Kaipara District Council
Unit 6 - The Hub, 6 Molesworth Drive, Mangawhai 0505
buildingsupport@kaipara.govt.nz
(09) 439 3123

BC170098

Alpha ID: 170098
Application Type: Building Consent with PIM
Site Address: 102 Settlement Road Kaiwaka
Project Description: Relocate two Secondhand Dwellings to site with associated Stormwater & Sanitary Sewer private drainage.
Project Status: Code Compliance Certificate Issued

Creation Date: 10 June 2019

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KAIPARA DISTRICT
Kaipara te Oranganui • Two Oceans Two Harbours

Building Consent Application: 87717829KJ

Date Submitted: Wednesday, 22 February 2017

Application Type

Building Consent only

Application Details

Reference Key: **87717829KJ**
Name: Chris Mcallister
Application Role: Agent

The Building

Site Address: 102 Settlement Road, Kaiwaka, 0573

Legal Description:
Lot 1 DP 123715

Description of Building Work: Relocate two Secondhand Residences to site with associated Stormwater & Sanitary Sewer private drainage.

Is this title currently subject to subdivision?: Yes

The Owner

Owner's Name: **Architectural Draughting Solutions Limited**
Contact Person: Chris Mcallister
Mailing Address: Po Box 120, Kumeu, Auckland 0841
Street Address: 134 Main Road, Kumeu, Auckland, 0841
Phone: Landline: 094128749 Mobile: 0212812121
Email: chris@adsltd.co.nz

The Agent

Agent's Name: **Chris Mcallister**
Contact Person: N/A
Mailing Address: Po Box 120, Kumeu, Auckland 810
Street Address: Po Box 120, Kumeu, Auckland
Phone: Landline: 0212812121 Mobile: 0212812121
Email: chris@adsltd.co.nz

Application

I request that you issue a Building Consent only for the building work described in this application. I have the authority for the application to proceed to processing and to accept the associated charges.
Signature of Agent on behalf of and with the authority of the owner:

CHRIS MCALLISTER

22 Feb 2017

The Project

Building Name:	**Residence A**
Building Type:	Residential
Building Classification:	2.0 Housing: 2.0.2 Detached Dwelling
Current, lawfully established, use:	SH (Sleeping Single Home)
Existing Floor Area:	122.50 square metre(s)
New Floor Area:	0.00 square metre(s)
Total Floor Area:	122.50 square metre(s)
Intended Life:	50 years
Year First Constructed:	1985
Previous Building Work:	N/A
Estimated Value of Building Work:	$20,000.00
Owner-builder carrying out the restricted building work:	No
Waiver / Modification Required:	N/A

Restricted Building Work: Yes

Means of Compliance with the New Zealand Building Code

B1 - Structure	AS1
F7 - Warning Systems	AS1
G9 - Electricity	AS1
G10 - Piped Services	AS1
G12 - Water Supplies	AS1
G13 - Foul Water	AS1

Building Name:	**Residence B**
Building Type:	Residential
Building Classification:	2.0 Housing: 2.0.2 Detached Dwelling
Current, lawfully established, use:	SH (Sleeping Single Home)
Existing Floor Area:	84.00 square metre(s)
New Floor Area:	0.00 square metre(s)
Total Floor Area:	84.00 square metre(s)
Intended Life:	50 years
Year First Constructed:	1975
Previous Building Work:	N/A
Estimated Value of Building Work:	$20,000.00
Owner-builder carrying out the restricted building work:	No

Waiver / Modification Required:	N/A

Restricted Building Work: Yes

Means of Compliance with the New Zealand Building Code

B1 - Structure	AS1
F7 - Warning Systems	AS1
G9 - Electricity	AS1
G10 - Piped Services	AS1
G12 - Water Supplies	AS1
G13 - Foul Water	AS1

Licensed Building Practitioners

Name:	**Christopher McAllister**
LBP Number:	BP114593
Company:	Design/Design 1
Contact:	094128749
Email:	chris@adsltd.co.nz
Address:	PO Box 120, Kumeu, Auckland, 0842

Site Personnel / Other Contacts

No Site Personnel / Other Contacts have been provided.

Miscellaneous Information

Does the project relate to a natural disaster?	No
Will there be a dog on site during construction?	No
Is there a swimming/spa pool on this site?	No

Attachments

Certificate of Title

1. 16-120_-_Title.pdf (62.87K)

Plans

1. 16-120_-_Full_Set.pdf (1.96M)
2. 16-120_-_DCL_Signed_Drawings.pdf (1.00M)

Restricted Building Work Memorandums / Owner-Builder Declaration

1. 16-120_-_DCL_Engineering.pdf (2.10M)
2. 16-120_-_LBP.pdf (672.58K)

Supporting Documents

1. 16-120_-_Authority_Form.pdf (16.44K)
2. 16-120_-_Residence_A_Sub-floor_Bracing.pdf (118.21K)

3. 16-120_-_Residence_B_Sub-floor_Bracing.pdf (118.50K)
4. 16-120_-_Geotech_Report.pdf (2.33M)
5. 16-120_-_Residence_B_Secondhand_Building_Report.pdf (8.40M)
6. 16-120_-_Residence_A_Secondhand_Building_Report.pdf (9.04M)

Specifications

1. 16-120_-_Job_Specification.pdf (166.52K)

Comments / Other Information:

N/A

FORM PLG 1

National Environmental Standard (NES) for Assessing and Managing Contaminants in Soil to Protect Human Health

(Please note that any inaccuracies may result in the applicant being in breach of the Resource Management Act 1991 and/or exposed to liability if the site is subsequently found to be contaminated, including being liable for remedial works. For assistance in answering these questions please refer to PLG 1A - refer to http://goo.gl/Ndbj43.)

Is the building work and all associated activities:

Changing the use of the land? No

(Please note that "changing the use of the land" includes erecting a dwelling on an area of land which previously had no dwelling erected upon it.)

Disturbing soil? No

(more than 25m3 per 500m2 of land) or removing soil? (more than 5m3 per 500m2 of land) (e.g.: foundations, on-site effluent treatment and disposal systems, wells or bores)

For more information on this process please contact the Duty Planner on 09 439 3123 or go the Ministry for the Environment website: http://www.mfe.govt.nz/laws/standards/contaminants-in-soil/

Building Consent Application: 87717829KJ

Date Submitted: Wednesday, 22 February 2017

FORM PLG 1

National Environmental Standard (NES) for Assessing and Managing Contaminants in Soil to Protect Human Health

For assistance in answering these questions please refer to (PLG 1A)

Please note that any inaccuracies may result in the applicant being in breach of the Resource Management Act 1991 and/or exposed to liability if the site is subsequently found to be contaminated, including being liable for remedial works.

Is the building work and all associated activities:

Changing the use of the land? **NO**

(Please note that "changing the use of the land" includes erecting a dwelling on an area of land which previously had no dwelling erected upon it.)

Disturbing soil? **NO**

(more than 25m3 per 500m2 of land) or removing soil? (more than 5m3 per 500m2 of land) (e.g.: foundations, on-site effluent treatment and disposal systems, wells or bores)

For more information on this process please contact the Duty Planner on 347 2868 or go the Ministry for the Environment website: http://www.mfe.govt.nz/laws/standards/contaminants-in-soil/

Signature

The name below as AGENT has the authority for the application to proceed to processing and accept the associated charges.

Signed By:

Chris Mcallister

22 Feb 2017

The Agent will be the first point of contact for communications with the Council/Building Consent authority regarding this application / building work and will receive all correspondence including all invoices.

COMPUTER FREEHOLD REGISTER
UNDER LAND TRANSFER ACT 1952

Search Copy

R.W. Muir
Registrar-General
of Land

Identifier	**NA72A/940**
Land Registration District	**North Auckland**
Date Issued	26 October 1988

Prior References
NA42A/819

Estate	Fee Simple
Area	4.5908 hectares more or less
Legal Description	Lot 1 Deposited Plan 123715

Proprietors
Lynette Eileen Dheda

Interests

Appurtenant hereto is a water right created by Transfer 644766

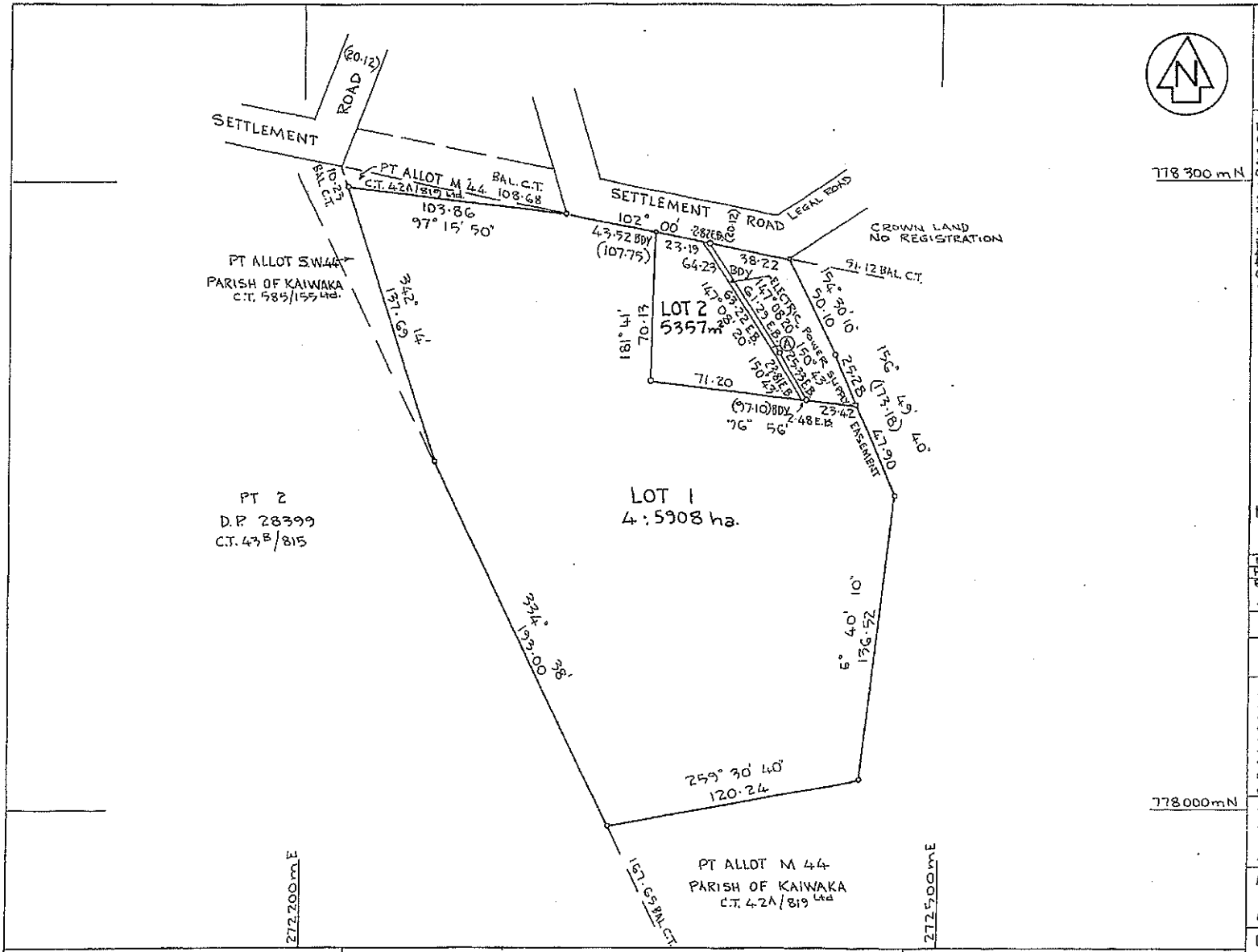
C870177.3 Mortgage to (now) Westpac New Zealand Limited - 26.7.1995 at 12.46 pm

C983686.1 Variation of Mortgage C870177.3 - 18.4.1996 at 3.28 pm

6679308.1 Variation of Mortgage C870177.3 - 7.12.2005 at 9:00 am

8211833.11 Variation of Mortgage C870177.3 - 30.6.2009 at 2:19 pm

10463452.14 Variation of Mortgage C870177.3 - 13.6.2016 at 2:28 pm



Approvals

REGISTERED OWNERS

Pursuant to a resolution of the Otamatea County Council passed on the 19th day of February 1988 approving, pursuant to Section 305 of the Local Government Act 1974 this survey plan conditional upon the granting or reserving of the easements shown in the memorandum endorsed hereon and certifying that the survey plan is in accordance with the requirements and provisions of the operative District Scheme for the area to which the survey plan relates the Common Seal of the Otamatea County Council was affixed hereto in the presence of:

COUNTY CHAIRMAN

CHIEF EXECUTIVE OFFICER

New Cs.T. Allocated
Lot 1 72A/940
Lot 2 72A/941

MEMORANDUM OF EASEMENT IN GROSS			
PURPOSE	SHOWN	SERVIENT TEN.	GRANTEE
ELECTRIC POWER SUPPLY	(A)	PT LOT 2	NORTH AUCKLAND ELECTRIC POWER BOARD

Total Area 5.1265ha.

Comprised in C.T. 42A/819 Ltd (Pt.)

I, Russell Lewis Fish
Registered Surveyor and holder of an annual practising certificate or who may act as a registered surveyor pursuant to the proviso to section 32(2) of the Surveyors Act 1986 hereby certify that this plan has been made from surveys executed by me or under my directions, that both plan and survey are correct and have been made in accordance with the Survey Regulations 1972
Dated at Auckland this 23 day of March 19 88 Signature

Field Book p. Traverse Book p.
Reference Plans
Examined Correct: K.J.Clark.

Approved as to Survey
18/5/88
Chief Surveyor

Deposited this 26 day of June 1988
District Land Registrar

File Received Instructions

D.P. 123715

LAND DISTRICT North Auckland
SURVEY BLK. & DIST. III Otamatea
NZMS 261 SHT RECORD MAP No

PLAN OF LOTS 1 & 2 BEING SUBDIVISION OF PART ALLOTMENTS 43, M 44 & NE 44 PARISH OF KAIWAKA

TERRITORIAL AUTHORITY Otamatea County
Surveyed by Thompson Fish & Assoc
Scale 1 : 1250 Date Jan. 1988

Printed by Sterling Imports Ltd. Auckland, New Zealand.
W.H. HAWKEY, SURVEYOR GENERAL, DEPARTMENT OF LANDS AND SURVEY NEW ZEALAND WELLINGTON
L & S FORM A93

AUCKLAND DISTRICT PRINTING MICROFILM SYSTEMS
Government Printing Office
9-12-88
CENTIMETRES

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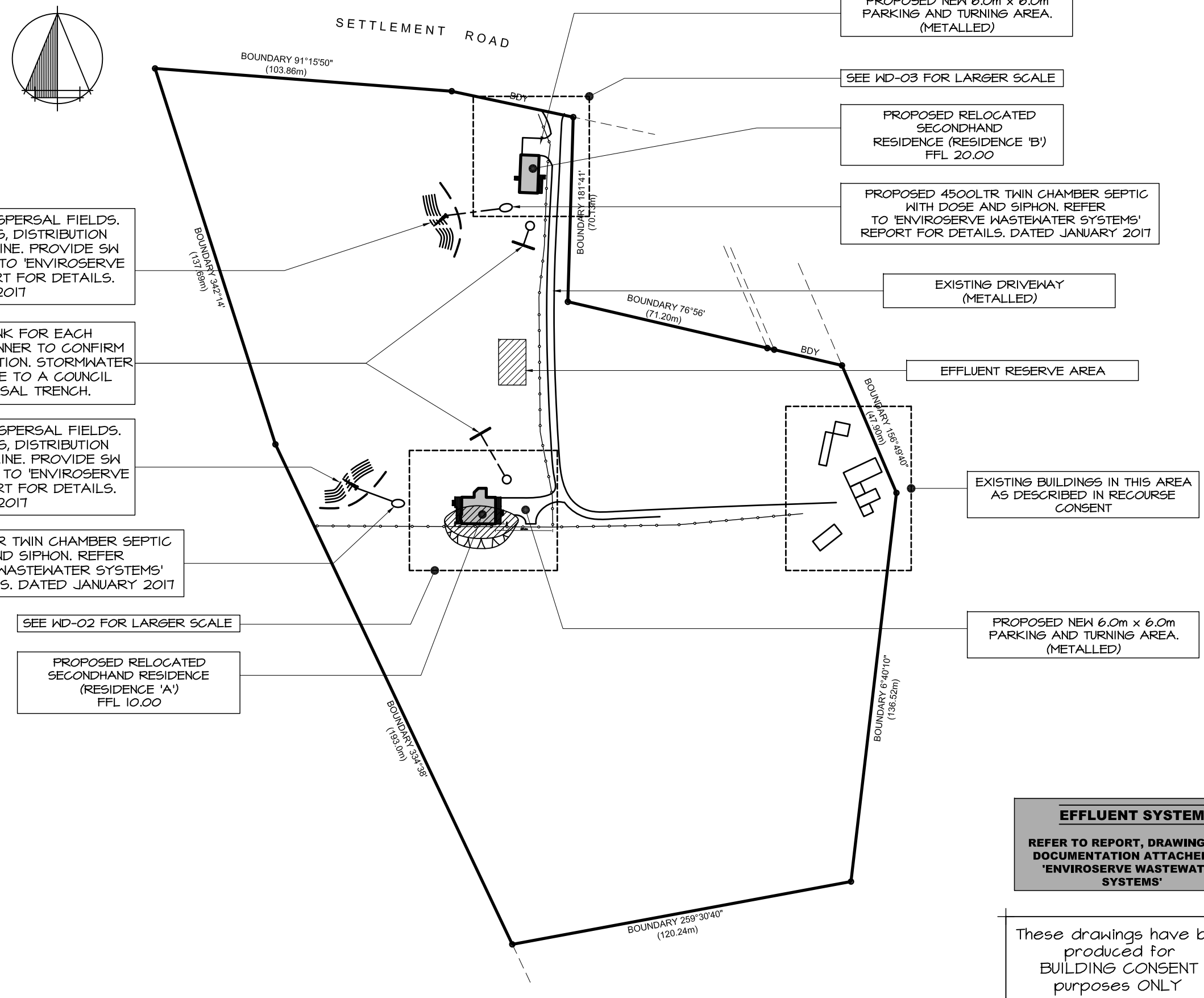
CONTRACTOR MUST VERIFY ALL DIMENSIONS ON SITE – IF IN DOUBT – ASK!

LEGAL DESCRIPTION

LOT 1
DP 123715
AREA: 5.5908Ha

PROJECT DESCRIPTION

RELOCATE SECONDHAND RESIDENCES (RESIDENCE 'A') & (RESIDENCE 'B') ONTO SITE. NEW ON-SITE EFFLUENT DISPOSAL SYSTEM FOR EACH DWELLING



PROPOSED NEW 6.0m x 6.0m PARKING AND TURNING AREA. (METALLED)

SEE WD-03 FOR LARGER SCALE

PROPOSED RELOCATED SECONDHAND RESIDENCE (RESIDENCE 'B') FFL 20.00

PROPOSED 4500LTR TWIN CHAMBER SEPTIC WITH DOSE AND SIPHON. REFER TO 'ENVIROSERVE WASTEWATER SYSTEMS' REPORT FOR DETAILS. DATED JANUARY 2017

PROPOSED 144m2 EFFLUENT DISPERSAL FIELDS. LAY LEVEL TO SUIT CONTOURS, DISTRIBUTION MANIFOLD IN MIDDLE OF TOP LINE. PROVIDE SW CUT-OFF SWALE ABOVE. REFER TO 'ENVIROSERVE WASTEWATER SYSTEMS' REPORT FOR DETAILS. DATED JANUARY 2017

EXISTING DRIVEWAY (METALLED)

PROPOSED WATER TANK FOR EACH RELOCATED RESIDENCE. OWNER TO CONFIRM SIZE, TYPE AND FINAL LOCATION. STORMWATER OVERFLOW TO DISCHARGE TO A COUNCIL APPROVED SW DISPERSAL TRENCH.

EFFLUENT RESERVE AREA

PROPOSED 144m2 EFFLUENT DISPERSAL FIELDS. LAY LEVEL TO SUIT CONTOURS, DISTRIBUTION MANIFOLD IN MIDDLE OF TOP LINE. PROVIDE SW CUT-OFF SWALE ABOVE. REFER TO 'ENVIROSERVE WASTEWATER SYSTEMS' REPORT FOR DETAILS. DATED JANUARY 2017

EXISTING BUILDINGS IN THIS AREA AS DESCRIBED IN RECOURSE CONSENT

PROPOSED 4500LTR TWIN CHAMBER SEPTIC WITH DOSE AND SIPHON. REFER TO 'ENVIROSERVE WASTEWATER SYSTEMS' REPORT FOR DETAILS. DATED JANUARY 2017

SEE WD-02 FOR LARGER SCALE

PROPOSED NEW 6.0m x 6.0m PARKING AND TURNING AREA. (METALLED)

PROPOSED RELOCATED SECONDHAND RESIDENCE (RESIDENCE 'A') FFL 10.00

NOTE : - SET OUT / LOCATION OF BUILDINGS

1. THE OWNER IS TO CONFIRM THE PROPOSED LOCATION & ORIENTATION OF THE BUILDING ON SITE PRIOR TO ANY WORK TAKING PLACE.
2. THE PROPOSED LOCATION OF THE BUILDING IS TO BE PEGGED BY THE SURVEYOR. SURVEYOR TO CHECK / CONFIRM MINIMUM FLOOR LEVELS & HEIGHT IN RELATION TO BOUNDARY AT THIS STAGE. CHECK WITH HOUSE MOVER PRIOR TO UNDERTAKING THIS.
3. PEG FFL DATUM BY ON SITE (AGAINST FENCE - OUT OF THE WAY) - CONFIRM THAT YOU ARE OK WITH THIS LEVEL. *(ENSURE TO ACHIEVE 450mm TO UNDER SIDE OF JOISTS).
5. ADVISE HOUSE MOVER THAT THE ABOVE HAS BEEN CONFIRMED AND/OR CARRIED OUT AND THAT THE SITE IS READY FOR THE RELOCATION OF THE BUILDING.

EFFLUENT SYSTEM

REFER TO REPORT, DRAWING AND DOCUMENTATION ATTACHED BY 'ENVIROSERVE WASTEWATER SYSTEMS'

These drawings have been produced for BUILDING CONSENT purposes ONLY

SITE PLAN
SCALE 1:1500

PH: 09 412 8749 FAX: 09 412 8751
P O Box120 , Kumeu, New Zealand
ARCHITECTURAL DRAUGHTING SOLUTIONS LTD
EMAIL: CHRIS@ADSLTD.CO.NZ

RELOCATE SECONDHAND RESIDENCES ('A') & ('B') TO 102 SETTLEMENT ROAD, KAIWAKA FOR LYNETTE DHEDA

		DATE	AMENDMENTS
DESIGNED			
DRAWN	CJM	06/16	
CHECKED	CJM		
APPROVED	CJM		
REF:			

CONTRACT No 16-120
DWG No WD-01
SCALE NTD @ A3

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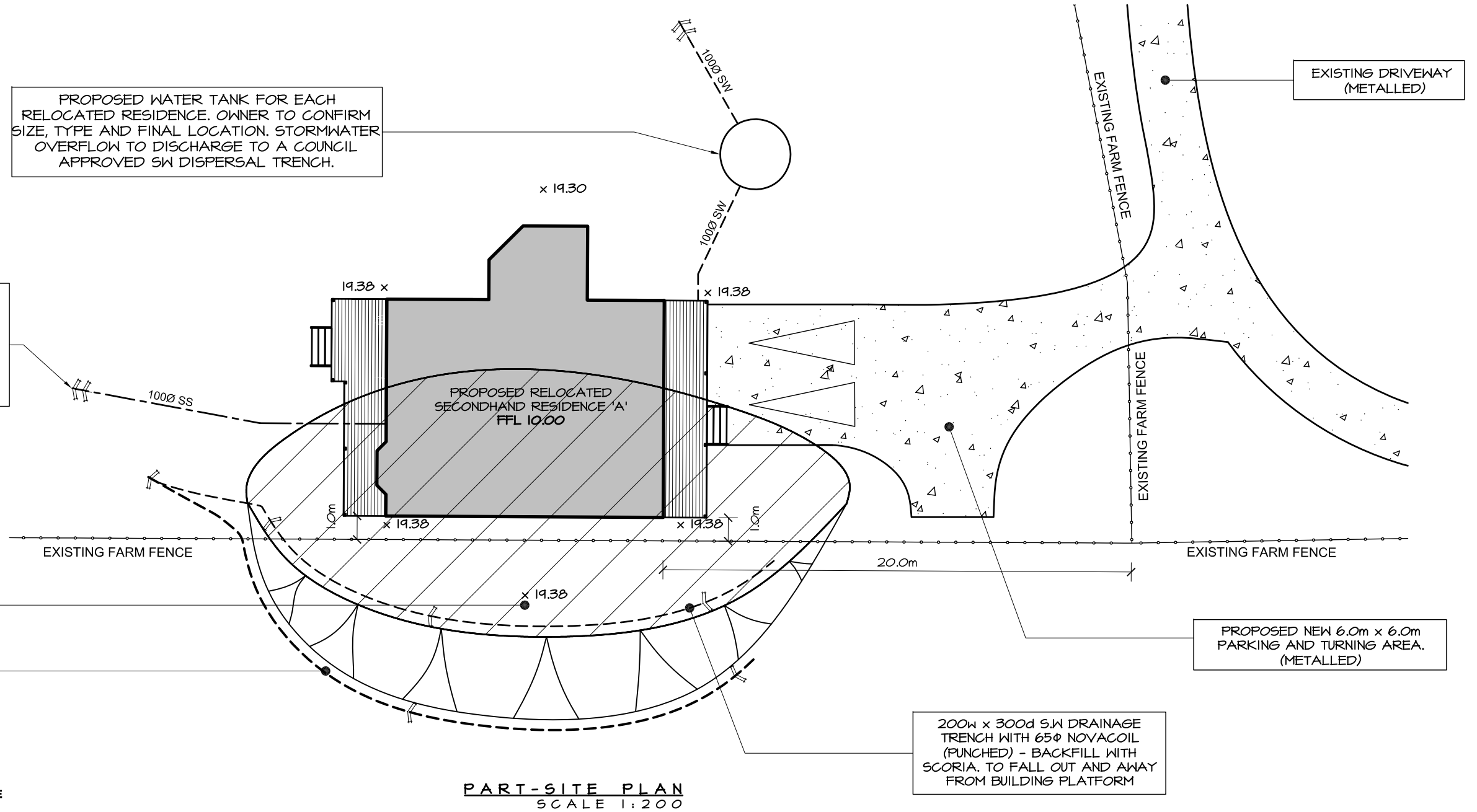
LEGAL DESCRIPTION

LOT 1
DP 123715
AREA: 5.5908Ha

PROJECT DESCRIPTION

RELOCATE SECONDHAND RESIDENCES (RESIDENCE 'A') & (RESIDENCE 'B') ONTO SITE. NEW ON-SITE EFFLUENT DISPOSAL SYSTEM FOR EACH DWELLING

These drawings have been produced for BUILDING CONSENT purposes ONLY



PART-SITE PLAN
SCALE 1:200

NOTE : - SET OUT / LOCATION OF BUILDINGS

1. **THE OWNER IS TO CONFIRM THE PROPOSED LOCATION & ORIENTATION OF THE BUILDING ON SITE PRIOR TO ANY WORK TAKING PLACE.**
2. **THE PROPOSED LOCATION OF THE BUILDING IS TO BE PEGGED BY THE SURVEYOR. SURVEYOR TO CHECK / CONFIRM MINIMUM FLOOR LEVELS & HEIGHT IN RELATION TO BOUNDARY AT THIS STAGE. CHECK WITH HOUSE MOVER PRIOR TO UNDERTAKING THIS.**
3. **PEG FFL DATUM BY ON SITE (AGAINST FENCE - OUT OF THE WAY) - CONFIRM THAT YOU ARE OK WITH THIS LEVEL. *(ENSURE TO ACHIEVE 450mm TO UNDER SIDE OF JOISTS).**
5. **ADVISE HOUSE MOVER THAT THE ABOVE HAS BEEN CONFIRMED AND/OR CARRIED OUT AND THAT THE SITE IS READY FOR THE RELOCATION OF THE BUILDING.**

EFFLUENT SYSTEM

REFER TO REPORT, DRAWING AND DOCUMENTATION ATTACHED BY 'ENVIROSERVE WASTEWATER SYSTEMS'

(RESIDENCE 'A')

PH: 09 412 8749 FAX: 09 412 8751
P O Box120 , Kumeu, New Zealand
ARCHITECTURAL DRAUGHTING SOLUTIONS LTD
EMAIL: CHRIS@ADSLTD.CO.NZ

RELOCATE SECONDHAND RESIDENCES ('A') & ('B') TO 102 SETTLEMENT ROAD, KAIWAKA FOR LYNETTE DHEDA

		DATE	AMENDMENTS
DESIGNED			
DRAWN	CJM	06/16	
CHECKED	CJM		
APPROVED	CJM		
REF:			

CONTRACT No 16-120
DWG No WD-02
SCALE NTD @ A3

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LEGAL DESCRIPTION

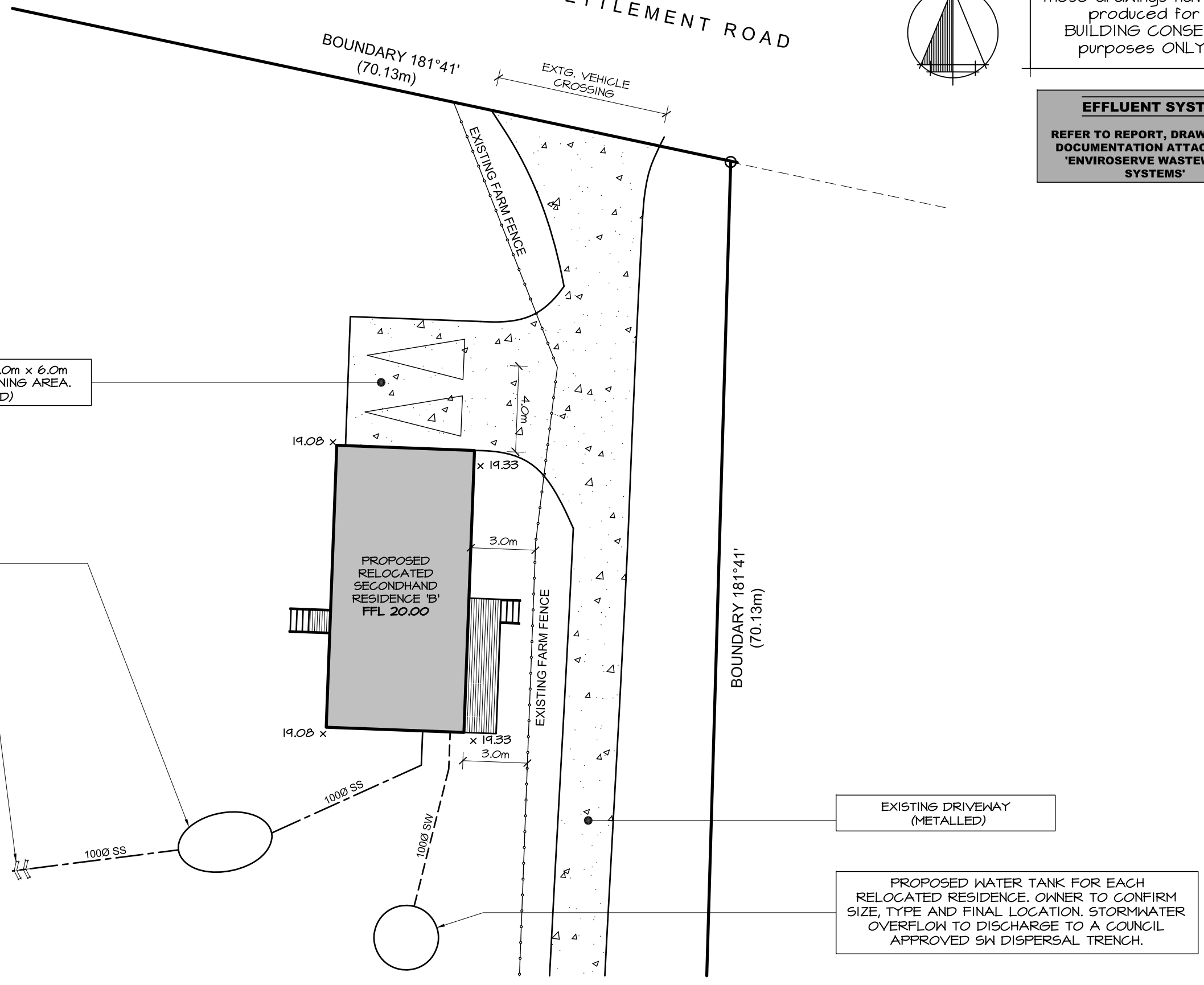
LOT 1
DP 123715
AREA: 5.5908Ha

PROJECT DESCRIPTION

RELOCATE SECONDHAND RESIDENCES (RESIDENCE 'A') & (RESIDENCE 'B') ONTO SITE. NEW ON-SITE EFFLUENT DISPOSAL SYSTEM FOR EACH DWELLING

EFFLUENT SYSTEM

REFER TO REPORT, DRAWING AND DOCUMENTATION ATTACHED BY 'ENVIROSERVE WASTEWATER SYSTEMS'



NOTE : - SET OUT / LOCATION OF BUILDINGS

1. **THE OWNER IS TO CONFIRM THE PROPOSED LOCATION & ORIENTATION OF THE BUILDING ON SITE PRIOR TO ANY WORK TAKING PLACE.**
2. **THE PROPOSED LOCATION OF THE BUILDING IS TO BE PEGGED BY THE SURVEYOR. SURVEYOR TO CHECK / CONFIRM MINIMUM FLOOR LEVELS & HEIGHT IN RELATION TO BOUNDARY AT THIS STAGE. CHECK WITH HOUSE MOVER PRIOR TO UNDERTAKING THIS.**
3. **PEG FFL DATUM BY ON SITE (AGAINST FENCE - OUT OF THE WAY) - CONFIRM THAT YOU ARE OK WITH THIS LEVEL. *(ENSURE TO ACHIEVE 450mm TO UNDER SIDE OF JOISTS).**
5. **ADVISE HOUSE MOVER THAT THE ABOVE HAS BEEN CONFIRMED AND/OR CARRIED OUT AND THAT THE SITE IS READY FOR THE RELOCATION OF THE BUILDING.**

PART-SITE PLAN
SCALE 1:200

(RESIDENCE 'B')

PH: 09 412 8749 FAX: 09 412 8751
P O Box120, Kumeu, New Zealand
ARCHITECTURAL DRAUGHTING SOLUTIONS LTD
EMAIL: CHRIS@ADSLTD.CO.NZ

RELOCATE SECONDHAND RESIDENCES ('A') & ('B') TO 102 SETTLEMENT ROAD, KAIWAKA FOR LYNETTE DHEDA

		DATE	AMENDMENTS
DESIGNED			
DRAWN	CJM	06/16	
CHECKED	CJM		
APPROVED	CJM		
REF:			

CONTRACT No 16-120
DWG No WD-03
SCALE NTD @ A3

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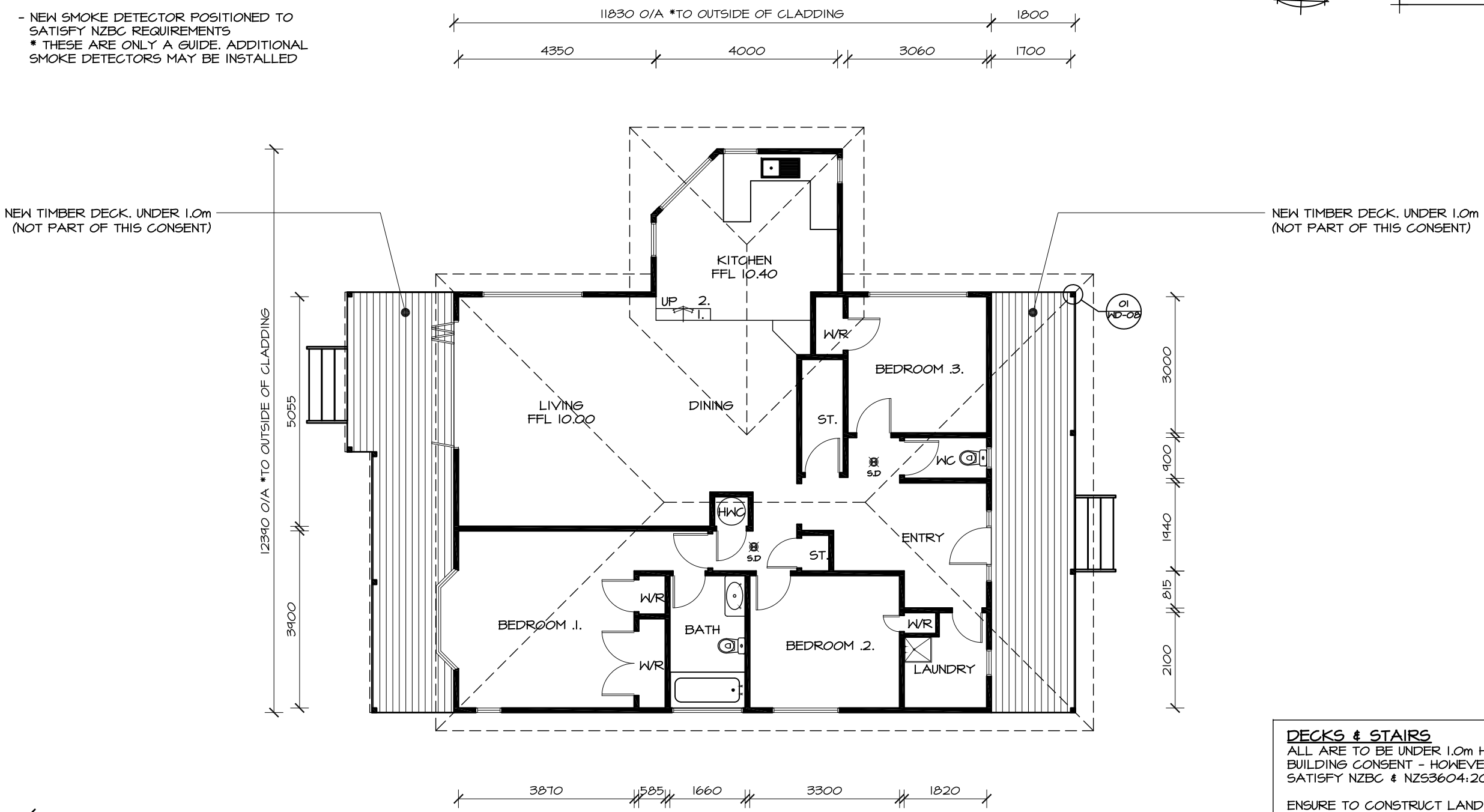
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These drawings have been produced for BUILDING CONSENT purposes ONLY

FLOOR PLAN KEY

- EXISTING TIMBER FRAMED WALLS

S.D – NEW SMOKE DETECTOR POSITIONED TO SATISFY NZBC REQUIREMENTS
* THESE ARE ONLY A GUIDE. ADDITIONAL SMOKE DETECTORS MAY BE INSTALLED



EXISTING FLOOR PLAN
SCALE 1:100

3 2 4 1

FLOOR AREA
122.5m²

DECKS & STAIRS

ALL ARE TO BE UNDER 1.0m HIGH & DO NOT REQUIRE A BUILDING CONSENT – HOWEVER MUST BE BUILT TO SATISFY NZBC & NZS3604:2011.

ENSURE TO CONSTRUCT LANDINGS OUT FROM ALL DOORS.

- IF THERE ARE STEPS COMING OFF OUTWARD OPENING DOORS, THEN 400mm CLEARANCE FROM DOOR SWING TO STEPS IS REQUIRED.
- IF THERE ARE 3 OR MORE RISERS, ENSURE TO PROVIDE HANDRAIL TO NZBC REQUIREMENTS.
- TREADS = MIN. 280mm / RISERS = MAX. 190mm

(RESIDENCE 'A')

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P O Box120 , Kumeu, New Zealand
ARCHITECTURAL DRAUGHTING SOLUTIONS LTD
EMAIL: CHRIS@ADSLTD.CO.NZ

RELOCATE SECONDHAND RESIDENCES ('A') & ('B') TO 102 SETTLEMENT ROAD, KAIWAKA FOR LYNETTE DHEDA

		DATE	AMENDMENTS
DESIGNED			
DRAWN	CJM	01/17	
CHECKED	CJM		
APPROVED	CJM		
REF:			

CONTRACT No 16-120
DWG No WD-04
SCALE NTD @ A3

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SUB-FLOOR FRAMING KEY

[ ] - TIMBER WALLS ABOVE

ENGINEERED BEARER UPGRADES
REMOVE ALL EXISTING BEARERS (EXCEPT B1) REPLACE WITH NEW BEARERS AS SPECIFIED BELOW. ENSURE TO STAGGAR LAPS I.E (NO MORE THAN 1 BUTT END PER PILE) DESIGNED BY 'DEANE CONSULTANCY LTD' SEE REPORT FOR DETAILS. REF:17/ADS/2 DATED: 17 FEBRUARY 2017

B1 - NEW 2/190x45 SG8 H1.2 TIMBER BEARER

B2 - NEW 3/190x45 SG8 H1.2 TIMBER BEARER

'SUB-FLOOR PILES' TWO STAGE 'ORDINARY' PILES
NEW 125mm SQ. SENTON PILE IN **450Φ** x 3000mm DEEP FOUNDATION IN FIRM NATURAL GROUND. SEE DETAIL 'Y' ON WD-14 FOR REINFORCING SPECIFICATIONS. BY 'DEANE CONSULTANCY LTD' SEE REPORT FOR DETAILS. REF:17/ADS/2 DATED: 17 FEBRUARY 2017

'SUB-FLOOR PILES' TWO STAGE 'LEADING EDGE' PILES
NEW 125mm SQ. SENTON PILE IN **450Φ** x 3000mm DEEP FOUNDATION IN FIRM NATURAL GROUND. SEE DETAIL 'X' ON WD-14 FOR REINFORCING SPECIFICATIONS. BY 'DEANE CONSULTANCY LTD' SEE REPORT FOR DETAILS. REF:17/ADS/2 DATED: 17 FEBRUARY 2017

A 'ANCHOR PILES' TWO STAGE
NEW 125x125 SQ. SENTON PILES IN **450Φ** x 3000mm DEEP FOUNDATION IN FIRM NATURAL GROUND. SEE DETAIL 'X' ON WD-14 FOR REINFORCING SPECIFICATIONS

'SUB-FLOOR PILES' - DECK POINT-LOAD (TWO STAGE)
NEW 125x125 SQ. SENTON PILES IN 350Φ x 3000mm DEEP FOUNDATION IN FIRM NATURAL GROUND. PLACE DIRECTLY UNDER VERANDAH ROOF & HANDRAIL POSTS

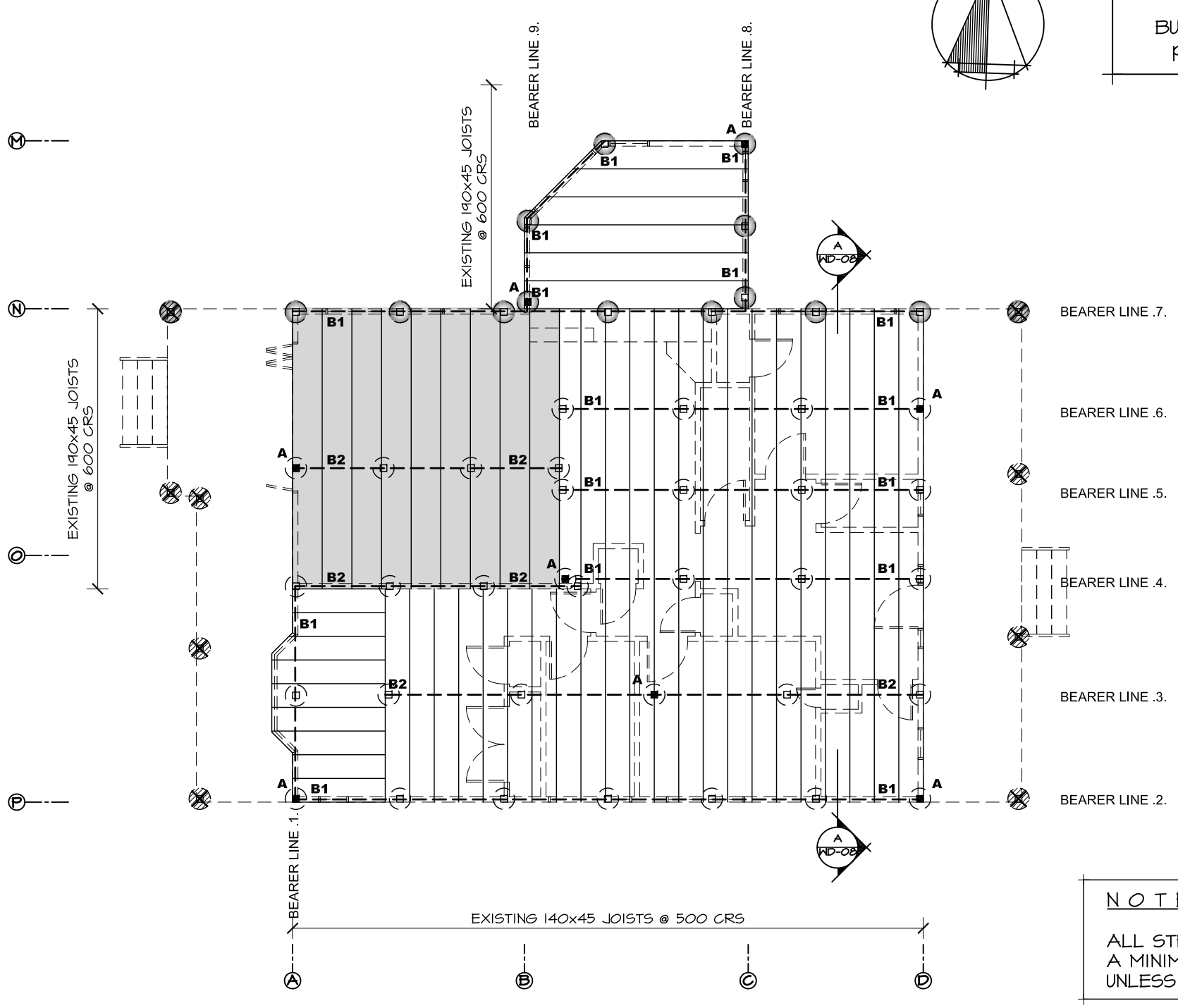
PILE SPACING KEY

BEARER LINE .1. - PILES @ 1.95m CRS MAX
BEARER LINE .2. - PILES @ 1.95m CRS MAX
BEARER LINE .3. - PILES @ 2.5m CRS MAX
BEARER LINE .4. - PILES @ 2.25m CRS MAX
BEARER LINE .5. - PILES @ 2.25m CRS MAX
BEARER LINE .6. - PILES @ 2.25m CRS MAX
BEARER LINE .7. - PILES @ 1.95m CRS MAX
BEARER LINE .8. - PILES @ 1.4m CRS MAX
BEARER LINE .9. - PILES @ EACH CORNER

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SUB-FLOOR PLAN
SCALE 1:100

NOTE: TIMBER GRADE

ALL STRUCTURAL TIMBER TO BE A MINIMUM OF SG8 OR HIGHER, UNLESS STATED OTHERWISE

SUB-FLOOR STEEL FIXINGS
ENSURE THAT ALL STEEL FIXINGS AND FASTENINGS ARE STAINLESS STEEL WHERE WITHIN 600mm FROM GROUND LEVEL OR GALVANIZED WHERE ABOVE 600mm UNLESS IN A SEA SPRAY ZONE. REFER TO NZS 3604, TABLE 4.1

(RESIDENCE 'A')

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RELOCATE SECONDHAND RESIDENCES ('A') & ('B') TO 102 SETTLEMENT ROAD, KAIWAKA FOR LYNETTE DHEDA

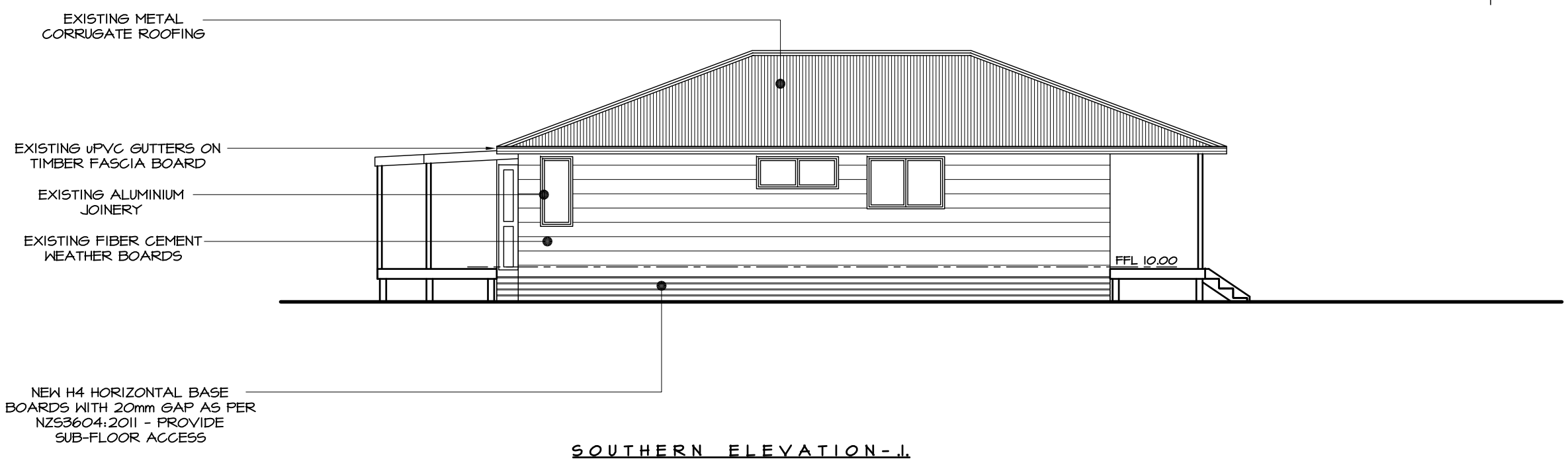
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SOUTHERN ELEVATION - 1.
SCALE 1:100



EASTERN ELEVATION - 2.
SCALE 1:100

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		DATE
DESIGNED		
DRAWN	CJM	01/17
CHECKED	CJM	
APPROVED	CJM	
REF:		

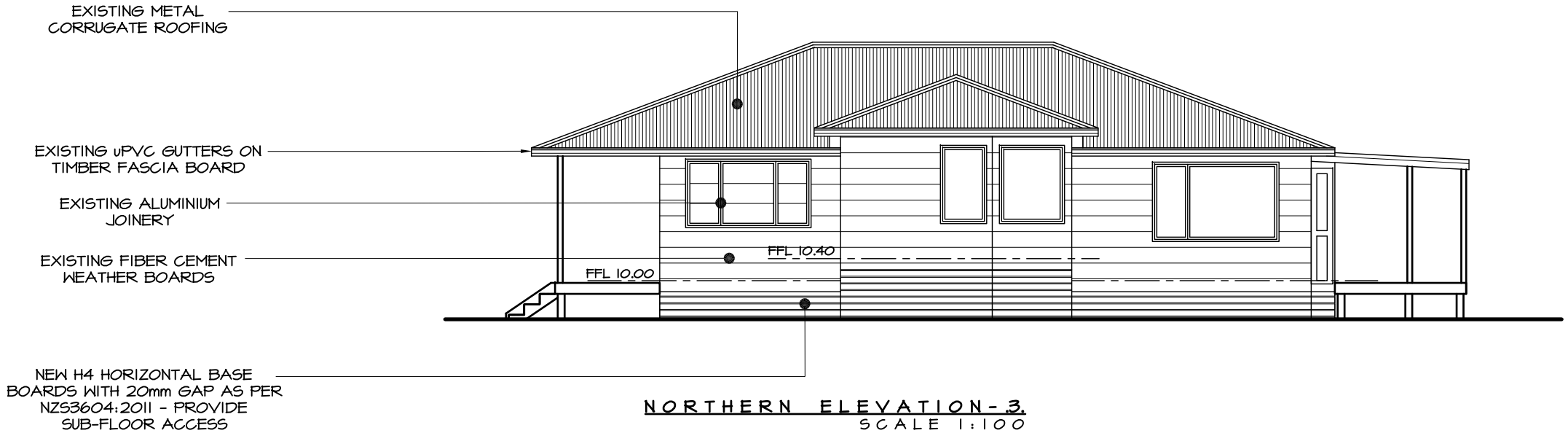
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DWG No WD-06
SCALE NTD @ A3

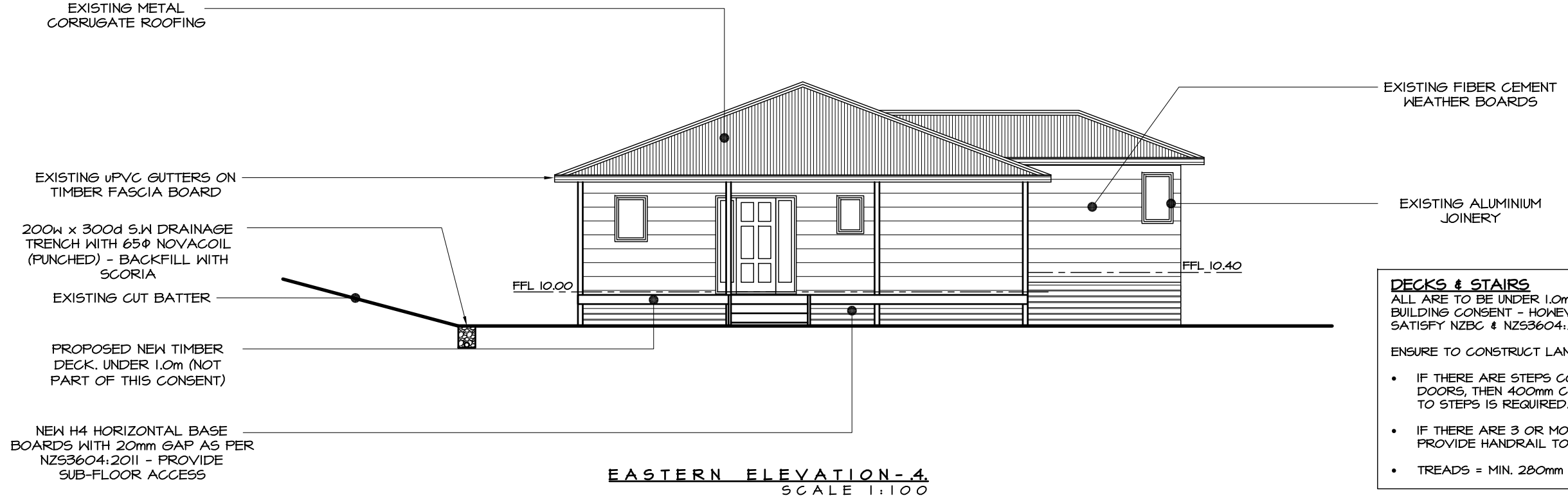
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NORTHERN ELEVATION-3.
SCALE 1:100



EASTERN ELEVATION-4.
SCALE 1:100

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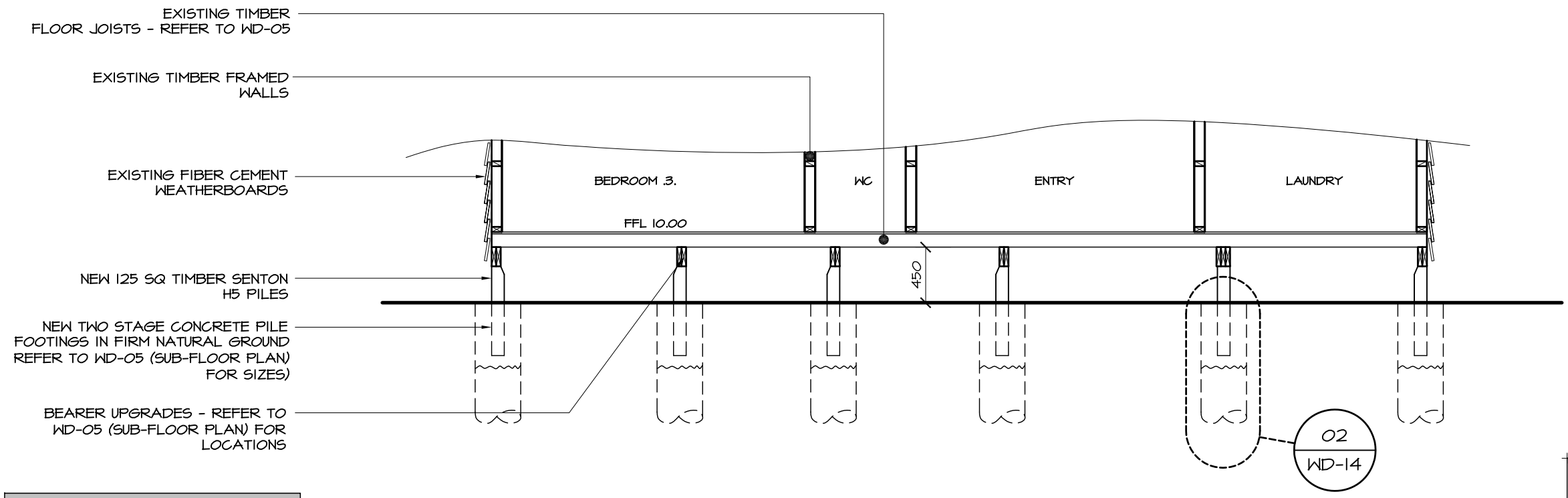
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SCALE NTD @ A3

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*ENSURE GROUND LEVEL TO UNDERSIDE OF FLOOR JOISTS IS 450mm MIN.

CROSS SECTION A-A
SCALE 1:50

NOTE: TIMBER GRADE

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SUB-FLOOR STEEL FIXINGS
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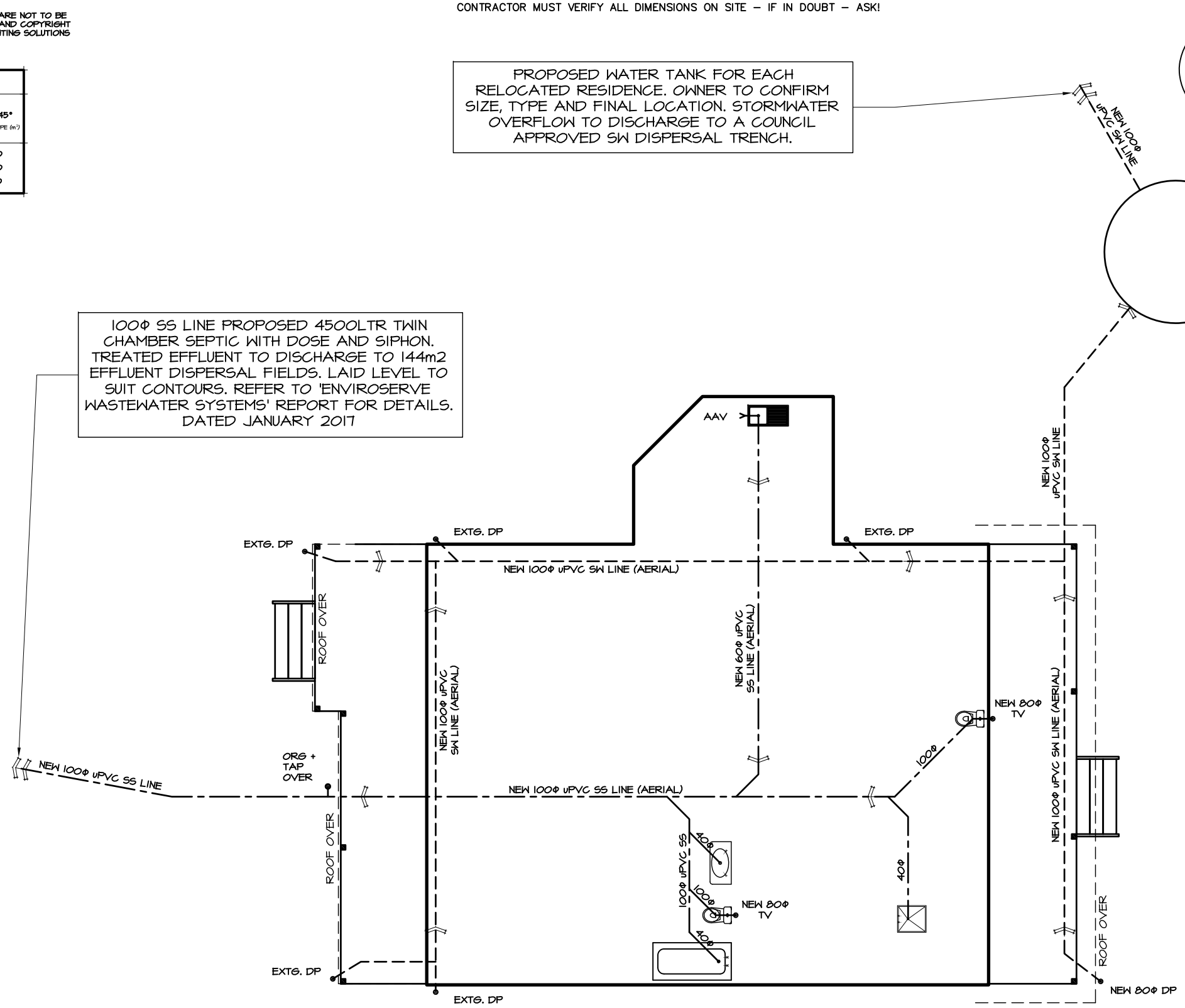
DOWNPIPE SIZE GUIDE

DOWNPIPE SIZE (mm) (minimum internal sizes)	ROOF PITCH 0-25° PLAN AREA OF ROOF SERVED BY THE DOWNPIPE (m²)	25-35°	35-45°
63mm DIAMETER	60	50	40
74mm DIAMETER	85	70	60
100mm DIAMETER	155	130	110

* CONFIRM DOWNPIPE SIZES OF EXISTING ARE ADEQUATE

PROPOSED WATER TANK FOR EACH RELOCATED RESIDENCE. OWNER TO CONFIRM SIZE, TYPE AND FINAL LOCATION. STORMWATER OVERFLOW TO DISCHARGE TO A COUNCIL APPROVED SW DISPERSAL TRENCH.

100Φ SS LINE PROPOSED 4500LTR TWIN CHAMBER SEPTIC WITH DOSE AND SIPHON. TREATED EFFLUENT TO DISCHARGE TO 144m2 EFFLUENT DISPERSAL FIELDS. LAID LEVEL TO SUIT CONTOURS. REFER TO 'ENVIROSERVE WASTEWATER SYSTEMS' REPORT FOR DETAILS. DATED JANUARY 2017



NOTE: PLUMBING STANDARDS
ALL SANITARY PLUMBING AND DRAINAGE SHALL BE IN A ACCORDANCE WITH G13/AS1 & AS2 RESPECTIVELY AND STORMWATER DRAINAGE IN ACCORDANCE WITH E1/AS1 AS DEPICTED

PROPOSED DRAINAGE PLAN
SCALE 1:100

(RESIDENCE 'A')

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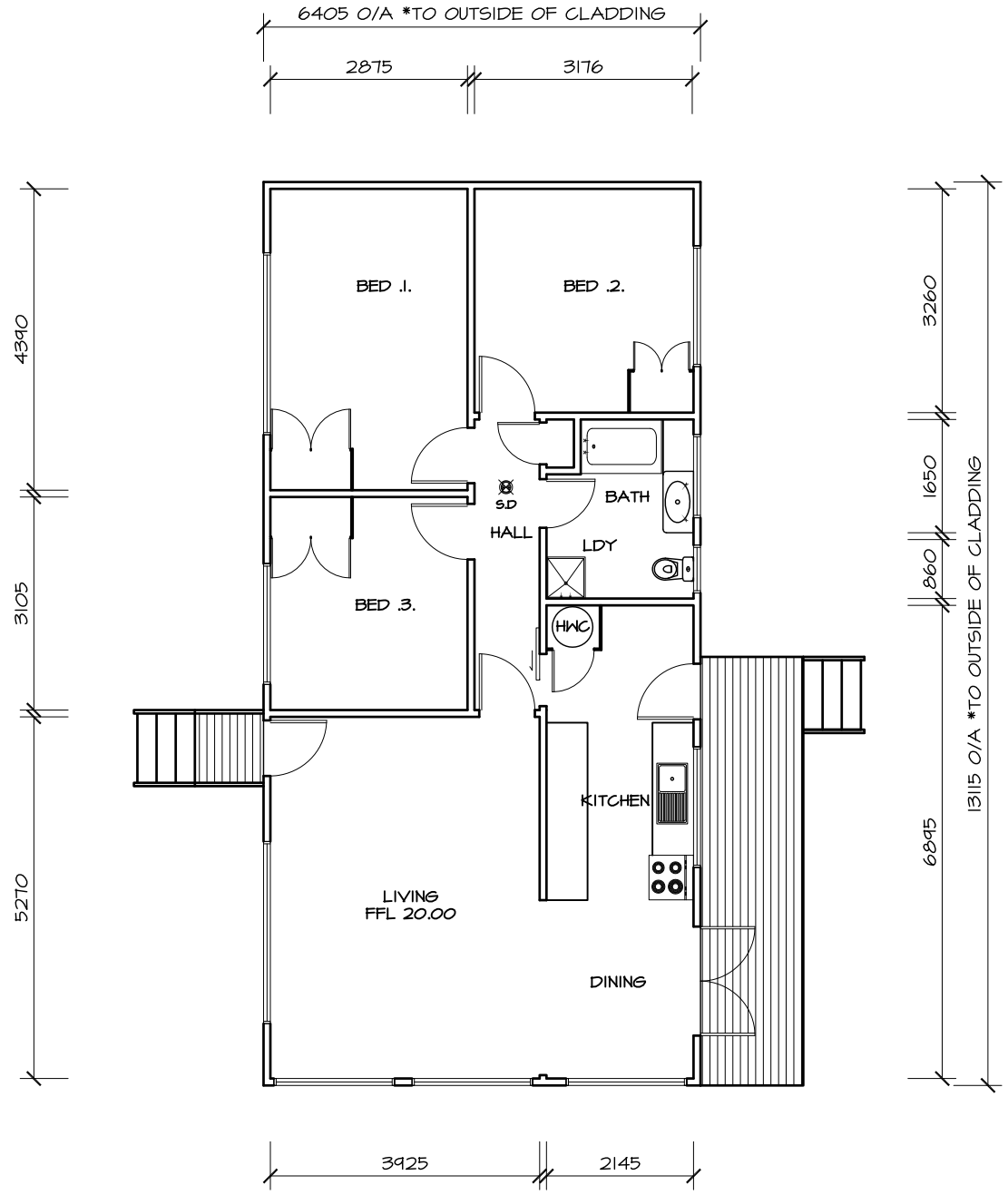
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FLOOR PLAN KEY

- EXISTING TIMBER FRAMED WALLS

S.D – NEW SMOKE DETECTOR POSITIONED TO SATISFY NZBC REQUIREMENTS
* THESE ARE ONLY A GUIDE. ADDITIONAL SMOKE DETECTORS MAY BE INSTALLED



EXISTING FLOOR PLAN
SCALE 1:100

3
2 4
1

FLOOR AREA
84.0m²

DECKS & STAIRS

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- TREADS = MIN. 280mm / RISERS = MAX. 190mm

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SUB-FLOOR FRAMING KEY

[ ] - TIMBER WALLS ABOVE

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REMOVE ALL EXISTING BEARERS (EXCEPT B1) REPLACE WITH NEW BEARERS AS SPECIFIED BELOW. ENSURE TO STAGGAR LAPS I.E (NO MORE THAN 1 BUTT END PER PILE) DESIGNED BY 'DEANE CONSULTANCY LTD' SEE REPORT FOR DETAILS. REF:17/ADS/2 DATED: 17 FEBRUARY 2017

B1 - NEW 2/190x45 SG8 HI.2 TIMBER BEARERS

B2 - NEW 3/190x45 SG8 HI.2 TIMBER BEARER

'SUB-FLOOR PILES' TWO STAGE 'ORDINARY' PILES
NEW 125mm SQ. SENTON PILE IN **450Φ** x 1500mm DEEP FOUNDATION IN FIRM NATURAL GROUND @ **2.07m CRS** MAX. SEE DETAIL 'Y' ON THIS PAGE FOR REINFORCING SPECIFICATIONS. BY 'DEANE CONSULTANCY LTD' SEE REPORT FOR DETAILS. REF:17/ADS/2 DATED: 17 FEBRUARY 2017

'SUB-FLOOR PILES' TWO STAGE 'LEADING EDGE' PILES
NEW 125mm SQ. SENTON PILE IN **450Φ** x 3000mm DEEP FOUNDATION IN FIRM NATURAL GROUND @ **2.07m CRS** MAX. SEE DETAIL 'X' ON THIS PAGE FOR REINFORCING SPECIFICATIONS. BY 'DEANE CONSULTANCY LTD' SEE REPORT FOR DETAILS. REF:17/ADS/2 DATED: 17 FEBRUARY 2017

A 'ANCHOR PILES' TWO STAGE
NEW 125x125 SQ. SENTON PILES IN **450Φ** x 3000mm DEEP FOUNDATION IN FIRM NATURAL GROUND. SEE DETAIL 'X' ON THIS PAGE FOR REINFORCING SPECIFICATIONS

NOTE: TIMBER GRADE

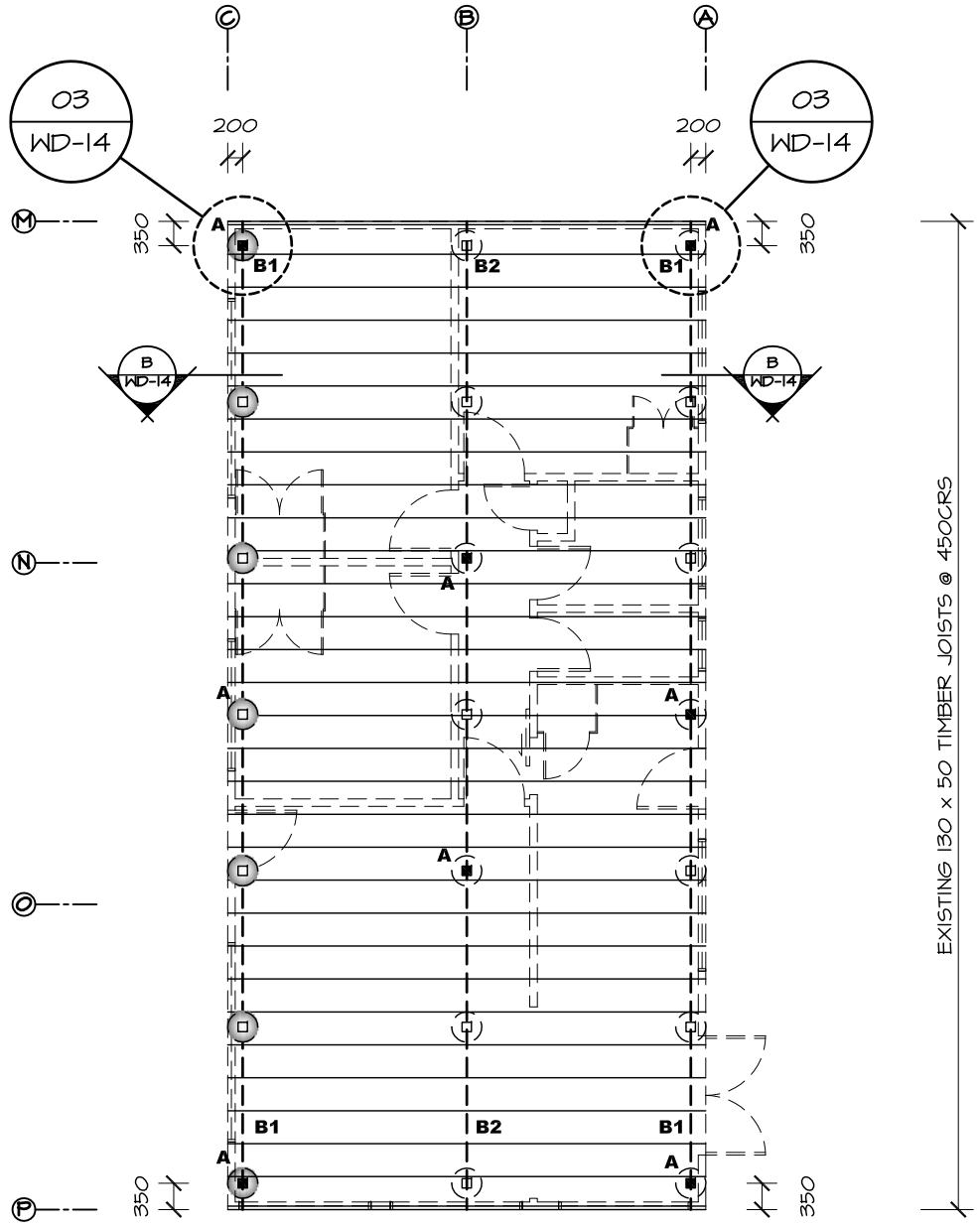
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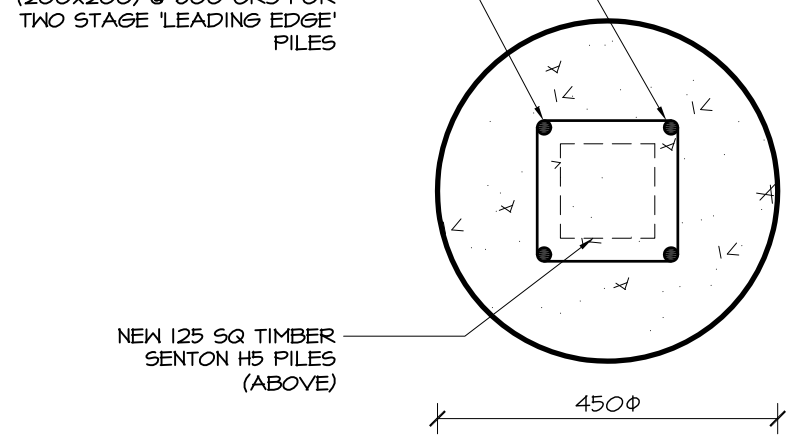
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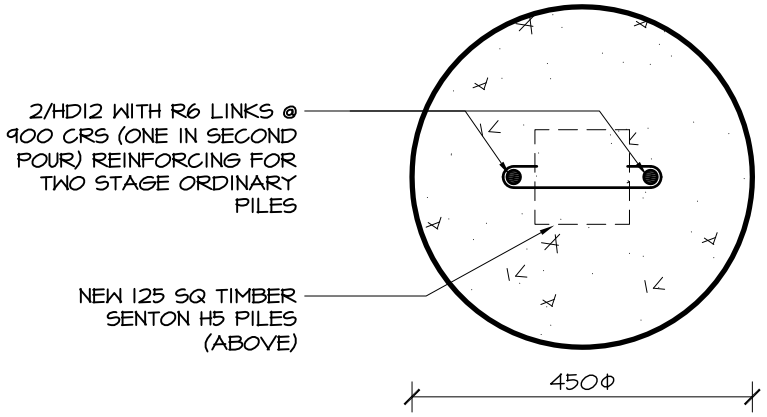


200 **SUB-FLOOR PLAN** 200
SCALE 1:100



'LEADING EDGE/ ANCHOR PILES' - PLAN VIEW

X / WD-14 **TWO STAGE PILE**
SCALE 1:10
ENGINEERING DETAIL



'ORDINARY' PILE - PLAN VIEW

Y / WD-14 **TWO STAGE PILE**
SCALE 1:10
ENGINEERING DETAIL

(RESIDENCE 'B')

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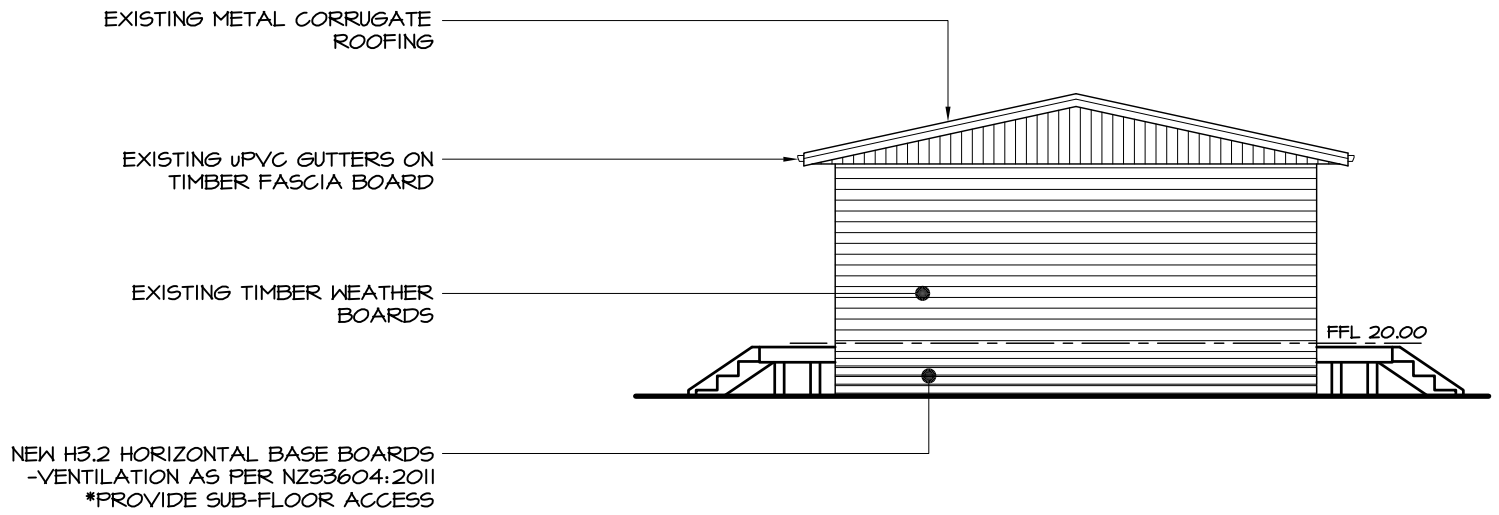
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DWG No WD-11
SCALE NTD @ A3

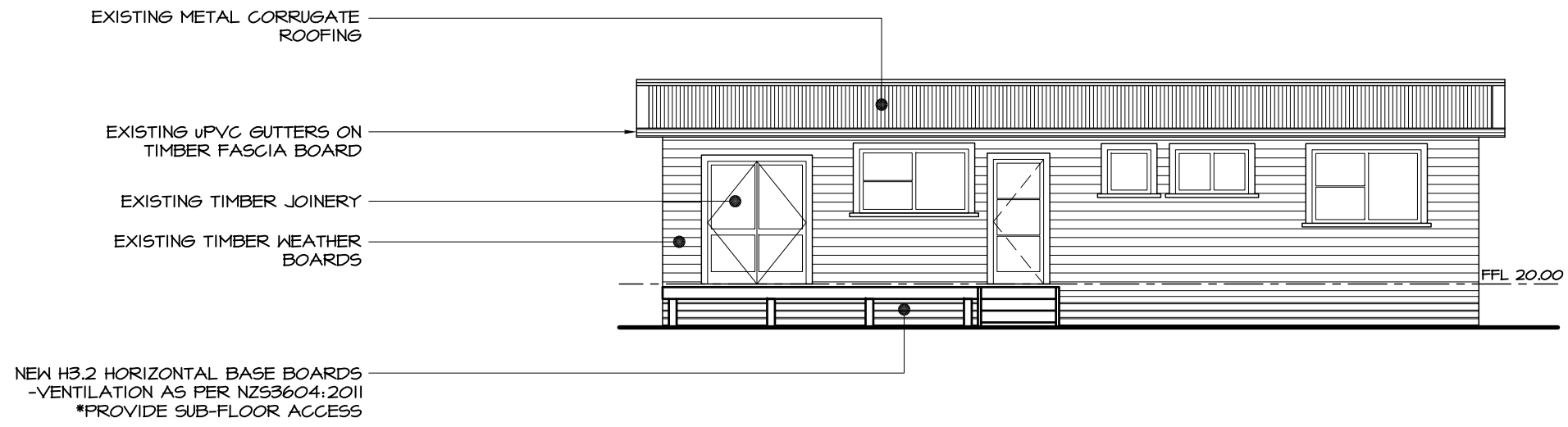
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NORTHERN ELEVATION-1.
SCALE 1:100



EASTERN ELEVATION-2.
SCALE 1:100

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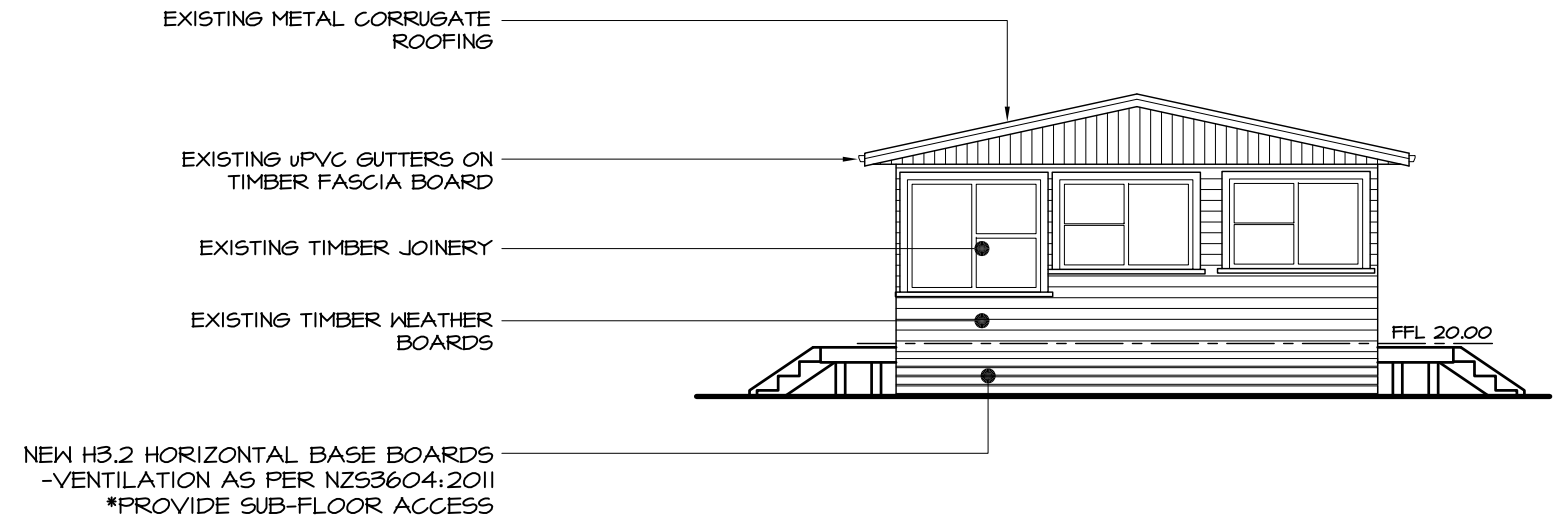
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SCALE NTD @ A3

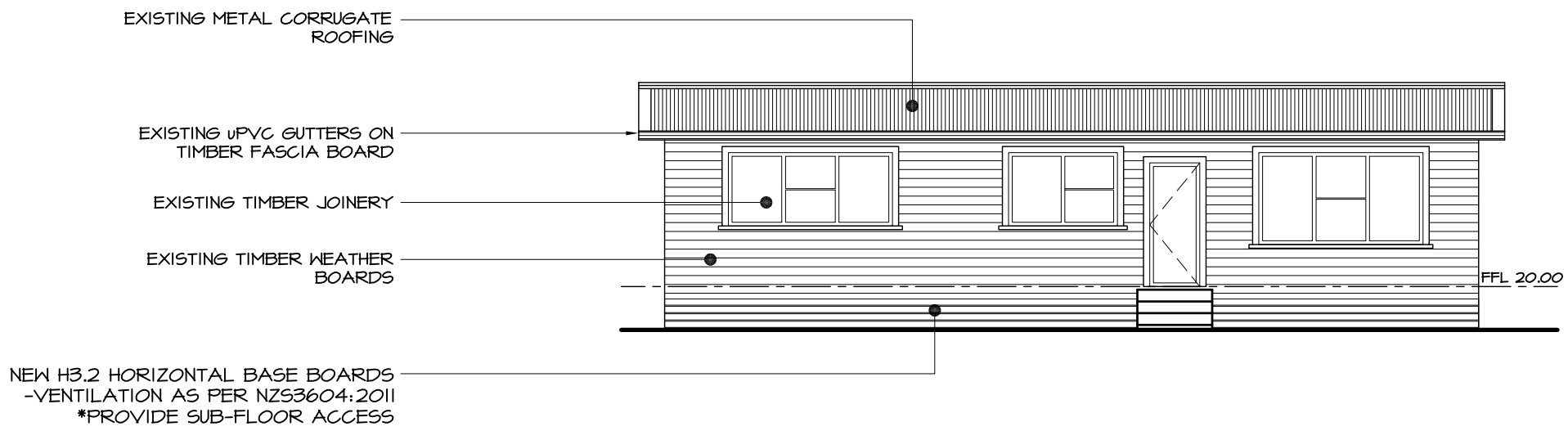
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SOUTHERN ELEVATION-3.
SCALE 1:100



WESTERN ELEVATION-4.
SCALE 1:100

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ALL ARE TO BE UNDER 1.0m HIGH & DO NOT REQUIRE A BUILDING CONSENT - HOWEVER MUST BE BUILT TO SATISFY NZBC & NZS3604:2011.

ENSURE TO CONSTRUCT LANDINGS OUT FROM ALL DOORS.

- IF THERE ARE STEPS COMING OFF OUTWARD OPENING DOORS, THEN 400mm CLEARANCE FROM DOOR SWING TO STEPS IS REQUIRED.
- IF THERE ARE 3 OR MORE RISERS, ENSURE TO PROVIDE HANDRAIL TO NZBC REQUIREMENTS.
- TREADS = MIN. 280mm / RISERS = MAX. 190mm

(RESIDENCE 'B')

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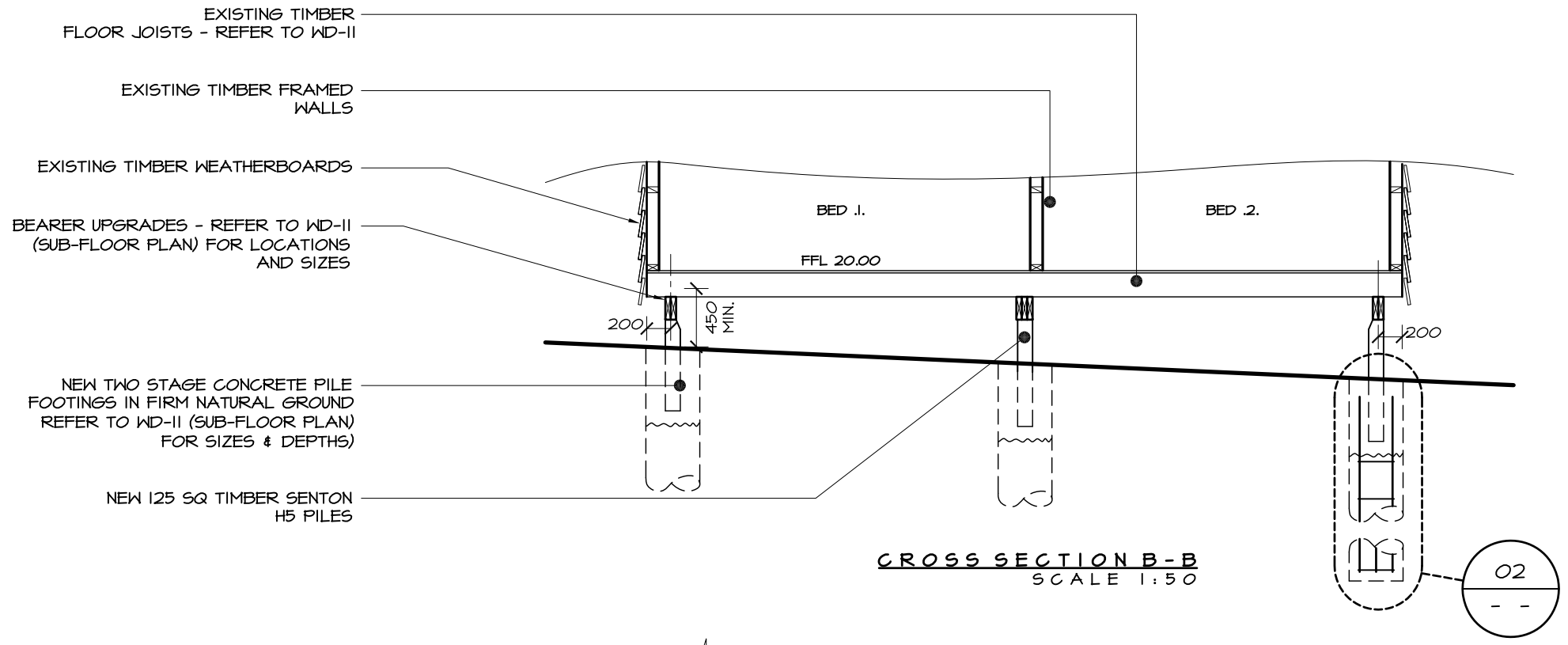
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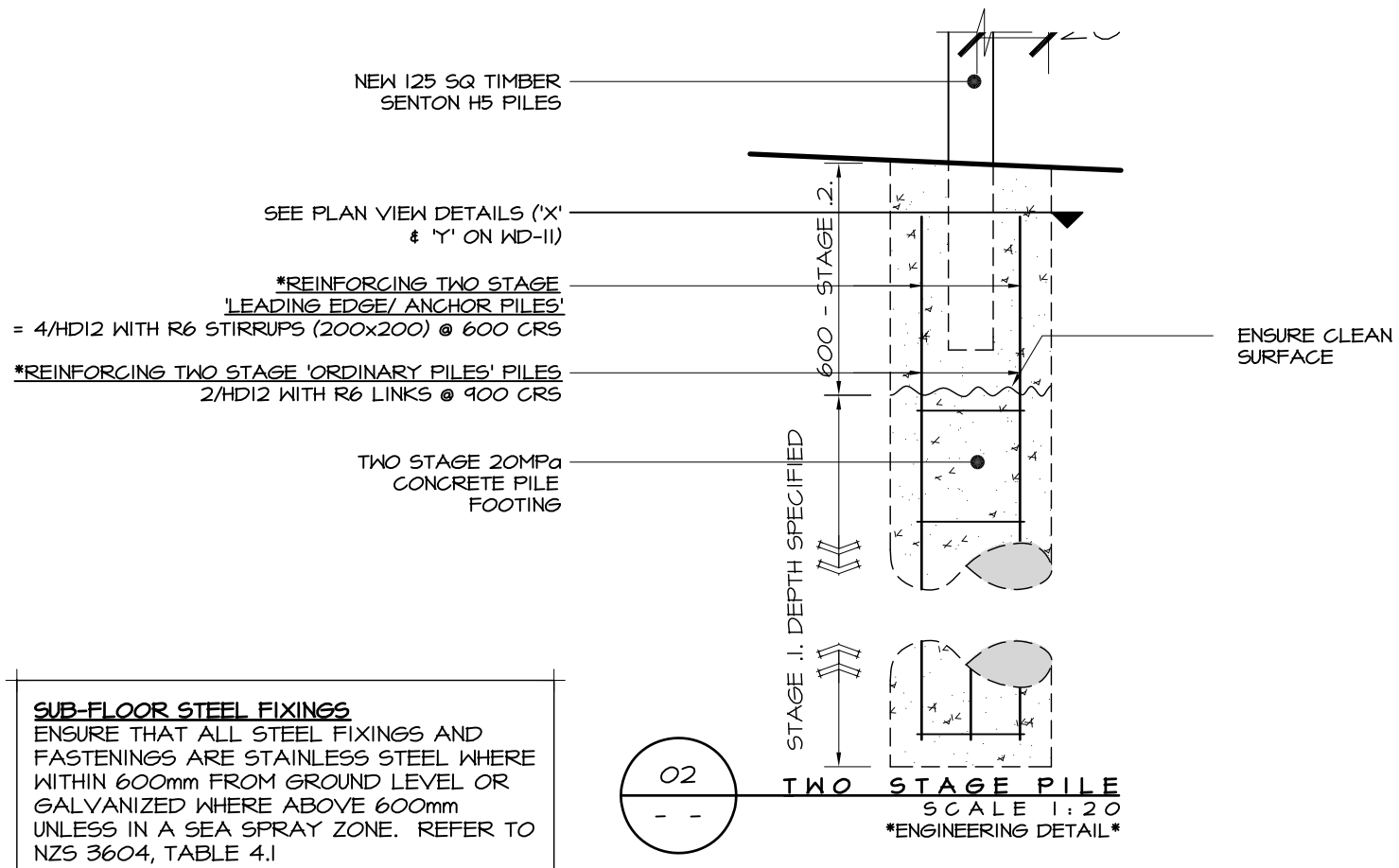
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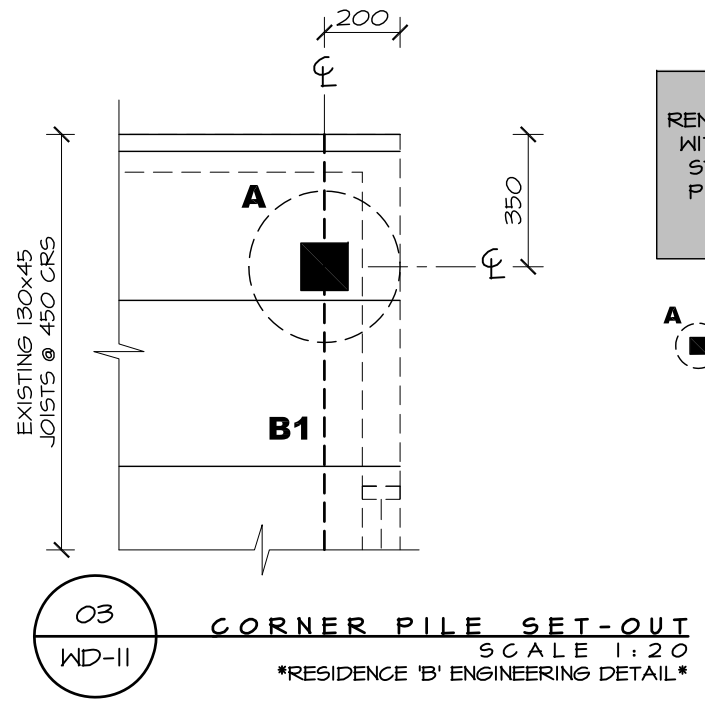
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CROSS SECTION B-B
SCALE 1:50



TWO STAGE PILE
SCALE 1:20
ENGINEERING DETAIL



CORNER PILE SET-OUT
SCALE 1:20
RESIDENCE 'B' ENGINEERING DETAIL

SUB-FLOOR FRAMING KEY

[----] - TIMBER WALLS ABOVE

B1 - NEW 2/190x45 SG8 H1.2 TIMBER BEARERS

ENGINEERED BEARER UPGRADES
REMOVE ALL EXISTING BEARERS (EXCEPT B1) REPLACE WITH NEW BEARERS AS SPECIFIED BELOW. ENSURE TO STAGGAR LAPS I.E (NO MORE THAN 1 BUTT END PER PILE) DESIGNED BY 'DEANE CONSULTANCY LTD' SEE REPORT FOR DETAILS. REF:17/ADS/2 DATED: 17 FEBRUARY 2017

A 'ANCHOR PILES' TWO STAGE
NEW 125x125 SQ. SENTON PILES IN **450Φ** x 3000mm DEEP FOUNDATION IN FIRM NATURAL GROUND. SEE DETAIL 'X' ON THIS PAGE FOR REINFORCING SPECIFICATIONS

SUB-FLOOR STEEL FIXINGS
ENSURE THAT ALL STEEL FIXINGS AND FASTENINGS ARE STAINLESS STEEL WHERE WITHIN 600mm FROM GROUND LEVEL OR GALVANIZED WHERE ABOVE 600mm UNLESS IN A SEA SPRAY ZONE. REFER TO NZS 3604, TABLE 4.1

N O T E : **TIMBER GRADE**

ALL STRUCTURAL TIMBER TO BE A MINIMUM OF SG8 OR HIGHER, UNLESS STATED OTHERWISE

(RESIDENCE 'B')

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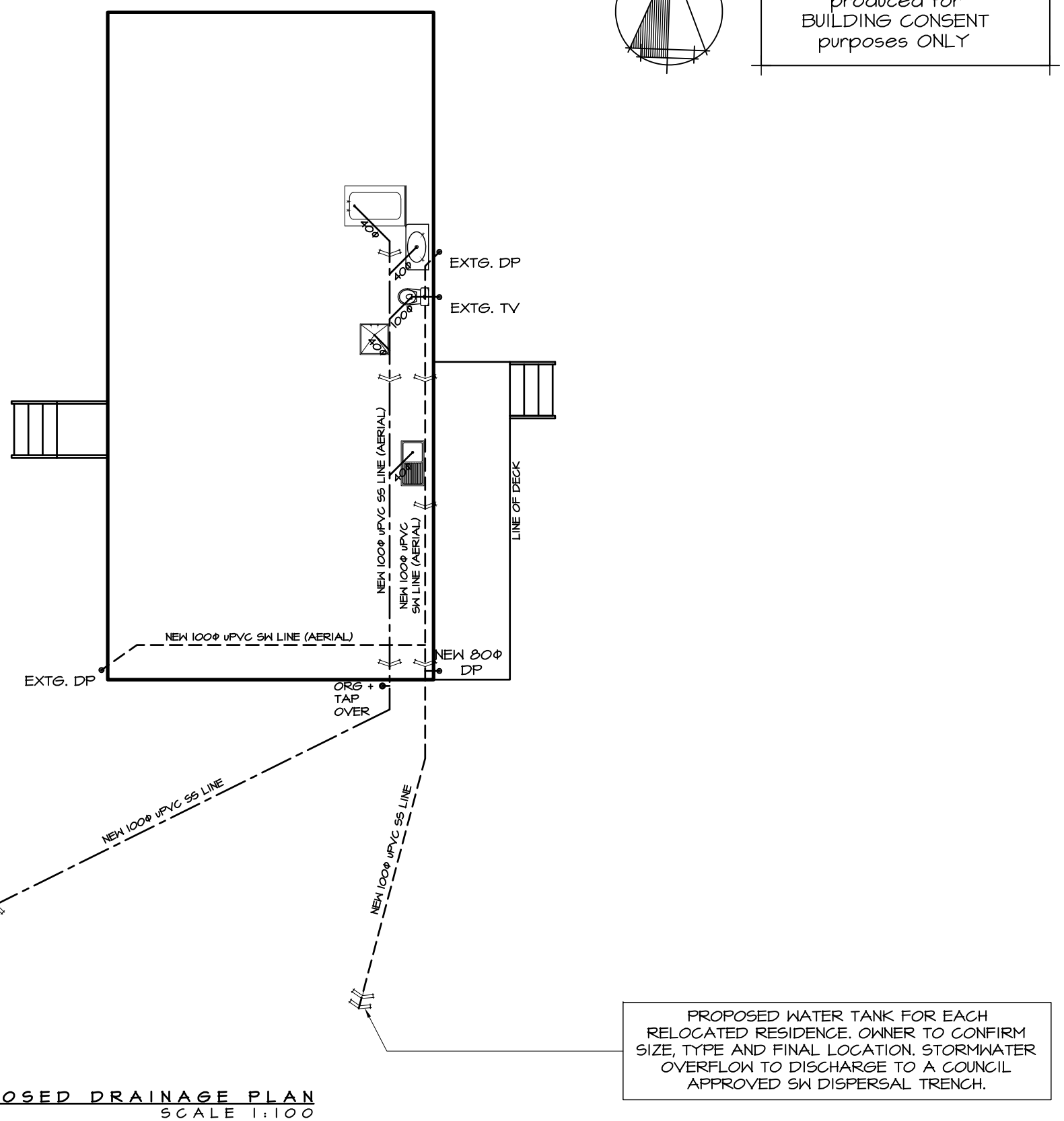
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DOWNPIPE SIZE GUIDE

DOWNPIPE SIZE (mm) (minimum internal sizes)	ROOF PITCH 0-25°	25-35°	35-45°
	PLAN AREA OF ROOF SERVED BY THE DOWNPIPE (m²)		
63mm DIAMETER	60	50	40
74mm DIAMETER	85	70	60
100mm DIAMETER	155	130	110

* CONFIRM DOWNPIPE SIZES OF EXISTING ARE ADEQUATE

NOTE: PLUMBING STANDARDS
ALL SANITARY PLUMBING AND DRAINAGE SHALL BE IN A ACCORDANCE WITH G13/AS1 & AS2 RESPECTIVELY AND STORMWATER DRAINAGE IN ACCORDANCE WITH E1/AS1 AS DEPICTED



PROPOSED DRAINAGE PLAN
SCALE 1:100

(RESIDENCE 'B')

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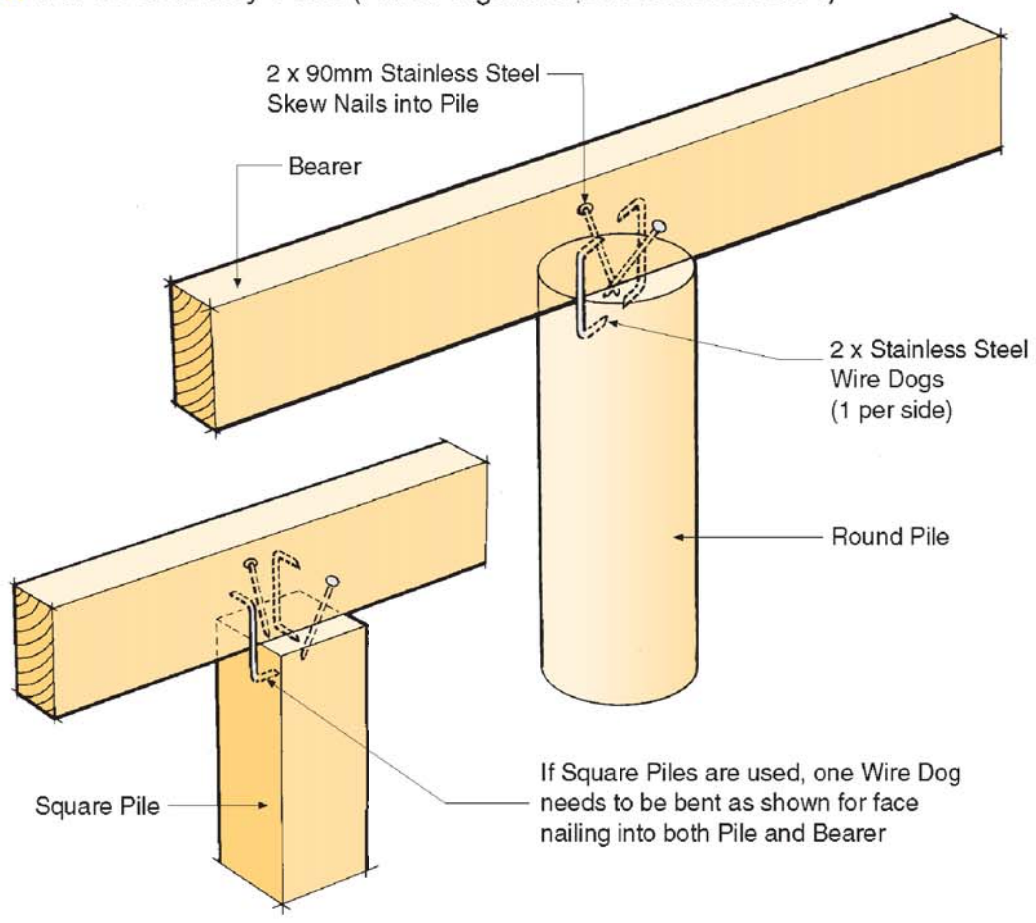
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LUMBERLOK®

ORDINARY PILE FIXING

- ★ Complies with NZS 3604:2011
- ★ All Fixings Stainless Steel
- ★ For all Ordinary Piles (Refer Figure 6.3 NZS 3604:2011)



Code: OPF
Pack Contains: 20 x Stainless Steel Wire Dog Staples
20 x Stainless Steel Nails 90mm x 4 dia.

Available from leading Builders Supply Merchants throughout New Zealand

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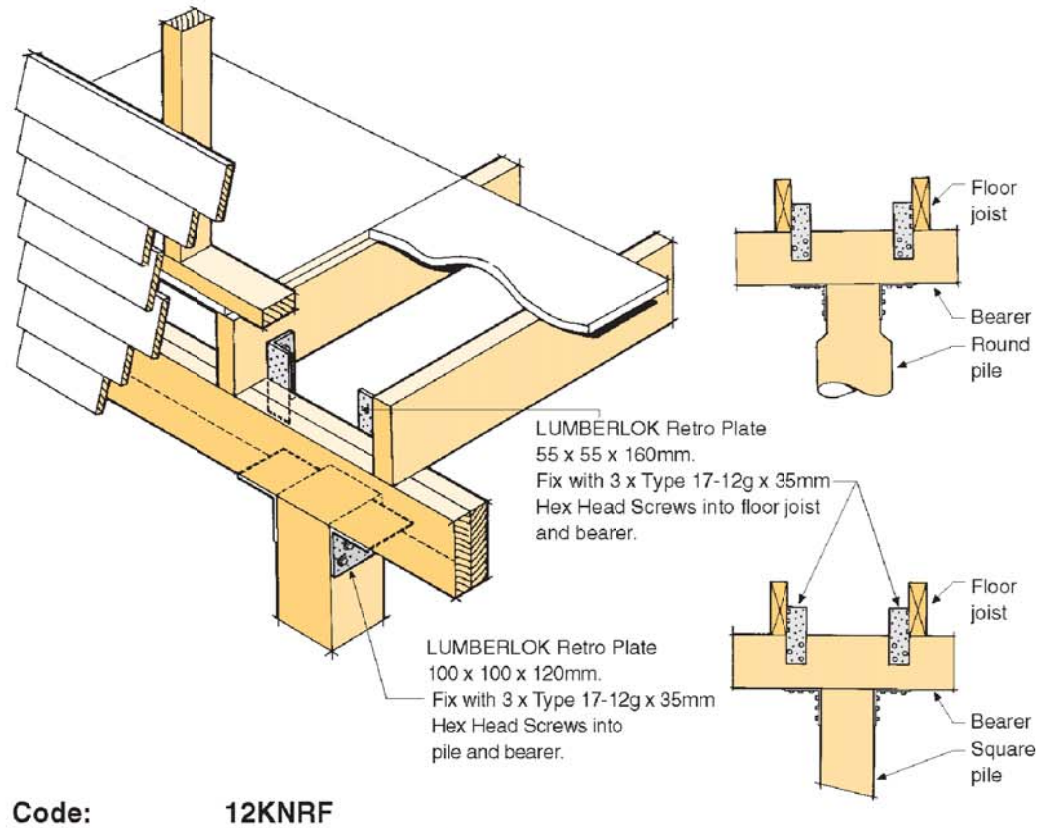
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LUMBERLOK®

12kN RETRO SUBFLOOR FIXING

- ★ Fixing to be used when the outside face of the bearer is not accessible e.g. fixing relocatable houses to piles.
- ★ Hot Dip Galvanised or Stainless Steel options available for required corrosive zone.



Code: 12KNRF
Material: 0.91mm G300 Z275 (Hot Dip Galvanised Steel)
Code: 12KNRFH
Material: 0.9mm Stainless Steel 304-2B
Pack Includes: 8 x Retro Plate 55 x 55 x 160mm
8 x Retro Plate 100 x 100 x 120mm
100 x Type 17-12g x 35mm Hex Head Screws

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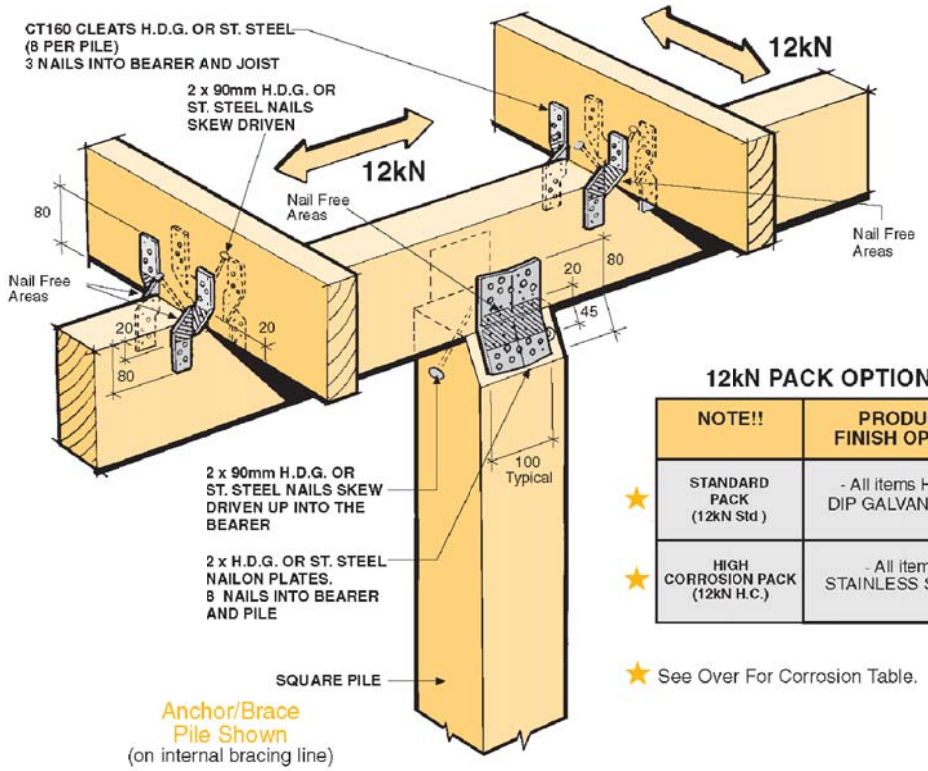
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LUMBERLOK®

12kN PILE FIXING
FOR BRACED PILES OR ANCHOR PILES

- ★ The 12kN Pile Fixing must be installed in accordance with this brochure
- ★ Auckland University Tested. Test Ref. 4613
- ★ All subfloor construction must be in accordance with NZS 3604:2011
- ★ NZS 3604 requires lines of lateral support to floor joists within 300mm of bearer or bracing lines, refer to Clause 7.1.2



Anchor/Brace Pile Shown
(on internal bracing line)

12kN PACK OPTIONS

NOTE!!	PRODUCT FINISH OPTIONS
★ STANDARD PACK (12kN Std)	- All items HOT DIP GALVANISED
★ HIGH CORROSION PACK (12kN H.C.)	- All items STAINLESS STEEL

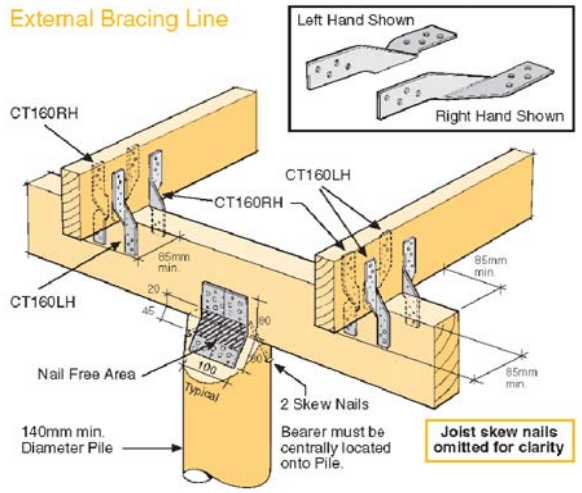
★ See Over For Corrosion Table.

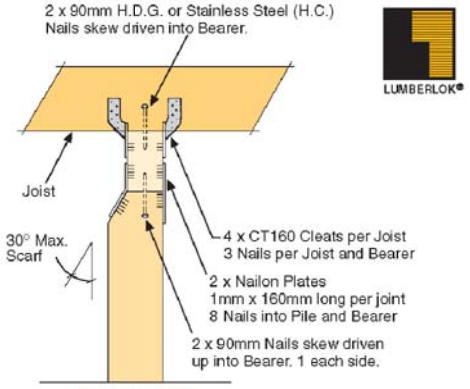
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External Bracing Line

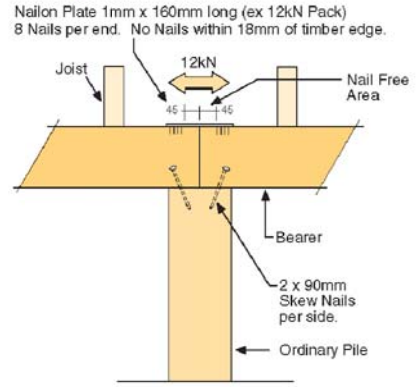




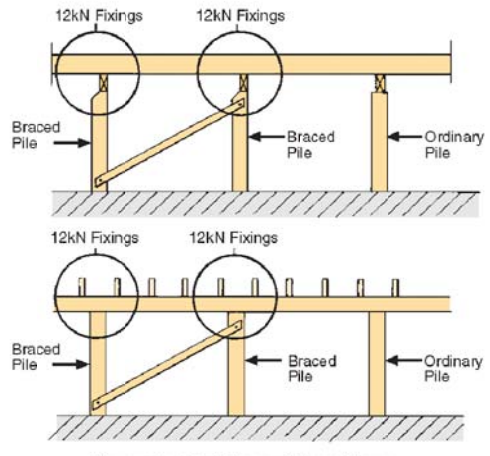
Square Pile

CORROSION HAZARD USE TABLE

Standard Pack (12kN Std) - Zones B & C - All Fixings ABOVE 600mm from Ground level	All items Hot Dip Galvanised.
High Corrosion Pack (12kN HC) - Zone D - All Fixings BELOW 600mm from Ground level	All items Stainless Steel (304).



12kN Bearer Splice
Clause 6.12.7.2
NZS 3604:2011



Sample Subfloor Elevations
12kN Fixing - Pile to Bearer
- Joists to Bearer

12kN Joint Fixing Schedule

PILE TO BEARER	- Nailon Plate (2 per joint) 1mm x 100mm (Typical) x 160mm long - 8 Nails per Plate into Pile - 8 Nails per Plate into Bearer - 2 Skew Nails 90mm (1 per face)
JOIST TO BEARER	- CT160 Cleats (4 per Joist) 160mm long - 3 Nails per Cleat into Joist - 3 Nails per Cleat into Bearer - 2 Skew Nails 90mm (1 per side)
NAILS	- 80 x 45mm x 3.55 dia. Spiral Nails - 6 x 90mm x 4 dia. St. Steel Nails (H.C. Pack only)

12kN Pile Set Contents
Each set represents 1 x 12kN Pile Fixing

(packed 4 sets per carton)
2 x Nailon Plates 160mm long
8 x CT160 Cleats
80 x 45mm x 3.55 dia. Spiral Nails
90mm x 4 dia. St. Steel Angular Groove
6 - H.C. Pack

} Refer front page for Product Finish Options

90mm H.D.G. Nails not included.

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PILE FIXING - LUMBERLOK 12kN

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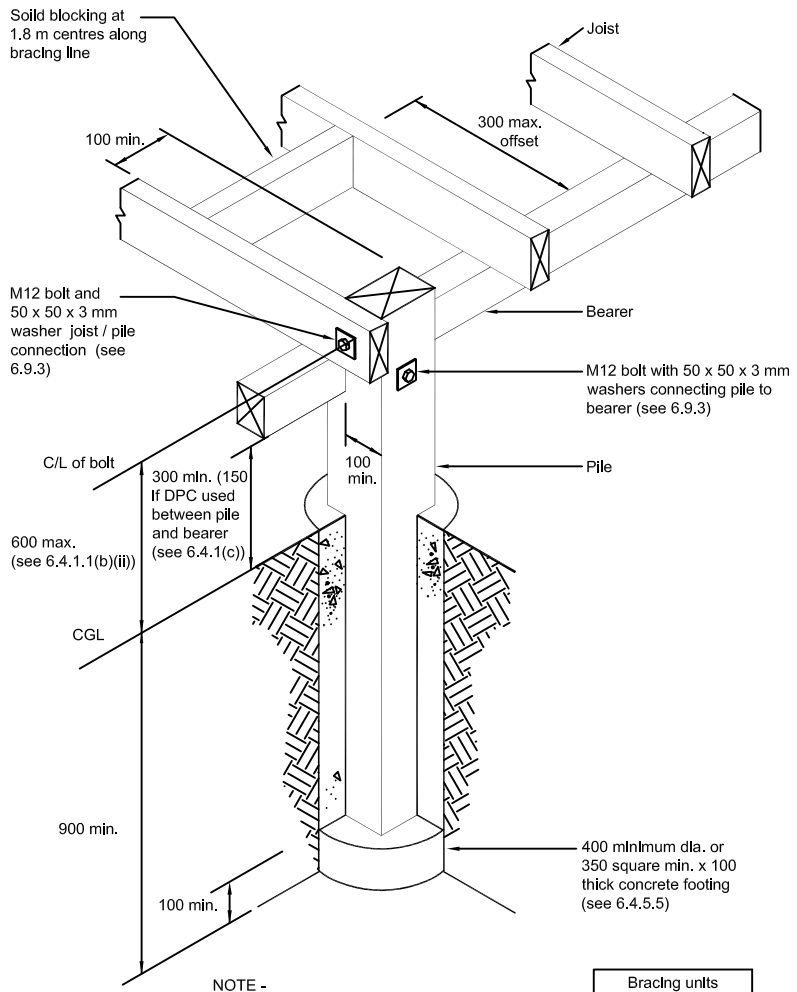
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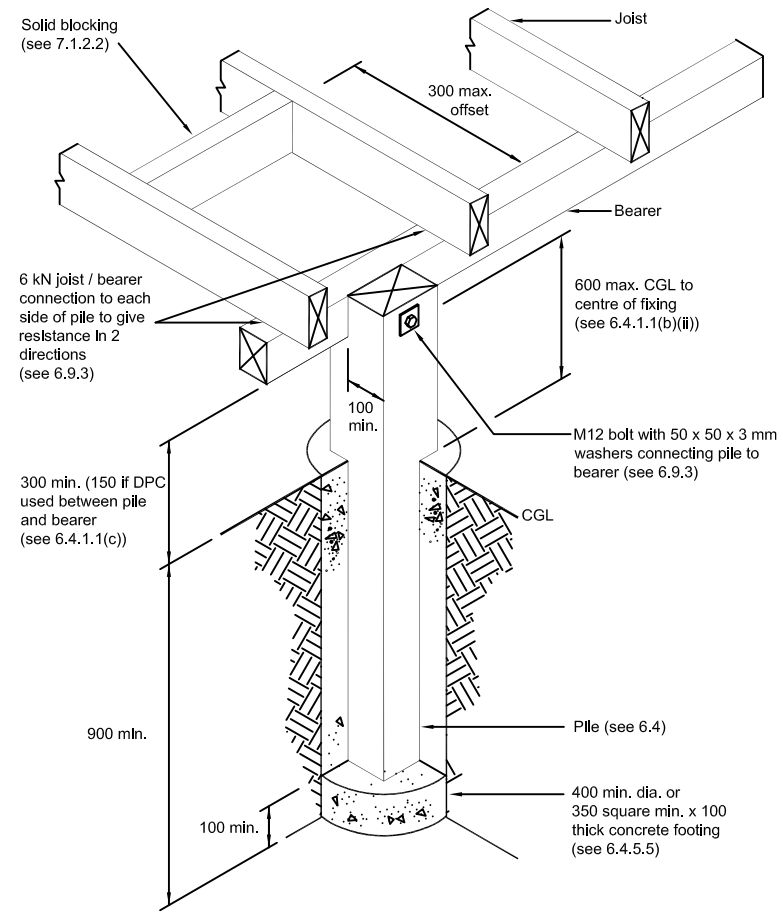
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NOTE -
(1) Bearers must not be joined at an anchor pile.
(2) CGL = Cleared ground level.
(3) See section 4 for durability requirements.

Bracing units	
Wind	160
Earthquake	120

PILE TO JOIST
N.T.S



NOTE -
(1) Bearers must not be joined at an anchor pile.
(2) CGL = Cleared ground level.
(3) See section 4 for durability requirements.

