COUNCIL PROPERTY FILE

File 2

34C Ripiro Drive, Baylys Beach

STATEMENT OF PASSING OVER

This building inspection has been supplied by the vendor in good faith. Pocklington Real Estate (Powered by Ownly Limited, Licensed REAA 2008) is merely passing over this information as supplied to us.

We cannot guarantee its accuracy as we have not checked, audited, or reviewed the information and all intending purchasers are advised to seek your own advice as to the information contained in this document.

Please note this Council property file is provided for informational purposes only. There may be matters relating to pre-1992 consents or permits which may need further investigation in order to determine their relevance.

To the maximum extent permitted by law we do not accept any responsibility to any party for the accuracy or use of the information herein.

Pocklington

REAL ESTATE

RECEIVED: 24 Jan 2011 SCANNED: 24 Jan 2011 BOX: 1 BATCH: 67088 DOC: KDCAALWN

KAIPARA DISTRICT

KAIPARA DISTRICT COUNCIL

Building Consent File Complete - Checklist

Item Checked	Y	N	NA	Comments	File Type
Application Form and Acceptance Checklist	Y	N	NA	PIM/BC Number: 050547	H
Building Consent and Conditions	Y	N	NA		H S
PIM	Y	N	NA		H S
Resource Consent	Y	N	NA	RM040255	S
Amendments	Y	N	NA		H S
Plans	Y	N	NA		H
Specifications	Y	N	NA		H
Drainage plan	Y	N	NA		H
2nd Hand Dwelling Relocate Report and signed Confirmation	Y	N	NA		H
Bracing / Engineering Calcs	Y	N	NA		H
Producer Statements	Y	N	NA	Structural Design,	H
Specified Systems Information	Y	N	NA		H
Processing Checklist	Y	N	NA		H
Other Checklists (Please Note)	Y	N	NA		H
Requests for Additional Information	Y	N	NA		H S
Records of all correspondence (emails, letters, phonecalls)	Y	N	NA		H S
Memorandum from NZFS	Y	N	NA	Fire Safety Report	H
Form 4A (Section 37)	Y	N	NA		H S
Approval from NZHPT	Y	N	NA		H
Development Contributions	Y	N	NA		
Inspection Records	Y	N	NA		H S
Truss Layout	Y	N	NA		H
Photos	Y	N	NA		H
Geotech Report	Y	N	NA		H
Notice to Fix	Y	N	NA		H S
Compliance Schedule	Y	N	NA	Refer CS:	H S
Compliance Schedule Statement	Y	N	NA	Refer CS:	S
Certificate of Public Use	Y	N	NA		H S
Copy of Complaints Received	Y	N	NA		H S
CCC Application, CCC Checklist and Code Compliance Certificate	Y	N	NA		H H S
Drainage Asbuilt	Y	N	NA		H
Electrical Certificate of Compliance	Y	N	NA	3078498.2995176,	H
Gas Certificate	Y	N	NA		H
Other (Please State)	Y	N	NA		H

Comments:

Checked & Approved by: Date: 22/11/10

Circle if applicable Y = Yes on file N = Not on file NA = Not applicable to this file

Note: If 'N, Not on file' is used, reasons need to be added to the comments box

H = Hard Copy - Information found on paper file. S = Soft Copy - Information available on NCS system

Once file is completed, file is sent for scanning. All information available as hard and soft copy.

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The Building Act 2004

This form should be used to make application for :

- Project Information Memorandum (PIM)
- Building Consent (BC)
- Certificate of Acceptance (COA)

025 991501

Consent No: 547 ..... Office Use Only	**Property ID:** ..... Office Use Only

Part A : General (See Guidance Notes prior to Completing)

1 The Owner

Name of Owner : Max Wright & Corrine Dawson as Moeatua Developments

Contact Person : .....

Postal Address : 8 Park Road Dargaville

Street Address/Registered Office : —

Phone No : ..... Fax No : .....

Email : .....

The following evidence of ownership is attached to this application : *(If property has been recently sold a copy of Sale and Purchase Agreement is required.*

COT

2 The Agent

Name of Agent : Martin Design Ltd

Contact Person : Noel Martin

Postal Address : 357 Kaiiwi Lakes Rd RD3 Dargaville

Street Address/Registered Office : —

Phone No 0943997292 Fax No 0943997292

Email : martin.design@xtra.co.nz

Relationship to Owner : Designer

First Point of Contact for Communications/Fees/Refunds to :

☐ The Owner

☑ The Agent

3 Location of Proposed Building Work / Rapid No : (If rural and already allocated) :

Street Address of Building : Baylys Coast Road

4 Legal Description

Valuation Roll No : 0104 017018 Lot(s) ~~or Section No~~ : 7 DP No: 316035

BLK No : ..... SD : .....

Area of Site (m² ~~/ha~~) : 1859 sqm Certificate of Title No : 62818 (No more than 6 months old)

Current, lawfully established use (if applicable) : —

Year first constructed (if applicable) : —

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5 This Application is in Relation to : (Tick appropriate box)

- [x] **Domestic**
- [ ] **Commercial**
- [ ] **Industrial**
- [ ] **Multi-storey - Number of Levels :**.....
- [ ] **Structure in Coastal Marine area** ***(SEE NOTES for this section)***

If your project is Commercial or Industrial you must list all specified systems for the building, on this form where indicated. **See Part 'E' of This Form and also clause 14, (Fire Service Design)**

Tick box A to D below, as appropriate :

- [ ] **A** Application is for a Project Information Memorandum (PIM)
- [ ] **B** Application is for Building Consent (BC) only, in accordance with PIM No : .....
- [x] **C** Application is for Building Consent (BC) and Project Information Memorandum (PIM)
- [ ] **D** Application is for a Certificate of Acceptance (COA)

6 Nature of Consent :

- [x] New Building – (exclude domestic garages and domestic outbuildings)
- [ ] Foundations only
- [ ] Alterations, repairs, extensions, conversions, re-siting, installation of heating appliances and plumbing and drainage only
- [ ] Other new construction and demolition
- [ ] Domestic garages and domestic outbuildings
- [ ] Plumbing & Drainage only (includes on-site effluent disposal)

7 Intended Project Life

- [x] **NOT** less than 50 years

OR ;

- [ ] **LESS** than 50 years

Specified as .....

8 Use of Building

Will the building work result in a change of use of the building

- [ ] YES
- [x] NO

If YES provide details of the new use

.....

9 Description of Work : to construct three new 3 bedroom dwellings

Intended Use (s) private residential

Ground floor area of project : 275

Upper floor areas of project : 215

Total floor area of project : 490

Market Value of project (incl GST) : 690 000

No of dwelling units : 3

10 Staged Project **(Note: under The Building Act 2004, separate building applications may be required)**

Is this a staged project ? ~~YES~~ (NO) If 'Yes', this is stage ..... of an intended ..... stages

11 Confidentiality - Plans and Specifications :

I/We require the following to be treated as confidential (proof of reasons for confidentiality will be required and will only be accepted if legally valid)

- [ ] Plans (please specify which plans i.e. Floor Plans etc.,) : .....
- [ ] Specifications
- [ ] I/We require that *all details* of this application remain confidential as required by a Council directive applied for, or already issued, in relation to a protection order currently in force under The Domestic Violence Act 1995.

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12 Vehicle Crossing Required

Is this application linked to a vehicle crossing application? ~~YES/NO~~ If 'YES', Application No : .....

(If 'YES' please include Vehicle Crossing Application)

13 Public Utility Connections Required

Is this application subject to a utility connection application? (Drainage, Water Connection or Water Meter Installation)

☑ YES - Application No: .....

☐ NO - Existing connections in place

14 Historic Places Trust

N/A

☐ The property is a registered historic place, historic area or wāhi tapu area

☐ A PIM has already been issued for this project - PIM No : .....

If your property is includes an archaeological or historic site, you will need to consult with Historic Places Trust in regard to your project for review and approval prior to your project commencing.

15 Fire Service Design Unit (3 copies - 4 where fire report required, 1 set to be A3)

Section 47 of The Building Act 2004, requires certain projects as specified by notice in the NZ Gazette to be reviewed by the New Zealand Fire Service, which may require a Memorandum, setting out advice on issues such as 'means of escape from fire' and 'water supply for fire fighting'.

16 Compliance Schedule (where applicable – Complete Part E)

A Compliance Schedule is required for buildings with specified systems. This does **NOT** apply to single storey, residential property apart from when serviced by a cable car (lift).

17 Certificate Of Acceptance (section 96 The Building Act 2004)

Is this application in relation to obtaining a Certificate of Acceptance (Section 96 The Building Act 2004) ~~YES~~/ NO

If 'YES' Please provide the details below :

Description of the building work : .....

Date building work carried out : .....

Name(s) of personnel who carried out the work are as follows :

Name :..... Reg No : .....

Address : .....

Phone No : ..... Mobile No : ..... Email address : .....

I request that you issue a (please tick)

☑ **Project Information Memorandum**

☑ **Building Consent**

☐ **Certificate of Acceptance**

for the building work described in this application

.....

Signed ~~by~~ / for and on behalf of / ~~the owner~~

NOTE : If acting for and on behalf of, please read the following declaration prior to signing :

"I hereby declare that I am authorised to act as Agent of the Applicant"

Signature : ..... **Name :** Noel Martin

Date : 28-6-05

Please Note :

Council is unable to accept your application as being lodged until all details and relevant information are provided, including completed ***Check List*** and the application is signed and the processing fee paid. For Full details of the fee structure see the Council's Schedule of Fees .

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Part B : Project Details

Property Information Memorandum (Complete this part only when applying for a PIM)

The project involves the following matters. Tick each applicable box and attach relevant information in **triplicate** for residential and **four copies** for Commercial Industrial or Multi-Storey. **Always include one set A3 size.**

- ☑ (a) Location, in relation to legal boundaries, and external dimensions of new, relocated, or altered buildings (Site Plan with elevations, Topography, drawn to scale).
- ☐ (b) Details of any known or potential erosion, avulsion, falling debris, filled ground, subsidence, slippage, alluvion, inundations, hazardous contaminants on or near the site, land contours.
- ☑ (c) Provisions to be made for vehicular access, including parking. (To be shown on site plan).
- ☐ (d) Provisions to be made in building over or adjacent to any road or public place.
- ☑ (e) Provisions to be made for disposing of stormwater and wastewater. (To be shown on site plan).
- ☐ (f) Precautions to be taken where building work is to take place over existing drains or sewers or in close proximity to wells or water mains.
- ☑ (g) New connections to public utilities i.e. water supply, stormwater system, wastewater system.
- ☐ (h) Provisions to be made in any demolition work for the protection of the public, suppression of dust, suppression of noise, disposal of debris and disconnection from public utilities.
- ☐ (i) Details of any cultural or heritage significance of the building or building site, including whether it is on a marae or wahi tapu.
- ☐ (j) Copy of/or reference to, any resource consent or planning approval (including subdivision) for this project. RC granted #
- ☐ (k) Details of volume of proposed excavations; include volumes for site preparation, basement and driveway.

Part C : Building Details

Complete this part only when applying for a Building Consent

This application is accompanied by : (tick each applicable box, attach relevant documents in **triplicate** (one of which must be A3 size) for residential and **four copies** (one of which must be A3 size) for Commercial, Industrial or Multi-Storey).

- ☑ 1 The drawings, specifications and other documents according to which the building is proposed to be constructed to comply with the provisions of the New Zealand Building Code, with supporting documents, if any, including :
- ☐ 2 Building Certificates.
- ☑ 3 Producer Statements (including TP 58 Effluent Design), and any alternative solutions.
- ☐ 4 References to product certification issued by the Department of Building and Housing (DBH).
- ☐ 5 References to determinations issued by the Department of Building and Housing (DBH).

For details on drawings and specifications etc., see checklist form. If applying for PIM and Building Consent together, then plans for PART B (a) can be included in PART C (1).

If a PIM has already been applied for then include a copy of any relevant authorisations (e.g. Resource Consents) with this application.

Establishing the Weathertightness Risk

For all complex designs a risk assessment of the proposed design shall be carried out using a building envelope risk matrix contained in the Approved Documents, Acceptable Solutions E2/AS1.

Risk Matrix Included ? (If your initial risk assessment score is over six)

- ☑ **YES**
- ☐ ~~NO~~

See attachment in this pack for details of Risk Matrix Table

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Part D : Key Personnel

From 30 November 2009, the Building Act 2004 requires all restricted building work to be carried out or supervised by a Licensed Building Practitioner. After this date, applications for consent can only be accepted where a Licensed Building Practitioner has been engaged and the registration number shown in the appropriate area below.

Designer

Name : Neil Martin Design Ltd Reg No : ..... Phone No: 094397292

Address : 357 Kaiwaka Lakes Road RD3 Dargaville

Mobile No : ..... Email: martindesign@xtra.co.nz

Builder (Licensed Building Practitioner From 30/11/2009)

Name : ..... Reg No : ..... Phone No: : .....

Address : .....

Mobile No : ..... Email: .....

Registered Drainlayer

Name : Ross Bicknell Reg No 5331 Phone No: : .....

Address : Box 7046 TIKIPUNGA

Mobile No : 021 943001 Email: .....

Registered Plumber

Name : ..... Reg No : ..... Phone No: : .....

Address : .....

Mobile No : ..... Email: .....

Registered Electrician

Name : ..... Reg No : ..... Phone No: : .....

Address : .....

Mobile No : ..... Email: .....

Registered Gas Fitter

Name : ..... Reg No : ..... Phone No: : .....

Address : .....

Mobile No : ..... Email: .....

Other Structual / Sewerage / Stormwater Engineer

Name : Vincenzo Marotta Reg No : 210914 Phone No: 094383345

Address : 4a pontrd & Okaroa drive Whangarei

Mobile No : ..... Email: .....

Other FRR report

Name : Form Architects - Dean Halvorsen Reg No : ..... Phone No: 094370722

Address : Box 1622 Whangarei

Mobile No : ..... Email: .....

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Part E : Compliance Schedule Details

E1 : Systems Necessitating a Compliance Schedule :

The building will contain the following (tick each box and attach proposed inspection, maintenance and reporting procedures).

Note : The building consent cannot be issued unless *all* specified systems are included.

- ☐ Automatic sprinkler systems or other systems of automatic fire protection.
- ☐ Automatic doors which form part of any fire wall and which are designed to close shut and remain shut on an alarm of fire.
- ☐ Emergency warning systems for fire or other dangers.
- ☐ Emergency lighting systems.
- ☐ Riser mains for fire service use.
- ☐ Any automatic back-flow preventer connected to a potable water supply.
- ☐ Lifts, escalators, or travelators or other similar systems.
- ☐ Mechanical ventilation or air conditioning system serving all or a major part of the building.
- ☐ Any other mechanical units for providing access to the exterior and interior walls of buildings.
- ☐ Building maintenance units for providing access to the exterior and interior walls of buildings.
- ☐ Such signs as are required by the building code in respect of the above mentioned systems.
- ☐ None of the above.

E2 : Other Systems and Features to be Included in the Compliance Schedule :

The building will contain the following : (Tick each applicable box and attach proposed inspection, maintenance and reporting procedures).

- ☐ Means of escape from fire.
- ☐ Safety Barriers.
- ☐ Means of access and facilities for use by persons with disabilities which meet the requirements of Schedule 2 of The Building Act 2004.
- ☐ Hand held hoses for fire fighting.
- ☐ Such signs as are required by the New Zealand Building Code or Schedule 2 of The Building Act 2004.

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Check List For Applications

- **Return this checklist with your application**
- **Include all the information and documents requested**
- **Mark each checkbox as follows :**

√ Item Included	X Item Not Included	N/A Item Not Applicable	Office Use Only

Application Form

- ☑ All items relevant to your application are to be completed on the application form. Include accurate 'Values' of the work to be undertaken (GST incl.) ☐
- ☑ Include the correct legal description (Can be obtained from your rates notice, Certificate of Title or from Council's Customer Services Section). ☐
- ☐ Name, address and phone numbers of all personnel relevant to your project, including person to receive accounts. ☐
- ☐ Copy of recent Certificate of Title (not more than six months old - obtained from Land Information NZ) or proof of purchase from solicitor ☐
- ☐ Copy of Consent Notices and related Engineering Reports if shown on title ☐

Specifications (3 copies - 4 where fire report required, 1 set to be A3)

- ☐ Written specifications, adequately describing all building work, components, materials and fixings including their size and type. Show compliance with the functionality and performance requirements of the Building Code i.e. NZS 3604 1999 or **SPECIFIC DESIGN** (see next page) ☐

Site Plan (3 copies - 4 where fire report required, 1 set to be A3)

- ☑ Show the floor area of the proposed building project and of all existing buildings to a minimum scale of 1:200. Use metric measurements. ☐
- ☑ Show the distance of the proposed and existing buildings from all legal boundaries. These measurements are to be to the walls or nearest part of the building and show any easements, overland flowpaths and/or any Council stormwater and drainage services.
- ☐ Show the layout of existing and proposed sanitary and stormwater drains and mains, septic tanks and stormwater disposal.
- ☐ Show the source of the water supply.
- ☐ Show the location of vehicle entrance.
- ☐ Show site contours

Floor Plan ((3 copies - 4 where fire report required, 1 set to be A3)

- ☑ A floor plan of each floor level to a minimum scale of 1:100. Plan to include floor layout and use of each section and show the location of all plumbing, gas and electrical fittings. Show all waste and vent pipes (can be on separate plans). ☐

Elevations (3 copies - 4 where fire report required, 1 set to be A3)

- ☑ An elevation of 1:100, each external wall showing heights and finished ground level at each external corner (see above for smaller scale allowances). ☐
- ☑ Location of wall and roof bracing to be shown on elevations.
- ☐ Scaled elevations indicating height from ground level to top of roofline.

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Check List For Applications (cont)

√ Item Included	X Item Not Included	N/A Item Not Applicable	Office Use Only

Foundation Plan (3 copies - 4 where fire report required, 1 set to be A3)

- ☐ For timber floors show 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.
- ☑ Wind zone calculations.
- ☐ Sub-floor bracing calculations.

Cross Section Details (3 copies - 4 where fire report required, 1 set to be A3)

- ☑ Sufficient cross sections through the building to show foundation details, floor systems, wall construction, roof construction, location of wall claddings and roof covering.
- ☑ Show construction details of terraces, steps, balustrades, flashing detail in accordance with E2/AS1 plus any non-standard items at a scale of 1:20.
- ☑ Plans have been completed to a scale of 1:50 and 1:20 where applicable

Wall and Floor Bracing Calculations (3 copies - 4 where fire report required, 1 set to be A3)

- ☑ Submit wall and sub-floor bracing calculations and plans, detailing location of bracing elements.
- ☐ **Note :** One room additions – Locate requirements and their respective values on the elevations.

Plumbing Design Plan (3 copies - 4 where fire report required, 1 set to be A3

- ☑ Plumbing Plan drawn to the AS/NZ Standards.

Effluent Design (TP 58 from Chartered Professional Engineer or Approved Designer)

- ☑ 3 Copies of proof of compliance with TP 58 and the Northern Regional Council Water and Soil Plan

Specific Design (3 copies - 4 where fire report required, 1 set to be A3

To facilitate processing of specific design applications, provide the following information :

- ☑ Full engineering calculations and drawings
- ☑ Design Certificate/Producer Statement.
- ☐ Soil report or geotechnical report (where applicable, refer title consent notice)
- ☐ A written description of the building model and techniques used in construction.
- ☐ Name and address of Chartered Professional Engineer.

Please tick the boxes below where appropriate :

- ☐ Vehicle Crossing Application needed
- ☐ Historic Places review needed
- ☐ Fire Service design unit Memorandum needed
- ☐ Compliance Schedule application needed
- ☑ Risk Matrix Calculations needed

- ☑ **Vehicle Crossing Application Form**
- ☑ **Risk Matrix Calculations**
- ☐ **Compliance schedule, (detailed design)**

Application Fees : Please refer to the Fees and Charges Schedule

For assistance in completing this application please contact the Customer Services Centre on 0800 727 059 (Dargaville) or 09 431 2013 (Kaiwaka)

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Building Consent Progress Sheet

KAIPARA DISTRICT COUNCIL

Name:	Impact Developments Ltd T MD	**BC No:**	050647.

Fees Assessment		**Payment Details**	
Value of Project	$690,000>		
Building Consent:	$2,435-00	**Rec No:**	4697688
PIM:	$ 100-00	**Date:**	28-6-05.
BRANZ Levy:	$ 690-00		
DBH Levy:	$ 1,359-30	~~**Fees not paid/ Incorrect**~~	
Total	$ 4,584-30.	**Date invoice sent**	28-6-05.

	Further plans needed	**Notes**
☐	Site	
☐	Drainage	
☐	Foundation	
☐	Cross Section	
☐	Elevation	
☐	Bracing Calculation	
☐	Floor Plan	
☐	Specifications	
☐	Fire Assessment	
☐	Engineering	
☐	Town Planning	

The applicant was advised of the further information required by:

☐ Telephone ☐ Fax ☐ Email ☐ Letter

Status updated by (initials) ..... **Date** .....

FI - Further information requested **IR** - Information Received

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Tax Invoice

GST Reg No.	52-237-122
Date	28/06/05
Customer No:	BC050547
Invoice Number	12622

Impact Developments Ltd
Moeatua Developments
C/- Martin Design
357 Kai Iwi Lakes Road
Dargaville RD3

050547 : BAYLYS COAST ROAD, DARGAVILLE
Construction of three, two level apartments

Qty	Description	Rate	Amount	
	Building Consent Fee		2,435.00	*
	PIM Fee		100.00	*
	BRANZ Fee		690.00	0G
	DBH Levy		1,359.30	0G
		BEFORE GST	**4,302.63**	
		(* Includes GST) GST	281.67	
		Total incl. GST	**$4,584.30**	
		LESS DEPOSIT PAID	4,584.30CR	
		Net Due	**0.00**	

Remittance Advice

Please use this remittance when making your payment and make cheques payable to Kaipara District Council.

Impact Developments Ltd
Moeatua Developments
C/- Martin Design
357 Kai Iwi Lakes Road
Dargaville RD3

Customer Number	BC050547
Invoice Date	28/06/05
Invoice Number	12622
Amount Due	**0.00**

KAIPInvoice Feb 04

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KAIPARA DISTRICT

TAX INVOICE RECEIPT (GST NO. 52-237-122)
Received with thanks by 3/51
KAIPARA DISTRICT COUNCIL

28-06-05 14:16 Receipt No.469758

COPY *COPY* *COPY*
DR BC050547
MOEATUA DEVELOPMENTS BUI 4,584.30-
Impact Developments Ltd::Moeatua Develo
CQ ASB DRL
Impact Developments 4,584.30

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COMPUTER FREEHOLD REGISTER UNDER LAND TRANSFER ACT 1952

Guaranteed Search Copy issued under Section 172A of the Land Transfer Act 1952

R.W. Muir
Registrar-General of Land

Identifier	**62818**
Land Registration District	**North Auckland**
Date Issued	31 May 2004

Prior References
60738

Estate	Fee Simple
Area	1859 square metres more or less
Legal Description	Lot 7 Deposited Plan 316035
Proprietors	
Moeatua Developments Limited	

Interests

Appurtenant hereto is a water right created by Transfer 598118

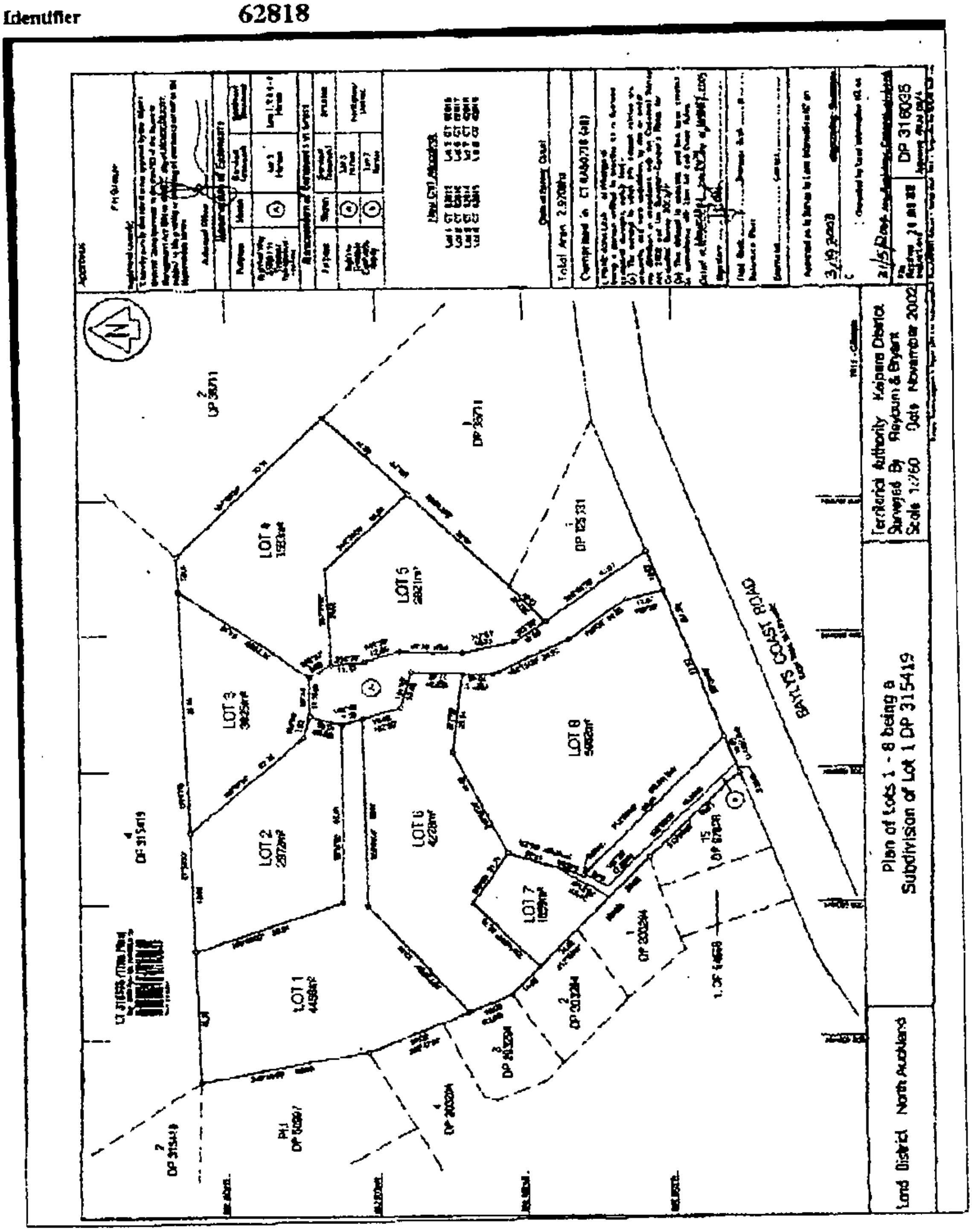
5716128.2 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 4.2.2003 at 9:00 am

6023758.4 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 31.5.2004 at 9:00 am

Subject to an electricity easement (in gross) over part marked B on DP 316035 in favour of Northpower Limited created by Transfer 6061695.1 - 30.6.2004 at 9:00 am

The easements created by Transfer 6061695.1 are subject to Section 243 (a) Resource Management Act 1991

Identifier 62818



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In the Matter of:	*The Resource Management Act 1991*
And	
In the Matter of:	*An application under Section 88 of the Resource Management Act 1991 made by Impact Developments Ltd.*
File Reference:	*RM 040255*

Decision on Resource Consent Application

Pursuant to Section 104 and 104B of the Resource Management Act 1991, the Kaipara District Council grants consent to the application by Impact Developments Ltd to establish three residential units with on-site wastewater treatment and disposal on Lot 7 DP 316035, located at Ripiro Drive, Baylys Beach.

This resource consent has been granted for the following reasons and subject to compliance with the conditions set out below.

Reasons for Decision

Pursuant to Section 113 of the Act, the reasons for this decision are:

1. *The proposed land use is a Discretionary Activity under the District Plan and satisfies the requirements of Sections 104 and 104B of the Act.*
2. *Subject to the imposition of appropriate conditions to mitigate adverse effects, the proposal is consistent with the objectives and policies of the District Plan.*
3. *The conditions of consent will ensure that the adverse effects of the land use are avoided, remedied, and/or mitigated.*
4. *The application does not offend Part II of the Act.*

Conditions of Consent

Pursuant to Section 108 of the Act, this consent is subject to the following conditions:

1) *The following conditions shall be complied with prior to occupation of any of the residential dwelling units.*

   a) *The development shall proceed generally in accordance with the plans and information submitted with the application and subsequent responses to requests for further information except as amended by the specific requirements set out in the following conditions.*
   b) *The consent holder shall provide evidence to the satisfaction of Council that legal rights exist for the construction of the stormwater pipeline across Lot 8 DP 316035 and for the subsequent discharge of stormwater from the site through this pipeline.*

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c) *The wastewater treatment and disposal system to serve the facility, including Disposal Fields 'A' and 'B' and the identified reserve area – Disposal Field 'C' shall be constructed in accordance with the report and drawings by Studio Marotta received by the Kaipara District Council on 26 October 2004.*

d) *The proposed swimming pool shall be the subject of specific engineering design with particular emphasis on crack control and leakage, taking into account the location of reserve Disposal Field 'C'. In order to satisfy this condition, a Producer Statement – Design shall be provided to Council certifying that the swimming pool has been designed taking into account the location of reserve effluent Disposal Field 'C' and that neither the reserve disposal field nor the swimming pool will be adversely affected by the other.*

e) *The vehicle crossing to Ripiro Drive shall be formed to comply with drawing KDC/ A4/S28 of the Kaipara District Council Draft Engineering Code of Practice for Land Subdivision and Development Year 2000 and of appropriate width.. Any necessary permit procedures shall be complied with.*

f) *The driveway shall be formed to comply with Appendix 9J of the District Plan (2 to 3 household equivalent standard, 3.0 m wide sealed or concrete carriageway).*

g) *A plan for amenity and screen planting, together with an ongoing monitoring and maintenance programme for this landscaping for a three-year period, shall be prepared and submitted to the Council for approval. The purpose of the landscaping plan shall be to soften the overall effect of the development and protect residential amenity values of the surrounding area. The landscaping plan shall specifically target the following areas:*

- *Northwestern, northeastern and southeastern boundaries of the site.*
- *Effluent disposal area along the driveway.*

h) *All landscaping works described in the approved landscape plan submitted to Council in accordance with Condition 1(d) shall be carried out to the satisfaction of the Council.*

i) *A cash contribution in lieu of reserves shall be paid, based on 0.5 % of the assessed value of two of the three residential units. Valuation shall be by a registered valuer at the applicant's expense.*

At the time of payment of the contribution, the valuation upon which the cash contribution is calculated shall be no more than 3 months old.

2) *The following conditions shall be complied with on an ongoing basis.*

a) *All landscaping works undertaken in accordance with Condition 1(e) shall be maintained in accordance with the maintenance programme and to the satisfaction of the Council for a period of at least three years after the date of completion of planting.*

b) *Any swimming pool constructed on the site shall be constructed strictly in accordance with the design submitted in accordance with Condition 1(d) unless a revised specific design and associated producer statement to that required under Condition 1(d) is submitted for an alternative design.*

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KAIPARA DISTRICT

Advice Notes

1. *The consent holder shall pay all charges set by the Council under Section 36 of the Resource Management Act 1991, including any administration, monitoring and supervision charges relating to the conditions of this resource consent. The consent holder will be advised of the charges as they fall.*
2. *Any discharge of treated wastewater to land from the three residential units must either meet the permitted activity criteria of Section 15 of the Regional Water and Soil Plan for Northland, or a resource consent must be gained for the discharge.*

Monitoring

All conditions of this consent will require monitoring by Council. There will be a Council charge for this monitoring.

Signed: ..... …. /…. / ….

Resource Consents Officer

Kaipara District Council

Signed under delegated authority pursuant to Section 34A of the Resource Management Act 1991.

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Application for Code Compliance Certificate

(Form 6) Section 92, Building Act 2004

The building consent

Building consent number: 050547

Issued by: KAIPARA DISTRICT COUNCIL

***The owner**

Name of owner: Impact Developments Ltd

†Contact person: Max Wright & Lorraine Davidson

Mailing address: 8 Park Road, Dargaville

Street address/registered office: 8 Park Road, Dargaville

Phone number: Landline: Daytime: After hours:

Mobile: Fax:

Email address: Website:

The following evidence of ownership is attached to this application: [copy of certificate of title, lease, agreement for sale and purchase, or other document showing full name of legal owner(s) of the building]

‡Agent

‡Name of agent: Impact Developments Ltd

§Contact person: Noel Martin

Mailing address: Moeatua Developments, C/- Martin Design, 357 Kai Iwi Lakes Road, Dargaville RD3

Street address/registered office: 357 Kai Iwi Lakes Road, RD3, Dargaville

Phone number: Landline: Daytime: 09 439 7292 After hours: 09 439 7292

Mobile: Fax: 09 439 7292

Email address: martin.design@xtra.co.nz Website:

Relationship to owner: Designer

First point of contact for communications with the council/building consent authority:
Full Name: Impact Developments Ltd

Mailing Address: Moeatua Developments, C/- Martin Design, 357 Kai Iwi Lakes Road, Dargaville RD3

Phones:: 09 439 7292: 09 439 7292

Fax: 09 439 7292

Email: martin.design@xtra.co.nz

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Application

All building work to be carried out under the above building consent was completed on

The personnel who carried out the building work are as follows:

Designer: Martin Design 357 Kai Iwi Lakes Road, RD3, Dargaville : 09 439 7292

I request that you issue a code compliance certificate for this work under section 95 of the Building Act 2004.

The code compliance certificate should be sent to: Moeatua Developments, C/- Martin Design, 357 Kai Iwi Lakes Road, Dargaville RD3 (Agent)

Attachments

The following documents are attached to this application:

¶Certificates from the personnel who carried out the work

¶Certificates that relate to the energy work

¶Evidence that specified systems are capable of performing to the performance standards set out in the building consent

*Delete this section if details have not changed from the building consent.

†Delete if owner is an individual.

‡Delete this section if the application is not being made on behalf of the owner.

§Delete if the agent is an individual.

‖Contact details must be in New Zealand.

¶Delete items not applicable.

21/10/10

Signature of: agent on behalf of and with the authority of the owner **Date:** 28/07/05 **Name of person signing:**

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Code Compliance Certificate 050547

Form 7, Section 95, Building Act 2004

Impact Developments Ltd
P.O Box 28
Dargaville 0340

Issue Date: 27/10/10
Overseer: Jim Vallance

THE BUILDING:

Street Address of Building:	34a Ripiro Drive, Baylys Beach, DARGAVILLE
Valuation Number:	0104017018
Legal Description:	Lot 7 DP 316035
Building Name:	
Location of Building within site/block number:	
Level/Unit Number:	
Current Lawfully Established Use:	Residential
Year First Constructed:	

THE PROJECT:

Description:	Construction of three, two level apartments NEW FLATS
Type of Work:	
Intended Use:	Owners Use
Intended Life:	Indefinite, but not less than 50 years
Stages:	Being Stage 1 of an intended 1 Stage

THE OWNER:

Owners Name:	Impact Developments Ltd			
Owners Mailing Address:	8 Park Road, Dargaville 0300			
Street Address/Registered Office:	8 Park Road, Dargaville			
Phone Number	**Landline:**	**Daytime:**		**After Hours:**
	Mobile:	**Fax:**		
Email:			**Website:**	

FIRST POINT OF CONTACT:

First Point of Contact:	Full Name: Impact Developments Ltd Mailing Address: Moeatua Developments, C/- Martin Design, 357 Kai Iwi Lakes Road, Dargaville RD3 Phones:: 09 439 7292: 09 439 7292 Fax: 09 439 7292 Email: martin.design@xtra.co.nz

BUILDING WORK:

Building Consent Number:	050547
Issued By:	Kaipara District Council

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

- the building work complies with the Building Consent 050547
- Building work complies with the building code at the time the building consent was granted.

Signature D.A. Hartford **Date:** «IssueDate» **Position** Building Services Officer

On behalf of: Kaipara District Council

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KAIPARA DISTRICT

KAIPARA DISTRICT COUNCIL
Building Services Department

Application for Waiver or Modification of the Building Code
(Section 67 Building Act 2004)

Building Consent No 050547 Date of Issue 28-7-05

Applicant
Name Impact Developments (Max Wright)
Mailing Address
Phone 027439991501 Fax 09 439 4656

X _____ 27-10-10
Signature Date

Project Location
Street Address Baylys Coast Road. Dargaville
Legal Description _____ Valuation Roll No 0104017018

Waiver or Modification Requested
Amend the Building Consent to incorporate a modification to clause B2 for the required durability period for all elements to apply from the date of substantial completion of the building, which it has been agreed was *5-10-06 and not from the date of issue of the Code Compliance Certificate.

Request for Waiver in Respect of Compliance with or Modification of Clause
Building Code Clause – B2 marginal note to clause B2.3.1
Reason for Request Due to the age of completed building work, much of the durability time of materials & systems has passed

☐ Drawings or Supporting Documents Attached

Council Use Only

Officer's Report *(Continue on separate sheet if necessary, attach any supporting documentation)*
Unit 1 was completed 5-10-06 followed closely by Unit 2 & 3 to a lock-up stage. Thus concern was raised as to the durability of the cladding (zincalum) being in close proximity to the coast. Hence B2 durability off
Conditions modification of consent.

Recommendations ☑ Approve ☐ Decline
Reason _____

DA. Waetford. Dave Waetford.
Signature Name *(please print)*

_____ 27-10-10
Nominated Building Officer Date

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KAIPARA DISTRICT

Kaipara te Oranganui - Two Oceans Two Harbours

KAIPARA DISTRICT COUNCIL
Building Services Department

Waiver or Modification of the Building Code - S67 Building Act 2004

In connection with Section 67 of the Building Act 2004, a modification of the Building Code has been approved in connection with Building Consent number 050547 issued on 28/7/05 in the name of Impact Developments

The effect of the waiver or modification is to amend the Building Consent to incorporate a modification to Clause B2 for the required durability period for all elements to apply from the date of substantial completion of the building which it has been agreed was 5/10/06 and not from the date of Code Compliance Certificate.

Signed: D.A. Waetford.

Name: Dave Waetford.

Title: Senior Building Controls Officer

This document is to be attached to the Building Consent to which it relates.

cc: Tracey Bevan
Administration Officer
Building Standard Office
Department of Building and Housing
P O Box 10-729
Wellington 6143

Copy sent to BDH

John Gardiner
Determinations Manager
Department of Building and Housing
P O Box 10-729
Wellington 6143

1919 State Highway 1, P O Box 26, Kaiwaka 0542, Northland, New Zealand
Telephone: 09 431 2013 or 0800 100 388 Fax: 09 431 2023 Email: council@kaipara.govt.nz www.kaipara.govt.nz

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WRIGHT - DAVIDSON

1. SOUND TRANSMISSION 200 – solid fill blocks, strapped + lined

2. SWIMMING POOL ?

3. S.W. OBTAIN EASEMENT ? OVER LOT 6

R.C. MENTIONS LEGAL RIGHTS TO PIPE ACROSS LOT 8.

Bean in contact with Mac Wright. He and owner of LOT 6 have discussed S.W. line over LOT 6.

4. FIRE SAFETY REPORT OK.

no need to go to fire service as complies with section C

of compliance documents

5. Cavity batten H3-1 ? check if need be H3-2

H3-1 dip treated only in some cases ?

6. Ated to top plate - Refer to top plate fixings ?

purlin fixing shown OK. (WD 15)

7. Packers behind weatherboard for deck balustrade

Contacted Noel Martin 20.07.05

Remark on plans as flat roof timber H.3.1

Poly H3.2 pressure treated

Engineer to provide detail to top plate & rafter fixings - timber

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FORM ARCHITECTS

05-0055 dh

17 June 2005

FIRE SAFETY COMPLIANCE REPORT FOR NEW RESIDENTIAL APARTMENTS FOR L DAVIDSON & M WRIGHT AT RIPIRO, BAYLEYS BEACH, DARGAVILLE (LOT 7 DP 316035) BASED ON C/AS1 ACCEPTABLE SOLUTIONS.

1. Purpose

The following report summarises the fire safety features of the project and is based on the C/AS1 ACCEPTABLE SOLUTIONS fire documents and the attached plans. The report should relate to completed documents to be lodged for building consent.

The findings of this report reflect the requirements of the Building Act, New Zealand Building Code and the acceptable solutions.

There is no requirement in the code to protect against loss of the owner's property by fire, as such this has not been addressed in this report.

The fire protection features set out below are required to protect the neighbour's property. The other features are required to protect life safety within the building.

2. Summary Of Fire Safety Precautions In This Project

Purpose Group	= SR
F Value, life safety	= 30
S Value, property protection	= 0
Fire Safety Precautions	= NO REQUIREMENTS

3. Building Details

The building being considered is three new 164m² attached residential apartments located side by side. The proposed construction is two storied light timber framed units with masonry blockwork inter-tenancy walls. Based on the number of bedrooms each unit will contain 6 occupants.

4. Code Application

As a new building the Building Act requires that all construction fully comply with NZBC requirements.

437 0772 Fax: (09) 437 0771 Mobile: 027 437 0742 Email: office@formarchitects.co.nz Postal Address: PO Box 1622 Whangarei

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5. Means Of Escape

C/AS1 Table 3.1 requires 1 escape route from each apartments. Therefore they comply.

No horizontal route is less than 850mm and no vertical route is less than 1000mm, accordingly escape route widths meet C/AS1 Table 3.2 controls.

Escape route lengths are within C/AS1 Table 3.3 limits
Allowable Dead End Open Path (D.O.P) =24m
Actual D.O.P = (12 x 1.4) + 5 + 2 =23.9m (ok just!)

6. Life Safety Features

The BIA acceptable solutions require the following life safety features for two floor residential units of this nature with up to 6 occupants:

F0

Where:
F0 = 0 minutes of FRR needed for life safety.

However C/AS1 6.8.1 requires that all residential units are separate fire cells with an FRR of 30/30/30. The spread of fire between units needs to be checked at both levels to ensure that adequate separation is provided with 30/30/30 wing or return walls. Separation required for spread of fire between apartments:

ELEVATION DESCRIPTION	ENCLOSING RECTANGLE	REQUIRED LENGTH OF WING(W)/RETURN(R) WALL
E1	10 x 3	0.2m R
E2	6 x 3	1.6m W
E3	10 x 3	0.2m R
E4	20 x 3	1.8m W
E5	6 x 3	1.6m W
E6	8 x 3	0.2m R
E8	10 x 3	0.2m R
E9	8 x 3	1.7m W
E10	10 x 3	1.8m W
E11	6 x 3	0.2m R
E12	10 x 3	0.2m R
E13	20 x 3	0.2m R
E14	3 x 3	1.3m W
E15	6 x 3	0.2m R
E16	10 x 3	0.2m R
E17	8 x 3	1.7m W

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The inter-tenancy walls including the required wing or return walls are to be 30/30/30 two way fire rated systems to the underside of the roofing material. These can be constructed using masonry blockwork or alternative Gib GBTL30 (see attached details)1x10mm fyreline to each side of a 100x50 timber framed wall. The location of these fire walls are indicated on the attached plans.

Each unit is also required to be fitted with domestic smoke detectors in accordance with NZBC F7/AS1.

7. Property Protection Features

The units are arranged in a 'side by side' fashion, with no unit being closer than 1.5m to the nearest boundary therefore C/AS1 7.10.7 does not require any additional fire rating to limit the spread of fire to neighbouring properties.

8. Fire Service Requirements

Fire service access to building faces is available without the necessity to strengthen site pavements.

9. Surface Finishes

Exterior surface finishes:
No requirements.

Interior surface finishes:
No requirements.

10. Summary Of Fire Safety Features

Escape routes:	Comply with D1/AS1.
Life safety features:	Apply FRR 30/30/30 as inter-tenancy separations including the required wing/return walls indicated on the attached plans. Install domestic smoke detectors in accordance with NZBC F7/AS1.
Property protection features:	Achieved by 1.5m separation to nearest boundary.
Fire service requirements:	Achieved by available vehicular access.
Surface finishes:	No requirements.

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11. Limitation

This report has been prepared solely for the benefit of our client and the Kaipara District Council in relation to the application for which this report has been prepared. The comments in it are limited to the purpose stated in this report. No liability is accepted by Form Architects Ltd in respect of its use by any other person, and any other person who relies upon any matter contained in this report does so entirely at their own risk.

Yours faithfully,

Dean Halvorson
FORM ARCHITECTS LIMITED

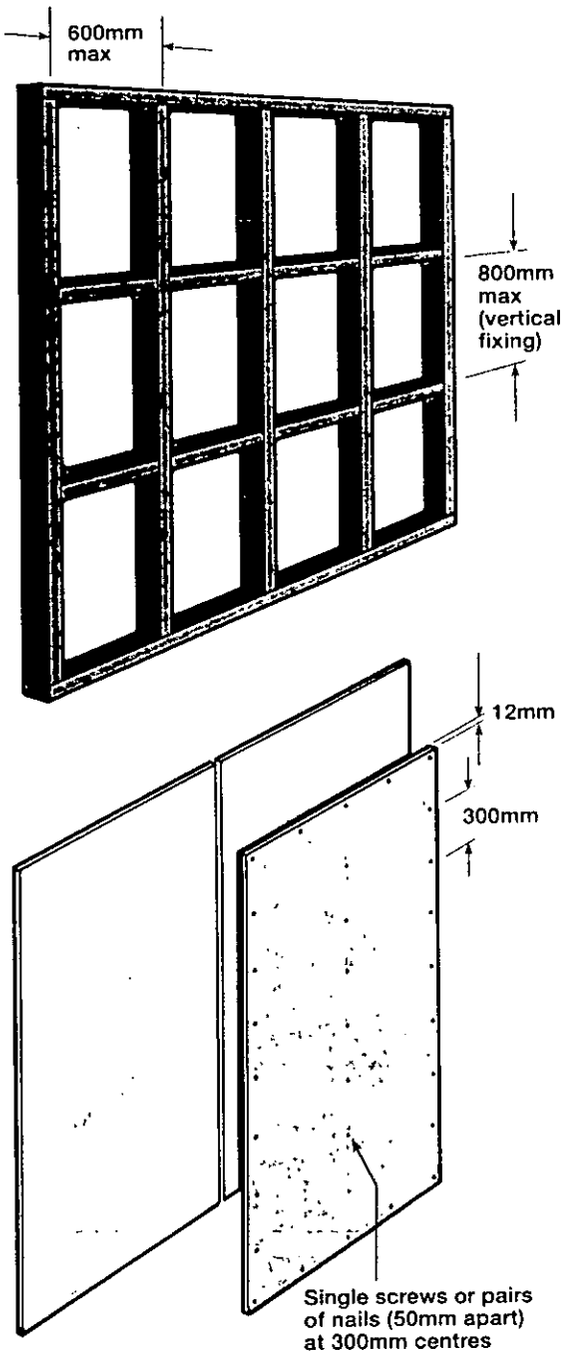
Encl: Proposed floor plans

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Timber Frame
(30)/30/30
LB/NLB

Fire Rated Wall Systems
Two Way FRR – Timber Frame

Specification Number	Loadbearing Capability	Fire Resistance Rating	Lining Requirements	Sound Transmission Class	System Weight Approx
GBT 30a	NLB	-/30/30	1 x 10mm Gib® Fyreline each side	STC 36	22kg/m²
GBTL 30	LB	30/30/30			



Framing

GBT30a Non Loadbearing and GBTL30 Loadbearing

F5 stress grade or No.1 visually graded kiln dried Radiata Pine actual dimensions 70 x 35mm minimum.
Alternatively No. 1 framing grade H1 treated Radiata Pine nominal dimensions 75 x 50mm minimum.
Studs at 600mm centres maximum.
Nogs at 800mm centres maximum for Vertical fixing.
Nogs at 1200mm centres for Horizontal fixing.

Wall Heights and Framing Dimensions

GBT30a Non Loadbearing - Framing dimensions and height as determined by NZS3604 stud tables for non loadbearing partitions.

GBTL30 Loadbearing - Framing dimensions and height as determined by NZS3604 stud and top plate tables for loadbearing walls.

Lining

1 layer of 10mm Gib® Fyreline each side of the frame.
Vertical or Horizontal fixing permitted.
Sheets shall be touch fitted.
When fixing vertically, full height sheets shall be used where possible.
All sheet joints must be formed over solid timber framing.

Fastening the Lining

Fasteners

41mm x 6g Gib® Grabber Scavenger Head High Thread Drywall screws or 40mm x 2.8mm Gib® nails.

Fastener Centres

300mm centres around the sheet perimeter, 12mm from the sheet edge.
Single screws or pairs of nails (50mm apart) at 300mm centres to intermediate studs.

Jointing

All fastener heads stopped and all sheet joints tape reinforced and stopped in accordance with the publication entitled "Gib Living Solutions® Site Guide".

GIB®

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KAIPARA DISTRICT

Kaipara te Oranganui · Two Oceans Two Harbours

Building Consent Inspection Checklist

KAIPARA DISTRICT COUNCIL

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

REQUIRED INSPECTIONS			BUILDING CONSENT NO. 050547			
NOTE:	One days notice is required for all inspections (A day means one Council **Working day**) Inspections relating to this consent are those highlighted in the following list.					
CONTACT: KAIPARA DISTRICT COUNCIL TELEPHONE: Dargaville PHONE:(09) 439 7059 FAX: (09) 439 6756 Kaiwaka PHONE:(09) 431 2013 FAX: (09) 431 2023			APPROVED YES	APPROVED NO	Re-check	Insp. Initial
✓	**Foundations**	Excavations level and clean, reinforcement in place, starters tied, with correct clearances prior to placement of concrete.	✓	UNIT 3 UNIT 2		
	Subfloor	Sub floor bracing and connectors, crawl space, dpc:				
✓	**Floor Slab**	Damp proofing and/or reinforcement in place, correct clearances, plumbing & drainage pipes in place and protected, damp proofing continuous to the exterior face of the building.				
✓	**Masonry**	Inc. bond beams, reinforcement in place, starters tied, bottom of core & ports clean, plumbing & drainage pipes in place.				
✓	**Prelining**	At the stage where exterior cladding and joinery is in place, but prior to the erection or fixing of internal linings, includes plumbing in walls under test, framing, bracing, moisture content, insulation, fixings for subfloor.				
	Insulation	Skillion roofs, solid construction (where insulation cannot be seen at the preline stage).				
✓	**Gib Nail**	Sheet bracing and insulation, double skin firewalls.				
✓	**Pre-Cladding**	Exterior bracing straps, building paper placement, external & internal flashings, cavities, fixing as per spec, fixing materials eg stainless steel & corresponding to cladding system.				
	Brick Veneer	When the veneer reaches sill height (brick ties, weep holes, clean cavities, steel lintels which support brickwork).				
✓	**Sanitary Drainage**	Manholes, benching, test on lines bedding SS connection, septic tank & irrigation installations prior to backfilling.				

As Built Drainage Plan Required? YES [✓] NO [ ]

✓	**Stormwater Drainage**	All drains, manholes, connection to SW system, soak holes in place but prior to covering up.				
	Disconnect Sanitary Drainage	Demolition work, capping sewer.				
	Disconnect Stormwater	Removal and capping of existing stormwater connection.				
	Disconnect Water	Removal of water meter from Council supply.				
	Special Conditions	Where notice is required for specific items.				
✓	**Completion**	Weathertightness, flashings, doors, deviation from plans, building, plumbing, drainage, free standing fire unit completion of all work authorised by this consent required prior to the issue of the Code Compliance Certificate.				

NOTE: *DEPENDING ON THE FORM OF CONSTRUCTION SOME OF THESE INSPECTIONS COULD BE INCORPORATED INTO ONE INSPECTION.*

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KAIPARA DISTRICT

Kaipara te Oranganui • Two Oceans Two Harbours

Request For Project Information Memorandum

KAIPARA DISTRICT COUNCIL

TO: Customer Services Team **BC No:** 050547

FROM: Jim Vallance / ~~Richard Greaves / Derek Free~~

DATE: 27-07-05

Property Zone: RESIDENTIAL Stats Code: 1900 ?

Valuation Number: 104/170/18

Please distribute to:

Engineering ~~Yes~~ / No

Town Planning ~~Yes~~ / No

1	✓
2	✓
3	✓
4	✓
5	
6	
7	✓
8	
9	✓
10	✓
11	✓
12	✓
13	✓
14	
15	✓
16	
17	
18	✓

Information For Project Information Memorandum

This project information memorandum is:

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

- Not yet applied for ☐
- No: ..... attached ☑
- Not yet issued ☐

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

This project information memorandum includes:

☐ Information identifying relevant special features of the land concerned

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

☐ Details of relevant utility systems

☑ Details of authorisations that have been granted

☐ Notification of any other authorisations that must be obtained before the proposed building work may be undertaken

☐ Details of authorisations, which have been refused

KAIPARA DISTRICT COUNCIL

ATTACHMENT TO PROJECT INFORMATION MEMORANDUM NO 00

INSPECTORATE

(A) Wind Zone rating for site

Low
Medium
High ✗
Very High ✓

(B) Durability : Classification of Exposure Zones
Sea Spray Zone ✓
Zone 1
Zone 2

(C) Provisions being made with regard to building over or adjacent to a road or public place are acceptable

Hoardings)
Gantries) **N/A**
Temporary Support)

(D) Provisions made for demolition are adequate

Removal of materials from site)
Dust Extraction) **N/A**

(E) The site is known to be affected by hazardous contaminants which may impact on the proposed project

Chemical Contamination)
Underground Tanks) **None Known**
Asbestos)

(F) Licences required to operate, subject to Building Consent being granted

Health Licences)
Dangerous Goods Licence) **N/A**

PLANNING

(A) Proposed Project complies with District Plan Zoning

Yes ✓
No

(B) The bulk and location of the proposed project complies with the restrictions of the District Plan

Yes ✗
No ✓

(C) Special planning restrictions know to affect the site which impact on the proposed project

Protected Tree Restrictions)
Historic Site Restrictions) **None Known**

(D) Proposed vehicle access acceptable

Gradient)
Width) ~~**Existing**~~ TO SECTION 9 OF COUNCIL DISTRICT PLAN
Length)

(E) Resource Consent Required - ~~No~~ YES

Nature of required consent APPROVAL GRANTED TO CONSTRUCT 3 DWELLING UNITS RM 040655 CONDITIONS APPLY

NOTE: The Northland Regional Council Transitional Regional Rule for small domestic sewage treatment systems, requires that there be a two metre separation between the lowest point of a septic tank effluent field and the highest ground water level. As this can only be determined by an examination of your site it is recommended that you seek professional advice on this point. If you cannot obtain the required separation it will be necessary to apply to the Northland Regional Council for a resource consent to discharge effluent.

ENGINEERING

(A) The site is known to have soil conditions which will have impact on the proposed project

Fill)
Erosion)
Slippage) **None Known**
Poor Bearing Capacity)

(B) Site is known to be prone to flooding or lies within an overland flow path - **No**

(C) Proposed methods for building over or near service pipes acceptable? - **N/A**

(D) Proposed connection to services acceptable

Stormwater Disposal ~~N/A~~ EASEMENT MAY BE REQUIRED
Foulwater Disposal ~~N/A~~ ✓
Water Connection ~~N/A~~ ✓

(E) Proposed location of vehicle access acceptable

Location) ~~Existing~~
Traffic Implications) EXISTING

(F) Restrictions which may be imposed owing to potential impact on traffic

Signs **N/A**

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Building Consent 050547

(Form 5) Section 51, Building Act 2004

The building

Street address of building:	BAYLYS COAST ROAD, DARGAVILLE
Legal description of land where building is located:	
Valuation number:	0104017018
Building name:	
Location of building within site/block number:	
Level/unit number:	

The owner

Name of owner: Impact Developments Ltd

Contact person: Max Wright & Lorraine Davidson

Mailing address: 8 Park Road, Dargaville

Street address/registered office: 8 Park Road, Dargaville

Phone number: Landline: Daytime: After hours:

Mobile: Fax:

Email address: Website:

First point of contact for communications with the council/building consent authority:
Full Name: **Impact Developments Ltd**

Mailing Address: Moeatua Developments, C/- Martin Design, 357 Kai Iwi Lakes Road, Dargaville RD3

Phones:: 09 439 7292: 09 439 7292

Fax: 09 439 7292

Email: martin.design@xtra.co.nz

Building work

The following building work is authorised by this building consent:

Construction of three, two level apartments

Owners Use

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.

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ADDENDA TO THIS BUILDING CONSENT:

1. This consent will lapse if building work has not commenced within 6 months from the date of issue or if reasonable progress has not been made within 12 months after work has commenced. The consent may be extended for a further period at the discretion of Council.
2. 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.
3. 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.
4. 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 survey pegs before work commences.
5. NOTICE THAT BUILDING WORK IS READY FOR INSPECTION. For the purposes of Section 76 of the Building Act, and unless otherwise provided by the building consent, the owner or other person undertaking any building work shall give:
6. b) at least 1 working days notice of the covering up of any
7. i) drainage or plumbing
8. ii) excavation for a foundation
9. iii) reinforcing steel for a foundation
10. iv) timber required to have a specific moisture content
11. Council MUST be notified at the completion of building work on the attached form.
12. From 28 April 2003 all new dwellings, additions or alterations to dwellings must be provided with domestic smoke alarm(s) in order to comply with the Building Code.

