foundation wall size	☐
Anchor pile size	☐	Subfloor vents	☐	Specific design	YES/NO
Pile hole spacing	☐	Steps/stairs	☐	If yes, has Engineer inspected	YES/NO

Has a **Site Instruction** been issued? Yes/No Instruction No: .....

Is a reinspection required? Yes/No Proposed date of follow up inspection .....

Labels in place? Yes/No Producer Statement Yes/No/NA

COMMENTS ENGINEER SUPERVISING REPORT REQUIRED

BM 23/11/04 FRONT FOUNDATIONS ONLY: STEEL IN PLACE AS REQUIRED. OK. TO CONTINUE

IN SINGLE POUR WITH SLAB

BM 29/11/04 FOUNDATIONS FOR BLOCK WALL & SLAB THICKENINGS FOR SUPPORT COLUMNS. IN PLACE WITH DIA STEELAS PER ENGINEERS PLANS & SPECS. ENGINEER VISITED SITE BM

BM 20/12/04 PILES IN PLACE FOR REAR DECK etc AS PER PLAN OK TO CONTINUE BM

Tick (✓) approved inspections Cross (x) inspections not approved Strike out inspections not applicable

PRE-SLAB

PLUMBING AND DRAINAGE:

Date: ..... Officer: ..... Builder/Contractor/Owner: G. KEE

UNDERSLAB PLUMBING		UNDERSLAB DRAINAGE	
Pipe sizes	☐	Pipe sizes	✓ ☐
Falls	☐	Falls	✓ ☐
Pipe protection	☐	Pipe protection	✓ ☐

Has a **Site Instruction** been issued? Yes/No Instruction No: .....

Is a reinspection required? Yes/No Proposed date of follow up inspection .....

Labels in place? Yes/No Producer Statement Yes/No/NA

COMMENTS AMENDED GROUND FLOOR. ASBUILT DRAINAGE PLAN REQUIRE 100mm P.V.C. PIPE IN PLACE UNDER SLAB AS PER REQUIREMENTS & TO FITTINGS AS SHOWN ON PLAN.

23/11/04

Tick (✓) approved inspections Cross (x) inspections not approved Strike out inspections not applicable

PRE-BLOCKFILL

7/12/09

COMMENTS BLOCKS IN PLACE AS PER ENGINEERS DESIGN WITH STEEL IN PLACE AS REQUIRED, & CLEAR TO FILL.
ENGINEER VISITED SITE, REPORT REQUIRED

Tick (✓) approved inspections Cross (x) inspections not approved Strike out inspections not applicable

PRE-SLAB

BUILDING

Date: 29/11/04 Officer: BC/ML Builder/Contractor/Owner: TONY LOCKWOOD

Minimum floor level	☑	Mesh	☑
DPC	☑	Mesh chairs	☑
Joints taped	☑	Slab thickening	☑
~~Penetrations~~	☐	~~Bottom plate fixings~~	☐

Specific design (Yes) / ~~No~~

If yes, has Engineer inspected (Yes) / ~~No~~

Has a **Site Instruction** been issued? ~~Yes~~ (No) Instruction No: .....

Is a reinspection required? ~~Yes~~ (No) Proposed date of follow up inspection .....

Labels in place? (Yes) / ~~No~~ Producer Statement ~~Yes~~ / (No) / ~~NA~~

COMMENTS ENGINEER VISITED SITE, REPORT REQUIRED

D.P.C. & MESH IN PLACE AS REQUIRED. BMC

EXTERIOR CLADDING

Solid Plaster/Textured Finish

Date: ..... Officer: ..... Builder/Contractor/Owner: .....

Rigid backing	☐	Reinforcement	☐
Non rigid backing	☐	Spacers	☐
Building paper	☐	Nailing (Hardies)	☐
Battens (non rigid)	☐	Flashings	☐
Cavity (non rigid)	☐	Control joints	☐
Sheet set out (Hardies)	☐		

Has a **Site Instruction** been issued? Yes/No Instruction No: .....

Is a reinspection required? Yes/No Proposed date of follow up inspection .....

Producer Statement Yes/No/NA

COMMENTS

_____

_____

_____

_____

_____

_____

Tick (✓) approved inspections Cross (x) inspections not approved Strike out inspections not applicable

BC 041339

BRICK VENEER

COMMENTS

9/6/05 PRE-BRICK CHECK, INTERNAL CORNER FLASHINGS REQUIRED & CRACK POOR REPAIRS. RECHECK REQUIRED.

13/6/05 RECHECKED ABOVE PLUS BRICK TIES & CAVITIES CLEAR WITH WASHOUTS LEFT. OK TO CONTINUE

Tick (✓) approved inspections Cross (x) inspections not approved Strike out inspections not applicable

PRELINE

PLUMBING AND DRAINAGE: Plumber: .....

Date: ..... Officer: ..... Builder/Contractor/Owner: .....

Pressure test	☐	Joint strain	☐
Visual leak check	☐	Pipe insulation	☐
Pipe support/clips	☐	Stacks	☐
Pipe size	☐	Wastes	☐
Pipe material	☐	Supply tank	☐

Has a **Site Instruction** been issued? Yes/No Instruction No: .....

Is a reinspection required? Yes/No Proposed date of follow up inspection .....

Preline Labels in place? Yes/No Producer Statement Yes/No/NA

COMMENTS

BM 27/5/05 S.S. DRAIN TESTED & FREEFLOWING THROUGH LATERAL TO MAIN BMT
S/WATER DRAIN TO BUBBLE UP TO SUPPLY TANK FROM SW SUMP.
BM 3/6/05 RECHECKED ABOVE NOW ALL COMPLETED BMT

BUILDING Lower level only (standard backwood construction on top floor).

Date: 19/5/05. Officer: Mike Mannix ..... Builder/Contractor/Owner: .....

Timber treatment	✓	~~Bracing straps~~ N/A	
Ceiling ~~diaphragm~~		Timber grade	✓
~~Dragon ties~~		Wall dwangs	✓
Studs - size/spacing	✓	Trimming studs	✓
Wall insulation	✓	~~Truss/rafter - fix/space~~ N/A	
Posts - size/fixing		~~Ceiling joists~~ N/A	
Lintels/bms - size/fixings	✓	Plate fixings	✓
Ext joinery - labels	✓	Ventilation	✓
~~Ceiling runners~~		~~Ceiling battens~~ N/A	
Wall bracing	✓	Check exterior claddings	✓
Mech ventilation	✓		
Moisture Content Walls	< 20 %	Ceiling	%

Has a **Site Instruction** been issued? Yes/~~No~~ Instruction No: .....

Is a reinspection required? Yes/~~No~~ Proposed date of follow up inspection .....

Preline Labels in place? Yes/~~No~~ Producer Statement Yes/No/NA

COMMENTS

All ok, polystyrene sheets used between battens on concrete masonry walls.

SEE FILE NOTE RE DECK BALUSTRADE.

Tick (✓) approved inspections Cross (x) inspections not approved Strike out inspections not applicable

POSTLINE

Date: ..... Officer: ..... Builder/Contractor/Owner: .....

Sheets nailed as per your schedule ☐ Insulation to walls ☐

Has a **Site Instruction** been issued? Yes/No Instruction No: .....

Is a reinspection required? Yes/No Proposed date of follow up inspection .....

Postline Label in place? Yes/No

COMMENTS

_____

_____

_____

_____

_____

_____

_____

Tick (✓) approved inspections Cross (x) inspections not approved Strike out inspections not applicable

DRAINS

Drainlayer: .....

Date: ..... Officer: .....Builder/Contractor/Owner: .....

Drain depth	☐	Gully traps	☐
Subsoil drains	☐	Granular bedding	☐
Pipe material	☐	Terminal vents	☐
Disposal field	☐	Even gradient/line	☐
Drains under building	☐	Soil stack	☐
Connection to main	☐	Manhole - haunching	☐
Pipe supports	☐	Inspection/bends	☐
Manhole - structure	☐	SW to kerb	☐
Lamp holes	☐	Sumps	☐
Drain test	☐		

Has a **Site Instruction** been issued? Yes/No Instruction No: .....

Is a reinspection required? Yes/No Proposed date of follow up inspection .....

Producer Statement Yes/No/NA

COMMENTS

Tick (✓) approved inspections Cross (x) inspections not approved Strike out inspections not applicable

BD MC 28/7/05

FINAL INSPECTION

Building Exterior — **CHECK PLANS** ✓

~~Subfloor - ventilation~~ ✓	Flashings - roof penet ✓	Gulley dishes ✓
Decks - structure ✓	hips ✓	~~Wastes to gullys~~
Balustrades - design ✓	valleys ✓	Terminals vents ✓
height ✓	gables ✓	Spouting - Downpipes ✓
~~Steps/Stairs - design~~	flues ✓	Landscaping & ground levels ✓
~~handrail~~	Cladding (ground clearance) ✓	~~Texture Coating Warranty~~
Flashings - windows ✓	Roofing & Fixings ✓	
	✳(roofing warranty) X	

Building Interior — **CHECK FITTINGS** ✓

Service area floors & walls ✓	Food storage ✓	✳Water temperature 57° ✳
Stair design ✓	Nat. ventilation ✓	~~Solid fuel heater~~ GAS. x2 ✓
✳ Handrails ✳	Mech. Ventilation ✓	Supply tank 1500 L ✓
Barriers ✓	Insulation ✓	Trap seals & AA Valves ✓
✳ Lightings ✳	Hot water cylinder flues ✓	Cistern flushing ✓
Laundering ✓	Hot water cylinder valves ✓	WC pan connection ✓
Cooking facilities ✓	Hot water cylinder rest ✓	~~Septic Tank~~ .
	Tempering valve ✓	(~~engineers inspc report~~)
		Windows - labels NOLOOK LOCKWOOD ✓
		Safety glass ✓

Footpath crossing installed Yes/No — Berm damaged Yes/No

Refund crossing deposit Yes/No — Engineering site reports required Yes/~~No~~ PS4

Stormwater & site drainage appear satisfactory Yes/~~No~~ — Engineering site reports received Yes/No TO FOLLOW

Has a Site Instruction been issued? Yes/No NTR Instruction No. ...VERBAL.....

Producer Statement Yes/~~No~~/~~NA~~

OK to issue final code compliance certificate. Yes/~~No~~

If an interim certificate is issued please list proposed conditions on the reverse of this form.

Is a reinspection required? Yes/No Proposed date of follow up inspection ...ASAP.....

Comments:

~~GAS~~ CERTIFICATE
ELECTRICAL CERTIFICATE
~~ENGINEERS~~ SUPERVISION
PLUMBING & DRAINAGE PRODUCER STATEMENT & AS LAID DRAWINGS
ROOFING WARRANTY

HANDRAIL TO REISTATE
WATER TEMPERATURE TO BE 55° (NOW ALL COMPLETED)

BD MC 29/8/05

ISSUE CCC

Tick (✓) approved inspections — Cross (x) inspections not approved — Strike out inspections not applicable

Costing Sheet Minor Work & Residential New Dwellings

Application No: 041339	Admin = $45 per hour	Engineering
Date: 17-9-09	Plan Vetting = $70 per hour	Technical Assessment/Peer Review
Site Address: 53D Kotare St HAIKANAE	Inspections = $65	Cost + 10%

	Classification	Plan Vetting				Consultants			Inspections					Set Fee Portion of Consent Fee	PIM Portion Of Consent Fee	Total Fee Excluding BRANZ, BIA Levies & Refundable Damage Deposits	To (A PI
		Plumbing	Drainage	Building	E health	District Plan	Fire	Engineering	Site	Plumbing	Drainage	Building	E Health				
1	Solid Fuel Heater													$45	Nil	$110	
2	Plumbing Work													$45	$68	$175	
3	Drainage Work													$45	$68	$175	
4	Sheds/Retaining Walls/Carports													$144	$130	$307	
5	Decks/Swimming & Spa Pools Conservatories/Pergolas & Other Minor Works													$144	$130	$298	
6	Minor Farm Buildings													$144	$130	$372	
7	Proprietary Garages, Standard													$189	$130	$482	
8	Proprietary Garages, with Firewall													$189	$130	$549	
9	Garages, Custom Design													$189	$130	$617	
	Residential New Dwellings																
10	Single Story Brick Veneer													$420	$165	$1378	
11	Single Story Weatherboard													$420	$165	$1443	
12	Single Story Stucco/Texture Coating/Ply/Steel/Block													$420	$165	$1573	
13	Multi Story Brick Veneer													$740	$165	$1838	
14	Multi Story Weatherboard													$740	$165	$1903	
15	Multi Story Stucco/Texture Coating/Ply/Steel/Block													$740	$165	$2033 − 28.50 = 2004.50	
30	Relocated Residential Dwellings													$281	$165	$749	

Note. Double Units charged at Single Unit Rate plus 50%
Dwellings with Multiple Cladding Types Charged at Stucco/Texture Coating/Ply/Steel/Block rate

CONSENT DATA INPUT REQUIREMENTS

REQUIRED INSPECTIONS	STANDARD ADDENDA			
14 ✓	32	✓	21	✓
1 ✓	2	✓	22	
17	3	✓	23	
7 ✓	4	✓	23A	
16 ✓	5		24	✓
2 ✓	6		24A	
3	7	✓	25	
22 ✓	8		26	
20	8A		27	
18 ✓	8B	✓	28	✓
19 ✓	9		29	
4 ✓	10		30	
8 ✓	11		31	
5 ✓	12		33	
15 ✓	13		34	
10 ✓	14		38	✓
	15		39	
	16		40	
	17		41	
	18		42	
	19		43	
	20		44	

STANDARD CONSENT CONDITIONS
35
36
37

NON STANDARD ADDENDA

KAPITI COAST DISTRICT COUNCIL

Building Consent

Section 35, Building Act 1991

Application

T and N Jaques c/- Ross Kerry Tuohy Homes Ltd PO Box 54-162	No. Issue date Application date	041339 17/11/04 17/09/04

Project

Description	New (& prebuilt) House, Unit, Bach, Crib, Town House etc. Being Stage 1 of an intended 1 Stages New Dwelling
Intended Life	Indefinite, but not less than 50 years
Intended Use	Residential
Estimated Value	$350,000
Location	53D KOTARE STREET, WAIKANAE
Legal Description	LOT 5 DP 310492 - HAVING 1/6SH IN LOT 8 DP 310492 BEING 1292M2
Valuation No.	1496060805

Builder:	Tuohy Homes Ltd
Designer:	Tuohy Homes Ltd
Drainlayer:	N.B. Henderson
Plumber:	Klee Plumbers

Charges

The Council's charges paid on uplifting this Building Consent, in accordance with the attached details are:

	$	2,433.00
Building Research Levy	$	350.00
Building Industry Authority Levy	$	227.50
Total	$	3,010.50

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 is not a consent under the Resource Management Act and does not affect any duty or responsibility under any other Act nor permit any breach of any other Act.

Signed for and on behalf of the Council:

Name: **Date:** 17-11-04

Addenda to Application

Application

T and N Jaques c/- Ross Kerry Tuohy Homes Ltd PO Box 54-162	No.	041339

Project

Description	New (& prebuilt) House, Unit, Bach, Crib, Town House etc. Being Stage 1 of an intended 1 Stages New Dwelling
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Legal Description	LOT 5 DP 310492 - HAVING 1/6SH IN LOT 8 DP 310492 BEING 1292M2
Valuation No.	1496060805

Builder:	Tuohy Homes Ltd
Designer:	Tuohy Homes Ltd
Drainlayer:	N.B. Henderson
Plumber:	Klee Plumbers

General Requirements

a) The District Inspector is to be given 24 hours' notice before carrying out the following inspections:

1. Initial inspection - previously completed
2. Foundation Inspection
3. Pre-concrete slab inspection of plumbing
4. Pre-block-fill inspection
5. Pre-slab Inspection, concrete floor
6. Other external cladding inspection
7. Brick veneer inspection
8. Prelining Inspection, moisture test, check bracing
9. Post-lining inspection, linings, fixed as per brace design
10. Completion inspection
11. Water test on sewer drains

b) To arrange for any of the above required inspections by the District Inspector, please contact the building inspectorate on (04) 298 5139 between the hours of 8.00am and 4.30pm.

2	Addenda to Application 041339

1. LAPSE AND CANCELLATION OF BUILDING CONSENT. A building consent shall lapse and be of no effect if the building work concerned has not been commenced within 6 calendar months after the date of issue. Or within such further period as the territorial authority allows.
2. The inspection of all specific design components of the building is the responsibility of the Design Engineer who is also required to supply a written report to Council.
3. All foundations are to be to solid bearing minimum of 300mm
4. NZS3604 is an Acceptable Solution in terms of the New Zealand Building Code and is a recommended reference document for timber framed buildings.
5. Fit head, jamb, sill flashings and proprietary sill tray to external joinery. Fit airseals to the inside edges of the window reveals.
6. Note and comply with endorsements on approved plans.
7. Minimum heights of finished concrete slab-on-ground floors above adjoining finished ground level to comply with the current NZS3604.
8. Section F7 of the New Zealand Building Code requires the installation of an approved smoke alarm system for detection and warning of fire. Alarms are to be of a type which include a reset and test buttons.
9. Provide from your Contractor a warranty covering the roof and fascia gutter system, including product, design and installation.
10. Restrictor stays, limiting sash opening to max 100mm must be fitted wherever sill height is less than 760mm and the difference in levels are 1 metre or greater. Refer F4.NZBC

I have read the foregoing addenda to application, and the Owner/Builder/Authorised Person hereby agrees to comply with them.

OWNER/BUILDER/
AUTHORISED PERSON **Date:**

KAPITI COAST
DISTRICT COUNCIL

Building Control Services

Thank you for choosing KCDC Building Control Services to process and inspect your building project.
It is our aim to provide you with timely and professional building control services. We welcome any suggestions for improvements to the services we provide.

Ken Smith
Building Control Manager
Ph (04) 904 5855
Cell 027 4501509

COUNCIL COPY

Building Consent Number : 041339

Applicant Name : T and N Jaques

Proposal : New Dwelling

Location : 53D KOTARE STREET, WAIKANAE

Legal Description : LOT 5 DP 310492 - HAVING 1/6$H

Please note the list below which identifies the inspections required for this project. Whenever possible allow sufficient time to notify KCDC Building Control Services to enable those inspections to be carried out. You will notice some additional inspections which are extra to those commonly required. These are to ensure Compliance with the NZ Building Code and have benefits for you. They will be provided at no additional cost to you or your contractor.

Inspection	Required	Sign off	Date
Initial (previously completed)	Yes		
Foundation FRONT FOOTING 23/11/04	Yes PACK 20/12/04		
Sub floor pre b-boards (reloc)	No		
Pre slab plumbing	Yes		
Pre block fill	Yes		7/12/04
Pre slab NOT READY 29/11/04	Yes		29/11/04
Sub floor	No		
Exterior cladding (general)	Yes		
Pre texture coating	No		
Pre stucco	No		
Brick veneer PRE-CLAD 9/6/05	Yes		13/6/05
Pre lining	Yes		
Post lining	Yes		
Drain test S/WATER 3/6/05	Yes		S/SEWER 27/5/05
Completion 28/7/05	Yes		

2/11/2004

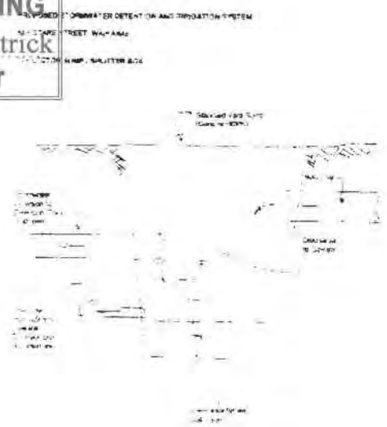
APPROVED BY BUILDING
Mark Fitzpatrick
Officer

CAUTION
Plans have been digitally reproduced and may not be to scale.

All references to standards and codes etc shall be taken as reference to latest version including amendments.

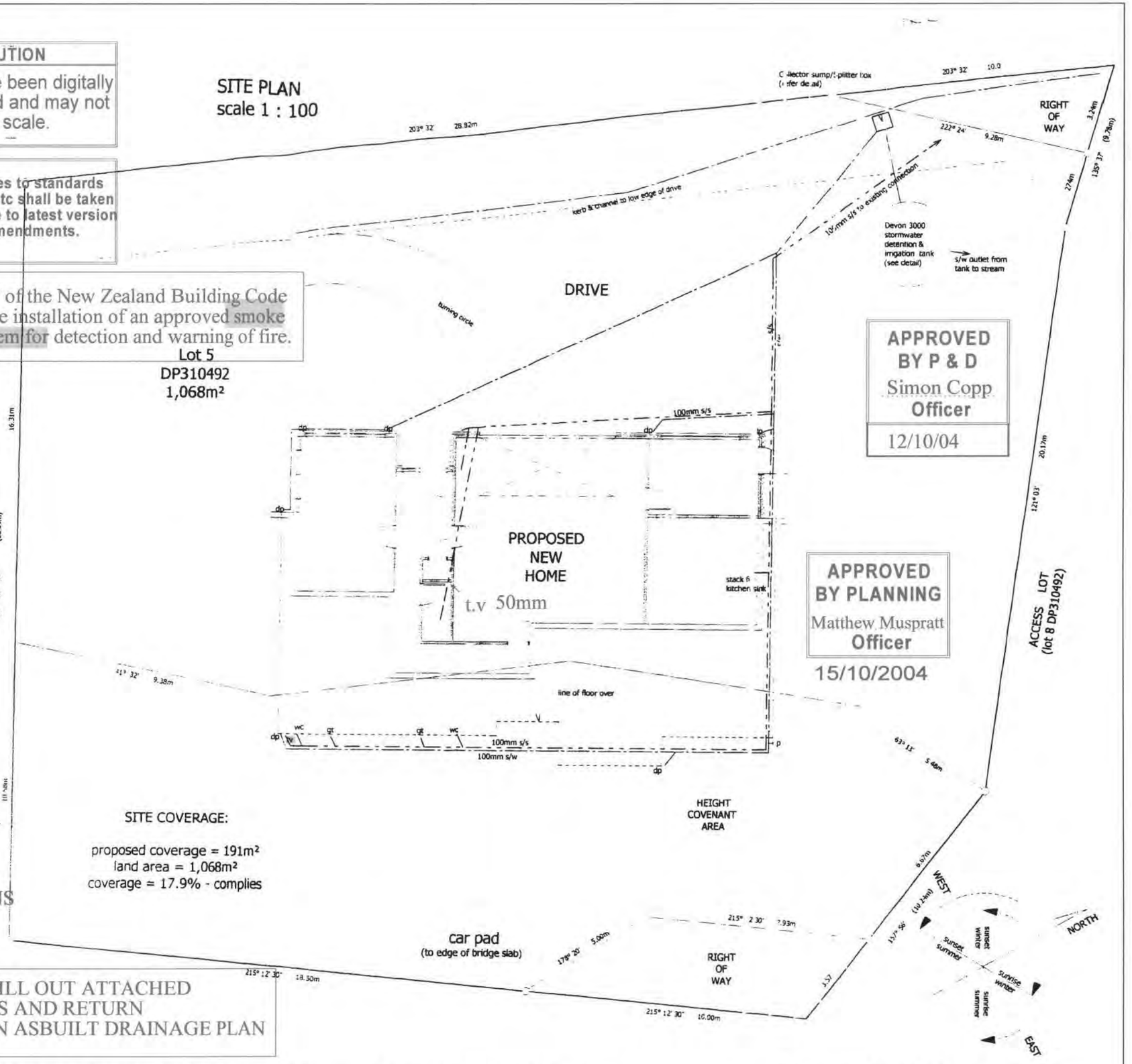
Section F7 of the New Zealand Building Code requires the installation of an approved smoke alarm system for detection and warning of fire.

SITE PLAN
scale 1 : 100



check with tank manufacturer,some plastic tanks can not be burried in anyway

Lot 5
DP310492
1,068m²



SITE COVERAGE:

proposed coverage = 191m²
land area = 1,068m²
coverage = 17.9% - complies

- CHECK P.I.M INFORMATION FOR SERVICE CONNECTIONS
- PROVIDED IN THE PLUMBING @ DRAINAGE PACK.

BUILDER TO ENSURE THAT PROPOSED FOUNDATION HEIGHT WILL ALLOW A SATISFACTORY DRAINAGE CONNECTION TO THE SEWER MAIN

PLUMBER / DRAINLAYER TO FILL OUT ATTACHED PRODUCER STATEMENT FORMS AND RETURN TO COUNCIL ALSO PROVIDE AN ASBUILT DRAINAGE PLAN

STANDARD LOCKWOOD CONSTRUCTION - refer to Lockwood Assembly & Detail Manuals

LOCKWOOD

Details:

Proposed New Lockwood Home for W.T & N.E Jaques
at 'RibbonWood', 53 Kotare St, Waikanae

Site Plan
Drainage Layout

Drawn: RJK

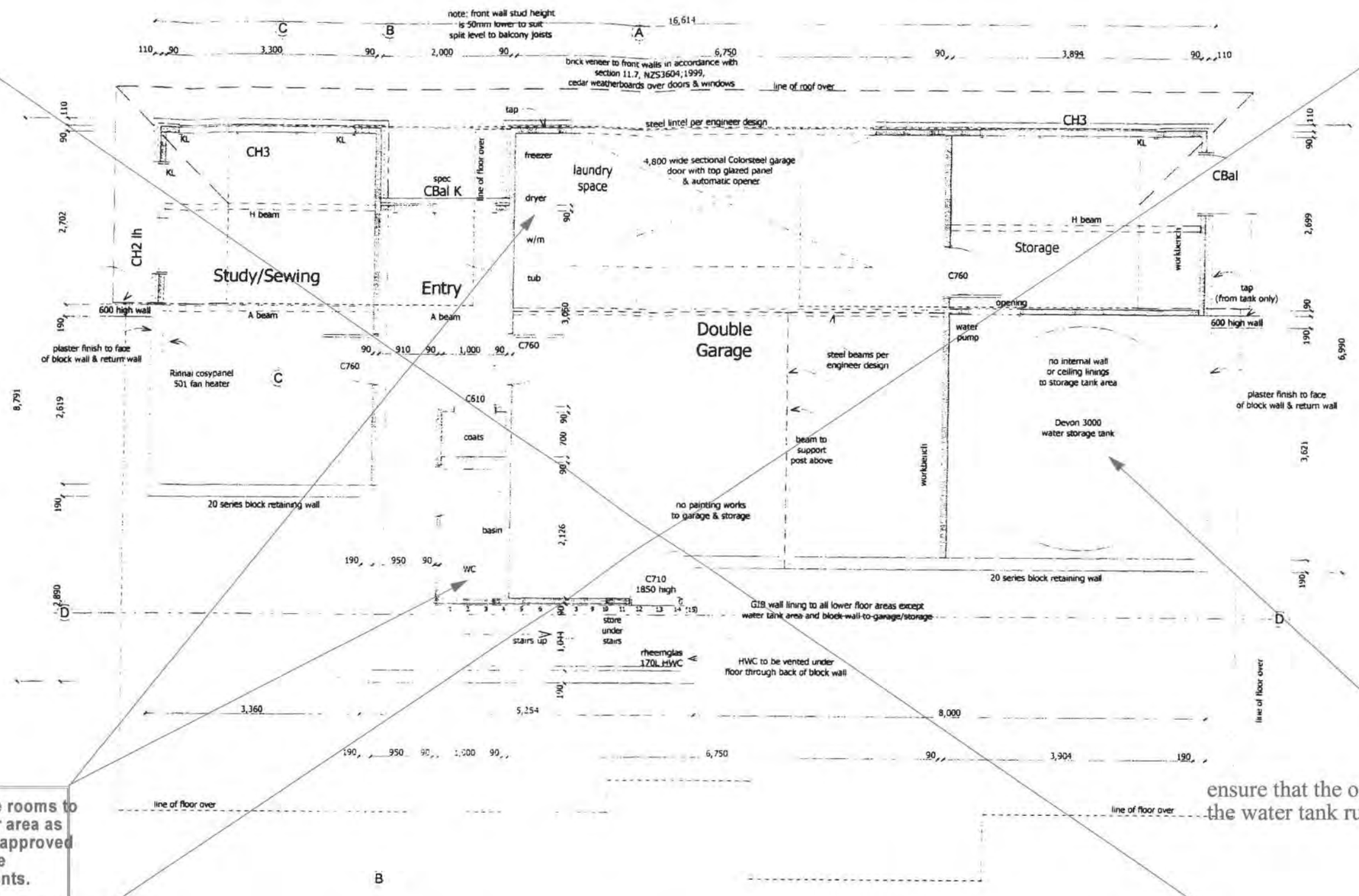
Scale : 1 : 100 @ A2
Date : 17/08/2004

Sheet # 1 of 12

2/11/2004

APPROVED BY BUILDING
Mark Fitzpatrick
Officer

APPROVED BY P & D
Simon Copp
Officer
12/10/04



All habitable / service rooms to have 5% of their floor area as opening windows or approved alternative, to achieve ventilation requirements.

ensure that the overflow from the water tank runs directly to the exterior

LOWER FLOOR PLAN
scale 1 : 50

Lower Floor Area = 117.28m²
Upper Floor Area = 155.30m²

Total House Area = 272.58m²

Total Balcony area = 19.94m²

Elevation Orientation

C
D B
A

PIPES TO BE INSPECTED BEFORE COVERING WITH SAND.

THL

STANDARD LOCKWOOD CONSTRUCTION - refer to Lockwood Assembly & Detail Manuals

LOCKWOOD

Details:

Proposed New Lockwood Home for W.T & N.E Jaques
at 'RibbonWood', 53 Kotare St, Waikanae

Lower Floor Plan

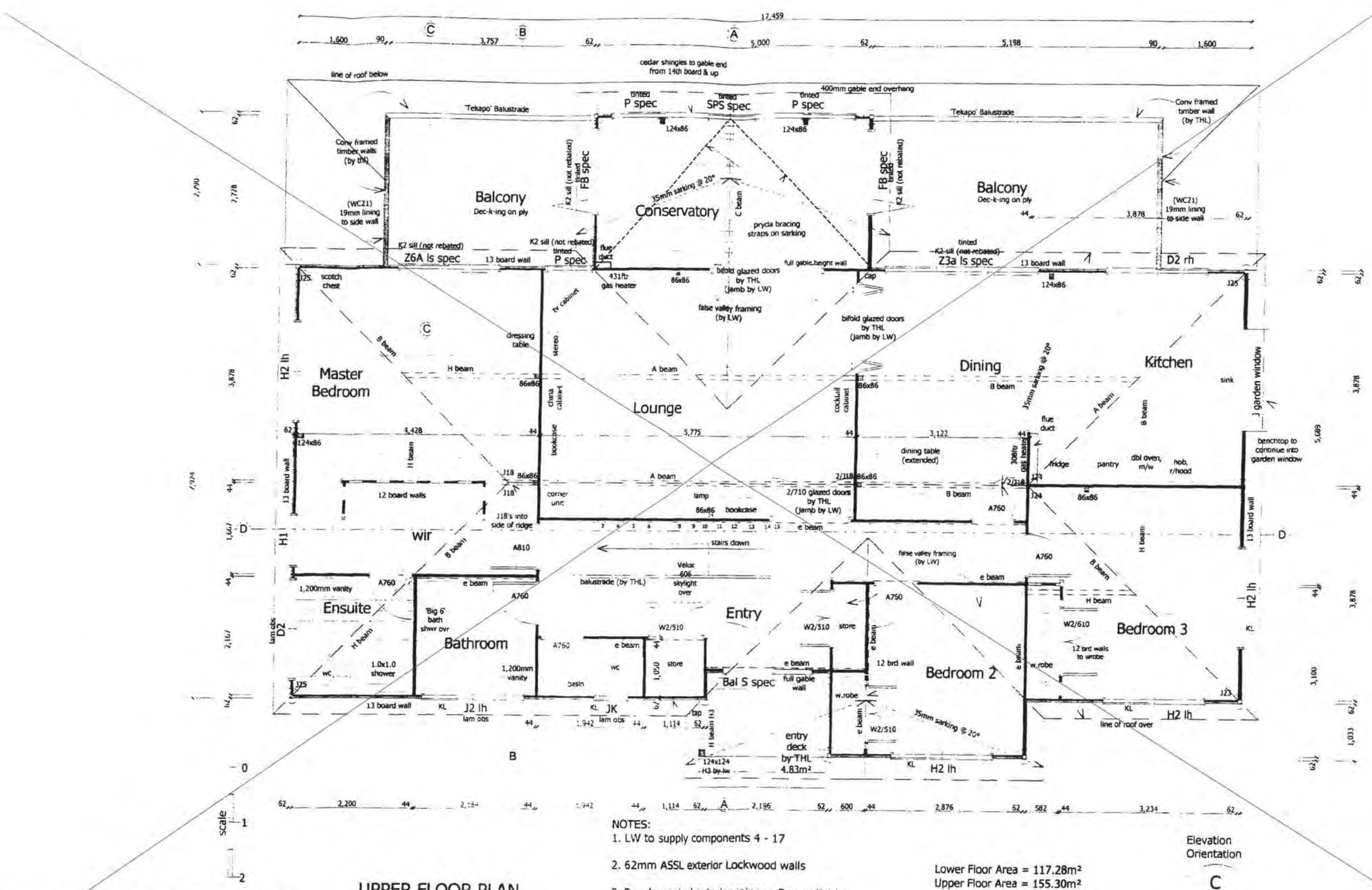
Drawn: RJK

Scale : 1 : 50 @ A2

Date : 30/08/2004

Sheet # 3 of 12

APPROVED
BY P & D
Simon Copp
Officer
12/10/04



NOTES:
1. LW to supply components 4 - 17

2. 62mm ASSL exterior Lockwood walls

3. Powdercoated exterior joinery. Bronze tint to dining, conservatory & dining windows.
"KL" = 1x lockable window catch

4. Longrun Colorsteel roofing on 35mm sarking (bitumous shingle on ply as optional cost)

Lower Floor Area = 117.28m²
Upper Floor Area = 155.30m²

Total House Area = 272.58m²

Total Balcony area = 19.94m²

Elevation Orientation

C
D B
A

UPPER FLOOR PLAN
scale 1 : 50

Lockwood construction is an 'Alternative Solution' in terms of the New Zealand Building Code.