Bracing units	
Wind	160
Earthquake	120

PILE TO BEARER
N.T.S

STANDARD ANCHOR PILE CONNECTION DETAILS

DETAILS AS PER NZS3604 1999

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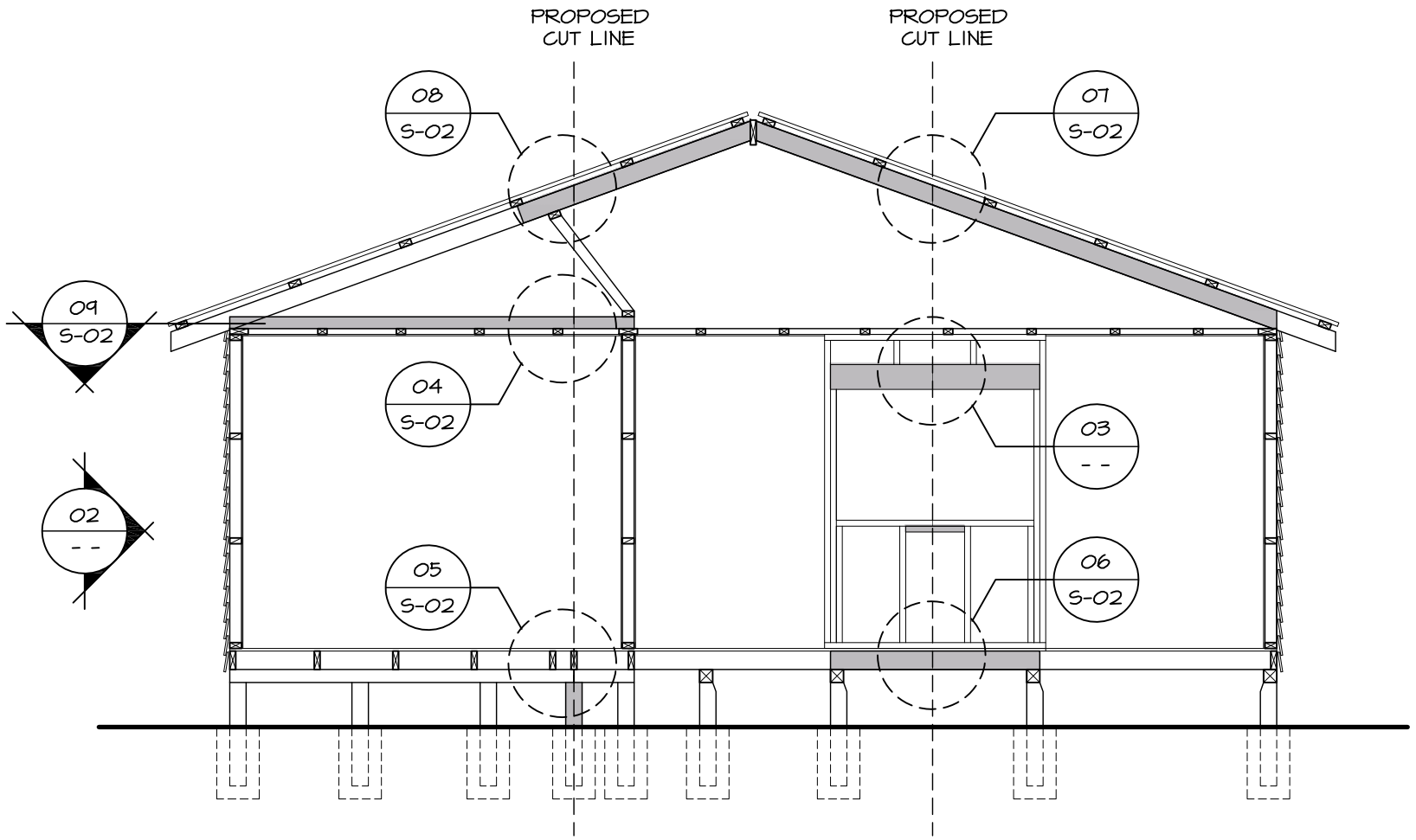
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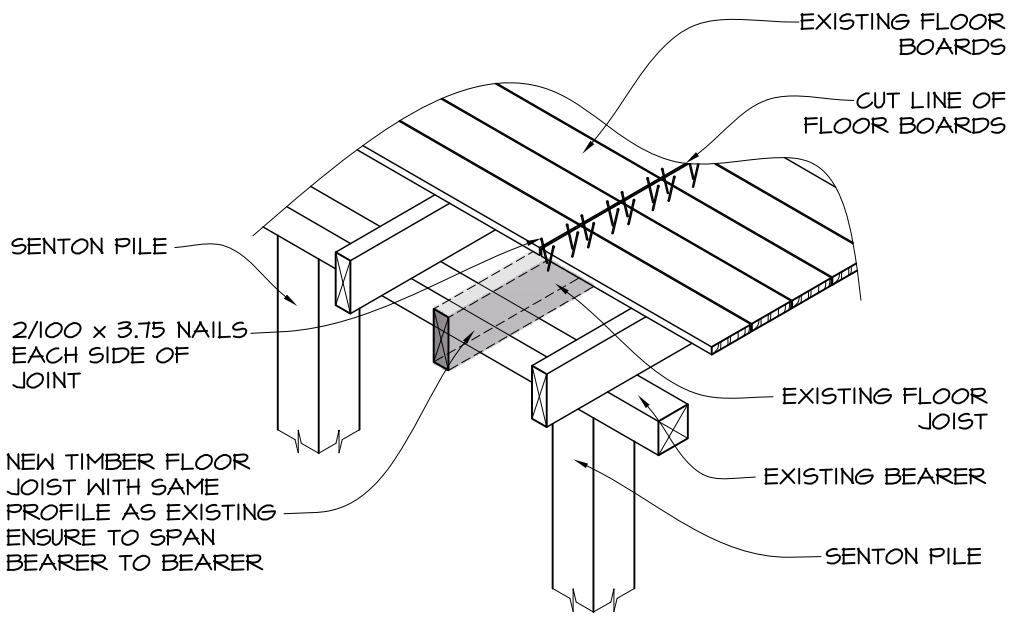
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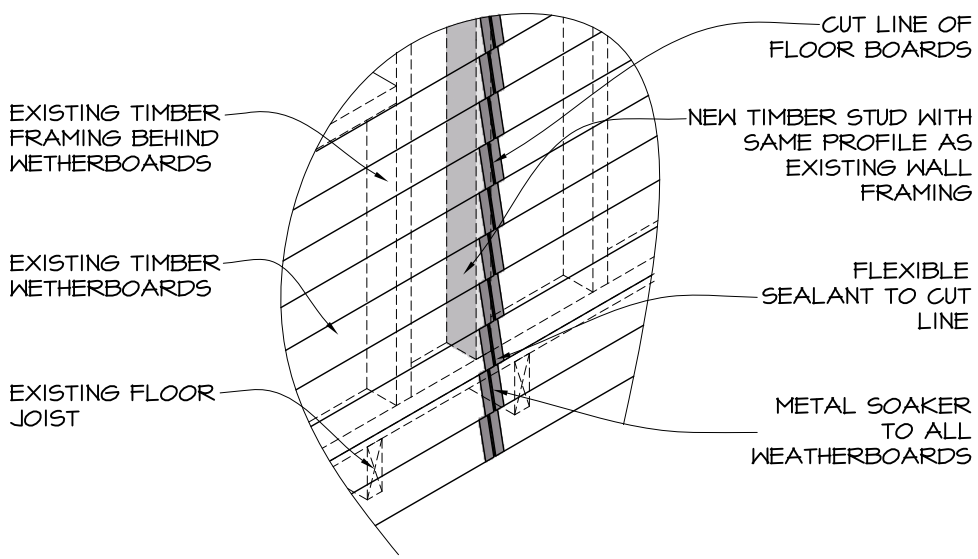
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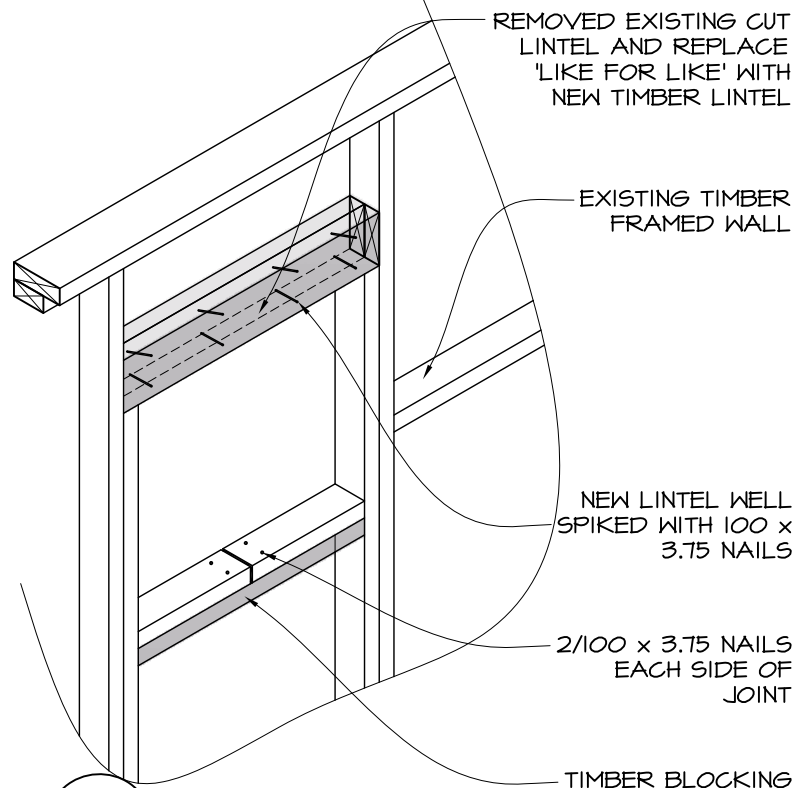
CROSS SECTION
SCALE 1:50



01 – – **CUT FLOOR BOARD**
SCALE 1:20



02 – – **CUT WEATHERBOARD**
SCALE 1:20



03 – – **CUT LINTEL**
SCALE 1:20

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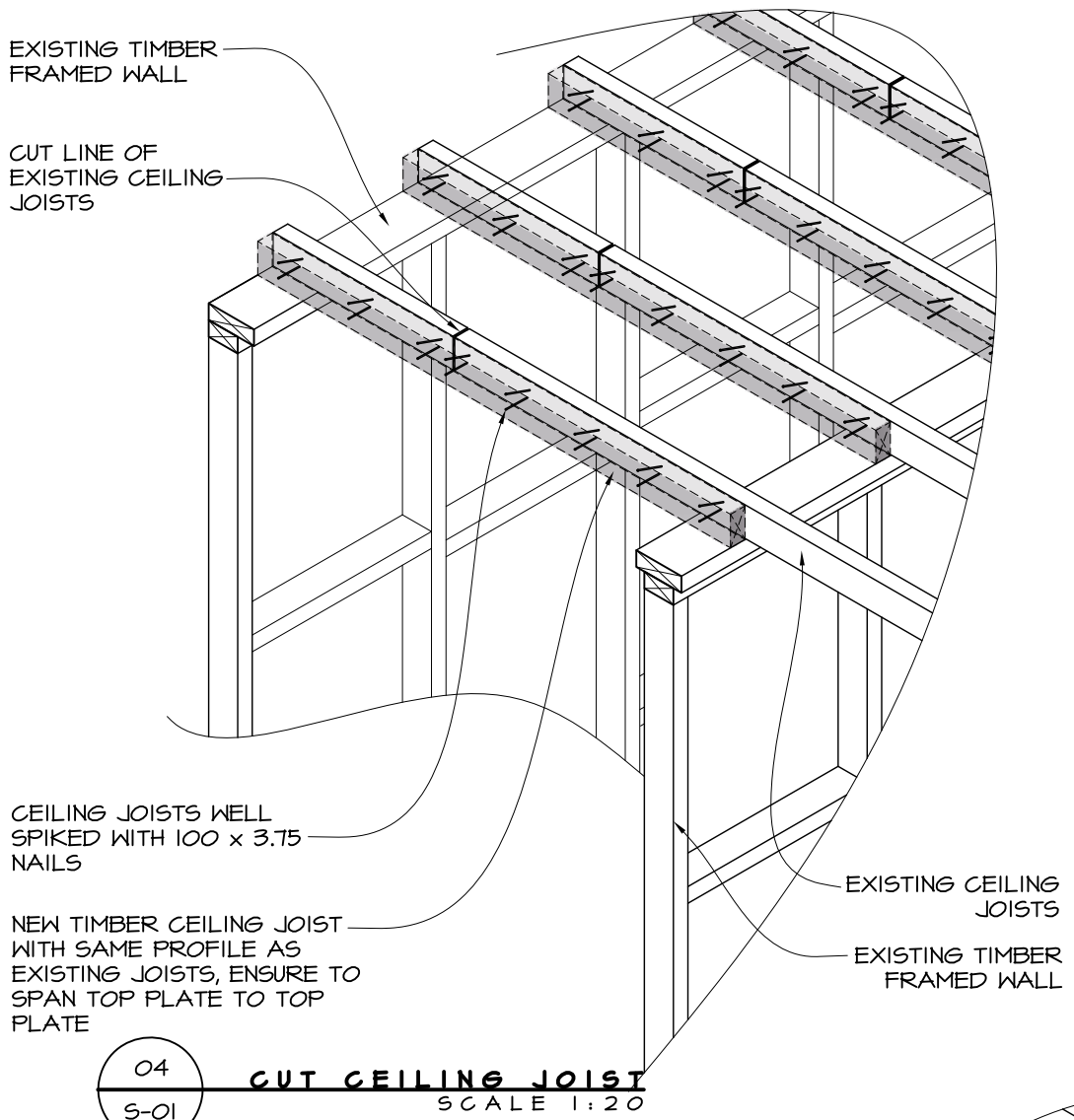
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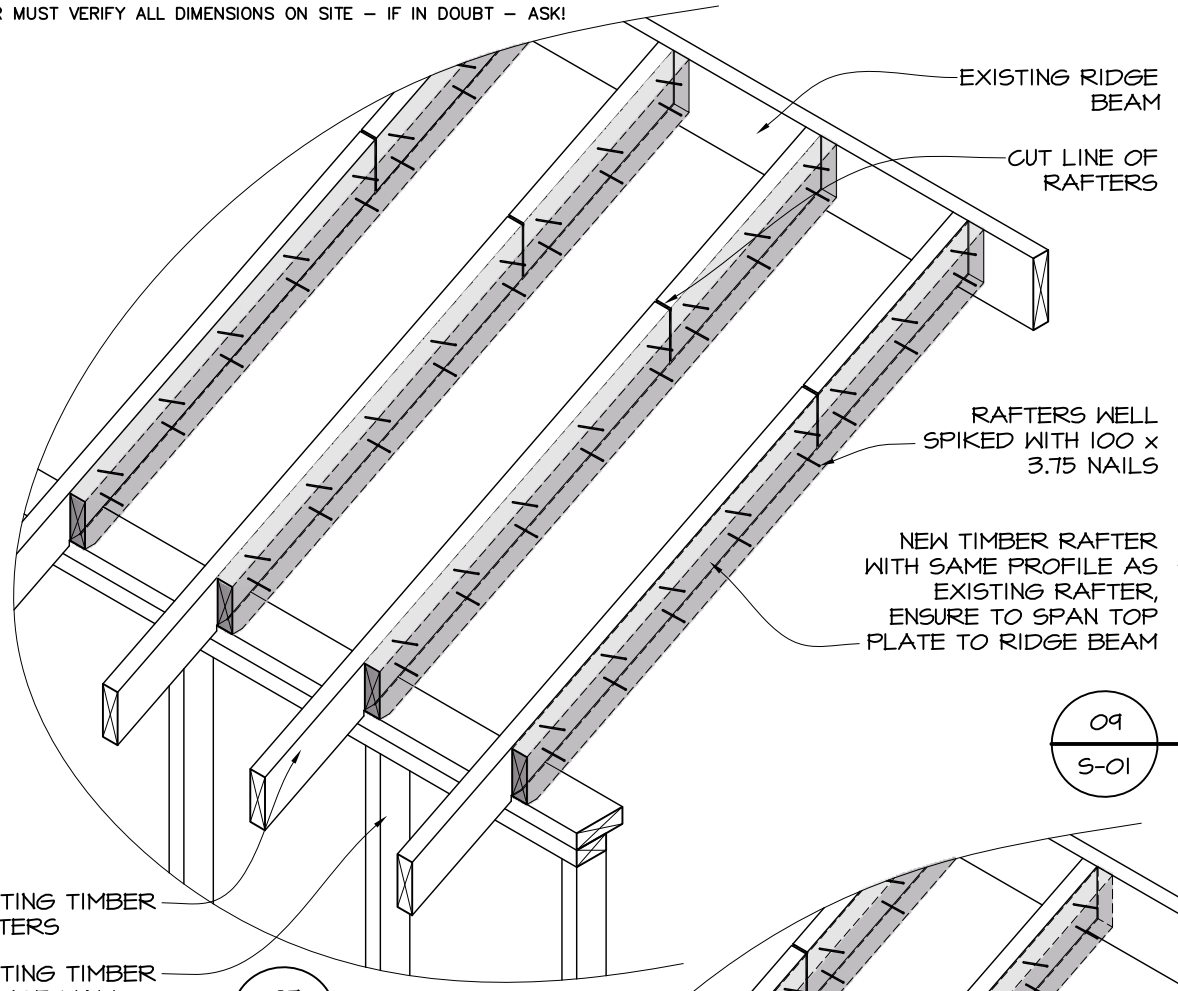
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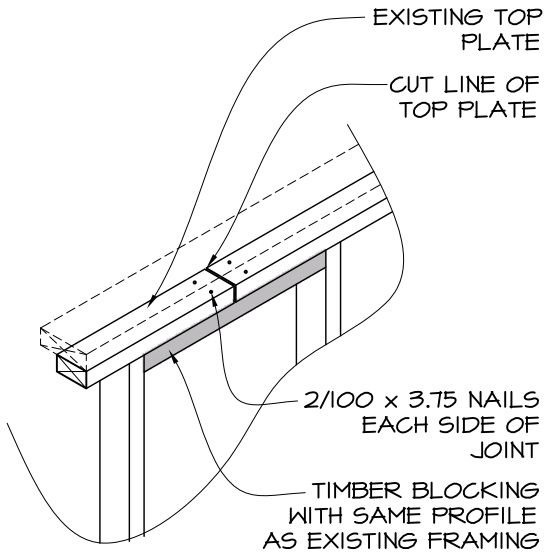
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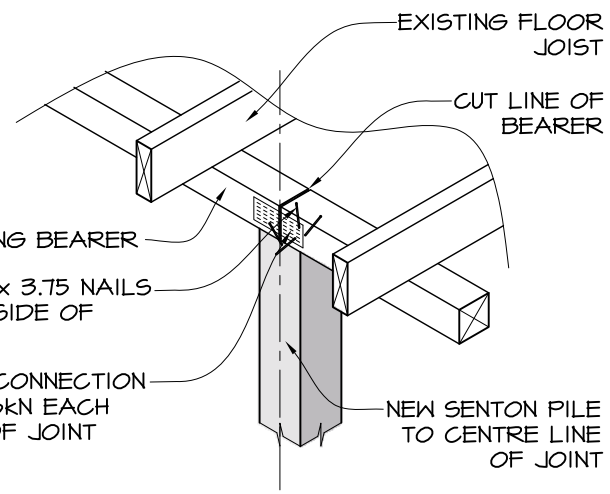
04 / S-01 **CUT CEILING JOIST** SCALE 1:20



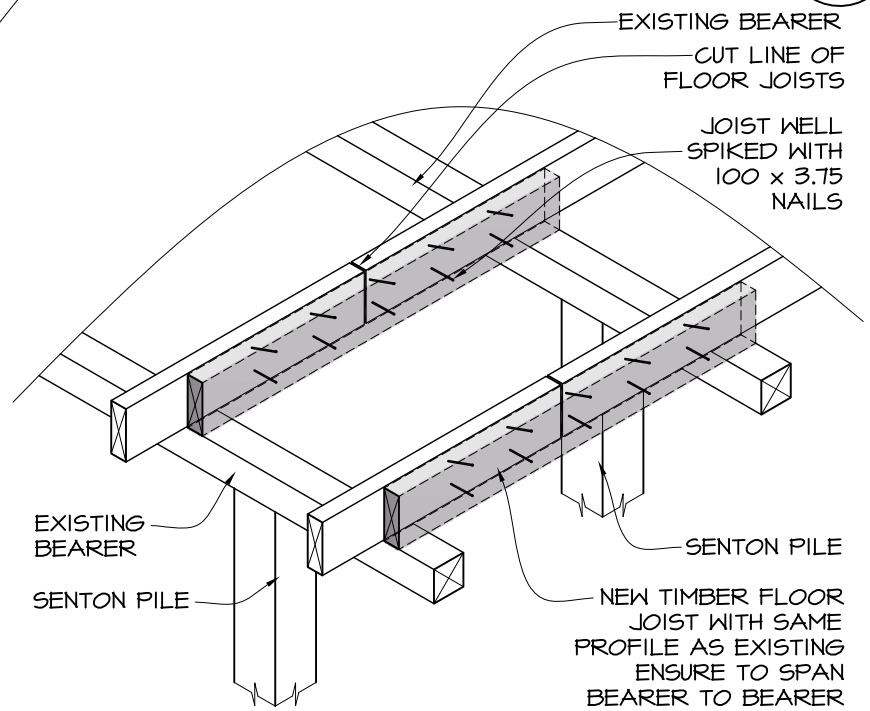
07 / S-01 **CUT RAFTER** SCALE 1:20



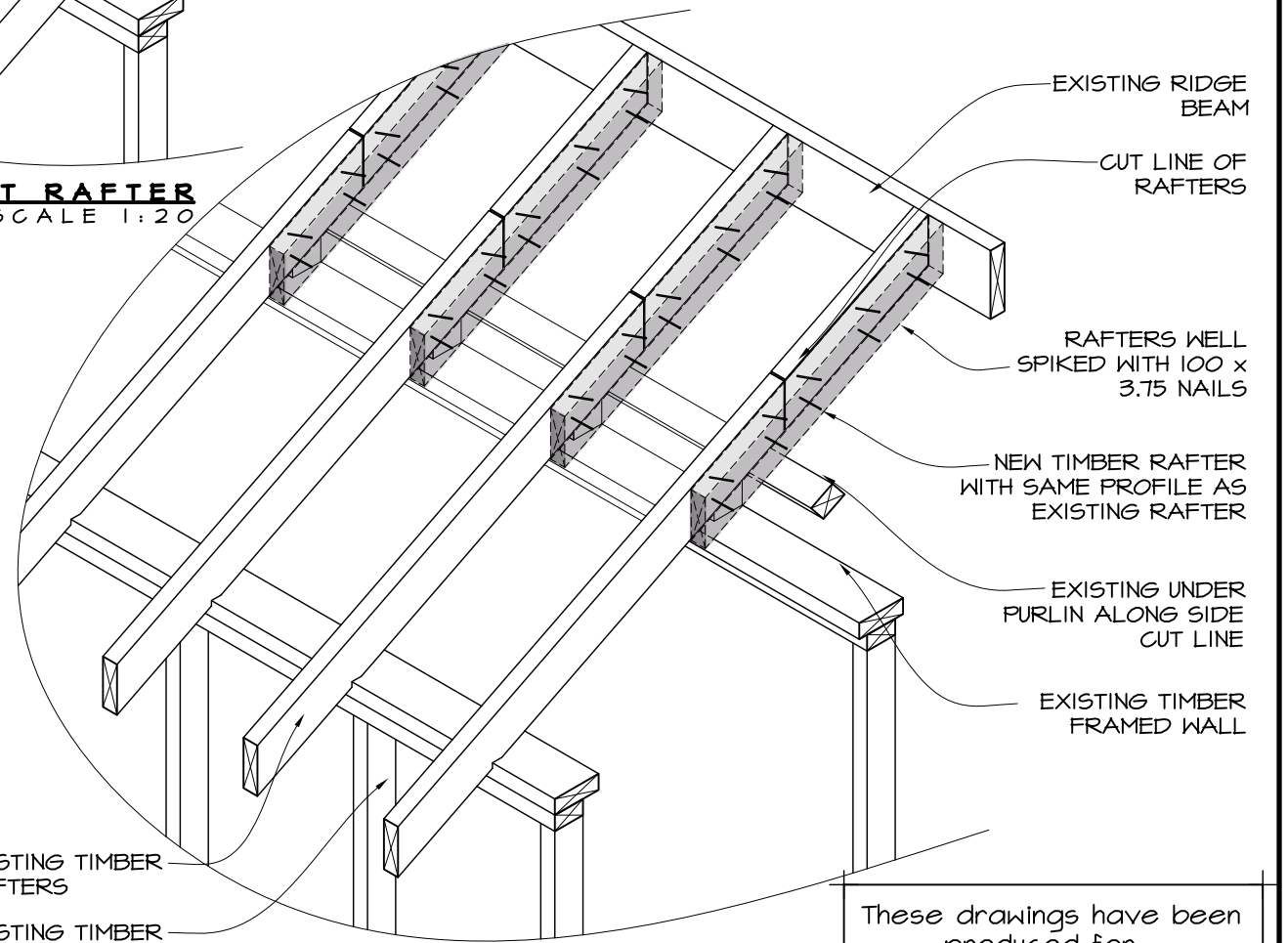
09 / S-01 **CUT TOP PLATE** SCALE 1:20



05 / S-01 **CUT BEARER** SCALE 1:20



06 / S-01 **CUT FLOOR JOIST** SCALE 1:20



08 / S-01 **CUT RAFTER UNDER PURLIN** SCALE 1:20

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SUB-FLOOR FRAMING KEY

- TIMBER WALLS ABOVE

ENGINEERED BEARER UPGRADES
REMOVE ALL EXISTING BEARERS (EXCEPT B1) REPLACE WITH NEW BEARERS AS SPECIFIED BELOW. ENSURE TO STAGGAR LAPS I.E (NO MORE THAN 1 BUTT END PER PILE) DESIGNED BY 'DEANE CONSULTANCY LTD' SEE REPORT FOR DETAILS. REF:17/ADS/2 DATED: 17 FEBRUARY 2017

B1 - NEW 2/190x45 SG8 HI.2 TIMBER BEARER

B2 - NEW 3/190x45 SG8 HI.2 TIMBER BEARER

'SUB-FLOOR PILES' TWO STAGE 'ORDINARY' PILES
NEW 125mm SQ. SENTON PILE IN **450Φ** x 3000mm DEEP FOUNDATION IN FIRM NATURAL GROUND. SEE DETAIL 'Y' ON WD-14 FOR REINFORCING SPECIFICATIONS. BY 'DEANE CONSULTANCY LTD' SEE REPORT FOR DETAILS. REF:17/ADS/2 DATED: 17 FEBRUARY 2017

'SUB-FLOOR PILES' TWO STAGE 'LEADING EDGE' PILES
NEW 125mm SQ. SENTON PILE IN **450Φ** x 3000mm DEEP FOUNDATION IN FIRM NATURAL GROUND. SEE DETAIL 'X' ON WD-14 FOR REINFORCING SPECIFICATIONS. BY 'DEANE CONSULTANCY LTD' SEE REPORT FOR DETAILS. REF:17/ADS/2 DATED: 17 FEBRUARY 2017

A 'ANCHOR PILES' TWO STAGE
NEW 125x125 SQ. SENTON PILES IN **450Φ** x 3000mm DEEP FOUNDATION IN FIRM NATURAL GROUND. SEE DETAIL 'X' ON WD-14 FOR REINFORCING SPECIFICATIONS

'SUB-FLOOR PILES' - DECK POINT-LOAD (TWO STAGE)
NEW 125x125 SQ. SENTON PILES IN 350Φ x 3000mm DEEP FOUNDATION IN FIRM NATURAL GROUND. PLACE DIRECTLY UNDER VERANDAH ROOF & HANDRAIL POSTS

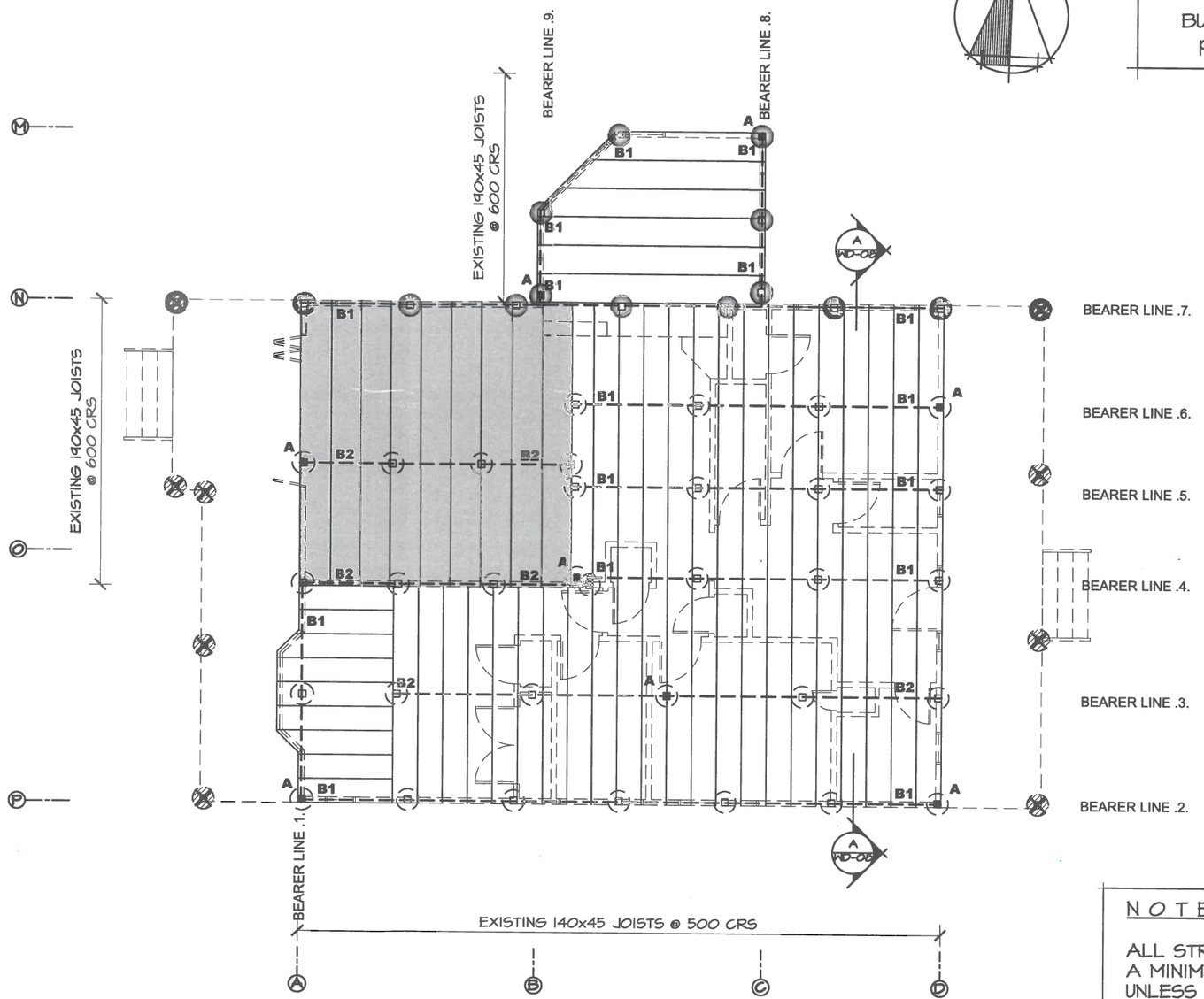
PILE SPACING KEY

BEARER LINE .1. - PILES @ 1.95m CRS MAX
BEARER LINE .2. - PILES @ 1.95m CRS MAX
BEARER LINE .3. - PILES @ 2.5m CRS MAX
BEARER LINE .4. - PILES @ 2.25m CRS MAX
BEARER LINE .5. - PILES @ 2.25m CRS MAX
BEARER LINE .6. - PILES @ 2.25m CRS MAX
BEARER LINE .7. - PILES @ 1.95m CRS MAX
BEARER LINE .8. - PILES @ 1.4m CRS MAX
BEARER LINE .9. - PILES @ EACH CORNER

DECKS & STAIRS
ALL ARE TO BE UNDER 1.0m HIGH & DO NOT REQUIRE A BUILDING CONSENT - HOWEVER MUST BE BUILT TO SATISFY NZBC & NZS3604:2011.

ENSURE TO CONSTRUCT LANDINGS OUT FROM ALL DOORS.

- IF THERE ARE STEPS COMING OFF OUTWARD OPENING DOORS, THEN 400mm CLEARANCE FROM DOOR SWING TO STEPS IS REQUIRED.
- IF THERE ARE 3 OR MORE RISERS, ENSURE TO PROVIDE HANDRAIL TO NZBC REQUIREMENTS.
- TREADS = MIN. 280mm / RISERS = MAX. 190mm



SUB-FLOOR PLAN
SCALE 1:100

NOTE: TIMBER GRADE

ALL STRUCTURAL TIMBER TO BE A MINIMUM OF SG8 OR HIGHER, UNLESS STATED OTHERWISE

SUB-FLOOR STEEL FIXINGS
ENSURE THAT ALL STEEL FIXINGS AND FASTENINGS ARE STAINLESS STEEL WHERE WITHIN 600mm FROM GROUND LEVEL OR GALVANIZED WHERE ABOVE 600mm UNLESS IN A SEA SPRAY ZONE. REFER TO NZS 3604, TABLE 4.1

(RESIDENCE 'A')

P. A. DEANE (09) 4222408
MIPENZ (Civil, Structural) CPEng
IPENZ No. 64619
21/2/17

PH: 09 412 8749 FAX: 09 412 8751
P O Box120 , Kumeu, New Zealand
ARCHITECTURAL DRAUGHTING SOLUTIONS LTD
EMAIL: CHRIS@ADSLTD.CO.NZ

RELOCATE SECONDHAND RESIDENCES ('A') & ('B') TO 102 SETTLEMENT ROAD, KAIWAKA FOR LYNETTE DHEDA

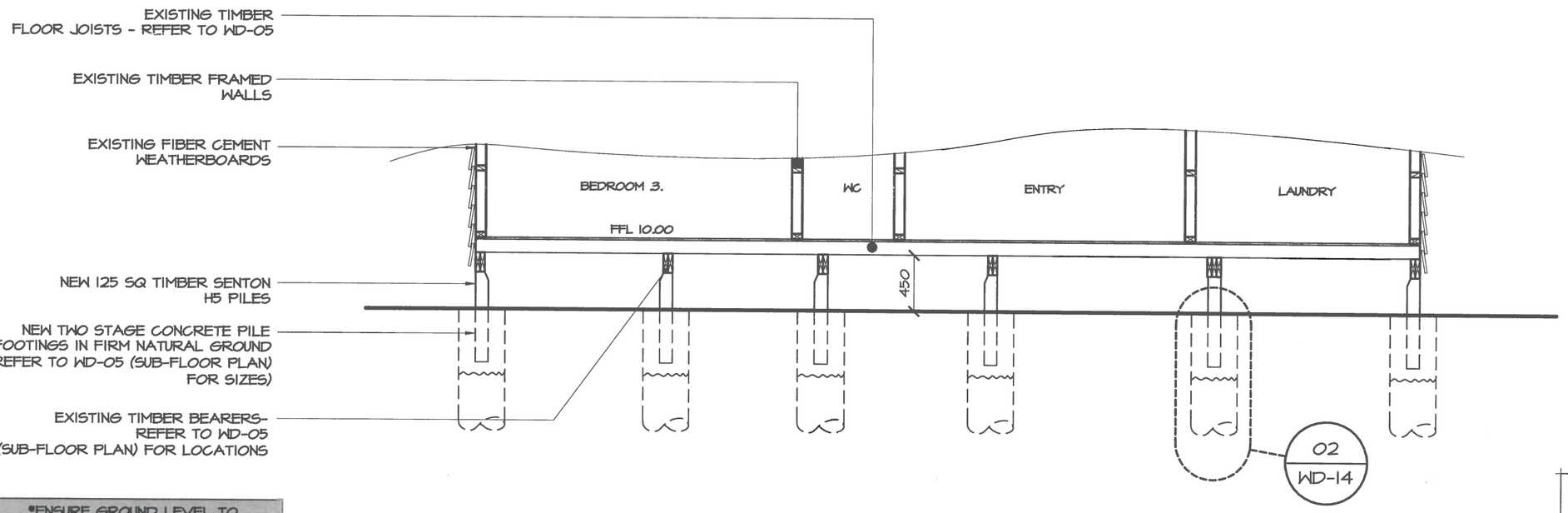
		DATE	AMENDMENTS
DESIGNED			
DRAWN			
CHECKED			
APPROVED			
REF:			

CONTRACT No 16-120
DWG No WD-05
SCALE NTD @ A3

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CONTRACTOR MUST VERIFY ALL DIMENSIONS ON SITE – IF IN DOUBT – ASK!

These drawings have been produced for BUILDING CONSENT purposes ONLY



*ENSURE GROUND LEVEL TO UNDERSIDE OF FLOOR JOISTS IS 450mm MIN.

CROSS SECTION A-A
SCALE 1:50

NOTE: TIMBER GRADE

ALL STRUCTURAL TIMBER TO BE A MINIMUM OF SG8 OR HIGHER, UNLESS STATED OTHERWISE

SUB-FLOOR STEEL FIXINGS
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21/2/17

(RESIDENCE 'A')

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P O Box120, Kumeu, New Zealand
ARCHITECTURAL DRAUGHTING SOLUTIONS LTD
EMAIL: CHRIS@ADSLTD.CO.NZ

RELOCATE SECONDHAND RESIDENCES ('A') & ('B') TO 102 SETTLEMENT ROAD, KAIWAKA FOR LYNETTE DHEDA

		DATE	AMENDMENTS
DESIGNED	CJM	01/17	
DRAWN	CJM	01/17	
CHECKED	CJM		
APPROVED	CJM		
REF:			

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DWG No WD-08
SCALE NTD @ A3

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SUB-FLOOR FRAMING KEY

▭▭▭ - TIMBER WALLS ABOVE

ENGINEERED BEARER UPGRADES
REMOVE ALL EXISTING BEARERS (EXCEPT B1) REPLACE WITH NEW BEARERS AS SPECIFIED BELOW. ENSURE TO STAGGAR LAPS I.E (NO MORE THAN 1 BUTT END PER PILE) DESIGNED BY 'DEANE CONSULTANCY LTD' SEE REPORT FOR DETAILS. REF:17/ADS/2 DATED: 17 FEBRUARY 2017

B1 - NEW 2/190x45 SG8 H1.2 TIMBER BEARERS

B2 - NEW 3/190x45 SG8 H1.2 TIMBER BEARER

'SUB-FLOOR PILES' TWO STAGE 'ORDINARY' PILES
NEW 125mm SQ. SENTON PILE IN **450Φ** x 1500mm DEEP FOUNDATION IN FIRM NATURAL GROUND @ **2.07m CRS** MAX. SEE DETAIL 'Y' ON THIS PAGE FOR REINFORCING SPECIFICATIONS. BY 'DEANE CONSULTANCY LTD' SEE REPORT FOR DETAILS. REF:17/ADS/2 DATED: 17 FEBRUARY 2017

'SUB-FLOOR PILES' TWO STAGE 'LEADING EDGE' PILES
NEW 125mm SQ. SENTON PILE IN **450Φ** x 3000mm DEEP FOUNDATION IN FIRM NATURAL GROUND @ **2.07m CRS** MAX. SEE DETAIL 'X' ON THIS PAGE FOR REINFORCING SPECIFICATIONS. BY 'DEANE CONSULTANCY LTD' SEE REPORT FOR DETAILS. REF:17/ADS/2 DATED: 17 FEBRUARY 2017

A
'ANCHOR PILES' TWO STAGE
NEW 125x125 SQ. SENTON PILES IN **450Φ** x 3000mm DEEP FOUNDATION IN FIRM NATURAL GROUND. SEE DETAIL 'X' ON THIS PAGE FOR REINFORCING SPECIFICATIONS

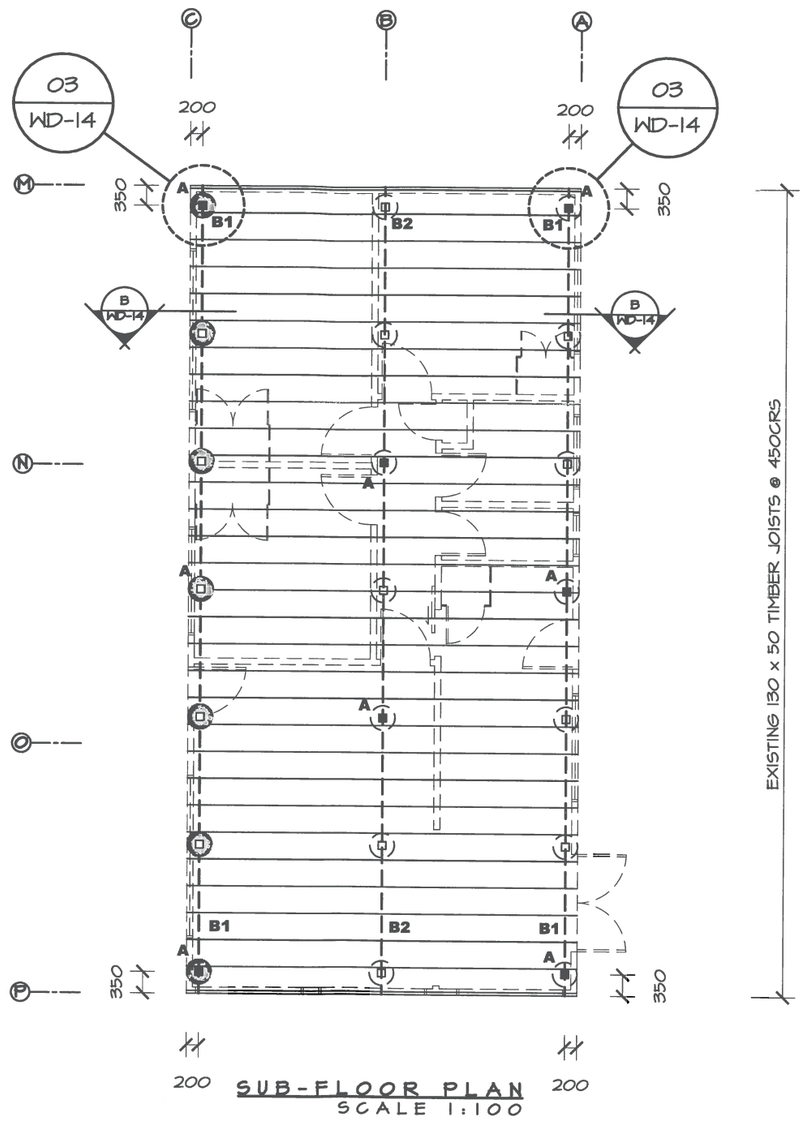
NOTE: TIMBER GRADE

ALL STRUCTURAL TIMBER TO BE A MINIMUM OF SG8 OR HIGHER, UNLESS STATED OTHERWISE

DECKS & STAIRS
ALL ARE TO BE UNDER 1.0m HIGH & DO NOT REQUIRE A BUILDING CONSENT - HOWEVER MUST BE BUILT TO SATISFY NZBC & NZS3604:2011.

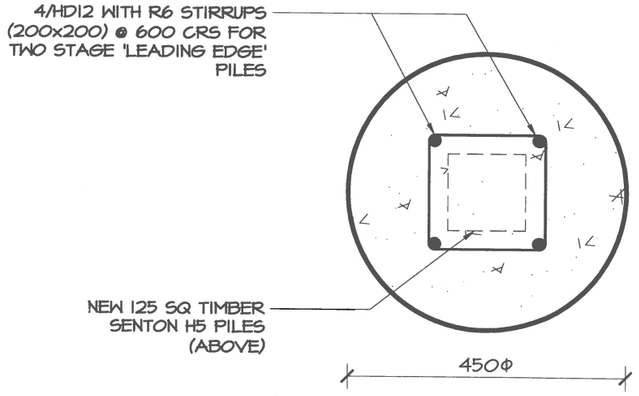
ENSURE TO CONSTRUCT LANDINGS OUT FROM ALL DOORS.

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- IF THERE ARE 3 OR MORE RISERS, ENSURE TO PROVIDE HANDRAIL TO NZBC REQUIREMENTS.
- TREADS = MIN. 280mm / RISERS = MAX. 190mm



SUB-FLOOR PLAN
SCALE 1:100

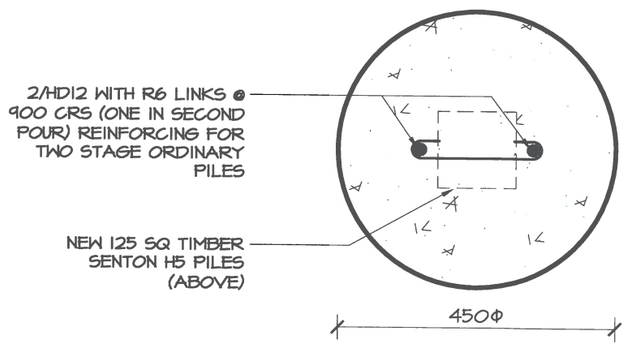
SUB-FLOOR STEEL FIXINGS
ENSURE THAT ALL STEEL FIXINGS AND FASTENINGS ARE STAINLESS STEEL WHERE WITHIN 600mm FROM GROUND LEVEL OR GALVANIZED WHERE ABOVE 600mm UNLESS IN A SEA SPRAY ZONE. REFER TO NZS 3604, TABLE 4.1



'LEADING EDGE/ ANCHOR PILES' - PLAN VIEW

X
WD-14

TWO STAGE PILE
SCALE 1:10
ENGINEERING DETAIL



'ORDINARY' PILE - PLAN VIEW

Y
WD-14

TWO STAGE PILE
SCALE 1:10
ENGINEERING DETAIL

21/2/17

(RESIDENCE 'B')

PH: 09 412 8749 FAX: 09 412 8751
P O Box120, Kumeu, New Zealand
ARCHITECTURAL DRAUGHTING SOLUTIONS LTD
EMAIL: CHRIS@ADSLTD.CO.NZ

RELOCATE SECONDHAND RESIDENCES ('A') & ('B') TO 102 SETTLEMENT ROAD, KAIWAKA FOR LYNETTE DHEDA

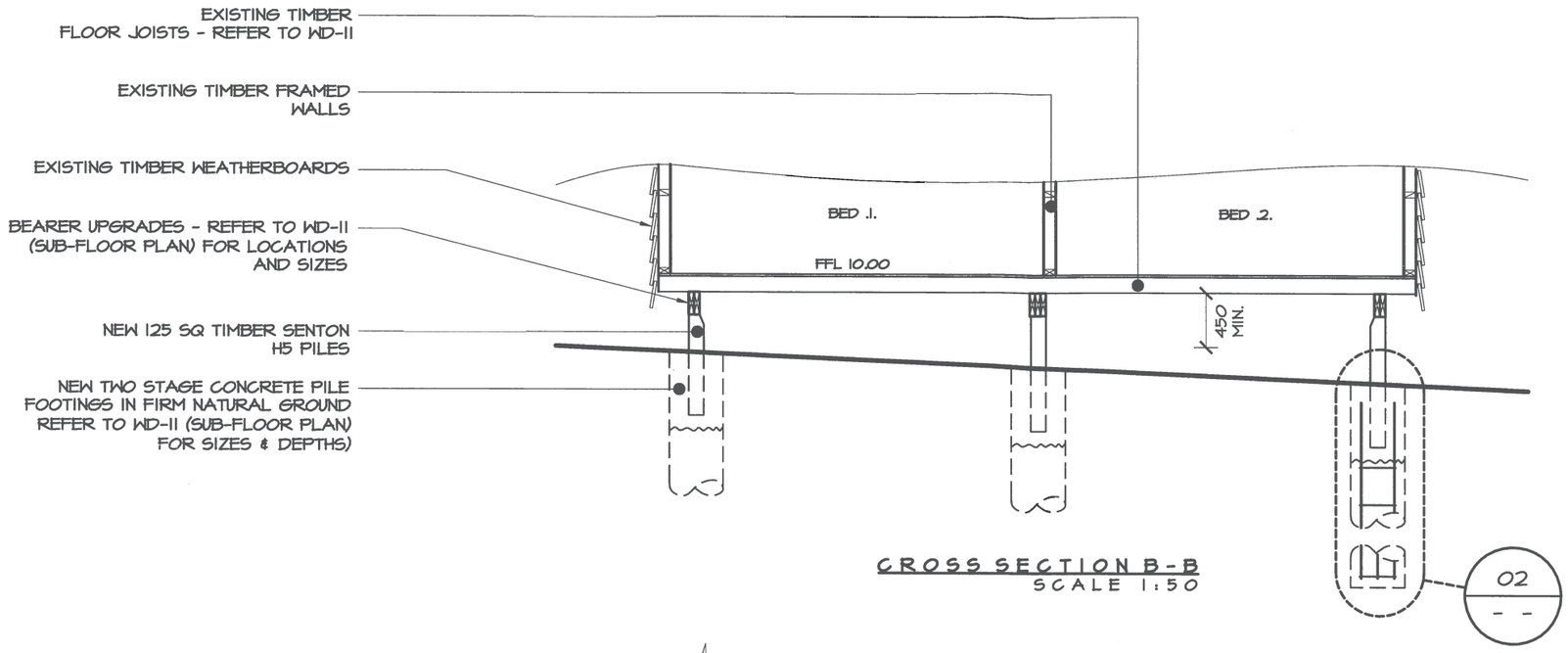
		DATE	AMENDMENTS
DESIGNED			
DRAWN	CJM	01/17	
CHECKED	CJM		
APPROVED	CJM		
REF:			

CONTRACT No 16-120
DWG No WD-11
SCALE NTD @ A3

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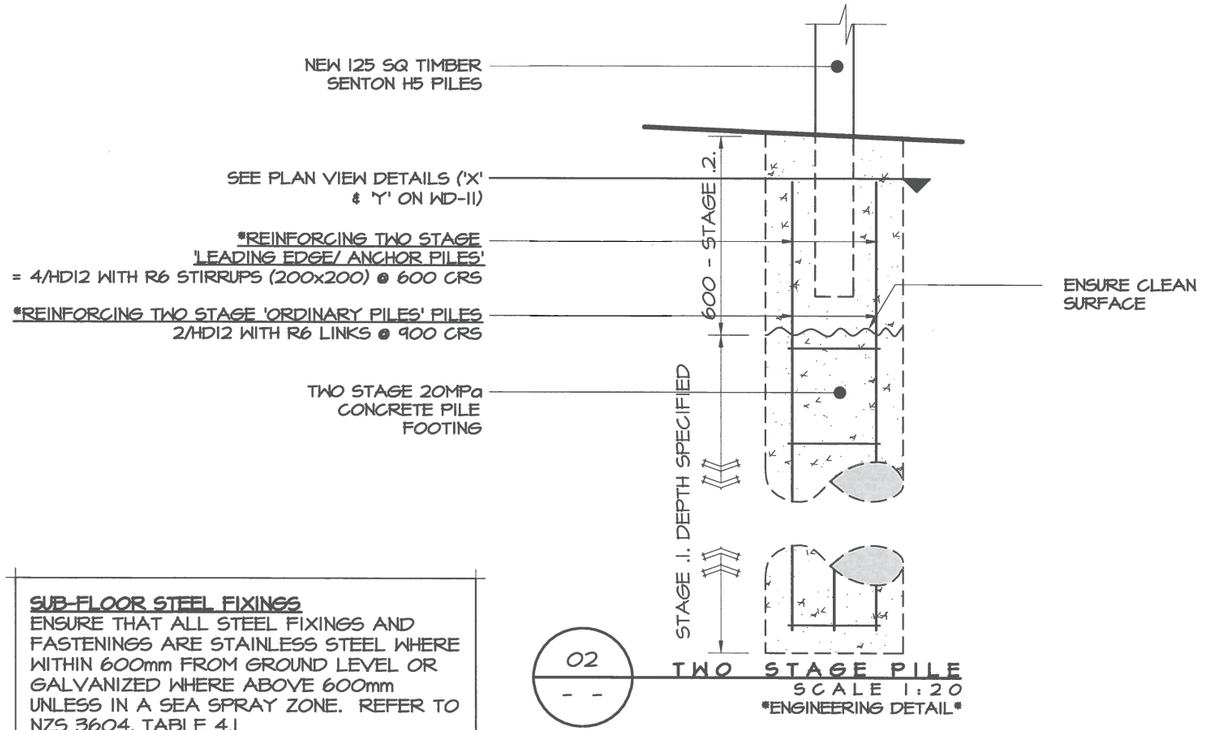
CONTRACTOR MUST VERIFY ALL DIMENSIONS ON SITE – IF IN DOUBT – ASK!

These drawings have been produced for BUILDING CONSENT purposes ONLY

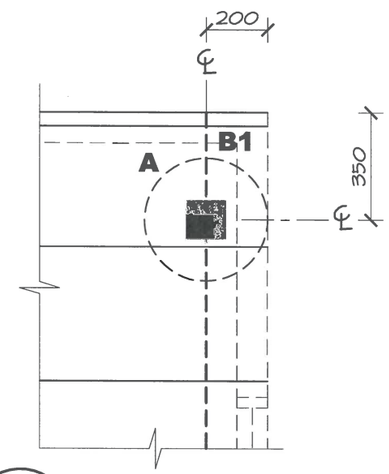


CROSS SECTION B-B
SCALE 1:50

02



02
TWO STAGE PILE
SCALE 1:20
ENGINEERING DETAIL



03
WD-11
CORNER PILE SET-OUT
SCALE 1:20
RESIDENCE 'B' ENGINEERING DETAIL

SUB-FLOOR STEEL FIXINGS
ENSURE THAT ALL STEEL FIXINGS AND FASTENINGS ARE STAINLESS STEEL WHERE WITHIN 600mm FROM GROUND LEVEL OR GALVANIZED WHERE ABOVE 600mm UNLESS IN A SEA SPRAY ZONE. REFER TO NZS 3604, TABLE 4.1

21/12/17

NOTE: TIMBER GRADE

ALL STRUCTURAL TIMBER TO BE A MINIMUM OF SG8 OR HIGHER, UNLESS STATED OTHERWISE

(RESIDENCE 'B')

PH: 09 412 8749 FAX: 09 412 8751
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EMAIL: CHRIS@ADSLTD.CO.NZ

RELOCATE SECONDHAND RESIDENCES ('A') & ('B') TO 102 SETTLEMENT ROAD, KAIWAKA FOR LYNETTE DHEDA

		DATE	AMENDMENTS
DESIGNED	CJM	01/17	
DRAWN	CJM	01/17	
CHECKED	CJM		
APPROVED	CJM		
REF:			

CONTRACT No 16-120
DWG No WD-14
SCALE NTD @ A3

17/ADS/2

Building Code Clause(s) B1+B2

PRODUCER STATEMENT – PS1 – DESIGN

(Guidance notes on the use of this form are printed on page 2)

ISSUED BY: DEANE CONSULTANCY LTD
(Design Firm)

TO: L. Dheda
(Owner/Developer)

TO BE SUPPLIED TO: KAIPARA DISTRICT COUNCIL
(Building Consent Authority)

IN RESPECT OF: Foundation and bearer design: relocated main and minor dwelling units.
(Description of Building Work)

AT: 102 Settlement Rd, Kaiwaka.
(Address)

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

We have been engaged by the owner/developer referred to above to provide structural design services in respect of the requirements of
(Extent of Engagement)

Clause(s) B1+B2 of the Building Code for
All ☐ or Part only ☑ (as specified in the attachment to this statement), of the proposed building work.

The design carried out by us has been prepared in accordance with:

☐ Compliance Documents issued by the Ministry of Business, Innovation & Employment B1/VM1 or
(verification method / ~~acceptable solution~~)

☐ Alternative solution as per the attached schedule

The proposed building work covered by this producer statement is described on the drawings titled – attached – and numbered S1-S6, C1-C4;
together with the specification, and other documents set out in the schedule attached to this statement.

On behalf of the Design Firm, and subject to:
(i) Site verification of the following design assumptions DCL to observe excavations for first stage piers.
(ii) All proprietary products meeting their performance specification requirements;

I believe on reasonable grounds that a) the building, if constructed in accordance with the drawings, specifications, and other documents provided or listed in the attached schedule, will comply with the relevant provisions of the Building Code and that b), the persons who have undertaken the design have the necessary competency to do so. I also recommend the following level of construction monitoring/observation:
☐CM1 ☑CM2 ☐CM3 ☐CM4 ☐CM5 (Engineering Categories) or ☐ as per agreement with owner/developer (Architectural)

I, ...**PETER ALLAN DEANE**..... am:
(Name of Design Professional)

☑CPEng ....**64619**.....#

☐Reg Arch ..... .#

I am a Member of : ☑ IPENZ ☐NZIA and hold the following qualifications: **MIPENZ(Civil,Structural)CPEng**.....
The Design Firm issuing this statement holds a current policy of Professional Indemnity Insurance no less than $200,000*.
The Design Firm is a member of ACENZ: ☐

SIGNED BY **P A DEANE**..... ON BEHALF OF ...**DEANE CONSULTANCY LTD, deanecl@xtra.co.nz**...
(Design Firm)

Date 17/2/17 (signature) Design complies Eng. Geol. report 8199.

Note: This statement shall only be relied upon by the Building Consent Authority named above. Liability under this statement accrues to the Design Firm only. The total maximum amount of damages payable arising from this statement and all other statements provided to the Building Consent Authority in relation to this building work, whether in contract, tort or otherwise (including negligence), is limited to the sum of $200,000.*

This form is to accompany **Form 2 of the Building (Forms) Regulations 2004** for the application of a Building Consent.

THIS FORM AND ITS CONDITIONS ARE COPYRIGHT TO ACENZ, IPENZ AND NZIA

DEANE CONSULTANCY LTD

17 Kotare Place, RD 2, Warkworth.
Ph 09 4222 408 027 252 6121 deanecl@xtra.co.nz

SL

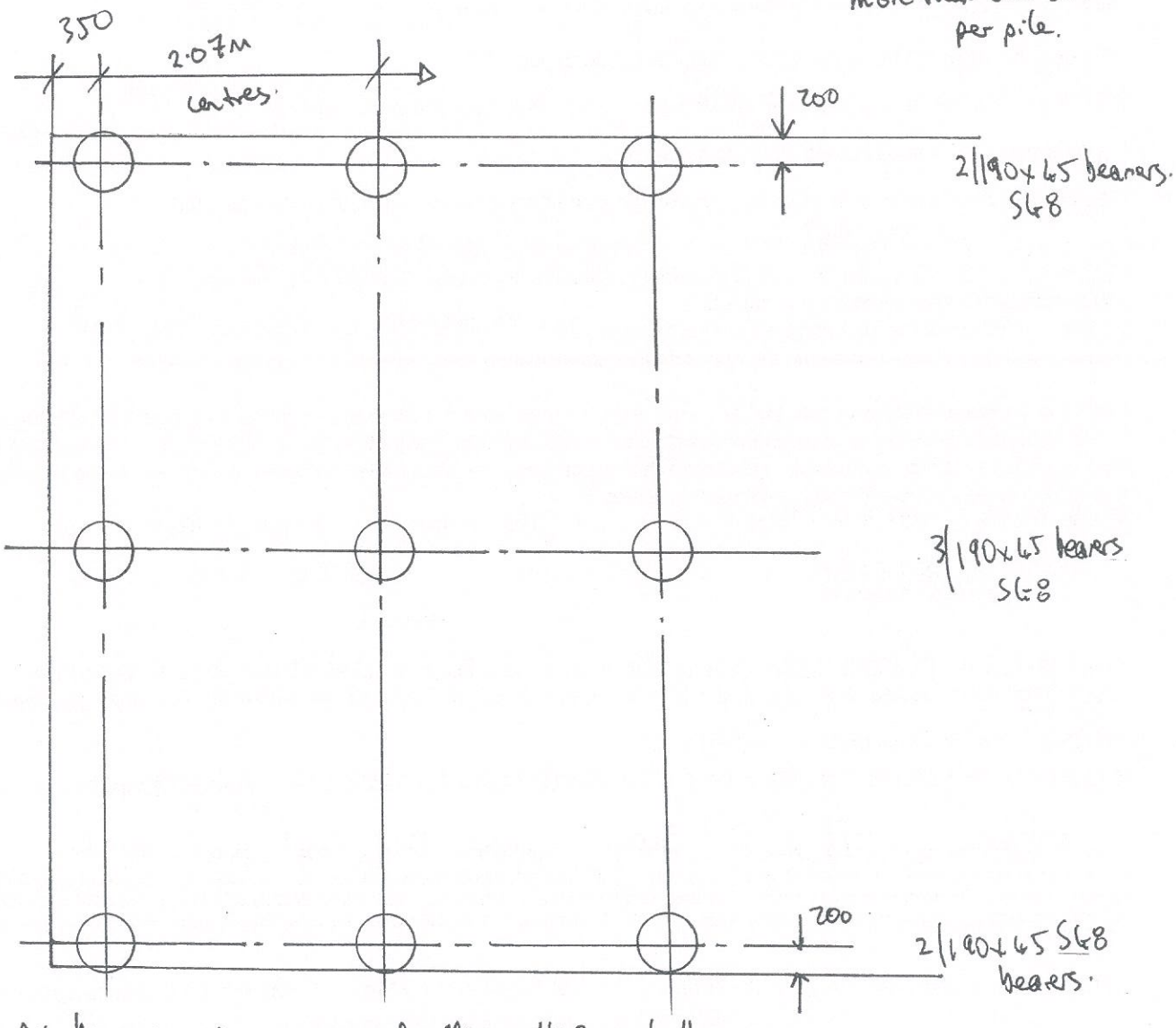
RELOCATED DWELLINGS FOR L DHEDA, 102 SETTLEMENT RD, KAIWAKA

The owner has engaged Engineering Geology Ltd to complete a geotechnical report (ref 8199 of 23 Sept, 2016).
I have read the report and discussed it with J Yeats of Eng Geology.
The requirement is for 3.0m deep piles, except leading edge piles to be designed for lateral creep loads to a depth of 1.5m.

In order to reduce costs to the owner, it is proposed to upgrade to larger bearers which will reduce the pile numbers.

MINOR DWELLING UNIT:

All bearers: stagger laps. No more than one butt end per pile.

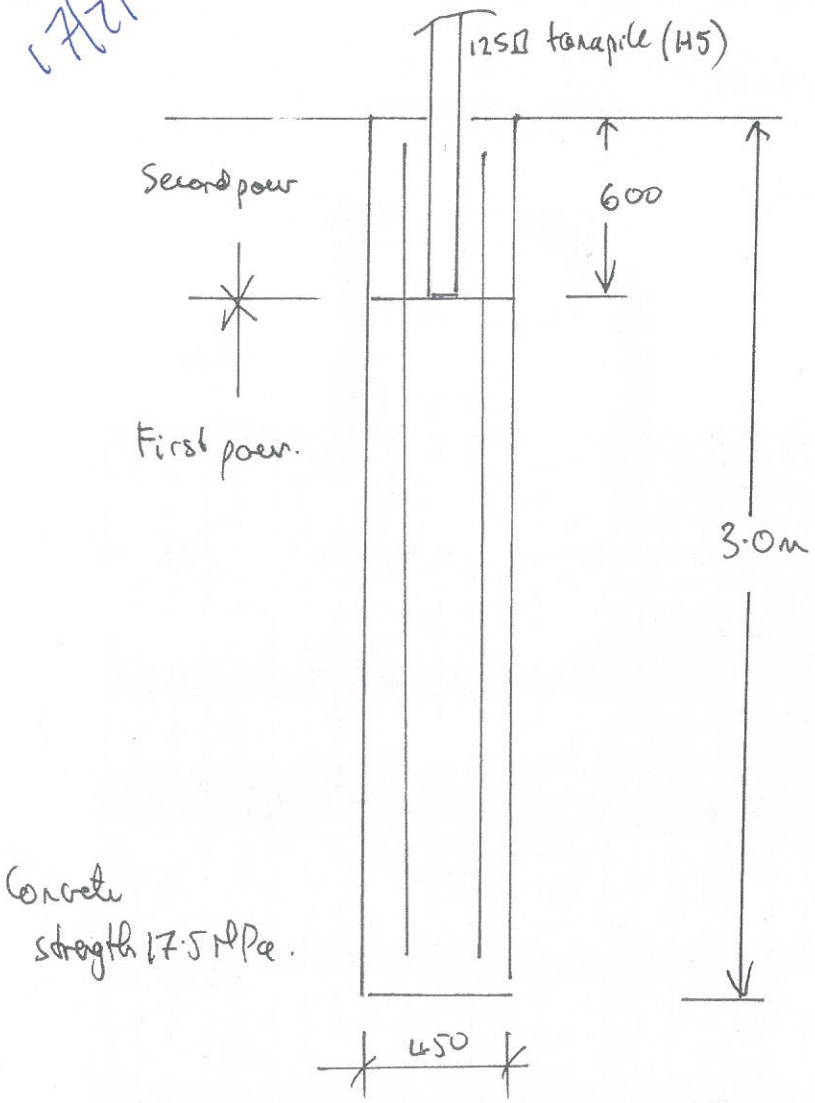


All bearers, main + minor dwellings: H1.2 or better.

DEANE CONSULTANCY LTD
17 Kotare Place, RD 2, Warkworth.
Ph 09 4222 408 027 252 6121 deanecl@xtra.co.nz

S2

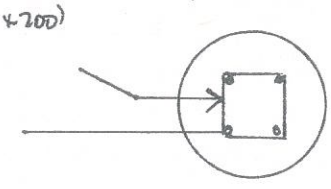
17/2/17



Deane Consultancy to be invited to observe foundation excavations.

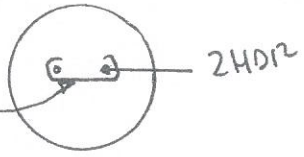
All pile Dimensions

R6 stps (200 x 200) at 600
4HD12



(3 stirrups in second pour.)

R6 links @ 600 (none in second pour)



All ordinary piles not in rows not at leading edge

All leading edge piles (excluding heels) and all anchor + braced piles.

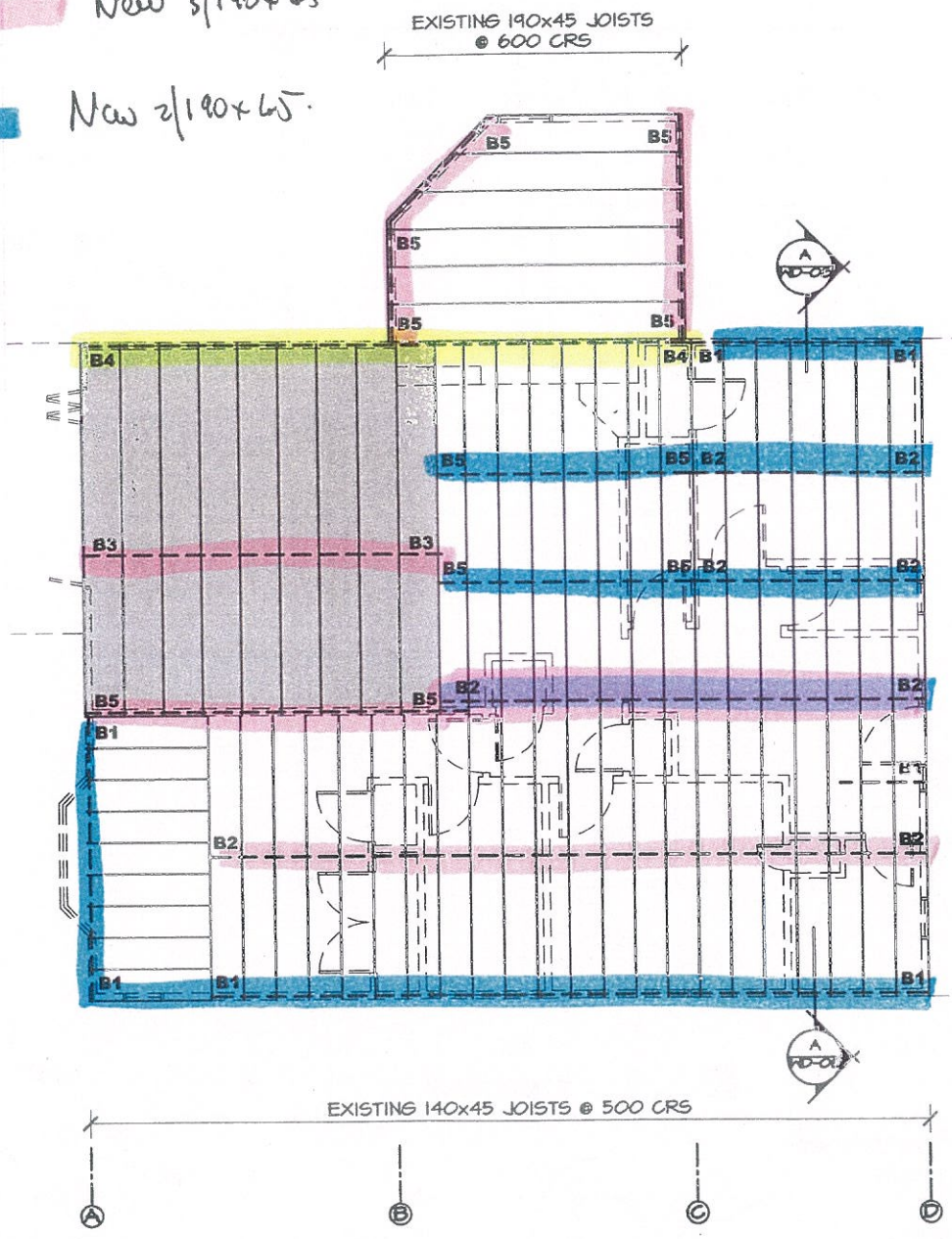
CONTRACTOR MUST VERIFY ALL DIMENSIONS ON SITE – IF IN DOUBT – ASK!

S3

Existing bearer to remain.

New 3/190x45

New 2/190x45.



SUB-FLOOR PLAN
SCALE 1:100

BEARERS

MAIN DWELLING UNIT

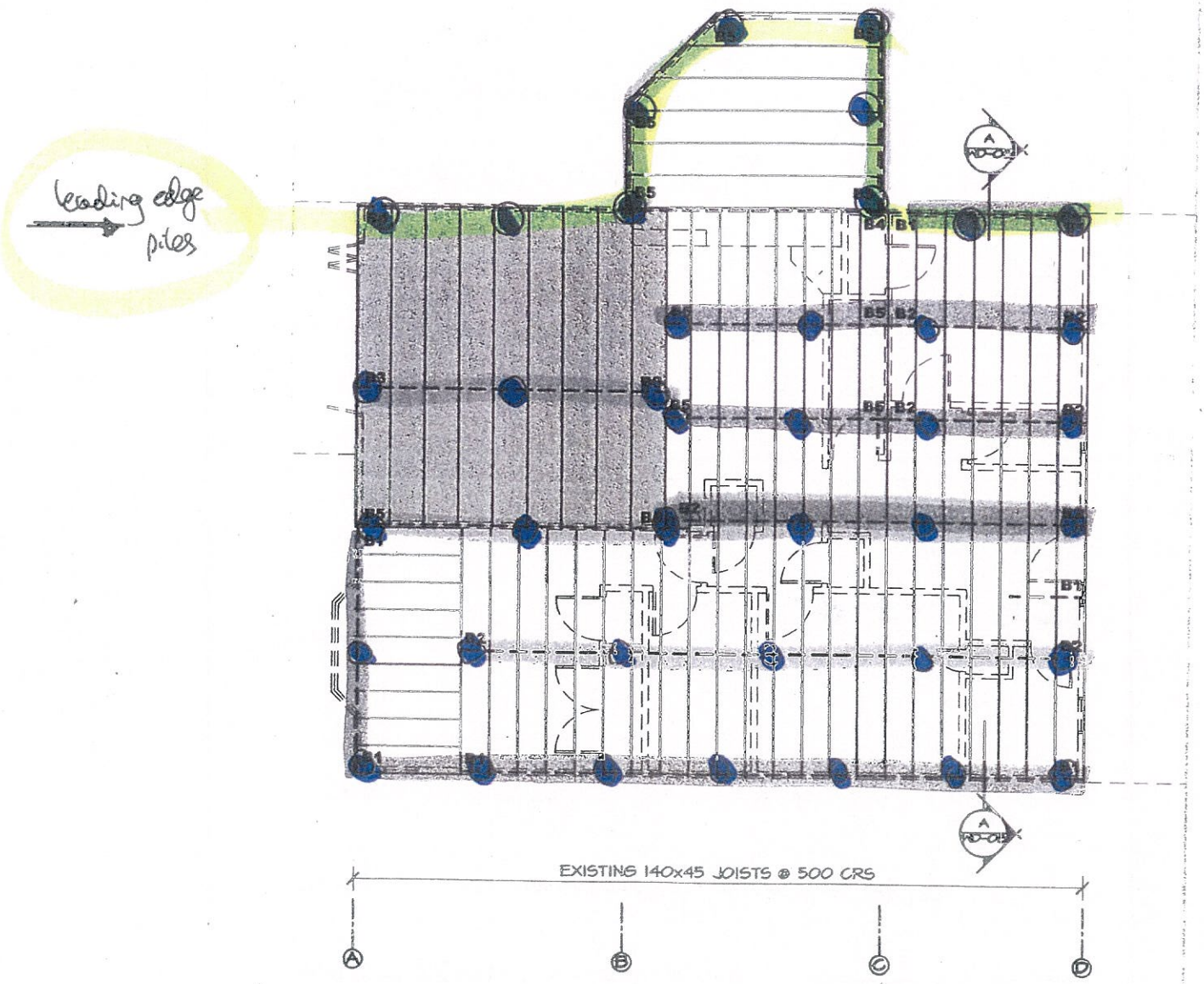
07/2/17

ECONDHAND RESIDENCES (MHU) & (PHU)
2 SETTLEMENT ROAD, KAIWAKA
FOR LYNETTE DHEDA

DESIGNED	
DRAWN	
CHECKED	
APPROVED	
REF:	

(54)

Pile details same as MDU page (52)



SUB-FLOOR PLAN
SCALE 1:100

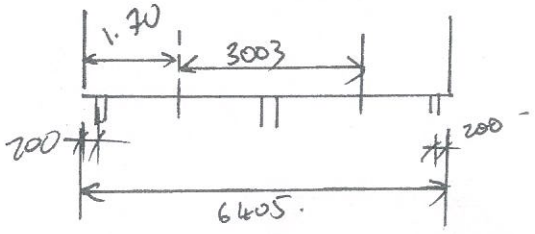
PILES: MAIN DWELLING UNIT

7/2/17

DEANE CONSULTANCY
17 Kotare Place
RD 2, Warkworth
deanecl@xtra.co.nz (09) 422-2408

Client: L. Dheda Page C1 of 4
Job: Relocations to 102 Settlement Rd.
MDU
Date: 17/2/17 Signed:

Central Beam line:



roof+ceil
$UG = 3.05(.45+.65) + 1.5\times2.6\times.4$
floor wall
$+.15$ kN/m
self

$= (2.75+1.64+.15)$ kN/m

$= 4.54$ kN/m.

$w_e = 1.5\text{kPa}\times3.05\text{m} = 4.6$ kN/m

$\therefore w(1.2G+1.5E) = 12.1$ kN/m.

$M^* = .107wL^2 = 1.295L^2$

try 2/180×45 beams:

$\phi M_n = .8\times.8\times1.14\times16\times2\times.243$ kNm $= 4.96$ kNm.

Solve for L: $1.295L^2 = 4.96$

$\therefore L^2 = 3.83$ kNm

$\therefore L = 1.96$m.

$\therefore$ @ 13.115m and 300mm cantilevers

$\Rightarrow$ 7 poles, 6 gaps @ $\frac{13.115-.6}{6}$ m $= 2.085$m

no

try 4 ends $\Rightarrow$ $\frac{13.115-.8}{6} = 2.053$m

$\therefore$ go to 8 poles, 7 gaps, 300mm ends $\Rightarrow$ 1.78m spacing.

try 3/180×45 beams: $\phi M_n = .8\times.8\times1.7\times16\times3\times.243$ kNm

$= 7.84$ kNm.

solve for L: $1.295L^2 = 7.84$ kNm

$\therefore L = 2.66$m $\rightarrow$ OK.

try 3 ends, 6 poles, 5 gaps $\Rightarrow$ spacing $= \frac{13.115-.6}{5}$ m

$= 2.503$ No go 7 poles 6 gaps @ 2.08m

DEANE CONSULTANCY
17 Kotare Place
RD 2, Warkworth
deanecl@xtra.co.nz (09) 422-2408

Client: L. Dheda Page 42 of
Job: Relocations to 102 Settlement Rd.
Date: 17/2/17 Signed:

Outer bearer lines:

$w_d = 3.5\times.65 + 2.6\times.65 + 1.2\times.65 + 1.2\times1.5\times2.4\times.4$
roof wall floor int wall
$+.15$ self $\}$ kN/m

$= 5.9$ kN/m

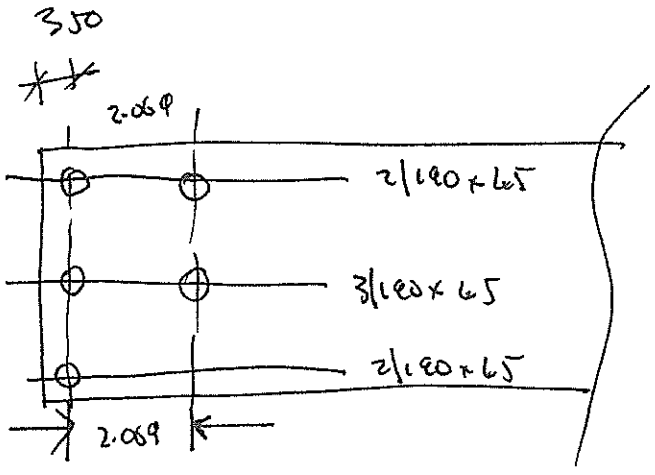
$w_e = 1.7\times1.5$ kN/m $= 2.55$ kN/m

$\therefore w(1.2G+1.5Q) = 10.9$ kN/m $\therefore M^* = .107\times10.9\times L^2$
$= 1.166L^2$

Try 2/190x65 SG8: $1.166L^2 = 4.96 \therefore L =$

$\therefore L = 2.06$ m.

$\therefore$ 35 ends, 7 poles, 6 gaps, spacing $= \frac{15.115 - .7}{6}$ m
$= 2.069$
$\Rightarrow$ OK (within 1%) ✓



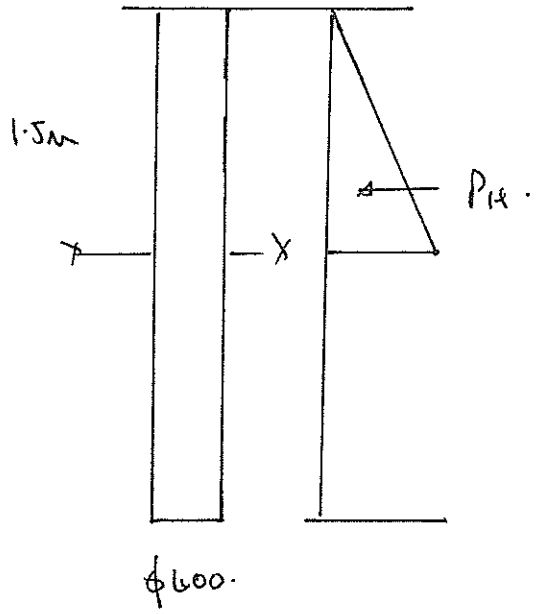
Poles: $P^*(1.2G+1.5Q) = 2.08$m $\times$ 12.1kN/m $= 25.1$ kN.

$\phi 4$ in end 3g: dependable $= .79\times65^2\times650$ kN
$= 72$kN easily OK.

DEANE CONSULTANCY
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RD 2, Warkworth
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Client: L. Dheda Page 23 of
Job: Relocations to 102 Settlement Rd.
Date: 17/2/17 Signed:

Piles in Lateral:



$P_H = \frac{K}{2} \gamma c h^2$

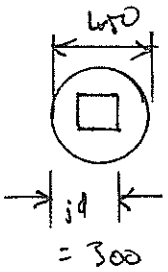
$K_a = 0.33$ ($\phi' = 30°$)
$\gamma = 18 kN/m^3$
$c = 3 \times .65 = 1.35 m$

$= \frac{.33 \times 18 \times 1.35 \times 1.5^2}{2}$

$= 9.02 kN$.

$\therefore M^{\phi}_{1.5} = 9.02 \times 1.5 kN \times .5m \Rightarrow$ 6.8kNm.

Try 4 HD12:



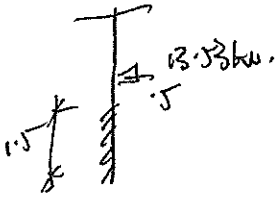
$\phi A_s f_y jd$

$= .85 \times 2 \times 113 \times .5 \times .85 \times .3 kNm$

$= 25.5 kNm > M^{\phi}$

$\therefore$ ok

Check pile 3m deep in Lateral resistance:



$p_0 = \frac{10.8 \times 13.33 (.5 + x)}{1.5^2 \times .65}$ kPa

$= 66 kPa < 650 kPa \therefore$ 3m ok.

DEANE CONSULTANCY
17 Kotare Place
RD 2, Warkworth
deanecl@xtra.co.nz (09) 422-2408

Client: L. Dheda Page 4 of 4
Job: Relocations to 102 Settlement Rd.
Date: 17/4/17 Signed:

internals 2 HO12. (+ ordinary.)

braced + arches 4 HO12+ stps.

Loads etc 4 HO12 cgrs + stps.

MAIN DWELLING: Similar loads apply.

Form 2A

Memorandum from licensed building practitioner: Certificate of design work

Section 45 and Section 30C, Building Act 2004

Please fill in the form as fully and correctly as possible.

If there is insufficient room on the form for requested details, please continue on another sheet and attach the additional sheet(s) to this form.

THE BUILDING

Street address:	102 Settlement Rd,	
Suburb:	Kaiwaka,	
Town/City	Kaipara District.	Postcode:

THE OWNER

Name(s):	
Mailing address:	
Suburb:	PO Box/Private Bag:
Town/City:	Postcode:
Phone number:	Email address:

BASIS FOR PROVIDING THIS MEMORANDUM

I am providing this memorandum in my role as the: Please tick the option that applies (√)	
( )	**sole** designer of all of the RBW design outlined in this memorandum – I carried out all of the RBW design myself – no other person will be providing any additional memoranda for the project
( )	**lead** designer who carried out some of the RBW design myself but also supervised other designers – this memorandum covers their RBW design work as well as mine, and no other person will be providing any additional memoranda for the project
( )	**lead** designer for all but specific elements of RBW – this memorandum only covers the RBW design work that I carried out or supervised and the other designers will provide their own memoranda relating to their specific RBW design
(√)	**specialist** designer who carried out specific elements of RBW design work as outlined in this memorandum – other designers will be providing a memorandum covering the remaining RBW design work

IDENTIFICATION OF DESIGN WORK THAT IS RESTRICTED BUILDING WORK (RBW)

I Peter Allan Deane carried out / ~~supervised~~ the following design work that is restricted building work

PRIMARY STRUCTURE: B1

Design work that is restricted building work	Description	Carried out/ supervised	Reference to plans and specifications

Tick (√) if included *Cross (X) if excluded*	*[If appropriate, provide details of the restricted building work]*	*[Specify whether you carried out this design work or supervised someone else carrying out this design work]*	*[If appropriate, specify references]*
Primary structure			
All RBW Design work relating to B1 ( )		( ) Carried out ( ) Supervised	
Foundations and subfloor framing (√)	Bored piles + bearers	(√) Carried out ( ) Supervised	PSI dated 17/2/17.
Walls ( )		( ) Carried out ( ) Supervised	
Roof ( )		( ) Carried out ( ) Supervised	
Columns and beams ( )		( ) Carried out ( ) Supervised	
Bracing ( )		( ) Carried out ( ) Supervised	
Other ( )		( ) Carried out ( ) Supervised	
EXTERNAL MOISTURE MANAGEMENT SYSTEMS: E2			
All RBW design work relating to E2 ( )		( ) Carried out ( ) Supervised	
Damp proofing ( )		( ) Carried out ( ) Supervised	
Roof cladding or roof cladding system ( )		( ) Carried out ( ) Supervised	
Ventilation system (for example, subfloor or cavity) ( )		( ) Carried out ( ) Supervised	
Wall cladding or wall cladding system ( )		( ) Carried out ( ) Supervised	
Waterproofing ( )		( ) Carried out ( ) Supervised	
Other ( )		( ) Carried out ( ) Supervised	
FIRE SAFETY SYSTEMS: C1 – C6			

Emergency warning systems, evacuation and fire service operation systems, suppression or control systems, or other	( )		( ) Carried out ( ) Supervised	

Note: The design of fire safety systems is only restricted building work when it involves small-to-medium apartment buildings as defined by the Building (Definition of Restricted Building Work) Order 2011.

Note: continue on another page if necessary.

WAIVERS AND MODIFICATIONS

Waivers or modifications of the building code are required ( ) Yes (✓) No

If Yes, provide details of the waivers or modifications below:

Clause	**Waiver/modification required**
[List relevant clause numbers of building code]	*[Specify nature of waiver or modification of building code]*

Note: continue on another page if necessary.

ISSUED BY

Name: P.A. Deane	LBP or Registration number: 64619
The practitioner is a: ( ) Design LBP ( ) Registered architect (✓) Chartered professional engineer	
Design Entity or Company (optional): Deane Consultancy Ltd	
Mailing address (if different from below):	
Street address / Registered office: 17 Kotare Place	
Suburb: Sandspit	Town/City: RD2, Warkworth
PO Box/Private Bag:	Postcode: 0982
Phone number: 09 6222 608	Mobile: 027 252 6121
After Hours:	Fax:
Email address: deaned@xtra.co.nz	Website: —

DECLARATION

I Peter Allan Deane [*name of practitioner*], LBP,

state that I have applied the skill and care reasonably required of a competent design professional in carrying out or supervising the Restricted Building Work (RBW) described in this form, and that based on this, I also state that the RBW:

- (✓) 1 Complies with the building code; or
- ( ) ~~2 Complies with the building code subject to any waiver or modification of the building code recorded on this form.~~

17/2/17

Memorandum from licensed building practitioner: Certificate of design work

Section 45 and section 30C, Building Act 2004

Please fill in the form as fully and correctly as possible.

If there is insufficient room on the form for requested details, please continue on another sheet and attach the additional sheet(s) to this form.

THE BUILDING	
Street address: 102 SETTLEMENT ROAD	
Suburb: KAIWAKA	
Town/City: KAIWAKA	Postcode:

THE OWNER(S)	
Name(s): LYNETTE DHEDA	
Mailing address: 102 SETTLEMENT ROAD.	
Suburb: KAIWAKA.	PO Box/Private Bag:
Town/City:	Postcode:
Phone number: 027 6007491	Email address: WHGadmin@terranova.net.nz

BASIS FOR PROVIDING THIS MEMORANDUM

I am providing this memorandum in my role as the: Please tick the option that applies ✓

○	**sole** designer of all of the RBW design outlined in this memorandum – I carried out all of the RBW design work myself – no other person will be providing any additional memoranda for the project
○	**lead** designer who carried out some of the RBW design myself but also supervised other designers – this memorandum covers their RBW design work as well as mine, and **no other** person will be providing any additional memoranda for the project
✓	**lead** designer for all but specific elements of RBW – this memorandum only covers the RBW design work that I carried out or supervised and the **other** designers will provide their own memorandum relating to their specific RBW design
○	**specialist** designer who carried out specific elements of RBW design work as outlined in this memorandum – other designers will be providing a memorandum covering the remaining RBW design work

IDENTIFICATION OF DESIGN WORK THAT IS RESTRICTED BUILDING WORK (RBW)

I CHRIS MCALLISTER carried out / supervised the following design work that is restricted building work

PRIMARY STRUCTURE: B1

Design work that is RBW	Description of RBW	Carried out or supervised	Reference to plans and specifications
Tick ✓ if included. Cross ⊗ if excluded	If appropriate, provide details of the RBW	Tick ✓ whether you carried out this design work or supervised someone else carrying out this design work	If appropriate, specify references
All RBW design work relating to B1 ○		○ Carried out ○ Supervised	
Foundations and subfloor framing ○		○ Carried out ○ Supervised	

Design work that is RBW	Description of RBW	Carried out or supervised	Reference to plans and specifications
Tick ✓ if included. Cross ✗ if excluded	If appropriate, provide details of the RBW	Tick ✓ whether you carried out this design work or supervised someone else carrying out this design work	If appropriate, specify references
Walls ○		○ Carried out ○ Supervised	
Roof ○		○ Carried out ○ Supervised	
Columns and beams ○		○ Carried out ○ Supervised	
Bracing ✓	SUB-FLOOR BRACING FOR RELOCATION ONLY RESIDENC 'A' & 'B'	○ Carried out ✓ Supervised	WD-08 & WD-11 CALC'S
Other ○		○ Carried out ○ Supervised	

Design work that is RBW	Description of RBW	Carried out or supervised	Reference to plans and specifications
Tick ✓ if included. Cross ✗ if excluded	If appropriate, provide details of the RBW	Tick ✓ whether you carried out this design work or supervised someone else carrying out this design work	If appropriate, specify references
EXTERNAL MOISTURE MANAGEMENT SYSTEMS E2			
All RBW design work relating to E2 ○		○ Carried out ○ Supervised	
Damp proofing ○		○ Carried out ○ Supervised	
Roof cladding or roof cladding system ○		○ Carried out ○ Supervised	
Ventilation system (for example, subfloor or cavity) ✓	HORIZONTAL TIMBER BASEBOARDS FOR SUB-FLOOR VENTILATION ONLY.	○ Carried out ✓ Supervised	WD-06, WD-07, WD-13 & WD-13
Wall cladding or wall cladding system ○		○ Carried out ○ Supervised	
Waterproofing ○		○ Carried out ○ Supervised	
Other ○		○ Carried out ○ Supervised	

Design work that is RBW	Description of RBW	Carried out or supervised	Reference to plans and specifications
Tick ✓ if included. Cross ✗ if excluded	If appropriate, provide details of the RBW	Tick ✓ whether you carried out this design work or supervised someone else carrying out this design work	If appropriate, specify references
FIRE SAFETY SYSTEMS: C1 - C6			
Emergency warning systems Evacuation and fire service operation systems ○ Suppression or control systems Other		○ Carried out ○ Supervised	
Note: The design of fire safety systems is only restricted building work when it involves small-to-medium apartment buildings as defined by the Building (Definition of Restricted Building Work) Order 2011.			

WAIVERS AND MODIFICATIONS

Waivers or modifications of the Building Code are required. ○ Yes ✓ No

If Yes, provide details of the waivers or modifications below:

Clause	**Waiver/modification required**
List relevant clause numbers of building code	Specify nature of waiver or modification of building code required

ISSUED BY

Name and contact details of the licensed building practitioner who is licensed to carry out or supervise design work that is restricted building work.

Name: CHRIS MCALLISTER	LBP or Registration number: BP114593
The practitioner is a: ☑ Design LBP ○ Registered architect ○ Chartered professional engineer	
Design Entity or Company (optional): Architectural Draughting Solutions Ltd	
Mailing address (if different from below):	
Street address/Registered office:	
Suburb: KUMEU	Town/City: AUCKLAND.
PO Box/Private Bag: Po Box 120	Postcode:
Phone number: (09) 412 8749	Mobile: 021 281 2121
After hours:	Fax:
Email address: chris@adsltd.co.nz	Website:

DECLARATION

I CHRIS MCALLISTER LBP, state that I have applied the skill and care reasonably required of a competent design professional in carrying out or supervising the Restricted Building Work (RBW) described in this form, and that based on this, I also state that the RBW:

- Complies with the building code, or
- ~~Complies with the building code subject to any waiver or modification of the building code recorded on this form~~

Signature: _____

Date: 21/02/17.

ARCHITECTURAL DRAUGHTING SOLUTIONS LTD

P: (09) 412 8749
F: (09) 412 8751

E: chris@adsltd.co.nz
W: www.adsltd.co.nz

P O Box 120
Kumeu, Auckland

134 Main Road, Kumeu

To whom it may concern,

Date: 17/2/2017

I, Lynette E. Dheda give Chris McAllister from Architectural Draughting Solutions Ltd authority to act as agent for the lodgement of any Building Consents and Resource Consents for the property or properties at

102 Settlement Road Kaiwaka.

All fees are to be sent to me directly at

lynettedheda@hotmail.com

Signature L.E.Dheda.

GIB EzyBrace® 2011 Software

Demand Calculation Sheet — single storey — V06/11

Job Details

Name	Lynette Dheda
Street and Number	102 Settlement Road
Lot and DP Number	Lot 1 DP 123715
City/Town/District	Kaiwaka
Designer	CJM
Company Name	Architectural Draughting Solutions Ltd
Date	24/01/2017

BRANZ Appraised
Appraisal No.294 [2011]

Select Lining Option: 10 or 13 mm GIB® Plasterboard

Building Specification

		Single Floor	Complete Single Floor Column only
Number of storeys	single		
Floor Loading	2kPa		
Foundation Type	subfloor		
Cladding Weight (subfloor)	light		
Cladding Weight		light	
Roof Weight		light	
Room in Roof Space		no	
Roof Pitch (degrees)		21	
Roof height above eaves (m)		2.0	
Building height to apex (m)		5.1	
Ground to lower floor level (m)		0.7	
Stud Height (m)		2.4	
Building Length (m)		12.4	
Building Width (m)		11.8	
Building Plan Area (m2)		123	

Building Location

Wind Zone	***High***	**Earthquake Zone**	**Soil Type**
Select by Building Consent Authority Map		1	D&E (deep to very soft)
or Preference	High	**Annual exceedance probability**	
Wind Region	Preference selected	1/500 (NZS3604:2011 default)	
Lee Zone	Preference selected		
Ground Roughness	Preference selected		
Site Exposure	Preference selected		
Topographic Class	Preference selected		

Bracing Units required for Wind

Demand W (BU)		
	subfloor	Walls single
along	988	579
across	983	554

Bracing Units required for Earthquake

Demand along / across E (BU)	
	Walls
subfloor	single
832	625

GIB EzyBrace® 2011 Software

Subfloor Bracing Calculation Sheet — Subfloor Along — V06/11

Along							
Bracing Line		*Bracing Elements provided*				*Wind*	*Earthq.*
1	2	3	4	5	6	8W	9EQ
Line Label	Minimum BUs Req/Ach	Bracing Element No.	Supplier	Bracing Type	Number or Length L (m)	BUs Achieved	BUs Achieved
a	*line totals*	1	NZS3604	anchor pile	2	320	240
W	320	2					
EQ	240	3					
b	*line totals*	1	NZS3604	anchor pile	2	320	240
W	320	2					
EQ	240	3					
c	*line totals*	1	NZS3604	anchor pile	2	320	240
W	320	2					
EQ	240	3					
d	*line totals*	1	NZS3604	anchor pile	2	320	240
W	320	2					
EQ	240	3					
e	*line totals*	1					
W		2					
EQ		3					
f	*line totals*	1					
W		2					
EQ		3					
g	*line totals*	1					
W		2					
EQ		3					
h	*line totals*	1					
W		2					
EQ		3					
I	*line totals*	1					
W		2					
EQ		3					
j	*line totals*	1					
W		2					
EQ		3					

						Wind	Earthq.
Totals Achieved						1280	960
						OK	*OK*
Totals Required (from Sheet A)						988	832

GIB EzyBrace® 2011 Software

Subfloor Bracing Calculation Sheet — Subfloor Across — V06/11

Along							
Bracing Line		*Bracing Elements provided*				*Wind*	*Earthq.*
1	2	3	4	5	6	8W	9EQ
Line Label	Minimum BUs Req/Ach	Bracing Element No.	Supplier	Bracing Type	Number or Length L (m)	BUs Achieved	BUs Achieved
m	*line totals*	1	NZS3604	anchor pile	1	160	120
W	160	2					
EQ	120	3					
n	*line totals*	1	NZS3604	anchor pile	2	320	240
W	320	2					
EQ	240	3					
o	*line totals*	1	NZS3604	anchor pile	2	320	240
W	320	2					
EQ	240	3					
p	*line totals*	1	NZS3604	anchor pile	3	480	360
W	480	2					
EQ	360	3					
q	*line totals*	1					
W		2					
EQ		3					
r	*line totals*	1					
W		2					
EQ		3					
s	*line totals*	1					
W		2					
EQ		3					
t	*line totals*	1					
W		2					
EQ		3					
u	*line totals*	1					
W		2					
EQ		3					
v	*line totals*	1					
W		2					
EQ		3					
						Wind	Earthq.
Totals Achieved						1280	960
						OK	*OK*
Totals Required (from Sheet A)						983	832

RESIDENCE 'B' SUB-FLOOR

GIB EzyBrace® 2011 Software

Demand Calculation Sheet

single storey V06/11

Job Details

Name	Lynette Dheda
Street and Number	102 Settlement Road
Lot and DP Number	Lot 1 DP 123715
City/Town/District	Kaiwaka
Designer	CJM
Company Name	Architectural Draughting Solutions Ltd
Date	24/01/2017

BRANZ Appraised
Appraisal No.294 [2011]

Select Lining Option: 10 or 13 mm GIB® Plasterboard

Building Specification

Number of storeys	single		
Floor Loading	2kPa		
Foundation Type	subfloor		
Cladding Weight (subfloor)	light		
		Single Floor	**Complete Single Floor Column only**
Cladding Weight		light	
Roof Weight		light	
Room in Roof Space		no	
Roof Pitch (degrees)		12	
Roof height above eaves (m)		1.0	
Building height to apex (m)		4.0	
Ground to lower floor level (m)		0.7	
Stud Height (m)		2.4	
Building Length (m)		13.1	
Building Width (m)		6.4	
Building Plan Area (m2)		84	

Building Location

Wind Zone	***High***	**Earthquake Zone**	**Soil Type**
Select by Building Consent Authority Map		1	D&E (deep to very soft)
or Preference	High	**Annual exceedance probability**	
Wind Region	Preference selected	1/500 (NZS3604:2011 default)	
Lee Zone	Preference selected		
Ground Roughness	Preference selected		
Site Exposure	Preference selected		
Topographic Class	Preference selected		

Bracing Units required for Wind

Demand W (BU)		
	subfloor	Walls single
along	450	236
across	833	395

Bracing Units required for Earthquake

Demand along / across E (BU)	
	Walls
subfloor	single
564	418

GIB EzyBrace® 2011 Software

Subfloor Bracing Calculation Sheet — Subfloor Along — V06/11

Along							
Bracing Line		*Bracing Elements provided*				*Wind*	*Earthq.*
1	2	3	4	5	6	8W	9EQ
Line Label	Minimum BUs Req/Ach	Bracing Element No.	Supplier	Bracing Type	Number or Length L (m)	BUs Achieved	BUs Achieved
a	*line totals*	1	NZS3604	anchor pile	3	480	360
W	480	2					
EQ	360	3					
b	*line totals*	1	NZS3604	braced piles	2	320	240
W	320	2					
EQ	240	3					
c	*line totals*	1	NZS3604	anchor pile	3	480	360
W	480	2					
EQ	360	3					
d	*line totals*	1					
W		2					
EQ		3					
e	*line totals*	1					
W		2					
EQ		3					
f	*line totals*	1					
W		2					
EQ		3					
g	*line totals*	1					
W		2					
EQ		3					
h	*line totals*	1					
W		2					
EQ		3					
I	*line totals*	1					
W		2					
EQ		3					
j	*line totals*	1					
W		2					
EQ		3					

					Wind	Earthq.
Totals Achieved					1280	960
					OK	*OK*
Totals Required (from Sheet A)					450	564

GIB EzyBrace® 2011 Software

Subfloor Bracing Calculation Sheet — Subfloor Across — V06/11

Along							
Bracing Line		*Bracing Elements provided*				*Wind*	*Earthq.*
1	2	3	4	5	6	8W	9EQ
Line Label	Minimum BUs Req/Ach	Bracing Element No.	Supplier	Bracing Type	Number or Length L (m)	BUs Achieved	BUs Achieved
m	*line totals*	1	NZS3604	anchor pile	2	320	240
W	320	2					
EQ	240	3					
n	*line totals*	1	NZS3604	anchor pile	2	320	240
W	320	2					
EQ	240	3					
o	*line totals*	1	NZS3604	anchor pile	2	320	240
W	320	2					
EQ	240	3					
p	*line totals*	1	NZS3604	anchor pile	2	320	240
W	320	2					
EQ	240	3					
q	*line totals*	1					
W		2					
EQ		3					
r	*line totals*	1					
W		2					
EQ		3					
s	*line totals*	1					
W		2					
EQ		3					
t	*line totals*	1					
W		2					
EQ		3					
u	*line totals*	1					
W		2					
EQ		3					
v	*line totals*	1					
W		2					
EQ		3					

						Wind	Earthq.
Totals Achieved						1280	960
						OK	*OK*
Totals Required (from Sheet A)						833	564

Engineering Geology Ltd
CONSULTING GEOTECHNICAL, GEOLOGICAL AND EARTHQUAKE ENGINEERS

Unit 7C, Rosedale Office Park, 331 Rosedale Road
Albany, Auckland, New Zealand
PO Box 301054, Albany, Auckland 0752
Phone: 64 9 486 2546 Fax: 64 9 486 2556
www.enggeo.co.nz

Ref: 8199

Megan Dryden
102 Settlement Road
KAIWAKA 0573

23 September 2016

Dear Megan,

RE : 102 SETTLEMENT ROAD, KAIWAKA
TWO NEW BUILDING SITES FOR DWELLINGS
GEOTECHNICAL ASSESSMENT

1.0 INTRODUCTION

This report presents the results of a geotechnical investigation for two new building sites at 102 Settlement Road for the client Lynette Eileen Dheda. The location of the two proposed building sites was agreed on site with Megan Dryden.

The investigation has been carried out to assess the subsoil conditions on site and provide geotechnical recommendations for the proposed building sites.

2.0 SITE DESCRIPTION

The property is irregular shaped and located on the southern side of Settlement Road. There are existing dwellings on the eastern side of the property with access via a driveway commencing at the eastern boundary of the property by Settlement Road. The driveway extends southwards for about 130m then takes a right angle turn to the east where the property extends further eastwards. The two proposed building sites are located on the western side of the driveway before it takes the right angle turn as shown on the attached drawing numbers 8199-1 and 2. Site 1 is where the driveway turns east and Site 2 is by the entrance to the property.

The property generally falls to the west in a series of undulations and near level terraces to a low point along the western boundary. The steepest slopes are at about 1(v) in 4(h). The property is mainly covered in grass with occasional trees, mainly along the lower western boundary. There are signs of historic slope movement indicated by the undulating topography.

Building site 1 is located on a gentle sloping area falling to the north and west at between about 1(v) in 8(h) and 1(v) in 10(h). The ground surface on the lower northern site of the proposed building site appears to be wetter than the surrounding slopes indicating that there could be some preferential shallow seepage taking place in this area, or it is subject to greater stormwater runoff. There is no obvious indication of local shallow instability within or immediately adjacent to the building site but it could be located on a larg historical slump block.

Building Site 2 is also located on gentle sloping ground at about 1(v) in 10(h) or flatter but then becomes progressively steeper to the west where it reaches about 1(v) in 4(h) beyond the proposed building site. There is no indication of any instability within or immediately adjacent to the building site but some shallow historical instability could have taken place lower down the slope where it is steeper, as indicated by undulations on the slope.

3.0 PROPOSED DEVELOPMENT

It is understood that lightweight timber framed single storey dwellings with suspended timber floors are proposed for each of the sites. The plan dimensions of the "Recommended Building Sites" shown on drawing numbers 8199-1 and 2 are specifically sized to accommodate the proposed dwellings.

4.0 FIELDWORK

The fieldwork was carried out on 14 September 2016 and comprised drilling 6 hand auger boreholes, designated BH1 to BH6, to practical refusal at depths of between 2.7m(BH3) and 3.4m(BH2). Pilcon hand shear vane tests were carried out at approximately 0.3m depth intervals and the soil encountered in the boreholes was logged by a field technician. Scala penetrometer tests were carried out from the bottom of the boreholes and they refused at between 3.0m and 5.1m depth.

The approximate location of the boreholes is shown on the attached drawing numbers 8199-1 and 2. Descriptions of the soils encountered in the boreholes together with the measured shear vane strengths are presented on the attached borehole log sheets together with the plots of the Scala penetrometer test results.

5.0 GROUND CONDITIONS

The IGNS geological map 2 "Whangarei" (2009) shows the site underlain by "undifferentiated melange" of the Northland Allochthon comprising predominantly Mangakahia Complex mudstones. These melange units have been tectonically displaced and generally comprise sheared mudstone with tectonic blocks of variable size. The ground conditions encountered in the hand auger boreholes comprised silty clay and clayey silt inferred to be derived from insitu weathering of the mudstone, and referred to as residual soil.

Topsoil to about 0.2m depth was observed in the boreholes. Underlying the topsoil is residual soil comprising very stiff to hard silty clay and clay silt to between 2.7 and 3.4m depth, where the boreholes reached practical refusal. Shear vane strengths in the residual soil varied from 100kPa to greater than 200kPa, the maximum range of the shear vane. Only one lower shear vane strength of 81kPa was recorded in BH1 at 1.2m depth. Scala penetrometer tests driven from the bottom of the boreholes reached practical refusal at between 3.0m and 4.2m depth at Site 1 and between 4.2m and 5.1m depth at Site 2. It is inferred that these tests terminated in the transitional material between residual soil and rock (eg. mudstone).

On completion of the fieldwork, and on the same day, the water level was measured at between 0.5m (BH1) and 1.7m (BH2) depth at Site 1 and 0.7m (BH4) and 2.3m (BH6) at Site 2. BH5 at Site 2 remained dry. These water levels are unlikely to have fully equalised with the groundwater table during the short period from drilling to measurement and

therefore the actual groundwater table is anticipated to be shallower than that measured. The water table will vary seasonally with the drier and wetter periods of the year.

It is considered that the soils on site will be moderately to highly reactive and classify as Class M to H1 in terms of AS 2870:2011.

6.0 DISCUSSION

The Northland Allochthon soil and rock is prone to soil creep and instability and this is apparent from the general topography on site. Building platforms have been identified in areas considered to be suitably stable for development but could still potentially be prone to soil creep or relaxation due to creep on the nearby surrounding slopes. It is therefore recommended that the dwellings are founded on piled foundations with some of the piles downslope piles designed to resist possible lateral soil creep.

Any earthworks on site to form the building platforms should comprise only cut with no fill placed on the platform, or immediate surrounding slopes, unless approved and agreed by a Geotechnical Engineer. Any cuts greater than 1m depth, or where there is sloping ground above steeper than 1(v) in 8(h), should be retained.

7.0 DEVELOPMENT RECOMMENDATIONS

Our development recommendations are as follows.

1) It is recommended that the foundation and earthworks design for the new dwellings is reviewed and approved by a Geotechnical Engineer to confirm that it is suitable for the site and the recommendations included in this report have been correctly interpreted. It is also recommended that the location of any cut material spoiled on the site is agreed and approved by a Geotechnical Engineer to ensure that it does not result in any slope creep or instability that could affect the proposed building platforms.

   It is noted that the designated building sites have been sized to fit the proposed dwellings. Should a larger dwelling be required, or it is proposed to locate the dwelling beyond the designated area, then specific approval must be obtained from a Geotechnical Engineer for the enlarged/revised location and revised geotechnical recommendations may be required.

2) It is recommended that the soils on site are considered as Class H1 in terms of AS2870:2011, unless confirmatory swell testing is carried out, and all foundations, ground bearing slabs and services designed accordingly.

3) Earthworks to form the building platforms should comprise only cut with no fill placed on the platform, or immediate surrounding slopes, unless approved and agreed by a Geotechnical Engineer. Any cuts greater than 1m depth, or where there is sloping ground above steeper than 1(v) in 8(h), should be retained by a pole retaining wall, unless specifically agreed otherwise by a Geotechnical Engineer.

   It was noted that the lower ground on the northern side of Site 1 had relative wet surface ground conditions. Consideration may have to be given to diverting stormwater runoff away from this area and/or the installation of shallow subsoil drains.

4) Piled foundations may be designed for Ultimate Limit State using a Dependable Skin Friction of 18kPa (36kPa Ultimate) and Dependable End Bearing of 450kPa (900kPa

Ultimate) within the residual soil and underlying transitional material/rock. Skin friction to 0.6m depth and through any fill, whichever is greater, should be ignored. The piles should be founded a minimum depth of 3m or 7 pile diameters below finished ground level subject to inspection and confirmation by a Geotechnical Engineer.

It is recommended that the downslope perimeter piles, and all piles on ground steeper than 1(v) in 8(h), are designed to resist potential lateral soil creep pressure to 1.5m depth. The creep pressure should be taken as acting over 3 times the pile bore diameter. The required depth of pile embedment to resist the creep pressure may be calculated using the same design parameters given for the pole retaining wall design in recommendation (6) below. Where the piles are located in cut the depth of creep pressure may be reduced by the depth of cut (i.e. design for creep pressure to 0.5m depth if located in 1m of cut).

To install the piles to the required depth may include drilling through the underlying rock. Appropriate piling equipment will be required to penetrate the rock.

5) It is understood that the floor slabs for the dwelling are to comprise suspended timber floors. However, should the design be changed to ground bearing slabs then it is recommended that they are designed as fully suspended unless located in cut greater than 0.5m depth and subject to inspection and approval of the subgrade by a Geotechnical Engineer. Floor slabs should not be poured on subgrades which have been allowed to dry out and desiccate. The subgrade should therefore be covered by a layer of protective hardfill as soon as possible after excavation to control drying out or disturbance and remoulding of the subgrade soils under excessively wet conditions. Should cracking of clay subgrades of more than 10mm be observed, then the advice of a Geotechnical Engineer should be obtained before placing hardfill or pouring concrete.

6) The following design parameters may be adopted for pole retaining walls up to 1m in height on site. For retaining walls greater than this it is recommended that specific design recommendations are provided by a Geotechnical Engineer.

Effective cohesion	= 0
Effective friction angle	= 30 degrees
Unit weight of soil	= 18.0 kN/m^3
Undrained shear strength	= 80kPa (i.e. for embedment of pole walls)

A strength reduction factor of 0.5 should be applied to the passive resistance or undrained shear strength, depending on the wall design. The design of the wall must take into account the slope of the ground above and below the wall which will increase the pole embedment depth compared to an equivalent retained height with horizontal ground level using a Brom's type analysis.

7) The soils on the site are considered to be moderately to highly susceptible to seasonal shrinkage and swelling, the effects of which can be exacerbated by trees (especially exotic varieties), hedges and plants having a high water demand which should not be planted near shallow foundations and ground slabs as they can withdraw moisture from the soil and cause the foundations to settle. Trees should be planted no closer to the footings/slabs than 1.0 times the mature height of the tree. There will be little effect on piled foundations due to their much greater founding depth.

8) Effluent disposal should be subject to specific design taking into account the site conditions.. We assess the site subsoil to be category 6 in terms of the definitions in TP58.

9) Any stormwater collected on site should either be stored for reuse or discharged via a pipe to the bottom of the slopes and dispersed in an approved manner. No concentrated flows of stormwater should be allowed to discharge uncontrolled over the slopes which could potentially precipitate soil creep or instability.

10) During excavation, earthworks and foundation construction the site should be inspected by a Geotechnical Engineer to confirm that the ground conditions are consistent with those on which the recommendations are based and provide advice on any other geotechnical issues that may become apparent during construction.

Where Engineering Geology Ltd is required to carry out site inspections during construction and provide certification or a Producer Statement – Construction Review, it is requested that we be supplied a copy of the Building Consent Conditions. We request that a minimum notification of 24 hours be given for any site inspections and note that we will be unable to issue a Producer Statement without site inspections at the appropriate stages during construction.

We note that site inspections during construction and associated certification are not included within the budget for the preparation of the geotechnical report and will be subject to additional costs.

8.0 LIMITATIONS

Recommendations and opinions in this report are based on 6 hand auger boreholes and Scala penetrometer tests. While the nature and continuity of the subsoil conditions away from the boreholes is inferred it is possible that the actual conditions could vary from those assumed. Should variations in the subsoil conditions described in this report be found to exist, or if the building proposal is altered significantly from that described to us on site, then it is essential that Engineering Geology Ltd be contacted as it may affect the design parameters recommended above and additional investigation may be required.

This report has been prepared solely for the benefit of Lynette Eileen Dheda as our client with respect to the proposed two building sites and Engineering Geology Ltd accepts no liability to any other party in relation to this report. The reliance by other parties on the information or opinions contained in this report shall, without our prior review and agreement in writing be at such parties' sole risk

Yours faithfully
ENGINEERING GEOLOGY LTD

Report prepared by Reviewed by

J A Yeats (CPEng) R Amigh (CPEng)

Encl Borehole logsBH1 to BH6 and Scala penetrometer logs
Borehole location plan – Dwg No.8099-1 and 2

ENGINEERING GEOLOGY LTD

HAND AUGER LOG

BOREHOLE No.: BH1

SHEET 1 OF 1

Job No.: 8199

PROJECT: 102 Settlement Road, KAIWAKA

LOCATION: 102 Settlement Road, KAIWAKA

COORDINATES: **RL GROUND:** **DATE:** 14/09/2016

GRID: **DATUM:** **HOLE DEPTH:** 2.8m

GEOLOGICAL UNIT	SOIL MATERIAL DESCRIPTION	DEPTH / RL	GRAPHIC LOG	DEPTH (m)	MOISTURE CONDITION	CONSISTENCY / DENSITY	SAMPLES	WATER CONTENT (%)	WATER LEVEL	CORRECTED VANE SHEAR STRENGTH (kPa) ● Field Vane (BS 1377) ○ Remoulded Field Vane	FIELD TESTS
TS	Organic SILT; dark brown	0.0 0.2							0.50m, 14/09/2016		
Melange (Northland Allochthon)	Silty CLAY; orange and light grey/light brown. Very stiff, moist, moderate plasticity.	-0.2 0.6			M					SV: 0.3m, Test 1 133 / - kPa (N/A)	
	Clayey SILT; orange and light grey. Very stiff, moist, dry-moist.	-0.6 1.0		1	D-M	VSt			1.20m, 14/09/2016	SV: 0.6m, Test 2 117 / 39 kPa (3.0) SV: 0.9m, Test 3 144 / - kPa (N/A)	
	Silty CLAY; light grey and orange. Very stiff, dry-moist, moderate plasticity.	-1.0 1.2								SV: 1.2m, Test 4 81 / 26 kPa (3.1)	
	mottled light grey, orange, bright orange and grey with some dark brown, stiff, wet	-1.2 1.5			W	St				SV: 1.5m, Test 5 170 / - kPa (N/A)	
	very stiff, saturated	-1.5 1.8			S	VSt				SV: 1.8m, Test 6 UTP	
	Clayey SILT; dark grey/grey and brown. Hard, dry-moist, low-moderate plasticity.	-1.8 2.5		2	D-M	H				SV: 2.1m, Test 7 UTP SV: 2.4m, Test 8 UTP	
	with some clay and sand(fine), dry-moist	-2.5 2.8								SV: 2.8m, Test 9 UTP	

EOH: 2.80 m

NOTES: E.O.B@2.8m (Too hard to auger). For ground conditions below 2.8m, refer to scala penetrometer log.

LOGGED: JWil **DRILL TYPE:** 50mm Hand Auger

CHECKED:

EGL - Hand Auger - Test Pit v4 - 19/09/16 9:38:43 AM - Produced with Core-GS by Geroc

ENGINEERING GEOLOGY LTD

HAND AUGER LOG

BOREHOLE No.: BH2

SHEET 1 OF 1

Job No.: 8199

PROJECT: 102 Settlement Road, KAIWAKA

LOCATION: 102 Settlement Road, KAIWAKA

COORDINATES: **RL GROUND:** **DATE:** 14/09/2016

GRID: **DATUM:** **HOLE DEPTH:** 3.4m

GEOLOGICAL UNIT	SOIL MATERIAL DESCRIPTION	DEPTH / RL	GRAPHIC LOG	DEPTH (m)	MOISTURE CONDITION	CONSISTENCY / DENSITY	SAMPLES	WATER CONTENT (%)	WATER LEVEL	CORRECTED VANE SHEAR STRENGTH (kPa) ● Field Vane (BS 1377) ○ Remoulded Field Vane (50 100 150)	FIELD TESTS
TS	Organic SILT; brown.	0.0 *0.2*									
Melange (Northland Allochthon)	Silty CLAY; light grey with orange streaks. Very stiff, moist, moderate plasticity.	-0.2			M	VSt				○ ●	SV: 0.3m, Test 1 136 / 31 kPa (4.5)
										○ ●	SV: 0.6m, Test 1 125 / - kPa (N/A)
	brown with orange and grey streaks	*0.8* -0.8 *1.0*		1						○ ●	SV: 0.9m, Test 1 156 / 8 kPa (18.7)
	SILT sm clay; grey, orange streaks. V. stiff, dry-moist, low plast	-1.0 *1.1*									
	Silty CLAY; brown with minor orange and grey streaks. Hard, dry-moist, moderate plasticity	-1.1			D-M	H			1.70m, 14/09/2016	●	SV: 1.2m, Test 1 UTP
										●	SV: 1.5m, Test 1 UTP
	SILT with minor clay; grey with orange patches. Hard, dry, friable.	-1.6 *1.8*									
	Silty CLAY; brow, grey and dark orange. Very stiff, dry, friable.	-1.8 *2.0*		2	D	VSt				○ ●	SV: 1.8m, Test 1 136 / 33 kPa (4.1)
	Clayey SILT; dark grey with orange streaks. Hard, moist, low plasticity.	-2.0 *2.2*			M					●	SV: 2.1m, Test 1 UTP
	no streaks, dry-moist	-2.2				H				●	SV: 2.4m, Test 1 UTP
	very stiff	*2.7* -2.7			D-M					○ ●	SV: 2.7m, Test 1 150 / 56 kPa (2.7)
				3		VSt				●	SV: 3.0m, Test 1 142 / - kPa (N/A)
	hard	*3.3* -3.3 *3.4*				H				●	SV: 3.3m, Test 1 200+ kPa

EOH: 3.40 m

NOTES:

LOGGED: S.D **DRILL TYPE:** 50mm Hand Auger

CHECKED:

EGL - Hand Auger - Test Pit v4 - 19/09/16 9:38:43 AM - Produced with Core-GS by Geroc

ENGINEERING GEOLOGY LTD

HAND AUGER LOG

BOREHOLE No.: BH3

SHEET 1 OF 1

Job No.: 8199

PROJECT: 102 Settlement Road, KAIWAKA

LOCATION: 102 Settlement Road, KAIWAKA

COORDINATES: **RL GROUND:** **DATE:** 14/09/2016

GRID: **DATUM:** **HOLE DEPTH:** 2.7m

GEOLOGICAL UNIT	SOIL MATERIAL DESCRIPTION	DEPTH / RL	GRAPHIC LOG	DEPTH (m)	MOISTURE CONDITION	CONSISTENCY / DENSITY	SAMPLES	WATER CONTENT (%)	WATER LEVEL	CORRECTED VANE SHEAR STRENGTH (kPa) ● Field Vane (BS 1377) ○ Remoulded Field Vane (50 100 150)	FIELD TESTS
TS	Organic SILT; dark brown	0.0 *0.2*									
Melange (Northland Allochthon)	Silty CLAY; orange and light grey. Very stiff, moist, moderate plasticity.	-0.2		1	M	VSt			1.20m, 14/09/2016	● 157	SV: 0.3m, Test 1 157 / - kPa (N/A)
										● 157	SV: 0.6m, Test 2 157 / 65 kPa (2.4)
										● 107	SV: 0.9m, Test 3 107 / - kPa (N/A)
		1.2									
	hard	-1.2				H				● 200+	SV: 1.2m, Test 4 200+ kPa
		1.5									
	mottled orange, light grey, dark brown and grey, very stiff	-1.5				VSt				● 183	SV: 1.5m, Test 5 183 / 72 kPa (2.5)
		1.8									
	Clayey SILT; dark grey/grey. Hard, dry, low-moderate plasticity, friable.	-1.8		2	D	H				● 200+	SV: 1.8m, Test 6 200+ kPa
										● UTP	SV: 2.1m, Test 7 UTP
										● UTP	SV: 2.4m, Test 8 UTP
		2.6									
	some clay; grey, low plasticity	-2.6 *2.7*								● UTP	SV: 2.7m, Test 9 UTP

EOH: 2.70 m

NOTES: E.O.B@2.7m (Too hard to auger). For ground conditions below 2.8m, refer to scala penetrometer log.

LOGGED: JWil **DRILL TYPE:** 50mm Hand Auger

CHECKED:

EGL - Hand Auger - Test Pit v4 - 19/09/16 9:38:43 AM - Produced with Core-GS by Geroc

ENGINEERING GEOLOGY LTD

HAND AUGER LOG

BOREHOLE No.: BH4

SHEET 1 OF 1

Job No.: 8199

PROJECT: 102 Settlement Road, KAIWAKA

LOCATION: 102 Settlement Road, KAIWAKA

COORDINATES: **RL GROUND:** **DATE:** 14/09/2016

GRID: **DATUM:** **HOLE DEPTH:** 3.2m

GEOLOGICAL UNIT	SOIL MATERIAL DESCRIPTION	DEPTH / RL	GRAPHIC LOG	DEPTH (m)	MOISTURE CONDITION	CONSISTENCY / DENSITY	SAMPLES	WATER CONTENT (%)	WATER LEVEL	CORRECTED VANE SHEAR STRENGTH (kPa) ● Field Vane (BS 1377) ○ Remoulded Field Vane (50 100 150)	FIELD TESTS
TS	Organic SILT; brown.	0.0 *0.2*									
Melange (Northland Allochthon)	Silty CLAY; grey with orange streaks. Very stiff, moist, moderate plasticity.	-0.2		1	M	VSt			0.70m, 14/09/2016	● 0.3m, 139 / 44 kPa (3.1) ● 0.6m, 111 / - kPa (N/A) ● 0.9m, 108 / 39 kPa (2.8) ● 1.2m, 111 / - kPa (N/A) ● 1.5m, 128 / 47 kPa (2.7)	SV: 0.3m, Test 1 139 / 44 kPa (3.1) SV: 0.6m, Test 1 111 / - kPa (N/A) SV: 0.9m, Test 1 108 / 39 kPa (2.8) SV: 1.2m, Test 1 111 / - kPa (N/A) SV: 1.5m, Test 1 128 / 47 kPa (2.7)
		1.6									
	Clayey SILT; grey with orange streaks. Very stiff, moist, low plasticity.	-1.6								● 1.8m, 131 / 61 kPa (2.1)	SV: 1.8m, Test 1 131 / 61 kPa (2.1)
		2.0		2							
	with some clay, hard, dry-moist	-2.0 *2.2*								○ 2.1m, Test 1 UTP	SV: 2.1m, Test 1 UTP
	clayey	-2.2 *2.4*				H				○ 2.4m, Test 1 0+ kPa	SV: 2.4m, Test 1 0+ kPa
	with some clay, dark grey and dark orange	-2.4 *2.5*			D-M						
	dark grey	-2.5 *2.6*									
	clayey, very stiff	-2.6				VSt			3.00m, 14/09/2016	● 2.7m, 167 / 53 kPa (3.2)	SV: 2.7m, Test 1 167 / 53 kPa (3.2)
		2.9									
	with reddish brown streaks	-2.9 *3.0*		3							
	hard, saturated	-3.0			S	H				○ 3.0m, Test 1 UTP	SV: 3.0m, Test 1 UTP
		3.2									

EOH: 3.20 m

NOTES:

LOGGED: S.D **DRILL TYPE:** 50mm Hand Auger

CHECKED:

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HAND AUGER LOG

BOREHOLE No.: BH5

SHEET 1 OF 1

Job No.: 8199

PROJECT: 102 Settlement Road, KAIWAKA

LOCATION: 102 Settlement Road, KAIWAKA

COORDINATES: **RL GROUND:** **DATE:** 14/09/2016

GRID: **DATUM:** **HOLE DEPTH:** 2.8m

GEOLOGICAL UNIT	SOIL MATERIAL DESCRIPTION	DEPTH / RL	GRAPHIC LOG	DEPTH (m)	MOISTURE CONDITION	CONSISTENCY / DENSITY	SAMPLES	WATER CONTENT (%)	WATER LEVEL	CORRECTED VANE SHEAR STRENGTH (kPa) ● Field Vane (BS 1377) ○ Remoulded Field Vane (50 100 150)	FIELD TESTS
TS	Organic SILT; brown.	0.0 *0.2*									
Melange (Northland Allochthon)	Silty CLAY; grey with orange streaks. Very stiff, moist, moderate plasticity.	-0.2		1	M	VSt			Groundwater Not Encountered	● 100 / 47 kPa (2.1)	SV: 0.3m, Test 1 100 / 47 kPa (2.1)
										● 139 / 39 kPa (3.6)	SV: 0.6m, Test 1 139 / 39 kPa (3.6)
										● 142 / - kPa (N/A)	SV: 0.9m, Test 1 142 / - kPa (N/A)
		1.1									
	Clayey SILT; light grey with orange streaks. Very stiff, dry-moist, low plasticity	-1.1			D-M					● 167 / 33 kPa (5.0)	SV: 1.2m, Test 1 167 / 33 kPa (5.0)
		1.4									
	with some clay; hard	-1.4								● UTP	SV: 1.5m, Test 1 UTP
		1.6									
	with minor clay and sand (fine), grey with orange and minor black streaks, dry	-1.6		2	D					● UTP	SV: 1.8m, Test 1 UTP
		2.0									
	Silty CLAY; grey with black and orange streaks. Hard, moist, moderate plasticity.	-2.0				H				● 200+ kPa	SV: 2.1m, Test 1 200+ kPa
		2.2									
	red and grey with orange and black streaks	-2.2			M					● UTP	SV: 2.4m, Test 1 UTP
		2.5									
	reddish brown and dark grey	-2.5								● UTP	SV: 2.7m, Test 1 UTP
		2.8									

EOH: 2.80 m

NOTES:

LOGGED: S.D **DRILL TYPE:** 50mm Hand Auger

CHECKED:

EGL - Hand Auger - Test Pit v4 - 19/09/16 9:38:44 AM - Produced with Core-GS by Geroc

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HAND AUGER LOG

BOREHOLE No.: BH6

SHEET 1 OF 1

Job No.: 8199

PROJECT: 102 Settlement Road, KAIWAKA

LOCATION: 102 Settlement Road, KAIWAKA

COORDINATES: **RL GROUND:** **DATE:** 14/09/2016

GRID: **DATUM:** **HOLE DEPTH:** 2.8m

GEOLOGICAL UNIT	SOIL MATERIAL DESCRIPTION	DEPTH / RL	GRAPHIC LOG	DEPTH (m)	MOISTURE CONDITION	CONSISTENCY / DENSITY	SAMPLES	WATER CONTENT (%)	WATER LEVEL	CORRECTED VANE SHEAR STRENGTH (kPa) ●Field Vane (BS 1377) ○Remoulded Field Vane (50 100 150)	FIELD TESTS
TS	Organic SILT; dark brown	0.0 *0.1*									
Melange (Northland Allochthon)	Silty CLAY; orange and light grey. Hard, moist, moderate plasticity.	-0.1				H					SV: 0.3m, Test 1 200+ kPa
											SV: 0.6m, Test 2 200+ kPa
		0.9									SV: 0.9m, Test 3 131 / 39 kPa (3.3)
	very stiff	-0.9		1	M	VSt					
		1.2									SV: 1.2m, Test 4 200+ kPa
	hard	-1.2									
		1.4									SV: 1.5m, Test 5 200+ kPa
	Clayey SILT with minor sand(fine); mottled light grey, orange, brown and bright orange. Hard, moist, moderate plasticity.	-1.4									
		1.6									SV: 1.8m, Test 6 200+ kPa
	light grey with bright orange and dark brown patches	-1.6									
		1.8									SV: 2.1m, Test 7 200+ kPa
	grey with light brown/light grey streaks, saturated	-1.8		2		H			2.30m, 14/09/2016		
		2.1			S						SV: 2.4m, Test 8 UTP
	dark grey	-2.1									
		2.5									SV: 2.7m, Test 9 UTP
	some clay; grey, dry, low plasticity, friable	-2.5			D						
		2.8									

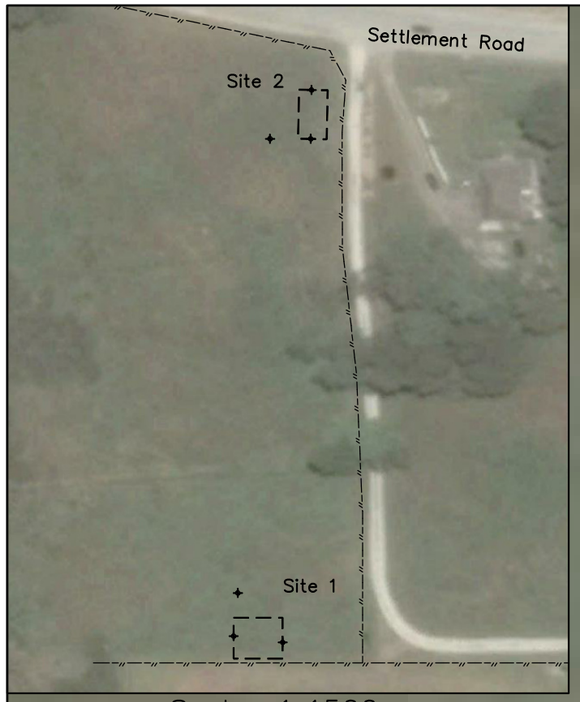
EOH: 2.80 m

NOTES: E.O.B@2.8m (Too hard to auger). For ground conditions below 2.8m, refer to scala penetrometer log.

LOGGED: JWil **DRILL TYPE:** 50mm Hand Auger

CHECKED:

EGL - Hand Auger - Test Pit v4 - 19/09/16 9:38:44 AM - Produced with Core-GS by Geroc



Scale: 1:1500

To Settlement Road

N

Gravel Driveway

Fence

BH3

12m

10m

BH2

BH1

Recomended Building Site

1m

20m

Fence

Notes:
1. This drawing is for Information only and it is not issued for Construction.
2. The location and alignment of the structures, boundaries and the underground and above ground services shown in this drawing are approximate only and shall be verified and confirmed on site prior to any excavation and construction work.

Legend

BH1 Hand Auger Borehole

Recommended Building Site

0 3 5 10 15m

Scale 1:250

Reference:
Google Earth
Date: Sept 2016

ENGINEERING GEOLOGY LTD
Unit 7C, 331 Rosedale Rd, PO Box 301054, Albany
Ph (09)486-2546, Fax (09)486-2556

(Site 1) 102 Settlement Road, KAIWAKA
Borehole Location Plan

Drawing No.	8199-1
Date:	Sept 2016
Drawn:	JWil
Scale:	1:250 (A3)
Filename:	8199-1.dwg



Notes:
1. This drawing is for Information only and it is not issued for Construction.
2. The location and alignment of the structures, boundaries and the underground and above ground services shown in this drawing are approximate only and shall be verified and confirmed on site prior to any excavation and construction work.

Legend

BH1 Hand Auger Borehole

Recommended Building Site

Reference:
Google Earth
Date: Sept 2016

ENGINEERING GEOLOGY LTD
Unit 7C, 331 Rosedale Rd, PO Box 301054, Albany
Ph (09)486-2546, Fax (09)486-2556

(Site 2) 102 Settlement Road, KAIWAKA
Borehole Location Plan

Drawing No.	8199-2
Date:	Sept 2016
Drawn:	JWil
Scale:	1:250 (A3)
Filename:	8199-1.dwg

PROPERTY SOLUTIONS

To Whom It May Concern:

Please find enclosed your Independent Building Report.

We trust the information will be of assistance to you, if we can be of any further assistance please do not hesitate to contact our office.

Best regards,

The Inspections Team
Property Solutions Surveys Ltd

- Painting / Waterproofing
- Roof repair services
- Building Inspections
- Safe & Sanitary Reports
- Final Sign-Offs
- Reports to Council
- Land Information Search
- Structural Reports
- Seismic (IEP) Surveys
- Engineers Reports
- Draughting
- Building Maintenance

Property Solutions

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Glen Eden

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Edmonton. 0652

Phone:
(09) 818-4873

Fax:
(09) 813-0963

Email:
info@propertysolutions.co.nz

Web:
www.propertysolutions.co.nz

Report Prepared For: Lynette Dheda

Date of inspection: 25th January 2017

INDEPENDENT BUILDING INSPECTION/SECOND HAND STRUCTURAL REPORT

House CW 448, Craig Walker Building Removals
134 Main Road, Kumeu



Following our recent inspection of the above-mentioned property we submit our report and findings and confirm the following.

Dear Lynette

Property Solutions Surveys Ltd services have been engaged to carry out an Independent Second Hand Building Inspection of the property located at Craig Walker Building Removals, Kumeu.

Please take note of the following Terms and Conditions, and that acceptance of this report constitutes an acceptance of the following conditions.

Any Independent Building Inspection/Structural Report **("Report")** prepared by Property Solutions Surveys Ltd ("we", "us" or "our") shall be deemed to include these Terms and Conditions. Property Solutions Surveys Ltd will not issue any reports except on their terms and conditions.

Scope of this Report

1. This Report
   a. This report has been prepared on the basis of a visual inspection of the building work using normal readily available access and without testing of components for the assessment of the overall structural condition of the building work and associated items, and without recourse to the construction drawings. It is confirmed that no detailed geotechnical investigation has been included in the brief. An investigation of the condition and location of underground drainage and services and of electrical, gas and plumbing (except as otherwise described in this report) is not included in the brief. No warranty can be given to any other defects not apparent to visual inspection at the time i.e. inside linings or cavities. Please note that we do not remove or uplift any fixtures, i.e. panels or carpets and we are unable to assess any hidden membranes or waterproofing below finished ground level.

      Although Property Solutions include plumbing, drainage, and electrical components, it is advised that they are not Registered Drain layers or Qualified Electricians. No warranty or guarantee is expressed or issued for these components.

      The conclusions and recommendations given do not necessarily meant that the items of building work will meet the requirements of the current Building Code. The reliance by other parties on the information or opinions contained in this report shall, without our prior review and agreement in writing, be at such party's sole risk.

   b. This is a preliminary non-invasive investigation for visible Defects, if any visible Defect is detected, this may be followed up at the **election of the customer** with further invasive or non-invasive investigations carried out by certified contractors. A non-invasive moisture reading is not a conclusive indication that moisture is present, in some cases hidden metals or chemical preservatives may affect a non-invasive capacitance moisture meter. The non-invasive moisture meter will only read moisture content up to 24mm to the wall, therefore some moisture in the wall could be missed if not within the vicinity of 24mm of the interior walls. Weather conditions could also affect the outcome of readings taken.
   c. Prices given for remedial work on faulty items are to serve as a guild only and it is recommended that quotations be obtained from suitably qualified tradespersons for the areas identified. Although these costings may be used in negotiations with vendors we do not accept responsibility for variation in prices received by contractors tendering for the work.
   d. The inspect is restricted to areas that have available access and will not include the removal of wall linings, building paper or insulation or any other covering or lining material. It cannot include **CONCEALED** plumbing, piping, drainage, and electrical items. Flint coat waterproofing or underground sealants commonly used in basement developments and associated drainage below ground cannot be accurately assessed.
   e. If ready access was not possible into the ceiling cavity or subfloor areas, they will be identified and excluded from the report.
   f. This report does not provide any guarantee whatsoever that items surveyed i.e. structures, services, fittings fixed or otherwise will not fail at some later date and information herein pertains strictly to observations on the day of inspection and accessibility.

g. This report does not purport to certify the soil stability or conditions of underground services including underground protective coatings, which are not able to be included. It assumes compliance in all aspects with Territorial Authority Ordinances / The Building Act 1991, and does not certify that all building improvements lie within the title boundaries. Furthermore, this report assumes that a Territorial Authority Land Information Memorandum (LIM) / Project Information Memorandum (PIM) would not reveal any non-complying features and/or requisitions.
h. The positioning of the building or improvements in relation to the site boundaries are excluded but can be checked upon request.
i. Electrical and plumbing to pools and spas are not included in this report and we suggest independent professional advise be sought.
j. We are unable to carry out any probe or destructive testing, nor move any furnishings or appliances, in a visual inspection.
k. The inspection and report are not intended to be technically exhaustive, or to imply that every component was inspected, or that every possible defect was discovered. No disassembly of equipment, opening of walls, moving of furniture, appliances or stored items, or excavation will be preformed. All components and conditions, which by nature of their location are concealed, camouflaged, or difficult to inspect, are excluded from this report.
l. Systems and conditions which are not within the scope of the building inspection include, but are not limited to: formaldehyde, lead paint, asbestos, toxic or flammable materials, and other environmental hazards pest infestation, playground equipment efficiency measurements of insulation or heating and cooling equipment, internal or underground drainage or plumbing, any systems which are shut down or otherwise secured; water wells (water quality and quantity), zoning ordinances; intercom; security systems; heat sensors; cosmetics or building code conformity. Any general comments about these systems and conditions are informational only and do not represent an inspection.

Limits of this Report

2. This Report
   a. Is only for the benefit of the customer who instructed Property Solutions to prepare the Report and may not be relied upon by any other party.
   b. Is not designed or intended to identify potential problems or issues within the Area other than the Defects and, without limitation, will not:
      i. Identify the presence or absences of dry/wet rot or any hazardous substance including, without limitation, mould toxins, carcinogens, noise or other contaminants;
      ii. Identity the presence or absences of any pests including, without limitation, wood damaging organisms, rodents or insects;
      iii. Determine the effectiveness of any equipment, utility, component or system installed to control leaks, moisture, heat loss, dry rot or hazardous substances;
      iv. Determine the life expectancy or future condition of any equipment, utility component or system; and
      v. Determine compliance or non-compliance with any statutory or regulatory requirement, code, bylaw, ordinance or other restriction; and

   c. Does not contain any advise, and cannot be relied on for any advise, relating to;
      i. Any methods, materials or cost of the repair of any Defect;
      ii. The suitability of the building for any specialised use;
      iii. The market value or marketability of the building; and
      iv. The advisability or inadvisability of the sale or purchase of the building.

Limits to our Obligations

3. In conducting our inspection, the customer acknowledges and agrees that we will not be required to:
   a. Disturb or move any insulation, panels, furniture, personal items, equipment, vegetation or other items or materials that obstruct access or visibility to the thermal inspection; and
   b. Operate any equipment, utility, component, or system that is shut down, inoperable or that does not respond to normal operating controls.

Exclusion of Implied Conditions and Warranties and Limitation of Liability

4. Where the customer is engaging our services for business purposes, the Consumer Guarantees Act 1993 (the "Act") will not apply.
5. If the customer is a consumer under the Act, to the extent that the customer's rights under the Act have not been excluded in clause 4 above, nothing in these terms and conditions will affect the rights of the customer under the Act.
6. Subject to clause 5:
   a. The customer relies upon their own knowledge, skill or judgement in relation to the particular use or suitability of this Report for the customers purpose: and
   b. All warranties, descriptions, representations, or conditions; whether imp0lied by the Sale of Goods Act 1908 or otherwise are expressly excluded to the fullest extent permitted by law.
7. Save as expressly provided otherwise in this Report or these Terms and Conditions, we shall not be liable, and none of our employees or contractors shall be liable to any customer, the customer's agents or employees or any other person for any direct, indirect, incidental or consequential damage or loss of any nature how so ever caused, (whether based on tort (including negligence), contract or otherwise), including but not limited to loss of profits, loss of sales opportunity, damage to equipment or property (including any cost or loss relating to any invasive inspection) or any other claim whatsoever arising directly or indirectly or in any way attributable to the performance or non-performance of our services or other obligations.
8. If, for any reason we are found to be liable to the customer or any other person in connection with this Report and/or the performance or non-performance of our services and we are unable to rely on the exclusions of liability set out in these Terms and Conditions, our liability shall in all cases be limited to the price paid or payable by the customer for such Report or services.

Moisture Meters and Weather tightness

The report cannot give any water proofing guarantee, as it is not readily possibly nor required to create simulated conditions to induce moisture ingress. However, signs of moisture ingress are looked for and spot checking is carried out predominantly around windows, doors and identified risk areas with a moisture meter.

The moisture meter used during the inspection is a Wagner L606 which is calibrated in accordance with manufacturer's specifications, this device is used for non-invasive test, and while this is deemed non-conclusive, it can be a good indicator of the presence of moisture. However, the condition and treatment type of any internal timbers is not known.

Definition of terms used for indications of moisture readings are as follows:-

- ✓ Normal – Generally indicates moisture readings up to approximately 16%
- ✓ Slightly High – Generally indicates moisture readings between 17 to 22%
- ✓ Higher – Generally indicates moisture readings between 23 to 30%
- ✓ Very High – Generally indicates moisture readings 30% and above

Accurate moisture readings can only be obtained by intrusive means, which is not carried out during the inspection, unless requested and permission had been given by vendors/property owners. However, where slight high or greater moisture readings are indicated during the inspection, further investigation would be required to determine the source of the readings, and this would also require permission from vendor/property owner(s) before further action is taken.

It is important to be aware that the lack of moisture indicators does not confirm that a property does not have moisture issues. Because water accumulates and travels immediately behind the external cladding, the external cladding is ideally what should be tested. However, this is not practical, nor possible with some claddings and weather conditions, therefore the meters are predominantly used from the interior of the home. A visual inspection and non-invasive testing may provide no initial evidence of leaking, knowledge of known weather tight risk details and/or signs to look for become more critical. Further investigation will be recommended where there is sufficient evidence and concern that it may reveal signs of severe moisture penetration.

Regards
Property Solutions Surveys Ltd

1.0 INTRODUCTION

The subject structure comprises a single level three bedroom dwelling scheduled for relocation. Construction is possibly around the 1960's and includes weatherboard cladding, iron roofing and timber joinery.

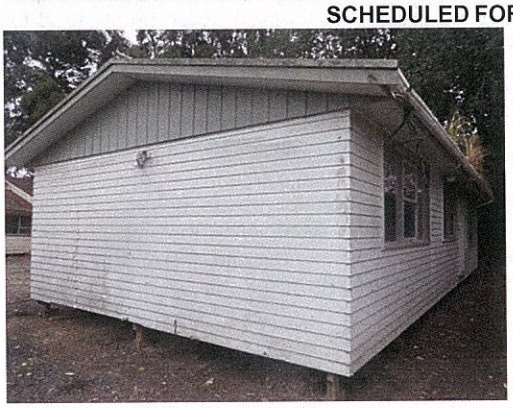
Councils will require a second hand building report to identify any defects or issues that may be pertinent to the structure's weathertightness and its desirability for its proposed new site.

The purpose of this report is to identify any decay or defective items that would not be acceptable on the proposed relocation site or neighbourhood / community. The primary focus will be upon visible defects or items that may require remedial work following relocation in order to comply or receive approval from the tertiary authorities control area. Ideally Councils would require the building to meet certain criteria and standards and any defective items, particularly those relating to weathertightness, or the aesthetics of the building may require upgrading following relocation.