Compliance schedule

A compliance schedule is not required for the building.

Attachments

Copies of the following documents are attached to this building consent:

Signature _____ **Date:** 28/07/05 **Position** _____

On behalf of: KAIPARA DISTRICT COUNCIL

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Project Information Memorandum

Section 31, Building Act 1991

Application

Impact Developments Ltd Moeatua Developments C/- Martin Design 357 Kai Iwi Lakes Road Dargaville RD3	No. Issue date Application date Overseer	050547 28/07/05 28/06/05 Jim Vallance

Project

Description	NEW FLATS
	Being Stage 1 of an intended 1 Stage
	Construction of three, two level apartments
Intended Life	Indefinite, but not less than 50 years
Intended Use	Owners Use
Estimated Value	$690,000
Location	BAYLYS COAST ROAD, DARGAVILLE
Legal Description	
Valuation No.	0104017018

This project information memorandum is confirmation that the proposed building work may be undertaken, subject to the provisions of the Building Act 2004, and any requirements of the building consent.

This project information memorandum includes:

___ Details of authorisations which have been granted

Signed for and on behalf of the Council:

Name: **Date:**

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KAIPARA DISTRICT COUNCIL

ATTACHMENT TO PROJECT INFORMATION MEMORANDUM NO 050549

INSPECTORATE

(A) Wind Zone rating for site

Low
Medium
High
Very High ✓

(B) Durability : Classification of Exposure Zones

Sea Spray Zone ✓
Zone 1
Zone 2

(C) Provisions being made with regard to building over or adjacent to a road or public place are acceptable

Hoardings)
Gantries) **N/A**
Temporary Support)

(D) Provisions made for demolition are adequate

Removal of materials from site)
Dust Extraction) **N/A**

(E) The site is known to be affected by hazardous contaminants which may impact on the proposed project

Chemical Contamination)
Underground Tanks) **None Known**
Asbestos)

(F) Licences required to operate, subject to Building Consent being granted

Health Licences)
Dangerous Goods Licence) **N/A**

PLANNING

(A) Proposed Project complies with District Plan Zoning

Yes ✓
No

(B) The bulk and location of the proposed project complies with the restrictions of the District Plan

Yes
No ✓

(C) Special planning restrictions know to affect the site which impact on the proposed project

Protected Tree Restrictions)
Historic Site Restrictions) **None Known**

(D Proposed vehicle access acceptable

Gradient)
Width) **To Section 9 of Council District**
Length) **Plan**

(E) Resource Consent Required – **Yes**

Nature or required consent – **Approval Granted To Construct Three Dwelling Units RM040255 – Conditions Apply**

NOTE: The Northland Regional Council Transitional Regional Rule for small domestic sewerage treatment systems, requires that there be a two meter separation between the lowest point of a septic tank effluent field and the highest ground water level. As this can only be determined by an examination of your site it is recommended that you seek professional advice on this point. If you cannot obtain the required separation it will be necessary to apply to the Northland Regional Council for a resource consent to discharge effluent.

ENGINEERING

(A) The site is known to have soil conditions which will have impact on the proposed project

Fill)
Erosion)
Slippage) **None Known**
Poor Bearing Capacity)

(B) Site is known to be prone to flooding or lies within an overland flow path - **No**

(C) Proposed methods for building over or near service pipes acceptable? - **N/A**

(D) Proposed connection to services acceptable

Stormwater Disposal) **Easement May Be Required**
Water Connection) ~~N/A~~ ✓
Foulwater Disposal) ~~N/A~~ ✓

(E) Proposed location of vehicle access acceptable

Location)
Traffic Implications) **Existing**

(F) Restrictions which may be imposed owing to potential impact on traffic

Signs **N/A**

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3600
98450
99000
1700 clothesline
1800 screen wall
1700
set out point A.
3000 rad
Cleanstream type textile recirculation system
kerb & channel
6.7
5.2
303° 09'
21.74
100 @ SW
98450
99150
kerb & channel
99450
17° 41'
46.88
kerb & channel
fall
7.2
6.2
9.2
FFL 99200
3
1800 screen wall
clothes line
2.5
1800 screen wall
2/12.00
effluent
field
entry dri
100 m
668 HP
kerb &
100300
FFL 99400
fall
3.8
5m
2
1800 screen wall
1500 rad
3.5
fall
2.2
fall
1.2
kerb & channe
1.1
1800 screen wall
FFL 99600
600
clothes line
1800 screen wall
1000
3100
COS
600
1800
100350
99800
99800
99800
317° 36'
34.99
99800
100
3600
1200
99300
7400
7000
17700

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EFFLUENT DISPOSAL CALCULATIONS AND SYSTEM DESIGN

STUDIO MAROTTA
ENGINEERING CONSULTANTS
Commercial
Industrial
Residential

Project Number: **04209**
Sheet: **1**

Client: **Max Wright, Ripiro Apartments**
Date: **24/06/05**

SITE LOCATION: **Ripiro Road, Baylys Beach** **Lot 7 DP 316035**

TOPOGRAPHY: **Flat and Sloping ground**

SOIL TYPE: **Red Sand**

DESIGN PARAMETERS

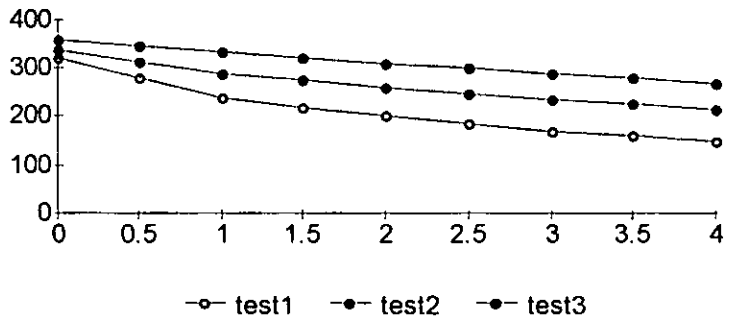
DEPTH WATER TABLE **> 1.0 m** LOT SIZE **1,850** sq.m

WATER SUPPLY **Town water**

No of BEDROOMS **3 X 3 apartments** No of PEOPLE **15** L/P/D

DAILY DISCHARGE **2700** Litres WATER USE PER DAY **180** L/P

Percolation Test Results



SOIL CATEGORY **2** LOADING RATE = **30** mm/day

AREA REQUIRED FOR DISPOSAL **90** sq.m

EFFLUENT TREATMENT **CleanStream Textile Recirculation System**

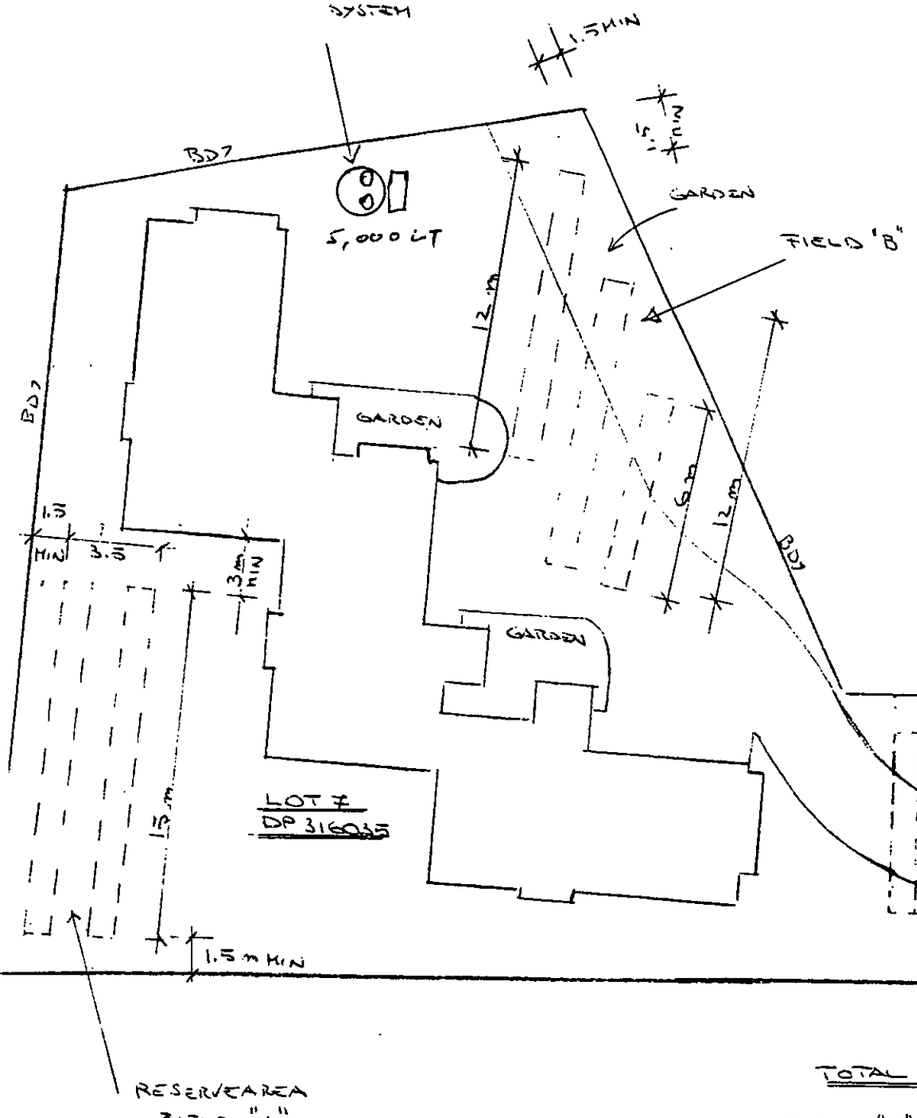
DISTRIBUTION METHODOLOGY IN DRAINFIELD **Distribution pipes and RAAM dripline in trenches**

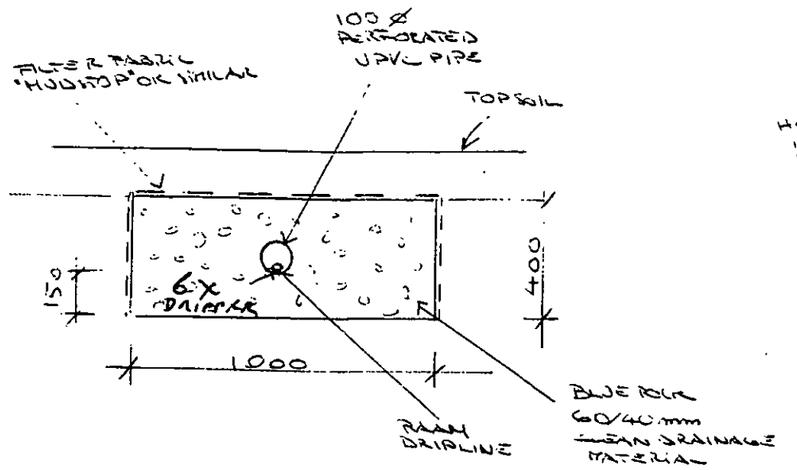
1st Floor Cnr Port Rd & Okara Dr, Whangarei
Phone: (09) 438 3345 Fax: (09) 438 3373
P.O. Box 10050 Te Mai, Whangarei

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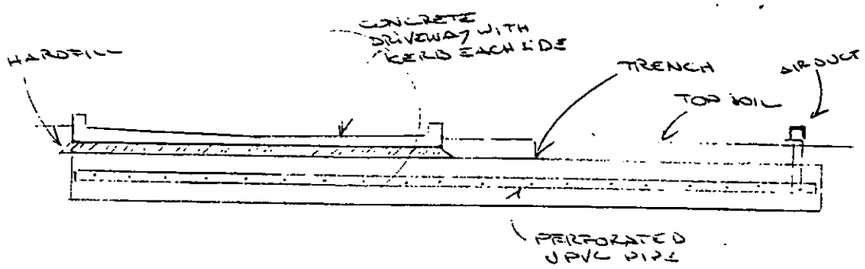
OASIS CLEARWATER TEXASS

TEXTILE RECIRCULATION SYSTEM





TRENCH SECTION - SCALE 1:20



SECTION THROUGH DRIVEWAY - SCALE 1:50

TOTAL AREA REQUIRED 30 m²

FIELD "A" 10/ 1m WIDE x 6 LONG TRENCHES = 60 m²

FIELD "B" 2/ 1m WIDE x 12 m LONG TRENCHES PLUS
1m WIDE x 6 m LONG TRENCH = 30 m²

TOT = 30 m²

RESERVE AREA 0.5 x 30 = 27 m²

FIELD "C" 2/ 1m WIDE x 15 m LONG TRENCHES = 30 m²

EFFLUENT FIELD LAYOUT
SCALE 1:250

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Producer Statement Design

STUDIO MAROTTA

ENGINEERING CONSULTANTS

Commercial
Industrial
Residential

Project number:	**04209**
Issued by:	**Vincenzo Marotta** (Suitably Qualified Design Professional)
To:	**Max Wright** (Owner)
In respect of:	**Proposed Apartments** (Description of Building Work)
At:	**Ripiro Road, Baylys Beach** (Address)
Lot:	**7** DP: **316035**

STUDIO MAROTTA LTD has been engaged by **Max Wright**
to provide **structural design of steel and timber beams, steel and timber posts, connections, bracing, block walls and foundations**
In respect of the requirements of Clause(s) **B1/VM** of the Building Regulations 1992 for

☐ All ☑ Part only as specified of the building work

The design has been prepared in accordance with **NZS 4203, 3603, 3404, 3101** (respectively) of the approved documents issued by the Building Industry Authority and the work described on drawings

titled **ripiro. baylys.**
and numbered **04DW01**

and the specification and other documents according to which the building is proposed to be constructed.

As an independent design professional covered by a current policy of Professional Indemnity Insurance to a minimum value of $200,000, I BELEIVE ON REASONABLE GROUNDS that subject to:

(i) The verification of the following design assumptions:
Allowable soil bearing pressure 100KPa, timber radiata pine grade MSG8, structural steel grade 300MPa, block masonry wall grade "B", reinforcing steel grade 300MPa, foundation concrete grade 20MPa

and (ii) This certificate does not cover stability or suitability of this site

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

Vincenzo Marotta Date **24 June 2005**
(Signature suitably qualified Design Professional)

BE MIPENZ CPEng **210914**
(Professional Qualifications) (Registration Number)

1st Floor Cnr Port Rd & Okara Dr, Whangarei
Phone: (09) 438 3345 Fax: (09) 438 3373
P.O. Box 10050 Te Mai, Whangarei

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Jim F. Vallance

From: Barbara Ware
Sent: Wednesday, 22 August 2007 4:11 p.m.
To: Jim F. Vallance
Subject: FW: Impact Developments 050277
Importance: High

Hi this is the one we were discussing. If yours inspections have satisfied this condition please advise by return email. If not, please also advise.

Thanks
Barbara

From: Barbara Ware
Sent: Wednesday, 15 August 2007 8:23 a.m.
To: Jim F. Vallance
Subject: Impact Developments 050277

Hi Jim

This is the three units again at Baylys. Impact Developments believe that 2b has been satisfied as you visited on site and "*inspected the wastewater system when it was installed*"

Is this the case and does this satisfy this condition. Or do I need to send Duffills out?

> *2b) The wastewater treatment and disposal system to serve the facility, including Disposal Fields 'A' and 'B' and the identified reserve area – Disposal Field 'C' shall be constructed in accordance with the report and drawings by Studio Marotta received by the Kaipara District Council on 26 October 2004 under RM 040255.*

Thanks
Barbara

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KAIPARA DISTRICT

Kaipara te Oranganui · Two Oceans Two Harbours

1012

Request For Project Information Memorandum

KAIPARA DISTRICT COUNCIL

TO: Customer Services Team **BC No:** _____

FROM: Jim Vallance / ~~Richard Greaves / Derek Free~~

DATE: 3-12-04

Property Zone: ROAD RESERVE Stats Code: 1503

Valuation Number:

Please distribute to:

Engineering Yes / No

Town Planning Yes / No

1	✓
2	✓
3	✓
4	✓
5	
6	
7	✓
8	
9	✓
10	
11	✓
12	
13	
14	
15	✓
16	
17	
18	

Information For Project Information Memorandum

This project information memorandum is:

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

- Not yet applied for ☐
- No: ..... attached ☑
- Not yet issued ☐

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

This project information memorandum includes:

☑ Information identifying relevant special features of the land concerned

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

☐ Details of relevant utility systems

☐ Details of authorisations that have been granted

☐ Notification of any other authorisations that must be obtained before the proposed building work may be undertaken

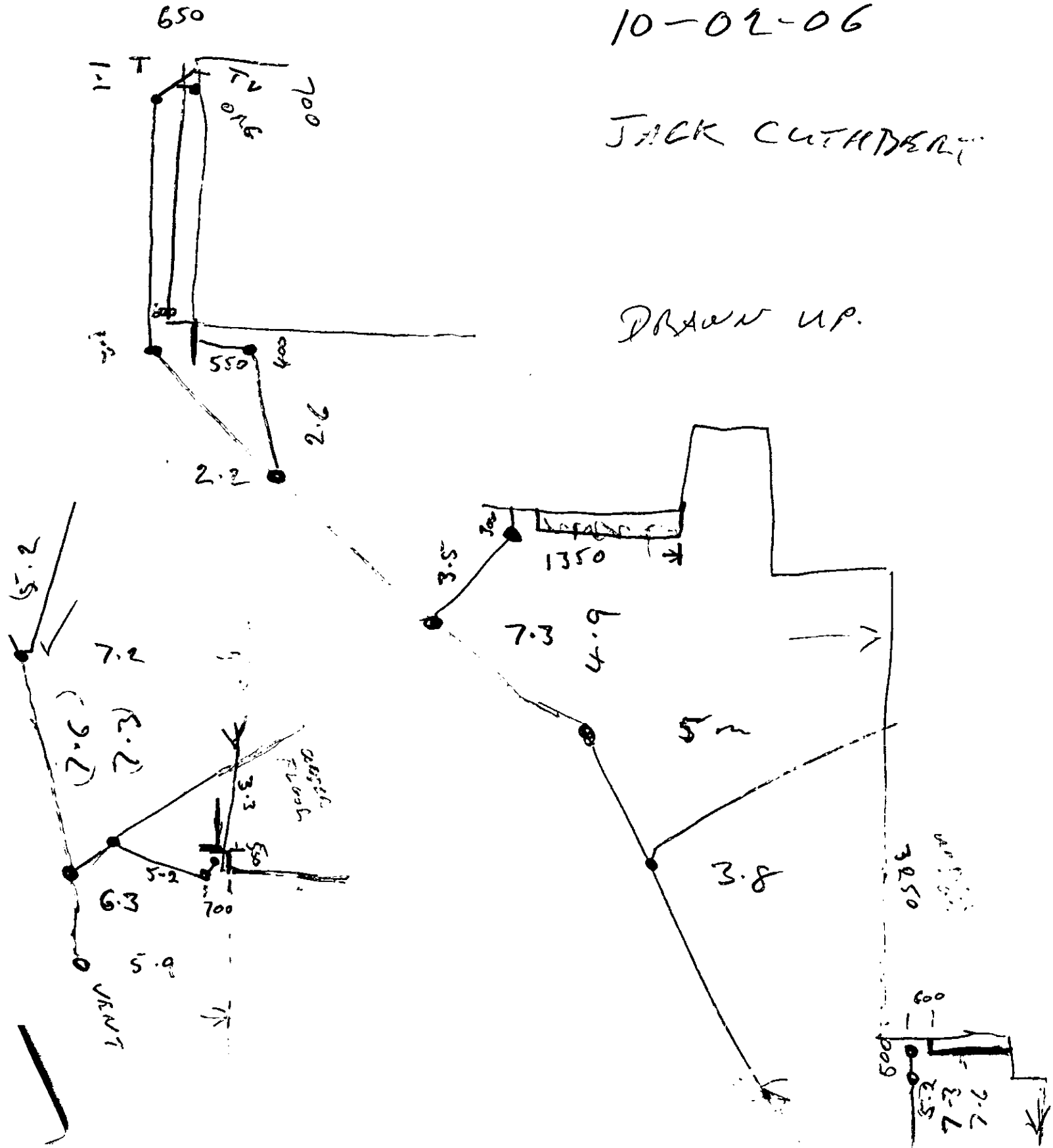
☐ Details of authorisations, which have been refused

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10-02-06

JACK CUTHBERT

DRAWN UP.



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050547 JmV

EWRB 551

Electrical Certificate of Compliance

No. 2995176

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

To be completed whether or not an Inspection is required.

No. of attachments

49127

CUSTOMER INFORMATION - PLEASE PRINT CLEARLY

Name of customer: IMPACT DEVELOPMENTS LTD Phone: 4394652

Address of installation: 348 RIPIRO DRIVE

Postal address of customer (if not as above): PO BOX 28 DARGAVILLE

WORK DETAILS

- ☐ No. of lighting outlets
- ☐ No. of socket outlets
- ☐ No. of ranges
- ☐ No. of water heaters
- Was any installation work carried out by the homeowner? ☐ Yes ☐ No

Please tick (✓) as appropriate where work includes:

- ☐ Mains
- ☐ Main earthing system
- ☐ Switchboard
- ☐ Electric lines

Description

New apartment 348 Ripiro Drive
All lights / Wires / switches
Floor Heating / Rotel Heater

It is recommended that test results be recorded here:

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

If necessary attach any pages with sketches of work done

CERTIFICATION OF WORK

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

ELECTRICAL WORKER DETAILS

Name	K Millsop
Registration no.	E 3285
Company	Mayfield Electrical
Signature	K Millsop
Date	5/1/11
Contact Ph No.	439 4656

CERTIFICATION OF ELECTRIC LINES

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

Name	
Registration no.	
Company	
Signature	
Date	
Contact Ph No.	

INSPECTION DETAILS

Electrical work requiring inspection by a registered electrical inspector

- ☐ New mains
- ☐ Switchboard
- ☐ Earthing system
- ☐ Installation work in hazardous areas

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

Name	
Signature	
Registration no.	
Date	
Daytime Contact Ph No.	

TO BE RETAINED BY THE WORKER RESPONSIBLE FOR CERTIFYING THE WORK

This form is approved by the Electrical Workers Registration Board (PO Box 10-156, Wellington. Freephone 0800 66-1000) for the purposes of the Electricity Regulations 1997.

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ELECTRICAL WORKERS REGISTRATION BOARD
Safety • Competency

EWRB 551

Electrical Certificate of Compliance

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

To be completed whether or not an Inspection is required.

No 3078498

No. of attachments

This form is approved by the Electrical Workers Registration Board (PO Box 10-156, Wellington. Freephone 0800 66-1000) for the purposes of the Electricity Regulations 1997.

CUSTOMER INFORMATION - PLEASE PRINT CLEARLY

Name of customer: IMPACT DEVELOPMENTS LTD Phone: 09639 4652

Address of installation: 34A RIPIRO DRIVE UNIT 3

Postal address of customer (if not as above): P.O. BOX 28 DARGAVILLE 0340

WORK DETAILS

- [ ] No. of lighting outlets
- [ ] No. of socket outlets
- [ ] No. of ranges
- [ ] No. of water heaters
- Was any installation work carried out by the homeowner? [ ] Yes [ ] No

Please tick (✓) as appropriate where work includes:

- [ ] Mains
- [ ] Switchboard
- [ ] Main earthing system
- [ ] Electric lines

Description

New apartment no 3
all lights - Plugs new
Hot Plates & Hobs

It is recommended that test results be recorded here:

- Visual Examination [✓]
- Earth Continuity [✓]
- Bonding [✓]
- Polarity [✓]
- Insulation Resistance _____ Mohm
- Other _____

If necessary attach any pages with sketches of work done

CERTIFICATION OF WORK

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

ELECTRICAL WORKER DETAILS

Name	K Mclaughlin
Registration no.	E 3283
Company	Mac Laughlin Electrical
Signature	K Mclaughlin
Date	20/10/10
Contact Ph No.	09 439 4652

CERTIFICATION OF ELECTRIC LINES

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

Name	
Registration no.	
Company	
Signature	
Date	
Contact Ph No.	

INSPECTION DETAILS

Electrical work requiring inspection by a registered electrical inspector

- [ ] New mains
- [ ] Switchboard
- [ ] Earthing system
- [ ] Installation work in hazardous areas

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

Name	
Signature	
Registration no.	
Date	
Daytime Contact Ph No.	

TO BE RETAINED BY THE PERSON INSPECTING THE WORK

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How to use...

Certificates of Compliance

CUSTOMER INFORMATION

Please print clearly and press firmly. Please include:

- the customer's name,
- Address of the installation,
- Customer contact details (Telephone No., Postal Address, etc)

WORK DETAILS

The description needs to clearly define what work has been done and what you are certifying. Use the boxes (No. of socket outlets etc) to assist with the description.

If extra space is needed for the description use an extra sheet of paper or an attachment form (available from the EWRB bookshop and some COC resellers).

It is recommended that the results of tests (for insulation resistance, polarity, earth continuity etc) be recorded in this section.

CERTIFICATION OF WORK

Complete the "Electrical Worker Details" part in all cases. The "Certification of Electric Lines" part need only be completed where the worker installing electric lines is different to that carrying out other electrical work.

INSPECTION OF WORK

Where the work requires inspection (under regulation 41 of the Electricity Regulations 1997) this section must be completed by the electrical inspector.

The electrical inspector who inspects the prescribed electrical work is required to give a certificate of compliance to the owner/occupier of the fittings/premises within 20 working days.

WHEN A CERTIFICATE OF COMPLIANCE IS REQUIRED

Electrical workers carrying out prescribed electrical work that involves the placing or positioning, or the replacing or repositioning of conductors (and fittings connected to those conductors), are required by law to ensure that:

- A Certificate of Compliance is completed for that work (regulation 39).
- Any work requiring inspection (regulation 41), is inspected and the appropriate section of the COC filled in by the electrical inspector.
- The relevant copy of the COC is given to the owner of the fittings or the occupier of the Premises within 20 working days of the works being completed (unless work requires inspection).
- A copy of the COC is retained for a minimum period of 3 years by the electrical worker completing the COC.

PARTIALLY COMPLETED ELECTRICAL WORK

If for any reason (e.g. a commercial dispute) a wiring job is left incomplete or unfinished a COC should be issued for the partially completed electrical work (regulation 39(8)). Any work that may not be safe should be recorded in writing on a separate sheet and immediately handed to the customer. A copy can also be forwarded to the EWRB Registrar, PO Box 10156, Wellington.

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KAIPARA DISTRICT COUNCIL

PROGRESS CHECK SHEET FOR A BUILDING CONSENT

Valuation Reference:	104/170/18
Name of Applicant:	IMPACT DEVELOPMENTS LTD.
Address of Property:	BAYLYS COAST RD
Consent Required For:	3 ATTACHED DWELLING UNITS
Consent Issued (number):	050547
OBJECTION TO RELEASE OF INFORMATION:	YES/NO

Sent To Applicant

Building Consent —
Various Receipts
PIM —
Inspection Checklist —
One Copy of Approved Plan and Specification Submitted with Application —

3-08-05: Footings Unit 3. Trenches + steel placement OK.

9-08-05: Footings Unit 2: Trenches + steel placement OK.

10-08-05: Demolition material found under unit 1. Area to be excavated.

17-08-05: Blockwork parts cleaned + steel placed + tied OK.

22-08-05: Footings Unit 1: Trenches + steel placement OK. Excavated area filled under Engineer control

25-08-05: Floor slab unit 3: Steel placement + hangerman OK. pipework through slab protected OK.

30-09-05 Stage 2 Blockwork, Units 1-2 parts clean. Steel placement OK

31-01-06 Installation of Oasis clearwater tank, drainlines + soakage trenches OK.

10-02-06: Drainage installed OK. Drainlayer, Josh Cuthbert

5-10-06: Unit 1 Final inspection. Insulation in roof ceiling at eaves less than 55°

DGW/dgw

5-11-06 Unit 2 Final inspection: Complete: Electrical energy certificate to follow

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KAIPARA DISTRICT
Kaipara te Oranganui - Two Oceans Two Harbours

P O Box 26, Kaiwaka, Northland
Free Phone: 0800 100 388
Phone: (09) 431 2013
Fax: (09) 431 2023
www.kaipara.govt.nz

FIELD ADVICE NOTICE - 3 Pg 1

05614

BC # 050547 **Date:** 5-11-09

Applicant: IMPACT DEVELOPEMENTS

Contractor: G TREGIDGA

Site Address: 34B REPIRO DRIVE **Inspection** (Passed) / Failed

Reinspection Required: Yes / (No)

VAL # **Recommended to issue CCC:** ~~Yes~~ / ~~No~~

Travelling Time: **Inspection Time:** 9.00 am

Officer: JIM VALLANCE *Signature:*

21	FINAL INSPECTION	OK	Not	N/A	Reason for the decision / Comments ..... If further inspection needed please indicate
1	Peer Review required (over 5 yrs)				
2	Owners Application for CCC / Contractors List		X		
3	Consent Documents on Site	✓			
4	Photos Taken				
20	**FINAL FIREPLACES INSPECTION**	**OK**	**Not**	**N/A**	
1	Smoke Alarms with Hush				UNIT TWO OF THREE
2	Hearth size and & secured				
3	Fire Place Clearances				COMPLETED.
4	Fire Place secured				
5	Flue Shield				
6	Flashings / Flue Height				
7	Wet back circulators correct size and fall				
	PLUMBING	**OK**	**Not**	**N/A**	
1	Waste pipe correct support & gradient				
2	Water filtration system installed				
3	Hot water pipe lagged				
4	1 metre minimum of copper outlet of HWC				
5	Hot water cylinder seismic restraint	✓			
6	Hot water tempering value set at 45/55 degrees	✓			LESS 55°
7	Hot water energy cut out switch to all valve vented systems	✓			
8	Hot water drain OK (falls to outside of building)	✓			
9	Filter, non return, stop, cold water expansion, pressure reducing & pressure relief valves	✓			
10	Notches & holes in joists & bearers			✓	
11	Waste pipes sizing / fall / support to gully trap	✓			
12	Soil pipe sizing / fall / support	✓			
13	Adequate support to water pipes	✓			
14	Water supply tank / bore / supply	✓			
15	Back flow prevention where required			✓	
16	Other				
	FINAL INTERNAL INSPECTION	**OK**	**Not**	**N/A**	
1	Smoke alarms with hush	✓			WIRED
2	Sink insert secured correctly	✓			
3	Service rooms inpervious walls	✓			
4	Service rooms impervious floors	✓			
5	Producer statement membrane in wet areas				
6	Ceiling insulation (clear of downlights)	✓			
7	Safety glass where required	✓			
8	Ventilation	✓			
9	Stairs gap / tread / rise / handrails	✓			
10	Barrier Height 1.0m / 1.1m / Stairs 900mm	✓			
11	Safety from falling eg. 100mm balustrade gaps	✓			
12	Access for disabled *(commercial only)*			/	
13	Facilities for disabled *(commercial only)*			/	
14	All surfaces completed			/	

An Inspection of the above mentioned premises has been undertaken and the matters as listed must be completed within ..... Days or otherwise stated

Action to be taken:
Issued by:
Designation: Building Officer
Next Inspection:

This notice Received By:
Owner / Agent / Contractor

RECEIVED: 24 Jan 2011 SCANNED: 24 Jan 2011 BOX: 1 BATCH: 67088 DOC: KDCAALWN

KAIPARA DISTRICT
Kaipara te Oranganui · Two Oceans Two Harbours

FIELD ADVICE NOTICE - 3 Pg 2

P O Box 26, Kaiwaka, Northland
Free Phone: 0800 100 388
Phone: (09) 431 2013
Fax: (09) 431 2023
www.kaipara.govt.nz

05614

FINAL EXTERIOR INSPECTION		OK	Not	N/A	Reason for the decision / Comments ..... If further inspection needed please indicate
1	Conditions on Resource / Building consent	✓			
1a	Landscaping Complete	✓			
2	Joints in bearers supported			✓	
3	Ground clearance to u/side of floor			✓	
4	Subfloor ventilation			✓	
5	Subfloor bracing			✓	
6	U/floor insulation			✓	
7	Finished ground level	✓			
8	Cladding (joints, corner, scribers window flashing etc)	✓			
9	Cladding - painted / penetrations sealed	✓			
10	Brick veneer weep holes cleared			✓	
11	Roof & post fixings	✓			
12	Roof, ridging and flashings fixed correctly	✓			
13	Roof penetrations flashed correctly	✓			
14	Spouting fixed correctly	✓			
15	Down pipe clips at 1.2	✓			
16	Vent pipe clips at 1.2	✓			
17	Vent Discharge / Vermin cage	✓			
18	Stairs gap / tread / rise / handrails	✓			
19	Barriers 1.0m / 1.1m / stairs 900mm	✓			
20	Safe from falling ballustrades	✓			
21	RAMPS grade / slip resistance			✓	
22	Safety Glass (Glass Visible - commercial)	✓			
DRAINAGE		**OK**	**Not**	**N/A**	
1	As built drainage plan s/water and sewer	✓			
2	Gully dish 25mm above sealed surface "A"				
3	Gully dish 75mm above unsealed surface "B"				
4	Relief gully installed	✓			
5	Foulwater drain finished	✓			
6	Ventilation to drains, e.g. TV & or valves	✓			
7	Stormwater drain finished	✓			
8	Retaining wall drainage connected into stormwater drain			✓	
9	Overflow to water tank			✓	
10	Access for septic tank maintenance	✓			
11	Commissioning statements				> TO DESIGN
12	Effluent Completed Barking / Planting				
PRODUCER STATEMENTS		**OK**	**Not**	**N/A**	
1	Engineer / Licenced Building Practioneer				
2	Membranes / Roof				
FINAL POOL INSPECTION		**OK**	**Not**	**N/A**	
1	Pool fencing compliance (sheet completed)				
2	Back flow prevention where required				
ENERGY CERTIFICATES		**OK**	**Not**	**N/A**	
1	Electrical				TO FOLLOW
2	Gas				
ROAD DAMAGE		**OK**	**Not**	**N/A**	
1	Footpath & kerb damage				
2	Crossing installed				
COMMERCIAL		**OK**	**Not**	**N/A**	
1	Compliance Schedule				
2	Fire Design Compliance				
3	FPIS report				
4	Certificate of Public Use				
5	Fire Service - Evacuation Scheme				
6	Fire Service - Conditions meet				
7	Producer Statements - Fire Alarm, Ventilation etc				

An Inspection of the above mentioned premises has been undertaken and the matters as listed must be completed within ..... Days or otherwise stated

Action to be taken:
Issued by:
Designation: Building Officer
Next Inspection:

This notice Received By:
Owner / Agent / Contractor

RECEIVED: 24 Jan 2011 SCANNED: 24 Jan 2011 BOX: 1 BATCH: 67088 DOC: KDCAALWN

KAIPARA DISTRICT
Kaipara te Oranganui • Two Oceans Two Harbours

P O Box 26, Kaiwaka, Northland
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www.kaipara.govt.nz

FIELD ADVICE NOTICE - 2

BC # 050547 **Date:** 7-07-10

Applicant: IMPACT DEVELOPMENTS 06700

Contractor: G TAGICA

Site Address: BAYLYS COAST RD. **Inspection** Passed / Failed
Reinspection Required: Yes / No

VAL #
Travelling Time: **Inspection Time:** 10.45 am

Officer: JIM VALLINGE *Signature:*

10	CLADDING INSPECTION	OK	Not	N/A	Reason for the decision / Comments ..... If further inspection needed please indicate
1	Plaster: reinforcing, flashings, sealants, construction				
2	Waterproofing / Coating				
3	EPS (polystyrene), nailing, flashings etc.				
4	Sheet Systems: layout, nailing, flashing, construction				
5	Weatherboard: grading, type, fixing, flashing				
6	Other				
9	FRAMING INSPECTION	OK	Not	N/A	
13	PRELINE BUILDING INSPECTION				PRELINE FIRST FLOOR UNIT 3
1	Trusses: fixing, spacing, bracing, support, purlins			✓	
2	Pitched roof; fixing, spacing, bracing, strutting, span			✓	
3	Ceiling: joists/Batten: fixing, spacing, support			✓	
4	Bottom-Top plate: fixing, size, DPC	✓			
5	Bracing: Strapping, bolts, check plan	✓			
6	Moisture content	✓			
7	Frame timber treatment			✓	
8	Frame; stud size, spacing, lintel fixings, grade	✓			
9	Recheck cladding: flashing, nog spacing (480mm-board/batten)			✓	OK TO LINK
10	Insulation: type, thickness	✓			
11	Glazing: safety glass, thickness	✓			
12	Fire & Sound walls: sealer, staggered laps, fire collars			✓	
13	Other				
15	PRELINE PLUMBING INSPECTION	OK	Not	N/A	
1	Pressure Test	✓			
2	Pipe material, size, support, insulation	✓			
3	Stacks / Wastes			✓	
4	Supply Tank			✓	
5	Other			✓	
16	POST LINING INSPECTION	OK	Not	N/A	
1	Sheet brace nailing, placement options				
2	Fire & Sound walls: sealer, staggered laps, fire collars				
3	Waterproofing under tiles				
4	Other				
17	DRAINAGE INSPECTION	OK	Not	N/A	
1	Accurate "as built" plan provided				
2	Depth of drain				
3	Bedding				
4	Gradient Line; Inspections, diameter correct				
5	Water test - connection to main				
6	Gullys: max 600mm depth, finish 25mm above protected or 100mm above protected ground				
7	Drains within boundaries, too close to foundations				
8	Other				
18	SEPTIC TANKS	OK	Not	N/A	
1	AS/NZS 1546, 1547 design				
2	Depth of beds, length, scoria, matting, cut off drain				
3	Tank installed properly on level				
4	Ventilation provided-distribution box				
5	Aerated mechanical systems installed to manufacturers specifications				
6	Access or tank maintenance (no vertical air loading)				
7	Other				

An Inspection of the above mentioned premises has been undertaken and the matters as listed must be completed within ..... Days or otherwise stated

Action to be taken:

Issued by: ***This notice Received By:***

Designation: Building Officer ***Owner / Agent / Contractor***

Next Inspection: POST LINI

RECEIVED: 24 Jan 2011 SCANNED: 24 Jan 2011 BOX: 1 BATCH: 67088 DOC: KDCAALWN

KAIPARA DISTRICT
Kaipara te Oranganui - Two Oceans Two Harbours

FIELD ADVICE NOTICE - 2

P O Box 26, Kaiwaka, Northland
Free Phone: 0800 100 388
Phone: (09) 431 2013
Fax: (09) 431 2023
www.kaipara.govt.nz

BC # 050547 **Date:** 22-7-10

Applicant:

ENTERED 07430

Contractor:

Site Address: Pelorus Dr **Inspection** Preline **Passed / Failed**
Reinspection Required: Yes / No

VAL #
Travelling Time: **Inspection Time:**
Officer: Wes Shelston *Signature:*

		OK	Not	N/A	Reason for the decision / Comments ..... If further inspection needed please indicate
10	**CLADDING INSPECTION**				
1	Plaster: reinforcing, flashings, sealants, construction			/	
2	Waterproofing / Coating			/	
3	EPS (polystyrene), nailing, flashings etc.			/	
4	Sheet Systems: layout, nailing, flashing, construction		/	/	
5	Weatherboard: grading, type, fixing, flashing	/	/		
6	Other				
9	**FRAMING INSPECTION**				
13	**PRELINE BUILDING INSPECTION**	**OK**	**Not**	**N/A**	
1	Trusses: fixing, spacing, bracing, support, purlins			/	
2	Pitched roof; fixing, spacing, bracing, strutting, span			/	
3	Ceiling: joists/Batten: fixing, spacing, support	/			
4	Bottom-Top plate: fixing, size, DPC	/			
5	Bracing: Strapping, bolts, check plan	/			
6	Moisture content	/			
7	Frame timber treatment	/			
8	Frame; stud size, spacing, lintel fixings, grade	/			
9	Recheck cladding: flashing, nog spacing (480mm-board/batten)			/	
10	Insulation: type, thickness	/			
11	Glazing: safety glass, thickness	/			
12	Fire & Sound walls: sealer, staggered laps, fire collars			/	
13	Other			/	Downstairs area complete all OK
15	**PRELINE PLUMBING INSPECTION**	**OK**	**Not**	**N/A**	
1	Pressure Test	/			
2	Pipe material, size, support, insulation	/			
3	Stacks / Wastes	/			
4	Supply Tank	/			
5	Other	/			
16	**POST LINING INSPECTION**	**OK**	**Not**	**N/A**	
1	Sheet brace nailing, placement options			/	
2	Fire & Sound walls: sealer, staggered laps, fire collars			/	
3	Waterproofing under tiles			/	
4	Other			/	
17	**DRAINAGE INSPECTION**	**OK**	**Not**	**N/A**	
1	Accurate "as built" plan provided			/	
2	Depth of drain			/	
3	Bedding			/	
4	Gradient Line; Inspections, diameter correct			/	
5	Water test - connection to main		/	/	
6	Gullys: max 600mm depth, finish 25mm above protected or 100mm above protected ground		/	/	
7	Drains within boundaries, too close to foundations	/			
8	Other				
18	**SEPTIC TANKS**	**OK**	**Not**	**N/A**	
1	AS/NZS 1546, 1547 design		/	/	
2	Depth of beds, length, scoria, matting, cut off drain		/	/	
3	Tank installed properly on level		/	/	
4	Ventilation provided-distribution box		/	/	
5	Aerated mechanical systems installed to manufacturers specifications	/	/		
6	Access or tank maintenance (no vertical air loading)	/			
7	Other				

An Inspection of the above mentioned premises has been undertaken and the matters as listed must be completed within ..... Days or otherwise stated

Action to be taken:
Issued by:
Designation: Building Officer
Next Inspection:

This notice Received By:
Owner / Agent / Contractor

RECEIVED: 24 Jan 2011 SCANNED: 24 Jan 2011 BOX: 1 BATCH: 67088 DOC: KDCAALWN

KAIPARA DISTRICT
Kaipara te Oranganui - Two Oceans Two Harbours

FIELD ADVICE NOTICE - 3 Pg 1

P O Box 26, Kaiwaka, Northland
Free Phone: 0800 100 388
Phone: (09) 431 2013
Fax: (09) 431 2023
www.kaipara.govt.nz

BC # 050547 **Date:** 21-10-10

Applicant: IMPACT DEVELOPMENTS LTD. 06663

Contractor: G TRIDGA

Site Address: BAYLYS COAST RD **Inspection** **Passed / Failed**

Reinspection Required: **Yes / No**

VAL # **Recommended to issue CCC:** **Yes / No**

Travelling Time: **Inspection Time:** 2.30pm

Officer: JIM VALLANCE *Signature:*

21	FINAL INSPECTION	OK	Not	N/A	Reason for the decision / Comments ..... If further inspection needed please indicate
1	Peer Review required (over 5 yrs)				
2	Owners Application for CCC / Contractors List				
3	Consent Documents on Site				
4	Photos Taken				
20	**FINAL FIREPLACES INSPECTION**	**OK**	**Not**	**N/A**	UNIT 3
1	Smoke Alarms with Hush				
2	Hearth size and & secured				FINAL
3	Fire Place Clearances				
4	Fire Place secured				
5	Flue Shield				
6	Flashings / Flue Height				
7	Wet back circulators correct size and fall				
	PLUMBING	**OK**	**Not**	**N/A**	
1	Waste pipe correct support & gradient	✓			
2	Water filtration system installed				
3	Hot water pipe lagged	✓			
4	1 metre minimum of copper outlet of HWC	✓			
5	Hot water cylinder seismic restraint	✓			
6	Hot water tempering value set at 45/55 degrees	✓			READING 50° AT TIME OF TEST
7	Hot water energy cut out switch to all valve vented systems	✓			
8	Hot water drain OK (falls to outside of building)	✓			
9	Filter, non return, stop, cold water expansion, pressure reducing & pressure relief valves				
10	Notches & holes in joists & bearers	✓			
11	Waste pipes sizing / fall / support to gully trap	✓			
12	Soil pipe sizing / fall / support	✓			
13	Adequate support to water pipes	✓			
14	Water supply tank / bore / supply	✓			
15	Back flow prevention where required				
16	Other				
	FINAL INTERNAL INSPECTION	**OK**	**Not**	**N/A**	
1	Smoke alarms with hush	✓			WIRED IN WITH ALARM
2	Sink insert secured correctly	✓			
3	Service rooms inpervious walls	✓			
4	Service rooms impervious floors	✓			
5	Producer statement membrane in wet areas				
6	Ceiling insulation (clear of downlights)	✓			
7	Safety glass where required	✓			
8	Ventilation	✓			
9	Stairs gap / tread / rise / handrails	✓			
10	Barrier Height 1.0m / 1.1m / Stairs 900mm	✓			
11	Safety from falling eg. 100mm balustrade gaps	✓			
12	Access for disabled *(commercial only)*			/	
13	Facilities for disabled *(commercial only)*			/	
14	All surfaces completed			/	

An Inspection of the above mentioned premises has been undertaken and the matters as listed must be completed within ..... Days or otherwise stated

Action to be taken:
Issued by:
Designation: Building Officer
Next Inspection:

This notice Received By:
Owner / Agent / Contractor

RECEIVED: 24 Jan 2011 SCANNED: 24 Jan 2011 BOX: 1 BATCH: 67088 DOC: KDCAALWN

KAIPARA DISTRICT

Kaipara te Oranganui / Two Oceans Two Harbours

FIELD ADVICE NOTICE - 3 Pg 2

P O Box 26, Kaiwaka, Northland
Free Phone: 0800 100 388
Phone: (09) 431 2013
Fax: (09) 431 2023
www.kaipara.govt.nz

06663

FINAL EXTERIOR INSPECTION		OK	Not	N/A	Reason for the decision / Comments ..... If further inspection needed please indicate
1	Conditions on Resource / Building consent	✓			
1a	Landscaping Complete	✓			
2	Joints in bearers supported				
3	Ground clearance to u/side of floor			/	
4	Subfloor ventilation			/	
5	Subfloor bracing			/	
6	U/floor insulation			/	
7	Finished ground level			/	
8	Cladding (joints, corner, scribers window flashing etc)	✓			
9	Cladding - painted / penetrations sealed	✓			SIGNS OF DETERIORATION IN TINCALUM CLADDING
10	Brick veneer weep holes cleared				
11	Roof & post fixings	✓			
12	Roof, ridging and flashings fixed correctly				
13	Roof penetrations flashed correctly				
14	Spouting fixed correctly	✓			
15	Down pipe clips at 1.2	✓			
16	Vent pipe clips at 1.2				
17	Vent Discharge / Vermin cage	✓			
18	Stairs gap / tread / rise / handrails	✓			
19	Barriers 1.0m / 1.1m / stairs 900mm	✓			
20	Safe from falling ballustrades	✓			
21	RAMPS grade / slip resistance			-	
22	Safety Glass (Glass Visible - commercial)			✓	
DRAINAGE		**OK**	**Not**	**N/A**	
1	As built drainage plan s/water and sewer	✓			
2	Gully dish 25mm above sealed surface "A"				
3	Gully dish 75mm above unsealed surface "B"	✓			
4	Relief gully installed	✓			
5	Foulwater drain finished	✓			
6	Ventilation to drains, e.g. TV & or valves	✓			
7	Stormwater drain finished	✓			
8	Retaining wall drainage connected into stormwater drain				
9	Overflow to water tank				
10	Access for septic tank maintenance	✓			
11	Commissioning statements				BEING MAINTAINED TWICE A YEAR
12	Effluent Completed Barking / Planting			✓	OAIS CLEAR WATER SYSTEMS
PRODUCER STATEMENTS		**OK**	**Not**	**N/A**	
1	Engineer / Licenced Building Practioneer				
2	Membranes / Roof				
FINAL POOL INSPECTION		**OK**	**Not**	**N/A**	
1	Pool fencing compliance (sheet completed)				
2	Back flow prevention where required				
ENERGY CERTIFICATES		**OK**	**Not**	**N/A**	
1	Electrical	✓			
2	Gas				
ROAD DAMAGE		**OK**	**Not**	**N/A**	
1	Footpath & kerb damage				
2	Crossing installed				
COMMERCIAL		**OK**	**Not**	**N/A**	
1	Compliance Schedule				
2	Fire Design Compliance				
3	FPIS report				
4	Certificate of Public Use				
5	Fire Service - Evacuation Scheme				
6	Fire Service - Conditions meet				
7	Producer Statements - Fire Alarm, Ventilation etc				

21/10/11

An Inspection of the above mentioned premises has been undertaken and the matters as listed must be completed within ..... Days or otherwise stated

Action to be taken:

Issued by:

Designation: Building Officer

Next Inspection:

This notice Received By:

Owner / Agent / Contractor

RECEIVED: 24 Jan 2011 SCANNED: 24 Jan 2011 BOX: 1 BATCH: 67088 DOC: KDCAALWN

KAIPARA DISTRICT COUNCIL

Building Consent Enquiry

Prev Change, Inspection Load, Create Invoice, Print Forms, Print Letters, Search, Resource Consent Search (Change Log) Next

PIM/Consent No. 050547

The Building

Valuation No	0104017018
	General Property Enquiry
Street Address	BAYLYS COAST ROAD, DARGAVILLE
Legal Description	
Levels	2
Floor (m2)	490
Current use	Residential
Current Status	CCC Application Received 21/10/10
Process Days Taken To Issue	22
CCC Process Days To Date	1
Overseer	Jim Vallance

The Owner

Name	Impact Developments Ltd
Contact	Max Wright & Lorraine Davidson
Mailing Address	8 Park Road Dargaville 0300
Street Address/Reg Office	8 Park Road, Dargaville

The Agent

Name	Impact Developments Ltd
Contact	Noel Martin
Mailing Address	Moeatua Developments C/- Martin Design 357 Kai Iwi Lakes Road Dargaville RD3
Street Address/Reg Office	357 Kai Iwi Lakes Road, RD3, Dargaville
Daytime Phone	09 439 7292
After Hours Phone	09 439 7292
Fax	09 439 7292
E-mail	martin.design@xtra.co.nz
Relationship to Owner	Designer
Debtor	BC050547 Edit Debtor
Balance	$ 0.00
Invoice	12622

Building Work

Type of Work	Construction of three, two level apartments
Intended use	Owners Use
Intended life / Durability	INDEFINITE
Stats code	1200 NEW FLATS

RECEIVED: 24 Jan 2011 SCANNED: 24 Jan 2011 BOX: 1 BATCH: 67088 DOC: KDCAALWN

Estimated value	$690,000
Units	3
Resource Consent?	040255 Decision Notified 21/03/05 Construction of three residential units and a pool on land not connected to reticulated wastewater GRANTED UNDER DELEGATED AUTHORITY
Dev Contrib Notice?	

Deposit	$4,584.30
Building Consent	$2,435.00
PIM Fee	$100.00
BRANZ Levy	$690.00
DBH Levy	$1,359.30
Total Charges	$4,584.30

Status history

Deadline	19/11/10	
Formally Received	28/06/05	
Invoiced	28/06/05	12622
PIM Issued	28/07/05	CONFIRMATION
Consent Granted	28/07/05	
CCC Application Received	21/10/10	

Designer	Martin Design
Phone	09 439 7292 357 Kai Iwi Lakes Road, RD3, Dargaville

Forms that should have been saved

Consent

PIM

Forms and Letters Actually Saved	050547 Building Act Regulations 10102008.doc

Notes

Date	10/10/08 Impact Developments have requested a CCC for the completed unit. Max Wright 0274991501
Date	27/11/09 received at Dargaville Electrical Certificate of Compliance
Date	27/01/10
Officer	Jim Vallance During inspection of completion of interior of unit two it was noticed that the zinkalume cladding was showing signs of deterioration at point of fixings. In speaking with Max Wright it was stated that the fixings were supplied with the cladding. Max has approuched the supplier in regards to the fixings and is in the process of replacing fixings with a different product. More recently a visit to the site was made with Bryan McKay. This entry made on his advice.

Diary Reminders

None found

Standard and

RECEIVED: 24 Jan 2011 SCANNED: 24 Jan 2011 BOX: 1 BATCH: 67088 DOC: KDCAALWN

Non-Standard Conditions

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 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

Council MUST be notified at the completion of building work on the attached form.

From 28 April 2003 all new dwellings, additions or alterations to dwellings must be provided with domestic smoke alarm(s) in order to comply with the Building Code.

Standard and Non-Standard PIM Notes

None found

Inspections

Inspected	3/08/05
Officer	Jim Vallance
	FOOTINGS, UNIT 3: TRENCHES & STEEL PLACEMENT OK.
Inspected	9/08/05
Officer	Jim Vallance
	FOOTINGS, UNIT 2: TRENCHES & STEEL PLACEMENT OK.
Inspected	10/08/05
Officer	Jim Vallance
	DEMOLITION MATERIAL FOUND UNDER UNIT 1. AREA TO BE EXCAVATED.
Inspected	17/08/05
Officer	Jim Vallance
	BLOCKWORK PORTS CLEANED, STEEL PLACED & TIED OK.
Inspected	22/08/05
Officer	Jim Vallance
	FOOTINGS UNIT 1: TRENCHES & STEEL PLACEMENT OK. EXCAVATED AREA FILLED UNDER ENGINEERS CONTROL.
Inspected	25/08/05
Officer	Jim Vallance
	FLOOR SLAB UNIT 1: STEEL PLACEMENT & DAMPCOURSE OK. PIPEWORK THROUGH SLAB PROTECTED OK.
Inspected	30/09/05
Officer	Jim Vallance

RECEIVED: 24 Jan 2011 SCANNED: 24 Jan 2011 BOX: 1 BATCH: 67088 DOC: KDCAALWN

	STAGE 2 BLOCKWORK, UNITS 1-2: PORTS CLEAN. STEEL PLACEMENT OK.
Inspected	31/01/06
Officer	Jim Vallance
	Installation of Oasis clearwater texass waste water tank, drip lines to soakage trenches ok. Installer, Ross Bicknell.
Inspected	10/02/06
Officer	Jim Vallance
	Drainage installed ok. Drainlayer, Jack Cuthbert.
Inspected	27/03/06
Officer	Jim Vallance
	Preline, unit 1: Moisture content, bracing, insulation & fixings ok. Plumbing tested ok.
Inspected	2/05/06
Officer	Jim Vallance
	Preline, unit 2: Moisture content ok. Bracing, fixings & insulation ok. Plumbing tested ok.
Inspected	5/10/06
Officer	Jim Vallance
	Unit 1 completed. Insulate HW pipe at cylinder. HW temperature under 55 degrees.
Type	**B21 B21 Final - Building Code Compliance Certificate**
Inspected	5/11/09
Officer	Jim Vallance
Result	OKAY
	FS 05614: Unit 2 of three completed. Hot water tested, below 55 degrees. Wired in smoke alarms. Electrical energy certificate received for unit.
Type	**B13 B13 Preline**
Inspected	7/07/10
Officer	Jim Vallance
Result	OKAY
	FS 2, 06700: First floor only. Moisture content and insulation ok. Fixings ok. Plumbing installed and pressure tested ok.
Type	**B13 B13 Preline**
Inspected	22/07/10
Officer	Des Sheldon
Result	OKAY
	Field sheet 07430..preline to downstairs area complete..all insulation, plumbing and fixings are in and complete...ok to line
Type	**B21 B21 Final - Building Code Compliance Certificate**
Inspected	21/10/10
Officer	Jim Vallance
Result	OKAY
	FS 3, 06663: Final inspection of unit 3. This completes the complex of three semi detached dwelling units. Unit completed: Wired in smoke alarms installed. Siesmic restraint to HW cylinder. HW temperature reading of 50 degrees at time of test. All wet areas sealed. Received: Electricalenergy certificate for unit. Stomwater drainage plan. Oasis clearwater wastewater system being maintained twice a year. Condition of zincalume cladding to be taken into consideration when issuing CCC. Dave to decide final draught.

Print Summary

Standard and Non-Standard CCC Conditions

None found

Work to be Stopped

RECEIVED: 24 Jan 2011 SCANNED: 24 Jan 2011 BOX: 1 BATCH: 67088 DOC: KDCAALWN

and Notice to Fix Conditions	None found
RM Certificate	None found
Letter 1 and Letter 2 Paragraphs	None found

Napier Computer Systems Limited.
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Author: Greg M Lee

KAIPARA DISTRICT

KAIPARA DISTRICT COUNCIL
Building Services Department

Code Compliance Certificate 050547

Form 7, Section 95, Building Act 2004

Impact Developments Ltd
P.O Box 28
Dargaville 0340

Issue Date: 27/10/10
Overseer: Jim Vallance

THE BUILDING:

Street Address of Building:	BAYLYS COAST ROAD, DARGAVILLE
Valuation Number:	0104017018
Legal Description:	
Building Name:	
Location of Building within site/block number:	
Level/Unit Number:	
Current Lawfully Established Use:	Residential
Year First Constructed:	

THE PROJECT:

Description:	Construction of three, two level apartments NEW FLATS
Type of Work:	
Intended Use:	Owners Use
Intended Life:	Indefinite, but not less than 50 years
Stages:	Being Stage 1 of an intended 1 Stage

THE OWNER:

Owners Name:	Impact Developments Ltd		
Owners Mailing Address:	8 Park Road, Dargaville 0300		
Street Address/Registered Office:	8 Park Road, Dargaville		
Phone Number	Landline:	Daytime:	After Hours:
	Mobile:	Fax:	
Email:		Website:	

FIRST POINT OF CONTACT:

First Point of Contact:	Full Name: Impact Developments Ltd Mailing Address: Moeatua Developments, C/- Martin Design, 357 Kai Iwi Lakes Road, Dargaville RD3 Phones:: 09 439 7292: 09 439 7292 Fax: 09 439 7292 Email: martin.design@xtra.co.nz

BUILDING WORK:

Building Consent Number:	050547
Issued By:	Kaipara District Council

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

- the building work complies with the Building Consent 050547
- Building work complies with the building code at the time the building consent was granted.