Details not shown in these plan have been verified in the 'Lockwood 62mm Detail Manual' and/or 'Lockwood Designers Condensed Handbook July 1995', held in the Territorial Authority's reference library. To avoid unnecessary duplication, those documents have not been reproduced in these documents. The afore-mentioned Lockwood documents must be held on site during construction

WATER PIPES TESTED TO 1500KPA

STANDARD LOCKWOOD CONSTRUCTION - refer to Lockwood Assembly & Detail Manuals

LOCKWOOD

THL

Details:

Proposed New Lockwood Home for W.T & N.E Jaques
at 'RibbonWood', 53 Kotare St, Waikanae

Upper Floor Plan

Drawn: RJK

Scale : 1 : 50 @ A2

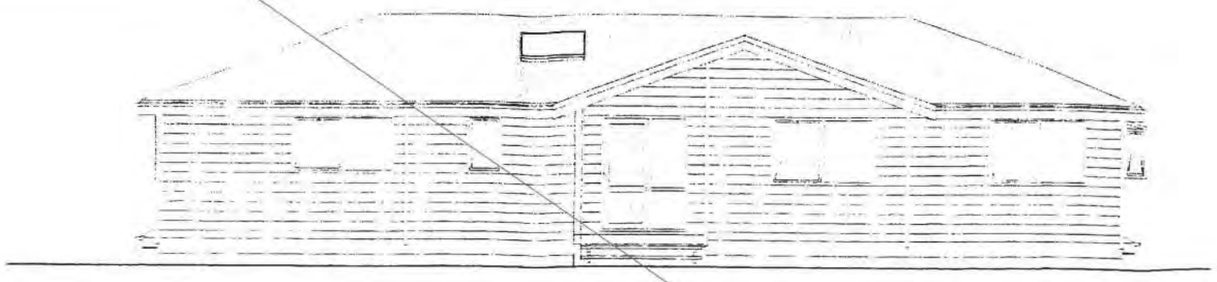
Date : 30/08/2004

Sheet # 4 of 12

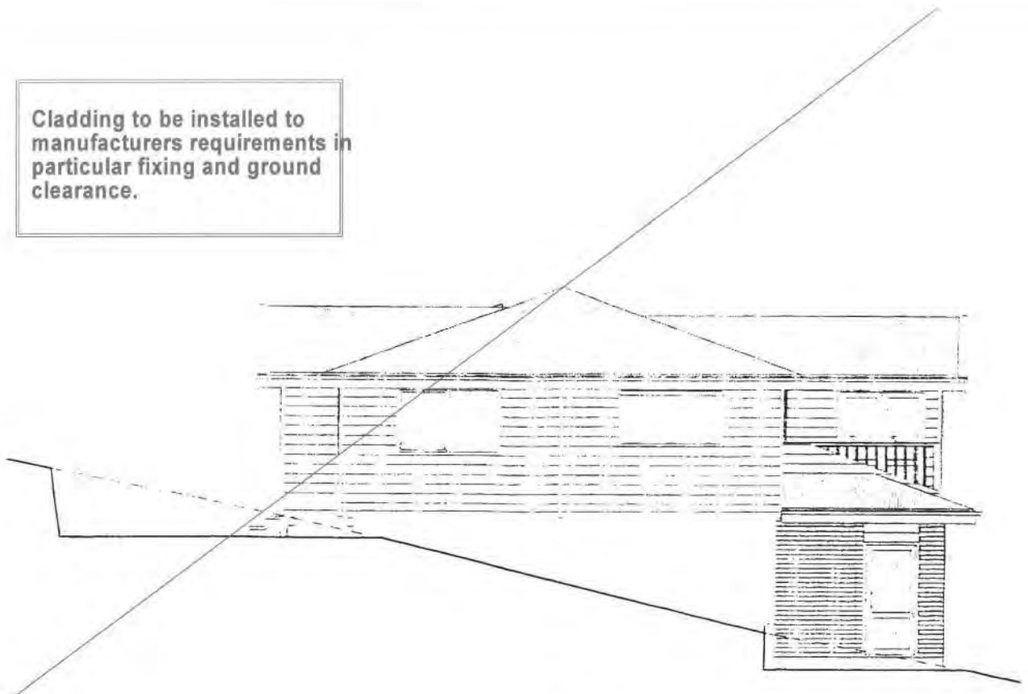
2/11/2004

APPROVED
BY BUILDING
Mark Fitzpatrick
Officer

Cladding to be installed to manufacturers requirements in particular fixing and ground clearance.



ELEVATION A
scale 1 : 75

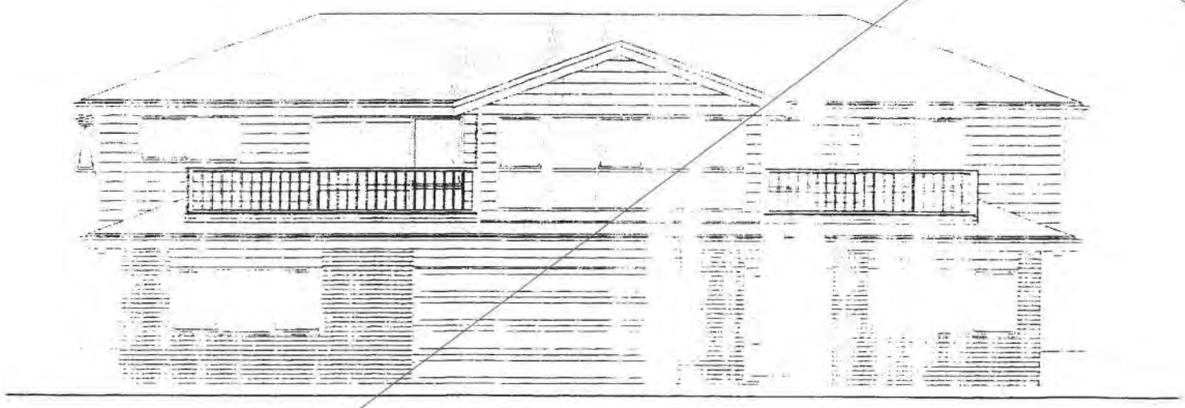


ELEVATION B
scale 1 : 75

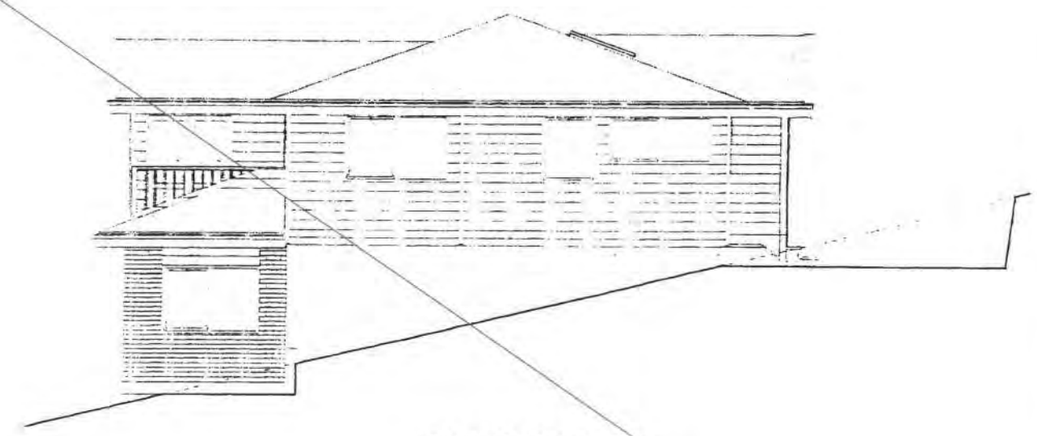
GLAZING CONFORM NZS 4223 PARTS 1, 2, 3.	
FIT SUITABLE FLASHINGS ETC. JOINERY	
HIGH WIND	1100pa DWP

APPROVED
BY PLANNING
Matthew Muspratt
Officer
15/10/2004

Note: Max cut depth for earthworks is 1.2 metres.



ELEVATION C
scale 1 : 75



ELEVATION D
scale 1 : 75

THL

STANDARD LOCKWOOD CONSTRUCTION - refer to Lockwood Assembly & Detail Manuals

LOCKWOOD

Details:

Proposed New Lockwood Home for W.T & N.E Jaques
at 'RibbonWood', 53 Kotare St, Waikanae

Elevations

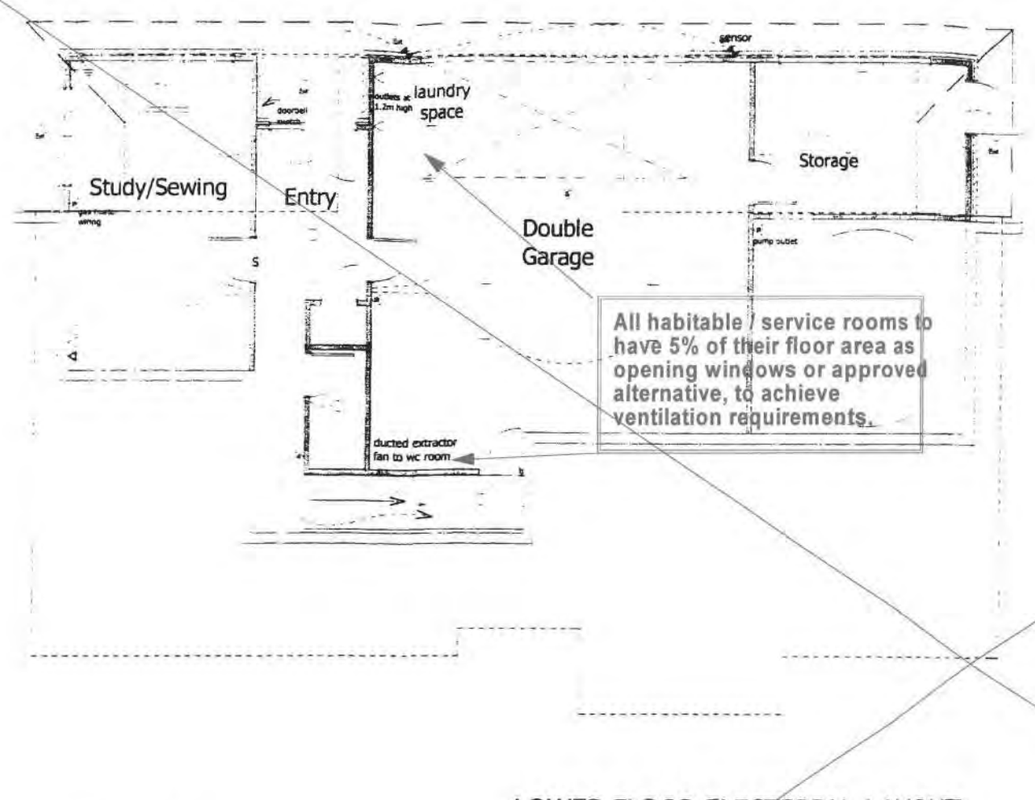
Drawn: RJK

Scale : 1 : 75 @ A2

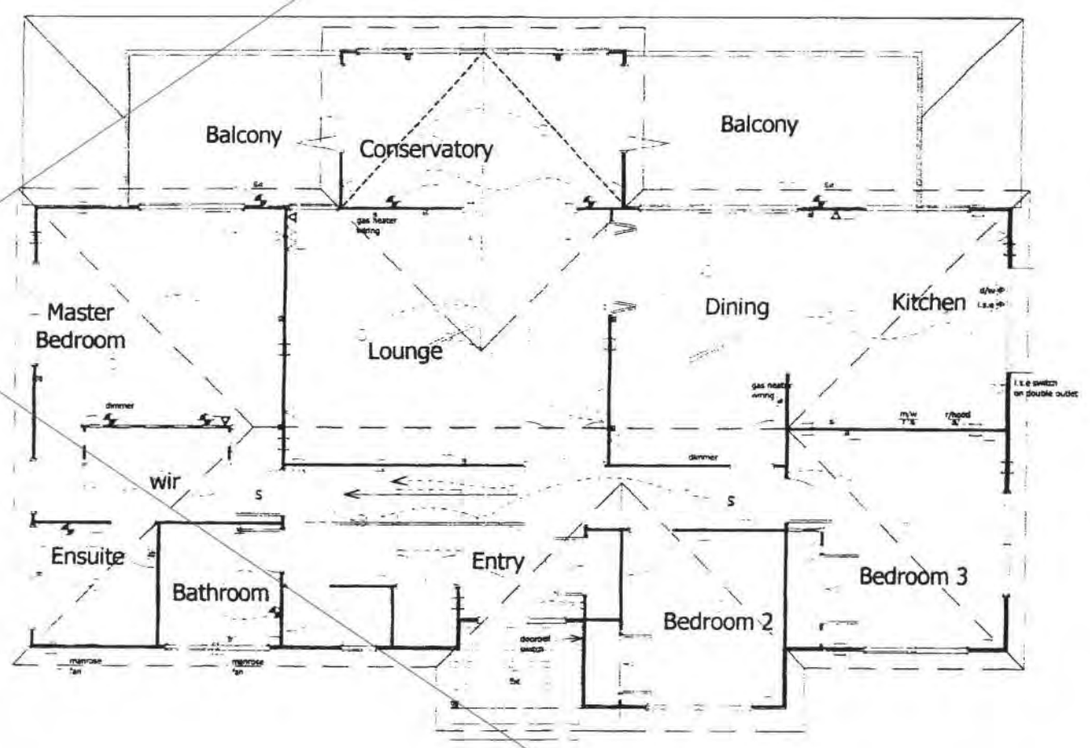
Date : 30/08/2004

Sheet # 5 of 12

APPROVED
BY P & D
Simon Copp
Officer
12/10/04



LOWER FLOOR ELECTRICAL LAYOUT
scale 1 : 50



UPPER FLOOR ELECTRICAL LAYOUT
scale 1 : 75

LEGEND:

- Double power outlet
- Telephone outlet
- Single power outlet
- Heater wiring only
- Range oven wiring
- Heated Towel rail
- Extra hole
- Auto door control
- Alarm keypad
- Television outlet
- 2x tube fluorescent light fitting (with diffuser)
- Ceiling mounted light
- Wall mounted light
- Halogen ceiling mounted light fitting
- Halogen wall mounted light fitting
- External watertight ceiling mounted light fitting
- External watertight wall mounted light fitting
- Meter board
- Switch Board
- S ceiling mounted smoke detector (battery operated)
- ceiling fan (WHITE)

Provide Electrical Certification after completion and prior to Code Compliance Certificate being issued

Recessed Downlights shall be installed to prevent transfer of moisture into ceiling spaces and maintain minimum clearances from insulation as required by NZECP 54:2001.

STANDARD LOCKWOOD CONSTRUCTION - refer to Lockwood Assembly & Detail Manuals

THL

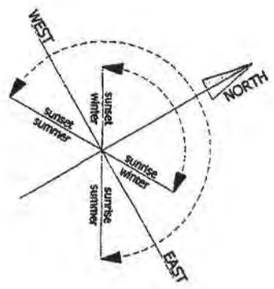
LOCKWOOD

Details:

Proposed New Lockwood Home for W.T & N.E Jaques
at 'RibbonWood', 53 Kotare St, Waikanae

Electrical Layout

Drawn: RJK
Scale : 1 : 75 @ A2
Date : 30/08/2004
Sheet # 8 of 12



SITE COVERAGE:

proposed coverage = 191m²
land area = 1,068m²
coverage = 17.9% - complies

SITE PLAN
scale 1 : 100

APPROVED
BY PLANNING
Matthew Muspratt
Officer
15/10/04
Note: Max cut depth for earthworks is ~~1.2 metres~~

DRIVE
turning circle
kerb & channel to toe edge of drive
RIGHT OF WAY
Lot 5
DP310492
1,068m²
PROPOSED NEW HOME
car pad
(to edge of bridge slab)
HEIGHT COVENANT AREA
(top floor over)
ACCESS LOT
(lot 8 DP310492)
203° 32' 28.62m
20° 32' 10.0
22° 24' 9.28m
3.24m
(9.78m)
135° 37'
27.74m
20.17m
122° 03'
16.31m
(26.89m)
300 23' 40"
41° 32' 9.38m
22° 53' 10.82m
38° 27' 10.41m
63° 13' 5.48m
10.58m
215° 12' 30" 7.93m
178° 30' 5.00m
215° 12' 30" 18.50m
215° 12' 30" 10.00m
137° 56' (10.26m)
6.67m
3.57

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Details not shown in these plan have been verified in the 'Lockwood 62mm Detail Manual' and/or 'Lockwood Designers Condensed Handbook July 1995', held in the Territorial Authority's reference library. To avoid uneccessary duplication, those documents have not been reproduced in these documents. The afore-mentioned Lockwood documents must be held on site during construction

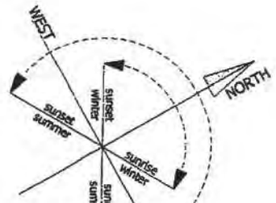
STANDARD LOCKWOOD CONSTRUCTION - refer to Lockwood Assembly & Detail Manuals

LOCKWOOD

T H L TUOHY HOMES LTD	Details: Proposed New Lockwood Home for W.T & N.E Jaques at 'RibbonWood', 53 Kotare St, Waikanae	Site Plan	Drawn: RJK	Scale : 1 : 100 @ A2 Date : 30/08/2004
				Sheet # 1 of 12

2/11/2004

APPROVED
BY BUILDING
Mark Fitzpatrick
Officer



CAUTION

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All references to standards and codes etc shall be taken as reference to latest version including amendments.

EARTHWORKS PLAN
scale 1 : 100

Contours shown to 1.0m intervals

Dimensions given are to toe of cuts

Section F7 of the New Zealand Building Code requires the installation of an approved smoke alarm system for detection and warning of fire.

DATUM
boundary peg
R.L. = 96.0m

batter front of fill (refer section)

form drive to 1 : 6 gradient

form 1:11.5 fall to top drive area

8.0m

compacted fill to form drive

existing bridge

RIGHT OF WAY

LOWER FLOOR PLATFORM
CUT AT 98.407m R.L.

UPPER PLATFORM (top floor over)
CUT AT 100.732m R.L.

approx 1.5m high cut,

RIGHT OF WAY

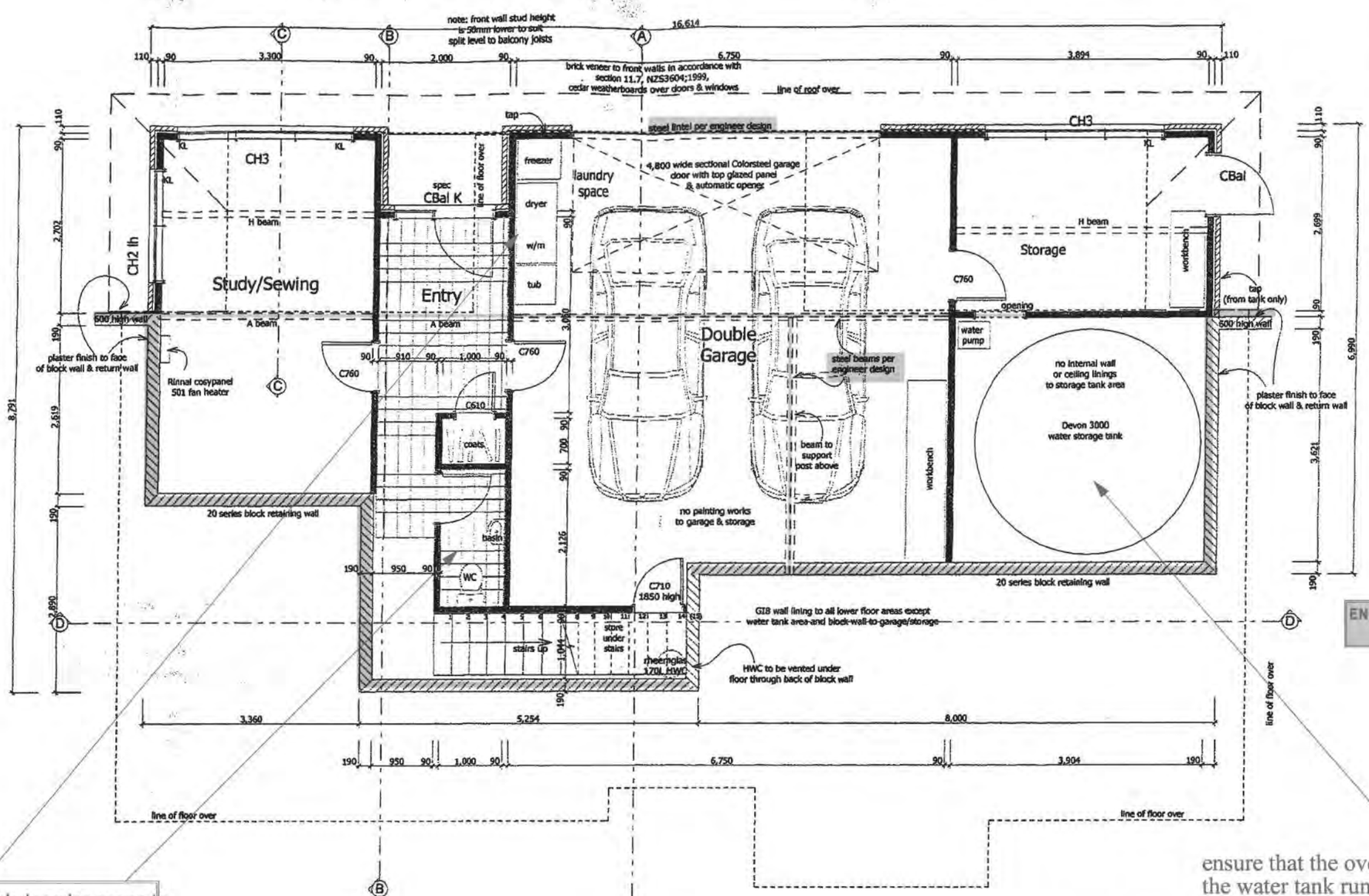
ACCESS LOT
(lot 8 DP310492)

STANDARD LOCKWOOD CONSTRUCTION - refer to Lockwood Assembly & Detail Manuals

LOCKWOOD

TUOHY HOMES LTD	Details: Proposed New Lockwood Home for W.T & N.E Jaques at 'RibbonWood', 53 Kotare St, Waikanae	Earthworks Plan	Drawn: RJK	Scale : 1 : 100 @ A2 / Date : 30/08/2004 / Sheet # 2 of 12

APPROVED
BY P & D
Simon Copp
Officer
12/10/04



All habitable / service rooms to have 5% of their floor area as opening windows or approved alternative, to achieve ventilation requirements.

PIPES TO BE INSPECTED BEFORE COVERING WITH SAND.

ensure that the overflow from the water tank runs directly to the exterior

ENGINEER STRUCTURAL DESIGN TAKES PRECEDENCE

LOWER FLOOR PLAN
scale 1 : 50

Lower Floor Area = 117.28m²
Upper Floor Area = 155.30m²

Total House Area = 272.58m²

Total Balcony area = 19.94m²

Elevation Orientation

STANDARD LOCKWOOD CONSTRUCTION - refer to Lockwood Assembly & Detail Manuals

LOCKWOOD

TUOHY HOMES LTD

Details:		Drawn:	Scale :	Sheet #
Proposed New Lockwood Home for W.T & N.E Jaques at 'RibbonWood', 53 Kotare St, Waikanae	Lower Floor Plan	RJK	1 : 50 @ A2	3 of 12
			Date : 30/08/2004	

2/11/2004

APPROVED
BY BUILDING
Mark Fitzpatrick
Officer

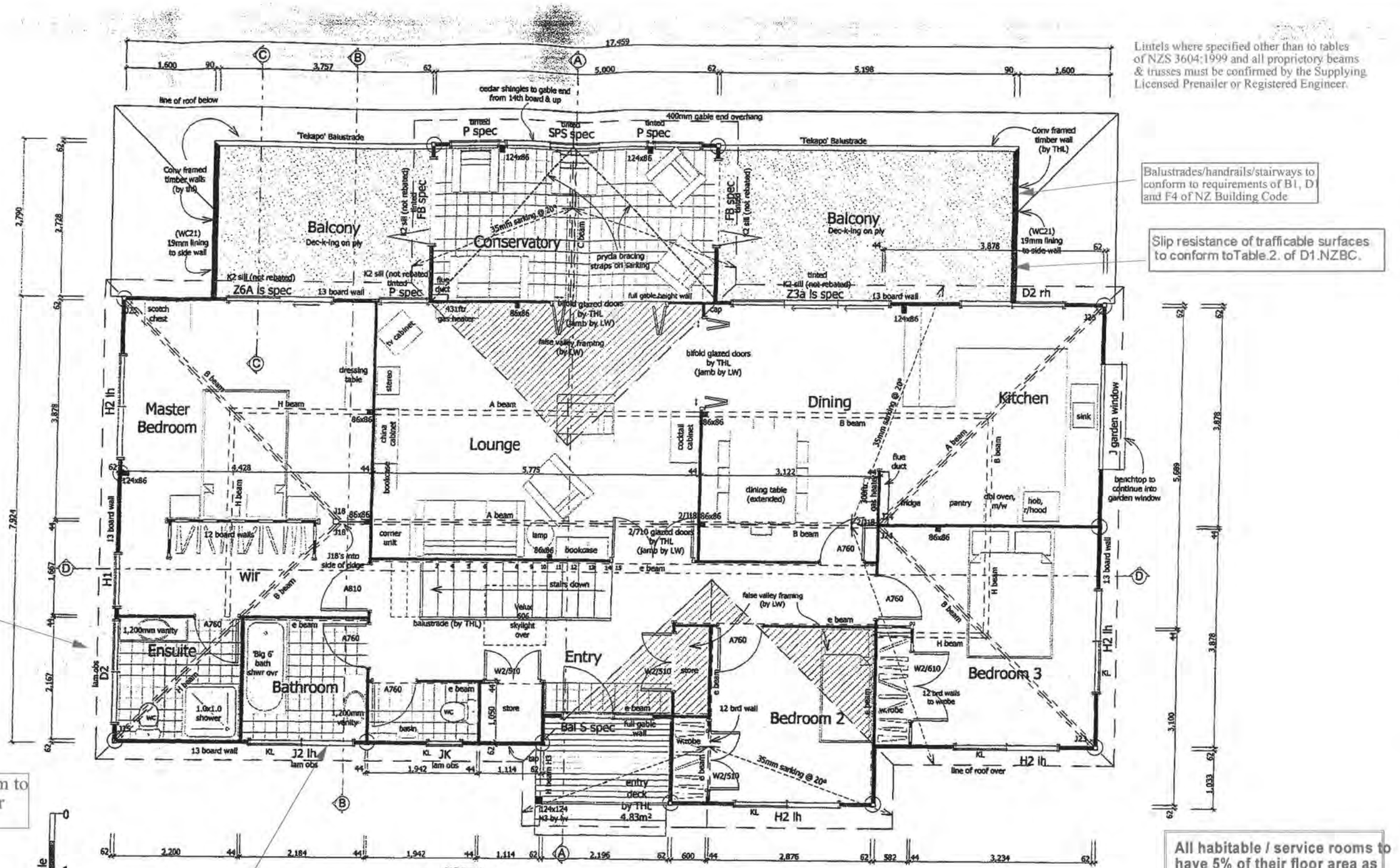
Lintels where specified other than to tables of NZS 3604:1999 and all proprietory beams & trusses must be confirmed by the Supplying Licensed Prenailer or Registered Engineer.

Balustrades/handrails/stairways to conform to requirements of B1, D1 and F4 of NZ Building Code

Slip resistance of trafficable surfaces to conform toTable.2. of D1.NZBC.

Safety glass to NZS 4223 Pt3 (1999 revision)

Stress graded framing to conform to relevant manufacturer's producer statement and selection tables.



scale 0 1 2

Safety glass to NZS 4223 Pt3 (1999 revision)

UPPER FLOOR PLAN
scale 1 : 50

NOTES:
1. LW to supply components 4 - 17
2. 62mm ASSL exterior Lockwood walls
3. Powdercoated exterior joinery. Bronze tint to dining, conservatory & dining windows. "KL" = 1x lockable window catch
4. Longrun Colorsteel roofing on 35mm sarking (bitumous shingle on ply as optional cost)

Lower Floor Area = 117.28m²
Upper Floor Area = 155.30m²

Total House Area = 272.58m²

Total Balcony area = 19.94m²

Elevation Orientation: C D B A

All habitable / service rooms to have 5% of their floor area as opening windows or approved alternative, to achieve ventilation requirements.

WATER RIPES TESTED TO 1500KPA

APPROVED
BY P & D
Simon Copp
Officer
12/10/04

Lockwood construction is an 'Alternative Solution' in terms of the New Zealand Building Code.

Details not shown in these plan have been verified in the 'Lockwood 62mm Detail Manual' and/or 'Lockwood Designers Condensed Handbook July 1995', held in the Territorial Authority's reference library. To avoid unnecessary duplication, those documents have not been reproduced in these documents. The afore-mentioned Lockwood documents must be held on site during construction

STANDARD LOCKWOOD CONSTRUCTION - refer to Lockwood Assembly & Detail Manuals

LOCKWOOD

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PLANS COPYRIGHT TUOHY HOMES LTD

Details:		Drawn:	Scale : 1 : 50 @ A2	Sheet #
Proposed New Lockwood Home for W.T & N.E Jaques at 'RibbonWood', 53 Kotare St, Waikanae	Upper Floor Plan	RJK	Date : 30/08/2004	4 of 12

2/11/2004

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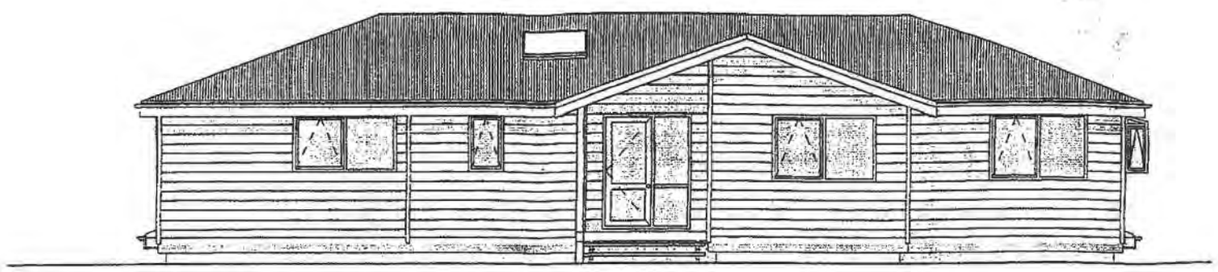
BY BUILDING
Mark Fitzpatrick
Officer

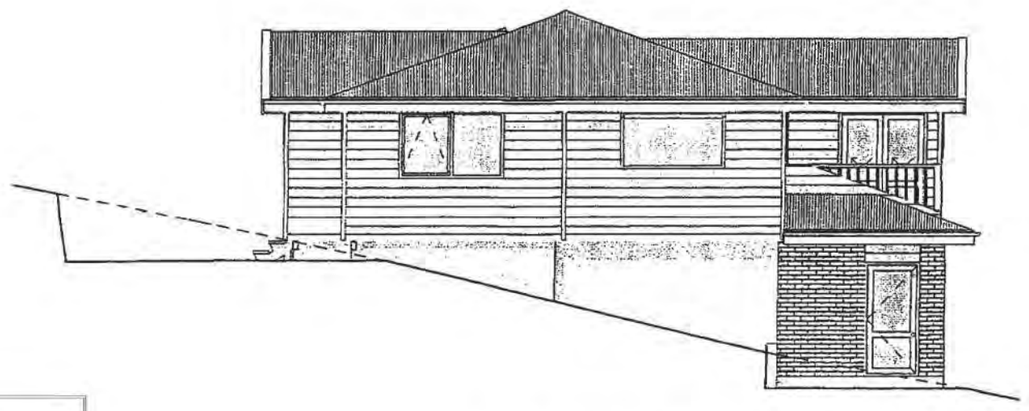
Roofing material is to be installed to manufacturers requirements. In particular, fixing and minimum pitch (reference also sect. 8 of E2 NZ Building Code.)

Supply copy of relevant warranties for roofing, membrane systems or fascia/gutter systems as appropriate to Council

The truss manufacturer must confirm the minimum size requirement of all lintels or beams supporting girder truss point loads. Provide in writing to Council and contractor.



ELEVATION A
scale 1 : 75



ELEVATION B
scale 1 : 75

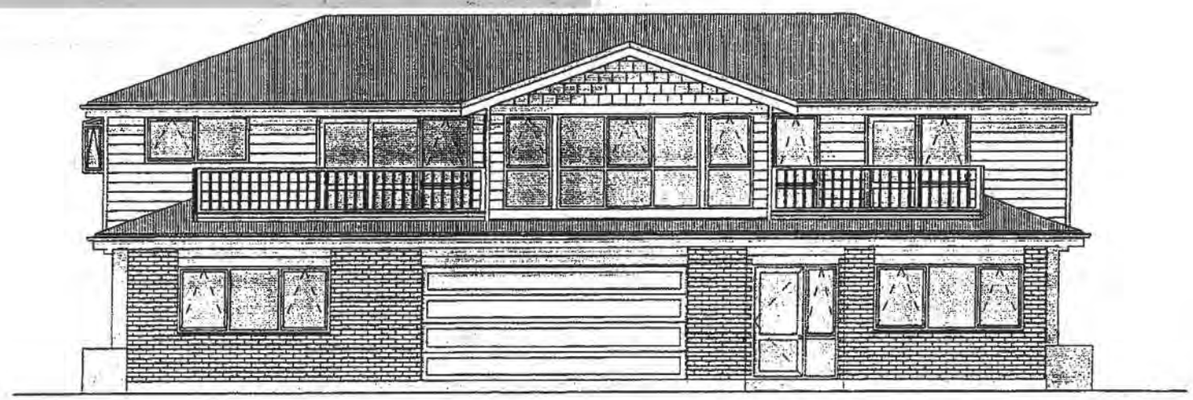
All junctions to claddings & other external moisture protection areas, to have capillary gaps/breaks & inseals where relevant, stopping wind driven or surface tension water.

Cladding to be installed to manufacturers requirements in particular fixing and ground clearance.

APPROVED
BY PLANNING
Matthew Muspratt
Officer
15/10/04

Note: Max cut depth for earthworks is 1.2 metres.

Restrictor stays limiting sash opening to max.100mm must be fitted wherever sill height is less than 760mm and the difference in levels are 1.0m or greater. Refer F4.NZBC.



ELEVATION C
scale 1 : 75

ELEVATION D
scale 1 : 75

SPECIFICATION
BRICK VENEER CONTROL JOINTS
If the brick veneer on this building is of concrete bricks, control joints must be constructed as required by both NZS 4210 and by the manufacturers.
If NZ made MONIER CLAY BRICKS are used, control joints are not required. For recommendations on control joints for imported clay bricks refer to the manufacturer.

The cavity shall be ventilated to the outside air with top and bottom openings. The bottom openings shall serve as weep holes to drain moisture to the outside.

The cavity between the masonary veneer and the exterior face of the timber stud wall shall be not less than 40mm nor more than 75mm wide. Pipes and services shall not be placed in the cavity.