1960's SINGLE LEVEL, THREE BEDROOM WEATHERBOARD & IRON ROOF DWELLING SCHEDULED FOR RELOCATION





PROPERTY SOLUTIONS

- Painting / Waterproofing
- Roof repair services
- Building Inspections
- Safe & Sanitary Reports
- Final Sign-Offs
- Reports to Council
- Land Information Search
- Structural Reports
- Seismic (IEP) Surveys
- Engineers Reports
- Draughting
- Building Maintenance

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Email:
info@propertysolutions.co.nz

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www.propertysolutions.co.nz





2.0 BRIEF OVERVIEW

2.1 TYPE OF BUILDING - DWELLING

2.2 PRESENT LOCATION – CRAIG WALKER BUILDING REMOVALS YARD - KUMEU

2.3 PROPOSED USE- DWELLING

2.4 CHANGE OF USE - NO

2.5 DESCRIPTION -

A. EXTERIOR CONSTRUCTION

- CLADDING - WEATHERBOARD
- JOINERY - TIMBER
- SPOUTING - PVC
- ROOFING – CORRUGATED IRON
- ROOF TYPE - HIP

B. INTERIOR CONSTRUCTION

- FRAMING - TIMBER
- LININGS – PAPER-FACED PLASTERBOARD
- CEILINGS – PINEX TILES
- ROOF SUPPORT – RAFTER/JOIST DETAIL

C. EXTERIOR APPEARANCE

- ROOF – REASONABLE ORDER / MAKE GOOD, REPAIR & REPAINT
- WALLS – REASONABLE ORDER / MAKE GOOD
- JOINERY – REASONABLE ORDER / MAKE GOOD & REPAINT

D. INTERIOR APPEARANCE

- WALLS – REASONABLE CONDITION / MAKE GOOD & REDECORATE
- CEILINGS – REASONABLE CONDITION / MAKE GOOD & REDECORATE
- DOORS – REASONABLE CONDITION

2.6 PLUMBING & DRAINAGE

- CURRENT – STANDARD UNDER-BENCH PLUMBING
- WATER CYLINDER – MAINS PRESSURE SYSTEM

2.7 WILL THE STRUCTURE REQUIRE CUTTING TO ENABLE TRANSPORTATION - NO

2.8 MOVING CONTRACTOR - CRAIG WALKER BUILDING REMOVALS

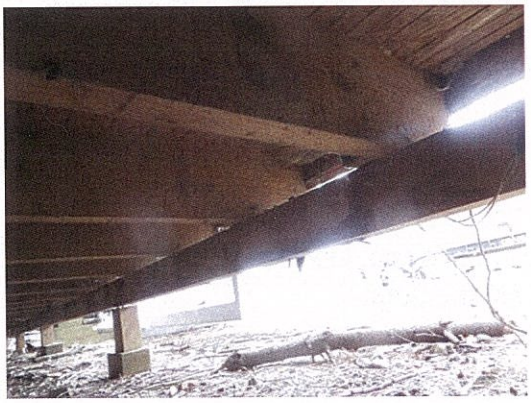
3.0 FOUNDATION & SUBFLOOR

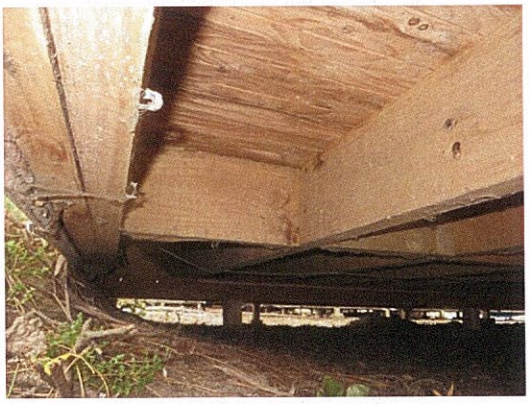
The foundation/subfloor comprises 200x50 floor joists supported by 100x75 bearers and tongue and groove flooring. The subfloor is non-insulated. The subfloor members show no rot or decay and should be reusable. A revised grid style foundation, site specific will be required upon resiting.





SUBFLOOR – JOIST, BEARER, TONGUE & GROOVE FLOORING / NON-INSULATED





4.0 CLADDING & JOINERY

4.1 CLADDING

The cladding features a standard bevel back timber weatherboard. Generally the weatherboards are in reasonable order, showing no serious rot but some making good will be required upon resiting.

The gable end cladding is fibre cement, Highline or Shadowline.

Soffit linings are fibre cement sheeting butt jointed. The soffits will require making good and repairs.



MAKE GOOD SOFFIT LININGS



MAKE GOOD CLADDING

4.2 JOINERY

Window joinery is timber with pivot and awning type sash, fixed sash and conventional sill and scribe detail. The joinery is mostly functional, except the lounge end window which requires repair. The joinery units will require making good, replacing any faulty glazing putties, easing, careful preparation and repainting.





TIMBER WINDOW JOINERY – STRIP, PREPARE & REPAINT




STRIP, PREPARE & REPAINT JOINERY



PREPARE & REPAINT



HEAD FLASHING DETAIL




REFIT EXTERIOR DOOR FRAME & FLASHING/
MAKE GOOD BUILDING ENVELOPE



RESECURE LOUNGE WINDOW

5.0 ROOFING

5.1 ROOFING EXTERIOR

The roofing is corrugated iron, set in a hip configuration with standard ridge. The roof should be checked upon resiting and made good, penetrations points repaired, carefully prepared and repainted.



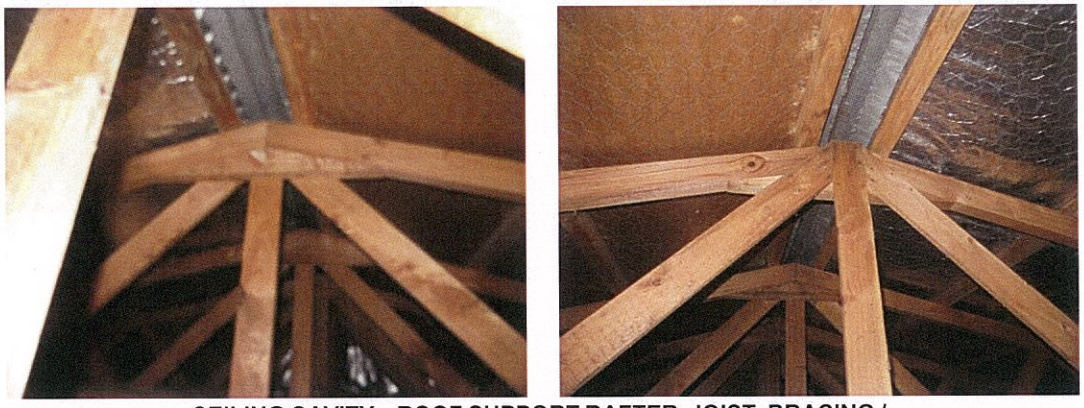
ROOFING – CORRUGATED IRON / MAKE GOOD, REPAIR PENETRATIONS



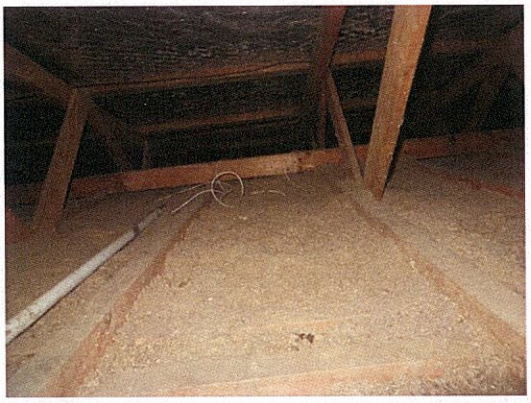
PREPARE & REPAINT ROOFING

5.2 CEILING CAVITY

The roof support mechanism comprises a standard rafter detail with joist rafters of 100x50, diagonal bracing, standard joists of 150x50 and insulation is installed. Aluminium foil wrap has been installed between the roofing material and purlins.



CEILING CAVITY – ROOF SUPPORT RAFTER, JOIST, BRACING / INSULATION INSTALLED, LOOSE FILL, MINIMAL THICKNESS



6.0 PLUMBING & DRAINAGE

PVC guttering circumnavigates the roofline and provides stormwater catchment. The guttering will require repair, re-alignment and reconnection to an approved stormwater system.

The hot water cylinder will require reinstatement upon resiting.





REPAIR & REALIGN GUTTER

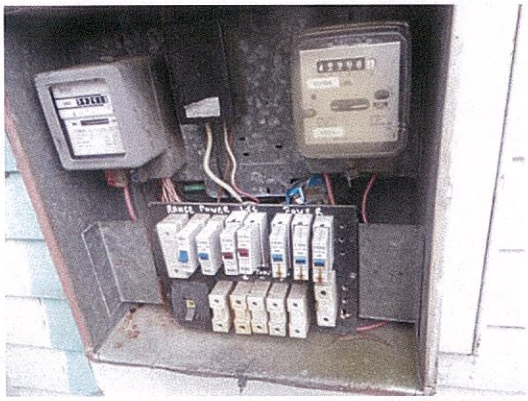
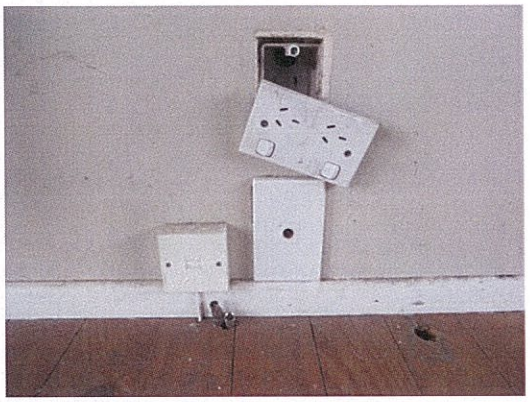


HOT WATER CYLINDER – CHECK & TEST ON SITE

7.0 ELECTRICAL

Electrical includes a standard distribution board, currently exposed without cover.

Please note that the writer is not a qualified electrician and that this was a visual inspection only.

DISTRIBUTION BOARD LACKS COVER / MAKE GOOD WIRING & FITTINGS

8.0 INTERIOR

The interior floor plan features an open plan lounge, kitchen, dining, hallway which provides access to a separate toilet, separate bathroom and three bedrooms.

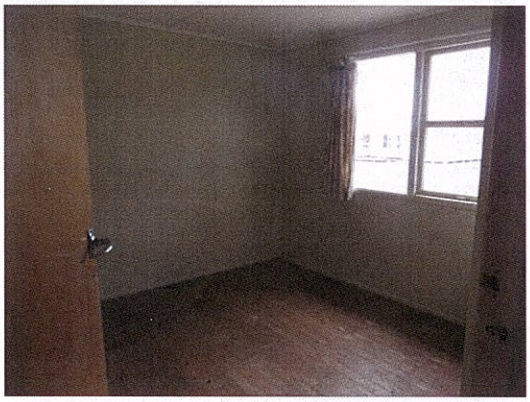



INTERIOR ROOMS





INTERIOR ROOMS



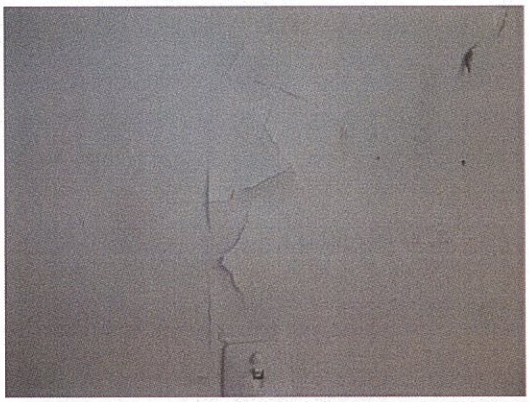
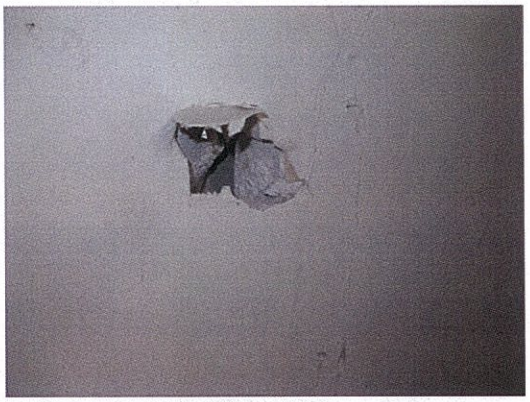




FLOORING SECURE

9.0 INTERNAL LININGS

Internal wall linings are paper-faced plasterboard. Ceiling linings are Pinex tiles. Generally the linings are in reasonable order but will require making good and complete redecoration.

WALL LININGS – MAKE GOOD, PREPARE & REDECORATE






CEILING LININGS – WATER STAINS




MAKE GOOD CEILING LININGS & REDECORATE





THERMAL IMAGING RESULTS SATISFACTORY






10.0 INTERNAL JOINERY

Internal door joinery is a hollow core veneer door, typical for the circa with standard architrave, frame, conventional hinges and hardware.



DOOR JOINERY

11.0 PRESENCE OF ASBESTOS

No

12.0 FUMIGATION

Will the structure require fumigation - No

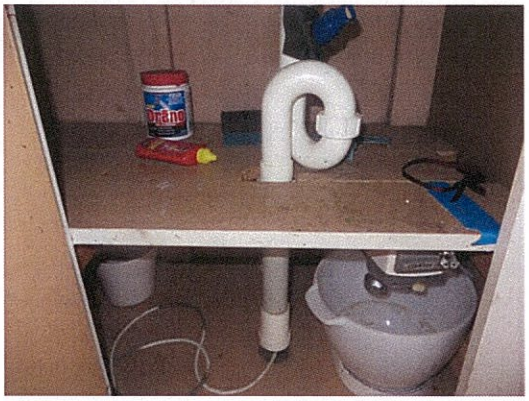
13.0 SERVICE AREAS

13.1 KITCHEN

The kitchen features a Formica bench top, timber cupboard and carcass units, standard plumbing and drainage, under-bench dishwasher, Simpson Apollo oven and ceramic cooktop. The units will require redecoration and the benches show ware.



KITCHEN – UNITS AGEING / REDECORATE

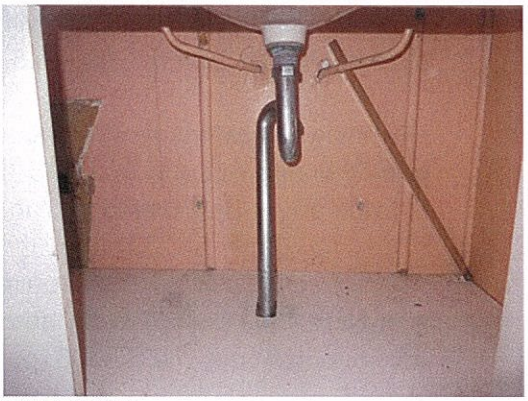


STANDARD PLUMBING & DRAINAGE

13.2 BATHROOMS

The bathroom includes a PVC bath/shower combined with Felton mix single levered fawcett, Formica bench top and basin with standard plumbing and drainage.





BATHROOM – VANITY AGEING

13.3 TOILET

The toilet is a separate facility and includes a conventional dual flush wall mounted cistern on standard pan and wash basin. The rubber flexi joint to the toilet may require replacement.




TOILET – WALL CISTERN, STANDARD PAN – RECOMMISSION

14.0 RECOMMENDATIONS

1. We recommend the house be lifted and transported in accord with accepted trade and industry standards.

2. Resiting should be to an approved foundation system, site specific in accord to NZS 3604 and an approved design under the consent process.

3. Ensure siting is in accord with approved drawings and compares favourably with boundary rule 7.8.1.1 (District Plan).

4. Plumbing and drainage will require reconnection in accord with Plumbing and Drainage Act and to NZBC G1/AS1, G13, AS/NZS 1260 and 3500. Provide an As-Built drainage plan.

5. The hot water cylinder will require reinstatement/reconnection in accord with NZS 4603/3, NZS 3501 and NZS 2642.2 (PB) and NZS 4602 (low pressure systems), NZS 4603 (open vented).

6. Electrical services will require reconnection in accord with NZ Electrical standards, NZS 3000 and Regulations 1997 and the work should be issued with a Certificate of Compliance upon completion. Resecure the electrical distribution board.

7. Install smoke detectors in accord with AS 3786. F7.

8. Compare insulation and adjust in accord with NZS 3604 H1 / R2 (Roof) and R1.9 (walls).

9. The roofing should be checked and any damage caused during transportation should be repaired including roof penetration, careful preparation and repainting in accord with NZS 3604 E2/AS1 to ensure continued weathertightness. Also repair and realign guttering.

10. Make good the cladding and any damage caused during transportation including careful preparation and repainting in accord with NZS 3604 E2 & B1 and Branz Bulletin 314 / NZBC E2 2.1.

11. Make good exterior window joinery, strip, ease, prepare and repaint in accord with NZS 4223.

12. Make good soffit linings.

13. Make good internal wall and ceiling linings in accord with NZS/AS 1859 & NZS 422.

14. Redecorate interior as required in accord with Branz Bulletin 314.

15. Make good and ease internal joinery to ensure correct functions are restored.

16. Complete re-establishing the building in accord with the building consent and any endorsements attached.

17. Ensure surface water is diverted away from the dwelling in accord with NZBC E1.

15.0 E2

Providing the cladding and roofing is made good upon resiting, weathertightness should be maintained.

16.0 B1

The building has performed reasonably well to date and has stood the test of time without serious component failure. It is therefore fair and reasonable to assume that the structure has proved to satisfy provisions under the NZ Building Act B1, B2.

17.0 CONCLUSION

The structure is a reasonable example of a 1960's weatherboard and iron roof dwelling, of non-complex design with conventional framing and subfloor members. Maintenance, typical for the vintage and design is required but no serious component failure was noted. Moisture levels were satisfactory and thermal imaging showed no historic leak or dampness.

Providing the building is moved and reinstatement is completed in accord with accepted industry and trade standards, and the structure is kept well maintained and weathertight, we would suggest that the building will continue to perform in accord with its design potential.

Repairs should be completed by qualified tradespersons and in accord with industry standards and building code requirements.

The writer advised that he was not present during the design stages or the construction of the structure and therefore cannot extend any warranty or guarantee in regard to the performance of the cladding or any items not visible at the time of the inspection. The writer has used a surface scan moisture meter test system only and has not exposed any linings or conducted any invasive tests in regards to the cladding system.

Please note that this report must be read in conjunction with Terms and Conditions, Limitations included at the beginning of this report. Payment is required upon receipt of invoicing and confirms that you have read and accepted the Terms and Conditions and Limitations contained within this report.

We trust this information is of assistance and sufficient for your requirements. Should you require any further information or have any queries, please do not hesitate to contact the writer.

Yours faithfully
Property Solutions Surveys Ltd



Rod Pratt
(BOINZ, CINZ)
ACCREDITED BUILDING SURVEYOR 20071801

RESIDENCE 'A'

To Whom It May Concern:

Please find enclosed your Independent Building Report.

We trust the information will be of assistance to you, if we can be of any further assistance please do not hesitate to contact our office.

Best regards,

The Inspections Team
Property Solutions Surveys Ltd

- Painting / Waterproofing
- Roof repair services
- Building Inspections
- Safe & Sanitary Reports
- Final Sign-Offs
- Reports to Council
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Report Prepared For: Lynette Dheda

Date of inspection: 25th January 2017

INDEPENDENT BUILDING INSPECTION/SECOND HAND STRUCTURAL REPORT

CW 364, Craig Walker Building Removals
1 Weza Lane, Kumeu



Following our recent inspection of the above-mentioned property we submit our report and findings and confirm the following.

Dear Lynette

Property Solutions Surveys Ltd services have been engaged to carry out an Independent Second Hand Building Inspection of the property located at Craig Walker Building Removals, Kumeu.

Please take note of the following Terms and Conditions, and that acceptance of this report constitutes an acceptance of the following conditions.

Any Independent Building Inspection/Structural Report **("Report")** prepared by Property Solutions Surveys Ltd ("we", "us" or "our") shall be deemed to include these Terms and Conditions. Property Solutions Surveys Ltd will not issue any reports except on their terms and conditions.

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   d. The inspect is restricted to areas that have available access and will not include the removal of wall linings, building paper or insulation or any other covering or lining material. It cannot include **CONCEALED** plumbing, piping, drainage, and electrical items. Flint coat waterproofing or underground sealants commonly used in basement developments and associated drainage below ground cannot be accurately assessed.
   e. If ready access was not possible into the ceiling cavity or subfloor areas, they will be identified and excluded from the report.
   f. This report does not provide any guarantee whatsoever that items surveyed i.e. structures, services, fittings fixed or otherwise will not fail at some later date and information herein pertains strictly to observations on the day of inspection and accessibility.

g. This report does not purport to certify the soil stability or conditions of underground services including underground protective coatings, which are not able to be included. It assumes compliance in all aspects with Territorial Authority Ordinances / The Building Act 1991, and does not certify that all building improvements lie within the title boundaries. Furthermore, this report assumes that a Territorial Authority Land Information Memorandum (LIM) / Project Information Memorandum (PIM) would not reveal any non-complying features and/or requisitions.
h. The positioning of the building or improvements in relation to the site boundaries are excluded but can be checked upon request.
i. Electrical and plumbing to pools and spas are not included in this report and we suggest independent professional advise be sought.
j. We are unable to carry out any probe or destructive testing, nor move any furnishings or appliances, in a visual inspection.
k. The inspection and report are not intended to be technically exhaustive, or to imply that every component was inspected, or that every possible defect was discovered. No disassembly of equipment, opening of walls, moving of furniture, appliances or stored items, or excavation will be preformed. All components and conditions, which by nature of their location are concealed, camouflaged, or difficult to inspect, are excluded from this report.
l. Systems and conditions which are not within the scope of the building inspection include, but are not limited to: formaldehyde, lead paint, asbestos, toxic or flammable materials, and other environmental hazards pest infestation, playground equipment efficiency measurements of insulation or heating and cooling equipment, internal or underground drainage or plumbing, any systems which are shut down or otherwise secured; water wells (water quality and quantity), zoning ordinances; intercom; security systems; heat sensors; cosmetics or building code conformity. Any general comments about these systems and conditions are informational only and do not represent an inspection.

Limits of this Report

2. This Report
   a. Is only for the benefit of the customer who instructed Property Solutions to prepare the Report and may not be relied upon by any other party.
   b. Is not designed or intended to identify potential problems or issues within the Area other than the Defects and, without limitation, will not:
      i. Identify the presence or absences of dry/wet rot or any hazardous substance including, without limitation, mould toxins, carcinogens, noise or other contaminants;
      ii. Identity the presence or absences of any pests including, without limitation, wood damaging organisms, rodents or insects;
      iii. Determine the effectiveness of any equipment, utility, component or system installed to control leaks, moisture, heat loss, dry rot or hazardous substances;
      iv. Determine the life expectancy or future condition of any equipment, utility component or system; and
      v. Determine compliance or non-compliance with any statutory or regulatory requirement, code, bylaw, ordinance or other restriction; and

   c. Does not contain any advise, and cannot be relied on for any advise, relating to;
      i. Any methods, materials or cost of the repair of any Defect;
      ii. The suitability of the building for any specialised use;
      iii. The market value or marketability of the building; and
      iv. The advisability or inadvisability of the sale or purchase of the building.

Limits to our Obligations

3. In conducting our inspection, the customer acknowledges and agrees that we will not be required to:
   a. Disturb or move any insulation, panels, furniture, personal items, equipment, vegetation or other items or materials that obstruct access or visibility to the thermal inspection; and
   b. Operate any equipment, utility, component, or system that is shut down, inoperable or that does not respond to normal operating controls.

Exclusion of Implied Conditions and Warranties and Limitation of Liability

4. Where the customer is engaging our services for business purposes, the Consumer Guarantees Act 1993 (the "Act") will not apply.
5. If the customer is a consumer under the Act, to the extent that the customer's rights under the Act have not been excluded in clause 4 above, nothing in these terms and conditions will affect the rights of the customer under the Act.
6. Subject to clause 5:
   a. The customer relies upon their own knowledge, skill or judgement in relation to the particular use or suitability of this Report for the customers purpose: and
   b. All warranties, descriptions, representations, or conditions; whether imp0lied by the Sale of Goods Act 1908 or otherwise are expressly excluded to the fullest extent permitted by law.
7. Save as expressly provided otherwise in this Report or these Terms and Conditions, we shall not be liable, and none of our employees or contractors shall be liable to any customer, the customer's agents or employees or any other person for any direct, indirect, incidental or consequential damage or loss of any nature how so ever caused, (whether based on tort (including negligence), contract or otherwise), including but not limited to loss of profits, loss of sales opportunity, damage to equipment or property (including any cost or loss relating to any invasive inspection) or any other claim whatsoever arising directly or indirectly or in any way attributable to the performance or non-performance of our services or other obligations.
8. If, for any reason we are found to be liable to the customer or any other person in connection with this Report and/or the performance or non-performance of our services and we are unable to rely on the exclusions of liability set out in these Terms and Conditions, our liability shall in all cases be limited to the price paid or payable by the customer for such Report or services.

Moisture Meters and Weather tightness

The report cannot give any water proofing guarantee, as it is not readily possibly nor required to create simulated conditions to induce moisture ingress. However, signs of moisture ingress are looked for and spot checking is carried out predominantly around windows, doors and identified risk areas with a moisture meter.

The moisture meter used during the inspection is a Wagner L606 which is calibrated in accordance with manufacturer's specifications, this device is used for non-invasive test, and while this is deemed non-conclusive, it can be a good indicator of the presence of moisture. However, the condition and treatment type of any internal timbers is not known.

Definition of terms used for indications of moisture readings are as follows:-

- ✓ Normal – Generally indicates moisture readings up to approximately 16%
- ✓ Slightly High – Generally indicates moisture readings between 17 to 22%
- ✓ Higher – Generally indicates moisture readings between 23 to 30%
- ✓ Very High – Generally indicates moisture readings 30% and above

Accurate moisture readings can only be obtained by intrusive means, which is not carried out during the inspection, unless requested and permission had been given by vendors/property owners. However, where slight high or greater moisture readings are indicated during the inspection, further investigation would be required to determine the source of the readings, and this would also require permission from vendor/property owner(s) before further action is taken.

It is important to be aware that the lack of moisture indicators does not confirm that a property does not have moisture issues. Because water accumulates and travels immediately behind the external cladding, the external cladding is ideally what should be tested. However, this is not practical, nor possible with some claddings and weather conditions, therefore the meters are predominantly used from the interior of the home. A visual inspection and non-invasive testing may provide no initial evidence of leaking, knowledge of known weather tight risk details and/or signs to look for become more critical. Further investigation will be recommended where there is sufficient evidence and concern that it may reveal signs of severe moisture penetration.

Regards
Property Solutions Surveys Ltd

1.0 INTRODUCTION

The subject structure comprises a single level, three bedroom dwelling scheduled for relocation. Construction includes fibre cement weatherboard cladding, iron roofing and timber joinery.

Councils will require a second hand building report to identify any defects or issues that may be pertinent to the structure's weathertightness and its desirability for its proposed new site.

The purpose of this report is to identify any decay or defective items that would not be acceptable on the proposed relocation site or neighbourhood / community. The primary focus will be upon visible defects or items that may require remedial work following relocation in order to comply or receive approval from the tertiary authorities control area. Ideally Councils would require the building to meet certain criteria and standards and any defective items, particularly those relating to weathertightness, or the aesthetics of the building may require upgrading following relocation.





SINGLE LEVEL, THREE BEDROOM WEATHERBOARD & IRON ROOF DWELLING SCHEDULED FOR RELOCATION







PROPERTY SOLUTIONS

- Painting / Waterproofing
- Roof repair services
- Building Inspections
- Safe & Sanitary Reports
- Final Sign-Offs
- Reports to Council
- Land Information Search
- Structural Reports
- Seismic (IEP) Surveys
- Engineers Reports
- Draughting
- Building Maintenance

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2.0 BRIEF OVERVIEW

2.1 TYPE OF BUILDING - DWELLING

2.2 PRESENT LOCATION – CRAIG WALKER BUILDING REMOVALS YARD, KUMEU

2.3 PROPOSED USE - DWELLING

2.4 CHANGE OF USE - NO

2.5 DESCRIPTION -

A. EXTERIOR CONSTRUCTION

- CLADDING – FIBRE CEMENT WEATHERBOARDS
- JOINERY – TIMBER & ALUMINIUM
- SPOUTING - PVC
- ROOFING - IRON
- ROOF TYPE - HIP

B. INTERIOR CONSTRUCTION

- FRAMING - TIMBER
- LININGS – PAPER-FACED PLASTERBOARD
- CEILINGS – PINEX SOFT BOARD
- ROOF SUPPORT – TRUSS & RAFTER DETAIL

C. EXTERIOR APPEARANCE

- ROOF – MAKE GOOD, REPAIR, PREPARE & REPAINT
- WALLS – MAKE GOOD, REPAIR, PREPARE & REPAINT
- JOINERY – REPAINT TIMBER JOINERY

D. INTERIOR APPEARANCE

- WALLS – REASONABLE CONDITION – MAKE GOOD, REDECORATE
- CEILINGS – REASONABLE CONDITION – MAKE GOOD REDECORATE
- DOORS – REASONABLE CONDITION

2.6 PLUMBING & DRAINAGE

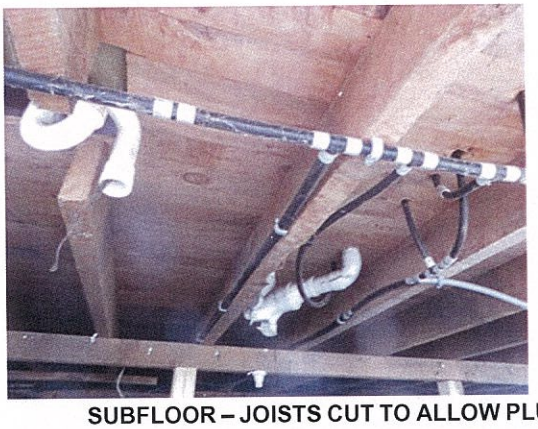
- CURRENT – STANDARD UNDER-BENCH PLUMBING
- WATER CYLINDER – NOT SIGHTED

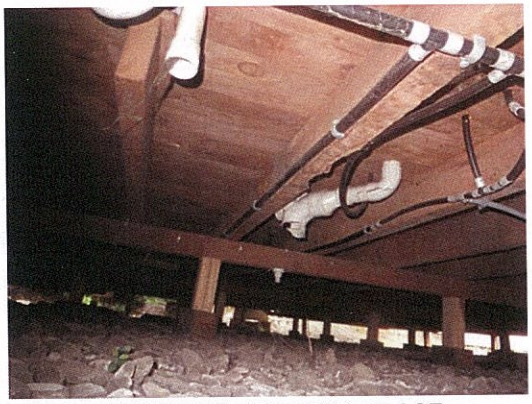
2.7 WILL THE STRUCTURE REQUIRE CUTTING TO ENABLE TRANSPORTATION - YES

2.8 MOVING CONTRACTOR – CRAIG WALKER BUILDING REMOVALS

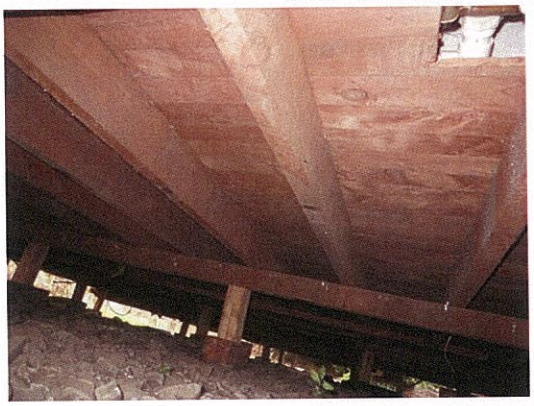
3.0 FOUNDATION & SUBFLOOR

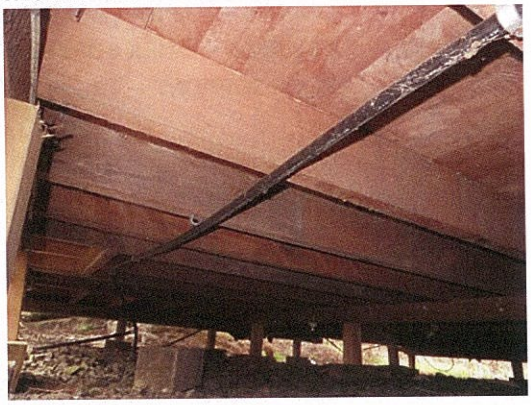
The foundation/subfloor includes standard bearers of 75x100 and joists of 150x50 at 450 centres. Flooring is tongue and groove timber. Flooring to the kitchen area is particle board. The subfloor is not insulated and has no damp proof course. However the timbers are native, in reasonable order and show no rot or decay. A revised grid style foundation, site specific will be required upon resiting.

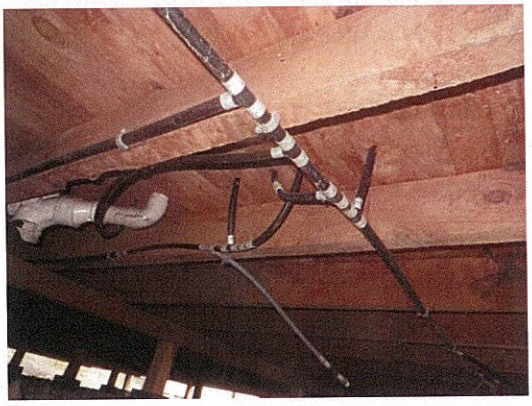




SUBFLOOR – JOISTS CUT TO ALLOW PLUMBING & DRAINAGE - AMEND/REPLACE JOIST, BEARER & TONGUE & GROOVE FLOORING / NON-INSULATED
STEP UP KITCHEN – PARTICLE BOARD FLOORING







4.0 CLADDING & JOINERY

4.1 CLADDING

The cladding features fibre cement weatherboard cladding which has been partially removed to allow transportation and reinstated to the front elevation but incomplete. The house has also been cut to enable transportation and generally the weatherboards show the need for repair work. Following resting the building envelope should be checked thoroughly and made good in order to maintain weathertightness. Repairs along with careful preparation and repainting will be required. Prior to painting, any rusting or damaged soakers should be replaced. The meter board has no formalised flashing and relies upon sealant.

The soffit linings are fibre cement sheeting and will require repair following resiting.

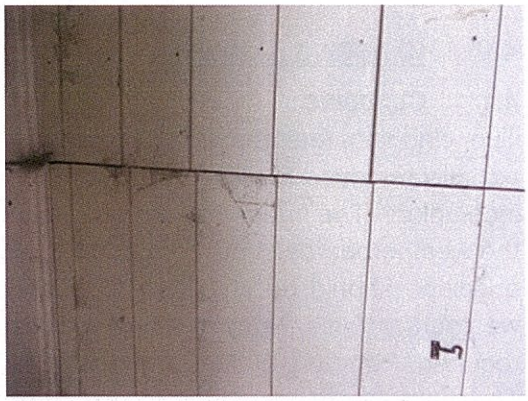




FIBRE CEMENT WEATHERBOARD CLADDING – MAKE GOOD ON SITE / PREPARE & REPAINT

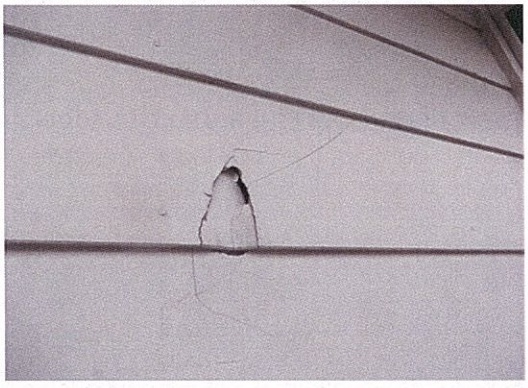




FIBRE CEMENT WEATHERBOARD CLADDING – MAKE GOOD ON SITE / PREPARE & REPAINT





SOFFIT DETAIL

4.2 JOINERY

Some original window joinery remains in timber with pivot type sash, standard scribe detail and sill. The timber joinery will require easing, careful preparation and repainting following resting to enable correct functions. The balance of the joinery is in aluminium and feature standard glazing seals and weather strips. The head flashing detail is incorporated into the frieze board. The aluminium joinery appears to be reasonably secure although no scribes have been installed. The scribe detail has been sealed with a sealant except for the bi-folding rear doors to the lounge which have no scribe but have protection from an enhanced soffit width.



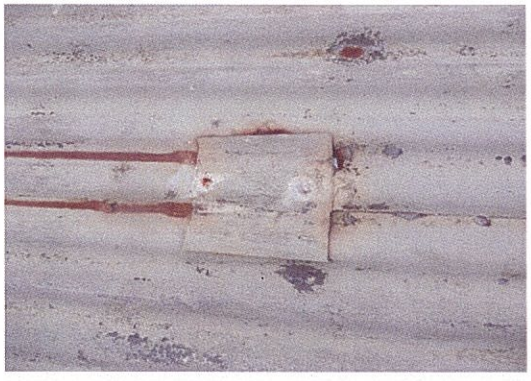


TIMBER WINDOW JOINERY – CHECK FUNCTIONS, EASE, PREPARE & REPAINT

5.0 ROOFING

5.1 ROOFING EXTERIOR

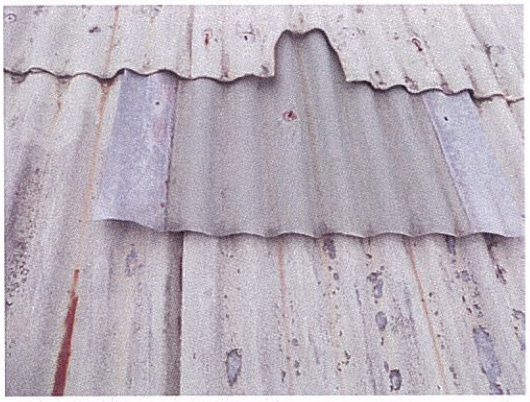
The roofing is a corrugated iron detail, set in a hip configuration with standard ridge cap detail. The roof is showing general ageing and weathering and some repairs will be required including replacement of any rusting lead head nail fixings, rusting sheets or ridge capping, making good any penetration points, i.e. chimney and careful preparation and repainting.



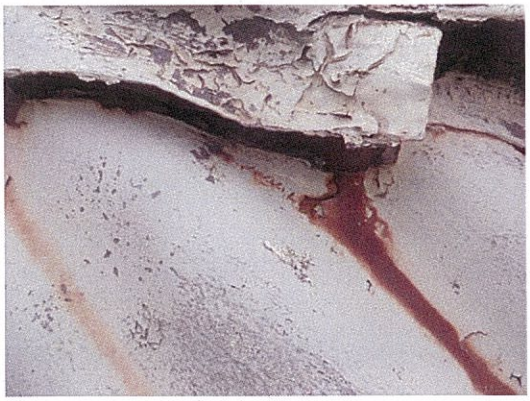





ROOFING – MAKE GOOD, REPLACE RUSTING SHEETS & RIDGE, RESECURE FLUE PENETRATIONS











REPLACE RUSTING NAILS



REPLACE RUSTING NAILS

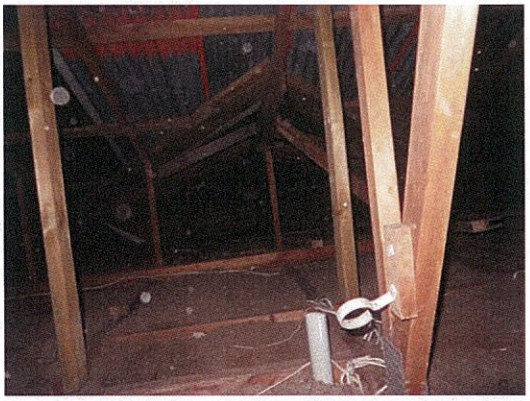


PREPARE & REPAINT

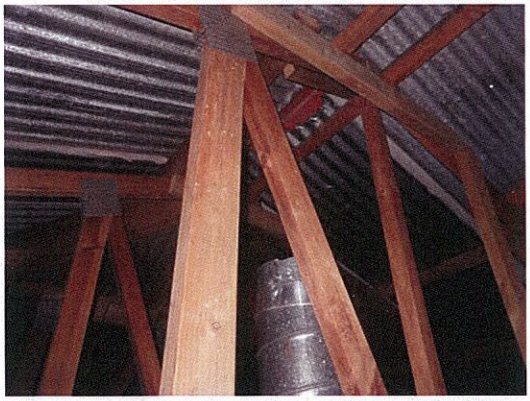
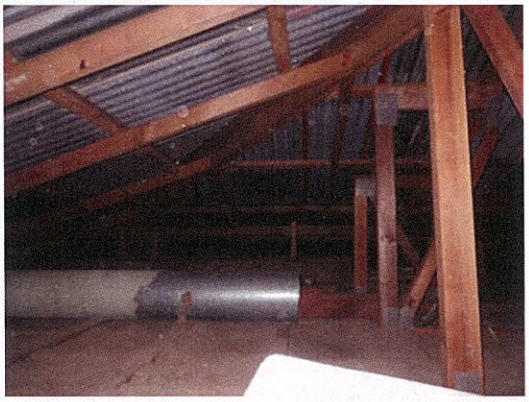
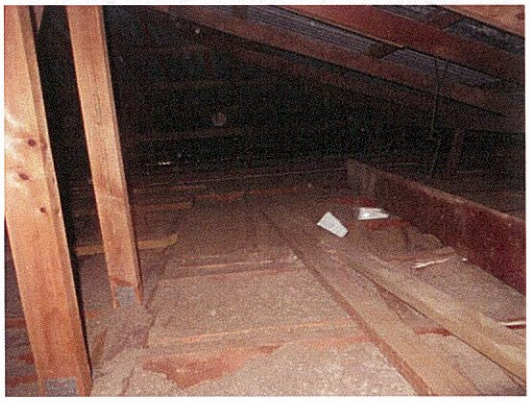
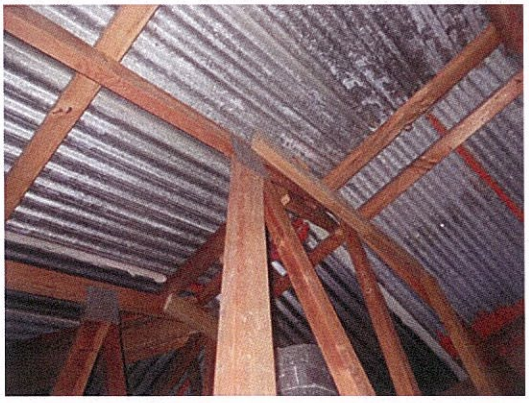


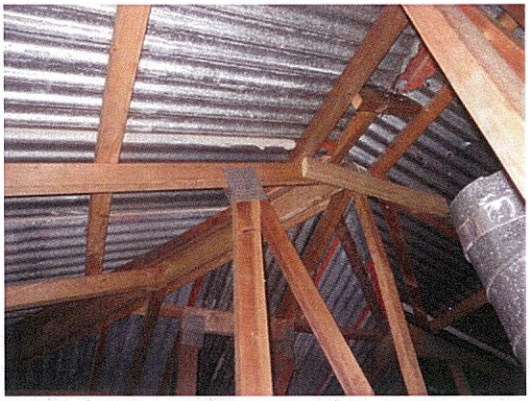

5.2 CEILING CAVITY

The roof support mechanism comprises a combination of rafter and truss design with original rafters of 100x50 with subsequent alterations and trusses of 100x50 upper and lower cords. The fixings should be checked upon resiting and reconnect the split sections of the building. Insulation is installed of a loose fill type.




CEILING CAVITY – ORIGINAL RAFTERS, SUBSEQUENT ALTERATIONS TRUSS, LOOSE FILL INSULATION – CHECK, RECONNECT SPLIT SECTIONS & MAKE GOOD



CEILING CAVITY

6.0 PLUMBING & DRAINAGE

PVC guttering circumnavigates the building and provides stormwater catchment, connecting to 80mm downpipes. The guttering is showing ageing and brittleness and should be made good on site and possible re-alignment to ensure stormwater runs correctly to each of the downpipe provisions. A formalised stormwater connection will be required.

.

The hot water cylinder will require reinstatement upon resiting.

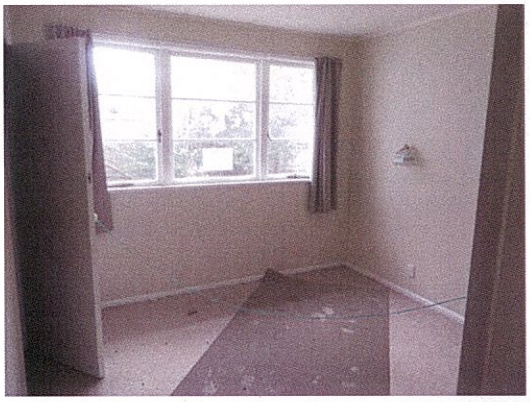
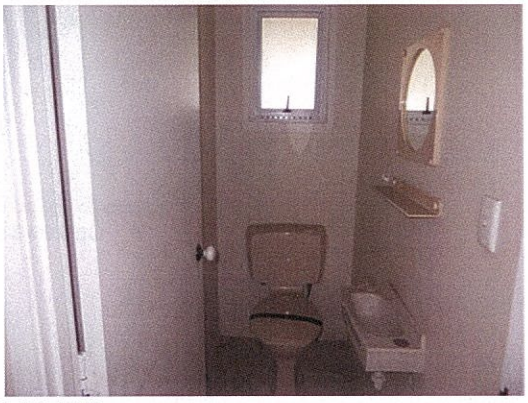
7.0 ELECTRICAL

A standard distribution board is installed and includes circuits to hot water cylinder, power points, lighting and range. Generally wiring at the board appeared to be secure.

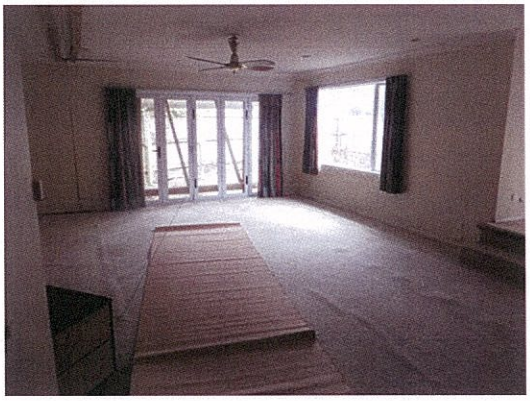
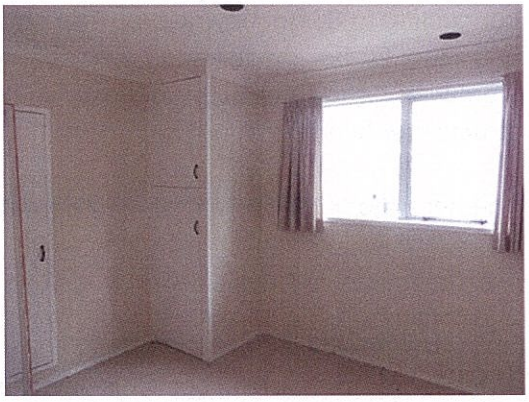
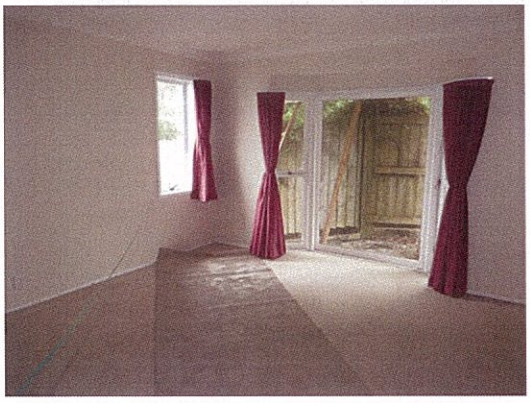
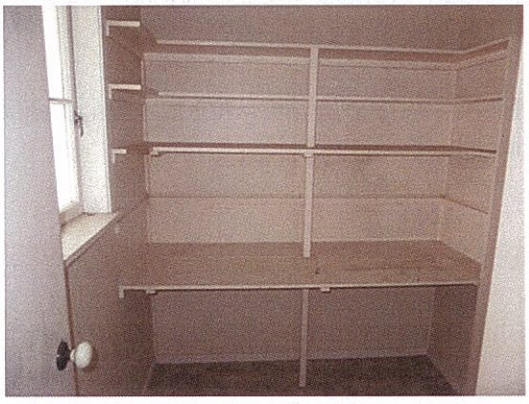
Please note that the writer is not a qualified electrician and that this was a visual inspection only.

8.0 INTERIOR

The interior features a large open plan lounge stepping up to a kitchen area, three bedrooms with wardrobe facilities, bathroom, laundry

INTERIOR ROOMS

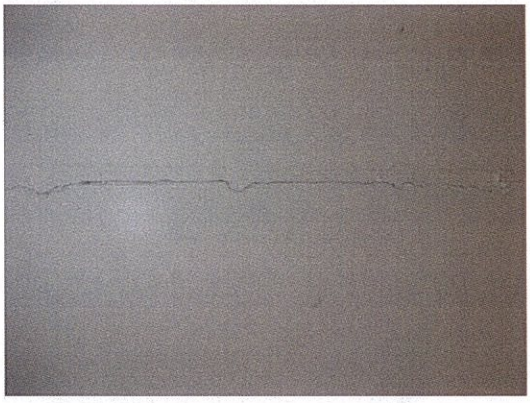
9.0 INTERNAL LININGS

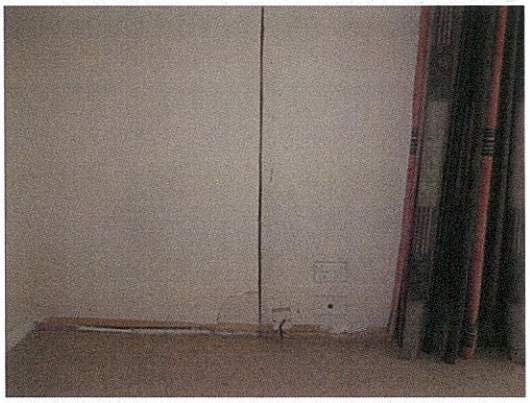
Internal wall linings are standard paper-faced plasterboard. Ceilings have Pinex softboard linings. The linings generally show some ageing and ware and should be made good upon resiting with careful preparation and repainting.

Moisture levels taken around the interior showed no dampness, historic or current leak.




MAKE GOOD LININGS & REDECORATE






INTERNAL LININGS – MAKE GOOD & REDECORATE





THERMAL IMAGING RESULTS SHOW NO HISTORIC OR CURRENT LEAK






10.0 INTERNAL JOINERY

Internal door joinery is a hollow core veneer door with standard architrave, frame, conventional hinges and hardware.

11.0 PRESENCE OF ASBESTOS

No

12.0 FUMIGATION

Will the structure require fumigation - No

13.0 HEATING

A solid fuel heater or wood burner is situated in the lounge area and if to be used should be reconnected and certified by a member of the Home Heating Association. The heater unit has a wet-back facility and owners will need to make a decision as to whether the wet-back is reconnected or not.

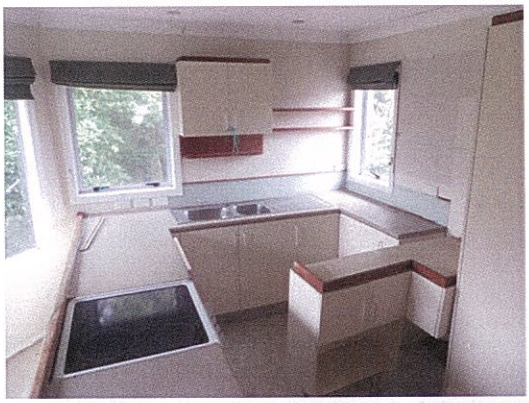


SOLID FUEL HEATER – IF TO BE REINSTATED CERTIFY

14.0 SERVICE AREAS

14.1 KITCHEN

The kitchen includes a rolled edge Meltica bench top with Meltica cupboard and carcass units, stainless bench with insert basin, free-standing oven with ceramic cooktop and the flooring is vinyl. Generally the kitchen units appear to be in reasonable order and show no serious ware, and provided reinstated correctly, should be reusable.

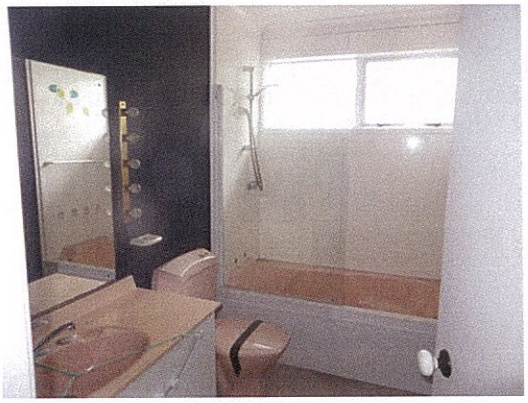



KITCHEN – STANDARD PLUMBING & DRAINAGE

14.2 BATHROOMS

The main bathroom features an Acronite PVC vanity with Meltica cupboard and carcass unit, PVC spa bath, dual flush wall mounted toilet cistern on standard pan and shower over bath with single levered fawcett Felton mixer.

A separate toilet with wash basin is provided off the entrance and features a Coroma dual flush wall mounted cistern on standard pan with conventional plumbing and will require reinstatement.



BATHROOM

15.0 RECOMMENDATIONS

1. We recommend the house be lifted and transported in accord with accepted trade and industry standards.

2. Resiting should be to an approved foundation system, site specific in accord to NZS 3604 and an approved design under the consent process. Replace or strengthen joists, cut for plumbing and drainage and recommend insulation be installed to the subfloor area.

3. Ensure siting is in accord with approved drawings and compares favourably with boundary rule 7.8.1.1 (District Plan).

4. Plumbing and drainage will require reconnection in accord with Plumbing and Drainage Act and to NZBC G1/AS1, G13, AS/NZS 1260 and 3500. Provide an As-Built drainage plan.

5. The hot water cylinder will require reinstatement/reconnection in accord with NZS 4603/3, NZS 3501 and NZS 2642.2 (PB) and NZS 4602 (low pressure systems), NZS 4603 (open vented).

6. Electrical services will require reconnection in accord with NZ Electrical standards, NZS 3000 and Regulations 1997 and the work should be issued with a Certificate of Compliance upon completion.

7. Install smoke detectors in accord with AS 3786. F7.

8. Compare insulation and adjust in accord with NZS 3604 H1 / R2 (Roof) and R1.9 (walls).

9. The roofing should be checked and any damage caused during transportation should be repaired including repairs, careful preparation and repainting in accord with NZS 3604 E2/AS1 to ensure continued weathertightness.

10. Make good the cladding and any damage caused during transportation including preparation and repainting in accord with NZS 3604 E2 & B1 and Branz Bulletin 314 / NZBC E2 2.1.

11. The roof supports vary in type (truss and rafter), check on site, including bracing and connections. The roof areas will require re-joining correctly to maintain weathertightness. Insulation is of an older fill type, not sufficient and purchasers should consider replacement.

12. Make good exterior timber window joinery, ease, prepare and repaint in accord with NZS 4223.

13. Make good internal wall and ceiling linings in accord with NZS/AS 1859 & NZS 422.

14. Redecorate interior as required in accord with Branz Bulletin 314.

15. Make good and ease internal joinery to ensure correct functions are restored.

16. Complete re-establishing the building in accord with the building consent and any endorsements attached.

17. Ensure surface water is diverted away from the dwelling in accord with NZBC E1.

16.0 E2

Providing the cladding and roofing is made good upon resiting, weathertightness should be maintained.

17.0 B1

The building has performed reasonably well to date and has stood the test of time without serious component failure. It is therefore fair and reasonable to assume that the structure has proved to satisfy provisions under the NZ Building Act B1, B2.

18.0 CONCLUSION

The dwelling's framing structure appears secure and the house should re-site suitably. Moisture levels and thermal imaging show no current leak although the roofing should be attended to as soon as possible, areas of framing are exposed. Predominantly native timbers to roof and subfloor framing and no serious decay or rot was evident. The permit history for the dwelling is unknown, alterations/extensions are evident.

Providing the building is moved and reinstatement is completed in accord with accepted industry and trade standards, and the structure is kept well maintained and weathertight, we would suggest that the building will continue to perform in accord with its design potential. Repairs should be completed by qualified tradespersons and in accord with industry standards and building code requirements.

The writer advised that he was not present during the design stages or the construction of the structure and therefore cannot extend any warranty or guarantee in regard to the performance of the cladding or any items not visible at the time of the inspection. The writer has used a surface scan moisture meter test system only and has not exposed any linings or conducted any invasive tests in regards to the cladding system.

Please note that this report must be read in conjunction with Terms and Conditions, Limitations included at the beginning of this report. Payment is required upon receipt of invoicing and confirms that you have read and accepted the Terms and Conditions and Limitations contained within this report.

We trust this information is of assistance and sufficient for your requirements. Should you require any further information or have any queries, please do not hesitate to contact the writer.

Yours faithfully
Property Solutions Surveys Ltd



Rod Pratt
(BOINZ, CINZ)
ACCREDITED BUILDING SURVEYOR 20071801

SPECIFICATION

of work to be done and materials to be used in carrying
out the works shown on the accompanying drawings

Relocate Secondhand Residences ('A') & ('B') to Site

At 102 Settlement Road, Kaiwaka

For Lynette Dheda

Job number: 16-120
Date: 14/02/2017

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1232 INTERPRETATION & DEFINITIONS

1. GENERAL

This general section relates to interpretation and definitions that are used in this specification.

1.1 INTERPRETATIONS

Required:	Required by the documents, or by a statutory authority.
Proprietary:	Identifiable by naming the manufacturer, supplier, installer, trade name, brand name, catalogue or reference number.
Provide and fix:	"Provide" or "fix" or "supply" or "fix" if used separately mean provide and fix unless explicitly stated otherwise.
Review:	Review by the contract administrator is for general compliance only. Review does not remove the need for the contractor to comply with the stated requirements, details and specifications of the manufacturers and suppliers of individual components, materials and finishes. Neither can the review be construed as authorising departures from the contract documents.

1.2 PERSONNEL

Owner:	The person defined as "owner" in the New Zealand Building Code.
Principal:	The person defined as "principal" in the conditions of contract.
Contractor:	The person contracted by the principal to carry out the contract.

Contract administrator:
The person appointed by the principal to administer the contract on the principal's behalf. It includes the architect, engineer, designer, project manager or other person so appointed. Where no person has been appointed by the Principal, it means the Principal or the Principal's representative.

1.3 ABBREVIATIONS

The following abbreviations are used throughout the specification:

AAMA	American Architectural Manufacturers Association
AS	Australian Standard
AS/NZS	Joint Australian/New Zealand Standard
ASTM	American Society for Testing and Materials
AWCINZ	Association of Wall and Ceiling Industries of New Zealand Inc
BRANZ	Building Research Association of New Zealand
BS	British Standard
CSIRO	Commonwealth Scientific and Industrial Research Organisation
HERA	Heavy Engineering Research Association
MPNZA	Master Painters New Zealand Association Inc
NZBC	New Zealand Building Code
NZS	New Zealand Standard
NZS/AS	Joint New Zealand/Australian Standard
TNZ	Transit New Zealand

1.4 DEFINED WORDS

Words defined in the conditions of contract, New Zealand Standards, or other reference documents, to have the same interpretation and meaning when used in their lower case, title case or upper case form in the specification text.

1.5 WORDS IMPORTING PLURAL AND SINGULAR

Where the context requires, words importing singular only, also include plural and vice versa.

1234 DOCUMENTATION

1. GENERAL

This general section relates to documentation required by the Territorial Authority/Building Consent Authority for compliance with the New Zealand Building Code. It also includes documentation relating to:
- Substitutions
- Manufacturers documents

Building Consent Authority documentation

1.1 BUILDING CONSENT

Obtain the original or copies of the building consent forms and documents from the owner and keep them on site. Liaise with the Building Consent Authority for all notices to be given and all inspections required during construction to ensure compliance. Return the consent form and documents to the owner on completion.

1.2 BUILDING CONSENT COMPLIANCE

It is an offence under the Building Act 2004 to carry out any work not in accordance with the building consent.
- The resolution of matters concerning building code compliance to be referred to the contract administrator for a direction in writing and then to the Building Consent Authority for consent.
- Where any alteration is requested by the territorial authority or any other authority, do not undertake such alteration until the matter has been referred to the contract administrator for direction.

1.3 PROJECT PERSONNEL

Provide names and contact detail of the contractor's key personnel and tradespersons who are involved with the project. Provide the names in the form required in the GENERAL section of the specification. Review the list once a month and reissue it if changes have been made.

1.4 KEY PERSONNEL

Provide names and contact detail of key personnel. Provide names, registrations numbers (where appropriate) and contact detail of key personnel that are required by the Building Consent Authority as part of the application for the Code Compliance Certificate.

Include the following as applicable:
- Registered drainlayer
- Registered plumber
- Registered gasfitter
- Registered electrician

- Roofer
- Block layer
- Bricklayer
- External plasterer
- External window manufacturer
- Waterproof membrane applicator

1.5 PRODUCER STATEMENTS

When producer statements verifying construction are required, provide copies to both the Building Consent Authority and the contract administrator. Provide producer statements in the form required by the Building Consent Authority.

1.6 DOCUMENTATION REQUIRED FOR CODE COMPLIANCE

Review the issued Building Consent for details of documents and information that will be required by the Principal for the application for a Code Compliance Certificate. Obtain such required documents from the relevant parties for delivery to the contract administrator after the final inspection has been carried out by the Building Consent Authority

Substitutions

1.7 PROPOSED SUBSTITUTIONS

A substitution may be proposed where specified products are not reasonably available. A substitution may also be proposed by the Contractor where the Contractor considers a proposed substitution to be an alternative to the specified product. Except where a specified product is not available, the Contract administrator is not bound to accept any substitutions. Where branded work sections are included in this specification, substitution of those products or systems will not be allowed.

1.8 NOTIFICATION OF SUBSTITUTIONS

Notify proposed substitution of specified products. Notification to include but not be limited to:

- Product identification
- Manufacturer's name, address, telephone and facsimile numbers, website and email address
- Detailed comparison between the properties and characteristics of the specified product and the proposed substitution
- Statement of NZBC compliance, including durability
- Details of manufacturer warranties

plus an assessment of

- Any changes required to the programme including any extension of time required
- Any consequential effects of the proposed substitution
- Allowance for time and cost for re-design and documentation (if applicable)
- Allowance for time and cost for obtaining an amendment to the Building Consent (if applicable)
- Any change in cost associated with the proposed substitution

and if requested

- All current manufacturer's literature on the product
- Accreditations and appraisals available
- Reference standards
- Product limitations
- Samples
- List of existing installations in the vicinity of the project

1.9 ACCEPTANCE OF SUBSTITUTIONS

The Contract administrator must advise of acceptance of substitutions in writing.

Amendment to issued Building Consent

1.10 CONTRACTOR AMENDMENTS TO BUILDING CONSENT

Where the contactor has sought acceptance of a substitution or a variation which is for the contractor's own convenience and the substitution or variation requires an amendment to the Building Consent, the contractor must apply for and obtain the required amendment.

The contractor must:

- Obtain approval for substitutions from the Contract administrator.
- Prepare and provide to the Building Consent Authority all documentation required for the amendment.
- Pay all fees and other costs associated with this amendment.
- Where the amendment affects other approved plans, also amend those plans.

1.11 PRINCIPALS AMENDMENTS TO BUILDING CONSENT

Where the principal is proposing a substitution or a variation which requires an amendment to the Building Consent, the contractor must provide to the principal information that the contractor has that is required for the amendment.

The principal will:

- Prepare and provide to the Building Consent Authority all documentation required for the amendment.
- Pay all fees and other costs associated with this amendment.
- Where the amendment affects other approved plans, also amend those plans.

Manufacturer's documents

1.12 BRANDED WORK SECTIONS
Branded sections may be included in this specification relating to specific products and systems to be installed as part of the contract works. Where branded sections are included, substitutions to the branded products and systems will not be allowed.

1.13 MANUFACTURER'S AND SUPPLIER'S REQUIREMENTS
Manufacturers and supplier's requirements, instructions, specifications or details mean those issued by them for their particular material, product or component and are the latest edition.

1.14 MANUFACTURER'S AND SUPPLIER'S DOCUMENTS
Refer to individual sections for a detailed list of manufacturer's and supplier's documents relating to work on this project. Retain current copies of the documents listed, and all other relevant manufacturer's technical literature, on site. Make this information available to all personnel and ensure they are familiar with requirements for handling, storing, preparing for, fixing and finishing all products before commencing work. Provide a copy of all listed manufacturer's literature to the Contract administrator.

1.15 ONGOING MAINTENANCE REQUIREMENTS
Refer to individual sections for details of manufacturer's and supplier's requirements for ongoing maintenance necessary to ensure continuing compliance with the durability requirements of the NZBC. Provide a copy of literature detailing ongoing maintenance and inspection requirements to the Contract administrator.

Shop drawings

1.16 PROVIDE SHOP DRAWINGS FOR REVIEW
Unless addressed elsewhere in this specification provide shop drawings for review by the contract administrator. Do not proceed with manufacture of the items until the Contract administrator gives a direction to proceed.

As built drawings

1.17 PROVIDE AS BUILT DRAWINGS
Unless addressed elsewhere in this specification provide as built drawings required as built drawings including those required by the Building Consent Authority.

1237 WARRANTIES

1. GENERAL

This general section refers to the requirements for warranties as listed, either in this work section or in specific work sections. It includes: -

- Warranties required by the Principal in a required form
- Warranties offered by manufacturers/subcontractors for parts of the work in the manufacturers/subcontractors standard form
- Guaranties provided by contractors in the contractor's standard form
- Trade warranties included with products, appliances and the like in the suppliers standard form

Warranties

1.1 PROVIDE WARRANTIES

Provide executed warranties in favour of the principal in respect of, but not limited to, materials, components, service, application, installation and finishing called for in that specified section of work. The terms and conditions of the warranty in no case negate the minimum remedies available under common law as if no warranty had been offered. Failure to provide the warranty does not reduce liability under the terms of the warranty called for in that specified section of work.

Where installer/applicator warranties are included in a branded section of this specification they shall be provided in lieu of the warranties that are otherwise required.

Where installer/applicator warranties are available they may be provided in lieu of the warranties that are otherwise required provided these warranties are subject to similar conditions and periods as those listed in the SCHEDULE OF WARRANTIES.

- Conform to the warranty agreement form included in the specification/conditions of contract.
- Commence warranties from the date of practical completion of the contract works (unless otherwise stated).
- Maintain their effectiveness for the times stated.
- Provide executed warranties no later than the date of the Contractor's Completion Statement.

1.2 WEATHERTIGHTNESS AND WATERTIGHTNESS WARRANTY

A warranty is required from the contractor for a minimum period of 2 years, covering the weathertightness of the complete building envelope and the watertightness of all liquid supply and disposal systems and fittings. This general warranty is in addition to any specific warranties required.

1.3 SCHEDULE OF WARRANTIES

The following is a summary of the warranties and warranty periods called for in work sections.

2 years	Weathertightness and watertightness
20 years	Mastic asphalt tanking
20 years	Liquid applied tanking
20 years	Sheet tanking
5 years	Proprietary curtain walling
5 years	Profiled metal cladding
5 years	Profiled plastic cladding
5 years	Aluminium composite cladding
5 years	Insulating wall cladding
5 years	Steel clad insulating cladding
5 years	Profiled metal roofing
5 years	Profiled plastic roofing
5 years	Concrete tile roofing
5 years	Clay tile roofing
5 years	Pressed steel tile roofing

5 years	Timber shingle roofing
5 years	Asphalt shingle roofing
5 years	Mastic asphalt roofing
5 years	Mineral fibre asphalt roofing
5 years	Synthetic rubber sheet roofing
5 years	Aluminium windows and doors
5 years	Steel windows and doors
5 years	Composite windows and doors
5 years	Timber fire windows and doors
5 years	Steel fire windows and doors
10 years	Sealants
2 years	Wall tiling
2 years	Floor tiling
1 year	Timber strip, block & plank flooring
1 year	Vinyl surfacing
1 year	Linoleum surfacing
1 year	Rubber surfacing
1 year	Cork surfacing
1 year	Carpeting
1 year	Carpet tiles
2 years	Painting
2 years	Decorative coatings
5 years	Protective coatings, steelwork
2 years	Hot and cold water system
2 years	Solar water heating system
1 year	Fire hose systems
1 year	Fire sprinkler systems
5 year	Underfloor heating
1 year	Electrical general
1 year	Access control
1 year	Intruder detection systems

Refer also to:
- WARRANTIES – INSTALLER/APPLICATOR for other installer/applicator warranties.
- WARRANTIES – MATERIALS for other materials and product warranties.

1.4 WARRANTIES – INSTALLER/APPLICATOR

Where installer/applicator warranties are offered covering execution and materials of proprietary products or complete installations, provide such warranties to the contract administrator. These warranties may be provided in lieu of the warranties that are otherwise required provided that these warranties are subject to similar conditions and periods as list in the SCHEDULE OF WARRANTIES.

Where installer/applicator warranties are included in a branded section of this specification, they shall be provided in lieu of the warranties that are otherwise required.

Provide warranties in favour of the principal. The terms and conditions of such warranties in no case negate the minimum remedies available under common law as if no warranty had been offered. Failure to provide the warranty does not reduce liability for execution and materials for that part of the work.

- Conform to the installer/applicator standard form of warranty. Where the installer/applicator does not have a standard form of warranty, use the form included in the contract documents.
- Commence the warranties from the date normally applicable for the work.
- Maintain their effectiveness for the times stated.
- Provide warranties no later than the date of the Contractor's Completion Statement.

1.5 WARRANTIES – MATERIALS

Where warranties are offered covering materials, equipment, appliances or proprietary products, provide all such warranties to the contract administrator.

Provide warranties in favour of the principal. The terms and conditions of such warranties in no case negate the minimum remedies available under common law as if no warranty had been offered. Failure to provide the warranty does not reduce liability for execution and materials for that part of the work.

- Conform to the manufacturer's standard form of warranty.
- Commence the warranties from the date normally applicable.
- Maintain their effectiveness for the times stated.
- Provide warranties no later than the date of the Contractor's Completion Statement.

Guarantees - Contractor

1.6 MASTER BUILD SERVICES LTD GUARANTEE

Provide a Master Build New Homes or Alterations & Additions Guarantee including all costs in the contract price and covering loss of deposit, completion, inspection, execution and material defects under the terms of the guarantee offered by Master Build Services Ltd. Execute with all three signatories: owner, registered master builder and Master Build Services Ltd, before commencing the contract works.

1.7 CBANZ GUARANTEE

Provide a Certified Builders HomeFirst Builders Guarantee. Complete the guarantee application. Before commencing the contract works, execute with the signatures of the owner and the Certified Builder, and forward to CBA Guarantee Ltd along with a copy of the Building Consent, payment schedule and the fee payable.

2201 PREPARATION AND GROUNDWORK

1. GENERAL

This section relates to the clearance, excavation and backfilling of the site area in preparation for:
- footings and floor slabs
- backfilling behind basement retaining walls

1.1 DOCUMENTS

Documents referred to in this section are:

NZS 3604	Timber framed buildings
OSH	Approved code of practice for safety in excavation and shafts for foundations

1.2 MANUFACTURER'S DOCUMENTS

Manufacturer's and supplier's documents relating to work in this section are:
~

Copies of the above literature are available from ~

Web:	~
Email:	~
Telephone:	~
Facsimile:	~

1.3 SITE SAFETY

Provide adequate support for all excavations. Cover holes and fence off open trenches and banks.

1.4 ANTIQUITIES AND ITEMS OF VALUE

Report the finding of any fossils, antiquities and other items of value. All to remain undisturbed until approval is given for removal, and all remain the property of the owner.

2. PRODUCTS

2.1 EXCAVATED FILL

Material from other formations in the excavation which may be selected and approved as suitable for filling by having grading and moisture content properties that will allow recompaction to 95% of maximum density.

~~2.2 VOLCANIC TUFF FILL~~

~~Scoriaceous tuff of variable grading excluding excessive silt or clay material, capable of being placed and compacted as specified.~~

~~2.3 ROCK FILL~~

~~Hard material comprising rock, broken stone, hard brick, concrete, run of pit scoria, or other comparable inert material capable of being placed and compacted as specified.~~

2.4 SAND FILL

Clean sand of such grading in particle size to achieve mechanical compaction to 90% maximum density.

2.5 HARD FILL

Scoria or crushed rock to GAP (General All Passing) 40 grading.

2.6 GRANULAR FILL

Approved screened crushed gravel or scoria, graded in size from 20 mm to 7 mm, clean. When tested with a standard sieve of 4.75 opening no material is to pass.

~~2.7 DRESSING COURSE~~

~~Scoria to GAP 20 grading, or "dirty footpath scoria", or equivalent "all in" graded crushed metal aggregate.~~

2.8 FREE-DRAINING AGGREGATE
Scoria or crushed gravel graded 50 to 14 clean.

3. EXECUTION

3.1 EXCAVATION GENERALLY
Carry out excavation to the guidelines set by the OSH publication: Approved code of practice for safety in excavation and shafts for foundations.

3.2 BURNING OF MATERIALS
Burning of materials is not permitted on site.

3.3 PROTECT EXISTING WORK
Protect from damage existing buildings, structures, roads, paving and services nominated on the drawings as being retained.

3.4 PROTECT TREES
Protect from damage trees, shrubs, natural site features and existing landscaped areas nominated on the drawings as being retained. Ensure existing levels are undisturbed beneath the dripline of retained trees.

3.5 SURFACE PREPARATION
Comply with NZS 3604, section 3.5, Site preparation. Remove all turf, vegetation, trees, topsoil, stumps and rubbish from the area to be built on.

3.6 UNDERGROUND ELEMENTS AND SERVICES
Break out and remove old foundations, slabs, drainage pipes, manholes, tanks, cables and redundant services. Report for instructions when any unexpected voids, made-up ground or services are encountered. Seal off the ends of drains or remove to territorial authority approval.

3.7 STOCKPILE TOPSOIL
Stockpile excavated topsoil on site where directed. Keep separate from other excavated materials. Spread and level where directed before completion of the works.

3.8 SHORING AND UNDERPINNING
Carry out shoring and underpinning shown on the drawings and as necessary to prevent subsidence of adjoining public or private property and to ensure the safety of the public and site personnel. Maintain protection throughout the progress of the works, or until foundations and subgrade structures have been completed and the stability of adjoining public and private property secured.

3.9 GENERAL EXCAVATION
Trim ground to required profiles, batters, falls and levels. Remove loose material. Protect cut faces from collapse. Keep excavations free from water.

3.10 ROCK EXCAVATION
If rock is found at any level above the underside of the structural foundations, or above required base levels for site service trenches, immediately notify the owner. Obtain written instructions from the owner on the proposed approach to rock excavation, or consequent alterations to subgrade construction. Confirm any changes with the territorial authority.

3.11 FOUNDATION EXCAVATION
Take foundation excavations to depths shown. Keep trenches plumb and straight, bottoms level and solid, stepped as detailed and clean and free of water.

3.12 INADEQUATE BEARING
If bearing is inadequate then excavate further and backfill with material as follows. Confirm any changes with the territorial authority.

Below slabs on grade:	Hardfill compacted in 150 mm layers
Below footings:	10 MPa concrete
Service trenches:	Hardfill compacted in 150 mm layers

If excavation exceeds the required depths, backfill and compact to the correct level with material as listed.

3.13 GRANULAR BASE FOR SLABS

To conform with NZS 3604, section 7.5.3, Granular base. Consolidate with a vibrating roller. Blind the surface with coarse sand or sand/cement and roll ready to receive a damp-proof membrane.

3.14 GENERAL BACKFILLING

Obtain written confirmation from the owner before using any excavated material. Compact approved backfilling in 150 mm layers with the last 200 mm in clean topsoil, lightly compacted and neatly finished off.

3.15 RETAINING WALLS

Backfill behind retaining walls with free draining granular material and compact in 200 mm layers. Ensure any tanking membranes, drain coil and damp-proofing are not damaged.

3.16 SURPLUS MATERIAL

Remove surplus and excavated material from the site.

2301 FOUNDATIONS

1. GENERAL

This section relates to all foundation and piling work, with the exception of in situ concrete work and concrete masonry.

1.1 RELATED SECTIONS

Refer to CONCRETE for poured concrete footings, foundations, foundation walls and floor slabs.
Refer to CONCRETE MASONRY for concrete block foundation walls.

1.2 DOCUMENTS

Documents referred to in this section are:

NZS 3104	Specification for concrete production
NZS 3109	Concrete construction
NZS 3602	Timber and wood-based products for use in building
NZS 3604	Timber framed buildings
NZS 3605	Timber piles and poles for use in buildings
NZS 3631	New Zealand national timber grading rules

1.3 MANUFACTURER'S DOCUMENTS

Manufacturer's and supplier's documents relating to work in this section are:
~

Copies of the above literature are available from ~

Web:	~
Email:	~
Telephone:	~
Facsimile:	~

2. PRODUCTS

~~2.1 CONCRETE PILES IN SITU~~
~~To NZS 3604 for concrete, reinforcement, footing and type.~~

~~2.2 CONCRETE PILES PRE-CAST~~
~~200 mm square parallel-sided to NZS 3604 for footing and type.~~

~~2.3 ROUND TIMBER PILES~~
~~Corsican pine or radiata pine, treated H5 to NZS 3602, table 1A, and complying with NZS 3605 for cross-section, length, straightness, strength and branding. All to NZS 3604 for footing and type.~~

2.4 SQUARE TIMBER PILES

Corsican pine or radiata pine, treated H5 to NZS 3602, table 1A, and complying with NZS 3605 for cross-section, length, straightness, strength and branding. All to NZS 3604 for footing and type.

2.5 TIMBER SUB-FLOOR FRAMING

Species, grade, moisture content in service and level of treatment as set out in NZS 3602. Grading to NZS 3631 and treated to NZS 3602, table 1C.

2.6 NAILS

Steel, stainless steel and galvanized steel of pattern to NZS 3604, table 6.8 and section 4 Durability.

2.7 BOLTS AND SCREWS

Steel, stainless steel and galvanized steel to NZS 3604.

2.8 NAIL PLATES

Stainless steel and galvanized steel toothed or nailed steel plates to the plate manufacturer's design for the particular locations shown on the drawings.

2.9 CONCRETE
For piles and footings, 17.5 MPa prescribed mix concrete to NZS 3104, section 3, Provisions for prescribed mix concrete, and NZS 3604, section 6.4.5, Pile footings.

3. EXECUTION

3.1 FOUNDATIONS GENERALLY
Comply with NZS 3109, 3602 and NZS 3604 except as varied by this specification. Execution to include those methods, practices and processes contained in the unit standards for the National Certificate in Carpentry and the National Certificate in Joinery (cabinetry, exterior joinery, stairs).

3.2 EXCAVATIONS
Refer to 2201 PREPARATION AND GROUNDWORK.

~~3.3 INSTALL CONCRETE PILES IN SITU~~
~~Box for, reinforce and pour in 17.5 MPa concrete the footings and piles in the various types to NZS 3604.~~

~~3.4 INSTALL CONCRETE PILES PRECAST~~
~~Pour 17.5 MPa concrete footing and set in pre-cast concrete piles in the various types to NZS 3604.~~

~~3.5 INSTALL ROUND TIMBER PILES~~
~~Prepare for and drive timber piles to NZS 3604, section 6.6, Driven timber piles. Protect pile heads with a suitable cushion.~~

3.6 INSTALL SQUARE TIMBER PILES
Prepare for, place and secure as detailed on the drawings.

3.7 SUB-FLOOR FRAMING
Frame up off foundation walls and piles, all fabricated, fastened and braced to NZS 3604, section 6, Foundation and subfloor framing.

4. SELECTIONS

4.1 PILES
Brand/type: ~

4.2 TIMBER SUB-FLOOR FRAMING

Member	Size	Centres	Species / grade	Treatment
Timber piles:	~			
Sub-floor framing:	~			
Jack studs:	~			
Bearers:	~			

4.3 NAILS
Material: ~

4.4 BOLTS AND SCREWS
Material: ~

4.5 NAIL PLATES
Brand/type: ~
Material: ~

3801 CARPENTRY

1. GENERAL

This section relates to the supply and erection of light timber framing, floors, flooring underlays for ceramic tiling and insulation.

1.1 DOCUMENTS

Documents referred to in this section are:

AS/NZS 1328.1	Glued laminated structural timber - Performance requirements and minimum production requirements
AS/NZS 1748	Mechanically stress-graded timber
AS/NZS 1860.1	Particleboard flooring - Specifications
AS/NZS 2269	Plywood - Structural
AS/NZS 2904	Damp-proof courses and flashings
AS/NZS 2918	Domestic solid fuel burning appliances - Installation
NZS 3602	Timber and wood-based products for use in building
NZS 3603	Timber structures standard
NZS 3604	Timber framed buildings
NZS 3631	New Zealand national timber grading rules
NZS 3640	Chemical preservation of round and sawn timber
AS/NZS 4347	Damp-proof courses and flashings – Methods of test

BRANZ Bulletin 368: Preventing moisture problems in timber framed skillion roofs
BRANZ Bulletin 453: Fasteners selection

1.2 MANUFACTURER'S DOCUMENTS

Manufacturer's and supplier's documents relating to work in this section are:
~

Copies of the above literature are available from ~

Web:	~
Email:	~
Telephone:	~
Facsimile:	~

1.3 SAMPLES

Provide samples of the following for review prior to ordering:
- Boarding for exterior decks
- Timber strip flooring.

1.4 DIMENSIONS

All timber sizes except for battens are actual minimum dried sizes.

2. PRODUCTS

2.1 TIMBER FRAMING, TREATED

Species, grade and in service moisture content to NZS 3602 and treatment to NZS 3640. Either mechanically stress graded to AS/NZS 1748, or visual grading to NZS 3631.

2.2 TIMBER FRAMING, CHEMICAL FREE, MECHANICALLY STRESS GRADED

Species, grade and moisture content in service as set out in NZS 3602. Machine stress graded to AS/NZS 1748, with an average moisture content at supply of 16% or less.

~~2.3 LAMINATED TIMBER~~

~~Radiata pine laminations to AS/NZS 1328.1; treated as required by NZS 3602, to the requirements of NZS 3640, with special attention to Appendix B "Specification advisory notes". Supply weather resistant sealed.~~

~~2.4 TIMBER TRUSSES~~

~~Moisture content: 16% at supply~~

~~2.5 TIMBER TRUSSES, CHEMICAL FREE~~

~~Moisture content: 16% at supply~~

2.6 TIMBER STRIP FLOORING
Tongue and groove profile with species and grade to NZS 3602. H1.1 treated to NZS 3640, clause 6.1.1, Sawn timber, unless durable heart wood. Moisture content 10-12% at laying.

2.7 PARTICLEBOARD FLOORING
Flooring grade high density resin bonded to AS/NZS 1860.1.

~~2.8 PLYWOOD~~
~~Structural plywood to AS/NZS 2269 for bracing, bracketing, sarking and floors.~~

~~2.9 COMPRESSED FIBRE CEMENT SHEET FLOORING~~
~~18 mm thick high density sheet of Portland cement, fine sand, cellulose fibre and water, with a smooth finish both sides.~~

2.10 HARDWOOD SPACED BOARDING FOR EXTERIOR DECKS
Plantation-grown hardwood. Dressed four sides and with arrises removed.

2.11 SOFTWOOD SPACED BOARDING FOR EXTERIOR DECKS
Selected radiata pine, treated to H3.2 CCA to NZS 3640, clause 6.3.1, Round, part round, or sawn timber. Dressed four sides and with arrises removed.
Moisture content: ~% prior to laying

2.12 NAILS
Steel, stainless steel and galvanized steel of pattern to suit the location and to BRANZ Bulletin 453 Fasteners selection.

2.13 BOLTS AND SCREWS
Steel, stainless steel and galvanized steel of pattern to suit the location and to BRANZ Bulletin 453 Fasteners selection.

2.14 NAIL PLATES
Stainless steel and/or galvanized steel toothed or nailed plates to the plate manufacturer's design for the particular locations as shown on the drawings.

2.15 CONNECTORS
Galvanized steel connectors and structural brackets to the connector manufacturer's design for particular locations shown on drawings.

2.16 POLYETHYLENE DPC
Polyethylene film to AS/NZS2904 and embossed on both sides. Thickness 500 microns minimum, manufactured for use as a damp-proof course and concealed flashings to doors and windows.

2.17 BITUMINOUS IMPREGNATED DPC
Heavy Kraft impregnated with high grade bitumen and coated with higher heat resistant bitumen to AS/NZS 2904 and AS/NZS 4347.

3. EXECUTION

3.1 EXECUTION GENERALLY
To NZS 3603 and NZS 3604 except as varied in this specification. Execution to include those methods, practices and processes contained in the unit standards for the National Certificate in Carpentry and the National Certificate in Joinery (cabinetry, exterior joinery, stairs).

3.2 SEPARATION
Separate all timber framing timbers from concrete, masonry and brick by: -
- a full length bituminous damp-proof membrane overlapping timber by at least 6 mm; or
- a 12 mm minimum free draining air space

3.3 ATTENDANCE
Provide and fix blocks, nogs, openings and other items as required by other trades.

3.4 MOISTURE CONTENT
Maximum allowable equilibrium moisture content (EMC) for non air-conditioned or centrally heated buildings for framing to which linings are attached.

Framing at erection:	24% maximum
Framing at enclosure:	20% maximum
Framing at lining:	16% maximum
Timber strip flooring:	10% at time of laying

3.5 SET-OUT
Set out framing in accordance with the requirements of NZS 3604 and as required to support sheet linings and claddings.

3.6 FRAMING SUB-FLOOR
Frame up off foundation walls and piles, all fabricated, fastened and braced to NZS 3604, section 6.10, Framed subfloor walls.

3.7 FRAMING FLOORS
Framed and fastened to NZS 3604, section 7, Floors.

3.8 FRAMING WALLS
Frame to required loading and bracing complete with lintels, sills and nogs, all fabricated and fastened to NZS 3604, section 8, Walls.

3.9 FRAMING ROOFS
Frame to required loading and bracing complete with valley boards, ridge boards and purlins. Design and fit roof trusses complete with anchorage. All fabricated and fastened to NZS 3604, section 9, Posts and 10, Roof framing.

3.10 FRAMING CEILINGS
Frame to required loading and bracing complete with runners and battens set out to support ceiling lining. All fabricated and fastened to NZS 3604, section 13, Ceilings. Trim for openings in ceilings and hatches to NZS 3604 section 13.3, Openings in ceilings. Provide blocking for water tanks located in the ceiling space to NZS 3604, section 13.4, Water tanks in roof space.

3.11 INSTALLING WALL WRAPS, UNDERLAYS AND SHEET INSULATION PRODUCTS
Refer to WALL CLADDING and THERMAL INSULATION for the installation of wall wraps, underlays and sheet insulation.

~~3.12 INSTALLING DECK UNDERLAY~~
~~Lay and secure in accordance with BRANZ Bulletin 368 “Preventing moisture in timber framed skillion roofs”.~~

3.13 LAYING TIMBER STRIP FLOORING
Lay, cramp and fasten to NZS 3604, section 7.2.2, Timber strip flooring. Punch nails, fill holes, then sand off with one coarse and one fine paper, hand sanding into corners.

3.14 LAYING PARTICLEBOARD FLOORING
Lay and fasten to the flooring manufacturer's requirements and NZS 3604, section 7.2.3, Wood-based sheet flooring. Punch nails, fill holes for clear finishing, then sand with one coarse and one fine paper, hand sanding into corners.

3.15 LAYING PLYWOOD SARKING AND FLOORING
Lay and countersink screw fix to the plywood manufacturer's requirements and to NZS 3604, section 7.2.3, Wood-based sheet flooring.

~~3.16 LAYING COMPRESSED FIBRE CEMENT SHEET FLOORING~~
~~Set out and countersink screw fix through pre-drilled holes strictly in accordance with the flooring manufacturer’s requirements and NZS 3604, section 7, Floors.~~

~~3.17 LAYING HARDBOARD UNDERLAY~~

~~Punch existing floor fixings and course sand level. Lay underlay with joints staggered, with a 1 mm gap between sheets and a 2 mm gap at all perimeters. Use 18 mm divergent staples at 100 mm centres throughout the whole sheet and 30 mm apart, 18 mm in from the edges of the sheets. Punch staples below the surface and sand joins level.~~

~~3.18 LAYING FIBRE CEMENT UNDERLAY~~

~~Punch existing floor fixings and course sand level. Set out and fix strictly in accordance with the underlay manufacturer's requirements, using 25 mm x 2.5 mm annular-threaded underlay nails. Drive heads flush with the sheet surface.~~

3.19 LAYING TIMBER SPACED BOARDING FOR EXTERIOR DECKS

Confirm whether the grooved side of the boards are face up or face down. Avoid excessively short or long lengths, drill for all fixings, stagger end joints and space boards a maximum of 2 mm apart in general conditions, or maximum 3 mm apart if boards are likely to swell after fixing. Fix using annular grooved galvanized jolt head nails, heads driven flush with the board surface.

3.20 DPC TO LOSP TREATED TIMBER

Lay polyethylene DPC under LOSP treated bottom plate of all timber framed walls on concrete, in a single layer with 50 mm overlaps at joints to provide a waterproof barrier.

3.21 DPC TO TIMBER

Lay bituminous DPC under the bottom plate of all timber framed walls on concrete, in a single layer with 50 mm overlaps at joints to provide a waterproof barrier.

3.22 INSTALL PROPRIETARY FIREPLACE

Prepare for the installation as detailed and as required by the manufacturer. Install strictly in accordance with AS/NZS 2918 and the manufacturer's stated and detailed requirements.

4. SELECTIONS

4.1 SUB-FLOOR FRAMING

Member	Species	Grade	Treatment
Bearers:	Radiata pine	~	H1.2
	Douglas fir	~	H1.2
Ground floor joists:	Radiata pine	~	H1.2
	Douglas fir	~	H1.2

4.2 FLOOR FRAMING

Member	Species	Grade	Treatment
Mid floor joists:	Radiata pine	~	H1.2
	Douglas fir	~	H1.2
Boundary joists:	Radiata pine	~	H1.2
	Douglas fir	~	H1.2

4.3 EXTERIOR WALL FRAMING

Member	Species	Grade	Treatment
Exterior walls:	Radiata pine	~	H1.2
	Douglas fir	~	H1.2
Parapets:	Radiata pine	~	H1.2
	Douglas fir	~	H1.2
Enclosed decks and balconies:	Radiata pine	~	H3.2

4.4 ROOF FRAMING

Member	Species	Grade	Treatment
Rafters:	Radiata pine	~	H1.2
	Douglas fir	~	H1.2
Trusses:	Radiata pine	~	H1.2
	Douglas fir	~	H1.2
Purlins:	Radiata pine	~	H1.2

	Douglas fir	~	None
Ceiling joists:	Radiata pine	~	H1.2
	Douglas fir	~	H1.2
Valley boards:	Radiata pine	Merchantable	H3.2
Sarking:	Radiata pine	Merchantable	H3.2
Skillion roof framing (>10°):	Radiata pine	~	H1.2
Skillion roof framing (<10°):	Radiata pine	~	H3.2
Enclosed flat roof framing:	Radiata pine	~	H3.2

4.5 SPECIAL FRAMING ELEMENTS

Member	Species	Grade	Treatment
~			

4.6 EXTERIOR EXPOSED TIMBERS

Member	Species	Grade	Treatment
Posts:	Radiata pine	~	H3.2
Joists:	Radiata pine	~	H3.2
Softwood decking:	Radiata pine	~	H3.2
Hardwood decking:	~	~	
Exterior stairs and steps:	Radiata pine	~	H3.2
Pergola:	Radiata pine	~	H3.2

4.7 EXTERIOR FINISHING TIMBERS

Member	Species	Grade	Treatment
Weatherboards:	Radiata pine	Dressing	H3.2
Fascia/barge/cover boards:	Radiata pine	Dressing	H3.2
Exterior trim:	Radiata pine	Dressing	H3.2

4.8 LAMINATED TIMBER

Member	Timber/grade/treatment	Finish
~		

4.9 LAMINATED VENEER LUMBER (LVL)

Member	Brand	Type
Joists:	~	
Rafters:	~	
Lintels:	~	

4.10 ENGINEERED WOOD PRODUCTS (EWP)

Member	Brand	Type
Joists:	~	
Rafters:	~	
Lintels:	~	

4.11 INTERIOR FRAMING

Member	Species	Grade	Treatment
Non structural walls:	Radiata pine	~	H1.2
	Douglas fir	~	H1.2
Structural and braced walls:	Radiata pine	~	H1.2
	Douglas fir	~	H1.2

4.12 TIMBER STRIP FLOORING

Location	Timber/grade/treatment	Board width
~		

4.13 PARTICLEBOARD FLOORING

Brand/type	Fixing method	Thickness
~		

4.14 PLYWOOD

Member	Brand/type	Treatment
Plywood flooring:	~	~

Plywood flooring – wet areas:	~	H3
Plywood decking:	~	H3 CCA
Plywood sarking:	~	H3 CCA
Plywood bracing:	~	H3
Plywood other:	~	~

4.15 INTERIOR FINISHING TIMBERS

Member	Species	Grade
Architraves:	Radiata pine	Dressing
Skirtings:	Radiata pine	Dressing
Cornices:	Radiata pine	Dressing

4.16 COMPRESSED FIBRE CEMENT SHEET FLOORING

Brand/type: ~
Thickness: ~ mm

4.17 FLOORING UNDERLAYS - TILING

Brand/type: ~
Thickness: ~ mm

4.18 DPC

Brand/Type: ~

4.19 NAILS

Location	Type	Material	Finish
~			

4.20 BOLTS AND SCREWS

Location	Type	Material	Finish
~			

4.21 NAIL PLATES

Location	Type	Material	Finish
~			

4.22 CONNECTORS

Location	Type	Material	Finish
~			

4.23 PROPRIETARY INSTALLATIONS

Type: ~
Brand/model: ~

7402 SANITARY PLUMBING

1. GENERAL

This section relates to above ground gravity flow sanitary plumbing.

Related work

1.1 RELATED SECTIONS
Refer to SANITARY FIXTURES, TAPWARE AND ACCESSORIES for sanitary fixtures tapware and accessories.

1.2 DOCUMENTS
Documents referred to in this section are:

NZBC G12/AS1	Water supplies
NZBC G13/AS1	Foul water - sanitary plumbing
AS 2887	Plastic waste fittings
AS/NZS 1260	PVC pipes and fittings for drain, waste and vent applications
AS/NZS 2032	Installation of PVC pipe systems

Plumbers, Gasfitters and Drainlayers Act 1976

1.3 MANUFACTURER'S DOCUMENTS
Manufacturer's and supplier's documents relating to work in this section are:
~

Copies of the above literature are available by phoning ~.

1.4 QUALIFICATIONS
Carry out work by or under the direct supervision of a person registered under the Plumbers, Gasfitters and Drainlayers Act 1976.

2. PRODUCTS

2.1 UPVC WASTE, DISCHARGE AND VENT PIPES
uPVC pipe to AS/NZS 1260 complete with fittings brand-matched to the pipe manufacturer's requirements.

2.2 EXPOSED PIPES AND TRAPS
Chrome plate on copper pipes and associated copper and brass fittings.
White polybutylene or PVC, including all associated fittings.

3. EXECUTION

3.1 EXECUTION GENERALLY
Carry out this work and complete all tests to AS/NZS 3500.2.
Carry out this work and complete all tests to NZBC G1/AS1: 2.0, 3.0 and G13/AS1.

3.2 ELECTROLYTIC ACTION
Avoid electrolytic action by eliminating actual contact or continuity of water between dissimilar metals.

3.3 INSTALL TRAPS, WASTE AND VENT PIPES
Connect waste outlets to traps and run waste pipes and back vents concealed, sized and fixed to AS/NZS 3500.2 /NZBC G13/AS1. Discharge wastes into the drainage system stack, soil pipe, or gully trap as shown. Bird proof mesh to all roof vents and vermin proof mesh to all untrapped waste pipes.

3.4 INSTALL ELECTRIC PAN VENTS
Install electric pan vents to manufacturers' requirements. Leave ready for electrical connection by electrician.

3.5 PENETRATIONS
At penetrations through constructions provide and fit collars and escutcheon plates to match pipework.

3.6 TEST
Test soil and waste disposal systems to ensure no leakage exists and leave in proper working order.

3.7 CLEAN UP
Remove labels and clean fittings. Remove unused materials from the site.

4. SELECTIONS

4.1 UPVC WASTE, DISCHARGE AND VENT PIPES
Brand/type: ~

4.2 EXPOSED PIPES AND TRAPS
Brand/type: ~

4.3 MISCELLANEOUS ITEMS
Pan vents: ~

7403 DRAINAGE

1. GENERAL

This section relates to the supply and laying of gravity foul water, stormwater and field drains.

1.1 DOCUMENTS REFERRED TO

Documents referred to in this section are:

NZBC B1/AS1	Structure – general, 6.0 Drains
NZBC E1/AS1	Surface water 3.0 Drainage system materials and construction
To NZBC E2/AS1	External moisture 12.3 Drainage
NZBC G13/AS2	Foul Water – drainage
AS/NZS 1254	PVC pipes and fittings for storm and surface water applications
AS/NZS 1260	PVC pipes and fittings for drain, waste and vent applications
AS/NZS 1546.1	On-site domestic wastewater treatment units - Septic tanks
AS/NZS 1547	On site domestic wastewater management
AS/NZS 2032	Installation of PVC pipe systems
AS/NZS 2033	Installation of Polyethylene pipe systems
AS/NZS 2566.1	Buried Flexible Pipelines - Structural Design
AS/NZS 2566.2	Buried Flexible Pipelines - Installation
AS/NZS 3500.2	Plumbing and drainage - Sanitary plumbing and drainage
AS/NZS 3500.3	Plumbing and drainage - Stormwater drainage
AS/NZS 4671	Steel reinforcing materials
AS/NZS 5065	Polyethylene and polypropylene pipes and fittings for drainage and sewerage applications
NZS 3104	Specification for concrete production

Plumbers, Gasfitters and Drainlayers Act 1976

1.2 MANUFACTURER'S DOCUMENTS

Manufacturer's and supplier's documents relating to work in this section are:
~

Copies of the above literature are available from ~

Web:	~
Email:	~
Telephone:	~
Facsimile:	~

1.3 AS-BUILT DRAWINGS

Supply a 1:100 scale as-built drawing of drains and fittings to the territorial authority and to the owner on completion.

1.4 QUALIFICATIONS

Drainlayers to hold a current licence within the terms of the Plumbers Gasfitters & Drainlayers Act 1976 and be experienced, competent and familiar with the materials and techniques specified.

2. PRODUCTS

2.1 CONCRETE

17.5 MPa prescribed mix to NZS 3104.

2.2 REINFORCEMENT

Plain round and/or deformed steel bars, Grade 300 to AS/NZS 4671.

2.3 UPVC PIPES

uPVC Pipes bends, junctions, fittings and joints to AS/NZS 1254 and AS/NZS 1260.

2.4 POLYETHYLENE PIPES

Polyethylene pipes and fittings to AS/NZS 5065.

2.5 FIELD DRAINS
Plastic piping for field drains perforated (straight sections or coiled) with filter fabric to prevent silting of the pipe.

2.6 GULLY TRAPS
To NZBC G13/AS2: 3.3 Gully traps, complete with grating.

2.7 SURFACE WATER SUMP GRATINGS
Cast iron frame with lift-up grating.

2.8 STRIP DRAIN CHANNEL
Proprietary, modular, variable invert, PVC or precast concrete drainage channel sections and drainage sump, embedded in site concrete and fitted with selected metal gratings.

2.9 INSPECTION COVERS
Cast iron frame with screw-down cover.

2.10 DRAINAGE AND FILLING MATERIALS

Granular:	Clean gravel or crushed stone or a blend of these. Particle size from minimum 7 mm to maximum 20 mm.
Selected:	Fine grain soil or granular material suitable for bedding; excluding topsoil.
Ordinary:	Top soil or other excavated materials.

~~2.11 SEPTIC TANKS~~
~~Cylindrical or rectangular septic tanks to AS/NZS 1546.1 made of pre-cast concrete 30 MPa with steel bar reinforcement, or cylindrical septic tanks to AS/NZS 1546.1 made of pre-cast concrete 35 MPa with steel fibre reinforcement, or cylindrical septic tanks, material to approval, all other requirements to AS/NZS 1546.1 made of ribbed~~ polyethylene.

3. EXECUTION

3.1 EXCAVATE
Excavate for drains to a firm even base with correct gradients set in straight runs.

3.2 MANUFACTURER'S REQUIREMENTS
All drainage installations to the pipe and fitting manufacturer's requirements.

3.3 DRAINAGE GENERALLY
Carry out drainage work and tests to AS/NZS 3500.2 (sanitary drainage) AS/NZS 3500.3 (stormwater drainage) as modified by NZBC B1/AS1: 6.0. Lay uPVC pipe systems to relevant sections of AS/NZS 2032, NZS 2566.1 and AS/NZS 2566.2. Lay polyethylene pipes and fittings to relevant sections of AS/NZS 2033 and NZS 2566.1.

3.4 LAY FOUL WATER DRAINS
Lay drains in straight runs to correct gradients, to discharge into the network utility operator's sewer. Set inspection fittings on a concrete base.

3.5 INSTALL GULLY TRAPS
Set on concrete 50 mm above the surrounding ground or paving and brought up to protect the top of the fitting. Trowel off.

3.6 LAY STORMWATER DRAINS
Confirm the required location of downpipes and finished ground levels before commencing pipework. Set downpipe bends in concrete with the concrete brought up to protect the top of the bend from damage. Lay drains in straight runs to correct gradients to discharge into the network utility operator's stormwater system.

3.7 LAY SUBSOIL DRAINS
Lay perforated piping firmly in a granular bed in straight runs to correct gradients, discharging into a cesspit. Carry the granular bed up over the pipes without disturbing

them to a total depth of 300 mm and cover with geotextile fabric to the pipe manufacturer's requirements. Carry the high end of all lines up to the surface to allow for flushing out and finish with a protected removable cap.

~~3.8 LAY SUBSOIL DRAINS TO BASEMENT WALLS~~
~~To NZBC E2/AS1: External moisture, 12.3 Drainage. Lay perforated piping firmly in a granular bed in straight runs to correct gradients, discharging into a cesspit. Carry the granular bed up over the pipes without disturbing them to a total depth of 300 mm and cover with geotextile fabric to the pipe manufacturer's requirements. Carry the high end of all lines up to the surface to allow for flushing out and finish with a protected removable cap.~~

3.9 INSTALL STRIP DRAIN CHANNEL
Excavate trench and form site concrete base to fall. Set interlocking channel sections, sumps and accessories in place, all in accordance with the channel manufacturer's requirements. Check falls and install gratings and covers.

3.10 INSTALL SURFACE WATER SUMP
To NZBC E1/AS1, complete with ceramic half-siphon pipe and cast iron frame with a lift out grating.

3.11 INSTALL STORMWATER INSPECTION CHAMBERS
To NZBC E1/AS1, with a 75 mm fall across the chamber and with channels to form a cascade where necessary. Channel top should be 100 mm above the pipe soffit. Bench from channels at 1V on 10H. Benching should be made of 17.5 MPa concrete vibrated to smooth finish. Plastering is not allowed. Fit a cast iron cover and frame.

3.12 INSTALL FOUL WATER INSPECTION CHAMBERS
To NZBC G13/AS2, with ceramic channels to form a 75 mm fall across the chamber. Channel top should be 100 mm above the pipe soffit. Bench from channels 1V on 10H. Benching should be made of 17.5 MPa concrete vibrated to smooth finish. Plastering is not allowed. Fit a cast iron cover and frame.

3.13 SOAKHOLES OR TRENCHES
Dispose of stormwater on site as shown on the drawings, by soakage, to suit local geology and soil structure; all as directed by the territorial authority.

3.14 CONCRETE ENCASEMENT
Concrete encase shallow drains and drains under driveways, on a 100 mm deep 17.5 MPa concrete bed reinforced with three 10 mm mild steel bars. Surround pipes with a polythene membrane to allow movement and encase in 100 mm 17.5 MPa concrete.

~~3.15 FIELD TEST~~
~~Field test drains for watertightness (UPVC to AS/NZS 2032 or AS/NZS 2566. 2 Appendix N) to the satisfaction of the territorial authority inspector.~~

3.16 BACKFILL
Backfill drain lines in 150 mm layers, well tamped but without disturbing the drains. Finish off with 150 mm of topsoil, slightly mounded above the finished ground line.

3.17 INSTALL SEPTIC TANK SYSTEM
Install to manufacturer's instructions.

3.18 INSTALL AERATED WASTEWATER TREATMENT SYSTEM
Install to AS/NZS 1547 and manufacturers instructions.

4. SELECTIONS

4.1 CERAMIC PIPES
Type/size: ~

4.2 UPVC PIPES
Brand/type: ~

4.3 POLYETHYLENE PIPES
Brand/type: ~

4.4 FIELD DRAINS
Pipe brand/type: ~
Fabric brand/type: ~

4.5 SEPTIC TANKS
Manufacturer: ~
Material: ~
Type: ~
Capacity: ~

23 Feb 2017

Lynette Dheda

102 Settlement Road

RD 2

Kaiwaka

Dear Sir or Madam,

Request for Further Information on PIM / BC Application

Reference Number: 170098

Project Location: 102 Settlement Road , Kaiwaka

Project Description: Relocate two Secondhand Residences to site with associated Stormwater & Sanitary Sewer private drainage.

This letter is to advise that we are in receipt of your application for a Project Information Memoranda (PIM) / building consent for the above project.

Our lodgement vetting process identifies that not all of the information required to accompany a PIM / Building Consent application has been provided. Until adequate information is provided the application cannot be formally received. Your application has been allocated a consent number, but is suspended until the list of further information listed below is provided.

You can re-start this process and move your application to "formally received status" by submitting the following further information:

Deposit / Fee

1. Please arrange payment of the building consent fee to complete the lodgement process. The fee for the application is $2345.40. Bank Details for internet banking are shown at the bottom of this letter. Please quote the reference number off the top of this letter in the particulars field.

Bracing Detail

1. Insufficient bracing information is provided to enable a compliance decision.

Please provide evidence that the dwelling is constructed with sufficient bracing for its new location as only foundation bracing is given. It is necessary to detail where the building has been relocated from.

Relocate Building

1. Please refer to the Kaipara District Council website - forms - Rules for Relocated Dwellings. The form within this document must be completed and signed for each relocated dwelling and submitted with this application.

My apologies if any of the above matters are already covered by the documents but have been overlooked.

Should you have any queries regarding this letter, please phone our Customer Services Team on Phone 0800 727 059.

Yours Sincerely,

Julia MacKenzie

Vetting Officer

On behalf of: Kaipara District Council

Kaipara District Council Bank Details

BNZ Dargaville

02 0308 0090743 07

Form 3

Development Contribution Notice

Section 36, Building Act 2004

To: Lynette Dheda, 102 Settlement Road, RD 2, Kaiwaka,

A code compliance certificate for the building work referred to in the attached project information memorandum or building consent number BC170098 will not be issued until a development contribution of $1,138.50 is paid. The development contribution must be paid to Kaipara District Council.

If the development contribution is not paid,-

(a) the Council may, under section 208(b) of the Local Government Act 2002, withhold the code compliance certificate that would be issued under section 95 of the Building Act 2004:

(b) the building consent authority, under section 94(4) of the Building Act 2004, must refuse to issue a code compliance certificate for the building work until it has received-

(i) evidence that the development contribution has been paid or made by the owner to the Council; or

(ii) a copy of a written agreement between the owner and the Council that the code compliance certificate may be issued:

(c) the Council may, under section 208(d) of the Local Government Act 2002, register the development contribution under the Statutory Land Charges Registration Act 1928 as a charge on the title of the land in respect of which the development contribution was required.

Please note that this is payable within 90 days or before the issue of CCC, whichever comes 1st. Reminders will be sent out at 30 and 60 day periods.

J. D. Nikora

Jamie Nikora

Building Control Officer

On behalf of: Kaipara District Council

Issue Date: 08 Mar 2017

NOTE: All queries relating to Utilities should be directed to the Asset Department Phone 0800 727 059 (Free Phone) / +64 9 431 3161.

Form 4

Certificate Attached to Project Information Memorandum

Section 37, Building Act 2004

RE: BC170098, Lynette Dheda, 102 Settlement Road , Kaiwaka

Restrictions on commencing building work under the Resource Management Act 1991

The building work referred to in the attached project information memorandum or building consent is also required to have the following resource consents under the Resource Management Act 1991:

12.10.03a - Dwellings:

1. Less than the required net site area will be associated with each additional dwelling on the site so the construction will be classed as a Discretionary Activity and resource consent will be required to be obtained before this activity can occur.

2. Less than the the required net site area, calculated over more than one site, will be associated with each additional dwelling. Because of this, the construction will be classed as a Discretionary Activity and resource consent will be required to be obtained before this activity can occur.

12.10.13 - Relocation of Buildings:

1. The relocated building will not comply with all relevant standards for permitted activities in the District Plan and will therefore be classed as a Restricted Discretionary Activity so resource consent will be required to be obtained before this activity can occur.

12.10.26 - Fire Safety:

1. Water supply for fire fighting and access to this supply will not complies with the New Zealand Fire Service Fire Fighting Water Supplies Code of Practice and will therefore be classed as a Restricted Discretionary Activity so resource consent will be required to be obtained before this activity can occur.

Resource consents will or may materially affect the building work to which the attached

project information memorandum relates. Until resource consent has been granted, building work may not proceed.

Failure to comply with the requirements of this notice may result in legal action being taken against you under the Resource Management Act 1991.

Adrianne Tisch

Planning Team

On behalf of: Kaipara District Council

Issue Date: 17 Mar 2017

Project Information Memorandum 170098P

Section 34, Building Act 2004

Application

Owner	Lynette Dheda	**Number**	170098P
	C/- Chris Mcallister	**Issue Date**	17 Mar 2017
	Po Box 120 Kumeu	**Formally Received Date**	22 Feb 2017
	Auckland 0841		

Project

Description	Relocate two Secondhand Residences to site with associated Stormwater & Sanitary Sewer private drainage.
Intended Life	50 years
Intended Use	2.0 Housing: 2.0.2 Detached Dwelling
Estimated Value	$40000
Location	102 Settlement Road , Kaiwaka
Legal Description	Lot 1 DP 123715
Valuation Number	0120026003

Building work can proceed following formal notification of Building Consent Approval being received from the Kaipara District Council Building Consent Authority and approvals being obtained from the agencies identified in this project information memorandum.

This Project Information Memorandum does NOT constitute a Building Consent.

Heritage Status of the Building

Building work associated with this project will not be affecting land or structures that have Heritage Status. This project is exempt from the rules of the District Plan that relate to Heritage Buildings.

Notable Trees

Council is not aware of there being any notable trees associated with this site. Therefore the project is exempt from the rules of the District Plan that relate to Notable Trees.

Special Features of the Land Concerned

"Land concerned" means the land on which the proposed building work is to be carried out; and includes any other land likely to affect or be affected by the building work.

"Special feature of the land concerned" includes, without limitation, potential natural hazards, or the likely presence of hazardous contaminants, that -

a) are likely to be relevant to the design and construction or alteration of the building or proposed building; and

b) is known to the Territorial Authority; and

c) is not apparent from the District Plan under the Resource Management Act 1991.

There are no known Special Features of the land concerned - this includes potential natural hazards, or the likely presence of hazardous contaminants that is likely to be relevant to the design and construction or alteration of the building or proposed buildings; and that is known to the Territorial Authority; and that is not apparent from the District Plan under the Resource Management Act 1991.

Other Information

Once a Building Consent is issued, the Council will follow up on building work not completed within two years of building consent issue.

A Building Consent lapses and is of no effect if the building work has not been started within 12 months of the date of issue.

If the building is public premises it may not be occupied until either a Code Compliance Certificate or Certificate for Public Use has been issued.

If the building is wholly or partly a dam, a Project Information Memorandum and Building

Consent must be obtained from the regional authority.

The Northland Regional Council has a register of contaminated sites. Please contact them on 0800 002 004 if you suspect that your property may be contaminated e.g. historic timber treatment sites, service stations, landfill sites etcetera.

Please check your Certificate of Title for any encumbrances (such as easements, section 73 notice etcetera) before you make an application for a Building Consent.

All archaeological sites are protected under the provisions of the Historic Places Act 1993. If subsurface archaeological evidence (shell, midden, hangi, storage pits, etc) should be unearthed during construction, work should cease in the immediate vicinity of the remains and the Historic Places Trust should be contacted.

The proposed project does not comply with the District Plan zoning as it does not meet the Rural Zone Rules. These breaches have been satisfied by RM160416, No additional Resource Consent required.

Council has found that the site wind zone rating is high

The Council has found that the site exposure zone is zone C - Inland

Development Contributions apply to this project, see attached form 3, DC Assessment and DC Invoice.

ATTACHMENTS:
-Form 4
-GIS map of property and utilities etcetera.
-Form 3
-DC Assessment
-DC Invoice

Form 3

Development Contribution Notice

Section 36, Building Act 2004

To: Lynette Dheda, 102 Settlement Road, RD 2, Kaiwaka,

A code compliance certificate for the building work referred to in the attached project information memorandum or building consent number BC170098 will not be issued until a development contribution of $1,138.50 is paid. The development contribution must be paid to Kaipara District Council.

If the development contribution is not paid,-

(a) the Council may, under section 208(b) of the Local Government Act 2002, withhold the code compliance certificate that would be issued under section 95 of the Building Act 2004:

(b) the building consent authority, under section 94(4) of the Building Act 2004, must refuse to issue a code compliance certificate for the building work until it has received-

(i) evidence that the development contribution has been paid or made by the owner to the Council; or

(ii) a copy of a written agreement between the owner and the Council that the code compliance certificate may be issued:

(c) the Council may, under section 208(d) of the Local Government Act 2002, register the development contribution under the Statutory Land Charges Registration Act 1928 as a charge on the title of the land in respect of which the development contribution was required.

Please note that this is payable within 90 days or before the issue of CCC, whichever comes 1st. Reminders will be sent out at 30 and 60 day periods.

Jamie Nikora

Building Control Officer

On behalf of: Kaipara District Council

Issue Date: 17 Mar 2017

NOTE: All queries relating to Utilities should be directed to the Asset Department Phone 0800 727 059 (Free Phone) / +64 9 431 3161.

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Development Contributions
Assessment BC 170098

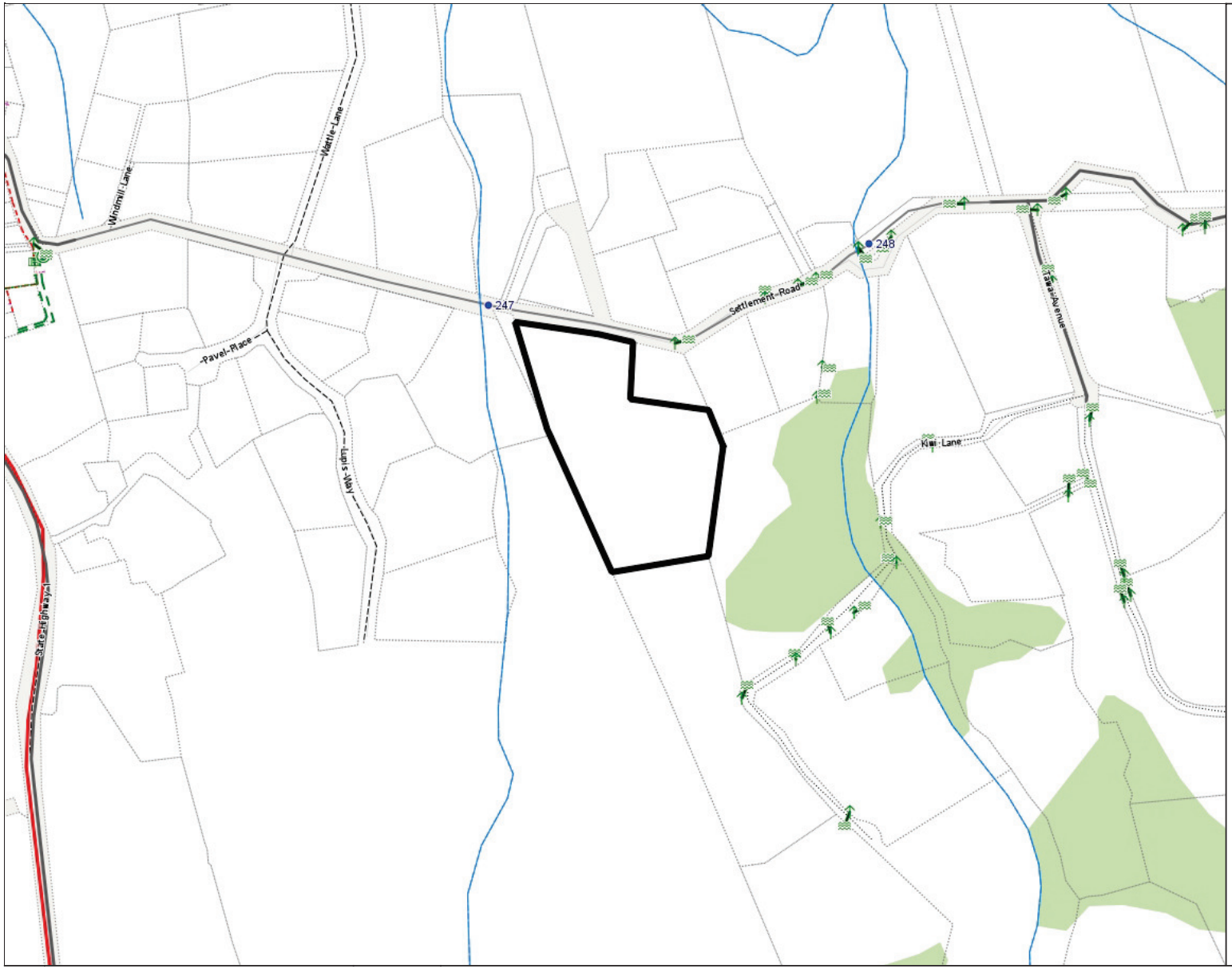
Lynette Dheda
102 Settlement road
RD2 Kaiwaka
Lot 1 DP 123715

	Original amount	GST	Total amount inc GST
Roading	$990.00	$148.50	$ 1,138.50

Total	**$1,138.50**

Print Date: 23/02/2017
Print Time: 1:46 PM

KAIPARA DISTRICT
Kaipara te Oranganui Two Oceans Two Harbours



Stormwater
- Stormwater Line Label
- Stormwater Point
  - Manhole
  - CatchPit
  - Dummy Node
  - Soakpit
  - Outlet
  - Inlet
  - Floodgate
  - Unknown
- Stormwater Line
  - Culvert
  - Catchpit Lead
  - Gravity Main
  - Open Drain
  - Service
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Water
- Water Line Label
- Water Point
  - Connection
  - Dummy Node
  - Fire Hydrant
  - Inlet
  - Meter
  - Tapping Band
  - Treatment Plant
  - Tank
  - Valve
  - Other
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Drainage
- Urban Drainline
- Stopbank Line
- Floodgate Point
- Drainage Catchment
- Drain Label
- Drainline
- nz-rivers-and-streams-centrelines
- nz-mainland-river-centrelines-topo-150k
- nz-mainland-drain-centrelines-topo-150k

- Bridge_Point
- SLU_Polygons
- SLU_Points
- RAMM Road Export
- RAMM Roads
  - Metal
  - N/A
  - Sealed

Scale: 1:4925
Original Sheet Size A3

Projection: NZGD2000 / New Zealand Transverse Mercator 2000
Bounds: 1730293.56480493,5995198.85979812
1731795.87085587,5996380.63914608

The information provided is an indication only and needs to be validated in the field.
Kaipara District Council accepts no responsibility for errors or omissions however given or implied arising from the reliance or use of this information. Cadastral information is derived from LINZ's Digital Cadastral Record System (CRS) CROWN COPYRIGHT RESERVED.

KAIPARA DISTRICT

Kaipara te Oranganui • Two Oceans Two Harbours

KAIPARA DISTRICT COUNCIL

Tax Invoice

GST Reg No.	52-237-122
Date	23/02/17
Customer No:	BC170098
Invoice Number	45978

Lynette Dheda
102 Settlement road
RD 2
Kaiwaka 0573

Development Contributions

Qty	Description	Rate	Amount
	Roading		1,138.50 *
	(* Incl GST $148.50)		
		Total incl. GST	**$1,138.50**

Payments by Direct Debit: BNZ Dargaville 02 0308 0090743 07
Please ensure you quote your customer number when making a payment

Remittance Advice

Please use this remittance when making your payment and make cheques payable to Kaipara District Council.

Lynette Dheda
102 Settlement road
RD 2
Kaiwaka 0573

Customer Number	BC170098
Invoice Date	23/02/17
Invoice Number	45978
Amount Due	**$1,138.50**

KAIPInvoice

23 Mar 2017

Lynette Dheda

102 Settlement Road

RD 2

Kaiwaka

Dear Sir or Madam,

Request for Further Information on PIM / BC Application

Reference Number: 170098.1

Project Location: 102 Settlement Road , Kaiwaka

Project Description: Relocate two Secondhand Residences to site with associated Stormwater & Sanitary Sewer private drainage.

Processing of your building consent application is currently in progress. To enable this work to be completed the following additional information / clarification is required to ensure compliance with the building code is demonstrated: Your consent application has been temporarily put on hold awaiting this information.

Residence A

SH - Freestanding Solid Fuelburning Appliances [Para 7.1]

1. Please advise if the existing wood burner is to be re-used, this will need to form part of this consent due to code clause E2, install specifications, flue specs and flashing details will be required to be provided to council for processing and an approved installer will be required to comment on the firebox suitability for re-use.

SH - Wet back / Water Booster [Part 7.1]

1. The building report details that there is facility for a wetback to be connected, if this is to take place this must form part of this consent and be done or overseen by a certifying plumber, please advise and if to be connected provide a wetback schematic and HWC details.

G13 - Foul Water

1. Please provide a copy of the waste water report by Enviroserve Wastewater Systems for both relocates?

Replying to your further information letter? Please follow these simple steps:-

When responding to further information requested please do so by replying to this email and ensure that:

- Drawing amendments are clearly identified and document changes referenced;

- Ensure all attached files are in PDF format and all documents are printable at the correct scale;

- Maximum document size for printing is A3. (Any associated printing costs will be charged to the building consent);

- All information is to be supplied within 28 days (or the application may be refused). Please keep us informed if additional time is required.

Yours Sincerely,



Jamie Nikora

Building Control Officer

On behalf of: Kaipara District Council

Building Consent - BC170098

Section 51, Building Act 2004

The Building

Street address of building: 102 Settlement Road , Kaiwaka

Legal description of land where building is located: Lot 1 DP 123715

Building name:

Location of building within site/block number: 102 Settlement Road , Kaiwaka

Level/unit number:

The Owner

Name of owner: Lynette Dheda

Contact person:

Mailing address: 102 Settlement Road, RD 2, Kaiwaka

Street address/registered office: 134 Main Road Kumeu , Auckland 0841 0841

Phone number: Landline: 094128749 Mobile: 0212812121 Chris Mcallister

Facsimile number:

Email address: chris@adsltd.co.nz

First point of contact for communications with the council/building consent authority: N/A

Building work

The following building work is authorised by this building consent:

Relocate two Secondhand Residences to site with associated Stormwater & Sanitary Sewer private drainage.

This building consent is issued under section 51 of the Building Act 2004. This building consent does not relieve the owner of the building (or proposed building) of any duty or

responsibility under any other Act relating to or affecting the building (or proposed building).

This building consent also does not permit the construction, alteration, demolition, or removal of the building (or proposed building) if that construction, alteration, demolition, or removal would be in breach of any other Act.

Conditions

This building consent is subject to the following conditions:

Section 36

Attached to this consent is a Development Contribution Notice issued by the Territorial Authority, in accordance with Section 36 of the Building Act 2004 please note that the Code Compliance Certificate will not be issued unless the development contributions have been paid in full.

Endorsements

Site Safety: Ensure all appropriate site safety measures are provided throughout the contract works to comply with NZ Building Code Clause F5 and all Occupational Safety and Health requirements.

Electrical Energy Works Certificate - The BCA places full reliance of the issue of Energy Work Certificates to verify that the installation and completion of electrical services comply with the provisions of NZBC Clauses G9. Code Compliance Certificate will not be issued unless the Energy Works Certificates identifies compliance with this specific code clause and confirms compliance with this building consent.

Pressure Test Certificate - Upon completion of the building work the Plumber shall provide a Pressure Test Certificate to the owner to submit with their documentation for Code Compliance Certificate application.

Inspections

The following inspections are required:

Residence A

- Prepour
- Wastepipes
- Subfloor - Framing
- Preline
- Drainage
- Final

Residence B

- Prepour
- Wastepipes
- Subfloor - Framing
- Preline
- Drainage
- Final

Construction Monitoring Requirements

CPEng Structural Engineer

CPEng Structural Engineer must view and issue a producer statement for part one of the 2 stage pour (3m deep reinforced concrete)

Suitably qualified NZHHA installer

to provide documentation stating the 2nd hand burner in residence A has been inspected and is fit for re-use.

Compliance Schedule

A compliance schedule is not required for the building.

Attachments

Copies of the following documents are attached to this building consent:

Project Information Memorandum (PIM): 170098P



Jamie Nikora
Building Control Officer
On behalf of: Kaipara District Council
Issue Date: 29 Mar 2017

ADDENDA TO THIS BUILDING CONSENT:

- This building consent will lapse and be of no effect if the building work to which it relates does not commence within 12 months after the date of issue. The consent may be extended for any further period at the discretion of council.
- No deviation or alteration from the original plans and specifications can be carried out without written approval of Council and no building may be converted to any other use other than that stated on the building consent.
- IMPORTANT: YOU ARE FULLY RESPONSIBLE FOR ANY DAMAGE DONE TO ANY WORKS SUCH AS TELEPHONE CABLES, POWER CABLES, WATER MAINS, GAS MAINS, SEWERS, PIPES, FOOTPATHS, ROADS OR OTHER SERVICES.
- As the property owner is responsible for the correct siting of all works in accordance with the NZ Building Code and the Resource Management Act, the owner must ascertain the true position of the survey pegs before work commences.
- NOTICE THAT BUILDING WORK IS READY FOR INSPECTION. For the purposes of Section 222 of the Building Act 2004, and unless otherwise provided by the building consent, the owner or other person undertaking any building work shall give:
- At least 2 working days notice of the covering up of any
- i) drainage or plumbing
- ii) excavation for a foundation
- iii) reinforcing steel for a foundation
- iv) timber required to have a specific moisture content
- v) other work required to give notice as a condition
- Council MUST be notified at the completion of building work on the attached form.
- Every household unit requires smoke alarms in accordance with NZBC Clause F7/AS 1.3.1. Smoke alarms may be battery powered but shall have a hush facility and must comply with at least one of the following: UL 217, CAN/ULC S531, AS 3786, BS 5446: Part 1. Smoke alarms shall be installed near the ceiling and located on escape routes, in every sleeping space or within 3.0m of every sleeping space door.
- A Compliance Schedule is NOT required for the building.

BUILDING CONSENT FEES:

Please note that further fees may be required to be paid before a Code Compliance Certificate is issued for this Building Consent. All fees must be paid before a Code Compliance Certificate will be issued.

Project Information Memorandum 170098P

Section 34, Building Act 2004

Application

Owner	Lynette Dheda	**Number**	170098P
	C/- Chris Mcallister	**Issue Date**	17 Mar 2017
	Po Box 120 Kumeu	**Formally Received Date**	22 Feb 2017
	Auckland 0841		

Project

Description	Relocate two Secondhand Residences to site with associated Stormwater & Sanitary Sewer private drainage.
Intended Life	50 years
Intended Use	2.0 Housing: 2.0.2 Detached Dwelling
Estimated Value	$40000
Location	102 Settlement Road , Kaiwaka
Legal Description	Lot 1 DP 123715
Valuation Number	0120026003

Building work can proceed following formal notification of Building Consent Approval being received from the Kaipara District Council Building Consent Authority and approvals being obtained from the agencies identified in this project information memorandum.

This Project Information Memorandum does NOT constitute a Building Consent.

Heritage Status of the Building

Building work associated with this project will not be affecting land or structures that have Heritage Status. This project is exempt from the rules of the District Plan that relate to Heritage Buildings.

Notable Trees

Council is not aware of there being any notable trees associated with this site. Therefore the project is exempt from the rules of the District Plan that relate to Notable Trees.

Special Features of the Land Concerned

"Land concerned" means the land on which the proposed building work is to be carried out; and includes any other land likely to affect or be affected by the building work.

"Special feature of the land concerned" includes, without limitation, potential natural hazards, or the likely presence of hazardous contaminants, that -

a) are likely to be relevant to the design and construction or alteration of the building or proposed building; and

b) is known to the Territorial Authority; and

c) is not apparent from the District Plan under the Resource Management Act 1991.

There are no known Special Features of the land concerned - this includes potential natural hazards, or the likely presence of hazardous contaminants that is likely to be relevant to the design and construction or alteration of the building or proposed buildings; and that is known to the Territorial Authority; and that is not apparent from the District Plan under the Resource Management Act 1991.

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Building Control Officer

On behalf of: Kaipara District Council

Issue Date: 17 Mar 2017

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Development Contributions
Assessment BC 170098

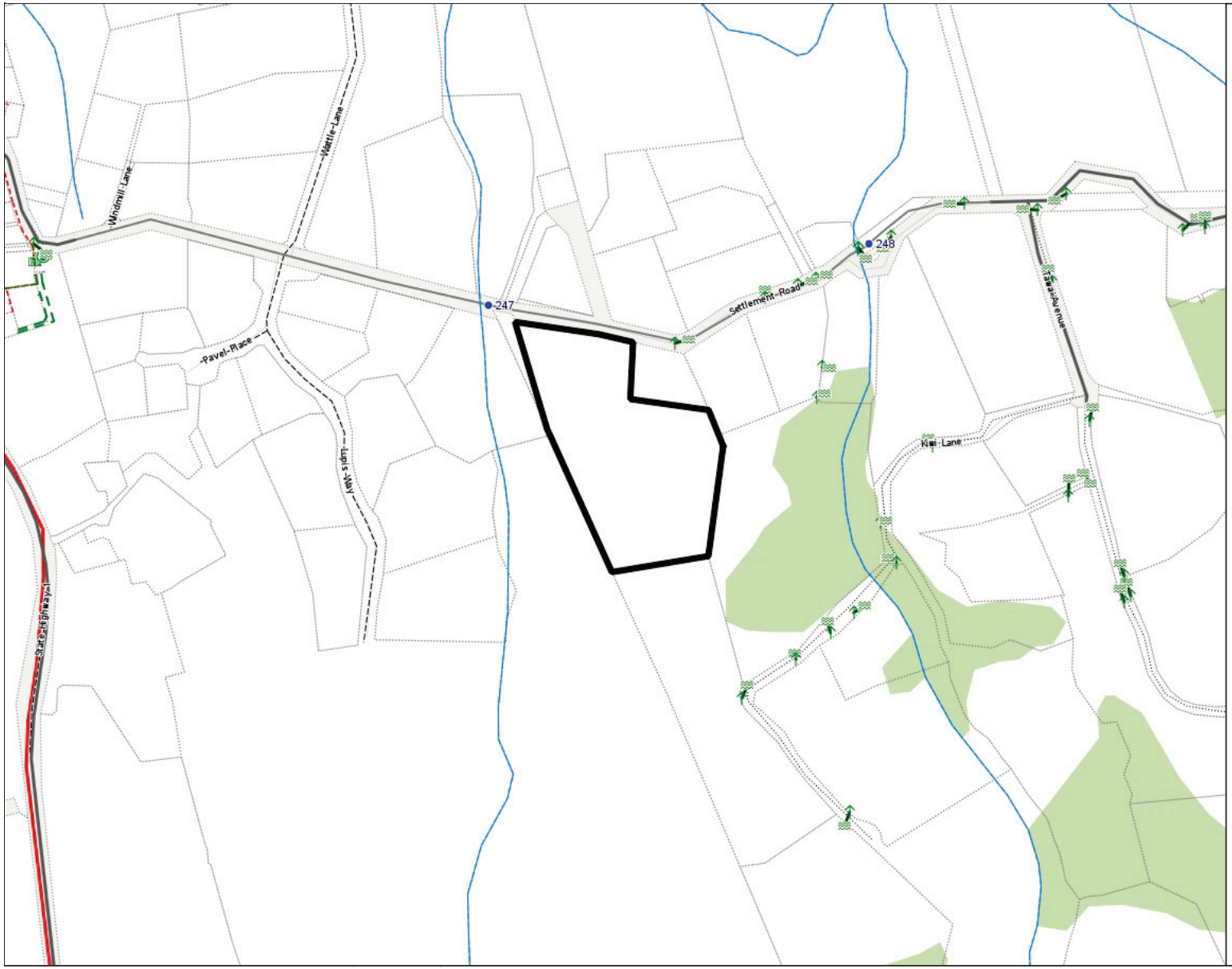
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102 Settlement road
RD2 Kaiwaka
Lot 1 DP 123715

	Original amount	GST	Total amount inc GST
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Total	**$1,138.50**

Print Date: 23/02/2017
Print Time: 1:46 PM

KAIPARA DISTRICT
Kaipara te Oranganui Two Oceans Two Harbours



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KAIPARA DISTRICT

Kaipara te Oranganui • Two Oceans Two Harbours

KAIPARA DISTRICT COUNCIL

Tax Invoice

GST Reg No.	52-237-122
Date	23/02/17
Customer No:	BC170098
Invoice Number	45978

Lynette Dheda
102 Settlement road
RD 2
Kaiwaka 0573

Development Contributions

Qty	Description	Rate	Amount
	Roading		1,138.50 *
	(* Incl GST $148.50)		
		Total incl. GST	**$1,138.50**

Payments by Direct Debit: BNZ Dargaville 02 0308 0090743 07
Please ensure you quote your customer number when making a payment

Remittance Advice

Please use this remittance when making your payment and make cheques payable to Kaipara District Council.