Signature D.A. Wallace Date: 27/10/10 «IssueDate» Position Building Services Officer

On behalf of: Kaipara District Council

1919 State Highway 1, PO Box 26, Kaiwaka 0542, Northland, New Zealand
p 09 431 2013 p 0800 100 388 f 09 431 2023 e council@kaipara.govt.nz www.kaipara.govt.nz

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JACKSON WHITTAKER

LAWYERS

Budget

FAXED COPY OF CCC 1-11-10 MN

147 Pompallier Estate Drive
Maunu
WHANGAREI 0110
Ph: 09 438 3339
Fax: 09 438 3374

PARTNERS: CLIVE ROWAN JACKSON L.L.B
HELEN WHITTAKER L.L.B

28 October 2010

Jim Vallance
Kaipara District Council
Private Bag 1001
DARGAVILLE 0340

Fax: 09 4396756

Dear Jim

34 RIPIRO DRIVE, BAYLYS BEACH
IMPACT DEVELEPMENTS LIMITED
CODE COMPLIANCE CERTIFICATE

Are you able to add the legal description onto the CCC and fax a copy to me.

The Solicitors for the purchasers of Unit A have requested this. I attach a copy of the Property Look Up Information Sheet with the details.

Kind Regards

Clive Jackson

CLIVE JACKSON
email cliverj@xtra.co.nz

Kaipara District Council
28 OCT 2010
RECEIVED
27760

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Kaipara District Council
Property Lookup
Information and Rates for Current Rating Year - 2008/09

Valuation No: 0104017018A **Old Valn No:** C:0104017018

PROPERTY DESCRIPTION

Location: RIPIRO DRIVE, BAYLYS BEACH
Legal Desc: UNIT A AU 1 DP 385495 ON LOT 7 DP 316035
Cert of Title: 342374
Ward No: 3
Category: RF20B **Zone:** 1A **Use:** 91
Service Flags: Water-Meter **TORAS:** 001200

VALUATIONS

Area (Ha):	0.1859		
Improvements:	$ 223,000	**Land Value:**	$ 57,000
Nature of Improvements:	ELAT QI	**Capital Value:**	$ 280,000
Valuation Date:	1/09/05		

RATES for Current Year - 2008/09 (Next Year - 2009/10)

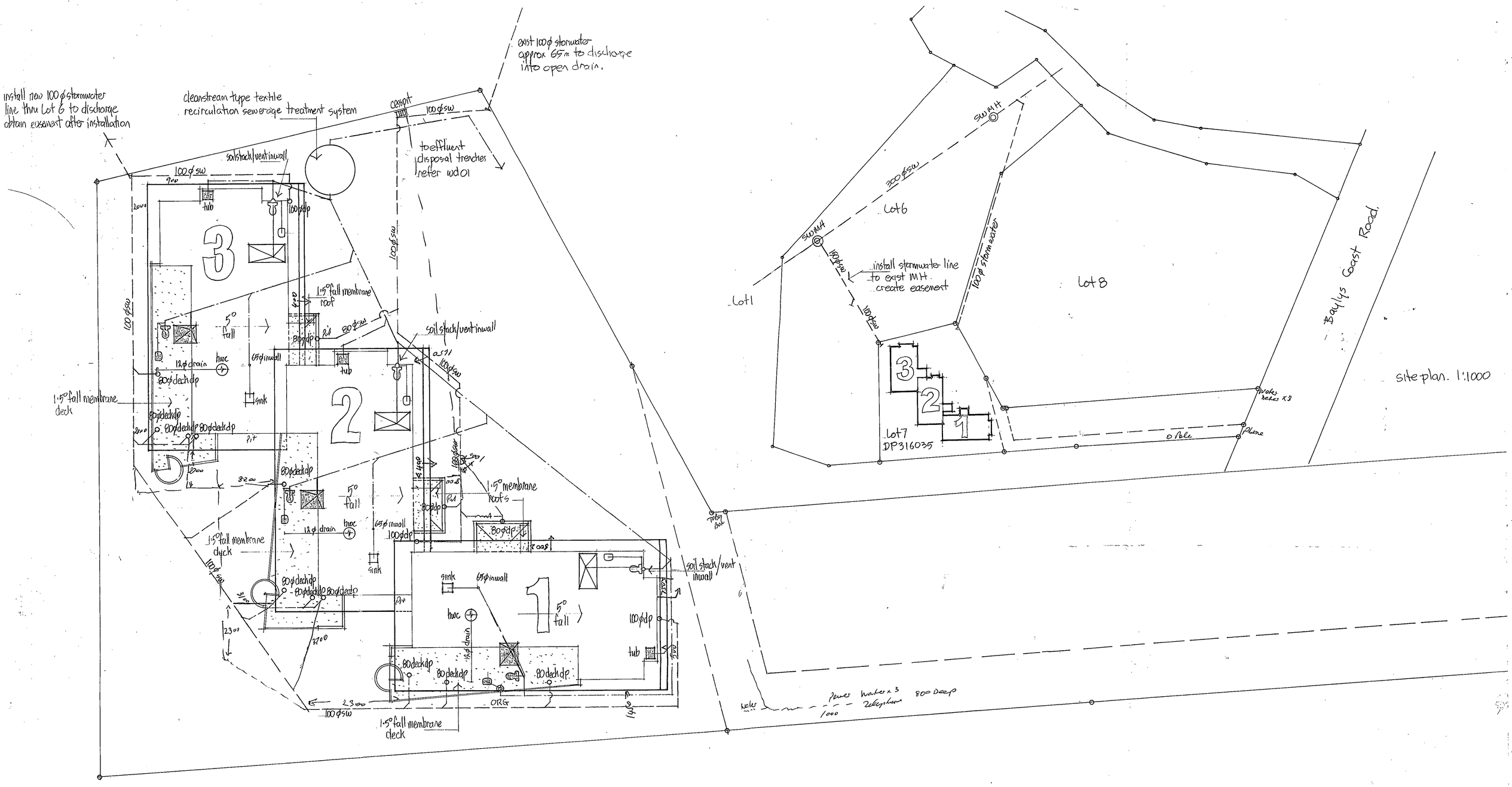
Type	Description (Basis)	Factor	Estimated Amt
001:	General Rate (L)	57000.00	$ 164.00
002:	Uniform Annual General Charge (U)	1.00	$ 337.00
003:	NRC Targeted Land Management (L)	57000.00	$ 10.60
006:	Baylys Beach Stormwater Rate (L)	57000.00	$ 34.70
013:	NRC Enviro/Recreat'n Facility (U)	1.00	$ 68.50
030:	NRC Infrastructure Rate (L)	57000.00	$ 1.70
074:	Darg.Town Hall Rural Loan (U)	1.00	$ 3.40
	Total Rates Levied		**$ 619.90**
	Instalments YTD		**$ 206.60**
	Current Instalment		**$ 103.30**

HISTORY

Year	Land Value	Capital Value	Annual Rates
2007/08	$ 170,000	$ 840,000	

Napier Computer Systems Limited.
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Author: Greg M Lee





roof & plumbing & drainage plan. 1:100
ground floor sanitary fixtures shown shaded.

ripiro @ baylys.

DESIGNER :	DATE : June 05
	DESIGNED : njm
	njm
	1:100 1:1000
	wd02

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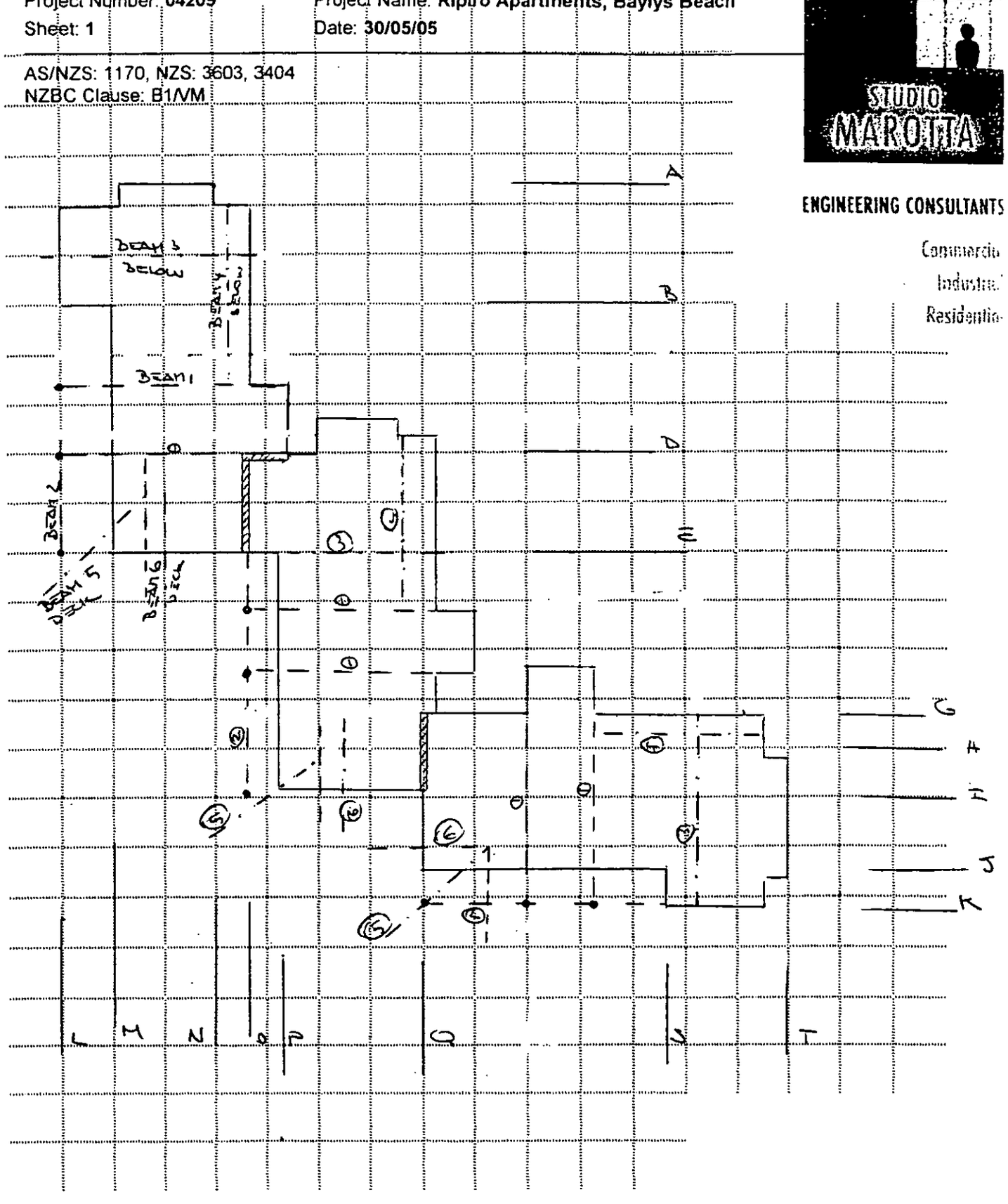
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Calculation Front Sheet

Project Number: **04209**
Sheet: **1**

Project Name: **Ripiro Apartments, Baylys Beach**
Date: **30/05/05**

AS/NZS: 1170, NZS: 3603, 3404
NZBC Clause: B1/VM



STUDIO MAROTTA
ENGINEERING CONSULTANTS
Commercial
Industrial
Residential

1st Floor Cnr Port Rd & Okara Dr, Whangarei
Phone: (09) 438 3345 Fax: (09) 438 3373
P.O. Box 10050 Te Mai, Whangarei

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Calculation Sheet

Project Number: **04209** Project Name: **Ripiro Apartments, Baylys Beach**

Sheet: **2** Date: **30/05/05**

DEAD LOADS

ROOF INC PURLINS, CEILING, BATTENS ETC. ... 0.3 kPa

FLOORS INC TIMBER JOISTS, FLOORING ETC. ... 0.4 kPa

DECK 0.35 kPa

WALLS INC TIMBER FRAMED 0.3 kPa

BLOCK 40 kPa FILLED SOLID 3.6 kPa

LIVE LOADS

ROOF INC $Q = 0.25$ kPa

FLOOR INC $Q = 1.5$ kPa

DECK INC $Q = 2$ kPa

WIND LOAD

$V_{25} = 37$ m/sec $V_{50} = 45$ m/sec

$M_{d=1} = M_h = M_s$ $M_{z,cat} = 0.91$

$V_R = 0.91 \times \begin{cases} 37 = 33.7 \text{ m/s} \\ 45 = 40.95 \text{ m/s} \end{cases}$

$q_{ld} = V_R^2 \times 0.6 = \begin{cases} 0.7 \text{ kPa} \\ 1.1 \text{ kPa} \end{cases}$

SEISMIC COEFFICIENT

$C_d(T_1) = C(T_1) \times S_p / K_\mu$ $\mu = 1.15$

$C(T_1) = 1.89 \times 0.13 \times 0.7 / 1.15 = 0.15$ ULTIMATE

$C(T_1)$ Z S_p

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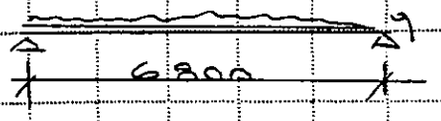
Calculation Sheet

Project Number: **04209** Project Name: **Ripiro Apartments, Baylys Beach**

Sheet: **3** Date: **30/05/05**

BEAM 1

6.8m SPAN



0.735 FOR 1.2G + 1.5Q

U.L. = (1.2×0.3 + 1.5×0.25) × 5.6/2 = 2.1 kN/m

M* = 2.1 × 6.8²/8 = 11.3 kNm

⇒ 2/400×45 LVL BEAM

φMn = 0.8 × 2 × 45.4 = 73 kNm

FOR 1.5G + Q:

U.L. = (1.5×0.3 + 0.175) × 2.8 = 1.75 kN/m

D = 0.013 × 1.75 × 6.8⁴ / (3168×2) = 8mm AT MID SPAN

FOR 1.5G ONLY

D = 8 × 0.45/0.65 = 6mm

FOR 2/400×63 LVL

D = 6 × 3168/4435 = 4mm O.K.

BEAM 2

FOR 1.2G + 1.5Q

U.L. = 0.65 × 3/2 × 0.735 = 0.72 kN/m

M* = 0.72 × 3.5²/8 = 1.1 kNm

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Calculation Sheet

Project Number: **04209** Project Name: **Ripiro Apartments, Baylys Beach**

Sheet: **4** Date: **30/05/05**

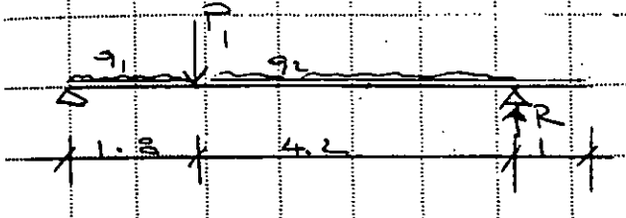
⇒ 2/250×50

$\phi M_m = 0.8^2 \times 240^2 \times 30/6 \times 14 = 77$ kNm

0.775 FOR G, Q_1

$D = (2 \times 0.3 + 0.175) \times 0.625 \times \frac{3}{2} \times \frac{0.013 \times 3.5^4}{5.4 \times 10^4} = 2.5$ mm OK

BEAM 3 (FLOOR BEAMS)



FOR $1.2G + 1.5Q$

$q_2 = (1.2 \times 0.4 + 1.5^2) \times 6.7/2 = 3.1$ kN/m $+ 0.36 + 2.4 = 12$ kN/m

$q_1 = 2.73 \times 1.7 + 1.2 \times 0.3 \times 2.4 + 0.735 \times 3.3 = 8.9$ kN/m

$P_1 = (1.2 \times 0.35 + 1.5 \times 2) \times 0.3 = 3.1$ kN/m $\times 1.6 = 4.9$ kN

3.42

$M^*_{max} = 56$ kNm

⇒ 250UB37

$\phi M_{sx} = \phi M_{bx} = 140$ kNm

FOR G, Q_2

$q_2 = (0.4 + 0.7 \times 1.5) \times 6.7/2 = 4.8$ kN/m $+$ $= 7.1$ kN/m

$q_1 = 1.45 \times 1.7 + 0.3 \times 2.4 + 0.475 \times 3.3 = 4.75$ kN/m

$P_1 = (0.35 + 1.4) \times 0.3 \times 1.6 = 2.5$ kN

$D_{max} = 11$ mm

$\frac{11}{6000} < \frac{1}{545}$ OK

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Calculation Sheet

Project Number: **04209** Project Name: **Ripiro Apartments, Baylys Beach**

Sheet: **5** Date: **30/05/05**

BEAM 4

$R = 50.7$ kN AT MID SPAN

$M^* = 50.7 \times 5.4/4 = 68$ kNm

⇒ 250 PFC

$\phi M_{sx} = \phi M_{bx} = 114$ kNm

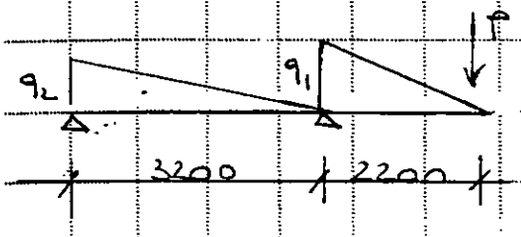
FOR G + Q_s

$R = 29.1$ kN

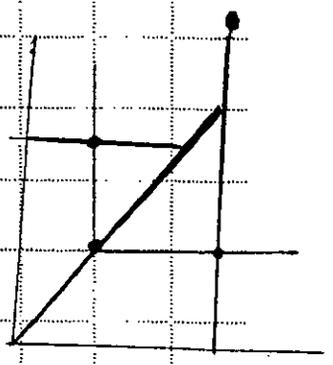
$D = \frac{29.1}{48} \times \frac{5.4^3}{200 \times 45.1} = 11$ mm $\quad \frac{11}{5400} = \frac{1}{490}$

O.K.

BEAM 5



APARTMENT 2



3.4 kPa

$q_1 = (1.8+1)/2 \times (1.2 \times 0.55 + 1.5 \times 2) = 4.8$ kN/m

$q_2 = (2.6+1.7)/2 \times 0.4 = 0.86$ kN/m SAY 0

$P = ((1.8/2 \times 3/2) + (1/2 \times 3.4/2)) \times 3.4 = 7.5$ kN

~~150 UC 37 NG~~ ⇒ 200 UC 52.2

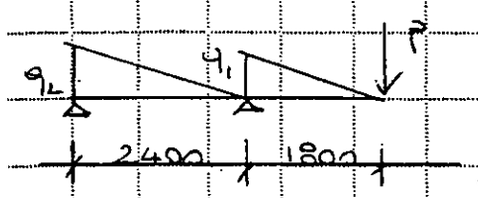
$\phi M_{sx} = \phi M_{bx} = 154$ kNm

FOR G + Q_s

$D_{max} = 4$ mm

O.K.

APARTMENT 3



$q_1 = 2.4 \times 1.2 = 2.4$ kN/m

$q_2 = (1.8+1.6)/2 \times 0.4 = 0.68$ kN/m

$P = 3.4 \times (0.5 \times 1.7 + 0.7 \times 1.5) = 6.5$ kN

⇒ 150 UB 37 OR

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Calculation Sheet

Project Number: **04209** Project Name: **Ripiro Apartments, Baylys Beach**

Sheet: **6** Date: **30/05/05**

$\phi M_{sx} = \phi M_{bx} = 84$ kNm

FOR G + Q_3

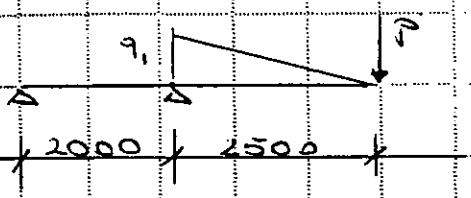
$q_1 = 1.75 \times 1.2 = 2.1$ kN/m

$q_2 = 1.7 \times 0.4 = 0.68$ kN/m

$P = 1.75/3.4 \times 6.5 = 3.3$ kN

$D_{max} = 4$ mm O.K.

APARTMENT 3



$P = 3.4 \times (1.2 \times 0.8 + 0.7 \times 2.4/3) = 5.2$ kN

$q_1 = (1 + 0.6) \times 2.4 = 5.5$ kN/m

$M^*_{max} = 20$ kNm

$\Rightarrow$ 200 UC 52 O.K.

FOR G + Q_3

$P = 5.2 \times 1.75/3.4 = 2.7$ kN

$q_1 = 1.6 \times 1.75 = 2.8$ kN/m

$D_{max} = 3.5$ mm O.K.

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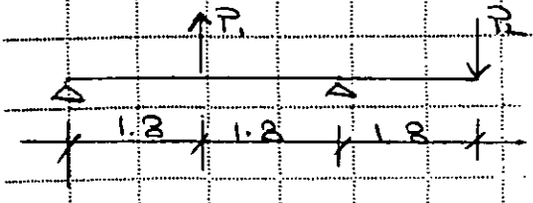
Calculation Sheet

Project Number: **04209** Project Name: **Ripiro Apartments, Baylys Beach**

Sheet: **7** Date: **30/05/05**

BEAM 6

APARTMENT 3 AND 2



FOR G + Q

$P_1 = 4.8$ kN

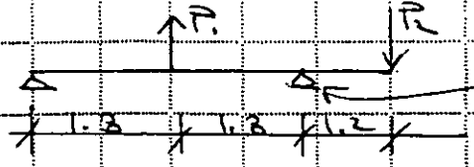
$P_2 = 1.35 \times 0.8 \times 3.7/2 = 2.6$ kN

$D_{max} = 4$mm FOR 200UB29 $I_x = 28.9$

FOR 200UC52 $I_x = 52.6$

$D = 4 \times 28.9/52.6 = 2$ mm

APARTMENT 1



LINTEL ON CANTILEVER WALL

$P_1 = 2.4 + 1.75 \times 4.6/2 \times 0.8 \times \frac{1}{2.8} = 4.6$ kN

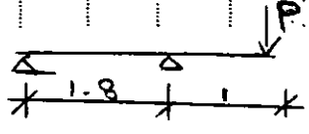
$P_2 = 1.75 \times 0.6 \times 1.4 = 1.5$ kN

→ 200UB29

$D_{max} = 1.5$mm O.K

$R^* = 0.2$ kN O.K

CHECK 3/150x45 LVL $P = \frac{1}{2} \times 2.1 \times (0.35 \times 1.8 + 0.7 \times 2) = 2.0$ kN



$D_{max} = 4$ mm

OR

FB15L

D = 5mm

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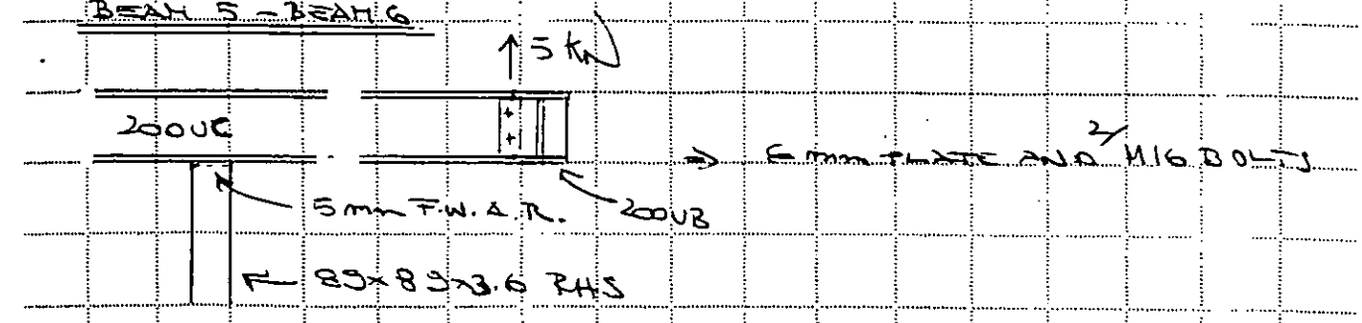
Calculation Sheet

Project Number: **04209** Project Name: **Ripiro Apartments, Baylys Beach**

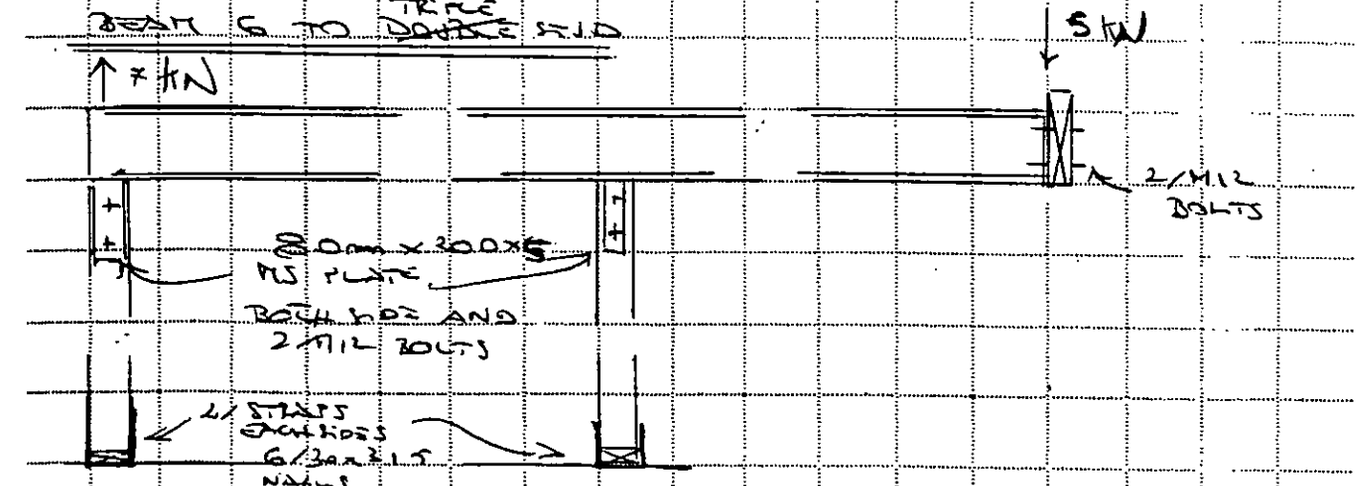
Sheet: **8** Date: **30/05/05**

CONNECTIONS

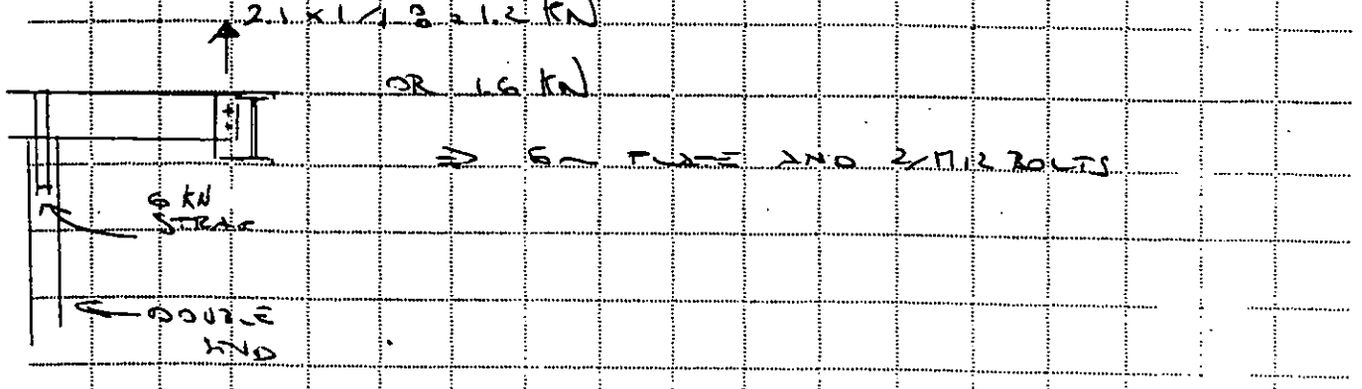
BEAM 5 - BEAM 6



BEAM 6 TO TRIPLE DOUBLE STUD



DOUBLE JOIST - BEAM



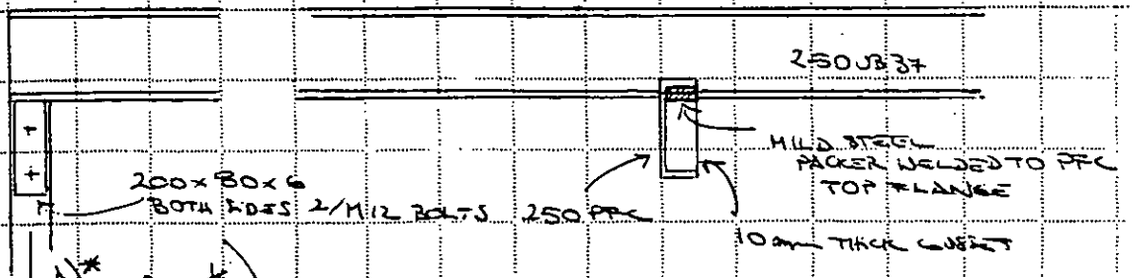
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Calculation Sheet

Project Number: **04209** Project Name: **Ripiro Apartments, Baylys Beach**

Sheet: **9** Date: **31/05/05**

BEAM 3 - BEAM 4



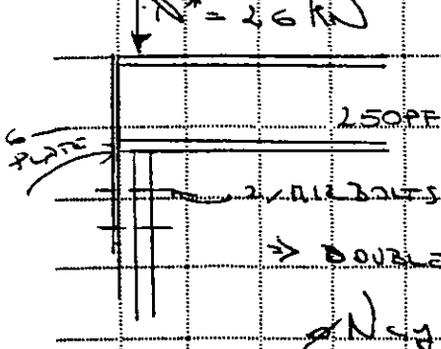
$N^* = 34$ kN

→ 3/100×50 RNDS

$\phi N_{c,y} = 90 \times 45 \times 3 \times 0.8^2 \times 18 \times k_s = k_s \times 140$ kN

$L = 2600$ $b = 90$ $S_1 = 2600/90 = 29$ ≈ 30 $k_s = 0.33$

$\phi N_{c,y} = 140 \times 0.33 = 46$ kN

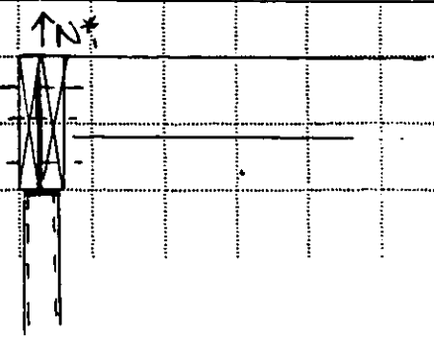


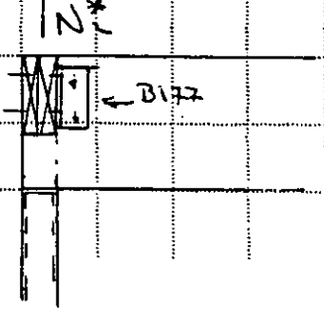
→ DOUBLE RND $L = 2800$ $S_1 = 25$ $k_s = 0.46$

$\phi N_{c,y} = 90^2 \times 0.8^2 \times 18 \times 0.46 = 43$ kN

O.K.

BEAM 1 - BEAM 2 AND RHS POST





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Calculation Sheet

Project Number: **04209** Project Name: **Ripiro Apartments, Baylys Beach**

Sheet: **10** Date: **31/05/05**

$N_v^* = (1.1 \times 1.05 - 0.9 \times 0.3) \times 0.975 \times$ $c_m = -0.3 - 0.6 \times \frac{3}{2.4} = 1.05$

$\times 3.5/2 = 1.5$ kN

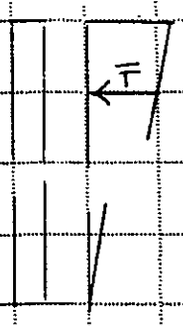
→ 2/M12 BOLTS O.K.

$N_t^* = 1.5 \text{ kN} \times 2 + (1.1 \times 1 - 0.9 \times 0.3) \times 2.8 \times 3.4 = 11$ kN

→ 3/M12 BOLTS IN DOUBLE SHEAR

$\phi V_u = 2 \times 3 \times 6.9 \times 0.7 = 29$ kN O.K.

BLOCK WALLS AND FOOTINGS



FOR E_u - G CONSERVATIVE

$c(T) = 0.15$

$F = 3.6 \times 0.15 \times 5.6 = 3$

$M^* = 3.1 \times 5.6 \times 2/3 = 11.3$ kNm

→ D16 AT 400 CTRS CTRS

$A = 201.0/4 = 50 \text{ mm}^2$ $f_y = 300$ MPa $d = 190/2 = 95$

$a = \frac{50 \times 300}{0.85 \times 12 \times 1000} = 15$ mm

$\phi M_u = 0.85 \times 50 \times 300 \left(95 - \frac{15}{2}\right) = 11.2$ kNm ← IT IS ABLE RESTRAINED BY WALL BRACING O.K.

FOR 0.5 kPa AFTER FIRE

$M^* = 0.5 \times 5.6^2/2 = 7.8$ kNm

↳ THE WALL IS ALWAYS RESTRAINED BY AT LEAST ONE APARTMENT

FOOTING REFER SHEET 11

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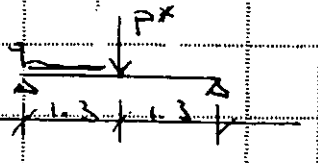
Calculation Sheet

Project Number: **04209** Project Name: **Ripiro Apartments, Baylys Beach**

Sheet: **11** Date: **31/05/05**

APARTMENT 1 – FLITCH BEAM SUPPORTING 200UB29

$P^* = 2.2/2 \times (1.2 \times 0.35 + 1.6 \times 2) \times 1.8 = 7.2$ kN



$g = 3.62 \times 1.7 = 6.1$ kN/m

$M^*_{max} = 6.1 \times 2.6^2/16 + 7.2 \times 2.6/4 = 7.3$ kNm

→ ~~200~~ F320H

$\phi M_{sx} = 0.9 \times 0.25 \times 1.80^2 \times 10/6 \times 1.5 = 13$ kNm

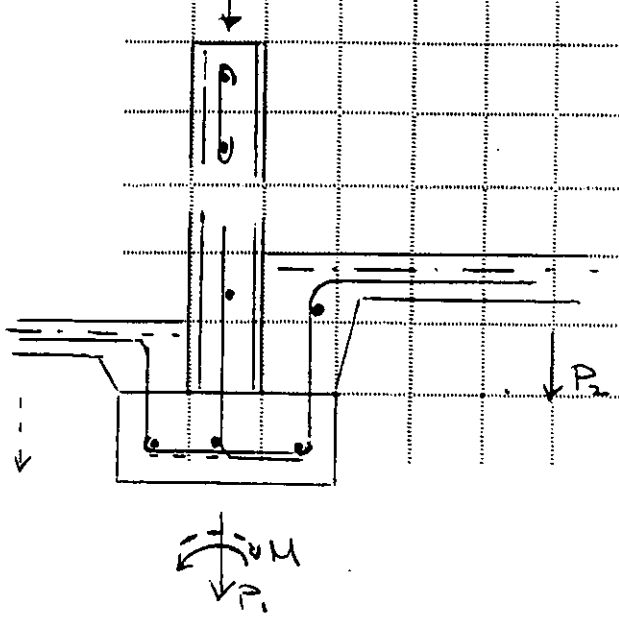
FOR 1.36 kPa

$P = (1.3 \times 2.35 + 1.4) \times 1.8 \times 1.1 = 3.6$ kN

$q = 1.35 \times 1.7 = 3.1$ kN/m

$D_{mcf} = \left(\frac{3.1 \times 5}{\text{tof}} \times 2.6^4 + \frac{3.6}{4\frac{3}{3}} \times 2.6^3\right) \times \frac{1}{8 \times 173} = 2$ mm — O.K.

BLOCK WALL FOOTING



$M = 11.2$ kNm

$P_1 = 3.6 \times 3.8 + 0.$ [illegible] $\times 0.25 \times 23 = 24.9$ kN

$P_2 = 1.5 \times 0.1 \times 23 = 3.5$ kN

$e = \frac{3.5 \times$ [illegible] $- 11.2}{24.9 + 3.5} = 0$

$\sigma_{max} = \frac{24.9 + 3.5}{2 \times 0.$ [illegible] $= 142$ kPa

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Calculation Sheet

Project Number: **04209** Project Name: **Ripiro Apartments, Baylys Beach**

Sheet: **12** Date: **01/06/05**

WALL BRACING

Upper Floor

Across H= 3.0 S= 27.0 KPa= 1.10

Stud Height= 2.8

F= 44.6 BU required= **891.0**

BRACING LINE	BRACING TYPE	BU/m	LENGTH (m)	BU provided
A	BR2A	75.0	1.8	135.0
B	GIB2A	75.0	1.8	135.0
	BR2A	75.0	1.8	135.0
~~C~~	~~BR2A~~	~~75.0~~	~~1.8~~	~~135.0~~
D	BLOCK WALL	N/A	1.6	370.0
E	GIB2A	75.0	1.8	135.0
	BR2A	75.0	1.8	135.0
~~F~~	~~BR2A~~	~~75.0~~	~~2.4~~	~~180.0~~
G	BR5	115.0	1.2	138.0
H	BR2A	75.0	1.8	135.0
I	BR2A	75.0	1.8	135.0
J	BR2A	75.0	1.8	135.0
K	BR4	100.0	0.9	90.0
			TOT	~~1,708.3~~ 1503

Along H= 3.0 S= 28.0 KPa= 1.10

Stud Height= 2.8

F= 46.2 BU required= **924.0**

BRACING LINE	BRACING TYPE	BU/m	LENGTH (m)	BU provided
L	BR4	100.0	0.9	90.0
M	BR2A	75.0	1.8	135.0
N	BR2A	75.0	1.8	135.0
O	BLOCK WALL	N/A	3.6	1,175.0
P	BR2A	75.0	1.8	135.0
Q	BLOCK WALL	N/A	3.6	1,175.0
~~R~~	~~BR2A~~	~~75.0~~	~~1.8~~	~~135.0~~
~~S~~	~~GIB2A~~	~~75.0~~	~~1.8~~	~~135.0~~
	BR2A	75.0	1.8	135.0
T	BR2A	75.0	1.8	135.0
			TOT	~~2,901.4~~ 2,766.4 o.k.

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Calculation Sheet

Project Number: **04209** Project Name: **Ripiro Apartments, Baylys Beach**

Sheet: **13** Date: **01/06/05**

WALL BRACING

Main Floor

Across H= 3.0 S= 27.0 KPa= 1.10

Stud Height= 2.4

F= 133.8 BU required= **2,675.0**

BRACING LINE	BRACING TYPE	BU/m	LENGTH (m)	BU provided
A	BR2B	85.0	3.2	272.0
	BR5	115.0	1.2	138.0
B	GIB2B	80.0	2.8	224.0
	BR2A	75.0	1.8	135.0
D	BLOCK WALL	N/A	1.6	370.0
E	BR2A	75.0	1.8	135.0
	~~BR2A~~ 135	~~75.0~~ 115	~~1.8~~ 1.3	~~135.0~~ 149.5 ✓
F	GIB2B	80.0	2.8	224.0
	BR2A	75.0	1.8	135.0
G	GIB2A	75.0	1.8	135.0
	~~BR2A~~	75.0	1.8	135.0 3.6
H	~~BR2B~~	~~85.0~~	~~2.8~~ 2.4	~~238.0~~ 204
I	BR2A	75.0	1.8	135.0
	~~BR2A~~ 135	75.0	~~1.8~~ 1.3	~~135.0~~ 141.5
K	BR2A	75.0	1.8	135.0
	BR2B	85.0	3.2	272.0
			TOT	~~2,953.0~~ 2,948.0 O.K.

Along H= 3.0 S= 28.0 KPa= 1.10

Stud Height= 2.4

F= 138.6 BU required= **2,772.0**

BRACING LINE	BRACING TYPE	BU/m	LENGTH (m)	BU provided
L	BR2B	85.0	3.6	306.0
M	BR5	115.0	1.5	172.5
N	GIB2A	75.0	2.4	180.0
O	BLOCK WALL	N/A	3.6	1,175.0
P	GIB2A	75.0	2.4	180.0
	BR5	115.0	1.5	172.5
Q	BLOCK WALL	N/A	3.6	1,175.0
R	GIB2A	75.0	1.8	135.0
S	GIB2B	80.0	2.8	224.0
	BR2A	75.0	1.8	135.0
T	BR2B	85.0	3.6	306.0
			TOT	**4,161.0**

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Calculation Sheet

Project Number: **04209** Project Name: **Ripiro Apartments, Baylys Beach**

Sheet: **Stormwater** Date: **13/06/05**

STORMWATER PIPE CALCULATIONS

PIPE 1

ROOF AREA = 115 m² C = 0.9

CONC PAVEMENT AREA = 260 m² C = 0.85

$Q_c = CIA_c/360$

I = 120 mm/h

$Q_c = \frac{(0.9 \times 115 + 0.85 \times 260) \times 120}{360 \times 10000} = 0.01\ m^3/s$

PIPE GRADIENT = 1500/65000 = 1/43 ← CHECK ON SITE

⇒ 150 100 NOMINAL DIAMETER (UPVC) Refer BC

PIPE 2

ROOF AREA = 195 m²

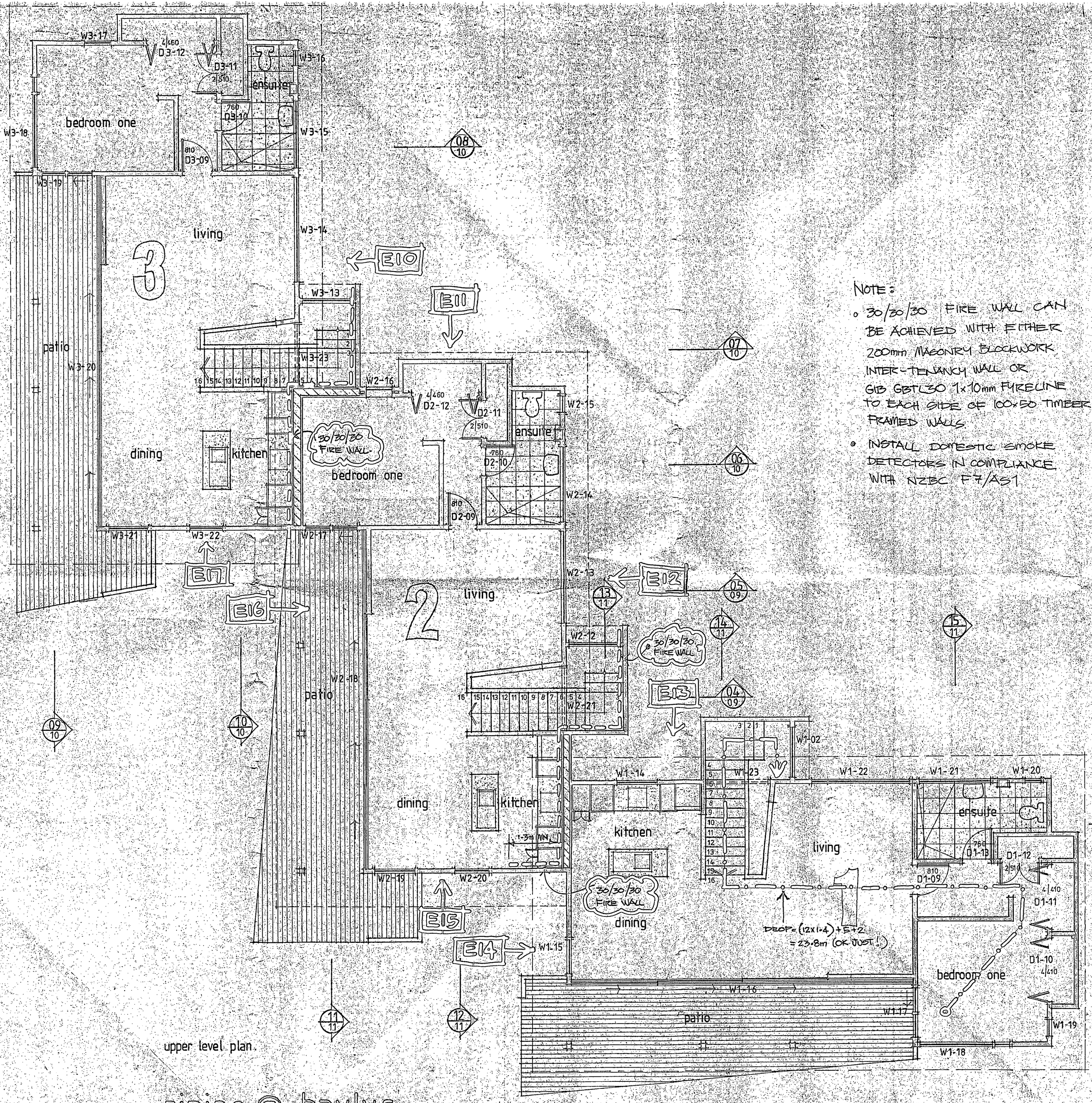
CONC PAVEMENT AREA = 150 m²

$Q_c = \frac{(0.9 \times 195 + 0.85 \times 150) \times 120}{360 \times 10000} = 0.01$

PIPE GRADIENT = 1/30 ⇒ 100 ND UPVC PIPE

← CHECK ON SITE

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NOTE:

- 30/30/30 FIRE WALL CAN BE ACHIEVED WITH EITHER 200mm MASONRY BLOCKWORK INTER-TENANCY WALL OR GIB GBT130 1x10mm FYRELINE TO EACH SIDE OF 100x50 TIMBER FRAMED WALLS
- INSTALL DOMESTIC SMOKE DETECTORS IN COMPLIANCE WITH NZBC F7/AS1

upper level plan.

KAIPARA DISTRICT COUNCIL
BC 070567
BUILDING INSPECTOR

DESIGNER
MARTIN DESIGN
Nigel J. Martin, NZCD Arch.
ARCHITECTURAL DESIGNER.

DATE : april 05
DESIGNED : MM
DRAWN : MM
SCALE : 1:50
DRAWING NUMBER : wd04
JOB No. 04DW01

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ripiro @ baylys

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W3-03 laundry W3-04 garage 3 W3-02 W3-05 W3-06 W3-01 W3-13 810 D3-01 FFL 99200 entry up 2700 W3-07 bathroom D3-02 760 2/460 D3-05 D3-08 710 W3-08 D3-03 810 D3-06 810 W2-03 laundry W3-09 bedroom two 2/510 D3-07 bedroom three 2/510 D3-04 W3-10 W3-11 W3-12 garage 2 W2-02 W2-04 W2-05 W2-01 W2-12 810 D2-01 FFL 99400 entry up 2700 W2-06 bathroom D2-02 760 2/460 D2-05 D2-08 710 W2-07 D2-03 810 D2-06 810 W2-08 bedroom two 2/510 D2-07 bedroom three 2/510 D2-04 W2-09 W2-10 W2-11 W1-04 D1-03 D1-02 D1-01 FFL 99600 2/510 810 710 W1-05 bedroom two 2/510 D1-06 910 D1-05 2/460 D1-04 D1-08 810 760 D1-07 bathroom W1-06 W1-07 W1-08 W1-09 W1-10 W1-11 W1-12 W1-03 entry up 2700 W1-02 W1-01 W1-13 garage 1 laundry

30/30/30 FIRE WALL

1m MIN. 1m MIN. 1.6m MIN.

E1 E2 E3 E4 E5 E6 E7 E8

08/10 07/10 06/10 05/09 13/11 14/11 15/11 04/09 03/09 02/09 01/09 09/10 10/10 11/11 12/11

	ground floor	upper floor	total
one	92	72	164
two	91	71	162
three	92	72	164

KAIPARA DISTRICT COUNCIL
BC 070543
BUILDING INSPECTOR

ground floor plan

ripiro @ baylys

DESIGNER : MARTIN DESIGN WHANGAREI
Telephone & Fax
DATE : april 05
DESIGNED : njm
DRAWN : njm
SCALE : 1:50
DRAWING NUMBER : wd01
JOB No. 04DW01

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Noel J. Martin N.Z.C.D. Arch
ARCHITECTURAL DESIGNER

SPECIFICATION

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

RIPIRO @ BAYLYS

BAYLYS COAST ROAD
DARGAVILLE

IMPACT DEVELOPMENTS
L. DAVIDSON & M. WRIGHT

KAIPARA DISTRICT COUNCIL

BC 050547

BUILDING INSPECTOR

MARTINDESIGN
MARTINDESIGN
MARTINDESIGN
MARTINDESIGN
MARTINDESIGN
MARTINDESIGN

Job number: 04 DW 01

Date: JUNE 2005

KAI IWI LAKES ROAD RD3 DARGAVILLE
Ph & Fax: 09 439 7292 A/h 09 439 7292
Email: martin.design@xtra.co.nz

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1201 PRELIMINARIES AND GENERAL

1. THE PROJECT

1.1 THE WORKS
The works are as described in this specification and as shown on the drawings.

1.2 SITE
The site of the works, the site address and the legal description are shown on the drawings. Confine access and work to the area of site indicated on the drawings.

2. DOCUMENTATION

2.1 SPECIFICATION STRUCTURE
The designation and numbering of individual specification sections follows the CBI (Co-ordinated Building Information) system for the co-ordination and classification of construction information. Sections are for reference and convenience only and do not profess to define subcontracts.

Read all sections together and read PRELIMINARIES AND GENERAL with all other sections.

2.2 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.
Approval:	Approval in writing.
Direction:	Direction in writing.
Provide and fix:	"Provide" or "fix" or "supply" or "fix" if used separately mean provide and fix unless explicitly stated otherwise.
Notified:	Notified in writing

2.3 ABBREVIATIONS
The following abbreviations are used throughout the specification sections:

AS	Australian Standard
AS/NZS	Joint Australian/New Zealand Standard
BRANZ	Building Research Association of New Zealand
BS	British Standard
ECP	Electrical Code of Practice
FTMA	Frame and Truss Manufacturers Association of New Zealand
HERA	Heavy Engineering Research Association
IEC	International Electrotechnical Commission
MPNZ	Master Painters New Zealand Association Inc
NZBC	New Zealand Building Code AS Acceptable solution VM Verification method
NZHB	New Zealand Hand Book
NZMRM	New Zealand Metal Roofing Manufacturers Inc
NZS	New Zealand Standard
NZS/AS	Joint New Zealand/Australian Standard
OSH	Department of Labour – Occupational Safety and Health
WANZ	Window Association of New Zealand Inc

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

2.5 PERSONNEL

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

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2.6 SUBSTITUTIONS

A substitution may be proposed where specified products are not available, or if substitute products are brought to the attention of and are considered by the owner as equivalent or superior to those specified. Except where a specified product is not available, the owner is not bound to accept any substitutions.

Notify proposed substitution of specified products. Include sufficient information to allow the owner to confirm that the substitution is equivalent or superior to that specified.

Approval of substitutions: In writing.

2.7 MANUFACTURERS AND SUPPLIERS REQUIREMENTS

Manufacturers and suppliers requirements, instructions, specifications or details means those issued by them for their particular material, product or component and are the latest edition.

2.8 MANUFACTURERS AND SUPPLIERS DOCUMENTS

Refer to individual sections for a detailed list of manufacturers and suppliers documents relating to work on this project. Retain current copies of the documents listed, and other relevant manufacturers' 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 products before commencing work. Provide a copy of all manufacturers' literature to the owner.

2.9 REFERENCED DOCUMENTS

Throughout this specification, reference is made to various New Zealand Building Code acceptable solutions (NZBC __/AS_) and verification methods (NZBC __/VM_) for criteria and/or methods used to establish compliance with the Building Act 2004.

Reference is also made to various Standards produced by Standards New Zealand (NZS, AS/NZS, NZS/AS), overseas standards (AS, BS) and to listed Acts, Regulations and various industry codes of practice and practice guides. The latest edition (including amendments and provisional editions) at the date of this specification applies unless stated otherwise.

It is the responsibility of the contractor to be familiar with the materials and expert in the techniques quoted in these publications, and to ensure that all those engaged in construction of the works to be similarly informed.

Documents cited both directly and within other cited publications are deemed to form part of this specification.

2.10 PRECEDENCE OF REFERENCED DOCUMENTS

This specification takes precedence in the event of it being at variance with and requiring a higher standard than, the cited documents.

Resolution of any variance must be confirmed in writing and where building consent approval is affected, the change notified to the territorial authority prior to any further work proceeding.

2.11 DOCUMENTS REFERRED TO

Documents referred to in this preliminaries and general section are:

Building Act 2004
Health and Safety in Employment Act 1992
Smoke Free Environments Act 1990

2.12 BUILDING CONSENT COMPLIANCE

It is an offence under the Building Act 2004 to carry out any work not in accordance with the building consent. Refer the resolution of matters concerning compliance to the owner for a direction. Where building consent approval is affected refer any change to the territorial authority.

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2.13 STATUTORY OBLIGATIONS
Comply with all statutory obligations and regulations of regulatory bodies controlling the execution of the works.

2.14 BUILDING CONSENT
Obtain the original or copies of the building consent form and documents from the owner and keep on site. Liaise with the territorial authority and/or the building certifier 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.

2.15 PRODUCER STATEMENTS
When producer statements verifying construction are required, provide copies to both the territorial authority and the owner. Producer statements to be in the form required by the Territorial Authority to comply with the Building Act.

2.20 WARRANTIES
Provide executed warranties in favour of the owner in respect of, but not limited to, materials, elements, 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.

- Conform to the warranty agreement form included in this specification.
- Commence all warranties from the date of practical completion of the contract works.
- Maintain their effectiveness for the times stated.
- Deliver executed warranties to the owner at practical completion.

2.21 WEATHERTIGHTNESS AND WATERTIGHTNESS WARRANTY
Provide a warranty 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.

2.22 TRADE WARRANTIES
Where specific trade warranties are offered covering materials and/or execution of proprietary products or complete installations, provide copies of all such warranties to the owner.

2.23 FORM OF WARRANTY
Conform with the form of warranty agreement included in this specification. Commence all warranties from the date of practical completion. Maintain their effectiveness for the times stated.

2.25 SERVICES PLANS
Prepare services plans setting out the actual positions as constructed of all sewer, stormwater, sanitary plumbing, piped and ducted services, electrical and mechanical services. Except where specified otherwise, as-built plans may be marked up on copies of relevant project drawings. Provide 1 set of services plans to the owner. Provide services plans required by the building consent to the territorial authority.

3. ESTABLISHMENT

3.1 APPROVALS
Attend on territorial authority officers, statutory and network utility inspectors, as necessary to obtain approvals (in addition to building consent approval) for and the satisfactory completion of the works.

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4. TEMPORARY WORKS AND SERVICES

4.1 SITE TELEPHONE AND FACSIMILE
Provide on site telephone and facsimile facilities for the duration of the works.

4.2 SITE ACCOMMODATION
Provide, erect and maintain scaffolding, sheds, toilets, water, power, hoardings and access to the site. Allow for cartage, craneage, plant hire and storage. Arrange for temporary works and services necessary for the completion of the works. Pay fees and remove temporary works and services on completion of the works.

4.3 PROTECT
Protect parts of the work liable to damage, including adjoining public or private property, existing buildings, existing roads, footpaths, fences, site services, trees, landscaping and existing retained site features, until completion of the works. Take all precautions necessary to protect the works from damage by unauthorised entry or inclement weather. Brace and support all parts of the works against damage during construction.

Make good damage to existing property and site features arising from construction activities or failure to protect.

4.4 PROVIDE SEDIMENT AND SILT RUN OFF PROTECTION
Provide appropriate measures to prevent or minimise sediment generation and silt run off. Comply with territorial and other authority requirements relating to carrying out earthworks.

Pump water from trenches and other areas of the site using methods to prevent sediment entering any drain or watercourse. Filter dirty water before discharging into the drainage system.

4.6 STORAGE
Provide temporary storage areas and protective covers and screens. Fillet stack and protect all framing and structural members from moisture and contamination. Completely protect finishing materials from the weather and damage and store in accordance with the manufacturer's requirements. Protect fabricated elements from the weather and damage, and store in accordance with suppliers' requirements.

4.7 ANTIQUITIES AND ITEMS OF VALUE AND INTEREST
Report immediately the finding of any fossils, antiquities, or objects of value. Ensure they remain undisturbed until direction is given for their removal.