STANDARD LOCKWOOD CONSTRUCTION - refer to Lockwood Assembly & Detail Manuals

LOCKWOOD

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TUOHY HOMES LTD

Details:		Drawn:	Scale : 1 : 75 @ A2	Sheet #
Proposed New Lockwood Home for W.T & N.E Jaques at 'RibbonWood', 53 Kotare St, Waikanae	Elevations	RJK	Date : 30/08/2004	5 of 12

2/11/2004

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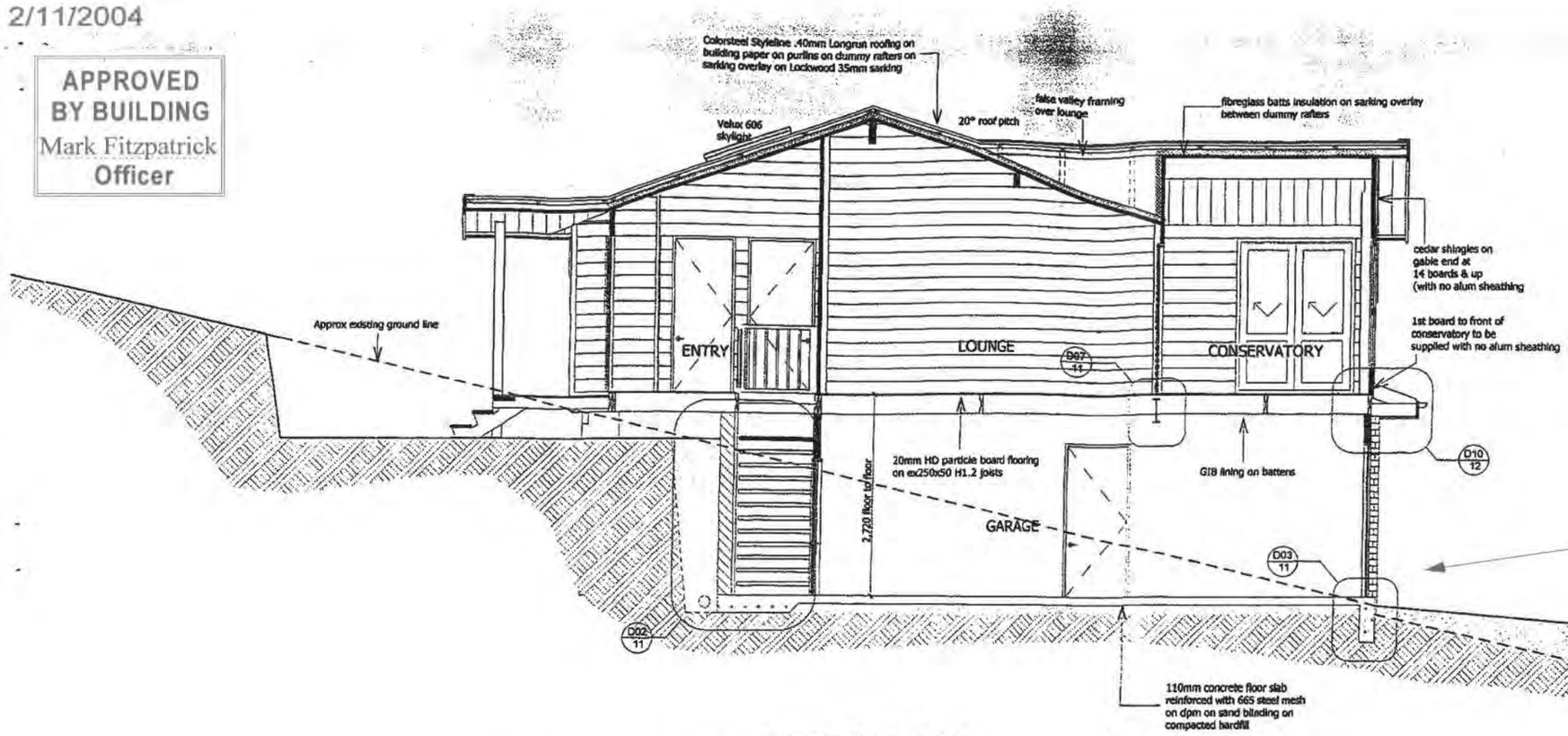
Mark Fitzpatrick
Officer

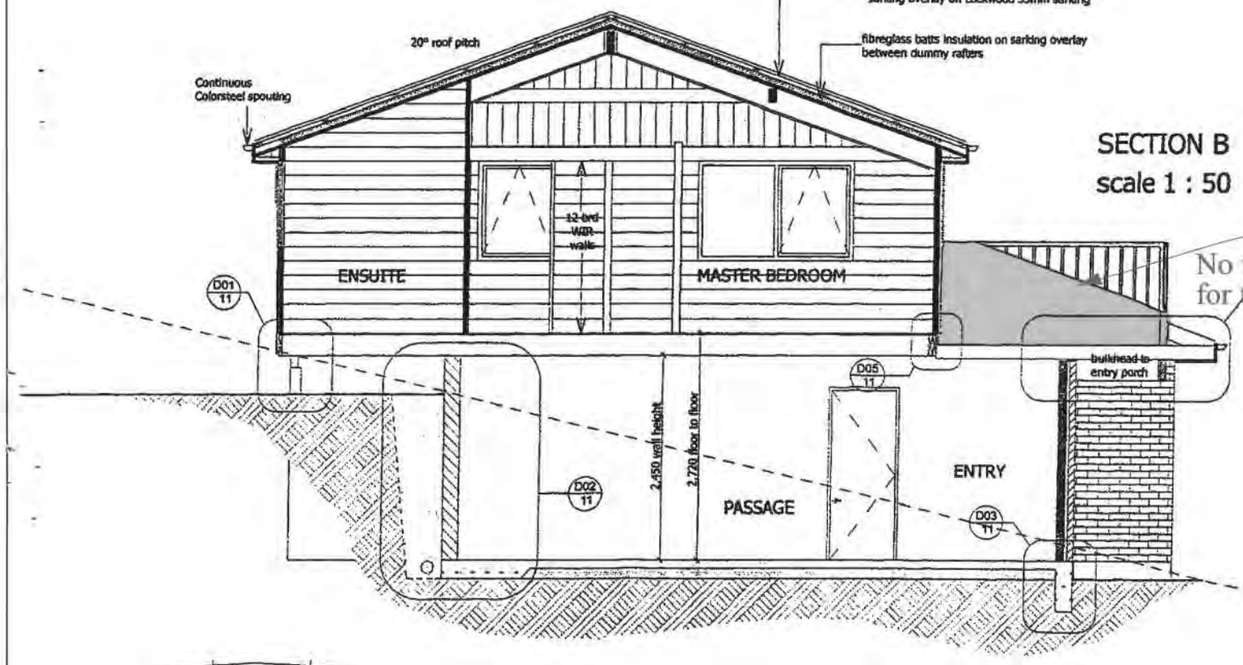
Refer also to NZS 4218 (1996)
for clarity on Insulation



SECTION A
scale 1 : 50

Bottom Plate Fixing
10mm dia. max 900mm crs. 12mm dia. max 1400mm crs. Approved anchors (fixed to manufactures instructions.) Ramset Dynabolt "Plus", Trubolts & Reid Anchors.

Balustrades/handrails/stairways to conform to requirements of B1, D1 and F4 of NZ Building Code



SECTION B
scale 1 : 50

Critical - Flashing
No top fixing -Cavity construction for the D08 12 walls
H3.1 (refer also to NZS3640 & 3602)

SECTION C
scale 1 : 50

Slip resistance of trafficable surfaces to conform toTable.2. of D1.NZBC.

STANDARD LOCKWOOD CONSTRUCTION - refer to Lockwood Assembly & Detail Manuals

LOCKWOOD

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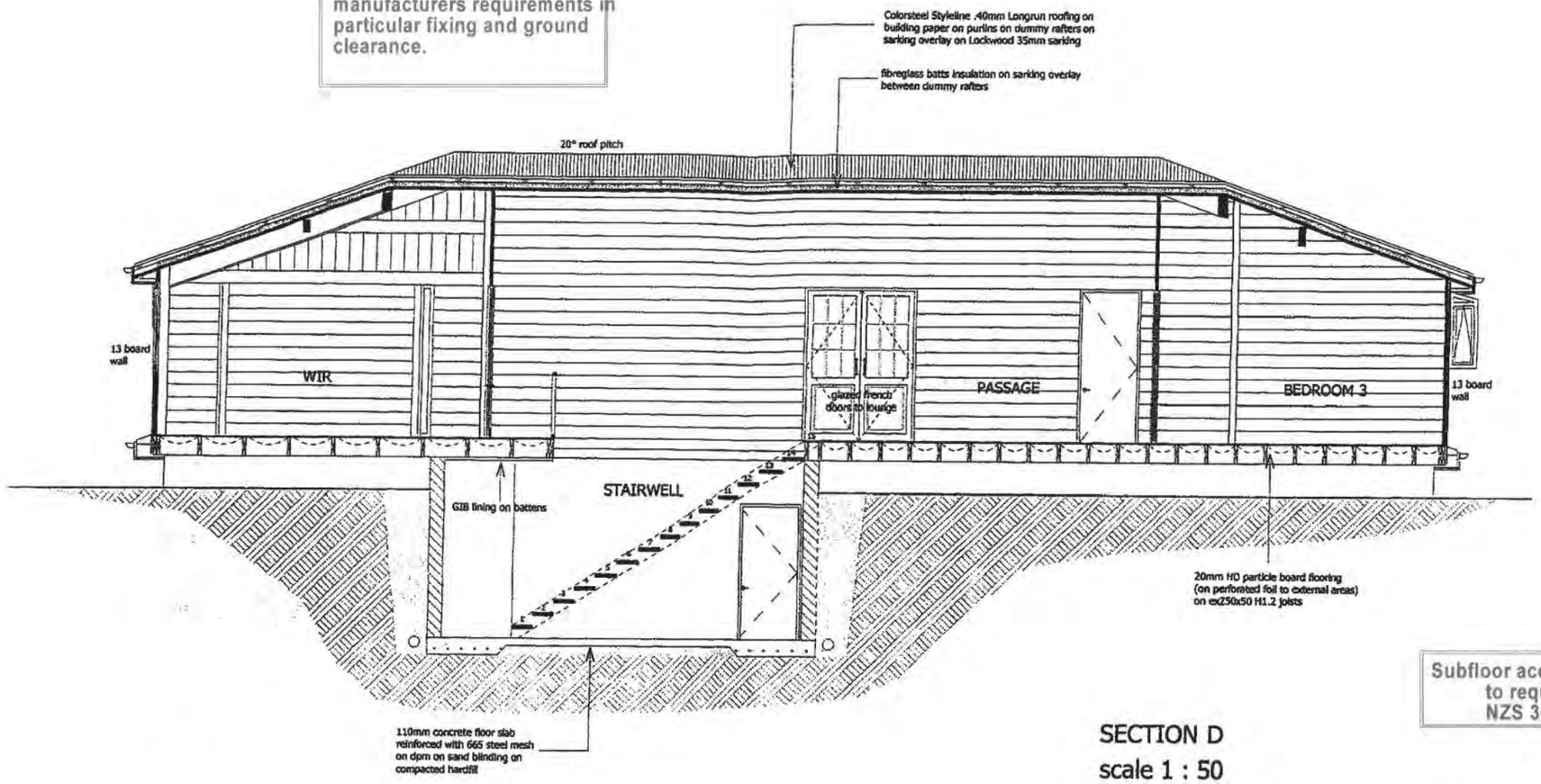
Details:		Drawn:	Scale : 1 : 50 @ A2	Sheet #
Proposed New Lockwood Home for W.T & N.E Jaques at 'RibbonWood', 53 Kotare St, Waikanae	Cross Sections	RJK	Date : 30/08/2004	6 of 12

3/11/2004

Cladding to be installed to manufacturers requirements in particular fixing and ground clearance.



Refer also to NZS 4218 (1996) for clarity on Insulation

Subfloor access and ventilation to requirements of NZS 3604 : 1999

SECTION D
scale 1 : 50

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STANDARD LOCKWOOD CONSTRUCTION - refer to Lockwood Assembly & Detail Manuals

LOCKWOOD

Details:		Drawn:	Scale : 1 : 50 @ A2	Sheet #
Proposed New Lockwood Home for W.T & N.E Jaques at 'RibbonWood', 53 Kotare St, Waikanae	Cross Section	RJK	Date : 30/08/2004	7 of 12

2/11/2004

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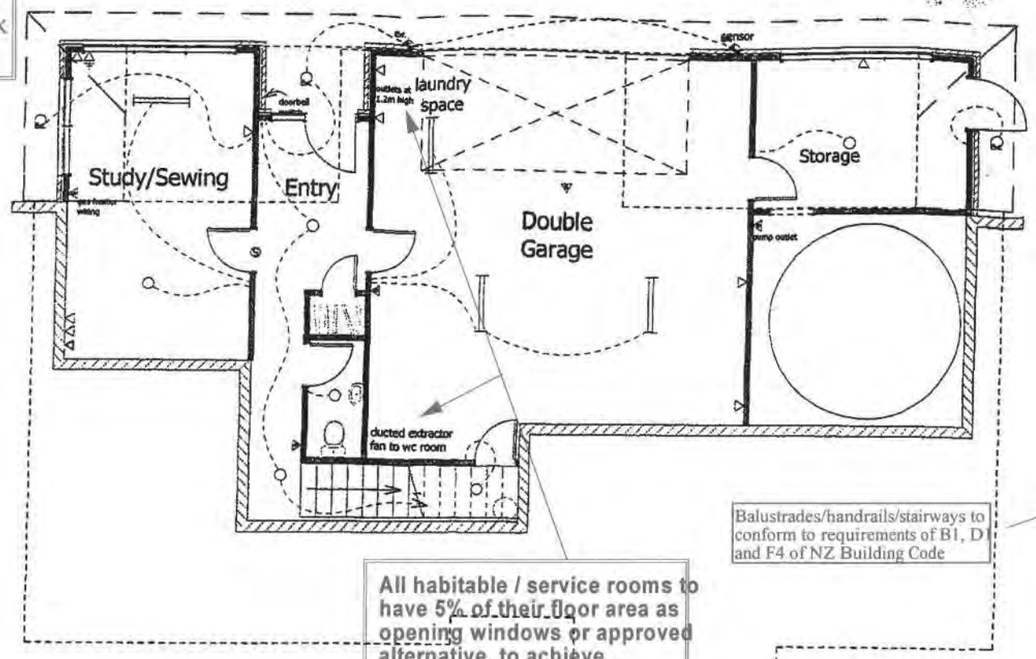
Mark Fitzpatrick
Officer



Balustrades/handrails/stairways to conform to requirements of B1, D1 and F4 of NZ Building Code

All habitable / service rooms to have 5% of their floor area as opening windows or approved alternative, to achieve ventilation requirements.

APPROVED BY P & D
Simon Copp
Officer
12/10/04

LOWER FLOOR ELECTRICAL LAYOUT
scale 1 : 50

LEGEND:

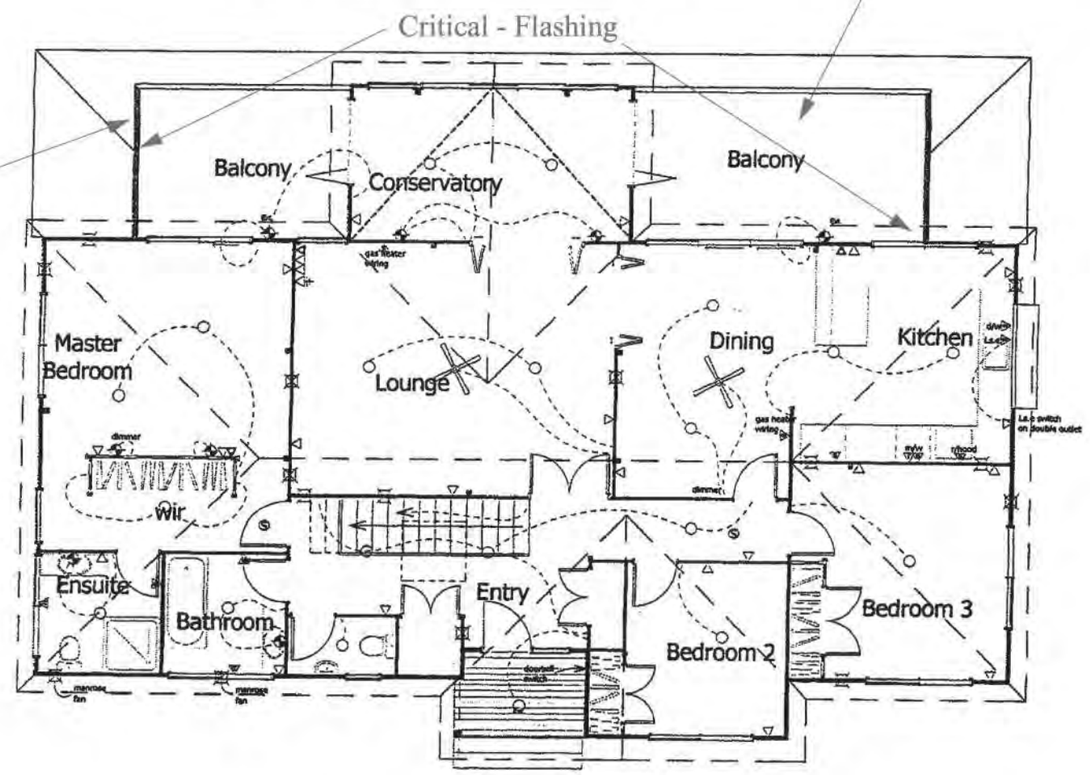
- Double power outlet
- Telephone outlet
- Single power outlet
- Heater wiring only
- Range/oven wiring
- Heated Towel rail
- Extra hole
- Auto door control
- Alarm keypad
- Television outlet
- 2x tube fluorescent light fitting (with diffuser)
- Ceiling mounted light
- Wall mounted light
- Halogen ceiling mounted light fitting
- Halogen wall mounted light fitting
- External watertight ceiling mounted light fitting
- External watertight wall mounted light fitting
- Meter board
- Switch Board
- ceiling mounted smoke detector (battery operated)
- ceiling fan (WHITE)

Recessed Downlights shall be installed to prevent transfer of moisture into ceiling spaces and maintain minimum clearances from insulation as required by NZECP 54:2001.

Provide Electrical Certification after completion and prior to Code Compliance Certificate being issued

Slip resistance of trafficable surfaces to conform toTable.2. of D1.NZBC.

Critical - Flashing



UPPER FLOOR ELECTRICAL LAYOUT
scale 1 : 75

STANDARD LOCKWOOD CONSTRUCTION - refer to Lockwood Assembly & Detail Manuals

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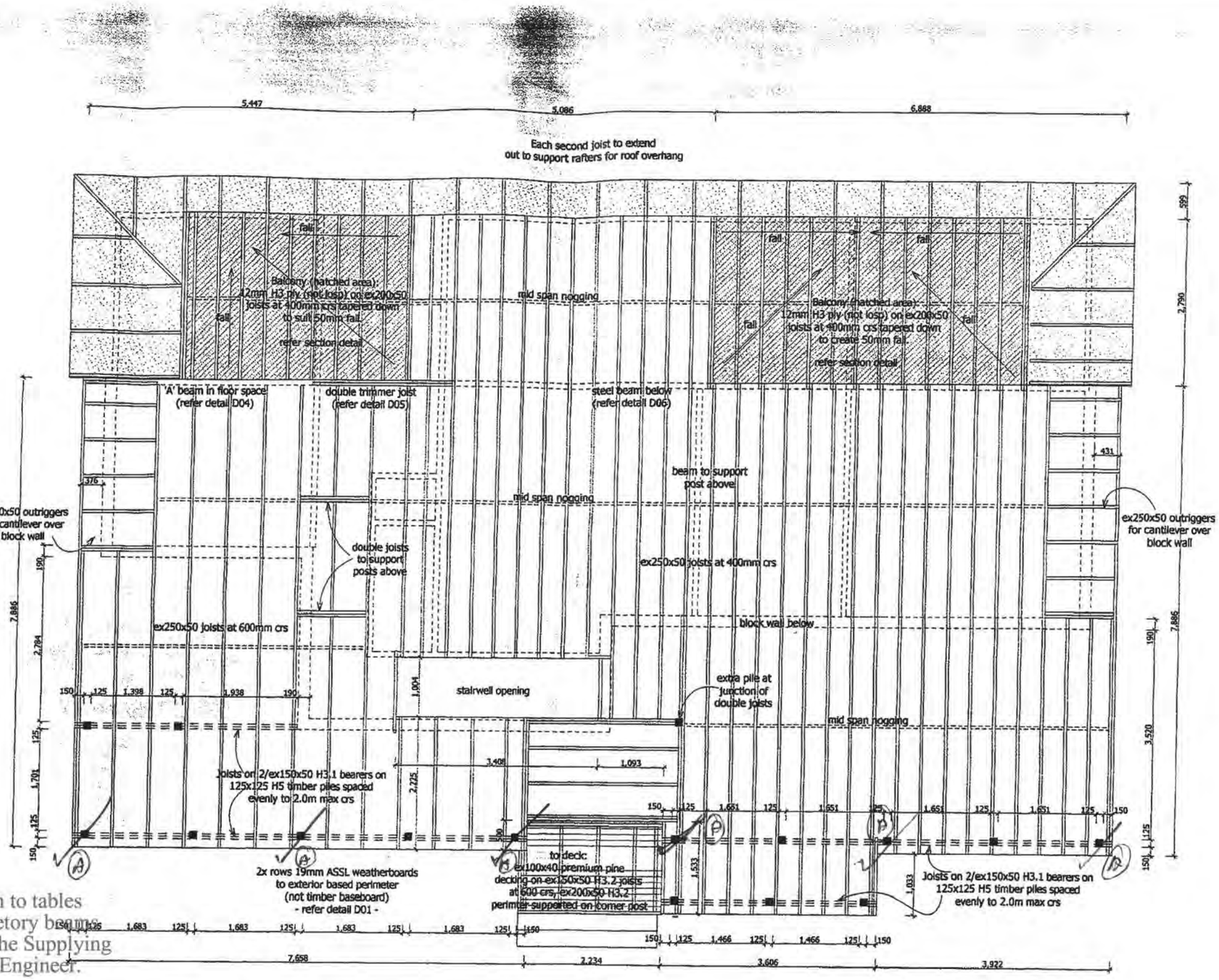
LOCKWOOD

Details:		Drawn:	Scale : 1 : 75 @ A2	Sheet #
Proposed New Lockwood Home for W.T & N.E Jaques at 'RibbonWood', 53 Kotare St, Waikanae	Electrical Layout	RJK	Date : 30/08/2004	8 of 12



Lintels where specified other than to tables of NZS 3604:1999 and all proprietory beams & trusses must be confirmed by the Supplying Licensed Prenailer or Registered Engineer.

Main house floor:
20mm HD particle board flooring on perforated foil insulation (to external areas) on ex250x50 H1.2 floor joists at centres shown

lateral support to joists in accordance with 7.1.2, NZS3604;1999

* continuous blocking over block wall.

UPPER FLOOR SUBFLOOR LAYOUT
scale 1 : 50

STANDARD LOCKWOOD CONSTRUCTION - refer to Lockwood Assembly & Detail Manuals

LOCKWOOD

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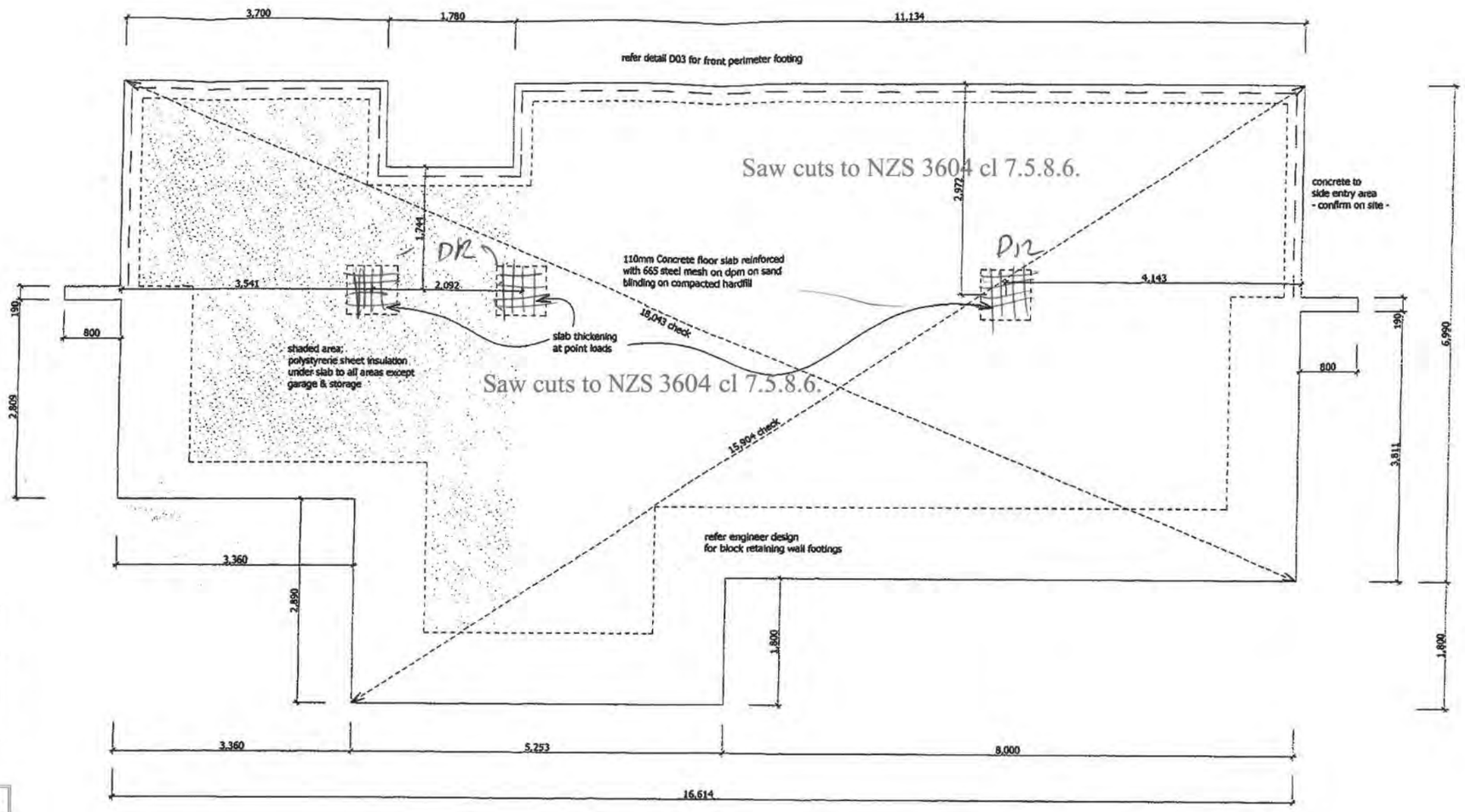
Details:					
Proposed New Lockwood Home for W.T & N.E Jaques at 'RibbonWood', 53 Kotare St, Waikanae	Upper Floor Subfloor Layout	Drawn: RJK	Scale : 1 : 50 @ A2	Date : 30/08/2004	Sheet # 9 of 12

3/11/2004



EXPOSED CONCRETE STRENGTH REQUIREMENTS
Within 500m of mean high tide - 25mpa
Beyond 500m of mean high tide - 20mpa

FOUNDATION WALL FOOTINGS	
REINFORCED CONCRETE :	
Single storey 165* wide	1 rod
Two Storey 200* wide	2 rods
REINFORCED MASONARY :	
Single storey 190* wide	2 rods
Two Storey 240* wide	2 rods
ENGINEER STRUCTURAL DESIGN TAKES PRECEDENCE	

SUPPLY CALCULATIONS AND

LOWER FLOOR SUBFLOOR PLAN
scale 1 : 50

STANDARD LOCKWOOD CONSTRUCTION - refer to Lockwood Assembly & Detail Manuals

LOCKWOOD

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Details:	Drawn:	Scale :	Sheet #
Proposed New Lockwood Home for W.T & N.E Jaques at 'RibbonWood', 53 Kotare St, Waikanae	RJK	1 : 50 @ A2	10 of 12
Lower Floor Subfloor Plan		Date : 30/08/2004	

2/11/2004

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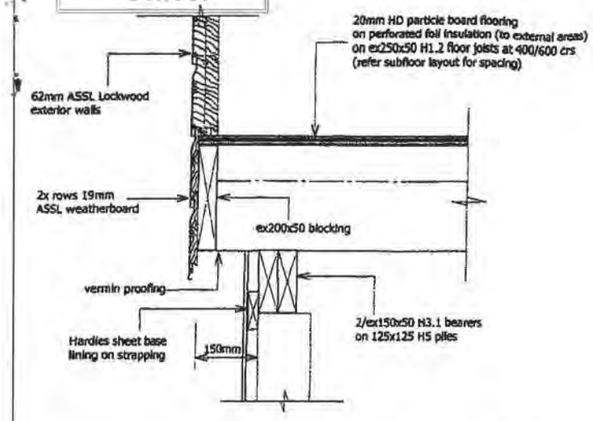
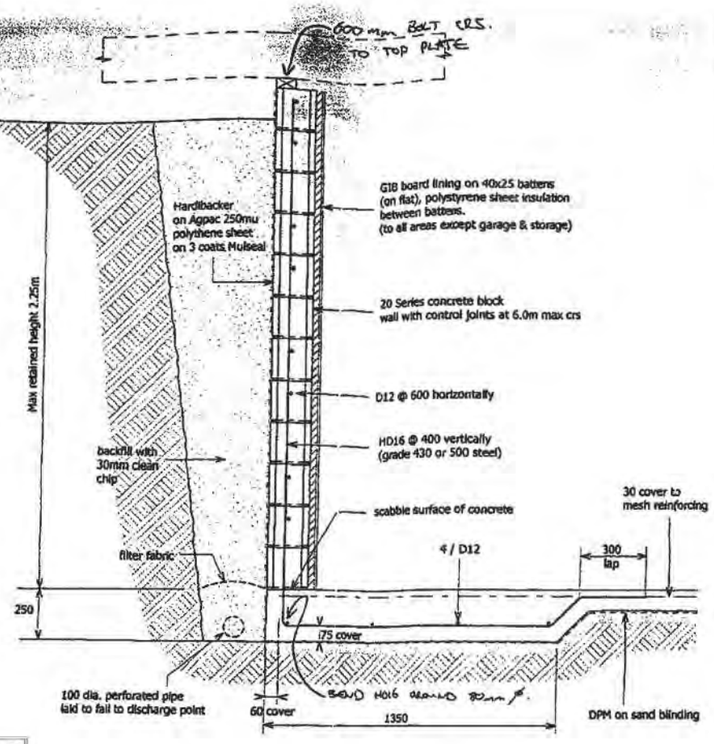
Mark Fitzpatrick
Officer



D01: TYPICAL TIMBER SUBFLOOR PERIMETER scale 1 : 10

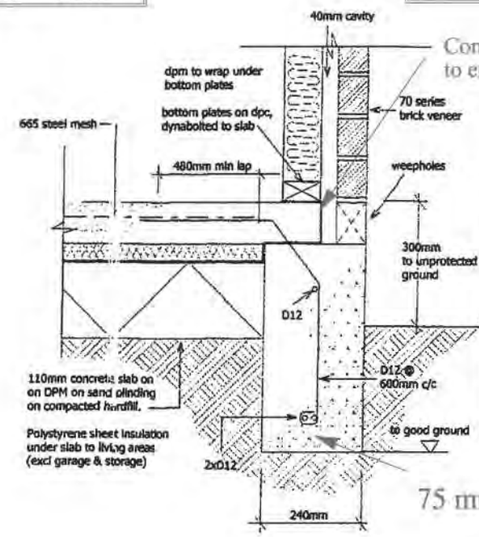
ENGINEER STRUCTURAL DESIGN TAKES PRECEDENCE



D02: BLOCK RETAINING WALL
scale 1 : 20

FOUNDATION WALL FOOTINGS	
REINFORCED CONCRETE	
Single storey 165* wide	1 rod
Two Storey 200* wide	2 rods
REINFORCED MASONARY	
Single storey 190* wide	2 rods
Two Storey 240* wide	2 rods

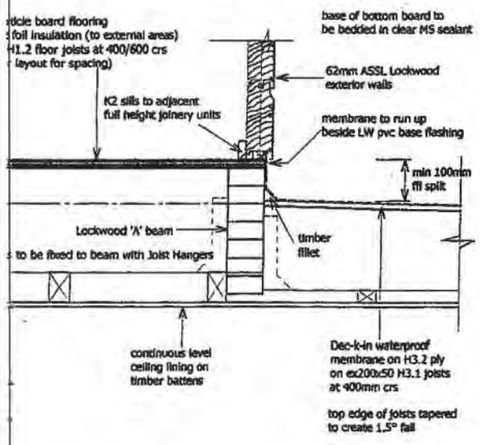
EXPOSED CONCRETE STRENGTH REQUIREMENTS
Within 500m of mean high tide - 25mpa
Beyond 500m of mean high tide - 20mpa



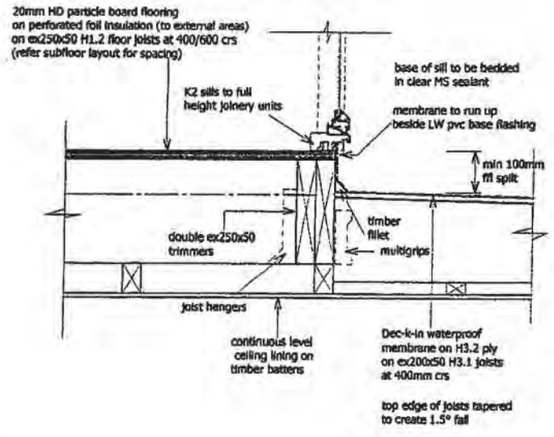
MINIMUM FINISHED GROUND LEVEL CLEARANCES.
BRICK VENEER
Protected ground minimum 100mm.
Unprotected ground minimum 150mm
OTHER CLADDINGS
Protected ground minimum 150mm.
Unprotected ground minimum 225mm.