Lynette Dheda
102 Settlement road
RD 2
Kaiwaka 0573

Customer Number	BC170098
Invoice Date	23/02/17
Invoice Number	45978
Amount Due	**$1,138.50**

KAIPInvoice

KDC - Approved Building Consent Document - BC170098 - Pg 1 of 26 - 29/03/2017 - kjn

Kaipara te Oranganui
KAIPARA DISTRICT
Two Oceans Two Harbours

Approved Building Consent Documents

Please note: A copy of the stamped, approved documents must be available onsite for **all** inspections.

KDC - Approved Building Consent Document - BC170093 - Pg 2 of 26 - 29/05/2017 - kjm

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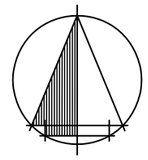
CONTRACTOR MUST VERIFY ALL DIMENSIONS ON SITE – IF IN DOUBT – ASK!

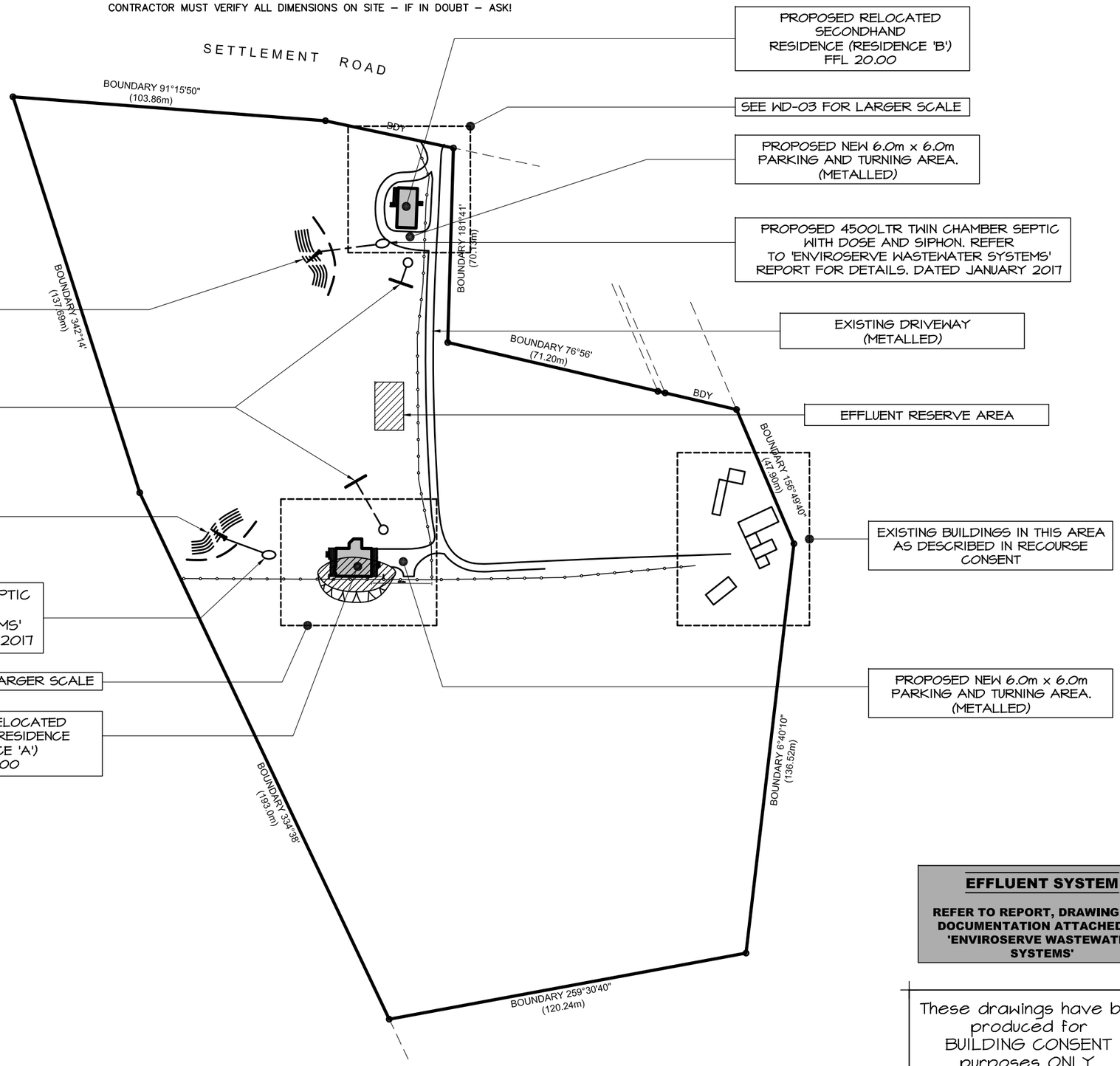
LEGAL DESCRIPTION

LOT 1
DP 123715
AREA: 5.5908Ha

PROJECT DESCRIPTION

RELOCATE SECONDHAND RESIDENCES (RESIDENCE 'A') & (RESIDENCE 'B') ONTO SITE. NEW ON-SITE EFFLUENT DISPOSAL SYSTEM FOR EACH DWELLING





PROPOSED RELOCATED SECONDHAND RESIDENCE (RESIDENCE 'B') FFL 20.00

SEE WD-03 FOR LARGER SCALE

PROPOSED NEW 6.0m x 6.0m PARKING AND TURNING AREA. (METALLED)

PROPOSED 4500LTR TWIN CHAMBER SEPTIC WITH DOSE AND SIPHON. REFER TO 'ENVIROSERVE WASTEWATER SYSTEMS' REPORT FOR DETAILS. DATED JANUARY 2017

EXISTING DRIVEWAY (METALLED)

EFFLUENT RESERVE AREA

EXISTING BUILDINGS IN THIS AREA AS DESCRIBED IN RECOURSE CONSENT

PROPOSED NEW 6.0m x 6.0m PARKING AND TURNING AREA. (METALLED)

PROPOSED 144m2 EFFLUENT DISPERSAL FIELDS. LAY LEVEL TO SUIT CONTOURS, DISTRIBUTION MANIFOLD IN MIDDLE OF TOP LINE. PROVIDE SW CUT-OFF SWALE ABOVE. REFER TO 'ENVIROSERVE WASTEWATER SYSTEMS' REPORT FOR DETAILS. DATED JANUARY 2017

PROPOSED WATER TANK FOR EACH RELOCATED RESIDENCE. OWNER TO CONFIRM SIZE, TYPE AND FINAL LOCATION. STORMWATER OVERFLOW TO DISCHARGE TO A COUNCIL APPROVED SW DISPERSAL TRENCH.

PROPOSED 144m2 EFFLUENT DISPERSAL FIELDS. LAY LEVEL TO SUIT CONTOURS, DISTRIBUTION MANIFOLD IN MIDDLE OF TOP LINE. PROVIDE SW CUT-OFF SWALE ABOVE. REFER TO 'ENVIROSERVE WASTEWATER SYSTEMS' REPORT FOR DETAILS. DATED JANUARY 2017

PROPOSED 4500LTR TWIN CHAMBER SEPTIC WITH DOSE AND SIPHON. REFER TO 'ENVIROSERVE WASTEWATER SYSTEMS' REPORT FOR DETAILS. DATED JANUARY 2017

SEE WD-02 FOR LARGER SCALE

PROPOSED RELOCATED SECONDHAND RESIDENCE (RESIDENCE 'A') FFL 10.00

NOTE : - SET OUT / LOCATION OF BUILDINGS

1. **THE OWNER IS TO CONFIRM THE PROPOSED LOCATION & ORIENTATION OF THE BUILDING ON SITE PRIOR TO ANY WORK TAKING PLACE.**
2. **THE PROPOSED LOCATION OF THE BUILDING IS TO BE PEGGED BY THE SURVEYOR. SURVEYOR TO CHECK / CONFIRM MINIMUM FLOOR LEVELS & HEIGHT IN RELATION TO BOUNDARY AT THIS STAGE. CHECK WITH HOUSE MOVER PRIOR TO UNDERTAKING THIS.**
3. **PEG FFL DATUM BY ON SITE (AGAINST FENCE - OUT OF THE WAY) - CONFIRM THAT YOU ARE OK WITH THIS LEVEL. *(ENSURE TO ACHIEVE 450mm TO UNDER SIDE OF JOISTS).**
5. **ADVISE HOUSE MOVER THAT THE ABOVE HAS BEEN CONFIRMED AND/OR CARRIED OUT AND THAT THE SITE IS READY FOR THE RELOCATION OF THE BUILDING.**

EFFLUENT SYSTEM

REFER TO REPORT, DRAWING AND DOCUMENTATION ATTACHED BY 'ENVIROSERVE WASTEWATER SYSTEMS'

These drawings have been produced for BUILDING CONSENT purposes ONLY

SITE PLAN
SCALE 1:1500

PH: 09 412 8749 FAX: 09 412 8751
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ARCHITECTURAL DRAUGHTING SOLUTIONS LTD
EMAIL: CHRIS@ADSLTD.CO.NZ

RELOCATE SECONDHAND RESIDENCES ('A') & ('B') TO 102 SETTLEMENT ROAD, KAIWAKA FOR LYNETTE DHEDA

		DATE		
DESIGNED				
DRAWN	CJM	06/16		
CHECKED	CJM			
APPROVED	CJM			
REF:			'A' - RESIDENCE 'B' (ROTATED)	02/17
			AMENDMENTS	

CONTRACT No 16-120
DWG No WD-01 'A'
SCALE NTD @ A3

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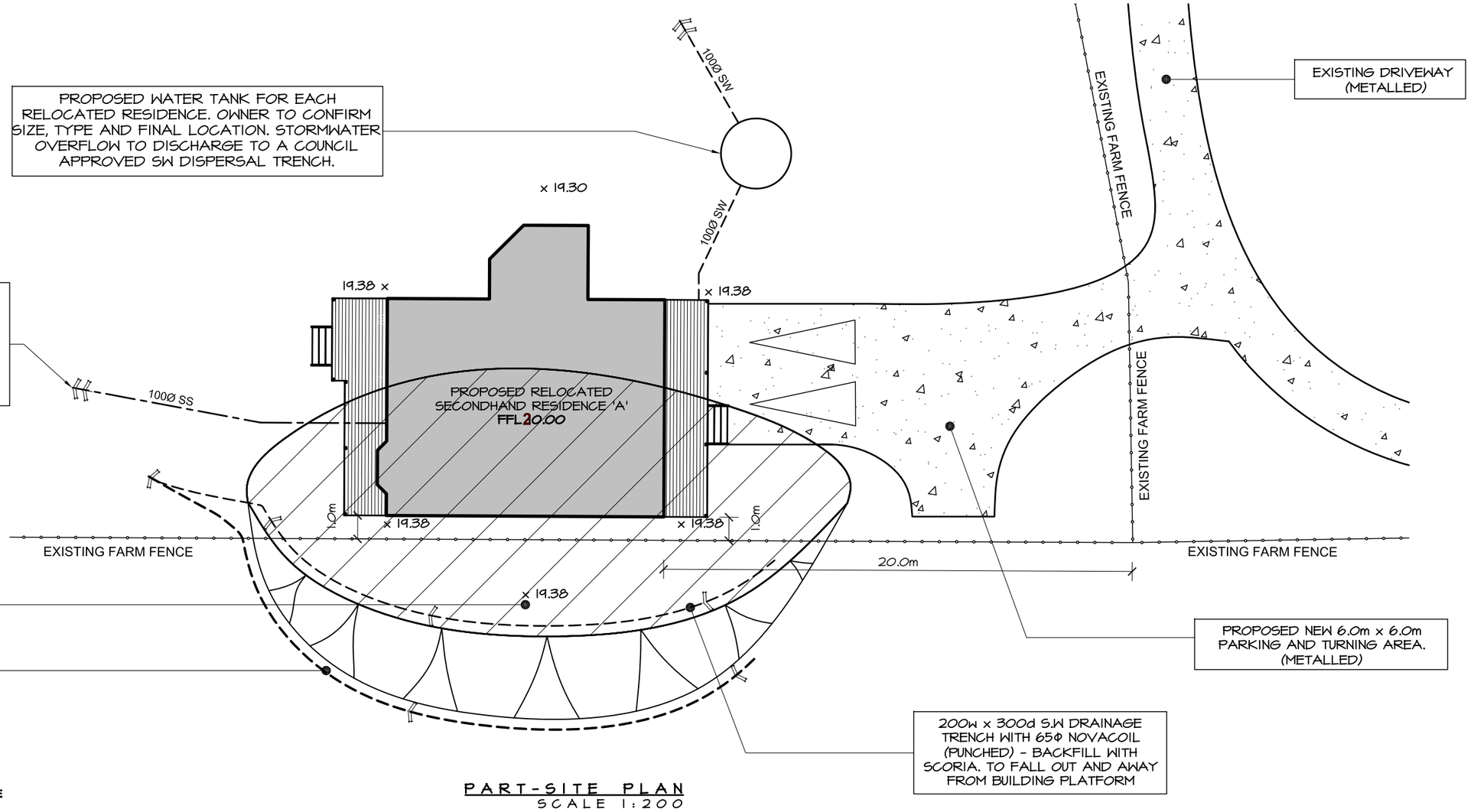
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LEGAL DESCRIPTION

LOT 1
DP 123715
AREA: 5.5908Ha

PROJECT DESCRIPTION

RELOCATE SECONDHAND RESIDENCES (RESIDENCE 'A') & (RESIDENCE 'B') ONTO SITE. NEW ON-SITE EFFLUENT DISPOSAL SYSTEM FOR EACH DWELLING



PART-SITE PLAN
SCALE 1:200

NOTE : - SET OUT / LOCATION OF BUILDINGS

1. **THE OWNER IS TO CONFIRM THE PROPOSED LOCATION & ORIENTATION OF THE BUILDING ON SITE PRIOR TO ANY WORK TAKING PLACE.**
2. **THE PROPOSED LOCATION OF THE BUILDING IS TO BE PEGGED BY THE SURVEYOR. SURVEYOR TO CHECK / CONFIRM MINIMUM FLOOR LEVELS & HEIGHT IN RELATION TO BOUNDARY AT THIS STAGE. CHECK WITH HOUSE MOVER PRIOR TO UNDERTAKING THIS.**
3. **PEG FFL DATUM BY ON SITE (AGAINST FENCE - OUT OF THE WAY) - CONFIRM THAT YOU ARE OK WITH THIS LEVEL. *(ENSURE TO ACHIEVE 450mm TO UNDER SIDE OF JOISTS).**
5. **ADVISE HOUSE MOVER THAT THE ABOVE HAS BEEN CONFIRMED AND/OR CARRIED OUT AND THAT THE SITE IS READY FOR THE RELOCATION OF THE BUILDING.**

roof must be re-instated as building report details weather tightness issues with current roofing.

EFFLUENT SYSTEM

REFER TO REPORT, DRAWING AND DOCUMENTATION ATTACHED BY 'ENVIROSERVE WASTEWATER SYSTEMS'

(RESIDENCE 'A')

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RELOCATE SECONDHAND RESIDENCES ('A') & ('B') TO 102 SETTLEMENT ROAD, KAIWAKA FOR LYNETTE DHEDA

		DATE	AMENDMENTS
DESIGNED			
DRAWN	CJM	06/16	
CHECKED	CJM		
APPROVED	CJM		
REF:			

CONTRACT No 16-120
DWG No WD-02
SCALE NTD @ A3

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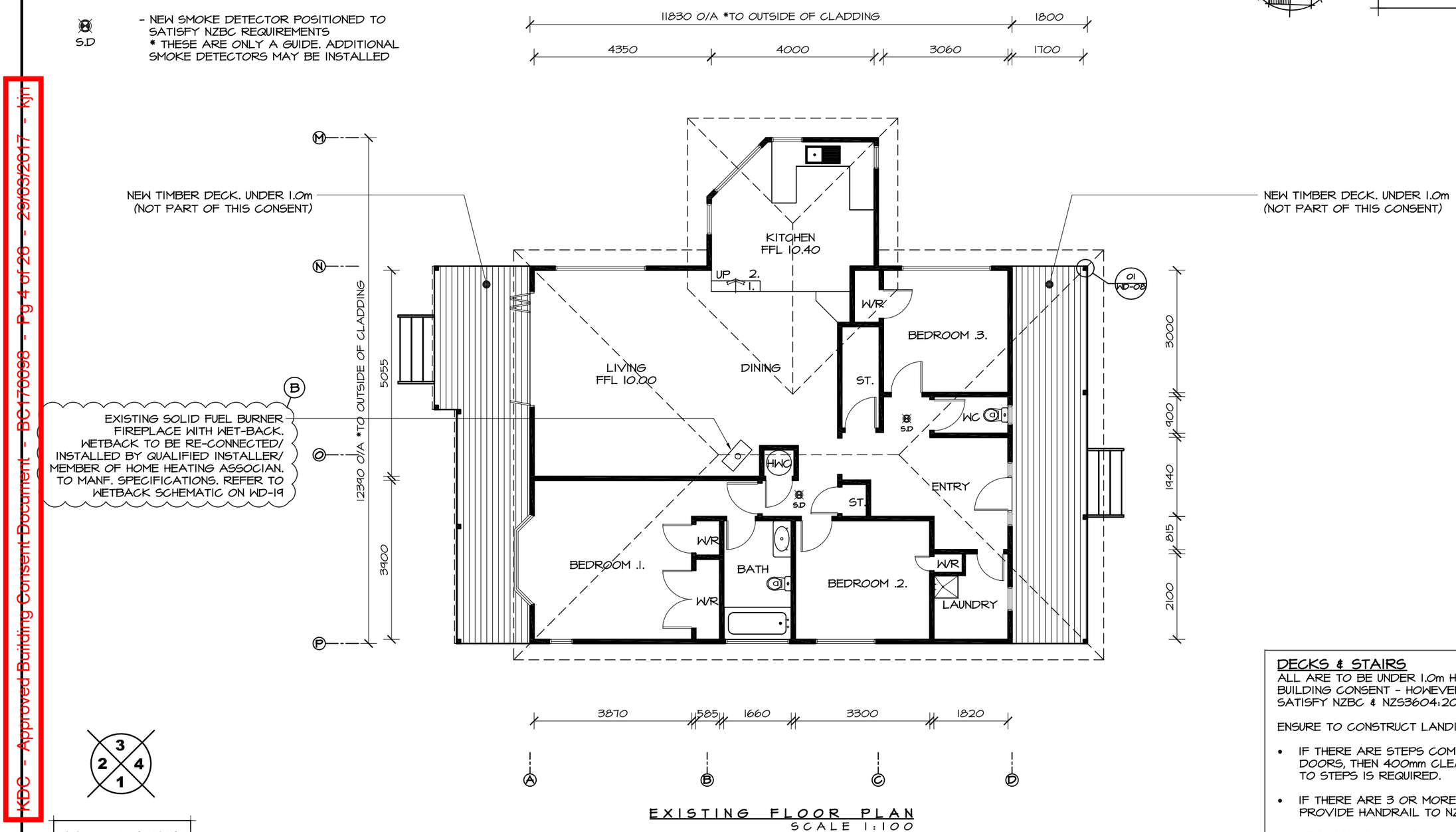
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FLOOR PLAN KEY

- EXISTING TIMBER FRAMED WALLS

S.D – NEW SMOKE DETECTOR POSITIONED TO SATISFY NZBC REQUIREMENTS
* THESE ARE ONLY A GUIDE. ADDITIONAL SMOKE DETECTORS MAY BE INSTALLED



EXISTING FLOOR PLAN
SCALE 1:100

FLOOR AREA
122.5m²

DECKS & STAIRS

ALL ARE TO BE UNDER 1.0m HIGH & DO NOT REQUIRE A BUILDING CONSENT – HOWEVER MUST BE BUILT TO SATISFY NZBC & NZS3604:2011.

ENSURE TO CONSTRUCT LANDINGS OUT FROM ALL DOORS.

- IF THERE ARE STEPS COMING OFF OUTWARD OPENING DOORS, THEN 400mm CLEARANCE FROM DOOR SWING TO STEPS IS REQUIRED.
- IF THERE ARE 3 OR MORE RISERS, ENSURE TO PROVIDE HANDRAIL TO NZBC REQUIREMENTS.
- TREADS = MIN. 280mm / RISERS = MAX. 190mm

(RESIDENCE 'A')

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RELOCATE SECONDHAND RESIDENCES ('A') & ('B') TO 102 SETTLEMENT ROAD, KAIWAKA FOR LYNETTE DHEDA

		DATE		
DESIGNED				
DRAWN	CJM	01/17		
CHECKED	CJM			
APPROVED	CJM			
			'B' - EXTG. FIREPLACE	03/17
REF:			'A' BRACE LINES FOR BRACING CHECK	02/17
			AMENDMENTS	

CONTRACT No 16-120
DWG No WD-04 'B'
SCALE NTD @ A3

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SUB-FLOOR FRAMING KEY

[ ] - TIMBER WALLS ABOVE

ENGINEERED BEARER UPGRADES
REMOVE ALL EXISTING BEARERS (EXCEPT B1) REPLACE WITH NEW BEARERS AS SPECIFIED BELOW. ENSURE TO STAGGAR LAPS I.E (NO MORE THAN 1 BUTT END PER PILE) DESIGNED BY 'DEANE CONSULTANCY LTD' SEE REPORT FOR DETAILS. REF:17/ADS/2 DATED: 17 FEBRUARY 2017

B1 - NEW 2/190x45 SG8 H1.2 TIMBER BEARER

B2 - NEW 3/190x45 SG8 H1.2 TIMBER BEARER

'SUB-FLOOR PILES' TWO STAGE 'ORDINARY' PILES
NEW 125mm SQ. SENTON PILE IN **450Φ** x 3000mm DEEP FOUNDATION IN FIRM NATURAL GROUND. SEE DETAIL 'Y' ON WD-14 FOR REINFORCING SPECIFICATIONS. BY 'DEANE CONSULTANCY LTD' SEE REPORT FOR DETAILS. REF:17/ADS/2 DATED: 17 FEBRUARY 2017

'SUB-FLOOR PILES' TWO STAGE 'LEADING EDGE' PILES
NEW 125mm SQ. SENTON PILE IN **450Φ** x 3000mm DEEP FOUNDATION IN FIRM NATURAL GROUND. SEE DETAIL 'X' ON WD-14 FOR REINFORCING SPECIFICATIONS. BY 'DEANE CONSULTANCY LTD' SEE REPORT FOR DETAILS. REF:17/ADS/2 DATED: 17 FEBRUARY 2017

A 'ANCHOR PILES' TWO STAGE
NEW 125x125 SQ. SENTON PILES IN **450Φ** x 3000mm DEEP FOUNDATION IN FIRM NATURAL GROUND. SEE DETAIL 'X' ON WD-14 FOR REINFORCING SPECIFICATIONS

'SUB-FLOOR PILES' - DECK POINT-LOAD (TWO STAGE)
NEW 125x125 SQ. SENTON PILES IN 350Φ x 3000mm DEEP FOUNDATION IN FIRM NATURAL GROUND. PLACE DIRECTLY UNDER VERANDAH ROOF & HANDRAIL POSTS

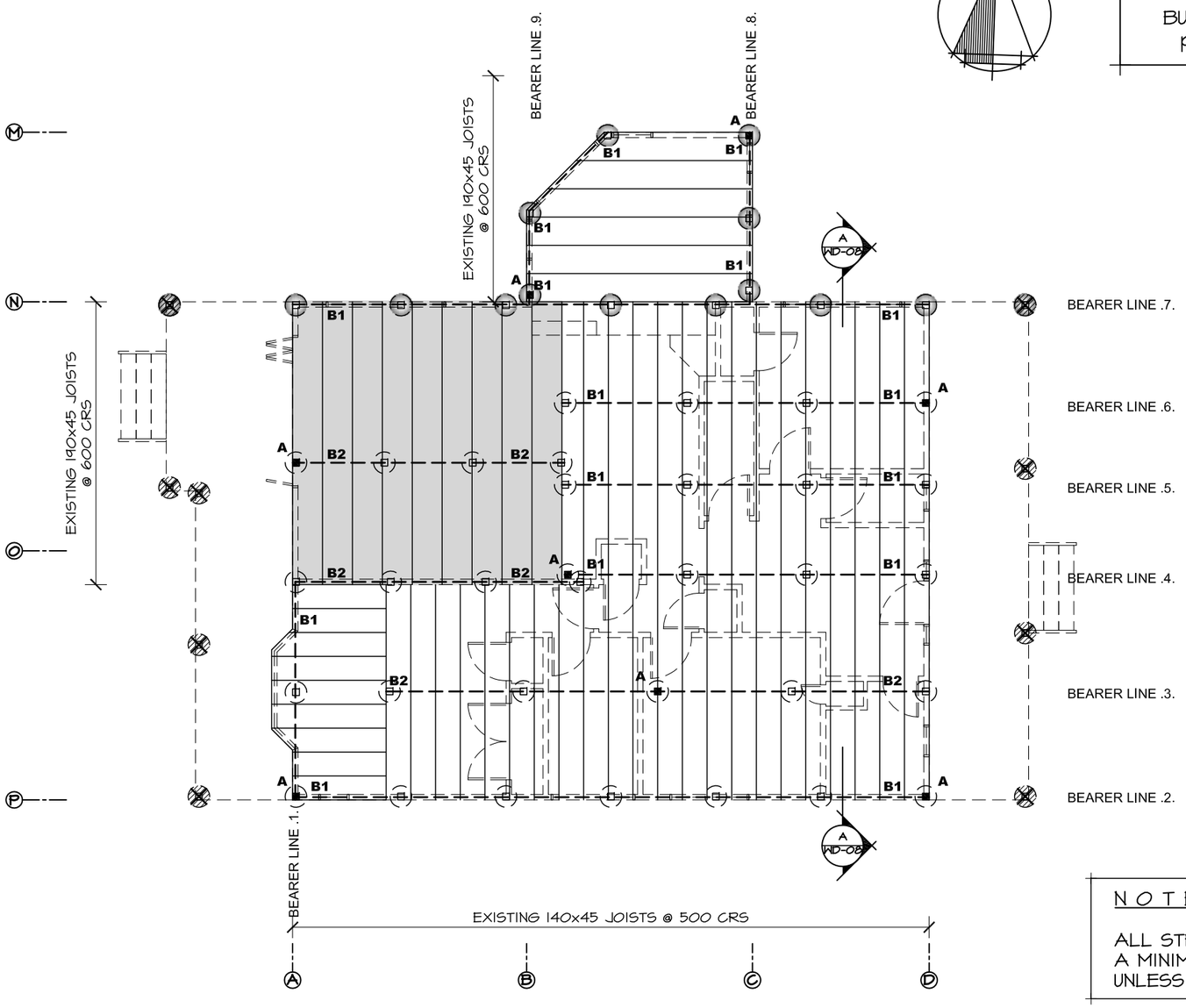
PILE SPACING KEY

BEARER LINE .1. - PILES @ 1.95m CRS MAX
BEARER LINE .2. - PILES @ 1.95m CRS MAX
BEARER LINE .3. - PILES @ 2.5m CRS MAX
BEARER LINE .4. - PILES @ 2.25m CRS MAX
BEARER LINE .5. - PILES @ 2.25m CRS MAX
BEARER LINE .6. - PILES @ 2.25m CRS MAX
BEARER LINE .7. - PILES @ 1.95m CRS MAX
BEARER LINE .8. - PILES @ 1.4m CRS MAX
BEARER LINE .9. - PILES @ EACH CORNER

DECKS & STAIRS
ALL ARE TO BE UNDER 1.0m HIGH & DO NOT REQUIRE A BUILDING CONSENT - HOWEVER MUST BE BUILT TO SATISFY NZBC & NZS3604:2011.

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- TREADS = MIN. 280mm / RISERS = MAX. 190mm



SUB-FLOOR PLAN
SCALE 1:100

NOTE: TIMBER GRADE

ALL STRUCTURAL TIMBER TO BE A MINIMUM OF SG8 OR HIGHER, UNLESS STATED OTHERWISE

SUB-FLOOR STEEL FIXINGS
ENSURE THAT ALL STEEL FIXINGS AND FASTENINGS ARE STAINLESS STEEL WHERE WITHIN 600mm FROM GROUND LEVEL OR GALVANIZED WHERE ABOVE 600mm UNLESS IN A SEA SPRAY ZONE. REFER TO NZS 3604, TABLE 4.1

(RESIDENCE 'A')

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RELOCATE SECONDHAND RESIDENCES ('A') & ('B') TO 102 SETTLEMENT ROAD, KAIWAKA FOR LYNETTE DHEDA

		DATE	AMENDMENTS
DESIGNED			
DRAWN			
CHECKED			
APPROVED			
REF:			

CONTRACT No 16-120
DWG No WD-05
SCALE NTD @ A3

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SUB-FLOOR FRAMING KEY

▭ - TIMBER WALLS ABOVE

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B1 - NEW 2/190x45 SG8 HI.2 TIMBER BEARER

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'SUB-FLOOR PILES' TWO STAGE 'LEADING EDGE' PILES
NEW 125mm SQ. SENTON PILE IN **450Φ** x 3000mm DEEP FOUNDATION IN FIRM NATURAL GROUND. SEE DETAIL 'X' ON WD-14 FOR REINFORCING SPECIFICATIONS. BY 'DEANE CONSULTANCY LTD' SEE REPORT FOR DETAILS. REF:17/ADS/2 DATED: 17 FEBRUARY 2017

A 'ANCHOR PILES' TWO STAGE
NEW 125x125 SQ. SENTON PILES IN **450Φ** x 3000mm DEEP FOUNDATION IN FIRM NATURAL GROUND. SEE DETAIL 'X' ON WD-14 FOR REINFORCING SPECIFICATIONS

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NEW 125x125 SQ. SENTON PILES IN 350Φ x 3000mm DEEP FOUNDATION IN FIRM NATURAL GROUND. PLACE DIRECTLY UNDER VERANDAH ROOF & HANDRAIL POSTS

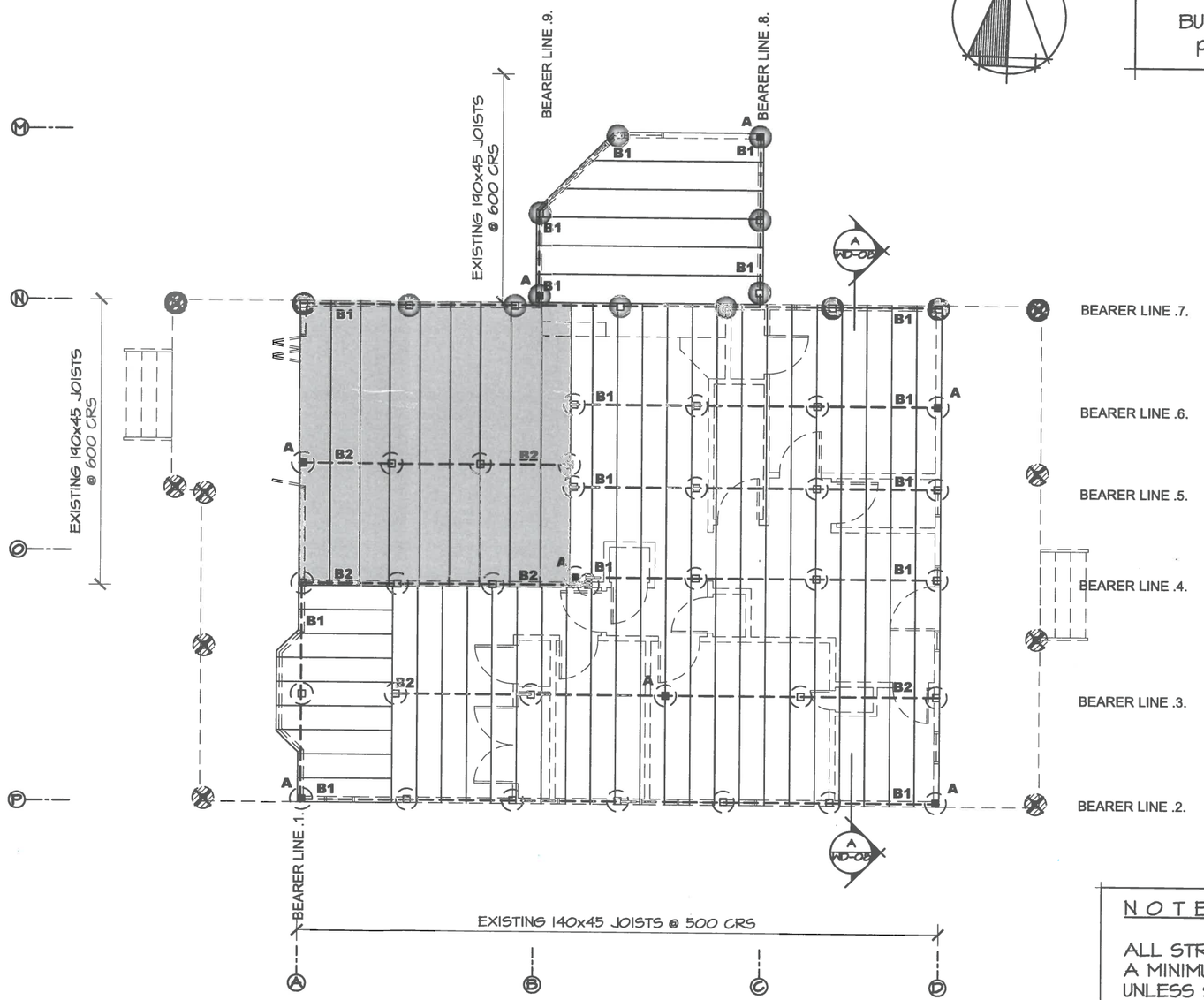
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BEARER LINE .7. - PILES @ 1.95m CRS MAX
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- TREADS = MIN. 280mm / RISERS = MAX. 190mm



SUB-FLOOR PLAN
SCALE 1:100

NOTE: TIMBER GRADE

ALL STRUCTURAL TIMBER TO BE A MINIMUM OF SG8 OR HIGHER, UNLESS STATED OTHERWISE

SUB-FLOOR STEEL FIXINGS
ENSURE THAT ALL STEEL FIXINGS AND FASTENINGS ARE STAINLESS STEEL WHERE WITHIN 600mm FROM GROUND LEVEL OR GALVANIZED WHERE ABOVE 600mm UNLESS IN A SEA SPRAY ZONE. REFER TO NZS 3604, TABLE 4.1

P. A. DEANE (09) 4222408
MIPENZ (Civil, Structural) CPEng
IPENZ No. 64619
21/2/17

(RESIDENCE 'A')

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RELOCATE SECONDHAND RESIDENCES ('A') & ('B') TO 102 SETTLEMENT ROAD, KAIWAKA FOR LYNETTE DHEDA

		DATE	AMENDMENTS
DESIGNED			
DRAWN			
CHECKED			
APPROVED			
REF:			

CONTRACT No 16-120
DWG No WD-05
SCALE NTD @ A3

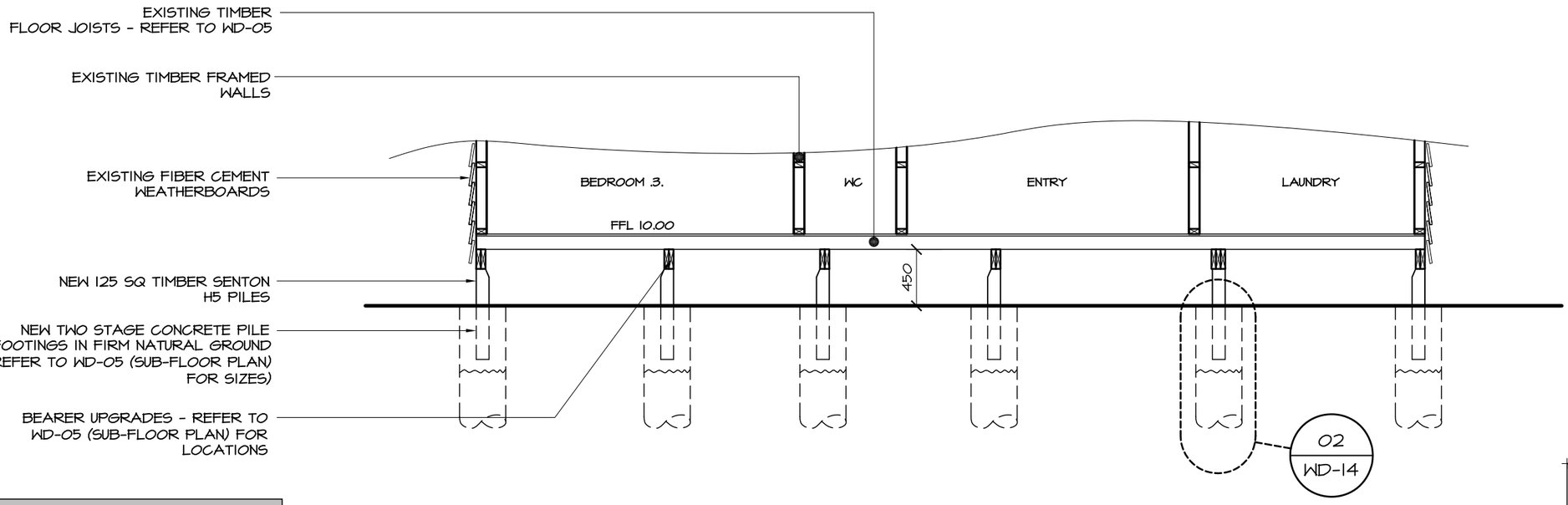
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*ENSURE GROUND LEVEL TO UNDERSIDE OF FLOOR JOISTS IS 450mm MIN.

CROSS SECTION A-A
SCALE 1:50

NOTE: TIMBER GRADE

ALL STRUCTURAL TIMBER TO BE A MINIMUM OF SG8 OR HIGHER, UNLESS STATED OTHERWISE

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		DATE	AMENDMENTS
DESIGNED	CJM	01/17	
DRAWN	CJM	01/17	
CHECKED	CJM		
APPROVED	CJM		
REF:			

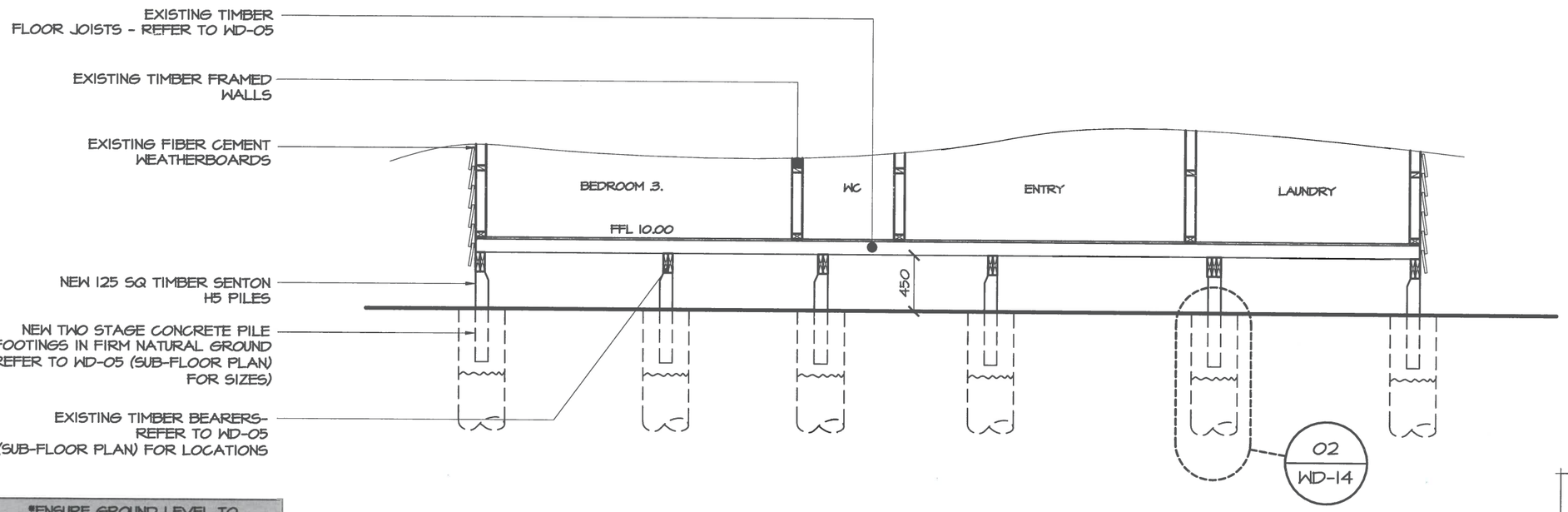
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*ENSURE GROUND LEVEL TO UNDERSIDE OF FLOOR JOISTS IS 450mm MIN.

CROSS SECTION A-A
SCALE 1:50

NOTE: TIMBER GRADE

ALL STRUCTURAL TIMBER TO BE A MINIMUM OF SG8 OR HIGHER, UNLESS STATED OTHERWISE

SUB-FLOOR STEEL FIXINGS
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21/2/17

(RESIDENCE 'A')

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RELOCATE SECONDHAND RESIDENCES ('A') & ('B') TO 102 SETTLEMENT ROAD, KAIWAKA FOR LYNETTE DHEDA

		DATE	AMENDMENTS
DESIGNED	CJM	01/17	
DRAWN	CJM	01/17	
CHECKED	CJM		
APPROVED	CJM		
REF:			

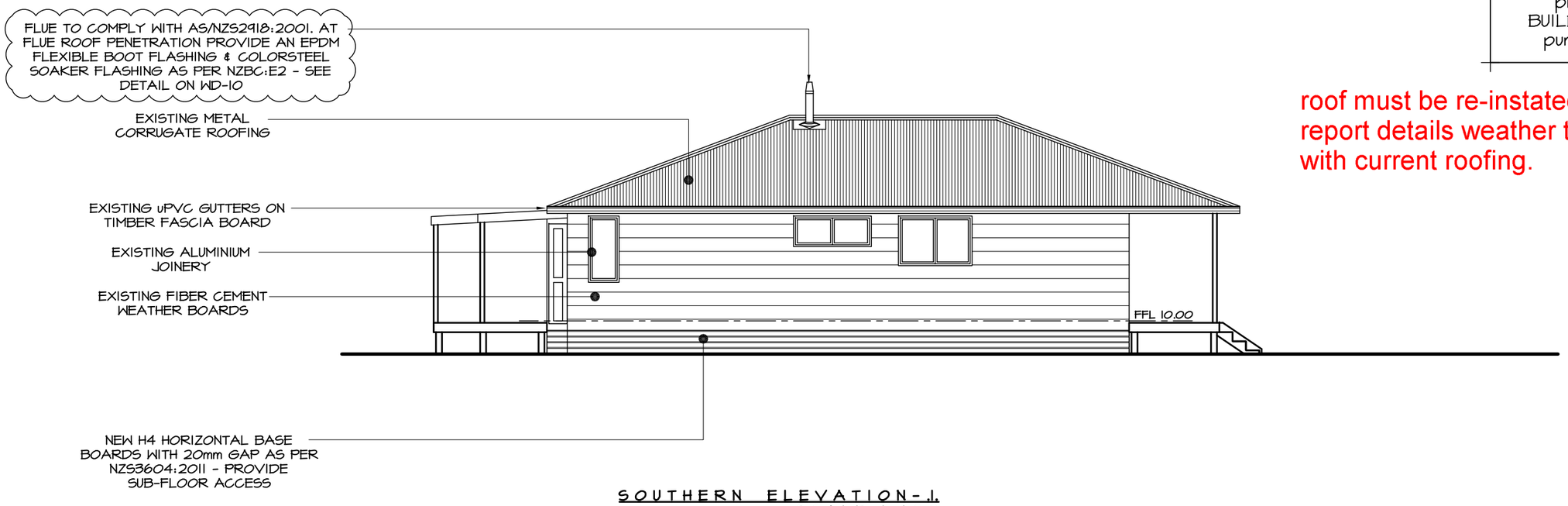
CONTRACT No 16-120
DWG No WD-08
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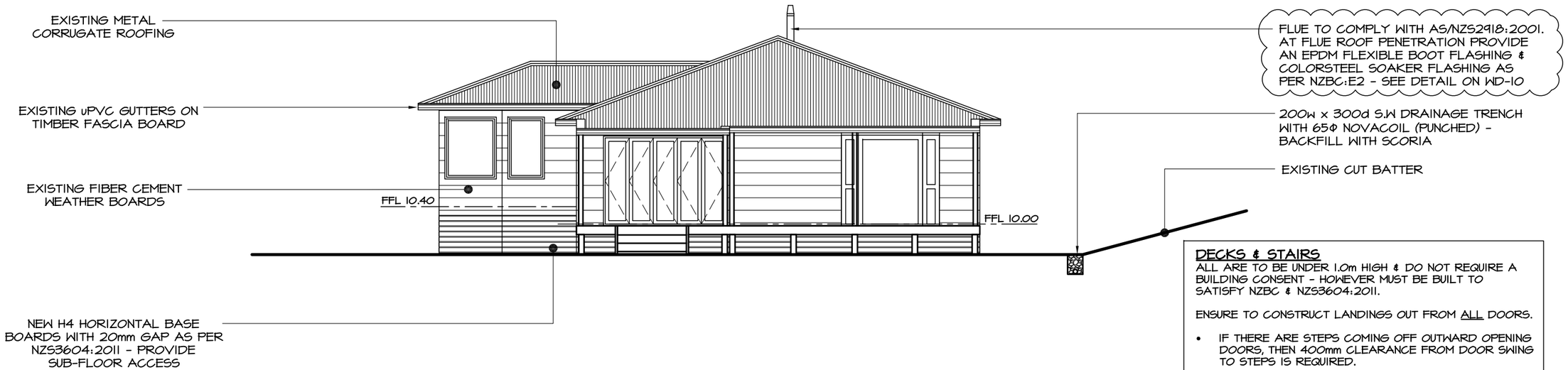
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roof must be re-instated as building report details weather tightness issues with current roofing.



SOUTHERN ELEVATION-1.
SCALE 1:100



EASTERN ELEVATION-2.
SCALE 1:100

DECKS & STAIRS

ALL ARE TO BE UNDER 1.0m HIGH & DO NOT REQUIRE A BUILDING CONSENT - HOWEVER MUST BE BUILT TO SATISFY NZBC & NZS3604:2011.

ENSURE TO CONSTRUCT LANDINGS OUT FROM ALL DOORS.

- IF THERE ARE STEPS COMING OFF OUTWARD OPENING DOORS, THEN 400mm CLEARANCE FROM DOOR SWING TO STEPS IS REQUIRED.
- IF THERE ARE 3 OR MORE RISERS, ENSURE TO PROVIDE HANDRAIL TO NZBC REQUIREMENTS.
- TREADS = MIN. 280mm / RISERS = MAX. 190mm

(RESIDENCE 'A')

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RELOCATE SECONDHAND RESIDENCES ('A') & ('B') TO 102 SETTLEMENT ROAD, KAIWAKA FOR LYNETTE DHEDA

		DATE		
DESIGNED				
DRAWN	CJM	01/17		
CHECKED	CJM			
APPROVED	CJM			
REF:			'A' - NEW FLU AND PENERTRATION FLASHING	03/17
			AMENDMENTS	

CONTRACT No 16-120
DWG No WD-06 'A'
SCALE NTD @ A3

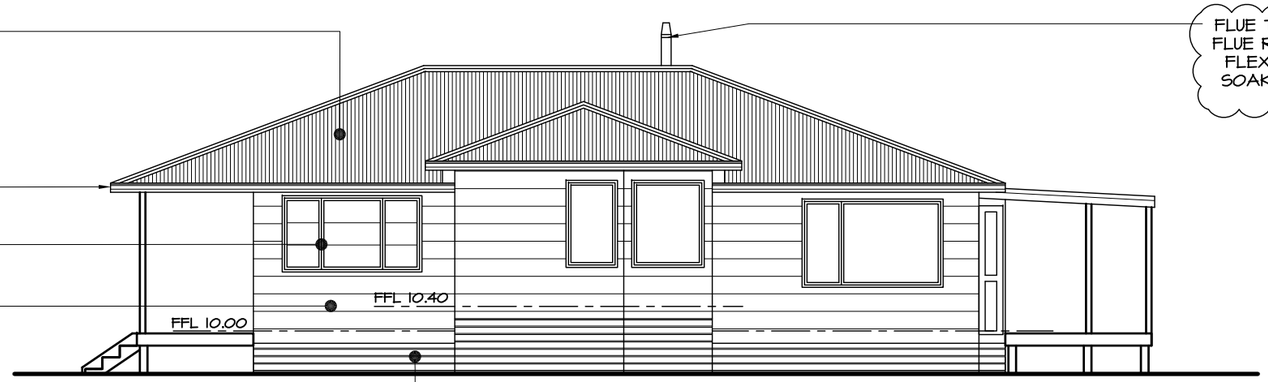
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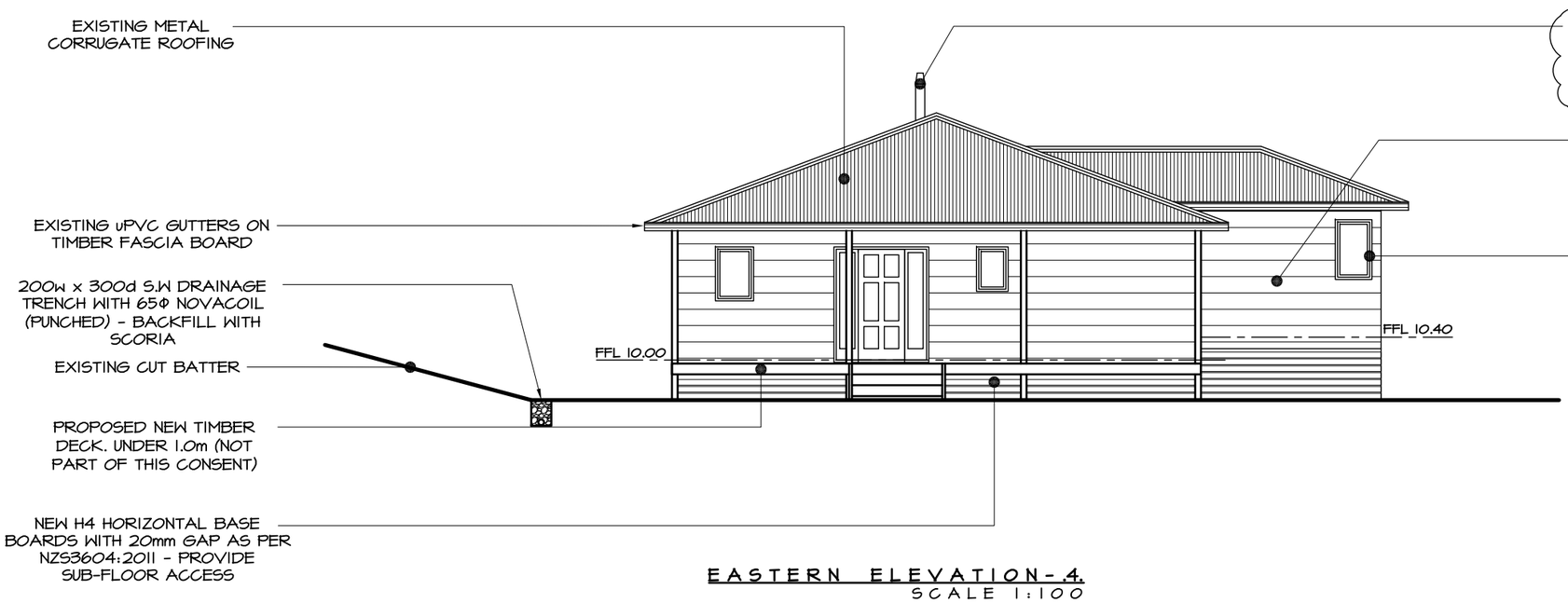
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NORTHERN ELEVATION - 3.
SCALE 1:100



EASTERN ELEVATION - 4.
SCALE 1:100

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RELOCATE SECONDHAND RESIDENCES ('A') & ('B') TO 102 SETTLEMENT ROAD, KAIWAKA FOR LYNETTE DHEDA

		DATE		
DESIGNED				
DRAWN	CJM	01/17		
CHECKED	CJM			
APPROVED	CJM			
REF:			'A' - NEW FLU AND PENERTRATION FLASHING	03/17
			AMENDMENTS	

CONTRACT No 16-120
DWG No WD-07 'A'
SCALE NTD @ A3

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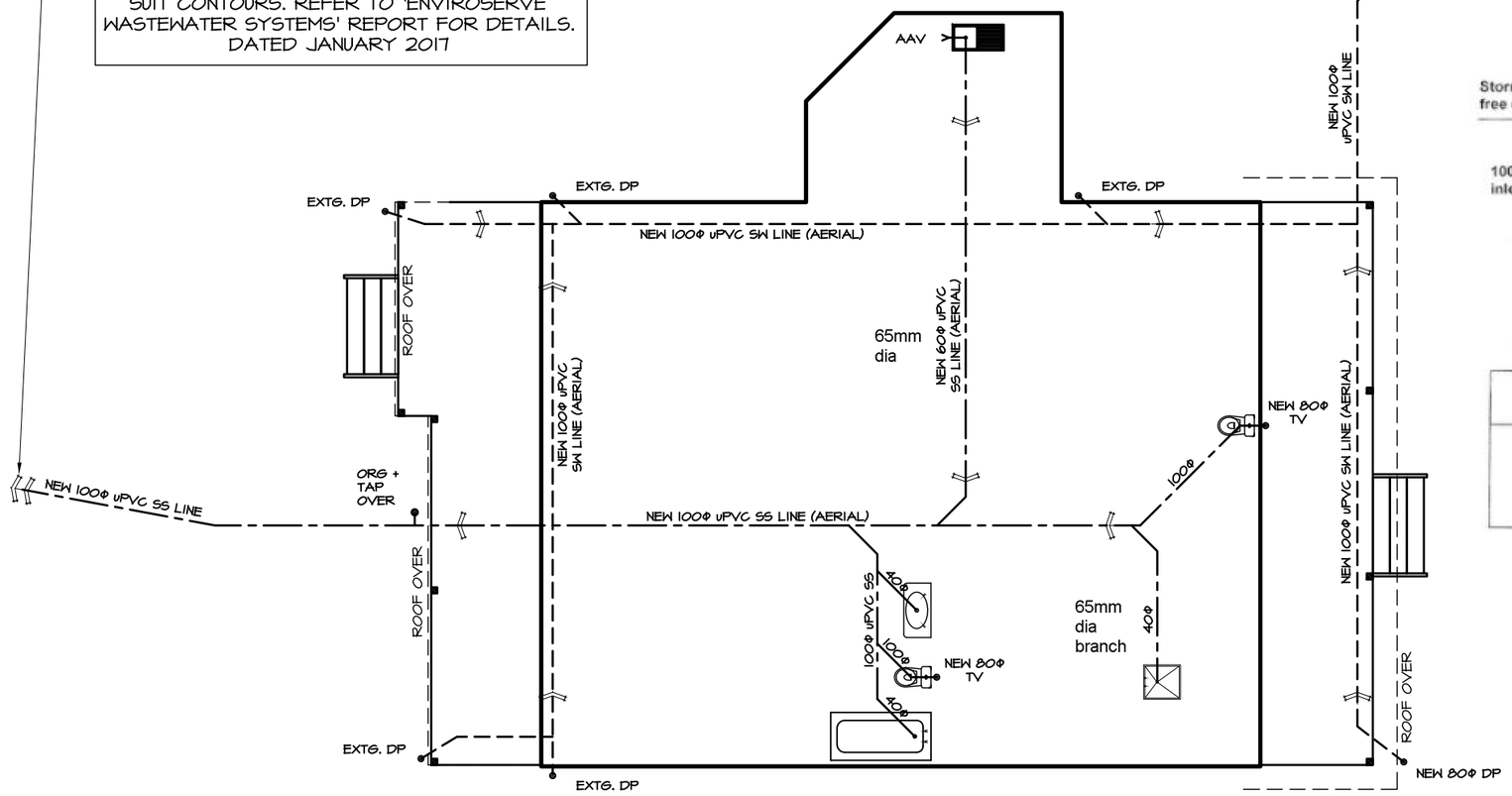
DOWNPIPE SIZE GUIDE

DOWNPIPE SIZE (mm) (minimum internal sizes)	ROOF PITCH 0-25° (PLAN AREA OF ROOF SERVED BY THE DOWNPIPE (m²))	25-35°	35-45°
63mm DIAMETER	60	50	40
74mm DIAMETER	85	70	60
100mm DIAMETER	155	130	110

* CONFIRM DOWNPIPE SIZES OF EXISTING ARE ADEQUATE

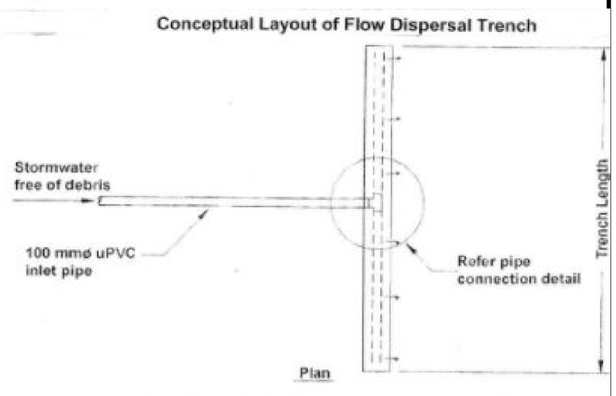
PROPOSED WATER TANK FOR EACH RELOCATED RESIDENCE. OWNER TO CONFIRM SIZE, TYPE AND FINAL LOCATION. STORMWATER OVERFLOW TO DISCHARGE TO A COUNCIL APPROVED SW DISPERSAL TRENCH.

100Φ SS LINE PROPOSED 4500LTR TWIN CHAMBER SEPTIC WITH DOSE AND SIPHON. TREATED EFFLUENT TO DISCHARGE TO 144m2 EFFLUENT DISPERSAL FIELDS. LAID LEVEL TO SUIT CONTOURS. REFER TO 'ENVIROSERVE WASTEWATER SYSTEMS' REPORT FOR DETAILS. DATED JANUARY 2017



PROPOSED DRAINAGE PLAN
SCALE 1:100

NOTE: PLUMBING STANDARDS
ALL SANITARY PLUMBING AND DRAINAGE SHALL BE IN A ACCORDANCE WITH G13/AS1 & AS2 RESPECTIVELY AND STORMWATER DRAINAGE IN ACCORDANCE WITH E1/AS1 AS DEPICTED

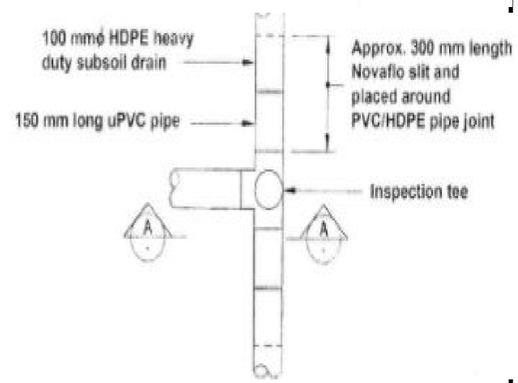


Keep dispersal trench 30 m clear of property boundary

Design Parameters

Effective catchment area drained (m^2)	Trench Length (m)
100	8
200	12
300	14
400	16
500	18
600	20

(Note: effective catchment area drained = impervious area + 0.72 x pervious area



(RESIDENCE 'A')

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ARCHITECTURAL DRAUGHTING SOLUTIONS LTD
EMAIL: CHRIS@ADSLTD.CO.NZ

RELOCATE SECONDHAND RESIDENCES ('A') & ('B') TO 102 SETTLEMENT ROAD, KAIWAKA FOR LYNETTE DHEDA

		DATE
DESIGNED	CJM	01/17
DRAWN	CJM	01/17
CHECKED	CJM	
APPROVED	CJM	
REF:		

AMENDMENTS

CONTRACT No 16-120
DWG No WD-09
SCALE NTD @ A3

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LEGAL DESCRIPTION

LOT 1
DP 123715
AREA: 5.5908Ha

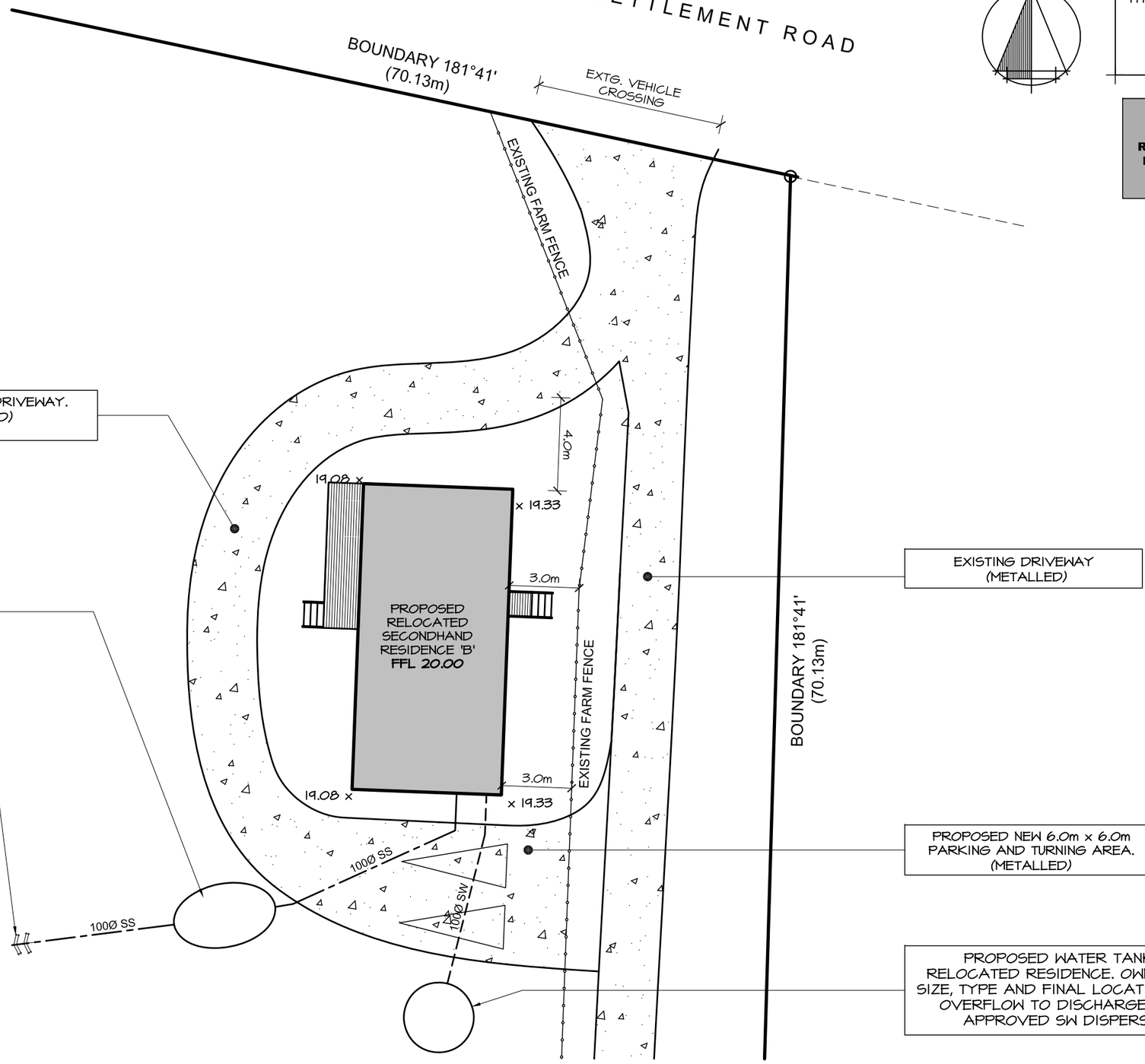
PROJECT DESCRIPTION

RELOCATE SECONDHAND RESIDENCES (RESIDENCE 'A') & (RESIDENCE 'B') ONTO SITE. NEW ON-SITE EFFLUENT DISPOSAL SYSTEM FOR EACH DWELLING

These drawings have been produced for BUILDING CONSENT purposes ONLY

EFFLUENT SYSTEM

REFER TO REPORT, DRAWING AND DOCUMENTATION ATTACHED BY 'ENVIROSERVE WASTEWATER SYSTEMS'



PART-SITE PLAN
SCALE 1:200

(RESIDENCE 'B')

NOTE : - SET OUT / LOCATION OF BUILDINGS

1. **THE OWNER IS TO CONFIRM THE PROPOSED LOCATION & ORIENTATION OF THE BUILDING ON SITE PRIOR TO ANY WORK TAKING PLACE.**
2. **THE PROPOSED LOCATION OF THE BUILDING IS TO BE PEGGED BY THE SURVEYOR. SURVEYOR TO CHECK / CONFIRM MINIMUM FLOOR LEVELS & HEIGHT IN RELATION TO BOUNDARY AT THIS STAGE. CHECK WITH HOUSE MOVER PRIOR TO UNDERTAKING THIS.**
3. **PEG FFL DATUM BY ON SITE (AGAINST FENCE - OUT OF THE WAY) - CONFIRM THAT YOU ARE OK WITH THIS LEVEL. *(ENSURE TO ACHIEVE 450mm TO UNDER SIDE OF JOISTS).**
5. **ADVISE HOUSE MOVER THAT THE ABOVE HAS BEEN CONFIRMED AND/OR CARRIED OUT AND THAT THE SITE IS READY FOR THE RELOCATION OF THE BUILDING.**

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EMAIL: CHRIS@ADSLTD.CO.NZ

RELOCATE SECONDHAND RESIDENCES ('A') & ('B') TO 102 SETTLEMENT ROAD, KAIWAKA FOR LYNETTE DHEDA

		DATE		
DESIGNED				
DRAWN	CJM	06/16		
CHECKED	CJM			
APPROVED	CJM			
REF:			'A' - RESIDENCE 'B' (ROTATED)	02/17
			AMENDMENTS	

CONTRACT No 16-120
DWG No WD-03 'A'
SCALE NTD @ A3

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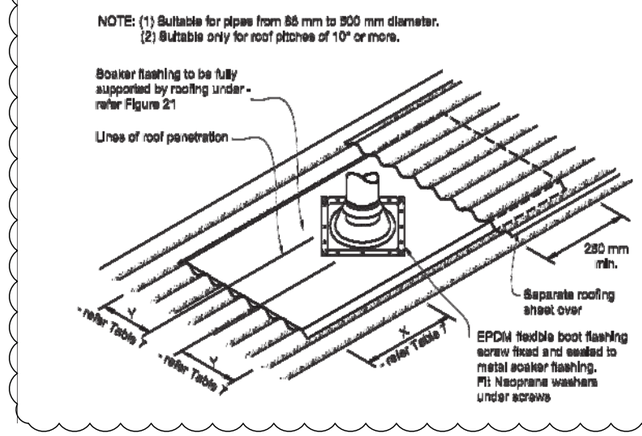
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FLOOR PLAN KEY

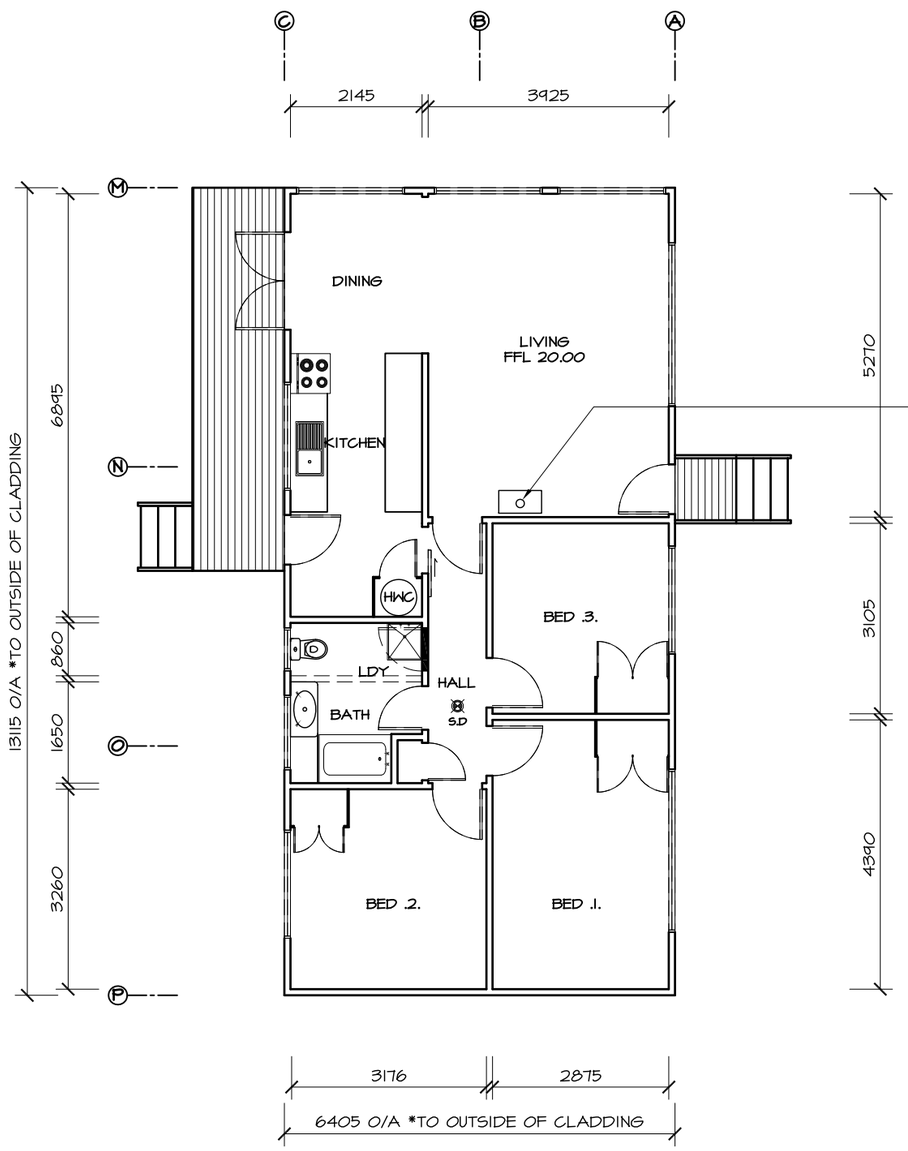
- ⊏ = ⊐ – EXISTING TIMBER FRAMED WALL TO BE REMOVED/ DEMOLISHED
- ▬ – FILL IN DOOR OPENING & MAKE GOOD
- ▭ – EXISTING TIMBER FRAMED WALLS
- ⊗ S.D – NEW SMOKE DETECTOR POSITIONED TO SATISFY NZBC REQUIREMENTS * THESE ARE ONLY A GUIDE. ADDITIONAL SMOKE DETECTORS MAY BE INSTALLED

B

Figure 54: Soaker flashing for pipe penetrations
Paragraph 8.4.17



SOAKER FLASHING - NZBC:E2
SCALE N.T.S



EXISTING FLOOR PLAN
SCALE 1:100

These drawings have been produced for BUILDING CONSENT purposes ONLY

B

PROPOSED 'METROFIRES WEE RAD WETBACK' SOLID FUEL BURNER FIRE PLACE. SKU:280142
MODEL: 200-0210
TO BE INSTALLED BY SUITABLY QUALIFIED INSTALLER TO MANF. SPECIFICATIONS.
RE-INSTATE EXISTING FLUE AND FLU FLASHING DETAILS. SEE DETAIL ON THIS PAGE. REFER TO WETBACK SCHEMATIC ON WD-19

3 / 2 4 / 1

FLOOR AREA
84.0m²

DECKS & STAIRS
ALL ARE TO BE UNDER 1.0m HIGH & DO NOT REQUIRE A BUILDING CONSENT - HOWEVER MUST BE BUILT TO SATISFY NZBC & NZS3604:2011.

ENSURE TO CONSTRUCT LANDINGS OUT FROM ALL DOORS.

- IF THERE ARE STEPS COMING OFF OUTWARD OPENING DOORS, THEN 400mm CLEARANCE FROM DOOR SWING TO STEPS IS REQUIRED.
- IF THERE ARE 3 OR MORE RISERS, ENSURE TO PROVIDE HANDRAIL TO NZBC REQUIREMENTS.
- TREADS = MIN. 280mm / RISERS = MAX. 190mm

(RESIDENCE 'B')

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EMAIL: CHRIS@ADSLTD.CO.NZ

RELOCATE SECONDHAND RESIDENCES ('A') & ('B') TO 102 SETTLEMENT ROAD, KAIWAKA FOR LYNETTE DHEDA

		DATE		
DESIGNED				
DRAWN	CJM	01/17		
CHECKED	CJM			
APPROVED	CJM		'B' - NEW FIRE PLACE AND FLASHING DETAIL	03/17
			'A' BRACE LINES FOR BRACING CHECK	02/17
REF:			'A' - RESIDENCE 'B' (ROTATED)	02/17
			AMENDMENTS	

CONTRACT No 16-120
DWG No WD-10 'B'
SCALE NTD @ A3

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SUB-FLOOR FRAMING KEY

[====] - TIMBER WALLS ABOVE

ENGINEERED BEARER UPGRADES
REMOVE ALL EXISTING BEARERS (EXCEPT B1) REPLACE WITH NEW BEARERS AS SPECIFIED BELOW. ENSURE TO STAGGAR LAPS I.E (NO MORE THAN 1 BUTT END PER PILE) DESIGNED BY 'DEANE CONSULTANCY LTD' SEE REPORT FOR DETAILS. REF:17/ADS/2 DATED: 17 FEBRUARY 2017

B1 - NEW 2/190x45 SG8 H1.2 TIMBER BEARERS

B2 - NEW 3/190x45 SG8 H1.2 TIMBER BEARER

'SUB-FLOOR PILES' TWO STAGE 'ORDINARY' PILES
NEW 125mm SQ. SENTON PILE IN **450Φ** x 1500mm DEEP FOUNDATION IN FIRM NATURAL GROUND @ **2.07m CRS** MAX. SEE DETAIL 'Y' ON THIS PAGE FOR REINFORCING SPECIFICATIONS. BY 'DEANE CONSULTANCY LTD' SEE REPORT FOR DETAILS. REF:17/ADS/2 DATED: 17 FEBRUARY 2017

'SUB-FLOOR PILES' TWO STAGE 'LEADING EDGE' PILES
NEW 125mm SQ. SENTON PILE IN **450Φ** x 3000mm DEEP FOUNDATION IN FIRM NATURAL GROUND @ **2.07m CRS** MAX. SEE DETAIL 'X' ON THIS PAGE FOR REINFORCING SPECIFICATIONS. BY 'DEANE CONSULTANCY LTD' SEE REPORT FOR DETAILS. REF:17/ADS/2 DATED: 17 FEBRUARY 2017

A 'ANCHOR PILES' TWO STAGE
NEW 125x125 SQ. SENTON PILES IN **450Φ** x 3000mm DEEP FOUNDATION IN FIRM NATURAL GROUND. SEE DETAIL 'X' ON THIS PAGE FOR REINFORCING SPECIFICATIONS

NOTE: TIMBER GRADE

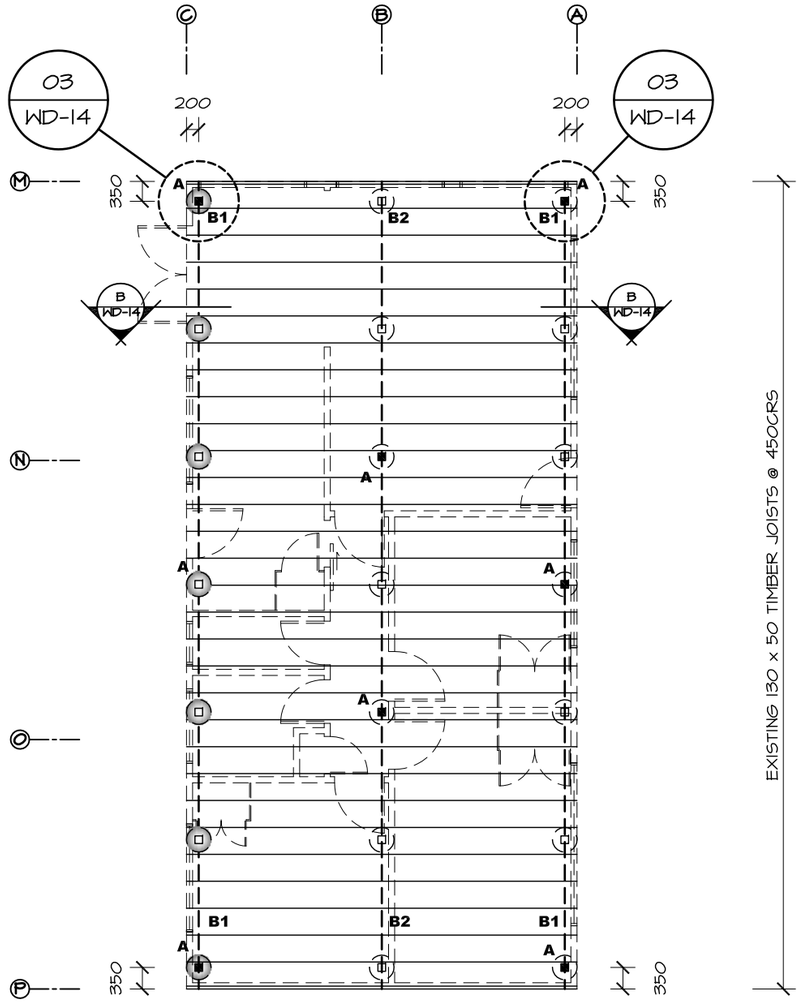
ALL STRUCTURAL TIMBER TO BE A MINIMUM OF SG8 OR HIGHER, UNLESS STATED OTHERWISE

DECKS & STAIRS
ALL ARE TO BE UNDER 1.0m HIGH & DO NOT REQUIRE A BUILDING CONSENT - HOWEVER MUST BE BUILT TO SATISFY NZBC & NZS3604:2011.

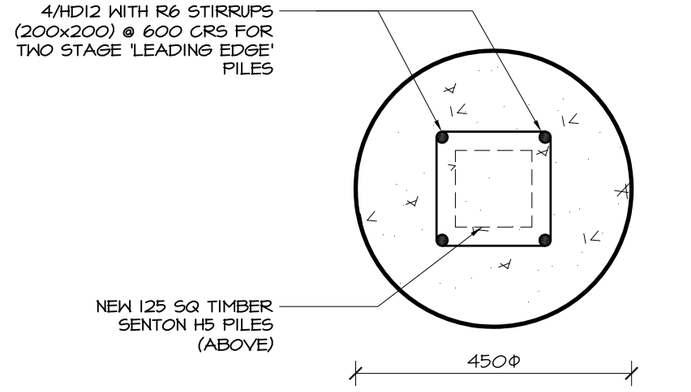
ENSURE TO CONSTRUCT LANDINGS OUT FROM ALL DOORS.

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- IF THERE ARE 3 OR MORE RISERS, ENSURE TO PROVIDE HANDRAIL TO NZBC REQUIREMENTS.
- TREADS = MIN. 280mm / RISERS = MAX. 190mm

SUB-FLOOR STEEL FIXINGS
ENSURE THAT ALL STEEL FIXINGS AND FASTENINGS ARE STAINLESS STEEL WHERE WITHIN 600mm FROM GROUND LEVEL OR GALVANIZED WHERE ABOVE 600mm UNLESS IN A SEA SPRAY ZONE. REFER TO NZS 3604, TABLE 4.1



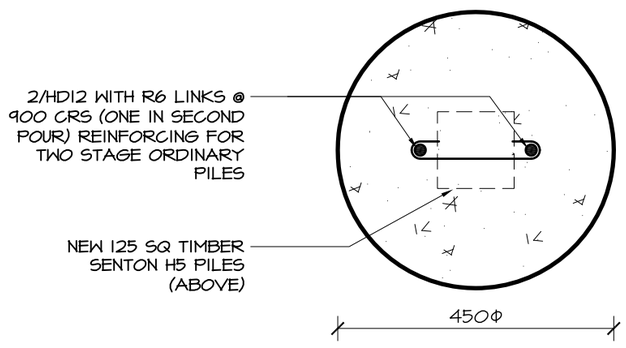
SUB-FLOOR PLAN
SCALE 1:100



'LEADING EDGE/ ANCHOR PILES' - PLAN VIEW

X / WD-14

TWO STAGE PILE
SCALE 1:10
ENGINEERING DETAIL



'ORDINARY' PILE - PLAN VIEW

Y / WD-14

TWO STAGE PILE
SCALE 1:10
ENGINEERING DETAIL

(RESIDENCE 'B')

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ARCHITECTURAL DRAUGHTING SOLUTIONS LTD
EMAIL: CHRIS@ADSLTD.CO.NZ

RELOCATE SECONDHAND RESIDENCES ('A') & ('B') TO 102 SETTLEMENT ROAD, KAIWAKA FOR LYNETTE DHEDA

		DATE		
DESIGNED				
DRAWN	CJM	01/17		
CHECKED	CJM			
APPROVED	CJM			
REF:			'A' - RESIDENCE 'B' (ROTATED)	02/17
			AMENDMENTS	

CONTRACT No 16-120
DWG No WD-11 'A'
SCALE NTD @ A3

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SUB-FLOOR FRAMING KEY

▭▭▭ - TIMBER WALLS ABOVE

ENGINEERED BEARER UPGRADES
REMOVE ALL EXISTING BEARERS (EXCEPT B1) REPLACE WITH NEW BEARERS AS SPECIFIED BELOW. ENSURE TO STAGGAR LAPS I.E (NO MORE THAN 1 BUTT END PER PILE) DESIGNED BY 'DEANE CONSULTANCY LTD' SEE REPORT FOR DETAILS. REF:17/ADS/2 DATED: 17 FEBRUARY 2017

B1 - NEW 2/190x45 SG8 H1.2 TIMBER BEARERS

B2 - NEW 3/190x45 SG8 H1.2 TIMBER BEARER

'SUB-FLOOR PILES' TWO STAGE 'ORDINARY' PILES
NEW 125mm SQ. SENTON PILE IN **450Φ** x 1500mm DEEP FOUNDATION IN FIRM NATURAL GROUND @ **2.07m CRS** MAX. SEE DETAIL 'Y' ON THIS PAGE FOR REINFORCING SPECIFICATIONS. BY 'DEANE CONSULTANCY LTD' SEE REPORT FOR DETAILS. REF:17/ADS/2 DATED: 17 FEBRUARY 2017

'SUB-FLOOR PILES' TWO STAGE 'LEADING EDGE' PILES
NEW 125mm SQ. SENTON PILE IN **450Φ** x 3000mm DEEP FOUNDATION IN FIRM NATURAL GROUND @ **2.07m CRS** MAX. SEE DETAIL 'X' ON THIS PAGE FOR REINFORCING SPECIFICATIONS. BY 'DEANE CONSULTANCY LTD' SEE REPORT FOR DETAILS. REF:17/ADS/2 DATED: 17 FEBRUARY 2017

A 'ANCHOR PILES' TWO STAGE
NEW 125x125 SQ. SENTON PILES IN **450Φ** x 3000mm DEEP FOUNDATION IN FIRM NATURAL GROUND. SEE DETAIL 'X' ON THIS PAGE FOR REINFORCING SPECIFICATIONS

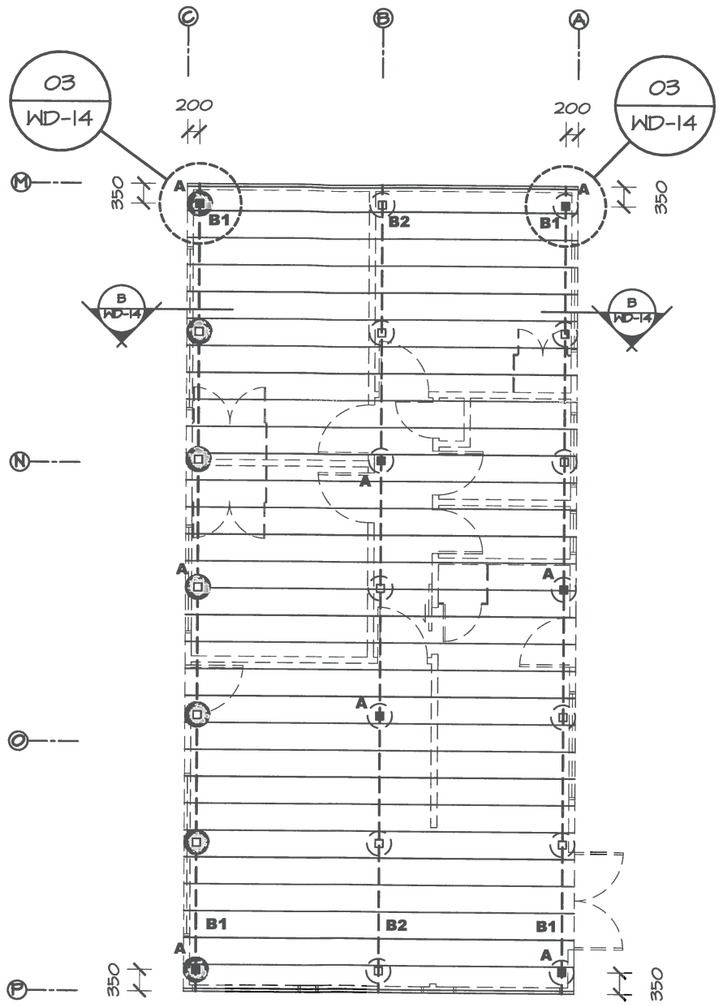
NOTE: TIMBER GRADE

ALL STRUCTURAL TIMBER TO BE A MINIMUM OF SG8 OR HIGHER, UNLESS STATED OTHERWISE

DECKS & STAIRS
ALL ARE TO BE UNDER 1.0m HIGH & DO NOT REQUIRE A BUILDING CONSENT - HOWEVER MUST BE BUILT TO SATISFY NZBC & NZS3604:2011.

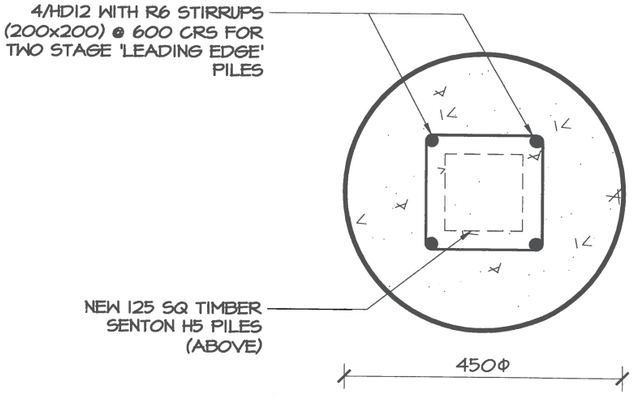
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- IF THERE ARE STEPS COMING OFF OUTWARD OPENING DOORS, THEN 400mm CLEARANCE FROM DOOR SWING TO STEPS IS REQUIRED.
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- TREADS = MIN. 280mm / RISERS = MAX. 190mm



SUB-FLOOR PLAN
SCALE 1:100

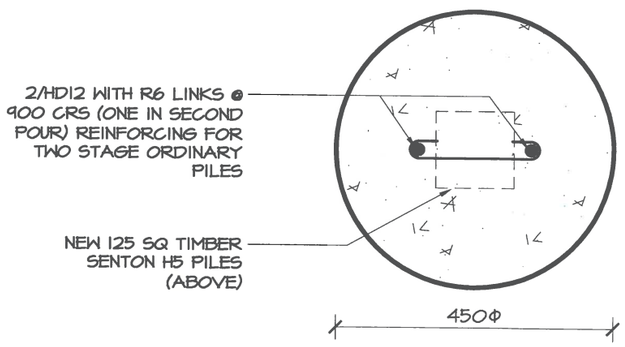
EXISTING 130 x 50 TIMBER JOISTS @ 450CRS



'LEADING EDGE/ ANCHOR PILES' - PLAN VIEW

X WD-14

TWO STAGE PILE
SCALE 1:10
ENGINEERING DETAIL



'ORDINARY' PILE - PLAN VIEW

Y WD-14

TWO STAGE PILE
SCALE 1:10
ENGINEERING DETAIL

SUB-FLOOR STEEL FIXINGS
ENSURE THAT ALL STEEL FIXINGS AND FASTENINGS ARE STAINLESS STEEL WHERE WITHIN 600mm FROM GROUND LEVEL OR GALVANIZED WHERE ABOVE 600mm UNLESS IN A SEA SPRAY ZONE. REFER TO NZS 3604, TABLE 4.1

21/2/17

(RESIDENCE 'B')

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RELOCATE SECONDHAND RESIDENCES ('A') & ('B') TO 102 SETTLEMENT ROAD, KAIWAKA FOR LYNETTE DHEDA

		DATE	AMENDMENTS
DESIGNED			
DRAWN	CJM	01/17	
CHECKED	CJM		
APPROVED	CJM		
REF:			

CONTRACT No 16-120
DWG No WD-11
SCALE NTD @ A3

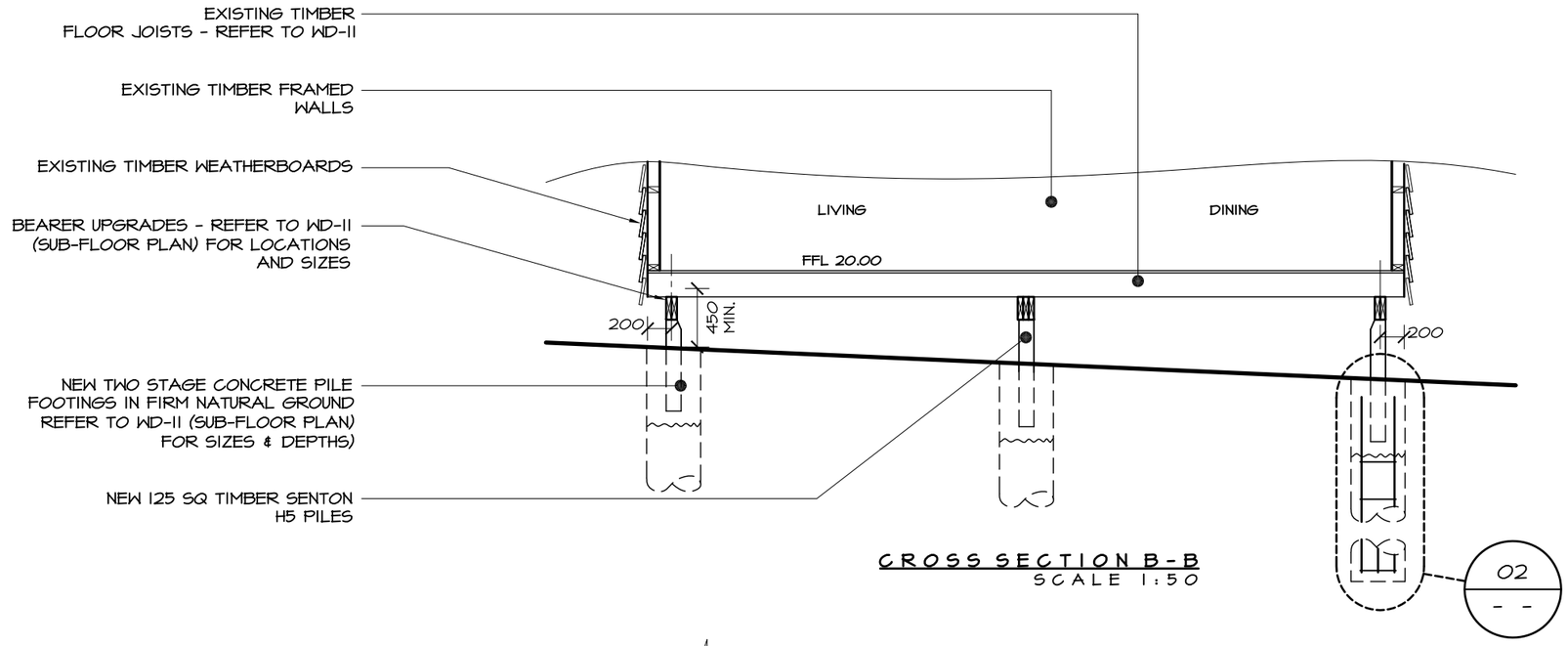
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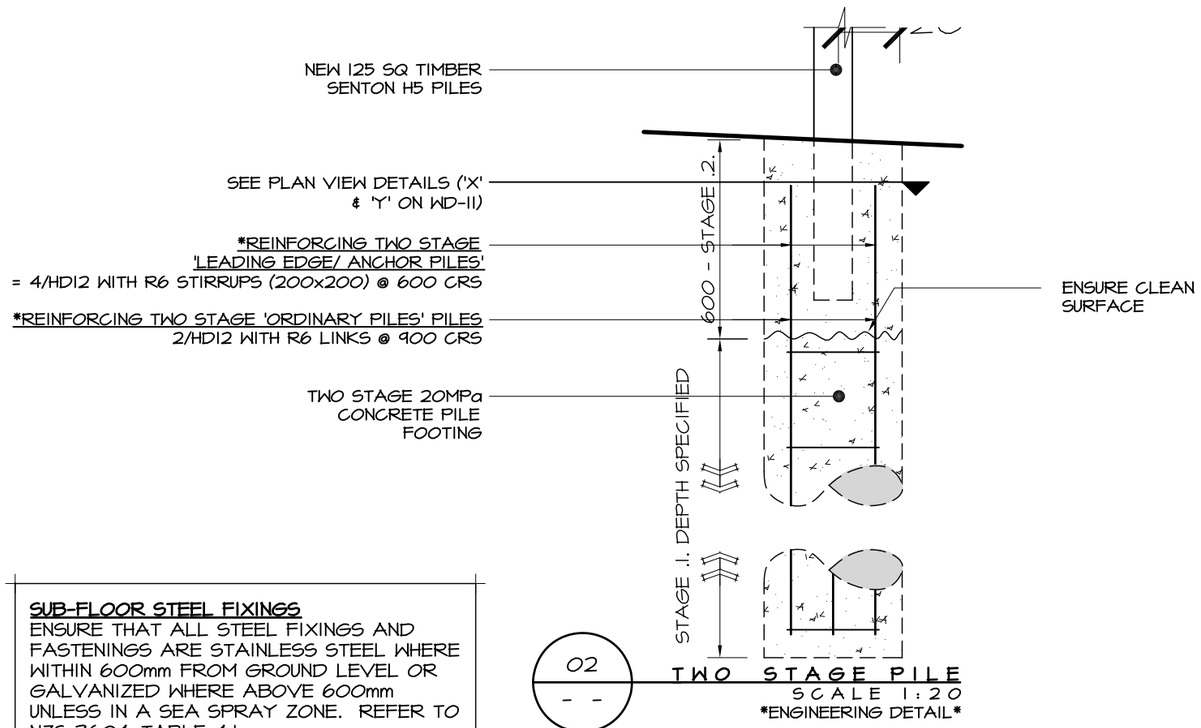
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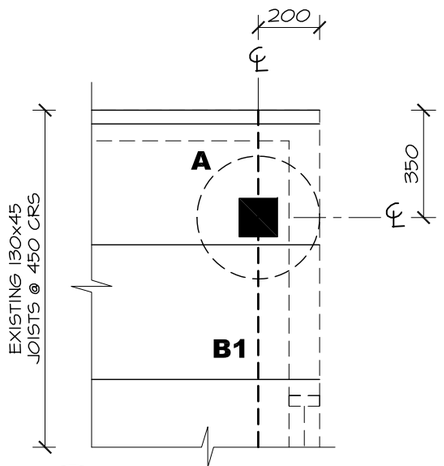
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CROSS SECTION B-B
SCALE 1:50



TWO STAGE PILE
SCALE 1:20
ENGINEERING DETAIL



CORNER PILE SET-OUT
SCALE 1:20
RESIDENCE 'B' ENGINEERING DETAIL

SUB-FLOOR FRAMING KEY

[----] - TIMBER WALLS ABOVE

B1 - NEW 2/190x45 SG8 H1.2 TIMBER BEARERS

ENGINEERED BEARER UPGRADES
REMOVE ALL EXISTING BEARERS (EXCEPT B1) REPLACE WITH NEW BEARERS AS SPECIFIED BELOW. ENSURE TO STAGGAR LAPS I.E (NO MORE THAN 1 BUTT END PER PILE) DESIGNED BY 'DEANE CONSULTANCY LTD' SEE REPORT FOR DETAILS. REF:17/ADS/2 DATED: 17 FEBRUARY 2017

A 'ANCHOR PILES' TWO STAGE
NEW 125x125 SQ. SENTON PILES IN **450Φ** x 3000mm DEEP FOUNDATION IN FIRM NATURAL GROUND. SEE DETAIL 'X' ON THIS PAGE FOR REINFORCING SPECIFICATIONS

SUB-FLOOR STEEL FIXINGS
ENSURE THAT ALL STEEL FIXINGS AND FASTENINGS ARE STAINLESS STEEL WHERE WITHIN 600mm FROM GROUND LEVEL OR GALVANIZED WHERE ABOVE 600mm UNLESS IN A SEA SPRAY ZONE. REFER TO NZS 3604, TABLE 4.1

NOTE: TIMBER GRADE

ALL STRUCTURAL TIMBER TO BE A MINIMUM OF SG8 OR HIGHER, UNLESS STATED OTHERWISE

(RESIDENCE 'B')

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P O Box120 , Kumeu, New Zealand
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EMAIL: CHRIS@ADSLTD.CO.NZ

RELOCATE SECONDHAND RESIDENCES ('A') & ('B') TO 102 SETTLEMENT ROAD, KAIWAKA FOR LYNETTE DHEDA

		DATE	
DESIGNED	CJM	01/17	
DRAWN	CJM	01/17	
CHECKED	CJM		
APPROVED	CJM		
REF:			'A' - RESIDENCE 'B' (ROTATED) 02/17
			AMENDMENTS

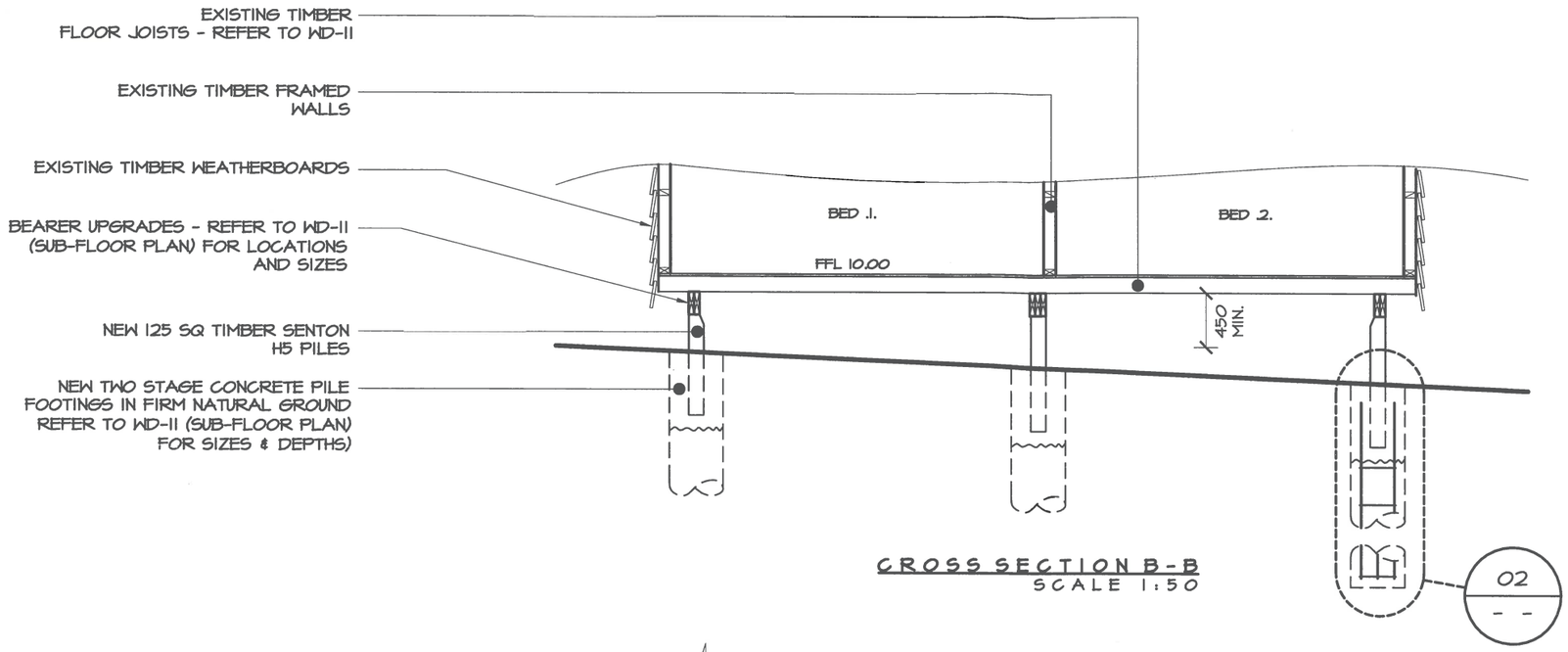
CONTRACT No 16-120
DWG No WD-14 'A'
SCALE NTD @ A3

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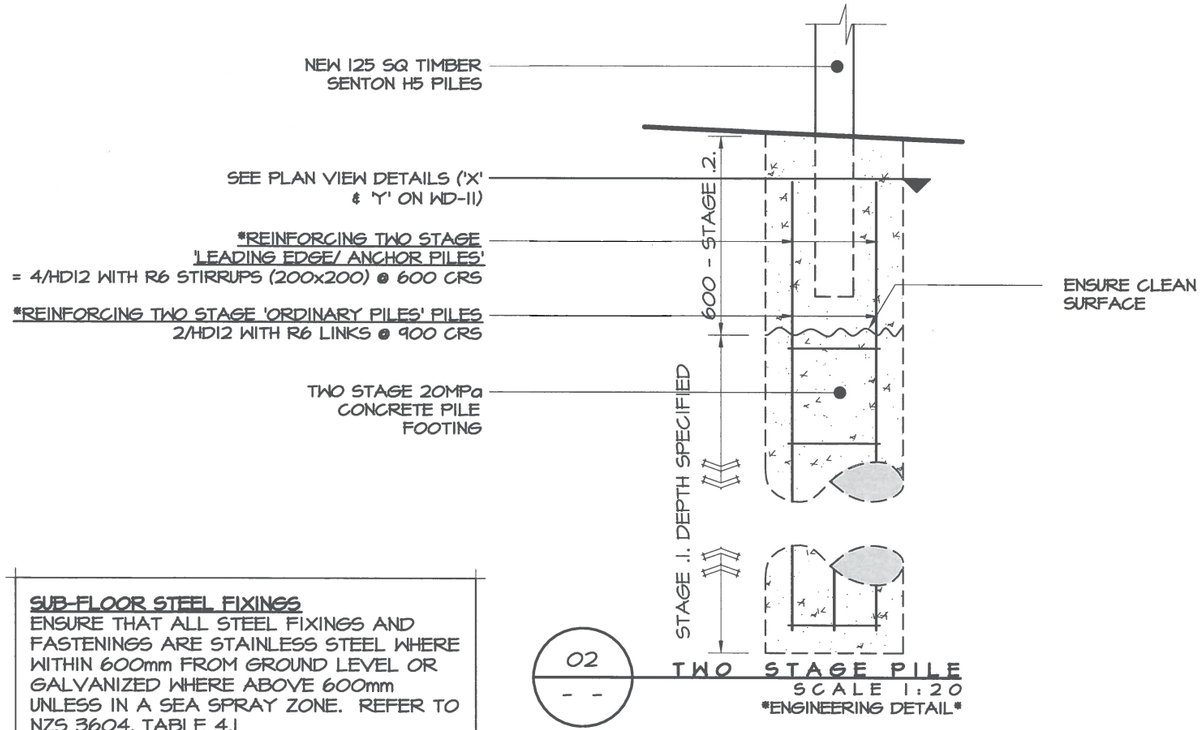
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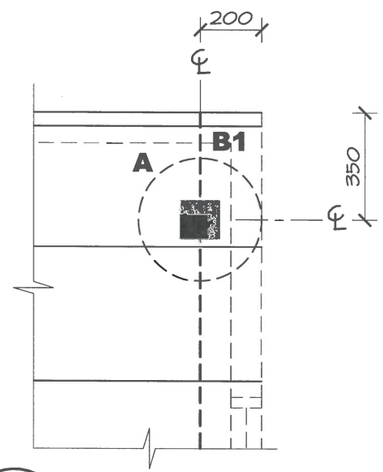


CROSS SECTION B-B
SCALE 1:50

02



02
- -
TWO STAGE PILE
SCALE 1:20
ENGINEERING DETAIL



03
WD-11
CORNER PILE SET-OUT
SCALE 1:20
RESIDENCE 'B' ENGINEERING DETAIL

SUB-FLOOR STEEL FIXINGS
ENSURE THAT ALL STEEL FIXINGS AND FASTENINGS ARE STAINLESS STEEL WHERE WITHIN 600mm FROM GROUND LEVEL OR GALVANIZED WHERE ABOVE 600mm UNLESS IN A SEA SPRAY ZONE. REFER TO NZS 3604, TABLE 4.1

21/12/17

NOTE: TIMBER GRADE

ALL STRUCTURAL TIMBER TO BE A MINIMUM OF SG8 OR HIGHER, UNLESS STATED OTHERWISE

(RESIDENCE 'B')

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EMAIL: CHRIS@ADSLTD.CO.NZ

RELOCATE SECONDHAND RESIDENCES ('A') & ('B') TO 102 SETTLEMENT ROAD, KAIWAKA FOR LYNETTE DHEDA

		DATE	AMENDMENTS
DESIGNED	GJM	01/17	
DRAWN	GJM	01/17	
CHECKED	GJM		
APPROVED	GJM		
REF:			

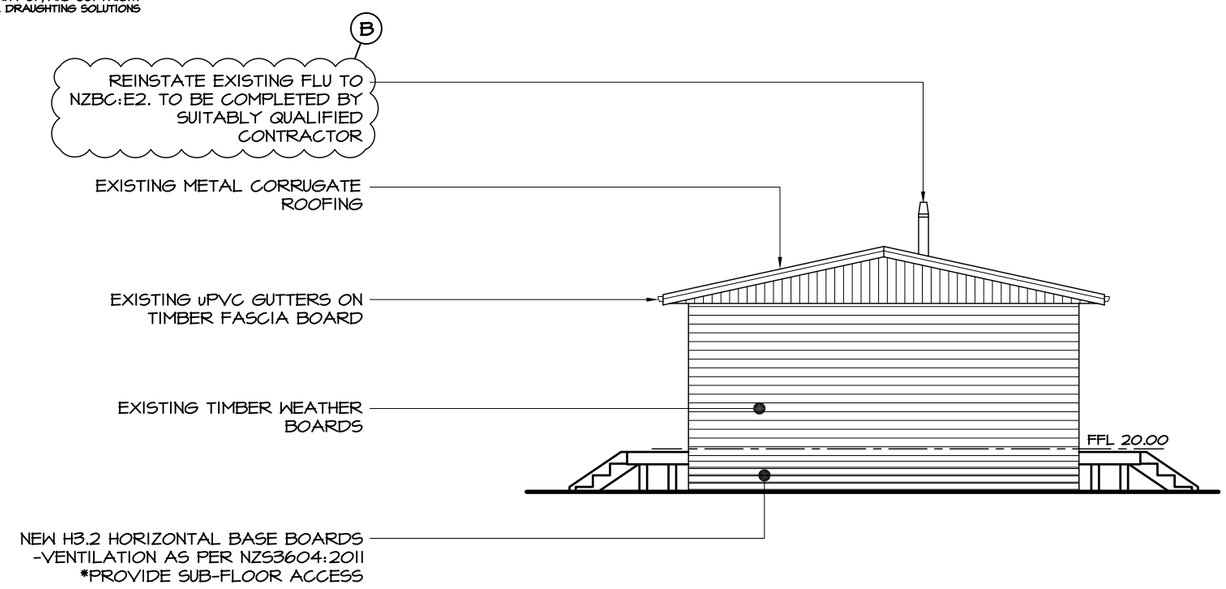
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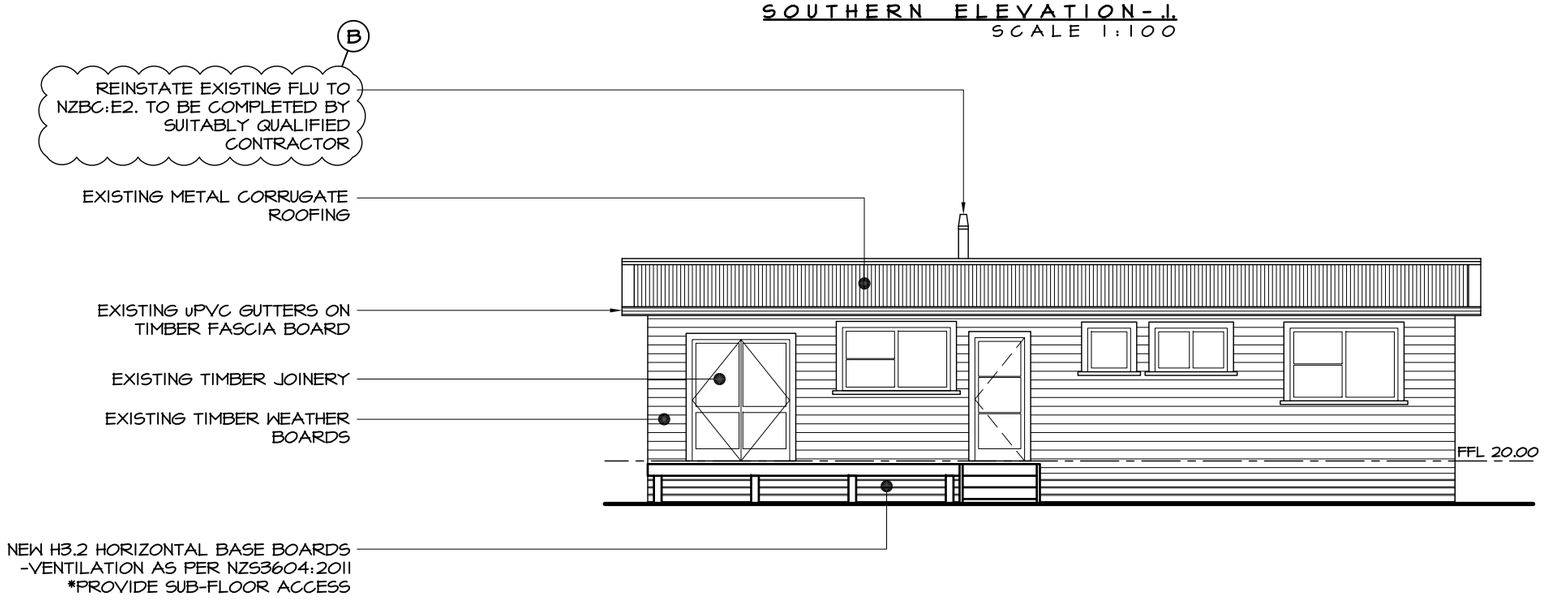
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SOUTHERN ELEVATION - 1.
SCALE 1:100



WESTERN ELEVATION - 2.
SCALE 1:100

DECKS & STAIRS
ALL ARE TO BE UNDER 1.0m HIGH & DO NOT REQUIRE A BUILDING CONSENT - HOWEVER MUST BE BUILT TO SATISFY NZBC & NZS3604:2011.

ENSURE TO CONSTRUCT LANDINGS OUT FROM ALL DOORS.

- IF THERE ARE STEPS COMING OFF OUTWARD OPENING DOORS, THEN 400mm CLEARANCE FROM DOOR SWING TO STEPS IS REQUIRED.
- IF THERE ARE 3 OR MORE RISERS, ENSURE TO PROVIDE HANDRAIL TO NZBC REQUIREMENTS.
- TREADS = MIN. 280mm / RISERS = MAX. 190mm

(RESIDENCE 'B')

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CHECKED	CJM	
APPROVED	CJM	
REF:		

AMENDMENTS	
'B' - REINSTATE EXTG. FLUE	03/17
'A' - RESIDENCE 'B' (ROTATED)	02/17

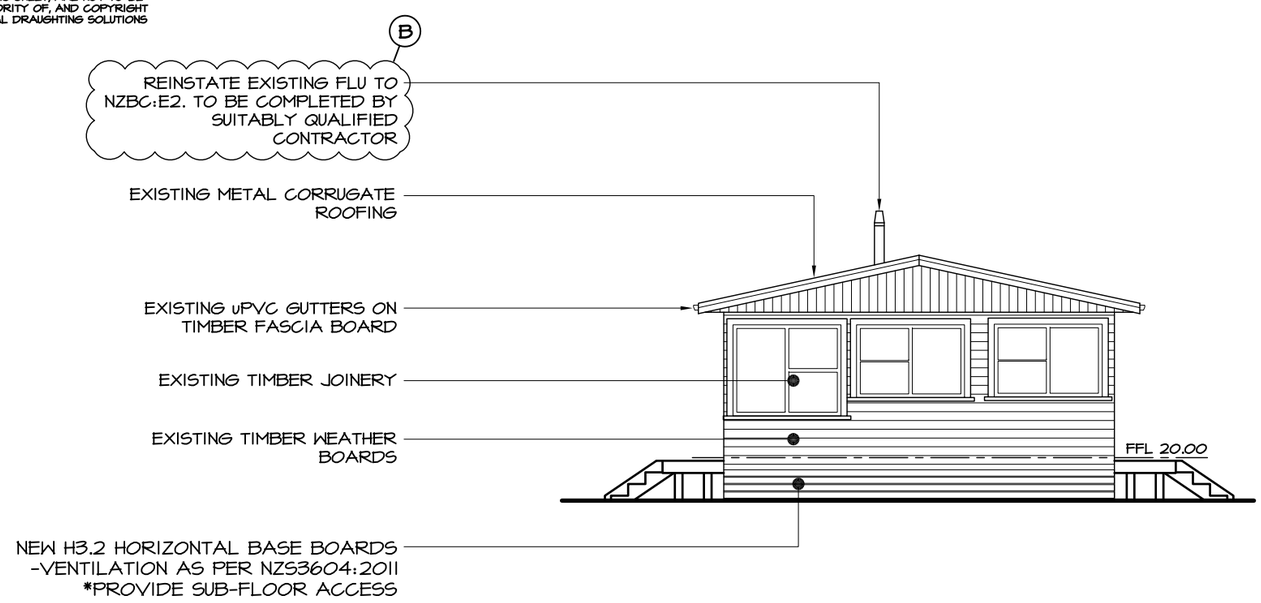
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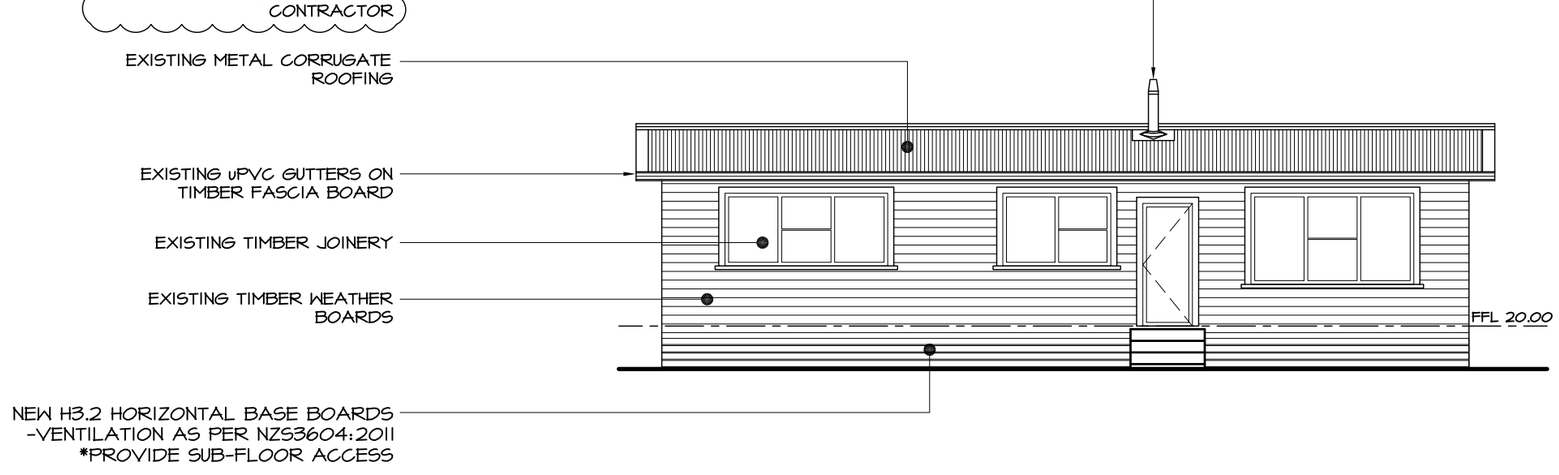
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NORTHERN ELEVATION-3.
SCALE 1:100



EASTERN ELEVATION-4.
SCALE 1:100

DECKS & STAIRS

ALL ARE TO BE UNDER 1.0m HIGH & DO NOT REQUIRE A BUILDING CONSENT - HOWEVER MUST BE BUILT TO SATISFY NZBC & NZS3604:2011.

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- IF THERE ARE 3 OR MORE RISERS, ENSURE TO PROVIDE HANDRAIL TO NZBC REQUIREMENTS.
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APPROVED	CJM			
			'B' - RE-INSTATE EXTG. FLU	03/17
REF:			'A' - RESIDENCE 'B' (ROTATED)	02/17
			AMENDMENTS	

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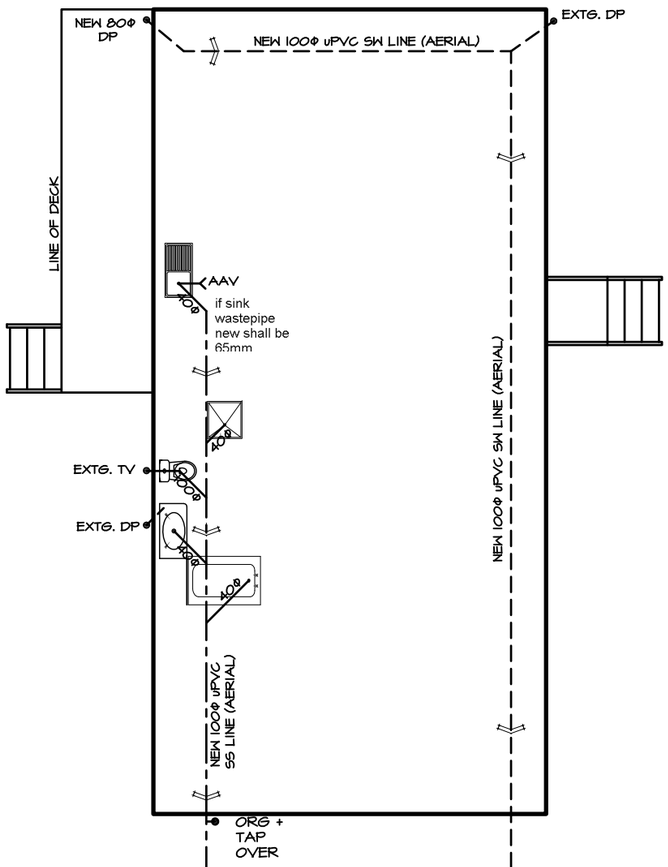
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DOWNPIPE SIZE GUIDE

DOWNPIPE SIZE (mm) (minimum internal sizes)	ROOF PITCH 0-25° (PLAN AREA OF ROOF SERVED BY THE DOWNPIPE (m²))	25-35°	35-45°
63mm DIAMETER	60	50	40
74mm DIAMETER	85	70	60
100mm DIAMETER	155	130	110

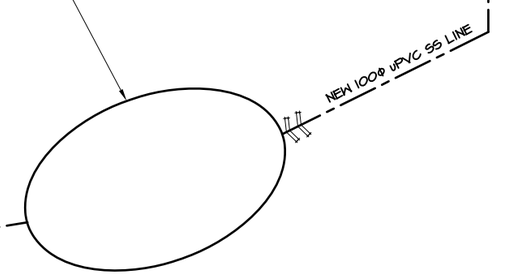
* CONFIRM DOWNPIPE SIZES OF EXISTING ARE ADEQUATE

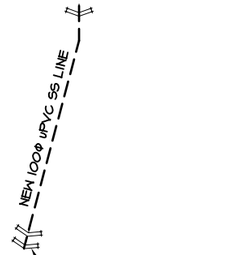
NOTE: PLUMBING STANDARDS
ALL SANITARY PLUMBING AND DRAINAGE SHALL BE IN A ACCORDANCE WITH G13/AS1 & AS2 RESPECTIVELY AND STORMWATER DRAINAGE IN ACCORDANCE WITH E1/AS1 AS DEPICTED



PROPOSED 4500LTR TWIN CHAMBER SEPTIC WITH DOSE AND SIPHON. REFER TO 'ENVIROSERVE WASTEWATER SYSTEMS' REPORT FOR DETAILS. DATED JANUARY 2017

TREATED EFFLUENT TO DISCHARGE VIA 100Φ SS LINE TO PROPOSED 144m2 EFFLUENT DISPERSAL FIELDS. LAY LEVEL TO SUIT CONTOURS, DISTRIBUTION MANIFOLD IN MIDDLE OF TOP LINE. PROVIDE SW CUT-OFF SWALE ABOVE. REFER TO 'ENVIROSERVE WASTEWATER SYSTEMS' REPORT FOR DETAILS. DATED JANUARY 2017

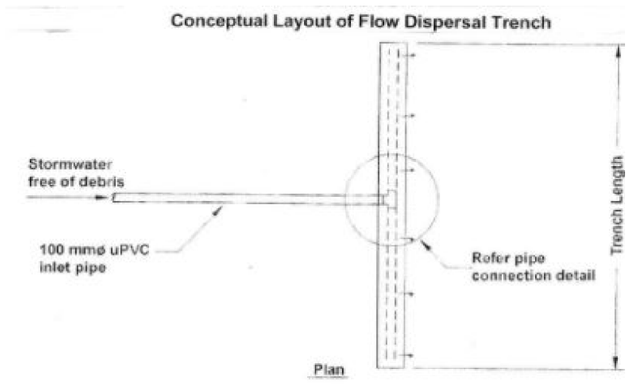




PROPOSED WATER TANK FOR EACH RELOCATED RESIDENCE. OWNER TO CONFIRM SIZE, TYPE AND FINAL LOCATION. STORMWATER OVERFLOW TO DISCHARGE TO A COUNCIL APPROVED SW DISPERSAL TRENCH.

PROPOSED DRAINAGE PLAN
SCALE 1:100

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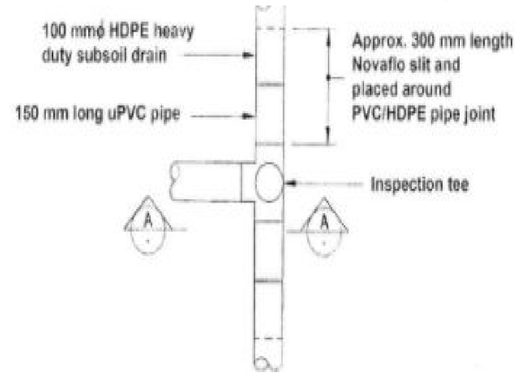


Keep dispersal trench 30 m clear of property boundary

Design Parameters

Effective catchment area drained (m^2)	Trench Length (m)
100	8
200	12
300	14
400	16
500	18
600	20

(Note: effective catchment area drained = impervious area + 0.72 x pervious area



(RESIDENCE 'B')

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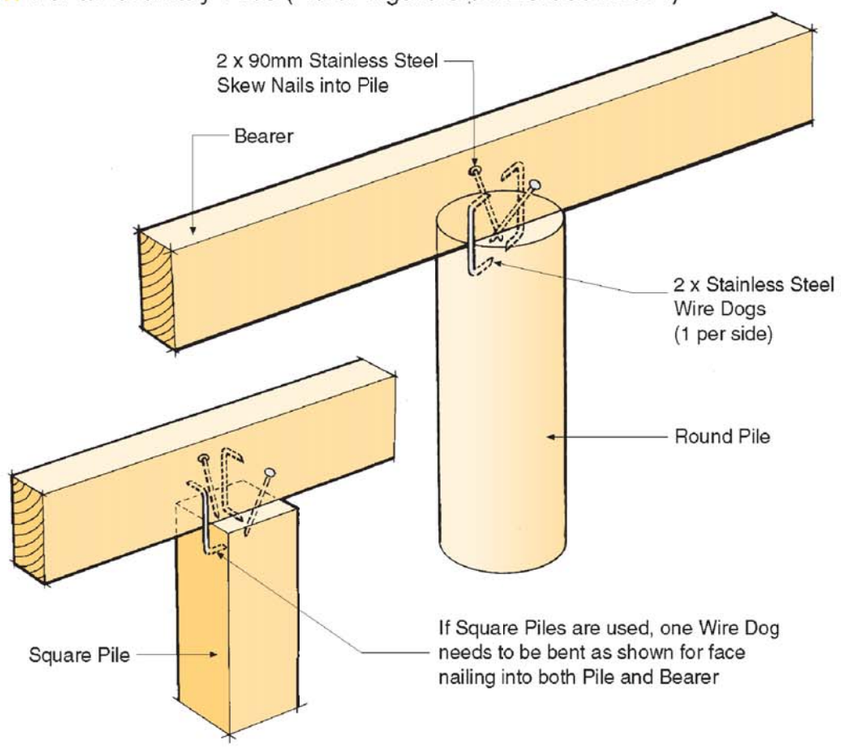
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10/2011

LUMBERLOK®

ORDINARY PILE FIXING

- ★ Complies with NZS 3604:2011
- ★ All Fixings Stainless Steel
- ★ For all Ordinary Piles (Refer Figure 6.3 NZS 3604:2011)



Code: OPF
Pack Contains: 20 x Stainless Steel Wire Dog Staples
20 x Stainless Steel Nails 90mm x 4 dia.

Available from leading Builders Supply Merchants throughout New Zealand

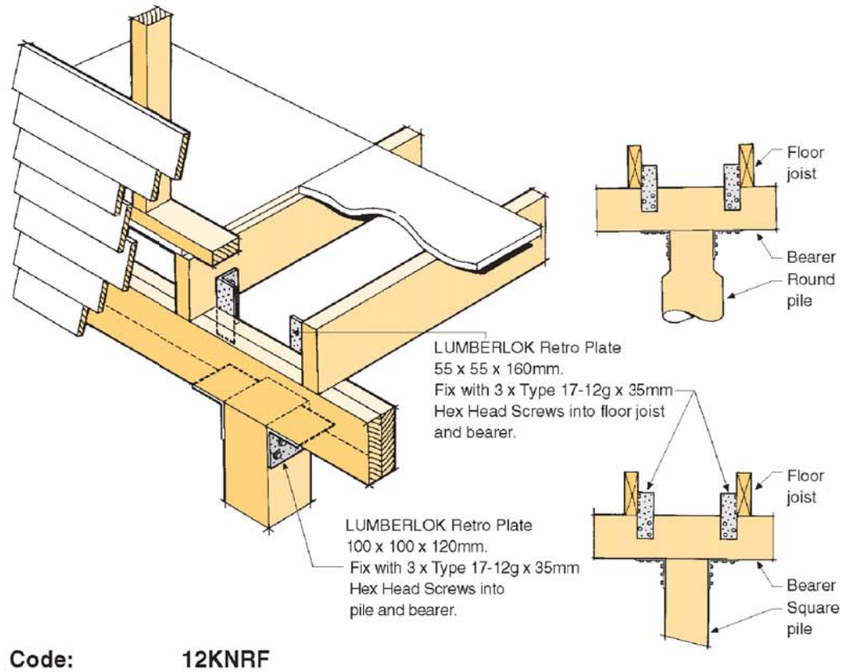
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Phone: 09-274 7100
Fax: 09-274 7100
CHRISTCHURCH
PO Box 8367, Riccarton 8440
Phone: 03-348 8691
Fax: 03-348 0314
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LUMBERLOK®

12kN RETRO SUBFLOOR FIXING

- ★ Fixing to be used when the outside face of the bearer is not accessible e.g. fixing relocatable houses to piles.
- ★ Hot Dip Galvanised or Stainless Steel options available for required corrosive zone.



Code: 12KNRF
Material: 0.91mm G300 Z275 (Hot Dip Galvanised Steel)
Code: 12KNRFH
Material: 0.9mm Stainless Steel 304-2B
Pack Includes: 8 x Retro Plate 55 x 55 x 160mm
8 x Retro Plate 100 x 100 x 120mm
100 x Type 17-12g x 35mm Hex Head Screws

MiTek New Zealand Limited
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TO 102 SETTLEMENT ROAD, KAIWAKA
FOR LYNETTE DHEDA

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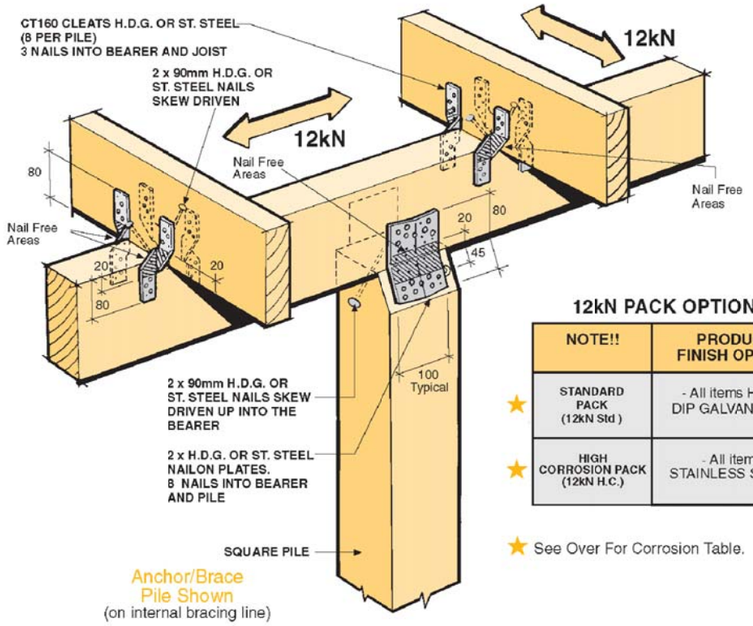
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LUMBERLOK®

12kN PILE FIXING
FOR BRACED PILES OR ANCHOR PILES

- ★ The 12kN Pile Fixing must be installed in accordance with this brochure
- ★ Auckland University Tested. Test Ref. 4613
- ★ All subfloor construction must be in accordance with NZS 3604:2011
- ★ NZS 3604 requires lines of lateral support to floor joists within 300mm of bearer or bracing lines, refer to Clause 7.1.2



Anchor/Brace Pile Shown
(on internal bracing line)

12kN PACK OPTIONS

NOTE!!	PRODUCT FINISH OPTIONS
★ STANDARD PACK (12kN Std)	- All items HOT DIP GALVANISED
★ HIGH CORROSION PACK (12kN H.C.)	- All items STAINLESS STEEL

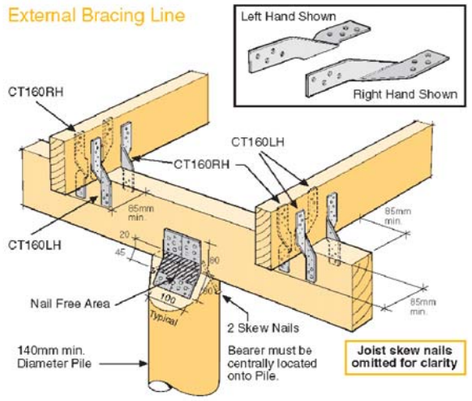
★ See Over For Corrosion Table.