5. PROJECT MANAGEMENT

5.1 SITE MEETINGS
Hold site meetings when required by the owner. The contractor's representative and site supervisor to attend such meetings. Inform subcontractors and others when their presence is required.

Meetings will normally be held: Fortnightly

5.2 MEANS OF COMMUNICATION
All directions and approvals to be in writing.

5.3 PROGRAMME
Provide within 2 weeks of award of the contract a programme for the contract works, including the work of separate contractors being carried out concurrent with this contract. Form of programme: A dated bar chart, identifying the contract work's critical path and all key dates for the provision of labour, materials and elements. Review and update the programme monthly. Supply a copy of the programme and all updates to the owner.

5.4 WORKING HOURS
Work on site is not restricted. Comply with territorial authority consent conditions and noise and nuisance controls.

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5.6 HEALTH AND SAFETY

Refer to the requirements of the Health and Safety in Employment Act 1992. Comply with all relevant New Zealand safety legislation.

Take all practical steps to make the site and the contract works safe and to provide and maintain a safe working environment. Ensure that all those working on or visiting the site are aware of the rules governing site safety, are properly supervised and are not unnecessarily exposed to hazards.

Identify any significant hazards.

Maintain proper procedures for dealing with any emergencies that may arise. Immediately investigate accidents, identify their cause and maintain a register of accidents and serious harm. Provide a copy of any report which the contractor is required to make to a public authority on any accident which is associated with carrying out the contract works and results in serious harm to any person.

5.7 SMOKING

Do not smoke on site except in a designated location in accordance with the Smoke Free Environments Act 1990. Location determined by the contractor, with the approval of the owner.

6. CONSTRUCTION

6.1 QUALITY ASSURANCE

Carry out and record regular checks of material quality and accuracy, including:
- Concrete quality and finishes (refer to 3101 CONCRETE).
- Dimensional accuracy of structural columns (following completion of foundations).
- All perimeter columns and frames for plumb.
- Levels of all floors relative to the site datum.
- Framing timber moisture content (refer to 3801 CARPENTRY).

Where any material, quality or dimension exceeds specified or required tolerances, obtain written confirmation of remedial action from the owner. When building consent approval is affected, confirm with the territorial authority.

Provide all materials, equipment, plant, attendances, supervision, inspections and programming to ensure the required quality standards are met.

6.2 DAMAGE AND NUISANCE

Take all reasonable precautions to prevent damage and nuisance from water, fire, smoke, vehicles, dust, rubbish, noise and all other causes resulting from the contract works. Comply with the requirements of the territorial authority and relevant Acts and Standards.

6.3 SET-OUT AND DATUM

Set out the works to conform with the drawings. Establish a permanent site datum to confirm the proposed building ground floor level and its relationship to all other existing and new building levels.

6.5 OWNER TO SIGHT SET-OUT

While it remains the contractor's responsibility to set out the works accurately and correctly and to confirm any changes from the approved location with the territorial authority, obtain the owner's written confirmation that they have sighted the proposed building location, site datum and profiles, before commencing any further work.

6.6 EXECUTION

Conform to the requirements of this specification. Ensure work is level, plumb, and true to line and face. Employ only experienced workers familiar with the materials and techniques specified.

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6.7 MATERIALS AND PRODUCTS

Use only new materials and products, unless stated otherwise, of the specified quality and complying with all cited documents.

Substitution of alternative materials, products, plant or equipment from those specified must first be confirmed by the owner in writing. If the building consent approval is affected, obtain the approval of the territorial authority for the substitution.

6.8 COMPATIBILITY

Ensure all parts of a construction or finish are compatible and their individual use approved by the manufacturers and suppliers of other parts of the system. Source all parts of a system from a single manufacturer or supplier.

6.9 COMPLETE ALL SERVICES

Ensure building services are operational, with temporary labelling removed, required labelling fixed and service instructions provided.

6.10 CLEAR AWAY

Regularly clear away trade debris, unused materials and elements from the site. On completion of the works leave the building clean and ready for occupancy, with all services operating and mechanical parts in good working order. Remove temporary markings, coverings and protective wrappings. Ensure that any maintenance requirements listed on temporary markings are conveyed to the owner.

6.11 CLEAN

Clean and wash down external surfaces to remove dirt, debris and marking. Clean interior surfaces including cabinetwork, joinery, sanitary and hardware items. Vacuum or polish floor surfaces. Clean and polish glass, both sides.

6.12 SPARES

Collect, protect and store safely spare materials required under the contract. Give the owner an inventory of spares.

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2201 PREPARATION AND GROUNDWORK

1. GENERAL

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

1.3 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 as to allow for 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.

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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.

3.5 SURFACE PREPARATION
Comply with NZS 3604, section 3.5. 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
Below footings:	10 MPa concrete
Service trenches:	Hardfill

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. Consolidate with a vibrating roller. Blind the surface with coarse sand or sand/cement and roll ready to receive a dampproof 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.

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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 dampproofing are not punctured.

3.16 SURPLUS MATERIAL

Remove surplus and excavated material from the site.

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2301 FOUNDATIONS

1. GENERAL

Refer to 3101 CONCRETE for poured concrete footings, foundations, foundation walls and floor slabs.
Refer to 3301 CONCRETE MASONRY for concrete block foundation walls.

1.1 DOCUMENTS
Documents referred to in this section are:

NZS 3109 Concrete construction

2. PRODUCTS

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

2.7 BOLTS AND SCREWS
Steel, stainless steel and galvanised steel to NZS 3604.

2.8 NAIL PLATES
Stainless steel and galvanised 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 ordinary grade 17.5 MPa to NZS 3109, section 6 and NZS 3604, section 6.4.5.

3. EXECUTION

3.1 FOUNDATIONS GENERALLY
Comply with NZS 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.

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3101 CONCRETE

1. GENERAL

1.1 DOCUMENTS
Documents referred to in this section are:

AS 1366	Rigid cellular plastics for thermal insulation Part 3 Rigid cellular polystyrene – Moulded (RC/PS – M)
NZS 3101	Concrete structures standard Part 1 The design of concrete structures
NZS 3104	Specification for concrete production
NZS 3109	Concrete construction
NZS 3114	Specification for concrete surface finishes
NZS 3604	Timber framed buildings
AS/NZS 4671	Steel reinforcing materials

2. PRODUCTS

2.1 NORMAL CONCRETE
Normal concrete 20 MPa grade, maximum aggregate size 19 mm ready-mixed to NZS 3104. Provide delivery dockets listing mix and despatch details.

2.2 PRESCRIBED MIX CONCRETE
Prescribed mix concrete 17.5 MPa grade minimum strength, using either separate batching of sand and builder's mix or coarse aggregate to NZS 3104: table 3.1 Grading recommendations for combined and uncombined coarse aggregates.

2.3 SITE CONCRETE
Special concrete 10 MPa with minimum water for workability, all materials and batching to NZS 3104: table 3.1 Prescribed mixes (P).

2.4 REINFORCEMENT
Bars to AS/NZS 4671. Grade 300E deformed, other than for ties, stirrups and spirals, unless shown otherwise on the drawings. Welded reinforcing mesh to AS/NZS 4671.

2.5 TYING WIRE
Mild drawn steel wire not less than 1.2 mm diameter.

2.6 SPACERS AND CHAIRS
Precast concrete or purpose made moulded PVC to approval. Use concrete spacer blocks only where the concrete surface is not exposed in the finished work.

2.7 DAMPPROOF MEMBRANE
0.25 mm minimum polyethylene to NZS 3604: 7.5.4 Damp-proof membrane.

3. EXECUTION

3.1 HANDLE AND STORE
Handle and store reinforcing steel and accessories without damage or contamination. Store on timber fillets on hard ground in a secure area clear of any building operation. Lay steel fabric flat.

Ensure reinforcement is clean and remains clean so that at the time of placing concrete it is free of all loose mill scale, loose rust and any other contamination that may reduce bonding capacity.

3.2 FALSEWORK AND FORMWORK
Use falsework and formwork of sufficient strength to retain and support the wet concrete to the required profiles and tolerances. Select formwork finish to produce the specified finished quality. Ensure timber or plywood used for formwork is non-staining to the set concrete.

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Securely fix and brace formwork sufficiently to support loads and with joints and linings tight enough to prevent water loss. Do not use tie wires or rods unless approved in writing by the owner. Unless detailed otherwise, provide a 19 mm chamfer or fillet strip at all interior and exterior angles of beam and column forms. Mitre at intersections.

Water blast to clean formwork. Keep formwork wet before concrete is placed.

Unless detailed otherwise, set up soffit boxing for beams and slabs to provide a camber when forms are stripped, of 3 mm rise for every 3 metres of total clear span.

3.3 INSTALL DAMPPROOF MEMBRANE

Apply polythene membrane to prepared basecourse with 150 mm laps between sheets. Tape seal laps and penetrations with 50 mm wide pressure sensitive plastic tape. Refer to drawings for perimeter details.

3.5 CUT AND BEND REINFORCEMENT

Cut and bend bars using proper bending tools to avoid notching and to the requirements of NZS 3109: 3.3 Hooks and bends. Do not rebend bars without written approval.

3.6 SECURE REINFORCEMENT

Secure reinforcement adequately with tying wire and place, support and secure against displacement when concreting. Bend tying wire back well clear of the formwork. Spacing as dimensioned, or if not shown, to the clear distance minimums laid down in NZS 3109: 3.6 Spacing of reinforcement.

3.7 LAPPED SPLICES

Length of laps where not dimensioned on the drawings in accordance with the 4. SCHEDULES. Increase laps of plain round steel by 100%. Provide laps only where indicated on the drawings. Tie all lapping bars to each other.

3.8 REINFORCEMENT COVER

Minimum cover to all reinforcing bars, stirrups, ties and spirals, as shown on the drawings. Where cover is not shown on drawings provide minimum cover to NZS 3101: table 5.5 Minimum required cover. Fix chairs for top reinforcement in slabs at 1.0 metre centres or to ensure adequate support. Cover tolerances to NZS 3109: 3.9 Tolerances for reinforcement.

3.9 CASTING IN

Build in all grounds, bolts and fixings for wall plates and bracing elements, holding down bolts, pipes, sleeves and fixings as required by all trades and as shown on the drawings, prior to pouring the concrete.

Do not use grounds exceeding 100 mm in length. Location and form of conduits to be approved in writing by the owner. Minimum cover 40 mm. Do not encase aluminium items in concrete. Do not paint steel embedded items more than 25 mm into the concrete encasement. Cut back form ties to specified cover and fill the cavities with mortar.

Form all pockets, chases and flashing grooves as required by all trades and as shown on the drawings.

Wrap all pipes embedded in concrete with tape to break the bond and to allow for expansion. Do not embed pipes for conveying liquids exceeding a temperature of 50°C in concrete.

3.10 CONSTRUCTION JOINTS

Locate and construct as shown on the drawings.

3.11 PRE-PLACEMENT INSPECTION

Do not place concrete until all excavations, boxing and reinforcing have been inspected and passed by the territorial authority inspector.

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3.12 SURFACE FINISHES
To NZS 3114: 105 Specification of finishes, as scheduled or as denoted on the drawings.

3.13 EXPOSED CONCRETE
Formwork linings and surface finishes as nominated for both fair face and concealed or exposed surfaces. Unless detailed, obtain written confirmation of the type and pattern of all joints.

3.14 CONCRETE SURFACE TOLERANCES
To NZS 3114: 104 Surface tolerances and 105 Specification of finishes, with the suggested tolerances becoming the required tolerances.

3.15 PUMPING CONCRETE
Set up and supervise pump operation, placing and compaction of the mix to NZS 3109: 7.4 Handling and placing and 7.6 Compaction Advise the ready-mix supplier of the type of pump and the slump required, in addition to the concrete grade, strength and quantity.

3.16 COMPACTION
Use power operated vibrators on foundations, vertical constructions and beams.

3.17 RESIDENTIAL FLOOR SLABS
Construct to NZS 3604: 7.5 Concrete slab-on-ground floors in timber buildings. Lay to true and straight surfaces, screeded, floated and steel (manual or power) trowelled finish. Tolerance on flatness: maximum 3 mm gradual deviation over a 3 metre straight-edge, to NZS 3109: 104 Surface tolerances.

3.18 SAW CUTS
Cut slabs where indicated on the drawings and as required to control shrinkage cracking. Carry out cutting as soon as possible, without causing tear-out of aggregate and before shrinkage cracking has occurred, generally within 24 hours of pouring. Where saw cuts are made, cut out 100 mm of every second wire of the mesh for a length of 50 mm each side of the saw cut position. Saw cuts: $^1/_3$ slab depth or 30 mm minimum.

3.19 SURFACE DEFECTS
Make good surface defects immediately after forms are stripped. Make good hollows or bony areas with 1:2 mortar or plaster, finished to the same tolerances as the parent concrete. Fill any tie rod holes with 1:2 mortar.

3.20 CURING OF CONCRETE
Keep damp for not less than seven days. Ensure curing of slabs commences as soon as possible after final finishing, by the use of continuous water sprays, or ponding. Alternately, apply a curing membrane. Ensure any membrane used will not affect subsequent applied finishes.

3.21 STRIKE FORMWORK
Strike formwork without damaging or overloading structure. Do not remove formwork before the following minimum periods:

Sides of beams, walls and columns:	12 hours
Slabs in beam and slab construction:	4 days
(leave props under slab spans over 2 metres)	
Props from under slab spans over 2 metres:	10 days
Beams, soffits and slab spans over 5 metres:	18 days

3.22 CLEAN OUT
Clean out saw cuts. Fill with cement grout where the floor will be covered with carpet or vinyl.

3.23 REMOVE
Remove all unused materials and all concrete and reinforcing debris from the site.

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4. SCHEDULES

4.1 DAMPPROOF MEMBRANE

Brand/type:	0.25MM

4.3 REINFORCEMENT LAPS

Where reinforcement laps are not shown on the drawings, lap as follows:

Bar Diameter	Grade 300E deformed
10 mm	400 mm
12 mm	500 mm
16 mm	650 mm

4.4 CONCRETE

Normal concrete:	17 MPa
Prescribed concrete:	10 MPa for site concrete, bedding concrete and for setting posts 17.5 MPa as required by NZS 3604 25 MPa as required by NZS 3604 and for exposed concrete in sea spray zone

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3301 CONCRETE MASONRY

1. GENERAL

1.1 DOCUMENTS
Documents referred to in this section are:

NZBC B1/AS1	Structure general, 2.0 Masonry
NZS 3103	Sands for mortars and plasters
NZS 3109	Concrete construction
NZS 3604	Timber framed buildings
NZS 4210	Masonry construction: materials and workmanship
NZS 4229	Concrete masonry buildings not requiring specific engineering design
AS/NZS 4455	Masonry units and segmented pavers
AS/NZS 4671	Steel reinforcing materials

1.3 QUALIFICATIONS
Carry out all masonry work with people competent and experienced in this type of work, under the supervision of a registered mason. The registered mason to certify in writing to the owner that the observation has been carried out in accordance with the relevant New Zealand Standards.

1.4 INSPECTION
Call for inspection of the work at critical stages including set out, reinforcing, and the time prior to and during grouting. All to recognised trade practice as set out in NZS 4210, clause 1.4.

1.5 TESTS
Carry out all required tests in accordance with NZS 4210, appendix 2A.

1.6 QUALITY RECORDS
Keep accurate records relating to strength and quality of materials used in the construction, and make the information available to the territorial authority inspector on request.

2. PRODUCTS

2.1 MASONRY UNITS
To AS/NZS 4455.

2.3 REINFORCEMENT
To AS/NZS 4671 and as detailed.

2.5 MORTAR
Sand to NZS 3103. Chloride levels to not exceed 0.04% by dry weight of sand. Mortar to NZS 4210, section 2.2. Compressive strength of not less than 12.5 MPa.

2.6 GROUT
To NZS 4210, section 2.3. Spread value 450 – 530 mm.

2.7 WATER
Clean, fresh and free from excess alkali, salt, silt and organic materials. Water from a local authority water supply is acceptable.

3. EXECUTION

3.1 MASONRY CONSTRUCTION GENERALLY
To NZS 4210 and NZS 4229.

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3.2 STORAGE
Store masonry units clear of the ground, under cover and well ventilated until placed in the work.

3.3 MOISTURE CONTENT
Ensure masonry units are air dry prior to laying.

3.4 CHECK BASE CONCRETE
Ensure the base concrete is true to line and level, requiring a base mortar bed of 10 mm (minimum) to 20 mm (maximum). Ensure that all laitance, loose aggregate, or anything preventing bond is removed prior to laying masonry units.

3.5 STARTER POSITIONS
Before commencing laying masonry units, check the location of starter reinforcement by measure or by a dry trial lay up of the first course. Do not correct misplacement by cranking bars. Where misplacement exceeds the location tolerance, obtain written direction before proceeding.

3.6 REINFORCEMENT AND GROUTING
Reinforcement detailed, bent and placed in accordance with NZS 4210. Refer to drawings for details of reinforcement and extent of grout filling.

3.7 COVER
Minimum cover as required for reinforced concrete, with grout and masonry treated as a homogeneous material. Maintain reinforcing bars for retaining walls a minimum of 15 mm and for other masonry a minimum of 6 mm from the masonry work face, with the space filled with grout.

3.8 TOLERANCES
Construct within the tolerances set out in NZS 4210, clauses 2.6.5 and 2.7.1. Lay masonry units with bedding of consistent thickness throughout.

3.9 PROTECTION
Protect fair-faced masonry walls, keeping them clear of mortar droppings, grout splashes, or stains of any kind.

3.10 LAY MASONRY UNITS
Ensure consistent, fully filled and tooled joints. Where walls are reinforced, prevent mortar droppings from entering the cells to be grouted. Provide clean out holes at base of wall, unless "low lift" (NZS 4210) grouting is used. Ensure reinforcement is accurately placed and tied. Lay in regular running bond with all necessary special units and sill units. Cut masonry, if necessary, true and square without chipping.

3.11 MASONRY UNITS JOINTS
Not exceeding 10 mm thick, or less than 8 mm when the units are bedded in. Joints tooled concave, unless detailed otherwise.

3.13 CONTROL JOINTS
Locate at major changes of wall height or thickness, at openings, and at not more than 8 metre centres, or, as shown on the drawings. Where reinforcement passes through a control joint, provide for breaking bond using methods detailed on NZS 4210, figure 2.10.1, unless specifically detailed otherwise.

3.14 BRACING
Provide sufficient temporary lateral bracing to ensure stability until the final supporting construction is in place.

3.15 PRE-GROUTING INSPECTION
Inspect walls prior to grouting. Ensure cells are clean and reinforcement is correctly placed. Where "high lift" (to NZS 4210) grouting is used, seal the clean out holes and brace to prevent blow outs.

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3.16 GROUTING OF CELLS
Grout all masonry cells below finished grades, all cells in retaining walls and all cells containing reinforcing.

3.17 GROUT CELLS
Grout all masonry unit cells.

3.18 GROUTING PROCEDURE
Use procedures set out in NZS 4210. Methods acceptable on this project are:
- high lift grouting with expansive admixture
- high lift grouting with reduced compaction
- low lift grouting.

3.19 CONSTRUCTION JOINTS
Form and treat construction joints between grout pours and between masonry walls and hardened concrete work to ensure bonding occurs. Comply with NZS 4210, section 2.16.

3.20 MORTAR IN COMPONENTS
Mortar in components such as sills, copings, lintels, and steps, as work proceeds.

3.21 BUILD IN
Build in plugs, bolts, ties, metal flashings, dowels, fastenings and fixings as required by all trades and as shown on the drawings.

3.28 PROGRESSIVE CLEANING
Clean off mortar splashes and grout spills as they occur, making good any damage at the same time.

3.29 FINAL CLEANING
Clean down masonry work and remove waste material from adjoining surfaces and floors at completion.

3.30 REMOVE
Remove from the site materials not used.

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3401 STRUCTURAL STEELWORK

1. GENERAL

1.1 DOCUMENTS
Documents referred to in this section are:

NZBC F5/AS1	Construction and demolition hazards
AS/NZS 1111	ISO metric hexagon commercial bolts and screws
AS/NZS 1252	High-strength steel bolts with associated nuts and washers for structural engineering
AS/NZS 1554	Structural steel welding, Part.1: Welding of steel structures
AS/NZS 2312	Guide to the protection of iron and steel against atmospheric corrosion
NZS 3404	Steel structures Standard, Part 1: Steel structures Standard
AS 3828	Guidelines for the erection of building steelwork
AS/NZS 4680	Hot-dip galvanised (zinc) coatings on fabricated ferrous articles
AS/NZS 4792	Hot-dip galvanised (zinc) coatings on ferrous hollow sections
HERA	Report R4-99 "HERA specification for the fabrication, erection and surface treatment of structural steelwork".

1.3 QUALIFICATIONS
Welders to be qualified, experienced competent workers, familiar with the materials and the techniques specified.

1.6 VERIFY DETAILS AND DIMENSIONS
Refer to drawings to ensure all required details and fixings are provided for in the structural steelwork. Verify dimensions against site measurements prior to fabrication.

1.7 TEST WELDING
Non-destructive weld examination with method, extent and standards of acceptance to AS/NZS 1554.1, Section 7 and Table D1 of NZS 3404 part 1.

2. PRODUCTS

2.1 STRUCTURAL STEEL
All steel Grade 300, except RHS sections Grade 350, unless noted otherwise on the drawings. Test and stress relieve for brittle fracture when required by NZS 3404, part 1, section 17.

2.2 WELDING
Electrodes to comply with and be selected for the grade of steel being welded as required by AS/NZS 1554.1. Welding wire as required by the wire manufacturer for the materials to be joined and the welding position. Welding flux: dry and used from sealed containers. Material for arc stud welding to comply with AS/NZS 1554.1.

2.3 BOLTS, NUTS AND WASHERS
To AS/NZS 1111 and AS/NZS 1252. Hot dip galvanise all bolts, nuts and washers forming a permanent part of any structure subject to a protective coating, to AS/NZS 4680.

2.4 PRIMER
Alkyd oil zinc chromate priming paint.

3. EXECUTION

3.1 SURFACE FINISH
Grind off all burrs and sharp arrises.

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3.2 TOLERANCES
Discard material showing visual defects affecting its structural integrity. Structural elements to comply with NZS 3404, part 1, section 14.4 (straightness, full contact splices, length and struts not prepared for full contact). Comply with the required tolerances laid down for holding down bolts, columns, beams and other members in HERA Report R4-99, sections 2.5, 4.5 and 5.6.

3.3 CUTTING
To NZS 3404, part 1, clause 14.3.3 and HERA Report R4-99, sections 1.5 and 4.6. Hand cut only where machine cutting is not possible.

3.4 CONSTRUCT
Construct the steel structure as detailed and to NZS 3404, part 1, section 14 (fabrication) and part 1, section 15 (erection).

3.5 WELDING
To NZS 3404, part 1, clause 14.3.4 and AS/NZS 1554.1. Comply with AS/NZS 1554.1 for guidance on welding inspection and quality control.

3.6 HOLING
To NZS 3404, part 1, clause 14.3.5 for sizes, alignment, finishing and punching of holes.

3.7 BOLTING
Bolting to comply with NZS 3404, clause 14.3.6.

3.8 THREADS EXCLUDED FROM SHEAR PLANE
Select length of bolts such that the threaded portion does not occur within the shear plane between joined parts.

3.9 START ERECTION
Start erection only when the holding down bolts and anchorages have achieved sufficient strength. Carry out the erection of the structural steel to the requirements of AS 3828. Comply with NZBC F5 and NZS 3404, part 1, section 15. Provide temporary bracing as required to achieve stability during erection.

3.10 BASE PLATES
Enlargement or site cutting of holes not permitted. Bending or displacement of holding down bolts not permitted.

3.11 COLUMNS
Plumb columns using sawn steel packs and wedges not larger than necessary for the purpose. The column base must not be raised by more than 25 mm. Fill space beneath the base plate with cement-sand grout, containing a non-shrink additive, the grout having a minimum compressive strength of 30MPa at 28 days. Alternately use a dry pack of 1:2 cement with the sand mortar hammered in tight to ensure complete filling of space.

3.12 INSPECTION
Inspect all stages of fabrication and construction of the structure to NZS 3404, part 1, sections 14 (fabrication) and 15 (erection).

3.13 ENCASED STEELWORK
Clean the steelwork to be encased in concrete to remove all loose mill scale, rust, dirt and other matter affecting bond with concrete. Achieve this by wire brushing and the use of suitable solvents.

3.14 BRUSH CLEANING
Remove oil and grease by the use of solvents. Scrape and power wire brush to bright metal. Avoid producing a polished surface. Ensure no burrs or sharp arrises remain which may prevent full coating thickness being attained. Prime immediately and paint as soon as practicable.

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3.16 PRIMING

After cleaning and grit blasting to bright metal in the workshop, unless noted otherwise coat all steelwork, with the specified priming paint. Patch prime on site after erection, using a compatible priming system.

3.19 UNPAINTED SURFACES

Do not paint:

- faying face of high strength friction grip bolted joints
- areas for site welding, keeping 75 mm clear all round
- surfaces being embedded in concrete.

Where steel is only partly encased then extend priming 25 mm maximum into the concrete encasement area.

3.20 PATCH PRIMING

Clean areas of damaged priming and areas left clear for site jointing to a standard comparable with that specified for shop cleaning. Wash off chemical deposits from welding fumes. Apply priming coats to the same standard as shop primers, ensuring thorough coating of bolts, nuts and connection areas. Reprime if more than 4 weeks elapse before the final coating system is applied.

3.21 COATING SYSTEMS

Apply all coatings in accordance with the coating manufacturer's requirements. Apply coatings to steel within 4 hours of cleaning and before condensation or light rusting can occur. Ensure steel is dry and atmospheric conditions warm and dry, with an air temperature of greater than 12°C and relative humidity less than 85%.

3.22 WELDING

Shop weld together touching or near-touching steelwork all round with 5 mm (one pass) continuous fillet welds unless denoted otherwise on the drawings.

3.23 TOUCH UP

Touch up primer. Apply protective coatings as specified.

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3401C CSP GALVANIZING CORROSION PROTECTION

1. GENERAL

1.1 DOCUMENTS REFERRED TO
Documents referred to in this section are:

AS/NZS 2312	Guide to the protection of structural steel against atmospheric corrosion by the use of protective coatings
AS/NZS 4680	Hot-dip galvanized (zinc) coatings on fabricated ferrous articles
AS 1627	Metal finishing - Preparation and pretreatment of surfaces - Method selection guide
1627.1:	Removal of oil, grease and related contamination
1627.2:	Power tool cleaning
1627.4:	Abrasive blast cleaning
1627.5:	Pickling
1627.9:	Pictorial surface preparation standards for painting steel surfaces
AS 1897	Electroplated coatings on threaded components (metric coarse series)
AS/NZS ISO 9002	Quality systems - Model for quality assurance in production, installation and servicing
OSH	Guidelines for the provision of facilities and general safety in the construction industry

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

CSP Galvanizing Design for hot dip galvanizing

Copies of the above literature are available on the Galvanizers Association of Australia website www.gaa.com.au or by phoning **CSP Galvanizing** on 0800-804 803.

1.3 QUALIFICATIONS
Galvanizers and other specialist coating applicators to be experienced, competent workers, qualified and familiar with the materials and techniques specified.

1.4 QUALITY ASSURANCE
Maintain quality assurance programmes to AS/NZS ISO 9002 for both galvanizing and other specialist coatings as necessary to assure that work is performed in accordance with this specification and the qualifying requirements of the contract documents.

1.5 INSPECTION
Inspection of the galvanized coatings by nominated personal must take place at the **CSP Galvanizing** works prior to dispatch to the site.

1.6 TEST CERTIFICATE
Where scheduled provide a **CSP Galvanising** certificate stating that the galvanizing complies with the requirements of AS/NZS 4680.

1.7 LABELLING
Where scheduled attach a **CSP Galvanising** label to finished work identifying the **CSP Galvanizing** plant, galvanizing thickness and the date of galvanizing.

2. PRODUCTS

2.1 GALVANIZED COATING
Zinc coating by the hot-dip process to the requirements of AS/NZS 4680.

2.2 BOLTS, NUTS AND WASHERS
Hot-dip galvanize to AS/NZS 4680, bolts, nuts and washers forming a permanent part of a structure subject to a protective coating. Alternatively electrogalvanize to AS 1897.

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3. EXECUTION

3.1 GENERALLY
The galvanized coating on all steel articles shall conform to the requirements of AS/NZS 4680 and as specified.

3.2 DEFECTS
Discard any material or fabricated items showing defects affecting its structural integrity.

3.3 SURFACE PREPARATION
Grind off burrs, welding slag and sharp arrises and all other defects that could affect appearance.

Galvanizing

3.4 STEELWORK BEING GALVANIZED
Clean sections thoroughly and apply zinc coating by the hot-dip process to the requirements of AS/NZS 4680. Average zinc coating to be not less than the following:

Structural steelwork	Average coating	Minimum coating
≤ 1.5 mm	45 microns	35 microns
> 1.5 mm – ≤ 3 mm	55 microns	45 microns
> 3 mm – ≤ 6 mm	70 microns	55 microns
> 6 mm	85 microns	70 microns
Bolts and washers		
< 8 mm	35 microns	25 microns
≥ 8 mm	55 microns	40 microns

Ensure that tolerances in screw cutting have made allowance for galvanizing.

Completion

3.17 ENSURE
Ensure all elements are free of marks or blemishes.

3.18 REPLACE
Replace damaged, cracked or marked elements.

3.19 LEAVE
Leave work to the standard required by following procedures.

4. SELECTIONS

4.3 STEELWORK BEING GALVANIZED
upper level deck RHS posts- refer to drawings.

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3701 METALWORK

1. GENERAL

1.1 DOCUMENTS
Documents referred to in this section are:

AS 1734 Aluminium and aluminium alloys - Flat sheet, coiled sheet and plate

1.3 QUALIFICATIONS
Welders to be qualified and experienced in working with the various metals.

2. PRODUCTS

2.6 ALUMINIUM SECTIONS
Plates/tubes/square tubes/flat bars/square bars/rods/angles/channels and sections.

2.7 ALUMINIUM SHEET AND PLATE
Anodised/plain finish sheet/strip complying with AS 1734.

3. EXECUTION

3.1 CORNERS
Unless specified or detailed otherwise, mitre junctions of identical sections.

3.2 HOLES
Form without distortion of surrounding metal.

3.3 PREPARATION FOR WELDING
Remove grease, dirt, moisture and oxide from edges to be welded. Remove scale and residue from arc and power cutting by machining or hand grinding. Ensure accurate fit using clamps and jigs where practical. Use tack welds for temporary attachment where jigging is not practical.

3.4 WELD QUALITY
Make joints with parent and weld metal fully fused throughout with no inclusions, holes, porosity or cracks. Prevent weld spatter falling on surfaces of materials which will be self finished and visible in completed work. Ensure complete removal of flux residues and slag. Butt welds which will be visible in completed work to be ground smooth and flush with adjacent surfaces.

3.13 HANDLING
Avoid distortion of elements during transit, storage and handling. Prevent pre-finished surfaces rubbing together, and any contact with mud, plaster or cement. Keep protective coverings dry.

3.14 SUBSTRATE
Ensure location and substrate is ready to receive the fabricated metalwork elements.

3.15 INSTALLATION
Locate fixings accurately and use in accordance with the metalwork manufacturer's requirements. Fix to comply with the specified standards and installation details, including bedding compounds and sealants, and with work plumb, level and true to line.

3.16 MOVING PARTS
When assembled, moving parts to move freely and without binding.

3.17 LEAVE CLEAN
Ensure elements are free of marks or blemishes.

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4. SCHEDULES

Fabricated Elements

Refer to drawings for details of :

Aluminium spiral stairs
Aluminium handrail brackets
Aluminium balustrades

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3801 CARPENTRY

1. GENERAL

1.1 DOCUMENTS
Documents referred to in this section are:

AS/NZS 1748	Mechanically stress-graded timber
AS/NZS 1860	Particleboard flooring, 1860.1: Specifications
AS/NZS 2269	Plywood - Structural
NZS 3602	Timber and wood-based products for use in building
NZS 3603	Timber structures standard
NZS 3604	Timber framed buildings
NZS 3606	Manufacturer of glue-laminated timber
NZS 3631	New Zealand national timber grading rules
NZS 3640	Chemical preservation of round and sawn timber

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

2. PRODUCTS

2.1 BUILDING WRAPS AND UNDERLAYS
Refer to 4201 WALL CLADDING and 4701 THERMAL INSULATION for the supply of wall wraps, underlays and sheet insulation products.

2.2 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.

2.8 PARTICLE BOARD FLOORING
Flooring grade high density resin bonded to AS/NZS 1860.1.

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

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

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

2.12 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.

2.13 DAMPPROOF COURSE
2-ply/3-ply kraft felt strip saturated and coated with bitumen.

2.14 NAILS
Steel, stainless steel and galvanised steel of pattern to suit the location and to BRANZ Bulletin 328 "Selection and use of fasteners".

2.15 BOLTS AND SCREWS
Steel, stainless steel and galvanised steel of pattern to suit the location and to BRANZ Bulletin 328 "Selection and use of fasteners".

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

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

NOTE: site is extreme exposure to salt winds.
all exterior exposed fixings to be stainless steel.

3. EXECUTION

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

3.2 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

3.3 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).

3.4 DIMENSIONS
All timber sizes are nominal sizes.

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

3.7 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. All fabricated and fastened to NZS 3604, section 9, Posts and 10, Roof framing.

3.10 INSTALLING WALL WRAPS, UNDERLAYS AND SHEET INSULATION PRODUCTS
Refer to WALL CLADDING and 4701 THERMAL INSULATION for the installation of wall wraps, underlays and sheet insulation.

3.11 INSTALLING DECK UNDERLAY
Lay and secure in accordance with BRANZ Bulletin 368 "Preventing moisture in timber framed skillion roofs".

3.13 LAYING PARTICLE BOARD 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.

3.14 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.

3.15 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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3.18 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 galvanised jolt head nails, heads driven flush with the board surface.

4. SCHEDULES

4.2 FLOOR FRAMING

Member	Timber species and grade	Treatment
Mid floor joists:	Radiata pine structural grades	H1.1
	Radiata pine kiln dried and gauged	None
	Douglas fir structural grades	None
Boundary joists:	Radiata pine structural grades	H1.2
	Douglas fir structural grades	H1.2

4.3 EXTERIOR WALL FRAMING

Member	Timber species and grade	Treatment
Exterior walls:	Radiata pine structural grades	H1.2
	Douglas fir structural grades	H1.2
Parapets:	Radiata pine structural grades	H1.2
	Douglas fir structural grades	H1.2
Enclosed decks and balconies:	Radiata pine structural grades	H3.1

4.4 ROOF FRAMING

Member	Timber species and grade	Treatment
Rafters:	Radiata pine structural grades	H1.1
	Douglas fir structural grades	None
	Radiata pine kiln dried and gauged	None
Purlins:	Radiata pine structural grades	H1.1
	Douglas fir structural grades	None
	Radiata pine kiln dried and gauged	None
Ceiling joists:	Radiata pine structural grades	H1.1
	Douglas fir structural grades	None
	Radiata pine kiln dried and gauged	None
Skillion roof framing:	Radiata pine structural grades	H1.2
Enclosed flat roof framing:	Radiata pine structural grades	H3.1

4.6 EXTERIOR EXPOSED TIMBERS

Member	Timber species and grade	Treatment
Posts:	Radiata pine structural grades	H5
Softwood decking:	Radiata pine structural grades	H3.2
Hardwood decking:	To be selected	

4.7 EXTERIOR FINISHING TIMBERS

Member	Timber species and grade	Treatment
Fascia/barge/cover boards:	Radiata pine dressing grade	H3.1
Exterior trim:	Radiata pine dressing grade	H3.1

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4.11 INTERIOR FRAMING

Member	Timber species and grade	Treatment
Non structural walls:	Radiata pine structural grades	H1.1
	Douglas fir structural grades	None
	Radiata pine kiln dried and gauged	None
Structural and braced walls:	Radiata pine structural grades	H1.1
	Douglas fir structural grades	None
	Radiata pine kiln dried and gauged	None

4.13 PARTICLE BOARD FLOORING

Brand/type	Fixing method	Thickness
To be selected	To manufacturers spec	19mm

4.14 PLYWOOD

Member	Brand/type	Treatment
Plywood flat roof:		H3
Plywood deck		H3
Plywood bracing:		H3

4.15 INTERIOR FINISHING TIMBERS

Member	Timber species and grade
Skirtings: 90x10 FJ	Radiata pine dressing grade

4.16 COMPRESSED FIBRE CEMENT SHEET FLOORING

Brand/type:	HARDIES
Thickness:	18mm

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3802E ECOPLY® FLOORS, DECKING AND ROOFING

1. GENERAL

1.1 DOCUMENTS REFERRED TO
Documents referred to in this section are:

NZBC E2/AS1	External moisture, 8.5 Membrane roofs and decks
AS/NZS 1604	Specification for preservative treatment, 1604.3 Plywood
AS/NZS 2269	Plywood – structural
NZS 3604	Timber framed buildings
NZS 4203	General structural design and design loadings for buildings

Documents listed above and cited in the clauses that follow are part of this specification. However, this specification takes precedence in the event of it being at variance with the cited document.

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

CHH Woodproducts Ecoply® roofing & decking manual (December 2003)
CHH Woodproducts Ecoply® flooring manual (October 2003)

Copies of the above literature are available by phoning Carter Holt Harvey 0800 Ecoply, (0800 326 759)

Performance

1.3 STRUCTURAL FIXINGS, WIND
Design and use the fixings appropriate for the wind zone (R) and topographical classification (T) of this site and building height; as required by NZS 3604 and the wind loads on various wall areas as given by NZS 4203.

1.4 STRUCTURAL FIXINGS, EARTHQUAKE
Use fixings and methods capable of sustaining the loads appropriate to the area as set out in NZS 3604 and as required by NZS 4203.

2. PRODUCTS

Materials

2.2 ECOPLY® FLOORING (T&G)
Radiata pine veneer ply to AS/NZS 2269, CD grade face sanded with plastic tongue and grooved long edges and H3 CCA treated to AS/NZS 1604 when used as a deck substrate.

2.3 ECOPLY® ROOFING (T&G)
Radiata pine veneer ply to AS/NZS 2269, DD grade unsanded with plastic tongue and grooved long edges and H3 CCA treated to AS/NZS 1604 if required.

Components

2.4 NAILS
Galvanised flat head, annular grooved or twisted shank. Stainless steel nails annular grooved. Refer to CHH Woodproducts requirements for size and use.

7 - 9 mm plywood:	40 mm x 2.5 mm
12 -15 mm plywood:	50 mm x 2.8 mm
17 - 21 mm plywood:	60 mm x 2.8 mm
25 mm plywood:	75 mm x 3.15 mm

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2.5 SCREWS IN TIMBER
Stainless steel, counter-sunk. Refer to CHH Woodproducts requirements for size and use.

7 – 9 mm plywood:	No. 8 x 30 mm
12 -15 mm plywood:	No. 8 x 40 mm
17 mm plywood:	No. 10 x 40 mm
19 – 21 mm plywood:	No. 10 x 45 mm
25 mm plywood:	No. 10 x 50 mm

2.6 SCREWS IN STEEL
Self tapping, self countersinking. Refer to CHH Woodproducts requirements for size and use.

2.7 ADHESIVE
Polyurethane adhesive to American Plywood Association specification AFG 01.

3. EXECUTION

3.1 HANDLE
Handle sheets carefully and reject those with damaged faces or edges.

3.2 STORE
Store sheets in stacks clear of the ground, supported without sagging on evenly spaced horizontal bearers. Protect from damage and weather.

3.3 SUPPORT FRAMING
Ensure support framing is completed to CHH Woodproducts stated requirements for laying plywood sheets.

3.4 SUPPORT EDGES AND JOINTS
Fully support edges and joints on square edged sheets.

3.5 ADHESIVE FIXING
Apply a 10 mm adhesive bead to joists.

3.6 FIXINGS
Minimum 7 mm, maximum 15 mm from the edge, 150 mm centres along edges and 300 mm centres on intermediate supports.

3.9 UNDER MEMBRANE ROOFING / DECKING
Screw fix sheets with stainless steel 316 grade screws for membrane type roofing to CHH Woodproducts and membrane manufacturers' requirements.

3.10 PROTECTION
Protect work from the weather until it is covered, coated or sealed.

3.11 REPLACE
Replace damaged or marked elements.

3.12 LEAVE
Leave work to the standard required by following procedures.

3.13 REMOVE
Remove all debris, unused materials and elements from the site.

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4. SCHEDULES

4.3 ECOPLY DECKING

Location:	upper level decks
Manufacturer:	CHH Woodproducts
Brand/grade:	Ecoply® CD
Stress grade:	F11
Thickness:	17 mm
Treatment:	H3 CCA
Fixing:	stainless steel Screw

4.5 ECOPLY ROOFING

Location:	entry roofs, valley gutters
Manufacturer:	CHH Woodproducts
Brand/grade:	Ecoply® DD
Stress grade:	F11
Thickness:	15 mm
Treatment:	H3 CCA
Fixing:	stainless steel screw

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3802P PYNEFLOOR™ PARTICLE BOARD FLOORS

1. GENERAL

1.1 DOCUMENTS REFERRED TO
Documents referred to in this section are:

AS/NZS 1860 Particleboard flooring,1860.1: Specifications
NZS 3604 Timber framed buildings

BRANZ Appraisal 254 (2002):
Pynefloor and Pynefloor Green Tongue particleboard flooring

Documents listed above and cited in the clauses that follow are part of this specification. However, this specification takes precedence in the event of it being at variance with the cited document.

1.2 MANUFACTURER'S DOCUMENTS
Manufacturer's and supplier's documents relating to work in this section are:
FWP publication: **Pynefloor Green Tongue** particleboard flooring November 2001

Copies of the above technical literature are available by phoning 0800-800 080 or from the web site www.fwp.co.nz. This literature gives in depth details of design and installation methods referred to in this specification. For specific design applications contact FWP technical division.

2. PRODUCTS

2.1 PYNEFLOOR GREEN TONGUE PARTICLE BOARD
Pynefloor Green Tongue 20 mm particle board flooring to AS/NZS 1860.1 (class 2)

2.4 NAILS
60 mm annular grooved gun nails or annular grooved particleboard flooring nails.

2.5 SCREWS
45 mm x 8g Type 17 countersunk head self drilling screws.

2.6 ADHESIVE
Flexible, solvent based, elastomatic, construction adhesive.

3. EXECUTION

3.1 STORAGE
Take delivery of and accept packets of particle board, dry and undamaged. Reject all damaged material. Store on a level, firm base, well ventilated and completely protected from weather and damage.

3.2 HANDLING
Avoid distortion and contact with damaging substances. Protect edges and surfaces from damage. Use a sufficient number of people to lift and lay sheets with ease.

3.3 SUBSTRATE
Do not commence work until the substrate is plumb and level, in true alignment and to the particle board manufacturer's requirements.

3.4 PLAN LAYOUT
Use Fletcher Wood Panels "Plan-A-Floor" to plan layout and determine quantities.

3.5 ADHESIVE FASTENING
Use construction adhesive to joists in conjunction with mechanical fixing. Apply adhesive in a continuous 5 mm bead to all floor joists. For **Pynefloor Green Tongue**, apply a

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2 mm bead of construction adhesive to the top of the tongue prior to insertion into the groove. Remove excess adhesive.

3.6 NAIL FIXING

Nail panel ends at 150 mm centres 10 mm from the edge. Nail intermediates at maximum 200 mm, with all nails slightly skewed except for corner vertical nails. Where T & G material is used nails must be 15 mm from the edge to avoid tongue damage.

3.8 LAYING PYNEFLOOR GREEN TONGUE .

- Programme work for minimal exposure to weather and lay sheets across the joists in a staggered pattern.
- Panels to span at least 3 joists.
- Lay panels with brand name down.
- Allow 8 mm minimum clearance between panel edges and fixed objects including columns and bottom plates.
- Provide continuous edge support at building perimeter.
- Provide continuous tongue and groove edge support (nogs) in wet areas or where rigid floor finishes (ceramic tiles) are used.
- Do not allow fixings to initially penetrate the surface of the panel by more than 1 mm. Tighten fixings; punch nails and tighten screws prior to sanding.
- Close butt edges and ends of panels. Do not cramp.
- Do not allow water to remain ponded on the floor surface – remove as soon as possible.
- Do not cover panels with polythene or apply liquid sealers, while exposed to weathering.

3.10 LEAVE

Leave work to the standard required by following procedures.

3.11 REMOVE

Remove all debris, unused materials and elements from the site.

3.12 SURFACE FINISHING

Carpet:	Single cut with a drum or belt sander – 60 to 80 grit

3.13 PROTECTION

Once the structure is enclosed and weather tight, protect the surfaces of the finished work until coatings are applied or coverings laid.

4. SCHEDULES

4.1 PARTICLE BOARD FLOORING

Type:	FWP Pynefloor Green Tongue
Thickness:	20 mm
Location:	dry rooms, upper level
Fixing method:	Adhesive and nail
Finish:	single cut sand

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4201 WALL CLADDING

1. GENERAL

1.1 DOCUMENTS
Documents referred to in this section are:

NZBC E2/AS1	External moisture 9.0 Wall claddings 9.1 General 9.5 Fibre cement weatherboards 9.6 Profiled metal 9.7 Fibre cement sheet 9.8 Plywood sheet
AS/NZS 1491	Finger jointed structural timber
AS/NZS 2269	Plywood - Structural
AS/NZS 2908	Cellulose-cement products, 2908.2 Flat sheets
NZS 3602	Timber and wood-based products for use in building
NZS 3604	Timber framed buildings
NZS 3617	Profiles of weatherboards fascia boards and flooring
NZS 3631	New Zealand national timber grading rules

BRANZ Bulletin 304: Flashing design
BRANZ Bulletin 448: Domestic flashing installation
BRANZ Bulletin 407: Walls on exposed sites
BRANZ Bulletin 441: Sealed joints in external claddings - 2. Sealants

1.3 PERFORMANCE
Accept responsibility for the weathertight performance of the completed cladding system, including all penetrations.

2. PRODUCTS

2.1 BUILDING WRAPS AND UNDERLAYS
Breather type, waterproof heavy duty.

2.3 EXTERIOR CAVITY WALL BATTENS
Radiata pine battens, minimum 20 mm thickness, width and height to match timber framing studs. To NZS 3602, table 1, reference 1D.10.

2.4 EXTERIOR CAVITY VERMIN-PROOFING
Perforated uPVC, aluminium or stainless steel trays with upstands. Upstand one side 10 mm and the other 75 mm. Length and width to suit cavity.

2.6 STRUCTURAL PLYWOOD
Structural plywood to AS/NZS 2269.

2.10 FIBRE-CEMENT WEATHERBOARD
Cellulose cement autoclaved sheets to NZS/AS 2908.2.

2.11 FIBRE CEMENT SHEET CLADDING
Cellulose cement autoclaved sheets to NZS/AS 2908.2.

2.12 FIBRE-CEMENT SOFFIT LINING
Cellulose cement autoclaved sheets to AS/NZS 2908.2.

2.13 TIMBER FASCIAS AND BARGE BOARDS
Dressing grade to NZS 3631 and treated to NZS 3602, table 2, reference 2A.3. Finger jointed timber to AS/NZS 1491.

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2.15 NAILS, SCREWS AND FASTENINGS
Metal, size and pattern, to cladding manufacturer's requirements and complying with the relevant aspects of NZS 3604, section 4: Durability.

2.16 FLASHINGS
Material, grade and colour as detailed and scheduled. Ensure that materials used for flashings are compatible with the window frame materials and fixings and cladding materials and fixings.

3. EXECUTION

3.1 MOISTURE CONTENT
Maximum allowable moisture content in accordance with NZS 3602 for:

	ECM
- Framing	20% at closing in
- Exterior joinery and trim	14%

3.2 EXECUTION METHODS AND PRACTICES
To 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).

3.3 FIX WRAPS AND UNDERLAYS
Fix to framing, with laps and fixing to the cladding manufacturer's requirements.

3.4 PENETRATIONS
Confirm that exterior wall openings have been prepared ready for the installation of all window and door frames and other penetrations through the cladding. Required preparatory work includes the following:
- wall cladding underlay/building wrap to openings finished and dressed off ready for the installation of window and door frames and other penetrations
- claddings neatly finished off to all sides of openings
- installation of flashings (those required to be installed prior to installation of penetrating elements).

3.6 INSTALL DRAINED CAVITY
20 mm minimum thickness ventilated and drained cavity to NZBC E2/AS1: 9.0 Wall claddings, where required. Fix vertical cavity battens to wall framing studs. The battens are fixed by the cladding fixings which will penetrate the wall framing studs over the building wrap. Seal the top of the cavity and install vermin-proofing at base.
Do not use horizontal cavity battens. Use cavity spacers where fixing is required between cavity battens.

3.8 INSTALL PLYWOOD
Install to the plywood manufacturer's requirements. Refer to the plywood manufacturer's literature for fixing details, NZS 3604 for fixings durability requirements and to BRANZ Bulletin 407 Walls on exposed sites for specific provisions.

3.10 PRIME OR SEAL
Prime or seal all front and back faces, edges and end grain before fixing weatherboards and exterior trim, to the finish and quality specified in 6701 PAINTING AND PAPERHANGING.

3.13 INSTALL FIBRE CEMENT WEATHERBOARDS
Linea weather boards to be concealed nailed as per James Hardie Linea technical specification.
Install to the weatherboard manufacturer's requirements. Refer to the cladding manufacturer's literature for fixing details, NZS 3604 for fixings durability requirements and to BRANZ Bulletin 407 Walls on exposed sites for specific provisions.

3.14 INSTALL FIBRE CEMENT SHEET CLADDING
Install to detail and to the cladding manufacturer's requirements. Refer to the cladding manufacturer's literature for fixing details, NZS 3604 for fixings durability requirements and to BRANZ Bulletin 407 Walls on exposed sites for specific provisions.

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3.15 INSTALL FIBRE CEMENT SOFFITS
Cut sheets dry and scribe fit to fully support all edges and joints. Nail and drill for and insert fasteners to the sheet manufacturer's requirements. Refer to the cladding manufacturer's literature for fixing details, NZS 3604 for fixings durability requirements and to BRANZ Bulletin 407 Walls on exposed sites for specific provisions.

3.16 INSTALL EXTERIOR TIMBER FINISHINGS
Install timber fascias, barge boards, facings, beads, trim and enclosures level, true to line and face, with all end grain sealed and joints mitred.

3.17 INSTALL FLASHINGS
Install flashings, covers and soakers as detailed on the drawings and to BRANZ Bulletins 304 Flashing design and 448 Domestic flashing installation.

3.18 USE OF SEALANTS
Selection and use of sealants to follow BRANZ Bulletin 441 Sealed joints in external claddings - 2. Sealants.

3.19 COMPLETE
Ensure the work is complete with all flashings, finishings and trim properly installed so the cladding system is completely weathertight.

3.20 REPLACE
Replace damaged or marked elements. Remove unused materials from the site.

4. SCHEDULES

4.1 BUILDING WRAPS/UNDERLAYS

Brand/weight:	to be selected, heavy duty type.
Flashing tape brand:	to be selected.

4.3 CAVITY BATTENS

Timber species:	pine
Timber grade:	#1
Treatment:	H3.1

4.4 VERMIN-PROOFING

Brand/type:	James Hardie
Material:	pvc

4.6 PLYWOOD

Brand:	to be selected, as required for bracing.
Treatment:	H1
Grade:	
Glue type:	
Face grade/thickness:	6mm

4.9 FIBRE-CEMENT WEATHERBOARD

Brand/type:	James Hardie LINEA

4.10 FIBRE CEMENT SHEET CLADDING

Brand/type:	James Hardie TITAN
Thickness:	9mm
Edge detail:	square

4.11 FIBRE-CEMENT SOFFIT LINING

Brand/type:	James Hardie HARDIFLEX
Thickness:	6mm

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4.12 TIMBER FASCIAS AND BARGE BOARDS

Species and grade:	Pine FJ
Treatment:	H3.1
Width:	to details on drawings
Priming:	preprimed

4.13 EXTERIOR FINISHING TIMBER

Species and grade:	Pine FJ
Treatment:	H3.1
Location:	to details on drawings
Priming:	preprimed

4.16 NAILS, SCREWS AND FASTENINGS

Sheathing material	Fixing/fastening	Fixing/fastening	
180 LINEA	Stainless steel	60x3.15 Hardiflex nails	Concealed nailed
Aluminium soaker	Stainless steel	30mm FH	Concealed
TITAN	Stainless steel	40 x 10g cs	stopped finish
HARDIFLEX	Stainless steel	10-12 x 25 pan pozi self tap c/w neoprene washer	

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4241B STEEL AND TUBE PROFILED METAL CLADDING

1. GENERAL

Related work

1.1 RELATED SECTIONS
Refer to ~ for ~.

Documents

1.2 DOCUMENTS REFERRED TO
Documents referred to in this section are:

Steel and Tube Roofing Products:
Product Guide May 2003
Standard flashing details
NZ Steel: Installers Guide September 2003

Documents listed above and cited in the clauses that follow are part of this specification. However, this specification takes precedence in the event of it being at variance with the cited document.

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

NZ Metal Roofing & Wall Cladding Code of Practice
Roofing Solutions CD

Copies of the above literature are available at www.stroofing.co.nz or by phoning 0800 333 247.

Requirements

1.4 QUALIFICATIONS
Installers to be **Steel and Tube Roofing Products**' Approved Installers. A list of approved installers can be obtained at www.stroofing.co.nz, or by telephoning Freephone 0800 333 247 or from the local **Steel and Tube Roofing Products** branch.

Warranties

1.5 WARRANTY
Warrant this work under normal environmental and use conditions against:

Perforation:	15 years minimum
Coatings:	10 years minimum
Workmanship:	5 years
From:	Date of installation

Provide warranties on **Steel and Tube Roofing Products** standard **Warranty Plus** warranty form.

Performance

1.6 FIXINGS, WIND
Design and use the fixings appropriate for the wind zone and topographical classification of this site and building height. Allow for specific loadings at corners and where localised pressure factors apply.

1.7 PERFORMANCE
Install cladding material and associated flashings and accessories to form a weather tight and durable system.

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1.8 PRODUCER STATEMENT
On completion arrange for inspection of the work by an authorised **Steel and Tube Roofing Products** representative. Provide a **Steel and Tube Roofing Products** inspection certificate confirming that the cladding system has been installed in accordance with the manufacturers' recommendations and good trade practice.

2. PRODUCTS

Materials

2.1 MATERIALS - CLADDING
Refer to 4. SCHEDULES / drawings.

2.2 BUILDING WRAP
Breather type, waterproof heavy duty.

2.3 FLASHINGS
Formable grade 0.55 BMT for galvanised, aluminium/zinc and pre-coated steel, and 0.90 for aluminium to the same standards as the profiled sheets, notched where across profile or provided with a soft edge. Where flashings are required but are not detailed, design to **Steel and Tube Roofing Products** standard flashing details.

Components

2.4 FASTENERS GENERALLY
Durability of all fasteners not less than the roofing material being fixed. Fastener material to be compatible with the material being fastened.

2.5 FIXING SCREWS
Screws appropriate to the cladding material and the supporting structure, as recommended by the **Steel and Tube Roofing Products**.

2.6 RIVETS
Sealed aluminium, minimum diameter 4 mm.

Accessories

2.7 SEALANT
Neutral curing silicone or polymer sealant as required by **Steel and Tube Roofing Products** and used as directed.

2.8 CLOSURE STRIPS
Compressible, profiled, closed cell foam strips to fit the sheet profile.

3. EXECUTION

Conditions

3.1 INSPECTION
Inspect the wall framing and supporting structure to ensure that it is complete and ready for cladding. Do not start work until all requirements are complete to the required standard.

3.2 STORAGE
Take delivery of and accept packs of cladding undamaged on delivery. Reject all damaged material. Store on a level firm base with packs well ventilated and completely protected from weather and damage. Do not allow moisture to build up between sheets. If sheet packs become wet, fillet or cross stack to allow air movement between sheets.

3.3 HANDLING
Avoid distortion and contact with damaging substances, including cement and swarf. Do not drag sheets across each other and other materials. Protect edges and surface finishes from damage.

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3.4 SEPARATION
Isolate dissimilar materials (metal and non-metal) in close proximity as necessary by painting the surfaces or fitting separator strips. Place isolators between metals and treated timber or cement based materials. Do not use unpainted lead sheet or copper in contact with or allow water run-off onto galvanised or Zincalume® materials.

Application

3.5 SET-OUT
Set out the planned layout before fixing commences to ensure true lines and correct relationship to other design features. Carefully set out sheets to plumb lines with side laps away from the main line of sight where possible. Check during fixing to eliminate creep or spread and make provision to keep fastenings in line.

3.7 AVOID END LAPS
End laps are not permitted, except where specifically detailed.

3.8 FIXING GENERALLY
Install and fix in accordance with NZ Steel's Installers Guide and to **Steel and Tube Roofing Products'** Product Guide. Use only screws as recommended by the cladding manufacturer. Ensure fastener layout is balanced to other architectural features. Paint colour matched fixings and accessories before installation.

3.9 FIX UNDERLAY
Run and fix underlays where specified, fixed in accordance with the underlay manufacturer's requirements.