75 mm cover to trench bottom/rods

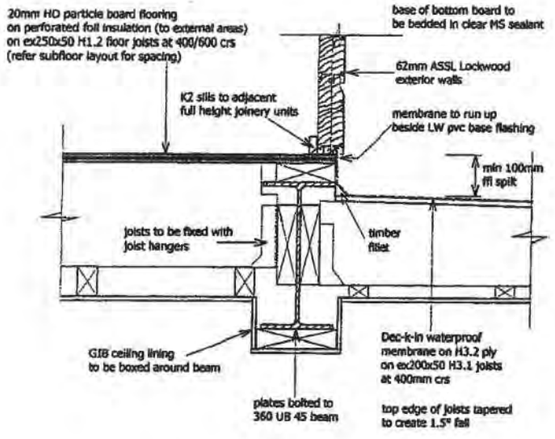
D03: BRICK VENEER FOOTING
scale 1 : 10



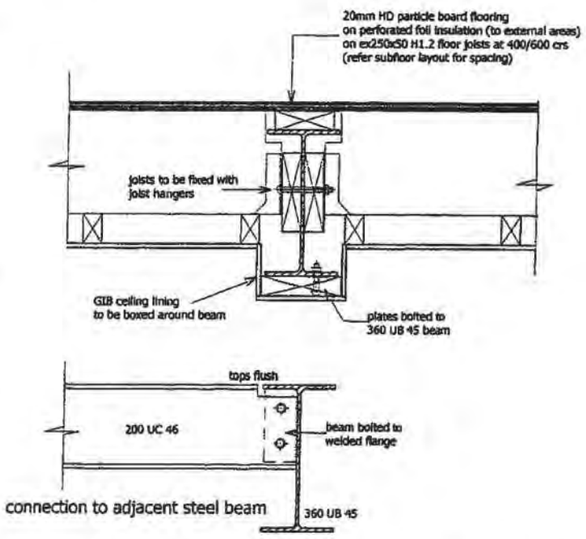
: BALCONY CONNECTION OVER STUDY
e 1 : 10



D05: BALCONY CONNECTION OVER ENTRY
(with K-2 sill) scale 1 : 10



D06: STEEL BEAM OVER GARAGE
AND BALCONY scale 1 : 10



D06: STEEL BEAM OVER GARAGE
scale 1 : 10

STANDARD LOCKWOOD CONSTRUCTION - refer to Lockwood Assembly & Detail Manuals

LOCKWOOD

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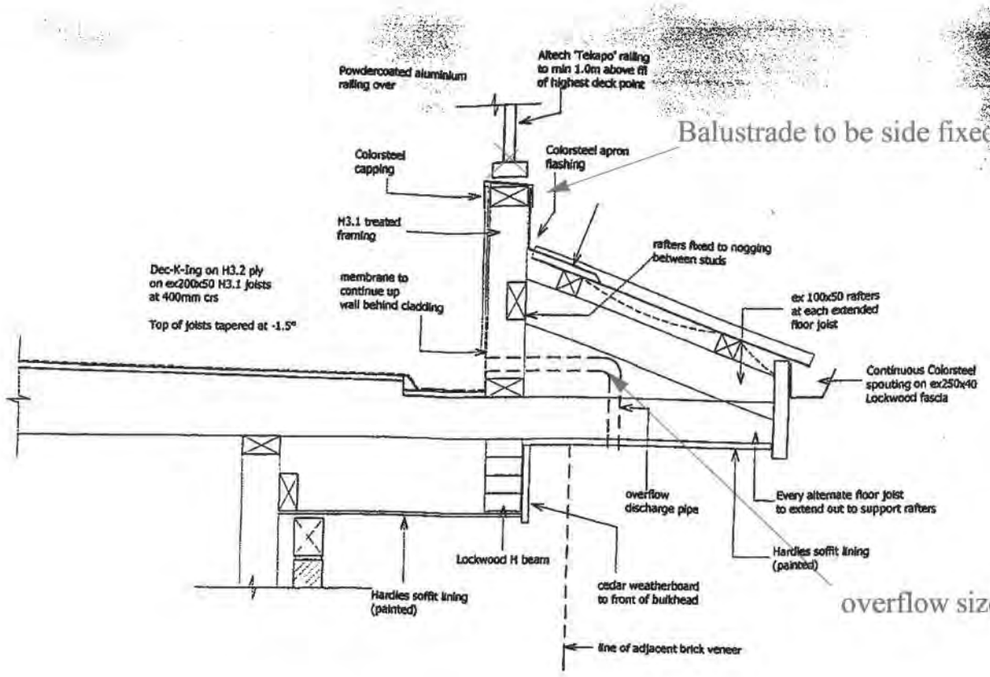
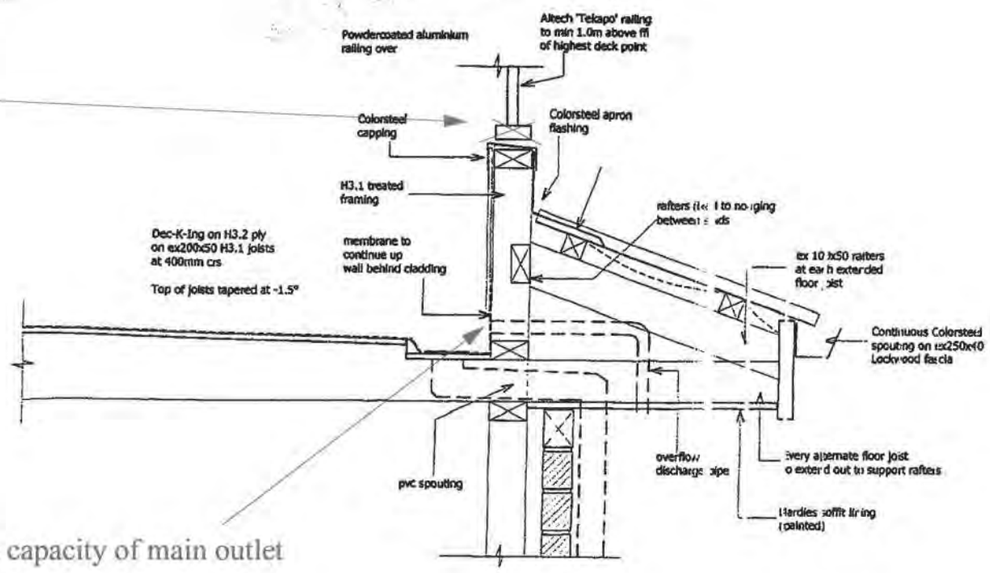
Details:	Proposed New Lockwood Home for W.T & N.E Jaques at 'RibbonWood', 53 Kotare St, Waikanae	Construction Details	Drawn: RJK	Scale : 1:10 / 1:20 @ A2	Sheet # 11 of 12
				Date : 30/08/2004	

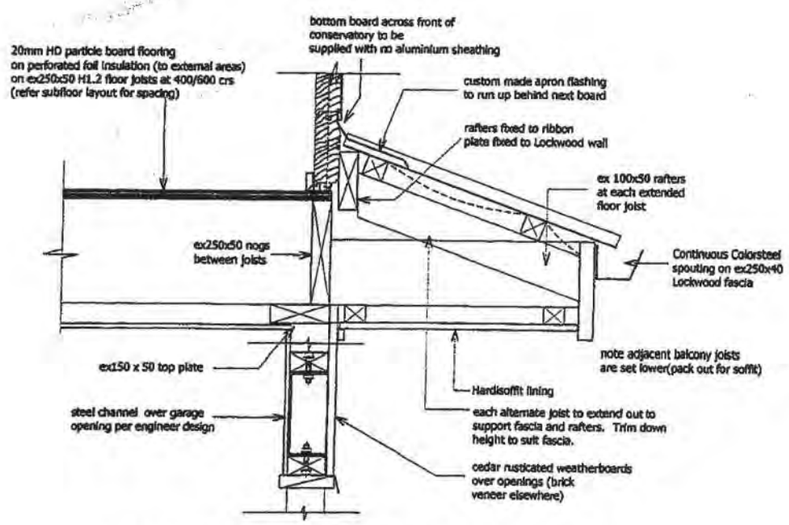


D08: BALCONY WALL & ROOF JUNCTION
(OVER ENTRY RECESS) scale 1 : 10



overflow size = 1.5 x capacity of main outlet

D09: BALCONY WALL & ROOF JUNCTION
(OVER STUDY & GARAGE FRONT) scale 1 : 10



D10: GARAGE OPENING & FRONT ROOF
scale 1 : 10

Also refer to NZBC, clause E2/AS1, External Moisture: Third Edition for clarity

STANDARD LOCKWOOD CONSTRUCTION - refer to Lockwood Assembly & Detail Manuals

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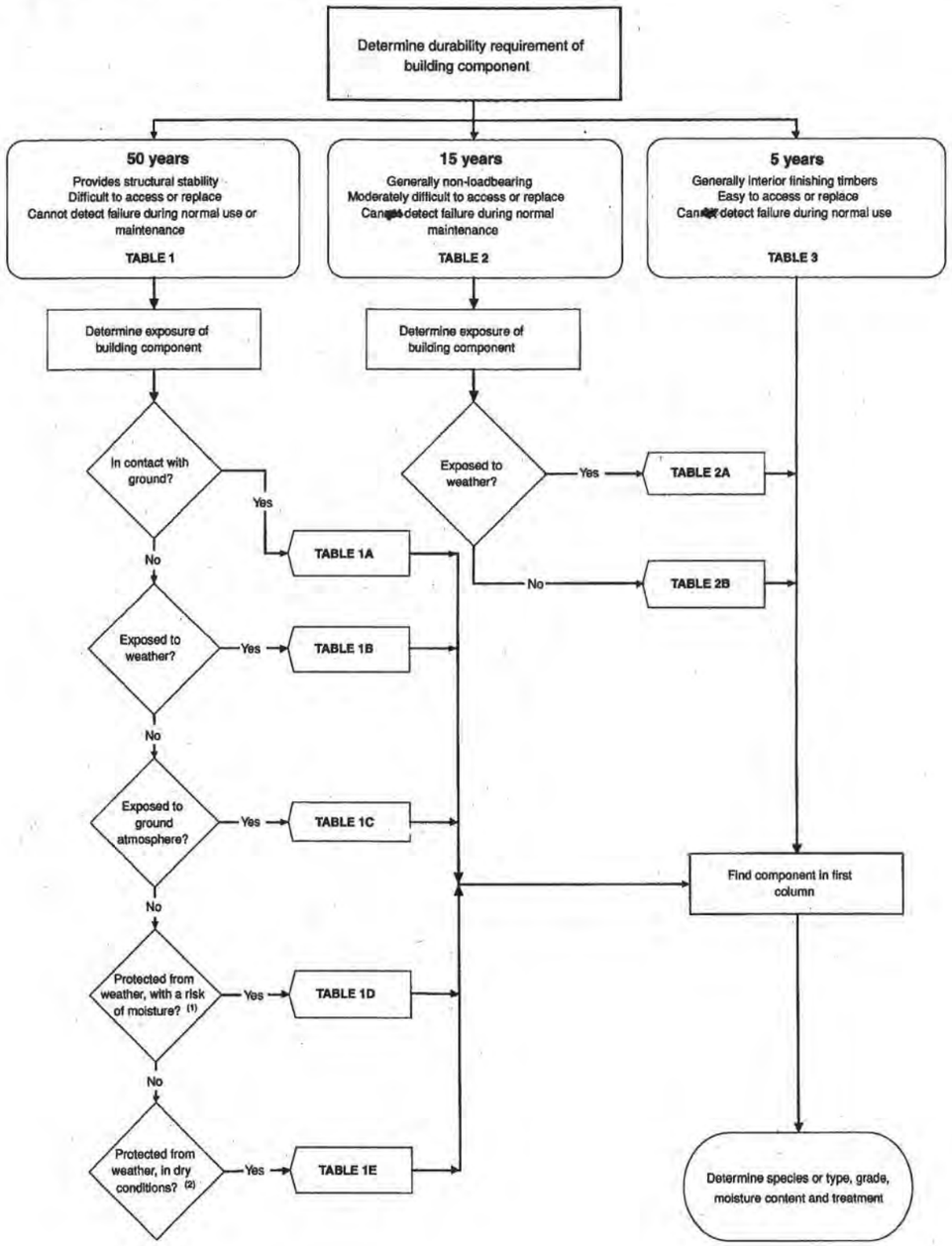
LOCKWOOD

Details:					
Proposed New Lockwood Home for W.T & N.E Jaques at 'RibbonWood', 53 Kotare St, Waikanae	Construction Details	Drawn: RJK	Scale : 1 : 10 @ A2	Date : 30/08/2004	Sheet # 12 of 12



NOTE –
(1) See section 109.
(2) See section 110.

Figure 4 – Flow chart guiding the use of tables 1, 2 and 3

Table 1 – Requirements for wood-based building components to achieve a 50-year durability performance

Ref No.	Wood-based building components	Species or type[1]	Grade or Standard ref.	In-service moisture range %	Level of treatment[2] to NZS 3640 or AS/NZS 1604[3]	See clause/ section
A Members in contact with the ground (see section 106)						
1A.1	Building piles	Radiata pine	NZS 3605	Not limited	H5	106.2
1A.2	Plywood and timber frame foundations		BRANZ P43		H5	106.3 106.2
1A.3	Crib walling		NZS 3605		H5	C106.4
1A.4	Sawn poles				H5	–
1A.5	House poles				H5	106.2
1A.6	Retaining walls –uprights				H5	–
1A.7	Retaining walls –horizontal members				H4	–
B Members exposed to exterior weather conditions and dampness but not in ground contact (see section 107)						
1B.1	Laminated beams	Radiata pine	AS/NZS 1328 & NZS 3606	Not limited	H3[3][4] or specific design	104.4
1B.2	Laminated posts				H3[3][4]	104.4
1B.3	Posts, bearers, beams, floor joists, rafters, guardrails, stair stringers	Radiata pine	Structural grades		H3.2[5]	–
1B.4	Cladding as wall bracing	Plywood[4]	AS/NZS 2269		H3[3][4]	107.2
C Members protected from the weather but exposed to ground atmosphere (see section 108)						
1C.1	Jackstuds, subfloor braces, bearers, wall plates, floor joists to the subfloor, blocking, subfloor wall studs, walings and battens, wall studs and nogs, diagonal boards	Radiata pine	Structural grades	20 % or less	H1.2	108
		Larch	Structural grades		None	
		Cypress species[6]	Structural grades sapwood		H1.2	
		Cypress species[6]	Structural grades heart		None	
		Douglas fir	Structural grades		H1.2	
		LVL	AS/NZS 4357	18 % or less	None	–
1C.2	Plywood sheet bracing	Radiata pine	AS/NZS 2269	18 % or less	H1.2	108.4
1C.3	Interior flooring, suspended ground floors	Plywood[7]	AS/NZS 2269	18 % or less	None	108.2
		LVL	AS/NZS 4357			
		Particleboard and other wood-based products[7]	AS/NZS 1859.1 AS/NZS 1859.2		None	104.3 108.2
		Radiata pine	Dressing		H1.1	108.2
		Cypress species[6]	Dressing sapwood		H1.1	
		Cypress species[6]	Dressing heart		None	
		Matai	Dressing sapwood		H1.1	
		Matai	Dressing heart		None	
		Rimu	Dressing sapwood		H1.1	
		Rimu	Dressing heart		None	
		Eucalyptus species	Dressing		None	
		Tawa	Dressing		H1.1	

NOTES to table 1A to 1C
(1) Wood-based building components made from wood species other than those listed may also achieve the required durability but there is not enough data on their durability to permit their inclusion in this Standard. Refer to C101.2.
(2) Throughout table 1, timber treated to a higher level than the minimum satisfies the minimum requirements.
(3) NZS 3640 specifies treatment for round and sawn timber. Plywood shall be treated to AS/NZS 1604:Part 3. Laminated beams and posts shall be treated to AS/NZS 1604: Part 5.
(4) H3 LOSP treated items exposed to the exterior must be painted to achieve a 50-year durability.
(5) H3.1 refers to tin-based Light Organic Solvent Preservatives (LOSP). H3.2 refers to CCA, Alkaline Copper Quaternary, Copper Naphthenate and Copper Azole preservatives. See also Note 2.
(6) Cypress species include Cupressus macrocarpa (macrocarpa), C. lustianica (Mexican cypress) and Chamaecyparis lawsoniana (Lawson's cypress). Refer to AS/NZS 1148.
(7) In wet areas where maintenance of an impervious coating cannot be assured plywood or timber flooring that has been treated to a minimum of H3.1 shall be used. (Refer to 110.3.1.)

Table 1 – Requirements for wood-based building components to achieve a 50-year durability performance (continued)

Ref No.	Wood-based building components	Species or type[1]	Grade or Standard ref.	In-service moisture range %	Level of treatment[2] to NZS 3640 or AS/NZS 1604[3]	See clause
D Members protected from the weather but with a risk of moisture penetration conducive to decay (see section 109)						
Roof members (in or associated with)						
1D.1	Sarking and framing not protected from solar driven moisture through absorbent claddings materials[8]	Plywood	AS/NZS 2269	20 % or less	H3[3]	104.2
		Radiata pine	Merchantable		H3.1	109.2
		Larch	Structural grades		None	
		Cypress species	Structural grades heart		None	
			Structural grades sapwood		H1.2	
1D.2	Enclosed flat roof framing and associated supporting members	Radiata pine	Structural grades	20 % or less	H3.1	102.6
1D.3	Enclosed skillion roof framing and associated members	Radiata pine	Structural grades	20 % or less	H1.2	102.6 109.2
		Douglas fir	Structural grades		H1.2	
		Larch	Structural grades		None	
		Cypress species	Structural grades heart		None	
			Structural grades sapwood		H1.2	
1D.4	Valley boards and boards supporting flashings or box gutters, and flashings to roof penetrations and upstands to roof decks [10]	Radiata pine	Merchantable	20 % or less	H3.1	109.2
		Plywood	AS/NZS 2269		H3[3]	
		Larch	Structural grades		None	
		Cypress species	Structural grades heart		None	
			Structural grades sapwood		H1.2	
Wall members (in or associated with)						
1D.5	Framing and other members within or beneath a parapet except in situations detailled in 1D.13	Radiata pine	Structural grades	20 % or less	H1.2	109.2
		Douglas fir	Structural grades		H1.2	
		Larch	Structural grades		None	
		Cypress species	Structural grades heart		None	
			Structural grades sapwood		H1.2	
1D.6	Framing and other members within enclosed decks or balconies [9] (see figure 1)	Radiata pine	Structural grades	20 % or less	H3.1	109.2
		Larch	Structural grades		None	
		Cypress species	Structural grades heart		None	
			Structural grades sapwood		H1.2	
1D.7	Framing and other members supporting enclosed decks or balconies where failure is potentially life threatening, such as when the support is enclosed post and beam construction	Radiata pine	Structural grades	20 % or less	H3.1	109.2
		Larch	Structural grades		None	
		Cypress species	Structural grades heart		None	
			Structural grades sapwood		H1.2	
1D.8	Framing and other members supporting enclosed decks or balconies [9] (see figure 1)	Radiata pine	Structural grades	20 % or less	H1.2	109.2
		Douglas fir	Structural grades		H1.2	
1D.9	Sheet material providing wall bracing	Plywood	AS/NZS 2269	20 % or less	H3[3]	104.2

Table 1 – Requirements for wood-based building components to achieve a 50-year durability performance (continued)

Ref No.	Wood-based building components	Species or type[1]	Grade or Standard ref.	In-service moisture range %	Level of treatment[2] to NZS 3640 or AS/NZS 1604[3]	See clause
1D.10	Battens used behind cladding to form a cavity	Radiata pine	Merchantable	20 % or less	H3.1	109.2
1D.11	Framing and other members to which shelf angles and lintel angles supporting masonry veneers are fixed and their adjoining and supporting members, including lower storey studs	Radiata pine	Structural grades		H3.1	109.2
1D.12	Framing and other members in exterior walls including boundary joists, where monolithic claddings are fixed directly to the framing and do not comply with E2/AS1	Radiata pine	Structural grades		H3.1	109.2
1D.13	Framing and other members in exterior walls including boundary joists, where monolithic claddings are fixed directly to the framing and comply with E2/AS1	Radiata pine	Structural grades		H1.2	109.2
		Douglas fir	Structural grades		H1.2	109.2
1D.14	All other exterior wall framing and other members including exterior and boundary joists[11], except those clad in masonry veneer covered by 110.2(c)[12]	Radiata pine	Structural grades		H1.2	109.2
		Douglas fir	Structural grades		H1.2	109.2

NOTE –

(1) Wood-based building components made from wood species other than those listed may also achieve the required durability but there is not enough data on their durability to permit their inclusion in this Standard. Refer to C101.2.

(2) Throughout table 1, timber treated to a higher level than the minimum satisfies the minimum requirements.

(3) NZS 3640 specifies treatment for round and sawn timber. Plywood shall be treated to AS/NZS 1604:Part 3. Laminated beams and posts shall be treated to AS/NZS 1604: Part 5.

(4) H3 LOSP treated items exposed to the exterior must be painted to achieve a 50-year durability.

(5) H3.1 refers to tin-based Light Organic Solvent Preservatives (LOSP). H3.2 refers to CCA, Alkaline Copper Quaternary, Copper Naphthenate and Copper Azole preservatives. See also Note 2.

(6) Cypress species include Cupressus macrocarpa (macrocarpa), C. lustianica (Mexican cypress) and Chamaecyparis lawsoniana (Lawson's cypress). Refer to AS/NZS 1148.

(7) In wet areas where maintenance of an impervious coating cannot be assured plywood or timber flooring that has been treated to a minimum of H3.1 shall be used. (Refer to 110.3.1.)

(8) Timber shakes and shingles, and similar absorbent claddings, absorb moisture that can be driven into frame cavities by evaporation. Unless the cavities are adequately drained and ventilated, continuing condensation caused by solar driven transfer increases the moisture content in the cavities and timber framing requiring a higher level of timber treatment to resist decay.

(9) Such as joists, lintels, wall plate and studs, together with parapets, enclosed balustrades, boxed columns and chimneys.

(10) Any metal flashing shall be separated from the treated timber with building paper.

(11) Exposed ends of joists shall be protected by a boundary joist.

(12) Refer to table 1 row 1E .4.

Table 1 – Requirements for wood-based building components to achieve a 50-year durability performance (continued)

Ref No.	Wood-based building components	Species or type[1]	Grade or Standard ref.	In-service moisture range %	Level of treatment[2] to NZS 3640 or AS/NZS 1604[3]	See clause
E Members not exposed to weather or ground atmosphere and in dry conditions (see section 110)						
1E.1	All roof trusses, including gable end trusses, roof, ceiling and eaves framing, purlins and battens excluding skillion roof framing, and sarking described in 1D.1	Radiata pine	Structural grades	20 % or less	H1.1	–
		Douglas fir	Structural grades		None	
		Larch	Structural grades		None	
		Cypress species [6]	Structural grades sapwood		H1.1	
		Cypress species[6]	Structural grades heart		None	
1E.2	All midfloor framing excluding boundary joists but including associated ceiling framing	Kiln dried and gauged Radiata pine	Structural grades	18 % or less	None	105.5
		LVL	AS/NZS 4357	18 % or less	None	104.4.2
1E.3	Unlined buildings except those not allowed in 110.2(f)					
1E.4	Timber framing (including boundary joists) in exterior walls clad with masonry veneer complying to SNZ HB 4236 on a single storeyed building but with restrictions set out in 110.2(b) and in figure 3	Radiata pine	Structural grades	20 % or less	H1.1	110.2
		Douglas fir	Structural grades		None	
		Larch	Structural grades		None	
		Cypress species [6]	Structural grades sapwood		H1.1	
		Cypress species[6]	Structural grades heart		None	
		Kiln dried and gauged Radiata pine	Structural grades	18 % or less	None	
		LVL	AS/NZS 4357		None	104.4.2
1E.5	Internal walls excluding those supporting decks and balconies	Radiata pine	Framing - No. 2 or Structural grades	20 % or less	H1.1	–
		Douglas fir	Structural grades		None	
		Larch	Structural grades		None	
		Cypress species [6]	Structural grades sapwood		H1.1	
		Cypress species [6]	Structural grades heart		None	
		Kiln dried and gauged Pinus species	Framing - No. 2 or Structural grades	18 % or less	None	105.5
		LVL	AS/NZS 4357		None	–
1E.6	Internal wall bracing	Plywood	AS/NZS 2269	18 % or less	None	104.4.2
		Particleboard and wood-based products	AS/NZS 1859		None	104.3

Table 1 – Requirements for wood-based building components to achieve a 50-year durability performance (continued)

Ref No.	Wood-based building components	Species or type[1]	Grade or Standard ref.	In-service moisture range %	Level of treatment[2] to NZS 3640 or AS/NZS 1604[3]	See clause
1E.7	Interior flooring	Plywood	AS/NZS 2269	18 % or less	None [7]	104.4.2
		Particleboard and wood-based products[13]	AS/NZS 1859		None [7]	104.3
		Pinus species	Dressing	16 % or less	H1.1	–
		Cypress species [6]	Dressing sapwood		H1.1	
		Cypress species [6]	Dressing heart		None	
		Matai	Dressing sapwood		H1.1	
		Matai	Dressing heart		None	
		Rimu	Dressing sapwood		H1.1	
		Rimu	Dressing heart		None	
		Beech – silver, red, hard	Dressing sapwood		H1.1	
		Beech – silver, red, hard	Dressing heart		None	
		Eucalyptus species	Dressing sapwood		H1.1	
		Eucalyptus species	Dressing heart		None	
		Tawa	Dressing		H1.1	

NOTE –

(1) Wood-based building components made from wood species other than those listed may also achieve the required durability but there is not enough data on their durability to permit their inclusion in this Standard. Refer to C101.2.

(2) Throughout table 1, timber treated to a higher level than the minimum satisfies the minimum requirements.

(3) NZS 3640 specifies treatment for round and sawn timber. Plywood shall be treated to AS/NZS 1604:Part 3. Laminated beams and posts shall be treated to AS/NZS 1604: Part 5.

(6) Cypress species include Cupressus macrocarpa (macrocarpa), C. lustianica (Mexican cypress) and Chamaecyparis lawsoniana (Lawson's cypress). Refer to AS/NZS 1148.

(7) In wet areas where maintenance of an impervious coating cannot be assured plywood or timber flooring that has been treated to a minimum of H3.1 shall be used. (Refer to 110.3.1.)

(13) Wood-based panels must have a proven durability performance against dampness.

Table 2 – Requirements for wood-based building components to achieve a 15-year durability performance

Ref No.	Wood-based building components	Species or type(1)	Grade or Standard ref.	Installation moisture range %	Level of treatment(2) to NZS 3640 or AS/NZS 1604(3)	See clause
A Members exposed to exterior weather conditions and dampness (see section 111)						
2A.1	Weatherboards	Radiata pine	Dressing	18 % or less	H3.1	111.2
		Larch	Dressing heart		None	
		Cypress species(4)	Dressing heart		None	
2A.2	Base battens	Redwood	Dressing heart		None	
		Western red cedar	Dressing heart		None	
2A.3	Fascia, barge, and coverboards	Plywood	AS/NZS 2269		H3(3)	
		Wood-based panels(5)	Exterior		H3(7)	
2A.4	Sheet cladding not providing bracing	Plywood	AS/NZS 2269	18 % or less	H3(3)	111.5 104.2.1
2A.5	Exterior joinery, including windows frames, sills, and sashes, exterior door frames, sills and doors	Radiata pine	Select A	18 % or less	H3(3)	–
		Redwood	Select A heart		None	
		Western red cedar	Select A heart		None	
2A.6	Timber reveals for aluminium windows	Cypress species(4)	Select A heart		None	
2A.7	External stairs, stair handrails and balustrades, verandah floors, unroofed decking (which can be easily replaced) with either a paint, stain, clear or no finish	Radiata pine	Merchantable	Not limited	H3.2	111.7
		Cypress species(4)	Dressing heart		None	
		Vitex, Kwila	Dressing heart		None	
		Rimu	Dressing heart		None	
		Eucalyptus(6)	Dressing heart		None	
		Beech – silver, red, hard	Dressing heart		None	
		Plywood	AS/NZS 2269		H3(3)	104.2.1 111.7
		Wood-based panels(5)	Exterior		H3 (7)	104.3 111.7
B Members protected from the weather and dampness (see section 111)						
2B.1	Non-loadbearing(8) interior wall framing	Radiata pine	Structural grades or Framing – No. 2	20 % or less	H1.1	–
		Douglas fir	Structural grades or Framing – No. 2		None	
		Larch	Structural grades or Framing – No. 2		None	
		Cypress heart (4)	Structural grades or Framing – No. 2		None	
		Kiln dried and gauged Radiata pine or Corsican pine	Structural grades or Framing – No. 2	18 % or less	None	105.5

Table 2 – Requirements for wood-based building components to achieve a 15-year durability performance (continued)

Ref No.	Wood-based building components	Species or type(1)	Grade or Standard ref.	Installation moisture range %	Level of treatment(2) to NZS 3640 or AS/NZS 1604(3)	Clause reference
2B.2	Stair treads, risers and handrails	Radiata pine	Select A	16 % or less	None	–
		Douglas fir	Select A			
		Cypress species(4)	Select A			
		Yaka	Select A			
		Rimu	Premium			
		Eucalyptus species(6)	Premium			
		Beech – silver, red, hard	Premium			
		Tawa	Premium			
		Plywood	AS/NZS 2269			
		Wood-based products(5)	AS/NZS 1859			

NOTE –

(1) Wood-based building components made from wood species other than those listed may also achieve the required durability but there is not enough data on their durability to permit their inclusion in this Standard. Refer to C101.2.

(2) Throughout table 2, timber treated to a higher level than the minimum satisfies the minimum requirements.

(3) NZS 3640 specifies treatment for round or sawn timber. Plywood shall be treated to AS/NZS 1604: Part 3. Laminated beams and posts shall be treated to AS/NZS 1604: Part 5.

(4) Cypress species include Cupressus macrocarpa (macrocarpa), C. lustianica (Mexican cypress) and Chamaecyparis lawsoniana (Lawson's cypress). Refer to AS/NZS 1148.

(5) Wood-based products must have a proven durability performance against dampness.

(6) Eucalyptus species include E.botryoides, E.saligna, E.globoidea, E.muellerana, E.obliqua, E. pilularis.

(7) NZS 3640 specifies treatment for round or sawn timber. Other products are to be treated to AS/NZS 1604.

(8) Walls that provide bracing are load-bearing walls.

LOCKWOOD

LOCKWOOD WALL BRACING CALCULATION SHEET A

JOB DETAILS

Name	T & N JAQUES
Street and number	
Lot and DP number	
City/Town/District	
Bracing prepared by	
Franchisee	TUOHY HOMES LTD

All work carried out under jurisdiction of producer statement to meet the engineer requirements fully.

BUILDING DETAILS

Location of storey	Upper of two		
Building height to apex	6	Roof weight	Light
Roof height above eaves	1.5m	Cladding weight	Light
Stud height	2.2	Room in roof space	No
Average roof pitch	20°	Gross building plan area	175 m²
Building length BL (m)	17.5		
Building width BW (m)	11		

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

Note: For heavy roofs use the roof plan at eaves level to determine GPA

WIND ZONE

Determine Wind Zone by application of NZS 3604 Figures 2.3 and 2.4 and Tables 2.4 and 2.5.

LOW	MEDIUM	HIGH	VERY HIGH	SPECIAL
o	o	●	o	o

EARTHQUAKE ZONE

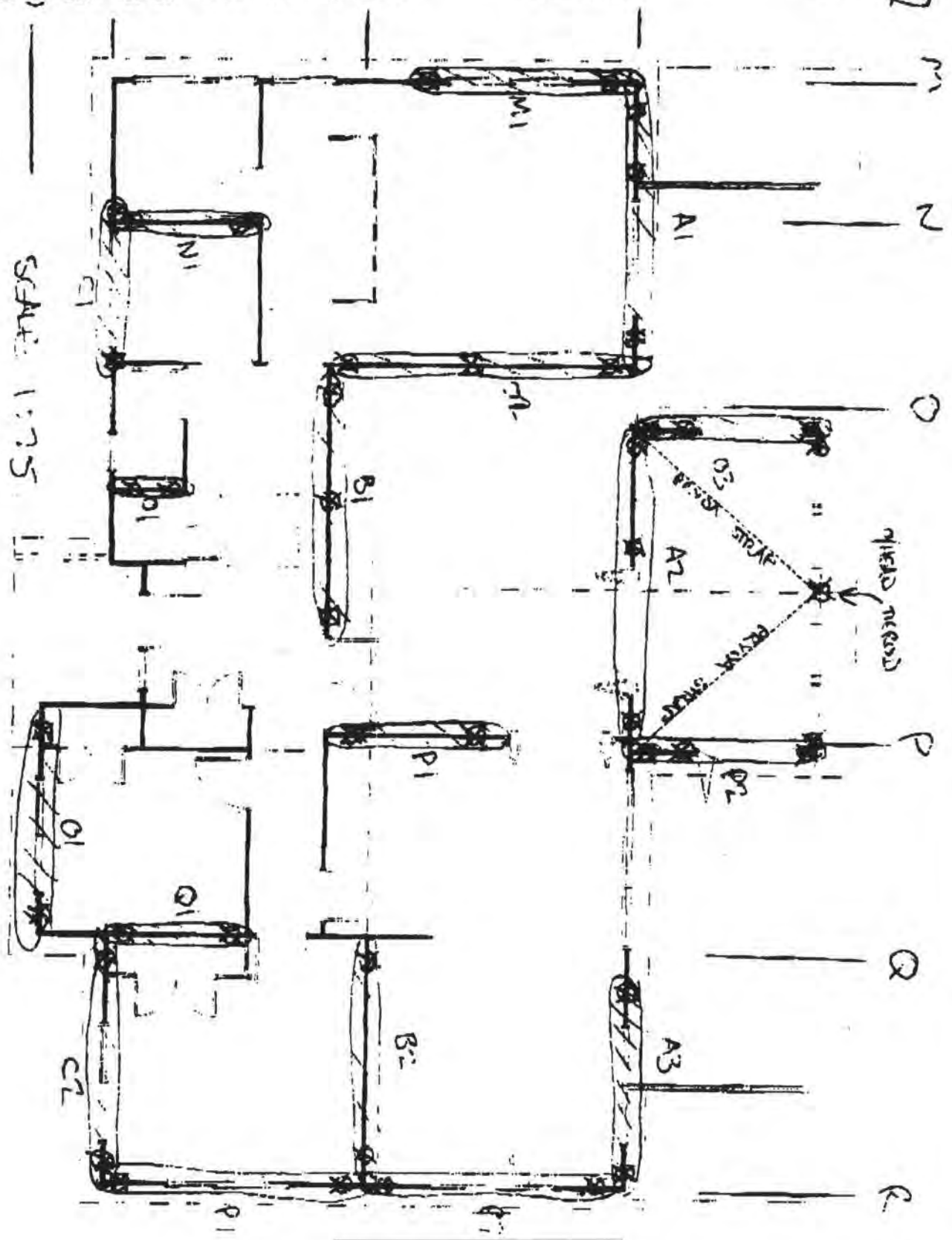
Select E/Q wind from Fig.2.2 NZS 3604

A		B		C
●		o		o

BU's required Wind

W along =	44	BU's
W across =	37	BU's
Total wind load,		
W along x BW =	484	BU's
W across x BL =	648	BU's

Earthquake B/U's	5.6	per sqm
E + 1 (See NZS 3604 Cl .6.3.2.5)		
21.3 x 36 + 12.4 (55-36)		
Total earthquake load,		
EQ along and EQ across		BU's
E x GPA BU's =	980	BU's



All work carried out under jurisdiction of producer statement to meet the engineer requirements fully.