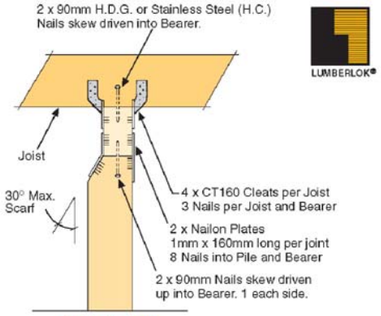
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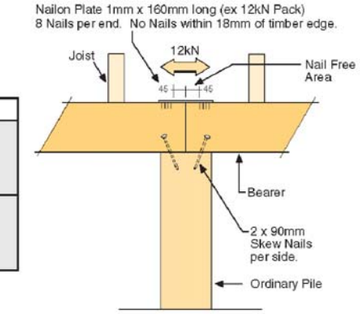
External Bracing Line



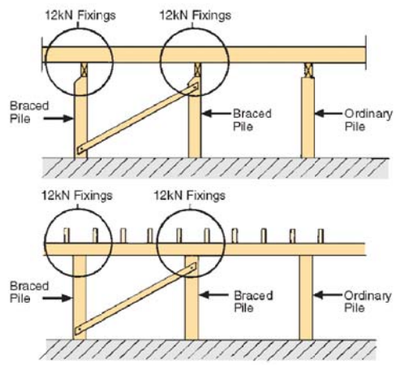


Square Pile

CORROSION HAZARD USE TABLE	
Standard Pack (12kN Std) - Zones B & C - All Fixings ABOVE 600mm from Ground level	All items Hot Dip Galvanised.
High Corrosion Pack (12kN HC) - Zone D - All Fixings BELOW 600mm from Ground level	All items Stainless Steel (304).



12kN Bearer Splice
Clause 6.12.7.2
NZS 3604:2011



Sample Subfloor Elevations
12kN Fixing - Pile to Bearer
- Joists to Bearer

12kN Joint Fixing Schedule

PILE TO BEARER	- Nailon Plate (2 per joint) 1mm x 100mm (Typical) x 160mm long - 8 Nails per Plate into Pile - 8 Nails per Plate into Bearer - 2 Skew Nails 90mm (1 per face)
JOIST TO BEARER	- CT160 Cleats (4 per Joist) 160mm long - 3 Nails per Cleat into Joist - 3 Nails per Cleat into Bearer - 2 Skew Nails 90mm (1 per side)
NAILS	- 80 x 45mm x 3.55 dia. Spiral Nails - 6 x 90mm x 4 dia. St. Steel Nails (H.C. Pack only)

12kN Pile Set Contents
Each set represents 1 x 12kN Pile Fixing

(packed 4 sets per carton)
2 x Nailon Plates 160mm long
8 x CT160 Cleats
80 x 45mm x 3.55 dia. Spiral Nails
90mm x 4 dia. St. Steel Angular Groove
6 - H.C. Pack

} Refer front page for Product Finish Options

90mm H.D.G. Nails not included.

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PILE FIXING - LUMBERLOK 12kN

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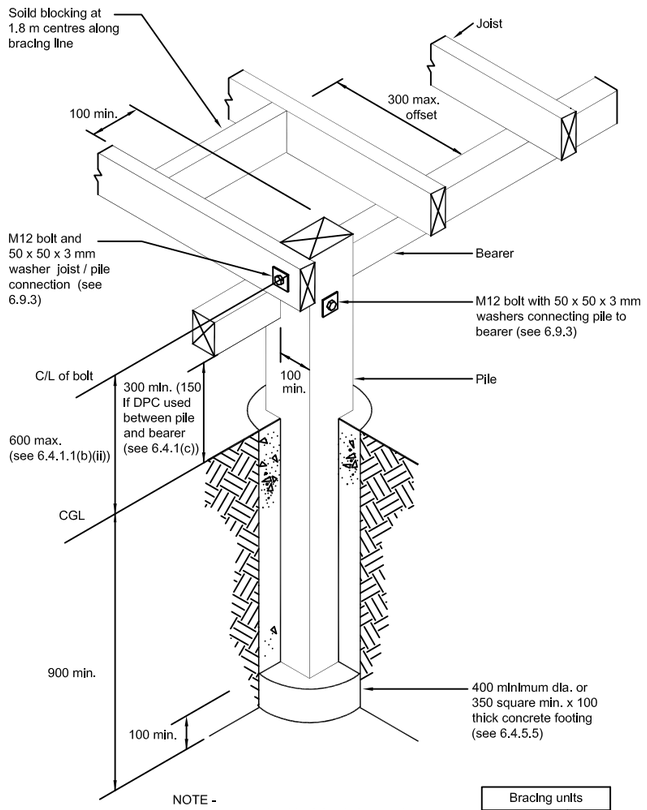
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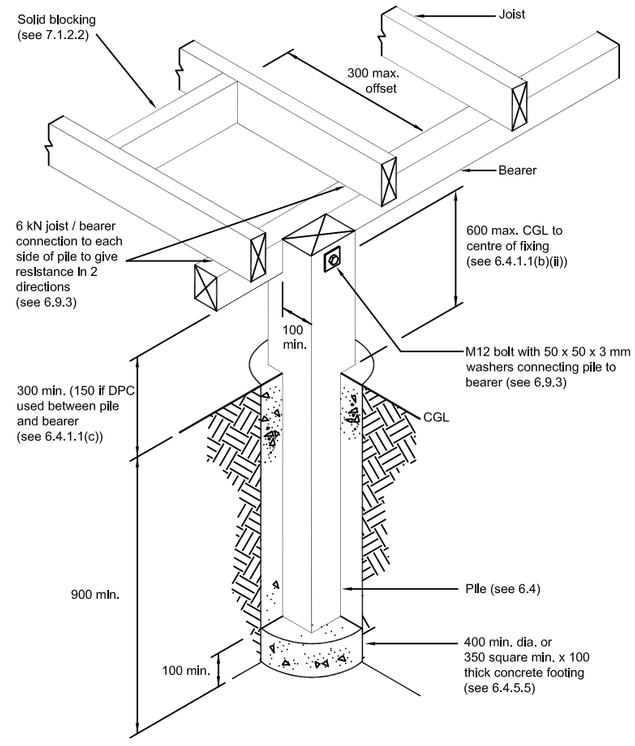
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NOTE -
(1) Bearers must not be joined at an anchor pile.
(2) CGL = Cleared ground level.
(3) See section 4 for durability requirements.

Bracing units	
Wind	160
Earthquake	120

PILE TO JOIST
N.T.S



NOTE -
(1) Bearers must not be joined at an anchor pile.
(2) CGL = Cleared ground level.
(3) See section 4 for durability requirements.

Bracing units	
Wind	160
Earthquake	120

PILE TO BEARER
N.T.S

STANDARD ANCHOR PILE CONNECTION DETAILS

DETAILS AS PER NZS3604 1999

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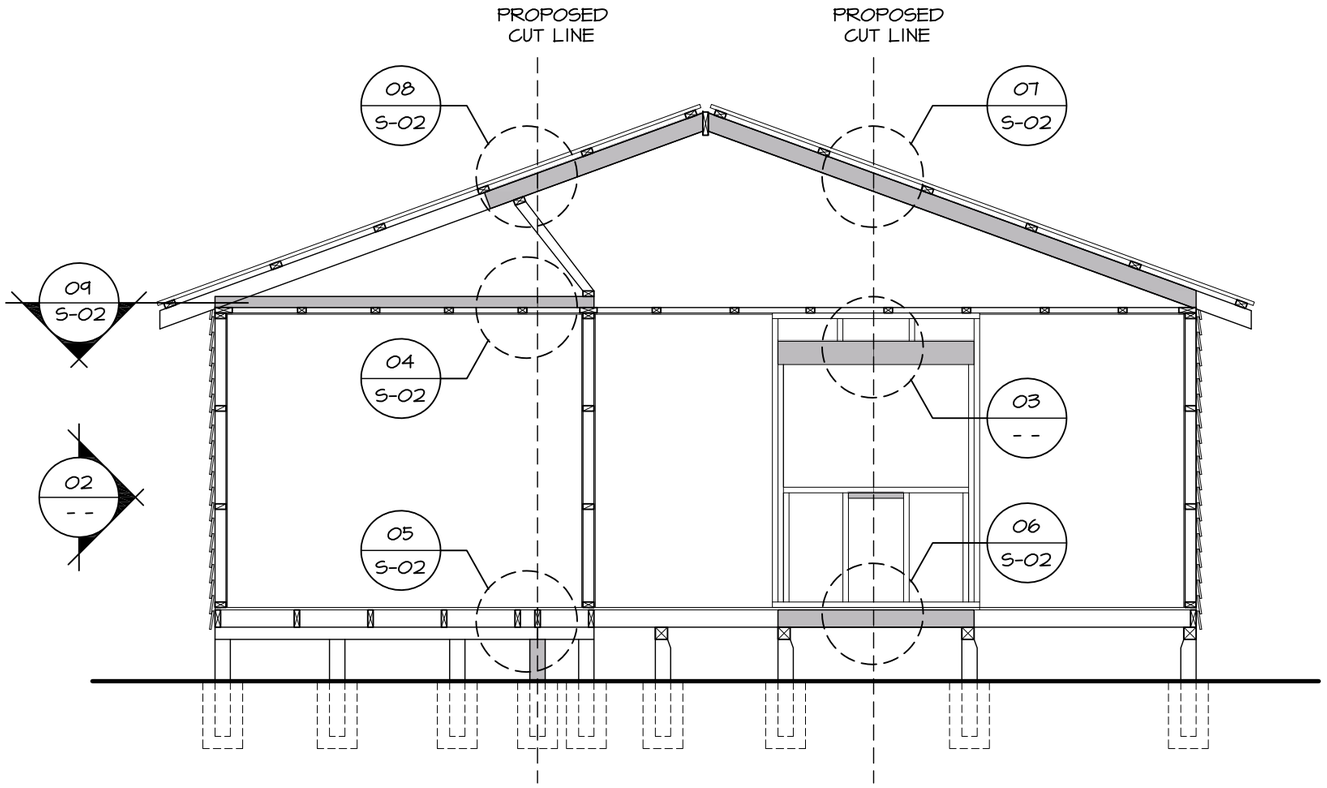
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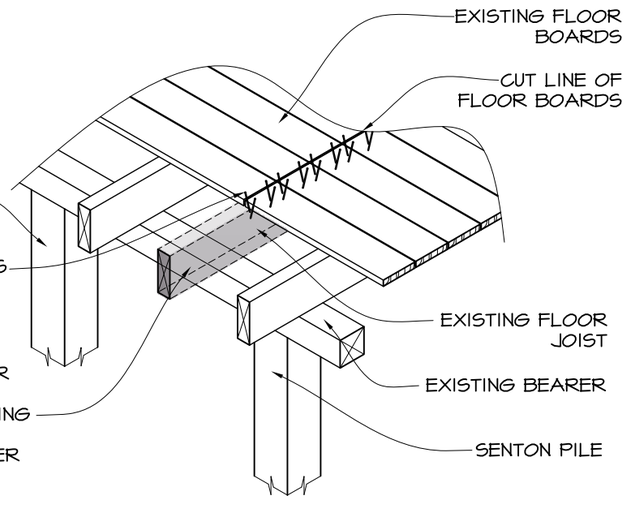
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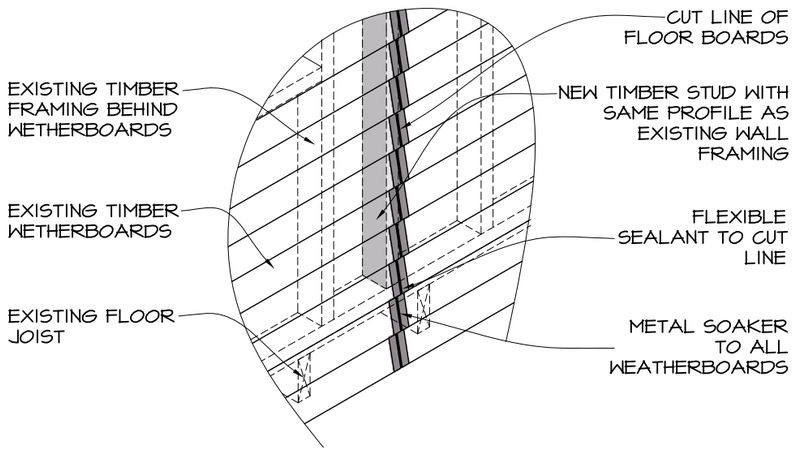
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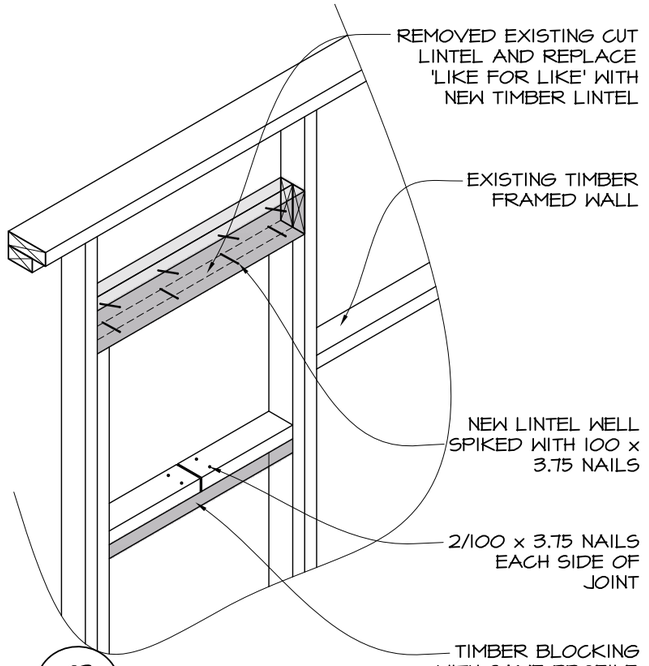
CROSS SECTION
SCALE 1:50



01 - - **CUT FLOOR BOARD**
SCALE 1:20



02 - - **CUT WEATHERBOARD**
SCALE 1:20



03 - - **CUT LINTEL**
SCALE 1:20

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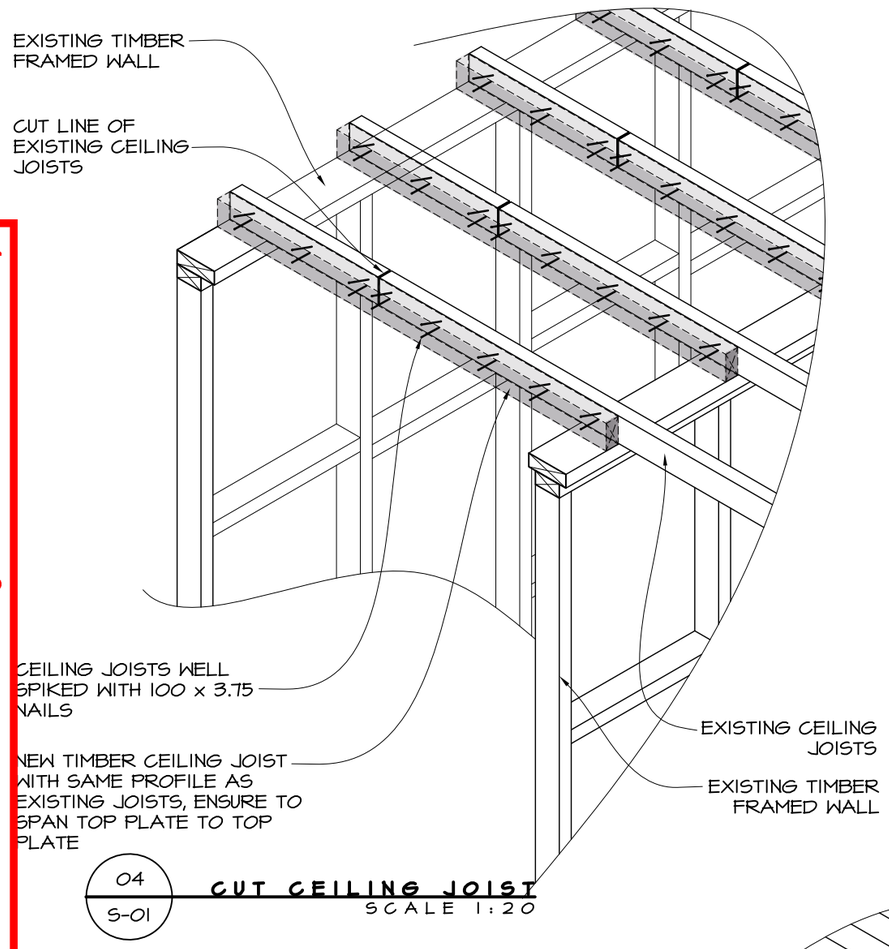
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DWG No S-01
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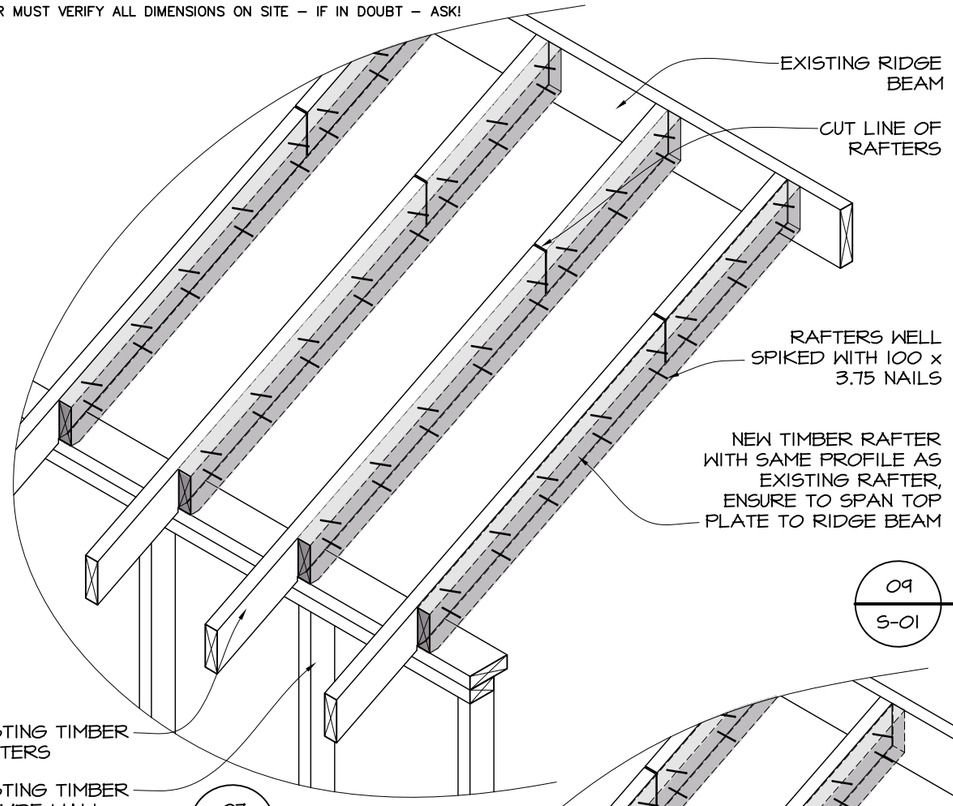
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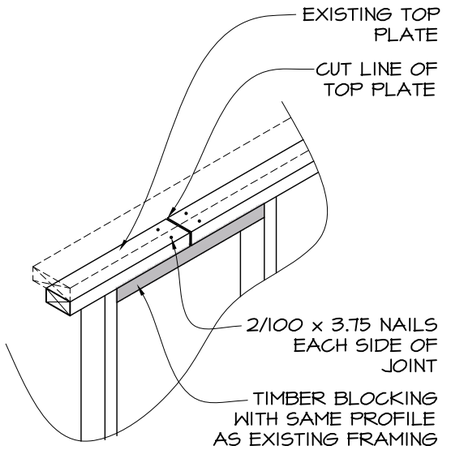
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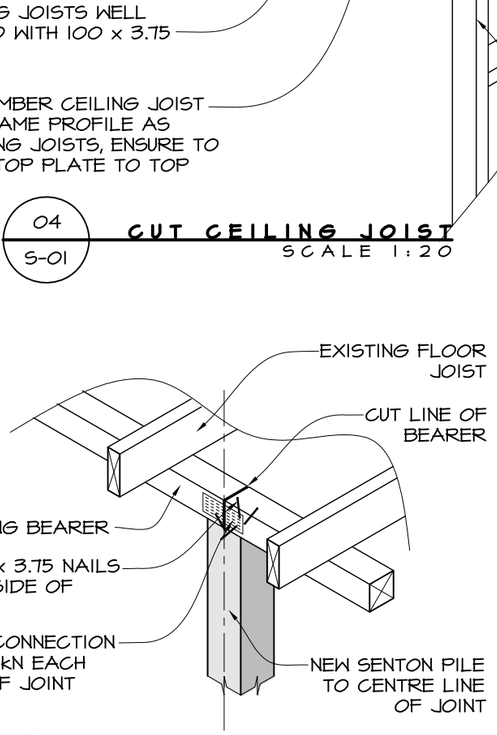
04 / S-01 **CUT CEILING JOIST** SCALE 1:20



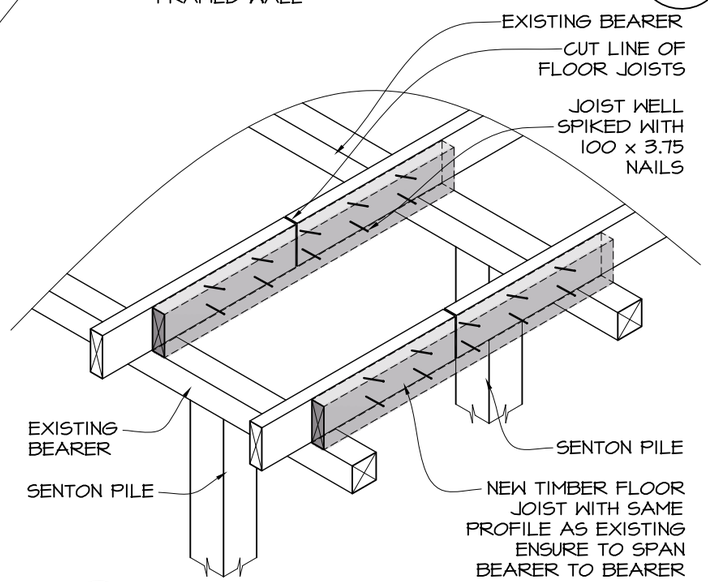
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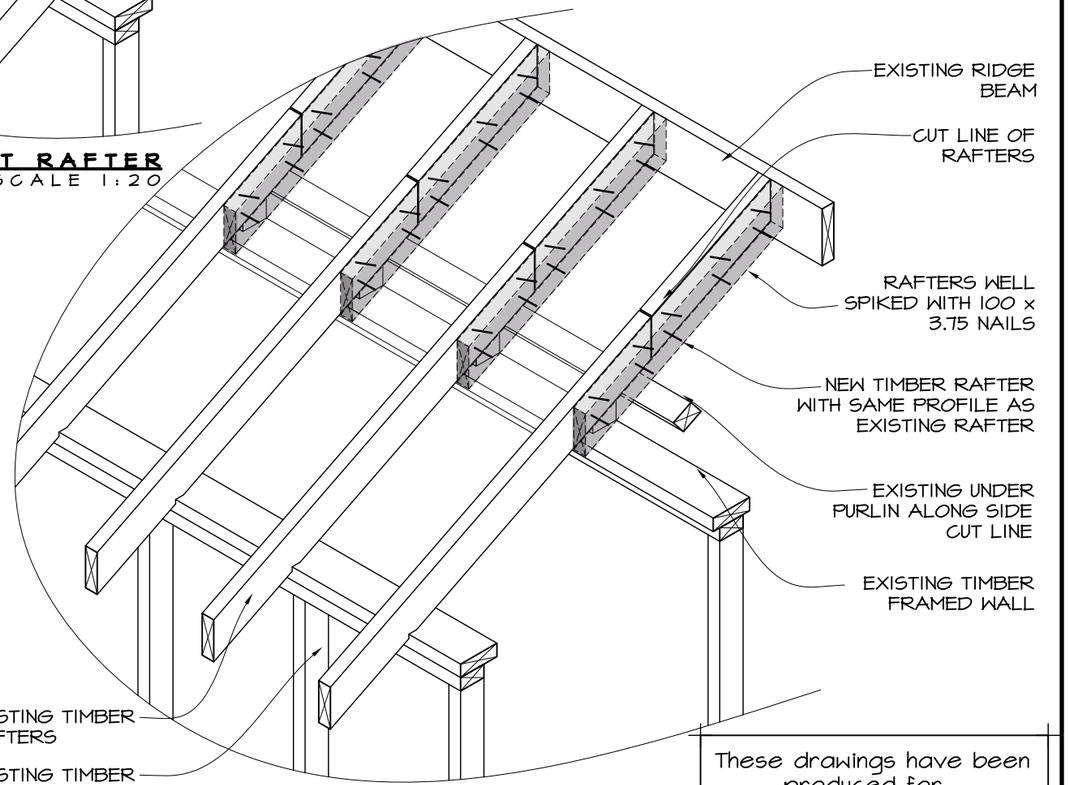
09 / S-01 **CUT TOP PLATE** SCALE 1:20



05 / S-01 **CUT BEARER** SCALE 1:20



06 / S-01 **CUT FLOOR JOIST** SCALE 1:20



08 / S-01 **CUT RAFTER UNDER PURLIN** SCALE 1:20

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ARCHITECTURAL DRAUGHTING SOLUTIONS LTD
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RELOCATE SECONDHAND RESIDENCES ('A') & ('B') TO 102 SETTLEMENT ROAD, KAIWAKA FOR LYNETTE DHEDA

		DATE	AMENDMENTS
DESIGNED			
DRAWN	CJM	01/17	
CHECKED	CJM		
APPROVED	CJM		
REF:			

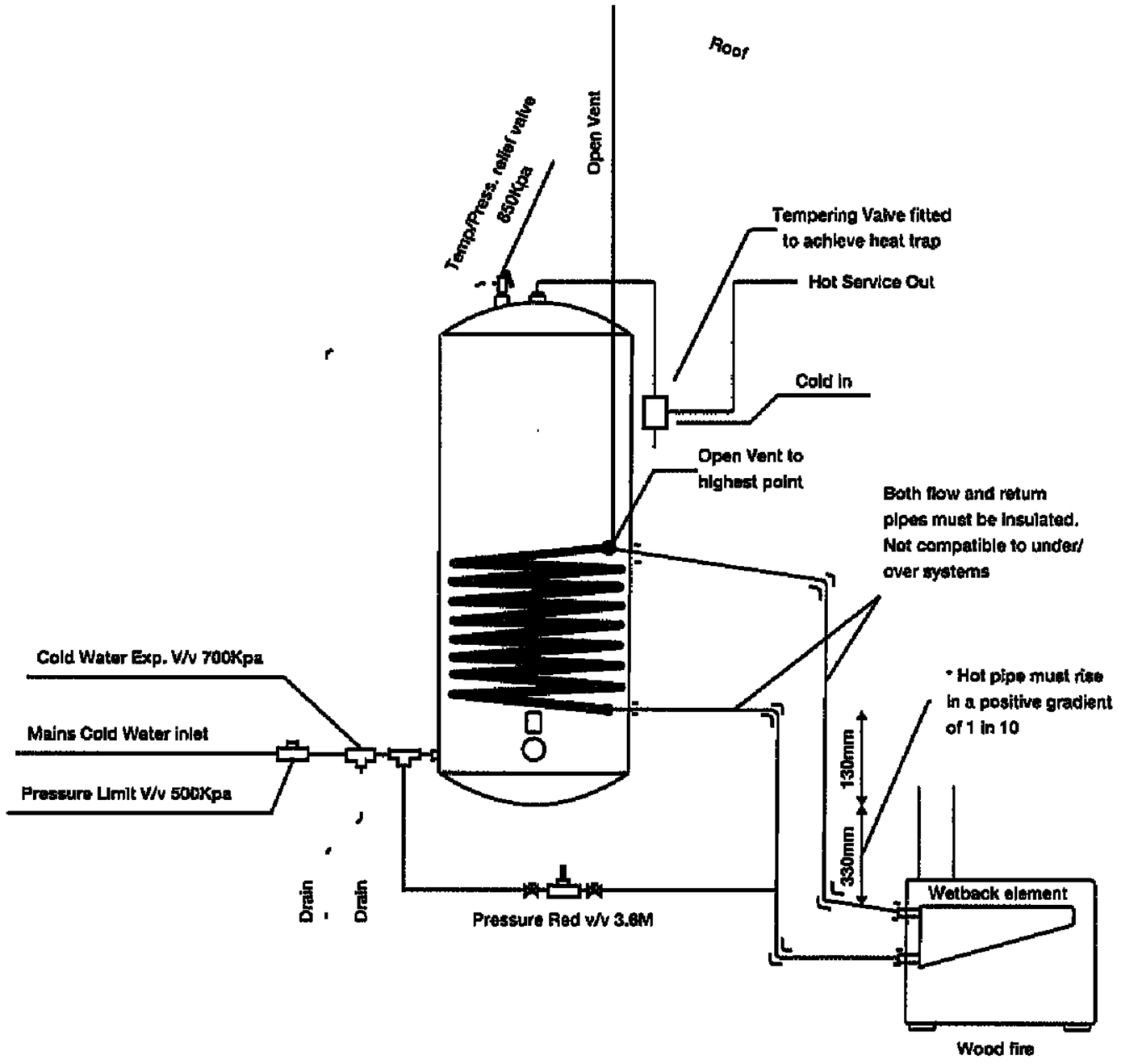
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WETBACK SYSTEM TO COMPLY WITH CODE & PRODUCE AS-BUILT PLAN TO COUNCIL. TO BE INSTALLED BY SUITABLY QUALIFIED INSTALLER

WETBACK SHEMATIC
SCALE N.T.S

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RELOCATE SECONDHAND RESIDENCES ('A') & ('B') TO 102 SETTLEMENT ROAD, KAIWAKA FOR LYNETTE DHEDA

		DATE	AMENDMENTS
DESIGNED			
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CHECKED	CJM		
APPROVED	CJM		
REF:			

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DWG No WD-19
SCALE NTD @ A3

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Kaipara te Oranganui

KAIPARA DISTRICT

Two Oceans Two Harbours

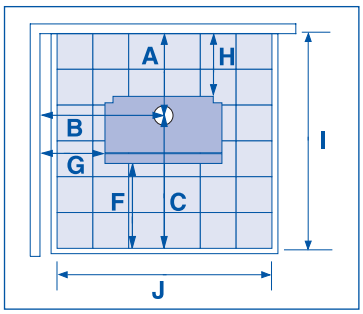
Approved Building Consent Documents

Please note: A copy of the stamped, approved documents must be available onsite for **all** inspections.

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Wood Fire Installation & Owner's Operation Manual









metrofires

Clean Air Freestanding Models

- ECO Tiny Ped
- ECO Tiny Rad
- R1
- R2
- Classic Rad
- Wee Rad
- Wee Rad Base
- Wee Ped
- Xtreme Rad
- Xtreme Rad Base
- Xtreme Ped
- ECO Euro Rad
- ECO Euro Ped
- Mega Rad

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Assembling your Metro.....2-3
Direct vent option 4
Floor protector installation 5
Clearances and specifications.....6
Wetback and flue installation 7
Operation important information 8
Where to install a Metro in your home....9
Optional wetbacks 9
Getting to know your Metro 10
Operating your Metro.....10
Cleaning and maintenance 11
Troubleshooting 12
Metro warranty.....13
Pioneer wood fire accessories 14

NZHHA New Zealand Home Heating Association Inc.

NEW ZEALAND MADE

PIONEER MANUFACTURING LIMITED

PO Box 11, Inglewood 4347, New Zealand
Ph (06) 756 6520 • Fax (06) 756 6540
info@metrofires.co.nz • www.metrofires.co.nz

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⚠ WARNING! Important Information

- **WE HIGHLY RECOMMEND YOU READ THIS ENTIRE MANUAL AS INCORRECT OPERATION, MISUSE AND/OR LACK OF MAINTENANCE WILL VOID THE WARRANTY**
- **The appliance and flue-system shall be installed in accordance with AS/NZS2918 and the appropriate requirements of the relevant building code or codes**
- **Any modification of the appliance that has not been approved in writing by the testing authority is considered to be in breach of the approval granted for compliance with AS/NZS4013 and will void the warranty**
- **The appliance must be installed correctly. We recommend a competent and suitably qualified NZHHA installer**

⚠ CAUTION! Important Information

- **Mixing of appliance or flue-system components from different sources or modifying the dimensional specification or components may result in hazardous conditions. Where such action is considered, the manufacturer should be consulted in the first instance**
- **Do not install a Metro fire if there is any sign of visible damage to the product**
- **This appliance must be regularly maintained.**
- **Use authorised Metro replacement parts only. The use of unauthorised parts may void the warranty**
- **This manual must be left with the home owner**

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This Metro wood fire has been tested to and complies with AS/NZS2918:2001 when installed in accordance with this manual. Please ensure you are fully conversant with this relevant standard and the contents of this manual. Correct installation is critical to the safe operation and performance of this wood fire.

Please take particular note of the following:

- It is recommended that Metro's be installed with a Metro ECO flue system which has been developed to enhance the performance of Metro wood fires. Any alternative flue system must have a minimum flue pipe length of 4.2 metres of 150mm diameter flue pipe & have been tested to AS/NZS2918:2001.
- The 150mm active flue pipe must be fully encased from the ceiling to the underside of the flashing cone at the top of the flue system, (i.e. there must not be any 150mm flue pipe exposed).
- All flue pipe joints must be sealed and riveted. The bottom of the flue pipe in particular MUST be fully sealed into the flue outlet of the Metro wood fire.
- In New Zealand, the Metro must be bolted through the floor protector into the floor to comply with the seismic restraint provisions of AS/NZS2918:2001
- All Metro's are extremely heavy, varying in weight from 85kgs up to 150kgs. During the installation process do not lift the appliance by yourself, and take care not to damage the panel coating.
- Please take care when lifting the Metro into place onto the hearth or floor protector as point loading may break tiles and/or scratch surfaces.

Assembling your Metro wood fire

All Metro wood fires are packed in a single heavy-duty carton, and tek screwed to a wooden pallet. Having removed the packaging and located this manual, familiarise yourself with the illustrations on pages 2 & 3, and proceed as detailed below.

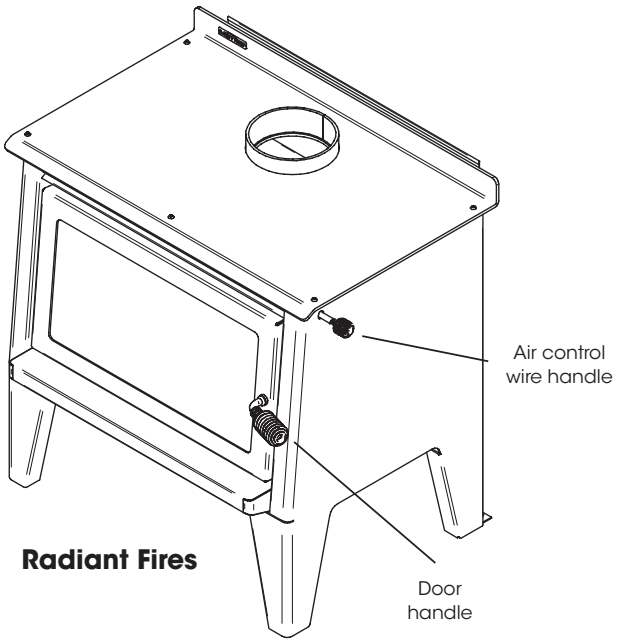
Please note: you should only assemble this wood fire if you are suitably experienced in wood fire assembly and installation.

Note: The Metro carton shows the model Metro you are about to install, enabling you to select the appropriate model's assembly instructions.

Metro Radiant Fires

These Metro's are supplied virtually fully assembled. Packed inside the firebox you will find bricks in a cardboard wrapper, a wire door handle and the air control wire handle.

- Remove the two tek screws located at the base of each rear leg which secure the Metro to the wooden pallet, and carefully "walk" the Metro off the pallet.
- Open the door fully and fit the side bricks to each side of the firebox. Location lugs are fitted to the base and rear of the firebox to retain the side bricks in position. Refer to Diagram 2.
- Attach the door handle to the door latch assembly by screwing it on clockwise.
- Attach the air control wire handle by screwing it on clockwise.



Radiant Fires

Assembling your Metro wood fire

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Metro Pedestal Fires

To minimise freight damage, the pedestal base has been packaged inside the firebox. Please note: you should only assemble this wood fire if you are suitably experienced in wood fire assembly and installation.

To safely assemble your Metro, please proceed as follows: -

Safely remove straps by cutting straps with scissors.

Lift off carton, turn upside down (use to hold all discarded packaging).

Lift off the top grill and place somewhere safe. Be careful not to chip the enamel coating.

Open the door 90 degrees and lift the door off the hinge and place somewhere safe. Be careful not to chip the enamel coating.

Remove the pedestal packed in a cardboard wrap

Remove the pedestal mount plate

Remove pedestal heat shield

Note: For some models this may be taped to rear heat shield and the ECO Tiny Ped is already assembled.

Remove the side bricks, door handle and the bolt bag

Remove the 2 tek screws at the base of the inside of the firebox that fix the wood fire to the pallet.

It is recommended that 2 people work together with this step. Grab the underneath top of the firebox door opening with one hand, holding the flue spigot with the other, slowly lift the front of the wood fire all the way back and rest the wood fire on its rear heat shield on the floor. Remove the packaging pallet.

Fit the pedestal heat shield over the 4 bolts as shown in Diagram 1, with the open edge facing the front of the Metro (up)

Position the pedestal with its front facing over the 4 bolts and fit the washers and nuts supplied, check to ensure the pedestal is correctly aligned and securely tighten the nuts

It is recommended that 2 people work together with this step. Grab the flue spigot with one hand and the other hand underneath the top of the firebox door opening, lift upwards standing the wood fire onto its pedestal.

Re-fit the door and top grill

Open the door fully and fit the side bricks to each side of the fire box. Location lugs are fitted to the base and rear of the firebox to retain the side bricks in position. Refer to Diagram 2.

Note: The ECO Tiny Ped model utilises a slightly different pedestal to that detailed in Diagram 1. The rear panel on the pedestal must be turned around with the return fold facing back the opposite way. This creates the mounting plate.

All Metro Models

Check to ensure the top baffle is in its correct position in the top chamber of the firebox. It should be resting on four support lugs (two on each side of the firebox). The baffle must be hard back against the rear of the firebox with the "promet extension" (white board) or return front steel edge of the baffle facing forward as illustrated in Diagram 2.

Diagram 1

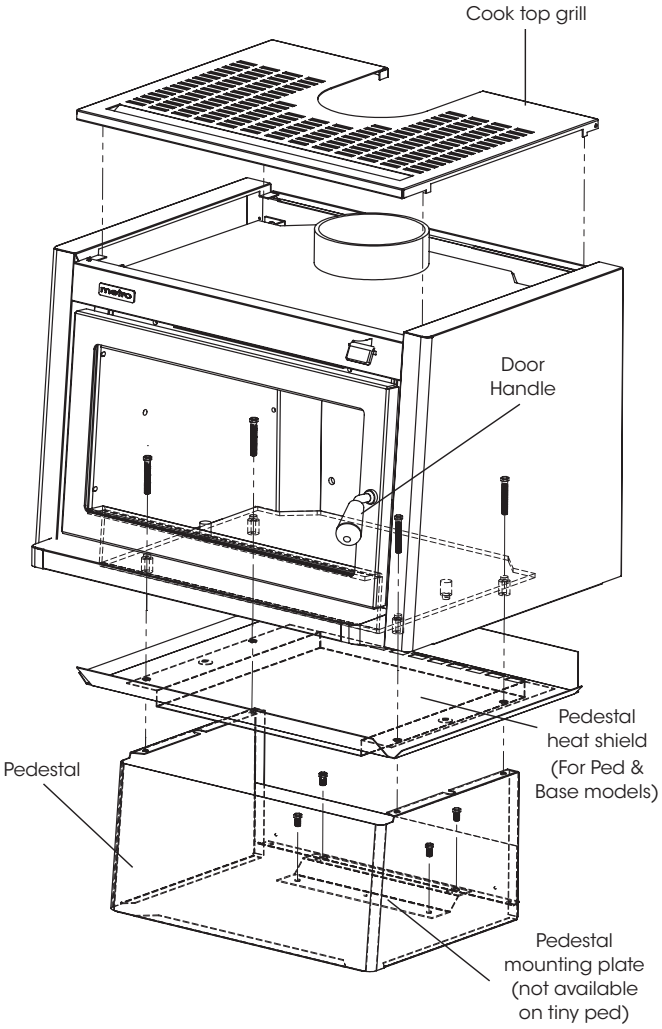
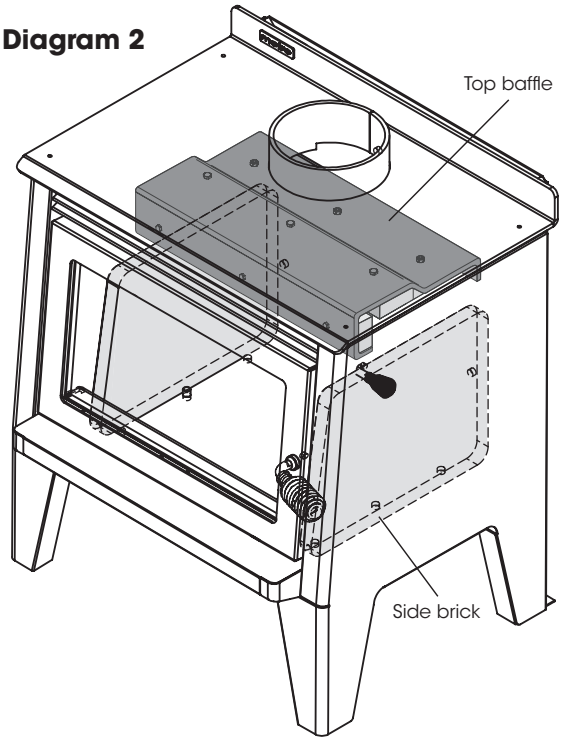


Diagram 2



Direct vent option

The ECO Euro Ped and ECO Euro Rad models have the option to be installed as "Direct Vent" appliances, thereby drawing all primary and secondary combustion air from outside the home. Once connected, this direct venting option ensures the air that is heated within the home, stays in the home improving efficiency and reducing fuel usage.

Note: Connection of the Metro's direct vent inlet to outside the home is optional. If not connected these Direct Vent models still offer greatly improved performance and lower emissions due to the unique pre-heated air path for all primary and secondary combustion air that these models consume.

Direct Vent Options

Three "Direct Vent kits" are available to connect the ECO DV Metro to an air supply from outside the living environment of the home. The kits available include;

- DV WALL KIT – For installations when the Metro is installed against an outside wall.
- DV FLOOR KIT– For installations onto a floor which has a free air supply below it.
- DV CEILING KIT– For installations when the Metro is installed against an internal wall and on a concrete floor

(DV Ceiling kit goes into the wall cavity, up inside the wall into the ceiling cavity, where the air supply is drawn from)

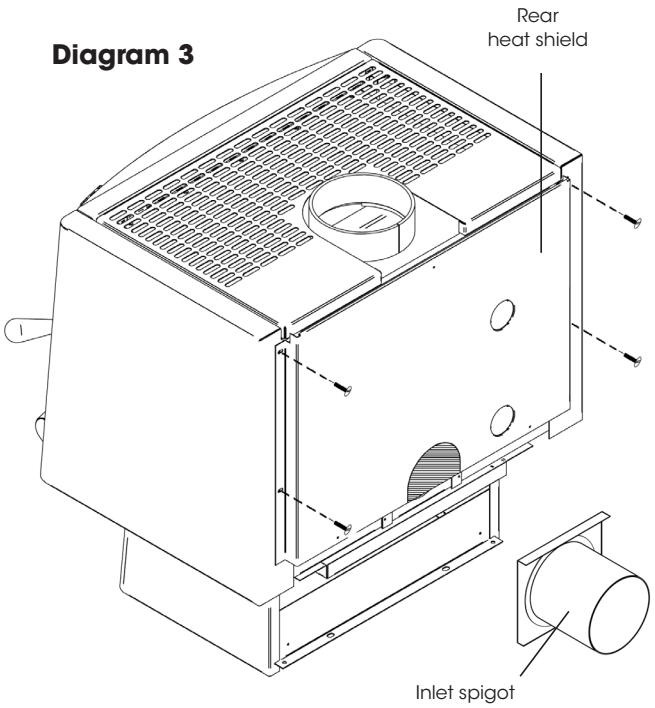
Installing the Direct Vent Option

Remove the rear heatshield from the Metro wood fire by unscrewing the four self-tapping screws illustrated in Diagram 3 and proceed as follows;

1. Remove the section of panel illustrated with a "hatch", from the mid/bottom section of the rear heatshield. This section to be removed has been pre-punched and only requires a few small tabs to be cut.
2. Take the "inlet spigot" supplied in the "Direct Vent kit" and slide it fully down into position into the brackets provided on the rear of the firebox.
3. Replace the Metro's rear heatshield with the four screws previously removed.

The Metro wood fire is now ready for installation once you have pre-fitted the Direct Vent kit into the wall or floor. Full instructions for this procedure are supplied with the Direct Vent kits.

Diagram 3



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Floor protector size, construction and fitting

Pioneer manufacture an extensive range of what Pioneer term "Ash Floor Protectors" which comply with the minimum floor protector requirement of AS/NZS2918:2001, and can be installed with any freestanding Metro wood fire.

Metro freestanding wood fires do not require an insulated floor protector as they comply with the minimum floor protector requirements of AS/NZS2918:2001. These minimum floor protector requirements are;

- They must be of adequate size to give appropriate wall, rear and front clearances/projections as detailed below and in the chart illustrated on page 6.

Note;

- The floor protector must extend 200mm horizontally to the rear and each side directly below the door opening, and 300mm forward of the door opening.
- The upper surface of the floor protector must be made of non-combustible material.
- A suitable floor protector for a Metro freestanding wood fire is therefore any non-combustible material which could include;
- Ceramic tiles with grouted joints fixed directly to timber flooring.
- A sheet of toughened glass, panel steel etc. laid directly onto a wooden or other combustible floor.

Note: If being installed onto a concrete or non-combustible floor a floor protector is not required.

Metro Radiant Fires

Lift the Metro onto the floor protector and using a tape measure ensure that the minimum wall clearances and front floor protector projections as detailed in the chart on page 6 are met or exceeded. Once the Metro's location on the floor protector is established and if the installation is in New Zealand, seismic restraint is required.

Using masonry anchors if the floor protector is on a concrete floor or coach bolts if a wooden floor, secure through the holes provided at the base, behind both rear legs.

Note: The anchors must pass through the floor protector and securely anchor the Metro to the floor.

Metro Pedestal Fires

These models (excluding the ECO Tiny Ped) are supplied with a "pedestal mounting plate". Refer to Diagram 1 on page 3. Place the mounting plate on the floor protector with the two slots at the rear. A flue centre hole is marked on this plate and the chart on page 6 enables you to locate the position of the Metro without placing the Metro onto the floor protector. Once the location of this mounting plate is established, secure it through the floor protector into the floor using both of the two holes provided.

Use masonry anchors if the floor protector is on a concrete floor or coach bolts if a wooden floor.

Note: The anchors must pass through the floor protector and securely anchor the Metro to the floor.

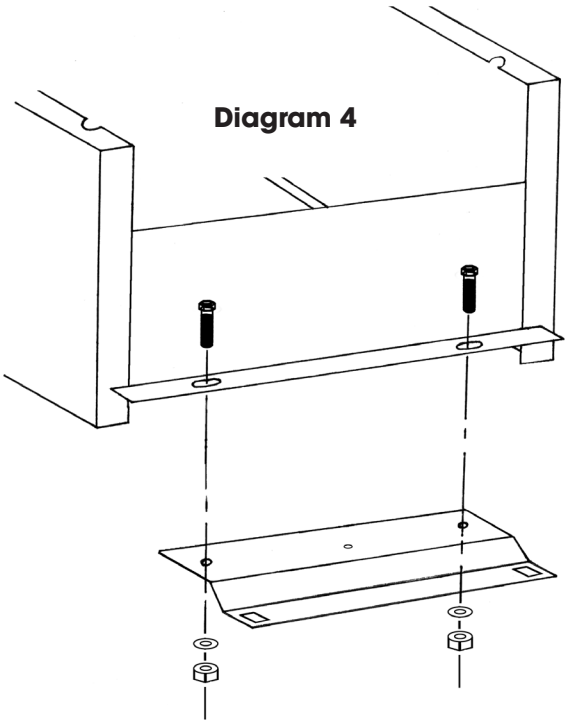
Alternative Metro Mount Plate Installation

For installations when it is desirable to position the assembled Metro prior to bolting down, it is possible to "invert" the mounting plate and use it as a means of bolting the Metro directly to the floor, through the floor protector. Refer to Diagram 4 and note;

1. Rotate the mount plate 180 degrees.
2. Remove the two "slide nuts" from the rear face of the mount plate.
3. Secure the mount plate to the pedestal with 6mm bolts through holes provided as illustrated.

You can then bolt down the Metro through the two rectangular slots in the rear edge of the mount plate. These slots are more accessible than bolting direct through the pedestal, and it also eliminates the need for spacers.

Diagram 4



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Clearance chart

Minimum clearances

All Metro wood fires comply with AS/NZS2918:2001. Minimum clearances shown below are detailed in millimetres, with a Pioneer double flue shield fitted to the appliance. Measurements are taken from the following reference points as illustrated:

- From the nearest combustible wall or surface (A, B, D, E, G, H)
- From the Metro's flue centre (A, B, C, D)
- From the Metro's cabinet/heatshield outermost point (E, F, G, H)
- To the edge of the ash floor protectors non-combustible surface (C, F, I, J, K, L, M)

AS/NZS2918:2001 allows for a reduction in minimum clearances as detailed in Section 3, tables 3.1 and 3.2 of the standard.

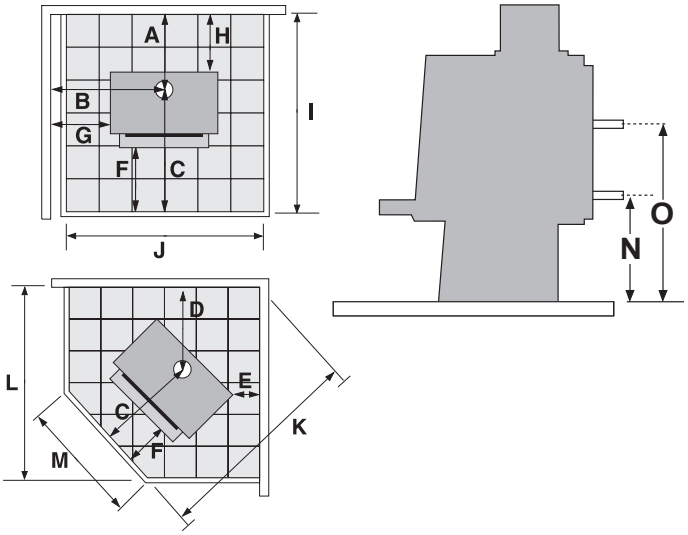
Some Metro models have undergone additional testing which allows for reduced clearances. Please see the footnotes below the tables for applicable models.

Specifications were correct at the time of printing, but may alter and those detailed within should be used only as a guide. If in doubt, please consult your Metro retailer.

Wetback connections

Connections below are taken facing the Metro/wall.

- Tiny Series models are 92mm left of the flue centre.
- Wee Series models are 226mm left of the flue centre.
- The Classic Rad is 183mm left of the flue centre.
- Xtreme Series models are 275mm left of the flue centre.
- All other models are 140mm left of the flue centre.



Metro clearances and specifications (Minimum clearances shown are in mm, with a Pioneer double flue shield fitted)

	Minimum installation clearances with a Pioneer double flueshield fitted (mm)													Wetback		Dimensions		
Clean Air Models	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	Width	Depth	Height
ECO Tiny Ped	210	430	580	290	25	200	185	60	790	650	990	875	250	280	470	490	530	665
ECO Tiny Rad	225	552	580	420	150	200	300	75	805	650	1165	925	250	280	470	505	530	665
R1	243	774	586	554	280	244	530	100	829	825	1370	1118	425	N/A	N/A	488	485	668
R2	246	858	626	582	275	235	570	100	872	905	1449	1203	505	N/A	N/A	575	537	690
Wee Rad [1]	251	568	577	455	150	230	260	100	828	825	1224	1015	425	295	485	615	498	688
Wee Rad Base	271	678	577	489	180	230	370	120	848	825	1270	1049	425	295	485	615	498	691
Wee Ped [2]	263	651	580	490	170	230	350	110	843	825	1274	1050	425	295	485	602	503	665
Classic Rad [3]	257	695	780	500	220	229	430	100	1037	728	1487	1168	328	393	583	530	707	680
Xtreme Ped	251	624	630	441	110	227	280	100	881	907	1254	1065	507	349	539	688	554	721
Xtreme Rad	251	650	630	458	100	227	280	100	881	907	1277	1077	507	349	539	740	554	743
Xtreme Rad Base	251	650	630	458	100	227	280	100	881	907	1277	1077	507	349	539	740	554	743
ECO Euro Rad DV	250	625	625	435	80	200	250	100	875	905	1240	1065	505	338	528	750	575	745
ECO Euro Ped DV [4]	230	585	625	495	170	200	250	80	855	905	1325	1120	505	325	515	670	575	715
Mega Rad	285	720	728	497	100	224	300	130	1013	1006	1431	1227	606	300	490	840	657	749

1 Wee Rad corner clearance (E) can be reduced to 120mm with the Wee Rad corner wing shields fitted. This in turn also reduces clearances (D) to 425mm, (K) to 1180mm and (L) to 985mm. When fitting the corner wing shields the Wee Rad itself must be installed to a corner clearance (E) of 120mm. The corner wing shields are then fitted which gives a wall to shield corner clearance of 100mm.

2 Wee Ped corner clearance (E) can be reduced to 115mm if installed with a Pioneer double flue shield with the side extensions fitted. This in turn also reduces clearances (D) to 436mm, (K) to 1197mm and (L) to 996mm.

3 Classic Rad corner clearance (E) can be reduced to 180mm if installed with a Pioneer double flue shield with the side extensions fitted. This in turn also reduces clearances (D) to 460mm, (K) to 1430mm and (L) to 1127mm.

4 ECO Euro Ped corner clearance (E) can be reduced to 110mm if installed with a Pioneer double flue shield with the side extensions fitted. This in turn also reduces clearances (D) to 435mm, (K) to 1240mm and (L) to 1060mm.

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Wetbacks

⚠ WARNING! Important Information

- **Do not connect to an unvented hot water system.**
- **Install in accordance with AS 3500.4.1 or NZS 4603 and the appropriate requirements of the relevant building code or codes.**

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If the home is in a classified "clean air zone", and dependent on requirements/restrictions which may be imposed by your local council, you may or may not be able to install a water heating device. If in doubt consult your local Metro retailer. Only Pioneer's cast jacket wetback system should be fitted to a Metro; alternative wetbacks will void the Metro's emission approvals and may seriously affect the performance of the appliance and void the owner's warranty.

Note; Wetback systems are not suitable for use in locations where the water supply has lime content, lime build up inside the coil will eventually block the coil causing the wetback to fail.

The wetback is fitted to the inside rear of the firebox, unless as detailed in the points below. The connection pipe heights are illustrated and detailed on the previous page 6. Please note:

- Wetback connections are as follows:
  - Tiny Series models are 92mm left of the flue centre.
  - Wee Series models are 226mm left of the flue centre.
  - The Classic Rad is 183mm left of the flue centre.
  - Xtreme Series models are 275mm left of the flue centre.
  - All other models are 140mm left of the flue centre.
- The Wee models, Classic Rad and Xtreme models wetback position is to the outside left hand firebox wall. See specific instruction in the 'Side Wetback' box for these appliances.
- It is recommended the return pipe has a minimum rise of 1 in 12; performance will reduce as the distance to the storage cylinder increases.

To fit the wetback proceed as follows: (For Wee Series, Xtreme Series and Classic Rad models, please follow instructions included in the side wetback box)

1. Remove the rear panel of the Metro by removing the four pozi drive screws. Remove the two pre-punched knockouts from this panel.
2. Two further knockouts will be visible on the inner rear heatshield; remove these also. Once these are removed 6mm nuts will be visible through the knockout holes.
3. Open the Metro's door and locate two bolts securing the pressed washers which are visible on the left hand side of the firebox for both inlet and outlet connection points.
4. A further three bolt heads will also be visible on the inside rear wall of the firebox; these are threaded into the 6mm thick firebox. Remove all three.
5. Using the tube of sealant supplied with the wetback, apply a liberal bead of sealant around both the two connection pipes and also the outer circumference of the wetback which will face and press against the inside rear wall of the firebox. This will completely seal the wetback to the inside rear wall of the fire on installation.
6. Fit the wetback into the firebox and carefully pass the connection pipes through the holes in the rear of the firebox. Securely attach the wetback using the three bolts previously removed from the rear face of the firebox, fitting them through the slots provided in the wetback's jacket.
7. The wetback is now ready for connection to the storage cylinder by a registered plumber.

Flue installation

It is recommended that all Metro freestanding wood fires be installed with the energy efficient Metro ECO flue system which comes complete with a detailed installation manual. This installation manual must be presented with your application to gain consent with your local council.

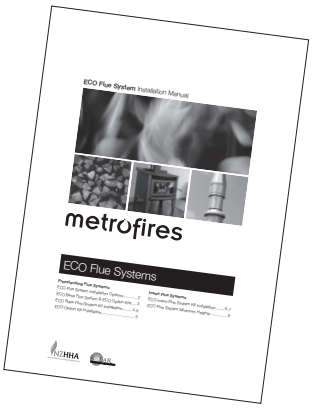
A copy of the installation manual can be downloaded from www.metrofires.co.nz, or a copy can be obtained from your Metro retailer. Any alternative flue system must comply with and be installed as detailed in AS/NZS2918:2001, and a copy of the installation manual must also be presented with your application to gain consent with your local council.

All Metro's require a 150mm diameter flue. Please note:

- All joints in the flue pipe must be sealed with Pioneer fire cement (or similar) and riveted.
- The base of the flue pipe must be sealed into the outlet of the Metro's flue outlet. This is critical for optimum operation.
- Refer "Important Information" on page 2.
- The flue systems 150mm diameter flue pipe must terminate a minimum of 4.6 metres above the top surface of the floor protector.

Pioneer Double Flue Shield

All Metro's have been tested with a Pioneer double flue mounted shield. For the Metro to be installed with minimal clearances as the clearance chart states, only the Pioneer double mounted flue shield can be used. All other flue shields will invalidate the installation.



The Metro can be installed without a flue shield, if this is the case it needs to be installed as AS/NZS2918:2001 stipulates.

⚠ WARNING! Important Information

- **WE HIGHLY RECOMMEND YOU READ THIS ENTIRE MANUAL AS INCORRECT OPERATION, MISUSE AND/OR LACK OF MAINTENANCE WILL VOID THE WARRANTY**
- **Any modification of the appliance that has not been approved in writing by the testing authority is considered as breaching AS/NZS 4013 and will void the warranty**
- **Do not use flammable liquids or aerosols in the vicinity of this appliance when it is operating**
- **Never operate your Metro with the top grill removed**
- **Do not dry clothes on or near this appliance**
- **Do not use flammable liquids or aerosols to start or rekindle the fire OR store fuel within the Metro's specified installation clearances**
- **Never operate your Metro with the door ajar, except on initial start up**
- **Open the air control fully before opening the Metro's door**

⚠ CAUTION! Important Information

- **This appliance should be maintained & operated at all times in accordance with this instruction manual**
- **This appliance should not be operated with cracked door glass, over worn, faulty or missing door seals**
- **Do not use driftwood, treated or unseasoned (wet) fuel, the use of most types of preservative treated wood as fuel can be hazardous and will damage your appliance**
- **Burning unseasoned (wet) fuel or incorrect operation on extended low burn cycles will cause excessive creosote to form. Creosote is very corrosive and excessive buildups will result in the flue pipe, flue spigot and upper burn chamber failing. Failure of the applicance and/ or flue system due to creosote damage is not covered under warranty. The formation of such is not an appliance issue it is a fuel and operational issue**
- **This appliance must be regularly maintained and replacement parts must be authorised Metro parts only**
- **Do not empty ash into a combustible container**

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Congratulations on the purchase of your Metro wood fire

This low-emission, slow combustion appliance is designed to give you many years of warmth and service, subject to the following key factors. These key factors, if not adhered to are the major causes of unsafe installation, poor performance and flue blockages and potential product failure.

1. Your Metro wood fire must be installed correctly. Metro recommend a competent and suitably qualified NZHHA installer.
2. The only fuel to be used in this appliance shall be wood that meets the following criteria.
   - Less than 25% moisture content
   - Has not been treated with preservatives or impregnated with chemicals or glue,
   - Is not chipboard, particle board, or laminated board,
   - Is not painted, stained or oiled
   - Is not driftwood or other salt impregnated wood
3. The appliance shall be operated at all times in accordance with the "Installation and Operating Instructions" supplied with each appliance.
4. It is preferable that Metro wood fires should be installed with a Metro ECO Flue System.
5. Coal must not be used as a fuel.

Please also note the following important points:

In New Zealand a building consent is required from your local building authority. The homeowner is responsible for obtaining this consent.

- As correct installation is critical to the performance and safe operation of your Metro, it is recommended your Metro be installed by a NZHHA registered installer or a person suitably qualified in the installation of wood fires. Your Metro retailer will be able to arrange professional installation for you.
- During the very first fire your Metro will give off an odour and fumes as the firebox paint cures. Do not be alarmed; open all windows and externally opening doors in that room and close any internally opening doors. This curing process will last for approximately one hour and is likely to happen this one time.
- Properly seasoned (dry) timber is necessary for the Metro to operate efficiently; firewood that contains a high moisture content will result in flue pipe blockages, reduce heat output and create other issues.

Note: Once split, Softwood usually takes 12 months to season - Hardwood can take up to 24 months to season - Wood must be stored in a location that enables air circulation. Unseasoned wood stored in a closed woodshed without air circulation will still be unseasoned 12 months later.

- It is critical that the fire not be operated with over worn, faulty or missing door seals. Door seals will harden over time and become over-worn (3-4 year's) this will cause air to leak into the fire, causing the appliance to 'over fire'.
- It is critical that the fire not be operated with over worn, faulty or missing bricks, baffle plate, baffle extension (white board on the baffle plate)
- It is critical that the fire not be operated with cracked, or broken door glass.

Please note, the above 3 points require regular inspection/ maintenance (every time the ash bed is cleaned out, generally 3-5 times a season) and if not maintained will void the firebox warranty. A glowing firebox or lower fluepipe is just one sign you are over firing your appliance. Please ensure you keep your proof of purchase/receipt on any parts you purchase.

- For optimum performance fuel must be loaded so the logs lay "front to rear" in preference to laying across the width of the firebox. Spaces should be left between the logs to enable oxygen to get to as much of the surface of the fuel as possible.
- A small hot fire loaded frequently is more efficient than a large fire burning on a low setting.
- Your Metro is covered by a full unconditional 12 month warranty on replacement parts, and a 10 year firebox warranty.

Where to install a Metro wood fire in your home

Wood fires are usually installed in the main living area, which is the section of the home that is usually kept the warmest, being the area in the home most frequently occupied. However, before deciding on the best location for your Metro wood fire you may wish to consider:

- Water heating. If you are intending to have a wetback it is important that the wood fire is as close as practically possible to the water storage cylinder.
- Split level homes are best heated when the wood fire is installed on the lower level, as the heated air will rise to the higher levels.
- Building construction is another consideration. Specified clearances from walls, curtains etc must be maintained and you need to ensure no structural beams or internal gutters etc are directly above your preferred site. If you have a two storey dwelling you need to consider the second storey to ensure you don't have the flue directly outside a second storey window.

Generally, you can install your Metro in your home anywhere that suits you; Pioneer offer various fan systems to transfer heat to other sections of the home that are not heated sufficiently. It is necessary if using a fan system that the Metro you have purchased has sufficient output to heat the total area you wish to heat. Your Metro retailer or installer will be able to advise if you are uncertain.

Optional wetbacks

If your home is in a classified "clean air zone", and dependent on requirements/restrictions which may be imposed by your local territorial authority (council) you may or may not be able to install a water heating device. If in doubt consult your local Metro retailer.

Water heating is another key feature of your Metro wood fire, and on offer are a number of options depending on the model you have purchased. Metro offer a 2kW wetback suitable for the ECO Tiny Rad and ECO Tiny Ped. The Ambie One cannot be fitted with a wetback in a clean air zone, but can be fitted with a wetback if installed on a 2HA+ rural property. All other 'ECO' Metro's can be fitted with the ECO wetback.

The Side wetback is suitable for the Wee Series models, Classic Rad and Xtreme Series models. Both R1 and R2 models cannot be fitted with a wetback at all.

Note: Wetbacks are not suitable for use in locations where the water supply has lime content. Lime build up inside the coil will eventually block the coil causing the wetback to fail.

Other considerations are:

- Distance from your Metro to the storage cylinder will affect the amount of hot water produced.
- Your climate & the manner in which you will 'fire' your Metro will determine the amount of hot water produced.

Cost Savings

Wetbacks can enable substantial power savings, dependent on the climate in the area in which you live. If you live in a cold climate you are likely to use your Metro for many months of the year, in which case a Pioneer wetback will reduce or even eliminate your water heating costs over those months. If however you live in a warmer climate and use your Metro for only a few hours a day over the colder months, electricity savings will be considerably less.

Water Pressure

A common misconception is that you must have a low-pressure system to have a wetback; this is not true. You must have a "vented" system and high-pressure cylinders are usually not vented. However you can install an "indirect" cylinder which contains a secondary coil inside the storage cylinder, enabling you to have a wetback while retaining a high-pressure system.

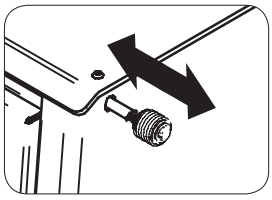
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Getting to know your Metro wood fire

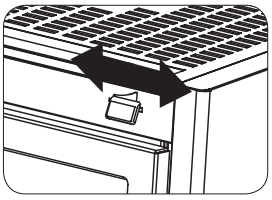
Operating your Metro wood fire is simple and you will quickly learn how to get the best from it. First take a minute to familiarise yourself with your new Metro.

- Raise the door handle anti-clockwise until the latch releases, and then slowly pull the door open. You will note that if you let the door go before it is at 90° to the appliance, it will fall closed. This is a safety feature that ensures the door cannot fall open if it is not latched securely. For the door to remain open, you must open it fully.
- There is a single air control making your Metro easy to adjust. This control moves from left to right, which is "low to high".

The Metro Radiant fires have a wire air control handle located at the upper right hand side of the appliance. Simply pull out to increase burn rate or push in to reduce burn rate.



Radiant fires air control



All other fires air control

All other model Metro's have an air control knob located on the upper front of the appliance.

Slide this control knob gently from right to left until you reach a stop. This is a pre-set "low" position. Your Metro must not be operated at a lower burn rate than this pre-set low allows.

Operating your Metro wood fire

If your Metro has only been installed within the past few days, the fire cement seal at the base of the flue will not be fully cured. To ensure the cement sets without blistering it is recommended you burn 2-3 sheets of loosely crumpled newspaper at a time, approximately once every hour over a 6-8 hour period.

During the very first fire your Metro will give off an odour and fumes as the firebox paint cures. Do not be alarmed. Open all windows and externally opening doors in that room and close any internally opening doors. This curing process will last for approximately one hour and is likely to happen this one time.

Start up

Place a quantity of loosely crumpled newspaper on the base of the firebox until it is approximately 50% full of paper, or place firelighters on the base of the firebox. Add dry kindling and move the air control knob fully to the right, being the "full open" position.

Light the paper at two or three locations across the front of the door opening and leave the door slightly ajar resting on the latch pin if necessary for a few minutes while the fire establishes. Once the kindling is burning well, open the door and add 2-3 small logs at a time until you have a well-established fire. Usually this will take approximately 30 minutes, during which time the air control should be set on "high" and the door should be closed, except for the initial few minutes and when fuel is being added.

Normal operation

Once the fire is well established, regulate the air control to achieve the desired burn rate and heat output. As you move the air control to the right, burn rate, firebox temperature and heat output will increase, if you move the control to the left they will decrease.

Please note:

- Always open the air control fully prior to opening the door, then open the door slowly.
- When loading logs, place them end-on, "front to back"; air spaces should be left between the logs to enable oxygen to get to as much of the surface of the fuel as possible.
- Every time you refuel, leave the air control on "high" for a minimum of 20-25 minutes.
- Never use the door to force wood into the firebox, as this is likely to break the glass.

Cooking

All Metro's are designed to enable cooking of soups, stews and casseroles etc, and your Metro will easily boil a flat bottom stainless steel kettle. The Radiant Series have a dedicated cooking top enabling large pots to be placed on the cook top, while all other models have a lift-off grill.

Note: Metro's supplied with a lift-off top grill have this feature to enable the grill to be removed for cleaning if you have a spill. The lift-off top grill must be left on when cooking, because if removed the wall temperatures next to the appliance may become excessive and the top of the firebox is generally too hot to cook on directly. Please note: Although very durable, Metro's in a satin stainless look are not recommended to be used to cook on.

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Cleaning and maintenance for your Metro wood fire

The Metro radiant fires are painted wood fires and coated with "Pioneer Metallic Black" high temperature paint and will require periodic repainting to keep them looking their best.

All other Metro's are coated with either vitreous enamel or a high temperature silver coating;

- Vitreous enamel is extremely durable and designed to last the life of the appliance. As vitreous enamel is glass, a solid or heavy object dropped or banged against a panel could chip the enamel surface.
- Silver coated Metro's are offered in a stainless steel look. Although very durable it is not recommended that Metro's with this finish be used to cook on.
- All model Metro's can be cleaned with a cloth when the appliance is not operating.
- This appliance must be regularly maintained and replacement parts must be authorised Metro parts only.

Door glass

Providing your fuel is properly seasoned, under normal operating conditions the air-wash design of the Metro's firebox will keep the door glass clear. If the glass requires cleaning you may use either a razor blade scraper or an oven cleaner.

If your door glass breaks it must be replaced with 5mm thick ceramic glass which is available from your local Metro retailer.

Door seals

Over time, usually 3-4 years, the door and glass seals will become hard and cause air to leak into the firebox, causing the appliance to 'over fire'. Your Metro retailer stocks replacement woven fibreglass door and glass seals, which need replacing when they become hard and over worn.

The door of your Metro is easily removed. Hold it in both hands and lift the hinge end of the door up and over the top hinge pin, then lower the door from the bottom hinge pin.

Side bricks

Hair-line cracks are not uncommon and are a result of the intense heat within the Metro's firebox, coupled with mechanical damage caused by accidental impact when fuel is being loaded. However if the side bricks become cracked to the extent that they start to break up, they must be replaced.

Door adjustment

Provision is available on both sides of the door for adjustment.

To adjust the hinge end of the door, open the door fully, loosen the top hinge nut and slightly lift the latch end of the door; you will see the hinge assembly move back 1-2mm which will usually be sufficient. Retighten, then repeat by loosening the lower hinge nut, this time applying a slight downwards pressure onto the door to move the lower hinge assembly back a similar distance, then retighten.

The door latch is also adjustable, as the latch pin on the right side of the firebox is fitted through a slot which enables the latch pin to be loosened, moved back and re-tightened.

Ash removal

Over a period of time ash will build up in the base of the Metro's firebox and require removal. The time this build-up takes depends on the density and cleanliness of your fuel.

To remove the excess ash your Metro should not be operating.

- Open the door, and using a hearth shovel or similar, empty the excess ash directly into a steel or non-combustible container.
- If the ash is not disposed of immediately, be careful where you store it, as the ash can retain heat for many days and become a fire hazard.
- You must leave a bed of ash in the base of the firebox approximately 10mm deep; this insulates the base of the firebox and improves combustion.

Top baffle

This is a 'sacrificial' wear part of the firebox and should be checked monthly. Usually only the "Promet" (white board) front/underneath section needs to be replaced when it starts to disintegrate.

Note: Cracks in the promet are not uncommon and have no adverse effect on the operation of your Metro. These cracks are the result of intense heat coupled with expansion and contraction. Burning wood which is not properly seasoned, i.e. 25% moisture content or more, will over time cause the promet to disintegrate and require replacement.

Flue systems

Should be checked annually, particularly the bottom end of the lower flue section at its rear lock formed joint. If deterioration is noticed contact your Metro retailer or installer.

The flue pipe should also be swept a minimum of once a year, or as required during the winter season. If smoke enters the room when you open the Metro's door this usually indicates the flue pipe is becoming restricted and needs cleaning. The frequency of flue pipe cleans depends on many factors, with the main variables being:

- The seasoning of the wood. If not properly seasoned you will require frequent flue pipe cleans.
- The density of the wood. Softwoods generally result in more deposits building up in the flue pipe.

To clean the flue pipe of your Metro, proceed as follows:-

- Open the Metro's door fully, reach inside with the palm of your hand face-up and extended, lift the top baffle approximately 20mm, then lift it forward out through the door opening, placing it on a sheet of newspaper you have placed on the front of the floor protector.

  Note: Some appliances have a two piece top baffle.
- Close the door and slide the air control to the left.
- Once on the roof, remove the cowl from the top of flue system and sweep the flue pipe using a 150mm-diameter flue pipe brush as detailed in the instructions provided with the fluebrush.
- Once the flue pipe is clear, clean and refit the cowl. Remove the excess soot which has fallen into the firebox, leaving a layer of ash 10mm deep on the base of the firebox, then refit the top baffle.

Note: The baffle must be fitted so its rear is touching the back of the firebox; if uncertain refer to page 3 in the installation section at the front of this manual, which shows illustrations of the baffle location.

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Troubleshooting your Metro wood fire

If your Metro is installed correctly, your fuel is dry and you operate your fire correctly, you will find it to be a pleasure to use. Metro's many years of experience within the wood heating industry has shown that dissatisfaction is mainly due to:

- unseasoned fuel
- faulty installation
- operational error
- or a combination of the above 3 points.

The following may be of assistance if you are experiencing any of these problems.

SMOKE ENTERS THE ROOM WHEN THE METRO'S DOOR IS AJAR (Possible reasons and solutions)

Check flue pipe joins:

If the flue pipe joins are not sealed correctly, the flue pipe will not draw as well as it should. The flue pipe join connecting into the flue spigot on top of the Metro is most critical, if this is not sealed correctly, smoke will enter the room when the door is ajar. To check this join is sealed correctly, run a match or lighter flame around the join. If the flame is sucked into the spigot then it is not sealed correctly. This check needs to be done when the fire is not going. Ensure you check the rear of the flue pipe/spigot join, as due to the seam in the flue pipe, this is the most common area for not being sealed correctly.

Ensure the fuel you are using is correctly seasoned:

If you are burning unseasoned fuel (wet), the fire will cause nothing but problems. The Metro won't deliver much heat, it will be lazy, smoke will enter the room when the door is ajar, and the door glass will run black. Unseasoned fuel is the main contributor to excessive creosote deposits which can be corrosive to your appliance and flue system.

Flue pipe length is too short:

Add more flue pipe as the longer the flue system, the better the draw of the flue pipe. Please note, if you did not purchase the Metro ECO Flue System, you will not have the ECO Cowl which increases draw. We highly recommend the Metro ECO Cowl is fitted as this will increase the draw. If you already have an ECO Cowl and smoke is still entering the room, please add another 600mm length of flue pipe.

Downdraft:

If you have checked all of the above and the fire is still smoking into the room, it's possible there may be a down draft issue. Down draft is environmental and can be caused by many variables, and it is purely trial and error to ascertain the cause. Solutions may be:

- 'H' Cowl, designed purely for downdraft issues, but if you have an ECO Cowl fitted as standard, you will also need to add another 600mm of flue pipe to compensate as the H Cowl is shorter in length.
- Directional Cowl, designed for high wind areas.

Air control setting:

Ensure the air control setting is on high before opening the door to reload, as this increases the draw up the flue pipe. Open the door slowly.

If your Metro did not smoke, but its starting too and is getting worse:

The flue pipe is in need of a clean. It is recommended that the flue pipe be cleaned every season, however if you are burning the fire on low a lot, or are using unseasoned fuel, flue pipe cleans will be required more frequently.

Correct operation:

Modern day wood fires need to be operated hard and fast, more so than low and lazy to ensure the firebox and flue pipe runs hot and efficiently. If the fire and flue pipe is up to temperature it will perform extremely well, the smoke will draw up the flue pipe with ease, and the fire will produce good amounts of heat.

If the fire is operated on low a lot of the time, the door glass will run black, the flue pipe will tend to block up more frequently and the fire will end up smoking into the room when reloading. It's better to have a small fire running hard and fast, rather than a big fire running low and lazy.

OTHER ISSUES YOU MAY EXPERIENCE

I can smell smoke in the room after a low burn cycle:

The smell is creosote that will be seeping through the flue pipe join or out of the flue spigot onto an external surface, thus creating the smell in your room. The cause will be either unseasoned fuel, fuel mass too large, incorrect operation on low burn cycles or a combination. Creosote is very corrosive and excessive buildups will result in the flue pipe and potentially the flue spigot and upper burn chamber failing. The formation of excessive creosote is not an appliance issue, it is a fuel and operational issue. Failure of flue pipe or firebox due to creosote build up is not covered under warranty as excessive creosote build up is only possible from either unseasoned fuel or incorrect operation.

The Metro is noisy as it heats up and cools down:

There will always be some expansion and contraction noise as the Metro heats and cools. This can usually be reduced by loosening three nuts at the rear of the appliance. To remedy, locate the 25mm deep cavity at the rear of your Metro between the 'rear panel' and the 'inner rear heat shield'. You will see a 6mm nut and two 6mm bolt heads in this cavity. Using a 10mm ring or open ended spanner, loosen all three so they are finger tight only.

On all non-DV model Metro's the air channel that allows the combustion air to enter the fire is fitted to the top underneath of the door opening. It is fitted with two M6 bolts. Slightly loosen both of these bolts. Note: This does not apply to the ECO DV models.

The Metro won't turn down as much as it did

The door itself may need readjusting, the hinge and latch is slotted and allows for movement. Loosening the hinge and moving it back a few mm will make the door seal tighter and stop air leaking into the fire. The door and glass seals may be in need of replacing, which is generally required every 3-4 years.

Familiarise yourself with the instructions on page 11 before proceeding with this maintenance.

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Warranty details for your Metro wood fire

Metro wood fires are manufactured in New Zealand, using the highest quality of materials, workmanship and the latest manufacturing techniques, which is why we offer a full 10 year firebox warranty and 1 year parts warranty for peace of mind.

METRO WARRANTY
(NZ Consumer laws apply to this warranty)

Pioneer Manufacturing Limited (Pioneer) warrants the steel firebox against defective materials and workmanship which would render it unfit for normal domestic use, from the date of purchase by the original consumer, for a period of 10 years.

Components including panel coating, door retainers, door seals, glass, trim, baffle & bricks are warranted for a period of 1 year from the date of original purchase for normal domestic use against defective materials and workmanship.

All associated accessories including, but not limited to, fans, flue systems, flue shields, wetbacks, tool sets, ash pots etc, are covered by a 1 year warranty against defective materials and workmanship.

It is recommended, but not a condition of this warranty, that a full service/inspection of the Metro wood fire be carried out at the end of each winter season.

Warranty Conditions:

- The Metro wood fire must be installed, operated and maintained strictly in accordance with the building code and this installation and operation manual.
- The Metro wood fire must be installed and used in a domestic application.
- This warranty covers appliance like for like replacement or repair at the manufacturer's discretion but excludes freight, travel, installation, labour and/or any other associated costs.
- Pioneer or their agents are not liable for any loss or expense direct or indirect arising from the failure of any part or operation of the appliance.
- Operation of this appliance in violation of the warnings in this operation and installation manual will void this warranty.
- Your Metro wood fire must be regularly maintained and we recommended it is also serviced annually. Proof of servicing may be required. If a wood fire is not regularly maintained and serviced, the life span will be reduced. If your Metro wood fire has been neglected, by not being regularly maintained and serviced, warranty may be declined.
- It is critical that the fire not be operated with over worn, faulty or missing door seals. Door seals will harden over time and become over-worn (3-4 year's) this will cause air to leak into the fire, causing the appliance to 'over fire'.
- It is critical that the fire not be operated with over worn, faulty or missing bricks, baffle plate or baffle extension (white board on or under the baffle plate)
- It is critical that the fire not be operated with cracked, or broken door glass.

⚠ IMPORTANT INFORMATION

Note: The above 3 points require regular inspection/ maintenance (every time the ash bed is cleaned out, generally 3-5 times a season) and if not maintained will void the firebox warranty. Please ensure you keep your proof of purchase/receipt on any parts you buy.

- A claim under this warranty should be directed to the retailer who supplied the Metro wood fire. If this is not possible write directly to the manufacturer stating details of fault, model and serial number of your Metro, date and proof of purchase and name of retailer where the Metro was purchased.

Warranty Exclusions:
This manufacturer's warranty does not cover:

- Service calls which are not related to any defect in the product (i.e. operational, installation or fuel issues). The cost of a service call will be charged if the problem is not found to be a product fault.
- Defects caused by factors other than normal domestic use or use in accordance with the product's operation manual.
- Defects caused through the product being operated in an "over-fired" manner resulting in sections of the firebox operating excessively hot to the point that sections glow red. (Note – This will result in distortion of the firebox)
- Defects to the product caused by accident, neglect, misuse or act of God.
- The cost of repairs carried out by non-authorised repairers or the cost of correcting such unauthorised repairs.
- Required maintenance as set out in this manual.

Service under this manufacturer's warranty must be provided by a repairer authorised by Pioneer Manufacturing Ltd. Such service shall be provided during normal business hours.

⚠ WARNING! Complete and retain these details at time of purchase:

Purchase Date	
Serial Number	
Model	
Colour	
Retailer	

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Metro - Visit us online today www.metrofires.co.nz

Metro Wood Fire Specifications

Metro have a Specifications Brochure available which details relevant compliance data for every model. This brochure is updated annually and details the minimum clearances and specifications for all models, which is generally required when applying for a building consent. See your Metro retailer to obtain a copy, or visit www.metrofires.co.nz



metrofires.co.nz

Visit the Metro website: www.metrofires.co.nz to view Metro's video demos' showing the latest in wood fire technology energy saving options. You can view the entire Metro product range, find out where your nearest Metro retailer is located or simply check out the latest specifications, installation requirements and emission and efficiency data for the Metro of your choice.

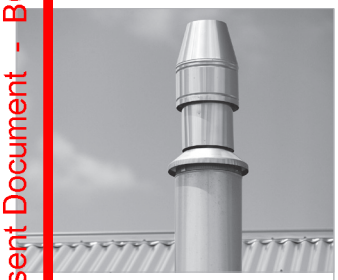
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Pioneer heating accessories

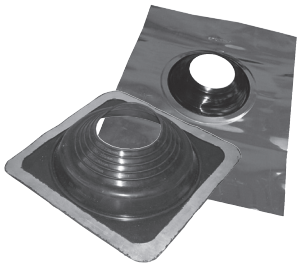
Metro Accessories

Metro offer a range of heating accessories designed to compliment your Metro wood fire. See below for some of the products within our heating accessory range.

This range of accessories includes floor protectors, heat transfer systems, child guards, baffles, bricks and more. For further details ask your Metro retailer for a copy of the Metro heating accessories brochure, or visit www.metrofires.co.nz



ICO Flue Systems



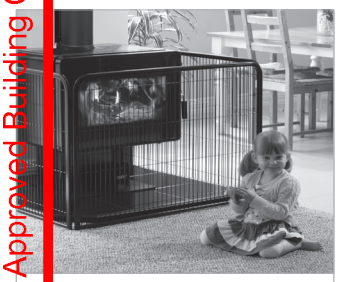
Flashrites and Versatiles



Wetbacks



High Temperature Paint



Child Guards



Heat Transfer Systems



Universal Door Seal Kits



Fire Cement And Silicone



Corner and Wall Floor Protectors



Glass Tape



Door Seal Rope



Chubb Smoke Detectors

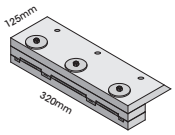
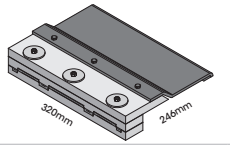
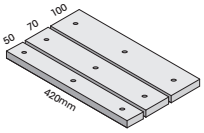
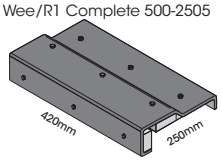
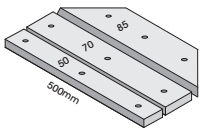
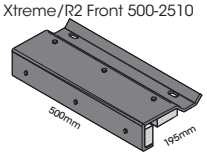
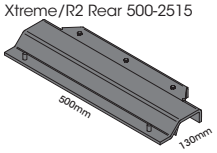
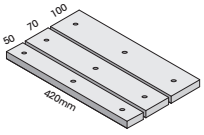
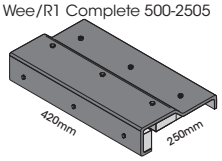
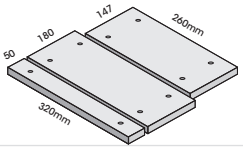
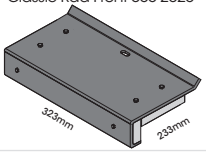
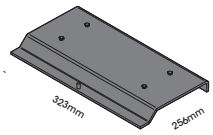
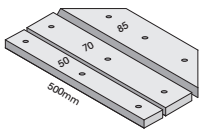
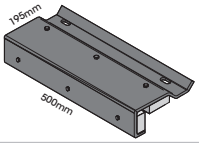
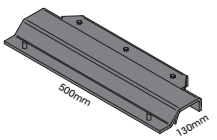
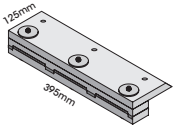
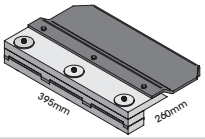
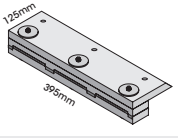
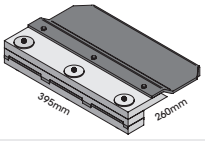
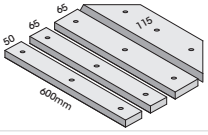
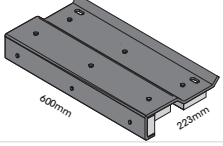
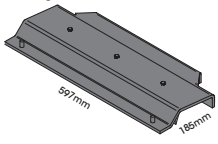
Parts guide for your Metro – Baffle, promet and wetback

Listed below are the parts and product codes for your Metro wood fire. The promet/baffle should be regularly checked and must always be in place during the operation of your fire.

Note: Cracks in the promet are not uncommon and have no adverse effect on the operation of your Metro.These cracks are the result of intense heat coupled with expansion and contraction and is normal wear & tear.

Your Metro wood fire must be regularly maintained and we recommended it is also serviced annually. If a wood fire is not regularly maintained and serviced, the life span will be reduced. If your Metro wood fire has been neglected, by not being regularly maintained and serviced, with authorised Metro parts replaced as required, your warranty may be declined.

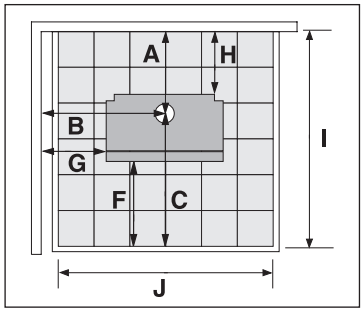
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Clean air models	Type of promet required / Type of steel baffle(s) required			Water heating options
• **ECO Tiny Ped** • **ECO Tiny Rad**		ECO Tiny 500-1550 	ECO Tiny Complete 500-2050 	ECO 2kW Booster 450-0050 
• **R1**		Wee/R1 Set 500-2005 	Wee/R1 Complete 500-2505 	No wetback can be fitted
• **R2**	Xtreme/R2 Set 500-2010 	Xtreme/R2 Front 500-2510 	Xtreme/R2 Rear 500-2515 	No wetback can be fitted
• **Wee Rad** [LEGS] • **Wee Rad** [BASE] • **Wee Ped**		Wee/R1 Set 500-2005 	Wee/R1 Complete 500-2505 	Side Wetback 450-0275 
• **Classic Rad**	Classic Rad Set 500-2015 	Classic Rad Front 500-2520 	Classic Rad Rear 500-2525 	Side Wetback 450-0275 
• **Xtreme Rad** [LEGS] • **Xtreme Rad** [BASE] • **Xtreme Ped**	Xtreme/R2 Set 500-2010 	Xtreme/R2 Front 500-2510 	Xtreme/R2 Rear 500-2515 	Side Wetback 450-0275 
• **ECO Euro Rad DV**		ECO DV 500-1750 	ECO DV Complete 500-2200 	No wetback if this fire is installed in a clean air zone. The LTD wetback can be fitted in a non-clean air zone. LTD 3kW Wetback 450-0100 or LTD 4kW Wetback 450-0150
• **ECO Euro Ped DV**		ECO DV 500-1750 	ECO DV Complete 500-2200 	ECO Wetback 450-0450 
• **Mega Rad**	Mega Rad Promet Set 500-2020 	Mega Rad Front 500-2530 	Mega Rad Rear 500-2535 	LTD 3kW Wetback 450-0100 

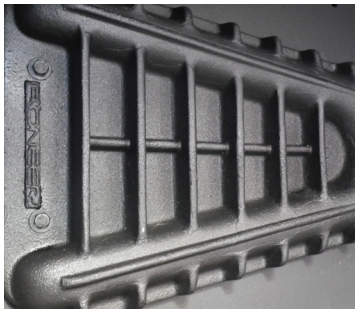
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Wetback Installation Instructions









metrofires

Wetback Installation

- 2kW Booster
- ECO Wetback
- Side Wetback
- LTD 3kW Wetback
- LTD 4kW Wetback
- LTD Side Boiler
- ECO Smart Booster
- ECO Mega Smart Booster

2kW Booster 3
Side Wetback - Wee Rad 4
Side Wetback - Xtreme Rad/Ped 5
ECO Wetback 6
LTD 3kW & 4kW Wetback 8
ECO Smart Booster 10
ECO Mega Smart Booster 11

M1088 11/14

NZHHA New Zealand Home Heating Association Inc.

NEW ZEALAND MADE

PIONEER MANUFACTURING LIMITED

info@metrofires.co.nz | www.metrofires.co.nz

⚠ WARNING! Important Information

- **WE HIGHLY RECOMMEND YOU READ THIS ENTIRE MANUAL AS INCORRECT INSTALLATION AND/OR LACK OF MAINTENANCE WILL VOID THE WARRANTY**
- **Do not connect to an unvented hot water system.**
- **Wetbacks must be installed in accordance with AS 3500.4.1 or NZS 4603 and the appropriate requirements of the relevant building code or codes.**

⚠ CAUTION! Important Information

- **Wetbacks must be connected with water before operating the fire. Water must always be available to the wetback while the fire is in operation.**
- **Wetback and boiler systems are not suitable for use in locations where the water supply has lime content. Lime build up inside the coil will eventually block the coil causing the wetback to fail.**
- **Rainwater collection tanks installed lower than the wetback that use a water pump to supply the home, can cause problems if the pump is not operational. In these situations either the type of wetback or a roof header tank should be considered.**

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Wetbacks

Water heating is another key feature of your Metro wood fire; nearly all Metro models can be fitted with a wetback, which are designed to give maximum output with minimal effect on the operation of the fire. Only the Pioneer cast jacket wetback system should be fitted to your Metro; alternative wetbacks will void the Metro's emission approvals and may seriously affect the performance of the appliance and void its warranty.

Cost Savings

Wetbacks can enable substantial power savings, dependent on the climate in the area in which you live. If you live in a cold climate you are likely to use your Metro for many months of the year, in which case a Pioneer wetback will reduce or even eliminate your water heating costs over those months.

If however you live in a warmer climate and use your Metro for only a few hours a day over the colder months, electricity savings will be considerably less.

If the home is in a classified "clean air zone", and dependent on requirements/restrictions which may be imposed by your local council, you may or may not be able to install a water heating device. If in doubt consult your local Metro retailer.

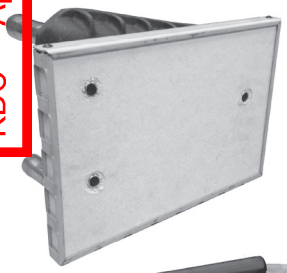
Water Pressure

A common misconception is that you must have a low-pressure system to have a wetback; this is not true. You must have a "vented" system and high-pressure cylinders are usually not vented. However you can install an "indirect" cylinder which contains a secondary coil inside the storage cylinder, enabling you to have a wetback while retaining a high-pressure system.

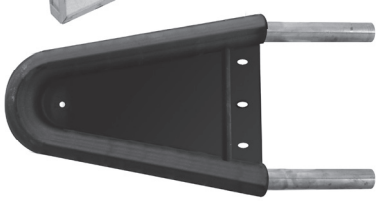
The Metro wetback range



2kW Booster



ECO Wetback



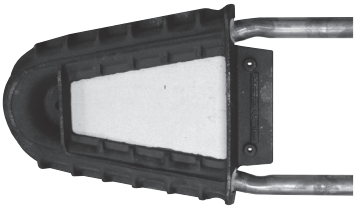
Side Wetback



LTD Wetback



ECO Smart Booster



ECO Mega Smart Booster

Metro 2kW Booster Installation Instructions - Tiny Ped and Tiny Rad models only



METRO 2kW BOOSTER

Suitable for installation into the following models:

- **ECO Tiny Ped**
- **ECO Tiny Rad**

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⚠ WARNING! Important Information

- **Do not connect to an unvented hot water system.**
- **Install in accordance with AS 3500.4.1 or NZS 4603 and the appropriate requirements of the relevant building code or codes.**

Proceed with installation of the wetback into the Metro wood fire as detailed below.

The 2kW booster is fitted to the inside rear of the firebox, with the connection pipe heights illustrated and detailed below. Please note:

- Wetback connections for the Tiny models are 92mm left of the flue centre facing the Metro/wall; the return pipe connection is directly above the inlet connection.
- It is recommended the return pipe has a minimum rise of 1 in 12; performance will reduce as the distance to the storage cylinder increases.

To fit the wetback proceed as follows:

1. Remove the rear panel of the Metro by removing the four pozi drive screws. Remove the two pre-punched knockouts from this panel.
2. Two further knockouts will be visible on the inner rear heatshield; remove these also. Once these are removed 6mm nuts will be visible through the knockout holes.
3. Open the Metro's door and locate two bolts securing the pressed washers which are visible on the left hand side of the firebox for both inlet and outlet connection points.
4. A further three bolt heads will also be visible on the inside rear wall of the firebox; these are threaded into the 6mm thick firebox. Remove all three.
5. Using the tube of sealant supplied with the wetback, apply a liberal bead of sealant around both the two connection pipes and also the outer circumference of the wetback which will face the inside rear wall of the firebox. This will completely seal the wetback to the inside rear wall of the fire on installation.
6. Fit the wetback into the firebox and carefully pass the connection pipes through the holes in the rear of the firebox. Securely attach the wetback using the three bolts previously removed from the rear face of the firebox, fitting them through the slots provided in the wetback's jacket.
7. The wetback is now ready for connection to the storage cylinder by a registered plumber.

Notice to the Installer

When installing a 2kw booster into the Metro ECO Tiny Ped and Rad models there are two modifications to be done:

1. Remove both side bricks from inside your Metro firebox and replace with the white promet side bricks supplied.
2. The air slide needs to be replaced to obtain the correct air settings and is detailed in the following steps.

ECO Tiny Ped

1. Remove top grill. Once the grill is removed you need to remove the two screws that secure the side panels to the front air slide cover. These are found in the front left/right hand corners.
2. Then remove the air control knob by pulling it off towards you. The air slide cover is removed by standing at the side of the Metro closest to the air control and pushing the opposite side panel away from you just far enough so the front air slide cover disengages from the side panel. Then remove the air slide cover.
3. You will see 2 x 6mm bolt heads that secure the air slide to the firebox. Undo these to allow the air slide to be removed.
4. Select the correct new air slide supplied in the wetback carton (the one with the small arm attached) and refit it to your Metro then refit the air slide cover as in above steps and replace air control knob.

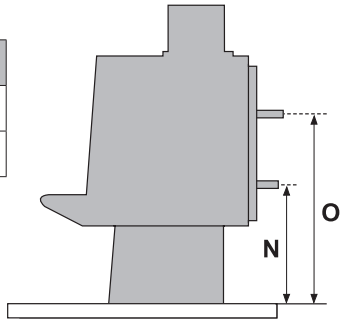
ECO Tiny Rad

1. Locate and loosen (do not remove) the Phillips screw on the left hand side under the bottom louvre.
2. Slide all three louvre's to the right hand side until they disengage from the slot and remove off the small wire pin then remove from the fire.
3. Remove the 6mm nut that is attached to the end of the air control arm.
4. Remove the two 6mm bolts that hold the air slide to the firebox, remove and discard the old air slide.
5. Select the correct new air slide supplied in the wetback carton and replace as in step 4 of the Tiny Ped.
6. Now refit air control arm and louvre's as a reversal of steps 1, 2 and 3.

Connection heights (mm)

Model	N	O
Tiny Ped	280	470
Tiny Rad	280	470

Note: Both wetback connections are 92mm left of the flue centre, facing the Metro/wall.



Side wetback Installation - Wee Rad, Wee Rad Base & Wee Ped



METRO SIDE WETBACK

⚠ WARNING! Important Information

Do not connect to an unvented hot water system.

Install in accordance with AS 3500.4.1 or NZS 4603 and the appropriate requirements of the relevant building code or codes.

Suitable for installation into the following models:

• Wee Rad • Wee Rad Base • Wee Ped

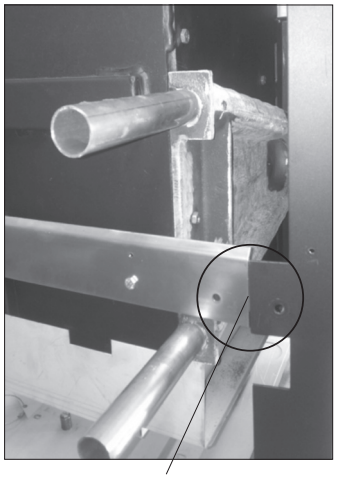
Please note:

This wetback is secured to the outside left hand wall only of the appliance. Left hand is deemed as you are looking at the appliance from the front. No adjustments to your wood fire settings are necessary, this appliance is factory set.

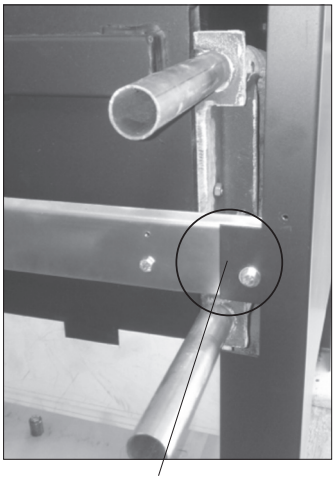
- This Metro requires the rear heat shields to be removed & the outer most only circular knock outs removed for copper pipe penetration.
- It is ideal this wetback is installed before the wood fire installation.
- It is recommended the return pipe has a minimum rise of 1 in 12; performance will reduce as the distance to the storage cylinder increases.

Follow this step by step procedure:

1. For best access during this process remove the wood fire door & internal baffle, place both in a safe area so as not to damage parts or painted surface.
2. At all times aside the removed fastenings to a safe location as these will be needed to refit the necessary parts.
3. Remove both the rear heat shield & the rear inner heat shield, both are fixed into position with 8g pozi screws & the inner heat shield is bolted at top only with one M6 fastening.
4. As you look from the rear of the appliance undo the very right hand M6 bolt in the spreader bar (as illustrated).
5. Spread the side panel away from the rear fixing point to provide access (as illustrated right).
6. Remove the two or three (depending on model) countersunk M6 fastenings in the left side wall of the fire box; these are used for fixing the wetback to the outside wall of the appliance.
7. Apply a liberal amount of Pioneer fire cement from the 70ml tube supplied, around the full perimeter of the flat face & over the internal flat area. This is needed for improved heat transfer.
8. Insert the wetback into the gap provided by spreading out the side panel, note the lower tube is positioned under the spreader bar. Fix in place with the provided countersunk fastening & nut at the rear centre slot of the wetback first, tighten but allow for a small amount of movement.
9. Line up the front M6 tapped hole in the casting with the front 8mm dia hole in the fire box wall. Using a second countersunk fastening screw into the casting from the internal of the fire box, discard the M6 nut. Tighten both fastenings to ensure a tight fit to the fire box. Insert and fasten any remaining rear fastenings.
   Note: Removal of the baffle as detailed in point 1 allows for easy access through the flue spigot.
10. Reassemble the rear heat shields, inner heat shield first.
    Note: both require the outer circular knock out plates only removed from the respective heat shields. It is absolutely critical these heat shields are placed back onto the appliance correctly with all bolts & screws in place & done up tightly.
11. The wetback is now fitted & ready for plumbing connection into your hot water cylinder using standard plumbing practice.



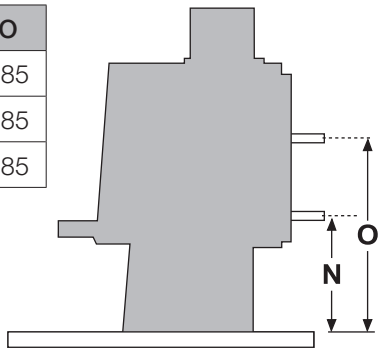
RIGHT HAND M6 BOLT UNDONE & SIDE PANEL 'SPREAD' FOR ACCESS



WETBACK INSTALLED AND SIDE PANEL RE-FASTENED. HEAT SHIELDS TO GO BACK ON FOR COMPLETION

Connection heights (mm)

Model	N	O
Wee Rad	295	485
Wee Rad Base	295	485
Wee Ped	295	485



Note: Wetback connections for the Wee Rad, Wee Rad Base and Wee Ped are 226mm left of the flue centre facing the Metro/wall.

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Side wetback Installation - Xtreme Rad, Xtreme Rad Base & Xtreme Ped



METRO SIDE WETBACK

⚠ WARNING! Important Information

- **Do not connect to an unvented hot water system.**
- **Install in accordance with AS 3500.4.1 or NZS 4603 and the appropriate requirements of the relevant building code or codes.**

Suitable for installation into the following models:

• Xtreme Rad • Xtreme Rad Base • Xtreme Ped

Please note:

This wetback is secured to the outside left hand wall only of the appliance. Left hand is deemed as you are looking at the appliance from the front. No adjustments to your wood fire settings are necessary, this appliance is factory set.

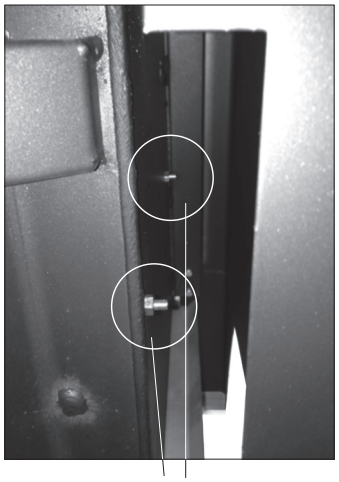
- This Metro requires the rear heat shields to be removed & the outer most only circular knock outs removed for copper pipe penetration.
- It is ideal this wetback is installed before the wood fire installation.
- It is recommended the return pipe has a minimum rise of 1 in 12; performance will reduce as the distance to the storage cylinder increases.

Follow this step by step procedure:

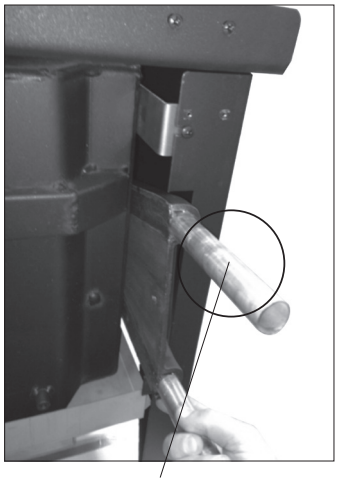
1. For best access during this process remove the wood fire door & internal two piece baffle, place all in a safe area so as not to damage parts or painted surface.
2. At all times aside the removed fastenings to a safe location as these will be needed to refit the necessary parts etc.
3. Remove both the rear heat shield & the rear inner heat shield, both are fixed into position with 8g pozi screws & the inner heat shield is bolted at top & bottom left & right hand sides with three M6 fastenings through the rear wall of the fire box.
4. Remove the two or three (depending on model) countersunk M6 fastenings in the left side wall of the fire box; these are used for fixing the wet back to the outside wall of the appliance.
5. Apply a liberal amount of Pioneer fire cement from the 70ml tube supplied around the full perimeter of the flat face & over the internal flat area. This is needed for improved heat transfer.
6. Insert the wetback into the gap provided. Fix in place with the provided countersunk fastening & nut at the rear centre slot of the wetback first, tighten but allow for a small amount of movement.
7. Line up the front M6 tapped hole in the casting with the front 8mm dia hole in the fire box wall. Using a second countersunk fastening screw into the casting from the internal of the fire box. Tighten both fastenings to ensure a tight fit to the fire box. Insert and fasten any remaining rear fastenings.

   Note: Removal of the baffle as detailed in point 1 allows for easy access through the flue spigot.
8. Reassemble the rear heat shields, inner heat shield first.

   Note: both require the outer circular knock out plates only removed from the respective heat shields. It is absolutely critical these heat shields are placed back onto the appliance correctly with all bolts & screws in place & done up tightly.
9. The wetback is now fitted & ready for plumbing connection into your hot water cylinder using standard plumbing practice.



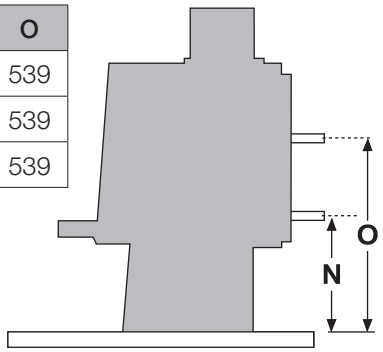
XTREME RAD FASTENING POSITIONS FOR THE SIDE WETBACK



SIDE WETBACK INSERTION PLACEMENT

Connection heights (mm)

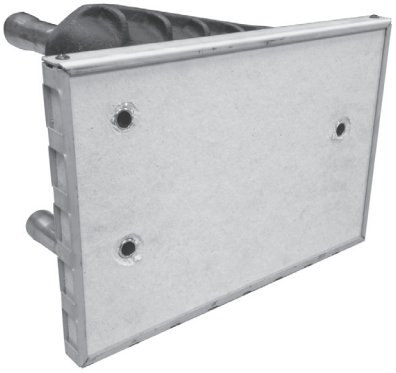
Model	N	O
Xtreme Rad	349	539
Xtreme Rad Base	349	539
Xtreme Ped	349	539



Note: Wetback connections for the Xtreme Rad, Xtreme Rad Base and Xtreme Ped are 226mm left of the flue centre facing the Metro/wall.

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Metro ECO Wetback Installation Instructions - Clean Air/ECO Models



METRO ECO WETBACK

⚠ WARNING! Important Information

- **Do not connect to an unvented hot water system.**
- **Install in accordance with AS 3500.4.1 or NZS 4603 and the appropriate requirements of the relevant building code or codes.**

Suitable for installation into the following models:

- **ECO Wee Ped**
- **ECO Xtreme Ped**
- **Ambie Plus**
- **ECO Euro Ped**

Proceed with installation of the wetback into the Metro wood fire as detailed below.

The ECO wetback is fitted to the inside rear of the firebox, with the connection pipe heights illustrated and detailed below. Please note:

- Wetback connections for the Metro models above are 140mm left of the flue centre, facing the Metro/wall; the return pipe connection is directly above the inlet connection.
- Reduced height pedestals are available for certain models to reduce wetback connection heights.
- It is recommended the return pipe has a minimum rise of 1 in 12; performance will reduce as the distance to the storage cylinder increases.

To fit the wetback proceed as follows:

1. Remove the rear panel of the Metro by removing the four pozi drive screws. Remove the two pre-punched knockouts from this panel.
2. Two further knockouts will be visible on the inner rear heatshield; remove these also. Once these are removed 6mm nuts will be visible through the knockout holes.
3. Open the Metro's door and locate two bolts securing the pressed washers which are visible on the left hand side of the firebox for both inlet and outlet connection points.
4. A further three bolt heads will also be visible on the inside rear wall of the firebox; these are threaded into the 6mm thick firebox. Remove all three.
5. Using the tube of sealant supplied with the wetback, apply a liberal bead of sealant around both the two connection pipes and also the outer circumference of the wetback which will face the inside rear wall of the firebox. This will completely seal the wetback to the inside rear wall of the fire on installation.
6. Fit the wetback into the firebox and carefully pass the connection pipes through the holes in the rear of the firebox. Securely attach the wetback using the three bolts previously removed from the rear face of the firebox, fitting them through the slots provided in the wetback's jacket.
7. The wetback is now ready for connection to the storage cylinder by a registered plumber.

Air setting adjustments

The Metro wood fires detailed above fitted with a Metro ECO wetback require alterations to be made to their air control settings in order to comply with the National Environmental Standard.

Please note: This is not necessary if the appliance is labelled as a "wet model" Metro. These already have the adjustments made; therefore you can disregard the following instructions.

Please select the appropriate instructions which relate to the specific model Metro you are installing and proceed as detailed;

Wee Ped

This model requires an alteration to the air control stop pin as follows.

ECO Wee Ped – Requires both the air control knob and the front panel directly above the door to be removed. The air control knob pulls off as you gently twist it left to right. The front panel is attached with two screws which are visible once the top grill is removed, you will need to spread the side panels apart slightly to remove this front panel to disengage location tabs.

Adjusting the maximum air control setting -

Having visibly exposed the air control assembly you will note a 5mm roll pin is fitted into the firebox acting as a stop against the right hand end of the airslide. Taking a 6mm nut from the plastic bag supplied with the wetback "screw" this nut onto the 5mm roll pin until the face of the nut is hard against the front of the firebox ensuring the nut is positioned with one of its six flat faces "facing upwards and horizontal"

Reattach the front panel and air control knob or louvers previously removed.

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Metro ECO Wetback Installation Instructions - Clean Air/ECO Models continued

ECO Xtreme Ped & ECO Euro Ped

These two models require both the maximum and minimum air control settings altered, which is achieved with the fitting of a single bracket as detailed below;

1. Remove the top grille, and leaning over the front of the Metro you will locate a row of bolts directly under the rear of the front/top panel. You will also view the air control lever near the right hand side of the appliance.
2. Using a 10mm ring or open ended spanner, remove the two bolts nearest to the right hand side of the appliance directly above the air control lever.
3. Moving the air control knob to its 'mid' position, take the bracket supplied with the wetback and position the bracket with the two smaller "folded down" tabs facing forward. The large single tab will be facing the rear of the fire.
4. Align the holes in the bracket with the holes you removed the two bolts from, then refit and tighten the two bolts before refitting the top grille.

Ambie Plus

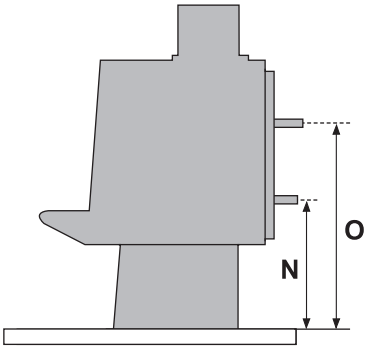
This appliance "wet model" has the air control mechanism already adjusted therefore no action needs to be taken.

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Metro wetback connection heights (Measurements shown are in mm)

Model	N	O
ECO Wee Ped	295	485
ECO Xtreme Ped	325	515
ECO Euro Rad	338	528
ECO Euro Ped	325	515
Ambie Plus	360	550

Note: Wetback connections for the Wee Rad is 226mm left of the flue centre, Xtreme Rad is 275mm left of the flue centre and all other Metro models are 140mm left of the flue centre facing the Metro/wall.



Metro LTD 3kW or 4kW Wetback Installation Instructions - LTD Models

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⚠ CAUTION! Important Information

- **Wetbacks must be connected with water before operating the fire. Water must always be available to the wetback while the fire is in operation.**
- **Wetback and boiler systems are not suitable for use in locations where the water supply has lime content. Lime build up inside the coil will eventually block the coil causing the wetback to fail.**
- **Rainwater collection tanks installed lower than the wetback that use a water pump to supply the home, can cause problems if the pump is not operational. In these situations either the type of wetback or a roof header tank should be considered.**



METRO LTD WETBACK

⚠ WARNING! Important Information

- **Do not connect to an unvented hot water system.**
- **Install in accordance with AS 3500.4.1 or NZS 4603 and the appropriate requirements of the relevant building code or codes.**

Suitable for installation into the following models:

- **LTD Wee Rad**
- **LTD Xtreme Rad**
- **LTD Euro Ped**
- **LTD Mega Rad**
- **Mega Rad**
- **LTD Wee Ped**
- **LTD Xtreme Ped**
- **LTD Mega Ped**
- **LTD Trend Insert**

All LTD Metro's can be fitted with an optional 3kW or 4kW wetback, designed to give maximum output with minimal effect on the operation of the fire. Only Pioneer's cast jacket wetback system should be fitted to a Metro. Alternative wetbacks will void the Metro's emission approvals and may seriously affect the performance of the appliance and void the owner's warranty.

The Mega Rad (Clean air) is suitable for the 3kW wetback only.

Note: Wetback and Boiler systems are not suitable for use in locations where the water supply has lime content, lime build up inside the coil will eventually block the coil causing the wetback to fail.

LTD 3kW or 4kW Wetback

The 3kW wetback is usually adequate for most homes; however, if your hot water use is considerable the 4kW would be preferable. Other considerations are:

Distance from the Metro to the storage cylinder will affect the amount of hot water produced. If it is more than 2 metres away the 4kW is usually preferable.

Your climate and the manner in which you will "fire" your Metro are the most relevant factors in choosing the correct output wetback. If you are in a moderate climate or have a modern well-insulated home you are likely to be running your Metro on lower output settings, in which case the 4kW should be used. If however you live in a cold climate, or have an older, cold or large home you are more likely to be "firing" your Metro on a higher burn rate, in which case the 3kW would be better suited.

Both 3kW and 4kW wetback options are fitted to the inside rear of the firebox, with the connection pipe heights illustrated and detailed on the opposite page. Please note:-

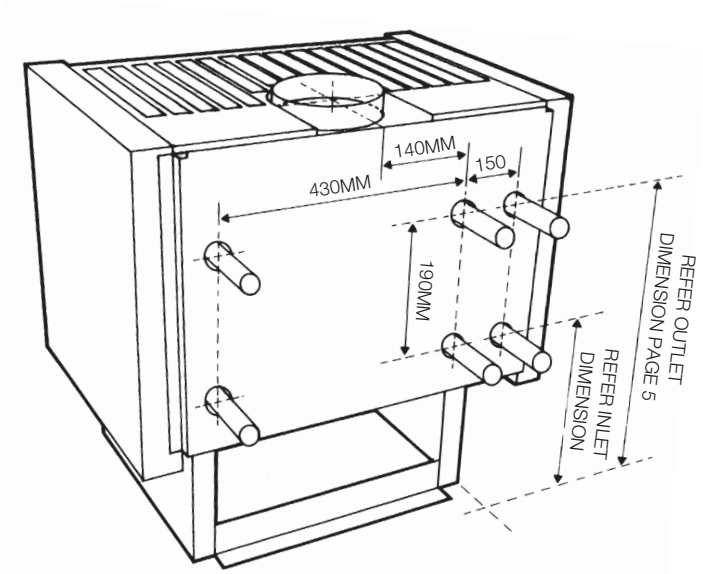
- Wetback connections for the Metro models above are 140mm left of the flue centre, facing the Metro/wall; the return pipe connection is directly above the inlet connection.
- Reduced height pedestals are available for certain models to reduce wetback connection heights.
- It is recommended the return pipe has a minimum rise of 1 in 12; performance will reduce as the distance to the storage cylinder increases.

To fit the Wetback proceed as follows:

1. Remove the rear panel of the Metro by removing the four pozi drive screws. Remove the two pre-punched knockouts from this panel.
2. Two further knockouts will be visible on the inner rear heatshield, remove these also. Once these are removed 6mm nuts will be visible through the knockout holes.
3. Open the Metro's door and locate two bolts securing the pressed washers which are visible on the left hand side of the firebox for both inlet and outlet connection points.
4. A further three bolt heads will also be visible on the inside rear wall of the firebox; these are threaded into the 6mm thick firebox. Remove all three.

Metro LTD 3kW or 4kW Wetback Installation Instructions - LTD Models

5. Using the tube of sealant supplied with the wetback, apply a liberal bead of sealant around both connection holes on the inside of the firebox. On the rear of the wetback casting apply the remaining contents of the tube equally around both connection pipes.
6. Fit the wetback into the firebox and carefully pass the connection pipes through the holes in the rear of the firebox. Securely attach the wetback using the three bolts previously removed from the rear face of the firebox, fitting them through the slots provided in the wetback's jacket.
7. The wetback is now ready for connection to the storage cylinder by a registered plumber.



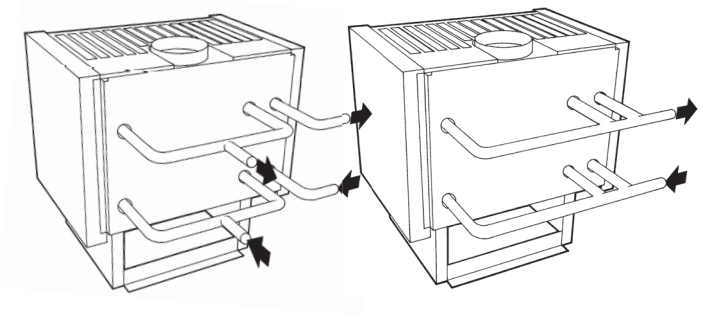
Boiler Options

Pioneer manufacture a 7kW boiler option for its larger model Metro's, the Mega Rad and Mega Ped. This 7kW boiler is a retrofit-able option.

The intended function of the boiler is as a heating source for hydronic heating systems with radiators being an ideal application. The Metro boiler is split into three separate heat exchangers, giving the option of running a split or manifold system as detailed opposite.

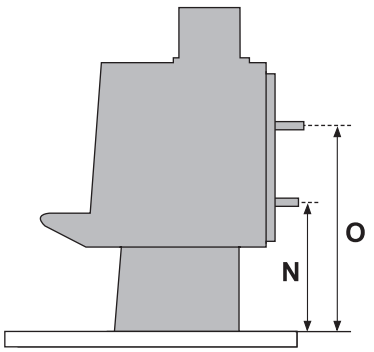
METRO BOILER SPLIT SYSTEM

METRO BOILER MANIFOLD SYSTEM

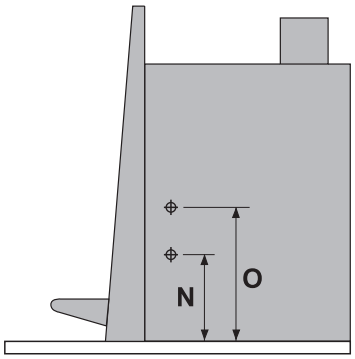


Metro wetback connection heights (Measurements shown are in mm)

Model	N	O
LTD Wee Rad	295	485
LTD Wee Ped	295	485
LTD Xtreme Rad	350	540
LTD Xtreme Ped	340	530
LTD Euro Ped	340	530
LTD Mega Rad	353	543
LTD Mega Ped	340	530
LTD Trend Insert	170	360
Mega Rad	300	490



Note: Freestanding wetback connections are 140mm left of the flue centre, facing the Metro/wall.



LTD Trend Insert wetback connections

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Metro ECO Smart Booster Installation - ECO Smart Insert only



METRO ECO SMART BOOSTER

⚠ WARNING! Important Information

- **Do not connect to an unvented hot water system.**
- **Install in accordance with AS 3500.4.1 or NZS 4603 and the appropriate requirements of the relevant building code or codes.**

Suitable for installation into the following model:

- **ECO Smart Insert**

The ECO Smart booster comes fully assembled and is designed to be fitted to the "outside face" of either the left or right hand side of the firebox.

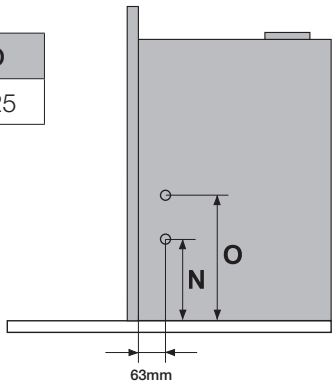
INSTALLATION - Fitting the water heater is best performed prior to installing the Insert into the fireplace cavity.

- The closer the ECO Smart Insert is to the hot water storage cylinder, the greater the hot water production will be, and generally distances over 3 metres are not recommended.
- The "return" hot water connection copper pipe must be insulated and have a "Minimum" rise of 1 in 12 along its entire length. 1 in 12 is minimum and the greater the rise the better the performance.
- The return hot water pipe must be connected to the riser pipe connection in the base of the hot water storage cylinder.

1. Remove the fascia (if fitted), then on the side of the firebox to which the water heater is to be fitted, remove the angle cover plate from the inside face of the outer cabinet. Also, remove the fire brick on the wetback side from inside the fire box.
2. Having removed this cover plate the front face of the inner wrap is exposed. Fold the front face of the inner wrap outwards so it is parallel with the outer cabinet. This is needed to create access for the water heater to fit between the firebox and the inner wrap.
3. Remove the two square knock out plates from the front face of the inner wrap to provide clearance for the two connection pipes when the return is folded back.
4. Remove the two 50mm diameter knock out plates from the outer cabinet.
5. With a long handled 10mm set spanner, reach in between the inner wrap and the firebox and loosen the nut on the rear Pozi drive screw which will be used to secure the water heater. Then unscrew from the inside and discard the 6mm nut as the screw will thread directly into the water heater casting. Repeat for the two front bolts but retain the nuts and washers.
6. Remove the water heater from it's box, which also contains a tube of fire cement. You will note a 6mm bolt is fitted to one of the casting ribs, remove this.
7. Smear a "liberal but even" amount of Pioneer fire cement over the entire "flat face" of the water heater in order to ensure full surface contact with the outside face of the firebox.
8. Hold the hot water heater by the two copper pipes and slide the water heater between the inner wrap and the firebox until the pipes are vertical and in line with the two 50mm holes in the outer cabinet. The pipes will be tight against the outer cabinet as you do this, but the cabinet will flex enough to allow you to work the device until the pipes pass through the 2 x 50mm holes in the outer cabinet.
9. Re-fit one of the bolts previously removed (stage 5) from "inside the firebox" through one of the two slots provided in the front edge of the water heater casting, and loosely attach the washer and nut to the thread of the bolt.
10. Next pivot the water heater using the first bolt just refitted as a pivot point, and refit the rear pozi drive screw "from inside the firebox" into the rear "tapped" hole in the casting. Then refit the remaining front bolt and attach the washer and nut.
11. Fully tighten all three fastenings, and check to ensure the casting has pulled up evenly onto the side of the firebox. Excess fire cement should be visible around the entire perimeter of the casting.
12. Bend the front returns of the inner wrap back into place so it folds around the front of the water heater, then secure the inner wrap to the casting by refitting the 6mm bolt previously removed at stage 6.
13. The water heater is now ready to have the copper pipe work attached for connection to the hot water storage cylinder (brazed joints are recommended)
14. Once all joints have been thoroughly checked and tested for leaks, refit the angle cover plate removed at stage 1, then align and refit the fascia. Both side bricks must be fitted inside the firebox.

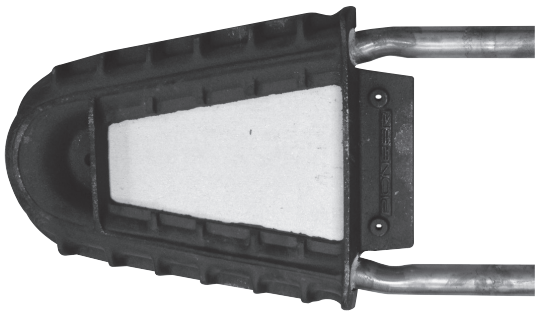
Connection heights (mm)

Model	N	O
ECO Smart	130	325



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Metro ECO Mega Smart Booster Installation - ECO Mega Smart Built-in only



METRO ECO MEGA SMART BOOSTER

⚠ WARNING! Important Information

- **Do not connect to an unvented hot water system.**
- **Install in accordance with AS 3500.4.1 or NZS 4603 and the appropriate requirements of the relevant building code or codes.**

Suitable for installation into the following model:

- **ECO Mega Smart Built-In**

The ECO Mega Smart booster comes fully assembled and is designed to be fitted to the "outside face" of either the left or right hand side of the firebox.

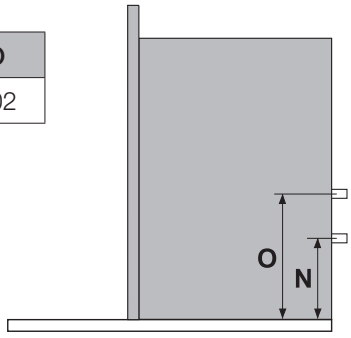
INSTALLATION - Fitting the water heater is best performed prior to installing the appliance into the fireplace cavity, and the plumbing connections should be aligned before any cladding is put up.

Note – The hot water output of this water heating device is dependent on correct installation and the proximity of the ECO Mega Smart Insert to the hot water storage cylinder;

1. Remove the Fascia (if fitted) then remove the vertical angle cover plate located just behind the door hinge or door latch pin depending on which side you intend fitting the water heater to. If fitting to the hinge side it is recommended you remove the hinge also to assist with access clearance.
2. Fold open the side return of the inner wrap so it is parallel with the outer cabinet, this is to allow room for the water heater to slide in between the firebox and the wrap.
3. Remove the 5 x 50mm knock out plates from the 2 inner wraps and outer cabinet through which the copper pipes will exit.
4. With a long handled 10mm set spanner reach in between the inner wrap and the firebox and loosen the nuts on the 2 rear and 1 front water heater securing Pozi drive screws, then unscrew from the inside and discard 2 of the 6mm nuts as the rear screws will thread directly into the water heater casting.
5. Remove the water heater from it's box and inspect the threaded holes making sure the Pozi drive screws removed from the firebox will thread in easily.
6. Thoroughly clean the 2 copper pipe ends with a file or emery paper, this will make brazing easier.
7. Smear a liberal amount of Pioneer fire cement over the flanged face of the water heater.
8. Holding the water heater by the bottom of the casting and the 2 x 25mm tubes facing the rear of the fire carefully position the water heater in between the inner wrap and the firebox until the pipes enter the inner wrap then slide the water heater along until the front Pozi screw lines up with the slotted hole. Take care to keep the water heater close to the wrap and away from the firebox so as to not wipe the fire cement off. Position the water heater so the front screw passes through the slotted hole in the water heater, fit a 6mm nut and washer and hand tighten.
9. Pivot the water heater around this bolt to fit the remaining 2 Pozi drive screws which are threaded into the casting.
10. Fully tighten all Pozi drive screws, you should see fire cement oozing out around the edges which will indicate a good square fit.
11. Insulate pipes where they exit the outer cabinet as cold air is being drawn in past this point.
12. Bend the side return back so it folds around the front of the water heater and refit the angled cover plate, this is critical.
13. Braze the required pipe work to the 2 x copper pipes in accordance with standard wet back installation requirements and inspect for leaks. Both side bricks must be fitted inside the firebox.
14. Ensure all firebox and wetback installation and operation manuals are left for the home owner.

Connection heights (mm)

Model	N	O
Mega Smart	212	402



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Side wetback Installation - Classic Rad



METRO SIDE WETBACK

⚠ WARNING! Important Information

- **Do not connect to an unvented hot water system.**
- **Install in accordance with AS 3500.4.1 or NZS 4603 and the appropriate requirements of the relevant building code or codes.**

Suitable for installation into the following models:

- **Classic Rad**

Please note:

This wetback is secured to the outside left hand wall only of the appliance. Left hand is deemed as you are looking at the appliance from the front. No adjustments to your wood fire settings are necessary, this appliance is factory set.

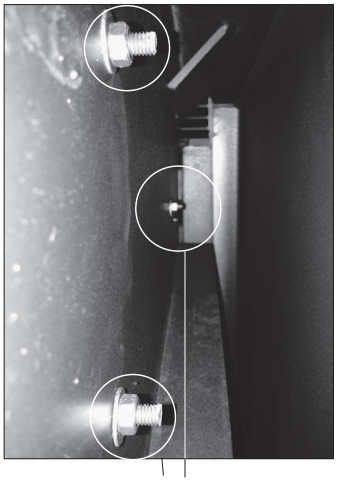
- This Metro requires the rear heat shields to be removed & the outer most only circular knock outs removed for copper pipe penetration.
- It is ideal this wetback is installed before the wood fire installation.
- It is recommended the return pipe has a minimum rise of 1 in 12; performance will reduce as the distance to the storage cylinder increases.

Follow this step by step procedure:

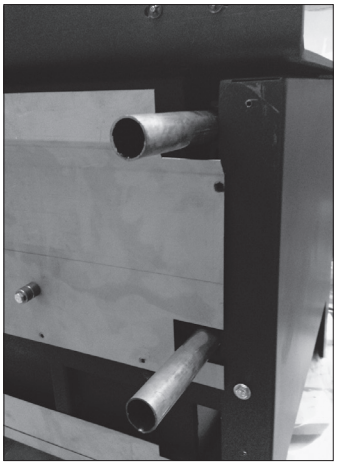
1. For best access during this process remove the wood fire door & internal two piece baffle, place all in a safe area so as not to damage parts or painted surface.
2. At all times aside the removed fastenings to a safe location as these will be needed to refit the necessary parts etc.
3. Remove both the rear heat shield & the rear inner heat shield, both are fixed into position with 8g pozi screws & the inner heat shield is bolted at the top only with one M6 fastening
4. Remove the three countersunk M6 fastenings in the left side wall of the fire box; these are used for fixing the wet back to the outside wall of the appliance.
5. Apply a liberal amount of Pioneer fire cement from the 70ml tube supplied around the full perimeter of the flat face & over the internal flat area. This is needed for improved heat transfer.
6. Insert the wetback into the gap provided. Fix in place with the provided countersunk fastening & nut at the rear top slot of the wetback first, tighten but allow for a small amount of movement.
7. Line up the front M6 tapped hole in the casting with the front 8mm dia hole in the fire box wall. Using a second countersunk fastening screw into the casting from the internal of the fire box. Insert and fix the last rear fastening and tighten all fastenings to ensure a tight fit to the fire box.