3.10 PENETRATIONS
Confirm that exterior wall openings have been prepared ready for the installation of all window and door frames and other penetrations through the cladding. Required preparatory work includes the following:
- wall cladding underlay/building wrap to openings finished and dressed off ready for the installation of window and door frames and other penetrations
- claddings neatly finished off to all sides of openings
- installation of flashings (those required to be installed prior to installation of penetrating elements).

3.11 MARKING AND CUTTING
Cut only by shearing tools. Do not use black lead pencils for marking Zincalume®, Colorsteel® or Colorcote® products.

3.12 INSTALL SHEETS
Fix sheets in place using the fastening system recommended by **Steel and Tube Roofing Products**, making due allowance for dynamic local wind pressures on the building and thermal movement in the sheet.

3.13 INSTALL FLASHINGS AND CAPPINGS
Flash neatly to all penetrations and openings through the cladding. Cap corners and edges to achieve a neat and tidy weatherproof finish. Unless otherwise detailed, flashing design and installation to Steel and Tube Roofing and Cladding Solutions CD.

Completion

3.14 REPLACE
Replace damaged or marked elements.

3.15 LEAVE
Leave this work complete with all necessary flashings and cappings all properly installed as the work proceeds so the finished cladding is completely weathertight.

3.16 REMOVE
Remove debris, unused materials and elements from the site.

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4. SCHEDULES

Cladding

4.1 STEEL AND TUBE CLADDING

Profile name:	corrugated
Material:	zincalume
Base metal thickness:	0.44 mm
Colour:	natural

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4301B STEEL AND TUBE ROOFING

1. GENERAL

1.1 DOCUMENTS
Documents referred to in this section are:

Steel and Tube Roofing Products:
Product Guide May 2003
Standard flashing details
Spring Curved Custom Orb Design Manual
NZ Steel: Installers Guide September 2003

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

NZ Metal Roof and Wall Cladding Code of Practice
Roofing Solutions CD

Copies of the above literature are available at www.stroofing.co.nz or by phoning 0800 333 247.

1.3 QUALIFICATIONS
Roofers to be **Steel and Tube Roofing Products**' Approved Installers. A list of approved installers can be obtained at www.stroofing.co.nz, by telephoning Freephone 0800 333 247 or from the local **Steel and Tube Roofing Products** branch.

1.4 WARRANTY
Warrant this work under normal environmental and use conditions against:
Perforation: 15 years minimum
Coatings: 10 years minimum
Workmanship: 5 years
From: Date of installation.

Provide warranties on **Steel and Tube Roofing Products** standard **Warranty Plus** warranty form.

1.5 FIXINGS, WIND
Design and use the fixings appropriate for the wind zone and topographical classification of this site and building height. Allow for specific loadings at corners and the periphery of the roof, where localised pressure factors apply.

1.6 CO-ORDINATE
Co-ordinate to ensure substrate and preparatory work is complete and other work programmed in the order required for access and completion of the roof. Ensure that all necessary members are positioned so that flashings can be fastened at both edges through the roof profile to the primary structure.

1.7 PERFORMANCE
Install roofing material and associated flashings and accessories to form a weather tight and durable system.

2. PRODUCTS

Roofing

2.1 STEEL & TUBE ROOFING
Refer to 4. SCHEDULES / drawings.

2.2 FLASHINGS GENERALLY
Formable grade 0.55 BMT for galvanised, aluminium/zinc and pre-coated steel, and 0.90 for aluminium to the same standards as the profiled sheets, notched where across profile

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or provided with a soft edge. Where flashings are required but are not detailed, design to **Steel and Tube Roofing Products** standard flashing details.

Underlays

2.4 UNDERLAY
Type: Breather type self supporting paper.

Components

2.5 FASTENERS GENERALLY
Ensure durability of all fasteners is at least Class 4 and not less than the roofing material being fixed. Where applicable all fasteners factory colour matched prior to installation

2.6 FIXING CLIPS
Galvanised steel or aluminium/zinc to suit the material and profile of the rigid sheet and location as required by **Steel and Tube Roofing Products**. Fix to steel with 16 mm x 10 gauge galvanised wafer head self-drilling screws and to timber with 50 mm long x 4.5 mm galvanised spiral rolled flat head nails.

2.7 FIXING SCREWS
Screws appropriate to the roofing material and the supporting member, as recommended by **Steel and Tube Roofing Products**.

2.8 RIVETS
Sealed aluminium, minimum diameter 4 mm.

2.9 SEALANT
Neutral curing silicone or polymer sealant as required by **Steel and Tube Roofing Products** and used as directed.

2.10 CLOSURE STRIPS
Compressible, profiled, closed cell foam strips to fit the sheet profile.

2.11 LAP SEALING TAPE
Closed cell, 3 mm x 16 mm self adhesive Trimseal tape.

3. EXECUTION

3.1 INSPECTION
Inspect the roof framing and supporting structure to ensure that it is complete and ready for roofing. Do not start work until all requirements are complete to the required standard.

3.2 STORAGE
Take delivery of and accept packs of roofing undamaged on delivery. Reject all damaged material. Store on a level firm base with packs well ventilated and completely protected from weather and damage. Do not allow moisture to build up between sheets. If sheet packs become wet, fillet or cross stack to allow air movement between sheets.

3.3 HANDLING
Avoid distortion and contact with damaging substances, including cement and swarf. Do not drag sheets across each other and other materials. Protect edges and surface finishes from damage. Use soft, flat soled shoes when fixing and for all other work on the roof.

3.4 SEPARATION
Isolate dissimilar materials (metal and non-metal) in close proximity as necessary by painting the surfaces or fitting separator strips. Place isolators between metals and treated timber or cement based materials. Do not use unpainted lead sheet or copper in contact with or allow water run-off onto galvanised or Zincalume® materials.

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Application

3.5 SET-OUT
Set out the planned layout before fixing commences, to ensure true lines and the correct relationship to module, grid and roof features.

3.7 END LAPS
Install in continuous lengths without end laps. Where end laps are necessary, seal both ends of the lap with lap sealing tape or sealant.

3.9 LAY ROOF UNDERLAY
Lay underlay horizontally or vertically with a 150 mm side lap, oversailing the spouting and/or gutters by 10-20 mm. Fit and lap roofing underlay manufacturer's requirements.

3.11 AVOID DAMAGE
Take care to avoid damaging pre-finished roofing both during and after fixing. Wear only soft-soled shoes on the finished surface. Allow foot traffic over the roof only within 300 mm of purlins or with foot placement in the pan of the profile. Where this is not possible, walk across two adjacent ribs.

3.12 MARKING AND CUTTING PROFILED METAL ROOFING
Use ink pen, chalk line or coloured pencil for marking roof sheets prior to cutting. Do not use black lead pencil for marking aluminium/zinc-based products. Cut by shear only, using nibblers or hand snips. Remove all cutting and drilling debris from the roof as soon as possible, ensuring that it does not contaminate gutters or lower surfaces.

3.13 INSTALLING PROFILED METAL ROOFING
Install and fix in accordance with NZ Steel's Installers Guide and to **Steel and Tube Roofing Products'** Product Guide. Use only screws as required by the roofing manufacturer. Colour matched fixings and accessories to be painted before installation.

Install in continuous lengths without end laps. Where end laps are necessary, seal both ends of the lap with lap sealing tape or sealant.

Confine foot traffic over the roof to within 300 mm of purlins or with foot placement in the pan of the profile. Where this is not possible, walk across two adjacent ribs.

3.15 FIXINGS
Refer to the roofing manufacturer's literature for fixing details, taking particular care in the higher wind uplift areas identified in NZS 3604, figure 10.17.

3.16 INSTALL FLASHING
Fasten ridges and all roof flashings at both edges through to the primary structure at centres required by the roofing manufacturer, allowing for localised wind forces. Close flashings neatly at the ends to provide a weatherproof and vermin proof appearance.

3.18 FLASHING PENETRATIONS
Flash all penetrations through the roof. Fit pipe flashings with a proprietary collar flashing, with other penetrations flashed as detailed and to provide a weathertight installation. Ensure that flashings are set to avoid any ponding of water.

3.20 USE OF SEALANTS
Select and use sealants only as recommended for the materials being used. Apply sealant in two narrow beads transversely across flashing intersections, close to the two edges. Avoid exposing sealant on outside surfaces.

3.21 ENSURE COMPLETE
Ensure the work is complete with all flashings, undercloaks, valleys, ridges and hips properly installed so the finished roof is completely weathertight.

3.22 REMOVE FILINGS
Remove metal filings from roofing surfaces at least daily.

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3.23 REMOVE
Remove trade rubbish and unused materials from the roof and surrounds daily during the work. Sweep down at the end of each day, and clean out spoutings, gutters and rainwater pipes on completion of the roof. Remove debris, unused materials and elements from the site.

3.24 REPLACE
Replace damaged or marked elements. Do not attempt to repair coatings by applying colour match paint to pre-finished surfaces.

3.25 LEAVE
Leave this work complete with all necessary flashings, undercloaks, valleys, ridges and hips all properly installed as the work proceeds so the finished roof is completely weathertight.

4. SCHEDULES

Roofing

4.1 STEEL AND TUBE ROOFING

Profile name:	Trimline
Material:	Zincalume
Base metal thickness:	0.44 mm
Colour:	natural

4.3 UNDERLAY

Brand/Type:	self supporting

4.6 PIPE FLASHINGS

Brand/Type:	Dektite

4.7 PROFILED FOAM STRIPS

Brand/Type:	Ecofoam

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4403W WATERPROOFING SYSTEMS WET AREA AND DECK MEMBRANES

1. GENERAL

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

Waterproofing Systems Ltd: Applicator specifications and training manual (May 2005)
Waterproofing Systems Ltd: Standard detailed drawings

BRANZ Appraisal Certificate 469 (2005): DuroSet™ & DuroQik™ external waterproofing membranes
BRANZ Appraisal Certificate 470 (2005): DuroSet™ & DuroQik™ wet area membranes

Copies of the above documents are available from Waterproofing Systems Ltd at www.waterproofing.co.nz, or by phone 0-6-357 9148 and by fax 0-6-357 9410.

1.3 QUALIFICATIONS
Waterproofing work to be carried out by licensed applicators approved by Waterproofing Systems Ltd. Approved applicators may be found by visiting www.waterproofing.co.nz or by phone 0-6-357 9148.

1.4 WARRANTY
Warrant this work under normal environmental and use conditions against failure.
Warranty period: 3 years

Refer to the PRELIMINARIES AND GENERAL section for the required form of warranty agreement and details of when completed warranties must be submitted.

1.5 MATERIAL WARRANTY
Provide a materials warranty in the suppliers standard form.

Warranty period: 15 years for tiled applications
5 years for exposed trafficable applications
From: Date of completion of the application

1.6 PERFORMANCE
Accept responsibility for the weather-tight performance of the completed membrane system.

1.7 SPECIAL DETAILS
Where a standard detail does not exist, or if a standard detail cannot be applied, an approved alternative must be obtained from Waterproofing Systems Ltd before proceeding with the installation.

2. PRODUCTS

2.1 WATERPROOFING MEMBRANE
DuroSet™ single component light beige coloured liquid water based flexible rubber membrane in pails marked with the manufacturer's mark.

2.2 QUICK CURING WATERPROOFING MEMBRANE
DuroQik™ two-part water based flexible waterproofing membrane comprising DuroQik™ liquid component plus the DuroMix™ curing compound in pails/bags marked with the manufacturer's mark.

2.3 CURING ADDITIVE
DuroMix™ cementitious curing additives mix in bags marked with the manufacturer's mark.

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2.4 TILE ADHESIVE
DuroFix™ ceramic tile adhesive for tiling over DuroSet™ or DuroQik™ membranes in bags marked with the manufacturer's mark.

2.5 TILE ADHESIVE FOR CONTINUOUSLY IMMERSED APPLICATIONS
C-Bond ceramic tile adhesive for tiling over DuroQik™ membranes in continuously immersed applications.

2.6 HI-BUILD ACRYLIC MEMBRANE
Synroof Hi-Build liquid applied acrylic membrane for exposed deck applications, with high elastomeric properties in pails marked with the manufacturer's mark and reinforced with chopped strand fibre approximately 160 - 250 gsm.

2.7 TINTING PASTE
A pigment paste to tint Synroof Hi Build to the desired colour.

2.8 PRIMER
GP general purpose primer in pails marked with the manufacturer's mark.

2.9 REINFORCEMENT
RF fabric tapes or pre-formed Elastofabric tapes and internal and external corners.

2.10 SEALANT
EF polyurethane sealant.

2.11 SUBSTRATE FILLER
Gripset 11Y combined with DuroMix™ to form a repair mortar.

3. EXECUTION

Conditions

3.1 GENERALLY
Comply with the requirements and instructions of Waterproofing Systems Ltd and the manufacturer's requirements.

3.2 STORAGE
Take delivery of pails of liquid membrane and accessories undamaged. Include for site handling facilities where required. Store, on a level surface, off concrete floors, out of direct sunlight and with the required accessories under conditions that ensure no deterioration or damage.

3.3 CHECK SUBSTRATE
Check that the substrate will allow work of the required standard and will comply with the requirements of the NZBC. Complete any remedial work identified before commencing any work.

3.4 CURING OF NEW CONCRETE
Allow concrete to fully cure before applying membranes. Maximum moisture content of concrete 75% RH.

3.5 FILM THICKNESS
Ensure that the film thickness specified in the Waterproofing Systems Ltd installation documents is achieved. Film thickness is an important factor to the waterproofing performance of the membrane and its long term durability.

Application – Preparation - DuroSet™/DuroQik™

3.6 SUBSTRATE CONDITION
Ensure that the substrate is in a suitable condition to allow work of the required standard and will comply with the requirements of the NZBC E2/AS1 for the relevant substrate and Waterproofing Systems Ltd requirements.

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Ensure that the substrate is well braced against movement and deflection and structurally sound. Ensure that the substrate falls to the rainwater/water outlets and water must not pond. Ensure all surfaces are clean, dry and free from dust and dirt, oils or grease with no projections of sharp materials.

Acid etch and/or diamond grid concrete surfaces as required to achieve a suitable surface.

3.7 SUBSTRATE PREPARATION
Remove projections and all debris, leaving the surface dust-free, oil-free and clean, with nothing that could diminish the adhesion of primers. Grind off steps or sharp protrusions caused by formwork joints.

3.8 PRIME SUBSTRATES
Prime substrates thoroughly with GP Primer ensuring a good even coverage and penetration as recommended by Waterproofing Systems Ltd. Where an existing coating is present on the substrate confirm with Waterproofing Systems Ltd technical specification that GP Primer is the most appropriate primer to use for the specific substrate.

3.11 ALLOW PRIMER TO DRY
Allow the primer to fully dry as recommended by Waterproofing Systems Ltd. Prevent contamination of the primed surface prior to application of the membrane.

3.12 FILL VOIDS
Voids and gaps to be filled with mortar incorporating 11Y primer additive and DuroMix™ or EF polyurethane sealant.

Installation – DuroSet™

3.13 WEATHER CONDITIONS
Install DuroSet™ liquid membrane only in fair weather with surface temperature above 10°C and below 35°C

3.14 INSTALL EF POLYURETHANE SEALANT
Install a 12 mm fillet of EF polyurethane sealant at junctions or substrate abutments before the application of RF fabric reinforcement

3.15 REINFORCEMENT
Provide reinforcement to the DuroSet™ membrane with RF or Elastofabric tapes to Waterproofing Systems Ltd specifications. Embed the tapes into a wet coat of the DuroSet™ and ensure that the reinforcing is completely covered with subsequent coatings of the liquid membrane.

3.16 JUNCTIONS IN SUBSTRATE
Ensure that all junctions in substrate i.e. wall/floor and wall/wall and substrate abutments are reinforced to waterproofing Systems Ltd specifications. Reinforce over cracks up to 2 mm maximum. Reinforce to enhance seals around penetrations and pipes through the membrane.

3.17 INSTALL DUROSET™
Install the DuroSet™ membrane to the substrate to Waterproofing Systems Ltd installation specifications. A minimum of two coats to apply a total minimum of 1.5 litres/m^2 giving a DFT of 1.2 mm is recommended by Waterproofing Systems Ltd. Apply subsequent coats at different directions to the preceding coat. Apply with roller (medium/long nap), long bristle brush or spray.

3.18 PROTECTION
Do not leave membrane exposed for prolong periods to UV light and the possibility of mechanical damage. Cover with protection sheeting if required. Apply tiling and/or surface toppings once the DuroSet™ membrane is fully cured according to Waterproofing Systems Ltd specifications.

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3.19 TILING
DuroFix™ ceramic tile adhesive to be used according to Waterproofing Systems Ltd specification.

Installation – DuroQik™

3.20 WEATHER CONDITIONS
Install DuroQik™ liquid membrane only in fair weather with surface temperatures above 5°C and below 25°C.

3.21 INSTALL EF POLYURETHANE SEALANT
Install a 12 mm fillet of EF polyurethane sealant at junctions or substrate abutments before the application of RF fabric reinforcement.

3.22 REINFORCEMENT
Provide reinforcement to the DuroQik™ membrane with RF or Elastofabric tapes to Waterproofing Systems Ltd specifications. Embed the tapes into a wet coat of the DuroQik™ and ensure that the reinforcing is completely covered with subsequent coatings of the liquid membrane.

3.23 JUNCTIONS IN SUBSTRATE
Ensure that all junctions in substrate i.e. wall/floor and wall/wall and substrate abutments are reinforced to waterproofing Systems Ltd specifications. Reinforce over cracks up to 2 mm maximum. Reinforce to enhance seals around penetrations and pipes through the membrane.

3.24 INSTALL DUROQIK™
Install the DuroQik™ membrane to the substrate to Waterproofing Systems Ltd installation specifications. Ensure the DuroMix™ curing additive is fully dispersed through the DuroQik™ liquid before installation. A minimum of two coats to apply a total minimum of 1.5 litres/m^2 giving a DFT of 1.2 mm is recommended by Waterproofing Systems Ltd. Apply subsequent coats at different directions to the preceding coat. Apply with roller (medium/long nap), long bristle brush or spray.

3.25 PROTECTION
Do not leave membrane exposed for prolonged periods to UV light and the possibility of mechanical damage. Cover with protection sheeting if required. Apply tiling and/or surface toppings once the DuroQik™ membrane is fully cured according to Waterproofing Systems Ltd specifications.

Application – Preparation - Synroof Hi-Build

3.27 SUBSTRATE CONDITION
Ensure that the substrate is in a suitable condition to allow work of the required standard and will comply with the requirements of NZBC E2/AS1 for relevant substrate and Waterproofing Systems Ltd requirements.

Ensure that substrate is well braced against movement and deflection. Ensure that the substrate falls to the rainwater outlets and water must not pond. Ensure all surfaces are smooth, clean, dry and free from dust and dirt with no projections of sharp materials that will cause damage to the membrane. Ensure metal surfaces are free from rust. Clean and treat any substrates affected by mould or fungus with a suitable fungicide.

3.28 SUBSTRATE PREPARATION
Remove projections, remove all debris, leaving the surface dust-free, oil-free and clean, with nothing that could diminish the adhesion of primers. Grind off steps and sharp protrusions caused by formwork joints.

3.29 PLYWOOD SUBSTRATE
Ensure that sheets have been stack bond laid (fully offset), and laid tight-butted, with all edges fully supported. Ensure sheets are rigid, with joints flush, no lumps or hollows, smooth, clean, dry (15% maximum moisture content) and free of debris. Plywood to be minimum 17mm tongue and groove, H3 treated and conform to AS/NZS 2269. Sheets to

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be fixed with glue and stainless steel screws counter sunk, chamfered edges, coving fillets to all up-stands and installed to Waterproofing Systems Ltd specification.

3.30 PRIME PLYWOOD SUBSTRATES
Prime plywood substrate thoroughly with GP Primer ensuring a good even coverage and penetration as recommended by Waterproofing Systems Ltd.

3.33 ALLOW PRIMER TO DRY
Allow the primer to fully dry as recommended by Waterproofing Systems Ltd. Prevent contamination of the primed surface prior to application of the membrane.

Installation – Synroof Hi-Build

3.34 WEATHER CONDITIONS
Install Synroof Hi-Build membranes only in fair weather with air temperature above 10°C and below 25°C. Ensure substrate is dry at time of laying and has maximum moisture content of 15%. Do not lay in hot or humid conditions as this will affect the curing of the membrane.

3.35 UPSTANDS
Install fillets, minimum 20 mm to all upstands and ensure a tight neat fit

3.36 JOINT, CORNER AND UPSTAND REINFORCEMENT
Install RF or Elastofabric tape reinforced membrane system across all plywood sheet joints, internal and external corners and upstands prior to installing the first body coat of the membrane system. Allow to dry.

3.37 INSTALL REINFORCED SYNROOF HI-BUILD BODY COAT
Install body coat of the Synroof Hi-Build membranes to Waterproofing Systems Ltd installation specifications at a rate of 0.8 - 1.0 kg/m^2. Reinforce this coat with 160 - 250 gsm chopped strand fibre ensuring no air entrapment or bridging. Install the membrane system to the specified dry film thickness (DFT). Refer to 4. SELECTIONS. Ensure coat is fully dry before installation of the next coat.

3.38 INSTALL SYNROOF HI-BUILD TOP COAT
Apply the top coat of the Synroof Hi-Build to Waterproofing Systems Ltd installation specifications at a rate of 0.8 -1.0 kg/m^2 per coat. Ensure good even coverage and film thickness.

3.39 INSTALL WEAR COAT FINISH
Incorporate an even coating of fine dry silica sand in the final coat of the membrane as described in the Waterproofing Systems Ltd specification at a rate of 0.5 kg/m^2. Apply to Waterproofing Systems Ltd specification

3.40 TINTING SYNROOF HI BUILD
Add tinting paste to Synroof Hi-Build and disperse thoroughly using a mechanical stirrer. Minimise any air entrapment. Tinting to be light colours only with a light reflectance value of 40% or more.

Completion

3.41 CLEAN UP
Clean up as the work proceeds.

3.42 ACCEPTANCE
- Arrange for an inspection of the completed work.
- Complete Waterproofing Systems Ltd Quality Control sheets and provide to them for the issuing of the Materials Warranty.
- Protect the membrane until completion of the contract works.

3.43 LEAVE
Leave this work in a sound and waterproof condition and free of any defect

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3.44 REMOVE
Remove debris, unused materials and elements from the site.

4. SELECTIONS

4.1 DUROSET™
Location: bathrooms / showers
Supplier: Waterproofing Systems Ltd
Brand: DuroSet™
Dry film thickness: 1.2 mm

4.2 DUROQIK™
Location: decks
Supplier: Waterproofing Systems Ltd
Brand: DuroQik™
Dry film thickness: 1.2 mm

4.3 SYNROOF HI-BUILD
Location: entry roofs, valley gutters
Supplier: Waterproofing Systems Ltd
Brand: Synroof Hi-Build
Dry film thickness: 1.5 - 2.0 mm
Finish: to be selected
Tint colour: grey

4.4 PRIMER
Location: as required.
Supplier: Waterproofing Systems Ltd
Brand: GP Primer

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4502 ALUMINIUM WINDOWS AND DOORS

1. GENERAL

1.1 RELATED SECTIONS
Refer to 4601 GLAZING for glazing.

1.2 DOCUMENTS
Documents referred to in this section are:

NZS 3604	Timber framed buildings
AS 3715	Metal finishing - Thermoset powder coatings for architectural applications
WANZ	Aluminium Window Handbook
WANZ	Specification for powder coatings on architectural aluminium products
WANZ	Installation code for aluminium joinery products

BRANZ Bulletin 349: Finishes for aluminium

1.6 CERTIFICATION
Provide a certificate from a laboratory accredited by International Accreditation of New Zealand that the windows and doors offered comply with the performance requirements of NZS 4211.

1.7 QUALIFICATIONS
Fabrication by a member of WANZ.

1.8 PERFORMANCE
The structural and weather-tight performance of the completed window installation, the glazing and infill panels is the responsibility of the window manufacturer.

2. PRODUCTS

2.1 WINDOW AND DOOR SECTIONS
Form all aluminium members from extruded sections. Folded sections are restricted to flashings and concealed members only.

2.2 FLASHINGS GENERALLY
Material, grade and colour of head flashings to match the window frames. Ensure that materials used for head, jamb and sill flashings are compatible with the window frame materials and fixings and cladding materials.

Components

2.3 FABRICATION SEALANT
To the window manufacturer's requirements.

2.4 GLAZING TAPE AND GASKETS
To the window manufacturer's requirements.

2.5 FIXINGS
Ensure all fixings and bracketing are compatible with aluminium. Do not use electroplated zinc fasteners or brass fastenings.

Finishes

2.6 ORGANIC POWDER COATING FINISH
To AS 3715 and WANZ Specification for powder coatings on architectural aluminium products. All finished surfaces to show uniformity of gloss and colour (to match approved sample) free of all coating defects.

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3. EXECUTION

3.1 CONFIRM
Confirm all framing openings on site for dimension, plumb and straightness prior to fabrication or ordering of aluminium joinery.

3.2 EXECUTION GENERALLY
Execute all fabrication and installation work in accordance with the requirements of NZS 4211, WANZ Aluminium window handbook and WANZ Installation code for aluminium joinery products.

3.3 HANDLING
Avoid distortion of elements during transit, handling and storage. Prevent pre-finished surfaces from rubbing together. Prevent contact with mud, plaster and cement. Do not deliver to site any elements which cannot be immediately unloaded into suitable conditions of storage.

3.4 CORROSION PROTECTION
Seal or suitably coat cut ends and holes drilled in aluminium before the frames are installed. Before fixing, apply bituminous coatings, slips or underlays between dissimilar metals in contact, or aluminium in contact with concrete.

3.5 CONFIRM PREPARATION OF WALL OPENINGS
Confirm that wall openings have been prepared ready for the installation of all window and door frames. Do not proceed with the window and door installation until required preparatory work has been completed.

Required preparatory work includes the following:
- wall cladding underlay/building wrap to openings finished and dressed off ready for the installation of window and door frames
- claddings neatly finished off to all sides of openings
- interior linings neatly trimmed ready for installation of jamb liners and completion of air seals to all sides of openings
- installation of flashings (those which are required to be installed prior to frames).

3.6 FIX FRAMES
Fix frames rigidly in place without distortion, to the window manufacturer's and WANZ Aluminium window handbook requirements, plumb, true to line and face, weathertight and with all openings operating freely.

3.7 DRAINAGE
Provide anti-condensation channels to all sills. Sills to sashes and fixed lights to incorporate positive drainage to the exterior.

Flashings and air seals

3.8 INSTALL FLASHINGS
Install flashings to heads, jambs and sills of frames as supplied and required by the window manufacturer and as detailed on the drawings. Finish head flashings to match window finish.

Place all flashings so that the head flashing weathers the jamb flashings, which in turn weathers over the upstand of the sill flashing. Ensure that sill flashings drain to the outside air.

Except where window/door frames are recessed, ensure that head flashings over-sail jamb facings by 15 mm at each end.

3.9 COMPLETE AIR SEAL
Form an air-tight seal by means of proprietary expanding foam, compressible foam strips, or sealants used with backing rods, applied deep within the reveal to completely fill the gap between joinery and structural framing. Ensure that in combination with the internal linings a complete air seal is created.

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Completion items

3.10 SEAL FRAMES ON SITE
Seal frames to each other and to adjoining structure and finishes, all as required by the window manufacturer and to make the installation weathertight. Do not seal the junction between the sill member and the cladding or sill flashing which must remain open.

3.11 PROTECTIVE COVERINGS
Retain protective coverings and coatings and keep in place during the fixing process. Provide protective coverings and coatings where required to prevent marking of surfaces visible in the completed work and to protect aluminium joinery from following trades. Remove protection on completion.

3.12 SAFETY
Indicate the presence of transparent glasses for the remainder of the contract period, with whiting, tape or signs compatible with the glass type. Indicators other than whiting must not be applied to the glass surface. Masking tape must not be used for this purpose.

3.13 MANIFESTATIONS
To NZS 4223, part 3, 303.1.

3.14 TRADE CLEAN
Clean off or remove safety indicators at completion of the building.

3.15 CLEAN FRAMES
On completion clean down both sides of window and door frames using the methods required by the window and door manufacturer.

4. SCHEDULES

4.1 WIND ZONE

Building wind zone:	very high (as determined from table 5.1 of NZS 3604)

Materials

4.2 WINDOWS AND DOORS TYPE

Manufacturer:	to be selected
Type/model:	to be selected

4.5 WINDOW AND DOOR JAMB LINERS

Type:	Gib FYRELINE
Thickness:	19 mm

4.7 ANODISING

Minimum average thickness:	12 microns (for external aluminium)
Colour:	silver

4.8 FLASHINGS

Material/type:	silver anodised aluminium
Pattern:	Formed to suit details provided

Components

4.9 HARDWARE

hinges, latches & handles	grey powder coat
louvre gear	grey pvc

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4601 GLAZING

1. GENERAL

1.1 DOCUMENTS
Documents referred to in this section are:

NZBC B1/AS1	Structure, 7.0 Glazing
NZBC F2/AS1	Hazardous building materials, 1.0 Glazing
NZBC F4/AS1	Safety from falling, 1.0 Barriers in buildings
AS/NZS 2208	Safety glazing materials in building
NZS 3604	Timber framed buildings
NZS 4223	Glazing in buildings Part 1: The selection and installation of glass in buildings Part 3: Human impact safety requirements Part 4: Dead, wind and snow loading
AS/NZS 4666	Insulating glass units
AS/NZS 4667	Quality requirements for cut-to-size and processed glass

2. PRODUCTS

2.1 GLASS
Processed glass to AS/NZS 4667, thickness to NZS 4223 parts 1, 3 and 4 unless otherwise specified:

- Clear float glass:	Clear annealed transparent float glass
- Laminated glass:	Grade A safety glazing material to AS/NZS 2208 with PVB or CIP resin interlayer.
- Toughened glass:	Grade A safety glazing material to AS/NZS 2208.
- Tinted float glass:	Body tinted float glass

2.2 MIRROR GLASS
Float mirror glass to NZS 4223, part 1, clause 101.2.2.2: Silvering quality (selection S), with silver and copper plating and 2 coats of protective paint.

2.3 SAFETY MIRROR GLASS
Float mirror glass with silver plating and vinyl backing, safety glazing material to AS/NZS 2208.

2.4 GLASS SCREENS
Proprietary shower/bath screens, formed to shape before toughening, complete with matching hardware.

Components, aluminium glazing

2.10 GLAZING TAPE AND GASKETS
Single/double sided pressure sensitive self-adhesive low/medium/high density foam tapes/butyl tapes selected to suit the glazing detail to window manufacturers' requirements.

2.11 SETTING BLOCKS
Santoprene/Neoprene, 80-90 Shore A hardness, set at quarter points or to detail, to support the weight of glass panes.

Components, mirrors

2.12 MIRROR ADHESIVE
Adhesive mirror-mastic and double-sided adhesive tape.

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3. EXECUTION

3.1 GLAZING GENERALLY
To NZS 4223, part 1, and for human impact safety glazing to NZS 4223, part 3.
To AS/NZS 4666 for IGU's.

Application mirrors

3.10 MIRRORS, ADHESIVE FIXED
Fix with adhesive mirror-mastic and double-sided adhesive tape onto 40x4.5mm H3 plywood spacing frame set min 40mm in from outside edge over adhesive fixed electric heat pads.

Application miscellaneous

3.11 INSTALL PLEXIGLASS BALUSTRADES
Confirm/design and carry out installation to details on drawings of Plexiglass Satinice DC balustrade infill panels to balustrades to upper floor decks. Confirm colour and finish of Plexiglass with Owner and Designer prior to ordering materials. Conform to NZBC F4/AS1: Safety from falling: 1.0 Barriers in buildings.

3.12 INSTALL GLASS SCREENS
Install shower and bath screens and doors to manufacturer's requirements. Fix wall channel with silicone sealant.

Finishing

3.13 SAFETY
After glazing indicate the presence of transparent glasses, with whiting, tape or signs compatible with the glass type.

3.14 MANIFESTATIONS
To comply with NZS 4223, part 3, 303.1.

3.15 TRADE CLEAN
Clean off or remove safety indicators at completion of the building.

4. SCHEDULES

4.1 WIND ZONE

Building wind zone:	very high (as determined from table 5.1 of NZS 3604)

Mirrors

4.11 MIRROR, SELECTIONS

Location:	refer to drawings
Dimensions:	refer to drawings
Thickness:	6 mm
Fixing method:	adhesive mirror mastic

Glass screens and balustrades

4.13 PLEXIGLASS BALUSTRADE

Location:	upper floor deck
Brand/type:	Plexiglass Satinice DC

4.14 FRAMELESS SHOWER SCREENS AND DOORS

Location:	all showers
Brand/type:	to be selected, refer to drawings.
Glass:	clear toughened
Thickness:	as required
Hardware:	chrome finish

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5101G GIB® PLASTERBOARD LININGS

1. GENERAL

1.1 DOCUMENTS
Documents referred to in this section are:

AS/NZS 2589 Gypsum linings in residential and light commercial construction - Application and finishing, Part 1: Gypsum plasterboard

BRANZ technical paper P21: A wall bracing test and evaluation procedure
BRANZ Appraisal Certificate No. 289 (2001): GIB® Fire Rated Systems

GIB® Site Guide (September 2003)
GIB® Bracing Systems (July 2003)
GIB® Rondo™ Metal Ceiling Batten Systems
GIB® Goldline™ Tape-on Trims

1.2 MANUFACTURER'S DOCUMENTS
Manufacturer's and supplier's documents which refer to work in this section are:

General:	GIB® Site Guide (September 2003)
Sound:	GIB Noise Control® Systems (July 2000)
	GIB® Sound Barrier® Noise control system for Floors (July 2002)
	GIB® Rondo Quiet Stud (October 2004)
Wet area:	GIB Aqualine® Wet Area Systems (October 2002)
Fire rated systems:	GIB® Fire Rated Systems (August 2001)
Bracing:	GIB® Bracing Systems (July 2003)
Ceilings:	GIB® Rondo™ Metal Ceiling Batten Systems
Accessories:	GIB-Cove®
	GIB® Goldline™ Tape-on Trims
	GIB® UltraFlex high impact corner mould

Copies of the above literature are available by phoning 0800 100 442.

1.3 QUALIFICATIONS
Carry out this work with competent workers experienced in GIB® drywall lining techniques. Submit evidence of experience on request.

1.4 QUALITY CONTROL
Inspect the finished surface of the installed plasterboard:
- before applying sealer and
- before applying finish coatings or decorative papers,

so that after assessment of the type and/or angle of illumination and its effect on the completed decorative treatment, group approval and acceptance of the surface can be given.

1.5 SOUND CONTROL REQUIREMENTS
If sound control is required, refer to **GIB Noise Control® Systems** (July 2000). Provide sound rated wall and floor/ceiling systems as listed in 4. SCHEDULES.

2. PRODUCTS

2.1 NO SUBSTITUTIONS
No substitutions to be made to any specified GIB® plasterboard sheets, or associated products, components or accessories.

2.2 GIB® PLASTERBOARD
Gypsum plaster core encased in a face and backing paper formed for standard and water resistance use to AS 2588 and for fire-rated use in accordance with BRANZ Appraisal Certificate No. 289 GIB® fire rated systems. Refer to 4. SCHEDULES for location, type, thickness and finish.

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GIB® Standard sheets
GIB Ultraline® high quality surface sheets
GIB Fyreline® fire resistant board
GIB Braceline® wall bracing sheet
GIB Aqualine® wet area board

2.3 CORNICE
GIB RONDO P50 metal trim

2.5 SCREWS
GIB® Grabber™ drywall screws.

2.6 NAILS
GIB® Nails (gold passivated).
Size: 30 mm, 40 mm, 50 mm

2.7 METAL ANGLE TRIMS
GIB® galvanised steel slim angle trims.

2.8 CONTROL JOINTS
GIB® Rondo™ P35 Control Joint

2.9 TAPE ON TRIMS AND EDGES
GIB® Goldline™ tape-on paper tape and galvanised steel trims and edges and/or GIB® UltraFlex high impact corner mould.

2.10 ADHESIVE
Timber frame: GIBFix® Wood Bond wallboard adhesive.
Timber frame LOSP treated: GIBFix® All Bond wallboard adhesive.

2.11 JOINTING COMPOUND
Bedding compound: GIB Tradeset®, GIB® Lite Blue and GIB ProMix® Taping compound
Finishing compound: GIB ProMix® GIB ProMix®, Lite, GIB® All Purpose and GIB Plus 4®

2.12 JOINTING TAPE
GIB® paper jointing tape.

2.14 SKIMCOAT
Resene Broadwall Surface Preparation.

2.15 SEALER
Resene Broadwall acrylic based surface sealer for general areas and Resene SureSeal for wet areas.

3. EXECUTION

3.1 HANDLE AND STORE
Handle and store sheets and accessories in dry conditions stored indoors out of direct sunlight in neat, flat stacks on either an impervious plastic sheet or clear of the floor with no sagging and avoiding damage to ends, edges and surfaces. Reject all damaged material.

3.2 CHECK SUBSTRATE
Do not commence work until the substrate is plumb, level and to the standard required by the sheet manufacturer's requirements. Moisture levels not to exceed 16% at the time of lining.

3.3 MOISTURE CONTENT
Maximum allowable moisture content in accordance with AS/NZS 2589.1 for:
Framing at lining: 12 - 16% for plasterboard linings

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3.4 PROTECT
Protect all surfaces, cabinetwork, fittings, equipment and finishes already in place from the possibility of water staining and stopping damage.

3.5 LEVELS OF FINISH
Provide the scheduled plasterboard surfaces to the levels of finish specified in AS/NZS 2589.1.

3.6 LEVELS OF FINISH ACCEPTANCE
Before commencing work, agree in writing upon the expectation for the final quality of finish. The specified level of finish for each area should be appropriate for the type of decoration and the type and angle of the primary source of illumination specified in that area.

3.8 LINING WALLS AND CEILINGS GENERALLY
Form in accordance with the **GIB® Site Guide** (September 2003).

3.9 QUIET ZONE SOLUTIONS
If noise control required, refer to **GIB Noise Control® Systems** (July 2000), GIB® Sound Barrier® Noise control system for Floors (July 2002) or GIB® Rondo Quiet Stud (October 2004). Refer to 4. SCHEDULES.

3.10 DRY ZONE SOLUTIONS
Form in accordance with GIB Aqualine® Wet Area Systems (October 2002). Refer to 4. SCHEDULES.

3.11 BRACING
Form in accordance with **GIB® Bracing Systems** (July 2003). Refer to 4. SCHEDULES.

3.12 FORM FIRE RATED SYSTEMS
Form in accordance with **GIB® Fire Rated Systems**.

3.13 FORM CONTROL JOINTS
Form in accordance with the **GIB® Site Guide**.

3.14 CORNICE
Install GIB RONDO P50 metal trim to all wall to ceiling junctions except inside cupboards which shall be square stopped finished.

3.15 TAPE-ON TRIMS
Install in accordance with GIB® Goldline™ Tape-on trims or GIB® UltraFlex high impact corner mould.

3.16 STANDARD OF FINISH
In accordance with the **GIB® Site Guide** (September 2003) and AS/NZS 2589.1.

3.17 REPLACE
Replace all damaged boards or elements.

3.18 CLEAN DOWN
Clean down completed surfaces to remove all irregularities and finally sand down with fine paper to the sheet manufacturer's requirements, to leave completely smooth and clean to the standard required for all following trades.

3.19 REMOVE
Remove all debris, unused materials and elements from the site.

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4. SCHEDULES

4.1 STANDARD SYSTEMS

Location	Plasterboard type / Lining requirements	Thickness	Finish level
Dry room walls	GIB® Standard	10 mm	4
Bathroom walls	GIB Aqualine®	10 mm	4
Ground floor ceilings	GIB Ultraline®	10 mm	5
Upper floor ceilings	GIB Ultraline	13mm	5

4.2 SOUND RATED SYSTEMS

Location	Plasterboard type / Lining requirements	STC / System specification	Finish level
To be selected	GIB Noiseline®		4

4.3 FIRE RATED SYSTEMS

Location / Type	Plasterboard type / Lining requirements	FRR / System specification	Finish level
Refer to drawings	GIB Fyreline®	GBTL 30	4

4.4 BRACING SYSTEMS

Location	Plasterboard type / Lining requirements	Bracing rating / System specification	Finish level
Refer to drawings	GIB Braceline®		4

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5501 INTERIOR TIMBER DOORS AND WINDOWS

1. GENERAL

1.1 RELATED SECTIONS
Refer to 4601 GLAZING for glazing

1.2 DOCUMENTS
Documents referred to in this section are:

NZS 3602	Timber and wood-based products for use in building
NZS 3604	Timber framed buildings
NZS 3610	Profiles of mouldings and joinery

2. PRODUCTS

2.1 TIMBER
To NZS 3602.

2.2 PROFILES, FACINGS, SCRIBERS AND ARCHITRAVES
Traditional profiles to NZS 3610. Proprietary profiles and special profiles as detailed. Pencil radius corners of profiled schedules for paint finish.

2.3 INTERIOR DOORS, MDF FACED
Hollow core doors as scheduled complete with matching 6 mm clashing strip to both sides and to the exposed edge of cavity slider doors.

2.6 DOOR HINGES
Size and gauge to carry door. 3 hinges per door.

2.8 INTERIOR SLIDING-FOLDING DOOR GEAR
Bi-fold pattern to suit size and weight of doors and as detailed.

3. EXECUTION

3.1 SITE MEASURE
Confirm framed openings on site for dimension, plumb and straightness prior to fabrication or ordering of timber joinery. Confirm lintel head and sill deflection for sliding or bifold door systems is within the manufacturer's specified tolerances. Provide not less than 10 mm unless otherwise required.

3.2 EXECUTION GENERALLY
Manufacture to the 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).

3.3 FACTORY FIT HARDWARE
Factory fit the following where specified: -
- Hinges

3.4 FACTORY FINISHING
Before delivery to site: -
- Brace square and provide protection to assemblies during delivery to site. Where factory glazed, indicate the presence of transparent glasses with whiting, tape or signs compatible with the glass type.

Internal doors

3.8 INTERNAL DOOR LINERS, EXTENDED
Heads and jambs finished 30 mm, rebated for wall linings and extended a minimum of 10 mm. 10 mm planted door stops. Hang doors on hinges, sliding and bi-fold gear to the door manufacturer's requirements and to operate freely. Countersink and plug frames scheduled for clear finish. Fit hardware.

Completion

3.10 CHECK
Check and adjust operation of all sashes, doors, hardware and furniture.

3.11 TEMPORARY PROTECTION
On completion remove any temporary protection and leave ready for following work.

4. SCHEDULES

4.5 INTERIOR HOLLOW CORE DOORS, PAINT

Brand/type:	PLYCO MANHATTEN /FLUSH
Door facing:	MDF
Finish:	gloss paint
Hardware:	as scheduled

4.9 INTERIOR SLIDING-FOLDING DOOR GEAR

Brand/type:	Henderson

4.10 INTERIOR DOORS

Reference	Description	Hardware
D1-01,D2-08,D3-08,	710x2000 Flush	Windsor 6047 SCP bar handle G298 NP roller catch
D1-02, D1-05, D1-08, D1-09, D2-01,D2-03, D2-06,D2-09,D3-01, D3-03,D3-06,D3-09,	810x2200 Manhatten	Guardsman B01/57 SS furniture G33S SC door stop LP 3722 N tubular latch
D1-03,D1-06,D1-12, D2-04,D2-07,D2-11, D3-04,D3-07,D3-11,	2/510x2000 Flush	2/ Windsor 6047 SCP bar handles 2/ G298 NP roller catches
D1-04, D2-05,D3-05,	2/460x2000 Flush	2/ Windsor 6047 SCP bar handles 2/ G298 NP roller catches
D1-07, D1-13,D2-02, D2-10,D3-02,D3-10,	760x2200 Manhatten	Guardsman B01/57 SS furniture G33S SC door stop LP 3722 N tubular latch
D1-10, D1-11,	4/410x2000 Flush	2/ Windsor 6047 SCP bar handles Henderson bi-fold gear
D2-12,D3-12,	4/460x2000 Flush	2/ Windsor 6047 SCP bar handles Henderson bi-fold gear

Accessories

4.11 DOOR AND WINDOW HINGES

	Type	Size	Material	Pin
Interior doors	Loose pin	89 mm	Zinc-plated steel	Loose-pin zinc-plated steel

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5503 BATHROOM AND TOILET FIXTURES

1. GENERAL

1.1 RELATED SECTIONS
Refer to 4601 GLAZING for mirrors and frameless shower and bath screens.

1.2 DOCUMENTS REFERRED TO
Documents referred to in this section are:

NZS 4121	Design for access and use of buildings and facilities by disabled persons

Documents listed above and cited in the clauses that follow are part of this specification. However, this specification takes precedence in the event of it being at variance with the cited document.

2. PRODUCTS

Refer to 4. SCHEDULES/drawings.

3. EXECUTION

3.1 RETAIN
Retain fixtures, fittings and hardware in the manufacturer's original packaging and ensure that units are complete with associated fixings and installation instructions.

3.2 INSPECTION
Before starting the installation of proprietary items, check relevant spaces and wall and floor finishes for any condition that would not allow the proper installation of any unit. Do not proceed until such conditions have been remedied.

3.3 LOCATE
Locate units at heights and/or locations shown on the drawings, or as required to comply with relevant Codes and Standards. For any dimension not shown or known, request direction before proceeding.

3.4 CUTTING AND FITTING
Where cutting and fitting of the substrate is necessary for installing any unit, carry out this work before the painting or finishing of that surface. Remove any hardware when required for painting.

3.5 INSTALLING UNITS
Install each unit in accordance with the proprietary fixture manufacturer's requirements, using the templates and tools supplied or recommended by them. Set units level, plumb and true to line and required location, with moving parts and actions freely and easily operating. Do not make any modifications to supplied units.

3.6 ADJUST
Adjust and check each operating unit for correct and smooth functioning. Replace those units that cannot be adjusted if they do not function correctly. Clean units and adjoining surfaces upon completing their installation.

3.7 REPLACE
Replace damaged or marked elements.

3.8 LEAVE
Leave work with parts fully and freely working and to the standard required by following procedures.

3.9 REMOVE
Remove debris, unused materials and elements from the site.

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3.10 PROTECT
Protect units from damage or marking.

3.11 FINAL ADJUSTMENT
Where units are installed more than a month prior to project completion, return and make a final check and adjustment of units just prior to hand over, to ensure that they are operating correctly, fitted properly and are undamaged.

4. SCHEDULES

4.1 PROPRIETARY FIXTURES AND FITTINGS
Complete with matching screws.

Fixture	Location	Make, model and finish
Glass shelf	Bathroom & Ensuite	Alexander Synergy **X2** in each **6 off total**
Toilet brush	Bathroom & Ensuite	Alexander Synergy **X1** in each **3 off total**
Toilet roll holders	Bathroom & Ensuite	Alexander Synergy **X1** in each **3 off total**
Robe hooks	Bathroom	Alexander Synergy **X1** in each **3 off total**
	Ensuite	Alexander Synergy **X2** in each **6 off total**

4.2 ELECTRIC POWERED APPLIANCES
Complete with matching screws.

Fixture	Location	Make, model and finish
Heated towel rails	Bathroom **X3**	Skope LTR7946 heated ladder
	Ensuite **X3**	DCS Tira heated ladder & shelf

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6201 TILING

1. GENERAL

1.1 DOCUMENTS
Documents referred to in this section are:

AS 2358	Adhesives - For fixing ceramic tiles
AS 3740	Waterproofing of wet areas within residential buildings
AS 3958	Ceramic tiles, 3958.1: Guide to the installation of ceramic tiles
BS 6431	Ceramic floor and wall tiles

BRANZ Good practice guide: Tiling

1.3 QUALIFICATIONS
Carry out tiling work using competent tilers, experienced with the materials and techniques specified.

1.4 ADHESIVES COMPATIBILITY
Adhesives selected for use on proprietary substrates or waterproof membranes to have documented compatibility approval from the respective manufacturers.

2. PRODUCTS

2.1 TILES
To BS 6431, parts 1 to 23 inclusive. Refer to 4. SCHEDULES.

2.4 LIQUID WATERPROOFING MEMBRANE
To AS 3740.

2.5 UNDERTILE HEATING
Proprietary electric undertile heating system complete with thermostat/controller.

2.6 CEMENT BASED SCREED
Mix of 3:1 Portland cement, wash-mix sand, gauged with liquid polymer additive to the tile manufacturer's requirements.

2.7 TILE ADHESIVE
To AS 2358.

2.8 GROUT
Cement based, compressible and to suit the particular location and use.

2.9 MOVEMENT CONTROL JOINT SEALANT
To BRANZ Good practice guide: Tiling, section 5.0.

3. EXECUTION

3.1 HANDLING AND STORAGE
Take delivery of packets of tiles undamaged and dry. Handle tiles with care to avoid chipping, soiling and damage. Store on hard level standings in non-traffic, non work areas that are enclosed, clean and dry.

3.2 CHECK TILES
Check tiles to ensure that they are as specified, from the same batch, of a consistent colour and pattern and sufficient to complete the work. Reject tiles that vary widely in colour or pattern. Reject tiles that are damaged.

3.3 CONFIRM LAYOUT
Before commencing work confirm the proposed layout of tiles and expansion joints and other visual considerations of the finished work.

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3.4 SETTING OUT
Before commencing the setting out confirm the number and location of cut tiles. Minimise in number with no cut tiles less than half size and only at the perimeter of the work.

3.5 SUBSTRATE
Ensure that all services and accessories are in place and located to suit the tile layout, with the substrate required for tiling work. Commencement of the work means the substrate and environment are accepted by the tile layer as satisfactory.

3.6 TEMPERATURE
Do not carry out tiling where the ambient temperature is below 5°C, or onto a substrate with a temperature higher than 40°C.

3.7 TILING GENERALLY
Prepare surfaces and carry out the tiling work in accordance with AS 3958, part 1, as modified by BRANZ Good practice guide: Tiling.

3.11 CONCRETE FLOORS PREPARATION
Remove from the surfaces all contaminants such as paints, oils, release and curing compounds. Remove all projections, unevenness and loose material to leave a clean, dust and dirt-free surface.

Remove all existing finishes down to the concrete. If the exposed concrete finish is not suitable then scabble the surface to expose the coarse aggregate.

3.12 TIMBER FLOORS PREPARATION
Confirm with the owner that the deflection of the timber floor is within the range of $^{1}/_{360}{}^{th}$ span. Remove from the surface all existing finishes, punch nail heads and sand to a smooth, clean, dust-free surface.

3.14 APPLYING LIQUID WATERPROOFING MEMBRANE
Apply the selected liquid waterproof membrane system to the membrane manufacturer's requirements and in accordance with AS 3740 and to BRANZ Good tiling practice, 7.0 Waterproofing interior wet areas.

3.15 INSTALL WATERPROOFING MEMBRANE
Install waterproofing membrane between the tile adhesive and the substrate. Reinforce all junctions of the waterproofing membrane to BRANZ Good tiling practice; 7.0 Waterproofing interior wet areas. Unless otherwise specified or shown on the drawings, install waterproof membranes as follows: -

Unenclosed shower cubicle
To 1800 mm above floor and 300 mm above shower rose.
To at least 1500 mm from shower rose.
To the floor within 1500mm of the shower rose.

3.16 INSTALL UNDERTILE HEATING
Clean thoroughly and prepare as for tiling. Remove any paint overspray and plaster spills. Ensure that waterproofing has been completed. Install electric undertile heating system to manufacturers requirements with the element connected to a continuity tester during installation. Leave ready for tiling and connection to the electrical system.

3.17 LAYING CEMENT SCREED
Apply a proprietary cement slurry bond coat over the whole of the floor to the tile manufacturer's requirements. Mix and place a 40 mm thick mortar bed over the bond coat and firmly tamp, screed and compact to the required level. Form screeds with a deviation from plane of not more than 5 mm over 3 metres.

In waterproofed areas where the cement screed has been laid over the waterproofing membrane, prepare the screed surface by applying a further waterproof coating before laying tiles.

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3.18 FALLS

Form screeds in areas where water is used in significant amounts with a deviation from plane of not more than 5 mm over 3 metres. Unless otherwise specified form screeds with the following falls:

1 : 40 minimum	For tiled decks which also act as a roof
1 : 40 minimum	For paving over ground
1 : 40 minimum	For shower bases
1 : 40	For shower bases for people with disabilities
1 : 50 minimum	For commercial kitchens

3.19 TILE FIXING GENERALLY

Apply adhesive, prepare and fix tiles by the method required by the adhesive manufacturer and tap them firmly into place.

3.20 TILE FIXING, CONCRETE, CEMENT-BASED ADHESIVE, THICK BED

Apply and float thick bed cement-based adhesive to a maximum 6 mm bed thickness to the tile manufacturer's requirements. Rib surface with a notched trowel, press tiles and beat it into place with 3 mm joints, and to obtain required coverage of adhesive on the back of each tile.

3.21 TILE FIXING, CONCRETE, CEMENT-BASED ADHESIVE, THIN BED

Apply and float thin bed cement-based adhesive to a minimum 3 mm bed thickness to the tile manufacturer's requirements. Rib surface with a notched trowel, press tiles and beat it into place with 3 mm joints, and to obtain required coverage of adhesive on the back of each tile.

3.22 TILE FIXING, RIGID SHEET LININGS

Refer to 3801 CARPENTRY for the installation of rigid sheet linings.

Prime the surface after the curing of any waterproof membrane. Spread adhesive to a uniform minimum thickness of 3 mm and rib it with a notched trowel to the tile manufacturer's requirements. Press tiles and beat it into place to obtain the required coverage by adhesive on the back of each tile.

3.23 TILE FIXING, INTERIOR TIMBER FRAMED FLOORS

Refer to 3801 CARPENTRY for the installation of rigid sheet underlays.

After the curing of any waterproof membrane, prime the surface, spread adhesive to a uniform minimum thickness of 3 mm and rib it with a notched trowel to the tile manufacturer's requirements. Press tiles and beat it into place to obtain the required coverage by adhesive on the back of each tile.

3.24 GROUTING

Remove spacers. Prepare joints, mix and apply proprietary grout and finish off to the grout manufacturer's requirements. Grout to finish uniform in colour, smooth and without voids, pinholes or low spots.

3.25 MOVEMENT CONTROL JOINTS

Minimum width of 6 mm, carried through tile and bedding. Where substantial movement is anticipated, carry through the rigid sheet to the structure. Install joints over expansion joints in structure, at junctions between different backgrounds, where abutting other materials, at storey heights horizontally and 3.0 metres vertically, at internal corners and at junctions with floors and columns.

Ensure joints are clean, formed, filled, and the sealant inserted to the sealant manufacturer's requirements.

3.26 CLEAN

Upon completion of setting and grouting, thoroughly sponge and wash the tiles to leave clean and free of blemish. Finally polish tiles with a clean dry cloth.

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3.27 REMOVE
Remove unused materials from the site.

4. SCHEDULES

4.1 TILES

Location	Brand	Pattern/code number
Areas to be determined		

4.2 LIQUID WATERPROOFING MEMBRANE

Brand/type:	Duroset

4.4 PRIMER

Brand/type:	GP primer

4.5 UNDERTILE HEATING

Brand:	to be selected
Thermostat/controller:	to be selected
Wattage:	65 watts/m^2

4.6 TILE ADHESIVE

Brand/type:	Durofix

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6202J JACOBSEN TIMBER FLOORING

1. GENERAL

1.1 DOCUMENTS REFERRED TO
Documents referred to in this section are:

BRANZ Bulletin 330: Thin flooring materials - 2 Preparation and laying

1.2 MANUFACTURER'S DOCUMENTS
Manufacturer's and Jacobsen's documents relating to work in this section are:
Jacobsen's Wood Flooring Technical Manual

Copies of the above literature can be obtained by phoning Jacobsen on Freephone 0800 800 460.

1.4 QUALIFICATIONS
Carry out all work in this section using people competent and experienced in this floor laying work.

2. PRODUCTS

2.1 FOAM UNDERLAY
Jacobsen's 2 mm thick, closed cell, foam underlay to provide a moisture membrane.

2.2 FOAM UNDERLAY TAPE
Moisture resistant tape, 48 mm wide.

2.4 BRASS BARS
Jacobsen's 40 mm wide solid brass bar of varying profiles to cover height transitions between 4 mm and 18 mm.

2.5 TIMBER STAIR NOSINGS
Prefinished matching stair nosings.

2.6 EXPANSION COVERS
Prefinished expansion cover.

2.7 REDUCER
Prefinished timber reducer.

3. EXECUTION

3.1 STORAGE AND HANDLING
Accept cartons and packs of timber and accessories undamaged and dry. Store on level, dry surfaces in non-traffic, non-work areas that are enclosed and dry. Avoid damage to cartons and packs of timber. Do not use damaged timber.

3.2 CHECK TIMBER
Check that the timber supplied is as specified. Check the moisture content of the timber to ensure it is at the required level for the installation environment. Check laminated strip and plank flooring to ensure it has been supplied at the moisture content recommended by the suppliers for the proposed location. Do not remove planks from packs until just prior to installation.