LOCKWOOD WALL BRACING CALCULATION SHEET B

ALONG UPPER FLOOR

Wall or bracing line		Bracing elements provided				Test panel capacities		
Line Label	Min B/U's Required	Bracing Element No		Length Element (m)		Test panel	B/U Wind achieved	B/U E/Q Achieved
A		A1	LW3	4500		4062	232	257
		A2	LW11	2200		2200	226	246
		A3	LW17	3500		3352	236	264
B		B1	LW7	3600		3600	246	261
		B2	LW7	4000		3600	246	261
C		C1	LW17	3300		3352	236	264
		C2	LW17	4000		3352	236	264
D		D1	LW17	3600		3352	236	264
Total B/U Achieved							1894	2081
From Sheet A Total B/U Required							484	980

If Wind required > E/Q required complete the wind achieved only. If E/Q required > 1.25 Wind achieved complete the E/Q achieved column only. Otherwise complete both Wind and E/Q achieved columns.

All work carried out under jurisdiction of producer statement to meet the engineer requirements fully.

LOCKWOOD WALL BRACING CALCULATION SHEET C

ACROSS UPPER FLOOR

Wall or bracing line		Bracing elements provided				Test panel capacities		
Line Label	Min B/U's Required	Bracing Element No	Bracing Type	Length Element (m)		Test Panel Length	B/U Wind achieved	B/U E/Q Achieved
M		M1	LW17	4000		3352	236	264
N		N1	LW11	2200		2200	226	246
O		O1	LW12	1100		1212	138	135
		O2	LW7	4500		3600	246	261
		O3	LW9	3000		3066	114	131
P		P1	LW11	2700		2200	226	246
		P2	LW9	3000		3066	114	131
Q		Q1	LW11	2200		2200	226	246
R		R1	LW17	4000		3352	236	264
		R2	LW17	4000		3352	236	264
Total B/U Achieved							1998	2188
From Sheet A Total B/U Required							648	980

If Wind required > E/Q required complete the wind achieved only. If E/Q required > 1.25 Wind achieved complete the E/Q achieved column only. Otherwise complete both Wind and E/Q achieved columns.

All work carried out under jurisdiction of producer statement to meet the engineer requirements fully.

2/11/2004

233-865 - ROSS - 12 PAGES.

P.I.M. No. .....

Building Regulation Clause(s) .....

PRODUCER STATEMENT – PS1 – DESIGN

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

ISSUED BY: D.N. UNDRILL
(Suitably qualified Design Professional)

TO: W & N JAQUES
(Owner)

TO BE SUPPLIED TO: KAPITI COAST DISTRICT COUNCIL
(Territorial Authority)

IN RESPECT OF: NEW HOUSE (LESS STANDARD LOCKWOOD COMPONENTS)
(Description of Building Work)

AT: 53 KOTARE ST
WAIKANAE
(Address)

LOT ..... **DP** ..... **SO** .....

UNDRILL has been engaged by TUOHY HOMES.
(Design Firm) (Owner/Developer/Contractor)

to provide DESIGN & SUPERVISION. services in respect of the
(Extent of Engagement)

requirements of Clause(s) B1 of the Building Regulations 1992 for

☐ All ☑ Part only as specified

of the building work. The design has been prepared in accordance with B1 / AS1.
(verification method(s)/acceptable solutions(s))

(respectively) of the approved documents issued by the Building Industry Authority and the work is described on

TUOHY HOMES. drawings titled JAQUES AT RIBBONWOOD.
(Design Firm)

and numbered 1-12 DATED 30/8/04 and the specification and other documents according to which the building is proposed to be constructed.

As an independent design professional covered by a current policy of Professional Indemnity Insurance to a minimum value of $1,000,000. **I BELIEVE ON REASONABLE GROUNDS** that subject to:

(i) the site verification of the following design assumptions —

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

.....
(Signature of suitably qualified Design Professional)

Date 15-9-04.

...BE (Civil), MIPENZ (Structural), CPEng.....
(Professional Qualifications)

CPEng No. ...27756.....

Member ACENZ ☐

18 Hathaway Avenue, LOWER HUTT.....
(Address)

IPENZ ☐ ☐ NZIA

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

All work carried out under jurisdiction of producer statement to meet the engineer requirements fully.

2/11/2004

/1.

D. N. UNDRILL
BE(Civil) MIPENZ (Structural) CPEng

Consulting Structural Engineer

18 Hathaway Avenue Lower Hutt New Zealand Tel: 64 4 567 0433 Fax: 64 4 567 0952 Email: undrill@clear.net.nz

2-9-04.

TOOHY HOMES
JAQUES HOUSE
53 KOTARE ST - WAIKANAE

RETAINING WALLS
-TO NZS 4229 AS ATTACHED.

GARAGE DOOR LINTEL.
SPAN 4800
SUPPORTED 1.5m FLOOR WALL & ROOF
AT 2.7 KPa,
.3m ROOF AT 1.0
= 5.1 KN/m.

$M = \frac{5.1 \times 4.8^2}{8} = 15\ KNm.$

$Z_{REQD} = \frac{M}{f} = \frac{15 \times 10^3}{165} = 90\ cm^3$

180×76 [Z = 150
I = 1337 cm^4.

$\delta = \frac{5}{384} \times \frac{5.1 \times 4800^4}{200000 \times 1337 \times 10^4}$

= 13mm
LIVE = .004 = 19mm

USE 180 PFC.

All work carried out under jurisdiction of producer statement to meet the engineer requirements fully.

2/11/2004

12.

D. N. UNDRILL
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Consulting Structural Engineer

18 Hathaway Avenue Lower Hutt New Zealand Tel: 64 4 567 0433 Fax: 64 4 567 0952 Email: undrill@clear.net.nz

BEAM OVER GARAGE - SHORT

SPAN 3900

SUPPORTING ONE POST

POST LOAD

5.5m OF ROOF BEAM

2.0m WIDTH OF ROOF ON BEAM

1 kPa × 2 × 5.5 = 11 kN POST LOAD.

$M = \frac{Pab}{L} = \frac{11 \times 2.7 \times 1.2}{3.9} = 9.2 \text{ kNm}$

$Z = \frac{M}{S} = \frac{9200}{165} = 55 \text{ cm}^3$.

150UB18 $Z = 115$, $I = 873 \text{ cm}^4$

$\delta = \frac{Pl^3}{48EI} = \frac{9200 \times 3900^3}{48 \times 200000 \times 873 \times 10^4}$

$= 6.5 \text{ mm}$

LIMIT = .004L = 15 mm

USE 150UB18

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MAIN BEAM OVER GARAGE

SPAN 6800
SUPPORTED 3600 WIDTH OF FLOOR WALL & ROOF

PLUS POST BEAM.

3.6 @ T 1.5 kN
.25 ROOF kN
.5 ROOF
.5 WALL
.3 FLOOR
3.3 kPa × 3.6 = 12 kN/m.

POST BEAM 11 kN (PAGE 2) × 2.7/3.9 = 8 kN.

$M = \frac{wL^2}{8} + \frac{Pab}{L}$

$= \frac{12 \times 6.8^2}{8} + \frac{8 \times 2.5 \times 4.3}{6.8}$

$= 70 + 13 = 83$ kNm

$Z_{REQD} = \frac{M}{f} = \frac{83 \times 10^3}{165} = 503 cm^3$,

300UB40 $Z = 561$ $I = 8523 cm^4$.

AT $w_s = 9$ kN/m.

$\delta = \frac{5}{384} \times \frac{9 \times 6800^4}{200000 \times 8523 \times 10^4}$

= 15 mm.

→ USE 360UB45 (I = 8200, δ = 10mm)

All work carried out under jurisdiction of producer statement to meet the engineer requirements fully.

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BE(Civil) MIPENZ (Structural) CPEng

Consulting Structural Engineer

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FLOOR JOISTS AT POSTS IN MASTER BEDROOM LOUNGE WALL

DEAD LOAD.
4.2 m OF BEAM AT 2m WIDTH OF ROOF
1kPa × 2 × 4.2 = 8.4kN,

JOIST MOMENT = $\frac{Pab}{L} = \frac{8.4 \times 0.6 \times 1.6}{2.2}$
= 3.7 kNm.

$Z = \frac{bd^2}{6} = \frac{2 \times 4.4 \times 24.4^2}{6} = 873 cm^3$

$f = \frac{M}{Z} = \frac{3700}{873} = 4.2 MPa$

LIMIT = $\frac{17.7 \times .8 \times .8 \times .8}{\phi \quad k_1 \quad k_6} = 9 MPa$ — OK.

DOUBLE JOISTS EACH SIDE OF RIBA ENTRY

SPAN. 3600
SUPPORTING 1500 OF FLOOR WALL & ROOF
— 1.5 × 3.3 = 5 kN/m.

$M = \frac{5 \times 3.6^2}{8} = 8.1 kNm.$

$f = \frac{8100}{873} = 9.3 MPa$ — USE EXTRA PILE

— DRAWING NOW CHANGED TO INCLUDE EXTRA PILE

All work carried out under jurisdiction of producer statement to meet the engineer requirements fully.

All work carried out under jurisdiction of producer statement to meet the engineer requirements fully.

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BASEMENT BRACING

WIND: R2, URBAN, EXPOSED
OUTER ZONE, MODERATE HILL.
— HIGH WIND LOAD.

FOUNDATIONS: H = 6m.
h = 1 m
143 BDS/m.

16.7 × 143 (ACROSS) = 2390 BDS
11 × 143 (ALONG) = 1580 BDS.

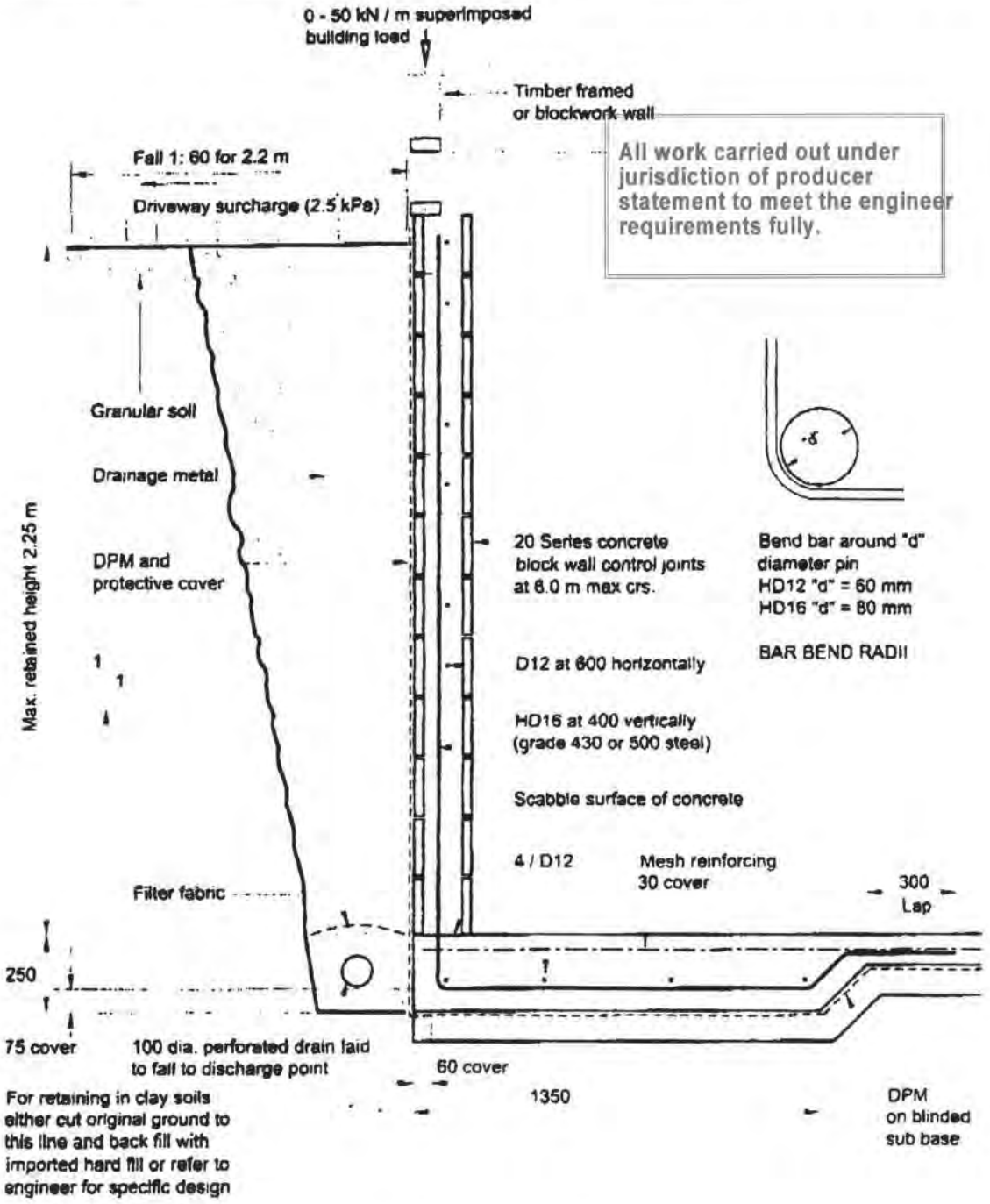
ACROSS: — RETAINING WALL CARRY LOAD DIRECT TO GROUND FOR N-WESTERLY.
— FROM EAST — REDUCED EXPOSURE

ALONG: — RETAINING WALLS WORK BOTH WAYS.

SEISMIC: 17.7 BDS/m²
× 16.7 × 11 = 3250 BDS.

BLOCK WALL ALONG
$\frac{16.7}{2.6} = 6.4 \rightarrow$ 300 BDS/m.
300 × 16.7 = 5010 BDS.

FLOOR DIAPHRAGM STRENGTH
16.7 m AT 6.67 NAILS/m AT 0.8kN/NAIL
= 80 kN AT 8kg/BD = 1780 BDS.



NOTE -

(1) It is important for bending strength that the vertical steel is positioned and secured so that it has 60 mm cover to the face of the wall retaining the earth.

(2) Bars designated D are deformed grade 300, bars designated HD are deformed grade 430, deformed grade 500 may be substituted for grade 430.

Figure C1.4 – 2.25 m high granular soil with surcharge, 0 – 50 kN/m superimposed load
(see C1.2 and C1.3)

TUOHY - 233-8165 - ROSS - 6 PAGES.

P.I.M. No.....
Building Regulation Clause(s) .....

PRODUCER STATEMENT – PS1 – DESIGN

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

ISSUED BY: D. N. UNDRILL
(Suitably qualified Design Professional)

TO: T & J. JAQUES
(Owner)

TO BE SUPPLIED TO: KAPITI COAST DISTRICT COUNCIL
(Territorial Authority)

IN RESPECT OF: RETAINING WALLS (SITEWORKS)
(Description of Building Work)

AT: 53D KOTARE ST
WAIKANAE
(Address)

LOT ..... **DP** ..... **SO** .....

UNDRILL (Design Firm) has been engaged by JAQUES (Owner/Developer/Contractor)

to provide DESIGN & SUPERVISION (Extent of Engagement) services in respect of the

requirements of Clause(s) B1 of the Building Regulations 1992 for

☒ All ☐ Part only as specified

of the building work. The design has been prepared in accordance with B1/AS1 (verification method(s)/acceptable solutions(s))

(respectively) of the approved documents issued by the Building Industry Authority and the work is described on

TUOHY HOMES (Design Firm) drawings titled JAQUES

and numbered 2 SHEETS OF 12/10/04 and the specification and other documents according to which the building is proposed to be constructed. + FIRTH STANDARD DETAILS

As an independent design professional covered by a current policy of Professional Indemnity Insurance to a minimum value of $1,000,000. **I BELIEVE ON REASONABLE GROUNDS** that subject to:

(i) the site verification of the following design assumptions .....

.....

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

(Signature of suitably qualified Design Professional) Date 12-10-2004

...BE (Civil), MIPENZ (Structural), CPEng (Professional Qualifications) CPEng No: 27756

Member ACENZ ☑

18 Hathaway Avenue, LOWER HUTT (Address) IPENZ ☑ ☐ NZIA

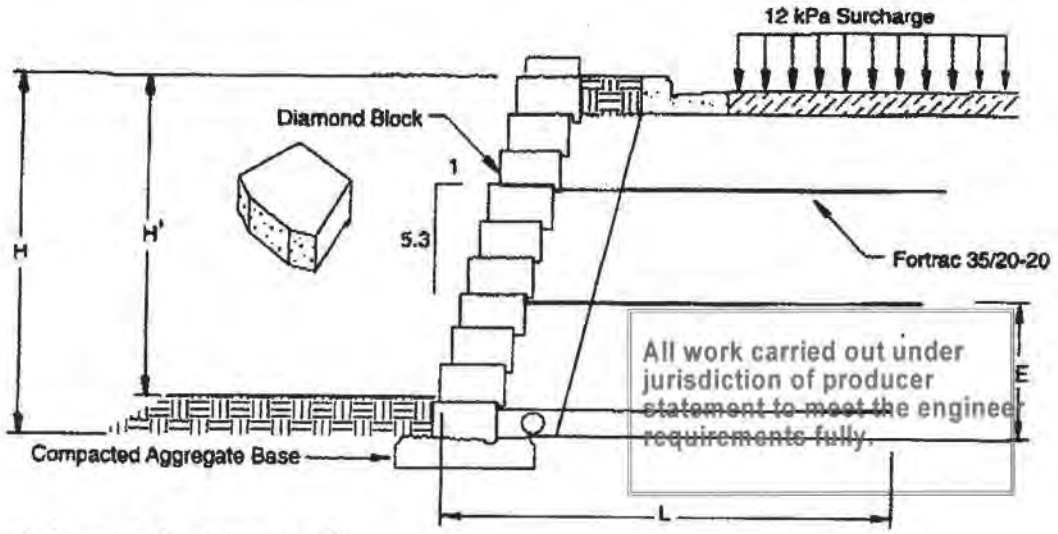
This form to accompany Form 3 of the Building Regulations 1992 for the application of a Building Consent.

All work carried out under jurisdiction of producer statement to meet the engine requirements fully. Engineer to sign off work supervision after construction

[redacted]

DIAMOND™ RETAINING WALL SYSTEM
FORTRAC® GEOGRID REINFORCEMENT
LEVEL BACKFILL / 12 kPa SURCHARGE

TODAY HOMES - TYROLES - AT DRIVEWAY,



$\phi = 30°$, $c = 0$, $\gamma = 18\ kN/m^3$

EXPOSED HEIGHT H'	TOTAL HEIGHT H	GEOGRID TYPE	NO. OF GEOGRID LAYERS	GEOGRID LENGTH L	ELEVATION ABOVE BASE COURSE E (m.)	NUMBER OF COURSES
					E1 E2 E3 E4 E5 E6 E7	
1.2m	1.35m	35/20 - 20	3	1.4m	0.30 0.75 1.05	9
1.5m	1.65m	35/20 - 20	4	1.7m	0.15 0.45 0.90 1.35	11
1.8m	1.95m	35/20 - 20	5	1.9m	0.15 0.45 0.75 1.20 1.65	13
2.1m	2.25m	35/20 - 20	5	2.1m	0.15 0.45 0.90 1.35 1.95	15
2.4m	2.70m	35/20 - 20	6	2.4m	0.15 0.45 0.75 1.20 1.80 2.40	17

Notes

1. Sample design to be used for preliminary design only when actual soil, geometry and surcharge conditions are conservatively represented by the assumption above. In all situations the final as built design should be performed by a qualified experienced engineer, using actual design conditions for the proposed site.
2. Sample designs have been prepared exclusively for use of Fortrac 35/20-20 geogrid reinforcement for all layers.
3. MINIMUM SAFETY FACTORS: 1.5 for internal reinforcement pull-out and tensile overstress, 1.5 for external sliding and 2.0 for external overturning and bearing capacity.
   NO provision or analysis for global stability, hydrostatic pressure and seismic loading.
4. Sample designs require adequate drainage provisions for both the reinforced wall fill and the retained back fill.
5. Sample designs based of the Firth Diamond Unit. Fortrac should extend completely to the front wall face.

MACCAFERRI®

FORTRAC® / DIAMOND® BLOCK RETAINING WALL SYSTEMS

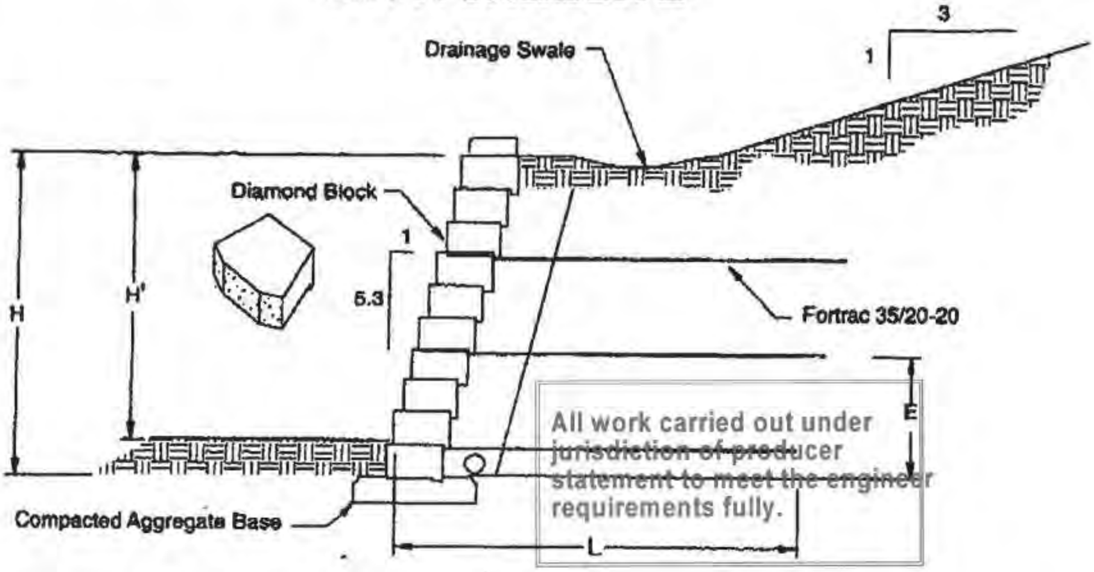
DESIGN CHARTS, CASE 2

Firth
LEADING BY DESIGN

2/11/2004

W/ TIDY HOMES W/ 3 ACRES BEHIND HOUSE

DIAMOND™ RETAINING WALL SYSTEM
FORTRAC® GEOGRID REINFORCEMENT
3H : 1V BACKSLOPE



All work carried out under ~~jurisdiction of producer statement to meet the engineer~~ requirements fully.

$\phi = 30°$, $c = 0$, $\gamma = 18$ kN/m^3

EXPOSED HEIGHT H'	TOTAL HEIGHT H	GEOGRID TYPE	NO. OF GEOGRID LAYERS	GEOGRID LENGTH L	ELEVATION ABOVE BASE COURSE E (m.)							NUMBER OF COUSES
					E1	E2	E3	E4	E5	E6	E7	
1.2m	1.35m	35/20 - 20	3	1.5m	0.15	0.45	0.90					9
1.5m	1.65m	35/20 - 20	4	1.8m	0.15	0.45	0.75	1.20				11
1.8m	1.95m	35/20 - 20	5	2.1m	0.15	0.45	0.75	1.05	1.50			13
2.1m	2.25m	35/20 - 20	6	2.4m	0.15	0.30	0.80	0.90	1.35	1.80		15
2.4m	2.70m	35/20 - 20	7	2.8m	0.15	0.30	0.60	0.90	1.35	1.80	2.25	17

Notes

1. Sample design to be used for preliminary design only when actual soil, geometry and surcharge conditions are conservatively represented by the assumption above. In all situations the final as built design should be performed by a qualified experienced engineer, using actual design conditions for the proposed site.
2. Sample designs have been prepared exclusively for use of Fortrac 35/20 - 20 geogrid reinforcement for all layers.
3. MINIMUM SAFETY FACTORS : 1.5 for internal reinforcement pull-out and tensile overstress, 1.5 for external sliding and 2.0 for external overturning and bearing capacity.
   NO provision or analysis for global stability, hydrostatic pressure and seismic loading.
4. Sample designs require adequate drainage provisions for both the reinforced wall fill and the retained back fill.
5. Sample designs based of the Firth Diamond Unit. Fortrac should extend completely to the front wall face

2/11/2004

All work carried out under jurisdiction of producer statement to meet the engineer requirements fully.

INSTALLATION

INSTALLATION PROCEDURES FOR FORTRAC REINFORCED DIAMOND OR VERTICA WALLS

The following guidelines have been prepared to assist in the installation of the selected Diamond and Vertica segmental block systems incorporating Fortrac geogrid reinforcement.

STEP 1: PLAN YOUR DIAMOND VERTICA WALL

Before beginning excavation and construction, document site conditions and prepare a layout plan for your Diamond or Vertica wall. Be sure to consider topography drainage patterns, soil conditions and local building codes. The excavation should take into account the amount of wall buried and the width necessary to accommodate granular fill and the embedment length of the Fortrac geogrid.

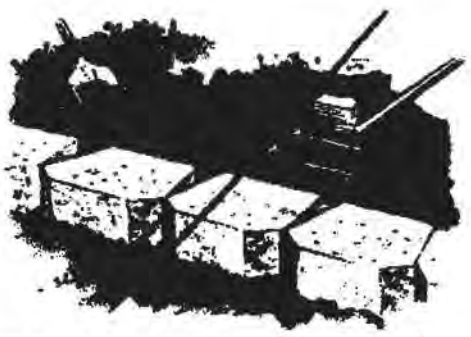
STEP 2: PREPARE THE BASE PAD

A solid foundation is essential to ensure a well built, long lasting Diamond or Vertica wall. Excavate a trench approximately 600mm wide and deep enough to accommodate the amount of buried block required plus a minimum of 150mm of compacted granular fill. The base material should be compacted to a minimum of 95% Standard Proctor compaction. A levelling pad of unreinforced concrete may be used. When the levelling pad is to be stepped, special consideration should be taken of the block setback, block height and the location of Fortrac reinforcement layers.

STEP 3: INSTALL THE BASE BLOCK LAYER

Place the first layer of Diamond or Vertica block on the prepared foundation. Position each unit and using a carpenter's level, level from side to side and front to back. Use a string line to verify straightness. Begin construction at the lowest point of the wall.

STEP 4: INSTALL THE DRAINAGE LAYER BACKFILL MATERIALS

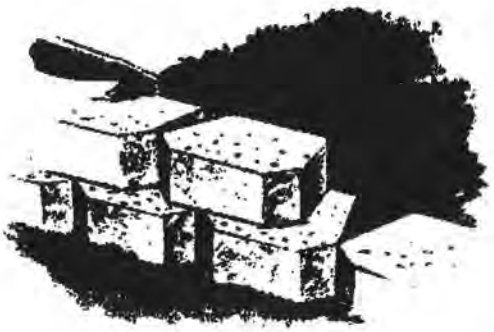


Fill all block voids with 20mm minus crushed stone or natural drainage aggregate, in the case of Vertica, ensure core hole is also filled with aggregate. Extend this drainage layer

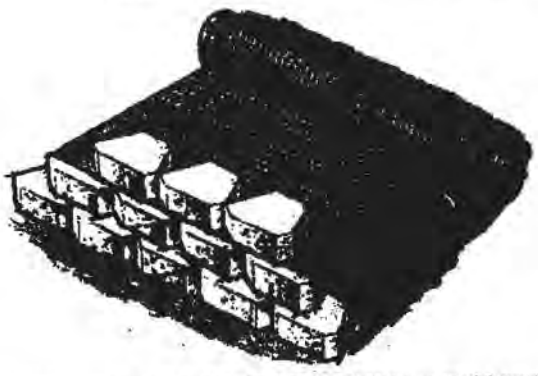
[redacted] carried out under jurisdiction of producer statement to meet the engineer requirements fully.

approximately 300mm behind the block wall face then place the select fill material in the reinforced soil zone. The layers of drainage and select fill material should be compacted to a minimum of 95% Standard Proctor. Compaction should take place with each increment of block course constructed. When compacting use only lightweight "walk behind" compaction equipment within 1 metre of the back of the block units taking care not to compact directly on the block units. Ensure that prior to laying the next course of Diamond or Vertica block that the top block surface is well swept to remove residual debris so that the next course of blocks rests evenly on the blocks below.

STEP 5: INSTALLING ADDITIONAL COURSES



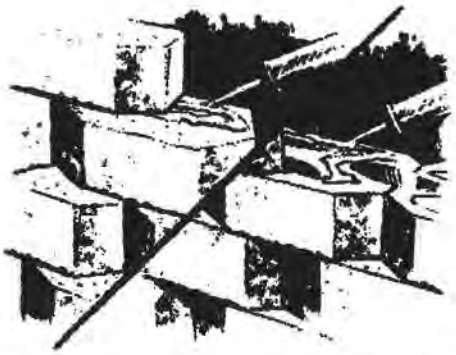
Position the second course of Diamond or Vertica block on the preceding layer with joints offset one half block. Ensure that when using Diamond block in your wall each block is pushed forward to ensure intimate contact of the shear key with the lower block rear face. With the Vertica block lay each block with the side core of the units resting around one side of the Vertica shear key locater. Push the unit forward by hand as far as possible. No interlocking pins or morter is required. Set back is established with the built in lip (Diamond) or shear key /locater (Vertica).



To ensure correct orientation, roll out the geogrid at right angles to the wall face and cut to the required length. At the levels which Fortrac reinforcement is to be placed, locate the grid on the block surface ensuring maximum block coverage. A minimum of 200mm of geogrid should be in contact with the block surface. Repeat block placement procedure as previously detailed.

STEP 7: BACKFILLING OVER REINFORCEMENT

Prior to placing select fill material pull Fortrac taut and stake if necessary to hold in place. Ensure the grid is laid flat and level then proceed to place select fill to the selected block height lift and compact. Avoid tracked or wheeled vehicles driving on exposed Fortrac.



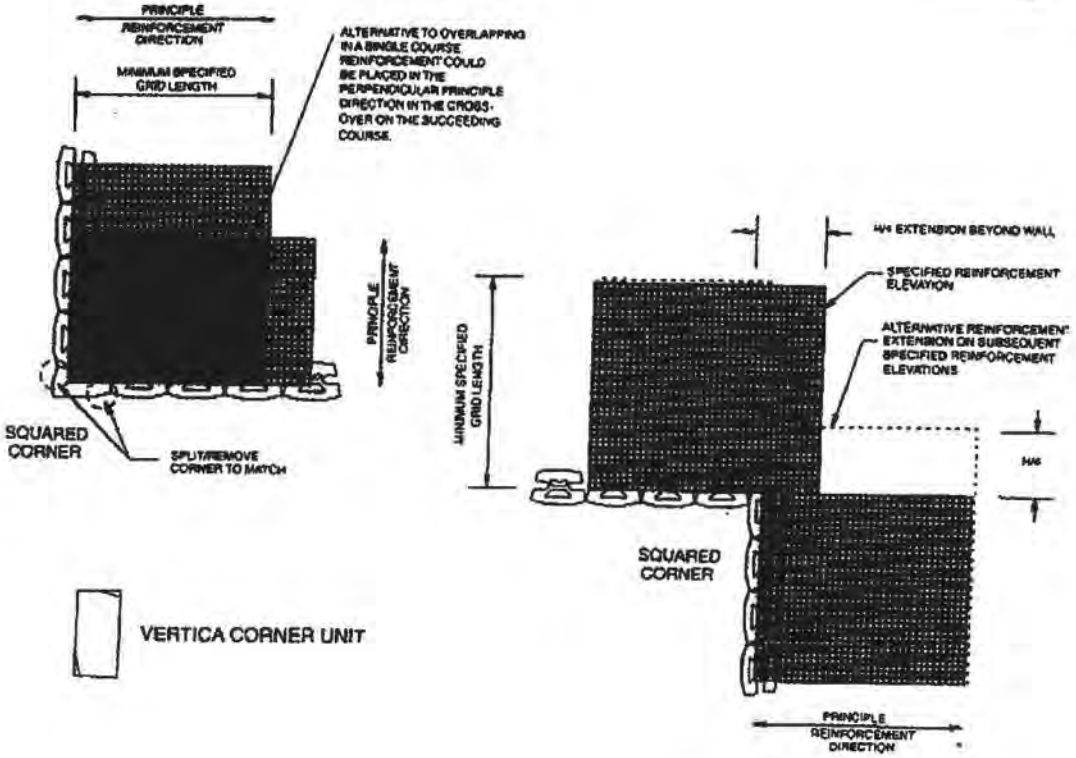
To complete the top of the Diamond or Vertica wall, place the finishing cap and fix with a construction adhesive or epoxy cement.

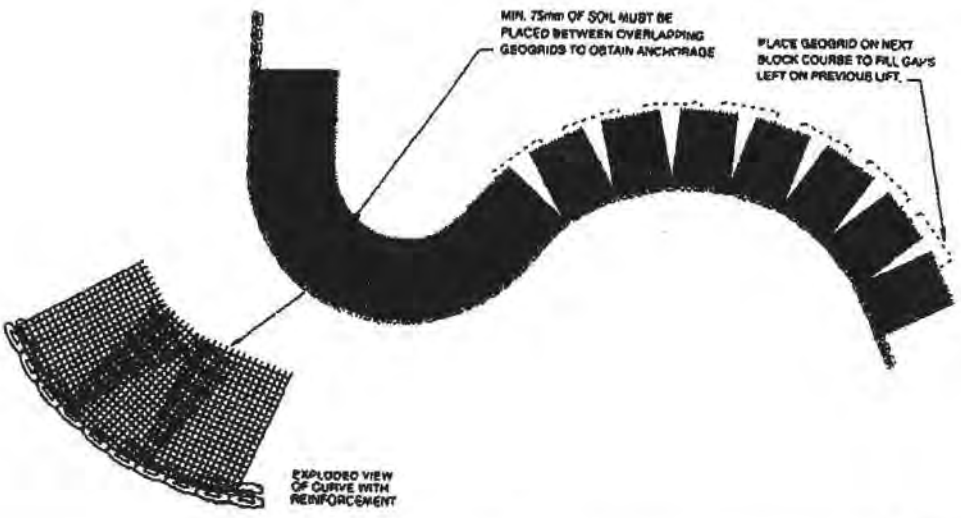
All work carried out under jurisdiction of producer statement to meet the engineer requirements fully.