   Note: Removal of the baffle as detailed in point 1 allows for easy access through the flue spigot.
8. Reassemble the rear heat shields, inner heat shield first.

   Note: Remove the circular knock out plates from the outer heat shield. It is absolutely critical these heat shields are placed back onto the appliance correctly with all bolts & screws in place & done up tightly.
9. The wetback is now fitted & ready for plumbing connection into your hot water cylinder using standard plumbing practice.



CLASSIC RAD FASTENING POSITIONS FOR THE SIDE WETBACK

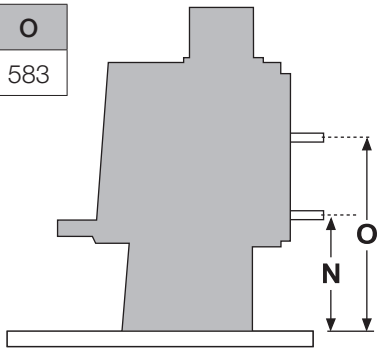


SIDE WETBACK PLACEMENT WITH INNER HEAT SHIELD REFITTED

Connection heights (mm)

Model	N	O
Classic Rad	393	583

Note: Wetback connections for the Classic Rad are 183mm left of the flue centre facing the Metro/wall.

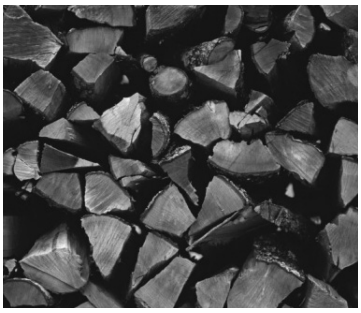


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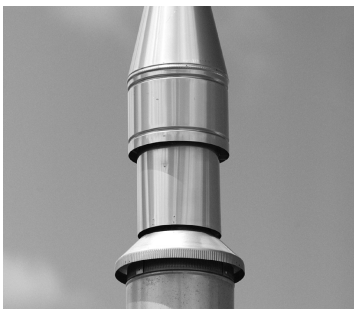
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ECO Flue System Installation Manual









metrofires

ECO Flue Systems

Freestanding Flue Systems
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NZHHA New Zealand Home Heating Association Inc.

NEW ZEALAND MADE

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⚠ WARNING! Important Information

- **Metro ECO Flue Systems must be installed to allow unrestricted air supply from either the ceiling cavity for an ECO Base Flue Kit, or above the roof line if the Base & Option Kits are both installed. Please read these instructions and familiarise yourself with the installation options and various components of the ECO Flue Systems**
- **The ECO Base Flue Kit must be installed into a "vented" flat ceiling cavity, or have an ECO Option Kit added to the flue system to provide an external air supply**

The ECO Flue Systems shall be installed in accordance with AS/NZS2918:2001 and the appropriate requirements of the relevant building codes

Any modification to this flue system that has not been approved in writing by the testing authority is considered to be in breach of all approvals granted

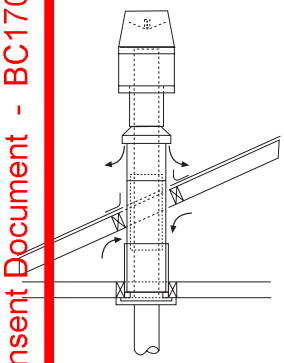
⚠ CAUTION! Important Information

- **Mixing of flue system components from different sources or modifying the dimensional specification or components may result in hazardous conditions. Where such action is considered, the manufacturer should be consulted.**
- **Prior to installing the assembled flue pipe into a masonry chimney cavity, take careful note to ensure there are no overhead power lines in close proximity.**

ECO Flue Systems Installation Options

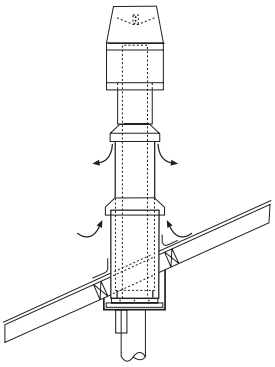
Detailed below are the more common installation methods for installing Metro ECO Flue Systems. To ensure a safe and efficient installation, this flue system must be installed as detailed below by either a registered installer, or someone competent in installing solid fuel appliances.

Single Storey Installations



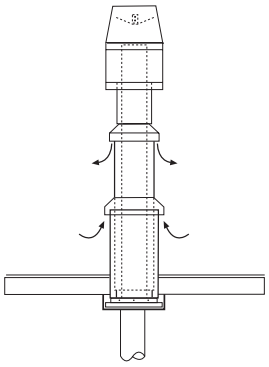
Flat Cavity Ceiling

ECO Base Flue Kit only required as air is drawn into the flue system direct from the ceiling cavity.



Sloping Ceiling

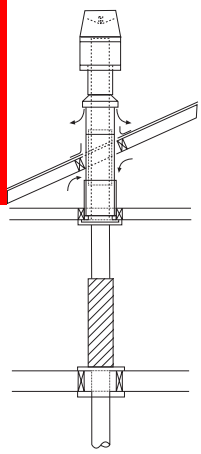
Both the ECO Base Flue Kit and ECO Option Kit are required to enable air to be drawn from outside the home.



Flat Ceiling/Roof

Requires both ECO Base Flue Kit and ECO Option Kit as per sloping ceiling unless a vented ceiling cavity exists.

Two Storey Installations



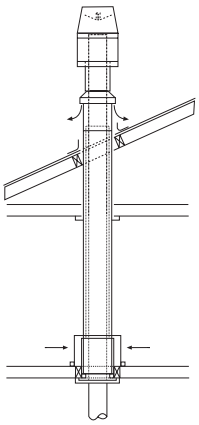
2nd Floor - Exposed Flue pipe

Requires an ECO Base Flue Kit only with additional lengths of flue pipe.

Additional components below are not supplied by Metrofires but are also required for this installation*

- A floor penetration kit
- 1x 1200mm long mesh/screen

*In accordance with AS/NZS2918:2001



2nd Floor - Enclosed Flue pipe

Requires an ECO Base Flue Kit only with additional lengths of flue pipe.

Additional components below are not supplied by Metrofires but are also required for this installation*

- 200mm & 250mm inner/outer combination liners.
- 2nd floor vent cover and an additional ceiling plate with a 250mm diameter hole

*In accordance with AS/NZS2918:2001

ECO Base Flue Kit & ECO Option Kit Component Checklist

Metro offers both the ECO Base Flue Kit, which is designed to be installed on its own and the ECO Option Kit which is designed to be installed in conjunction with the ECO Base Flue Kit. The specific application for each of these two options is detailed below.

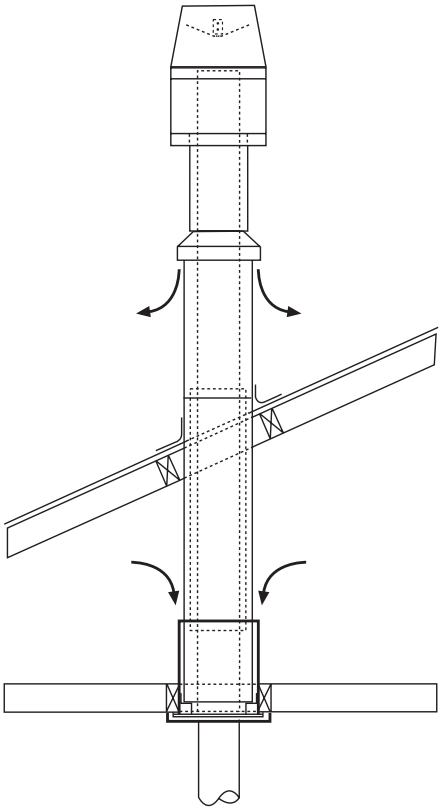
Metro ECO Base Flue Kit - Metro ECO Base Flue Kit is designed for installation into a building that has a "ceiling cavity" with unrestricted air supply as is the case with conventional homes.

A vented ceiling cavity is required as the Base Kit draws its cooling air from the ceiling cavity.

Metro ECO Option Kits - The Metro ECO Option Kit is designed to be "added to" the Metro ECO Base Flue Kit for installations that do not have a vented ceiling cavity and require the flue systems cooling air to be drawn in from above the roofline (outside the building).

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ECO BASE FLUE KIT ASSEMBLED



ECO BASE FLUE KIT COMPONENTS

(A) 1 x Stainless steel weather butterfly

(B) 1 x Stainless steel ECO cowl housing

(C) 1 x 225mm x 200mm diameter stainless steel outer casing extension

(D) 1 x 480mm long stainless steel flue pipe extension with flashing cone

(E) 1 x 1200mm x 150mm diameter stainless steel flue pipe

(F) 1 x 1200mm x 250mm diameter galvanised outer casing with 750mm long slip section

(G) 1 x 800mm x 200mm diameter galvanised inner casing

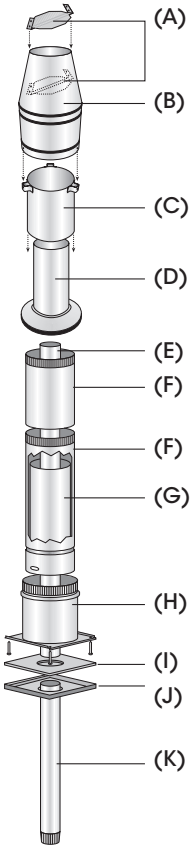
(H) 1 x Galvanised mounting plate with brackets and 300mm long x 300mm diameter casing attached

(I) 1 x insulation gasket

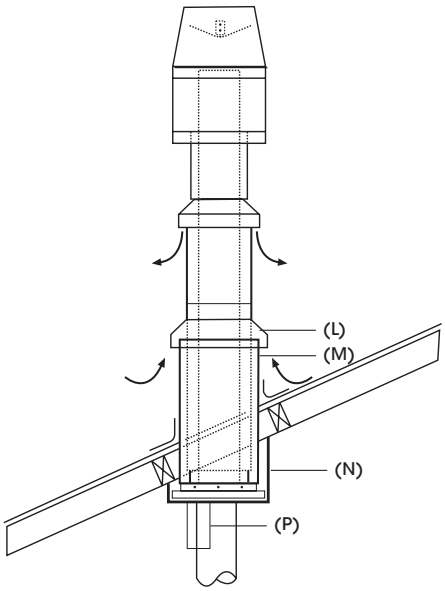
(J) 1 x black clip-on ceiling plate

(K) 2 x 1200mm lengths of 150mm diameter stainless steel flue pipe painted metallic black

(+) 1 x Plastic bag of assembly bolts



ECO BASE FLUE KIT & ECO OPTION KIT ASSEMBLED



ECO OPTION KIT COMPONENTS

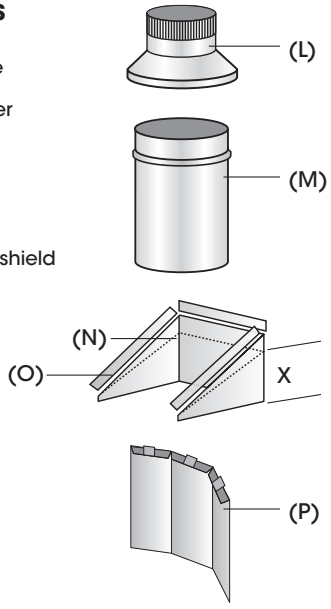
(L) External intake flashing cone

(M) 1x 780mm x 300mm diameter outer liner extension

(N) Drop box infill panel

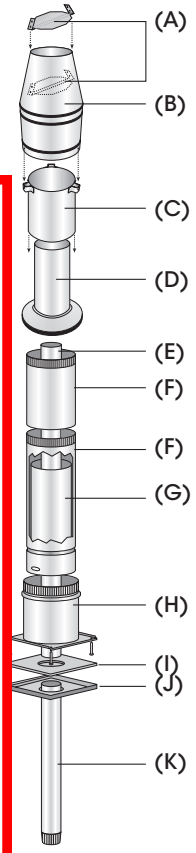
(O) Drop box edge covers

(P) Ceiling plate mounted heat shield

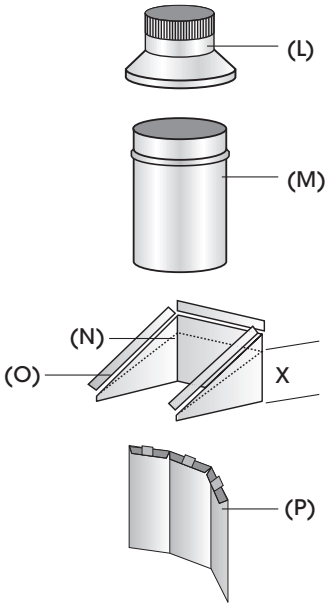


ECO Base Flue Kit Installation Instructions

ECO BASE FLUE KIT COMPONENTS



ECO OPTION KIT COMPONENTS



Having positioned the wood fire in the desired location, check to ensure the wood fire and floor protector have adequate clearances/projections, and that the flue system is clear of ceiling joists, trusses etc. (refer to the Wood Fire Installation and Operation Manual).

Note: ECO Flue Systems use stainless steel brackets enabling movement due to expansion, while centralising flue pipes and casings. These brackets may require resetting after transport, if they are too loose or tight during assembly;

1. At a point directly above the wood fires flue centre, cut a 300mm square hole through the ceiling and a 250mm diameter hole through the outer roof lining providing it is non combustible (iron, tiles etc) otherwise cut a 250mm square hole through the roof lining. "Trim out" the top face of the ceiling using timber nog's creating a square aperture measuring 300mm internally.

   Note: Certain flashing manufacturers detail specific size and shape of the aperture to be cut for their flashing, which must be adhered to.

2. Fit mounting plate (H) into the ceiling by sliding the 300mm diameter casing attached to the mounting plate up into the ceiling until the two upturned edges rest against the under side of the ceiling. Square the mounting plate to the wall and secure it in location with the four coach screws supplied, into the nogs just fitted. To further improve the rigidity of the installation, nail through the 300mm diameter casing at 4 points into the timber nogs.
3. Moving onto the roof with the 1200mm x 250mm diameter galvanised outer casing (F) with 750mm long slip section fitted, lower the slotted end of this casing (F) into the roof cavity until it locates inside the brackets on the top face of the mounting plate. Return back into the room and using the 2 x 6mm bolts and washers supplied, securely bolt the base of the 250mm diameter outer casing into the rivet nuts pre-fitted into the mounting plate brackets.

   Note: As there are two bolts, the outer casing can be rotated 180 degrees. Ensure the lock-form seam is rotated so the seam is sheltered as much as possible from the prevailing weather direction.

4. Return back onto the roof and using a suitable flashing, weather proof the joint where the 250mm diameter outer casing penetrates the roof. Ensure the flashing used is compatible with the roofing material, and if fitting instructions are supplied with the flashing, these must be adhered to. Prior to fitting the flashing, by fitting brackets securing the outer casing (F) to the roof material will further improve rigidity of the installation.
5. While on the roof fit the 800mm x 200mm diameter galvanised inner casing (G).

   Note: This inner casing has a top and bottom, the bottom end has both internal and external brackets while the top end has external only. Fit the bottom end of this inner casing (G) down into the 250mm diameter outer casing (F) until the casings lower external brackets locate on the internal swadge of the outer casing.

⚠ WARNING! Important Information

- **If there is timber or combustibles within 25mm of the outer casing (F) in a zone "above the top end of the inner casing (G) and below the roof line" an additional 200mm inner casing must be fitted.**

6. Moving back into the home, remove the plastic film from the ceiling plate (J) and place it black side down over the flue outlet of the wood fire. Using a high temperature black aerosol, spray around the hole in the centre of the white insulation gasket, and when dry lay this centrally on the ceiling plate.
7. Unwrap the two painted flue pipes (K) taking care not to mark the painted surface (use a metallic black Stovebright aerosol for touch ups) and proceed to assemble the three flue pipe sections as described below;

- Smear an adequate amount of Pioneer fire cement inside the "top/un-crimped" end of both painted flue pipes (K).
- Taking the unpainted stainless steel flue pipe (E) insert its top "un-crimped" end up through the mounting plate (H) and up into the casings until its bottom "crimped" end is 1250mm above the top of the wood fire.
- Take one of the two painted stainless steel flue pipes (K) and fit its lower "crimped" end into the Metro wood fires flue outlet. Now lower the unpainted stainless steel flue (E) which is protruding down from the mounting plate so that it fully connects into the lower painted flue pipe (K). Ensure these two flue pipe sections are firmly connected and aligned, then secure with three stainless steel or monel rivets spaced equally around the joint.
- Lift the two assembled flue pipe sections so the bottom of the lower section is 1250mm above the top of the wood fire, and repeat the above procedure to fit the remaining painted flue pipe (K).

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ECO Base Flue Kit Installation Instructions - continued

- With all three flue pipe sections securely joined, lift this three section assembly out of the wood fires flue outlet, then move it slightly off centre and lower the flue pipe assembly "on top" of the wood fires flue outlet. Smear an adequate amount of Pioneer fire cement inside the wood fires flue outlet (move the flue pipe assembly as required to ensure the entire flue outlet is coated in fire cement) then lower the flue pipe back into the wood fires flue outlet, with the vertical flue seam facing the rear.

8. Taking the ceiling plate (J) with insulation gasket (I) fitted which are laying on top of the wood fire, with the flue pipe passing through them. Carefully lift them up the flue pipe trying not to mark the painted flue, and clip the ceiling plate onto the mounting plate.
9. While still on the ground, assemble the ECO vertical discharge cowl as follows;

   Take the stainless steel weather butterfly (A) so the angled sections are facing up and fold "up" both arms at the slot provided to just over 90 degrees as shown.

   With both arms and angled sections of the stainless steel weather butterfly (A) facing up, fit it into the stainless steel cowl housing (B), and secure in position through the holes provided with stainless steel rivets.

   Note: Once fitted the weather butterfly will be slightly angled within the cowl housing.

- Now fit the base of the cowl housing (B) over the brackets of the outer casing extension (C) ensuring the 3 x pre-punched holes punched in its lower skirt align centrally over the three brackets attached to the casing extension as illustrated. Push the cowl housing down fully until its internal swage rests on the casing extension brackets (the brackets should be "just but fully" inside the base of the cowl housing). Drill through the three pre-punched holes in the cowl housing through the three brackets and secure with stainless steel rivets.

10. Making your way back onto the roof, slide the 750mm long slip section of the outer casing (F) until the top of this slip section is "level" **(+ or -10mm)** with the top of the 150mm stainless steel flue pipe, then secure this slip section of the outer casing with rivets.
11. Fit the 480mm long flue pipe extension/flashing cone (D), with the flashing cone at the bottom, fit its short flue section inside the top of the already installed 150mm diameter flue pipe. Ensure the three brackets extended below the flashing cone fit "outside" the outer casing slip section. Drill through the pre-punched hole in all three brackets into the outer casing slip and secure with rivets.
12. Taking the removable section of the ECO cowl, position it over the top of the stainless steel flue pipe extension, and slide it down fully. This removable section does not require riveting and enables easy removal for future flue cleaning.

Installation Instructions with the ECO Option Kit

Dependent on whether you are installing into a flat roof/ceiling or sloping ceiling situation as detailed on page 2, will determine if you require all the components of the ECO Option Kit. If installing into a flat ceiling/roof you will not require the drop box or drop box edge covers.

Note: The 300mm diameter outer liner extension (M) supplied with the ECO Option Kit is supplied at the maximum length it has been tested, and must not be extended.

1. Slip the 300mm outer extension liner supplied with the ECO Option Kit over the 300mm outer liner "stub" attached to the mounting plate (H) supplied with the Base Kit. Permanently secure these two components together by drilling four evenly spaced holes around the circumference and rivet with stainless steel rivets.
2. At a point directly above the wood fires flue centre, cut a 300mm square hole through the ceiling and a 300mm diameter hole through the outer roof lining providing it is non combustible (iron, tiles etc) otherwise cut a 300mm square hole through the roof lining. "Trim out" the top face of the ceiling using timber nog's creating a square aperture measuring 300mm internally.

   Note: Certain flashing manufacturers detail specific size and shape of the aperture to be cut for their flashing, which must be adhered to.

3. Fit mounting plate (H) into the ceiling by sliding the 300mm diameter casing attached to the mounting plate up into the ceiling until the two upturned edges rest against the under side of the ceiling. Square the mounting plate to the wall and secure it in location with the four coach screws supplied, into the nogs just fitted. To further improve the rigidity of the installation, nail through the 300mm diameter casing at 4 points into the timber nogs.

- **If the ceiling is angled,** it is critical that the mounting plate is correctly positioned so the drop box in-fill panel can be fitted. Ensure the two "upturned folds" on the mounting plate are aligned parallel to the roof joists, i.e pointing towards the apex.

  You will only be able to use two of the securing holes provided in the mounting plate. To give additional support to the installation nail through the 300mm diameter outer liner into the timber framing, access is through the 200mm hole in the base of the mounting plate.

4. Moving onto the roof with the 1200mm x 250mm diameter galvanised outer casing (F) with 750mm long slip section fitted, lower the slotted end of this casing (F) into the roof cavity until it locates inside the brackets on the top face of the mounting plate. Return back into the room and using the 2 x 6mm bolts and washers supplied, securely bolt the base of the 250mm diameter outer casing into the rivet nuts pre-fitted into the mounting plate brackets. Return back onto the roof and using a suitable flashing, weather proof the joint where the 300mm diameter outer casing penetrates the roof. Ensure the flashing used is compatible with the roofing material, and if fitting instructions are supplied with the flashing, these must be adhered to.

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Installation Instructions with ECO Option Kit - continued

Prior to fitting the flashing, by fitting brackets securing the outer casing (F) to the roof material will further improve rigidity of the installation.

Note: As there are two bolts, the outer casing can be rotated 180 degrees. Ensure the lock-form seam is rotated so the seam is sheltered as much as possible from the prevailing weather direction.

5. Fit the external "intake" flashing cone supplied with the Option Kit as illustrated, and secure it to the top of the 300mm diameter extension liner through the 4 x brackets which protrude below the base of the external "intake" flashing cone.
6. While on the roof fit the 800mm x 200mm diameter galvanised inner casing (G).

Note: This inner casing has a top and bottom, the bottom end has both internal and external brackets while the top end has external only. Fit the bottom end of this inner casing (G) down into the 250mm diameter outer casing (F) until the casings lower external brackets locate on the internal swadge of the outer casing.

7. Moving back into the home, remove the plastic film from the ceiling plate (J) and place it black side down over the flue outlet of the wood fire. Using a high temperature black aerosol, spray around the hole in the centre of the white insulation gasket, and when dry lay this centrally on the ceiling plate.
8. Unwrap the two painted flue pipes (K) taking care not to mark the painted surface (use a metallic black Stovebright aerosol for touch ups) and proceed to assemble the three flue pipe sections as described below;

Smear an adequate amount of Pioneer fire cement inside the "top/un-crimped" end of both painted flue pipes (K).

Taking the unpainted stainless steel flue pipe (E) insert its top "un-crimped" end up through the mounting plate (H) and up into the casings until its bottom "crimped" end is 1250mm above the top of the wood fire.

Take one of the two painted stainless steel flue pipes (K) and fit its lower "crimped" end into the Metro wood fires flue outlet. Now lower the unpainted stainless steel flue (E) which is protruding down from the mounting plate so that it fully connects into the lower painted flue pipe (K). Ensure these two flue pipe sections are firmly connected and aligned, then secure with three stainless steel or monel rivets spaced equally around the joint.

Lift the two assembled flue pipe sections so the bottom of the lower section is 1250mm above the top of the wood fire, and repeat the above procedure to fit the remaining painted flue pipe (K).

With all three flue pipe sections securely joined, lift this three section assembly out of the wood fires flue outlet, then move it slightly off centre and lower the flue pipe assembly "on top" of the wood fires flue outlet. Smear an adequate amount of Pioneer fire cement inside the wood fires flue outlet (move the flue pipe assembly as required to ensure the entire flue outlet is coated in fire cement) then lower the flue pipe back into the wood fires flue outlet, with the vertical flue seam facing the rear.

9. Taking the ceiling plate (J) with insulation gasket (I) fitted which are laying on top of the wood fire, with the flue pipe passing through them. Carefully lift them up the flue pipe trying not to mark the painted flue, and clip the ceiling plate onto the mounting plate.
10. While still on the ground, assemble the ECO vertical discharge cowl as follows;

- Take the stainless steel weather butterfly (A) so the angled sections are facing up and fold "up" both arms at the slot provided to just over 90 degrees as shown.
- With both arms and angled sections of the stainless steel weather butterfly (A) facing up, fit it into the stainless steel cowl housing (B), and secure in position through the holes provided with stainless steel rivets.

Note: Once fitted the weather butterfly will be slightly angled within the cowl housing.

- Now fit the base of the cowl housing (B) over the brackets of the outer casing extension (C) ensuring the 3 x pre-punched holes punched in its lower skirt align centrally over the three brackets attached to the casing extension as illustrated. Push the cowl housing down fully until its internal swage rests on the casing extension brackets (the brackets should be "just but fully" inside the base of the cowl housing). Drill through the three pre-punched holes in the cowl housing through the three brackets and secure with stainless steel rivets.

11. Measure dimension "X" as shown on page 3 and transfer this measurement to the drop box in-fill panel as shown.

- Cut the in-fill panel to the correct size and fit the 3 x edge covers.

Note: The side edge covers will require trimming on the ends to suit the angle of the ceiling.

- Secure the in-fill panel in position by fitting three rivets to each side through the holes provided.

12. Back in the room, lift the ceiling plate then attach the "ceiling plate mounted heat shield" to the lower face of the ceiling plate so that it acts as a deflector shield between the flue pipe and the lower side of the ceiling (refer assembled diagram on page 3). This heat shield has three tabs on its top face enabling it to be "clipped" into the 160mm diameter hole in the ceiling plate. Attach the ceiling plate by clipping it onto the mount plate and the installation is now complete.

⚠ WARNING! Important Information

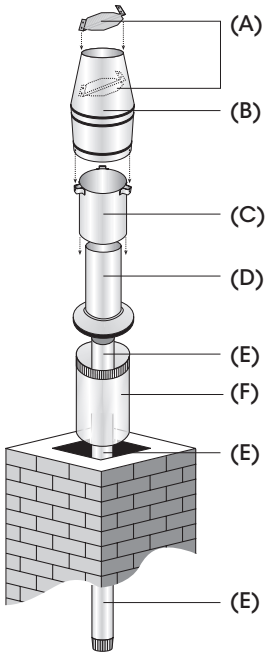
- **If there is timber or combustibles within 25mm of the outer casing (F) in a zone "above the top end of the inner casing (G) and below the roof line" an additional 200mm inner casing must be fitted.**

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ECO Insert Flue Kit Installation Instructions & Component Checklist

Please read these instructions fully prior to installation of the Insert Flue System and familiarise yourself with all the various components as illustrated right and listed below.

Note: Rivets and fire cement are not included as they are supplied by the installer.



ECO INSERT FLUE KIT COMPONENTS

(A) 1 x Stainless steel weather butterfly

(B) 1 x Stainless steel ECO cowl housing

(C) 1 x 225mm x 200mm diameter stainless steel outer casing extension

(D) 1 x 480mm long stainless steel flue pipe extension with flashing cone

(E) 3 x 1200mm x 150mm diameter stainless steel flue pipe

(F) 1 x 600mm x 250mm diameter galvanised outer casing

This flue system has been manufactured and complies with AS/NZS2918:2001. To ensure a safe and efficient installation, this flue system must be installed as detailed below by either a registered installer, or someone competent in installing solid fuel appliances.

1. Check the masonry chimney for structural soundness and make any repairs that are necessary.

   Note: Most councils require the masonry chimney to be inspected prior to installation. The masonry chimney cavity must also be swept prior to installation.

2. Once the fireplace insert has been installed correctly as per the manufacturers instructions, look directly down the chimney to ensure the wood fire flue spigot is in line with the masonry chimney. (A torch will be required).

3. If you cannot see the flue spigot, a flue pipe offset will be required. If so, install the flue pipe offset so the top of it can be clearly seen from the top of the masonry chimney.

4. If an offset is required, an adjustable telescopic type is recommended. Measure the amount of offset required and adjust the telescopic offset to suit, after smearing an adequate amount of Pioneer fire cement onto the slip section of the offset to ensure a good seal, then rivet the offset in three locations around its circumference. (If the offset is used in its fully compressed form, it will be necessary to modify the end of the female slip section otherwise it will restrict the internal diameter) Apply a liberal amount of Pioneer fire cement into the flue outlet of the fireplace insert, and fit the lower crimped end of the offset into position inside the flue outlet, and bolt into position.

   Note: In some installations where it is not possible to fit offsets or rigid flue pipe due to the shape of the masonry chimney cavity, "Flexi flue" may be used.

5. Secure the flue pipes together and ensure the flue seams are in line. Flue pipe joints must be fully compressed with a considerable amount of fire cement to ensure a good seal, and then riveted together at three even points around the flue join. Prior to installing the assembled flue pipe into the masonry chimney cavity, take careful note to ensure there are no overhead power lines in close proximity.

6. Lower the flue pipe into the masonry chimney, with the crimped end fitting into the fireplace insert flue outlet/offset, and securely attach with three rivets (offset/bend must be riveted to the flue pipe). For installations where extra lengths of flue pipe are required, or when the weather is poor, it will be easier to assemble the flue pipe lengths as they are lowered into the masonry chimney.

7. Secure the outer casing to the masonry chimney with suitable fasteners and weatherproof/seal to the masonry chimney top with mortar or silicone. Note: The top of the outer casing must be "level" **(+ or -10mm)** with the top of the 150mm stainless steel flue pipe. An optional masonry chimney flashing plate is available if required.

8. Assemble the ECO vertical discharge cowl as follows;

- Take the stainless steel weather butterfly (A) so the angled sections are facing up and fold "up" both arms at the slot provided to just over 90 degrees as shown.
- With both arms and angled sections of the stainless steel weather butterfly (A) facing up, fit it into the stainless steel cowl housing (B), and secure in position through the holes provided with stainless steel rivets.

  Note: Once fitted the weather butterfly will be slightly angled within the cowl housing.

- Now fit the base of the cowl housing (B) over the brackets of the outer casing extension (C) ensuring the 3 x pre-punched holes punched in its lower skirt align centrally over the three brackets attached to the casing extension as illustrated. Push the cowl housing down fully until its internal swage rests on the casing extension brackets (the brackets should be "just but fully" inside the base of the cowl housing). Drill through the three pre-punched holes in the cowl housing through the three brackets and secure with stainless steel rivets.

  The removable section of the ECO cowl is now fully assembled.

9. Making your way back onto the roof, fit the 480mm long flue pipe extension/flashing cone (D), with the flashing cone at the bottom. Fit the short flue section inside the top of the already installed 150mm diameter flue pipe. Ensure the three brackets extended below the flashing cone fit "outside" the outer casing slip section. Drill through the pre-punched hole in all three brackets into the outer casing slip and secure with rivets.

10. Taking the "removable section of the ECO cowl" assembled in section (8) above, position it over the top of the stainless steel flue pipe extension, and slide it down fully. This removable section does not require riveting and therefore enables easy removal for future flue cleaning.

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Minimum Heights for all Metro Flue Systems In compliance with AS/NZS2918:2001

The Metro ECO Flue Systems comply with AS/NZS2918:2001 and its 4.6 metre height requirement (4.6 metre minimum from the top of the floor protector to the top of the flue pipe). However as external structures and the proximity of other buildings will differ for every installation, some situations will require additional flue height to comply with the standard. Refer to Diagrams 3 and 4 below. (All measurements in mm)

Note: AS/NZS2918:2001 Section 4, details flue system installation requirements in full.

DIAGRAM 3

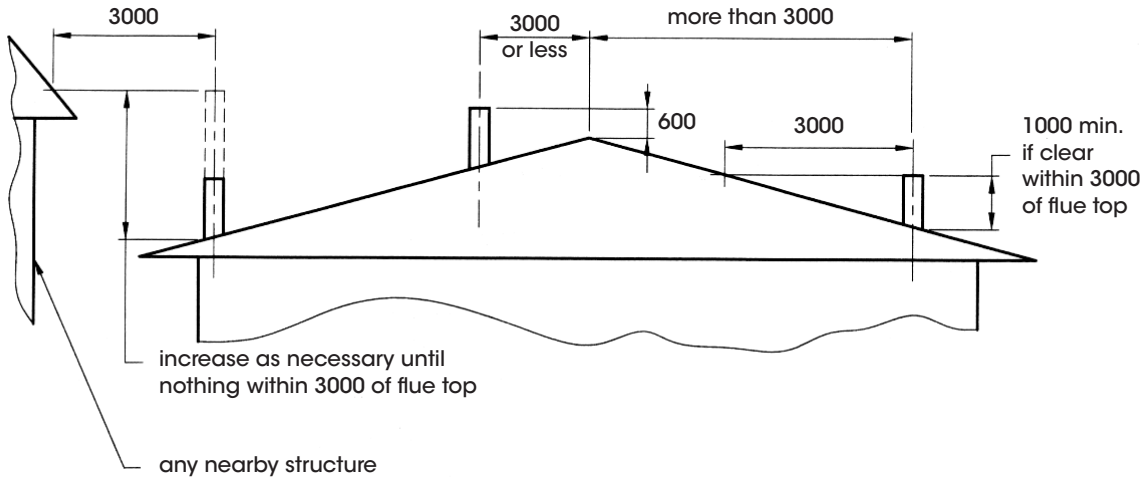
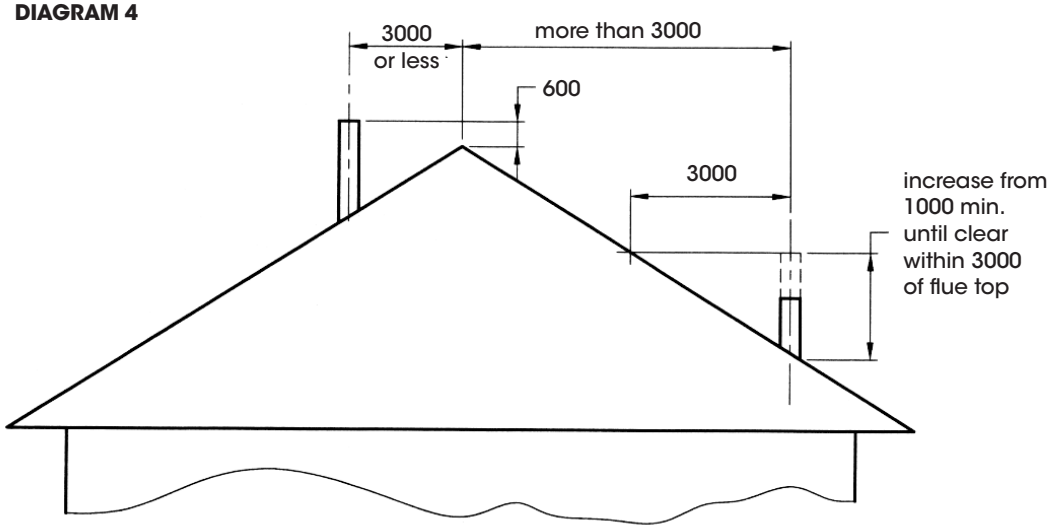


DIAGRAM 4



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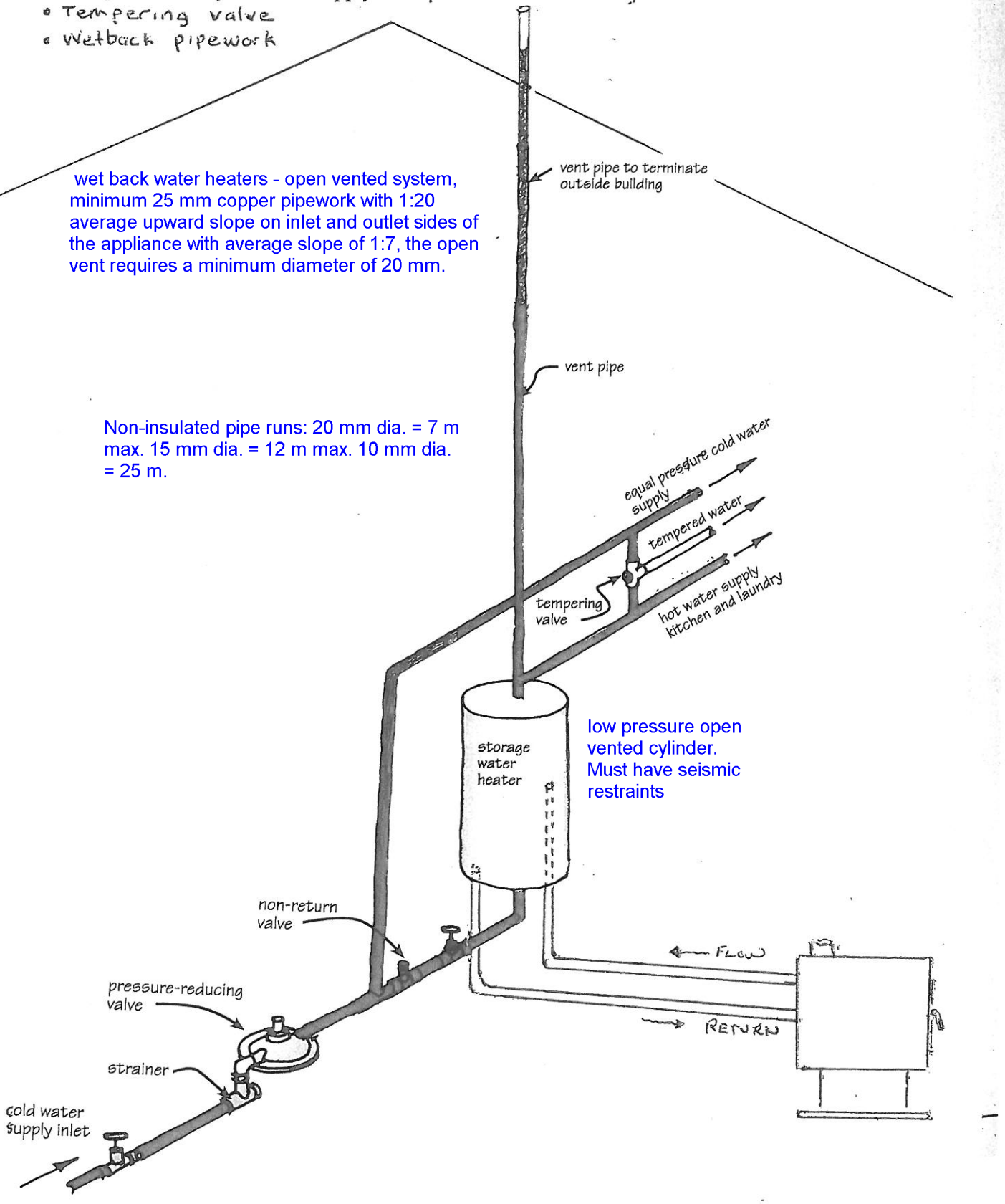
HOT WATER STORAGE HEATER INSTALLATION SYSTEMS

Detailed information on requirements for hot water supply systems is given in:

- AS/NZS 3500.4 *Heated water services – Acceptable Solution*
- NZBC G12/AS1 6.0 for *Hot water supply systems.*

Typical hot water storage heater installation systems include:

- an open-vented system with supply via pressure-reducing valve.
- Tempering valve
- Wetback pipework



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Kaipara te Oranganui

KAIPARA DISTRICT

Two Oceans Two Harbours

Approved Building Consent Documents

Please note: A copy of the stamped, approved documents must be available onsite for **all** inspections.

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SPECIFICATION

of work to be done and materials to be used in carrying out the works shown on the accompanying drawings

Relocate Secondhand Residences ('A') & ('B') to Site

At 102 Settlement Road, Kaiwaka

For Lynette Dheda

Job number: 16-120
Date: 14/02/2017

1012 TABLE OF CONTENTS

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3801# CARPENTRY ..... 15#
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1232 INTERPRETATION & DEFINITIONS

1. GENERAL

This general section relates to interpretation and definitions that are used in this specification.

1.1 INTERPRETATIONS

Required:	Required by the documents, or by a statutory authority.
Proprietary:	Identifiable by naming the manufacturer, supplier, installer, trade name, brand name, catalogue or reference number.
Provide and fix:	"Provide" or "fix" or "supply" or "fix" if used separately mean provide and fix unless explicitly stated otherwise.
Review:	Review by the contract administrator is for general compliance only. Review does not remove the need for the contractor to comply with the stated requirements, details and specifications of the manufacturers and suppliers of individual components, materials and finishes. Neither can the review be construed as authorising departures from the contract documents.

1.2 PERSONNEL

Owner:	The person defined as "owner" in the New Zealand Building Code.
Principal:	The person defined as "principal" in the conditions of contract.
Contractor:	The person contracted by the principal to carry out the contract.

Contract administrator:
The person appointed by the principal to administer the contract on the principal's behalf. It includes the architect, engineer, designer, project manager or other person so appointed. Where no person has been appointed by the Principal, it means the Principal or the Principal's representative.

1.3 ABBREVIATIONS

The following abbreviations are used throughout the specification:

AAMA	American Architectural Manufacturers Association
AS	Australian Standard
AS/NZS	Joint Australian/New Zealand Standard
ASTM	American Society for Testing and Materials
AWCINZ	Association of Wall and Ceiling Industries of New Zealand Inc
BRANZ	Building Research Association of New Zealand
BS	British Standard
CSIRO	Commonwealth Scientific and Industrial Research Organisation
HERA	Heavy Engineering Research Association
MPNZA	Master Painters New Zealand Association Inc
NZBC	New Zealand Building Code
NZS	New Zealand Standard
NZS/AS	Joint New Zealand/Australian Standard
TNZ	Transit New Zealand

1.4 DEFINED WORDS

Words defined in the conditions of contract, New Zealand Standards, or other reference documents, to have the same interpretation and meaning when used in their lower case, title case or upper case form in the specification text.

1.5 WORDS IMPORTING PLURAL AND SINGULAR

Where the context requires, words importing singular only, also include plural and vice versa.

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1234 DOCUMENTATION

1. GENERAL

This general section relates to documentation required by the Territorial Authority/Building Consent Authority for compliance with the New Zealand Building Code. It also includes documentation relating to:
- Substitutions
- Manufacturers documents

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Building Consent Authority documentation

1.1 BUILDING CONSENT

Obtain the original or copies of the building consent forms and documents from the owner and keep them on site. Liaise with the Building Consent Authority for all notices to be given and all inspections required during construction to ensure compliance. Return the consent form and documents to the owner on completion.

1.2 BUILDING CONSENT COMPLIANCE

It is an offence under the Building Act 2004 to carry out any work not in accordance with the building consent.
- The resolution of matters concerning building code compliance to be referred to the contract administrator for a direction in writing and then to the Building Consent Authority for consent.
- Where any alteration is requested by the territorial authority or any other authority, do not undertake such alteration until the matter has been referred to the contract administrator for direction.

1.3 PROJECT PERSONNEL

Provide names and contact detail of the contractor's key personnel and tradespersons who are involved with the project. Provide the names in the form required in the GENERAL section of the specification. Review the list once a month and reissue it if changes have been made.

1.4 KEY PERSONNEL

Provide names and contact detail of key personnel. Provide names, registrations numbers (where appropriate) and contact detail of key personnel that are required by the Building Consent Authority as part of the application for the Code Compliance Certificate.

Include the following as applicable:
- Registered drainlayer
- Registered plumber
- Registered gasfitter
- Registered electrician

- Roofer
- Block layer
- Bricklayer
- External plasterer
- External window manufacturer
- Waterproof membrane applicator

1.5 PRODUCER STATEMENTS

When producer statements verifying construction are required, provide copies to both the Building Consent Authority and the contract administrator. Provide producer statements in the form required by the Building Consent Authority.

1.6 DOCUMENTATION REQUIRED FOR CODE COMPLIANCE

Review the issued Building Consent for details of documents and information that will be required by the Principal for the application for a Code Compliance Certificate. Obtain such required documents from the relevant parties for delivery to the contract administrator after the final inspection has been carried out by the Building Consent Authority

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Substitutions

1.7 PROPOSED SUBSTITUTIONS

A substitution may be proposed where specified products are not reasonably available. A substitution may also be proposed by the Contractor where the Contractor considers a proposed substitution to be an alternative to the specified product. Except where a specified product is not available, the Contract administrator is not bound to accept any substitutions. Where branded work sections are included in this specification, substitution of those products or systems will not be allowed.

1.8 NOTIFICATION OF SUBSTITUTIONS

Notify proposed substitution of specified products. Notification to include but not be limited to:

- Product identification
- Manufacturer's name, address, telephone and facsimile numbers, website and email address
- Detailed comparison between the properties and characteristics of the specified product and the proposed substitution
- Statement of NZBC compliance, including durability
- Details of manufacturer warranties

plus an assessment of

- Any changes required to the programme including any extension of time required
- Any consequential effects of the proposed substitution
- Allowance for time and cost for re-design and documentation (if applicable)
- Allowance for time and cost for obtaining an amendment to the Building Consent (if applicable)
- Any change in cost associated with the proposed substitution

and if requested

- All current manufacturer's literature on the product
- Accreditations and appraisals available
- Reference standards
- Product limitations
- Samples
- List of existing installations in the vicinity of the project

1.9 ACCEPTANCE OF SUBSTITUTIONS

The Contract administrator must advise of acceptance of substitutions in writing.

Amendment to issued Building Consent

1.10 CONTRACTOR AMENDMENTS TO BUILDING CONSENT

Where the contactor has sought acceptance of a substitution or a variation which is for the contractor's own convenience and the substitution or variation requires an amendment to the Building Consent, the contractor must apply for and obtain the required amendment.

The contractor must:

- Obtain approval for substitutions from the Contract administrator.
- Prepare and provide to the Building Consent Authority all documentation required for the amendment.
- Pay all fees and other costs associated with this amendment.
- Where the amendment affects other approved plans, also amend those plans.

1.11 PRINCIPALS AMENDMENTS TO BUILDING CONSENT

Where the principal is proposing a substitution or a variation which requires an amendment to the Building Consent, the contractor must provide to the principal information that the contractor has that is required for the amendment.

The principal will:

- Prepare and provide to the Building Consent Authority all documentation required for the amendment.
- Pay all fees and other costs associated with this amendment.
- Where the amendment affects other approved plans, also amend those plans.

Manufacturer's documents

1.12 BRANDED WORK SECTIONS
Branded sections may be included in this specification relating to specific products and systems to be installed as part of the contract works. Where branded sections are included, substitutions to the branded products and systems will not be allowed.

1.13 MANUFACTURER'S AND SUPPLIER'S REQUIREMENTS
Manufacturers and supplier's requirements, instructions, specifications or details mean those issued by them for their particular material, product or component and are the latest edition.

1.14 MANUFACTURER'S AND SUPPLIER'S DOCUMENTS
Refer to individual sections for a detailed list of manufacturer's and supplier's documents relating to work on this project. Retain current copies of the documents listed, and all other relevant manufacturer's technical literature, on site. Make this information available to all personnel and ensure they are familiar with requirements for handling, storing, preparing for, fixing and finishing all products before commencing work. Provide a copy of all listed manufacturer's literature to the Contract administrator.

1.15 ONGOING MAINTENANCE REQUIREMENTS
Refer to individual sections for details of manufacturer's and supplier's requirements for ongoing maintenance necessary to ensure continuing compliance with the durability requirements of the NZBC. Provide a copy of literature detailing ongoing maintenance and inspection requirements to the Contract administrator.

Shop drawings

1.16 PROVIDE SHOP DRAWINGS FOR REVIEW
Unless addressed elsewhere in this specification provide shop drawings for review by the contract administrator. Do not proceed with manufacture of the items until the Contract administrator gives a direction to proceed.

As built drawings

1.17 PROVIDE AS BUILT DRAWINGS
Unless addressed elsewhere in this specification provide as built drawings required as built drawings including those required by the Building Consent Authority.

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1237 WARRANTIES

1. GENERAL

This general section refers to the requirements for warranties as listed, either in this work section or in specific work sections. It includes: -

- Warranties required by the Principal in a required form
- Warranties offered by manufacturers/subcontractors for parts of the work in the manufacturers/subcontractors standard form
- Guaranties provided by contractors in the contractor's standard form
- Trade warranties included with products, appliances and the like in the suppliers standard form

Warranties

1.1 PROVIDE WARRANTIES

Provide executed warranties in favour of the principal in respect of, but not limited to, materials, components, service, application, installation and finishing called for in that specified section of work. The terms and conditions of the warranty in no case negate the minimum remedies available under common law as if no warranty had been offered. Failure to provide the warranty does not reduce liability under the terms of the warranty called for in that specified section of work.

Where installer/applicator warranties are included in a branded section of this specification they shall be provided in lieu of the warranties that are otherwise required.

Where installer/applicator warranties are available they may be provided in lieu of the warranties that are otherwise required provided these warranties are subject to similar conditions and periods as those listed in the SCHEDULE OF WARRANTIES.

- Conform to the warranty agreement form included in the specification/conditions of contract.
- Commence warranties from the date of practical completion of the contract works (unless otherwise stated).
- Maintain their effectiveness for the times stated.
- Provide executed warranties no later than the date of the Contractor's Completion Statement.

1.2 WEATHERTIGHTNESS AND WATERTIGHTNESS WARRANTY

A warranty is required from the contractor for a minimum period of 2 years, covering the weathertightness of the complete building envelope and the watertightness of all liquid supply and disposal systems and fittings. This general warranty is in addition to any specific warranties required.

1.3 SCHEDULE OF WARRANTIES

The following is a summary of the warranties and warranty periods called for in work sections.

2 years	Weathertightness and watertightness
20 years	Mastic asphalt tanking
20 years	Liquid applied tanking
20 years	Sheet tanking
5 years	Proprietary curtain walling
5 years	Profiled metal cladding
5 years	Profiled plastic cladding
5 years	Aluminium composite cladding
5 years	Insulating wall cladding
5 years	Steel clad insulating cladding
5 years	Profiled metal roofing
5 years	Profiled plastic roofing
5 years	Concrete tile roofing
5 years	Clay tile roofing
5 years	Pressed steel tile roofing

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5 years	Timber shingle roofing
5 years	Asphalt shingle roofing
5 years	Mastic asphalt roofing
5 years	Mineral fibre asphalt roofing
5 years	Synthetic rubber sheet roofing
5 years	Aluminium windows and doors
5 years	Steel windows and doors
5 years	Composite windows and doors
5 years	Timber fire windows and doors
5 years	Steel fire windows and doors
10 years	Sealants
2 years	Wall tiling
2 years	Floor tiling
1 year	Timber strip, block & plank flooring
1 year	Vinyl surfacing
1 year	Linoleum surfacing
1 year	Rubber surfacing
1 year	Cork surfacing
1 year	Carpeting
1 year	Carpet tiles
2 years	Painting
2 years	Decorative coatings
5 years	Protective coatings, steelwork
2 years	Hot and cold water system
2 years	Solar water heating system
1 year	Fire hose systems
1 year	Fire sprinkler systems
5 year	Underfloor heating
1 year	Electrical general
1 year	Access control
1 year	Intruder detection systems

Refer also to:
- WARRANTIES – INSTALLER/APPLICATOR for other installer/applicator warranties.
- WARRANTIES – MATERIALS for other materials and product warranties.

1.4 WARRANTIES – INSTALLER/APPLICATOR

Where installer/applicator warranties are offered covering execution and materials of proprietary products or complete installations, provide such warranties to the contract administrator. These warranties may be provided in lieu of the warranties that are otherwise required provided that these warranties are subject to similar conditions and periods as list in the SCHEDULE OF WARRANTIES.

Where installer/applicator warranties are included in a branded section of this specification, they shall be provided in lieu of the warranties that are otherwise required.

Provide warranties in favour of the principal. The terms and conditions of such warranties in no case negate the minimum remedies available under common law as if no warranty had been offered. Failure to provide the warranty does not reduce liability for execution and materials for that part of the work.

- Conform to the installer/applicator standard form of warranty. Where the installer/applicator does not have a standard form of warranty, use the form included in the contract documents.
- Commence the warranties from the date normally applicable for the work.
- Maintain their effectiveness for the times stated.
- Provide warranties no later than the date of the Contractor's Completion Statement.

1.5 WARRANTIES – MATERIALS

Where warranties are offered covering materials, equipment, appliances or proprietary products, provide all such warranties to the contract administrator.

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Provide warranties in favour of the principal. The terms and conditions of such warranties in no case negate the minimum remedies available under common law as if no warranty had been offered. Failure to provide the warranty does not reduce liability for execution and materials for that part of the work.

- Conform to the manufacturer's standard form of warranty.
- Commence the warranties from the date normally applicable.
- Maintain their effectiveness for the times stated.
- Provide warranties no later than the date of the Contractor's Completion Statement.

Guarantees - Contractor

1.6 MASTER BUILD SERVICES LTD GUARANTEE
Provide a Master Build New Homes or Alterations & Additions Guarantee including all costs in the contract price and covering loss of deposit, completion, inspection, execution and material defects under the terms of the guarantee offered by Master Build Services Ltd. Execute with all three signatories: owner, registered master builder and Master Build Services Ltd, before commencing the contract works.

1.7 CBANZ GUARANTEE
Provide a Certified Builders HomeFirst Builders Guarantee. Complete the guarantee application. Before commencing the contract works, execute with the signatures of the owner and the Certified Builder, and forward to CBA Guarantee Ltd along with a copy of the Building Consent, payment schedule and the fee payable.

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2201 PREPARATION AND GROUNDWORK

1. GENERAL

This section relates to the clearance, excavation and backfilling of the site area in preparation for:
- footings and floor slabs
- backfilling behind basement retaining walls

1.1 DOCUMENTS

Documents referred to in this section are:

NZS 3604	Timber framed buildings
OSH	Approved code of practice for safety in excavation and shafts for foundations

1.2 MANUFACTURER'S DOCUMENTS

Manufacturer's and supplier's documents relating to work in this section are:
~

Copies of the above literature are available from ~

Web:	~
Email:	~
Telephone:	~
Facsimile:	~

1.3 SITE SAFETY

Provide adequate support for all excavations. Cover holes and fence off open trenches and banks.

1.4 ANTIQUITIES AND ITEMS OF VALUE

Report the finding of any fossils, antiquities and other items of value. All to remain undisturbed until approval is given for removal, and all remain the property of the owner.

2. PRODUCTS

2.1 EXCAVATED FILL

Material from other formations in the excavation which may be selected and approved as suitable for filling by having grading and moisture content properties that will allow recompaction to 95% of maximum density.

~~2.2 VOLCANIC TUFF FILL~~

~~Scoriaceous tuff of variable grading excluding excessive silt or clay material, capable of being placed and compacted as specified.~~

~~2.3 ROCK FILL~~

~~Hard material comprising rock, broken stone, hard brick, concrete, run of pit scoria, or other comparable inert material capable of being placed and compacted as specified.~~

2.4 SAND FILL

Clean sand of such grading in particle size to achieve mechanical compaction to 90% maximum density.

2.5 HARD FILL

Scoria or crushed rock to GAP (General All Passing) 40 grading.

2.6 GRANULAR FILL

Approved screened crushed gravel or scoria, graded in size from 20 mm to 7 mm, clean. When tested with a standard sieve of 4.75 opening no material is to pass.

~~2.7 DRESSING COURSE~~

~~Scoria to GAP 20 grading, or "dirty footpath scoria", or equivalent "all in" graded crushed metal aggregate.~~

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2.8 FREE-DRAINING AGGREGATE
Scoria or crushed gravel graded 50 to 14 clean.

3. EXECUTION

3.1 EXCAVATION GENERALLY
Carry out excavation to the guidelines set by the OSH publication: Approved code of practice for safety in excavation and shafts for foundations.

3.2 BURNING OF MATERIALS
Burning of materials is not permitted on site.

3.3 PROTECT EXISTING WORK
Protect from damage existing buildings, structures, roads, paving and services nominated on the drawings as being retained.

3.4 PROTECT TREES
Protect from damage trees, shrubs, natural site features and existing landscaped areas nominated on the drawings as being retained. Ensure existing levels are undisturbed beneath the dripline of retained trees.

3.5 SURFACE PREPARATION
Comply with NZS 3604, section 3.5, Site preparation. Remove all turf, vegetation, trees, topsoil, stumps and rubbish from the area to be built on.

3.6 UNDERGROUND ELEMENTS AND SERVICES
Break out and remove old foundations, slabs, drainage pipes, manholes, tanks, cables and redundant services. Report for instructions when any unexpected voids, made-up ground or services are encountered. Seal off the ends of drains or remove to territorial authority approval.

3.7 STOCKPILE TOPSOIL
Stockpile excavated topsoil on site where directed. Keep separate from other excavated materials. Spread and level where directed before completion of the works.

3.8 SHORING AND UNDERPINNING
Carry out shoring and underpinning shown on the drawings and as necessary to prevent subsidence of adjoining public or private property and to ensure the safety of the public and site personnel. Maintain protection throughout the progress of the works, or until foundations and subgrade structures have been completed and the stability of adjoining public and private property secured.

3.9 GENERAL EXCAVATION
Trim ground to required profiles, batters, falls and levels. Remove loose material. Protect cut faces from collapse. Keep excavations free from water.

3.10 ROCK EXCAVATION
If rock is found at any level above the underside of the structural foundations, or above required base levels for site service trenches, immediately notify the owner. Obtain written instructions from the owner on the proposed approach to rock excavation, or consequent alterations to subgrade construction. Confirm any changes with the territorial authority.

3.11 FOUNDATION EXCAVATION
Take foundation excavations to depths shown. Keep trenches plumb and straight, bottoms level and solid, stepped as detailed and clean and free of water.

3.12 INADEQUATE BEARING
If bearing is inadequate then excavate further and backfill with material as follows. Confirm any changes with the territorial authority.

Below slabs on grade:	Hardfill compacted in 150 mm layers
Below footings:	10 MPa concrete
Service trenches:	Hardfill compacted in 150 mm layers

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If excavation exceeds the required depths, backfill and compact to the correct level with material as listed.

3.13 GRANULAR BASE FOR SLABS

To conform with NZS 3604, section 7.5.3, Granular base. Consolidate with a vibrating roller. Blind the surface with coarse sand or sand/cement and roll ready to receive a damp-proof membrane.

3.14 GENERAL BACKFILLING

Obtain written confirmation from the owner before using any excavated material. Compact approved backfilling in 150 mm layers with the last 200 mm in clean topsoil, lightly compacted and neatly finished off.

3.15 RETAINING WALLS

Backfill behind retaining walls with free draining granular material and compact in 200 mm layers. Ensure any tanking membranes, drain coil and damp-proofing are not damaged.

3.16 SURPLUS MATERIAL

Remove surplus and excavated material from the site.

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2301 FOUNDATIONS

1. GENERAL

This section relates to all foundation and piling work, with the exception of in situ concrete work and concrete masonry.

1.1 RELATED SECTIONS

Refer to CONCRETE for poured concrete footings, foundations, foundation walls and floor slabs.
Refer to CONCRETE MASONRY for concrete block foundation walls.

1.2 DOCUMENTS

Documents referred to in this section are:

NZS 3104	Specification for concrete production
NZS 3109	Concrete construction
NZS 3602	Timber and wood-based products for use in building
NZS 3604	Timber framed buildings
NZS 3605	Timber piles and poles for use in buildings
NZS 3631	New Zealand national timber grading rules

1.3 MANUFACTURER'S DOCUMENTS

Manufacturer's and supplier's documents relating to work in this section are:
~

Copies of the above literature are available from ~

Web:	~
Email:	~
Telephone:	~
Facsimile:	~

2. PRODUCTS

~~2.1 CONCRETE PILES IN SITU~~
~~To NZS 3604 for concrete, reinforcement, footing and type.~~

~~2.2 CONCRETE PILES PRE-CAST~~
~~200 mm square parallel-sided to NZS 3604 for footing and type.~~

~~2.3 ROUND TIMBER PILES~~
~~Corsican pine or radiata pine, treated H5 to NZS 3602, table 1A, and complying with NZS 3605 for cross-section, length, straightness, strength and branding. All to NZS 3604 for footing and type.~~

2.4 SQUARE TIMBER PILES

Corsican pine or radiata pine, treated H5 to NZS 3602, table 1A, and complying with NZS 3605 for cross-section, length, straightness, strength and branding. All to NZS 3604 for footing and type.

2.5 TIMBER SUB-FLOOR FRAMING

Species, grade, moisture content in service and level of treatment as set out in NZS 3602. Grading to NZS 3631 and treated to NZS 3602, table 1C.

2.6 NAILS

Steel, stainless steel and galvanized steel of pattern to NZS 3604, table 6.8 and section 4 Durability.

2.7 BOLTS AND SCREWS

Steel, stainless steel and galvanized steel to NZS 3604.

2.8 NAIL PLATES

Stainless steel and galvanized steel toothed or nailed steel plates to the plate manufacturer's design for the particular locations shown on the drawings.

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2.9 CONCRETE
For piles and footings, 17.5 MPa prescribed mix concrete to NZS 3104, section 3, Provisions for prescribed mix concrete, and NZS 3604, section 6.4.5, Pile footings.

3. EXECUTION

3.1 FOUNDATIONS GENERALLY
Comply with NZS 3109, 3602 and NZS 3604 except as varied by this specification. Execution to include those methods, practices and processes contained in the unit standards for the National Certificate in Carpentry and the National Certificate in Joinery (cabinetry, exterior joinery, stairs).

3.2 EXCAVATIONS
Refer to 2201 PREPARATION AND GROUNDWORK.

~~3.3 INSTALL CONCRETE PILES IN SITU~~
~~Box for, reinforce and pour in 17.5 MPa concrete the footings and piles in the various types to NZS 3604.~~

~~3.4 INSTALL CONCRETE PILES PRECAST~~
~~Pour 17.5 MPa concrete footing and set in pre-cast concrete piles in the various types to NZS 3604.~~

~~3.5 INSTALL ROUND TIMBER PILES~~
~~Prepare for and drive timber piles to NZS 3604, section 6.6, Driven timber piles. Protect pile heads with a suitable cushion.~~

3.6 INSTALL SQUARE TIMBER PILES
Prepare for, place and secure as detailed on the drawings.

3.7 SUB-FLOOR FRAMING
Frame up off foundation walls and piles, all fabricated, fastened and braced to NZS 3604, section 6, Foundation and subfloor framing.

4. SELECTIONS

4.1 PILES
Brand/type: ~

4.2 TIMBER SUB-FLOOR FRAMING

Member	Size	Centres	Species / grade	Treatment
Timber piles:	~			
Sub-floor framing:	~			
Jack studs:	~			
Bearers:	~			

4.3 NAILS
Material: ~

4.4 BOLTS AND SCREWS
Material: ~

4.5 NAIL PLATES
Brand/type: ~
Material: ~

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3801 CARPENTRY

1. GENERAL

This section relates to the supply and erection of light timber framing, floors, flooring underlays for ceramic tiling and insulation.

1.1 DOCUMENTS

Documents referred to in this section are:

AS/NZS 1328.1	Glued laminated structural timber - Performance requirements and minimum production requirements
AS/NZS 1748	Mechanically stress-graded timber
AS/NZS 1860.1	Particleboard flooring - Specifications
AS/NZS 2269	Plywood - Structural
AS/NZS 2904	Damp-proof courses and flashings
AS/NZS 2918	Domestic solid fuel burning appliances - Installation
NZS 3602	Timber and wood-based products for use in building
NZS 3603	Timber structures standard
NZS 3604	Timber framed buildings
NZS 3631	New Zealand national timber grading rules
NZS 3640	Chemical preservation of round and sawn timber
AS/NZS 4347	Damp-proof courses and flashings – Methods of test

BRANZ Bulletin 368: Preventing moisture problems in timber framed skillion roofs
BRANZ Bulletin 453: Fasteners selection

1.2 MANUFACTURER'S DOCUMENTS

Manufacturer's and supplier's documents relating to work in this section are:
~

Copies of the above literature are available from ~

Web:	~
Email:	~
Telephone:	~
Facsimile:	~

1.3 SAMPLES

Provide samples of the following for review prior to ordering:
- Boarding for exterior decks
- Timber strip flooring.

1.4 DIMENSIONS

All timber sizes except for battens are actual minimum dried sizes.

2. PRODUCTS

2.1 TIMBER FRAMING, TREATED

Species, grade and in service moisture content to NZS 3602 and treatment to NZS 3640. Either mechanically stress graded to AS/NZS 1748, or visual grading to NZS 3631.

2.2 TIMBER FRAMING, CHEMICAL FREE, MECHANICALLY STRESS GRADED

Species, grade and moisture content in service as set out in NZS 3602. Machine stress graded to AS/NZS 1748, with an average moisture content at supply of 16% or less.

~~2.3 LAMINATED TIMBER~~

~~Radiata pine laminations to AS/NZS 1328.1; treated as required by NZS 3602, to the requirements of NZS 3640, with special attention to Appendix B "Specification advisory notes". Supply weather resistant sealed.~~

~~2.4 TIMBER TRUSSES~~

~~Moisture content: 16% at supply~~

~~2.5 TIMBER TRUSSES, CHEMICAL FREE~~

~~Moisture content: 16% at supply~~

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2.6 TIMBER STRIP FLOORING
Tongue and groove profile with species and grade to NZS 3602. H1.1 treated to NZS 3640, clause 6.1.1, Sawn timber, unless durable heart wood. Moisture content 10-12% at laying.

2.7 PARTICLEBOARD FLOORING
Flooring grade high density resin bonded to AS/NZS 1860.1.

~~2.8 PLYWOOD~~
~~Structural plywood to AS/NZS 2269 for bracing, bracketing, sarking and floors.~~

~~2.9 COMPRESSED FIBRE CEMENT SHEET FLOORING~~
~~18 mm thick high density sheet of Portland cement, fine sand, cellulose fibre and water, with a smooth finish both sides.~~

2.10 HARDWOOD SPACED BOARDING FOR EXTERIOR DECKS
Plantation-grown hardwood. Dressed four sides and with arrises removed.

2.11 SOFTWOOD SPACED BOARDING FOR EXTERIOR DECKS
Selected radiata pine, treated to H3.2 CCA to NZS 3640, clause 6.3.1, Round, part round, or sawn timber. Dressed four sides and with arrises removed.
Moisture content: ~% prior to laying

2.12 NAILS
Steel, stainless steel and galvanized steel of pattern to suit the location and to BRANZ Bulletin 453 Fasteners selection.

2.13 BOLTS AND SCREWS
Steel, stainless steel and galvanized steel of pattern to suit the location and to BRANZ Bulletin 453 Fasteners selection.

2.14 NAIL PLATES
Stainless steel and/or galvanized steel toothed or nailed plates to the plate manufacturer's design for the particular locations as shown on the drawings.

2.15 CONNECTORS
Galvanized steel connectors and structural brackets to the connector manufacturer's design for particular locations shown on drawings.

2.16 POLYETHYLENE DPC
Polyethylene film to AS/NZS2904 and embossed on both sides. Thickness 500 microns minimum, manufactured for use as a damp-proof course and concealed flashings to doors and windows.

2.17 BITUMINOUS IMPREGNATED DPC
Heavy Kraft impregnated with high grade bitumen and coated with higher heat resistant bitumen to AS/NZS 2904 and AS/NZS 4347.

3. EXECUTION

3.1 EXECUTION GENERALLY
To NZS 3603 and NZS 3604 except as varied in this specification. Execution to include those methods, practices and processes contained in the unit standards for the National Certificate in Carpentry and the National Certificate in Joinery (cabinetry, exterior joinery, stairs).

3.2 SEPARATION
Separate all timber framing timbers from concrete, masonry and brick by: -
- a full length bituminous damp-proof membrane overlapping timber by at least 6 mm; or
- a 12 mm minimum free draining air space

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3.3 ATTENDANCE
Provide and fix blocks, nogs, openings and other items as required by other trades.

3.4 MOISTURE CONTENT
Maximum allowable equilibrium moisture content (EMC) for non air-conditioned or centrally heated buildings for framing to which linings are attached.

Framing at erection:	24% maximum
Framing at enclosure:	20% maximum
Framing at lining:	16% maximum
Timber strip flooring:	10% at time of laying

3.5 SET-OUT
Set out framing in accordance with the requirements of NZS 3604 and as required to support sheet linings and claddings.

3.6 FRAMING SUB-FLOOR
Frame up off foundation walls and piles, all fabricated, fastened and braced to NZS 3604, section 6.10, Framed subfloor walls.

3.7 FRAMING FLOORS
Framed and fastened to NZS 3604, section 7, Floors.

3.8 FRAMING WALLS
Frame to required loading and bracing complete with lintels, sills and nogs, all fabricated and fastened to NZS 3604, section 8, Walls.

3.9 FRAMING ROOFS
Frame to required loading and bracing complete with valley boards, ridge boards and purlins. Design and fit roof trusses complete with anchorage. All fabricated and fastened to NZS 3604, section 9, Posts and 10, Roof framing.

3.10 FRAMING CEILINGS
Frame to required loading and bracing complete with runners and battens set out to support ceiling lining. All fabricated and fastened to NZS 3604, section 13, Ceilings. Trim for openings in ceilings and hatches to NZS 3604 section 13.3, Openings in ceilings. Provide blocking for water tanks located in the ceiling space to NZS 3604, section 13.4, Water tanks in roof space.

3.11 INSTALLING WALL WRAPS, UNDERLAYS AND SHEET INSULATION PRODUCTS
Refer to WALL CLADDING and THERMAL INSULATION for the installation of wall wraps, underlays and sheet insulation.

~~3.12 INSTALLING DECK UNDERLAY~~
~~Lay and secure in accordance with BRANZ Bulletin 368 "Preventing moisture in timber framed skillion roofs".~~

3.13 LAYING TIMBER STRIP FLOORING
Lay, cramp and fasten to NZS 3604, section 7.2.2, Timber strip flooring. Punch nails, fill holes, then sand off with one coarse and one fine paper, hand sanding into corners.

3.14 LAYING PARTICLEBOARD FLOORING
Lay and fasten to the flooring manufacturer's requirements and NZS 3604, section 7.2.3, Wood-based sheet flooring. Punch nails, fill holes for clear finishing, then sand with one coarse and one fine paper, hand sanding into corners.

3.15 LAYING PLYWOOD SARKING AND FLOORING
Lay and countersink screw fix to the plywood manufacturer's requirements and to NZS 3604, section 7.2.3, Wood-based sheet flooring.

~~3.16 LAYING COMPRESSED FIBRE CEMENT SHEET FLOORING~~
~~Set out and countersink screw fix through pre-drilled holes strictly in accordance with the flooring manufacturer's requirements and NZS 3604, section 7, Floors.~~

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~~3.17 LAYING HARDBOARD UNDERLAY~~

~~Punch existing floor fixings and course sand level. Lay underlay with joints staggered, with a 1 mm gap between sheets and a 2 mm gap at all perimeters. Use 18 mm divergent staples at 100 mm centres throughout the whole sheet and 30 mm apart, 18 mm in from the edges of the sheets. Punch staples below the surface and sand joins level.~~

~~3.18 LAYING FIBRE CEMENT UNDERLAY~~

~~Punch existing floor fixings and course sand level. Set out and fix strictly in accordance with the underlay manufacturer's requirements, using 25 mm x 2.5 mm annular-threaded underlay nails. Drive heads flush with the sheet surface.~~

3.19 LAYING TIMBER SPACED BOARDING FOR EXTERIOR DECKS

Confirm whether the grooved side of the boards are face up or face down. Avoid excessively short or long lengths, drill for all fixings, stagger end joints and space boards a maximum of 2 mm apart in general conditions, or maximum 3 mm apart if boards are likely to swell after fixing. Fix using annular grooved galvanized jolt head nails, heads driven flush with the board surface.

3.20 DPC TO LOSP TREATED TIMBER

Lay polyethylene DPC under LOSP treated bottom plate of all timber framed walls on concrete, in a single layer with 50 mm overlaps at joints to provide a waterproof barrier.

3.21 DPC TO TIMBER

Lay bituminous DPC under the bottom plate of all timber framed walls on concrete, in a single layer with 50 mm overlaps at joints to provide a waterproof barrier.

3.22 INSTALL PROPRIETARY FIREPLACE

Prepare for the installation as detailed and as required by the manufacturer. Install strictly in accordance with AS/NZS 2918 and the manufacturer's stated and detailed requirements.

4. SELECTIONS

4.1 SUB-FLOOR FRAMING

Member	Species	Grade	Treatment
Bearers:	Radiata pine	~	H1.2
	Douglas fir	~	H1.2
Ground floor joists:	Radiata pine	~	H1.2
	Douglas fir	~	H1.2

4.2 FLOOR FRAMING

Member	Species	Grade	Treatment
Mid floor joists:	Radiata pine	~	H1.2
	Douglas fir	~	H1.2
Boundary joists:	Radiata pine	~	H1.2
	Douglas fir	~	H1.2

4.3 EXTERIOR WALL FRAMING

Member	Species	Grade	Treatment
Exterior walls:	Radiata pine	~	H1.2
	Douglas fir	~	H1.2
Parapets:	Radiata pine	~	H1.2
	Douglas fir	~	H1.2
Enclosed decks and balconies:	Radiata pine	~	H3.2

4.4 ROOF FRAMING

Member	Species	Grade	Treatment
Rafters:	Radiata pine	~	H1.2
	Douglas fir	~	H1.2
Trusses:	Radiata pine	~	H1.2
	Douglas fir	~	H1.2
Purlins:	Radiata pine	~	H1.2

	Douglas fir	~	None
Ceiling joists:	Radiata pine	~	H1.2
	Douglas fir	~	H1.2
Valley boards:	Radiata pine	Merchantable	H3.2
Sarking:	Radiata pine	Merchantable	H3.2
Skillion roof framing (>10°):	Radiata pine	~	H1.2
Skillion roof framing (<10°):	Radiata pine	~	H3.2
Enclosed flat roof framing:	Radiata pine	~	H3.2

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4.5 SPECIAL FRAMING ELEMENTS

Member	Species	Grade	Treatment
~			

4.6 EXTERIOR EXPOSED TIMBERS

Member	Species	Grade	Treatment
Posts:	Radiata pine	~	H3.2
Joists:	Radiata pine	~	H3.2
Softwood decking:	Radiata pine	~	H3.2
Hardwood decking:	~	~	
Exterior stairs and steps:	Radiata pine	~	H3.2
Pergola:	Radiata pine	~	H3.2

4.7 EXTERIOR FINISHING TIMBERS

Member	Species	Grade	Treatment
Weatherboards:	Radiata pine	Dressing	H3.2
Fascia/barge/cover boards:	Radiata pine	Dressing	H3.2
Exterior trim:	Radiata pine	Dressing	H3.2

4.8 LAMINATED TIMBER

Member	Timber/grade/treatment	Finish
~		

4.9 LAMINATED VENEER LUMBER (LVL)

Member	Brand	Type
Joists:	~	
Rafters:	~	
Lintels:	~	

4.10 ENGINEERED WOOD PRODUCTS (EWP)

Member	Brand	Type
Joists:	~	
Rafters:	~	
Lintels:	~	

4.11 INTERIOR FRAMING

Member	Species	Grade	Treatment
Non structural walls:	Radiata pine	~	H1.2
	Douglas fir	~	H1.2
Structural and braced walls:	Radiata pine	~	H1.2
	Douglas fir	~	H1.2

4.12 TIMBER STRIP FLOORING

Location	Timber/grade/treatment	Board width
~		

4.13 PARTICLEBOARD FLOORING

Brand/type	Fixing method	Thickness
~		

4.14 PLYWOOD

Member	Brand/type	Treatment
Plywood flooring:	~	~

Plywood flooring – wet areas:	~	H3
Plywood decking:	~	H3 CCA
Plywood sarking:	~	H3 CCA
Plywood bracing:	~	H3
Plywood other:	~	~

4.15 INTERIOR FINISHING TIMBERS

Member	Species	Grade
Architraves:	Radiata pine	Dressing
Skirtings:	Radiata pine	Dressing
Cornices:	Radiata pine	Dressing

4.16 COMPRESSED FIBRE CEMENT SHEET FLOORING

Brand/type: ~
Thickness: ~ mm

4.17 FLOORING UNDERLAYS - TILING

Brand/type: ~
Thickness: ~ mm

4.18 DPC

Brand/Type: ~

4.19 NAILS

Location	Type	Material	Finish
~			

4.20 BOLTS AND SCREWS

Location	Type	Material	Finish
~			

4.21 NAIL PLATES

Location	Type	Material	Finish
~			

4.22 CONNECTORS

Location	Type	Material	Finish
~			

4.23 PROPRIETARY INSTALLATIONS

Type: ~
Brand/model: ~

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7402 SANITARY PLUMBING

1. GENERAL

This section relates to above ground gravity flow sanitary plumbing.

Related work

1.1 RELATED SECTIONS
Refer to SANITARY FIXTURES, TAPWARE AND ACCESSORIES for sanitary fixtures tapware and accessories.

1.2 DOCUMENTS
Documents referred to in this section are:

NZBC G12/AS1	Water supplies
NZBC G13/AS1	Foul water - sanitary plumbing
AS 2887	Plastic waste fittings
AS/NZS 1260	PVC pipes and fittings for drain, waste and vent applications
AS/NZS 2032	Installation of PVC pipe systems

Plumbers, Gasfitters and Drainlayers Act 1976

1.3 MANUFACTURER'S DOCUMENTS
Manufacturer's and supplier's documents relating to work in this section are:
~

Copies of the above literature are available by phoning ~.

1.4 QUALIFICATIONS
Carry out work by or under the direct supervision of a person registered under the Plumbers, Gasfitters and Drainlayers Act 1976.

2. PRODUCTS

2.1 UPVC WASTE, DISCHARGE AND VENT PIPES
uPVC pipe to AS/NZS 1260 complete with fittings brand-matched to the pipe manufacturer's requirements.

2.2 EXPOSED PIPES AND TRAPS
Chrome plate on copper pipes and associated copper and brass fittings.
White polybutylene or PVC, including all associated fittings.

3. EXECUTION

3.1 EXECUTION GENERALLY
Carry out this work and complete all tests to AS/NZS 3500.2.
Carry out this work and complete all tests to NZBC G1/AS1: 2.0, 3.0 and G13/AS1.

3.2 ELECTROLYTIC ACTION
Avoid electrolytic action by eliminating actual contact or continuity of water between dissimilar metals.

3.3 INSTALL TRAPS, WASTE AND VENT PIPES
Connect waste outlets to traps and run waste pipes and back vents concealed, sized and fixed to AS/NZS 3500.2 /NZBC G13/AS1. Discharge wastes into the drainage system stack, soil pipe, or gully trap as shown. Bird proof mesh to all roof vents and vermin proof mesh to all untrapped waste pipes.

3.4 INSTALL ELECTRIC PAN VENTS
Install electric pan vents to manufacturers' requirements. Leave ready for electrical connection by electrician.

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3.5 PENETRATIONS
At penetrations through constructions provide and fit collars and escutcheon plates to match pipework.

3.6 TEST
Test soil and waste disposal systems to ensure no leakage exists and leave in proper working order.

3.7 CLEAN UP
Remove labels and clean fittings. Remove unused materials from the site.

4. SELECTIONS

4.1 UPVC WASTE, DISCHARGE AND VENT PIPES
Brand/type: ~

4.2 EXPOSED PIPES AND TRAPS
Brand/type: ~

4.3 MISCELLANEOUS ITEMS
Pan vents: ~

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7403 DRAINAGE

1. GENERAL

This section relates to the supply and laying of gravity foul water, stormwater and field drains.

1.1 DOCUMENTS REFERRED TO

Documents referred to in this section are:

NZBC B1/AS1	Structure – general, 6.0 Drains
NZBC E1/AS1	Surface water 3.0 Drainage system materials and construction
To NZBC E2/AS1	External moisture 12.3 Drainage
NZBC G13/AS2	Foul Water – drainage
AS/NZS 1254	PVC pipes and fittings for storm and surface water applications
AS/NZS 1260	PVC pipes and fittings for drain, waste and vent applications
AS/NZS 1546.1	On-site domestic wastewater treatment units - Septic tanks
AS/NZS 1547	On site domestic wastewater management
AS/NZS 2032	Installation of PVC pipe systems
AS/NZS 2033	Installation of Polyethylene pipe systems
AS/NZS 2566.1	Buried Flexible Pipelines - Structural Design
AS/NZS 2566.2	Buried Flexible Pipelines - Installation
AS/NZS 3500.2	Plumbing and drainage - Sanitary plumbing and drainage
AS/NZS 3500.3	Plumbing and drainage - Stormwater drainage
AS/NZS 4671	Steel reinforcing materials
AS/NZS 5065	Polyethylene and polypropylene pipes and fittings for drainage and sewerage applications
NZS 3104	Specification for concrete production

Plumbers, Gasfitters and Drainlayers Act 1976

1.2 MANUFACTURER'S DOCUMENTS

Manufacturer's and supplier's documents relating to work in this section are:

~

Copies of the above literature are available from ~

Web:	~
Email:	~
Telephone:	~
Facsimile:	~

1.3 AS-BUILT DRAWINGS

Supply a 1:100 scale as-built drawing of drains and fittings to the territorial authority and to the owner on completion.

1.4 QUALIFICATIONS

Drainlayers to hold a current licence within the terms of the Plumbers Gasfitters & Drainlayers Act 1976 and be experienced, competent and familiar with the materials and techniques specified.

2. PRODUCTS

2.1 CONCRETE

17.5 MPa prescribed mix to NZS 3104.

2.2 REINFORCEMENT

Plain round and/or deformed steel bars, Grade 300 to AS/NZS 4671.

2.3 UPVC PIPES

uPVC Pipes bends, junctions, fittings and joints to AS/NZS 1254 and AS/NZS 1260.

2.4 POLYETHYLENE PIPES

Polyethylene pipes and fittings to AS/NZS 5065.

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2.5 FIELD DRAINS
Plastic piping for field drains perforated (straight sections or coiled) with filter fabric to prevent silting of the pipe.

2.6 GULLY TRAPS
To NZBC G13/AS2: 3.3 Gully traps, complete with grating.

2.7 SURFACE WATER SUMP GRATINGS
Cast iron frame with lift-up grating.

2.8 STRIP DRAIN CHANNEL
Proprietary, modular, variable invert, PVC or precast concrete drainage channel sections and drainage sump, embedded in site concrete and fitted with selected metal gratings.

2.9 INSPECTION COVERS
Cast iron frame with screw-down cover.

2.10 DRAINAGE AND FILLING MATERIALS

Granular:	Clean gravel or crushed stone or a blend of these. Particle size from minimum 7 mm to maximum 20 mm.
Selected:	Fine grain soil or granular material suitable for bedding; excluding topsoil.
Ordinary:	Top soil or other excavated materials.

~~2.11 SEPTIC TANKS~~
~~Cylindrical or rectangular septic tanks to AS/NZS 1546.1 made of pre-cast concrete 30 MPa with steel bar reinforcement, or cylindrical septic tanks to AS/NZS 1546.1 made of pre-cast concrete 35 MPa with steel fibre reinforcement, or cylindrical septic tanks, material to approval, all other requirements to AS/NZS 1546.1 made of ribbed~~ polyethylene.

3. EXECUTION

3.1 EXCAVATE
Excavate for drains to a firm even base with correct gradients set in straight runs.

3.2 MANUFACTURER'S REQUIREMENTS
All drainage installations to the pipe and fitting manufacturer's requirements.

3.3 DRAINAGE GENERALLY
Carry out drainage work and tests to AS/NZS 3500.2 (sanitary drainage) AS/NZS 3500.3 (stormwater drainage) as modified by NZBC B1/AS1: 6.0. Lay uPVC pipe systems to relevant sections of AS/NZS 2032, NZS 2566.1 and AS/NZS 2566.2. Lay polyethylene pipes and fittings to relevant sections of AS/NZS 2033 and NZS 2566.1.

3.4 LAY FOUL WATER DRAINS
Lay drains in straight runs to correct gradients, to discharge into the network utility operator's sewer. Set inspection fittings on a concrete base.

3.5 INSTALL GULLY TRAPS
Set on concrete 50 mm above the surrounding ground or paving and brought up to protect the top of the fitting. Trowel off.

3.6 LAY STORMWATER DRAINS
Confirm the required location of downpipes and finished ground levels before commencing pipework. Set downpipe bends in concrete with the concrete brought up to protect the top of the bend from damage. Lay drains in straight runs to correct gradients to discharge into the network utility operator's stormwater system.

3.7 LAY SUBSOIL DRAINS
Lay perforated piping firmly in a granular bed in straight runs to correct gradients, discharging into a cesspit. Carry the granular bed up over the pipes without disturbing

them to a total depth of 300 mm and cover with geotextile fabric to the pipe manufacturer's requirements. Carry the high end of all lines up to the surface to allow for flushing out and finish with a protected removable cap.

~~3.8 LAY SUBSOIL DRAINS TO BASEMENT WALLS~~
~~To NZBC E2/AS1: External moisture, 12.3 Drainage. Lay perforated piping firmly in a granular bed in straight runs to correct gradients, discharging into a cesspit. Carry the granular bed up over the pipes without disturbing them to a total depth of 300 mm and cover with geotextile fabric to the pipe manufacturer's requirements. Carry the high end of all lines up to the surface to allow for flushing out and finish with a protected removable cap.~~

3.9 INSTALL STRIP DRAIN CHANNEL
Excavate trench and form site concrete base to fall. Set interlocking channel sections, sumps and accessories in place, all in accordance with the channel manufacturer's requirements. Check falls and install gratings and covers.

3.10 INSTALL SURFACE WATER SUMP
To NZBC E1/AS1, complete with ceramic half-siphon pipe and cast iron frame with a lift out grating.

3.11 INSTALL STORMWATER INSPECTION CHAMBERS
To NZBC E1/AS1, with a 75 mm fall across the chamber and with channels to form a cascade where necessary. Channel top should be 100 mm above the pipe soffit. Bench from channels at 1V on 10H. Benching should be made of 17.5 MPa concrete vibrated to smooth finish. Plastering is not allowed. Fit a cast iron cover and frame.

3.12 INSTALL FOUL WATER INSPECTION CHAMBERS
To NZBC G13/AS2, with ceramic channels to form a 75 mm fall across the chamber. Channel top should be 100 mm above the pipe soffit. Bench from channels 1V on 10H. Benching should be made of 17.5 MPa concrete vibrated to smooth finish. Plastering is not allowed. Fit a cast iron cover and frame.

3.13 SOAKHOLES OR TRENCHES
Dispose of stormwater on site as shown on the drawings, by soakage, to suit local geology and soil structure; all as directed by the territorial authority.

3.14 CONCRETE ENCASEMENT
Concrete encase shallow drains and drains under driveways, on a 100 mm deep 17.5 MPa concrete bed reinforced with three 10 mm mild steel bars. Surround pipes with a polythene membrane to allow movement and encase in 100 mm 17.5 MPa concrete.

~~3.15 FIELD TEST~~
~~Field test drains for watertightness (UPVC to AS/NZS 2032 or AS/NZS 2566. 2 Appendix N) to the satisfaction of the territorial authority inspector.~~

3.16 BACKFILL
Backfill drain lines in 150 mm layers, well tamped but without disturbing the drains. Finish off with 150 mm of topsoil, slightly mounded above the finished ground line.

3.17 INSTALL SEPTIC TANK SYSTEM
Install to manufacturer's instructions.

3.18 INSTALL AERATED WASTEWATER TREATMENT SYSTEM
Install to AS/NZS 1547 and manufacturers instructions.

4. SELECTIONS

4.1 CERAMIC PIPES
Type/size: ~

4.2 UPVC PIPES
Brand/type: ~

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4.3 POLYETHYLENE PIPES
Brand/type: ~

4.4 FIELD DRAINS
Pipe brand/type: ~
Fabric brand/type: ~

4.5 SEPTIC TANKS
Manufacturer: ~
Material: ~
Type: ~
Capacity: ~

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Kaipara te Oranganui

KAIPARA DISTRICT

Two Oceans Two Harbours

Approved Building Consent Documents

Please note: A copy of the stamped, approved documents must be available onsite for **all** inspections.

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GIB EzyBrace® 2011 Software

Demand Calculation Sheet — single storey — V06/11

Job Details

Name	Lynette Dheda
Street and Number	102 Settlement Road
Lot and DP Number	Lot 1 DP 123715
City/Town/District	Kaiwaka
Designer	CJM
Company Name	Architectural Draughting Solutions Ltd
Date	24/01/2017

BRANZ Appraised
Appraisal No.294 [2011]

Select Lining Option: 10 or 13 mm GIB® Plasterboard

Building Specification

Number of storeys	single
Floor Loading	2kPa
Foundation Type	subfloor
Cladding Weight (subfloor)	light

	Single Floor	Complete Single Floor Column only
Cladding Weight	light	
Roof Weight	light	
Room in Roof Space	no	
Roof Pitch (degrees)	21	
Roof height above eaves (m)	2.0	
Building height to apex (m)	5.1	
Ground to lower floor level (m)	0.7	
Stud Height (m)	2.4	
Building Length (m)	12.4	
Building Width (m)	11.8	
Building Plan Area (m2)	123	

Building Location

Wind Zone	***High***	**Earthquake Zone**	**Soil Type**
Select by Building Consent Authority Map		1	D&E (deep to very soft)
or Preference	High	**Annual exceedance probability**	
Wind Region	Preference selected	1/500 (NZS3604:2011 default)	
Lee Zone	Preference selected		
Ground Roughness	Preference selected		
Site Exposure	Preference selected		
Topographic Class	Preference selected		

Bracing Units required for Wind

Demand W (BU)	subfloor	Walls single
along	988	579
across	983	554

Bracing Units required for Earthquake

Demand along / across E (BU)	Walls	
	subfloor	single
	832	625

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Subfloor Bracing Calculation Sheet — Subfloor Along — V06/11

Along

Bracing Line		*Bracing Elements provided*				*Wind*	*Earthq.*
1	2	3	4	5	6	8W	9EQ
Line Label	Minimum BUs Req/Ach	Bracing Element No.	Supplier	Bracing Type	Number or Length L (m)	BUs Achieved	BUs Achieved
a	*line totals*	1	NZS3604	anchor pile	2	320	240
W	320	2					
EQ	240	3					
b	*line totals*	1	NZS3604	anchor pile	2	320	240
W	320	2					
EQ	240	3					
c	*line totals*	1	NZS3604	anchor pile	2	320	240
W	320	2					
EQ	240	3					
d	*line totals*	1	NZS3604	anchor pile	2	320	240
W	320	2					
EQ	240	3					
e	*line totals*	1					
W		2					
EQ		3					
f	*line totals*	1					
W		2					
EQ		3					
g	*line totals*	1					
W		2					
EQ		3					
h	*line totals*	1					
W		2					
EQ		3					
I	*line totals*	1					
W		2					
EQ		3					
j	*line totals*	1					
W		2					
EQ		3					

	Wind	Earthq.
Totals Achieved	1280	960
	OK	*OK*
Totals Required (from Sheet A)	988	832

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Subfloor Bracing Calculation Sheet — Subfloor Across — V06/11

Along							
Bracing Line		*Bracing Elements provided*				*Wind*	*Earthq.*
1	2	3	4	5	6	8W	9EQ
Line Label	Minimum BUs Req/Ach	Bracing Element No.	Supplier	Bracing Type	Number or Length L (m)	BUs Achieved	BUs Achieved
m	*line totals*	1	NZS3604	anchor pile	1	160	120
W	160	2					
EQ	120	3					
n	*line totals*	1	NZS3604	anchor pile	2	320	240
W	320	2					
EQ	240	3					
o	*line totals*	1	NZS3604	anchor pile	2	320	240
W	320	2					
EQ	240	3					
p	*line totals*	1	NZS3604	anchor pile	3	480	360
W	480	2					
EQ	360	3					
q	*line totals*	1					
W		2					
EQ		3					
r	*line totals*	1					
W		2					
EQ		3					
s	*line totals*	1					
W		2					
EQ		3					
t	*line totals*	1					
W		2					
EQ		3					
u	*line totals*	1					
W		2					
EQ		3					
v	*line totals*	1					
W		2					
EQ		3					
						Wind	Earthq.
Totals Achieved						1280	960
						OK	*OK*
Totals Required (from Sheet A)						983	832

RESIDENCE 'B' SUB-FLOOR

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Demand Calculation Sheet — single storey — V06/11

Job Details

Name	Lynette Dheda
Street and Number	102 Settlement Road
Lot and DP Number	Lot 1 DP 123715
City/Town/District	Kaiwaka
Designer	CJM
Company Name	Architectural Draughting Solutions Ltd
Date	24/01/2017

BRANZ Appraised
Appraisal No.294 [2011]

Select Lining Option: 10 or 13 mm GIB® Plasterboard

Building Specification

		Single Floor	Complete Single Floor Column only
Number of storeys	single		
Floor Loading	2kPa		
Foundation Type	subfloor		
Cladding Weight (subfloor)	light		
Cladding Weight		light	
Roof Weight		light	
Room in Roof Space		no	
Roof Pitch (degrees)		12	
Roof height above eaves (m)		1.0	
Building height to apex (m)		4.0	
Ground to lower floor level (m)		0.7	
Stud Height (m)		2.4	
Building Length (m)		13.1	
Building Width (m)		6.4	
Building Plan Area (m2)		84	

Building Location

Wind Zone	*High*	Earthquake Zone	Soil Type
Select by Building Consent Authority Map		1	D&E (deep to very soft)
or Preference	High	Annual exceedance probability	
Wind Region	Preference selected	1/500 (NZS3604:2011 default)	
Lee Zone	Preference selected		
Ground Roughness	Preference selected		
Site Exposure	Preference selected		
Topographic Class	Preference selected		

Bracing Units required for Wind

Demand W (BU)	subfloor	Walls single
along	450	236
across	833	395

Bracing Units required for Earthquake

Demand along / across E (BU)	Walls	
	subfloor	single
	564	418

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GIB EzyBrace® 2011 Software

Subfloor Bracing Calculation Sheet — Subfloor Along — V06/11

Along

Bracing Line		*Bracing Elements provided*				*Wind*	*Earthq.*
1	2	3	4	5	6	8W	9EQ
Line Label	Minimum BUs Req/Ach	Bracing Element No.	Supplier	Bracing Type	Number or Length L (m)	BUs Achieved	BUs Achieved
a	*line totals*	1	NZS3604	anchor pile	3	480	360
W	480	2					
EQ	360	3					
b	*line totals*	1	NZS3604	braced piles	2	320	240
W	320	2					
EQ	240	3					
c	*line totals*	1	NZS3604	anchor pile	3	480	360
W	480	2					
EQ	360	3					
d	*line totals*	1					
W		2					
EQ		3					
e	*line totals*	1					
W		2					
EQ		3					
f	*line totals*	1					
W		2					
EQ		3					
g	*line totals*	1					
W		2					
EQ		3					
h	*line totals*	1					
W		2					
EQ		3					
I	*line totals*	1					
W		2					
EQ		3					
j	*line totals*	1					
W		2					
EQ		3					

					Wind	Earthq.
Totals Achieved					1280	960
					OK	*OK*
Totals Required (from Sheet A)					450	564

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GIB EzyBrace® 2011 Software

Subfloor Bracing Calculation Sheet — Subfloor Across — V06/11

Along

Bracing Line		*Bracing Elements provided*				*Wind*	*Earthq.*
1	2	3	4	5	6	8W	9EQ
Line Label	Minimum BUs Req/Ach	Bracing Element No.	Supplier	Bracing Type	Number or Length L (m)	BUs Achieved	BUs Achieved
m	*line totals*	1	NZS3604	anchor pile	2	320	240
W	320	2					
EQ	240	3					
n	*line totals*	1	NZS3604	anchor pile	2	320	240
W	320	2					
EQ	240	3					
o	*line totals*	1	NZS3604	anchor pile	2	320	240
W	320	2					
EQ	240	3					
p	*line totals*	1	NZS3604	anchor pile	2	320	240
W	320	2					
EQ	240	3					
q	*line totals*	1					
W		2					
EQ		3					
r	*line totals*	1					
W		2					
EQ		3					
s	*line totals*	1					
W		2					
EQ		3					
t	*line totals*	1					
W		2					
EQ		3					
u	*line totals*	1					
W		2					
EQ		3					
v	*line totals*	1					
W		2					
EQ		3					

	Wind	Earthq.
Totals Achieved	1280	960
	OK	*OK*
Totals Required (from Sheet A)	833	564

Enviroserve Wastewater

Kaiwaka Northland

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Site Evaluation and On-Site Effluent Treatment Recommendations for K Dheda Settlement Rd Kaiwaka

January 2017

Enviroserve Ltd Settlement Road RD2 Kaiwaka Phone 09 431 2434 mobile 021 1300 821

Enviroserve
Registered Certifying Drainlayer
Biotic Systems Designer
Kaiwaka Northland
09 431 2434 mobile 021 1300 821

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Introduction

Enviroserve was retained to evaluate L Dheda's property, Lot 1 DP123715 102 Settlement Rd, Kaiwaka for suitability for on-site organic waste treatment for a 3 bedroom house plus a minor 3 bedroom dwelling. Using this evaluation a site specific design was required to treat black water, and recycle the suitably treated effluent into an appropriate dispersal area.

Existing Conditions

This property is a rural farm block of 4.5908 Ha. The land has been grazing pasture for many years and is part of a recently subdivided farm. Groundcover is pasture grasses.

Slopes over all the property are moderate with a shallow gully running east to west, descending to a stream along the western boundary. This gully takes runoff from nieighbouring properties to the east and passes approximately 40 m north of the proposed house. The ground appears stable with no signs of slippage evident in this author's 17 year knowledge of this property. The major proposed dwelling is to be sited approximately 1m from the southern boundary and approximately 20 m from the eastern boundary of the property. A driveway to the current farm buildings is formed and a new access to the proposed dwelling will be formed off this drive. This site is well drained with existing farm drainage directing flows from the paddocks above to the gully mentioned above. The area approximately 70 northwest of the house site, alongside the western boundary is close to level with the stream and is boggy in the winter months but this is a significant distance from the dwelling and should be no issue. There is a boggy area approximately 22m north-north west of the proposed house with sedge grass growing This area is wet for most of the winter months. The area due west of the house however is a dry spur with no signs of perched water tables and will be suitable for siting the dispersal field.

The house site has exposure to sun from the north and east and evapotranspiration potential is good.

The minor dwelling is to be situated approximately 15 m from the roadside boundary and 3 m from the eastern boundary as shown on the site maps. This position is the highest elevation on the property with falls to the west and south. This dwelling will be exposed to north-west with good evaporation expected.

Ground conditions are typical of the area. Semi friable silty clays overlay soft limerock and argillaceous mudstone at deeper levels. Topsoil layers are good and site testpit show more than 250mm depth of good silt/loam topsoil. Pasture growth is vigorous with excellent root development and soil shows no colour spotting to indicate periodic groundwater inundation in the spur area.

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Existing Conditions Continued

Subsoil conditions are not conducive to deep percolation and shallow transpirative disposal is the most viable method of nutrient recycling.
No evidence of ground movement has been apparent in this author's professional experience of the area over more than 16 years. Neighbouring properties have resited houses onto similar or even greater slopes with no problems becoming evident.
There is fall from the house site to the west where space exists for the dispersal field with ample reserve pumped capacity to the north. This fall is adequate for an effective dosing siphon discharge system to be employed.

Recommended Technology

The nature of the fine silty clay subsoil and deeper limerock and mudstone limit deep percolation possible on this site. The black water from a septic system will need to be contained treated and dispersed in aerobic surface soil layers. This is in fact the most effective means of aerobic decomposition, mimicking the nutrient recycling processes of the natural biosphere. Experience of this region over the last two decades of work has shown this approach to be effective and sustainable. The critical factors in this form of recycling are a low concentration of blackwater,even distribution of water over entire dispersal field and a good volume of aerobic soil to promote the growth of soil micro-organisms which can consume the nutrient. The area beside the house site (1) to the west is suitable and a level dispersal field in this area is viable. Groundwater levels were measured during subdivision in the area of the dwelling and to the north which are identified in this report as ephemeral perched watertables. These borelogs are not representative of ground conditions at the proposed dispersal field site which is a well drained spur above this area.
Flow paths in the area will need minor modification with the installation of a V drain above the field to prevent surface water infiltration in heavy cloudbursts. This can easily be achieved with a drain along the proposed southern boundary discharging to the west.
The field lateral lines will be laid to level in the existing contour and this area can be left in grass or planted out so as to complement the owners' landscape plans. <u>This area must however be protected from grazing animals</u> and it must be fenced off from surrounding pasture if livestock is to be run here.
Conditions at house site (2) are similar however there is no evidence of perched watertables here. Fall from the proposed dwelling to the west and south is ample for the use of a dose loaded septic system. There is a new level area to the southwest approximately 18m away which would be suitable for a dispersal field with minimal earthwork required. This area can be levelled to provide a single level dispersal field which would be an ideal place for planting shrubs or orchard species to improve amenity value. This area will require a V drain around the north east side discharging to the south of the field area. Soil depth on the field should be improved with spoil from on site which is readily available.

The primary septic treatment system recommended for each dwelling is therefore a 4500 litre twin-chamber unit with a Zoeller domestic biofilter in the primary chamber outlet and a dosing siphon in the secondary chamber to transfer the clarified wastewater to the dispersal field. For site (1) this will be installed approximately 6 m west of the proposed dwelling. For site (2) this will be installed approximately 14m to the south west of the house. Care should be taken to ensure a minimum of two metres fall is provided from the septic tank lid to the highest of the dispersal field laterals so the dose siphon does not stall in its normal operation.

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Recommended Technology Continued

The field lines should be laid level along each lateral length as per the attached plan. The field area may be planted with landscape or orchard trees and shrubs which will provide increased amenity value from the house site as well as increasing the transpiration rate of the treated wastewater. In this way nutrients contained in the waste water can be recycled into an attractive area providing a return on the investment in this system.

Surface runoff from the house site and amenity areas above the field area must be properly diverted and controlled to prevent infiltration of the field. Overflow from the water tank should be directed to an outfall structure away from the dispersal field area. For site (1), to the northwest and for site (2) to the south to prevent runoff infiltrating the field. Runoff from the driveway should likewise be controlled to prevent infiltration of the ground below the house.

A conservative loading rate is specified in line with guidelines set forth in AS/NZS 1547:2012. This concentration is 5mm/m^2/day. The initial main feed line from tank to field will be a minimum of 2 metres length of 100mm uPVC sewer pipe, reducing to 40mm polyethylene to the dispersal manifold, and the lateral lines in the actual field are to be 25mm polyethylene pipe. These laterals are to be encapsulated, at the position of the outlet holes, in 450mm long cells of 100mm punched novacoil. The cells will provide a tertiary withholding capacity for the waste of approximately 8 hours and help prevent ingress of dirt and sand into dispersal pipes. The lateral pipes will be provided with suitable plugs or valves at the ends to facilitate flushing when maintenance becomes necessary. These valves or plugs should be identified with easily located stakes or similar to allow for flushing during maintenance.

The owner should be informed that these stakes are important to the maintenance of the system and they should not be removed.

The black water is to be distributed into the lateral lines using a distribution manifold as detailed in attached plan number DPP1. This manifold should be laid as close to lateral lines as practicable so as to ensure orifice pressures and lateral lengths are uniform. This manifold should be accurately and carefully laid to ensure that all trenches are evenly loaded with liquid. To ensure this the manifold should be attached to a structure of H4 tanalised timber, driven securely into the earth and set to level (see detail DPP1). Once the field is established vehicles and livestock must be kept off the area at all times.

System Specifications and Conditions

1) The installation contractor shall inform the designer 48 hours before commencement of work to co-ordinate the calculation of outlet orifice sizes in the dispersal field lines.

2) Estimated effluent volumes per person are 180 litres/day. The design loading for this 3 bedroom dwelling requires capacity for 4 persons. This equates to 4 x 180 = 720 litres/day total loading. At a conservative application rate of 5mm/m^2/day the area required to service this loading is 720 litres/5 litres/m^2 = 144 m^2. This is applicable to site (1) and to site (2).

3) The primary treatment system to be employed is a 4500 litre twin chamber septic tank with filter in the primary chamber outlet and with a dose siphon fitted in the secondary chamber to transmit the waste to the field. The **installation contractor must ensure that the tank inlet 'T' has an air space provided** to allow air to enter the tank as specified in AS/NZS1546.1:1998.

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System Specifications and Conditions Continued

4) The dispersal field area site (1) is to be situated in the area to the west of the house site. The dispersal field will be trenched into the existing ground, laid level along each lateral length. The dispersal field area for site (2) is to the southwest of the house. The field can if desired, be planted in hydrophilic species to maximise transpiration potential and perhaps provide a return to the owners from recycled nutrients. Aggressive rooting trees such as willow, poplar or pohutukawa should not be planted within 25 m of this field. The dispersal pipes are to be laid within 200mm of the finished ground surface, on a level contour. There is room for more than 100% reserve area for site (1) between this area and the northern boundary should this be required in future. Site (2) reserve is to the west of the marked dispersal field area.

5) For each site there will be 5 x 25 mm polyethylene lateral dispersal lines approximately 24 m long, laid evenly over the dispersal platform. These should be laid at minimum 1200mm apart. The laterals will be punctured at intervals calculated by the designer, by holes of appropriate sizes to provide even liquid distribution depending on the different heads of each individual line. These calculations will be provided by the system designer when these elevations are known and supplied by the installer.

6) The lateral lines will be encased in 450mm lengths of 100mm diameter punched novacoil to provide aerobic habitat and also to provide a reservoir for the exiting liquid. These cells will be centred over the outlet holes.

7) **As per AS/NZS 1547:2000 Section 2.4.2.2.3 a garbage grinder type waste disposal unit may not be fitted to this system** as increased volumes of waste solids can overload the tanks capacity to effectively sediment and decompose the effluent. Additionally heavier concentrations of fats and undigested animal matter are more likely with this type fitting, and this is extremely harmful to the system. Fats can block outlet filters and cause oxygen depletion in the waste treatment tank resulting in death to the aerobic bacteria in the waste material.

8) **Fat is a major problem in septic tank systems**. DO NOT pour fats and oils down the sink or otherwise introduce them into the drainage system. Scrape all plates before washing. The less you put into your tank, the less often you will need to empty it, thus saving you money.

9) For site (1) a swale drain is to be installed above the dispersal field exiting to the west of the field ensuring no groundwater infiltration is possible in heavy rain. Site (2) will have a swale drain around the north and east sides discharging to the south.

10) The septic tank should be emptied by a tank cleaning contractor on an average every two years although this frequency will depend on usage and is best judged by biannual inspection for the first few years. If usage patterns change in future years this inspection should be continued to ensure appropriate service periods. It is recommended that tank cleaning is not carried out at more frequent intervals (unless inspection shows excessive sludge build up) as bacteria concentrations may be adversely reduced, leading to untreated waste exiting the tank and blocking the fields. **The system should be serviced by a septic drainage specialist annually. And please beware of cowboys, I do mean someone with expertise in septic maintenance.**

System Specifications and Conditions Continued

11) Care should be taken to **absolutely minimise bleaches, detergents and disinfectants going into the septic system**. These substances can seriously damage the bacterial action of the septic tank. They will increase the frequency with which the tank needs to be emptied and can even cause system failure through untreated solids being carried into the treatment field. Wherever possible dispose of bleaches, detergents and disinfectants outside the septic system. Where this is not possible, reduce the amounts used to an absolute minimum. This simple to form habit could easily save you thousands of dollars in system repairs.

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Environmental Concerns

The impact of these dwellings on the site will be beneficial especially when drainage and planting is undertaken. The installation of the dispersal fields will dramatically **enhance plant growth** and **improve aerobic soil conditions** on this site. Blackwater will be separated from the water-table by NRC approved margins. Swale drains will remove surface water infiltration from the field dispersal area. The nutrients supplied to the planted field will **enhance plant growth**, the environment and air quality. This property is a large enough to easily support this nutrient loading and has ample space for reserve area should this become necessary.

There should be **no adverse smells** from these installation as a large area of aerobic dispersal field is to be constructed. Minor smells from a working septic tank are usual but these are minimal with normal use and the large tank size and twin treatment stages will provide good treatment of the waste, minimising such nuisance.

Visually there will be little change to the current outlook. The dispersal fields will be laid in the existing contour below the houses and some distance from them. The landscaping and planting will enhance the view of the area from the dwelling and adjoining properties. The enhanced soil bed and increased aerobic nutrient levels will improve growth of the surrounding flora.

Groundwater quality will be largely unaffected by this installation. Rainwater which would have fallen on the ground in the house footprints will now be collected into water tanks and then released into the wastewater system which is where this water would have gone naturally. Overall the installation of the wastewater treatment unit will have a **beneficial impact on the property** and the locality.

Dispersal Field Installation Instructions

Care must be taken when laying the dispersal fields as this is crucial to the continuing proper operation of the septic systems. If the lateral pipes are not laid to level, uneven distribution of the blackwater can occur and soggy spots or surface breakout may be the result. The most important factor is the ground level lower edge of the excavated trench. If this varies then any blackwater build up may overflow at one point causing wet spots, problem smells and scouring.

- The main supply pipe from the septic tanks shall be an initial length of 2m minimum 100mm DWV, reducing to 40mm alkathene using level invert type reducers rather than reducing bushes as flow rate at these low operating pressures is hampered by the hard shouldered reducing bushes.
- Care should be taken to ensure there is NO backfall at all in the main discharge line from tank to manifold. The dosing siphon works on an air pressure and any blockage in the pipe can stall the siphon
- The dispersal field manifold must be set up to level so each lateral outlet is exactly the same level as its neighbouring lateral. See plan DPP1 for the construction of this manifold.
- Pipework should be securely attached to the timber frame with good quality nylon ties or galvanised tie wire and haunching should be used around the manifold to support the lateral pipes and ensure they can't sag over time where they run away from this manifold support.
- The lateral lines will be 25mm LPPE (alkathene) as this is hardy and long lasting and is rated to 9 bar pressure, ideal for this application.
- A laser level should be used and the contour marked with spraymarker or pegs every two metres for the excavator operator's guidance.

Backfill should be done with extreme care to avoid damaging or moving the discharge cells. The soil should NOT be compacted with the machine tracks but simply pressed firmly into place with the bucket. The ground should be firm so it doesn't slump but still retain air space to promote plant and bacteria growth.

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Conclusion

A septic tank can be an effective treatment system if used appropriately. This site is easily large enough to safely support an these on-site septic treatment systems and dispersal fields with adequate reserve capacity.

A laser level or similar should be utilised to ensure accurate shaping of the field surface. The native soil's LTAR is moderate to good. The specified dispersal rate of 5mm/m^2/day is equivalent to just 5 litres per square meter per day and is conservative in this application.

All treatment systems require maintenance at regular intervals and this system should be inspected annually by an on-site waste system specialist to ensure the systems health and that any maintenance needed is carried out promptly. Regular maintenance of septic and waste treatment systems can prolong the useful life of these fixtures for many years but unfortunately, once a system has failed it may prove very expensive and technically difficult to remedy. The cliché 'a stitch in time saves nine' is eminently appropriate, with this vital piece of equipment often being a large part of the overall cost of your building project. It is prudent to protect that investment.

An organic treatment system is a biological entity similar to a plant or animal, and it requires certain conditions to maintain its health, and your healthy environment. It is in your interest to see that these conditions are maintained for your own sake, for your children's sake and for the sake of all our fellow creatures on the planet.

Report compiled by Paul Warren
Enviroserve Wastewater Management Ltd
Registered Certifying Drainlayer
15th January 2017

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System Component Sizes and Specifications

System Description;	Twin chamber Septic Tank and Zoeller Effluent Filter system discharging through dose siphon to an LPED dispersal field.
House Drain Pipes;	100mm uPVC DWV pipe.
Septic Tank;	4500 litre twin-chamber concrete tank, filter in primary chamber outlet, dosing siphon in secondary chamber. **Drainlayer MUST check that tank inlet is vented properly as per AS/NZS1546.1:1998.**
Septic Outlet Line;	2 m of 100mm uPVC Sewer pipe then reducing to 40 mm polyethylene pipe dosing to distribution manifold.
Distribution Box;	40/40/25 'T's in Dispersal Manifold as illustrated in plan DPP1.
Manifold Support;	H4 tanalised timber support structure as detailed in plan DPP1
Field Lines;	5 x 25mm polyethylene pipes x 24m long punctured at calculated intervals encapsulated in 100mm punched Novacoil, removable end plugs fitted. Discharge hole sizes to be determined on installation.
Dispersal Concentration;	5mm/ m^2/ day.
Surface Water Drains;	Swale above dispersal field
Sub-surface drain;	None
Dispersal Field Area;	144m^2 each site
Reserve Area Available;	100%+

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REFERENCES

National Plumbing and Drainage Part 2.2: Sanitary Plumbing and Drainage-Acceptable Solutions, AS/NZS 3500.5.2000

New Zealand Guidelines for Utilisation of Sewage Effluent on Land,Part Two: Issues for Design and Management, New Zealand Land Treatment Collective and Forest Research,2000.

On-site domestic wastewater management, AS/NZS 1547:2012.

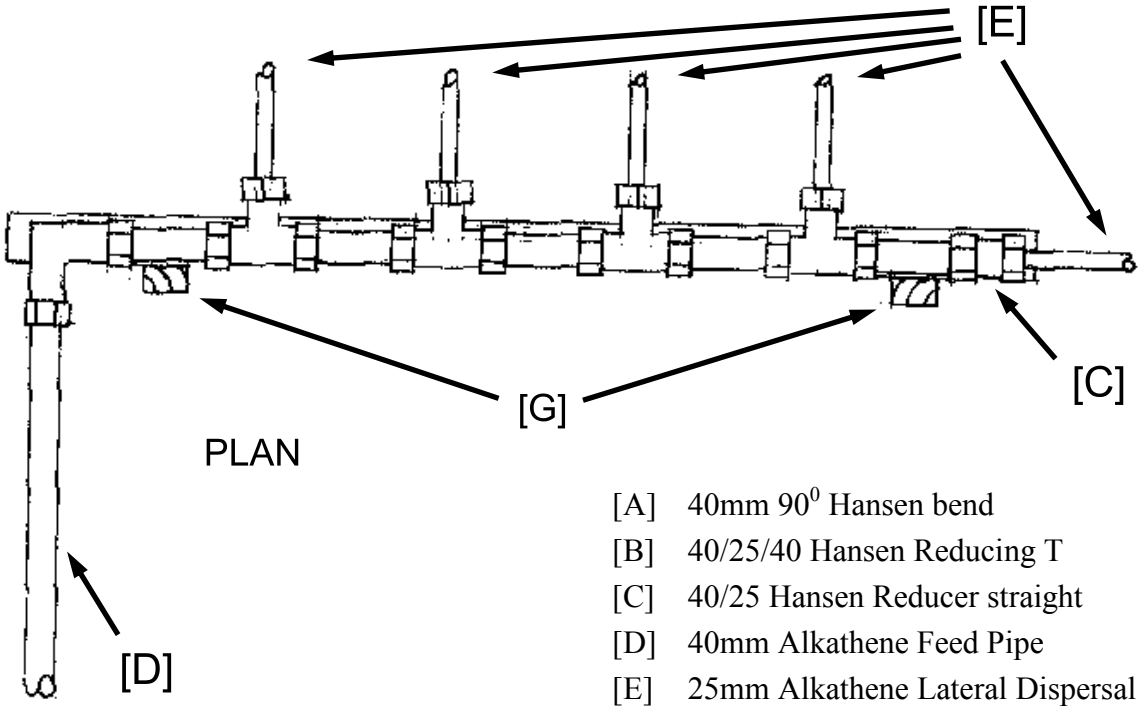
On-site domestic wastewater treatment units, Part 1 Septic Tanks, AS/NZS 1546.1:1998.

On-Site Wastewater Disposal from Households and Institutions, ARC Environment Technical Publication No.58, November 2007.

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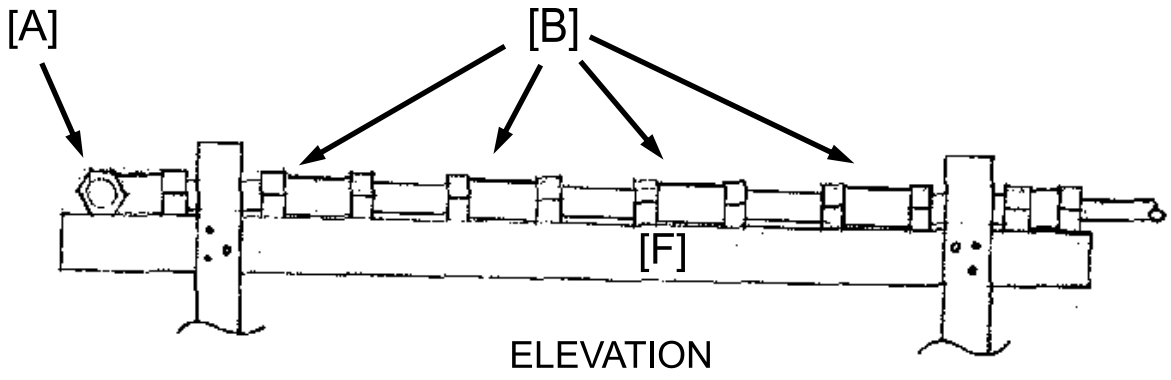
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Dispersal Manifold Detail Plan DPP1



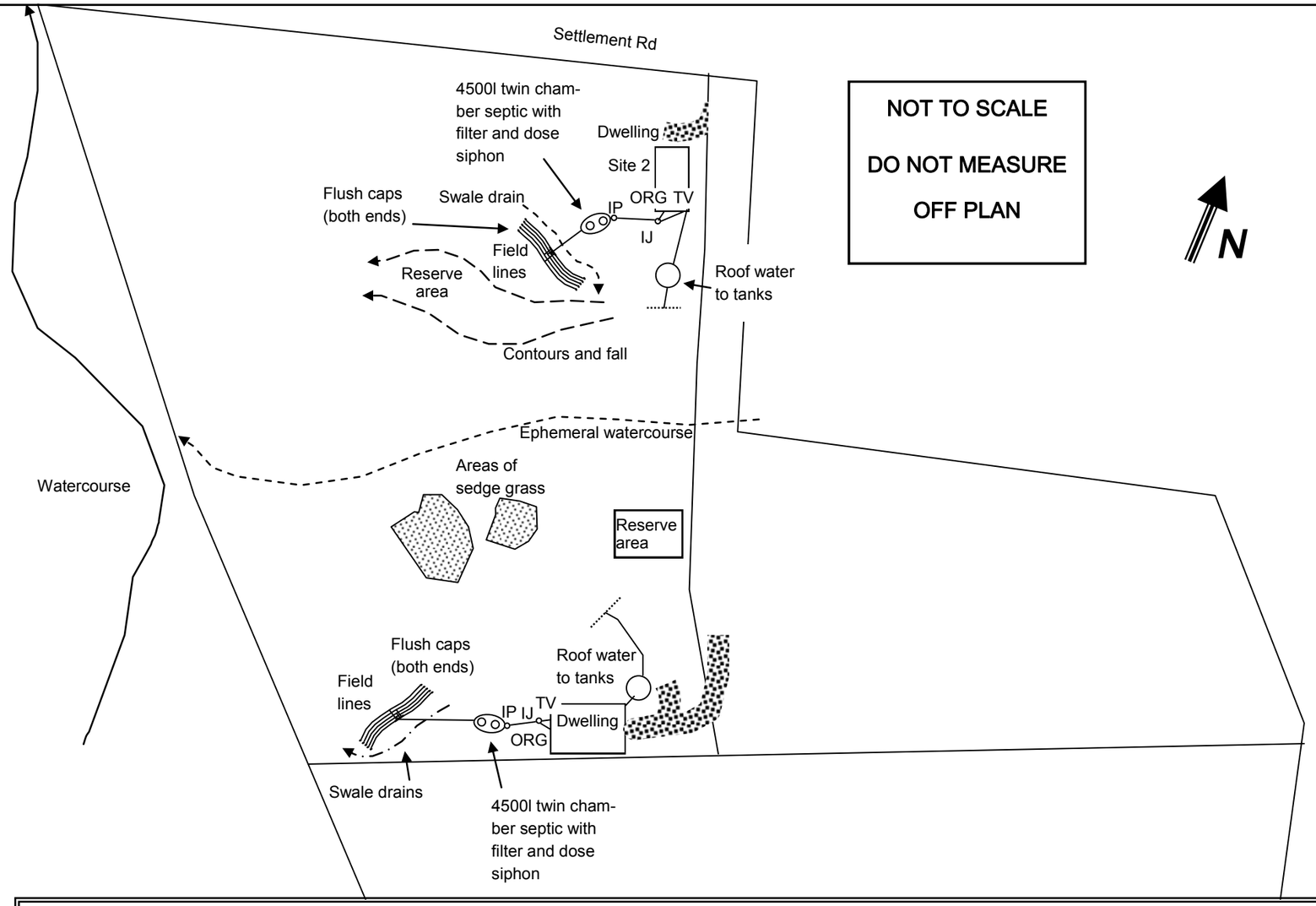
[A] 40mm 90^0 Hansen bend
[B] 40/25/40 Hansen Reducing T
[C] 40/25 Hansen Reducer straight
[D] 40mm Alkathene Feed Pipe
[E] 25mm Alkathene Lateral Dispersal Pipes
[F] 50 x 40 H4 Tanalised Timber support
[G] 50 x 40 H4 Tanalised Timber Pegs

Reduced Copy



1) **Manifold to be securely attached to level timber support by galvanised wire or nylon ties.**
2) **All lateral 25mm outlets from 'T's are to be at the same level to ensure even distribution.**
3) **Timber supports to be H4 Tanalised.**
4) **Main feed line to be 40mm alkathene and laterals to be 25mm alkathene.**
5) **All 'T's and joiners to be Hansen brand fittings for warranty terms.**
6) **Far right outlet discharges to highest dispersal line, next outlet T discharges to next descending lateral line etc.**
7) **Manifold to be installed below finished ground level, while support pegs may protrude to identify manifold position.**

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NOT TO SCALE

DO NOT MEASURE OFF PLAN

N

Enviroserve Wastewater Systems

- Dispersal field area 144m^2 each site, 100% reserve available to northeast (1) & west (2).
- Swale along south (1) & northeast (2) side of field area.
- Field lines laid to level, distribution manifold in middle of top line.
- Planting of field to suit owners garden plans. Aggressive trees must not be planted close to field lines. Animals must not be grazed on the dispersal field.
- System designer must be contacted at least 48 hours before installation to co-ordinate calculation of dispersal orifice sizes.

Site plan and detail for
L Dheda
102 Settlement Rd
Kaiwaka
January 2017

KAIPARA DISTRICT

Kaipara te Oranganui • Two Oceans Two Harbours

KAIPARA DISTRICT COUNCIL

Producer Statement

Design: On-Site Effluent Disposal Systems (AS/NZS 1547:2000)

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Issued by : ..... (approved qualified design professional)

To : ..... (owner)

To be supplied to: Kaipara District Council.....

Property Location: .....

.....

Lot.....DP.....Valuation Number.....

To Provide: Design an on-site effluent disposal system that will comply with the principles and procedures of AS/NZS 1547:2000 and provide a schedule to the owner for the system's maintenance.

The Design: Has been in accordance with G13 (Foul Water) G14 (Industrial Liquid Waste) B2 (durability 15 years) of the Building Regulations 1992 in Compliance with the New Zealand Building Code

As an independent approved design professional covered by a current policy of Professional Indemnity Insurance (Design) to a minimum value of $200,000, I **believe on reasonable grounds** that subject to:

1 Site verification

2 The proposal All proprietary products met the performance requirements.

the proposed design will met the relevant provisions of the Building Code and Northland Regional Council discharges rules.

..... (Signature of approved design professional)

..... (Professional qualifications)

..... (Licence Number or professional Registration number)

Address .....

.....

Telephone Number .....

Fax Number .....

Cellphone .....

Date .....

KAIPARA DISTRICT

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Application For And Acceptance Of Producer Statements

Name: _____

Contact Telephone Number: _____

Fax Number: _____

Email Address: _____

Employer: _____

Length of Service: _____

Membership of Approved Body, Group or Organisation _____

Organisation: _____

Registration No: _____

Title/Position Held:

Insurance Company

Plan Processing
Design
Inspection
Construction

A Producer Statement from an author who has designed, installed and commissioned or inspects all work will be required to be peer reviewed by a suitably qualified person.

Dated:

Signature:

Building code classes applied for
(must include B2) _____

Office use only	Comments	Y	N
Criteria			
Qualifications			
Experience and Expertise			
Scope of Work			
Insurance			
Professional Reg N°			
Recognised Accreditation			
Professional References			
Dated:	Approval Signature:		

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Producer Statements, Register Of Approved Authors

To enable us to be able to accept Producer Statements the author must be included on our list of approved authors.

Producer Statements may not be used as of right, but at the sole discretion of the Kaipara District Council.

The use of Producer Statements is a means of establishing compliance with the New Zealand building code. It is a tool that the Kaipara District Council uses as grounds to be satisfied as near as is reasonably practicable that the work covered by the Producer Statement complies with the New Zealand building code. This register will be used when accepting Producer Statements as one of the means of establishing compliance with the New Zealand building code.

Before a Producer Statement can be accepted Council must be satisfied that the skills, qualifications and experience of the author are appropriate for the scope of work and building code clauses covered.

Could you please read the following and provide us with the required information as soon as possible.

Our policy on acceptance of a Producer Statement will be dependent on the following:

- The author of the Producer Statement has been accepted onto the "register" held by the Kaipara District Council building control department.
- If not on the "register" then the author has satisfied the building control department that they have the skills, experience, qualifications and insurance necessary to produce the class of work specified in the Producer Statement.

Entry to the register will be at the sole discretion of the Building Team Leader, and will require the following information from the authors:

- The type of Producer Statement that will be submitted (e.g. Structural, HVAC, Fire Engineering, Fire Alarm Systems, Fire Sprinklers, Mechanical Installations for Access, On-site wastewater designs, Durability and the like). Please nominate Building Code clauses to be covered.
- A summary of the author's qualifications
- A summary of the author's experience
- Verification of the professional indemnity insurance held by the author

Please note that when a Producer Statement is used, Council will require a design summary and a copy of the design calculations to be included as part of that Building Consent record. In some instances a review of the calculations, or a peer review of the design, may be required. This will be at the cost of the building consent applicant.

Producer Statements will not necessarily be accepted to verify compliance of building works not carried out in accordance with a current building consent or prior to the issue of a building consent, even if the author is included in the "register."

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APPROVED LIST OF WRITERS

Kaipara District Council

March 2009

[redacted]

Author	Practice	Qualification
Cameron Shaw	G13	Design Engineer Only
Graham Slatter	G13	Master Plumbers Assn.
John Hawley	G13,14	CPENG Engineer
Kevin D Scott	G13	Craftsman Plumber
Mark Wharfe	G13,14	Registered Drainlayer
Paul Warren	G13	Registered Drainlayer
Peter Macpherson	G13	Registered Drainlayer
John Charles Cuthbert	G13,14	Registered Drainlayer Craftman Plumber
Sean Huband	G13,14	Registered Drainlayer
Stuart Butcher	G13	Registered drainlayer Craftsman Plumber

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KAIPARA DISTRICT

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Note: This form is to accompany every application for a Building Consent incorporating AS/NZS 1547:2000 Approval as a design professional is at Council's discretion.

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Kaipara District Council

AS/NZS 1547:2000

On-site Wastewater Disposal Site and Soil Evaluation

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Part A: Owners Details

1 Applicant Details:

Applicant Name		
Company Name		
	First Name(s)	Surname
Property Owner Name(s)		
Nature of Applicant*		

*(*i.e. Owner, Leaser, Prospective Purchaser, Developer)*

2 Consultant / Site Evaluator Details:

Consultant/Agent Name				
Site Evaluator Name				
Postal Address				
		Area Code:		
Telephone Number	Business		Private	
	Mobile		Fax	
Name of Contact Person				
E-mail Address				

3 Are there any previous existing discharge consents relating to this proposal or other waste discharge on this site?

Yes		No		(Please tick)
If yes, give Reference Numbers and Description				

4 List any other consent in relation to this proposal site and indicate whether or not they have been applied for or granted

If so, specify Application Details and Consent N°.

(e.g. LandUse, Water Take, Subdivision, Earthworks Stormwater Consent)

Part B: Property Details

1.1: Location Details

Physical Address of Property	
Territorial Local Authority	**Kaipara District Council**
Regional Council	**Northland Regional Council**
Legal Status of Activity	Permitted: Controlled: Discretionary:
Relevant Regional Rule(s)	
Total Property Area (m^2)	
Map Grid Reference of PropertyIf Known	

2 Legal description of land (as shown on Certificate of Title)

Lot N°		DP N°		CT N°	
Other (specify)					

Please ensure copy of Certificate of Title is attached.

Part C: On-Site Evaluation

(Refer AS/NZS 1547:2000 See Fig 4.1C2)

Has a relevant property history study been conducted?

Yes		No		(Please tick one)

If yes, please specify the findings of the history study, and if not please specify why this was not considered necessary.

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1 **Has a Slope Stability Assessment been carried out on the property?**

Yes		No		Please tick

If **No**, why not?

If **Yes**, please give details of report (if possible, please attach report):

Author	
Company/Agency	
Date of Report	
Brief Description of Report Findings:	

2 **Site Information (See Table 1 attached):**

Provide descriptive details below:
Performance of Adjacent Systems:
Estimated Rainfall and Seasonal Variation:
Information available from **N.I.W.A MET RESEARCH**
Vegetation / Tree Cover:
Slope Shape: (Please provide diagrams)
Slope Angle:
Surface Water Drainage Characteristics:
Flooding Potential: **Yes / No**
If **Yes**, specify relevant flood levels on appended site plan i.e. one in five years and/or 20 year and/or 100 year return period flood level, relative to disposal area.
Surface Water Separation:
Site Characteristics: or any other limitation influencing factors

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3 Site Geology **Check Rock Maps**

Geological Map Reference Number	

4 What Aspect(s) does the proposed disposal system face? (please tick)

North		**West**	
North-West		**South-West**	
North-East		**South-East**	
East		**South**	

5 Site clearances (Indicate on site plan where relevant)

Separation Distance from	Proposed Clearances (m)	Septic Tank Treated Allowed(KDC+ NRC)	Secondary Treated Allowed (KDC+NRC)
Boundaries		1.5 m	1.5 m
Surface water (i.e. permanent or intermittently flowing rivers, creeks, streams etc)		20 m	15 m
Groundwater Bores horizontal distance		20 m	20 m
Subsurface water vertical separation distance (Winter)		1.2 m	600 mm
Embankments/retaining walls		1.5 m	1.5 m
Other			
Reserve area set aside		100 %	30 %

Part D: Site Assessment - Subsoil Investigation

(Refer AS/NZS 1547:2000 clause 4.2A4.2 Site and Soil Evaluation Report)

1 Please identify the soil profile determination method:

Test Pit		(Depth_____m)	N° of Test Pits	
Bore Hole		(Depth_____m)	N° of Bore Holes	
Other (specify):				

Soil Report attached?