3.3 DO NOT START
Commence laying only when the building is enclosed, doors are hung and lockable, all wet work complete, full lighting available and in the case of air-conditioned buildings the air-conditioning operating for 6 weeks.

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3.4 SUBSTRATE
Inspect the substrate to ensure it provides a suitable finish. Do not start laying if the substrate will not allow work of the required standard.

3.5 CARRY OUT THE WORK
Carry out the work to Jacobsen's Wood Flooring Technical Manual.

3.6 LAYOUT
Before beginning the installation, confirm the proposed layout of the timber, grain direction and other visual considerations of the finished work.

3.8 SURFACE TOLERANCES, FLOATING
Substrate to have no deviations greater than 5 mm over a 3 metre straightedge in any given direction. No abrupt variations greater than 2 mm over 250 mm.

3.12 NEW CONCRETE PREPARATION
Clear substrate of all debris, clean off all surface contamination and carry out surface repairs using Kerakoll levelling compounds. Carefully feather out at all perimeters of repaired areas. Grind level, then vacuum to remove all dust. Check for moisture content by hygrometer to BRANZ Bulletin 330. Do not commence installation until the hygrometer readings show 75% or less. Refer to allowable surface tolerances.

3.14 MOISTURE CONTENT, TIMBER SUBSTRATE
Check for moisture content by hygrometer to BRANZ Bulletin 330. Do not commence installation until readings for the whole area show a moisture content of :
- 8 - 12% for air conditioned buildings
- 10 - 14% for intermittently heated buildings
- 12 - 16% for unheated buildings

3.15 NEW PLYWOOD OR PARTICLE BOARD PREPARATION
Clear substrate of all debris, machine sand to remove all surface contamination and carry out surface repairs using Tile and Slate Underlay. Carefully feather out at all perimeters of repaired areas.

3.18 TONGUE AND GROOVE, FLOATING INSTALLATION, PREPARATION
Clear substrate of all debris, remove existing floor coverings, re-nail or replace any loose or missing boards, then machine sand to remove adhesive and make level. Carry out any surface preparation using Tile and Slate Underlay.

3.20 TIMBER OVERLAY PREPARATION
Check that the timber supplied is as specified. Check the moisture content of the timber to ensure that it is at the required level for the installation environment. Work from sealed packs and do not remove timber from the packs prior to commencement of the installation.

3.22 LAYING, FLOATING
Install Jacobsen's 2 mm foam underlay to the total floor area, in long, continuous runs, allowing to cove up walls by 50 mm. Tape all joints using moisture resistant tape, to create an impervious membrane. Install the timber floor strictly in accordance with Jacobsen's stated requirements. Except for Tarkett Ultraloc, use Tarkett D3 adhesive to glue all tongues and grooves. Ensure the required amount of expansion gap is left at all perimeters and around all fixed obstacles.

3.23 LAYING, STAIRCASES AND LANDINGS
Check for moisture content and suitability of substrate prior to installation. Flooring to be adhesive-fixed to stair treads, risers and landings.

3.24 EXPANSION GAPS, PERIMETERS
Calculate expansion gaps strictly in accordance with Jacobsen's Wood Flooring Technical Manual, to suit the environment, size of the installation and product type.

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3.25 EXPANSION JOINTS
Expansion joints to be covered using matching expansion joint covers.

3.26 EDGES
Install skirtings after installation of the timber floor covering to cover the required expansion gap.

3.27 CLEAN
Leave timber flooring surfaces free of adhesive, dirt and debris. Vacuum off, damp mop with a low-foam neutral detergent and allow to dry.

3.28 ACCEPTANCE
Arrange for a final inspection of the completed floor by the owner.

3.29 PROTECT FINISHED SURFACE
Ensure that the completed surface is not used for traffic until curing is complete. Continue to protect the surface until completion of the contract works.

3.30 REPLACE
Replace all damaged or marked elements.

3.31 REMOVE
Remove all debris, unused materials and elements from the site.

4. SCHEDULES

4.2 TARKETT 14 mm PREFINISHED

Product:	to be selected
Species:	to be selected

4.5 TIMBER STAIR NOSINGS

Species:	aluminium

4.6 EXPANSION COVERS

Species:	aluminium

4.7 REDUCER

Species:	aluminium

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6501 CARPETING

1. GENERAL

1.1 DOCUMENTS
Documents referred to in this section are:

AS/NZS 2455.1 Textile floor coverings - Installation practice, Part 1: General

The New Zealand Carpet Manufacturers' Association Conditions of Warranty and installation guide

1.3 QUALIFICATIONS
Carpet layers to be experienced competent workers, familiar with the materials and the techniques specified and with AS/NZS 2455.1.

2. PRODUCTS

2.1 UNDERLAY
Refer to 4. SCHEDULES.

2.2 CARPET
Refer to 4. SCHEDULES.

2.3 EDGE GRIPPER, TAPES, FIXING BARS
To AS/NZS 2455.1.

2.4 BINDER BARS
Anodised aluminium section with a fluted face.

2.5 ADHESIVE, UNDERLAY
To AS/NZS 2455.1.

2.6 ADHESIVE, CARPET
To AS/NZS 2455.1.

3. EXECUTION

3.1 COMPLY
Comply with the requirements of the carpet manufacturer including preparation of and procedures over the various substrates.

3.2 SUBSTRATE
Before starting work inspect the substrate to ensure it will allow work of the required standard and that all fittings and fixtures around which the carpet is to be scribed, are in place.

3.3 PROTECTION
Protect adjoining work surfaces and finishes during installation and make good any damage to same.

3.4 TAPE
Tape for binding and seaming to be the type and width required by AS/NZS 2455.1 to suit the specified carpet and the standard of performance required.

3.5 LAYOUT
Plan the carpet layout so that: -
- seams run lengthways
- traffic runs along the seam
- light from windows is not across the seam
- pile faces away from the main natural light source.

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3.6 TEMPERATURE
Acclimatise carpet to a room temperature above 15°C through the whole of the installation.

3.7 STORAGE
Keep carpet dry and protected from damage, sharp bending or folding.

3.8 PREPARE FLOOR SURFACE
Prepare floors for laying to AS/NZS 2455.1 requirements.

3.9 INSTALLATION, UNDERLAY
Installation to AS/NZS 2455.1. Lay at right angles to the carpet direction.

3.10 INSTALLATION, TAPED JOINTS
Tape carpet joints, fix grippers to floor, install underlay and carpet, to AS/NZS 2455.1.

3.15 FIX TRIMS
Fix binder bars, carpet to carpet bars, and trims to all junctions with other materials and to carpet edges, to AS/NZS 2455.1. Ensure that all junctions with other materials are neatly formed, with bars and trims securely fastened to the substrate, 20 mm from each end and at maximum 100 mm centres.

3.16 TAKE AWAY
Take away from the site all plant and all materials not used, leaving finished floor clean and without blemish.

3.17 CLEAN
On completion thoroughly vacuum the finished carpet.

4. SCHEDULES

4.1 UNDERLAY

Brand:	to be selected
Type:	~
Thickness/weight:	~ mm

4.2 CARPET

Location:	to be decided
Brand/type/weight/code:	to be selected
Installation method:	to be selected

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6701R RESENE PAINTING

1. GENERAL

1.1 DOCUMENTS
Documents referred to in this section are:

Health and Safety in Employment Act 1992

Resene: One-Line Specifications and Product Data Manual
Resene: Putting your safety first

1.3 PAINTER QUALIFICATION
All work to be carried out by persons competent in the trade and experienced with the **Resene** coating systems and techniques specified.

1.4 HEALTH AND SAFETY
Refer to the requirements of the Health and Safety in Employment Act 1992 and the **Resene** booklet "Putting your safety first" and if elimination or isolation is not possible, then minimise the hazards in this work.

1.5 CONTROL SAMPLES
Prepare samples of the finished work as scheduled, including preparation and colour as specified. Obtain approval of the appearance before proceeding. Refer to 4. SCHEDULES.

2. PRODUCTS

2.1 PAINT TYPES
All paint coatings to be **Resene** products (which are guaranteed for consistency and performance under ISO 9001 and APAS) prepared, mixed and applied as directed in the One-Line Specifications and Product Data Manual.

2.2 GAP FILLERS
Use suitable gap fillers to match the surface being prepared. Any special primers required of the fillers must be satisfied. Refer to **Resene** surface preparation sheets in the One-Line Specifications and Product Data Manual.

3. EXECUTION

3.1 INSPECT
Inspect all surfaces to be painted and report any that will not, after the preparation as laid down in the **Resene** surface preparation sheets; allow work of the required standard.

3.2 PROTECT
Cover up all adjoining surfaces and areas liable to damage or over-painting.

3.3 REMOVE HARDWARE
Remove hardware and door/window furniture and replace on completion. Do not paint over permanently attached hinges, or any hardware items which cannot be removed. Refer to 4. SCHEDULES.

3.4 PRIMING AND SEALING
Ensure that all priming and sealing work necessary before or during construction is carried out when required.

3.5 ENVIRONMENTAL CONDITIONS
Carry out work within acceptable temperature and humidity limits, with timber dry, all to the requirements of **Resene**.

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3.6 SELECTIONS
Confirm all selections, colours and finishes for both paint and wallpaper with the owner, before commencing work.

3.8 SHARP EDGES, CRACKS AND HOLES
Sharp edges, cracks and holes if present: remove and/or repair as outlined in the preamble to the **Resene** One-Line Specifications and Product Data Manual.

3.9 PREPARE ALL SURFACES
Prepare all surfaces to be coated to the requirements of the **Resene** surface preparation sheets. Use suitable gap fillers to match the surface being prepared. Any special primers required of the fillers must be satisfied. Refer to **Resene** surface preparation sheets.

3.10 APPLICATION
Apply paint by brush and/or roller to the requirements of **Resene** to obtain a smooth, even coating of the specified thickness, uniform gloss and colour. Do not spray on site without express permission.

3.11 RESENE SPECIFICATIONS
Refer to the **Resene** One-Line Specifications and Product Data Manual for surface preparation, coating sequence and application requirements as they apply to each system. Correct defective work immediately, with any recoating following the system's requirements.

3.12 SCUFF BETWEEN COATS
Between all coats remove any dust pick-up, protruding fibres and coarse particles.

3.13 FINISHED PAINT SURFACES
All finished paint surfaces to show uniformity of gloss and colour, to have the correct thickness for each coat, and freedom from painting defects such as tackiness and conspicuous brush marks. Finished work to be clean and free of any disfigurement.

3.16 CLEAN
Clean adjoining surfaces, glass and fittings of any paint contamination.

3.17 REPLACE
Replace hardware without damage to the hardware or the adjoining surfaces.

3.18 TAKE AWAY
Take away from the site unused painting materials and equipment.

4. SCHEDULES

4.3 PAINT SYSTEMS, EXTERIOR
To the **Resene** One-Line specifications as listed for the different substrates. Refer to the **Resene** manual for the first and second coats of each system to suit the particular substrate and condition.

Substrate	Resene Number	System topcoat	Finish
Cementitious	1e 1.2	Sonyx 101 D30	Semi-Gloss
Timbers	2e 1.1	Hi-Glo D31	Gloss

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4.4 PAINT SYSTEMS, INTERIOR

To the **Resene** One-Line specifications as listed for the different substrates. Refer to the **Resene** manual for the first and second coats of each system to suit the particular substrate and condition.

Substrate	Resene Number	System topcoat	Finish
Cementitious	1i 1.2	Lustacryl D310	Semi-Gloss
Timbers	2i 1.1	Enamacryl D309	Gloss
Paperfaced Plaster/ Plaster/Fibrous Plaster	15i 1.4SC	Zylone SpaceCote D311	Low Sheen

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7101 HOT AND COLD WATER SYSTEM

1. GENERAL

1.1 DOCUMENTS
Documents referred to in this section are:

NZBC G12/AS1	Water supplies
AS/NZS 2642	Polybutylene pipe fittings 2642.2: Polybutylene (PB) pipe for hot and cold water applications 2642.3: Mechanical jointing fittings for use with polybutylene (PB) pipes for hot and cold water applications
NZS 3501	Specification for copper tubes for water, gas and sanitation
NZS 4602	Low pressure copper thermal storage electric water heaters
NZS 4606	Storage water heaters 4606.3: Specific requirements for water heaters with composite shells
NZS 4607	Installation of thermal storage electric water heaters: valve-vented systems
NZS 4617	Tempering (3-port mixing) valves
DIN 8077	Polypropylene (PP) Pipe dimensions
DIN 8078	Polypropylene (PP) Pipes Types 1, 2 & 3, General Quality Requirements and Testing.

Plumbers, Gasfitters and Drainlayers Act 1976

1.3 QUALIFICATIONS
Plumbers to be experienced competent craftsman plumbers, or registered plumbers working under the direction of a craftsman plumber, familiar with the materials and techniques specified.

2. PRODUCTS

2.1 WATER MAIN POLYETHYLENE
High density polyethylene 32 mm OD (minimum 25 mm internal diameter) pipe complete with rubber ring compression type fittings.

2.2 COPPER WATER PIPE
To NZS 3501.

2.3 POLYBUTYLENE WATER PIPE
Polybutylene tubing to AS/NZS 2642.2 and AS/NZS 2642.3 complete with fittings and accessories brand-matched.

2.4 POLYETHYLENE WATER PIPE
Proprietary high-density cross-linked polyethylene composite pipe and fittings to BS 7291.3.

2.5 POLYPROPYLENE WATER PIPE
Polypropylene pipes to DIN 8077 and DIN 8078 complete with fusion welded fittings and accessories brand-matched.

2.6 EXPOSED PIPES
Chrome plated copper pipe with chrome plated brass nuts and fittings.
Faucet hoses covered with stainless steel braid and fitted with stainless steel nuts.
White polyethylene composite pipe with white nuts and accessories.

Selected pipework finish to include escutcheon plates and bends and elbows protruding from walls or fittings.

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2.7 VALVES
Pressure reducing or limiting valve, filter, non-return valve, cold water expansion valve, pressure relief or temperature valve, pressure relief valve and isolating valves to NZBC G12/AS1: Water supplies.

2.8 TEMPERING VALVE
Tempering valve to NZS 4617 to NZBC G12/AS1: Water supplies.

2.9 ELECTRIC HOT WATER CYLINDER, MAINS PRESSURE
To NZS 4606.3, ceramic-coated steel thermal storage cylinder, insulated and complete with fittings required for installation by the manufacturer.

3. EXECUTION

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

3.2 EXECUTION GENERALLY
Generally carry out the whole of this work and tests to NZBC G12/AS1.

3.3 EXCAVATE
Excavate for the water main to a firm, even trench base in straight runs. Allow to backfill.

3.4 WATER MAIN
Lay a minimum of 500 mm below ground level (600 mm under driveways) from the utility network operator's supply through a gate valve and meter toby box to the building. Lay marker tape above the water main in backfill.

3.5 COPPER WATER SUPPLY
Size the piping layout to eliminate loss of pressure at any point by simultaneous draw-off. Run pipes in straight runs, firmly fixed to falls, with long radius bends and jointed by brazing or with crox fittings, to NZBC G12/AS1. Conceal piping, insulate all hot water pipework and pressure test before the wall linings are fixed.

3.6 POLYBUTYLENE/POLYETHYLENE WATER SUPPLY
Size the piping layout to eliminate loss of pressure at any point by simultaneous draw-off. Run pipes complete with all fittings, support and fixing, and jointed to the pipe manufacturer's specifications, all to NZBC G12/AS1. Conceal pipework and pressure test before the wall linings are fixed.

3.8 OUTLET LOCATIONS
Ensure wall outlets for exposed pipes are level and centred on the fixture to ensure the neat installation of exposed pipework.

3.9 INSTALLING HOT WATER PIPE INSULATION
Insulate all hot water pipes in accordance with the insulation manufacturer's instructions. Cut insulation sections tight between timber framing and tight between the webs of steel studs. Where hair felt is used, wrap around pipes in two layers in opposite directions and secure with galvanised steel wire ties.

3.10 INSTALL ELECTRIC HOT WATER CYLINDERS AND BOILING CYLINDERS
Install where shown complete with all the necessary fittings to the cylinder manufacturer's requirements and in accordance with NZBC G12/AS1: 6.10. Valve-vented systems to NZS 4607.

3.13 INSTALL TEMPERING VALVE
Install 1 metre minimum from outlet of hot water cylinder and to manufacturer's instructions.

3.14 PENETRATIONS
Provide and fit collars and escutcheon plates to match the pipework at all penetrations through constructions.

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3.15 INSTALL TAPS AND FAUCETS
Install taps and faucets in accordance with the tap manufacturer's requirements. Flush out on completion. Check that washers or ceramic discs are operating correctly.

3.16 LEAVE
Leave water services in proper working order. Pressure test to ensure no leakage and leave in proper working order.

3.17 CLEAN
Clean tapware and fittings. Remove unused materials from the site.

4. SCHEDULES

4.1 WATER MAIN

Internal diameter:	to be determined- suitable for 3 residences.

4.2 WATER PIPE

Brand/type:	~
Material:	to be selected
Nominal bore:	~ mm

4.3 INSULATION FOR HOT WATER PIPES

Brand/type:	pvc foam type
Inside diameter:	to suit piping

4.4 ELECTRIC HOT WATER CYLINDER, MAINS PRESSURE – **X3**

Brand/model number:	Rheem 311 18015
Capacity:	180 litres

4.11 TAPS AND FAUCETS
Confirm selections with the owner.

Fitting location	Tap type	Brand	Catalogue number	
Basins:	Mixer 15 mm	Methven Minamalist	MMB-	**X6**
Shower:	Slide shower	Methven Minimalist	SHMM-	**X6**
	Mixer	Methven Minimalist	MMS-	**X6**
Sink:	Mixer 15 mm	Methven Minimalist	MMK-	**X3**
Tub:	Supplied with tub unit			
WC cisterns:	Supplied with toilet suite			
Washing machine:	Supplied with tub unit			
Dishwasher:	Stop taps 15 x 20 mm	Methven		**X3**
Standpipes:	Hose tap 15 mm	Methven Brass		**X6**
Hot water cylinder:	Stop cock			**X3**

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7401 RAINWATER SYSTEMS

1. GENERAL

1.1 DOCUMENTS
Documents referred to in this section are: -

AS 1397 Steel sheet and strip - hot-dipped, zinc-coated or aluminium/zinc-coated

BRANZ Bulletin 304: Flashing design.
BRANZ Bulletin 448: Domestic flashing installation.

1.3 QUALIFICATIONS
Workers to be either competent craftsman plumbers, or registered plumbers working under the direction of a craftsman plumber, or roofers, familiar with the materials and techniques specified.

2. PRODUCTS

uPVC

2.2 uPVC DOWNPIPES
Tubes, stand-off brackets and fittings brand matched and complete to the manufacturers specifications.

Aluminium/zinc alloy coated steel

2.6 ALUMINIUM/ZINC ALLOY COATED SHEET STEEL
0.55 mm sheet steel coated to AS 1397.

2.7 ALUMINIUM/ZINC ALLOY COATED STEEL SPOUTING
Profile, jointing, brackets and fittings brand-matched and complete to the spouting manufacturer's specifications.

General

2.15 RAINWATER HEADS, DROPPERS, OVERFLOWS
Fabricate and install as detailed.

2.16 FLASHINGS GENERALLY
0.55 mm sheet steel galvanised to AS 1397, aluminium/zinc coated to AS 1397, 1.8 mm (20 kg/m^2) copperised pure lead, 0.5 mm half hard copper sheet, or proprietary rubberised perforated aluminium strip, all to location, compatibility and design requirements of BRANZ Bulletin 304 Flashing design.

3. EXECUTION

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

Check compatibility of metals used for rainwater goods, against the materials used for roofing and flashings. Notify any incompatibility to the owner and obtain written approval for amendments to selections.

3.2 LIAISON
Ensure liaison with associated installations to confirm material selections are compatible and required flashing work is completed.

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3.3 INSTALLATION GENERALLY
Install and fix spouting and downpipes to the manufacturers requirements. Install system to properly drain water from the roof area and so that water will not enter the building under overflow conditions.

uPVC

3.5 FIT uPVC DOWNPIPES
Fit stand-off brackets or clips at maximum 1 metre centres and fix with round head galvanised screws. Set pipes plumb and clear of the wall. Solvent weld joints. Discharge into stormwater drain.

Aluminium/zinc alloy coated steel

3.8 FIT ALUMINIUM/ZINC ALLOY COATED STEEL SPOUTING
Fit brackets at maximum 800 mm centres and fix with galvanised screws. Set to fall to outlets. Make joints with silicone sealed and pop-riveted to the spouting manufacturer's requirements.

General

3.14 FLASHINGS
Scribe fit, fold, lap, seam, or run solder as required by the metal, to flash all roof penetrations, roofing and exterior joinery to prevent weather penetration. Except at expansion joints, allow for 2 rows of rivets to overlapping sheet joints. Install and fix flashings and flashing joints to the criteria stated in BRANZ Bulletins 304 Flashing design and 448 Domestic flashing installation.

3.18 LEAVE
Leave rainwater services in proper working order and all flashing work completed to keep the building weathertight.

3.19 CLEAN UP
Wash out gutter daily and on completion to remove swarf. Take away from the site unused materials and elements.

4. SCHEDULES

uPVC

4.2 uPVC DOWNPIPES

Size:	80mm & 100 mm

Aluminium/zinc alloy coated steel

4.5 ALUMINIUM/ZINC ALLOY COATED STEEL SPOUTING

Shape/size:	300
BMT/Gauge:	0.55 mm
Brand/type:	Steel & Tube 300 box gutter on galvanised mild steel brackets
	125
	0.55mm
	Steel & Tube 125 box gutter with internal Zincalume brackets

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7402 SANITARY PLUMBING

1. GENERAL

1.1 DOCUMENTS
Documents referred to in this section are:

NZBC G1/AS1	Personal hygiene 2.0 Fixture construction and installation 3.0 Location of sanitary fixtures
NZBC G13/AS1	Foul water - sanitary plumbing
AS/NZS 1260	PVC pipes and fittings for drain, waste and vent applications
AS/NZS 3500	Plumbing and drainage Part 2: Sanitary plumbing and drainage
NZS 7641	Unplasticised PVC waste and ventilating pipe, fittings and accessories, 32 mm, 40 mm and 50 mm

Plumbers, Gasfitters and Drainlayers Act 1976

1.3 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, SOIL AND VENT PIPES
UPVC pipe to NZS 7641 and 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.

2.3 SEALANT, SANITARY FIXTURES
For between sanitary fixtures and accessories and adjacent floor or wall surfaces.
1-part, silicone, containing mildew resistant agents.
Colour: White

3. EXECUTION

3.1 EXECUTION GENERALLY
Carry out this work and complete all tests to AS/NZS 3500 Part 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 SANITARY FIXTURES
Fit and install sanitary fixtures and associated screens, elements and hardware, plumb, true to line and rigid, to the fixture manufacturer's requirements. Supply standard chrome plated brass wastes and plastic plugs on chrome plated chains with all basins, tubs and baths.

3.4 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 Part 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.

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

3.7 INSTALL SANITARY ACCESSORIES
Install sanitary accessories as selected.

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

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

4. SCHEDULES

4.1 COPPER WASTE, SOIL AND VENT PIPES

4.2 UPVC WASTE, SOIL AND VENT PIPES

4.3 SANITARY FIXTURES
Refer to 4601 GLAZING for frameless shower and bath screens.
Refer to 5503 BATHROOM AND TOILET FIXTURES for bathroom and toilet accessories.

Fixture	Location	Model Size Colour	
WC suite	Bathroom / Ensuite	Caroma Opal 2000 BTW-	**X6**
Wash hand basins:	Bathroom /Ensuite	Duravit 344/60 wall basin-	**X6**
Basin wastes	Bathroom /Ensuite	Aquasanit chrome pvc bottle trap-	**X6**
Shower wastes	Bathroom /Ensuite	Stainless steel easy clean-	**X6**
Sinks	Kitchen	Mercer Caprice MCS10-20-	**X3**
Tubs	Laundry	Robinhood ST3500 incl taps-	**X3**

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7403 DRAINAGE

1. GENERAL

1.1 DOCUMENTS
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
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	Septic tanks
AS/NZS 1547	On site domestic wastewater management
AS/NZS 4130	Polyethylene pressure pipes (PE)
AS/NZS 4671	Steel reinforcing materials
NZS 3107	Precast concrete drainage and pressure pipes
NZS 3104	Specification for concrete production
AS/NZS 3500	Plumbing and drainage
	Part 2: Sanitary plumbing and drainage
	Part 3: Stormwater drainage
NZS 7643	Installation of unplasticised PVC pipe systems

Plumbers, Gasfitters and Drainlayers Act 1976

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

2.5 GULLY TRAPS
To NZBC G13/AS2: 3.3, complete with grating.

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

2.7 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.

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

2.9 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.

2.10 AERATED WASTEWATER TREATMENT SYSTEM

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 Part 2 (sanitary drainage) AS/NZS 3500 Part 3 (stormwater drainage) as modified by NZBC B1/AS1: 6.0. Lay uPVC pipe systems to relevant sections of NZS 7643.

3.4 LAY FOUL WATER DRAINS
Lay drains in straight runs to correct gradients, to discharge into the TREATMENT SYSTEM. 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 sump. Carry the granular bed up over the pipes without disturbing them, to a total depth of 300 mm and cover with geotextile fabric; all to the pipe manufacturer's requirements.

3.8 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.

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

3.10 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.

3.11 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.

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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 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.

3.14 FIELD TEST

Field test drains for watertightness (UPVC to NZS 7643 section 11) to the satisfaction of the territorial authority inspector.

3.15 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 AERATED WASTEWATER TREATMENT SYSTEM

Install to AS/NZS 1547 and manufacturers instructions to Engineers designed layout as shown on drawings.

4. SCHEDULES

4.4 TREATMENT SYSTEM

Cleanstream Type Textile Recirculation System

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7701 ELECTRICAL

1. GENERAL

1.1 DOCUMENTS
Documents referred to in this section are:

NZBC F6/AS1	Lighting for emergency
NZBC F7/AS1	Warning systems, 3.1 Domestic smoke alarms
NZBC F8/AS1	Signs
AS/NZS 2293	Emergency evacuation lighting for buildings
AS/NZS 3000	Electrical regulations - Buildings, structures and premises
AS/NZS 3008	Electrical installations - Selection of cables 3008.1.2: Typical New Zealand installation conditions
AS 3786	Smoke alarms
NZS 6401	PVC-insulated cables for electric power and lighting

Electricity Regulations 1997
New Zealand electrical codes of practice (ECP)

1.3 COMPLY
Comply with the Electricity Regulations 1997, AS/NZS 3000, AS/NZS 3008.1.2 and the New Zealand electrical codes of practice for listed and prescribed work and with the utility network operator's requirements. Apply for the service connection. Arrange for the required inspections of listed work. Pay all fees.

1.4 QUALIFICATIONS
Carry out work by or under the direct supervision of a holder of a practising certificate under the Electricity Regulations 1997.

1.5 CERTIFICATE OF COMPLIANCE
Supply a certificate of compliance to the owner, as required by the Electricity Regulations 1997, and in particular, clauses 16, 34 and 35. Allow the network utility operator to view before the meter installation, listed work inspection, polarity check and livening of supply.

2. PRODUCTS

2.1 MAINS SUPPLY, SINGLE PHASE
Tough plastic sheathed neutral screened cable to NZS 6401 and AS/NZS 3008.1.2, with a minimum rating of 60 amps per phase. Include pilot cable where required by network utility company.

2.2 CABLES
Tough plastic sheathed copper conductors to NZS 6401, stranded above 1.0 mm^2, and to AS/NZS 3008.1.2. Minimum sizes as below. Increase sizes if the method of installation, thermal insulation, cable length or load will reduce the cable rating below that of the connected load, or produce an excessive voltage drop.

Lighting circuits:	Domestic: 1.0 mm^2 on 10 amp MCBs
Lighting circuits:	Commercial: 1.5 mm^2 on 16 amp MCBs
Power circuits:	1.5 mm^2 on 16 amp MCBs for domestic and unenclosed or unfilled cavity construction 2.5 mm^2 on 16 amp MCBs for domestic insulated construction, or filled cavity 2.5 mm^2 on 20 amp MCBs for unenclosed or unfilled cavity construction 2.5 mm^2 on 16 amp MCBs for insulated construction, or filled cavity, or lengths over 30 metres
Range circuits:	Single phase: 6 mm^2 on 32 amp MCBs

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Heat resistant cable for final connections to all heated appliances, and high temperature cable in ambient conditions may be above 35°C.

2.3 METER BOX
Proprietary manufactured, zinc plated metal case, with glazed panel door, weatherproof if mounted outdoors, and complete with meter mounting, main switch and fuse.

2.4 DISTRIBUTION BOARD
Proprietary manufactured, heavy duty plastic, fire resistant enclosed construction, complete with neutral and earth busbars, MCBs, 30 mA RCDs and 60 amp main switch, complete with 20% spare capacity to AS/NZS 3000. Include 2 spare MCBs labelled as "spare". All protective devices: 6kA MCBs of the appropriate rating.

2.5 MINIATURE CIRCUIT BREAKERS
Miniature moulded case circuit breakers

2.6 WALL BOXES
Standard size in plastic, with 2 or more gang size in metal, all screw fixed.

2.7 SWITCH UNITS
Sixteen amp minimum rated, 230 volt polycarbonate flushplate units. Refer to drawings/schedules for number of switches per unit, dimmer units, neon (indicator or toggle) units, locator units and 2 way units.

2.8 HOT WATER SYSTEM SWITCH
One way 20 amp switch complete with cable clamp for flexible PVC conduit to element enclosure.

2.9 SWITCHED SOCKET UNITS
Ten amp, 230 volt polycarbonate flushplate 3 pin flat NZS combination switch units, single or multi gang as detailed.

2.10 SMOKE ALARMS
To AS 3786

2.14 TV AERIAL
Antenna, co-axial cable and outlets, suitable for both VHF and UHF reception of all local free-to-air broadcast channels.

2.15 GARAGE DOOR CONTROLLERS
Provide single switched socket outlet for the door controller to plug into.

2.16 LIGHT FITTINGS
Fluorescent and High Intensity Discharge fittings with low loss control gear and power factor corrected to 0.90 minimum. Control gear suitable for dimming if this is required. All fittings complete with lamps; Incandescent GLS lamps pearl, coiled-coil 240v rated, bayonet cap; Fluorescent triphosphor 2700K; ELV 12v dichroic reflector with cover glass unless detailed otherwise.

2.17 SELECTIONS
Confirm selections of all outlet fittings and hardware with the owner in writing before ordering.

3. EXECUTION

3.1 MAIN SUPPLY
Lay underground mains to the network utility operator's requirements. Excavate trench, install cable and marker tape and backfill.

3.2 METER BOX
Fit to meter box manufacturer's and network utility operator's requirements where detailed. Recess into external wall and flash to weatherproof. Arrange for meter installation and connection.

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3.3 DISTRIBUTION BOARD
Fit to board manufacturer's requirements where detailed. Recess into wall and ensure fire containment properties of the enclosure is maintained.

3.4 CIRCUIT PROTECTION
Install MCBs to protect each final sub circuit sized for circuit maximum loading.

3.5 EARTH LEAKAGE PROTECTION
RCD protection to AS/NZS 3000

Domestic
Install RCD protection at the switchboard of final sub circuits controlling socket outlets except for:
- Fixed cooking equipment
- Lighting

3.6 SET-OUT
Unless specifically detailed, the position of outlets and equipment shown on drawings is indicative of requirements. Study documents and site conditions to ensure no conflict with other services or features will arise. Resolve conflicts and discrepancies before proceeding with work affected. Confirm on site the exact location, disposition and mounting heights of all outlets, fittings, equipment, penetrations, and use of exposed wiring. Fix outlet items level, plumb and in line.

3.7 CABLING
Install with a maximum of 10 light outlet units or 6 double or single switched socket units on any circuit. Minimum 2 lighting circuits per installation. Separate circuits for all electric heating appliances. All cabling run concealed. No TPS cable laid directly in concrete. Locate holes in timber framing for the passage of cables at the centre line of the timber member. Install cable in conduits where required to pass through concrete or underground.

3.8 WALL BOXES
Flush mounted in cavity construction.

3.9 SWITCH AND SOCKET UNITS
Fit all single and double switch units and socket at the following heights (to the centre of the unit) unless shown otherwise on the drawings.

Switch Units:	1000 mm
Socket Units:	150 mm above work benches
	400 mm elsewhere

Mount switches vertically and socket units horizontally. Label all switch units that control electrical equipment by colour filled engraving on the switch plate.

3.10 LIGHT FITTINGS
Install light fittings in locations and at heights detailed, and in accordance with the fitting manufacturer's requirements.

3.11 EXTRA LOW VOLTAGE LIGHTING
Where remote transformers are used for ELV lamps, connect from transformer to lamp with minimum 2.5 mm^2 conductor, to ensure voltage drop in transformer and conductor does not exceed 0.8 volts. Connect lamps 50 watt or greater matched to no more than one per transformer, located as close as practicable to the lamp. Ensure transformers and rear of light fittings are adequately ventilated and clear of any thermal insulation.

3.13 ELECTRIC HOT WATER SYSTEM
Wire as a separate circuit through a wall-mounted isolating switch, with the cable from switch to element encased in flexible PVC conduit, clamp fixed at each end. Hot water cylinders, thermostats and 3000 watt element supplied and fitted under 7101 HOT AND COLD WATER SYSTEM.

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3.14 EARTH BONDS
Bond together and to earth all plumbing fittings not adequately isolated, to the Electricity Regulations 1997 and to the fitting manufacturer's requirements.

3.15 TELEPHONE WIRING
Install telephone cable to telephone outlet positions shown on the drawings. Install in conduit for outlets on masonry surface. Fix and connect BT jack point outlets to NZ Telecom requirements and terminate wiring at incoming terminal block.

3.16 TELEPHONE DRAW WIRES
Supply draw wires from accessible positions for the telephone outlets shown on the drawings. Install in conduit for outlets on masonry surface.

3.17 TV AERIAL
Fit antenna, run cabling concealed below the roof and fit outlets where shown on the electrical drawings. Ensure the system is suitable for high quality reception of all VHF and UHF channels - Sky TV installation practices minimum.

3.20 SECURITY SYSTEM
Install to the system manufacturer's requirements, with control panel, detectors and associated equipment fitted neatly and without damage to surrounding finishes.

3.22 SMOKE ALARMS
Install smoke alarms to NZBC F7/AS1 and to the alarm manufacturer's requirements, fitted neatly and without damage to the surrounding finish.

3.23 ELECTRIC POWERED FITTINGS AND EQUIPMENT
Install and wire fittings and equipment to individual fittings and equipment manufacturer's requirements. Refer to the drawings for required layouts and locations for equipment.

3.24 BATHROOM ELECTRICAL FIXTURES
Install electrical fixtures specified in other parts of this specification. Connect the following bathroom and toilet electrical items: -

- Heated towel rails:	Install to manufacturers requirements.
- Mirror demisters:	Locate centrally above the wash hand basin(s). Connect wiring to room lighting unless specified otherwise.
- Extract fans:	Install to manufacturers requirements.

3.25 EXTERIOR SERVICES
Provide circuits and connections for exterior installations, including ELV 12 volt path lighting and electronic irrigation systems. Refer to drawings for connection points. Where underground, connect mains voltage outlets with cable enclosed in conduit, or with 2 core neutral screen cable with heavy duty grade 3.2 mm PVC sheath, with the neutral screen conductors terminated in a soldered or compression cable lug, PVC sleeved, and connected as the earth continuity conductor.

Connect to all ELV outlets with 230v rated cable with minimum 2.5 mm^2 conductor, and to ensure voltage drop to lamp does not exceed 0.8 volts. Connect lamps 50 watt or greater matched to no more than one per transformer, located as close as practicable to the lamp. Ensure transformers and light fittings are adequately cooled and watertight if liable to immersion.

3.26 MAIN EARTH
Provide a plastic toby box or UPVC tube to contain and protect the earth pin. Fix the connecting earth wiring closely and securely against wall surfaces.

3.27 LABELLING
Complete all labelling in clear machine printed permanent manner. Include label under each controller, switch and circuit breaker on distribution boards. Include a warning notice if light dimmers are used in the installation. List the rating of each circuit.

3.28 COMPLETION
Leave work operating correctly, with equipment clean and all lamps operational.

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4. SCHEDULES

Materials

4.5 MISCELLANEOUS ITEMS

Item	Brand/model number
TV aerial:	~
Security system:	~
Smoke alarms:	~

4.6 HEATED TOWEL RAILS

Location	Brand and code	
Bathroom	Skope LTR7946 heated ladder-	**X3**
Ensuite	DCS Tira heated ladder & shelf-	**X3**

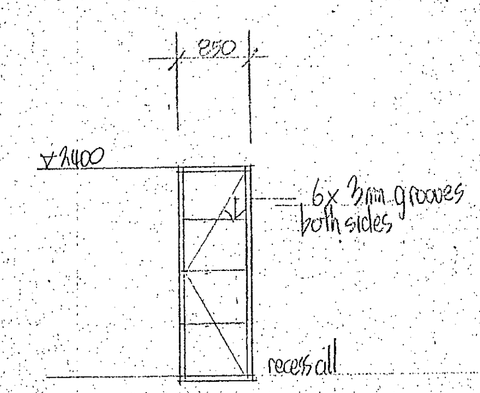
4.7 MIRROR DE-MISTERS

Brand: Nu klear

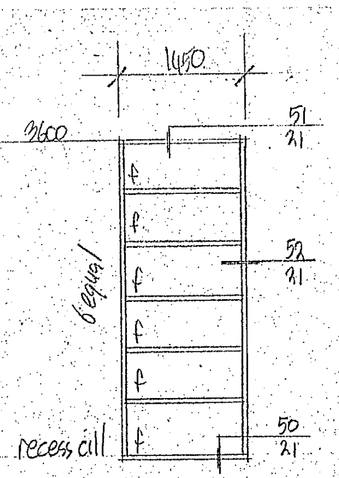
Location	Size	
Bathroom / Ensuite	To be selected	**X6**

4.9 ELECTRIC-POWERED APPLIANCES

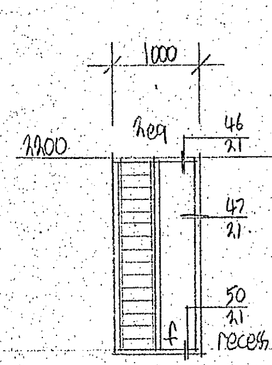
Item	Location	Brand and code
Wall oven:	Kitchen	To be selected
Cooker top:	Kitchen	To be selected
Range hood:	Kitchen	To be selected



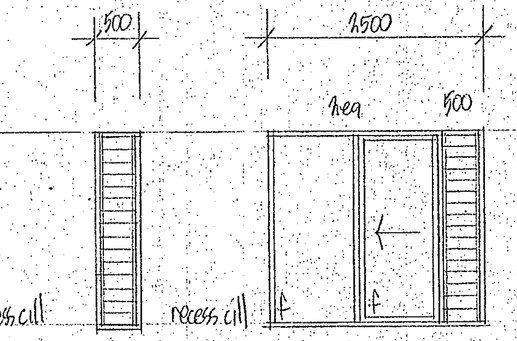
W1-01, W2-01, W3-01,
paint finish meranti ply both sides on cedar frame door, polystyrene core, in aluminum frame. open in.



W1-02, W2-12, W3-13

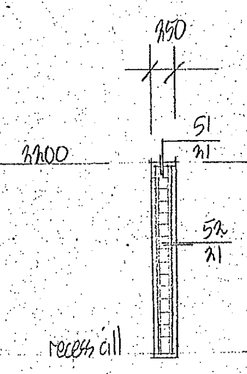


W1-03

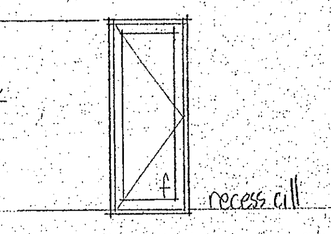


W1-04, W1-06, W1-07
W1-11, W2-04, W2-09
W2-10, W3-04, W3-05,
W3-10, W3-11

W1-05, W2-08, W3-09

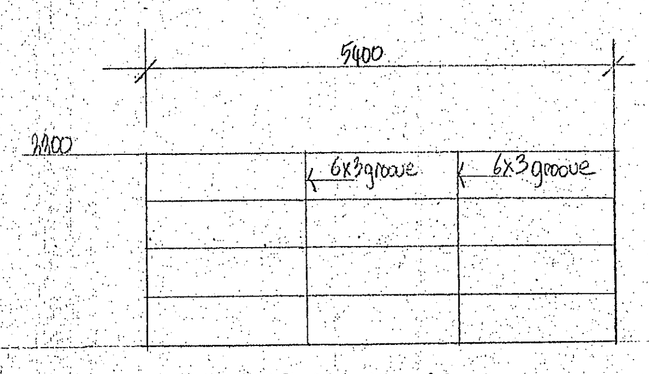


W1-08, W1-10,
W2-05, W2-07
W3-06, W3-08



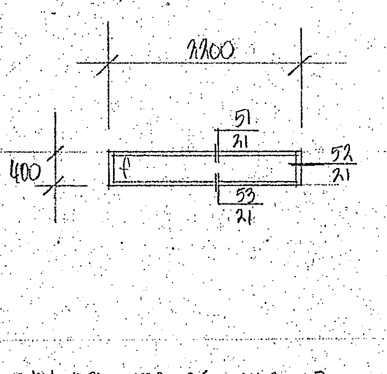
W1-12, W2-03, W3-03

810 aluminum glazed door in aluminum frame. open in

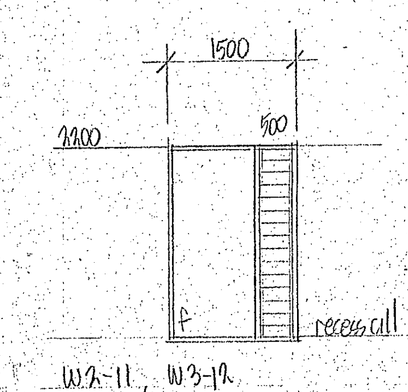


W1-13, W2-02, W3-02

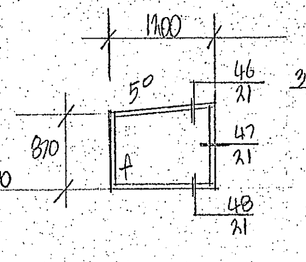
paint finish meranti ply sheathed electric open sectional door. zincalume trim opening



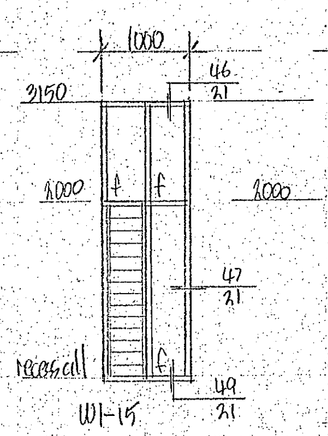
W1-09, W2-06, W3-07



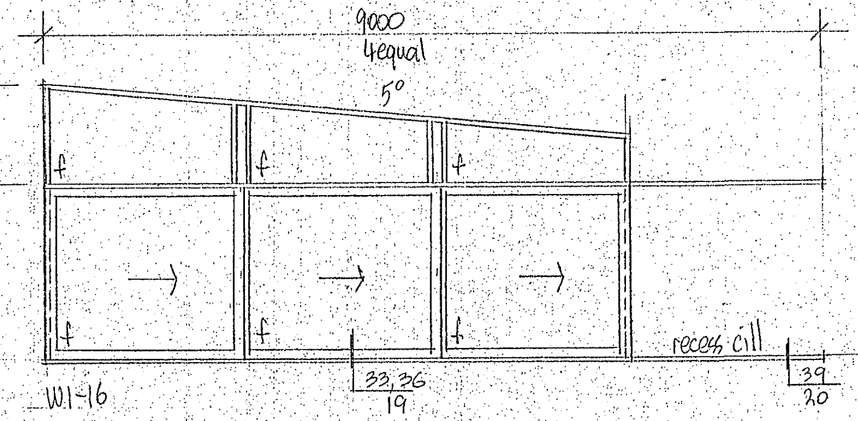
W2-11, W3-12



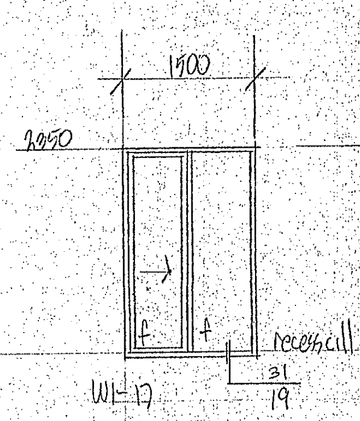
W1-14



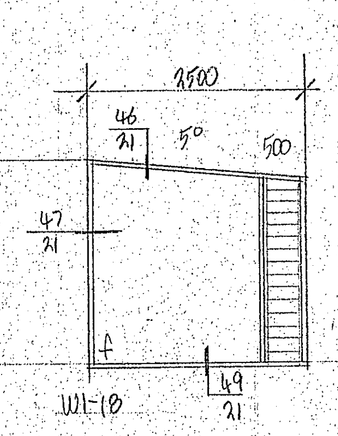
W1-15



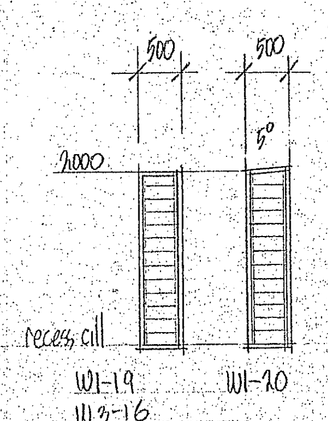
W1-16



W1-17

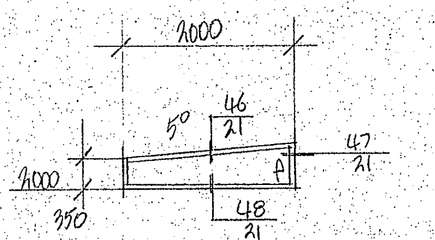


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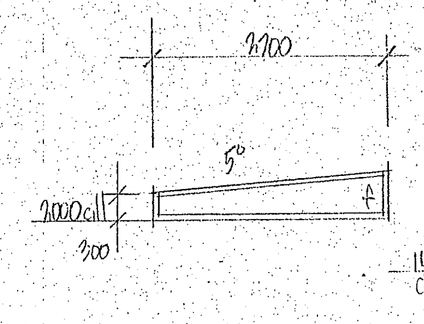


W1-19
W3-16

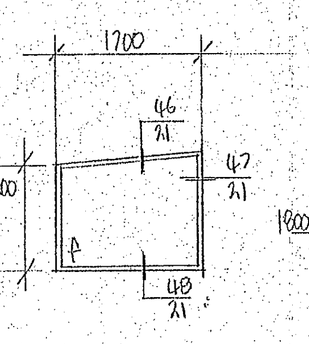
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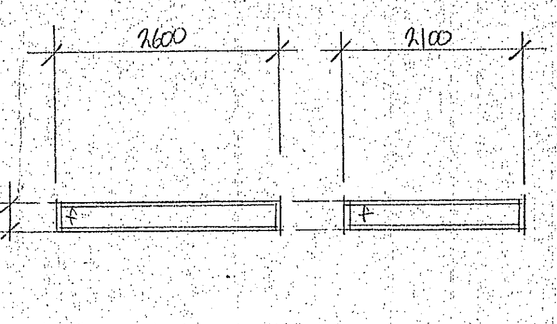
W1-21



W1-22



W1-23

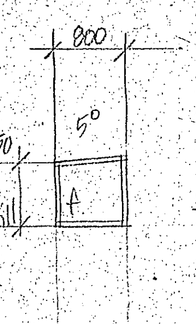


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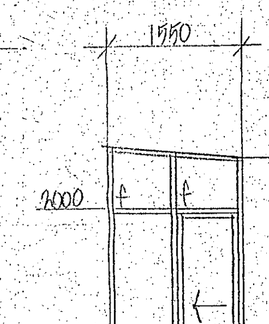
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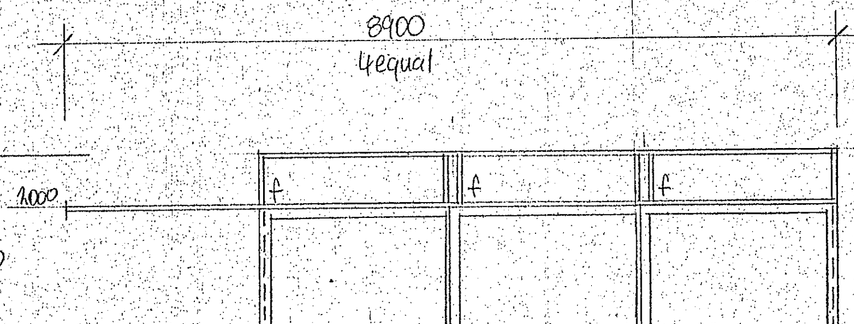
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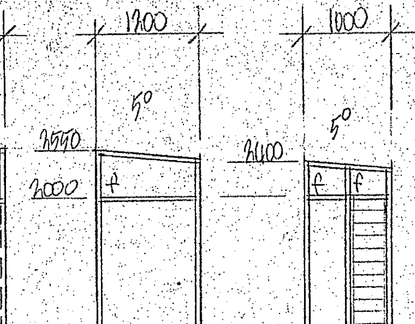
W2-16



W2-17

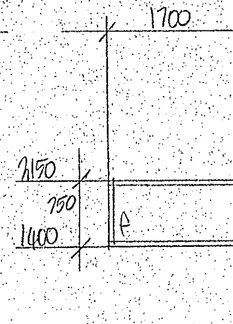


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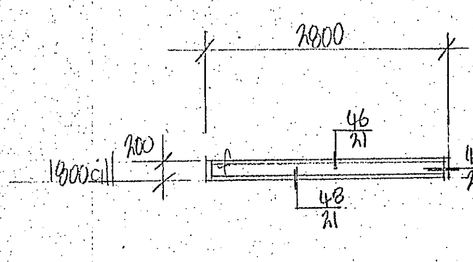


W2-19

W2-20

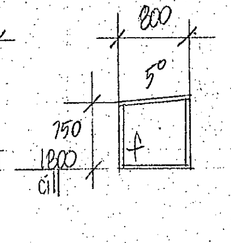


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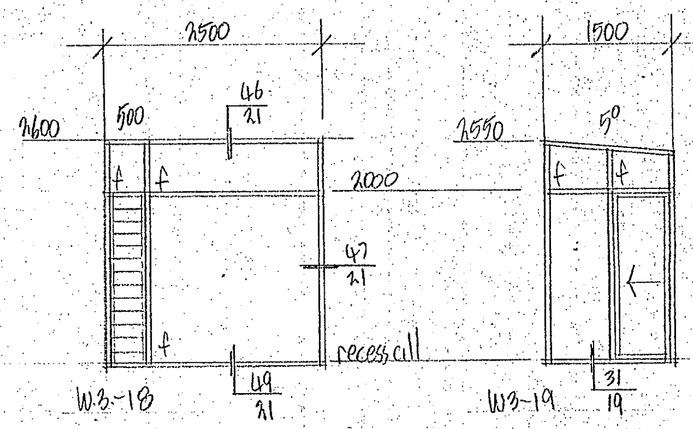


W3-14

W3-15

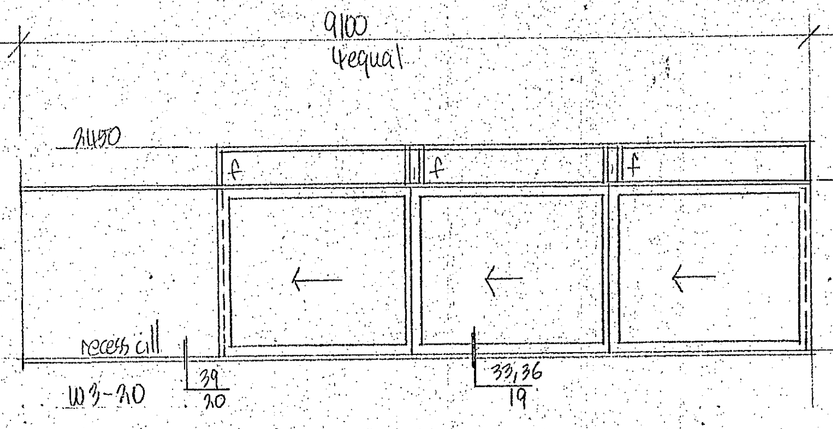


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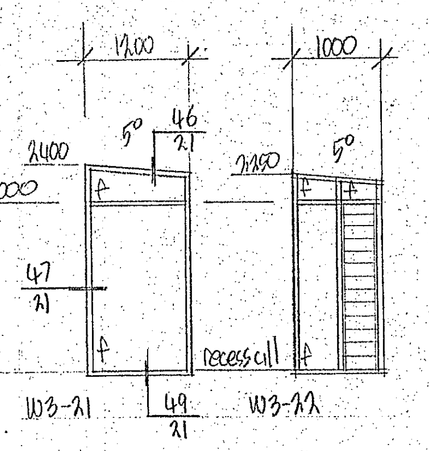


W3-18

W3-19

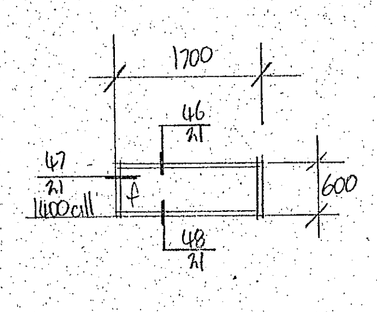


W3-20



W3-21

W3-22



W3-23

Joinery schedule:

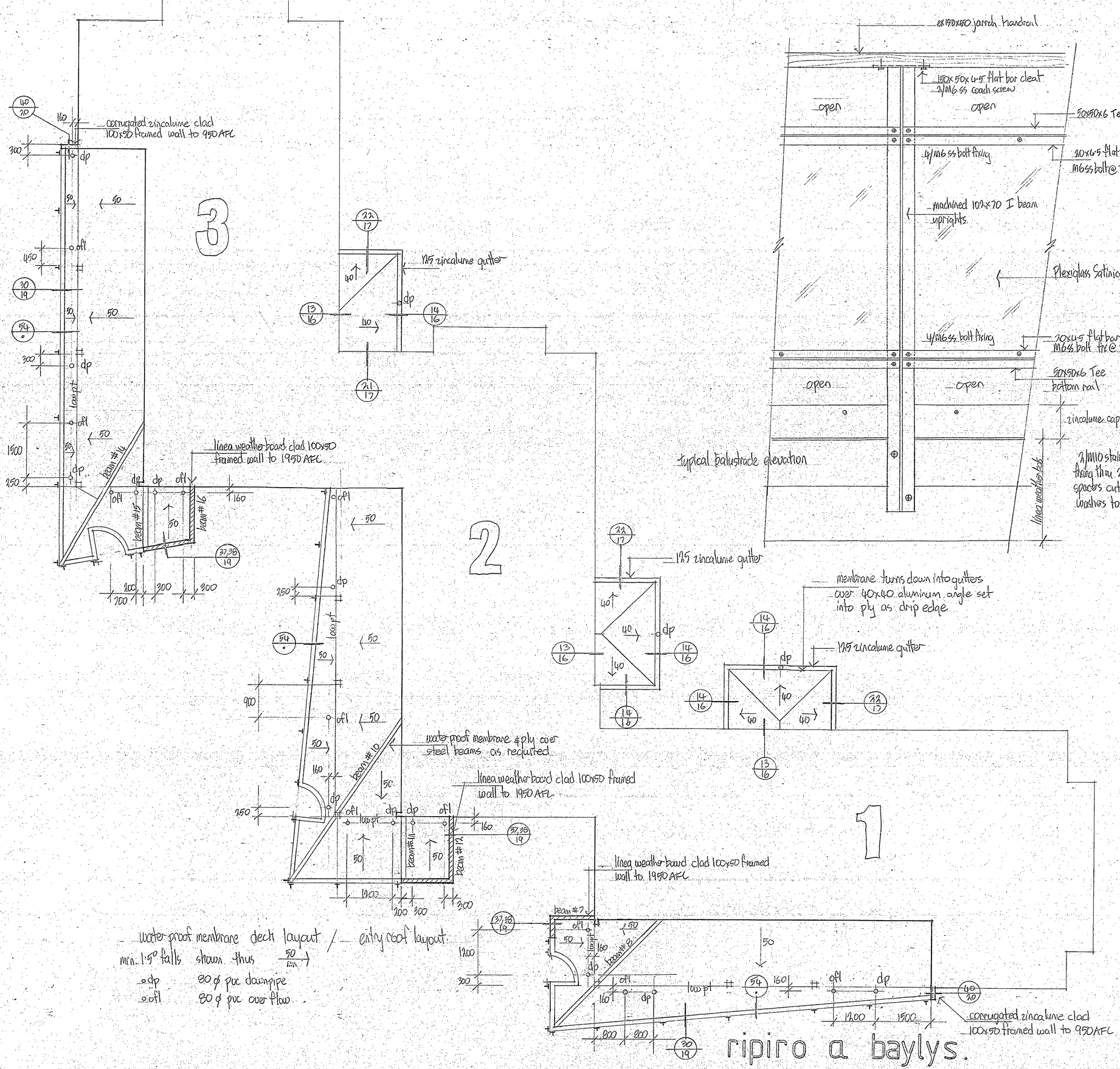
1. check all dimensions on site prior to commencing fabrication
2. joinery shown viewed from outside.
3. joinery to be silver anodised aluminum
4. head flashings to silver anodised aluminum to details
5. liners to be 19mm Fyrie line gib - provide units with fixing lugs as required
6. glass to be green tint clear finish. glazing to comply with NZS4223 / NZBC
7. louvre blades to be 150mm size. louvre gear to be grey pvc
8. hardware & hinges to be powder coat to match joinery
9. W1-01, W2-01, W3-01 to be supplied by joinery manufacturer hardware supplied by Owner hinges by joinery manufacturer
10. W1-13, W2-02, W3-02 - garage doors - to be supplied by Doors 4 U - Auckland
11. W1-16, W2-18, W3-18 to be discussed with Designer to enable desired solution to be achieved.
12. If in doubt ask Designer.