CORNERS AND CURVES

Curves and 90° corners both inside and outside, may be easily accomplished with both Diamond and Vertica blocks. Advice should be sought from the supplier with respect to minimum radi for the block type selected. Careful attention should be paid to Fortrac placement in these locations. Typical details are shown below for grid placement around corners and curves. Additional advice should be sought for specific project applications. Some additional guidance is given on set outs in the Firth Industries "Installation Manual"

GEOGRID PLACEMENT FOR CORNERS AND CURVES





2/11/2004

APPROVED
BY BUILDING
Mark Fitzpatrick
Officer

SPECIFICATIONS

Work and materials to be included in accordance with the enclosed specifications and attached plans ;

NEW HOME ,

For : T & N Jaques

Road : 53 Kotare Street

Town : Waikanae

Lot # : 5

D. P. # : 310492

All references to standards and codes etc shall be taken as reference to latest version including amendments.

Non Endorsed sheets of specs have not been reproduced by Council, refer main set supplied by Architect if required to view.

THE WHOLE OF THE WORKS TO BE CARRIED OUT BY ;

TUOHY HOMES LIMITED.
P.O. Box 54-162
Mana
Wellington.
Telephone 233-8018
Fax 233-8165

9.6 Cold water supply – urban.
Arrange water supply to storage tank via existing trickle feed that operates from 12am to 6am. Arrange to install gate valve at home site.

9.6 Cold water storage.
Arrange to install 1 x 13,500 litre Devon 3000 litre water storage tank to position shown on attached plans. Water shall be reticulated to these tanks as provided under drainage section herein. Arrange to install stainless steel mesh screen at each down pipe to restrict the ingress of airborne contaminates such as leaves etc. Gate valve to be fitted to overflow outlet form tank.

9.7 Hot water supply.
Supply and install a 170 litre Rheemglas gas high pressure hot water cylinder complete with flue. A tempering valve is to be installed on the HWC with a maximum setting of 55'c. Seismic restraints to be fitted to HWC.

9.8 Tests
Hot and cold water pipes to be water tested to a pressure of 1,500 kPa.

9.9 Sanitary fittings.
All fittings shall be as shown on the plan and schedule. Unless otherwise stated all fittings are assumed white in colour.

9.10 Kitchen
The following items apply to the kitchen;
Kitchen cupboards and tops to be as per attached plan.

Kitchen faucet	Caroma Azuro sink mixer
Dishwasher	Supply cold water and waste outlet to suit model. Connect Dishwasher at completion of job.
Waste disposal	install owner supplied waste disposal unit on completion.

9.11 Bathroom.
Supply & Install the following fittings to the bathroom ;

Bath	Big 6 bath, with wall liner and bifold swivel screen if shower over bath.
Bath taps	Caroma bath spout with Azuro mixer.
Shower mixer	Caroma Azuro shower mixer. Mixer to be diverter model if shower is over bath.
Shower rose	Caroma Bullet 3 mode shower set
Vanity	Clearlite 1,200 vanity as plans.
Vanity faucet	Caroma Azuro basin mixer

APPROVED
BY P & D
Simon Copp
Officer
12/10/04

9.12 Toilets.
The following shall apply ;
Classic style Vitreous China toilet suite – Caroma Trident Sovereign 2000

WC basin:	Clearlite Madrid basin

9.13 Ensuite.
Supply & Install the following items apply to the ensuite room.

Shower	Clearlite Millenium shower in accordance with details on plan.
Shower mixer	Caroma Azuro shower mixer
Shower rose	Caroma Bullet 3 mode shower set
Vanity	Clearlite 1,200 vanity as plans.
Vanity faucet.	Caroma Azuro basin mixer

9.14 Laundry.
Supply and install Robin Hood ST3000 Supertub with provision for washing machine connections.

Plumbing variations -
The above outline is regarded as the standard plumbing application for all homes. However, should there be changes required to the above specification these should be discussed with the plumber and all cost details either verified then or alternately these changes will be shown on the final account upon completion of the home. All changes to be verified in writing to both plumber and main contractor.

10 Drain laying works.

10.1 Preliminary.

The whole of the drainlaying works shall be carried out in accordance with the local authority by laws by a qualified competent tradesman. Install all drains in accordance with good trade practice and arrange local authority inspections prior to backfilling of trenches.

10.2 General.

Provide all fittings necessary to complete the work and lay all drains to an even and consistent fall not less than 1:40

10.3 Sanitary fittings.

Fit W.C. pan to sewer connections. Connect sewer to vent pipe installed by plumber.

10.4 Sewer.

Drains shall be laid in a straight line and to even gradient , properly cleaned out as work proceeds. Install gully traps of approved manufacture to positions as shown on plans. Ensure all gully traps have approved grating installed upon completion.

10.6 Storm water.

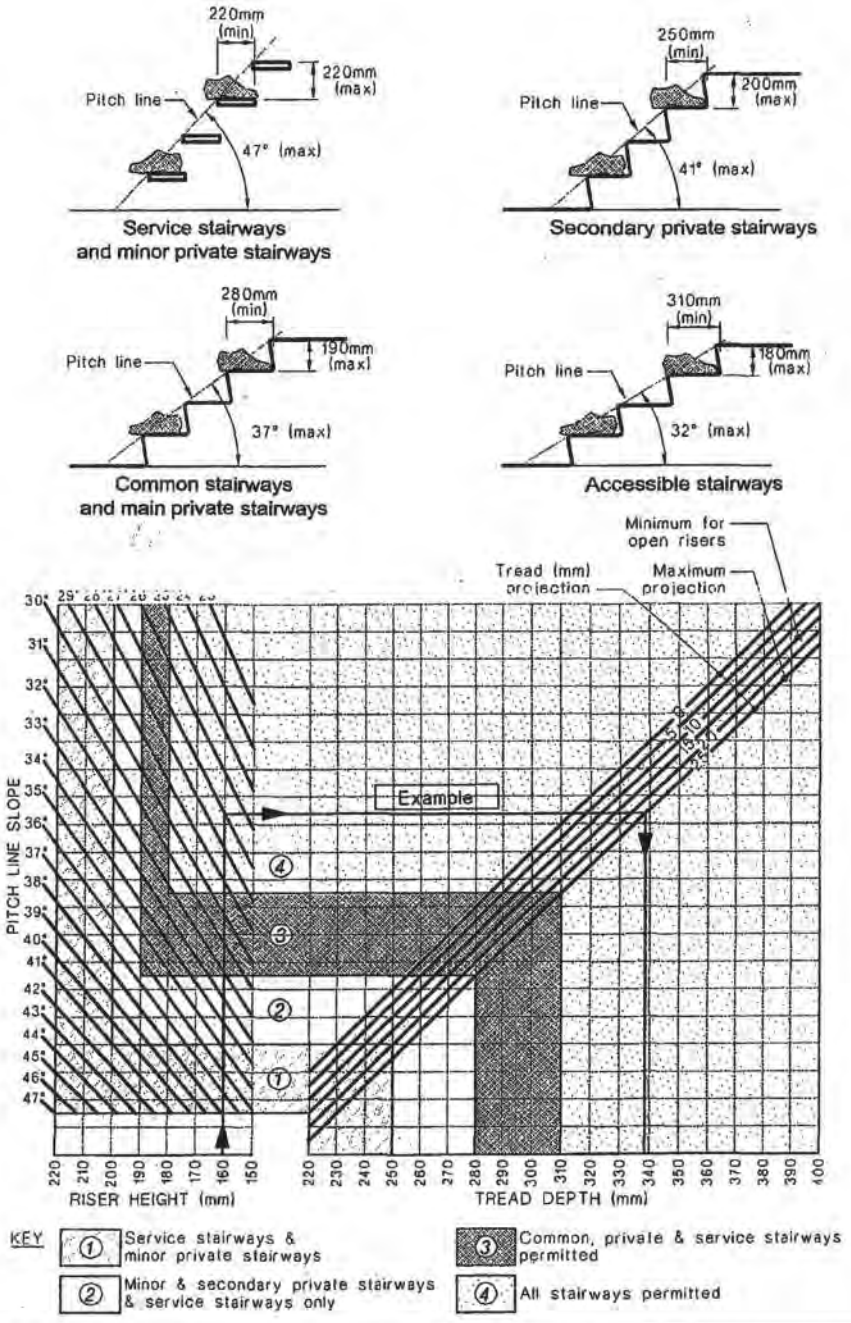
From all down pipes, install sealed 100mm ground drain to water storage tank. Ensure all down pipes are sealed to a level above the invert level to the water storage tanks.
Storage tank overflow to feed in to existing stormwater connection.

10.7 Provisional sum.

The whole of the drainlaying works are covered by a provisional sum in this contract. Upon completion of these works the drainlayer will remit a detailed account of all works to the builder. Upon completion of this contract the builder will submit the adjusted account for drainage works on the final account to the owner.
The provisional sum in this contract is $5,625.00 (including GST)

APPROVED
BY P & D
Simon Copp
Officer
12/10/04

Figure 11: Pitch, Risers and Treads for Stairs
Paragraphs 4.1.1, 4.1.4, 4.4.2, 4.5.1 a) and Figure 17



25mm,

Main private stairway A *private stairway* intended to provide access to and between frequently used spaces such as living areas, kitchens and garages, and includes all exterior *private stairways*.

Minor private stairway A *private stairway* not on a main thoroughfare, and intended to provide infrequent access to a single room which is not a living area or kitchen.

Secondary private stairway A *private stairway* other than a *main* or *minor private stairway*, intended to provide access to another floor containing only bedrooms, bathroom or similar accommodation.

10.2 Systems to resist vertical loads

10.2.1 *Framed roofs*

10.2.1.1 *Scope*

The scope of this clause is as follows:

(a) Clause 10.2.1 is written specifically for *couple-close roofs* (see figures 10.1 and 10.3), but the requirements for individual roof *framing* members apply equally to framed roofs of other types; for example, mono-pitch skillion and exposed *rafter* roofs.

(b) This clause does not include "cathedral ceiling" type roofs (see figure 10.3);

(c) The *rafter spacing* shall not exceed 1200 mm for *light roofs*, and 900 mm for *heavy roofs*.

Table 10.1 – Summary of roof bracing systems (see 10.1.4)

Roof type	Roof plane diagonal braces unless sarked (see 10.4)		Roof space diagonal braces*	Hip or valley rafters		Hip and top plate
Light hip	–	–	–	Minimum 3 per ridge	–	–
Heavy hip	One per 35 m^2 roof plane plan area	Plus	–	Minimum 3 per ridge	Plus	Top plate connected at 2.5 m maximum centres to wall bracing elements (see figure 10.22)
Light gable	One per 50 m^2 roof plane plan area	Or	At each end of ridge and maximum 7.5 m centres between	–	–	–
Heavy gable	One per 25 m^2 roof plane plan area, minimum 2 per plane	Plus	One per 12 m^2 roof plane plan area, parallel to ridge but not less than 2 m from a parallel external wall	–	–	–

* Sometimes known as ridge braces or gable braces.

NOTE –

(1) Roofs with hip and valley rafters shall have at least 3 hips or valleys connected to the ridge and top plates (refer to 10.3).

(2) Additional hip and valley rafters shall be counted as roof plane braces.

RECOMMENDED CONSTRUCTION METHOD
REFER TO "THE BRICK BOOK" FOR FURTHER DETAILS.

FIG. 37 WINDOW JAMB - Aluminium

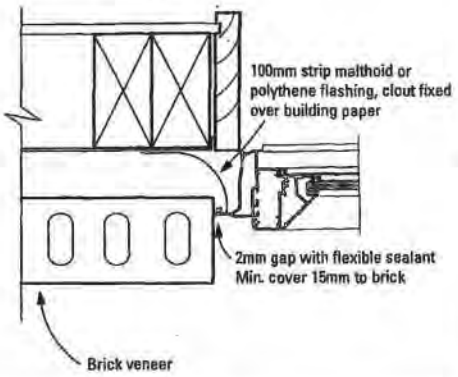


FIG. 38 WINDOW JAMB - Timber

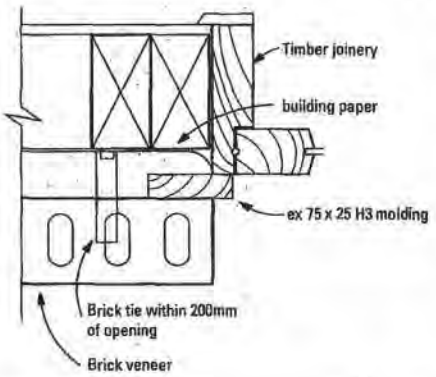


FIG. 39 WINDOW SILL - Aluminium

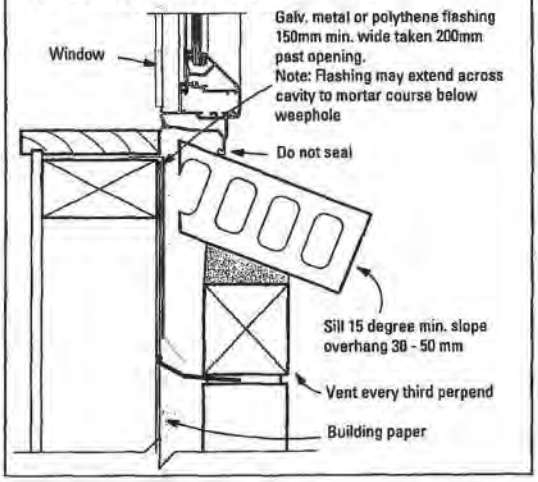


FIG. 40 WINDOW SILL - Timber

FIG. 41 DOOR JAMB - Aluminium

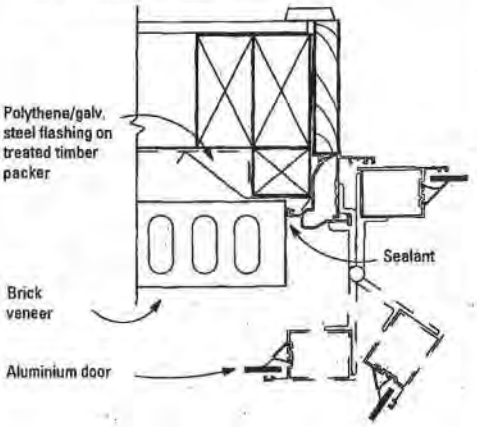
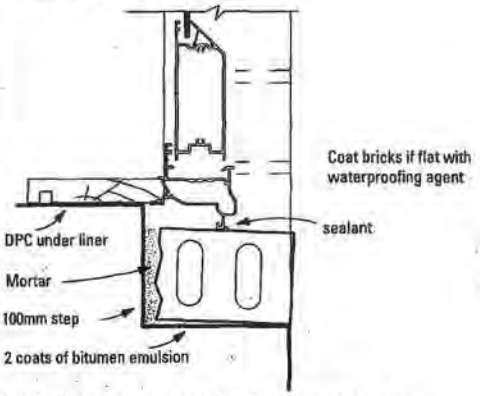


FIG. 42 BRICK DOOR SILL



Note: If brick is to be sloped further either increase the depth of the step or reduce the thickness of the brick

9.2 Masonry Veneer

9.2.1 Limitations

This Acceptable Solution is limited to:

a) Clay brick veneer on timber *framing*, and

b) Concrete brick or block veneer on timber *framing*.

COMMENT:
Natural stone bricks or blocks may be suitable. However, these are not part of this Acceptable Solution. Refer to the manufacturer's recommendations for *specific weathertightness design* information.

9.2.2 General

Installation of *masonry veneer* shall be by trained installers, approved by the manufacturer or the NZ agent (in the case of imported *masonry veneer*).

COMMENT:
It is recommended that an installer has successfully completed, or demonstrated skill to the level of, an NZQA recognised course.

9.2.3 Installation

Masonry veneer on timber *framing* shall be an Acceptable Solution provided that:

a) The installation complies with SNZ HB 4236 and NZS 3604,

b) The *drained cavity* is sealed off from both the roof space and subfloor space,

c) A *building wrap* complying with Table 23 is applied to the face of timber *framing* in the cavity, and

d) *Control joints* are included as described in Paragraph 9.2.4.

9.2.4 Control joints

9.2.4.1 Clay bricks

Control joints shall be included at locations specified by the brick manufacturer.

When *control joints* are used, they shall be formed as shown in Figure 73, and shall have:

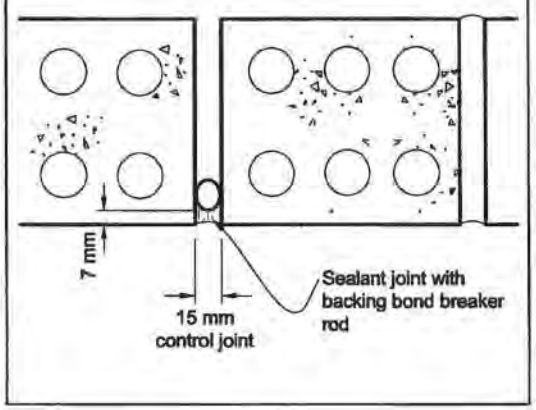
a) A backer rod of compressible foam complying with ASTM C1330, and

b) Sealant in compliance with:
   i) Type F, Class 20LM or 25LM of ISO 11600, or
   ii) low modulus Type II Class A of Federal Specification TT-S-00230C.

COMMENT:
Control joints are not normally necessary for clay bricks except in long walls or at abutments.

Cracks are cosmetic and not likely to cause a moisture problem because of the presence of the cavity. Manufacturers can provide additional information on *control joints*.

Figure 73: Vertical control joint
Paragraphs 9.2.4.1 and 9.2.5



9.2.5 Concrete bricks

Control joints shall be included as specified in the New Zealand Concrete Masonry Manual and in any other locations specified by the manufacturer. *Control joints* shall be formed as shown in Figure 73.

COMMENT:
Concrete bricks shrink over time and this must be allowed for in the design of the *masonry veneer*. Manufacturers can provide additional information on *control joints*.

9.2.6 Windows and doors

The openings in wall *framing* for windows and doors shall have *building wrap* and *flexible flashing tape* applied, in accordance with Paragraph 9.1.5.

Air seals shall be provided in accordance with Paragraph 9.1.6.

Window *flashings* shall be installed in accordance with SNZ HB 4236.

9.2.7 Bottom of masonry veneer

Clearances to ground levels at the bottom of *masonry veneer* shall be in accordance with Paragraph 9.1.3.2.

Vents at the top and drainholes at the base of the *masonry veneer* shall be installed in accordance with SNZ HB 4236 and NZS 3604.

9.2.8 Secondary cladding

Where a secondary *cladding* is used with the *masonry veneer*, and is *direct fixed* to *framing* above windows or at gable ends, this shall be fully sealed on:

a) The face of the *cladding*,

b) All edges of the *cladding*, and

c) A 75 mm minimum perimeter strip on the rear of the *cladding*.

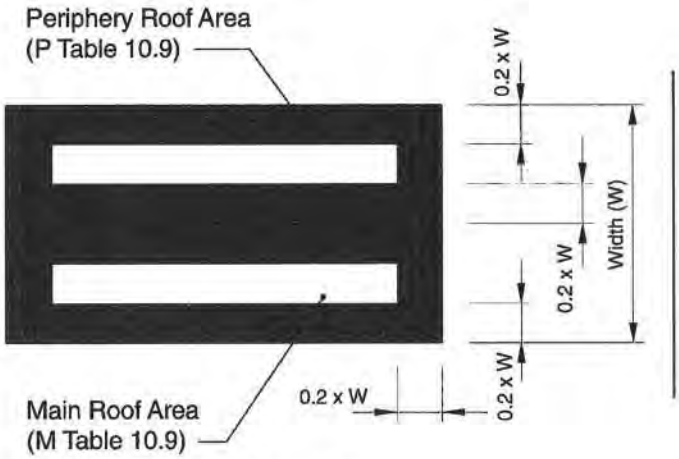
PURLIN & BATTEN FIXING CHART

01/18

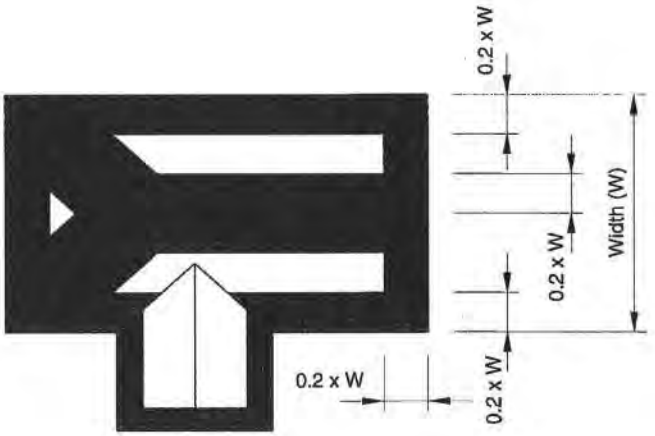
(COMPLIES WITH NZS 3604:1999 TABLE 10.10)

NOTE:

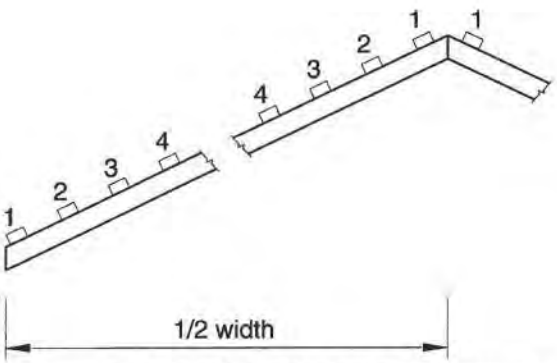
- ☆ Max. truss overall roof span 12m
- ☆ All purlin and batten sizes as NZS 3604:1999 Section 10.
- ☆ These fixings assume purlin or battens are fixed over top of truss or rafter.



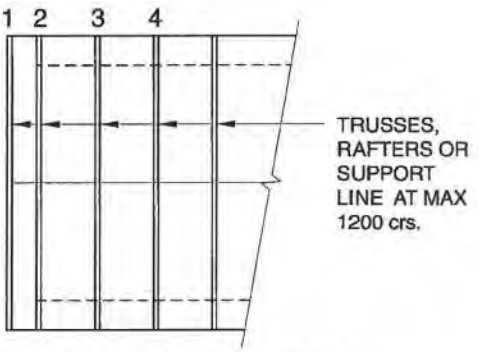
PLAN GABLE



PLAN HIP ENDS



PURLIN LAYOUT (MAX 1200 crs.)



LAYOUT ON GABLE END

LUMBERLOK®

MiTek™

MiTek New Zealand Ltd.

AUCKLAND
PO Box 58-014, Greenmount
Phone: (09) 274 7109
Fax: (09) 274 7100

CHRISTCHURCH
PO Box 8387, Riccarton
Phone: (03) 348 8691
Fax: (03) 348 0314

www.miteknz.co.nz

HOME OF **GANG-NAIL®** BUILDING SYSTEMS

SELECTION CHART
(minimum fixing requirements)

1. HEAVY ROOFS

All purlins and/or battens use fixing Type A only on roof width (w) up to 12m.

2. LIGHT ROOFS

A. BATTENS - Max. span 1200
- Max crs. 400
- Roof width (w) up to 12m.

H & VH wind loads use Type C on all battens.

B. PURLINS - Max. span 1200, Max crs. 900 or
- Max. span. 900, Max crs. 1200

H & VH wind loads
1. On roof width (w) up to 8m;
   Use Type D fixing on purlin No. 2 and Type C on all other purlins.
2. On roof width (w) up to 12m;
   Use Type D fixing on purlins No. 2 & 3 and Type C on all other purlins.

C. PURLINS AND BATTENS ON GABLE END
- Max. span 1200, Max crs. 900 or
- Max. span. 900, Max crs. 1200

H & VH wind loads use Type C fixing on support line No. 1, Type D on support lines No. 2, 3, & 4 and all other support lines as per Section A or B above.

STANDARD FIXING OPTIONS

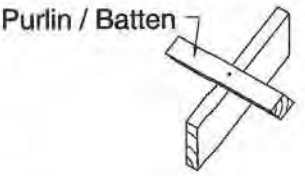
LUMBERLOK®

FIXING DEFINITIONS

NAIL = Either 90 x 3.15 Power driven
or 100 x 3.75 Hand driven
SCREW = 100 x 3.0 dia **LUMBERLOK** Purlin screw
WIREDOG = Either left hand or right hand **LUMBERLOK** wiredog.

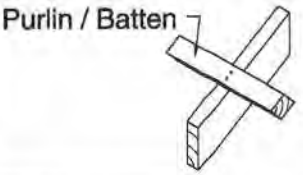
FIXING TYPE A
0.40kN

1 NAIL



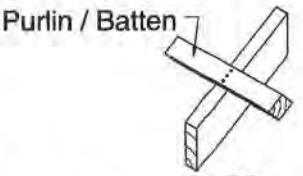
FIXING TYPE B
0.70kN

2 NAILS

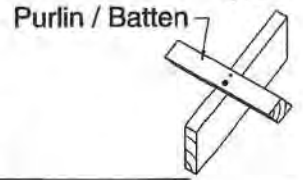


FIXING TYPE C
1.20kN

3 NAILS
OR
1 NAIL + 1 SCREW

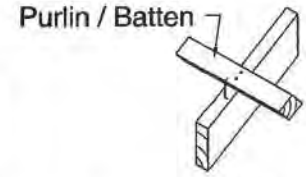


OR

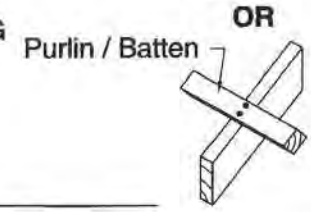


FIXING TYPE D
2.00kN

2 NAILS + 1 WIREDOG
OR
2 SCREWS

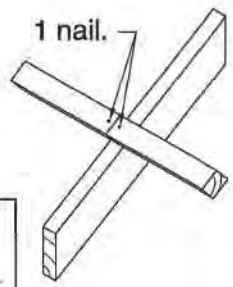


OR

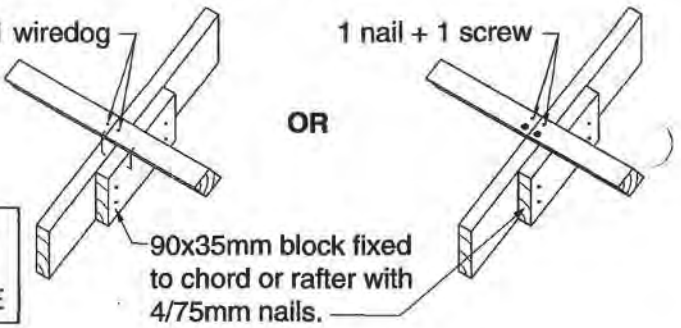


PURLIN / BATTEN SPLICE FIXING OPTIONS

NOTE:
Skew nail when fixing to 35mm rafter or truss.



FIXING TYPE A & B OVER PURLIN SPLICE



FIXING TYPE C & D OVER PURLIN SPLICE

8.5 Membrane Roofs and Decks

8.5.1 Limitations

This Acceptable Solution is limited to *membranes* composed of butyl or *EPDM* installed over plywood substrates for:

a) Roofs with a minimum fall of 1.5° (1:40),

b) *Decks* with:
   i) a minimum fall of 1° (1:60),
   ii) a maximum area of 40 m²,
   iii) no steps in level within *deck* area,
   iv) no integral roof gardens, and
   v) no downpipe direct discharge to *deck*,

COMMENT:
Discharging gutters directly onto *decks* increases the chances of water entry into sensitive areas.

Direct discharge may be allowed into gutters calculated to have sufficient water-carrying capacity, but this is outside the scope of this Acceptable Solution.

c) Internal gutters with a minimum fall of 1 in 100, with no seams in the gutters closer than 1 m to an outlet, and

COMMENT:
Seams should be avoided in gutters where possible. Where they cannot be avoided they should be positioned at a high point or a change in plane to reduce the risks of ponding on the seam. Seams in gutters are particularly difficult to form at outlets through *enclosed balustrade* walls, and the risk of failure is high. Failure of a seam can result in damage to underlying walls.

d) Decks with removable raised surfaces to give level access as shown in Figure 17A.

The application of directly-applied wearing or decorative surfaces to *membranes* is not covered in this Acceptable Solution.

COMMENT:
EPDM and butyl rubber *membranes* are subject to damage when on trafficable roof-*decks*. A suitable wearing surface will help reduce such damage.

8.5.2 General

Installation of *membrane cladding* shall be by trained installers, approved by the manufacturer or the NZ agent (in the case of imported *membrane)*.

COMMENT:
It is recommended an installer has successfully completed, or demonstrated skill to the level of, an NZQA recognised course.

8.5.3 Plywood substrates

Plywood shall be:

a) A minimum of 17 mm complying with AS/NZS 2269,

b) At least CD Grade Structural plywood with the sanded C face upwards, and

c) H3.1 with treatment type compatible with *membrane* and adhesives used, and kiln dried after treatment.

COMMENT:
The compatibility of LOSP-treated plywood must be checked with *membrane* suppliers.

If using plywood containing copper-based preservatives, check the compatibility of adhesives and *membranes* with copper with the product manufacturers.

8.5.4 Butyl and EPDM

Butyl rubber and *EPDM* rubber used for *membrane* roofing or *decks* shall:

a) Be a minimum thickness of:
   i) 1 mm for roofing or when used for *decks* with a protective wearing surface, or
   ii) 1.5 mm with no protective surface, and

b) Comply with the following parts of Table 1 in ASTM D6134:
   i) tensile strength,
   ii) elongation,
   iii) water absorption,
   iv) water vapour permeance, and
   v) heat aging followed by:
      a. tensile strength
      b. elongation, and

c) Have adhesives, primers and seam tapes that:
   i) comply with BRANZ EM 5, and
   ii) are part of a complete system approved by the manufacturer or supplier of the *membrane*.

8.5.5 Installation

8.5.5.1 Plywood

Substrates must be dry when *membranes* are applied. The plywood and the timber substructure shall have a maximum moisture content of 20% when a *membrane* is adhered.

COMMENT:
This will generally require substrates to be covered to prevent rain wetting, or to be pre-primed to avoid moisture uptake.

Manufacturers' recommendations should be consulted, as some require a lower moisture content in order to validate guarantees.

Plywood substrates shall be fixed according to the following requirements:

a) Panels shall be laid with staggered joints (brick bond),

b) The edge of sheets shall be supported with *dwangs* or *framing*, unless a structurally tested tongue-in-groove edge provides equivalent support,

c) The maximum span shall be 400 mm in each direction,

d) Plywood shall be laid with the face grain at right angles to the supports,

e) A 20 mm triangular fillet shall be used at the base of any 90° upstand,

f) External edges shall be chamfered with a minimum radius of 5 mm, and

g) Plywood shall be fixed:
   i) with 10 g x 50 mm stainless steel countersunk head screws,
   ii) with 3 mm gaps between all sheets,
   iii) at 150 mm centres on edges, and
   iv) 200 mm in the body of the sheets.

COMMENT:
Closed-in construction spaces under *membrane* roofs and *decks* shall have adequate ventilation to prevent the accumulation of moisture under the *membrane*. There should be a minimum gap of 20 mm between the underside of the substrate and any insulation.

For roof or *deck* areas over 40 m², roof vents will be required. Roof vents are not covered by this Acceptable Solution.

8.5.5.2 Butyl and EPDM

Seam tapes shall be used on all joints of:

a) Roofs or *decks* with falls less than 5° (1:12),

b) Gutters or where water could pond,

c) Penetrations through the *membrane* where butyl or *EPDM flashing* is required,

d) *EPDM membrane*, and

e) Butyl *membranes* that contain *EPDM*.

COMMENT:
Coloured butyl *membranes* contain *EPDM*, which makes them more difficult to adhere properly.

Seams should be aligned parallel to the fall of the *deck* to minimise ponding. The use of joins in butyl or *EPDM* should be avoided in gutters. Where this is not possible, the plywood should be rebated to minimise the effect of the seam.

Where a penetration is made through the *membrane* subsequent to laying, the *flashing* should be installed by the applicator of the *membrane* system.

All joints in the plywood and junctions of plywood with other materials shall have 25 mm polyethylene release tape applied before application of the *membrane*.

8.5.6 Roof and deck drainage

Roofs and *decks* shall be *constructed* to provide falls as shown in Figure 56.

Roofs and *decks* shall be *constructed* so that:

a) The highest point of the roof or *deck* is a minimum of 100 mm below an adjoining floor as shown in Figure 56,

b) *Membrane* upstands extend to a minimum level of 50 mm above the floor level at all walls or *parapets* as shown in Figure 62,

COMMENT:
This will lead to a minimum total *membrane* upstand of 150 mm which, if the clearance of the *cladding* from the *deck* or roof surface is at the minimum of 35 mm, gives an overlap of 115 mm.

c) Water discharges either:
   i) directly into roof outlets with a minimum diameter of 75 mm as shown in Figure 64, or
   ii) via *scupper* openings, into a rainwater head, or a gutter with a minimum width of 300 mm as shown in Figure 63,

d) Where the discharge is through a *parapet* or *enclosed balustrade*, the *scupper* opening shall have a minimum clear opening of 200 mm wide and 75 mm high, with a lip as shown in Figure 63,

e) External corner upstands in the *membrane* around the *scupper* opening are formed as shown in Figure 57, and

Addenda to Application

Application

T and N Jaques c/- Ross Kerry Tuohy Homes Ltd PO Box 54-162	No.	041339

Project

Description	New (& prebuilt) House, Unit, Bach, Crib, Town House etc. Being Stage 1 of an intended 1 Stages New Dwelling
Intended Life	Indefinite, but not less than 50 years
Intended Use	Residential
Estimated Value	$350,000
Location	53D KOTARE STREET, WAIKANAE
Legal Description	LOT 5 DP 310492 - HAVING 1/6SH IN LOT 8 DP 310492 BEING 1292M2
Valuation No.	1496060805

Builder:	Tuohy Homes Ltd
Designer:	Tuohy Homes Ltd
Drainlayer:	N.B. Henderson
Plumber:	Klee Plumbers

General Requirements

a) The District Inspector is to be given 24 hours' notice before carrying out the following inspections:

1. Initial inspection - previously completed
2. Foundation Inspection
3. Pre-concrete slab inspection of plumbing
4. Pre-block-fill inspection
5. Pre-slab Inspection, concrete floor
6. Other external cladding inspection
7. Brick veneer inspection
8. Prelining Inspection, moisture test, check bracing
9. Post-lining inspection, linings, fixed as per brace design
10. Completion inspection
11. Water test on sewer drains

b) To arrange for any of the above required inspections by the District Inspector, please contact the building inspectorate on (04) 298 5139 between the hours of 8.00am and 4.30pm.