Yes		No		Please tick

2 Was fill material intercepted during the subsoil investigation?

Yes		No		Please tick

If yes, please specify the effect of the fill on wastewater disposal

3 Percolation testing (Recommended for conventional trenches in all clay soils)

Please specify the method (refer to Appendix 4.1F AS/NZS 1547:2000)					
Test Report Attached?	Yes		No		Please tick

4 Are surface water interception/diversion drains required?

Yes		No		Please tick

If yes, please show on site plan

4a Are subsurface drains required

Yes		No		Please tick

If yes enter details

5 Please state the depth of the seasonal water table:

Winter	m	Measured		Estimated	
Summer	m	Measured		Estimated	

6 Are there any potential storm water short circuit paths?

Yes		No		Please tick
If the answer is yes, please explain how these have been addressed				

7 Estimated soil category *(Refer AS/NZS 1547:2000 Table 4.1.1 and clause 4.1.4.1)*

Is Topsoil Present?	If so, Topsoil Depth?	(m)

Classification	Properties	Tick One
Sand	Very little to no coherence, cannot be moulded., single grains	
Loamy sand	Slightly coherence, give a short ribbon 5mm that breaks easy	
Sandy loam	Forms a cast but will not roll in a ball. Individual sand grains can be seen	
Fine sandy loam	As for Sandy loam. Individual sand grains cannot be seen	
Loam	As for Sandy loam. But cast feels spongy	
Silty loam	As for loams but not spongy. Very smooth and silky	
Sandy clay loam	Can be rolled into a ball. Sand grains can be felt	
Fine sandy clay loam	As for sandy clay loam but no sand grains visible	
Clay loam	Can be rolled into a ball with spongy feel, slightly plastic	
Silty clay loam	As for clay loams but not very spongy. Very smooth and silky	
Sandy clay	Forms a plastic ball in which sand grains can be seen,	

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	felt and heard	
Light clay	Smooth plastic ball that can be rolled into a rod. Slight resistance to shearing	
Silty clay	As for light clay but very smooth and silky	
Medium clay	Smooth plastic ball like plasticine. Can be moulded. Some resistance to ribboning	
Heavy clay	Smooth plastic ball like plasticine. Can be moulded. Firm resistance to ribboning	
Reasons for placing in stated category		

PART E: Discharge Details

1. Water supply source for the property (please tick):

Rainwater (roof collection)	
Bore/well	
Public supply	

2. Calculate the maximum daily volume of wastewater to be discharged, unless accurate water meter readings are available

(Refer AS/NZS 1547:2000 Appendix 4.2D)

Number of Bedrooms	1 - 2 - 3 - 4 - 5 - 6			
Design Occupancy				(Number of People)
Per capita Wastewater Production	140	160	180	(tick) (Litres per person per day)
Other - specify	200	220		
Total Daily Wastewater Production				(litres per day)

3. Do any special conditions apply regarding water saving devices

a) Full Water Conservation Devices?	Yes		No		(Please tick)
b) Water Recycling - what %?	%				(Please tick)

If you have answered yes, please state what conditions apply and include the estimated reduction in water usage

4. Is Daily Wastewater Discharge Volume more than 3000 litres per day:

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Yes		(Please tick)
No		(Please tick)

Note if answer to the above is yes, an N.R.C wastewater discharge permit will be required

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PART F: Primary Treatment

(Please also refer to NRC rules)

1. **Please indicate below the no. and capacity (litres) of all septic tanks including type (single/dual chamber grease traps) to be installed or currently existing: If not 4500 litre dual chamber, explain why not**

Number of Tanks	Type of Tank	Capacity of Tank (Litres)
	Total Capacity	

2. **Type of Septic Tank Outlet Filter to be installed?**

(min 3.5mm screen required see NRC rules)

PART G: Secondary and Tertiary Treatment

(Please also refer to NRC rules)

1. **Will the discharge effluent have a 5-day biochemical oxygen demand (BOD5) that is less than or equal to 30 grams per cubic metre and the total suspended solids (TSS) concentration that that is less than or equal to 45 grams per cubic metre?**

(Manufacturers specifications required see NRC rules)

Yes		No		(Please tick)
No means this is considered a primary system				

2. **Please indicate the type of additional treatment, if any, proposed to be installed in the system: (please tick)**

Secondary Treatment	
Home aeration plant	
Commercial aeration plant	
Intermediate sand filter	

Recirculating sand filter			
Recirculating textile filter			
Clarification tank			
Tertiary Treatment			
Ultraviolet disinfection			
Chlorination			
Other		Specify	

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PART H: Land Disposal Method

(Refer AS/NZS 1547:2000 appendix 4.2C)

1. Please indicate the proposed loading method: (please tick)

Gravity	
Dosing Siphon	
Pump	

2.High water level alarm to be installed in pump chamber(s)

Yes	No

If not to be installed, explain why

3. If a pump is being used, please provide the following information:

Total Design Head		(m)
Pump Chamber Volume		(Litres)
Emergency Storage Volume		(Litres)

4. Please identify the type(s) of land disposal method proposed for this site: (please tick)

(Refer AS/NZS 1547:2000 appendix 4.2A)

Surface Dripper Irrigation			
Sub-surface Dripper irrigation			
Standard Trench			
Deep Trench			
Mound			
Evapo-transpiration Beds			
Other		Specify	

5. Please identify the loading rate you propose for the option selected in the above, stating the reasons for selecting this loading rate:

(Refer to AS/NZS 1547:200 appendix 4.2A)

Loading Rate			(Litres/m2/day)
Disposal Area	Design		(m2)
	reserve		(m2)

Explanation

6. What is the available reserve wastewater disposal area

Reserve Disposal Area (m²)	
Percentage of Primary Disposal Area (%)	

7. Please provide a detailed description of the design and dimensions of the disposal field and attach a detailed plan of the field relative to the property site:

Description and Dimensions of Disposal Field:

Plan Attached?	Yes		No		(Please tick)

If not, explain why not

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PART I: Maintenance & Management

(Please also refer to NRC rules)

1. Has a maintenance agreement been made with the treatment and disposal system suppliers?

Yes		No		(Please tick)

Name of Suppliers

PART J: Assessment of Environmental Concerns

1. Is an assessment of environmental concerns included with application?

(Refer Fig 4.1C3)

Yes		No		(Please tick)

If Yes, list and explain possible effects

PART K: Is Your Application Complete?

1. Is a Northland Regional Council Discharge Consent Required?

Yes		No		(Please tick)

2. In order to provide a complete application you have remembered to:

Fully Complete this Assessment Form	
Include a *Location Plan* and *Site Plan* (with Scale Bars)	
Attach an Assessment of Environmental Concerns	

3. Declaration

I hereby certify that, to the best of knowledge and belief, the information given in this application is true and complete.

Name	Signature	
Position	Date	

Note:

Any alteration to the site plan or design after approval will result in non compliance.

A commissioning statement is required for any Pumped system, Alternative solution and Secondary treated system before the Code Compliance Certificate can be issued

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PROPERTY SOLUTIONS

To Whom It May Concern:

Please find enclosed your Independent Building Report.

We trust the information will be of assistance to you, if we can be of any further assistance please do not hesitate to contact our office.

Best regards,

The Inspections Team
Property Solutions Surveys Ltd

- Painting / Waterproofing
- Roof repair services
- Building Inspections
- Safe & Sanitary Reports
- Final Sign-Offs
- Reports to Council
- Land Information Search
- Structural Reports
- Seismic (IEP) Surveys
- Engineers Reports
- Draughting
- Building Maintenance

Property Solutions

Office:
29F Cartwright Road,
Glen Eden

Postal Address:
P.O. Box 83003.
Edmonton. 0652

Phone:
(09) 818-4873

Fax:
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Email:
info@propertysolutions.co.nz

Web:
www.propertysolutions.co.nz

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Report Prepared For: Lynette Dheda

Date of inspection: 25th January 2017

INDEPENDENT BUILDING INSPECTION/SECOND HAND STRUCTURAL REPORT

House CW 448, Craig Walker Building Removals
134 Main Road, Kumeu



Following our recent inspection of the above-mentioned property we submit our report and findings and confirm the following.

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Dear Lynette

Property Solutions Surveys Ltd services have been engaged to carry out an Independent Second Hand Building Inspection of the property located at Craig Walker Building Removals, Kumeu.

Please take note of the following Terms and Conditions, and that acceptance of this report constitutes an acceptance of the following conditions.

Any Independent Building Inspection/Structural Report **("Report")** prepared by Property Solutions Surveys Ltd ("we", "us" or "our") shall be deemed to include these Terms and Conditions. Property Solutions Surveys Ltd will not issue any reports except on their terms and conditions.

Scope of this Report

1. This Report
   a. This report has been prepared on the basis of a visual inspection of the building work using normal readily available access and without testing of components for the assessment of the overall structural condition of the building work and associated items, and without recourse to the construction drawings. It is confirmed that no detailed geotechnical investigation has been included in the brief. An investigation of the condition and location of underground drainage and services and of electrical, gas and plumbing (except as otherwise described in this report) is not included in the brief. No warranty can be given to any other defects not apparent to visual inspection at the time i.e. inside linings or cavities. Please note that we do not remove or uplift any fixtures, i.e. panels or carpets and we are unable to assess any hidden membranes or waterproofing below finished ground level.

      Although Property Solutions include plumbing, drainage, and electrical components, it is advised that they are not Registered Drain layers or Qualified Electricians. No warranty or guarantee is expressed or issued for these components.

      The conclusions and recommendations given do not necessarily meant that the items of building work will meet the requirements of the current Building Code. The reliance by other parties on the information or opinions contained in this report shall, without our prior review and agreement in writing, be at such party's sole risk.

   b. This is a preliminary non-invasive investigation for visible Defects, if any visible Defect is detected, this may be followed up at the **election of the customer** with further invasive or non-invasive investigations carried out by certified contractors. A non-invasive moisture reading is not a conclusive indication that moisture is present, in some cases hidden metals or chemical preservatives may affect a non-invasive capacitance moisture meter. The non-invasive moisture meter will only read moisture content up to 24mm to the wall, therefore some moisture in the wall could be missed if not within the vicinity of 24mm of the interior walls. Weather conditions could also affect the outcome of readings taken.
   c. Prices given for remedial work on faulty items are to serve as a guild only and it is recommended that quotations be obtained from suitably qualified tradespersons for the areas identified. Although these costings may be used in negotiations with vendors we do not accept responsibility for variation in prices received by contractors tendering for the work.
   d. The inspect is restricted to areas that have available access and will not include the removal of wall linings, building paper or insulation or any other covering or lining material. It cannot include **CONCEALED** plumbing, piping, drainage, and electrical items. Flint coat waterproofing or underground sealants commonly used in basement developments and associated drainage below ground cannot be accurately assessed.
   e. If ready access was not possible into the ceiling cavity or subfloor areas, they will be identified and excluded from the report.
   f. This report does not provide any guarantee whatsoever that items surveyed i.e. structures, services, fittings fixed or otherwise will not fail at some later date and information herein pertains strictly to observations on the day of inspection and accessibility.

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g. This report does not purport to certify the soil stability or conditions of underground services including underground protective coatings, which are not able to be included. It assumes compliance in all aspects with Territorial Authority Ordinances / The Building Act 1991, and does not certify that all building improvements lie within the title boundaries. Furthermore, this report assumes that a Territorial Authority Land Information Memorandum (LIM) / Project Information Memorandum (PIM) would not reveal any non-complying features and/or requisitions.

h. The positioning of the building or improvements in relation to the site boundaries are excluded but can be checked upon request.

i. Electrical and plumbing to pools and spas are not included in this report and we suggest independent professional advise be sought.

j. We are unable to carry out any probe or destructive testing, nor move any furnishings or appliances, in a visual inspection.

k. The inspection and report are not intended to be technically exhaustive, or to imply that every component was inspected, or that every possible defect was discovered. No disassembly of equipment, opening of walls, moving of furniture, appliances or stored items, or excavation will be preformed. All components and conditions, which by nature of their location are concealed, camouflaged, or difficult to inspect, are excluded from this report.

l. Systems and conditions which are not within the scope of the building inspection include, but are not limited to: formaldehyde, lead paint, asbestos, toxic or flammable materials, and other environmental hazards pest infestation, playground equipment efficiency measurements of insulation or heating and cooling equipment, internal or underground drainage or plumbing, any systems which are shut down or otherwise secured; water wells (water quality and quantity), zoning ordinances; intercom; security systems; heat sensors; cosmetics or building code conformity. Any general comments about these systems and conditions are informational only and do not represent an inspection.

Limits of this Report

2. This Report

a. Is only for the benefit of the customer who instructed Property Solutions to prepare the Report and may not be relied upon by any other party.

b. Is not designed or intended to identify potential problems or issues within the Area other than the Defects and, without limitation, will not:

i. Identify the presence or absences of dry/wet rot or any hazardous substance including, without limitation, mould toxins, carcinogens, noise or other contaminants;

ii. Identity the presence or absences of any pests including, without limitation, wood damaging organisms, rodents or insects;

iii. Determine the effectiveness of any equipment, utility, component or system installed to control leaks, moisture, heat loss, dry rot or hazardous substances;

iv. Determine the life expectancy or future condition of any equipment, utility component or system; and

v. Determine compliance or non-compliance with any statutory or regulatory requirement, code, bylaw, ordinance or other restriction; and

c. Does not contain any advise, and cannot be relied on for any advise, relating to;

i. Any methods, materials or cost of the repair of any Defect;

ii. The suitability of the building for any specialised use;

iii. The market value or marketability of the building; and

iv. The advisability or inadvisability of the sale or purchase of the building.

Limits to our Obligations

3. In conducting our inspection, the customer acknowledges and agrees that we will not be required to:

a. Disturb or move any insulation, panels, furniture, personal items, equipment, vegetation or other items or materials that obstruct access or visibility to the thermal inspection; and

b. Operate any equipment, utility, component, or system that is shut down, inoperable or that does not respond to normal operating controls.

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Exclusion of Implied Conditions and Warranties and Limitation of Liability

4. Where the customer is engaging our services for business purposes, the Consumer Guarantees Act 1993 (the "Act") will not apply.
5. If the customer is a consumer under the Act, to the extent that the customer's rights under the Act have not been excluded in clause 4 above, nothing in these terms and conditions will affect the rights of the customer under the Act.
6. Subject to clause 5:
   a. The customer relies upon their own knowledge, skill or judgement in relation to the particular use or suitability of this Report for the customers purpose: and
   b. All warranties, descriptions, representations, or conditions; whether imp0lied by the Sale of Goods Act 1908 or otherwise are expressly excluded to the fullest extent permitted by law.
7. Save as expressly provided otherwise in this Report or these Terms and Conditions, we shall not be liable, and none of our employees or contractors shall be liable to any customer, the customer's agents or employees or any other person for any direct, indirect, incidental or consequential damage or loss of any nature how so ever caused, (whether based on tort (including negligence), contract or otherwise), including but not limited to loss of profits, loss of sales opportunity, damage to equipment or property (including any cost or loss relating to any invasive inspection) or any other claim whatsoever arising directly or indirectly or in any way attributable to the performance or non-performance of our services or other obligations.
8. If, for any reason we are found to be liable to the customer or any other person in connection with this Report and/or the performance or non-performance of our services and we are unable to rely on the exclusions of liability set out in these Terms and Conditions, our liability shall in all cases be limited to the price paid or payable by the customer for such Report or services.

Moisture Meters and Weather tightness

The report cannot give any water proofing guarantee, as it is not readily possibly nor required to create simulated conditions to induce moisture ingress. However, signs of moisture ingress are looked for and spot checking is carried out predominantly around windows, doors and identified risk areas with a moisture meter.

The moisture meter used during the inspection is a Wagner L606 which is calibrated in accordance with manufacturer's specifications, this device is used for non-invasive test, and while this is deemed non-conclusive, it can be a good indicator of the presence of moisture. However, the condition and treatment type of any internal timbers is not known.

Definition of terms used for indications of moisture readings are as follows:-

- ✓ Normal – Generally indicates moisture readings up to approximately 16%
- ✓ Slightly High – Generally indicates moisture readings between 17 to 22%
- ✓ Higher – Generally indicates moisture readings between 23 to 30%
- ✓ Very High – Generally indicates moisture readings 30% and above

Accurate moisture readings can only be obtained by intrusive means, which is not carried out during the inspection, unless requested and permission had been given by vendors/property owners. However, where slight high or greater moisture readings are indicated during the inspection, further investigation would be required to determine the source of the readings, and this would also require permission from vendor/property owner(s) before further action is taken.

It is important to be aware that the lack of moisture indicators does not confirm that a property does not have moisture issues. Because water accumulates and travels immediately behind the external cladding, the external cladding is ideally what should be tested. However, this is not practical, nor possible with some claddings and weather conditions, therefore the meters are predominantly used from the interior of the home. A visual inspection and non-invasive testing may provide no initial evidence of leaking, knowledge of known weather tight risk details and/or signs to look for become more critical. Further investigation will be recommended where there is sufficient evidence and concern that it may reveal signs of severe moisture penetration.

Regards
Property Solutions Surveys Ltd

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1.0 INTRODUCTION

The subject structure comprises a single level three bedroom dwelling scheduled for relocation. Construction is possibly around the 1960's and includes weatherboard cladding, iron roofing and timber joinery.

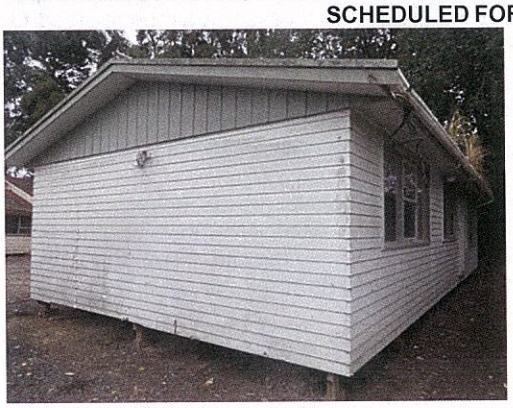
Councils will require a second hand building report to identify any defects or issues that may be pertinent to the structure's weathertightness and its desirability for its proposed new site.

The purpose of this report is to identify any decay or defective items that would not be acceptable on the proposed relocation site or neighbourhood / community. The primary focus will be upon visible defects or items that may require remedial work following relocation in order to comply or receive approval from the tertiary authorities control area. Ideally Councils would require the building to meet certain criteria and standards and any defective items, particularly those relating to weathertightness, or the aesthetics of the building may require upgrading following relocation.





1960's SINGLE LEVEL, THREE BEDROOM WEATHERBOARD & IRON ROOF DWELLING SCHEDULED FOR RELOCATION





PROPERTY SOLUTIONS

- Painting / Waterproofing
- Roof repair services
- Building Inspections
- Safe & Sanitary Reports
- Final Sign-Offs
- Reports to Council
- Land Information Search
- Structural Reports
- Seismic (IEP) Surveys
- Engineers Reports
- Draughting
- Building Maintenance

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Web:
www.propertysolutions.co.nz

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2.0 BRIEF OVERVIEW

2.1 TYPE OF BUILDING - DWELLING

2.2 PRESENT LOCATION – CRAIG WALKER BUILDING REMOVALS YARD - KUMEU

2.3 PROPOSED USE- DWELLING

2.4 CHANGE OF USE - NO

2.5 DESCRIPTION -

A. EXTERIOR CONSTRUCTION

- CLADDING - WEATHERBOARD
- JOINERY - TIMBER
- SPOUTING - PVC
- ROOFING – CORRUGATED IRON
- ROOF TYPE - HIP

B. INTERIOR CONSTRUCTION

- FRAMING - TIMBER
- LININGS – PAPER-FACED PLASTERBOARD
- CEILINGS – PINEX TILES
- ROOF SUPPORT – RAFTER/JOIST DETAIL

C. EXTERIOR APPEARANCE

- ROOF – REASONABLE ORDER / MAKE GOOD, REPAIR & REPAINT
- WALLS – REASONABLE ORDER / MAKE GOOD
- JOINERY – REASONABLE ORDER / MAKE GOOD & REPAINT

D. INTERIOR APPEARANCE

- WALLS – REASONABLE CONDITION / MAKE GOOD & REDECORATE
- CEILINGS – REASONABLE CONDITION / MAKE GOOD & REDECORATE
- DOORS – REASONABLE CONDITION

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2.6 PLUMBING & DRAINAGE

- CURRENT – STANDARD UNDER-BENCH PLUMBING
- WATER CYLINDER – MAINS PRESSURE SYSTEM

2.7 WILL THE STRUCTURE REQUIRE CUTTING TO ENABLE TRANSPORTATION - NO

2.8 MOVING CONTRACTOR - CRAIG WALKER BUILDING REMOVALS

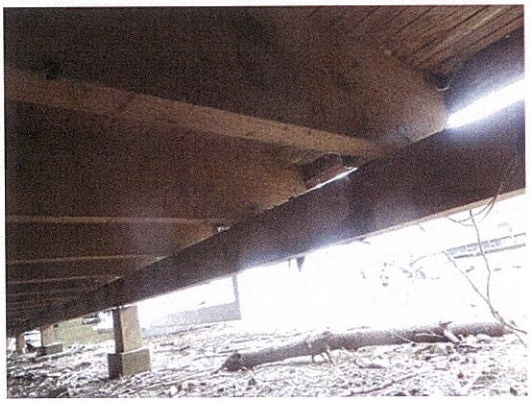
3.0 FOUNDATION & SUBFLOOR

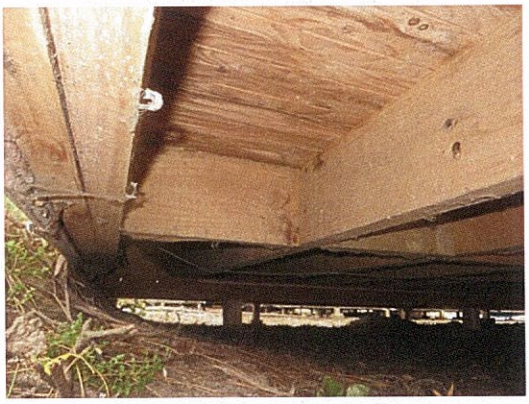
The foundation/subfloor comprises 200x50 floor joists supported by 100x75 bearers and tongue and groove flooring. The subfloor is non-insulated. The subfloor members show no rot or decay and should be reusable. A revised grid style foundation, site specific will be required upon resiting.





SUBFLOOR – JOIST, BEARER, TONGUE & GROOVE FLOORING / NON-INSULATED





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4.0 CLADDING & JOINERY

4.1 CLADDING

The cladding features a standard bevel back timber weatherboard. Generally the weatherboards are in reasonable order, showing no serious rot but some making good will be required upon resiting.

The gable end cladding is fibre cement, Highline or Shadowline.

Soffit linings are fibre cement sheeting butt jointed. The soffits will require making good and repairs.



MAKE GOOD SOFFIT LININGS



MAKE GOOD CLADDING

4.2 JOINERY

Window joinery is timber with pivot and awning type sash, fixed sash and conventional sill and scribe detail. The joinery is mostly functional, except the lounge end window which requires repair. The joinery units will require making good, replacing any faulty glazing putties, easing, careful preparation and repainting.





TIMBER WINDOW JOINERY – STRIP, PREPARE & REPAINT

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STRIP, PREPARE & REPAINT JOINERY



PREPARE & REPAINT



HEAD FLASHING DETAIL





REFIT EXTERIOR DOOR FRAME & FLASHING/
MAKE GOOD BUILDING ENVELOPE

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RESECURE LOUNGE WINDOW

5.0 ROOFING

5.1 ROOFING EXTERIOR

The roofing is corrugated iron, set in a hip configuration with standard ridge. The roof should be checked upon resiting and made good, penetrations points repaired, carefully prepared and repainted.




ROOFING – CORRUGATED IRON / MAKE GOOD, REPAIR PENETRATIONS

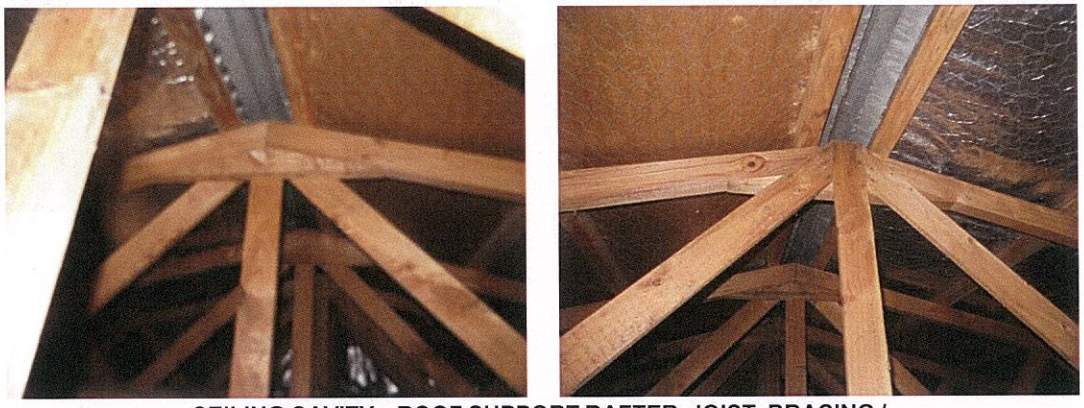



PREPARE & REPAINT ROOFING

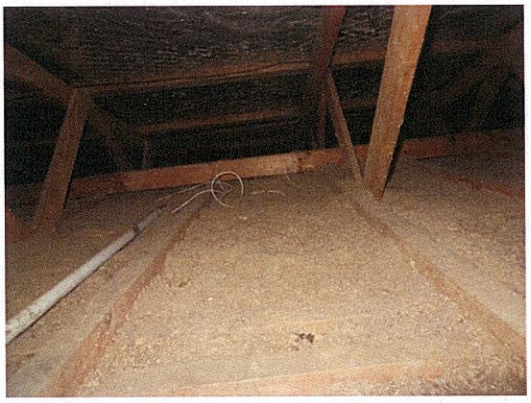
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5.2 CEILING CAVITY

The roof support mechanism comprises a standard rafter detail with joist rafters of 100x50, diagonal bracing, standard joists of 150x50 and insulation is installed. Aluminium foil wrap has been installed between the roofing material and purlins.



CEILING CAVITY – ROOF SUPPORT RAFTER, JOIST, BRACING / INSULATION INSTALLED, LOOSE FILL, MINIMAL THICKNESS



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6.0 PLUMBING & DRAINAGE

PVC guttering circumnavigates the roofline and provides stormwater catchment. The guttering will require repair, re-alignment and reconnection to an approved stormwater system.

The hot water cylinder will require reinstatement upon resiting.





REPAIR & REALIGN GUTTER



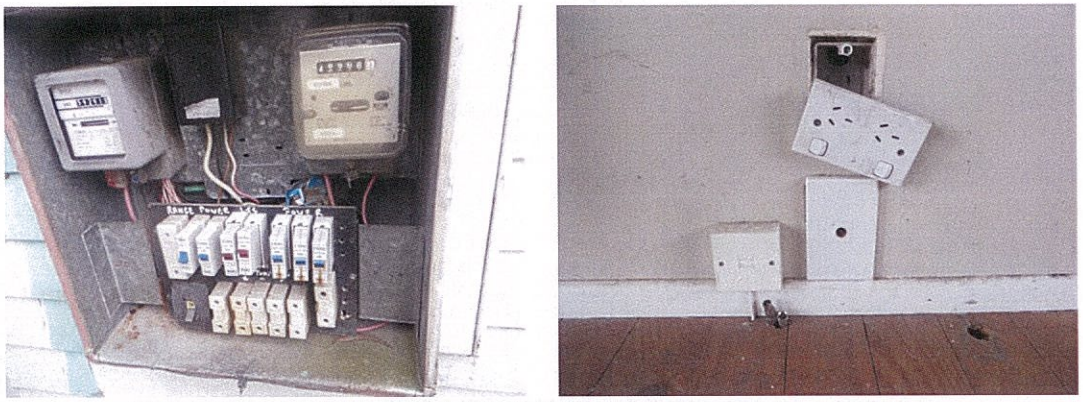
HOT WATER CYLINDER – CHECK & TEST ON SITE

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7.0 ELECTRICAL

Electrical includes a standard distribution board, currently exposed without cover.

Please note that the writer is not a qualified electrician and that this was a visual inspection only.



DISTRIBUTION BOARD LACKS COVER / MAKE GOOD WIRING & FITTINGS

8.0 INTERIOR

The interior floor plan features an open plan lounge, kitchen, dining, hallway which provides access to a separate toilet, separate bathroom and three bedrooms.



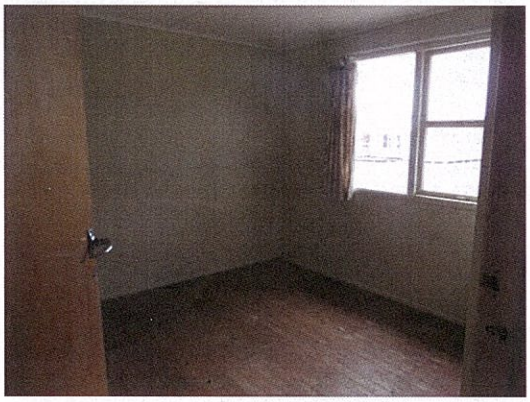
INTERIOR ROOMS

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INTERIOR ROOMS





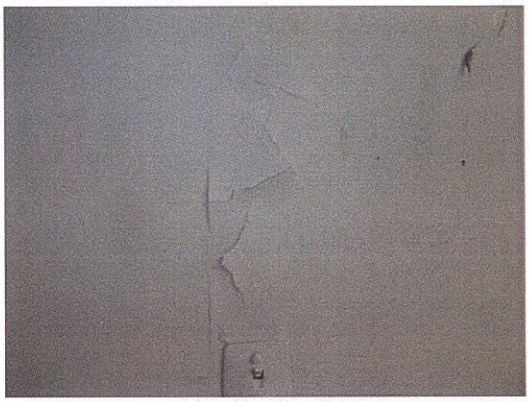
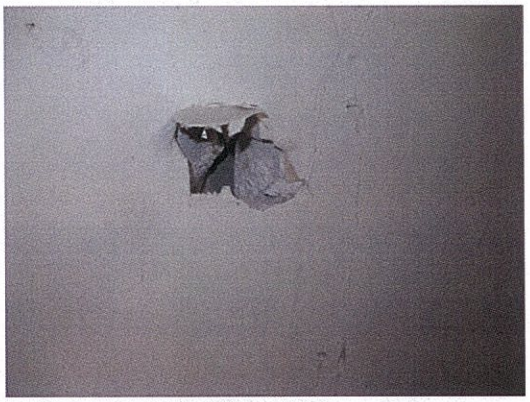


FLOORING SECURE

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9.0 INTERNAL LININGS

Internal wall linings are paper-faced plasterboard. Ceiling linings are Pinex tiles. Generally the linings are in reasonable order but will require making good and complete redecoration.

WALL LININGS – MAKE GOOD, PREPARE & REDECORATE






CEILING LININGS – WATER STAINS

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MAKE GOOD CEILING LININGS & REDECORATE





THERMAL IMAGING RESULTS SATISFACTORY






10.0 INTERNAL JOINERY

Internal door joinery is a hollow core veneer door, typical for the circa with standard architrave, frame, conventional hinges and hardware.



DOOR JOINERY

11.0 PRESENCE OF ASBESTOS

No

12.0 FUMIGATION

Will the structure require fumigation - No

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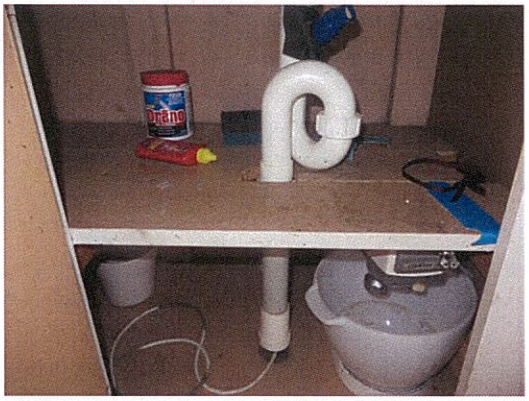
13.0 SERVICE AREAS

13.1 KITCHEN

The kitchen features a Formica bench top, timber cupboard and carcass units, standard plumbing and drainage, under-bench dishwasher, Simpson Apollo oven and ceramic cooktop. The units will require redecoration and the benches show ware.



KITCHEN – UNITS AGEING / REDECORATE

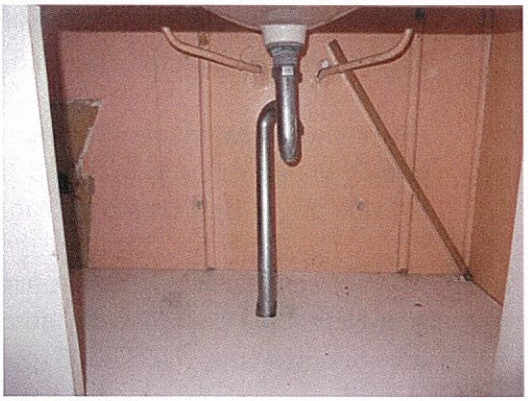


STANDARD PLUMBING & DRAINAGE

13.2 BATHROOMS

The bathroom includes a PVC bath/shower combined with Felton mix single levered fawcett, Formica bench top and basin with standard plumbing and drainage.





BATHROOM – VANITY AGEING

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13.3 TOILET

The toilet is a separate facility and includes a conventional dual flush wall mounted cistern on standard pan and wash basin. The rubber flexi joint to the toilet may require replacement.





TOILET – WALL CISTERN, STANDARD PAN – RECOMMISSION

14.0 RECOMMENDATIONS

1. We recommend the house be lifted and transported in accord with accepted trade and industry standards.

2. Resiting should be to an approved foundation system, site specific in accord to NZS 3604 and an approved design under the consent process.

3. Ensure siting is in accord with approved drawings and compares favourably with boundary rule 7.8.1.1 (District Plan).

4. Plumbing and drainage will require reconnection in accord with Plumbing and Drainage Act and to NZBC G1/AS1, G13, AS/NZS 1260 and 3500. Provide an As-Built drainage plan.

5. The hot water cylinder will require reinstatement/reconnection in accord with NZS 4603/3, NZS 3501 and NZS 2642.2 (PB) and NZS 4602 (low pressure systems), NZS 4603 (open vented).

6. Electrical services will require reconnection in accord with NZ Electrical standards, NZS 3000 and Regulations 1997 and the work should be issued with a Certificate of Compliance upon completion. Resecure the electrical distribution board.

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7. Install smoke detectors in accord with AS 3786. F7.

8. Compare insulation and adjust in accord with NZS 3604 H1 / R2 (Roof) and R1.9 (walls).

9. The roofing should be checked and any damage caused during transportation should be repaired including roof penetration, careful preparation and repainting in accord with NZS 3604 E2/AS1 to ensure continued weathertightness. Also repair and realign guttering.

10. Make good the cladding and any damage caused during transportation including careful preparation and repainting in accord with NZS 3604 E2 & B1 and Branz Bulletin 314 / NZBC E2 2.1.

11. Make good exterior window joinery, strip, ease, prepare and repaint in accord with NZS 4223.

12. Make good soffit linings.

13. Make good internal wall and ceiling linings in accord with NZS/AS 1859 & NZS 422.

14. Redecorate interior as required in accord with Branz Bulletin 314.

15. Make good and ease internal joinery to ensure correct functions are restored.

16. Complete re-establishing the building in accord with the building consent and any endorsements attached.

17. Ensure surface water is diverted away from the dwelling in accord with NZBC E1.

15.0 E2

Providing the cladding and roofing is made good upon resiting, weathertightness should be maintained.

16.0 B1

The building has performed reasonably well to date and has stood the test of time without serious component failure. It is therefore fair and reasonable to assume that the structure has proved to satisfy provisions under the NZ Building Act B1, B2.

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17.0 CONCLUSION

The structure is a reasonable example of a 1960's weatherboard and iron roof dwelling, of non-complex design with conventional framing and subfloor members. Maintenance, typical for the vintage and design is required but no serious component failure was noted. Moisture levels were satisfactory and thermal imaging showed no historic leak or dampness.

Providing the building is moved and reinstatement is completed in accord with accepted industry and trade standards, and the structure is kept well maintained and weathertight, we would suggest that the building will continue to perform in accord with its design potential.

Repairs should be completed by qualified tradespersons and in accord with industry standards and building code requirements.

The writer advised that he was not present during the design stages or the construction of the structure and therefore cannot extend any warranty or guarantee in regard to the performance of the cladding or any items not visible at the time of the inspection. The writer has used a surface scan moisture meter test system only and has not exposed any linings or conducted any invasive tests in regards to the cladding system.

Please note that this report must be read in conjunction with Terms and Conditions, Limitations included at the beginning of this report. Payment is required upon receipt of invoicing and confirms that you have read and accepted the Terms and Conditions and Limitations contained within this report.

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We trust this information is of assistance and sufficient for your requirements. Should you require any further information or have any queries, please do not hesitate to contact the writer.

Yours faithfully
Property Solutions Surveys Ltd



Rod Pratt
(BOINZ, CINZ)
ACCREDITED BUILDING SURVEYOR 20071801

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Phone: 64 9 486 2546 Fax: 64 9 486 2556
www.enggeo.co.nz

Ref: 8199

Megan Dryden
102 Settlement Road
KAIWAKA 0573

23 September 2016

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Dear Megan,

RE : 102 SETTLEMENT ROAD, KAIWAKA
TWO NEW BUILDING SITES FOR DWELLINGS
GEOTECHNICAL ASSESSMENT

1.0 INTRODUCTION

This report presents the results of a geotechnical investigation for two new building sites at 102 Settlement Road for the client Lynette Eileen Dheda. The location of the two proposed building sites was agreed on site with Megan Dryden.

The investigation has been carried out to assess the subsoil conditions on site and provide geotechnical recommendations for the proposed building sites.

2.0 SITE DESCRIPTION

The property is irregular shaped and located on the southern side of Settlement Road. There are existing dwellings on the eastern side of the property with access via a driveway commencing at the eastern boundary of the property by Settlement Road. The driveway extends southwards for about 130m then takes a right angle turn to the east where the property extends further eastwards. The two proposed building sites are located on the western side of the driveway before it takes the right angle turn as shown on the attached drawing numbers 8199-1 and 2. Site 1 is where the driveway turns east and Site 2 is by the entrance to the property.

The property generally falls to the west in a series of undulations and near level terraces to a low point along the western boundary. The steepest slopes are at about 1(v) in 4(h). The property is mainly covered in grass with occasional trees, mainly along the lower western boundary. There are signs of historic slope movement indicated by the undulating topography.

Building site 1 is located on a gentle sloping area falling to the north and west at between about 1(v) in 8(h) and 1(v) in 10(h). The ground surface on the lower northern site of the proposed building site appears to be wetter than the surrounding slopes indicating that there could be some preferential shallow seepage taking place in this area, or it is subject to greater stormwater runoff. There is no obvious indication of local shallow instability within or immediately adjacent to the building site but it could be located on a larg historical slump block.

Building Site 2 is also located on gentle sloping ground at about 1(v) in 10(h) or flatter but then becomes progressively steeper to the west where it reaches about 1(v) in 4(h) beyond the proposed building site. There is no indication of any instability within or immediately adjacent to the building site but some shallow historical instability could have taken place lower down the slope where it is steeper, as indicated by undulations on the slope.

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3.0 PROPOSED DEVELOPMENT

It is understood that lightweight timber framed single storey dwellings with suspended timber floors are proposed for each of the sites. The plan dimensions of the "Recommended Building Sites" shown on drawing numbers 8199-1 and 2 are specifically sized to accommodate the proposed dwellings.

4.0 FIELDWORK

The fieldwork was carried out on 14 September 2016 and comprised drilling 6 hand auger boreholes, designated BH1 to BH6, to practical refusal at depths of between 2.7m(BH3) and 3.4m(BH2). Pilcon hand shear vane tests were carried out at approximately 0.3m depth intervals and the soil encountered in the boreholes was logged by a field technician. Scala penetrometer tests were carried out from the bottom of the boreholes and they refused at between 3.0m and 5.1m depth.

The approximate location of the boreholes is shown on the attached drawing numbers 8199-1 and 2. Descriptions of the soils encountered in the boreholes together with the measured shear vane strengths are presented on the attached borehole log sheets together with the plots of the Scala penetrometer test results.

5.0 GROUND CONDITIONS

The IGNS geological map 2 "Whangarei" (2009) shows the site underlain by "undifferentiated melange" of the Northland Allochthon comprising predominantly Mangakahia Complex mudstones. These melange units have been tectonically displaced and generally comprise sheared mudstone with tectonic blocks of variable size. The ground conditions encountered in the hand auger boreholes comprised silty clay and clayey silt inferred to be derived from insitu weathering of the mudstone, and referred to as residual soil.

Topsoil to about 0.2m depth was observed in the boreholes. Underlying the topsoil is residual soil comprising very stiff to hard silty clay and clay silt to between 2.7 and 3.4m depth, where the boreholes reached practical refusal. Shear vane strengths in the residual soil varied from 100kPa to greater than 200kPa, the maximum range of the shear vane. Only one lower shear vane strength of 81kPa was recorded in BH1 at 1.2m depth. Scala penetrometer tests driven from the bottom of the boreholes reached practical refusal at between 3.0m and 4.2m depth at Site 1 and between 4.2m and 5.1m depth at Site 2. It is inferred that these tests terminated in the transitional material between residual soil and rock (eg. mudstone).

On completion of the fieldwork, and on the same day, the water level was measured at between 0.5m (BH1) and 1.7m (BH2) depth at Site 1 and 0.7m (BH4) and 2.3m (BH6) at Site 2. BH5 at Site 2 remained dry. These water levels are unlikely to have fully equalised with the groundwater table during the short period from drilling to measurement and

therefore the actual groundwater table is anticipated to be shallower than that measured. The water table will vary seasonally with the drier and wetter periods of the year.

It is considered that the soils on site will be moderately to highly reactive and classify as Class M to H1 in terms of AS 2870:2011.

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6.0 DISCUSSION

The Northland Allochthon soil and rock is prone to soil creep and instability and this is apparent from the general topography on site. Building platforms have been identified in areas considered to be suitably stable for development but could still potentially be prone to soil creep or relaxation due to creep on the nearby surrounding slopes. It is therefore recommended that the dwellings are founded on piled foundations with some of the piles downslope piles designed to resist possible lateral soil creep.

Any earthworks on site to form the building platforms should comprise only cut with no fill placed on the platform, or immediate surrounding slopes, unless approved and agreed by a Geotechnical Engineer. Any cuts greater than 1m depth, or where there is sloping ground above steeper than 1(v) in 8(h), should be retained.

7.0 DEVELOPMENT RECOMMENDATIONS

Our development recommendations are as follows.

1) It is recommended that the foundation and earthworks design for the new dwellings is reviewed and approved by a Geotechnical Engineer to confirm that it is suitable for the site and the recommendations included in this report have been correctly interpreted. It is also recommended that the location of any cut material spoiled on the site is agreed and approved by a Geotechnical Engineer to ensure that it does not result in any slope creep or instability that could affect the proposed building platforms.

   It is noted that the designated building sites have been sized to fit the proposed dwellings. Should a larger dwelling be required, or it is proposed to locate the dwelling beyond the designated area, then specific approval must be obtained from a Geotechnical Engineer for the enlarged/revised location and revised geotechnical recommendations may be required.

2) It is recommended that the soils on site are considered as Class H1 in terms of AS2870:2011, unless confirmatory swell testing is carried out, and all foundations, ground bearing slabs and services designed accordingly.

3) Earthworks to form the building platforms should comprise only cut with no fill placed on the platform, or immediate surrounding slopes, unless approved and agreed by a Geotechnical Engineer. Any cuts greater than 1m depth, or where there is sloping ground above steeper than 1(v) in 8(h), should be retained by a pole retaining wall, unless specifically agreed otherwise by a Geotechnical Engineer.

   It was noted that the lower ground on the northern side of Site 1 had relative wet surface ground conditions. Consideration may have to be given to diverting stormwater runoff away from this area and/or the installation of shallow subsoil drains.

4) Piled foundations may be designed for Ultimate Limit State using a Dependable Skin Friction of 18kPa (36kPa Ultimate) and Dependable End Bearing of 450kPa (900kPa

Ultimate) within the residual soil and underlying transitional material/rock. Skin friction to 0.6m depth and through any fill, whichever is greater, should be ignored. The piles should be founded a minimum depth of 3m or 7 pile diameters below finished ground level subject to inspection and confirmation by a Geotechnical Engineer.

It is recommended that the downslope perimeter piles, and all piles on ground steeper than 1(v) in 8(h), are designed to resist potential lateral soil creep pressure to 1.5m depth. The creep pressure should be taken as acting over 3 times the pile bore diameter. The required depth of pile embedment to resist the creep pressure may be calculated using the same design parameters given for the pole retaining wall design in recommendation (6) below. Where the piles are located in cut the depth of creep pressure may be reduced by the depth of cut (i.e. design for creep pressure to 0.5m depth if located in 1m of cut).

To install the piles to the required depth may include drilling through the underlying rock. Appropriate piling equipment will be required to penetrate the rock.

5) It is understood that the floor slabs for the dwelling are to comprise suspended timber floors. However, should the design be changed to ground bearing slabs then it is recommended that they are designed as fully suspended unless located in cut greater than 0.5m depth and subject to inspection and approval of the subgrade by a Geotechnical Engineer. Floor slabs should not be poured on subgrades which have been allowed to dry out and desiccate. The subgrade should therefore be covered by a layer of protective hardfill as soon as possible after excavation to control drying out or disturbance and remoulding of the subgrade soils under excessively wet conditions. Should cracking of clay subgrades of more than 10mm be observed, then the advice of a Geotechnical Engineer should be obtained before placing hardfill or pouring concrete.

6) The following design parameters may be adopted for pole retaining walls up to 1m in height on site. For retaining walls greater than this it is recommended that specific design recommendations are provided by a Geotechnical Engineer.

Effective cohesion	= 0
Effective friction angle	= 30 degrees
Unit weight of soil	= 18.0 kN/m^3
Undrained shear strength	= 80kPa (i.e. for embedment of pole walls)

A strength reduction factor of 0.5 should be applied to the passive resistance or undrained shear strength, depending on the wall design. The design of the wall must take into account the slope of the ground above and below the wall which will increase the pole embedment depth compared to an equivalent retained height with horizontal ground level using a Brom's type analysis.

7) The soils on the site are considered to be moderately to highly susceptible to seasonal shrinkage and swelling, the effects of which can be exacerbated by trees (especially exotic varieties), hedges and plants having a high water demand which should not be planted near shallow foundations and ground slabs as they can withdraw moisture from the soil and cause the foundations to settle. Trees should be planted no closer to the footings/slabs than 1.0 times the mature height of the tree. There will be little effect on piled foundations due to their much greater founding depth.

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8) Effluent disposal should be subject to specific design taking into account the site conditions.. We assess the site subsoil to be category 6 in terms of the definitions in TP58.

9) Any stormwater collected on site should either be stored for reuse or discharged via a pipe to the bottom of the slopes and dispersed in an approved manner. No concentrated flows of stormwater should be allowed to discharge uncontrolled over the slopes which could potentially precipitate soil creep or instability.

10) During excavation, earthworks and foundation construction the site should be inspected by a Geotechnical Engineer to confirm that the ground conditions are consistent with those on which the recommendations are based and provide advice on any other geotechnical issues that may become apparent during construction.

Where Engineering Geology Ltd is required to carry out site inspections during construction and provide certification or a Producer Statement – Construction Review, it is requested that we be supplied a copy of the Building Consent Conditions. We request that a minimum notification of 24 hours be given for any site inspections and note that we will be unable to issue a Producer Statement without site inspections at the appropriate stages during construction.

We note that site inspections during construction and associated certification are not included within the budget for the preparation of the geotechnical report and will be subject to additional costs.

8.0 LIMITATIONS

Recommendations and opinions in this report are based on 6 hand auger boreholes and Scala penetrometer tests. While the nature and continuity of the subsoil conditions away from the boreholes is inferred it is possible that the actual conditions could vary from those assumed. Should variations in the subsoil conditions described in this report be found to exist, or if the building proposal is altered significantly from that described to us on site, then it is essential that Engineering Geology Ltd be contacted as it may affect the design parameters recommended above and additional investigation may be required.

This report has been prepared solely for the benefit of Lynette Eileen Dheda as our client with respect to the proposed two building sites and Engineering Geology Ltd accepts no liability to any other party in relation to this report. The reliance by other parties on the information or opinions contained in this report shall, without our prior review and agreement in writing be at such parties' sole risk

Yours faithfully
ENGINEERING GEOLOGY LTD

Report prepared by Reviewed by

J A Yeats (CPEng) R Amigh (CPEng)

Encl Borehole logsBH1 to BH6 and Scala penetrometer logs
Borehole location plan – Dwg No.8099-1 and 2

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ENGINEERING GEOLOGY LTD

HAND AUGER LOG

BOREHOLE No.: BH1

SHEET 1 OF 1

Job No.: 8199

PROJECT: 102 Settlement Road, KAIWAKA

LOCATION: 102 Settlement Road, KAIWAKA

COORDINATES: **RL GROUND:** **DATE:** 14/09/2016

GRID: **DATUM:** **HOLE DEPTH:** 2.8m

GEOLOGICAL UNIT	SOIL MATERIAL DESCRIPTION	DEPTH / RL	GRAPHIC LOG	DEPTH (m)	MOISTURE CONDITION	CONSISTENCY / DENSITY	SAMPLES	WATER CONTENT (%)	WATER LEVEL	CORRECTED VANE SHEAR STRENGTH (kPa) ● Field Vane (BS 1377) ○ Remoulded Field Vane	FIELD TESTS
TS	Organic SILT; dark brown	0.0 0.2							0.50m, 14/09/2016		
	Silty CLAY; orange and light grey/light brown. Very stiff, moist, moderate plasticity.	-0.2 0.6			M						SV: 0.3m, Test 1 133 / - kPa (N/A)
	Clayey SILT; orange and light grey. Very stiff, moist, dry-moist.	-0.6 1.0		1	D-M	VSt			1.20m, 14/09/2016		SV: 0.6m, Test 2 117 / 39 kPa (3.0) SV: 0.9m, Test 3 144 / - kPa (N/A)
	Silty CLAY; light grey and orange. Very stiff, dry-moist, moderate plasticity.	-1.0 1.2									
	mottled light grey, orange, bright orange and grey with some dark brown, stiff, wet	-1.2 1.5			W	St					SV: 1.2m, Test 4 81 / 26 kPa (3.1)
	very stiff, saturated	-1.5 1.8			S	VSt					SV: 1.5m, Test 5 170 / - kPa (N/A) SV: 1.8m, Test 6 UTP
	Clayey SILT; dark grey/grey and brown. Hard, dry-moist, low-moderate plasticity.	-1.8 2.5		2	D-M	H					SV: 2.1m, Test 7 UTP SV: 2.4m, Test 8 UTP
	with some clay and sandfine), dry-moist	-2.5 2.8									SV: 2.8m, Test 9 UTP
	EOH: 2.80 m										

NOTES: E.O.B@2.8m (Too hard to auger). For ground conditions below 2.8m, refer to scala penetrometer log.

LOGGED: JWil **DRILL TYPE:** 50mm Hand Auger

CHECKED:

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HAND AUGER LOG

BOREHOLE No.: BH2

SHEET 1 OF 1

Job No.: 8199

PROJECT: 102 Settlement Road, KAIWAKA

LOCATION: 102 Settlement Road, KAIWAKA

COORDINATES: **RL GROUND:** **DATE:** 14/09/2016

GRID: **DATUM:** **HOLE DEPTH:** 3.4m

GEOLOGICAL UNIT	SOIL MATERIAL DESCRIPTION	DEPTH / RL	GRAPHIC LOG	DEPTH (m)	MOISTURE CONDITION	CONSISTENCY / DENSITY	SAMPLES	WATER CONTENT (%)	WATER LEVEL	CORRECTED VANE SHEAR STRENGTH (kPa) ● Field Vane (BS 1377) ○ Remoulded Field Vane (50 100 150)	FIELD TESTS
TS	Organic SILT; brown.	0.0 0.2									
	Silty CLAY; light grey with orange streaks. Very stiff, moist, moderate plasticity.	-0.2			M	VSt					SV: 0.3m, Test 1 136 / 31 kPa (4.5)
											SV: 0.6m, Test 1 125 / - kPa (N/A)
	brown with orange and grey streaks	0.8 -0.8									SV: 0.9m, Test 1 156 / 8 kPa (18.7)
	SILT sm clay; grey, orange streaks. V. stiff, dry-moist, low plast	1.0 -1.0 1.1		1							
	Silty CLAY; brown with minor orange and grey streaks. Hard, dry-moist, moderate plasticity	-1.1			D-M	H			1.70m, 14/09/2016		SV: 1.2m, Test 1 UTP
		1.6									SV: 1.5m, Test 1 UTP
	SILT with minor clay; grey with orange patches. Hard, dry, friable.	-1.6 1.8			D						SV: 1.8m, Test 1 136 / 33 kPa (4.1)
	Silty CLAY; brow, grey and dark orange. Very stiff, dry, friable.	-1.8 2.0		2		VSt					
Melange (Northland Allochthon)	Clayey SILT; dark grey with orange streaks. Hard, moist, low plasticity.	-2.0 2.2			M						SV: 2.1m, Test 1 UTP
	no streaks, dry-moist	-2.2				H					SV: 2.4m, Test 1 UTP
	very stiff	2.7 -2.7			D-M						SV: 2.7m, Test 1 150 / 56 kPa (2.7)
				3		VSt					SV: 3.0m, Test 1 142 / - kPa (N/A)
	hard	3.3 -3.3 3.4				H					SV: 3.3m, Test 1 200+ kPa

EOH: 3.40 m

NOTES:

LOGGED: S.D **DRILL TYPE:** 50mm Hand Auger

CHECKED:

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HAND AUGER LOG

BOREHOLE No.: BH3

SHEET 1 OF 1

Job No.: 8199

PROJECT: 102 Settlement Road, KAIWAKA

LOCATION: 102 Settlement Road, KAIWAKA

COORDINATES: **RL GROUND:** **DATE:** 14/09/2016

GRID: **DATUM:** **HOLE DEPTH:** 2.7m

GEOLOGICAL UNIT	SOIL MATERIAL DESCRIPTION	DEPTH / RL	GRAPHIC LOG	DEPTH (m)	MOISTURE CONDITION	CONSISTENCY / DENSITY	SAMPLES	WATER CONTENT (%)	WATER LEVEL	CORRECTED VANE SHEAR STRENGTH (kPa) ● Field Vane (BS 1377) ○ Remoulded Field Vane (50 100 150)	FIELD TESTS
TS	Organic SILT; dark brown	0.0 *0.2*									
Melange (Northland Allochthon)	Silty CLAY; orange and light grey. Very stiff, moist, moderate plasticity.	-0.2		1	M	VSt			1.20m, 14/09/2016	● 0.3m	SV: 0.3m, Test 1 157 / - kPa (N/A)
										● 0.6m	SV: 0.6m, Test 2 157 / 65 kPa (2.4)
										● 0.9m	SV: 0.9m, Test 3 107 / - kPa (N/A)
	hard	*1.2* -1.2				H				● 1.2m	SV: 1.2m, Test 4 200+ kPa
	mottled orange, light grey, dark brown and grey, very stiff	*1.5* -1.5				VSt				● 1.5m	SV: 1.5m, Test 5 183 / 72 kPa (2.5)
		1.8								● 1.8m	SV: 1.8m, Test 6 200+ kPa
	Clayey SILT; dark grey/grey. Hard, dry, low-moderate plasticity, friable.	-1.8		2	D	H				● 2.1m	SV: 2.1m, Test 7 UTP
										● 2.4m	SV: 2.4m, Test 8 UTP
	some clay; grey, low plasticity	*2.6* -2.6 2.7								● 2.7m	SV: 2.7m, Test 9 UTP

EOH: 2.70 m

NOTES: E.O.B@2.7m (Too hard to auger). For ground conditions below 2.8m, refer to scala penetrometer log.

LOGGED: JWil **DRILL TYPE:** 50mm Hand Auger

CHECKED:

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HAND AUGER LOG

BOREHOLE No.: BH4

SHEET 1 OF 1

Job No.: 8199

PROJECT: 102 Settlement Road, KAIWAKA

LOCATION: 102 Settlement Road, KAIWAKA

COORDINATES: **RL GROUND:** **DATE:** 14/09/2016

GRID: **DATUM:** **HOLE DEPTH:** 3.2m

GEOLOGICAL UNIT	SOIL MATERIAL DESCRIPTION	DEPTH / RL	GRAPHIC LOG	DEPTH (m)	MOISTURE CONDITION	CONSISTENCY / DENSITY	SAMPLES	WATER CONTENT (%)	WATER LEVEL	CORRECTED VANE SHEAR STRENGTH (kPa) ● Field Vane (BS 1377) ○ Remoulded Field Vane (50 100 150)	FIELD TESTS
TS	Organic SILT; brown.	0.0 0.2									
Melange (Northland Allochthon)	Silty CLAY; grey with orange streaks. Very stiff, moist, moderate plasticity.	-0.2		1	M	VSt			0.70m, 14/09/2016		SV: 0.3m, Test 1 139 / 44 kPa (3.1) SV: 0.6m, Test 1 111 / - kPa (N/A) SV: 0.9m, Test 1 108 / 39 kPa (2.8) SV: 1.2m, Test 1 111 / - kPa (N/A) SV: 1.5m, Test 1 128 / 47 kPa (2.7)
		1.6									
	Clayey SILT; grey with orange streaks. Very stiff, moist, low plasticity.	-1.6									SV: 1.8m, Test 1 131 / 61 kPa (2.1)
		2.0		2							
	with some clay, hard, dry-moist	-2.0 2.2									SV: 2.1m, Test 1 UTP
	clayey	-2.2 2.4				H					SV: 2.4m, Test 1 0+ kPa
	with some clay, dark grey and dark orange	-2.4 2.5			D-M						
	dark grey	-2.5 2.6									
	clayey, very stiff	-2.6				VSt			3.00m, 14/09/2016		SV: 2.7m, Test 1 167 / 53 kPa (3.2)
		2.9									
	with reddish brown streaks	-2.9 3.0		3							SV: 3.0m, Test 1 UTP
	hard, saturated	-3.0			S	H					
		3.2									

EOH: 3.20 m

NOTES:

LOGGED: S.D **DRILL TYPE:** 50mm Hand Auger

CHECKED:

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HAND AUGER LOG

BOREHOLE No.: BH5

SHEET 1 OF 1

Job No.: 8199

PROJECT: 102 Settlement Road, KAIWAKA

LOCATION: 102 Settlement Road, KAIWAKA

COORDINATES: **RL GROUND:** **DATE:** 14/09/2016

GRID: **DATUM:** **HOLE DEPTH:** 2.8m

GEOLOGICAL UNIT	SOIL MATERIAL DESCRIPTION	DEPTH / RL	GRAPHIC LOG	DEPTH (m)	MOISTURE CONDITION	CONSISTENCY / DENSITY	SAMPLES	WATER CONTENT (%)	WATER LEVEL	CORRECTED VANE SHEAR STRENGTH (kPa) ● Field Vane (BS 1377) ○ Remoulded Field Vane (50 100 150)	FIELD TESTS
TS	Organic SILT; brown.	0.0 0.2									
Melange (Northland Allochthon)	Silty CLAY; grey with orange streaks. Very stiff, moist, moderate plasticity.	-0.2		1	M	VSt			Groundwater Not Encountered	● 100 kPa	SV: 0.3m, Test 1 100 / 47 kPa (2.1)
										● 139 kPa	SV: 0.6m, Test 1 139 / 39 kPa (3.6)
		1.1								● 142 kPa	SV: 0.9m, Test 1 142 / - kPa (N/A)
	Clayey SILT; light grey with orange streaks. Very stiff, dry-moist, low plasticity	-1.1			D-M					● 167 kPa	SV: 1.2m, Test 1 167 / 33 kPa (5.0)
		1.4									
	with some clay; hard	-1.4									SV: 1.5m, Test 1 UTP
		1.6									
	with minor clay and sand (fine), grey with orange and minor black streaks, dry	-1.6		2	D						SV: 1.8m, Test 1 UTP
		2.0									
	Silty CLAY; grey with black and orange streaks. Hard, moist, moderate plasticity.	-2.0				H					SV: 2.1m, Test 1 200+ kPa
		2.2									
	red and grey with orange and black streaks	-2.2			M						SV: 2.4m, Test 1 UTP
		2.5									
	reddish brown and dark grey	-2.5									SV: 2.7m, Test 1 UTP
		2.8									

EOH: 2.80 m

NOTES:

LOGGED: S.D **DRILL TYPE:** 50mm Hand Auger

CHECKED:

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HAND AUGER LOG

BOREHOLE No.: BH6

SHEET 1 OF 1

Job No.: 8199

PROJECT: 102 Settlement Road, KAIWAKA

LOCATION: 102 Settlement Road, KAIWAKA

COORDINATES: **RL GROUND:** **DATE:** 14/09/2016

GRID: **DATUM:** **HOLE DEPTH:** 2.8m

GEOLOGICAL UNIT	SOIL MATERIAL DESCRIPTION	DEPTH / RL	GRAPHIC LOG	DEPTH (m)	MOISTURE CONDITION	CONSISTENCY / DENSITY	SAMPLES	WATER CONTENT (%)	WATER LEVEL	CORRECTED VANE SHEAR STRENGTH (kPa) ●Field Vane (BS 1377) ○Remoulded Field Vane (50 100 150)	FIELD TESTS
TS	Organic SILT; dark brown	0.0 0.1									
Melange (Northland Allochthon)	Silty CLAY; orange and light grey. Hard, moist, moderate plasticity.	-0.1				H					SV: 0.3m, Test 1 200+ kPa
											SV: 0.6m, Test 2 200+ kPa
		0.9									SV: 0.9m, Test 3 131 / 39 kPa (3.3)
	very stiff	-0.9		1	M	VSt					
		1.2									SV: 1.2m, Test 4 200+ kPa
	hard	-1.2									
		1.4									SV: 1.5m, Test 5 200+ kPa
	Clayey SILT with minor sand(fine); mottled light grey, orange, brown and bright orange. Hard, moist, moderate plasticity.	-1.4									
		1.6									SV: 1.8m, Test 6 200+ kPa
	light grey with bright orange and dark brown patches	-1.6									
		1.8									SV: 2.1m, Test 7 200+ kPa
	grey with light brown/light grey streaks, saturated	-1.8		2		H			2.30m, 14/09/2016		
		2.1			S						SV: 2.4m, Test 8 UTP
	dark grey	-2.1									
		2.5									SV: 2.7m, Test 9 UTP
	some clay; grey, dry, low plasticity, friable	-2.5			D						
		2.8									

EOH: 2.80 m

NOTES: E.O.B@2.8m (Too hard to auger). For ground conditions below 2.8m, refer to scala penetrometer log.

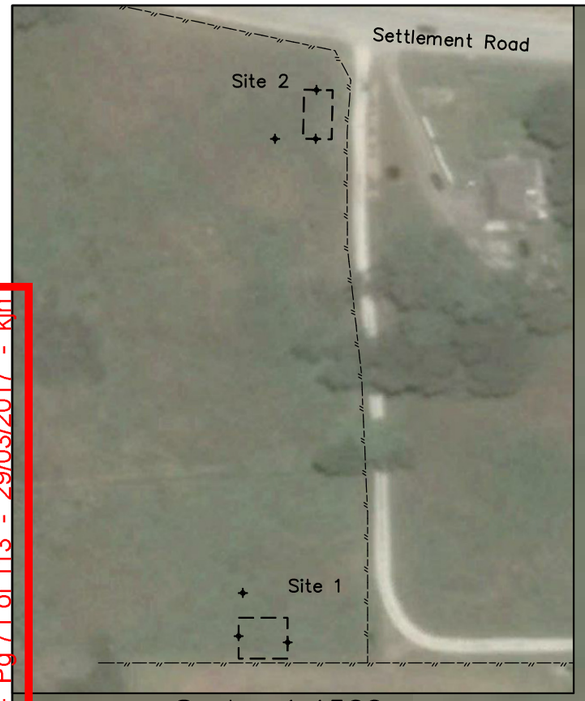
LOGGED: JWil **DRILL TYPE:** 50mm Hand Auger

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Scale: 1:1500

To Settlement Road

N

Gravel Driveway

Fence

BH3

12m

10m

BH2

BH1

Recomended Building Site

1m

20m

Fence

Notes:
1. This drawing is for Information only and it is not issued for Construction.
2. The location and alignment of the structures, boundaries and the underground and above ground services shown in this drawing are approximate only and shall be verified and confirmed on site prior to any excavation and construction work.

Legend

BH1 Hand Auger Borehole

Recommended Building Site

0 3 5 10 15m

Scale 1:250

Reference:
Google Earth
Date: Sept 2016

ENGINEERING GEOLOGY LTD
Unit 7C, 331 Rosedale Rd, PO Box 301054, Albany
Ph (09)486-2546, Fax (09)486-2556

(Site 1) 102 Settlement Road, KAIWAKA
Borehole Location Plan

Drawing No.	8199-1
Date:	Sept 2016
Drawn:	JWil
Scale:	1:250 (A3)
Filename:	8199-1.dwg

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Scale: 1:1500

SETTLEMENT ROAD

Fence

N

4m

BH4

Recomended Building Site

12m

3m

Fence

BH6

BH5

7m

Gravel Driveway

Notes:
1. This drawing is for Information only and it is not issued for Construction.
2. The location and alignment of the structures, boundaries and the underground and above ground services shown in this drawing are approximate only and shall be verified and confirmed on site prior to any excavation and construction work.

Legend

BH1 Hand Auger Borehole

Recommended Building Site

0 3 5 10 15m

Scale 1:250

Reference:
Google Earth
Date: Sept 2016

ENGINEERING GEOLOGY LTD
Unit 7C, 331 Rosedale Rd, PO Box 301054, Albany
Ph (09)486-2546, Fax (09)486-2556

(Site 2) 102 Settlement Road, KAIWAKA
Borehole Location Plan

Drawing No.	8199-2
Date:	Sept 2016
Drawn:	JWil
Scale:	1:250 (A3)
Filename:	8199-1.dwg

RESIDENCE 'A'

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PROPERTY SOLUTIONS

To Whom It May Concern:

Please find enclosed your Independent Building Report.

We trust the information will be of assistance to you, if we can be of any further assistance please do not hesitate to contact our office.

Best regards,

The Inspections Team
Property Solutions Surveys Ltd

- Painting / Waterproofing
- Roof repair services
- Building Inspections
- Safe & Sanitary Reports
- Final Sign-Offs
- Reports to Council
- Land Information Search
- Structural Reports
- Seismic (IEP) Surveys
- Engineers Reports
- Draughting
- Building Maintenance

Property Solutions

Office:
29F Cartwright Road,
Glen Eden

Postal Address:
P.O. Box 83003.
Edmonton. 0652

Phone:
(09) 818-4873

Fax:
(09) 813-0963

Email:
info@propertysolutions.co.nz

Web:
www.propertysolutions.co.nz

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Report Prepared For: Lynette Dheda

Date of inspection: 25th January 2017

INDEPENDENT BUILDING INSPECTION/SECOND HAND STRUCTURAL REPORT

CW 364, Craig Walker Building Removals
1 Weza Lane, Kumeu



Following our recent inspection of the above-mentioned property we submit our report and findings and confirm the following.

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Dear Lynette

Property Solutions Surveys Ltd services have been engaged to carry out an Independent Second Hand Building Inspection of the property located at Craig Walker Building Removals, Kumeu.

Please take note of the following Terms and Conditions, and that acceptance of this report constitutes an acceptance of the following conditions.

Any Independent Building Inspection/Structural Report **("Report")** prepared by Property Solutions Surveys Ltd ("we", "us" or "our") shall be deemed to include these Terms and Conditions. Property Solutions Surveys Ltd will not issue any reports except on their terms and conditions.

Scope of this Report

1. This Report
   a. This report has been prepared on the basis of a visual inspection of the building work using normal readily available access and without testing of components for the assessment of the overall structural condition of the building work and associated items, and without recourse to the construction drawings. It is confirmed that no detailed geotechnical investigation has been included in the brief. An investigation of the condition and location of underground drainage and services and of electrical, gas and plumbing (except as otherwise described in this report) is not included in the brief. No warranty can be given to any other defects not apparent to visual inspection at the time i.e. inside linings or cavities. Please note that we do not remove or uplift any fixtures, i.e. panels or carpets and we are unable to assess any hidden membranes or waterproofing below finished ground level.

      Although Property Solutions include plumbing, drainage, and electrical components, it is advised that they are not Registered Drain layers or Qualified Electricians. No warranty or guarantee is expressed or issued for these components.

      The conclusions and recommendations given do not necessarily meant that the items of building work will meet the requirements of the current Building Code. The reliance by other parties on the information or opinions contained in this report shall, without our prior review and agreement in writing, be at such party's sole risk.

   b. This is a preliminary non-invasive investigation for visible Defects, if any visible Defect is detected, this may be followed up at the **election of the customer** with further invasive or non-invasive investigations carried out by certified contractors. A non-invasive moisture reading is not a conclusive indication that moisture is present, in some cases hidden metals or chemical preservatives may affect a non-invasive capacitance moisture meter. The non-invasive moisture meter will only read moisture content up to 24mm to the wall, therefore some moisture in the wall could be missed if not within the vicinity of 24mm of the interior walls. Weather conditions could also affect the outcome of readings taken.
   c. Prices given for remedial work on faulty items are to serve as a guild only and it is recommended that quotations be obtained from suitably qualified tradespersons for the areas identified. Although these costings may be used in negotiations with vendors we do not accept responsibility for variation in prices received by contractors tendering for the work.
   d. The inspect is restricted to areas that have available access and will not include the removal of wall linings, building paper or insulation or any other covering or lining material. It cannot include **CONCEALED** plumbing, piping, drainage, and electrical items. Flint coat waterproofing or underground sealants commonly used in basement developments and associated drainage below ground cannot be accurately assessed.
   e. If ready access was not possible into the ceiling cavity or subfloor areas, they will be identified and excluded from the report.
   f. This report does not provide any guarantee whatsoever that items surveyed i.e. structures, services, fittings fixed or otherwise will not fail at some later date and information herein pertains strictly to observations on the day of inspection and accessibility.

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g. This report does not purport to certify the soil stability or conditions of underground services including underground protective coatings, which are not able to be included. It assumes compliance in all aspects with Territorial Authority Ordinances / The Building Act 1991, and does not certify that all building improvements lie within the title boundaries. Furthermore, this report assumes that a Territorial Authority Land Information Memorandum (LIM) / Project Information Memorandum (PIM) would not reveal any non-complying features and/or requisitions.
h. The positioning of the building or improvements in relation to the site boundaries are excluded but can be checked upon request.
i. Electrical and plumbing to pools and spas are not included in this report and we suggest independent professional advise be sought.
j. We are unable to carry out any probe or destructive testing, nor move any furnishings or appliances, in a visual inspection.
k. The inspection and report are not intended to be technically exhaustive, or to imply that every component was inspected, or that every possible defect was discovered. No disassembly of equipment, opening of walls, moving of furniture, appliances or stored items, or excavation will be preformed. All components and conditions, which by nature of their location are concealed, camouflaged, or difficult to inspect, are excluded from this report.
l. Systems and conditions which are not within the scope of the building inspection include, but are not limited to: formaldehyde, lead paint, asbestos, toxic or flammable materials, and other environmental hazards pest infestation, playground equipment efficiency measurements of insulation or heating and cooling equipment, internal or underground drainage or plumbing, any systems which are shut down or otherwise secured; water wells (water quality and quantity), zoning ordinances; intercom; security systems; heat sensors; cosmetics or building code conformity. Any general comments about these systems and conditions are informational only and do not represent an inspection.

Limits of this Report

2. This Report
   a. Is only for the benefit of the customer who instructed Property Solutions to prepare the Report and may not be relied upon by any other party.
   b. Is not designed or intended to identify potential problems or issues within the Area other than the Defects and, without limitation, will not:
      i. Identify the presence or absences of dry/wet rot or any hazardous substance including, without limitation, mould toxins, carcinogens, noise or other contaminants;
      ii. Identity the presence or absences of any pests including, without limitation, wood damaging organisms, rodents or insects;
      iii. Determine the effectiveness of any equipment, utility, component or system installed to control leaks, moisture, heat loss, dry rot or hazardous substances;
      iv. Determine the life expectancy or future condition of any equipment, utility component or system; and
      v. Determine compliance or non-compliance with any statutory or regulatory requirement, code, bylaw, ordinance or other restriction; and

   c. Does not contain any advise, and cannot be relied on for any advise, relating to;
      i. Any methods, materials or cost of the repair of any Defect;
      ii. The suitability of the building for any specialised use;
      iii. The market value or marketability of the building; and
      iv. The advisability or inadvisability of the sale or purchase of the building.

Limits to our Obligations

3. In conducting our inspection, the customer acknowledges and agrees that we will not be required to:
   a. Disturb or move any insulation, panels, furniture, personal items, equipment, vegetation or other items or materials that obstruct access or visibility to the thermal inspection; and
   b. Operate any equipment, utility, component, or system that is shut down, inoperable or that does not respond to normal operating controls.

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Exclusion of Implied Conditions and Warranties and Limitation of Liability

4. Where the customer is engaging our services for business purposes, the Consumer Guarantees Act 1993 (the "Act") will not apply.
5. If the customer is a consumer under the Act, to the extent that the customer's rights under the Act have not been excluded in clause 4 above, nothing in these terms and conditions will affect the rights of the customer under the Act.
6. Subject to clause 5:
   a. The customer relies upon their own knowledge, skill or judgement in relation to the particular use or suitability of this Report for the customers purpose: and
   b. All warranties, descriptions, representations, or conditions; whether imp0lied by the Sale of Goods Act 1908 or otherwise are expressly excluded to the fullest extent permitted by law.
7. Save as expressly provided otherwise in this Report or these Terms and Conditions, we shall not be liable, and none of our employees or contractors shall be liable to any customer, the customer's agents or employees or any other person for any direct, indirect, incidental or consequential damage or loss of any nature how so ever caused, (whether based on tort (including negligence), contract or otherwise), including but not limited to loss of profits, loss of sales opportunity, damage to equipment or property (including any cost or loss relating to any invasive inspection) or any other claim whatsoever arising directly or indirectly or in any way attributable to the performance or non-performance of our services or other obligations.
8. If, for any reason we are found to be liable to the customer or any other person in connection with this Report and/or the performance or non-performance of our services and we are unable to rely on the exclusions of liability set out in these Terms and Conditions, our liability shall in all cases be limited to the price paid or payable by the customer for such Report or services.

Moisture Meters and Weather tightness

The report cannot give any water proofing guarantee, as it is not readily possibly nor required to create simulated conditions to induce moisture ingress. However, signs of moisture ingress are looked for and spot checking is carried out predominantly around windows, doors and identified risk areas with a moisture meter.

The moisture meter used during the inspection is a Wagner L606 which is calibrated in accordance with manufacturer's specifications, this device is used for non-invasive test, and while this is deemed non-conclusive, it can be a good indicator of the presence of moisture. However, the condition and treatment type of any internal timbers is not known.

Definition of terms used for indications of moisture readings are as follows:-

- ✓ Normal – Generally indicates moisture readings up to approximately 16%
- ✓ Slightly High – Generally indicates moisture readings between 17 to 22%
- ✓ Higher – Generally indicates moisture readings between 23 to 30%
- ✓ Very High – Generally indicates moisture readings 30% and above

Accurate moisture readings can only be obtained by intrusive means, which is not carried out during the inspection, unless requested and permission had been given by vendors/property owners. However, where slight high or greater moisture readings are indicated during the inspection, further investigation would be required to determine the source of the readings, and this would also require permission from vendor/property owner(s) before further action is taken.

It is important to be aware that the lack of moisture indicators does not confirm that a property does not have moisture issues. Because water accumulates and travels immediately behind the external cladding, the external cladding is ideally what should be tested. However, this is not practical, nor possible with some claddings and weather conditions, therefore the meters are predominantly used from the interior of the home. A visual inspection and non-invasive testing may provide no initial evidence of leaking, knowledge of known weather tight risk details and/or signs to look for become more critical. Further investigation will be recommended where there is sufficient evidence and concern that it may reveal signs of severe moisture penetration.

Regards
Property Solutions Surveys Ltd

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1.0 INTRODUCTION

The subject structure comprises a single level, three bedroom dwelling scheduled for relocation. Construction includes fibre cement weatherboard cladding, iron roofing and timber joinery.

Councils will require a second hand building report to identify any defects or issues that may be pertinent to the structure's weathertightness and its desirability for its proposed new site.

The purpose of this report is to identify any decay or defective items that would not be acceptable on the proposed relocation site or neighbourhood / community. The primary focus will be upon visible defects or items that may require remedial work following relocation in order to comply or receive approval from the tertiary authorities control area. Ideally Councils would require the building to meet certain criteria and standards and any defective items, particularly those relating to weathertightness, or the aesthetics of the building may require upgrading following relocation.





SINGLE LEVEL, THREE BEDROOM WEATHERBOARD & IRON ROOF DWELLING SCHEDULED FOR RELOCATION







PROPERTY SOLUTIONS

- Painting / Waterproofing
- Roof repair services
- Building Inspections
- Safe & Sanitary Reports
- Final Sign-Offs
- Reports to Council
- Land Information Search
- Structural Reports
- Seismic (IEP) Surveys
- Engineers Reports
- Draughting
- Building Maintenance

Property Solutions

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www.propertysolutions.co.nz

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2.0 BRIEF OVERVIEW

2.1 TYPE OF BUILDING - DWELLING

2.2 PRESENT LOCATION – CRAIG WALKER BUILDING REMOVALS YARD, KUMEU

2.3 PROPOSED USE - DWELLING

2.4 CHANGE OF USE - NO

2.5 DESCRIPTION -

A. EXTERIOR CONSTRUCTION
- CLADDING – FIBRE CEMENT WEATHERBOARDS
- JOINERY – TIMBER & ALUMINIUM
- SPOUTING - PVC
- ROOFING - IRON
- ROOF TYPE - HIP

B. INTERIOR CONSTRUCTION
- FRAMING - TIMBER
- LININGS – PAPER-FACED PLASTERBOARD
- CEILINGS – PINEX SOFT BOARD
- ROOF SUPPORT – TRUSS & RAFTER DETAIL

C. EXTERIOR APPEARANCE
- ROOF – MAKE GOOD, REPAIR, PREPARE & REPAINT
- WALLS – MAKE GOOD, REPAIR, PREPARE & REPAINT
- JOINERY – REPAINT TIMBER JOINERY

D. INTERIOR APPEARANCE
- WALLS – REASONABLE CONDITION – MAKE GOOD, REDECORATE
- CEILINGS – REASONABLE CONDITION – MAKE GOOD REDECORATE
- DOORS – REASONABLE CONDITION

2.6 PLUMBING & DRAINAGE
- CURRENT – STANDARD UNDER-BENCH PLUMBING
- WATER CYLINDER – NOT SIGHTED

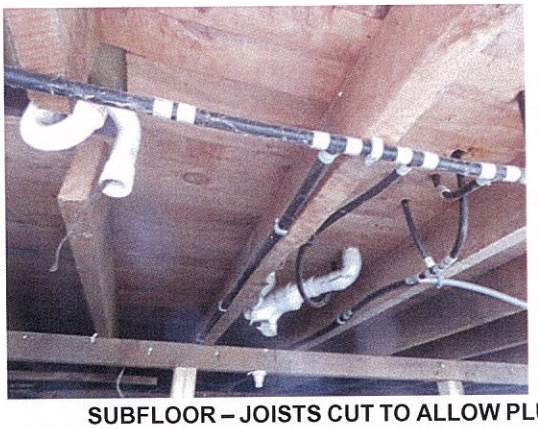
2.7 WILL THE STRUCTURE REQUIRE CUTTING TO ENABLE TRANSPORTATION - YES

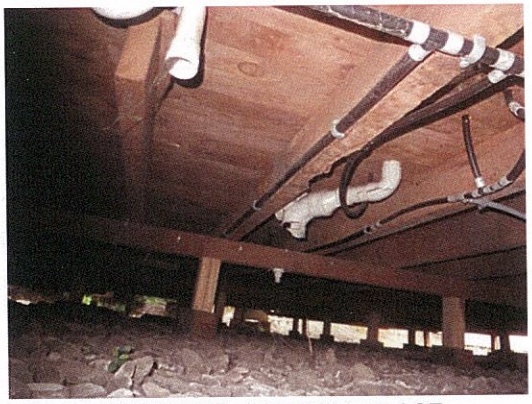
2.8 MOVING CONTRACTOR – CRAIG WALKER BUILDING REMOVALS

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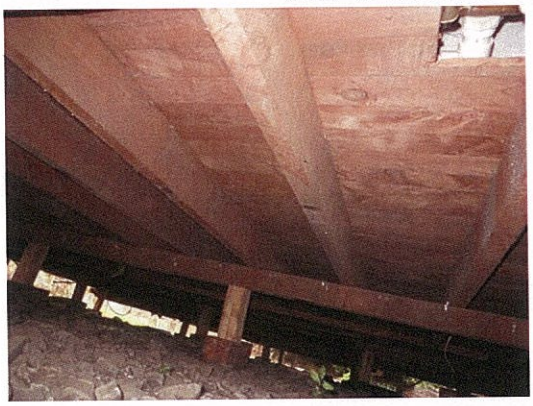
3.0 FOUNDATION & SUBFLOOR

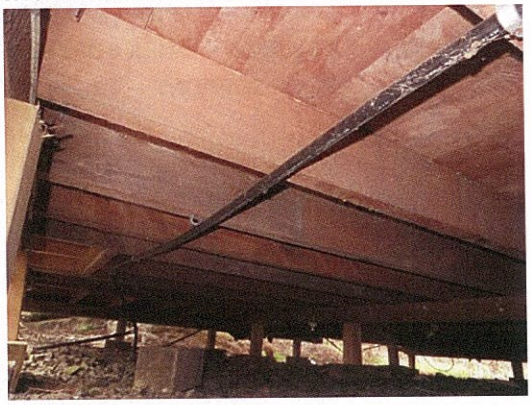
The foundation/subfloor includes standard bearers of 75x100 and joists of 150x50 at 450 centres. Flooring is tongue and groove timber. Flooring to the kitchen area is particle board. The subfloor is not insulated and has no damp proof course. However the timbers are native, in reasonable order and show no rot or decay. A revised grid style foundation, site specific will be required upon resiting.

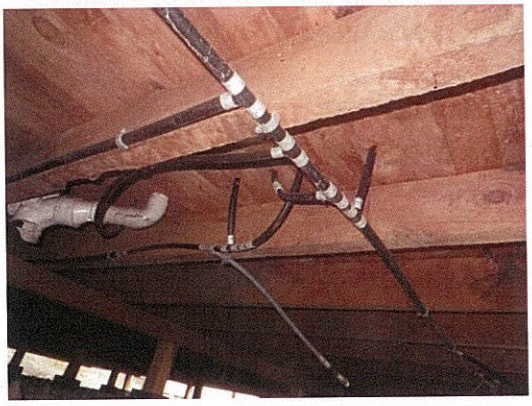




SUBFLOOR – JOISTS CUT TO ALLOW PLUMBING & DRAINAGE - AMEND/REPLACE JOIST, BEARER & TONGUE & GROOVE FLOORING / NON-INSULATED
STEP UP KITCHEN – PARTICLE BOARD FLOORING







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4.0 CLADDING & JOINERY

4.1 CLADDING

The cladding features fibre cement weatherboard cladding which has been partially removed to allow transportation and reinstated to the front elevation but incomplete. The house has also been cut to enable transportation and generally the weatherboards show the need for repair work. Following resting the building envelope should be checked thoroughly and made good in order to maintain weathertightness. Repairs along with careful preparation and repainting will be required. Prior to painting, any rusting or damaged soakers should be replaced. The meter board has no formalised flashing and relies upon sealant.

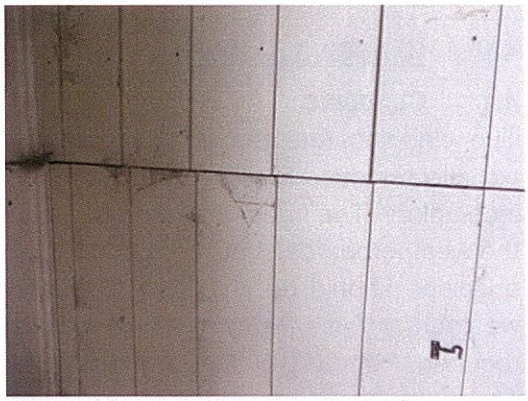
The soffit linings are fibre cement sheeting and will require repair following resiting.




FIBRE CEMENT WEATHERBOARD CLADDING – MAKE GOOD ON SITE / PREPARE & REPAINT

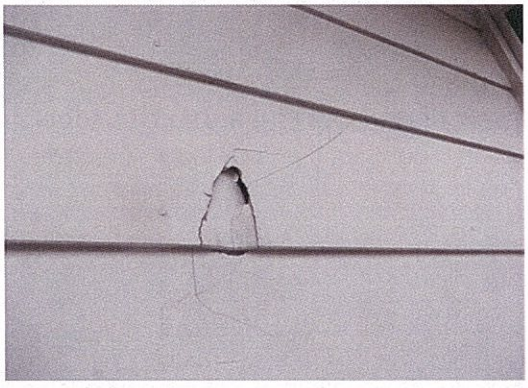



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FIBRE CEMENT WEATHERBOARD CLADDING – MAKE GOOD ON SITE / PREPARE & REPAINT





SOFFIT DETAIL

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4.2 JOINERY

Some original window joinery remains in timber with pivot type sash, standard scribe detail and sill. The timber joinery will require easing, careful preparation and repainting following resting to enable correct functions. The balance of the joinery is in aluminium and feature standard glazing seals and weather strips. The head flashing detail is incorporated into the frieze board. The aluminium joinery appears to be reasonably secure although no scribes have been installed. The scribe detail has been sealed with a sealant except for the bi-folding rear doors to the lounge which have no scribe but have protection from an enhanced soffit width.



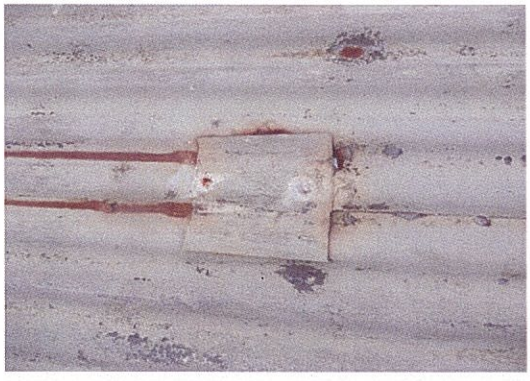


TIMBER WINDOW JOINERY – CHECK FUNCTIONS, EASE, PREPARE & REPAINT

5.0 ROOFING

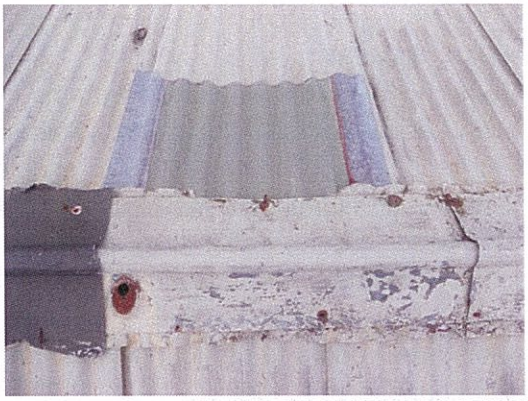
5.1 ROOFING EXTERIOR

The roofing is a corrugated iron detail, set in a hip configuration with standard ridge cap detail. The roof is showing general ageing and weathering and some repairs will be required including replacement of any rusting lead head nail fixings, rusting sheets or ridge capping, making good any penetration points, i.e. chimney and careful preparation and repainting.

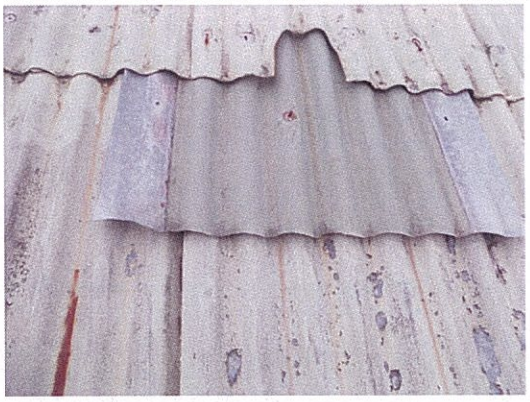




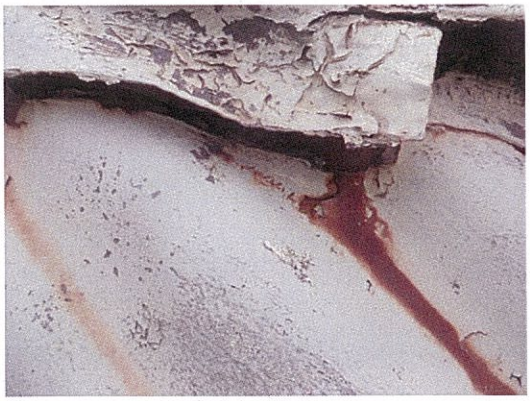
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ROOFING – MAKE GOOD, REPLACE RUSTING SHEETS & RIDGE, RESECURE FLUE PENETRATIONS








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REPLACE RUSTING NAILS



REPLACE RUSTING NAILS



PREPARE & REPAINT

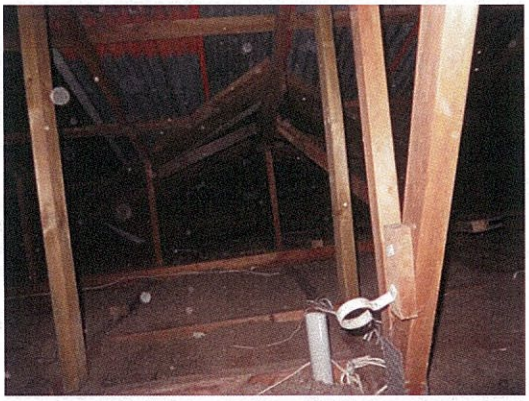




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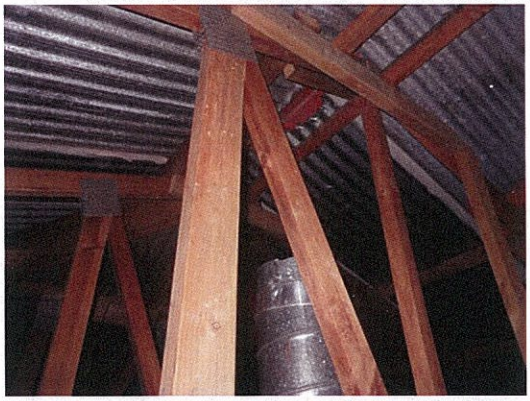
5.2 CEILING CAVITY

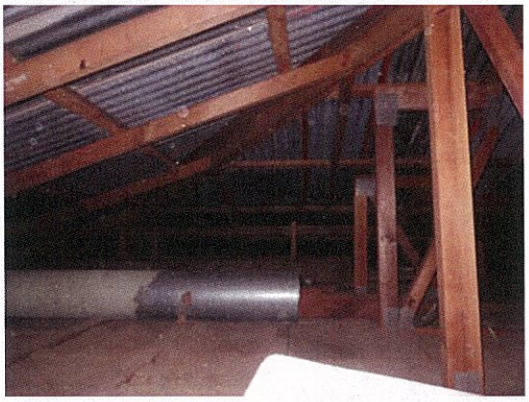
The roof support mechanism comprises a combination of rafter and truss design with original rafters of 100x50 with subsequent alterations and trusses of 100x50 upper and lower cords. The fixings should be checked upon resiting and reconnect the split sections of the building. Insulation is installed of a loose fill type.

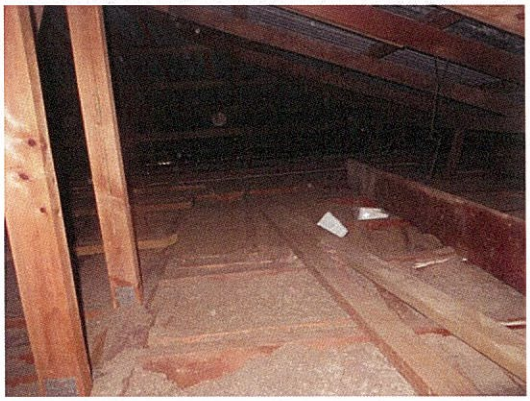


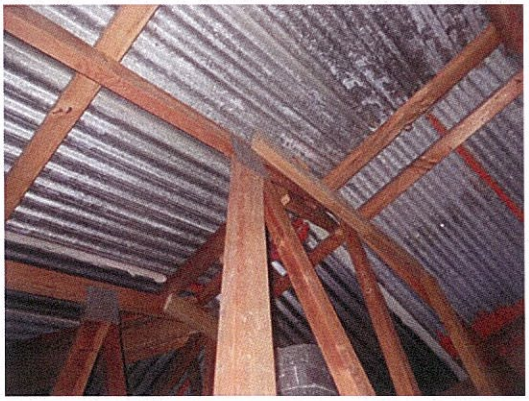


CEILING CAVITY – ORIGINAL RAFTERS, SUBSEQUENT ALTERATIONS TRUSS, LOOSE FILL INSULATION – CHECK, RECONNECT SPLIT SECTIONS & MAKE GOOD

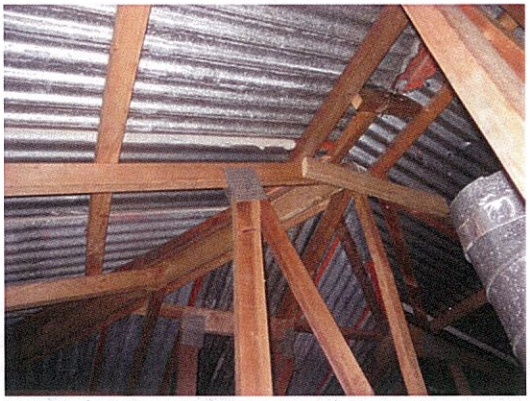








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CEILING CAVITY

6.0 PLUMBING & DRAINAGE

PVC guttering circumnavigates the building and provides stormwater catchment, connecting to 80mm downpipes. The guttering is showing ageing and brittleness and should be made good on site and possible re-alignment to ensure stormwater runs correctly to each of the downpipe provisions. A formalised stormwater connection will be required.

.

The hot water cylinder will require reinstatement upon resiting.

7.0 ELECTRICAL

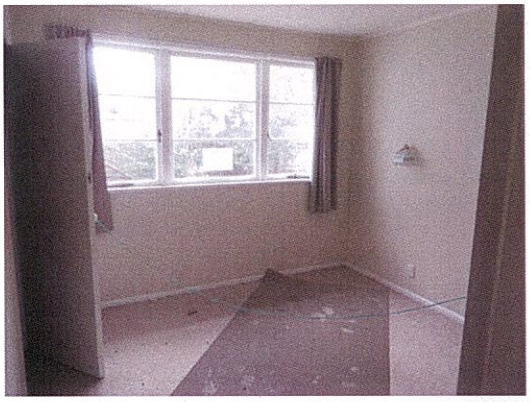
A standard distribution board is installed and includes circuits to hot water cylinder, power points, lighting and range. Generally wiring at the board appeared to be secure.

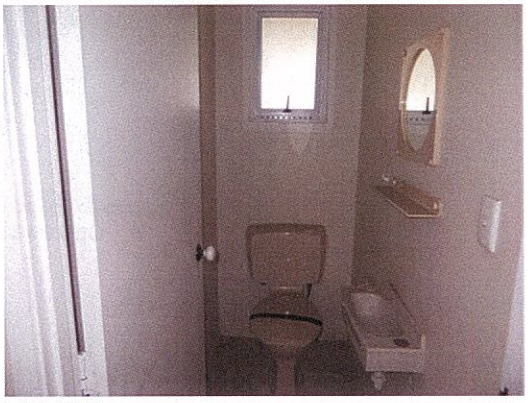
Please note that the writer is not a qualified electrician and that this was a visual inspection only.

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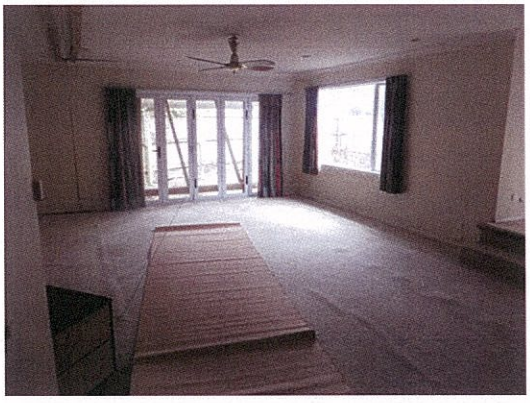
8.0 INTERIOR

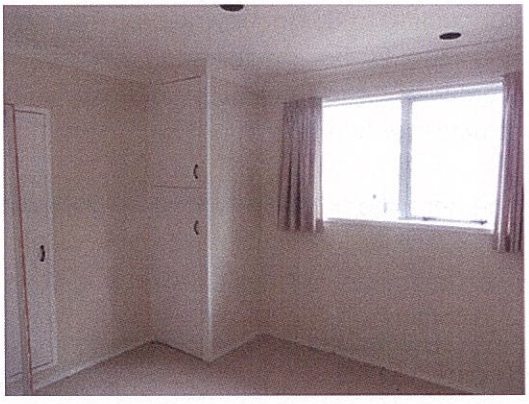
The interior features a large open plan lounge stepping up to a kitchen area, three bedrooms with wardrobe facilities, bathroom, laundry

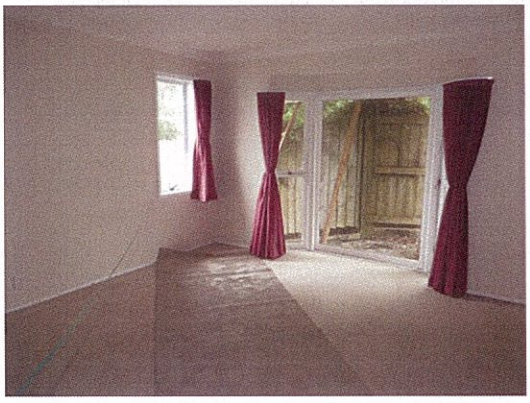


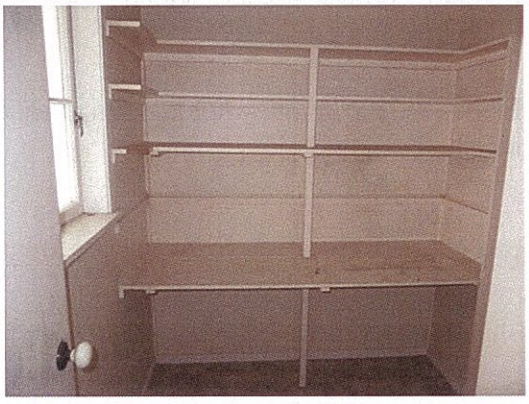


INTERIOR ROOMS









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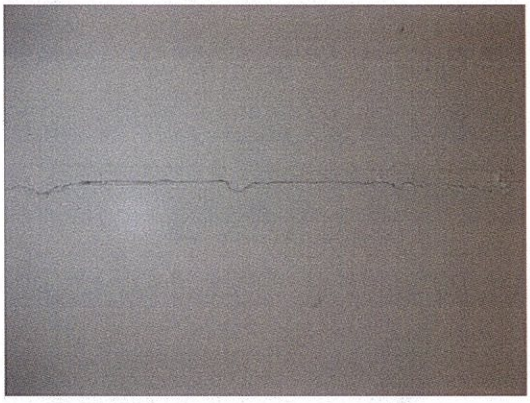
9.0 INTERNAL LININGS

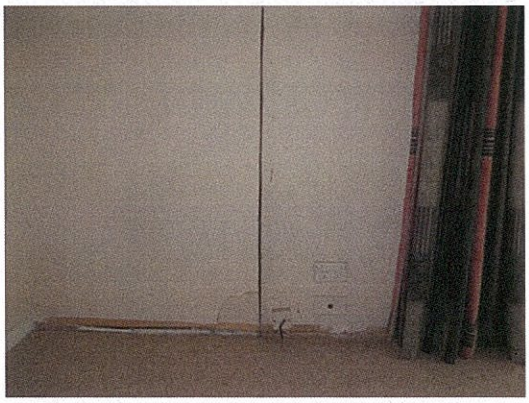
Internal wall linings are standard paper-faced plasterboard. Ceilings have Pinex softboard linings. The linings generally show some ageing and ware and should be made good upon resiting with careful preparation and repainting.

Moisture levels taken around the interior showed no dampness, historic or current leak.




MAKE GOOD LININGS & REDECORATE



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INTERNAL LININGS – MAKE GOOD & REDECORATE





THERMAL IMAGING RESULTS SHOW NO HISTORIC OR CURRENT LEAK






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10.0 INTERNAL JOINERY

Internal door joinery is a hollow core veneer door with standard architrave, frame, conventional hinges and hardware.

11.0 PRESENCE OF ASBESTOS

No

12.0 FUMIGATION

Will the structure require fumigation - No

13.0 HEATING

A solid fuel heater or wood burner is situated in the lounge area and if to be used should be reconnected and certified by a member of the Home Heating Association. The heater unit has a wet-back facility and owners will need to make a decision as to whether the wet-back is reconnected or not.



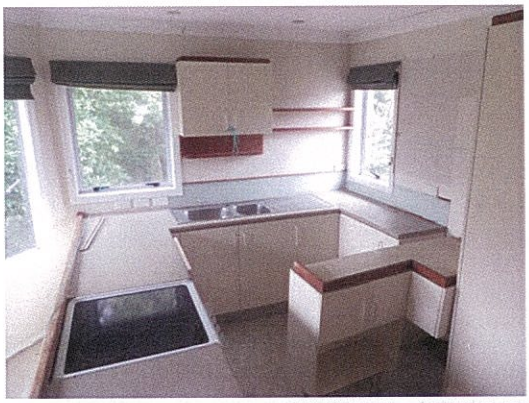
SOLID FUEL HEATER – IF TO BE REINSTATED CERTIFY

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14.0 SERVICE AREAS

14.1 KITCHEN

The kitchen includes a rolled edge Meltica bench top with Meltica cupboard and carcass units, stainless bench with insert basin, free-standing oven with ceramic cooktop and the flooring is vinyl. Generally the kitchen units appear to be in reasonable order and show no serious ware, and provided reinstated correctly, should be reusable.

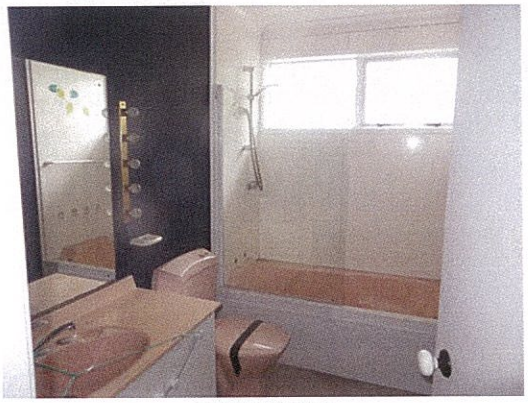



KITCHEN – STANDARD PLUMBING & DRAINAGE

14.2 BATHROOMS

The main bathroom features an Acronite PVC vanity with Meltica cupboard and carcass unit, PVC spa bath, dual flush wall mounted toilet cistern on standard pan and shower over bath with single levered fawcett Felton mixer.

A separate toilet with wash basin is provided off the entrance and features a Coroma dual flush wall mounted cistern on standard pan with conventional plumbing and will require reinstatement.



BATHROOM

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15.0 RECOMMENDATIONS

1. We recommend the house be lifted and transported in accord with accepted trade and industry standards.

2. Resiting should be to an approved foundation system, site specific in accord to NZS 3604 and an approved design under the consent process. Replace or strengthen joists, cut for plumbing and drainage and recommend insulation be installed to the subfloor area.

3. Ensure siting is in accord with approved drawings and compares favourably with boundary rule 7.8.1.1 (District Plan).

4. Plumbing and drainage will require reconnection in accord with Plumbing and Drainage Act and to NZBC G1/AS1, G13, AS/NZS 1260 and 3500. Provide an As-Built drainage plan.

5. The hot water cylinder will require reinstatement/reconnection in accord with NZS 4603/3, NZS 3501 and NZS 2642.2 (PB) and NZS 4602 (low pressure systems), NZS 4603 (open vented).

6. Electrical services will require reconnection in accord with NZ Electrical standards, NZS 3000 and Regulations 1997 and the work should be issued with a Certificate of Compliance upon completion.

7. Install smoke detectors in accord with AS 3786. F7.

8. Compare insulation and adjust in accord with NZS 3604 H1 / R2 (Roof) and R1.9 (walls).

9. The roofing should be checked and any damage caused during transportation should be repaired including repairs, careful preparation and repainting in accord with NZS 3604 E2/AS1 to ensure continued weathertightness.

10. Make good the cladding and any damage caused during transportation including preparation and repainting in accord with NZS 3604 E2 & B1 and Branz Bulletin 314 / NZBC E2 2.1.

11. The roof supports vary in type (truss and rafter), check on site, including bracing and connections. The roof areas will require re-joining correctly to maintain weathertightness. Insulation is of an older fill type, not sufficient and purchasers should consider replacement.

12. Make good exterior timber window joinery, ease, prepare and repaint in accord with NZS 4223.

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13. Make good internal wall and ceiling linings in accord with NZS/AS 1859 & NZS 422.

14. Redecorate interior as required in accord with Branz Bulletin 314.

15. Make good and ease internal joinery to ensure correct functions are restored.

16. Complete re-establishing the building in accord with the building consent and any endorsements attached.

17. Ensure surface water is diverted away from the dwelling in accord with NZBC E1.

16.0 E2

Providing the cladding and roofing is made good upon resiting, weathertightness should be maintained.

17.0 B1

The building has performed reasonably well to date and has stood the test of time without serious component failure. It is therefore fair and reasonable to assume that the structure has proved to satisfy provisions under the NZ Building Act B1, B2.

18.0 CONCLUSION

The dwelling's framing structure appears secure and the house should re-site suitably. Moisture levels and thermal imaging show no current leak although the roofing should be attended to as soon as possible, areas of framing are exposed. Predominantly native timbers to roof and subfloor framing and no serious decay or rot was evident. The permit history for the dwelling is unknown, alterations/extensions are evident.

Providing the building is moved and reinstatement is completed in accord with accepted industry and trade standards, and the structure is kept well maintained and weathertight, we would suggest that the building will continue to perform in accord with its design potential. Repairs should be completed by qualified tradespersons and in accord with industry standards and building code requirements.

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The writer advised that he was not present during the design stages or the construction of the structure and therefore cannot extend any warranty or guarantee in regard to the performance of the cladding or any items not visible at the time of the inspection. The writer has used a surface scan moisture meter test system only and has not exposed any linings or conducted any invasive tests in regards to the cladding system.

Please note that this report must be read in conjunction with Terms and Conditions, Limitations included at the beginning of this report. Payment is required upon receipt of invoicing and confirms that you have read and accepted the Terms and Conditions and Limitations contained within this report.

We trust this information is of assistance and sufficient for your requirements. Should you require any further information or have any queries, please do not hesitate to contact the writer.

Yours faithfully
Property Solutions Surveys Ltd



Rod Pratt
(BOINZ, CINZ)
ACCREDITED BUILDING SURVEYOR 20071801

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ARCHITECTURAL DRAUGHTING SOLUTIONS LTD

P: (09) 412 8749
F: (09) 412 8751

E: chris@adsltd.co.nz
W: www.adsltd.co.nz

P O Box 120
Kumeu, Auckland

134 Main Road, Kumeu

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To whom it may concern,

Date: 17/2/2017

I, Lynette E. Dheda give Chris McAllister from Architectural Draughting Solutions Ltd authority to act as agent for the lodgement of any Building Consents and Resource Consents for the property or properties at

102 Settlement Road Kaiwaka.

All fees are to be sent to me directly at

lynettedheda@hotmail.com

Signature L.E.Dheda.

BRACING CHECK (RESIDENCE A') TAKEN FROM ORIGINAL WIND ZONE (HIGH)

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GIB EzyBrace® 2011 Software

Demand Calculation Sheet — single storey — V06/11

Job Details

Name	
Street and Number	Ex 17 Kanuka Road
Lot and DP Number	
City/Town/District	Sandspit
Designer	CJM
Company Name	Architectural Draughting Solutions Ltd
Date	17/11/2016

BRANZ Appraised
Appraisal No.294 [2011]

Select Lining Option: 10 or 13 mm GIB® Plasterboard

Building Specification

Number of storeys	single
Floor Loading	2kPa
Foundation Type	subfloor
Cladding Weight (subfloor)	light

	Single Floor	Complete Single Floor Column only
Cladding Weight	light	
Roof Weight	light	
Room in Roof Space	no	
Roof Pitch (degrees)	21	
Roof height above eaves (m)	2.0	
Building height to apex (m)	5.1	
Ground to lower floor level (m)	0.7	
Stud Height (m)	2.4	
Building Length (m)	12.4	
Building Width (m)	11.8	
Building Plan Area (m2)	123	

Building Location

Wind Zone ***High***

Select by Building Consent Authority Map

or Preference	High
Wind Region	Preference selected
Lee Zone	Preference selected
Ground Roughness	Preference selected
Site Exposure	Preference selected
Topographic Class	Preference selected

Earthquake Zone: 1

Soil Type: D&E (deep to very soft)

Annual exceedance probability: 1/500 (NZS3604:2011 default)

Bracing Units required for Wind

Demand W (BU)

	subfloor	Walls single
along	988	579
across	983	554

Bracing Units required for Earthquake

Demand along / across E (BU)

subfloor	Walls single
836	627

GIB EzyBrace® 2011 Software

SINGLE OR UPPER STOREY WALLS ALONG

V06/11

Lines		*Bracing Elements*							
1	2	3	4	5	6	7	8	9	10
Line Total Check	Line Label	Bracing Element No.	Available Wall Length L (m)	Angle to Bracing line (degrees)	Element Height H (m)	Bracing Type	Supplier	Bracing Units Achieved	
								W	E
120	**A**	1	0.9		2.4	PlsterBd	PlsterBd	27	27
		2	0.9		2.4	PlsterBd	PlsterBd	27	27
		3	1.7			PlsterBd	PlsterBd	51	51
		4	0.5			PlsterBd	PlsterBd	15	15
135	**B**	1	0.3			PlsterBd	PlsterBd	9	9
		2	0.4			PlsterBd	PlsterBd	12	12
		3	0.2			PlsterBd	PlsterBd	6	6
		4	2			PlsterBd	PlsterBd	60	60
		5	0.9		2.4	PlsterBd	PlsterBd	27	27
		6	0.7		2.4	PlsterBd	PlsterBd	21	21
435	**C**	1	2.9		2.4	PlsterBd	PlsterBd	87	87
		2	0.9		2.4	PlsterBd	PlsterBd	27	27
		3	0.8		2.4	PlsterBd	PlsterBd	24	24
		4	0.3		2.4	PlsterBd	PlsterBd	9	9
		5	2.8		2.4	PlsterBd	PlsterBd	84	84
		6	2.5		2.4	PlsterBd	PlsterBd	75	75
		7	1.4		2.4	PlsterBd	PlsterBd	42	42
		8	0.5		2.4	PlsterBd	PlsterBd	15	15
		9	2.4		2.4	PlsterBd	PlsterBd	72	72
276	**D**	1	1.7		2.4	PlsterBd	PlsterBd	51	51
		2	0.9		2.4	PlsterBd	PlsterBd	27	27
		3	0.5		2.4	PlsterBd	PlsterBd	15	15
		4	0.7		2.4	PlsterBd	PlsterBd	21	21
		5	0.8		2.4	PlsterBd	PlsterBd	24	24
		6	0.6		2.4	PlsterBd	PlsterBd	18	18
		7	0.6		2.4	PlsterBd	PlsterBd	18	18
		8	0.2		2.4	PlsterBd	PlsterBd	6	6
		9	0.2		2.4	PlsterBd	PlsterBd	6	6
		10	3		2.4	PlsterBd	PlsterBd	90	90

					Wind	Earthq.
Totals Achieved	W	167%	EQ	154%	966	966
Timber Floor, design limit of 120 BU/m			***accepted***		*OK*	*OK*
Totals Required (from Demand)					579	627

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GIB EzyBrace® 2011 Software

SINGLE OR UPPER STOREY WALLS ACROSS

V06/11

Lines		Bracing Elements							
1	2	3	4	5	6	7	8	9	10
Line Total Check	Line Label	Bracing Element No.	Available Wall Length L (m)	Angle to Bracing line (degrees)	Element Height H (m)	Bracing Type	Supplier	Bracing Units Achieved W	Bracing Units Achieved E
-34	M	1	0.2			PlsterBd	PlsterBd	6	6
		2	0.2			PlsterBd	PlsterBd	6	6
		3	1.8			PlsterBd	PlsterBd	54	54
135	N	1	0.5			PlsterBd	PlsterBd	15	15
		2	1.6			PlsterBd	PlsterBd	48	48
		3	0.9			PlsterBd	PlsterBd	27	27
		4	0.6			PlsterBd	PlsterBd	18	18
		5	0.5		2.4	PlsterBd	PlsterBd	15	15
		6	0.4		2.4	PlsterBd	PlsterBd	12	12
495	O	1	5.5		2.4	PlsterBd	PlsterBd	165	165
		2	0.9		2.4	PlsterBd	PlsterBd	27	27
		3	1		2.4	PlsterBd	PlsterBd	30	30
		4	1		2.4	PlsterBd	PlsterBd	30	30
		5	0.7		2.4	PlsterBd	PlsterBd	21	21
		6	2.4		2.4	PlsterBd	PlsterBd	72	72
		7	2.1		2.4	PlsterBd	PlsterBd	63	63
		8	1.9		2.4	PlsterBd	PlsterBd	57	57
		9	1		2.4	PlsterBd	PlsterBd	30	30
225	P	1	0.4		2.4	PlsterBd	PlsterBd	12	12
		2	2.9		2.4	PlsterBd	PlsterBd	87	87
		3	0.6		2.4	PlsterBd	PlsterBd	18	18
		4	0.5		2.4	PlsterBd	PlsterBd	15	15
		5	1.3		2.4	PlsterBd	PlsterBd	39	39
		6	1.8		2.4	PlsterBd	PlsterBd	54	54

					Wind	Earthq.
Totals Achieved	W	166%	EQ	147%	921	921
Timber Floor, design limit of 120 BU/m			*accepted*		*OK*	*OK*
Totals Required (from Demand)					554	627

KDC - Approved Building Consent Document - BC170098 - Pg 100 of 113 - 29/03/2017 - kjn

BRACING CHECK (RESIDENCE 'B') TAKEN FROM ORIGINAL WIND ZONE (HIGH)

KDC - Approved Building Consent Document - BC170098 - Pg 101 of 113 - 29/03/2017 - kjn

GIB EzyBrace® 2011 Software

Demand Calculation Sheet — single storey — V06/11

Job Details

Name	
Street and Number	Ex Wainui Road
Lot and DP Number	
City/Town/District	Silverdale
Designer	CJM
Company Name	Architectural Draughting Solutions Ltd
Date	17/11/2016

BRANZ Appraised
Appraisal No.294 [2011]

Select Lining Option: 10 or 13 mm GIB® Plasterboard

Building Specification

		Single Floor	Complete Single Floor Column only
Number of storeys	single		
Floor Loading	2kPa		
Foundation Type	subfloor		
Cladding Weight (subfloor)	light		
Cladding Weight		light	
Roof Weight		light	
Room in Roof Space		no	
Roof Pitch (degrees)		12	
Roof height above eaves (m)		1.0	
Building height to apex (m)		4.0	
Ground to lower floor level (m)		0.7	
Stud Height (m)		2.4	
Building Length (m)		13.1	
Building Width (m)		6.4	
Building Plan Area (m2)		84	

Building Location

Wind Zone	***High***	**Earthquake Zone**	**Soil Type**
Select by Building Consent Authority Map		1	D&E (deep to very soft)
or Preference	High	**Annual exceedance probability**	
Wind Region	Preference selected	1/500 (NZS3604:2011 default)	
Lee Zone	Preference selected		
Ground Roughness	Preference selected		
Site Exposure	Preference selected		
Topographic Class	Preference selected		

Bracing Units required for Wind

Demand W (BU)

	subfloor	Walls single
along	450	236
across	833	395

Bracing Units required for Earthquake

Demand along / across E (BU)

	Walls
subfloor	single
564	418

GIB EzyBrace® 2011 Software

SINGLE OR UPPER STOREY WALLS ALONG

V06/11

Lines		*Bracing Elements*							
1	2	3	4	5	6	7	8	9	10
Line Total Check	Line Label	Bracing Element No.	Available Wall Length L (m)	Angle to Bracing line (degrees)	Element Height H (m)	Bracing Type	Supplier	Bracing Units Achieved	
								W	E
147	**A**	1	0.8		2.4	PlsterBd	PlsterBd	24	24
		2	1		2.4	PlsterBd	PlsterBd	30	30
		3	0.4			PlsterBd	PlsterBd	12	12
		4	1			PlsterBd	PlsterBd	30	30
		5	0.8			PlsterBd	PlsterBd	24	24
		6	0.9			PlsterBd	PlsterBd	27	27
318	**B**	1	2.8			PlsterBd	PlsterBd	84	84
		2	1.8			PlsterBd	PlsterBd	54	54
		3	2.2		2.4	PlsterBd	PlsterBd	66	66
		4	0.3		2.4	PlsterBd	PlsterBd	9	9
		5	3.5		2.4	PlsterBd	PlsterBd	105	105
168	**C**	1	0.6		2.4	PlsterBd	PlsterBd	18	18
		2	0.9		2.4	PlsterBd	PlsterBd	27	27
		3	0.4		2.4	PlsterBd	PlsterBd	12	12
		4	0.9		2.4	PlsterBd	PlsterBd	27	27
		5	0.4		2.4	PlsterBd	PlsterBd	12	12
		6	0.7		2.4	PlsterBd	PlsterBd	21	21
		7	0.2		2.4	PlsterBd	PlsterBd	6	6
		8	0.7		2.4	PlsterBd	PlsterBd	21	21
		9	0.8		2.4	PlsterBd	PlsterBd	24	24

					Wind	Earthq.
Totals Achieved	W	152%	EQ	167%	633	633
Timber Floor, design limit of 120 BU/m			***accepted***		*OK*	*OK*
Totals Required (from Demand)					416	378

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GIB EzyBrace® 2011 Software

SINGLE OR UPPER STOREY WALLS ACROSS

V06/11

Lines		*Bracing Elements*							
1	2	3	4	5	6	7	8	9	10
Line Total Check	Line Label	Bracing Element No.	Available Wall Length L (m)	Angle to Bracing line (degrees)	Element Height H (m)	Bracing Type	Supplier	Bracing Units Achieved	
								W	E
-73	**M**	1	0.1			PlsterBd	PlsterBd	3	3
		2	0.5			PlsterBd	PlsterBd	15	15
		3	0.3			PlsterBd	PlsterBd	9	9
159	**N**	1	3.1			PlsterBd	PlsterBd	93	93
		2	2.2			PlsterBd	PlsterBd	66	66
171	**O**	1	2.3			PlsterBd	PlsterBd	69	69
		2	0.5		2.4	PlsterBd	PlsterBd	15	15
		3	2.9		2.4	PlsterBd	PlsterBd	87	87
183	**P**	1	3.2		2.4	PlsterBd	PlsterBd	96	96
		2	2.9		2.4	PlsterBd	PlsterBd	87	87

					Wind	Earthq.
Totals Achieved	W	134%	EQ	143%	540	540
Timber Floor, design limit of 120 BU/m			***accepted***		*OK*	*OK*
Totals Required (from Demand)					404	378

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KAIPARA DISTRICT
Kaipara Te Oranganui • Two Oceans Two Harbours

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Kaipara District Plan

Chapters 12 Rural and 13 Residential

12.4.11 Rural Issues and 13.4.6 Residential Issues

Potential adverse impacts on visual amenity from poorly maintained sites and buildings, including relocated buildings, during development

Sites under development need to ensure that construction and land modification activities being undertaken, while often temporary in nature, do not lead to adverse visual amenity effects on the surrounding environment.

12.5.9 Rural Objectives and 13.5.6 Residential Objectives

To maintain sites and buildings during development to avoid adverse visual amenity effects. Issues 12.4.11 and 13.4.6

12.8.1 Rural Outcomes

12.8.1 The character (including social, environmental and natural values) of the rural environment will be maintained. Issue 12.4.11

12.8.5 The maintenance and enhancement of those values that contribute to Visual Amenity Landscapes. Issue 12.4.11

12.8.10 Site development works, avoid, remedy, or mitigate adverse environmental effects (including on visual amenity) of site development works. Issue 12.4.11

13.8 Residential Outcomes

13.8.1 The existing built form and character of the residential environment will be retained. Issue 13.4.6

13.8.7 Existing amenity values associated with the residential environment will be maintained, and where appropriate enhanced. Issue 13.4.6

13.8.9 The avoidance of adverse environmental effects (including those on residential amenity values) associated with site development works. Issue 13.4.6

12.10 Performance Standards - Rural Land Use and 13.10 Residential Land Use

12.10.13 and 13.10.10 Relocation of Buildings – Rural/ Residential Zones

Relocated ***buildings*** are permitted where the following matters can be satisfied:

a) Any relocated building can comply with the relevant standards for ***Permitted Activities*** in the District Plan; and

b) Any relocated ***dwelling*** must have been previously designed built and used as a dwelling; and

c) A building inspection report shall accompany the Building Consent. The report is to identify all reinstatement work required to the exterior of the building; and

d) All work required to reinstate the exterior of any relocated building, including the siting of the building on permanent foundations, shall be completed within **12 months** of the building being delivered to the ***site.***

Restricted Discretionary Activity

If the ***building*** infringes another Performance Standard then a Resource Consent will be required.

Where an activity is not permitted by this Rule, ***Kaipara District Council*** will restrict its discretion to the following matters when considering an application for Resource Consent:

i) Proposed landscaping, including opportunities to screen the building during reinstatement;

ii) Visibility from the ***road***, public places and other residential areas;

iii) ***Maintenance*** of the ***site*** and surrounds during reinstatement; and

iv) Application of a bond to ensure reinstatement within a **12 month** time limit.

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KAIPARA DISTRICT

Kaipara te Oranganui • Two Oceans Two Harbours

New Rules for Relocated Dwellings

KAIPARA DISTRICT COUNCIL

Confirmation from Dwelling Relocation Applicant

I/We Lynette E. Dhada understand that Resource Consent approval for relocating a dwelling is not necessary if the following criteria are met:

i. Any relocated building can comply with the relevant standards for ***Permitted Activities*** in the Kaipara District Plan; and

ii. Any relocated ***dwelling*** must have been previously designed built and used as a dwelling; and

iii. A building inspection report shall accompany the Building Consent. The report is to identify all reinstatement work required to the exterior of the building; and

iv. All work required to reinstate the exterior of any relocated building, including the siting of the building on permanent foundations, shall be completed within **12 months** of the building being delivered to the site.

Having taken into account the information sheet supplied by Kaipara District Council and my available resources, I/we can confirm that I/we will be able to meet all of the above criteria for the house I/we propose to relocate.

Further, I/we understand that if I/we fail to complete the required reinstatement of the exterior of the building within the prescribed **12 months** I/we will be obliged to seek Resource Consent from the Kaipara District Council to avoid enforcement action under Section 322 of the Resource Management Act 1991. I/we understand that this enforcement action could include being served a Court order to remove the building.

Pursuant to Kaipara District Plan Rules 12.10.13 or 13.10.10 **a site inspection will be carried out by Kaipara District Council's Monitoring and Compliance Officer** to ensure compliance with **clause (iii)** of this application has been met.

This inspection will incur a minimum fee as quoted in Kaipara District Council's Fees and Charges, and any further inspections should they be required, will be invoiced to you.

☑ I understand and accept that Council may rely on this document, for the purposes of establishing compliance with the above building consent and that the content including the signature, whether electronic or not, is truly representative and authoritative of the information contained.

L.E.Dhada. 27-2-2017

Signature Date

Office Use Only:	Building Consent Number:

KDC - Approved Building Consent Document - BC170098 - Pg 106 of 113 - 29/03/2017 - kjn

KAIPARA DISTRICT

Relocate a Dwelling Application

These applications can be processed speedily and for least cost if you, the applicant, provide **all** the information needed with the application at the outset. This includes:

- ☐ A completed Building Consent application form - be sure to provide your name and contact address and telephone number
- ☐ Signed agreement to reinstate exterior of dwelling within 12 months of delivery to site ("Confirmation from Dwelling Relocation Applicant")
- ☐ A site plan drawn reasonably to scale, preferably on A4 paper using black ball point pen (photocopies more easily). The plan should show the proposed location of the dwelling in relation to boundaries, existing buildings, location of proposed access and effluent disposal/sewer connection
- ☐ A foundation plan for timber floors to show the location of all piles and sub-floor timber braces, foundation perimeter walls and internal piling system. For concrete floors a detailed cross section is required
- ☐ A drainage plan and design to show how wastewater and stormwater will be disposed. This plan must be designed for the specific project and certified (by a registered professional person familiar with the area)
- ☐ A floor plan of the dwelling to be relocated. Elevations (drawings of what it looks like from the outside) are also beneficial
- ☐ Photographs of the dwelling (in its present position) and the proposed site are also very desirable
- ☐ Report on structural soundness of dwelling and its suitability for relocation. This report must be completed by an independently qualified person (IQP); for example an architect, engineer, and registered building surveyor or similar. Most relocation companies have the services of suitable building assessors available
- ☐ House Relocation Application to be submitted in triplicate if land use consent is required

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KAIPARA DISTRICT
Kaipara Te Oranganui • Two Oceans Two Harbours

Kaipara District Plan

Chapters 12 Rural and 13 Residential

KDC - Approved Building Consent Document - BC170098 - Pg 108 of 113 - 29/03/2017 - kjn

12.4.11 Rural Issues and 13.4.6 Residential Issues

Potential adverse impacts on visual amenity from poorly maintained sites and buildings, including relocated buildings, during development

Sites under development need to ensure that construction and land modification activities being undertaken, while often temporary in nature, do not lead to adverse visual amenity effects on the surrounding environment.

12.5.9 Rural Objectives and 13.5.6 Residential Objectives

To maintain sites and buildings during development to avoid adverse visual amenity effects. Issues 12.4.11 and 13.4.6

12.8.1 Rural Outcomes

12.8.1 The character (including social, environmental and natural values) of the rural environment will be maintained. Issue 12.4.11

12.8.5 The maintenance and enhancement of those values that contribute to Visual Amenity Landscapes. Issue 12.4.11

12.8.10 Site development works, avoid, remedy, or mitigate adverse environmental effects (including on visual amenity) of site development works. Issue 12.4.11

13.8 Residential Outcomes

13.8.1 The existing built form and character of the residential environment will be retained. Issue 13.4.6

13.8.7 Existing amenity values associated with the residential environment will be maintained, and where appropriate enhanced. Issue 13.4.6

13.8.9 The avoidance of adverse environmental effects (including those on residential amenity values) associated with site development works. Issue 13.4.6

12.10 Performance Standards - Rural Land Use and 13.10 Residential Land Use

12.10.13 and 13.10.10 Relocation of Buildings – Rural/ Residential Zones

Relocated ***buildings*** are permitted where the following matters can be satisfied:

a) Any relocated building can comply with the relevant standards for ***Permitted Activities*** in the District Plan; and

b) Any relocated ***dwelling*** must have been previously designed built and used as a dwelling; and

c) A building inspection report shall accompany the Building Consent. The report is to identify all reinstatement work required to the exterior of the building; and

d) All work required to reinstate the exterior of any relocated building, including the siting of the building on permanent foundations, shall be completed within **12 months** of the building being delivered to the ***site.***

Restricted Discretionary Activity

If the ***building*** infringes another Performance Standard then a Resource Consent will be required.

Where an activity is not permitted by this Rule, ***Kaipara District Council*** will restrict its discretion to the following matters when considering an application for Resource Consent:

i) Proposed landscaping, including opportunities to screen the building during reinstatement;

ii) Visibility from the ***road***, public places and other residential areas;

iii) ***Maintenance*** of the ***site*** and surrounds during reinstatement; and

iv) Application of a bond to ensure reinstatement within a **12 month** time limit.

KDC - Approved Building Consent Document - BC170098 - Pg 109 of 113 - 29/03/2017 - kjn

KAIPARA DISTRICT

Kaipara ki Oruawhakaa • Two Oceans Two Harbours

New Rules for Relocated Dwellings

KAIPARA DISTRICT COUNCIL

Confirmation from Dwelling Relocation Applicant

I/We Lynette E. Dhedar understand that Resource Consent approval for relocating a dwelling is not necessary if the following criteria are met:

i. Any relocated building can comply with the relevant standards for ***Permitted Activities*** in the Kaipara District Plan; and

ii. Any relocated ***dwelling*** must have been previously designed built and used as a dwelling; and

iii. A building inspection report shall accompany the Building Consent. The report is to identify all reinstatement work required to the exterior of the building; and

iv. All work required to reinstate the exterior of any relocated building, including the siting of the building on permanent foundations, shall be completed within **12 months** of the building being delivered to the site.

Having taken into account the information sheet supplied by Kaipara District Council and my available resources, I/we can confirm that I/we will be able to meet all of the above criteria for the house I/we propose to relocate.

Further, I/we understand that if I/we fail to complete the required reinstatement of the exterior of the building within the prescribed **12 months** I/we will be obliged to seek Resource Consent from the Kaipara District Council to avoid enforcement action under Section 322 of the Resource Management Act 1991. I/we understand that this enforcement action could include being served a Court order to remove the building.

Pursuant to Kaipara District Plan Rules 12.10.13 or 13.10.10 a **site inspection will be carried out by Kaipara District Council's Monitoring and Compliance Officer** to ensure compliance with **clause (iii)** of this application has been met.

This inspection will incur a minimum fee as quoted in Kaipara District Council's Fees and Charges, and any further inspections should they be required, will be invoiced to you.

☑ I understand and accept that Council may rely on this document, for the purposes of establishing compliance with the above building consent and that the content including the signature, whether electronic or not, is truly representative and authoritative of the information contained.