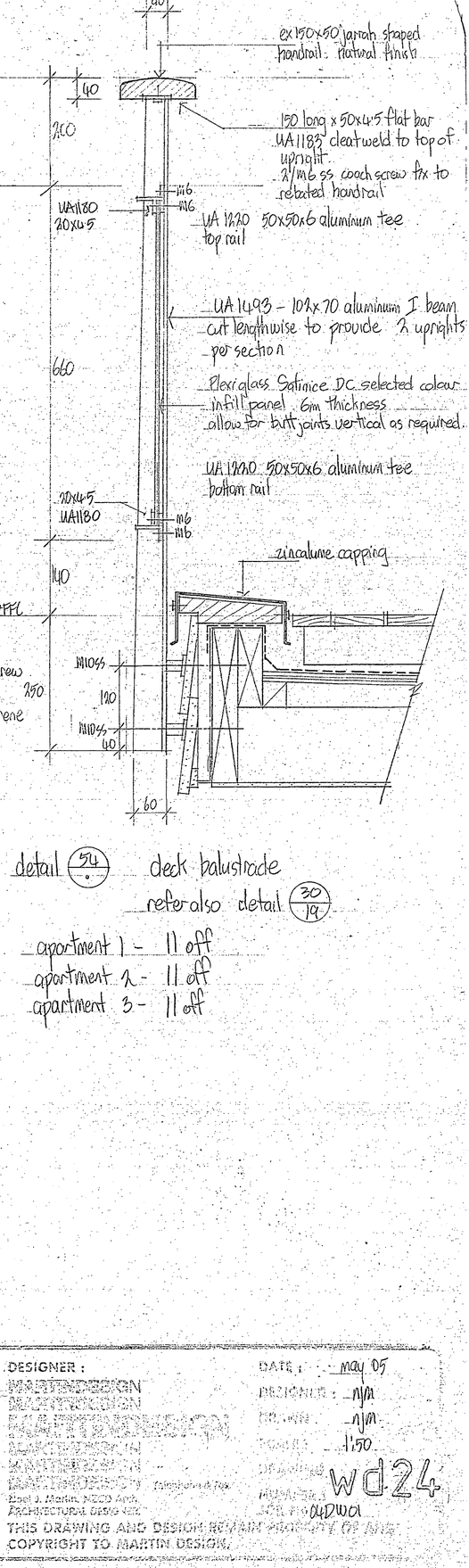
ripiro @ baylys.

DESIGNER :
DRAFTSPERSON
DATE : June 05
DESIGNED : MM
DRAWN : MM
SCALE : 1:50
DRAWING NUMBER : wd25
JOB No. 04DW01
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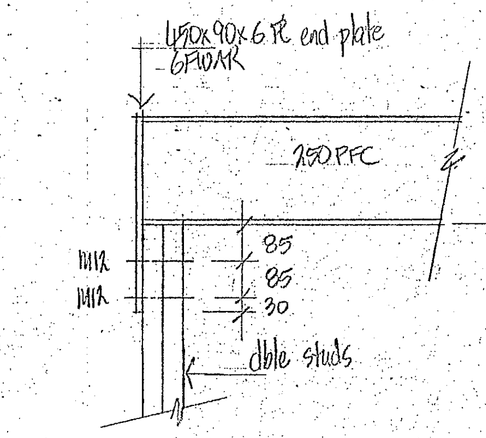
detail (54/.) deck balustrade
refer also detail (30/19)

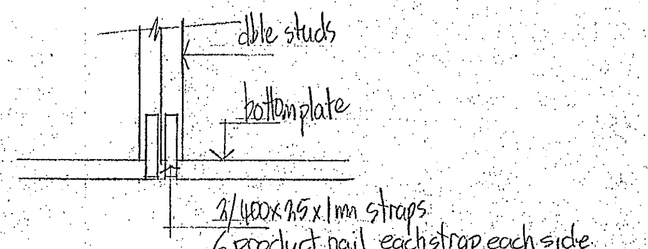
apartment 1 - 11 off
apartment 2 - 11 off
apartment 3 - 11 off

ripiro a baylys.

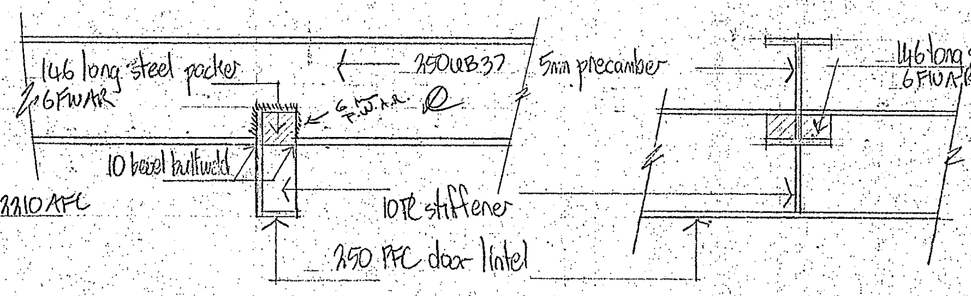
DESIGNER :	DATE : may 05
MARTIN DESIGN	DESIGNED : njm
MARTIN DESIGN	DRAWN : njm
MARTIN DESIGN	SCALE : 1:50
MARTIN DESIGN	wd24
MARTIN DESIGN Registered Architects Noel J. Martin, NZRD Arch. ARCHITECTURAL DESIGN LTD.	JOB NO. 04DW01

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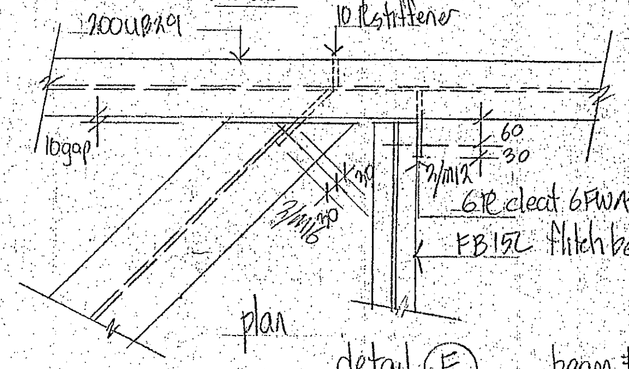




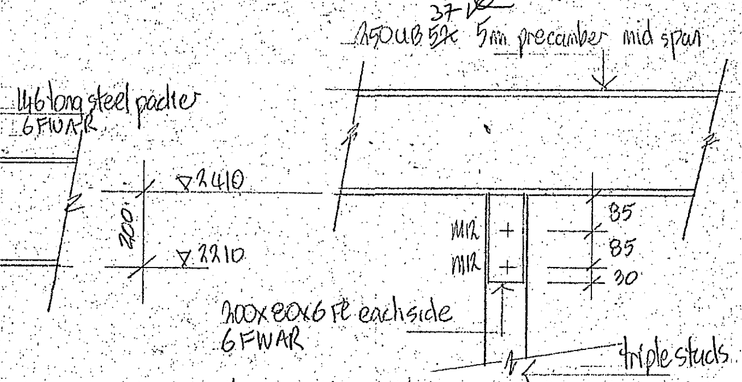
detail (A) beam #1 beam #3 beam #5



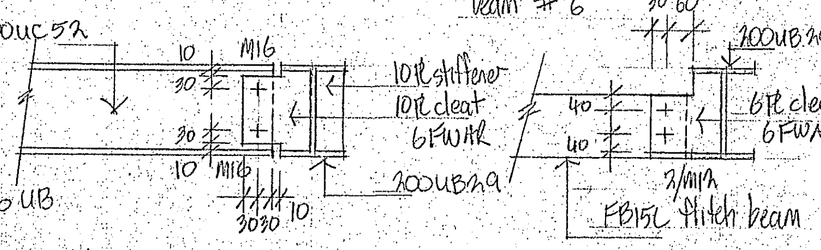
detail (B) beam #1 / beam #2
beam #3 / beam #4
beam #5 / beam #6



detail (F)

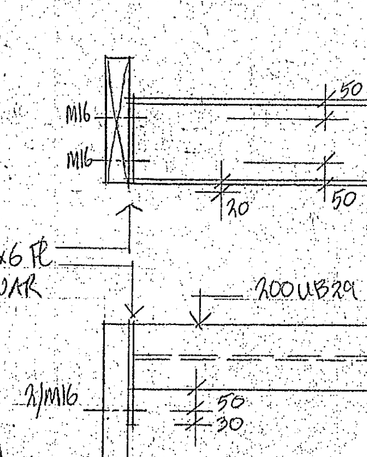


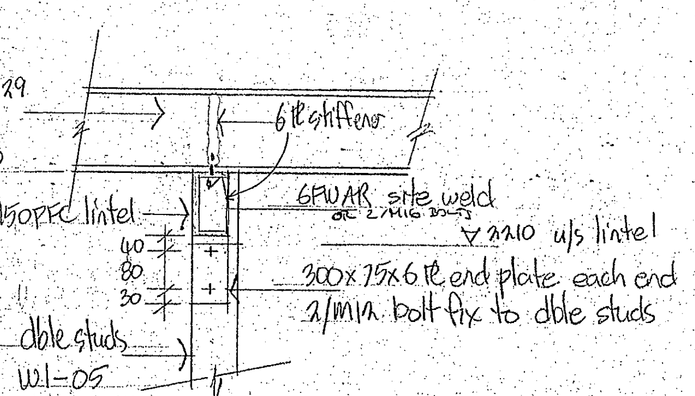
detail (C) beam #2
beam #4
beam #6



elevation – UC

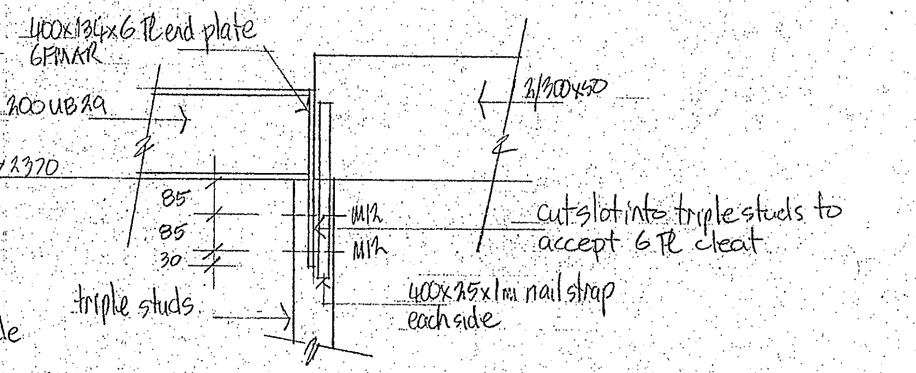
elevation – flitch beam



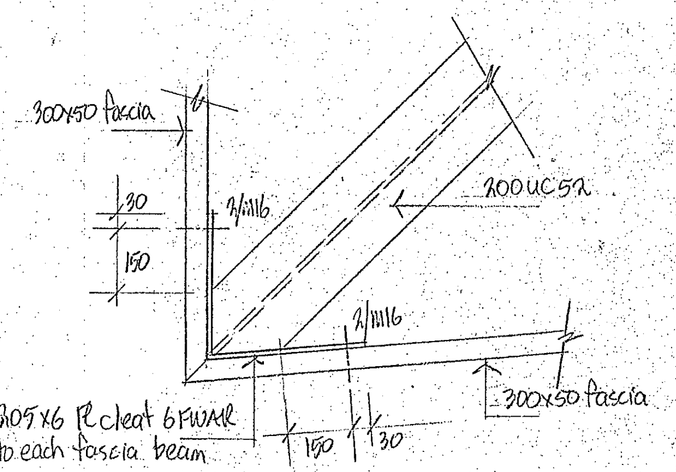


detail (E) beam #7 / beam #19 - lintel to W1-05

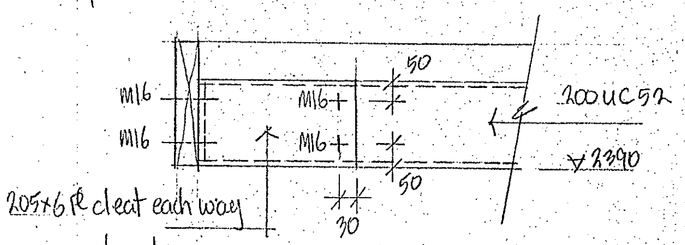
detail (D) beam #7



detail (G) beam #7 / 2/300x50

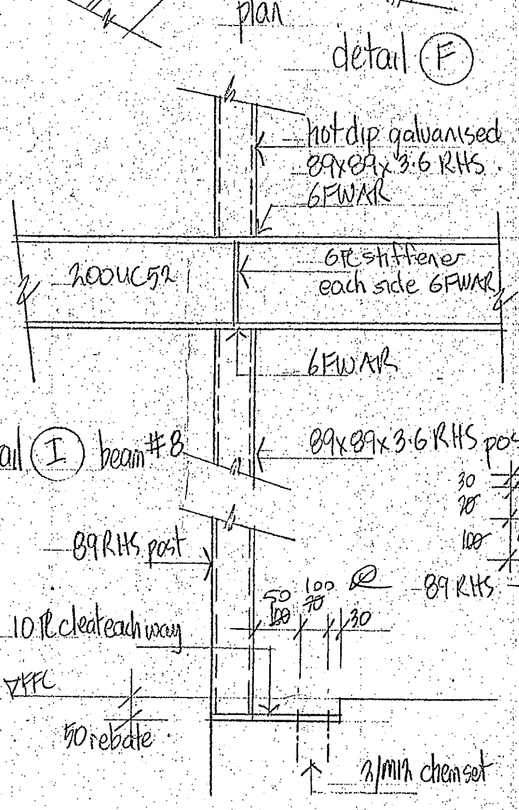


plan



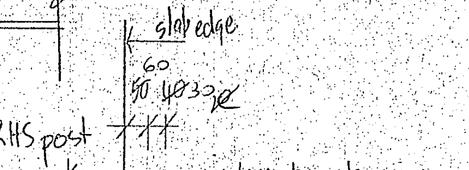
elevation

detail (H) beam #8

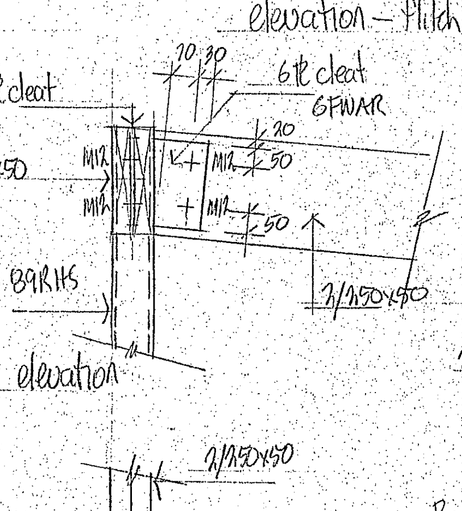


detail (I) beam #8

detail (J) post #1, 2, 3, 4, 5, 6, 7, 8, 9.

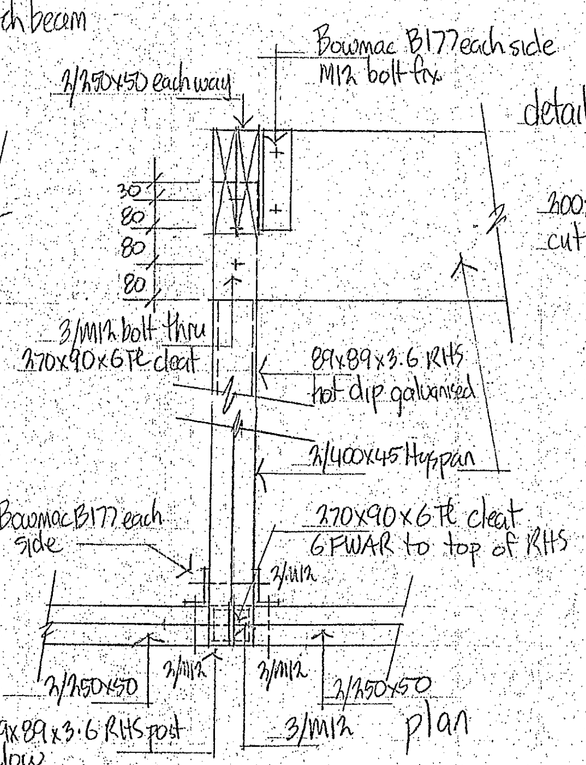


plan

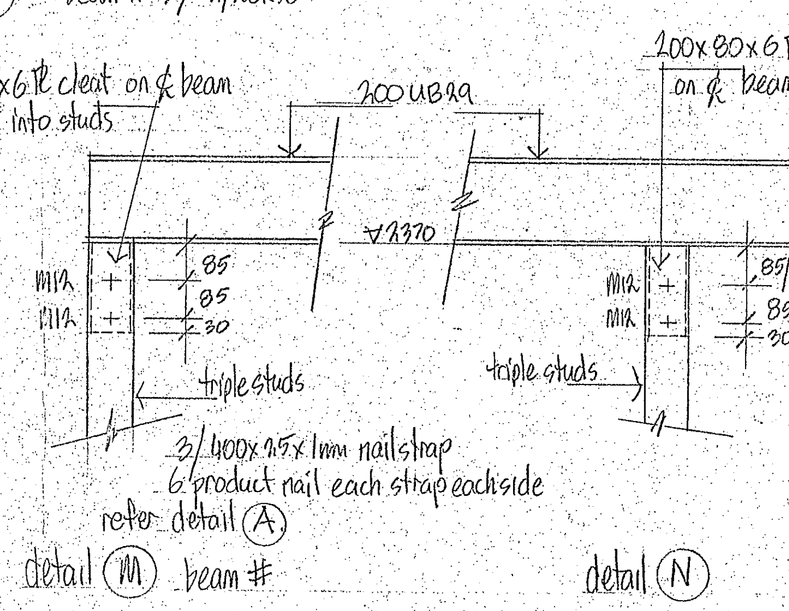


plan

detail (K) post #3
post #4

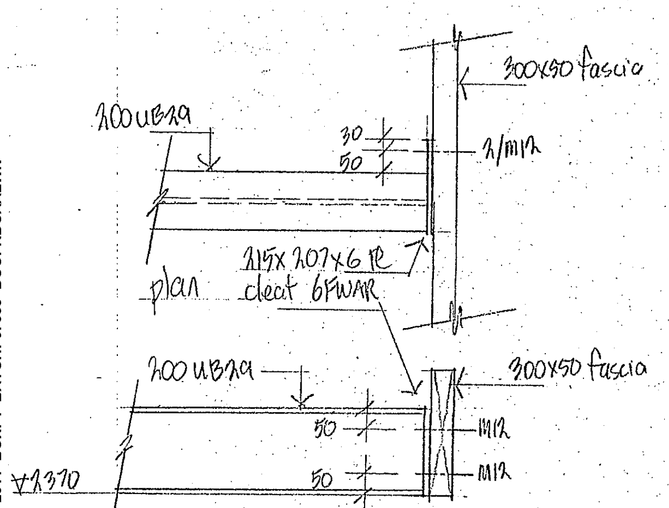


detail (L) post #1, 2

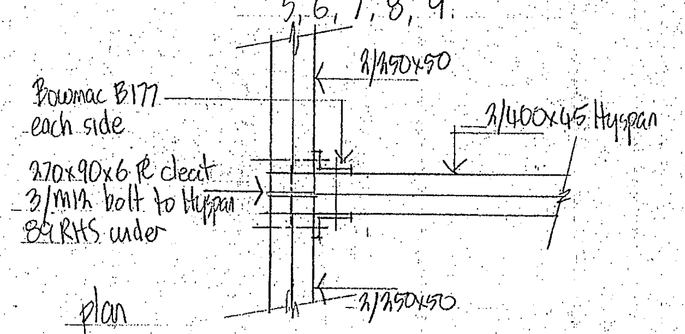


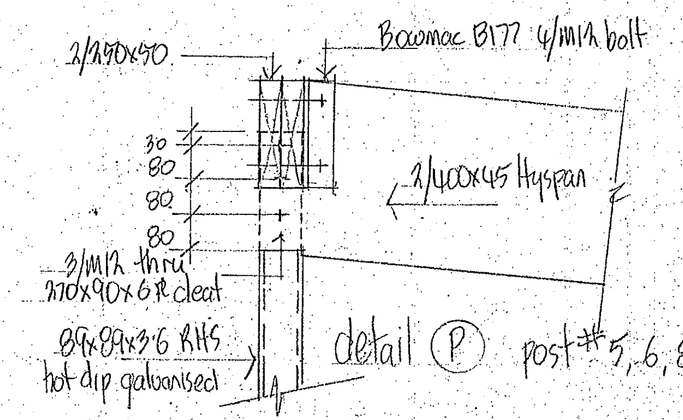
detail (M) beam #

detail (N)

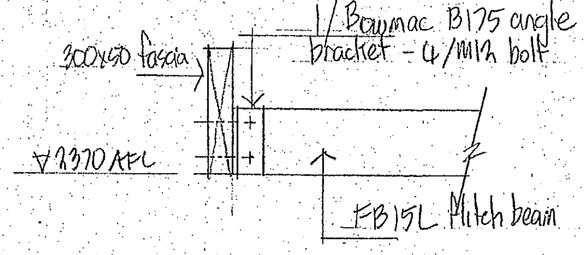


detail (O) beam #11





detail (P) post #5, 6, 8, 9.



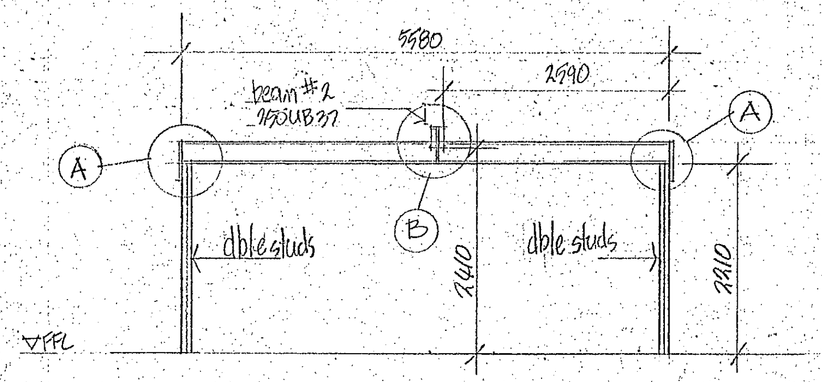
detail (Q) beam #9, 13, 17,

ripiro @ baylys

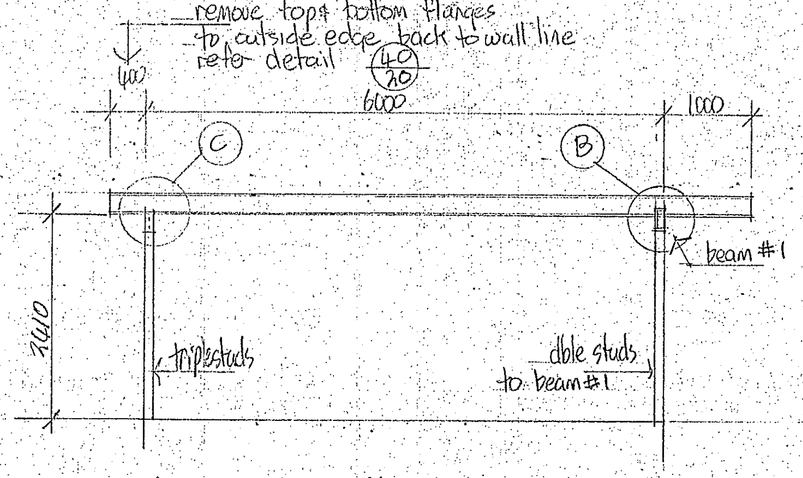
DESIGNER :	DATE : June 05
	DESIGNED : NJM
	DRAWN : NJM
	SCALE : 1:50
	DRAWING NUMBER : wd23
Noel J. Martin, NZCD Arch. ARCHITECTURAL DESIGNER	JOB No. 04DW01

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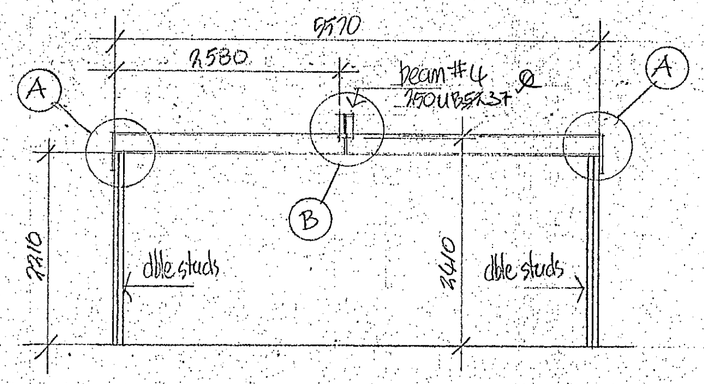
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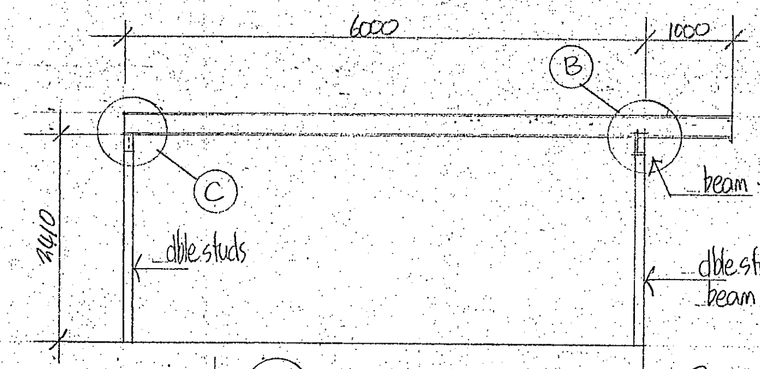
beam #1 250 PFC garage door lintel
apartment 1

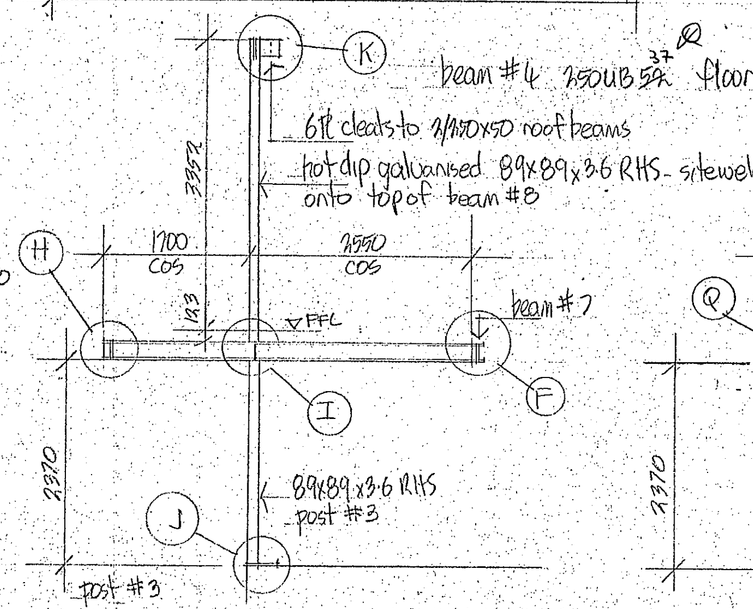


beam #2 250UB37 floor beam over garage
apartment 1

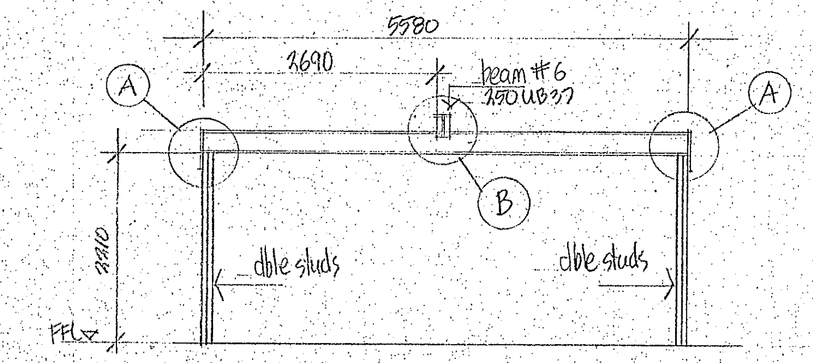


beam #3 250 PFC garage door lintel
apartment 2

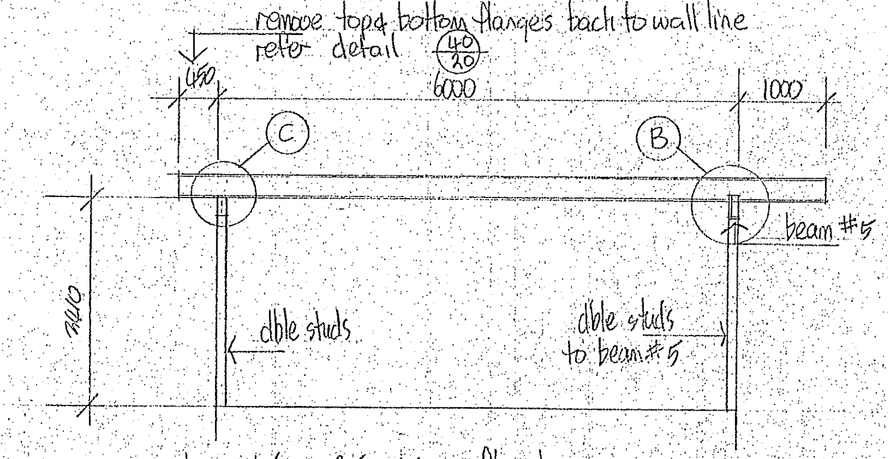




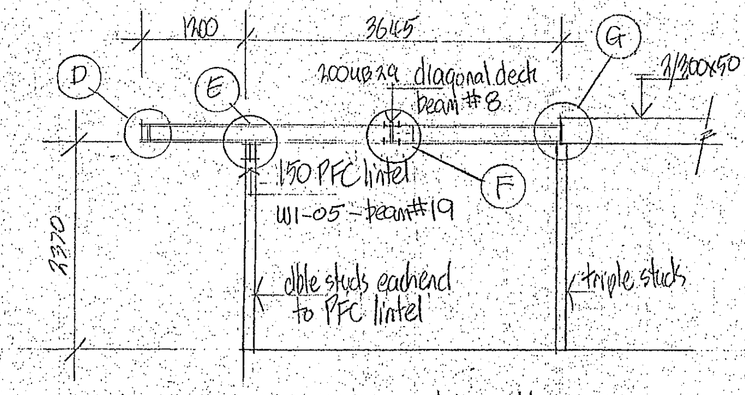
beam #4 250UB37 floor beam over garage apartment 2



beam #5 250 PFC garage door lintel
apartment 3

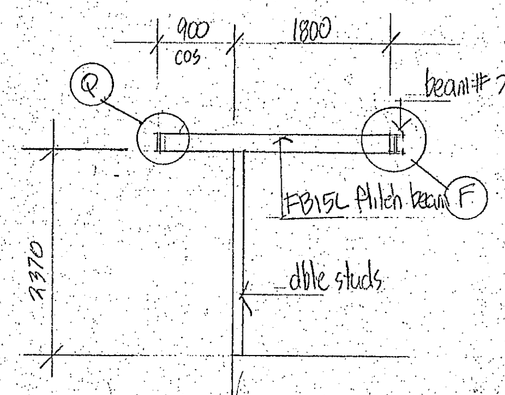


beam #6 250UB37 floor beam over garage
apartment 3

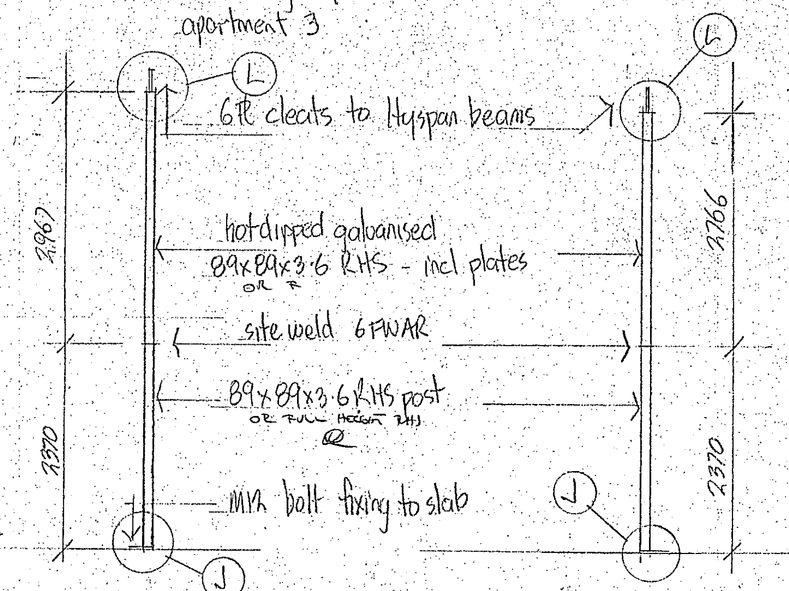


beam #7 200UB29 deck cantilever
apartment 1

beam #8 200UC52 deck diagonal cantilever
apartment 1. pack 5mm over RHS post

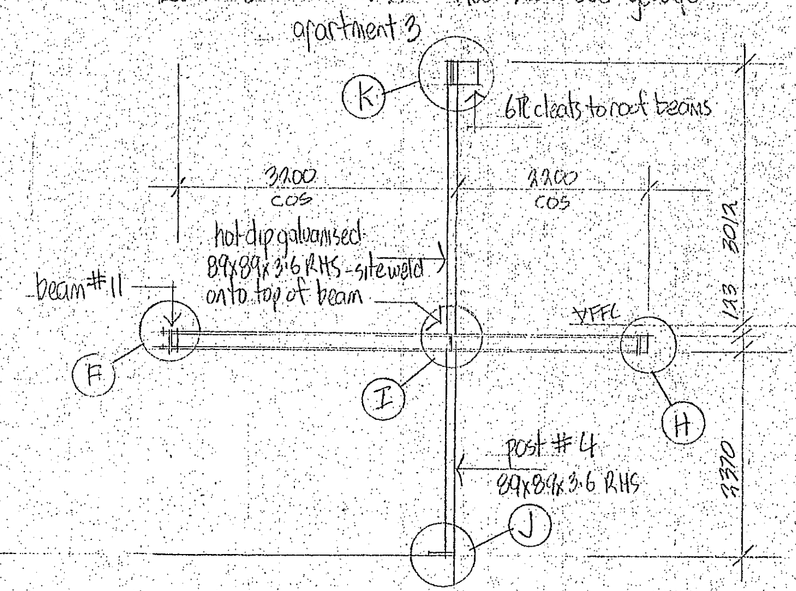


beam #9 FB15L deck cantilever
apartment 1
beam #18 FB15L deck cantilever

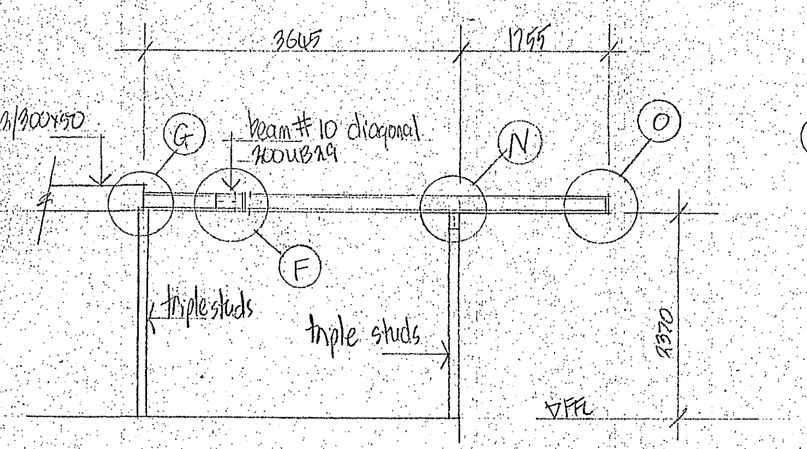


post #2 89x89x3.6 RHS
apartment 1

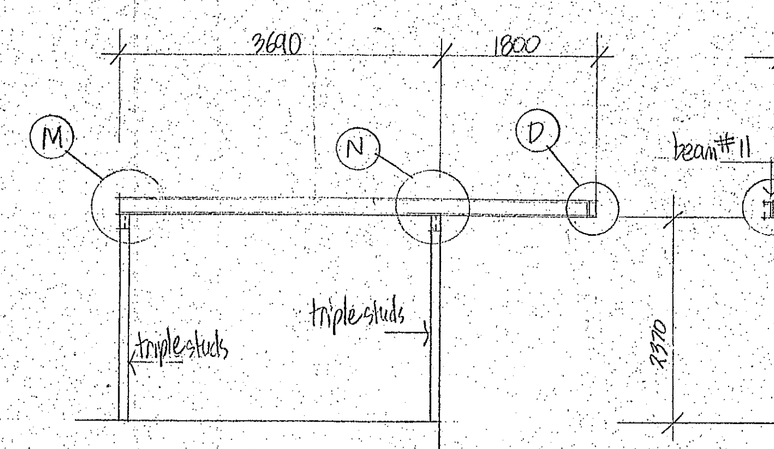
post #1 89x89x3.6 RHS
apartment 1.



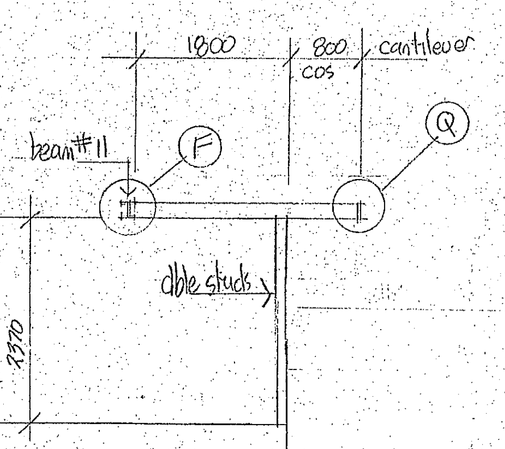
beam #10 200UC52 deck cantilever
post #4 apartment 2 pack 5mm over RHS post



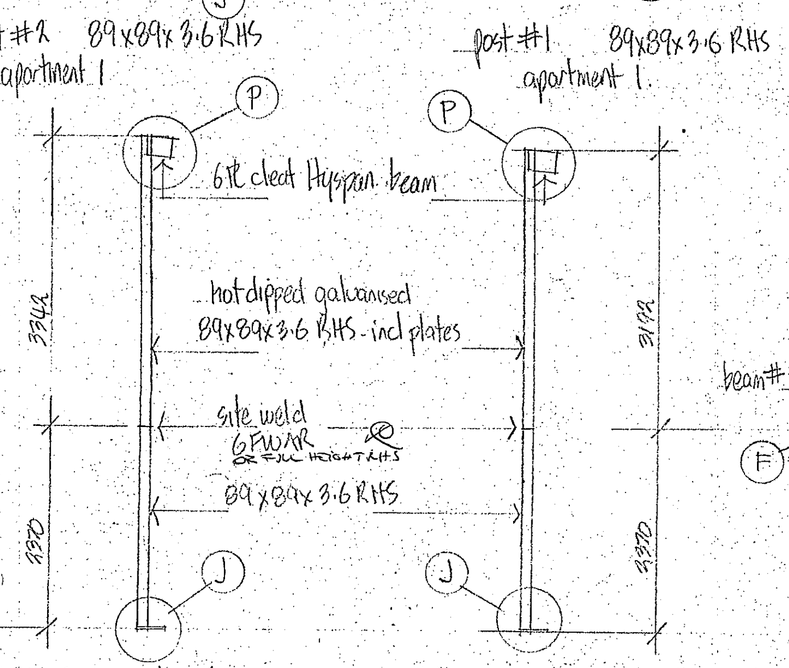
beam #11 200UB29 deck cantilever
apartment 2



beam #12 200UB29 deck cantilever
apartment 2

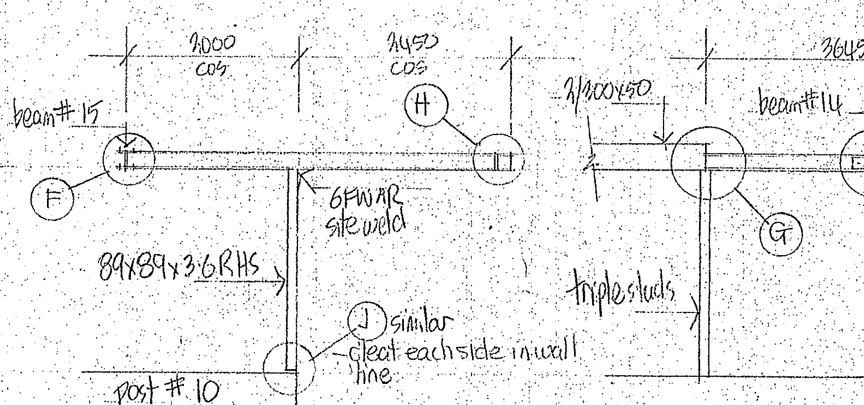


beam #13 FB15L beam deck cantilever
apartment 2 ensure beam locates over
dble studs of W2-08

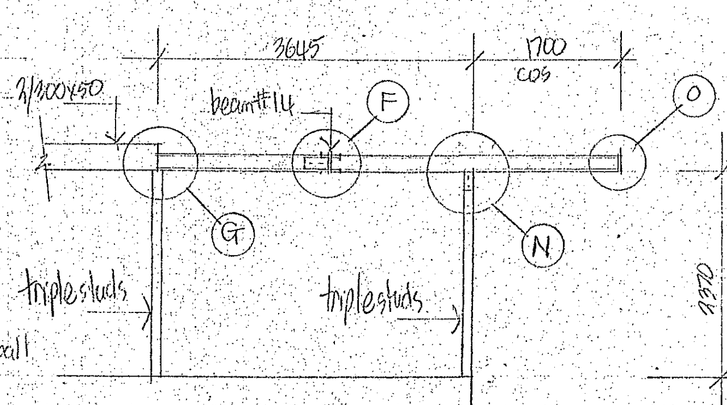


post #5 post #6
89x89x3.6 RHS apartment #2

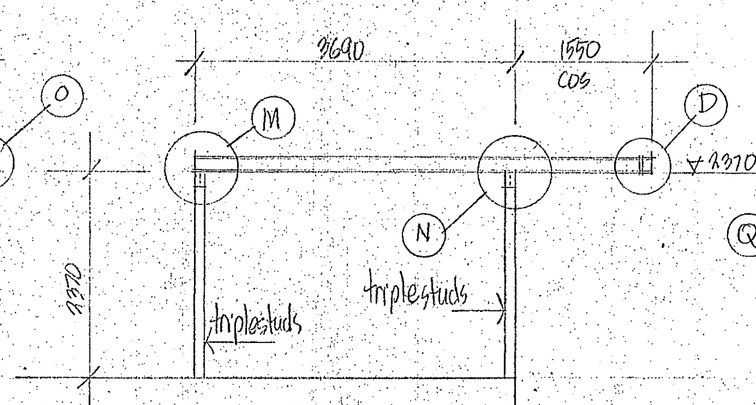
post #7 post #8, post #9
apartment #3



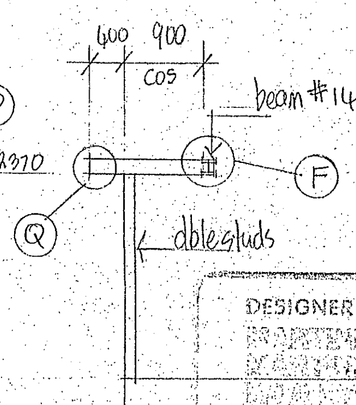
beam #14 200UC52 diagonal cantilever
apartment 3 pack 5mm over RHS post



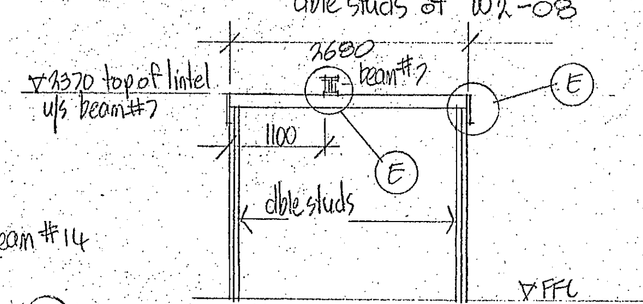
beam #15 200UB29 deck cantilever
apartment 3



beam #16 200UB29 deck cantilever
apartment 3



beam #17 FB15L
apartment 3



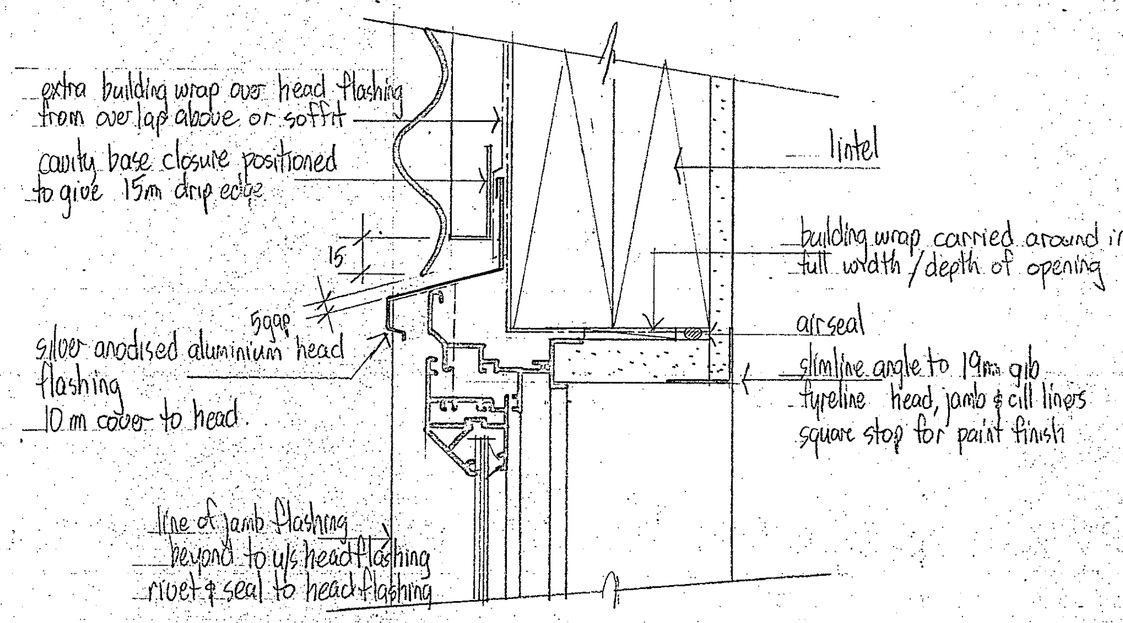
beam #19 - 150 PFC lintel - W1-05

steel beams & posts. schematic/dimension layouts. check on site - cos.

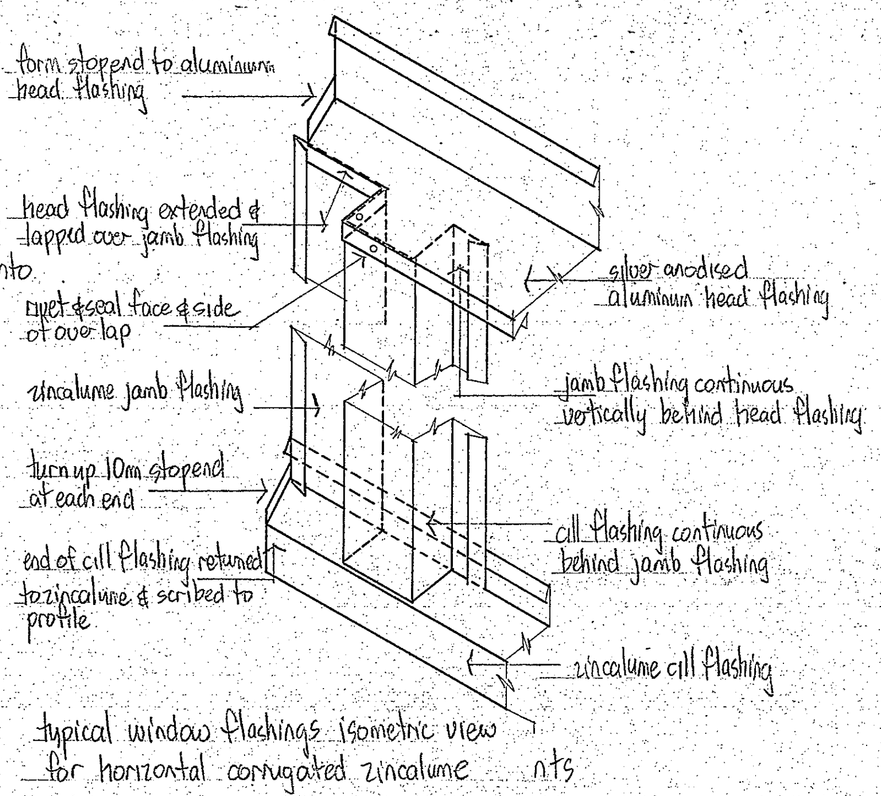
ripiro @ baylys.