2	Addenda to Application 041339

1. LAPSE AND CANCELLATION OF BUILDING CONSENT. A building consent shall lapse and be of no effect if the building work concerned has not been commenced within 6 calendar months after the date of issue. Or within such further period as the territorial authority allows.
2. The inspection of all specific design components of the building is the responsibility of the Design Engineer who is also required to supply a written report to Council.
3. All foundations are to be to solid bearing minimum of 300mm
4. NZS3604 is an Acceptable Solution in terms of the New Zealand Building Code and is a recommended reference document for timber framed buildings.
5. Fit head, jamb, sill flashings and proprietary sill tray to external joinery. Fit airseals to the inside edges of the window reveals.
6. Note and comply with endorsements on approved plans.
7. Minimum heights of finished concrete slab-on-ground floors above adjoining finished ground level to comply with the current NZS3604.
8. Section F7 of the New Zealand Building Code requires the installation of an approved smoke alarm system for detection and warning of fire. Alarms are to be of a type which include a reset and test buttons.
9. Provide from your Contractor a warranty covering the roof and fascia gutter system, including product, design and installation.
10. Restrictor stays, limiting sash opening to max 100mm must be fitted wherever sill height is less than 760mm and the difference in levels are 1 metre or greater. Refer F4.NZBC

I have read the foregoing addenda to application, and the Owner/Builder/Authorised Person hereby agrees to comply with them.

OWNER/BUILDER/
AUTHORISED PERSON **Date:**

FILE

BC 041339

16 February 2010

W T & N E Jaques
5-53 Kotare Street
WAIKANAE

Dear Mr and Mrs Jaques

CODE COMPLIANCE CERTIFICATE – BC041339 – 53D KOTARE STREET, WAIKANAE

Thank you for your letter of 20 January 2010, requesting clarification for the inclusion of retaining wall structures in the Code Compliance Certificate relating to Building Consent 041339 construction of the new dwelling.

After some research and discussions with yourselves, I am able to confirm that the retaining wall structures at the driveway and behind the dwelling are indeed part of the building consent, and are therefore covered under the Code Compliance Certificate issued on 5 September 2005.

The absence of these marked clearly on the site plan contributed to the confusion that may have arisen, however, the consent project description is generally based on the main component of the works and the description given by the applicant. It is quite common for other works considered landscaping or indeed retaining associated with that building work to not be specifically identified in the main description of works.

Rest assured, the two areas of retaining are part of the building consent and have been deemed to comply with the New Zealand Building Code, and are included in the Code Compliance Certificate issued for BC041339, issued on 5 September 2005.

Therefore, it is not necessary or appropriate to issue a revised Code Compliance Certificate.

Yours sincerely

Leigh Sage
BUILDING CONTROL MANAGER

DDI *(04) 296 4650*
Fax *(04) 296 4830*
Cell *027 5555 650*
Email *leigh.sage@kapiticoast.govt.nz*

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BCA/03/12.
54051

WT & NE Jaques
5-53 Kotare Street
Waikanae
Tel: (04) 904-2697

20th January, 2010.

Building Manager,
Kapiti Coast District Council,
Private Bag 601,
PARAPARAUMU. 5254.

22 JAN 2010

Dear Sir,

Building Consent 041339 : 53D Kotare Street

On 5 September 2005 Kapiti Coast District Council issued a Code Compliance Certificate for a "New Dwelling" at the above address.

On the face of it, it would appear that the certificate relates only to a dwelling, and that it does not include any retaining walls.

I understand that your Council file contains details of retaining walls as part of siteworks covered by the building consent application — namely Producer Statement dated 12/10/04 and 2 sheets of drawings of the same date. The engineer's name is Mr D.N. UNDRILL.

I am writing to ask for either a fresh certificate to be issued or written confirmation that the retaining walls are covered by the existing certificate, to forestall any enquiry from a future purchaser!

Yours faithfully

W Jaques

(W.T. JAQUES)

KAPITI COAST
DISTRICT COUNCIL

8th October 2004

BC041339

T & N Jaques
C/- Tuohy Homes Ltd
PO Box 54-162
MANA

Attention: Ross Kerry

Dear Ross

BC041339: PROPOSED NEW DWELLING AT 53D KOTARE STREET, WAIKANAE (LOT 5 DP 310492)

Thank you for the above building consent application which is currently being processed. I draw you attention to the requirements of the consent notice registered on the title of the property (copy attached), and advise that it is the applicant's responsibility to ensure that the conditions have been met. Please ensure that the design of the dwelling is in accordance with the requirements of the consent notice.

In addition, I confirm that the height covenant area shown on the building consent site plan is a private covenant and it is the applicant's responsibility to comply with any requirements of this covenant.

In conclusion, Council needs the building consent application to demonstrate that the proposed dwelling complies with the relevant conditions on the attached consent notice. To assist you to do this I have attached copies of the stormwater disposal report and the soil investigations report found within the subdivision consent which created the property RM010345.

Please phone me with any queries on (04) 904 5759.

Yours faithfully

Matthew Muspratt
RESOURCE CONSENTS PLANNER

8/10/04

KAPITI COAST DISTRICT COUNCIL

EARTHWORKS CONDITIONS FOR NEW DWELLING AT 53D KOTARE STREET, WAIKANAE – BC041339.

These conditions are issued for the above building consent application in accordance with the Kapiti Coast District Council Earthworks Bylaw.

1. Adequate provision shall be made for the control of silt and stormwater run-off during the construction period. Silt retaining structures or ponding areas may need to be constructed and maintained throughout the duration of the works.

   Note:
   Attention is drawn to the Wellington Regional Council Publication "Erosion and Sediment Control Guidelines for the Wellington Region". Applying the appropriate recommended treatments from this publication is a means of compliance with this condition.

2. Encroachment onto adjacent land owned by others, is not permitted without having first obtained their written consent. This evidence shall be provided to the Council prior to the commencement of any earthworks.

3. The removal of soil support from adjacent lots is not permitted.

4. Contravention of the Land Drainage Act is not permitted and natural drainage patterns are to be preserved.

5. All batters shall be self-supporting.

6. Where the existing land or vegetative cover is disturbed, suitable ground cover shall be established as soon as practicable following earthworks or within 5 days of completion whichever shall occur first. For this condition "suitable ground cover" means application of basecourse, topsoil, grassing or mulch, or another type of application to the satisfaction of the Council.

7. Should there be potential for wind-blown sand, soil or other material to be transported onto other properties the consent holder shall erect suitable fabric fencing (sarlon cloth or similar) or take other acceptable mitigation measures, to the satisfaction of the Council.

   Note: The consent holder shall not use water from Council watermains for mitigation measures

8. Where required, the testing and certification of compaction/filling and the stability of batter slopes shall be carried out by a suitably qualified person experienced in soils engineering.

9. Should a waahi tapu or other cultural site be unearthed during earthworks the operator and/or owner shall :-

   (a) cease operations;
   (b) inform relevant local iwi, (Te Ati Awa ki Whakarongotai, Ngati Toa, or Ngati Raukawa)
   (c) inform the NZ Historic Places Trust (NZHPT) and apply for an appropriate authority if required;
   (d) Take appropriate action, after discussion with the NZHPT, Council and iwi to remedy damage and/or restore the site.

   Note:

   In accordance with the Historic Places Act 1993, where an archaeological site is present (or uncovered), an authority from the NZ Historic Places Trust is required if the site is to be modified in any way.

13 OCT 2004

12th October, 2004

THL
TUOHY HOMES
LIMITED

Ulric Street, Plimmerton
P.O. Box 54-162, Mana
Wellington, New Zealand
PHONE (04) 233 8018
FAX (04) 233 8165
EMAIL phil.tuohy@clear.net.nz

Attn: Matthew Muspratt
Kapiti Coast District Council
175 Rimu Road,
Paraparaumu

Dear Matt,

Re: BC041339: Proposed New Dwelling at 53d Kotare Street, Waikanae (Lot 5 DP 310492)

In reply to your letter dated 8th October we enclose the following information to be included with the consent application:

1. Stormwater disposal shall be in accordance with the enclosed stormwater disposal report. The location of splitter box and water tank have been shown on the enclosed site plan. The house water supply shall be from a separate tank located in the storage area on the lower floor (as shown on plan), this is fed via a trickle feed that operates from 12am to 6am. Also, the correct location for the lower bridge is now shown.

2. To show compliance with the land stability report you have provided I have enclosed a revised site earthworks plan showing a 1.2m max cut to the upper building platform so that specific review shall not be required for stability of the land above (as referred in clause IX of the report). The owner wishes to use a Firth Diamond Pro retaining wall along the drive and to the upper platform cut (as shown on the plan), an engineer's producer statement is enclosed for this.

3. The covenant area shown on the site and title plan refers to a 108m relative level height restriction - the proposed dwelling complies with this (the highest ridgeline of the house will be under this level by 1.5m)

We trust that there is now sufficient information for the building consent application to proceed,

Yours Faithfully,

Ross Kerry,
Tuohy Homes Ltd

SAMCON
CIVIL ENGINEERS
PROJECT MANAGERS

The Consents Officer
Kapiti Coast District Council
Rimu Road
PARAPARAUMU

STATEMENT OF PROFESSIONAL OPINION AS TO

SUITABILITY OF LAND FOR BUILDING PURPOSES

Subdivision	:	53 Kotare Street, Waikanae
Owner	:	Peter and Prue Hawker
Location	:	53 Kotare Street, Waikanae

I, Graeme Douglas Walker of

Samcon Limited, Consulting Engineers
Paekakariki Hill Road, RD 1 Porirua,

hereby confirm that;

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

2. Site Investigations have been carried out under my direction and are described in our report dated 6 September 2002.

3. I am aware of the details of the subdivision and have attended the site throughout the period of physical works, details of which relating to foundation conditions are contained in our report of 6 September 2002.

4. I confirm that, except as noted below, no formalised earthworks have been carried out as part of the subdivisional works; the land levels remain generally at the levels and condition that existed prior to the subdivisional works.

   Surface boulders have been removed and the surface re-dressed with topsoil and grassed.

   Minor earthworks have been completed to create driveway entries over the culverts, and within a minor gully has been filled along the southern boundary as displayed on the Soil Test Plan.

Samcon Limited
Paekakariki Hill Road RD 1 Porirua
Ph 23 99 565 Fax 23 99 576 Mob 0274 345 868

5. As a general indication of foundation conditions, the existing ground has been tested with a Scala Probe and the results of these tests are summarised in the Soils report. While the tests indicate the surface soils are suitable for the erection of lightweight buildings, various site-specific issues require that all buildings be subject to specific foundation design as required for buildings constructed on natural ground, as more fully described below.

6. In my professional opinion, not to be construed as a guarantee, I consider that all Lots contain a building platform suitable for the erection of residential dwellings subject to the following conditions:-

   I. All sites have longitudinal gradients in the vicinity of 1 (vertical) in 5 (horizontal). For house construction on such slopes building will either require a piled (or pole) foundation, or a building platform will be created through earthworks. Where earthworks are carried out to create a building platform, the soil conditions indicated by the Scala Probes summarised in the Soils Report become irrelevant.

   II. Where building platforms are created by earth cuts, or a combination of earth cuts and fills, all organic material is to be stripped from areas to be filled and from all foundation zones and all enclosed areas within the building site.

   III. Any earthfills completed in the process of creating a building platform shall be tested to ensure acceptable levels of compaction have been achieved. All foundation subgrades exposed by earth cuts shall also be further tested by Penetrometer to ensure the actual conditions are consistent with those anticipated by the soils report.

   IV. Once prepared, foundation subgrades shall be kept dry and protected from stormwater runoff.

   V. Ground contours shall not be modified to the extent that they modify the direction of stormwater runoff, or cause stormwater to cross site boundaries

   VI. Batters shall not be cut steeper than 1 (vertical) to 3 (horizontal) without specific investigation and design. No cut batter of height in excess of 1.2 metres shall be formed without the stability of the land above being subject to specific review.

   VII. No building shall be constructed within 5 metres of a batter without the influence of such building on the batter being the subject of a specific design process.

   VIII. All retaining walls for landscaping and for building purposes shall be subject to specific design.

   IX. No cut batter or retaining wall of height in excess of 1.2 metres shall be formed without the stability of the land above being subject to specific review.

   X. In all earthworks, foundation and retaining wall design, specific consideration shall be given to the presence, and the potential presence of subsurface water and 'springs'

7. This professional opinion is furnished to the Kapiti Coast District Council and the subdividing owner for their purposes alone on the express condition that it not be

relied upon by any other person and does not remove the necessity for normal inspection of foundation conditions at the time of erection of any structure.

Graeme D Walker
(BE Hons, BCA, MIPENZ, Reg No 5845)
Samcon Limited

6 September 2002

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SAMCON
CIVIL ENGINEERS
PROJECT MANAGERS

6 September 2002

The Subdivisions Engineer
Kapiti Coast District Council
Rimu Road
Paraparaumu

Dear Sir,

53 KOTARE STREET, WAIKANAE - SOIL INVESTIGATION REPORT
PORPOSED SUBDIVISION for M/M PETER and PRUE HAWKER

This report summarises our inspection and testing of the above site, carried out to determine the suitability of the site for subdivision for residential purposes. Details contained in this report reiterate information contained in our preliminary assessment of 11 June 2001, along with observations and testing of the development works carried out since that time.

1. Subdivisional Development

The development comprises the subdivision of the residential Lot at 53 Kotare Street into 6 residential Lots (the existing plus 5 new lots).

The site lies on the lower northeastern facing slopes of the Hemi Matenga Memorial Park. The topography is planar, sloping down toward Kotare Street at consistent grades of 1 (vertical) in 5 (horizontal).

A Resource Consent was issued for the works (RM 010345) by the Kapiti Coast District Council and all physical works required by that Consent are now complete.

2. Site Investigation.

This report is based on the combined results from an inspection of the site and the land above it, Scala Penetrometer tests carried out on the various building sites and observation throughout the course of the works.

2.1 General Topography.

The topography is planar, falling from the back boundary toward its Kotare Street frontage at grades of around 1 in 5. The site currently contains a single residential unit, and the balance land either provided grazing, contained crop trees or landscaping.

From an inspection of the site, adjacent cut batters and the surrounding topography we note the following.

- The predominate soil in the site is a colluvium of large angular gravels / boulders in a matrix of gray clayey silts. The fine-grained soils dominate the surface layers with

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the gravels becoming more prominent with increasing depth below the surface. The gravels comprise blue/gray moderately weathered rock and are generally angular in nature.

- Large boulders were also evident across the grassed grazing areas, although in many areas these have been removed as part of previous landscaping works.

- The area above the site lies within a bushy Reserve and provides the catchment feeding the streambeds running through this and the adjacent properties. The surface materials within this area are largely scree slopes with large angular gravels consistent with those evident in the soil matrix below. The reserve area contains mature native forest. Neither the trees nor the surface indications provide any evidence that there has been movement or general instability in this area for a very long time.

- These same conditions appear to continue to the north of the site, and are apparent in new building works in adjacent 55 Kotare Street.

- Differing materials are apparent to along the southern boundary of the site. The material in the adjacent site to the south comprises typical highly / completely weathered greywacke material with conventional overburden soils. Materials from this ridgeline intrude into Lots 4 and 5; the boundary between these conditions and the colluvium described above is an abrupt interface and in Lot 5 in particular is characterised by a small gully (the location of which is evident on Lattey Consultants Plan 732.05-4).

Based on these observations it would appear that the predominate soils within the site are silty gravels that have been historically formed as part of a scree fan from the gully catchment above. The materials are typical of large areas of the foothills below the Hemi Matenga Memorial Park.

3. Scala Penetrometer Tests

A series of Scala Penetrometer tests have been carried out in the vicinity of the five new building sites to determine their adequacy as foundation materials for conventional housing construction. The purpose of the probes is to identify weak soils and in homogenous soils, determine an approximate bearing capacity of the soils. The tests involve driving a standard steel cone into the soil by dropping a standard weight a predefined distance. In general terms soils which require less than 5 blows to advance the probe 100mm will require some form of special treatment, or piling for even a light-weight timber-framed house.

The nature of the materials on this site (and in particular the presence of large boulders) do not lend themselves to the use of small diameter dynamic probe tests such as the Scala, and the results must be interpreted in that light. In many cases the probe results tabulated for this site are the composite results of multiple tests taken in the same area while trying to avoid boulders.

Additionally the slope of the site indicates that surface soil tests are unlikely to be of significant use in a specific foundation design process; Cuts and Fills required to develop flat building platforms will significantly alter the existing soil profiles.

Information derived from the Scala Probes is largely restricted to the depth of overburden soils and the quality of the fine grained soils that form part of the boulder matrix.

Probe Test locations are displayed on the attached Plan "ST" , and the results of the probes are contained in the attached spreadsheet. As noted above conventional lightweight housing generally requires a minimum Scala blow-count of 5 blows per 100 mm. While this is not the sole criterion for determining the adequacy of existing soils, it is a useful basis for discussing the requirements of the site.

It will be noted that Probe Tests 1 – 9, 11, and 13 all encountered gravels, or display irregularly high readings that imply the presence of gravels. These probe tests represent the predominant soils in the vicinity of the expected building sites on Lots 1, 3 5 and 6.

The probe results on the above Lots indicate soft, or marginal soils over the top 400 – 500 mm, underlain by the gravel matrix. These upper soils generally comprise topsoil and varying degrees of organic soils and are not adequate for foundation support. House foundations should extend through these upper soils to the underlying gravel layers. Where earthworks are proposed, these upper soils should be removed, stockpiled and re-spread over the compacted filling, outside the zone of structural filling.

In the process of completing the probes it became evident that the fine-grained soils are sensitive to moisture, and as is typical with organic materials, suffer a considerable loss of strength when wet.

Probe Tests 10, 12, 14-15 and 18 all display differing characteristics representing the differing soil profile that intrudes from the southern boundary. This profile only effects the Lot 4 building area; depending on the precise building location the profile may apply for the full building site, although the potential for the silty gravels to be found in northern sectors of the site should not be ignored. Beneath the surface organic topsoil, the underlying soils are moderate greywacke residual soils that are in the lower order of acceptability for conventional foundations supporting lightweight buildings.

Probes 16 and 17 both struck gravels in their lower levels, and although close to the boundary of the two soil types, are generally expected to reflect the greywacke soils profile.

Conclusions

All sites are satisfactory for the erection of residential buildings subject to specific design of the foundation systems for each building. The need for specific design relates to various issues noted below, but in particular to the expectation that the existing site surface soil profiles will be modified to create building platforms.

- The upper fine grained soils (around 500mm) are to be removed prior to any earthworks, and shall be reused only for surface dressing or landscaping; they shall not be included into structural fills unless inspected and approved by a suitably qualified engineer prior to the works being carried out.

- The upper fine-grained materials shall not subjected to any foundation loading.

- The existence of 'springs' and the potential for 'springs' to arise should be recognised. The surface soils, and the soils in the gravel matrix are susceptible to strength loss when saturated. All foundation platforms and retaining structures shall

be designed to take account of water and strength issues arising from the potential for sub-surface water 'springs'.

- No cut or fill batter to exceed grades of 1 (vertical) to 3 (horizontal) unless reviewed by a suitably qualified engineer with specific attention to surface and subsurface water, local stability and general stability.

- No site development that raises site levels and loadings by importing materials without cutting (load reduction) by an equivalent amount.

- All retaining walls in excess of 1.2 metres to be subject to specific design.

Seismic Risk

We have consulted the Wellington Regional Council Seismic Hazard Maps with respect to the site.

The maps do not indicate any known fault zones in the vicinity of the site.
The maps do indicate moderate seismic hazard (for slope stability) for all of the hill slopes behind Kotare Street in Waikanae. Within this zone of moderate hazard, a localised area of high hazard risk is identified in the gully behind the site. We presume this classification to reflect the scree slopes above the gully floor behind this site. As noted earlier these slopes currently support mature native forest; additionally the gradients in the area immediately to the rear of the site are relatively modest. Accordingly we do not see this zone as presenting an extraordinary and specific seismic hazard to this site.

Yours faithfully,

Graeme Walker
Samcon Limited

Attached
- Probe Results
- Plan of Probe Locations
- Topographic Plan

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53 KOTARE STREET, WAIKANAE

SCALA PROBES TESTS

(Refer attached plan for probe locations)

Probe No	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**8A**	**9**	**10**	**11**	**11a**	**11b**	**12**	**13**	**14**	**15**	**16**	**17**	**18**
Lot	**1**	**1**	**3**	**3**	**6**	**6**	**6**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**4**	**4**	**4**	**4**	**4**	**4**	**4**
Depth in mm																					
000 - 100	4	P	3	2	P	1	P	P		2	3	2			3	P	1	P	P	P	P
100 - 200	6	2	5	4	3	4	3	2		4	4	3			3	3	3	P	P	P	P
200 - 300	4	4	5	6#	2	4	4	3		5	4	9	4	3	3	4	3	P	P	5	2
300 - 400	10	3	6		3	4	6	4		8	3	9	9	4	4	4	3	6	P	6	3
400 - 500	15	2	6		3	4	4	4		16	3	20#	14#	6	8	4	4	7	P	6	4
500 - 600	11	3	5		4	5	4	10#	7	22#	4			##	6	3	4	6	5	4	5
600 - 700	9	7	9#		7	13	9#	23#	11	22#	4				9	7	6	7	6	12#	4
700 - 800	20	7			15#	21	5		8	21#	4				13	##	5	5	5		5
800 - 900	28	8				15	4		16#		5				11		5	5	6#		5
		9#					9														

Notes

"P" means the probe can be pushed into the sand layer without the need to drive
means the probe has been impeded by boulders
means the probes has met refusal on boulders (bounce)
P2 possibly in toe of fill for existing house construction

8
Access Lot

86
DP 29377

7

2
DP 71460

3
DP 71460

88
DP 29377

89
DP 29377

90
DP 29377

32
DP 20768

6

5

2
DP 53961

1
DP 18826
Scenic Reserve
GAZ. 1956 p1660

KOTARE STREET
Legal Road
17.07 wide & over

Existing Sewer Main
Existing Sewer
single sump
Sump
Ex. SSMH
Water Pump House
Workshop
Carport
Existing Garage
Existing House
Approx. Site Coverage =18%
9.1m
13.4m
9.0m
SSMH
8.1m
10.5m
Kerb Only
Kerb and Channel
(31.4m MH to MH)
SSMH
7.5m
1.0m
(46.2m MH to MH)
SSMH
9.7m
Crossing
8.3m
8.3m
55.4
STREAM
OVERHEAD POWER LINES
OVERHEAD POWER LINES
Small Stream
Existing Watermain
FH
629800mN
2653000E
2653100mN
2653200E
2653300E
Outlets from neighbours pond and stream

(N)

MEMORANDUM OF EASEMENTS

PURPOSE	SHOWN	SERVIENT TENEMENT	DOMINANT TENEMENT
Right to Convey Gas, Electricity, Telecommunications, and Water	A	Lot 6	Lots 1 – 5, Lot 7, Lot 8
Right to Drain Sewage	B	Lot 1	Lot 2
	C	Lot 7	Lot 2
	J	Lot 1	Lot 2
Right of Way	D	Lot 6	Lot 5
	E	Lot 5	Lot 6
	F	Lot 5	Lot 4
	G	Lot 4	Lot 5
Right to Convey and Store Water for Fire Fighting Purposes	H	Lot 3	Lot 4
	I	Lot 4	Lot 3
Right to Convey Telecommunications.	L	Lot 2	Lot 3 DP 71460
Right to Convey Water & Maintain Water Pump	C	Lot 7	Lots 1 – 5

AREAS D, F, J, K, R, S, T, U, AND V TO BE SUBJECT TO A LAND COVENANT.

MEMORANDUM OF EASEMENT IN GROSS

PURPOSE	SHOWN	SERVIENT TENEMENT	GRANTEE
Right to Convey Water	K	Lot 3	Kapiti Coast District Council

⑤ Scala Probe Test

NOTES:
- Fieldwork and Certification by Samcon Limited
- All Sewer Laterals are 100mm uPVC
- All Sewer Mains are 100mm uPVC

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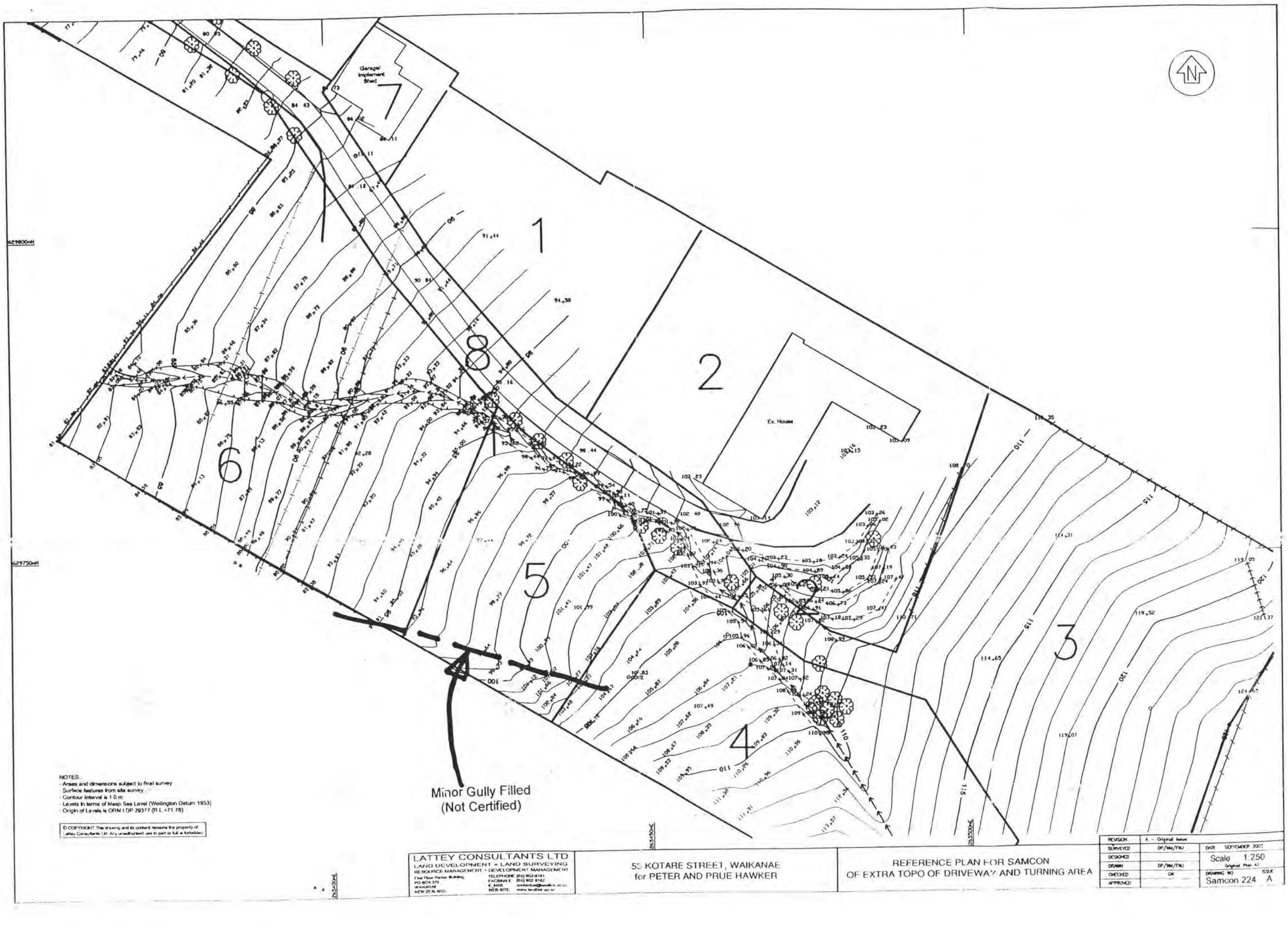
RESOURCE MANAGEMENT • DEVELOPMENT MANAGEMENT

53 KOTARE STREET
for PETER AND PRUE HAWKER

REVISION	A Original Issue
SURVEYED	
PLANS	
DRAWN	
CHECKED	
APPROVED	

DATE 26 September
Scale
DRAWING NO
S.T.


Garage/
Implement
Shed
Ex. House
1
2
3
4
5
6
7
8
Minor Gully Filled
(Not Certified)
NOTES:
- Areas and dimensions subject to final survey
- Surface features from site survey
- Contour Interval is 1.0 m
- Levels in terms of Mean Sea Level (Wellington Datum 1953)
- Origin of Levels is ORM I DP 29377 (R.L. +71.76)
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WEB SITE
53 KOTARE STREET, WAIKANAE
for PETER AND PRUE HAWKER
REFERENCE PLAN FOR SAMCON
OF EXTRA TOPO OF DRIVEWAY AND TURNING AREA
REVISION
A - Original Issue
SURVEYED
DP/MM/TMJ
DESIGNED
DRAWN
DP/MM/TMJ
CHECKED
DR
APPROVED
DATE SEPTEMBER 2007
Scale 1:250
Original Plan A1
DRAWING NO
Samcon 224
ISSUE
A

PROPOSED RESIDENTIAL SUBDIVISION

53 KOTARE STREET, WAIKANAE

STORMWATER DISPOSAL

1. General Background

The property at 53 Kotare Street lies on the hills backing on to the Hemi Matenga Memorial Reserve. There is currently a single residence on the property, located approximately at the middle of the developable area.

It is proposed that the property be subdivided into 6 separate residential properties – 5 new lots in addition to the existing residential unit.

A minor stream, which has its origins in the Hemi Matenga Memorial Park reserve above, flows through the site; normally the stream bifurcates above the property but at this point in time the stream receives the full catchment runoff. Wellington Regional Council are currently investigating restoration of the status quo with respect to stream flow volumes.

Stormwater runoff calculations determining the theoretical runoff for the full catchment are appended. These indicate that the catchment above the site has a Time of Concentration of 20 minutes and a peak flow of 992 litres / second. If a flow contribution from Lots 2 – 6 (being that portion of the site draining to the stream) is added then the overall peak flow across the bottom boundary is 1056 litres / second.

In a preliminary submission it was proposed to maintain a constant flow in the stream by diverting any additional stormwater runoff to the driveway, and thence to the roadside kerb and channel. We understand that Council has concerns over water on the footpath, and downstream effects.

With respect to discharge to the roadside kerb and channel there are certainly difficulties in capturing and containing the flows in the channel. However we have taken the view that this is a 10 minute event on a 10 year return period, and the chances of it coinciding with voluntary pedestrian movements on the roadside are minimal.

We understand that the downstream problems are more difficult to address. We understand that, notwithstanding the complying nature of the proposal, the downstream culverts and channels cannot accept higher levels of flow at this time, and no net increase in peak levels of discharge form the site will be contemplated.

Accordingly we have addressed stormwater discharge on the basis that site runoff levels must not exceed the current levels, and that any excess runoff generated in consequence of the development must be retained on site and subsequently discharged after the peak in the system has declined.

2. Code Requirements

The Kapiti Coast District Council Code of Practice for Urban Subdivisions requires that stormwater calculations recognise that land development activities may increase stormwater runoff, and provides the basis on which such increases might be assessed.

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The Code provides the following runoff coefficients to be used in calculating the runoff differentials:-

Site Description	Coefficient of Runoff (C)
Fully Roofed and/or Sealed developments	0.95
Residential Developments in which the impervious area exceeds 35% of the Gross Site area	0.50
All other areas (including residential areas where the impervious areas are less than 35% of the gross site area.)	0.35

While building plans have not been finalised for the proposed subdivisional sites, we have assumed for the purposes of this exercise that each house/garage combination will have a roof area of 270 square metres and that driveway and turning areas will total 130 sm. This gives an overall impervious area of 400 square metres.

There is a single dwelling on the property currently which occupies approximately 4% of the total site (excluding access), the appropriate current runoff coefficient is 0.35.

After development the total impervious area will be in the order of 2,400 sm (6 lots at 400 sm/lot), which translates to a 20% site coverage. The appropriate runoff coefficient after development therefore remains 0.35.

There is some logic in this approach as, despite the creation of impervious surfaces, aspects of site development decrease the runoff. Landscape development around the existing residence is a good example of this when compared to the surrounding pasture land

Accordingly in terms of the requirements of the KCDC Code of Practice there is no calculated increase in stormwater runoff, and provided the stormwater flows to the same destination as currently occurs, no further action is required

3. Finite Analysis

If the Code is considered an unacceptable document for this particular set of circumstances, then a finite site analysis is required

To achieve this we have looked at the increases in flow that might occur if individual elements of each site are considered. While the process of calculating increased flows from roofs and sealed areas is easily quantified, the benefits of site development are not, and the process is therefore necessarily conservative.

The analysis examines the effects of development on the 5 new sites; no changes are proposed to the existing residential building, and runoff from this site will not change.

The potential increase in runoff is therefore $A \times I \times (c1 - c2)$

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Where A is the developed site area of the 5 new sites = 5 x 400 sm
= 2,000 sm (0.2 Ha)

I is the intensity for the selected period storm, and
C is the runoff coefficient C1 =0.95
C2 =0.35

The KCDC Code of Practice requires stormwater systems be considered in residential areas for a 10 year return period.

Attached are calculations showing that the catchment above the site has a Time of Concentration of 20 minutes, and that for a 10 year storm the watercourse through the property may carry up to 992 litres / second. This flow assumes the full catchment area above drains through the above site. Historically this has not been the case: above the site the stream bifurcates and we estimate 70 percent of the flow would normally flow through the watercourse in this property, while the balance would flow through a watercourse to the north of the site. (Refer to the Lattey topographic plan showing the split of channels at the top of the site.) The change in flow patterns is a result of physical works by a nearby resident, and we understand WRC are working toward restoring the original patterns.

Nevertheless we have adopted the higher figure for design, as long-term planning should consider the potential for the northern stream to block.

Although the site itself has a lesser time of concentration than the catchment above, the appropriate storm to consider for the system immediately downstream is a storm of the same duration as applies for the larger catchment, so that the two peaks coincide.

If the developed areas only on the five sites are considered, the stormwater runoff prior to development is:-

Q1 = 2.78 x 0.35 x 59.3 x 0.2 Ha
= 11.5 litres / sec.
= (2.3 litres / household average)

After development the stormwater runoff becomes :-

Q2 = 2.78 x 0.95 x 59.3 x 0.2 Ha
= 31.3 litres / sec.

Increase in flow off the site for 20-minute storm

= 19.8 litres / sec.

Accumulated effect over 20 minutes on the (conservative) assumption that the peak is held for the full storm period

= 23,760 litres
= 4,750 litres / household.

To meet a goal of no net increase of flow into the watercourse, each household will need to be able to store up to 4,750 litres on site and discharge this after the peak flow in the watercourse has receded. This is an average figure and will need to be individually addressed for each site when the extent of proposed development is known.

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In this manner the flow into the stream will never exceed the rate that the site currently feed to the stream. This applies to any Time of Concentration for the catchment below.