L.E.Dhedar. 27-2-2017

Signature Date

Office Use Only:	Building Consent Number:

KDC - Approved Building Consent Document - BC170098 - Pg 110 of 113 - 29/03/2017 - kjn

KAIPARA DISTRICT

Relocate a Dwelling Application

These applications can be processed speedily and for least cost if you, the applicant, provide **all** the information needed with the application at the outset. This includes:

- ☐ A completed Building Consent application form - be sure to provide your name and contact address and telephone number
- ☐ Signed agreement to reinstate exterior of dwelling within 12 months of delivery to site ("Confirmation from Dwelling Relocation Applicant")
- ☐ A site plan drawn reasonably to scale, preferably on A4 paper using black ball point pen (photocopies more easily). The plan should show the proposed location of the dwelling in relation to boundaries, existing buildings, location of proposed access and effluent disposal/sewer connection
- ☐ A foundation plan for timber floors to show the location of all piles and sub-floor timber braces, foundation perimeter walls and internal piling system. For concrete floors a detailed cross section is required
- ☐ A drainage plan and design to show how wastewater and stormwater will be disposed. This plan must be designed for the specific project and certified (by a registered professional person familiar with the area)
- ☐ A floor plan of the dwelling to be relocated. Elevations (drawings of what it looks like from the outside) are also beneficial
- ☐ Photographs of the dwelling (in its present position) and the proposed site are also very desirable
- ☐ Report on structural soundness of dwelling and its suitability for relocation. This report must be completed by an independently qualified person (IQP); for example an architect, engineer, and registered building surveyor or similar. Most relocation companies have the services of suitable building assessors available
- ☐ House Relocation Application to be submitted in triplicate if land use consent is required

KDC - Approved Building Consent Document - BC170098 - Pg 111 of 113 - 29/03/2017 - kjn

COMPUTER FREEHOLD REGISTER
UNDER LAND TRANSFER ACT 1952

Search Copy

R.W. Muir
Registrar-General
of Land

Identifier	**NA72A/940**
Land Registration District	**North Auckland**
Date Issued	26 October 1988

Prior References
NA42A/819

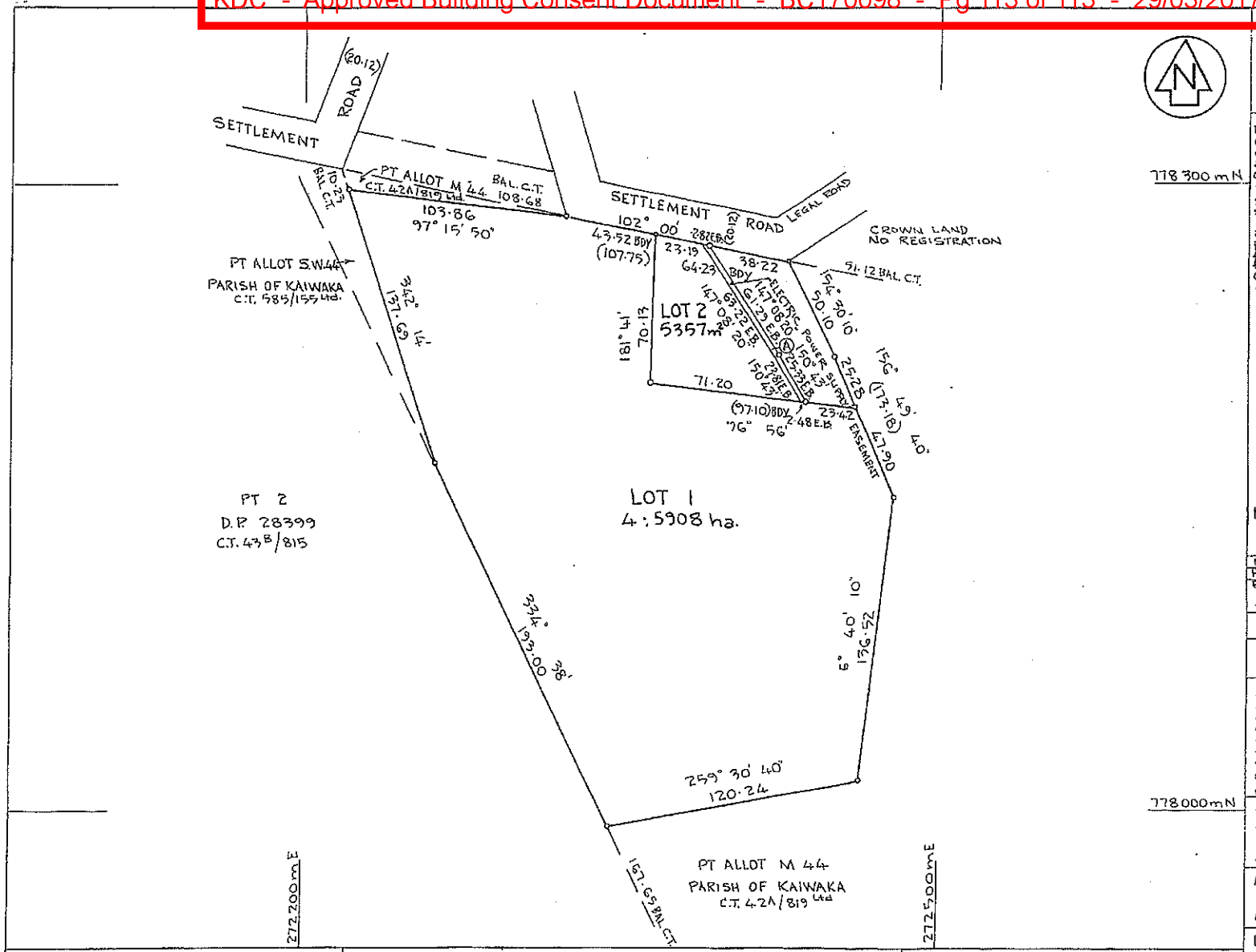
Estate	Fee Simple
Area	4.5908 hectares more or less
Legal Description	Lot 1 Deposited Plan 123715

Proprietors
Lynette Eileen Dheda

Interests
Appurtenant hereto is a water right created by Transfer 644766
C870177.3 Mortgage to (now) Westpac New Zealand Limited - 26.7.1995 at 12.46 pm
C983686.1 Variation of Mortgage C870177.3 - 18.4.1996 at 3.28 pm
5679308.1 Variation of Mortgage C870177.3 - 7.12.2005 at 9:00 am
8211833.11 Variation of Mortgage C870177.3 - 30.6.2009 at 2:19 pm
10463452.14 Variation of Mortgage C870177.3 - 13.6.2016 at 2:28 pm

KDC - Approved Building Consent Document - BC170098 - Pg 112 of 113 - 29/03/2017 - kjn

KDC - Approved Building Consent Document - BC170098 - Pg 113 of 113 - 29/03/2017 - kjn



Approvals

REGISTERED OWNERS

Pursuant to a resolution of the Otamatea County Council passed on the 19th day of February 1988 approving, pursuant to Section 305 of the Local Government Act 1974 this survey plan conditional upon the granting or reserving of the easements shown in the memorandum endorsed hereon and certifying that the survey plan is in accordance with the requirements and provisions of the operative District Scheme for the area to which the survey plan relates the Common Seal of the Otamatea County Council was affixed hereto in the presence of:

COUNTY CHAIRMAN

CHIEF EXECUTIVE OFFICER

New Cs.T. Allocated
Lot 1 72A/940
Lot 2 72A/941

MEMORANDUM OF EASEMENT IN GROSS			
PURPOSE	SHOWN	SERVIENT TEN.	GRANTEE
ELECTRIC POWER SUPPLY	(A)	PT LOT 2	NORTH AUCKLAND ELECTRIC POWER BOARD

Total Area 5.1265ha.

Comprised in C.T. 42A/819 Ltd (Pt.)

I, Russell Lewis Fish
Registered Surveyor and holder of an annual practising certificate or who may act as a registered surveyor pursuant to the proviso to section 32(2) of the Surveyors Act 1986 hereby certify that this plan has been made from surveys executed by me or under my directions, that both plan and survey are correct and have been made in accordance with the Survey Regulations 1972
Dated at Auckland this 23 day of March 19 88 Signature

Field Book p. Traverse Book p.
Reference Plans
Examined Correct: K.J.Clark.

Approved as to Survey
18/5/88
Chief Surveyor

Deposited this 26 day of June 1988
District Land Registrar

File Received Instructions

D.P. 123715

LAND DISTRICT North Auckland
SURVEY BLK. & DIST. III Otamatea
NZMS 261 SHT RECORD MAP No

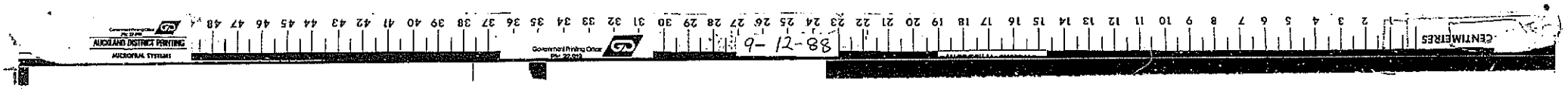
PLAN OF LOTS 1 & 2 BEING SUBDIVISION OF PART ALLOTMENTS 43, M 44 & NE 44 PARISH OF KAIWAKA

TERRITORIAL AUTHORITY Otamatea County
Surveyed by Thompson Fish & Assoc
Scale 1 : 1250 Date Jan. 1988

Printed by Sterling Imports Ltd. Auckland, New Zealand.

W.N. HAWKEY, SURVEYOR GENERAL, DEPARTMENT OF LANDS AND SURVEY NEW ZEALAND WELLINGTON

L & S FORM A93



07 Jun 2017

Lynette Dheda

102 Settlement Road

RD 2

Kaiwaka 0573

Dear Sir or Madam,

Reference Number: BC170098

Project Location: 102 Settlement Road , Kaiwaka

Legal description of land where building is located: Lot 1 DP 123715

Project Description: Relocate two Secondhand Dwellings to site with associated Stormwater & Sanitary Sewer private drainage.

IR Number: 1

Building Name: Residence A

Inspection Results:

PREPOUR - 07 Jun 2017 @ 11:00 by John Dowden

Inspection Outcome: PASS - The BCA is satisfied, on reasonable grounds, that the aspects of building work pertaining to this inspection demonstrate compliance with the building consent.

Inspection Summary: Pre pour Pile Foundations for Relocatable Home, Craig Walker Building Removals.

21 pile foundations 3 mts deep, x 400 mm diameter.

AP piles fitted with 4 x D12 reinforcing with R 6 stirrups @ 600 mm C's.

Ordinary piles 2 x D12 reinforcing bars with R 6 links @ 600 mm C's.

CPEng to inspect site prior to concrete. Please ensure site notes are on site at next inspection.

Your next inspection will be: **Subfloor - Framing**

Please contact us 48 hours before you require this to book your inspection.

History

Inspection Name	Summary
Prepour	**PASS** - 07 Jun 2017
Wastepipes	-
Subfloor - Framing	-
Preline	-
Drainage	-
Final	-

Yours Sincerely,



John Dowden
Building Control Officer
On behalf of: Kaipara District Council

KAIPARA DISTRICT

Kaipara te Oranganui • Two Oceans Two Harbours

KAIPARA DISTRICT COUNCIL

Application for Code Compliance Certificate (Form 6) Section 92, Building Act 2004

For Official use
Date Received:

Items marked * are mandatory. **Complete this form in BLOCK CAPITALS using BLACK or BLUE ink.**

1. The Building Consent

Building Consent Number*:		Site Address*:	

2. The Project

Description of the building work*:

Floor Area*: m²

Has the intended use of the building changed since the Building Consent was issued/granted? *

◯ YES → Provide details of the new use: [*refer NZBC A1 Classified Uses*]

◯ NO

3. The Owner [*include preferred form of address, eg, Mr, Miss, Dr, if an individual*]

Owner's Name*:		Contact Person (*if owner is a company*):	
Mailing/ Billing Address*:		Street Address/ Registered Office:	
Phone Number:		Cell Phone:	Fax:
E-mail address:			
Website:			

4. The Agent (Note - Only required if application is being made on behalf of the owner. The Agent, if nominated, will be the first point of contact for communications with the Council/Building Consent Authority regarding this application/building work and will receive all correspondence including all invoices)

Agent's Name:		Contact Person (*if agent is a company*):	
Mailing/ Billing Address:		Street Address/ Registered Office:	
Phone Number:		Cell Phone:	Fax:
E-mail address:			
Website:			

5a. The Application

All building work to be carried out under the above building consent was completed on*:

From 6-CCC Application
Version 1
Issued: 01 March 2014

5b. The Application (Restricted Building Work) *

The licenced building practitioner(s) who carried out, or supervised, the restricted building work is/are as follows:

Note: Enter the licenced building practitioner (LBP) number or registration number if treated as being licenced under section 291 of Building Act 2004.

Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					

5c. The Application (Key Personnel) *

The personnel who carried out the building work other than restricted building work are as follows:

Builder:		Registration Number:	
Mailing Address:			
e-mail:		Phone (day):	
Certifying Plumber:		Registration Number:	
Mailing Address:			
e-mail:		Phone (day):	
Certifying Gasfitter:		Registration Number:	
Mailing Address:			
e-mail:		Phone (day):	
Certifying Drainlayer:		Registration Number:	
Mailing Address:			
e-mail:		Phone (day):	
Registered Electrician:		Registration Number:	
Mailing Address:			
e-mail:		Phone (day):	
Name:		Registration Number:	
Mailing Address:			
e-mail:		Phone (day):	
Name:		Registration Number:	
Mailing Address:			
e-mail:		Phone (day):	

Note: Use additional sheets if required.

Other notes or comments which you as the applicant may wish to add:

5d. The Application (Specified Systems)

Are there any specified systems associated with this project? *

YES NO, there are no specified systems associated with this project.

The following specified systems are contained on the compliance schedule for the building and, in the opinion of the personnel who installed them, are capable of performing to the performance standards set out in the building consent: [*specified systems are defined in regulations*].

SS1 Automatic systems for fire suppression (for example, sprinkler systems)

SS2 Automatic or manual emergency warning systems for fire or other dangers (other than a warning system for fire that is entirely within a household unit & serves only that unit).

SS3 Electromagnetic or automatic doors or windows(for example, ones that close on fire alarm activation)

- **SS3/1** Automatic doors
- **SS3/2** Access Controlled Doors
- **SS3/3** Interfaced fire or smoke doors or windows

SS4 Emergency lighting systems

SS5 Escape route pressurisation systems

SS6 Riser mains for fire service use

SS7 Automatic back-flow preventers connected to a potable water supply

SS8 Lifts, escalators, travelators, or other systems for moving people or goods within buildings

- **SS8/1** Passenger Carrying lifts
- **SS8/2** Service Lifts
- **SS8/3** Escalators and moving walks

SS9 Mechanical ventilation or air conditioning systems

SS10 Building maintenance units for providing access to the exterior and interior walls of buildings

SS11 Laboratory fume cupboards

SS12 Audio loops or other assistive listening systems

SS13 Smoke control systems

- **SS13/1** Mechanical Smoke Control
- **SS13/2** Natural Smoke Control
- **SS13/3** Smoke Curtains

SS14 Emergency power systems for, or signs relating to, a system or feature specified in any of the clauses 1 to 13

- **SS14/1** Emergency Power Systems
- **SS14/2** Signs relating to Specified Systems 1 to 13

SS15 Other Fire Safety Systems or Features

- **SS15/1** Systems for communicating spoken information intended to facilitate evacuation
- **SS15/2** Final exit (as defined by A2 of the Building Code; and
- **SS15/3** Fire separations
- **SS15/4** Signs for communicating information intended to facilitate evacuation;
- **SS15/5** Smoke separations

SS16 Cable Cars

Purpose Group*:		**Fire Hazard Category*:**		**Max Occupant Load*:**	

5e. The Application (Signatory)

I request that you issue a code compliance certificate for this work under section 95 of the Building Act 2004.

Signed by*:	
FULL NAME*:	
Date*:	
I am the*:	◯ **Owner** ◯ **Agent** on behalf of, and with the authority of, the owner.
Address the code compliance certificate should be sent to:	

6. Attachments

The following documents are attached to this application:

Evidence of ownership* (*Certificate of Title or Sale & Purchase Agreement*)

Certificates that relate to the energy work (*eg Gas & electricity*)

Evidence that the specified systems are capable of performing to the performance standards set out in the building consent

Proof of potability of drinking water from private well, and/or rainwater catchment, supply (refer to New Zealand Drinking Water Standards 2005)

Memoranda (Records of Building Work) from licenced building practitioner(s) stating what restricted building work they carried out or supervised*

Other documents from personnel who carried out the work

For Official use only:

KAIPARA DISTRICT

Kaipara te Oranganui • Two Oceans Two Harbours

KAIPARA DISTRICT COUNCIL

Application for Code Compliance Certificate (Form 6) Section 92, Building Act 2004

For Official use
Date Received:

Items marked * are mandatory. **Complete this form in BLOCK CAPITALS using BLACK or BLUE ink.**

1. The Building Consent

Building Consent Number*:		Site Address*:	

2. The Project

Description of the building work*:

Floor Area*: m²

Has the intended use of the building changed since the Building Consent was issued/granted? *

◯ YES → Provide details of the new use: [*refer NZBC A1 Classified Uses*]

◯ NO

3. The Owner [*include preferred form of address, eg, Mr, Miss, Dr, if an individual*]

Owner's Name*:		Contact Person (*if owner is a company*):	
Mailing/ Billing Address*:		Street Address/ Registered Office:	
Phone Number:		Cell Phone:	Fax:
E-mail address:			
Website:			

4. The Agent (Note - Only required if application is being made on behalf of the owner. The Agent, if nominated, will be the first point of contact for communications with the Council/Building Consent Authority regarding this application/building work and will receive all correspondence including all invoices)

Agent's Name:		Contact Person (*if agent is a company*):	
Mailing/ Billing Address:		Street Address/ Registered Office:	
Phone Number:		Cell Phone:	Fax:
E-mail address:			
Website:			

5a. The Application

All building work to be carried out under the above building consent was completed on*:

From 6-CCC Application
Version 1
Issued: 01 March 2014

5b. The Application (Restricted Building Work) *

The licenced building practitioner(s) who carried out, or supervised, the restricted building work is/are as follows:

Note: Enter the licenced building practitioner (LBP) number or registration number if treated as being licenced under section 291 of Building Act 2004.

Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					

5c. The Application (Key Personnel) *

The personnel who carried out the building work other than restricted building work are as follows:

Builder:		Registration Number:	
Mailing Address:			
e-mail:		Phone (day):	
Certifying Plumber:		Registration Number:	
Mailing Address:			
e-mail:		Phone (day):	
Certifying Gasfitter:		Registration Number:	
Mailing Address:			
e-mail:		Phone (day):	
Certifying Drainlayer:		Registration Number:	
Mailing Address:			
e-mail:		Phone (day):	
Registered Electrician:		Registration Number:	
Mailing Address:			
e-mail:		Phone (day):	
Name:		Registration Number:	
Mailing Address:			
e-mail:		Phone (day):	
Name:		Registration Number:	
Mailing Address:			
e-mail:		Phone (day):	

Note: Use additional sheets if required.

Other notes or comments which you as the applicant may wish to add:

5d. The Application (Specified Systems)

Are there any specified systems associated with this project? *

YES NO, there are no specified systems associated with this project.

The following specified systems are contained on the compliance schedule for the building and, in the opinion of the personnel who installed them, are capable of performing to the performance standards set out in the building consent: [*specified systems are defined in regulations*].

SS1 Automatic systems for fire suppression (for example, sprinkler systems)

SS2 Automatic or manual emergency warning systems for fire or other dangers (other than a warning system for fire that is entirely within a household unit & serves only that unit).

SS3 Electromagnetic or automatic doors or windows(for example, ones that close on fire alarm activation)

- **SS3/1** Automatic doors
- **SS3/2** Access Controlled Doors
- **SS3/3** Interfaced fire or smoke doors or windows

SS4 Emergency lighting systems

SS5 Escape route pressurisation systems

SS6 Riser mains for fire service use

SS7 Automatic back-flow preventers connected to a potable water supply

SS8 Lifts, escalators, travelators, or other systems for moving people or goods within buildings

- **SS8/1** Passenger Carrying lifts
- **SS8/2** Service Lifts
- **SS8/3** Escalators and moving walks

SS9 Mechanical ventilation or air conditioning systems

SS10 Building maintenance units for providing access to the exterior and interior walls of buildings

SS11 Laboratory fume cupboards

SS12 Audio loops or other assistive listening systems

SS13 Smoke control systems

- **SS13/1** Mechanical Smoke Control
- **SS13/2** Natural Smoke Control
- **SS13/3** Smoke Curtains

SS14 Emergency power systems for, or signs relating to, a system or feature specified in any of the clauses 1 to 13

- **SS14/1** Emergency Power Systems
- **SS14/2** Signs relating to Specified Systems 1 to 13

SS15 Other Fire Safety Systems or Features

- **SS15/1** Systems for communicating spoken information intended to facilitate evacuation
- **SS15/2** Final exit (as defined by A2 of the Building Code; and
- **SS15/3** Fire separations
- **SS15/4** Signs for communicating information intended to facilitate evacuation;
- **SS15/5** Smoke separations

SS16 Cable Cars

Purpose Group*:		**Fire Hazard Category*:**		**Max Occupant Load*:**	

5e. The Application (Signatory)

I request that you issue a code compliance certificate for this work under section 95 of the Building Act 2004.

Signed by*:	
FULL NAME*:	
Date*:	
I am the*:	◯ **Owner** ◯ **Agent** on behalf of, and with the authority of, the owner.
Address the code compliance certificate should be sent to:	

6. Attachments

The following documents are attached to this application:

Evidence of ownership* (*Certificate of Title or Sale & Purchase Agreement*)

Certificates that relate to the energy work (*eg Gas & electricity*)

Evidence that the specified systems are capable of performing to the performance standards set out in the building consent

Proof of potability of drinking water from private well, and/or rainwater catchment, supply (refer to New Zealand Drinking Water Standards 2005)

Memoranda (Records of Building Work) from licenced building practitioner(s) stating what restricted building work they carried out or supervised*

Other documents from personnel who carried out the work

For Official use only:

09 Jun 2017

Lynette Dheda

102 Settlement Road

RD 2

Kaiwaka 0573

Dear Sir or Madam,

Reference Number: BC170098

Project Location: 102 Settlement Road , Kaiwaka

Legal description of land where building is located: Lot 1 DP 123715

Project Description: Relocate two Secondhand Dwellings to site with associated Stormwater & Sanitary Sewer private drainage.

IR Number: 2

Building Name: Residence B

Inspection Results:

PREPOUR - 09 Jun 2017 @ 12:00 by John Dowden

Inspection Outcome: PASS - The BCA is satisfied, on reasonable grounds, that the aspects of building work pertaining to this inspection demonstrate compliance with the building consent.

Inspection Summary: Pre pour Pile Foundations Relocatable Home. Residence B. Craig Walker House Movers. LBP Rangi Joyce.

Pile set out as per consent plans.

All piles drilled to a depth of 3mts x 400 mm diameter. D12 reinforcing cages installed with 12 5 x 125 sentons to be installed on top of concrete pile foundations.

Deane Consultancy have inspected piles and ground conditions, site notes are on site for both sites.

Ok to continue.

Your next inspection will be: **Subfloor - Framing**

Please contact us 48 hours before you require this to book your inspection.

History

Inspection Name	Summary
Prepour	**PASS** - 09 Jun 2017
Wastepipes	-
Subfloor - Framing	-
Preline	-
Drainage	-
Final	-

Yours Sincerely,



John Dowden
Building Control Officer
On behalf of: Kaipara District Council

KAIPARA DISTRICT

Kaipara te Oranganui • Two Oceans Two Harbours

KAIPARA DISTRICT COUNCIL

Application for Code Compliance Certificate (Form 6) Section 92, Building Act 2004

For Official use
Date Received:

Items marked * are mandatory. **Complete this form in BLOCK CAPITALS using BLACK or BLUE ink.**

1. The Building Consent

Building Consent Number*:		Site Address*:	

2. The Project

Description of the building work*:

Floor Area*: m²

Has the intended use of the building changed since the Building Consent was issued/granted? *

○ YES → Provide details of the new use: [*refer NZBC A1 Classified Uses*]

○ NO

3. The Owner [*include preferred form of address, eg, Mr, Miss, Dr, if an individual*]

Owner's Name*:		Contact Person (*if owner is a company*):	
Mailing/ Billing Address*:		Street Address/ Registered Office:	
Phone Number:		Cell Phone:	Fax:
E-mail address:			
Website:			

4. The Agent (Note - Only required if application is being made on behalf of the owner. The Agent, if nominated, will be the first point of contact for communications with the Council/Building Consent Authority regarding this application/building work and will receive all correspondence including all invoices)

Agent's Name:		Contact Person (*if agent is a company*):	
Mailing/ Billing Address:		Street Address/ Registered Office:	
Phone Number:		Cell Phone:	Fax:
E-mail address:			
Website:			

5a. The Application

All building work to be carried out under the above building consent was completed on*:

From 6-CCC Application
Version 1
Issued: 01 March 2014

5b. The Application (Restricted Building Work) *

The licenced building practitioner(s) who carried out, or supervised, the restricted building work is/are as follows:

Note: Enter the licenced building practitioner (LBP) number or registration number if treated as being licenced under section 291 of Building Act 2004.

Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					

5c. The Application (Key Personnel) *

The personnel who carried out the building work other than restricted building work are as follows:

Builder:		Registration Number:	
Mailing Address:			
e-mail:		Phone (day):	
Certifying Plumber:		Registration Number:	
Mailing Address:			
e-mail:		Phone (day):	
Certifying Gasfitter:		Registration Number:	
Mailing Address:			
e-mail:		Phone (day):	
Certifying Drainlayer:		Registration Number:	
Mailing Address:			
e-mail:		Phone (day):	
Registered Electrician:		Registration Number:	
Mailing Address:			
e-mail:		Phone (day):	
Name:		Registration Number:	
Mailing Address:			
e-mail:		Phone (day):	
Name:		Registration Number:	
Mailing Address:			
e-mail:		Phone (day):	

Note: Use additional sheets if required.

Other notes or comments which you as the applicant may wish to add:

5d. The Application (Specified Systems)

Are there any specified systems associated with this project? *

YES NO, there are no specified systems associated with this project.

The following specified systems are contained on the compliance schedule for the building and, in the opinion of the personnel who installed them, are capable of performing to the performance standards set out in the building consent: [*specified systems are defined in regulations*].

SS1 Automatic systems for fire suppression (for example, sprinkler systems)

SS2 Automatic or manual emergency warning systems for fire or other dangers (other than a warning system for fire that is entirely within a household unit & serves only that unit).

SS3 Electromagnetic or automatic doors or windows(for example, ones that close on fire alarm activation)

- **SS3/1** Automatic doors
- **SS3/2** Access Controlled Doors
- **SS3/3** Interfaced fire or smoke doors or windows

SS4 Emergency lighting systems

SS5 Escape route pressurisation systems

SS6 Riser mains for fire service use

SS7 Automatic back-flow preventers connected to a potable water supply

SS8 Lifts, escalators, travelators, or other systems for moving people or goods within buildings

- **SS8/1** Passenger Carrying lifts
- **SS8/2** Service Lifts
- **SS8/3** Escalators and moving walks

SS9 Mechanical ventilation or air conditioning systems

SS10 Building maintenance units for providing access to the exterior and interior walls of buildings

SS11 Laboratory fume cupboards

SS12 Audio loops or other assistive listening systems

SS13 Smoke control systems

- **SS13/1** Mechanical Smoke Control
- **SS13/2** Natural Smoke Control
- **SS13/3** Smoke Curtains

SS14 Emergency power systems for, or signs relating to, a system or feature specified in any of the clauses 1 to 13

- **SS14/1** Emergency Power Systems
- **SS14/2** Signs relating to Specified Systems 1 to 13

SS15 Other Fire Safety Systems or Features

- **SS15/1** Systems for communicating spoken information intended to facilitate evacuation
- **SS15/2** Final exit (as defined by A2 of the Building Code; and
- **SS15/3** Fire separations
- **SS15/4** Signs for communicating information intended to facilitate evacuation;
- **SS15/5** Smoke separations

SS16 Cable Cars

Purpose Group*:		**Fire Hazard Category*:**		**Max Occupant Load*:**	

5e. The Application (Signatory)

I request that you issue a code compliance certificate for this work under section 95 of the Building Act 2004.

Signed by*:	
FULL NAME*:	
Date*:	
I am the*:	◯ **Owner** ◯ **Agent** on behalf of, and with the authority of, the owner.
Address the code compliance certificate should be sent to:	

6. Attachments

The following documents are attached to this application:

Evidence of ownership* (*Certificate of Title or Sale & Purchase Agreement*)

Certificates that relate to the energy work (*eg Gas & electricity*)

Evidence that the specified systems are capable of performing to the performance standards set out in the building consent

Proof of potability of drinking water from private well, and/or rainwater catchment, supply (refer to New Zealand Drinking Water Standards 2005)

Memoranda (Records of Building Work) from licenced building practitioner(s) stating what restricted building work they carried out or supervised*

Other documents from personnel who carried out the work

For Official use only:

KAIPARA DISTRICT

Kaipara te Oranganui • Two Oceans Two Harbours

KAIPARA DISTRICT COUNCIL

Application for Code Compliance Certificate (Form 6) Section 92, Building Act 2004

For Official use
Date Received:

Items marked * are mandatory. **Complete this form in BLOCK CAPITALS using BLACK or BLUE ink.**

1. The Building Consent

Building Consent Number*:		Site Address*:	

2. The Project

Description of the building work*:

Floor Area*: m²

Has the intended use of the building changed since the Building Consent was issued/granted? *

○ YES → Provide details of the new use: [*refer NZBC A1 Classified Uses*]

○ NO

3. The Owner [*include preferred form of address, eg, Mr, Miss, Dr, if an individual*]

Owner's Name*:		Contact Person (*if owner is a company*):	
Mailing/ Billing Address*:		Street Address/ Registered Office:	
Phone Number:		Cell Phone:	Fax:
E-mail address:			
Website:			

4. The Agent (Note - Only required if application is being made on behalf of the owner. The Agent, if nominated, will be the first point of contact for communications with the Council/Building Consent Authority regarding this application/building work and will receive all correspondence including all invoices)

Agent's Name:		Contact Person (*if agent is a company*):	
Mailing/ Billing Address:		Street Address/ Registered Office:	
Phone Number:		Cell Phone:	Fax:
E-mail address:			
Website:			

5a. The Application

All building work to be carried out under the above building consent was completed on*:

From 6-CCC Application
Version 1
Issued: 01 March 2014

5b. The Application (Restricted Building Work) *

The licenced building practitioner(s) who carried out, or supervised, the restricted building work is/are as follows:

Note: Enter the licenced building practitioner (LBP) number or registration number if treated as being licenced under section 291 of Building Act 2004.

Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					

5c. The Application (Key Personnel) *

The personnel who carried out the building work other than restricted building work are as follows:

Builder:		Registration Number:	
Mailing Address:			
e-mail:		Phone (day):	
Certifying Plumber:		Registration Number:	
Mailing Address:			
e-mail:		Phone (day):	
Certifying Gasfitter:		Registration Number:	
Mailing Address:			
e-mail:		Phone (day):	
Certifying Drainlayer:		Registration Number:	
Mailing Address:			
e-mail:		Phone (day):	
Registered Electrician:		Registration Number:	
Mailing Address:			
e-mail:		Phone (day):	
Name:		Registration Number:	
Mailing Address:			
e-mail:		Phone (day):	
Name:		Registration Number:	
Mailing Address:			
e-mail:		Phone (day):	

Note: Use additional sheets if required.

Other notes or comments which you as the applicant may wish to add:

5d. The Application (Specified Systems)

Are there any specified systems associated with this project? *

YES NO, there are no specified systems associated with this project.

The following specified systems are contained on the compliance schedule for the building and, in the opinion of the personnel who installed them, are capable of performing to the performance standards set out in the building consent: [*specified systems are defined in regulations*].

SS1 Automatic systems for fire suppression (for example, sprinkler systems)

SS2 Automatic or manual emergency warning systems for fire or other dangers (other than a warning system for fire that is entirely within a household unit & serves only that unit).

SS3 Electromagnetic or automatic doors or windows(for example, ones that close on fire alarm activation)

- **SS3/1** Automatic doors
- **SS3/2** Access Controlled Doors
- **SS3/3** Interfaced fire or smoke doors or windows

SS4 Emergency lighting systems

SS5 Escape route pressurisation systems

SS6 Riser mains for fire service use

SS7 Automatic back-flow preventers connected to a potable water supply

SS8 Lifts, escalators, travelators, or other systems for moving people or goods within buildings

- **SS8/1** Passenger Carrying lifts
- **SS8/2** Service Lifts
- **SS8/3** Escalators and moving walks

SS9 Mechanical ventilation or air conditioning systems

SS10 Building maintenance units for providing access to the exterior and interior walls of buildings

SS11 Laboratory fume cupboards

SS12 Audio loops or other assistive listening systems

SS13 Smoke control systems

- **SS13/1** Mechanical Smoke Control
- **SS13/2** Natural Smoke Control
- **SS13/3** Smoke Curtains

SS14 Emergency power systems for, or signs relating to, a system or feature specified in any of the clauses 1 to 13

- **SS14/1** Emergency Power Systems
- **SS14/2** Signs relating to Specified Systems 1 to 13

SS15 Other Fire Safety Systems or Features

- **SS15/1** Systems for communicating spoken information intended to facilitate evacuation
- **SS15/2** Final exit (as defined by A2 of the Building Code; and
- **SS15/3** Fire separations
- **SS15/4** Signs for communicating information intended to facilitate evacuation;
- **SS15/5** Smoke separations

SS16 Cable Cars

Purpose Group*:		**Fire Hazard Category*:**		**Max Occupant Load*:**	

5e. The Application (Signatory)

I request that you issue a code compliance certificate for this work under section 95 of the Building Act 2004.

Signed by*:	
FULL NAME*:	
Date*:	
I am the*:	◯ **Owner** ◯ **Agent** on behalf of, and with the authority of, the owner.
Address the code compliance certificate should be sent to:	

6. Attachments

The following documents are attached to this application:

Evidence of ownership* (*Certificate of Title or Sale & Purchase Agreement*)

Certificates that relate to the energy work (*eg Gas & electricity*)

Evidence that the specified systems are capable of performing to the performance standards set out in the building consent

Proof of potability of drinking water from private well, and/or rainwater catchment, supply (refer to New Zealand Drinking Water Standards 2005)

Memoranda (Records of Building Work) from licenced building practitioner(s) stating what restricted building work they carried out or supervised*

Other documents from personnel who carried out the work

For Official use only:

17 July 2017

Lynette Dheda
102 Settlement Road
RD 2
Kaiwaka 0573

Dear Sir or Madam,

Reference Number: BC170098

Project Location: 102 Settlement Road , Kaiwaka

Legal description of land where building is located: Lot 1 DP 123715

Project Description: Relocate two Secondhand Dwellings to site with associated Stormwater & Sanitary Sewer private drainage.

IR Number: 3

Building Name: Residence A

Inspection Results:

DRAINAGE - 17 Jul 2017 @ 16:00 by Gavin Spaabaek

Inspection Outcome: INCOMPLETE - Some aspects of the building work pertaining to this inspection have yet to be checked and confirmed as complying with the building consent.

Formal Directive: PLease place two shovels of concrete around the gulley trap.

Inspection Summary: line branches to an overflow relief gulley to be charged by a tap. Primer used and fall is good. Inspection points correct. OK to cover.

Your next inspection will be: **Subfloor - Framing**

Please contact us 48 hours before you require this to book your inspection.

History

Inspection Name	Summary
Prepour	PASS - 07 Jun 2017

Wastepipes	-
Subfloor - Framing	-
Preline	-
Drainage	**IN-PROGRESS** - 17 Jul 2017
Final	-

Yours Sincerely,



Gavin Spaabaek

Senior Building Control Officer

On behalf of: Kaipara District Council

KAIPARA DISTRICT

Kaipara te Oranganui • Two Oceans Two Harbours

KAIPARA DISTRICT COUNCIL

Application for Code Compliance Certificate (Form 6) Section 92, Building Act 2004

For Official use
Date Received:

Items marked * are mandatory. **Complete this form in BLOCK CAPITALS using BLACK or BLUE ink.**

1. The Building Consent

Building Consent Number*:		Site Address*:	

2. The Project

Description of the building work*:

Floor Area*: m²

Has the intended use of the building changed since the Building Consent was issued/granted? *

○ YES → Provide details of the new use: [*refer NZBC A1 Classified Uses*]

○ NO

3. The Owner [*include preferred form of address, eg, Mr, Miss, Dr, if an individual*]

Owner's Name*:		Contact Person (*if owner is a company*):	
Mailing/ Billing Address*:		Street Address/ Registered Office:	
Phone Number:		Cell Phone:	Fax:
E-mail address:			
Website:			

4. The Agent (Note - Only required if application is being made on behalf of the owner. The Agent, if nominated, will be the first point of contact for communications with the Council/Building Consent Authority regarding this application/building work and will receive all correspondence including all invoices)

Agent's Name:		Contact Person (*if agent is a company*):	
Mailing/ Billing Address:		Street Address/ Registered Office:	
Phone Number:		Cell Phone:	Fax:
E-mail address:			
Website:			

5a. The Application

All building work to be carried out under the above building consent was completed on*:

From 6-CCC Application
Version 1
Issued: 01 March 2014

5b. The Application (Restricted Building Work) *

The licenced building practitioner(s) who carried out, or supervised, the restricted building work is/are as follows:

Note: Enter the licenced building practitioner (LBP) number or registration number if treated as being licenced under section 291 of Building Act 2004.

Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					

5c. The Application (Key Personnel) *

The personnel who carried out the building work other than restricted building work are as follows:

Builder:		Registration Number:	
Mailing Address:			
e-mail:		Phone (day):	
Certifying Plumber:		Registration Number:	
Mailing Address:			
e-mail:		Phone (day):	
Certifying Gasfitter:		Registration Number:	
Mailing Address:			
e-mail:		Phone (day):	
Certifying Drainlayer:		Registration Number:	
Mailing Address:			
e-mail:		Phone (day):	
Registered Electrician:		Registration Number:	
Mailing Address:			
e-mail:		Phone (day):	
Name:		Registration Number:	
Mailing Address:			
e-mail:		Phone (day):	
Name:		Registration Number:	
Mailing Address:			
e-mail:		Phone (day):	

Note: Use additional sheets if required.

Other notes or comments which you as the applicant may wish to add:

5d. The Application (Specified Systems)

Are there any specified systems associated with this project? *

YES NO, there are no specified systems associated with this project.

The following specified systems are contained on the compliance schedule for the building and, in the opinion of the personnel who installed them, are capable of performing to the performance standards set out in the building consent: [*specified systems are defined in regulations*].

SS1 Automatic systems for fire suppression (for example, sprinkler systems)

SS2 Automatic or manual emergency warning systems for fire or other dangers (other than a warning system for fire that is entirely within a household unit & serves only that unit).

SS3 Electromagnetic or automatic doors or windows(for example, ones that close on fire alarm activation)

- **SS3/1** Automatic doors
- **SS3/2** Access Controlled Doors
- **SS3/3** Interfaced fire or smoke doors or windows

SS4 Emergency lighting systems

SS5 Escape route pressurisation systems

SS6 Riser mains for fire service use

SS7 Automatic back-flow preventers connected to a potable water supply

SS8 Lifts, escalators, travelators, or other systems for moving people or goods within buildings

- **SS8/1** Passenger Carrying lifts
- **SS8/2** Service Lifts
- **SS8/3** Escalators and moving walks

SS9 Mechanical ventilation or air conditioning systems

SS10 Building maintenance units for providing access to the exterior and interior walls of buildings

SS11 Laboratory fume cupboards

SS12 Audio loops or other assistive listening systems

SS13 Smoke control systems

- **SS13/1** Mechanical Smoke Control
- **SS13/2** Natural Smoke Control
- **SS13/3** Smoke Curtains

SS14 Emergency power systems for, or signs relating to, a system or feature specified in any of the clauses 1 to 13

- **SS14/1** Emergency Power Systems
- **SS14/2** Signs relating to Specified Systems 1 to 13

SS15 Other Fire Safety Systems or Features

- **SS15/1** Systems for communicating spoken information intended to facilitate evacuation
- **SS15/2** Final exit (as defined by A2 of the Building Code; and
- **SS15/3** Fire separations
- **SS15/4** Signs for communicating information intended to facilitate evacuation;
- **SS15/5** Smoke separations

SS16 Cable Cars

Purpose Group*:		**Fire Hazard Category*:**		**Max Occupant Load*:**	

5e. The Application (Signatory)

I request that you issue a code compliance certificate for this work under section 95 of the Building Act 2004.

Signed by*:	
FULL NAME*:	
Date*:	
I am the*:	◯ **Owner** ◯ **Agent** on behalf of, and with the authority of, the owner.
Address the code compliance certificate should be sent to:	

6. Attachments

The following documents are attached to this application:

Evidence of ownership* (*Certificate of Title or Sale & Purchase Agreement*)

Certificates that relate to the energy work (*eg Gas & electricity*)

Evidence that the specified systems are capable of performing to the performance standards set out in the building consent

Proof of potability of drinking water from private well, and/or rainwater catchment, supply (refer to New Zealand Drinking Water Standards 2005)

Memoranda (Records of Building Work) from licenced building practitioner(s) stating what restricted building work they carried out or supervised*

Other documents from personnel who carried out the work

For Official use only:

18 September 2017

Lynette Dheda

102 Settlement Road

RD 2

Kaiwaka 0573

Dear Sir or Madam,

Reference Number: BC170098

Project Location: 102 Settlement Road , Kaiwaka

Legal description of land where building is located: Lot 1 DP 123715

Project Description: Relocate two Secondhand Dwellings to site with associated Stormwater & Sanitary Sewer private drainage.

IR Number: 4

Building Name: Residence B

Inspection Results:

DRAINAGE - 18 Sep 2017 @ 10:00 by Gavin Spaabaek

Inspection Outcome: **FAIL** - The following aspects of this inspection have resulted in a Fail result -- see the item(s) below:

G13 - Foul Water:

1. Gully Traps / ORG installation does not comply with building consent. Please rectify and advise when work is ready for re-inspection.

These may be viewed at time of next inspection.

Formal Directive: Install an overflow relief gulley down stream of the the toilet.

Storm water not ready and asbuilt required.

Inspection Summary: Paul Warren

Inspection points correct. Bedding good. Fall of 1 in 40 in a stright line to the house. Air test good.

Your next inspection will be: **Drainage**

Please contact us 48 hours before you require this to book your inspection.

History

Inspection Name	Summary
Prepour	**PASS** - 09 Jun 2017
Wastepipes	-
Subfloor - Framing	-
Preline	-
Drainage	**FAIL** - 18 Sep 2017 **View at next inspection**
Final	-

Yours Sincerely,



Gavin Spaabaek

Senior Building Control Officer

On behalf of: Kaipara District Council

27 April 2018

Lynette Dheda
102 Settlement Road
RD 2
Kaiwaka 0573

Dear Sir or Madam,

Reference Number: BC170098

Project Location: 102 Settlement Road , Kaiwaka

Legal description of land where building is located: Lot 1 DP 123715

Project Description: Relocate two Secondhand Dwellings to site with associated Stormwater & Sanitary Sewer private drainage.

IR Number: 5

Building Name: Residence A

Inspection Results:

WASTEPIPES (UNDERSLAB) - 27 Apr 2018 @ 10:00 by Gavin Spaabaek

Inspection Outcome: NOT APPLICABLE

SUB-FLOOR FRAMING - 27 Apr 2018 @ 10:00 by Gavin Spaabaek

Inspection Outcome: FAIL- The following aspects of this inspection have resulted in a Fail result -- see the item(s) below:

B1 - Sub-floor Cross-Flow Ventilation:
Sub-Floor Ventilation does not comply with building consent.

Specific reinspection of these matters is required before building work may proceed.

PRELINE - 27 Apr 2018 @ 10:00 by Gavin Spaabaek

Inspection Outcome: NOT APPLICABLE

DRAINAGE - 27 Apr 2018 @ 10:00 by Gavin Spaabaek

Inspection Outcome: PASS - The BCA is satisfied, on reasonable grounds, that the aspects of building work pertaining to this inspection demonstrate compliance with the building consent.

FINAL - 27 Apr 2018 @ 10:00 by Gavin Spaabaek

Inspection Outcome: FAIL- The following aspects of this inspection have resulted in a Fail result -- see the item(s) below:

Section 84 - 89 - Restricted Building Work:

Code Compliance Certificate cannot be issued until all applicable Restricted Building Work Certificates and Record of Work, as required under sections BA 88 & 89, have been provided in the prescribed forms.

B2 - DURABILITY:

1. There is an incompatibility issue between treated deck timber and galvanised bolts. Two stainless steel 12mm bolts required for the deck boundary joist. This will need to be rectified before code compliance certificate may be issued. Please advise the building consent authority in writing how this is proposed to be rectified but do not proceed with further work until approval to do so is received from the building consent authority.

E1 - Surface Water:

1. Downpipe [size, support, location] is not compliant. Please rectify so that building work conforms with the building consent and advise when work is ready for re-inspection.

Specific reinspection of these matters is required before building work may proceed.

Formal Directive: House A

Please remove galvanised bolts from the deck and replace with 2 x 12mm stainless steel bolts of 12mm diameter.

Clip the downpipe at 1200mm centres.

Install base cladding.

Provide a record of building work from the licenced building practitioner who built the foundations.

Inspection Summary: House has been repainted. It is located as per the site plan.

Subfloor connections are installed. The fire and flue have been replaced. Producer statement is on file. Smoke detector located correctly and working. Waste pipes are slung correctly. Recheck required for above items.

Your next inspection will be: **Final**

Please contact us 48 hours before you require this to book your inspection.

History

Inspection Name	Summary
Prepour	**PASS** - 07 Jun 2017
Wastepipes (Underslab)	**NOT APPLICABLE** - 27 Apr 2018
Sub-floor Framing	**FAIL** - 27 Apr 2018 **Reinspection required**
Preline	**NOT APPLICABLE** - 27 Apr 2018
Drainage	**PASS** - 27 Apr 2018
Final	**IN-PROGRESS** - 27 Apr 2018

Yours Sincerely,



Gavin Spaabaek

Senior Building Control Officer

On behalf of: Kaipara District Council

14 September 2018

Lynette Dheda
102 Settlement Road
RD 2
Kaiwaka 0573

Dear Sir or Madam,

Reference Number: BC170098
Project Location: 102 Settlement Road , Kaiwaka
Legal description of land where building is located: Lot 1 DP 123715
Project Description: Relocate two Secondhand Dwellings to site with associated Stormwater & Sanitary Sewer private drainage.
IR Number: 6
Building Name: Residence B

Inspection Results:

WASTEPIPES (UNDERSLAB) - 14 Sep 2018 @ 16:00 by John Dowden

Inspection Outcome: **FAIL**- The following aspects of this inspection have resulted in a Fail result -- see the item(s) below:

G12 - Water Supply:
The hot water cylinder relief drain pipework requires a bend to the end to divert water to the ground as discussed..

Specific reinspection of these matters is required before building work may proceed.

SUB-FLOOR FRAMING - 14 Sep 2018 @ 16:00 by John Dowden

Inspection Outcome: **PASS** - The BCA is satisfied, on reasonable grounds, that the aspects of building work pertaining to this inspection demonstrate compliance with the building consent.

PRELINE - 14 Sep 2018 @ 16:00 by John Dowden

Inspection Outcome: **PASS** - The BCA is satisfied, on reasonable grounds, that the aspects of building work pertaining to this inspection demonstrate compliance with the building consent.

DRAINAGE - 14 Sep 2018 @ 16:00 by John Dowden

Inspection Outcome: **FAIL**- The following aspects of this inspection have resulted in a Fail result -- see the item(s) below:

G13 - Foul Water:
1. As-built and drain layer details have not been provided. Please rectify so that building work conforms with the building consent and advise when work is ready for re-inspection.

2. Gully Traps / ORG installation does not comply with building consent. Please rectify and advise when work is ready for re-inspection.

These may be viewed at time of next inspection.

FINAL - 14 Sep 2018 @ 16:00 by John Dowden

Inspection Outcome: FAIL- The following aspects of this inspection have resulted in a Fail result -- see the item(s) below:

SH - Fire Safety System [Para 2.2]:
Smoke detector required outside bedroom.

SH - Freestanding Solid Fuelburning Appliances [Para 7.1]:
1. Location & type of smoke detectors does not comply with building consent. Please rectify and advise when work is ready for re-inspection.

G12 - Water Supply:
1. The relief drain is not terminated in a safe and complying manner. Add bend to end of pipe.

G13 - Foul Water:
1. Please provide all as-built drainage drawings along with Drainlayer details (name, company, license number, contact details).

Documentation:
1. Please provide producer statements for the following aspects of work:

a) As built drainage plan and PS 3 for effluent field installation.

b)

c)

Specific reinspection of these matters is required before building work may proceed.

Inspection Summary: Final Inspection of two relocated dwellings. All building work is complete. Some remedial items tobe attended to. Smoke detector to be installed. Over flow relief for HWC to have bend attached to end of pipe. Documentation required as built drainage plan to come. Upon completion of the items above please re book a final inspection.

Your next inspection will be: **Final**

Please contact us 48 hours before you require this to book your inspection.

History

Inspection Name	Summary
Prepour	**PASS** - 09 Jun 2017
Wastepipes (underslab)	**FAIL** - 14 Sep 2018 **Reinspection required**
Sub-floor framing	**PASS** - 14 Sep 2018
Preline	**PASS** - 14 Sep 2018
Drainage	**FAIL** - 14 Sep 2018

	View at next inspection
Final	**FAIL** - 14 Sep 2018
	Reinspection required

Yours Sincerely,



John Dowden
Building Control Officer
On behalf of: Kaipara District Council

13 March 2019

Lynette Dheda
102 Settlement Road
RD 2
Kaiwaka 0573

Dear Sir or Madam,

Reference Number: BC170098
Project Location: 102 Settlement Road
Kaiwaka
Legal description of land where building is located: Lot 1 DP 123715
Project Description: Relocate two Secondhand Dwellings to site with associated Stormwater & Sanitary Sewer private drainage.
IR Number: 7
Building Name: Residence B
Inspection Results:
WASTEPIPES - 13 Mar 2019 @ 15:00 by Jamie Nikora

Inspection Outcome: PASS - The BCA is satisfied, on reasonable grounds, that the aspects of building work pertaining to this inspection demonstrate compliance with the building consent.

DRAINAGE - 13 Mar 2019 @ 15:00 by Jamie Nikora

Inspection Outcome: PASS - The BCA is satisfied, on reasonable grounds, that the aspects of building work pertaining to this inspection demonstrate compliance with the building consent.

FINAL - 13 Mar 2019 @ 15:00 by Jamie Nikora

Inspection Outcome: PASS - The BCA is satisfied, on reasonable grounds, that the aspects of building work pertaining to this inspection demonstrate compliance with the building consent.

Inspection Summary: all items on last final resolved. CCC can be issued.

Your next inspection will be: **No further inspection required**

History

Inspection Name	**Summary**
Prepour	**PASS** - 09 Jun 2017
Wastepipes	**PASS** - 13 Mar 2019
Sub-floor Framing	**PASS** - 14 Sep 2018
Preline	**PASS** - 14 Sep 2018
Drainage	**PASS** - 13 Mar 2019
Final	**PASS** - 13 Mar 2019

Yours Sincerely,



Jamie Nikora
Building Control Officer
On behalf of: Kaipara District Council

KAIPARA DISTRICT

Kaipara te Oranganui • Two Oceans Two Harbours

KAIPARA DISTRICT COUNCIL

Producer Statement Construction (PS3) - Drainage

Issued by: Paul Oliver being a Registered Certifying Drainlayer

In respect of installing drainage and the on-site wastewater disposal for:

(Owner) L E Oheda

At (Address) 102 Settlement Rd

~~Ka~~ Kaiwaka

Legal Description: Lot 1 DP 123715 Valuation

I have sighted the issued Building Consent (BC 170098) and have constructed the drainage system including the pipes and fittings in accordance with the approved Building Consent, the New Zealand Building Code, and the manufacturers specifications and requirements.

I have tested the pipework and installed the system as follows:

☑ Installed an on-site effluent disposal system in accordance with AS/NZS 1547:2000 and provide a schedule to the owner for the systems maintenance.

☑ Has been installed in accordance with G13 (Foul Water) and G14 (Industrial Liquid Waste) and B2 (durability 15 years) of the Building Regulations 1992.

I believe on reasonable grounds that the work complies with the Building Consent issued.

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

☑ I understand and accept that Council may rely on this document, for the purposes of establishing compliance with the above building consent and that the content including the signature, whether electronic or not, is truly representative and authoritative of the information contained.

Signature of Registered Certifying Drainlayer:

Drainlayers Registration Number: 10084 Reg Expiry Date: March 2019

Date: 13/4/18

File: 3117.0

PS.CD
Version 1
Issued 1 March 2014

As built drainage plan

Auckland Council
Te Kaunihera o Tāmaki Makaurau

Building Consent number: 170098

DETAILS

Owner: L Oheda

Mailing address: 102 Settlement Rd Kaiwaka

Postcode:

Legal description of land where building is located:

Lot number: 1

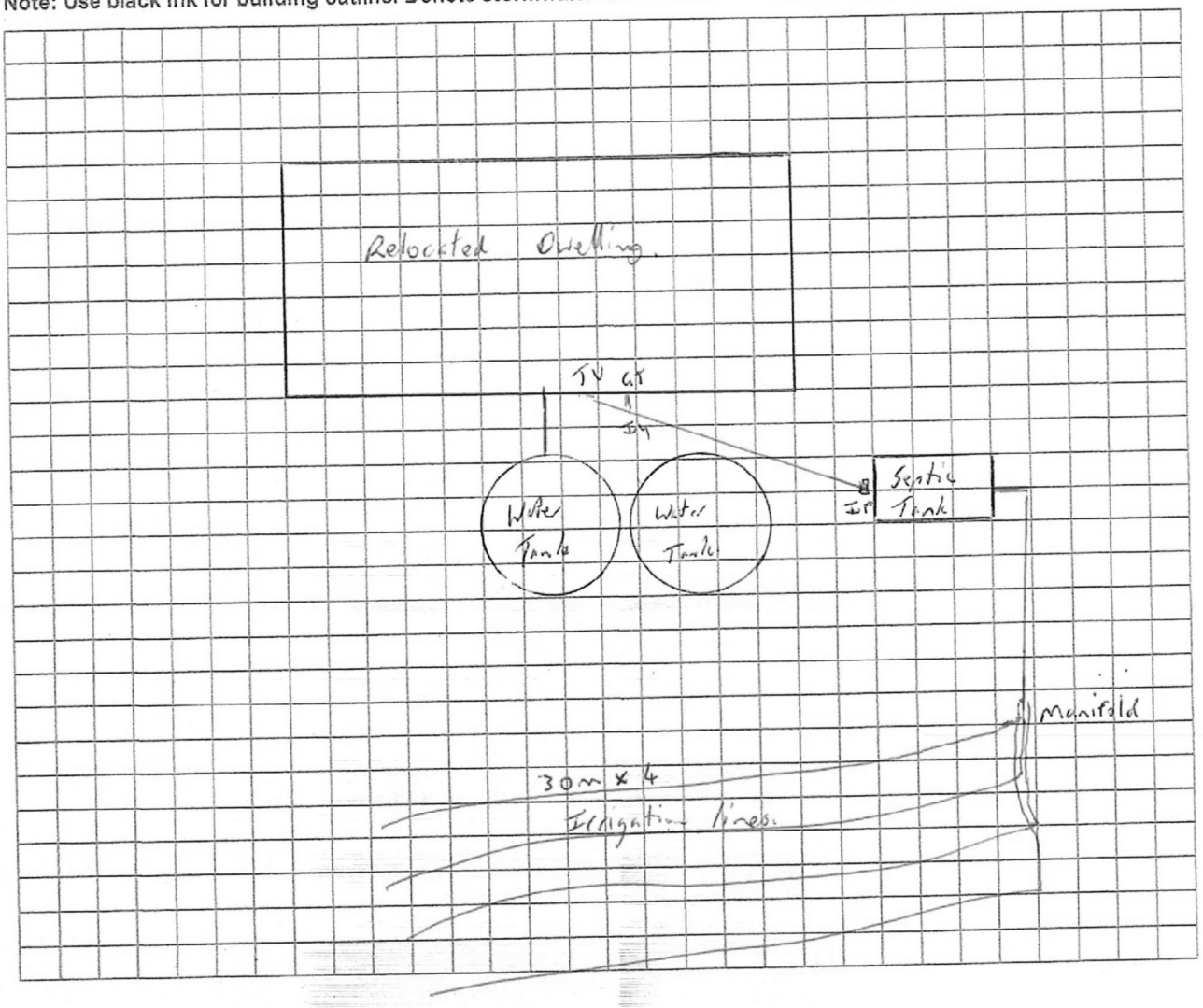
DP number: 123715

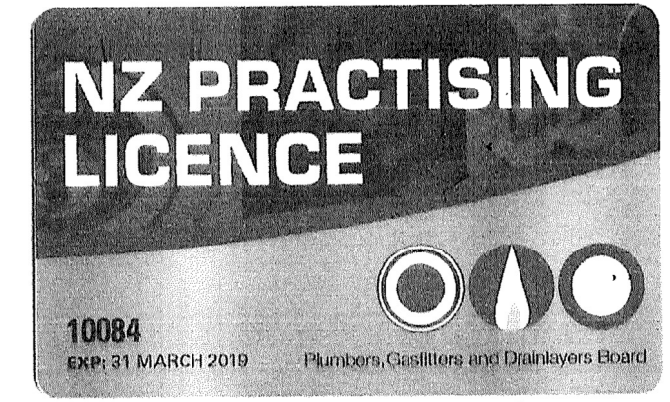
Drain-layer: Paul Oliver

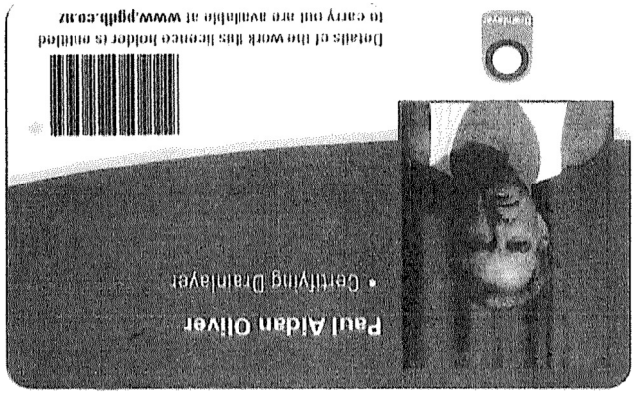
Registration number: 10084

Date submitted: 13/4/18

Note: Please provide figures/measurements from a defined point of reference.
Note: Use black ink for building outline. Denote stormwater as -------S/W------- and sanitary sewer as -------S/S-------




NZ PRACTISING
LICENCE
10084
EXP: 31 MARCH 2019
Plumbers, Gasfitters and Drainlayers Board


Paul Aidan Oliver
• Certifying Drainlayer
Details of the work this licence holder is entitled
to carry out are available at www.pgdb.co.nz

17/A05/2

ENGINEERS NEW ZEALAND | NEW ZEALAND INSTITUTE OF ARCHITECTS INCORPORATED | ACENZ

Building Code Clause(s) B1

PRODUCER STATEMENT – PS4 – CONSTRUCTION REVIEW

(Guidance notes on the use of this form are printed on page 2)

ISSUED BY: ...DEANE CONSULTANCY LTD.....
(Construction Review Firm)

TO: L Dheda
(Owner/Developer)

TO BE SUPPLIED TO: Kaipara District Council
(Building Consent Authority)

IN RESPECT OF: Foundation excavations (geotechnical): Main dwelling and minor dwelling relocations.
(Description of Building Work)

AT: 102 Settlement Rd,
(Address)
Kaiwaka LOT 1 DP 123715 SO .....

DEANE CONSULTANCY LTD ..has been engaged by..... L Dheda
(Construction Review Firm)

To provide ☐CM1 ☑CM2 ☐CM3 ☐CM4 ☐CM5 (Engineering Categories) or ☐ observation as per agreement with owner/developer

or ☐other .....services
(Extent of Engagement)

in respect of clause(s) B1 ..... of the Building Code for the building work described in documents relating to Building Consent No. BC 170098 ..... and those relating to Building Consent Amendment(s) Nos. ✓.....issued during the course of the works. We have sighted these Building Consents and the conditions of attached to them.

Authorised instructions / variations(s) No. ✓..... (copies attached)

or by the attached Schedule ☑ have been issued during the course of the works.

On by the basis of ☑this ☐these review(s) and information supplied by the contractor during the course of the works and **on behalf of the firm** undertaking this Construction Review, **I believe on reasonable grounds** that ☐All ☑Part only of the building works have been completed in accordance with the relevant requirements of the Building Consent and Building Consent Amendments identified above, with respect to Clause(s) B1.....of the Building Code.

I also believe on reasonable grounds that the persons who have undertaken this construction review have the necessary competency to do so.

I, ...PETER ALLAN DEANE.....am: ☑CPEng No. ...64619.....
(Name of Construction Review Professional)

☐Reg Arch No. .....

I am a Member of : ☑IPENZ ☐NZIA and hold the following qualifications: ...MIPENZ(Civil,Structural)CPEng.....

The Construction Review Firm issuing this statement holds a current policy of Professional Indemnity Insurance no less than $200,000*.

The Construction Review Firm is a member of ACENZ : ☐

SIGNED BY ...P A DEANE... ON BEHALF OF ...DEANE CONSULTANCY LTD, deanecl@xtra.co.nz.....

Date: 13/6/17 Signature: ..... Work complies approved design and geotechnical requirements at site.

Note: This statement shall only be relied upon by the Building Consent Authority named above. Liability under this statement accrues to the Design Firm only. The total maximum amount of damages payable arising from this statement and all other statements provided to the Building Consent Authority in relation to this building work, whether in contract, tort or otherwise (including negligence), is limited to the sum of $200,000.*

This form is to accompany **Forms 6 or 8 of the Building (Form) Regulations 2004** for the issue of a Code Compliance Certificate.

THIS FORM AND ITS CONDITIONS ARE COPYRIGHT TO ACENZ, IPENZ AND NZIA

Attached: one page insp'n notes.

DEANE CONSULTANCY LTD
17 Kotare Place , RD2, Warkworth
09 4222 408 deanecl@xtra.co.nz

SITE INSPECTION REPORT

PROJECT:	Dheda house and MHU relocation
REF:	17/ADS/2
CLIENT:	Craig Walker for Lynette Dheda
CLIENT ADDRESS:	102 Settlement Rd, Kaiwaka
SITE ADDRESS:	102 Settlement Rd, Kaiwaka
LEGAL DESCRIPTION:	Lot 1 DP123715
DATE & TIME:	First Inspection 07/06/2017 @ 11.00am
	Second Inspection 08/06/2017 @ 3.00pm
BUILDING CONSENT NO:	BC 170098
TLA:	Kaipara DC

CONSENT CONDITIONS:

Inspect stage 1 of foundations.

COMMENTS:

There is no required outcome to be reported

SITE CONDITIONS:

First Inspection ,MHU site wet, and tidy, no house on site, MHU holes excavated and covered. Main dwelling still being excavated.
Second Inspection, main dwelling site very wet, holes filling with water.
Excavation is down to water table in SE corner,(holes filled to surface) all holes filling with water and some material still in bottom of holes

DESCRIPTION OF WORK INSPECTED:

First Inspection, only MHU holes inspected all 450 dia x 3000 deep to hard material.
Second Inspection, all main dwelling holes 450 x 3000 deep (no 350 as per plan)
Leading edge and anchor piles 4/ D12, balance 2/ D12 all tied and in place, all down to hard un-weathered material.

PERSONNEL ON SITE:

First Inspection, Chip (CWHR Forman) and earth moving contractor.
Second Inspection, Chip, labourer and excavator operator.

FINDINGS AND COMMENTS:

All piles installed as per consent and DCL recommendations, but requiring cleaning and dewatering prior to pouring.
Agreed that would have to happen immediately prior to pouring and CWHR to have sludge pump and digger on site to clear holes prior to pouring.

INSPECTION BY: First and second by K Canton

P1

13/6/17

Electrical Workers Registration Board
SAFETY | COMPETENCY | COMPLIANCE

Electrical Certificate of Compliance and Electrical Safety Certificate

Reference/Certificate ID No: 401

This form has been designed to be used by licensed electrical workers to certify that installations or Part installations under **Part 1 or Part 2 of AS/NZS 3000** are safe to be connected to the **specified** system of electrical supply.

LOCATION AND CONTACT

Location Details: 102A SETTLEMEN Rd.
Contact Name: ANWELS -
Contact Address: 102 SETTLEMEN Rd. KAIWAKA. Postcode: 0542
Name of Electrical worker: JOHN WHATSON
Registration/Practising licence number: E 8515
Organisation/ company: DRAGON SEC + ELECTRICAL
Phone: 027 495 3488
Email: dragonhl2020@Gmail.com
Name of person(s) supervised:

CoC

Type of work: ○ Additions ○ Alterations ○ New work
The prescribed electrical work is: ○ Low risk ✓ General ✓ High risk (specify):
Reference Standards: ✓ Part 1 of AS/NZS 3000 ○ Part 2 of AS/NZS 3000 ○ Additional Standards:

Description of work: (including date/s of work and type of supply system)
LIGHTS
POWER Points
H/W
MAINS MEN SYSTEM
MAINS SW/BD

I certify that the completed prescribed electrical work to which this Certificate of Compliance applies has been done lawfully and safely, and the information in the certificate is correct in that the installation, or part of the installation:

Select those that apply:

- Has been installed in accordance with the specified certified design[1] ✓
- Has an earthing system that is correctly rated (where applicable) ✓
- Contains fittings that are safe to connect to a power supply ✓
- Relies on a supplier Declaration of Conformity[1]
- Has been satisfactorily tested in accordance with the Electricity (Safety) Regulations 2010 ✓
- Is safe to connect ✓

Test Results

Polarity (independent earth):
Insulation resistance:
Earth Continuity: .02
Bonding:
Fault Loop impedance: 1.8 Ω
Other (specify):

Electronic/Other reference:

Certifier's signature: [signature]
Date: 20 / 11 / 17

[1] Attach or reference. If it is impractical to attach a copy of a particular manufacturer's instructions, or of any certified design or supplier declaration of conformity, provide a reference to where the documents can be found, in a readily accessible format, by electronic means.

ESC

I certify that the ~~installation~~, or part of the installation, to which this Electrical Safety Certificate applies is connected to a power supply and is safe to use.

Certifier's name: Francis Meagher
Registration/Practising licence number: IR68829
Certifier's signature: [signature]
Certificate Issue Date: 20 / 11 / 17
Connection Date: 20 / 11 / 17

CUSTOMER COPY - THIS IS AN IMPORTANT DOCUMENT AND SHOULD BE RETAINED FOR A MINIMUM OF 7 YEARS
This certificate also confirms that the electrical work complies with the building code for the purposes of Section 19(1)(e) of the Building Act 2004.

KAIPARA DISTRICT

Kaipara te Oranganui • Two Oceans Two Harbours

KAIPARA DISTRICT COUNCIL

Producer Statement Construction (PS3) – Solid Fuel Heating Appliances

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

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

(Owner) LYNETTE DHEDA

At (Address) 102A SETTLEMENT RD
KAIWAKA

Legal Description: Lot 1 DP 123715 Valuation 01200-26003

I have sighted the issued building consent (BC 170098) and have installed the solid fuel burning appliance in accordance with the approved building consent, the New Zealand Building Code, and the manufacturers specifications and requirements.

I have installed the solid fuel burning appliance as follows:

☑ Installed and tested the solid fuel burning appliance in compliance with the manufactures requirements or as to AS/NZS 2918:2001 in compliance with the Building Consent.

☑ Installed and tested the smoke alarms in compliance with clause F7 of the New Zealand Building Code

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

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

☑ I understand and accept that Council may rely on this document, for the purposes of establishing compliance with the above building consent and that the content including the signature, whether electronic or not, is truly representative and authoritative of the information contained.

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

Registration Number: 12766 Reg Expiry Date: 31/3/18

Date: 1/11/12

KAIPARA DISTRICT

Kaipara te Oranganui • Two Oceans Two Harbours

KAIPARA DISTRICT COUNCIL

Producer Statement Construction (PS3) - Plumbing

Issued by: G FINLAYSON being a Registered Certifying Plumber.

In respect of the testing of water pipework prior to concealment for:

(Owner) LYNETTE DHEDA

At (Address) 102A SETTLEMENT RD
KAIWAKA

Legal Description: Lot 1 DP 123715 Valuation 01200-26003

I have sighted the issued building consent (BC 170098) and have constructed the plumbing pipes and fitting in accordance with the approved building consent, the New Zealand Building Code, and the manufacturers specifications and requirements.

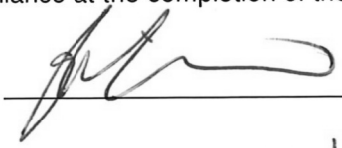
I have tested the water supply system as follows:

(✓) By pressurising the water supply system by subjecting the hot and cold system to a pressure of 1500kPa for a period of not less that 15 minutes and inspecting the system to ensure that there are no leaks, in accordance with NZBC G12/AS1 Clause 7.5.1

( ) By pressurising the UPVC water piping systems to 1.5 times the working pressure for a period not less than 15 minutes and checking that there are no leaks, as given in section 9 of NZS 7643, in accordance with NZBC G12/AS1 clause 7.5.2

I believe on reasonable grounds that the pipework has passed that test.

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

Signature of Registered Certifying Plumber: 

Registration Number: 12766 Reg Expiry Date: 31/3/18

Date: 1/11/17

File: 3117.03

Northpower

Electrical Certificate of Compliance (C.O.C)

3725

This form has been designed to be used by licensed electrical workers to certify low voltage installations, or part installations, that comply with standards as indicated below and are safe to be connected to a 230/400 Volt multiple earth neutral (MEN) system of electrical supply.

(1) Location of Installation

Address: 102 SETTLEMENT RD KAIWAKA

(2) Customer information

Name: LYNETTE DHEDA

Postal Address: 102 SETTLEMEN RD RD 1 KAIWAKA

Phone and Email:

(3) Electrical Worker Information

Name: ALASTAIR MARTIN

Registration Number or Employer Licence No: Lm 250508

Organisation: NORTH POWER CONTRACTING

Telephone Number: 021829713

Email:

Name of person(s) being supervised: ALASTAIR

(4) Work Details

The work is (circle): **additions** | **alterations** | **new work**

The prescribed electrical work is: (Please tick (✓) as appropriate)

✓ High Risk ○ General ○ Low Risk ○ The homeowner has undertaken part of the electrical installation work

Work Completed:

PULL UP 2 x 16 AERIAL CABLE
TEMINATE UP POLE ONLY
READY FOR INSPECTOR
CABLE INSTALLED TO HOUSE BY OTHERS

Date completed: 30-10-17

Tick (✓) if work includes:

- ○ Mains
- ○ MEN switchboard closest to point of supply
- ○ Main Earthing System
- ○ Electric Lines

(5) Certification of Work

I certify that the completed prescribed electrical work to which this certificate applies, has been done lawfully and safely and the information in the certificate is correct in that the installation, or part of the installation:

- ○ has been installed in accordance with certified design
- ○ has an earthing system that is correctly rated
- ○ contains fittings which are safe to connect to a power supply
- ○ relies on supplier's Declaration of conformity
- ○ relies on manufacturer's instructions
- ○ has been installed and satisfactorily tested in accordance with Electricity (Safety) Regulations 2010
- ○ is safe to connect
- ○ has been installed in accordance with AS/NZS 3000 Part 1
- ○ has been installed in accordance with AS/NZS 3000 Part 2
- ○ has been installed in compliance with standard/s

Test Results:

	Electrical Worker	Inspector
Polarity (independent earth):	O	
Insulation resistance:	>999	
Earth continuity:		
Bonding:		
Loop Test		
Other (specify):		

Electronic reference/s :
(Of any electronic Certified Design, Supplier Declaration of Conformity, Manufacturer's Instructions)

Electrical Worker's Signature: A Martin

Date: 30-10-17

KAIPARA DISTRICT

Kaipara te Oranganui • Two Oceans Two Harbours

KAIPARA DISTRICT COUNCIL

Application for Code Compliance Certificate (Form 6) Section 92, Building Act 2004

For Official use
Date Received:

Items marked * are mandatory. **Complete this form in BLOCK CAPITALS using BLACK or BLUE ink.**

1. The Building Consent

Building Consent Number*:	170098	Site Address*:	102A 102B Settlement Rd.

2. The Project

Description of the building work*: Relocate 2 x dwellings.

Floor Area*: ☐ m^2

Has the intended use of the building changed since the Building Consent was issued/granted? * ☐ YES → Provide details of the new use: [*refer NZBC A1 Classified Uses*] ☐ NO

3. The Owner [*include preferred form of address, eg, Mr, Miss, Dr, if an individual*]

Owner's Name*:	MRS LYNETTE DHEDA	Contact Person (*if owner is a company*):	
Mailing/ Billing Address*:	102 Settlement Rd RD2 Kaiwaka 0573.	Street Address/ Registered Office:	
Phone Number:		Cell Phone:	0276007491
Fax:			
E-mail address:	lynettedheda@hotmail.com		
Website:			

4. The Agent (Note - Only required if application is being made on behalf of the owner. The Agent, if nominated, will be the first point of contact for communications with the Council/Building Consent Authority regarding this application/building work and will receive all correspondence including all invoices)

Agent's Name:		Contact Person (*if agent is a company*):	
Mailing/ Billing Address:		Street Address/ Registered Office:	
Phone Number:		Cell Phone:	
Fax:			
E-mail address:			
Website:			

5a. The Application

All building work to be carried out under the above building consent was completed on*: 13-9-18.

KAIPARA DISTRICT

5b. The Application (Restricted Building Work) *

The licenced building practitioner(s) who carried out, or supervised, the restricted building work is/are as follows:

Note: Enter the licenced building practitioner (LBP) number or registration number if treated as being licenced under section 291 of Building Act 2004.

Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					

KAIPARA DISTRICT

5c. The Application (Key Personnel) *

The personnel who carried out the building work other than restricted building work are as follows:

Builder:	Rangi Joyce.	Registration Number:	BP 11393.
Mailing Address:	foundations		
e-mail:		Phone (day):	
Certifying Plumber:	Guy Finlayson	Registration Number:	~~10084~~ 12766.
Mailing Address:			
e-mail:		Phone (day):	
Certifying Gasfitter:		Registration Number:	
Mailing Address:			
e-mail:		Phone (day):	
Certifying Drainlayer:	Paul Oliver / Paul Warren.	Registration Number:	10084
Mailing Address:			
e-mail:		Phone (day):	
Registered Electrician:	F Meagher.	Registration Number:	(FMEAGHER). REF401
Mailing Address:			
e-mail:		Phone (day):	
Name:		Registration Number:	
Mailing Address:			
e-mail:		Phone (day):	
Name:		Registration Number:	
Mailing Address:			
e-mail:		Phone (day):	

Note: Use additional sheets if required.

Other notes or comments which you as the applicant may wish to add:

KAIPARA DISTRICT

5d. The Application (Specified Systems)

Are there any specified systems associated with this project? *

YES NO, there are no specified systems associated with this project.

The following specified systems are contained on the compliance schedule for the building and, in the opinion of the personnel who installed them, are capable of performing to the performance standards set out in the building consent: [*specified systems are defined in regulations*].

SS1 Automatic systems for fire suppression (for example, sprinkler systems)

SS2 Automatic or manual emergency warning systems for fire or other dangers (other than a warning system for fire that is entirely within a household unit & serves only that unit).

SS3 Electromagnetic or automatic doors or windows(for example, ones that close on fire alarm activation)

- **SS3/1** Automatic doors
- **SS3/2** Access Controlled Doors
- **SS3/3** Interfaced fire or smoke doors or windows

SS4 Emergency lighting systems

SS5 Escape route pressurisation systems

SS6 Riser mains for fire service use

SS7 Automatic back-flow preventers connected to a potable water supply

SS8 Lifts, escalators, travelators, or other systems for moving people or goods within buildings

- **SS8/1** Passenger Carrying lifts
- **SS8/2** Service Lifts
- **SS8/3** Escalators and moving walks

SS9 Mechanical ventilation or air conditioning systems

SS10 Building maintenance units for providing access to the exterior and interior walls of buildings

SS11 Laboratory fume cupboards

SS12 Audio loops or other assistive listening systems

SS13 Smoke control systems

- **SS13/1** Mechanical Smoke Control
- **SS13/2** Natural Smoke Control
- **SS13/3** Smoke Curtains

SS14 Emergency power systems for, or signs relating to, a system or feature specified in any of the clauses 1 to 13

- **SS14/1** Emergency Power Systems
- **SS14/2** Signs relating to Specified Systems 1 to 13

SS15 Other Fire Safety Systems or Features

- **SS15/1** Systems for communicating spoken information intended to facilitate evacuation
- **SS15/2** Final exit (as defined by A2 of the Building Code; and
- **SS15/3** Fire separations
- **SS15/4** Signs for communicating information intended to facilitate evacuation;
- **SS15/5** Smoke separations

SS16 Cable Cars

Risk Group*:		**Fire Hazard Category*:**		**Max Occupant Load*:**	

KAIPARA DISTRICT

5e. The Application (Signatory)

I request that you issue a code compliance certificate for this work under section 95 of the Building Act 2004.

Signed by*:	Hamath
FULL NAME*:	Angela Jaishree Tamath
Date*:	14-9-18
I am the*:	☐ **Owner** ☑ **Agent** on behalf of, and with the authority of, the owner.
Address the code compliance certificate should be sent to:	

6. Attachments

The following documents are attached to this application:

Evidence of ownership* (*Certificate of Title or Sale & Purchase Agreement*)

Certificates that relate to the energy work (*eg Gas & electricity*)

Evidence that the specified systems are capable of performing to the performance standards set out in the building consent

Proof of potability of drinking water from private well, and/or rainwater catchment, supply (refer to New Zealand Drinking Water Standards 2005)

Memoranda (Records of Building Work) from licenced building practitioner(s) stating what restricted building work they carried out or supervised*

Other documents from personnel who carried out the work

For Official use only:

Memorandum from licensed building practitioner: Record of building work

Section 88, Building Act 2004

Please fill in the form as fully and correctly as possible.

If there is insufficient room on the form for requested details, please continue on another sheet and attach the additional sheet(s) to this form.

THE BUILDING	
Street address: 102 Settlement Road	
Suburb: Kaiwaka	
Town/City: Kaipara	Postcode:

THE PROJECT
Building consent number: 2017/35695

THE OWNER(S)	
Name(s): Lynette Eileen Dheda	
Mailing address:	
Suburb:	PO Box/Private Bag:
Town/City:	Postcode:
Phone number: 027 600 7491	Email address: whgadmin@terranova.net.nz

RECORD OF WORK THAT IS RESTRICTED BUILDING WORK

PRIMARY STRUCTURE

Work that is restricted building work	Description of restricted building work	Carried out or supervised
Tick ✓	If necessary, describe the restricted building work.	Tick ✓ whether you carried out the restricted building work or supervised someone else carrying out the restricted building work.
Foundations and subfloor framing ☑	Instalation Of New Foundations. For both Building A & Building B	✓ Carried out ✓ Supervised
Walls ☐		○ Carried out ○ Supervised
Roof ☐		○ Carried out ○ Supervised
Columns and beams ☐		○ Carried out ○ Supervised
Bracing ☐		○ Carried out ○ Supervised
Other ☐		○ Carried out ○ Supervised

EXTERNAL MOISTURE MANAGEMENT SYSTEMS		
Work that is restricted building work	**Description of restricted building work**	**Carried out or supervised**
Tick ☑	If necessary, describe the restricted building work.	Tick ☑ whether you carried out the restricted building work or supervised someone else carrying out the restricted building work.
Damp proofing ☐		○ Carried out ○ Supervised
Roof cladding or roof cladding system ☐		○ Carried out ○ Supervised
Ventilation system (for example, subfloor or cavity) ☐		○ Carried out ○ Supervised
Wall cladding or wall cladding system ☐		○ Carried out ○ Supervised
Waterproofing ☐		○ Carried out ○ Supervised
Other ☐		○ Carried out ○ Supervised

ISSUED BY

Name and contact details of the licensed building practitioner who is licensed to carry out or supervise restricted building work.

Name: Clifton Rangi Joyce	LBP number: BP 113939
Class(es) licensed in:	
Foundations	
Plumbers, Gasfitters and Drainlayers registration number (if applicable):	
Mailing address (if different from below): PO Box 517 Kumeu	
Street address/Registered office: 134 Main Road	
Suburb: Kumeu	Town/City: Auckland
PO Box/Private Bag	Postcode:
Phone number: 09 412 6405	Mobile: 027 668 9403
After hours:	Fax:
Email address: rangi@cwbr.co.nz	Website: www.cwbr.co.nz

DECLARATION

I Clifton Rangi Joyce carried out or supervised the restricted building work recorded on this form.

Signature: _____

Date: 19-6-17.

17/A05/2

Building Code Clause(s) B1

PRODUCER STATEMENT – PS4 – CONSTRUCTION REVIEW

(Guidance notes on the use of this form are printed on page 2)

ISSUED BY: ...DEANE CONSULTANCY LTD.....
(Construction Review Firm)

TO: L. Dheda
(Owner/Developer)

TO BE SUPPLIED TO: Kaipara District Council
(Building Consent Authority)

IN RESPECT OF: Foundation excavations (geotechnical): Main dwelling and minor dwelling relocations.
(Description of Building Work)

AT: 102 Settlement Rd,
Kaiwaka
(Address)
LOT 1 DP 123715 SO .....

DEANE CONSULTANCY LTD ..has been engaged by..... L. Dheda
(Construction Review Firm)

To provide ☐CM1 ☑CM2 ☐CM3 ☐CM4 ☐CM5 *(Engineering Categories)* or ☐ observation as per agreement with owner/developer

or ☐other .....services
(Extent of Engagement)

in respect of clause(s) B1 ..... of the Building Code for the building work described in documents relating to Building Consent No. BC 170098 ..... and those relating to Building Consent Amendment(s) Nos. ✓.....issued during the course of the works. We have sighted these Building Consents and the conditions of attached to them.

Authorised instructions / variations(s) No. ✓..... (copies attached)

or by the attached Schedule ☑ have been issued during the course of the works.

On by the basis of ☑this ☐these review(s) and information supplied by the contractor during the course of the works and **on behalf of the firm** undertaking this Construction Review, **I believe on reasonable grounds** that ☐All ☑Part only of the building works have been completed in accordance with the relevant requirements of the Building Consent and Building Consent Amendments identified above, with respect to Clause(s) B1.....of the Building Code.

I also believe on reasonable grounds that the persons who have undertaken this construction review have the necessary competency to do so.

I, ...PETER ALLAN DEANE.....am: ☑CPEng No. ...64619.....
(Name of Construction Review Professional)

☐Reg Arch No. .....

I am a Member of : ☑IPENZ ☐NZIA and hold the following qualifications: ...MIPENZ(Civil,Structural)CPEng.....

The Construction Review Firm issuing this statement holds a current policy of Professional Indemnity Insurance no less than $200,000*.

The Construction Review Firm is a member of ACENZ : ☐

SIGNED BY ...P A DEANE... ON BEHALF OF ...DEANE CONSULTANCY LTD, deanecl@xtra.co.nz.....

Date: 13/6/17 ...Signature: ..... Work complies approved design and geotechnical requirements at site.

Note: This statement shall only be relied upon by the Building Consent Authority named above. Liability under this statement accrues to the Design Firm only. The total maximum amount of damages payable arising from this statement and all other statements provided to the Building Consent Authority in relation to this building work, whether in contract, tort or otherwise (including negligence), is limited to the sum of $200,000.*

This form is to accompany **Forms 6 or 8 of the Building (Form) Regulations 2004** for the issue of a Code Compliance Certificate.

THIS FORM AND ITS CONDITIONS ARE COPYRIGHT TO ACENZ, IPENZ AND NZIA

Attached: One page insp'n notes.

DEANE CONSULTANCY LTD
17 Kotare Place , RD2, Warkworth
09 4222 408 deanecl@xtra.co.nz

SITE INSPECTION REPORT

PROJECT:	Dheda house and MHU relocation
REF:	17/ADS/2
CLIENT:	Craig Walker for Lynette Dheda
CLIENT ADDRESS:	102 Settlement Rd, Kaiwaka
SITE ADDRESS:	102 Settlement Rd, Kaiwaka
LEGAL DESCRIPTION:	Lot 1 DP123715
DATE & TIME:	First Inspection 07/06/2017 @ 11.00am
	Second Inspection 08/06/2017 @ 3.00pm
BUILDING CONSENT NO:	BC 170098
TLA:	Kaipara DC

CONSENT CONDITIONS:

Inspect stage 1 of foundations.

COMMENTS:

There is no required outcome to be reported

SITE CONDITIONS:

First Inspection ,MHU site wet, and tidy, no house on site, MHU holes excavated and covered. Main dwelling still being excavated.
Second Inspection, main dwelling site very wet, holes filling with water.
Excavation is down to water table in SE corner,(holes filled to surface) all holes filling with water and some material still in bottom of holes

DESCRIPTION OF WORK INSPECTED:

First Inspection, only MHU holes inspected all 450 dia x 3000 deep to hard material.
Second Inspection, all main dwelling holes 450 x 3000 deep (no 350 as per plan)
Leading edge and anchor piles 4/ D12, balance 2/ D12 all tied and in place, all down to hard un-weathered material.

PERSONNEL ON SITE:

First Inspection, Chip (CWHR Forman) and earth moving contractor.
Second Inspection, Chip, labourer and excavator operator.

FINDINGS AND COMMENTS:

All piles installed as per consent and DCL recommendations, but requiring cleaning and dewatering prior to pouring.
Agreed that would have to happen immediately prior to pouring and CWHR to have sludge pump and digger on site to clear holes prior to pouring.

INSPECTION BY: First and second by K Canton

P1

13/6/17

Electrical Workers Registration Board

SAFETY | COMPETENCY | COMPLIANCE

Electrical Certificate of Compliance and Electrical Safety Certificate

Reference/Certificate ID No: 402

This form has been designed to be used by licensed electrical workers to certify that installations or Part installations under **Part 1 or Part 2 of AS/NZS 3000** are safe to be connected to the **specified** system of electrical supply.

LOCATION AND CONTACT

Location Details: 102 B SETTLEMENT Rd.

Contact Name: ANNGIE

Contact Address: 102 SETTLEMENT Rd KAWAKA

Postcode: 0542

Name of Electrical worker: JOHN WATSON

Organisation/ company: DRAGON SEC + ELECTRICAL

Phone: 027 495 3488

Registration/Practising licence number: E8515

Email: dragon hi 2020 @ GMAIL.COM

Name of person(s) supervised:

CoC

Type of work: ○ Additions ○ Alterations ○ New work

The prescribed electrical work is: ○ Low risk ✓ General ✓ High risk (specify):

Reference Standards: ✓ Part 1 of AS/NZS 3000 ✓ Part 2 of AS/NZS 3000

○ Additional Standards:

Description of work: (including date/s of work and type of supply system)

LIGHTS H/W

Power Points

MAINS NEW SYSTEM MAINS SW/Rd.

I certify that the completed prescribed electrical work to which this Certificate of Compliance applies has been done lawfully and safely, and the information in the certificate is correct in that the installation, or part of the installation:

Select those that apply:

- Has been installed in accordance with the specified certified design[1]
- Has an earthing system that is correctly rated (where applicable) ✓
- Contains fittings that are safe to connect to a power supply ✓
- Relies on a supplier Declaration of Conformity[1]
- Has been satisfactorily tested in accordance with the Electricity (Safety) Regulations 2010 ✓
- Is safe to connect ✓

Test Results

Polarity (independent earth):

Insulation resistance: ✓

Earth Continuity: ∞Ω

Bonding:

Fault Loop impedance: 1.7

Other (specify):

Electronic/Other reference:

Certifier's signature:

Date: 31 / 10 / 17

[1] Attach or reference. If it is impractical to attach a copy of a particular manufacturer's instructions, or of any certified design or supplier declaration of conformity, provide a reference to where the documents can be found, in a readily accessible format, by electronic means.

ESC

I certify that the installation, or part of the installation, to which this Electrical Safety Certificate applies is connected to a power supply and is safe to use.

Certifier's name:

Registration/Practising licence number:

Certifier's signature:

Certificate Issue Date: / /

Connection Date: / /

CUSTOMER COPY – THIS IS AN IMPORTANT DOCUMENT AND SHOULD BE RETAINED FOR A MINIMUM OF 7 YEARS

This certificate also confirms that the electrical work complies with the building code for the purposes of Section 19(1)(e) of the Building Act 2004.

KAIPARA DISTRICT

Kaipara te Oranganui • Two Oceans Two Harbours

KAIPARA DISTRICT COUNCIL

Producer Statement Construction (PS3) – Solid Fuel Heating Appliances

Issued by: C. FINLAYSON being a licensed Home Heating Association member or a Certifying Plumber on the Council approved authors register

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

(Owner) LYNETTE DHEDA

At (Address) 102 B SETTLEMENT RD
KAIWAKA

Legal Description: Lot 1 DP 123715 Valuation 01200 - 26003

I have sighted the issued building consent (BC 170098) and have installed the solid fuel burning appliance in accordance with the approved building consent, the New Zealand Building Code, and the manufacturers specifications and requirements.

I have installed the solid fuel burning appliance as follows:

☑ Installed and tested the solid fuel burning appliance in compliance with the manufactures requirements or as to AS/NZS 2918:2001 in compliance with the Building Consent.

☑ Installed and tested the smoke alarms in compliance with clause F7 of the New Zealand Building Code

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

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

☑ I understand and accept that Council may rely on this document, for the purposes of establishing compliance with the above building consent and that the content including the signature, whether electronic or not, is truly representative and authoritative of the information contained.

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

Registration Number: 12766 Reg Expiry Date: 31/3/18

Date: 1/11/12

KAIPARA DISTRICT

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KAIPARA DISTRICT COUNCIL

Producer Statement Construction (PS3) - Plumbing

Issued by: G FINLAYSON being a Registered Certifying Plumber.

In respect of the testing of water pipework prior to concealment for:

(Owner) LYNETTE DHEDA

At (Address) 102 B SETTLEMENT RD

KAIWAKA

Legal Description: Lot 1 DP 123715 Valuation 01200-26003

I have sighted the issued building consent (BC 170093) and have constructed the plumbing pipes and fitting in accordance with the approved building consent, the New Zealand Building Code, and the manufacturers specifications and requirements.

I have tested the water supply system as follows:

(✓) By pressurising the water supply system by subjecting the hot and cold system to a pressure of 1500kPa for a period of not less that 15 minutes and inspecting the system to ensure that there are no leaks, in accordance with NZBC G12/AS1 Clause 7.5.1

( ) By pressurising the UPVC water piping systems to 1.5 times the working pressure for a period not less than 15 minutes and checking that there are no leaks, as given in section 9 of NZS 7643, in accordance with NZBC G12/AS1 clause 7.5.2

I believe on reasonable grounds that the pipework has passed that test.

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

Signature of Registered Certifying Plumber: _____

Registration Number: 12766 Reg Expiry Date: 31/3/18

Date: 1/11/17

File: 3117.03

Form 7
Code compliance certificate

Section 95, Building Act 2004

The building

Street address of building:	102 Settlement Road , Kaiwaka
Legal description of land where building is located:	Lot 1 DP 123715
Building name:	N/A
Location of building within site/block number:	102 Settlement Road Kaiwaka
Level/unit number:	N/A
Current, lawfully established, use:	2.0 Housing: 2.0.2 Detached Dwelling
Year first constructed:	1985

The owner

Name of owner:	Lynette Dheda
Contact person:	Lynette Dheda
Mailing address:	102 Settlement Road, RD 2, Kaiwaka
Street address/registered office:	134 Main Road Kumeu , Auckland 0841
Phone number:	Landline: 094128749 Mobile: 0212812121 Chris Mcallister
Daytime:	Landline: 094128749 Mobile: 0212812121 Chris Mcallister
After hours:	Landline: 094128749 Mobile: 0212812121 Chris Mcallister
Facsimile number:	N/A
Email address:	chris@adsltd.co.nz

First point of contact for communications with the council/building consent authority:
Chris Mcallister; Mailing Address: Po Box 120 Kumeu
Auckland 0841; Mobile: 0212812121; Email: chris@adsltd.co.nz

Building work

Building consent number:	BC170098
Description:	Relocate two Secondhand Dwellings to site with associated Stormwater & Sanitary Sewer private drainage.
Issued by:	Kaipara District Council

Code compliance

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

- the building work complies with the building consent.



Signature: Jamie Nikora
Position: Building Control Officer
On behalf of: Kaipara District Council
Date: 13 March 2019

KAIPARA DISTRICT
Kaipara te Oranganui • Two Oceans Two Harbours

KAIPARA DISTRICT COUNCIL

Private Utility Service As-Built Record

(Section 216, Building Act 2004)

Part A Consent Details (to be completed in all cases)

Building Consent Number 170098

Applicants Name L. & D. Dheda

Applicants Mailing Address 102 Settlement Road, Kaiwaka.

Site Address 102B - Settlement Rd. - (House 2)

Part B As Built Services Information (to be completed in relation to service provided, ticking each box as appropriate)

Wastewater - Pressure (Pump Make/Model)_____

Connection Diameter		Pipe Material		Connection Type	
	40mm		uPVC		Public Utility Service Connection
	50mm		Vitrified Clay		Septic Tank
	80mm		Concrete		Other _____
	Other_____mm		Other _____		

Wastewater - Gravity

Connection Diameter		Pipe Material		Connection Type	
	65mm		uPVC		Public Utility Service Connection
	80mm		Vitrified Clay		Soak Hole
	100mm		Concrete		Stream
	Other_____mm		Other _____		Other _____

Wastewater - Disposal System Description

Septic Tank

Size: _____ litres

Type
- [ ] **Septic tank DECOMMISSIONED**
- [ ] Ecotank
- [ ] Biocycle

Effluent Field

Trench _____m

- [ ] Deep Soakhole
  - Depth _____m
  - Number of holes _____m
- [ ] Other _____

Sanitary Facilities

- [ ] Toilet Number_____
- [ ] Bidet Number _____
- [ ] Urinal Number _____

Waste Disposal Unit

- [ ] No
- [ ] Yes Type _____

Certification

I Paul Warren being

- [ ] Owner
- [ ] Occupier
- [ ] Craftsman plumber — Registration Number _____
- [x] Registered drainlayer — Registration Number _____

certify that this Private Utility Service As-Built Record is an accurate representation of the work carried out.

_____ _____

Signature Date

Stormwater

Pipe Diameter		Pipe Material		Connection Type	
	80mm		uPVC		Public Utility Service Connection
	100mm		Vitrified Clay		Soak Hole
	150mm		Ductile Iron		Stream
	225mm		Concrete		Drain
	Other_____mm		Other_____		Other_____

Water Supply

Pipe Material - Cold

- [ ] uPVC
- [ ] Copper
- [ ] Polybutylene
- [ ] Other _____

Hot Water Cylinder

- [ ] High Pressure _____Litre
- [ ] Low Pressure _____Litre

Meter Type

Make _____Model_____

Pipe Material - Hot

- [ ] uPVC
- [ ] Copper
- [ ] Polybutylene
- [ ] Other _____

Diameter _____

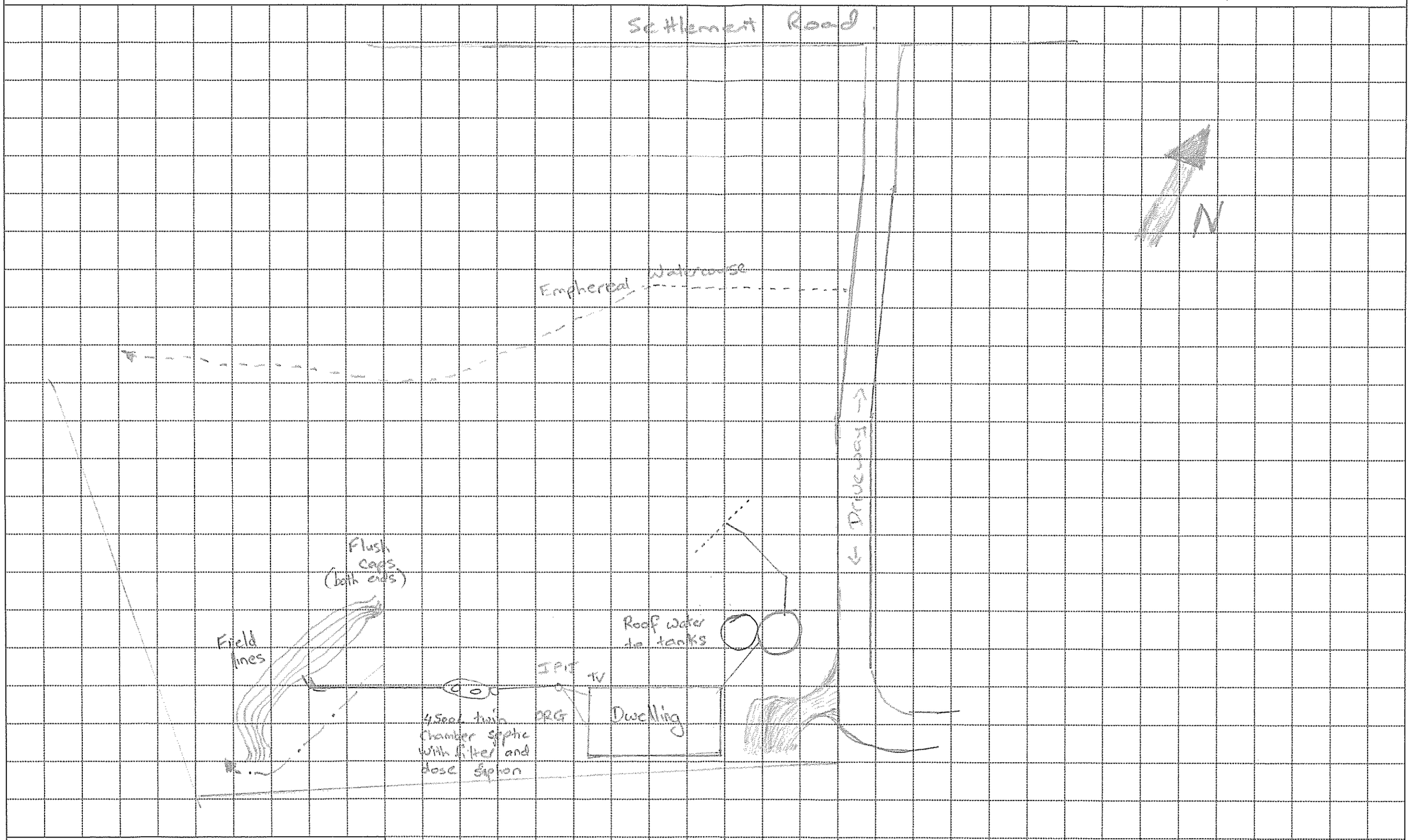
Serial Number _____

Reading [ ][ ][ ][ ][ ][ ][ ] m^3

(Quote all black figures inclusive of zeros only)

Note Part B As Built Services Information

PART C: As Built Services Plan
(To be completed in all cases. If details are already noted on separate drawings then provide copies in duplicate as appropriate and attach to this sheet. Ensure that drawing numbers, etc, are noted below.)

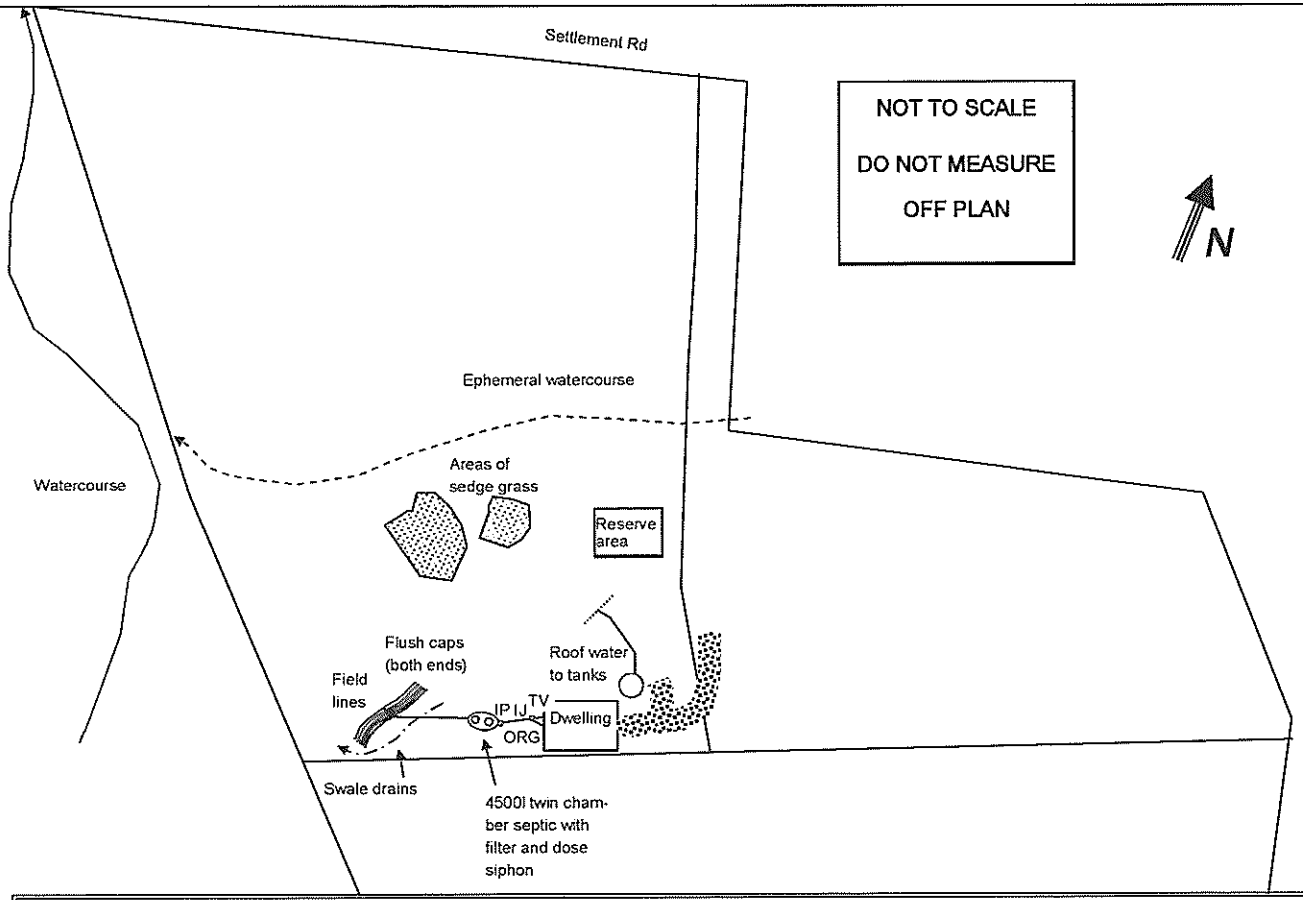


Scale: _____ in _____

Site Address: _____

_____

Please provide at least two measurements for each access point for future location



NOT TO SCALE

DO NOT MEASURE OFF PLAN

N

Enviroserve Wastewater Systems

- Dispersal field area 144m², 100% reserve available to northeast
- Swale along south side of field area
- Field lines laid to level, distribution manifold in middle of top line.
- Planting of field to suit owners garden plans. Aggressive trees must not be planted close to field lines. Animals must not be grazed on the dispersal field.
- System designer must be contacted at least 48 hours before installation to co-ordinate calculation of dispersal orifice sizes.

Site plan and detail for
L Dheda
102 Settlement Rd
Kaiwaka
January 2017

KAIPARA DISTRICT

Kaipara te Oranganui • Two Oceans Two Harbours

KAIPARA DISTRICT COUNCIL

Application for Code Compliance Certificate (Form 6) Section 92, Building Act 2004

For Official use
Date Received:

Items marked * are mandatory. **Complete this form in BLOCK CAPITALS using BLACK or BLUE ink.**

1. The Building Consent

Building Consent Number*:	170098	Site Address*:	102A 102B Settlement Rd.

2. The Project

Description of the building work*: Relocate 2 x dwellings.

Floor Area*: ☐ m^2

Has the intended use of the building changed since the Building Consent was issued/granted? * ☐ YES → Provide details of the new use: [*refer NZBC A1 Classified Uses*] ☐ NO

3. The Owner [*include preferred form of address, eg, Mr, Miss, Dr, if an individual*]

Owner's Name*:	MRS LYNETTE DHEDA	Contact Person (*if owner is a company*):	
Mailing/ Billing Address*:	102 Settlement Rd RD2 Kaiwaka 0573.	Street Address/ Registered Office:	
Phone Number:		Cell Phone:	0276007491
Fax:			
E-mail address:	lynettedheda@hotmail.com		
Website:			

4. The Agent (Note - Only required if application is being made on behalf of the owner. The Agent, if nominated, will be the first point of contact for communications with the Council/Building Consent Authority regarding this application/building work and will receive all correspondence including all invoices)

Agent's Name:		Contact Person (*if agent is a company*):	
Mailing/ Billing Address:		Street Address/ Registered Office:	
Phone Number:		Cell Phone:	
Fax:			
E-mail address:			
Website:			

5a. The Application

All building work to be carried out under the above building consent was completed on*: 13-9-18.

KAIPARA DISTRICT

5b. The Application (Restricted Building Work) *

The licenced building practitioner(s) who carried out, or supervised, the restricted building work is/are as follows:

Note: Enter the licenced building practitioner (LBP) number or registration number if treated as being licenced under section 291 of Building Act 2004.

Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					
Name		**Licence Class**		**LBP number**	
Particular work carried out or supervised:					

KAIPARA DISTRICT

5c. The Application (Key Personnel) *

The personnel who carried out the building work other than restricted building work are as follows:

Builder:	Rangi Joyce. Foundations	Registration Number:	BP 11393.
Mailing Address:			
e-mail:		Phone (day):	
Certifying Plumber:	Guy Finlayson	Registration Number:	~~10084~~ 12766.
Mailing Address:			
e-mail:		Phone (day):	
Certifying Gasfitter:		Registration Number:	
Mailing Address:			
e-mail:		Phone (day):	
Certifying Drainlayer:	Paul Oliver / Paul Warren.	Registration Number:	10084
Mailing Address:			
e-mail:		Phone (day):	
Registered Electrician:	F Meagher.	Registration Number:	(FMEAGHER). REF401
Mailing Address:			
e-mail:		Phone (day):	
Name:		Registration Number:	
Mailing Address:			
e-mail:		Phone (day):	
Name:		Registration Number:	
Mailing Address:			
e-mail:		Phone (day):	

Note: Use additional sheets if required.

Other notes or comments which you as the applicant may wish to add:

KAIPARA DISTRICT

5d. The Application (Specified Systems)

Are there any specified systems associated with this project? *

YES NO, there are no specified systems associated with this project.

The following specified systems are contained on the compliance schedule for the building and, in the opinion of the personnel who installed them, are capable of performing to the performance standards set out in the building consent: [*specified systems are defined in regulations*].

SS1 Automatic systems for fire suppression (for example, sprinkler systems)

SS2 Automatic or manual emergency warning systems for fire or other dangers (other than a warning system for fire that is entirely within a household unit & serves only that unit).

SS3 Electromagnetic or automatic doors or windows(for example, ones that close on fire alarm activation)

- **SS3/1** Automatic doors
- **SS3/2** Access Controlled Doors
- **SS3/3** Interfaced fire or smoke doors or windows

SS4 Emergency lighting systems

SS5 Escape route pressurisation systems

SS6 Riser mains for fire service use

SS7 Automatic back-flow preventers connected to a potable water supply

SS8 Lifts, escalators, travelators, or other systems for moving people or goods within buildings

- **SS8/1** Passenger Carrying lifts
- **SS8/2** Service Lifts
- **SS8/3** Escalators and moving walks

SS9 Mechanical ventilation or air conditioning systems

SS10 Building maintenance units for providing access to the exterior and interior walls of buildings

SS11 Laboratory fume cupboards

SS12 Audio loops or other assistive listening systems

SS13 Smoke control systems

- **SS13/1** Mechanical Smoke Control
- **SS13/2** Natural Smoke Control
- **SS13/3** Smoke Curtains

SS14 Emergency power systems for, or signs relating to, a system or feature specified in any of the clauses 1 to 13

- **SS14/1** Emergency Power Systems
- **SS14/2** Signs relating to Specified Systems 1 to 13

SS15 Other Fire Safety Systems or Features

- **SS15/1** Systems for communicating spoken information intended to facilitate evacuation
- **SS15/2** Final exit (as defined by A2 of the Building Code; and
- **SS15/3** Fire separations
- **SS15/4** Signs for communicating information intended to facilitate evacuation;
- **SS15/5** Smoke separations

SS16 Cable Cars

Risk Group*:		**Fire Hazard Category*:**		**Max Occupant Load*:**	

KAIPARA DISTRICT

5e. The Application (Signatory)

I request that you issue a code compliance certificate for this work under section 95 of the Building Act 2004.

Signed by*: Hamath

FULL NAME*: Angela Jaishree Tamath

Date*: 14-9-18

I am the*: ☐ **Owner** ☑ **Agent** on behalf of, and with the authority of, the owner.

Address the code compliance certificate should be sent to:

6. Attachments

The following documents are attached to this application:

Evidence of ownership* (*Certificate of Title or Sale & Purchase Agreement*)

Certificates that relate to the energy work (*eg Gas & electricity*)

Evidence that the specified systems are capable of performing to the performance standards set out in the building consent

Proof of potability of drinking water from private well, and/or rainwater catchment, supply (refer to New Zealand Drinking Water Standards 2005)

Memoranda (Records of Building Work) from licenced building practitioner(s) stating what restricted building work they carried out or supervised*

Other documents from personnel who carried out the work

For Official use only:

Form 7
Code compliance certificate

Section 95, Building Act 2004

The building

Street address of building:	102 Settlement Road , Kaiwaka
Legal description of land where building is located:	Lot 1 DP 123715
Building name:	N/A
Location of building within site/block number:	102 Settlement Road Kaiwaka
Level/unit number:	N/A
Current, lawfully established, use:	2.0 Housing: 2.0.2 Detached Dwelling
Year first constructed:	1985

The owner

Name of owner:	Lynette Dheda
Contact person:	Lynette Dheda
Mailing address:	102 Settlement Road, RD 2, Kaiwaka
Street address/registered office:	134 Main Road Kumeu , Auckland 0841
Phone number:	Landline: 094128749 Mobile: 0212812121 Chris Mcallister
Daytime:	Landline: 094128749 Mobile: 0212812121 Chris Mcallister
After hours:	Landline: 094128749 Mobile: 0212812121 Chris Mcallister
Facsimile number:	N/A
Email address:	chris@adsltd.co.nz

First point of contact for communications with the council/building consent authority:
Chris Mcallister; Mailing Address: Po Box 120 Kumeu
Auckland 0841; Mobile: 0212812121; Email: chris@adsltd.co.nz

Building work

Building consent number:	BC170098
Description:	Relocate two Secondhand Dwellings to site with associated Stormwater & Sanitary Sewer private drainage.
Issued by:	Kaipara District Council

Code compliance

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

- the building work complies with the building consent.



Signature: Jamie Nikora
Position: Building Control Officer
On behalf of: Kaipara District Council
Date: 13 March 2019

Email #16213: BC170098

Project ID: 170098
Date Received: 2017-03-01 15:15:02
Sender: paul@adsltd.co.nz
Checked By: Pamela White
Accepted By: Lissa Whiteman
Subject:
Information Received Via Email: 102 Settlement Road, Kaiwaka
Message:
Hi Michelle,

Attached documentation relating to your RFI dated 23 Feb 2017. I have briefly noted an explanation on each point below, these numbers relate directly to your RFI numbered items for ease.

1. - Complete?

2. - Wall bracing check for each dwelling based on original house location / wind zone.

3. - Signed forms for each of the relocated dwellings.

Also, included in these amendments is the client changes.

She has rotated the smaller building (building 'B') 180 degrees. It will remain in the exact same location (just rotated). the floor plan, sub-floor plan, elevations, section & drainage plans have been altered to reflect the rotation.

She has also changed the driveway to loop around the building.

Regards
Paul Thompson
Architectural Draughting Solutions Ltd

134 Main Road, Kumeu, Auckland
P O Box 120, Kumeu, Auckland

P: +64 9 412 8749

ATTACHMENTS:

- 15109_1689111632627837886_Residence_A_Bracing_Check.pdf
- 15109_1817569391500673816_Residence_A_Relocated_Dwelling_Form.pdf
- 15109_1851012361995207088_Residence_B_Bracing_Check.pdf
- 15109_11083772331938289840_Residence_B_Relocated_Dwelling_Form.pdf

- 15109_17145298151085302823_16120_Amend_Set.pdf

Email #16523: BC170098

Project ID: 170098
Date Received: 2017-03-27 11:05:02
Sender: chris@adsltd.co.nz
Checked By: Jamie Nikora
Accepted By: Jamie Nikora
Subject:
Information Received Via Email: RE: BC170098.1 Request For Further Information - 102 Settlement Road Kaiwaka
Message:
Hi Jamie,

Please find attached the amended drawings in relation to your RFI dated 23 March 2017.

Also attached is the Effluent Report with all attachments.

Regards
Chris McAllister
Architectural Draughting Solutions Ltd

134 Main Road, Kumeu, Auckland
P O Box 120, Kumeu, Auckland

P: +64 9 412 8749
M: +64 21 281 2121
e: chris@adsltd.co.nz

-----Original Message-----
From: Kaipara District Council [mailto:170098@kdc.abcs.co.nz]
Sent: Thursday, March 23, 2017 10:29 AM
To: Chris McAllister <chris@adsltd.co.nz>
Subject: BC170098.1 Request For Further Information - 102 Settlement Road Kaiwaka

Good Morning,

Reference Number: 170098
Project Location: 102 Settlement Road , Kaiwaka Project Description: Relocate two Secondhand Residences to site with associated Stormwater & Sanitary Sewer private drainage.

Processing of your building consent application is currently in progress. The attached letter details information which is required to be provided to demonstrate that the proposed work will comply with the NZ Building Act and Regulations. Please note that the processing time clock has been suspended pending this information.

So that your information gets to us as promptly as possible, please:

- ensure you reply directly to this email and the format of our email address must be in full as follows: 170098@kdc.abcs.co.nz

- only provide information specifically relating to this project;
- all attachments must be saved in PDF format;

By doing this you will keep your project moving as the information will be delivered directly to the processor - thank you for helping us to help you!

If you do not receive the automated reply confirmation from Kaipara District Council for the info sent then Kaipara District Council has not received your information.

Regards,

Jamie Nikora
Building Control Officer
Kaipara District Council
Kaipara District Council, Unit 5 - The Hub, 6 Molesworth Drive, Mangawhai / PO Box 224, Mangawhai 0540
P: (09) 439 3123 | E: buildingsupport@kaipara.govt.nz | W: www.kaipara.govt.nz

ATTACHMENTS:

- 16123_2012263814287276136_ENVSFW182A_Dheda_Drainage_Site_Plan_January_2017.pdf

- 16123_18093806041557195441_16120_Second_RFI_Amends.pdf

- 16123_14682002741507307983_Metro_All_Models_Wetback_Installation_Manual_HR.PDF

- 16123_15700756831391735628_metroecofluesystemsmanual.pdf

- 16123_14267572301708201492_metroecofreestandingmanual.pdf

Email #18416: BC170098

Project ID: 170098
Date Received: 2017-08-11 14:50:01
Sender: jnikora@kaipara.govt.nz
Checked By: Jamie Nikora
Accepted By: Jamie Nikora
Subject:
Information Received Via Email: FW: BC170098 permission to change position of water tanks as per plan attached
Message:

From: Administrator; West Harbour Gardens Residential Care [mailto:WHGadmin@terranova.net.nz]
Sent: Friday, 11 August 2017 2:25 PM
To: Jamie Nikora
Subject: RE: BC170098 permission to change position of water tanks as per plan attached

Thanks Jamie,
I have asked the drain-layer - Paul Warren to do as you have asked.

Lynette

Lynette Dheda
Administrator

West Harbour Gardens Residential Care
315 Hobsonville Road | West Harbour | Auckland
P: (09) 417 0400 | F: (09) 417 0401
whgadmin@terranova.net.nz | www.terranovahomes.co.nz

Part of the TerraNova Group of Homes

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-----Original Message-----
From: Jamie Nikora [mailto:jnikora@kaipara.govt.nz]
Sent: Friday, 11 August 2017 2:16 p.m.
To: Administrator; West Harbour Gardens Residential Care
Subject: RE: BC170098 permission to change position of water tanks as per plan attached

Good Afternoon Lynette,

I am happy with the proposal it will not be an amendment and no charge but I will need the site plan correctly updated and the disposal trench location detailed as the trench cannot be up slope from the wastewater disposal area. The fall from the trench for stormwater must fall away from the wastewater disposal area. When received and complies I can issue for you.

Kind Regards,

Jamie Nikora | Building Control Officer
Kaipara District Council, Private Bag 1001, Dargaville 0340
Freephone: 0800 727 059 | 09 431 3161
jnikora@kaipara.govt.nz | council@kaipara.govt.nz |
http://scanmail.trustwave.com/?c30&dON2XnF7i3kJfRRouKndIrHR2xqWy_8IOzvZx2jhw&s34&utp%3a%2f%2fwww%2ekaipara%2egovt%2enz

-----Original Message-----
From: Administrator; West Harbour Gardens Residential Care [mailto:WHGadmin@terranova.net.nz]
Sent: Friday, 11 August 2017 11:23 AM
To: Jamie Nikora
Subject: FW: BC170098 permission to change position of water tanks as per plan attached

Hi Jamie,
Sorry to bother you, I know you are probably very busy.
I spoke with a lovely lady this morning and asked about moving our water tank position. She said for me to draw on the plan and then submit to you for clearance.
I would like them to go 6 metres from the house on the west side of the house parallel to settlement Road.
Can you give me the okay for this to happen please Thanks

Lynette

Lynette Dheda
Administrator

West Harbour Gardens Residential Care
315 Hobsonville Road | West Harbour | Auckland
P: (09) 417 0400 | F: (09) 417 0401
whgadmin@terranova.net.nz |
http://scanmail.trustwave.com/?c30&dON2XnF7i3kJfRRouKndIrHR2xqWy_8IL65b0uk1w&s34&utp%3a%2f%2fwww%2eterranovahomes%2eco%2enz

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-----Original Message-----
From: DocuCentre-V C2275 [mailto:whgadmin@terranova.net.nz]
Sent: Friday, 11 August 2017 1:12 p.m.
To: Administrator; West Harbour Gardens Residential Care
Subject: Scan Data from FX-D56E93

Number of Images: 1
Attachment File Type: PDF

Device Name: DocuCentre-V C2275
Device Location:

Email #26824: BC170098

Project ID: 170098
Date Received: 2018-09-27 14:41:14
Sender: jnikora@kaipara.govt.nz
Checked By: John Dowden
Accepted By: John Dowden
Subject:
Information Received Via Email: FW: BC170098 - 102 Settlement Road Kaiwaka
Message:
ATTN John Dowden

-----Original Message-----
From: Lynette [mailto:whgadmin@sunrisehealthcare.co.nz]
Sent: Thursday, 27 September 2018 11:57 AM
To: Jamie Nikora
Subject: RE: BC170098 - 102 Settlement Road Kaiwaka

Hi,
The guy who came out for the final inspection of the houses a couple of weeks ago asked us to send in the attached papers.
Could you pass on please.
We have replaced the fire alarm in the house and just need to get the metal benders to bend the Hot water cylinder outlet pipe.
I hope the attached is what he needs.
Thanks
Lynette

-----Original Message-----
From: DocuCentre-V C2275 <whgadmin@terranova.net.nz>
Sent: Thursday, 27 September 2018 11:41 a.m.
To: Lynette <whgadmin@sunrisehealthcare.co.nz>
Subject: Scan Data from FX-D56E93

Sent by: 3579
Number of Images: 4
Attachment File Type: PDF

Device Name: DocuCentre-V C2275
Device Location:

ATTACHMENTS:

- 27092018114030-0001.pdf

Email #30937: BC170098

Project ID: 170098
Date Received: 2019-03-13 15:20:11
Sender: postmaster@services.onenet.co.nz
Checked By: Jamie Nikora
Accepted By: Jamie Nikora
Subject:

Information Received Via Email: Undeliverable: 170098.1 Form 7: Code Compliance Certificate - 102 Settlement Road Kaiwaka

Message:

Delivery has failed to these recipients or groups:

whangarei@sunrisehealthcare.co.nz<mailto:whangarei@sunrisehealthcare.co.nz>
The email address you entered couldn't be found. Please check the recipient's email address and try to resend the message. If the problem continues, please contact your email admin.

Diagnostic information for administrators:

Generating server: ONENETEX20.services.onenet.co.nz

whangarei@sunrisehealthcare.co.nz
Remote Server returned '550 5.1.10 RESOLVER.ADR.RecipientNotFound; Recipient not found by SMTP address lookup'

Original message headers:

Dear Sir/Madam,

Reference Number: 170098.1

Form 7: Code Compliance Certificate

Regards

Jamie Nikora
Building Control Officer
Kaipara District Council
Unit 6 - The Hub, 6 Molesworth Drive, Mangawhai 0505

P: (09) 439 3123 | E: buildingsupport@kaipara.govt.nz | W: www.kaipara.govt.nz

--Dear Sir/Madam,

Reference Number: 170098.1

Form 7: Code Compliance Certificate

Regards

Jamie Nikora
Building Control Officer
Kaipara District Council
Unit 6 - The Hub, 6 Molesworth Drive, Mangawhai 0505
P: (09) 439 3123 | E: buildingsupport@kaipara.govt.nz | W: www.kaipara.govt.nz

ATTACHMENTS:

- 170098.1-190313031528_form-7-code-compliance-certificate.pdf

Email #44578: BC170098

Project ID: 170098
Date Sent: 2017-02-23 16:31:13
Recipient: chris@adsltd.co.nz
Sender: Julia MacKenzie
Subject:
BC170098.1 Request For Further Information - Vetting - 102 Settlement Road Kaiwaka
Message:
Good afternoon

Reference Number: 170098
Project Location: 102 Settlement Road , Kaiwaka
Project Description: Relocate two Secondhand Residences to site with associated Stormwater & Sanitary Sewer private drainage.

Thank you for lodging your building consent application with the Kaipara District Council, the application has been reviewed for completeness, and the attached letter details information which is required to be provided to enable your application to be formally received.

So that your information gets to us as promptly as possible, please:

- ensure you reply directly to this email and the format of our email address must be in full as follows: 170098@kdc.abcs.co.nz

- only provide information specifically relating to this project;
- all attachments must be saved in PDF format;

By doing this you will keep your project moving as the information will be delivered directly to the processor - thank you for helping us to help you!

If you do not receive the automated reply confirmation from Kaipara District Council for the info sent then Kaipara District Council has not received your information.

Kind regards

Julia Mackenzie
Vetting Officer
Kaipara District Council
Kaipara District Council, Unit 5 - The Hub, 6 Molesworth Drive, Mangawhai / PO Box 224, Mangawhai 0540
P: (09) 439 3123 | E: buildingsupport@kaipara.govt.nz | W: www.kaipara.govt.nz

Email #44815: BC170098

Project ID: 170098
Date Sent: 2017-03-01 15:15:04
Recipient: paul@adsltd.co.nz
Sender: AlphaOne System
Subject: RE: 102 Settlement Road, Kaiwaka
Message:

Thank you for your message. This is an automated response to acknowledge receipt. Your message will be forwarded to the assigned officer for review.

ACCEPTED ATTACHMENTS:

- 15109_1689111632627837886_Residence_A_Bracing_Check.pdf (405.99)
- 15109_1817569391500673816_Residence_A_Relocated_Dwelling_Form.pdf (123.91)
- 15109_1851012361995207088_Residence_B_Bracing_Check.pdf (400.50)
- 15109_11083772331938289840_Residence_B_Relocated_Dwelling_Form.pdf (125.98)
- 15109_17145298151085302823_16120_Amend_Set.pdf (670.99)

Kaipara District Council
170098@kdc.abcs.co.nz
www.kaipara.govt.nz

Email #44835: BC170098

Project ID: 170098
Date Sent: 2017-03-02 07:34:56
Recipient: mnepia@kaipara.govt.nz
Sender: Gavin Spaabaek
Subject: BC170098: A new email has been allocated to you
Message:

Hello Michelle Nepia,

A new email for BC170098 has been allocated to you. Please check and begin processing.

— AlphaOne System

Email #45400: BC170098

Project ID: 170098
Date Sent: 2017-03-13 17:13:07
Recipient: jnikora@kaipara.govt.nz
Sender: Derek Free
Subject: BC170098: A new job for you
Message:

Hello Jamie Nikora,

BC170098 has been allocated to you. Please check and begin processing.

— AlphaOne System

Email #45673: BC170098

Project ID: 170098
Date Sent: 2017-03-17 11:47:27
Recipient: chris@adsltd.co.nz
Sender: Jamie Nikora
Subject: BC170098.1 PIM - 102 Settlement Road Kaiwaka
Message:

Good Morning,

Attached is a copy of the issued Project Information Memorandum (PIM) for BC170098, This is not approval to build.

Reference Number: 170098.1

PIM

Regards,

Jamie Nikora
Building Control Officer
Kaipara District Council
Kaipara District Council, Unit 5 - The Hub, 6 Molesworth Drive, Mangawhai / PO Box 224, Mangawhai 0540
P: (09) 439 3123 | E: buildingsupport@kaipara.govt.nz | W: www.kaipara.govt.nz

Email #45989: BC170098

Project ID: 170098
Date Sent: 2017-03-23 10:28:55
Recipient: chris@adsltd.co.nz
Sender: Jamie Nikora
Subject:
BC170098.1 Request For Further Information - 102 Settlement Road Kaiwaka
Message:
Good Morning,

Reference Number: 170098
Project Location: 102 Settlement Road , Kaiwaka
Project Description: Relocate two Secondhand Residences to site with associated Stormwater & Sanitary Sewer private drainage.

Processing of your building consent application is currently in progress. The attached letter details information which is required to be provided to demonstrate that the proposed work will comply with the NZ Building Act and Regulations. Please note that the processing time clock has been suspended pending this information.

So that your information gets to us as promptly as possible, please:

- ensure you reply directly to this email and the format of our email address must be in full as follows: 170098@kdc.abcs.co.nz

- only provide information specifically relating to this project;
- all attachments must be saved in PDF format;

By doing this you will keep your project moving as the information will be delivered directly to the processor - thank you for helping us to help you!

If you do not receive the automated reply confirmation from Kaipara District Council for the info sent then Kaipara District Council has not received your information.

Regards,

Jamie Nikora
Building Control Officer
Kaipara District Council
Kaipara District Council, Unit 5 - The Hub, 6 Molesworth Drive, Mangawhai / PO Box 224, Mangawhai 0540
P: (09) 439 3123 | E: buildingsupport@kaipara.govt.nz | W: www.kaipara.govt.nz

Email #46125: BC170098

Project ID: 170098
Date Sent: 2017-03-27 10:56:53
Recipient: jnikora@kaipara.govt.nz
Sender: Tanya Ritter
Subject: BC170098: A new email has been allocated to you
Message:

Hello Jamie Nikora,

A new email for BC170098 has been allocated to you. Please check and begin processing.

— AlphaOne System

Email #46127: BC170098

Project ID: 170098
Date Sent: 2017-03-27 11:05:03
Recipient: chris@adsltd.co.nz
Sender: AlphaOne System
Subject:
RE: RE: BC170098.1 Request For Further Information - 102 Settlement Road Kaiwaka
Message:

Thank you for your message. This is an automated response to acknowledge receipt. Your message will be forwarded to the assigned officer for review.

ACCEPTED ATTACHMENTS:

- 16123_2012263814287276136_ENVSFW182A_Dheda_Drainage_Site_Plan_January_2017.pdf (1.26)
- 16123_18093806041557195441_16120_Second_RFI_Amends.pdf (450.38)
- 16123_14682002741507307983_Metro_All_Models_Wetback_Installation_Manual_HR.PDF (1.75)
- 16123_15700756831391735628_metroecofluesystemsmanual.pdf (697.34)
- 16123_14267572301708201492_metroecofreestandingmanual.pdf (3.26)

Kaipara District Council
170098@kdc.abcs.co.nz
www.kaipara.govt.nz

Email #46151: BC170098

Project ID: 170098
Date Sent: 2017-03-27 14:29:04
Recipient: jnikora@kaipara.govt.nz
Sender: Gavin Spaabaek
Subject: BC170098: A new email has been allocated to you
Message:

Hello Jamie Nikora,

A new email for BC170098 has been allocated to you. Please check and begin processing.

— AlphaOne System

Email #46310: BC170098

Project ID: 170098
Date Sent: 2017-03-29 14:55:59
Recipient: chris@adsltd.co.nz
Sender: Jamie Nikora
Subject:
BC170098.1 Form 5: Building Consent - 102 Settlement Road Kaiwaka
Message:
Good Afternoon,

BC170098 for 2 proposed relocated dwellings to 102 Settlement Road has been issued, Plans will be mailed.

Regards,

Jamie Nikora
Building Control Officer
Kaipara District Council
Kaipara District Council, Unit 5 - The Hub, 6 Molesworth Drive, Mangawhai / PO Box 224, Mangawhai 0540
P: (09) 439 3123 | E: buildingsupport@kaipara.govt.nz | W: www.kaipara.govt.nz

Email #49998: BC170098

Project ID: 170098
Date Sent: 2017-06-07 11:10:11
Recipient:
chris@adsltd.co.nz, chris@adsltd.co.nz, chris@adsltd.co.nz
Sender: John Dowden
Subject: BC170098 Inspection Report
Message:
Our inspection team have carried out a site inspection on the above project today, please find attached the inspectors site notice for your information.

If you have any queries regarding the content of the site notice please contact the inspector on phone 0800 727 059.

Email #50148: BC170098

Project ID: 170098
Date Sent: 2017-06-09 12:05:08
Recipient: chris@adsltd.co.nz
Sender: John Dowden
Subject: BC170098 Inspection Report
Message:

Our inspection team have carried out a site inspection on the above project today, please find attached the inspectors site notice for your information.

If you have any queries regarding the content of the site notice please contact the inspector on phone 0800 727 059.

Email #52410: BC170098

Project ID: 170098
Date Sent: 2017-07-17 16:22:04
Recipient: chris@adsltd.co.nz, chris@adsltd.co.nz
Sender: Gavin Spaabaek
Subject: BC170098 Inspection Report
Message:

Our inspection team have carried out a site inspection on the above project today, please find attached the inspectors site notice for your information.

If you have any queries regarding the content of the site notice please contact the inspector on phone 0800 727 059.

Email #53766: BC170098

Project ID: 170098
Date Sent: 2017-08-11 14:50:02
Recipient: jnikora@kaipara.govt.nz
Sender: AlphaOne System
Subject:
RE: FW: BC170098 permission to change position of water tanks as per plan attached
Message:

Thank you for your message. This is an automated response to acknowledge receipt. Your message will be forwarded to the assigned officer for review.

Kaipara District Council
170098@kdc.abcs.co.nz
www.kaipara.govt.nz

Email #55692: BC170098

Project ID: 170098
Date Sent: 2017-09-18 10:42:08
Recipient: chris@adsltd.co.nz
Sender: Gavin Spaabaek
Subject: BC170098 Inspection Report
Message:

Our inspection team have carried out a site inspection on the above project today, please find attached the inspectors site notice for your information.

If you have any queries regarding the content of the site notice please contact the inspector on phone 0800 727 059.

Email #70125: BC170098

Project ID: 170098
Date Sent: 2018-04-27 14:05:06
Recipient: chris@adsltd.co.nz
Sender: Gavin Spaabaek
Subject: BC170098 Inspection Report
Message:

Our inspection team have carried out a site inspection on the above project today, please find attached the inspectors site notice for your information.

If you have any queries regarding the content of the site notice please contact the inspector on phone 0800 727 059.

Email #81749: BC170098

Project ID: 170098
Date Sent: 2018-09-14 16:08:05
Recipient: chris@adsltd.co.nz
Sender: John Dowden
Subject: BC170098 Inspection Report
Message:

Our inspection team have carried out a site inspection on the above project today, please find attached the inspectors site notice for your information.

If you have any queries regarding the content of the site notice please contact the inspector on phone 0800 727 059.

Email #82824: BC170098

Project ID: 170098
Date Sent: 2018-09-27 14:41:16
Recipient: jnikora@kaipara.govt.nz
Sender: AlphaOne System
Subject: RE: FW: BC170098 - 102 Settlement Road Kaiwaka
Message:

Hello

Thank you for your message regarding your Building Consent application with Kaipara District Council. This is an automated response to confirm your message has been received by the assigned officer for review. You can expect a response within 5 working days.

Below is a list of the accepted and rejected attachments. We accept email attachments in PDF, JPG and PNG format.

ACCEPTED ATTACHMENTS:
- 27092018114030-0001.pdf (210.96kB)

For further information or enquiries please email 170098@kdc.abcs.co.nz.

Kind regards

Kaipara District Council
Unit 6 - The Hub
6 Molesworth Drive
Mangawhai 0505
www.kaipara.govt.nz

Email #82871: BC170098

Project ID: 170098
Date Sent: 2018-09-28 08:42:54
Recipient: jdowden@kaipara.govt.nz
Sender: Steven Spence
Subject: BC170098: A new email has been allocated to you
Message:

Hello John Dowden,

A new email for BC170098 has been allocated to you. Please check and take appropriate action.

//kdc.abcs.co.nz/jobs/170098/communication/?optilbox

— AlphaOne System

Email #96801: BC170098

Project ID: 170098
Date Sent: 2019-03-13 15:16:40
Recipient:
chris@adsltd.co.nz, whangarei@sunrisehealthcare.co.nz
Sender: Jamie Nikora
Subject:
170098.1 Form 7: Code Compliance Certificate - 102 Settlement Road Kaiwaka
Message:
Dear Sir/Madam,

Reference Number: 170098.1

Form 7: Code Compliance Certificate

Regards

Jamie Nikora
Building Control Officer
Kaipara District Council
Unit 6 - The Hub, 6 Molesworth Drive, Mangawhai 0505
P: (09) 439 3123 | E: buildingsupport@kaipara.govt.nz | W: www.kaipara.govt.nz