However it is still necessary to check if longer period storms will require greater storage levels, regardless of the reduced intensities. By repeating the above processes it can be shown:-

- For a 30 minute storm
  Total flows from seal / roofed areas = 25.3 litres per second
  Less pre-development maximum to stream = 11.5 litres per second
  Required storage for 30 minute event = 24,900 litres
  = 4,980 litres / unit

- For a 60 minute storm
  Total Flows from sealed / roofed areas = 17.17 litres per second
  Less pre-development maximum to the stream = 11.5 litres per second
  Required storage for 60 minute event = 20,400 litres

On this basis the 30 minute storm will dominate, even although this is not the most critical immediately downstream, so that there is no negative impact further downstream. This dictates a maximum storage requirement will be around 5,000 litres per site.

It is also necessary to check what a short duration storm would do to the proposed storage system, even although this is not a critical downstream event.

Increase in peak flow for a 10 minutes storm = 2.78 x (0.95 – 0.35) x 84 x 0.2
= 28 / litres / sec

If the peak is held for the full duration this equates to a need for 16,800 litres of storage (3,360 per household) which is less than the requirement determined above.

4. Water Storage.

The applicant, having a commercial background in horticulture, places a high value on the preservation and re-use of stormwater for irrigation / gardening purposes.

In keeping with this belief it is proposed that the storage of stormwater that exceeds the existing levels of discharge be directed toward a system that can retain and use elements of the runoff.

Definitive details of the proposed system will need to be determined in concert with the building consent once the development details are known, but conceptually the proposal will be as follows.

- All stormwater from roofed or asphaltic areas collected and drained to a storage tank in the lower levels of each property.
- A storage tank of around 13500 litre capacity (eg Devon 3000, R=3.5 m / H =1.5m) at a level which will accept gravitational flow to its upper surface.
- The tank will provide storage for garden irrigation in its lower levels but maintain sufficient freeboard to take the fluctuating levels required for temporary stormwater detention.

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- A low flow priority bypass will be provided into the tank to ensure the irrigation storage is continually kept 'topped up' during normal summer periods of infrequent rain.
- A splitter box upstream of the tank with a direct take-off discharging to the stream. The take-off is to be sized to limit flow to 2.3 litres / sec (or the appropriate pre-development figure for that site.)
- Once flow levels exceed the capacity of the direct discharge the balance of flow will spill into a discharge and thence into the tank.
- A small diameter pipe will run from the tank to the stream to enable the stored water to run away to the stream over time. The pipe will be located in the tank wall such that storage above the level exceeds 5000 litres (or the calculated amount for that site). In the case of a Devon 3000 tank this would require the pipe to be at least 500mm below the tanks upper surface.
- An overflow back to the original catchment (generally the stream) for extreme rainfall events.
- A small diameter hose feed and pump from the bottom of the tank for garden irrigation fed.
- Either upper or lower entry for routine desilting by pump or by hand.

The above example demonstrates a general approach ; in practice the development of individual lots may opt for under-floor tanks, or more extensive garden storage.

In practice the system as proposed above will often offer better performance than detailed above, as the temporary storage capacity is increased by draw-off from the irrigation storage. however for design purposes it is necessary to consider the event as occurring in a mid winter period when the irrigation component is already full.

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PROPOSED SUBDIVISION - 53 KOTARE STREET, WAIKANAE

STORMWATER ANALYSIS — Spreadsheet No 1

Part A - Catchment Above the Site.

Input Data

A **Catchment Area.**

From 1 : 50000 Series enlarged to 1:5000 (see attached plan)

Area	**17.2 Ha**
Catchment Description	Mature native bush in a bush reserve area where no further development will occur. Ground conditions are porous / rocky comprising scree gravels in the valleys with conventional light soil cover

B **Time of Concentration**

Channel Slope	RL 480 to 140 in 0.75 km 45.30%
Bransby - Williams	F x L / A(0.1) x S(0.2)
	92.7 x 0.75 / 17.2(0.1) x 453(0.2)
	69.52/1.33 x 3.40
	15 minutes
Cross - reference Fig 4.2	Outside chart range but by extrapolation seems to be approx 24 minutes
	Adopt average figure of 20 minutes

C **Intensity** — 59.3 mm / hr — 10 yr return

D **Ten Year Runoff**

	K (C x I x A)
	2.78 x 0.35 x 59.3 x 17.2
	992 litres / sec

E **Current Site Contribution**
(Lots 2 - 6)

Catchment Area	Lot 4 - 6, Part Lot 3 (3500sm), Part Lot 2 (1350) 1.11 Ha

	10 min peak	2.78 x 0.35 x 84 x 1.11 91 litres / sec
	20 min peak	2.78 x 0.35 x 59.3 x 1.11 64 litres / sec
F	**Peak Downstream Flow**	(Pre - development)
	Max occurs for 20 min storm	1,056 litres / sec

KAPITI COAST DISTRICT COUNCIL

Action Number 3022

FILE NOTE

Consents & Compliance Division

FILE NUMBER: BC 041339

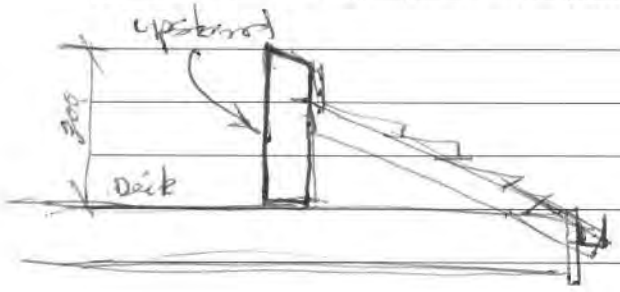
OFFICER: Mike Mawby

DATE: 10/5/05

SUBJECT: Balustrade / Deck / Roof

Site Visit 10/5/05.

Met with Builder on site to discuss balustrade a top storey deck. The problem has arisen because of the pitched roof junction to the deck, an upstand/parapet has been created that is more than 150mm above the deck but is less than 760mm above the deck.



It is proposed to attach an aluminium balustrade to the inside face of the upstand with vertical elements complying with E4. However the problem arises is that the top of upstand will give a toe hold between 150 and 760 mm above the deck.

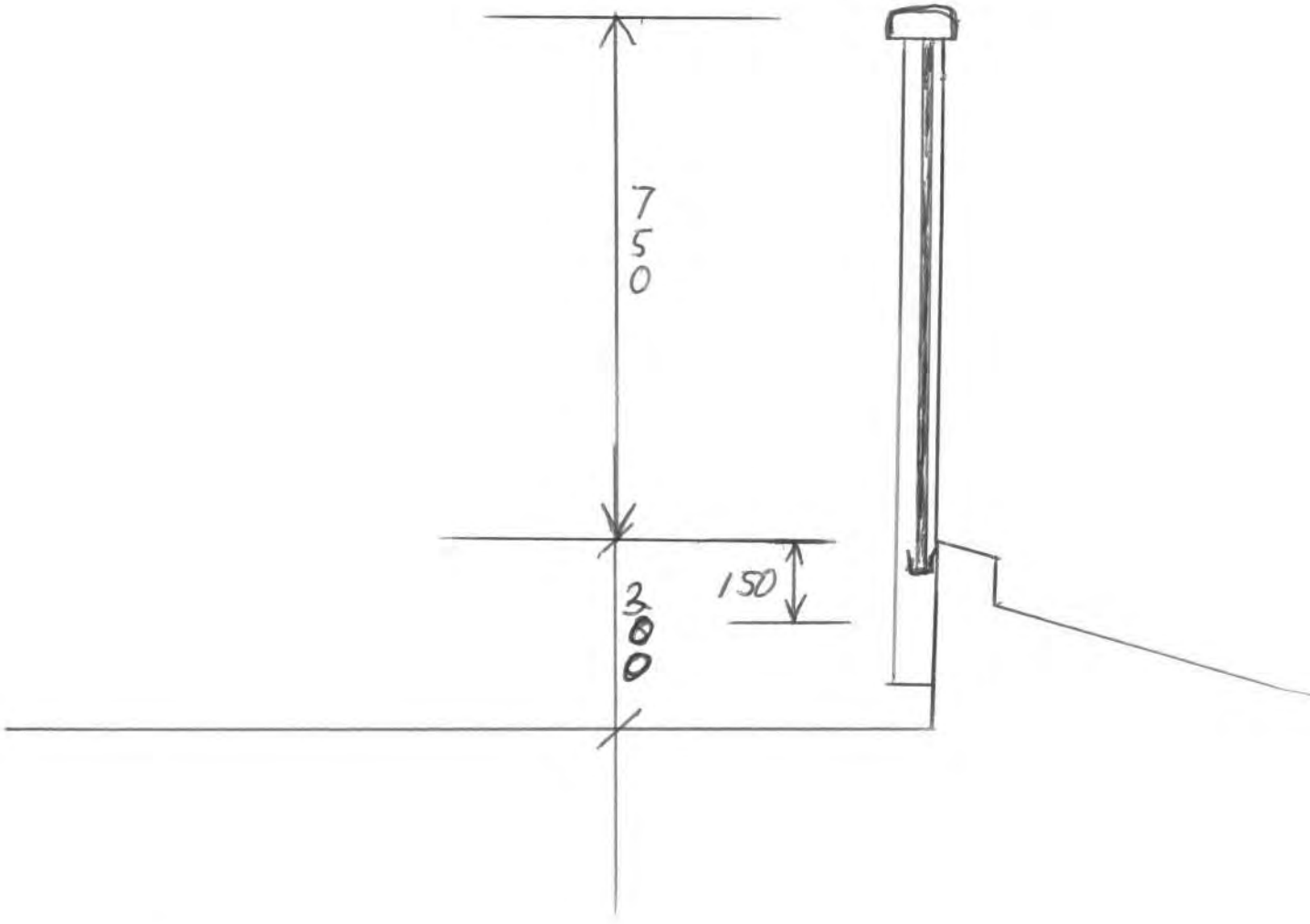
I gave the builder 3 alternatives, but at the end of the day the owner has to produce a design that will comply with the balustrade requirements of B2 & F4.

Signature: _____

53D Rotorua
Proposed balustrade detail.

Not accepted, because of Toe hold.
To be redesigned
Not from Tony Locanood to come back.

11/5



KAPITI COAST DISTRICT COUNCIL

Project Information Memorandum

Section 31, Building Act 1991

Application

T and N Jaques c/- Ross Kerry Tuohy Homes Ltd PO Box 54-162	No. Issue date Application date	041339 11/11/04 17/09/04

Project

Description	New (& prebuilt) House, Unit, Bach, Crib, Town House etc. Being Stage 1 of an intended 1 Stages New Dwelling
Intended Life	Indefinite, but not less than 50 years
Intended Use	Residential
Estimated Value	$350,000
Location	53D KOTARE STREET, WAIKANAE
Legal Description	LOT 5 DP 310492 - HAVING 1/6SH IN LOT 8 DP 310492 BEING 1292M2
Valuation No.	1496060805

This project information memorandum 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.

This project information memorandum includes:

___ Information identifying relevant special features of the land concerned

___ Details of relevant utility systems

___ Details of authorisations which have been granted

Signed for and on behalf of the Council:

Name: Robyne Graham **Date:** 11/11/04

Kapiti Coast District Council

Phone (04) 904 5700, Fax (04) 904 5830 175 Rimu Road, Private Bag 601, Paraparaumu. Website www.kcdc.govt.nz

KAPITI COAST DISTRICT COUNCIL

PROJECT INFORMATION MEMORANDUM - BC 041339

Application Details

Applicant Name :	T and N Jaques
Contact Address :	c/- Ross Kerry Tuohy Homes Ltd PO Box 54-162
Location :	53D KOTARE STREET, WAIKANAE
Legal Description :	LOT 5 DP 310492 - HAVING 1/6SH IN LOT 8 DP 3104
Proposal :	New Dwelling

Application Details

Use Permitted :	Permitted activity
Resource consent granted :	None listed
Designations on property :	None listed
Easements :	Right of way, services
Site subject to inundation :	Not known to be
Relocatable zone :	N/A
Coastal building line restriction :	N/A
Minimum floor level (50 year event) :	N/A
Floor level (100 year event) :	N/A
Yard and height requirements :	Comply
Tree/building preservation :	None listed

Comments

Consent notices, covenants, and like listings registered on the title are the responsibility of the applicant. Search this property title for any impediments to this proposal.

Note: Minimum floor levels must use Mean Sea Level Wellington Datum 1953. Certification that the floor level complies with the minimum floor level will be required from a registered surveyor prior to foundation inspection.

Special Features of the Land

Potential erosion :	None known
Potential avulsion :	None known
Potential subsidence :	None known
Potential slippage :	None known
Potential alluvion :	None known
Potential inundation :	None known
Presence of hazardous contaminants :	None known

Other features

Plumbing and Drainage Details

Sewer available / connected :	Available
Water available / connected :	Available
Site plan of existing services :	Not supplied
Location of sewer lateral :	shown
Location and size of water toby :	20mm shown
Location of public drains (if any) :	See attached plan
Location of easments (if any) :	see Planners comments
Stormwater disposal to :	connection provided

Plumbing and drainage notes

KAPITICOAST
DISTRICT COUNCIL

LOCAL GOVERNMENT ACT 1974

FOR THE DEPOSIT OF LAND TRANSFER PLAN 310492

BEING THE SUBDIVISION OF LOT 2 DP 53961

53 KOTARE STREET, WAIKANAE

FOR MR P HAWKER

To: The Regional Regulatory Titles Officer at Wellington

RESOLVED:

It is hereby resolved by the Kapiti Coast District Council pursuant to the provisions of Section 321(3)(c) of the Local Government Act 1974 that Lots 1, 2, 3, 4, 5 and 7 Land Transfer Plan 310492 are permitted to be without frontage to a public road on the grounds that adequate access to the allotments is provided by an access allotment and on that ground Section 321(1) shall not apply.

Issued in respect of Application No. RM 010345

Dated at Paraparaumu this 29th day of November 2002.

Trevor M Garnett

Trevor Garnett
AUTHORISED OFFICER

Hermione Blair
AUTHORISED OFFICER

Lot 5

53D Kotare St

KAPITICOAST
DISTRICT COUNCIL

KAPITI COAST DISTRICT COUNCIL

CONSENT NOTICE PURSUANT TO SECTION 221

OF THE RESOURCE MANAGEMENT ACT 1991

FOR THE DEPOSIT OF LAND TRANSFER PLAN 310492

THE SUBDIVISION OF LOT 2 DP 53961,

53 KOTARE STREET, WAIKANAE.

FOR P HAWKER (RM010345)

To The Regional Regulatory Titles Officer at Wellington

PURSUANT to Section 221 of the Resource Management Act 1991 the Kapiti Coast District Council hereby gives notice that it has consented to the subdivision and the following conditions are to be complied with on a continuing basis:

In relation to Lot 1:

(1) No building, structure, scaffolding or vegetation is permitted within 6.2 metres in any direction of the MHO-PKK Lines A and B that cross the property as required by Transpower.

(2) That foundation design and construction for any new building or additions and alterations to a building on the land shall be in accordance with the recommendations within the Soil Investigation report prepared by Samcom Limited, dated 6 September 2002, submitted to Council in relation to application No. RM010345. A copy of the Soil Test report is held on the file RM010345 in the Kapiti Coast District Council's Resource Consents Office and can be viewed at any time the office is open to the public.

(3) Stormwater retention capacity of not less than 5000 litres is available for the land as described within the report by Samcon Limited entitled "Stormwater disposal" received by Council on 20 November 2001. A copy of the report is held on the file RM010345 in the Kapiti Coast District Council's Resource Consents Office and can be viewed at any time the office is open to the public.

In relation to Lot 2:

(1) Stormwater retention capacity of not less than 5000 litres is available for the land as described within the report by Samcon Limited entitled "Stormwater disposal", received by Council on 20 November 2001. A copy of the report is held on the file RM010345 in the Kapiti Coast District Council's Resource Consents Office and can be viewed at any time the office is open to the public.

In relation to Lot 3:

(1) All buildings are to be set back 15m from the eastern boundary adjoining the Department of Conservation Hemi Matenga Memorial Park Reserve to mitigate any effects from occupation of the lots in respect to the reserve.

(2) A tank which provides a minimum of 20,000 litres of water at any time dedicated to fire-fighting is located along the mutual boundary of lots 3 and 4 to serve these lots for fire fighting purposes, and must be maintained for this purpose.

(3) Any dwelling built, erected or sited on the land shall contain a sprinkler system designed and installed by a recognised industry operator and this system is to be maintained on an on-going basis.

(4) Planting in the 15m separation area between any buildings on the land and the Department of Conservation Hemi Matenga Memorial Park is restricted to those species that will achieve a maximum height of 1.2m. Suitable species are listed in the Hawker and Son Limited letter dated 6 November 2002 amended by facsimilie by Landlink Limited dated 3.12.02 held on the file RM010345. A copy of this letter is held on the file RM010345 in the Kapiti Coast District Council's Resource Consents Office and can be viewed at any time the office is open to the public.

(5) That foundation design and construction for any new building or additions and alterations to a building on the land shall be in accordance with the recommendations within the Soil Investigation report prepared by Samcom Limited, dated 6 September 2002, submitted to Council in relation to application No. RM010345. A copy of the Soil Test report is held on the file RM010345 in the Kapiti Coast District Council's Resource Consents Office and can be viewed at any time the office is open to the public.

(6) Stormwater retention capacity of not less than 5000 litres is available for the land as described within the report by Samcon Limited entitled "Stormwater disposal", received by Council on 20 November 2001. A copy of the report is held on the file RM010345 in the Kapiti Coast District Council's Resource Consents Office and can be viewed at any time the office is open to the public.

In relation to Lot 4:

(1) Any dwelling built, erected or sited on the land shall contain a sprinkler system designed and installed by a recognised industry operator and this system is to be maintained on an on-going basis.

(2) A tank which provides a minimum of 20,000 litres of water at any time dedicated to fire-fighting is located along the mutual boundary of lots 3 and 4 to serve these lots for fire fighting purposes, and must be maintained for this purpose.

(3) That foundation design and construction for any new building or additions and alterations to a building on the land shall be in accordance with the recommendations within the Soil Investigation report prepared by Samcom Limited, dated 6 September 2002, submitted to Council in relation to application No. RM010345. A copy of the Soil Test report is held on the file RM010345 in the Kapiti Coast District Council's Resource Consents Office and can be viewed at any time the office is open to the public.

(4) Stormwater retention capacity of not less than 5000 litres is available for the land as described within the report by Samcon Limited entitled "Stormwater disposal", received by Council on 20 November 2001. A copy of the report is held on the file RM010345 in the Kapiti Coast District Council's Resource Consents Office and can be viewed at any time the office is open to the public

In relation to Lot 5:

(1) That foundation design and construction for any new building or additions and alterations to a building on the land shall be in accordance with the recommendations within the Soil Investigation report prepared by Samcom Limited, dated 6 September 2002, submitted to Council in relation to application No. RM010345. A copy of the Soil Test report is held on the file RM010345 in the Kapiti Coast District Council's Resource Consents Office and can be viewed at any time the office is open to the public.

(2) Stormwater retention capacity of not less than 5000 litres is available for the land as described within the report by Samcon Limited entitled "Stormwater disposal", received by Council on 20 November 2001. A copy of the report is held on the file RM010345 in the Kapiti Coast District Council's Resource Consents Office and can be viewed at any time the office is open to the public

In relation to Lot 6:

(1) No building, structure, scaffolding or vegetation is permitted within 6.2 metres in any direction of the MHO-PKK Lines A and B that cross the property as required by Transpower.

(2) Stormwater retention capacity of not less than 5000 litres is available for the land as described within the report by Samcon Limited entitled "Stormwater disposal", received by Council on 20 November 2001. A copy of the report is held on the file RM010345 in the Kapiti Coast District Council's Resource Consents Office and can be viewed at any time the office is open to the public

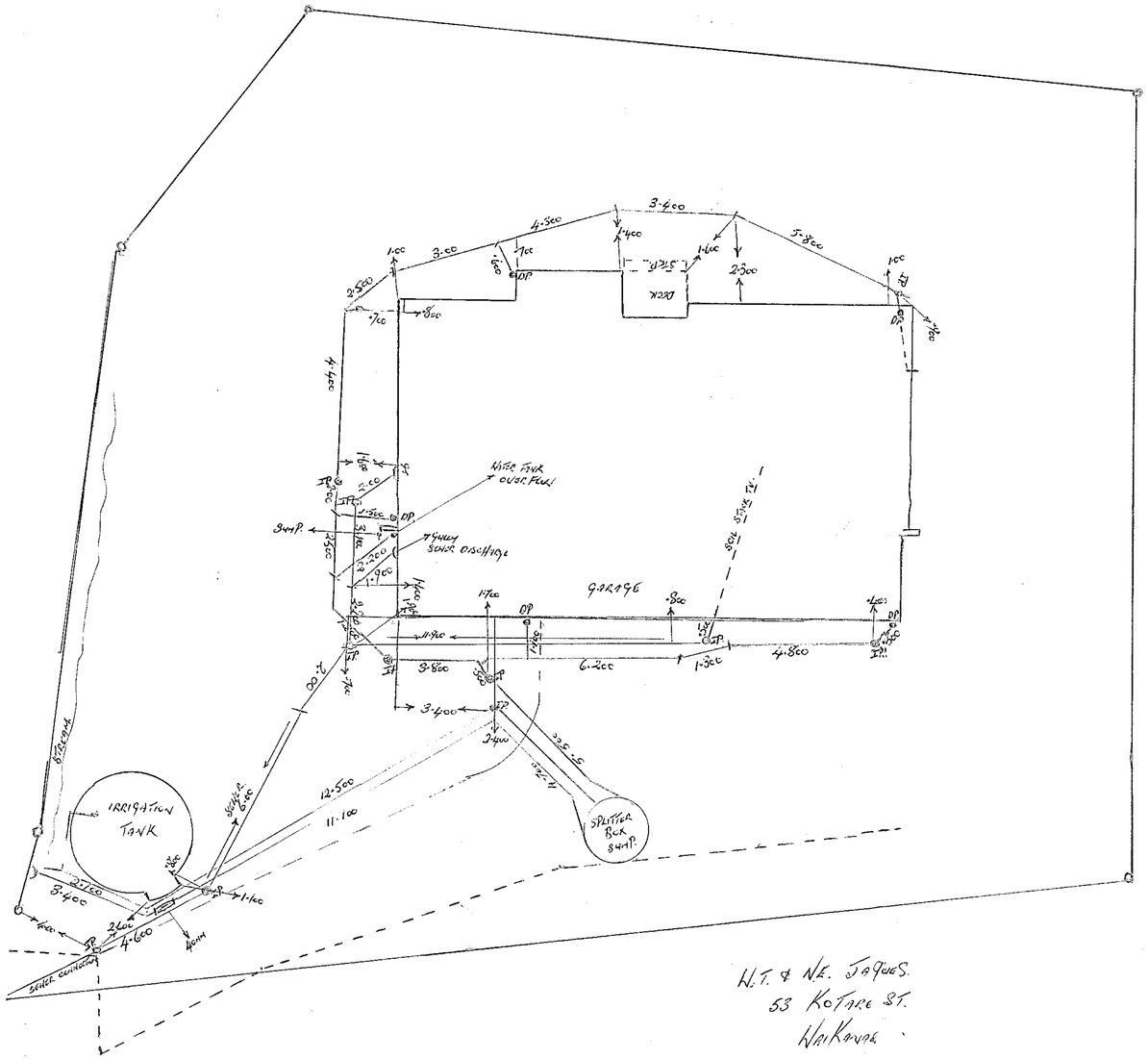
(3) That foundation design and construction for any new building or additions and alterations to a building on the land shall be in accordance with the recommendations within the Soil Investigation report prepared by Samcom Limited, dated 6 September 2002, submitted to Council in relation to application No. RM010345. A copy of the Soil Test report is held on the file RM010345 in the Kapiti Coast District Council's Resource Consents Office and can be viewed at any time the office is open to the public.

Issued in respect of application No. RM 010345 on this 3rd day of December 2002.

Trevor M. Garnett

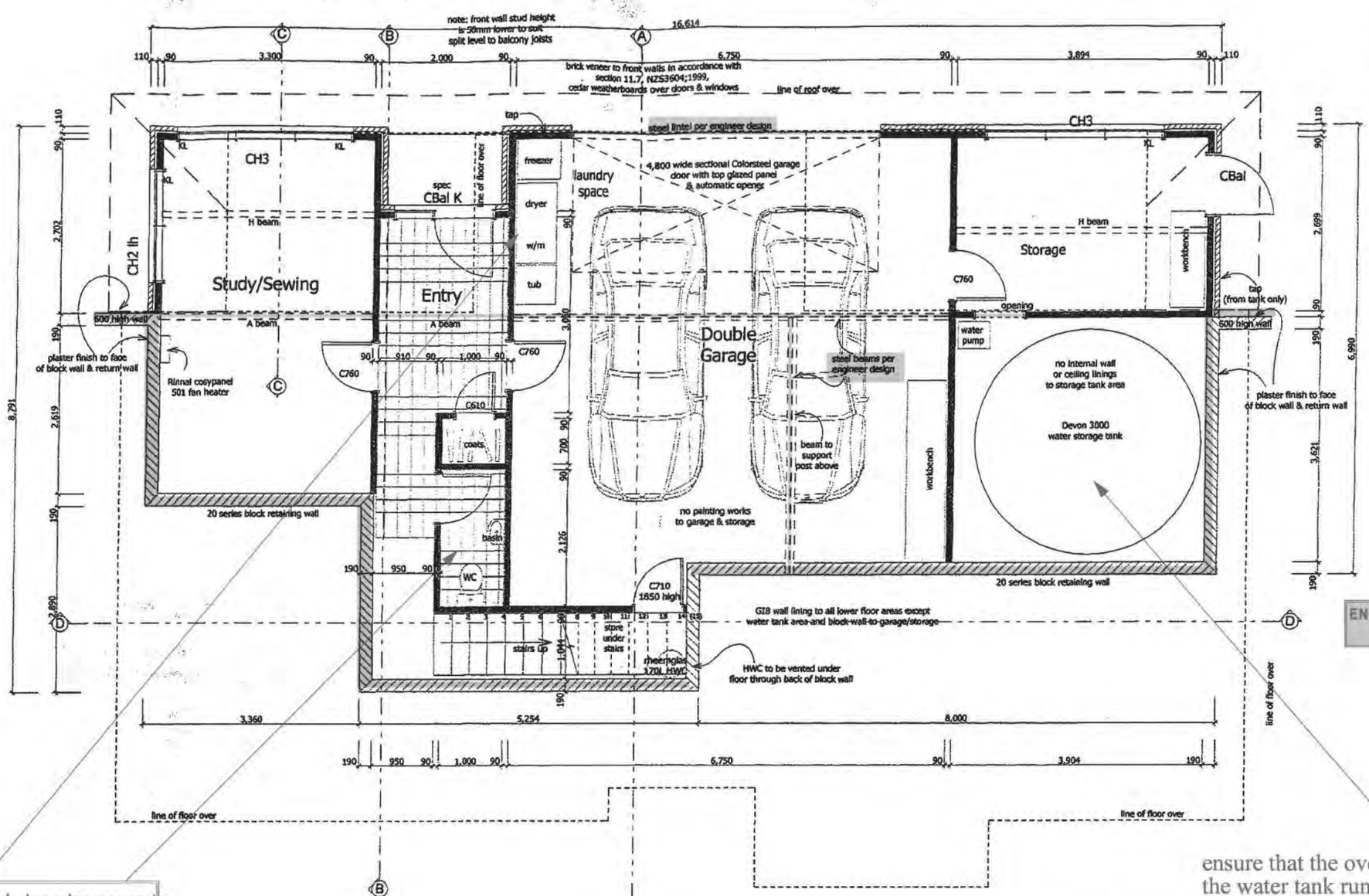
Trevor Garnett
AUTHORISED OFFICER

Hermione Blair
AUTHORISED OFFICER



H.T. & N.E. JAQUES.
53 KOTARE ST.
WAIKANAE.

APPROVED
BY P & D
Simon Copp
Officer
12/10/04



All habitable / service rooms to have 5% of their floor area as opening windows or approved alternative, to achieve ventilation requirements.

PIPES TO BE INSPECTED BEFORE COVERING WITH SAND.

ensure that the overflow from the water tank runs directly to the exterior

ENGINEER STRUCTURAL DESIGN TAKES PRECEDENCE

LOWER FLOOR PLAN
scale 1 : 50

Lower Floor Area = 117.28m²
Upper Floor Area = 155.30m²

Total House Area = 272.58m²

Total Balcony area = 19.94m²

Elevation Orientation

STANDARD LOCKWOOD CONSTRUCTION - refer to Lockwood Assembly & Detail Manuals

LOCKWOOD

TUOHY HOMES LTD

Details:		Drawn:	Scale :	Sheet #
Proposed New Lockwood Home for W.T & N.E Jaques at 'RibbonWood', 53 Kotare St, Waikanae	Lower Floor Plan	RJK	1 : 50 @ A2	3 of 12
			Date : 30/08/2004	

2/11/2004

APPROVED
BY BUILDING
Mark Fitzpatrick
Officer

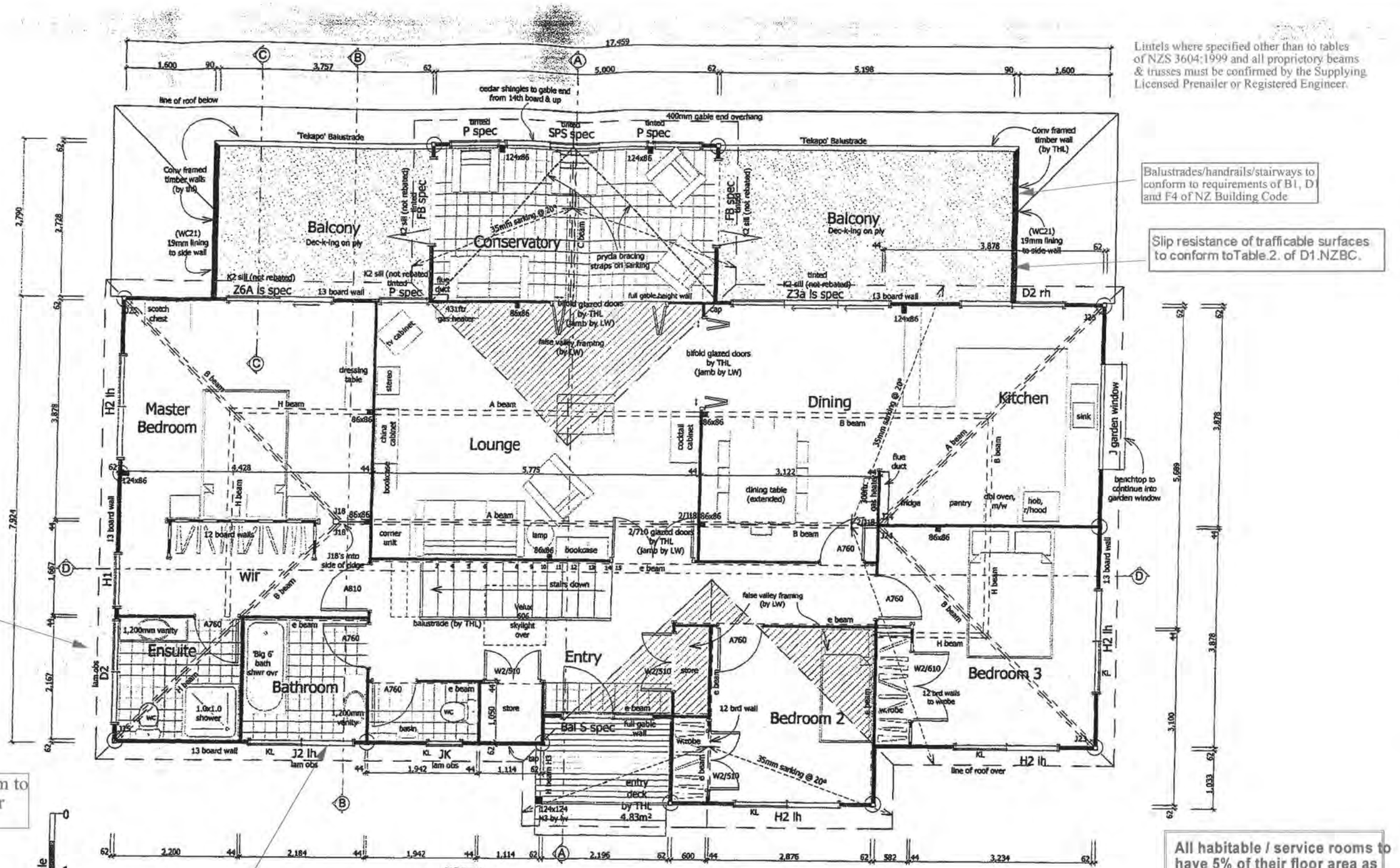
Lintels where specified other than to tables of NZS 3604:1999 and all proprietory beams & trusses must be confirmed by the Supplying Licensed Prenailer or Registered Engineer.

Balustrades/handrails/stairways to conform to requirements of B1, D1 and F4 of NZ Building Code

Slip resistance of trafficable surfaces to conform toTable.2. of D1.NZBC.

Safety glass to NZS 4223 Pt3 (1999 revision)

Stress graded framing to conform to relevant manufacturer's producer statement and selection tables.



scale 0 1 2

Safety glass to NZS 4223 Pt3 (1999 revision)

UPPER FLOOR PLAN
scale 1 : 50

NOTES:
1. LW to supply components 4 - 17
2. 62mm ASSL exterior Lockwood walls
3. Powdercoated exterior joinery. Bronze tint to dining, conservatory & dining windows. "KL" = 1x lockable window catch
4. Longrun Colorsteel roofing on 35mm sarking (bitumous shingle on ply as optional cost)

Lower Floor Area = 117.28m²
Upper Floor Area = 155.30m²

Total House Area = 272.58m²

Total Balcony area = 19.94m²

Elevation Orientation: C D B A

All habitable / service rooms to have 5% of their floor area as opening windows or approved alternative, to achieve ventilation requirements.

WATER RIPES TESTED TO 1500KPA

APPROVED
BY P & D
Simon Copp
Officer
12/10/04

Lockwood construction is an 'Alternative Solution' in terms of the New Zealand Building Code.

Details not shown in these plan have been verified in the 'Lockwood 62mm Detail Manual' and/or 'Lockwood Designers Condensed Handbook July 1995', held in the Territorial Authority's reference library. To avoid unnecessary duplication, those documents have not been reproduced in these documents. The afore-mentioned Lockwood documents must be held on site during construction

STANDARD LOCKWOOD CONSTRUCTION - refer to Lockwood Assembly & Detail Manuals

LOCKWOOD

T H L
TUOHY HOMES LTD

PLANS COPYRIGHT TUOHY HOMES LTD

Details:		Drawn:	Scale : 1 : 50 @ A2	Sheet #
Proposed New Lockwood Home for W.T & N.E Jaques at 'RibbonWood', 53 Kotare St, Waikanae	Upper Floor Plan	RJK	Date : 30/08/2004	4 of 12