DESIGNER: WHANGAREI
DESIGNED: njm
DRAWN: njm
SCALE: 1:50
DATE: may 05
DRAWING NUMBER: w.d22
Ph/Fax: Telephone & Fax
Brad J. Martin, NZCD Arch.
ARCHITECTURAL DESIGNER.
JOB No: 04DW01
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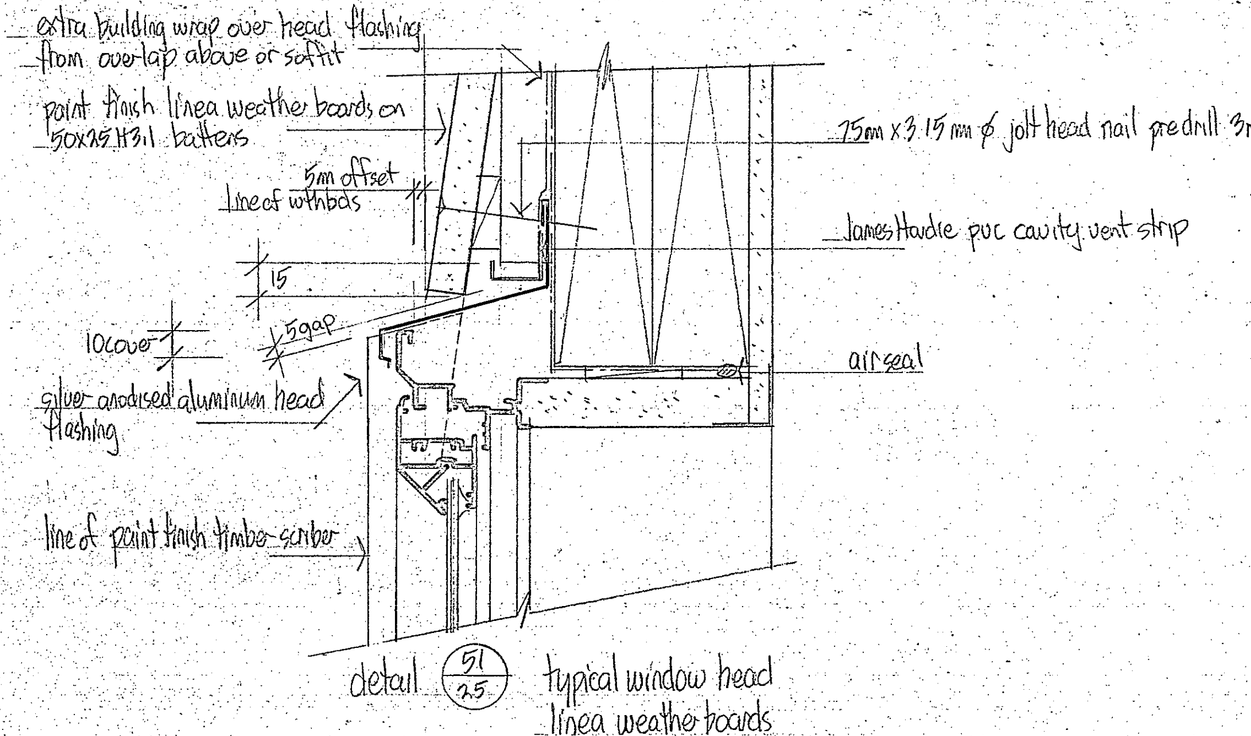
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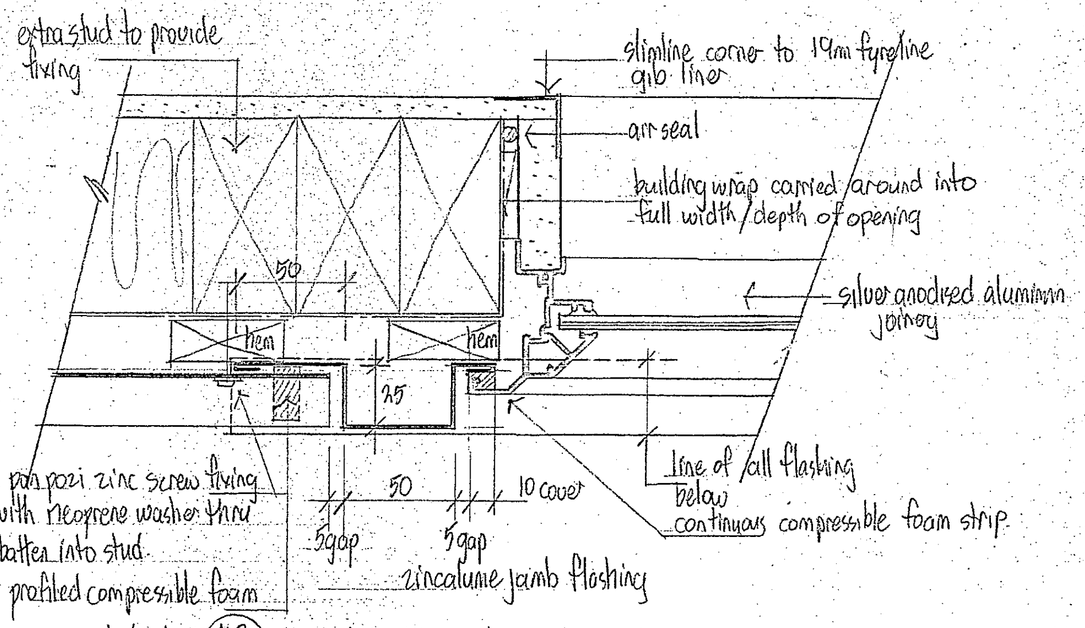
detail (46/25) typical head- corrugated zincalume horizontal



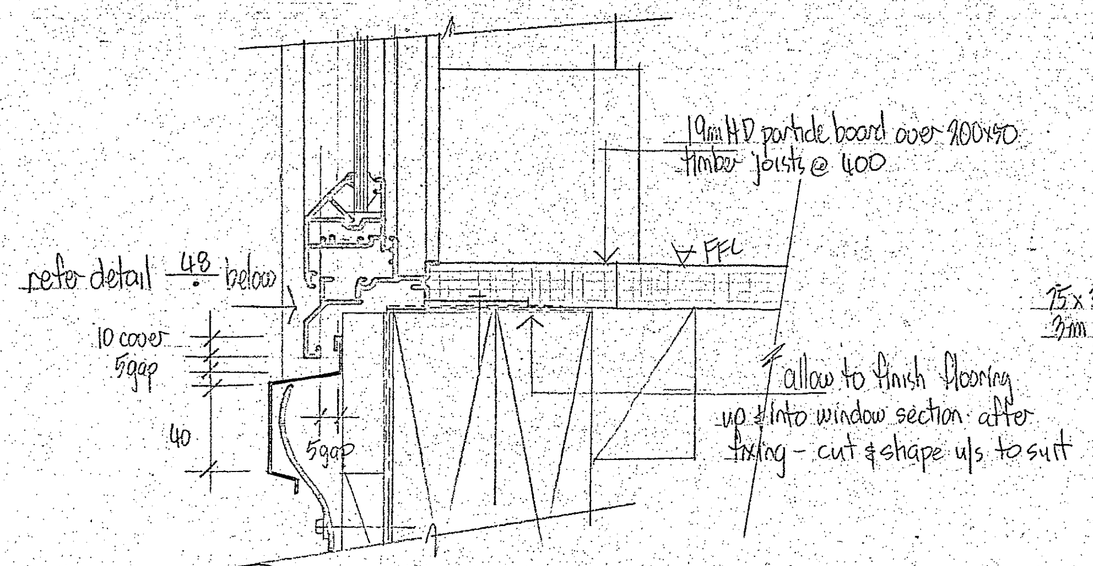
typical window flashings isometric view for horizontal corrugated zincalume nts



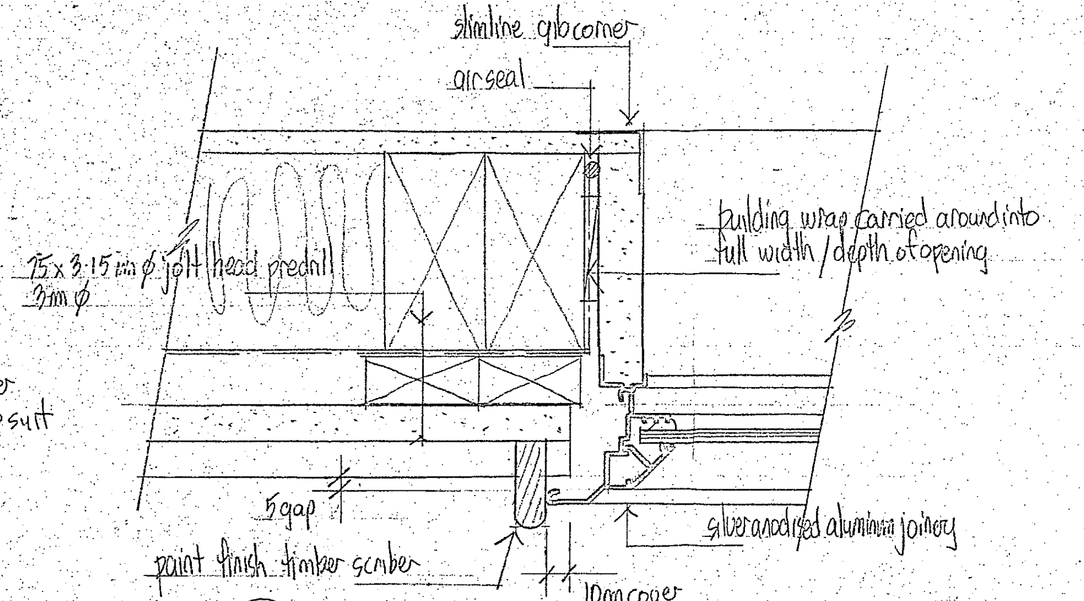
detail (51/25) typical window head linea weather boards



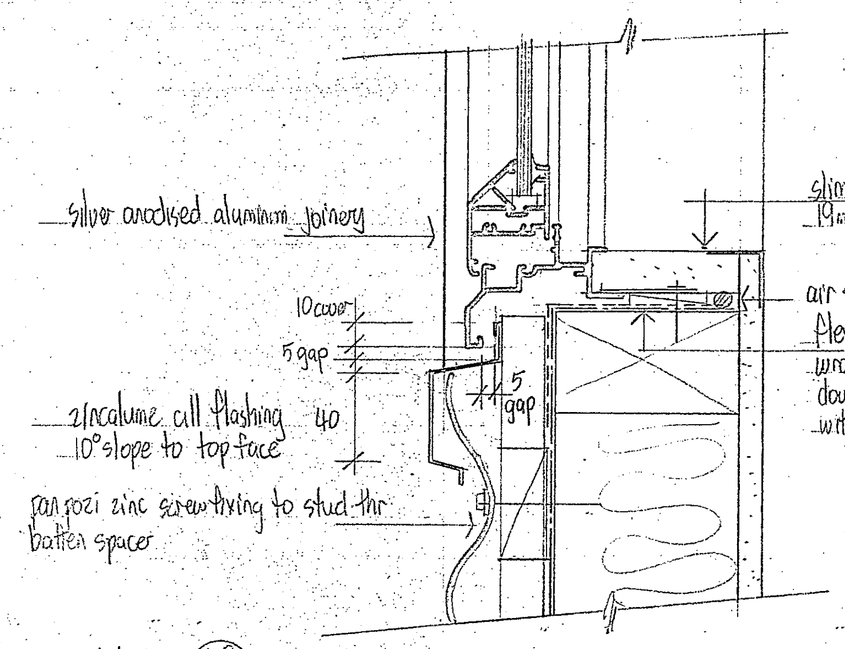
detail (47/25) typical jamb - horizontal corrugated zincalume



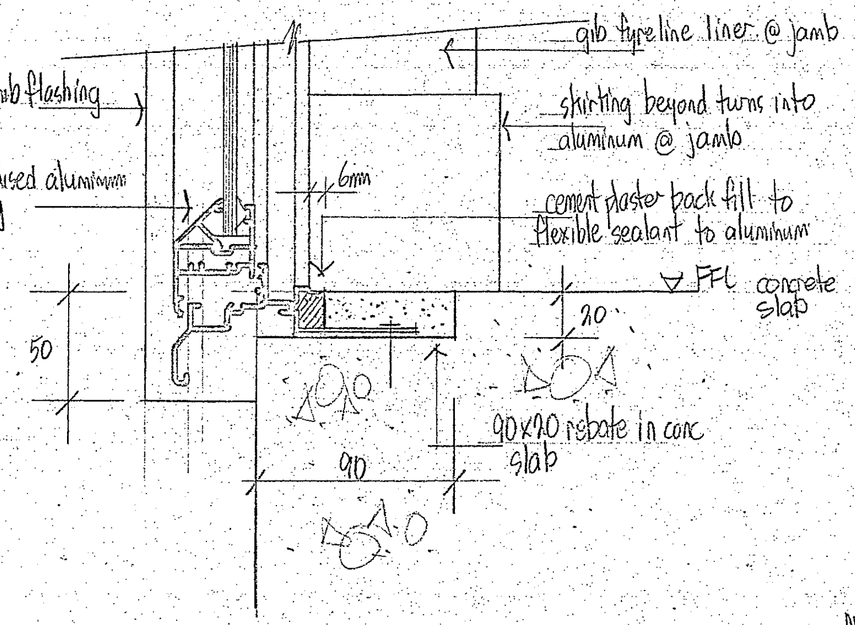
detail (49/25) upper floor level - cill @ floor horizontal corrugated zincalume



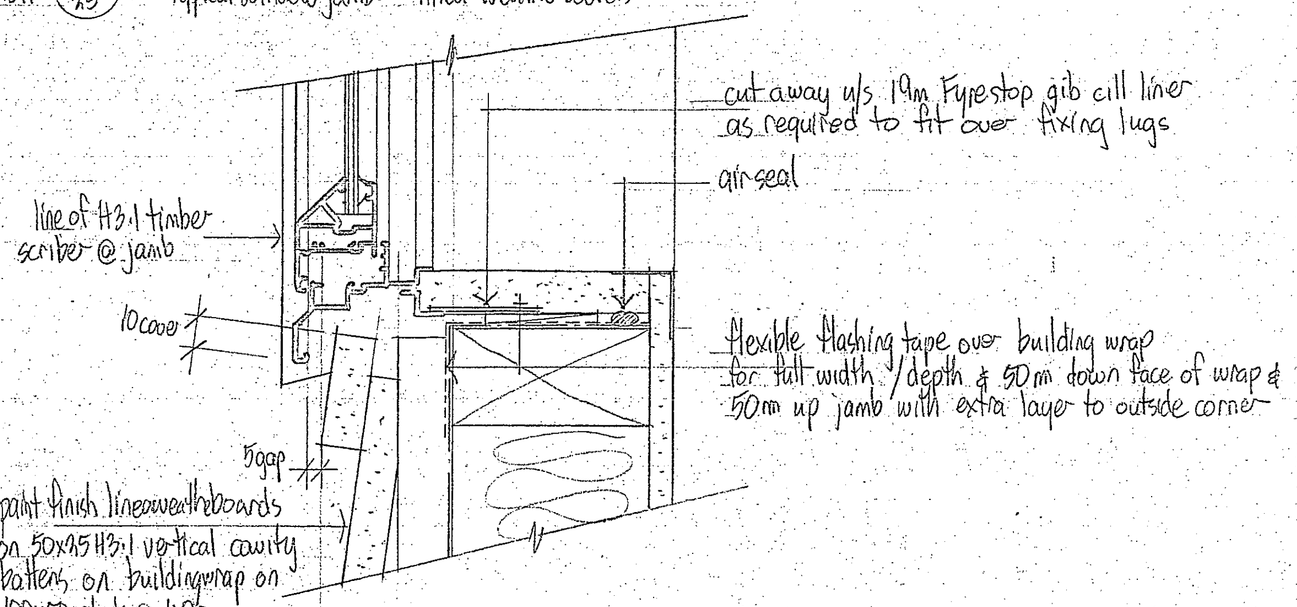
detail (52/25) typical window jamb- linea weatherboards



detail (48/25) typical cill - horizontal corrugated zincalume



detail (50/25) ground floor level - cill @ floor similar for linea & zincalume wall cladding



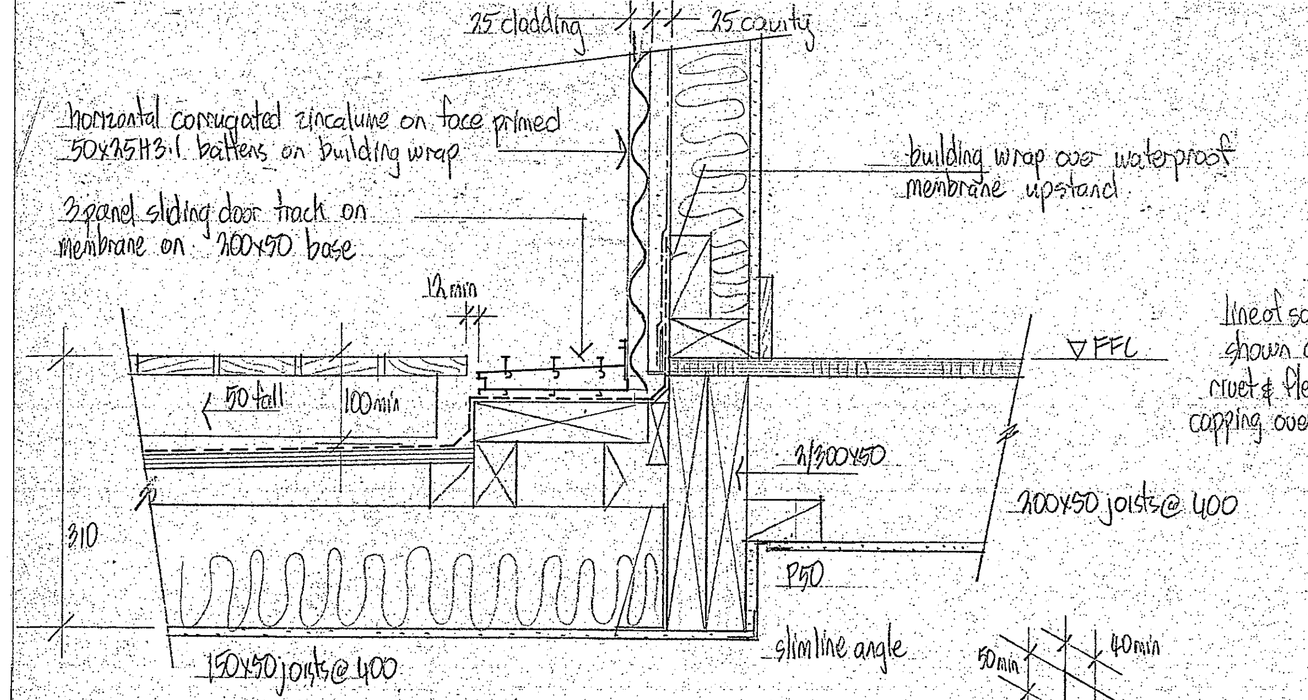
detail (53/25) typical window cill- linea weatherboards

NOTE: contractor to ensure complete compliance with NZBC Clause E2 & joinery & sheathing manufacturers requirements to achieve complete & adequate weather tightness to all parties satisfaction.

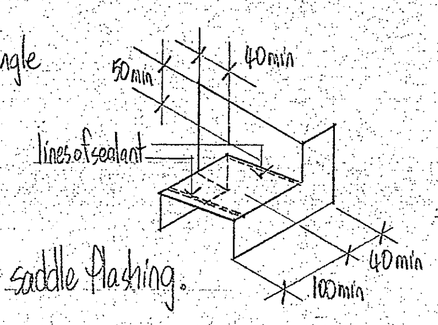
ripiro a baylys.

DESIGNER: [redacted]
DATE: June 05
DESIGNED: RJM
DRAWN: RJM
SCALES: 1:2
DRAWING NUMBER: wd21
JOB No.: 04 DW 01
Robert J. Martin, NZCD Arch.
ARCHITECTURAL DESIGNER
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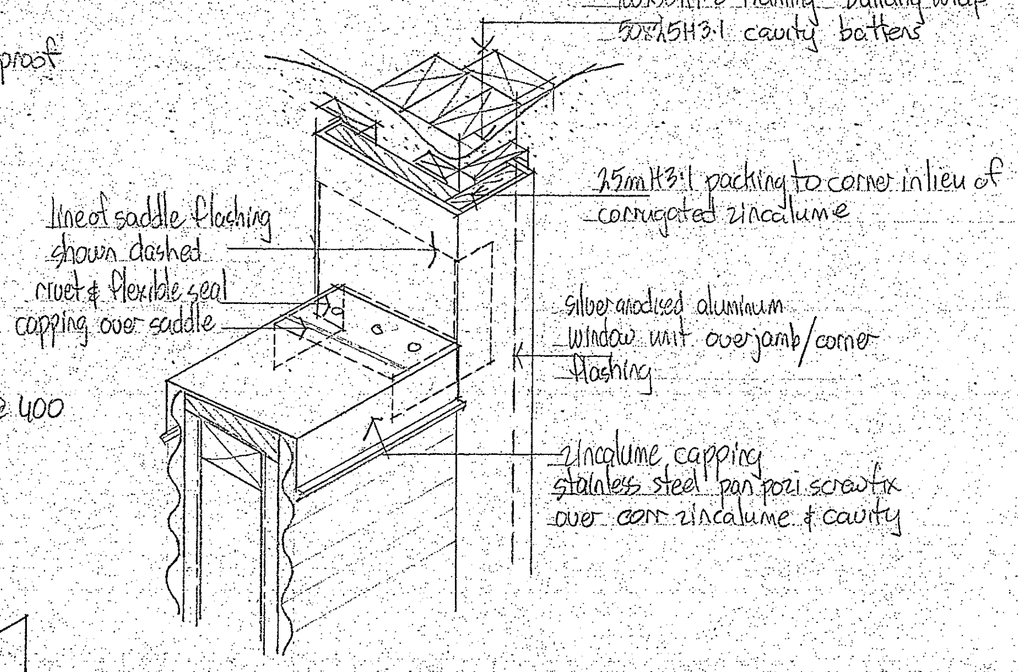
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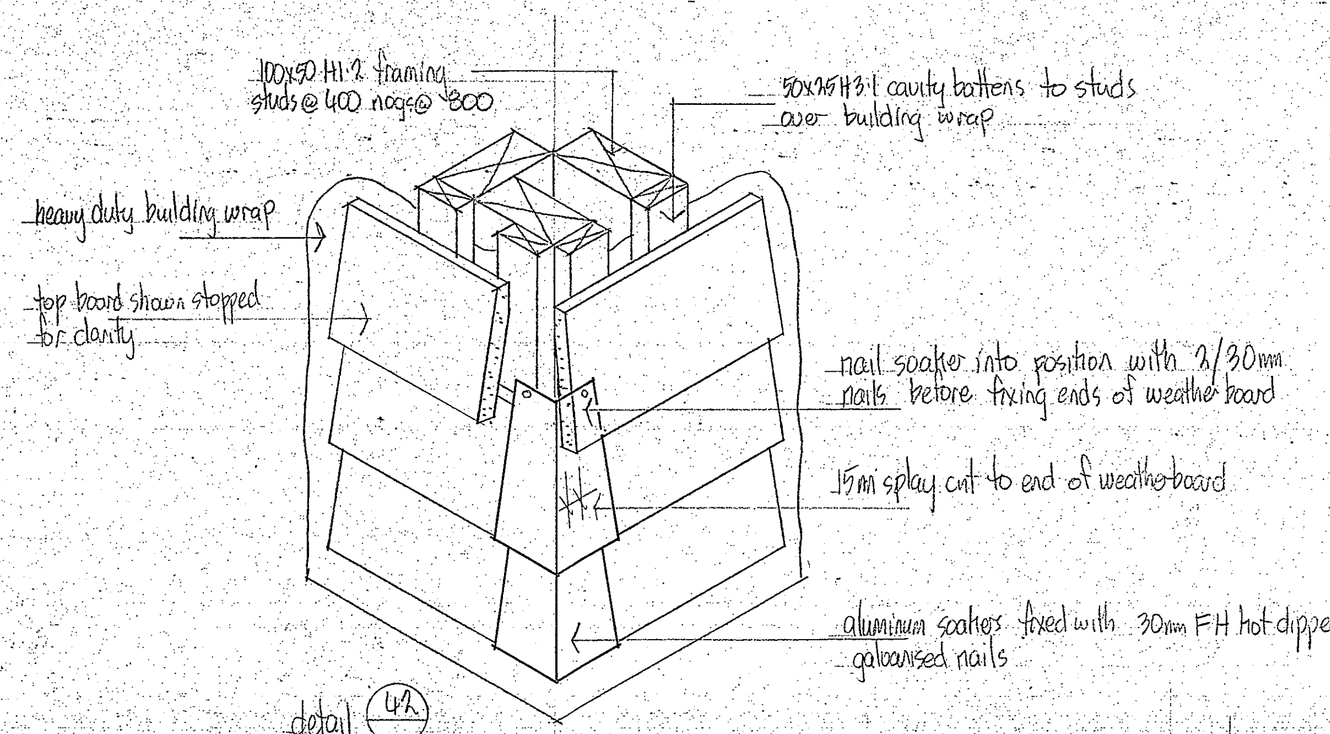
detail (39/13) deck / stacker door wall apartments 1, 2, 3



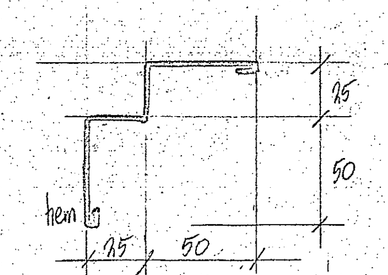
saddle flashing.

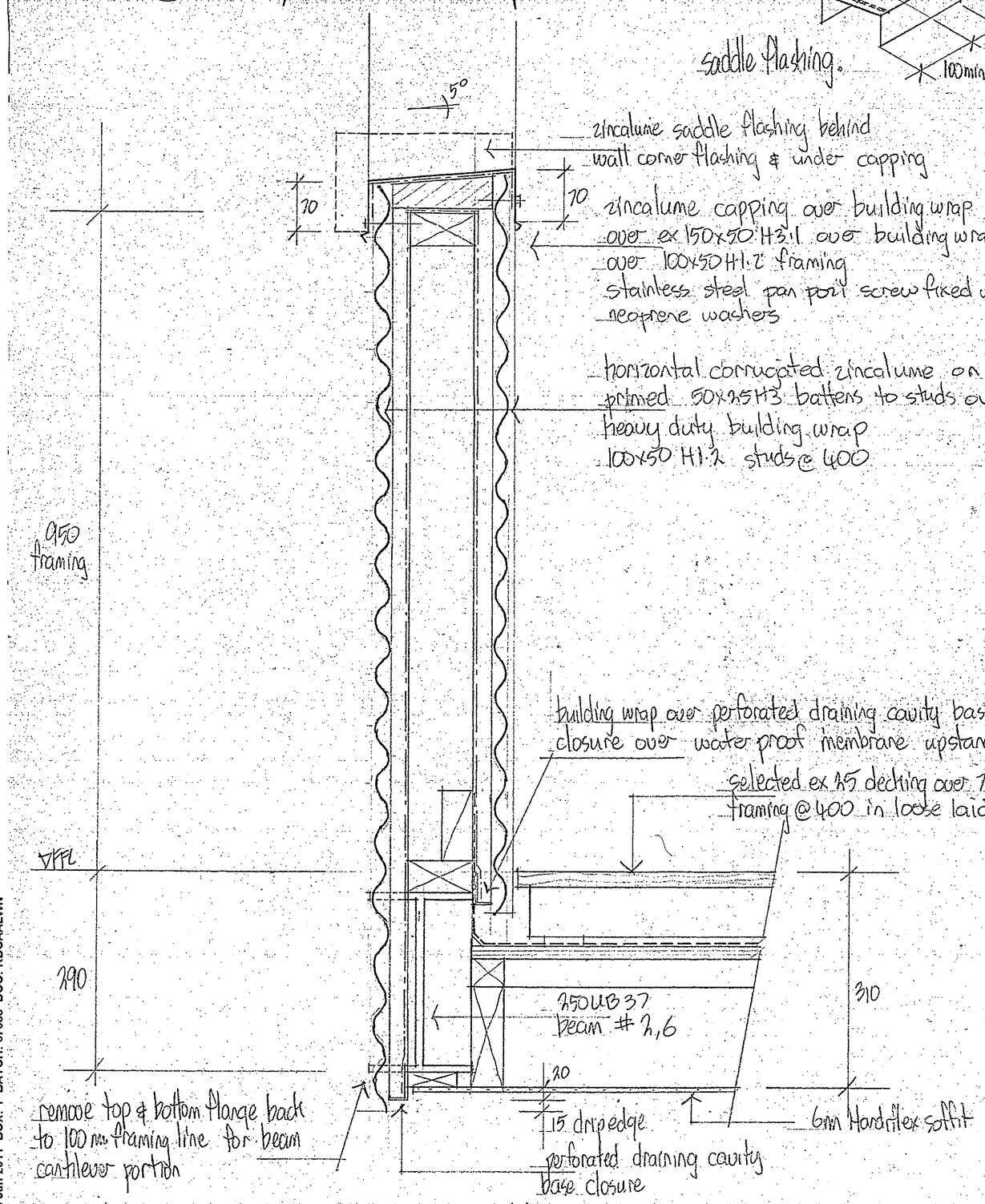


isometric view - balustrade to wall junction
corrugated zincalume
similar for linea weatherboards

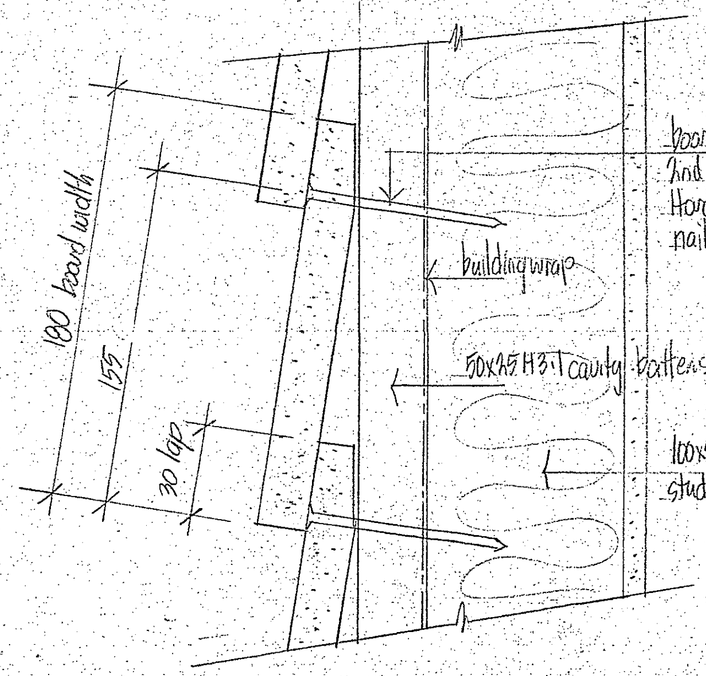


detail (42) linea weatherboard - external corner -



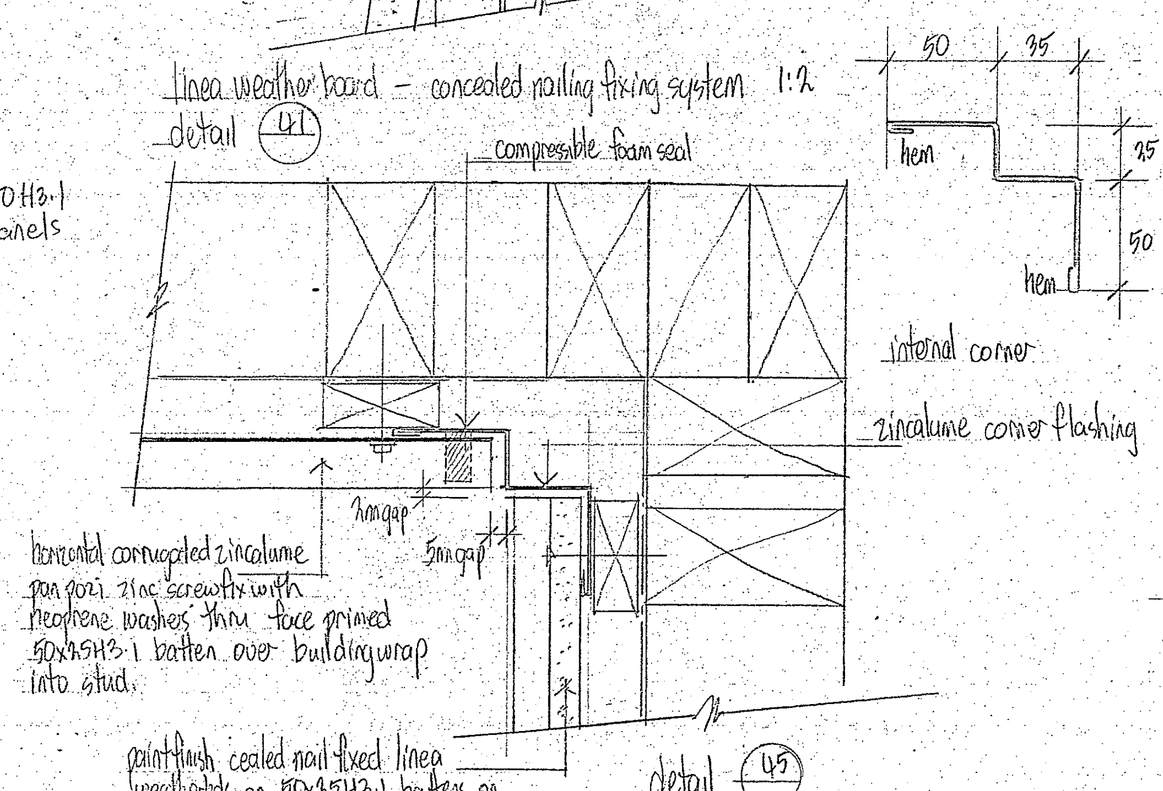


detail (40/13) deck balustrade - zincalume apartments 1, 3

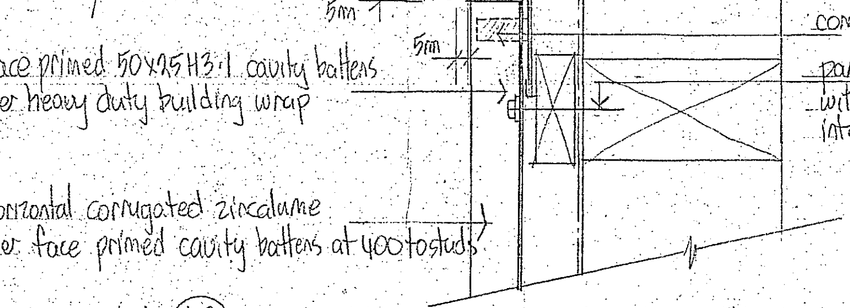


linea weatherboard - concealed nailing fixing system 1:2

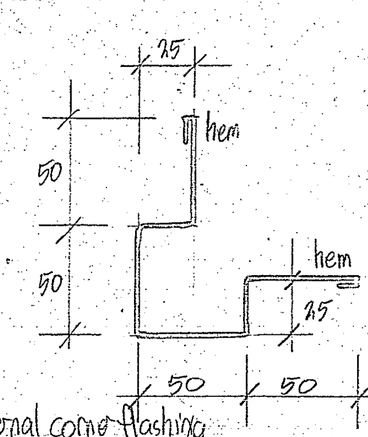
detail (41)

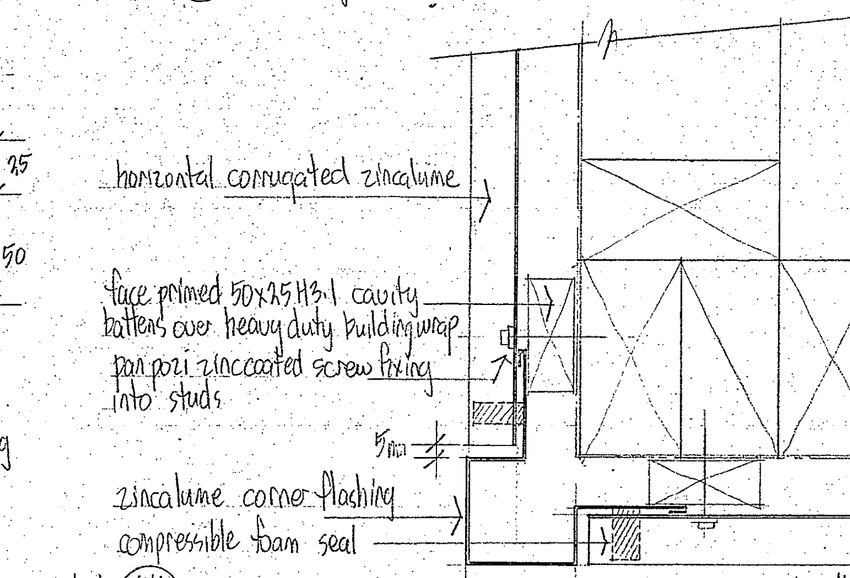


detail (45) corrugated zincalume horizontal / linea weatherboards internal corner



detail (43) corrugated zincalume horizontal - internal corner





detail (44) corrugated zincalume horizontal external corner

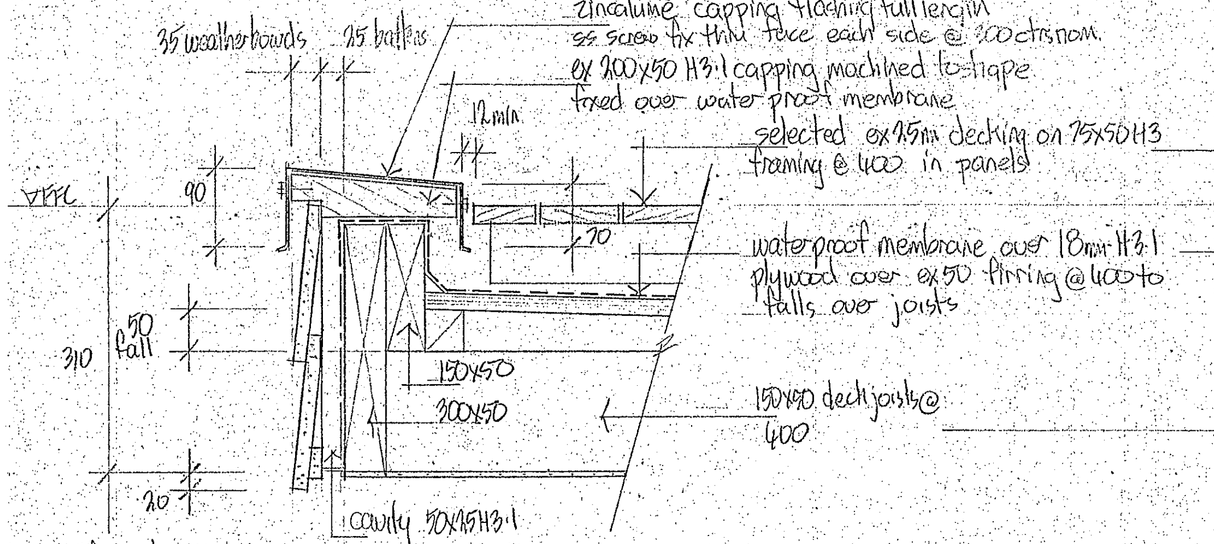
detail 44 corrugated zincalume - external corner

DESIGNER :	
DRAWN :	DATE : June 05
CHECKED :	DESIGNED : AJM
	DRAWN : MJM
	SCALE : 1:5, 1:2
Noel J. Martin, NZCD Arch. ARCHITECTURAL DESIGNER	DRAWING NUMBER wd20
	JOB NO. 04DW01

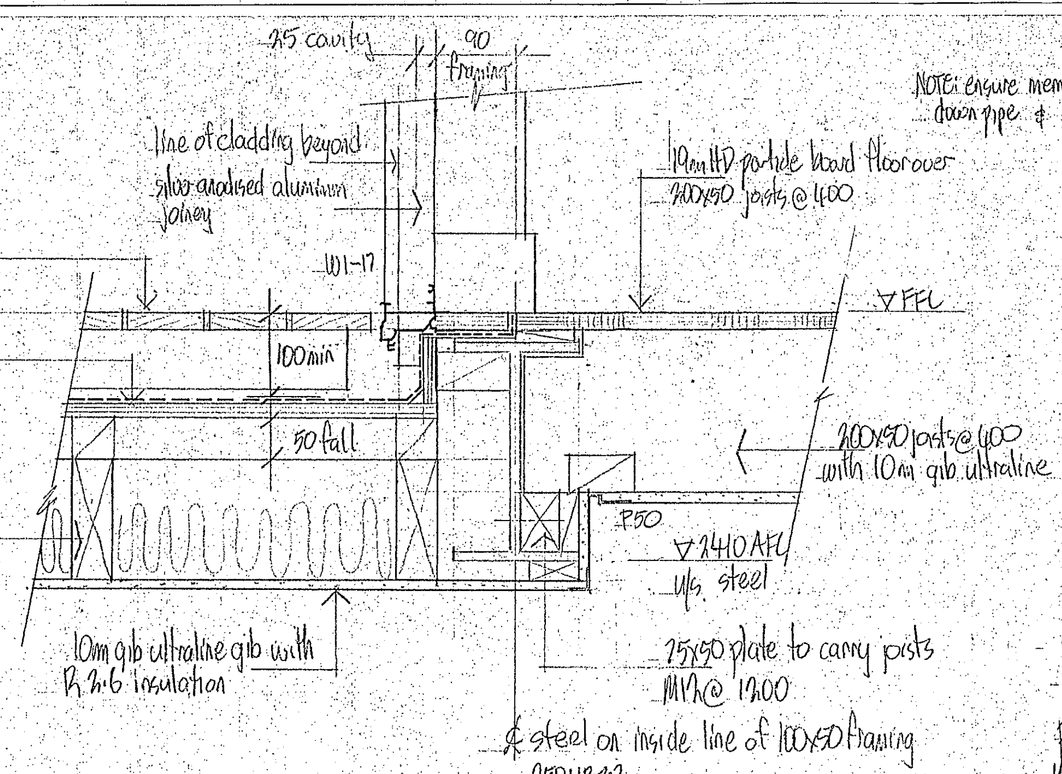
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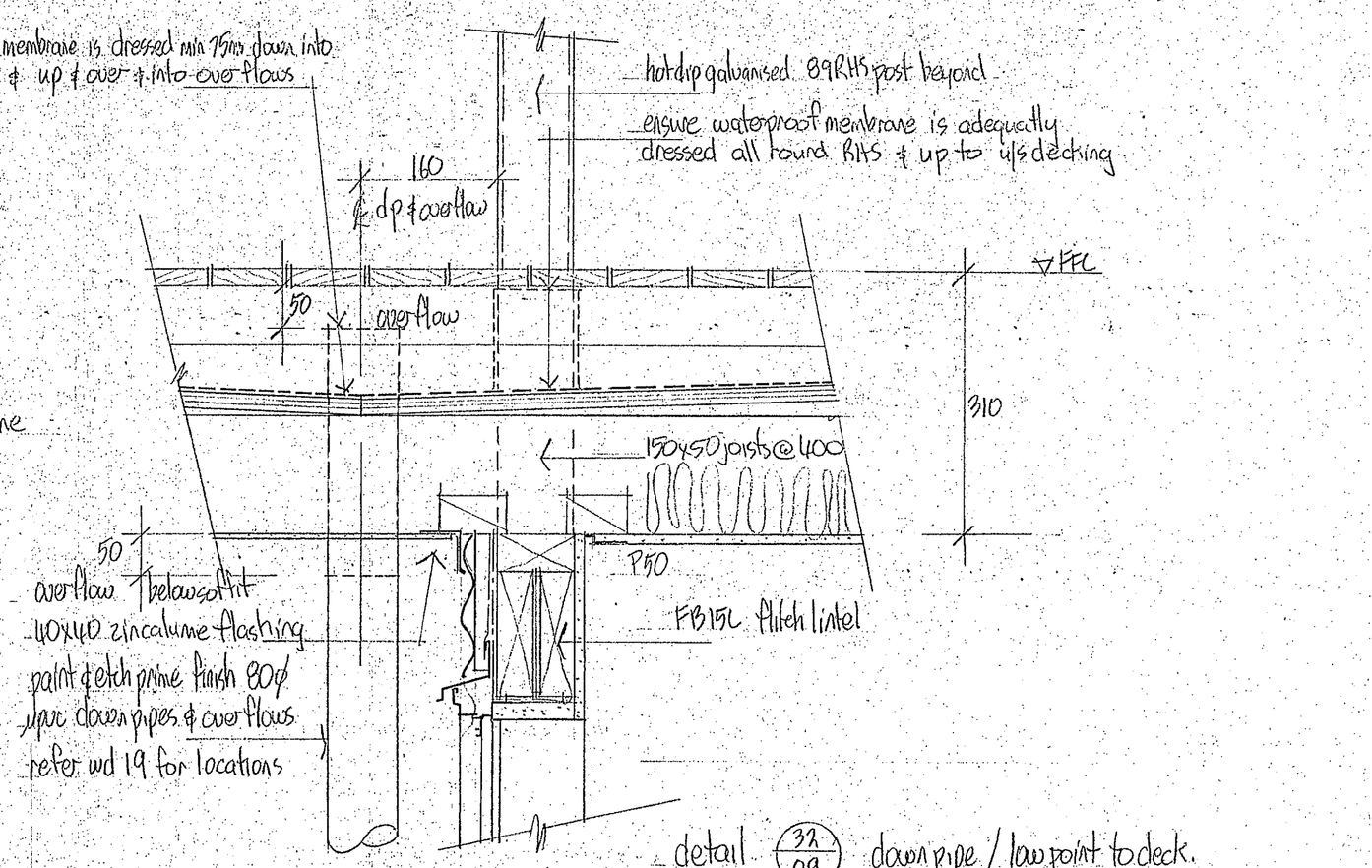
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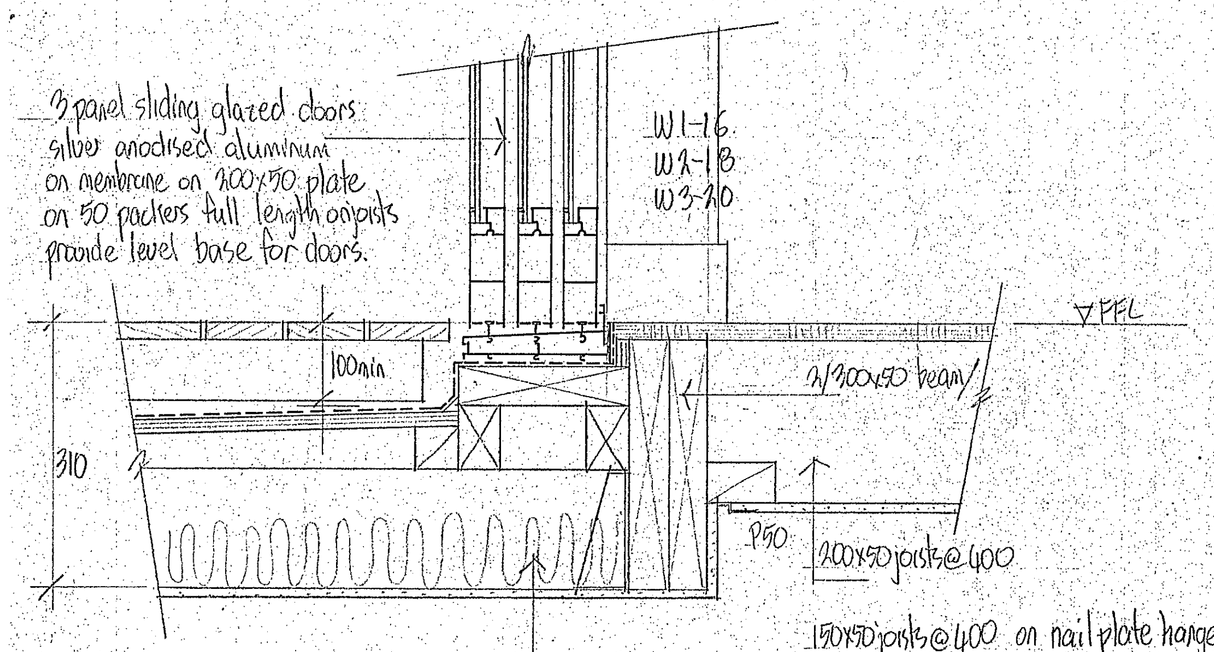
detail (30/09) deck fascia - balustrade not shown
apartments 1, 2, 3



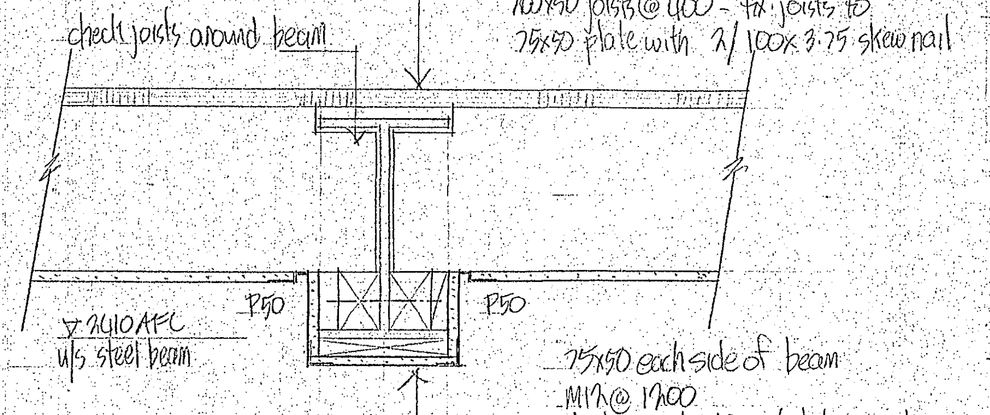
detail (31/09) deck/door sill/beam - W1-17 apartment 1
W2-17 apartment 2
W3-19 apartment 3



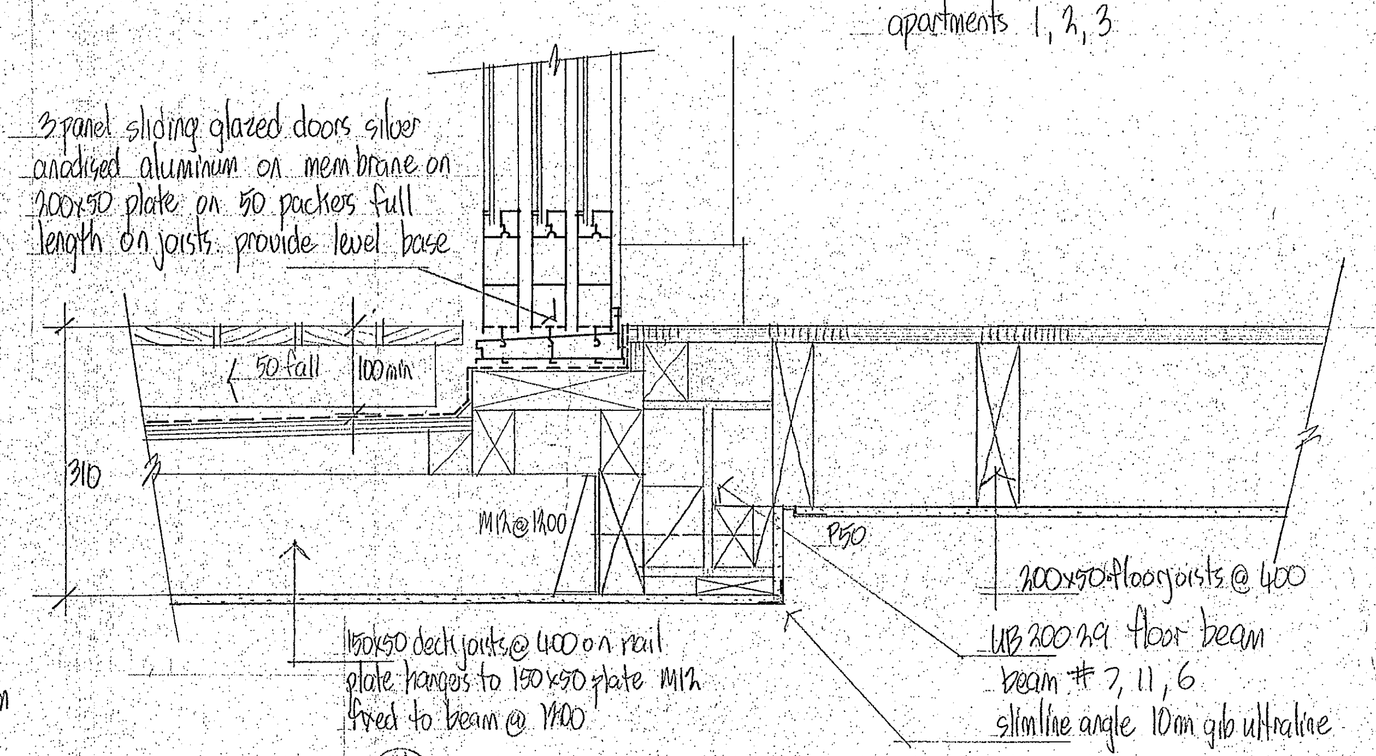
detail (32/09) down pipe / low point to deck.
apartments 1, 2, 3



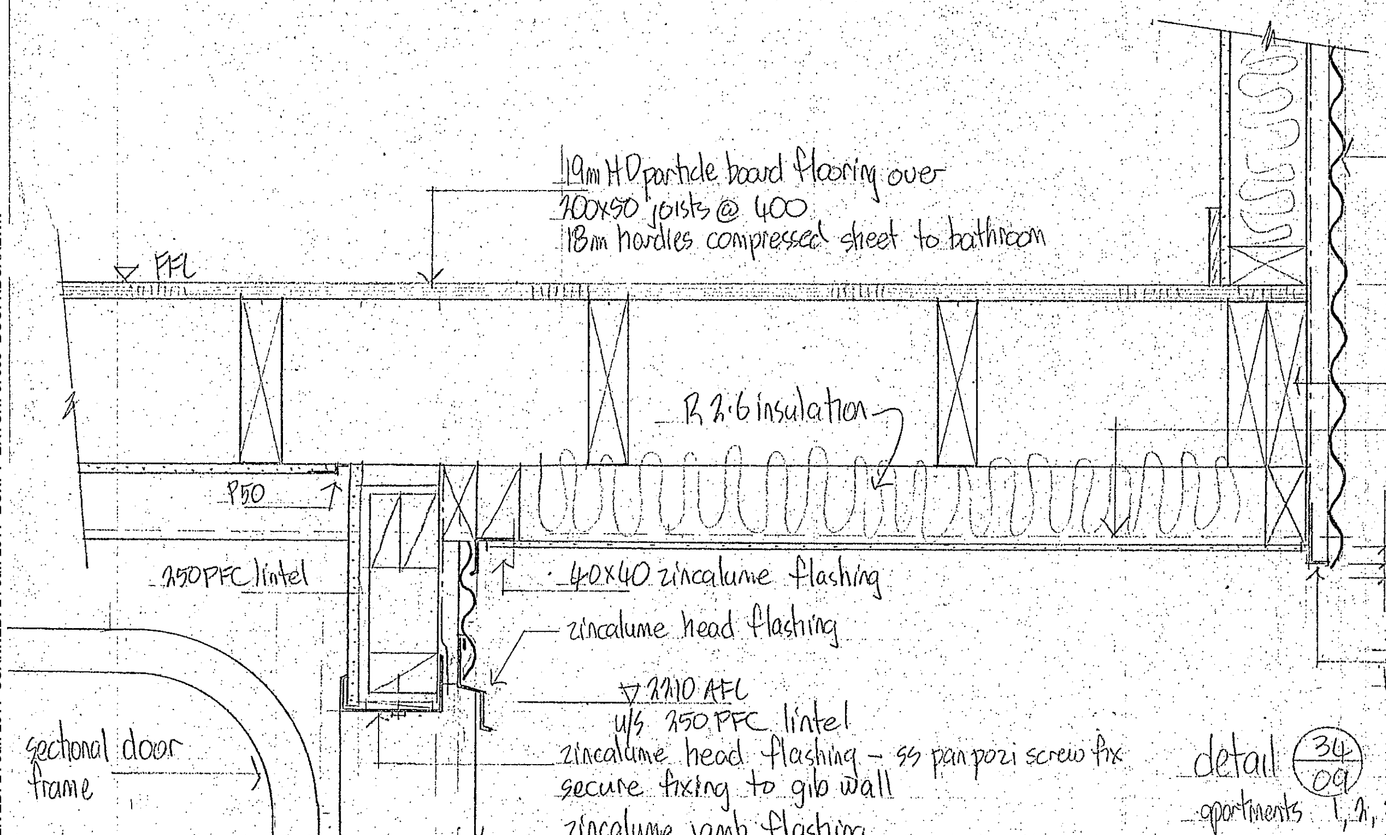
detail (33/09) deck/stacker door sill apartments 1, 2, 3,



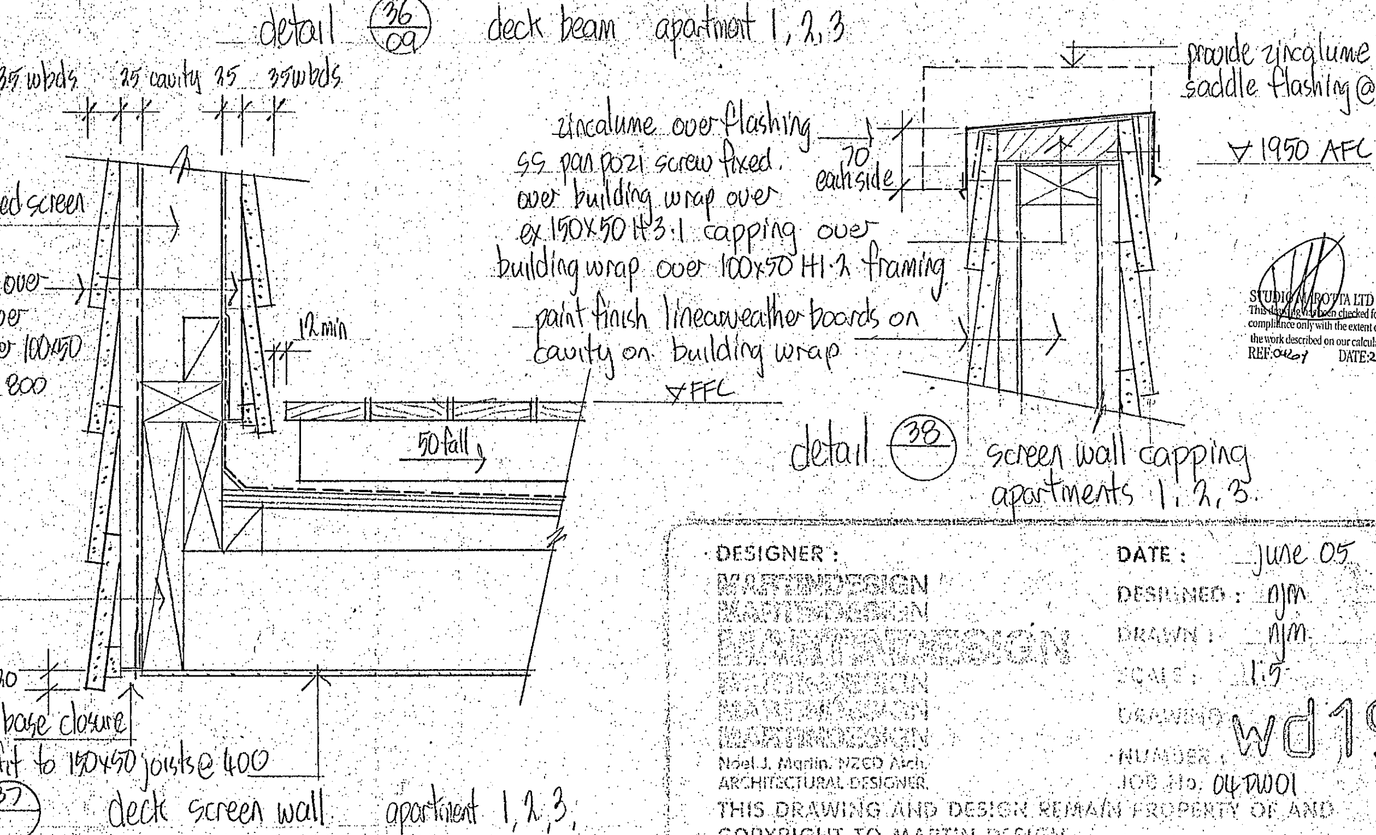
detail (35/10) floor beam # 2, 4, 6



detail (36/09) deck beam apartment 1, 2, 3



detail (34/09) garage door head/soffit
apartments 1, 2, 3



detail (37) deck screen wall apartment 1, 2, 3,

detail (38) screen wall capping
apartments 1, 2, 3.

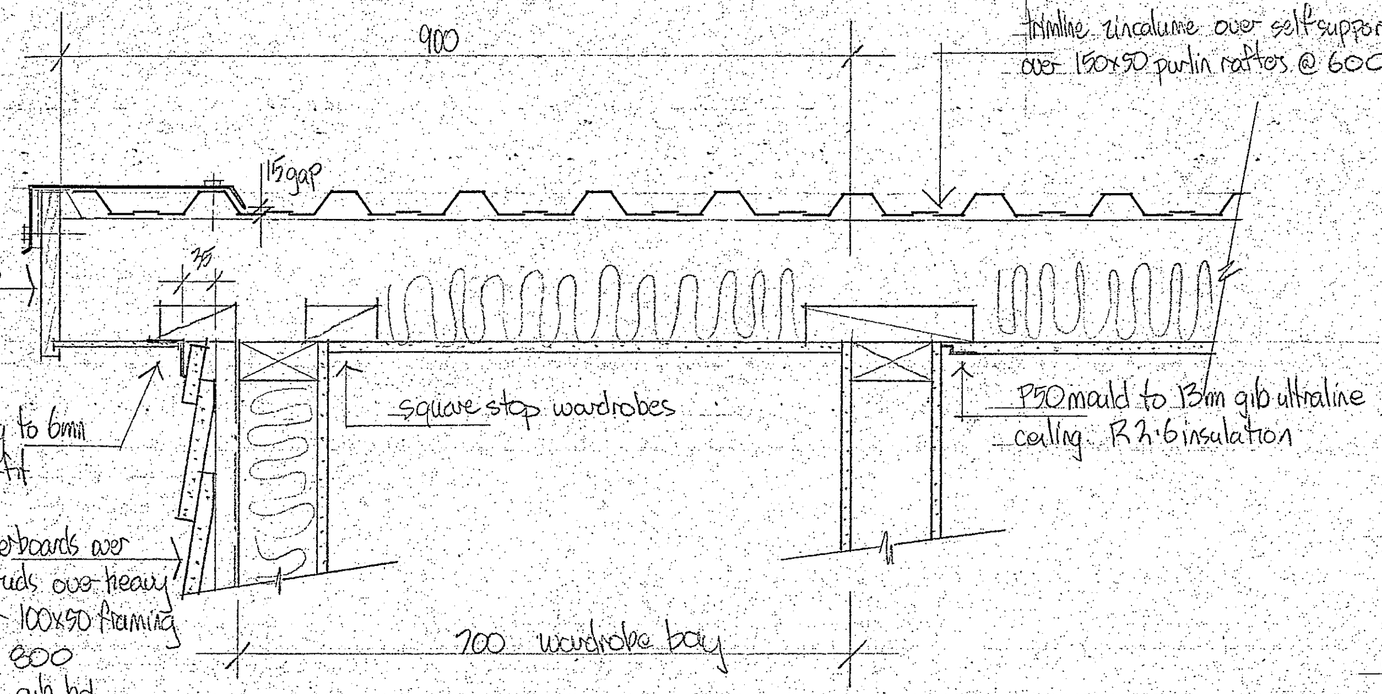
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DATE: 24/1

ripiro @ baylys.

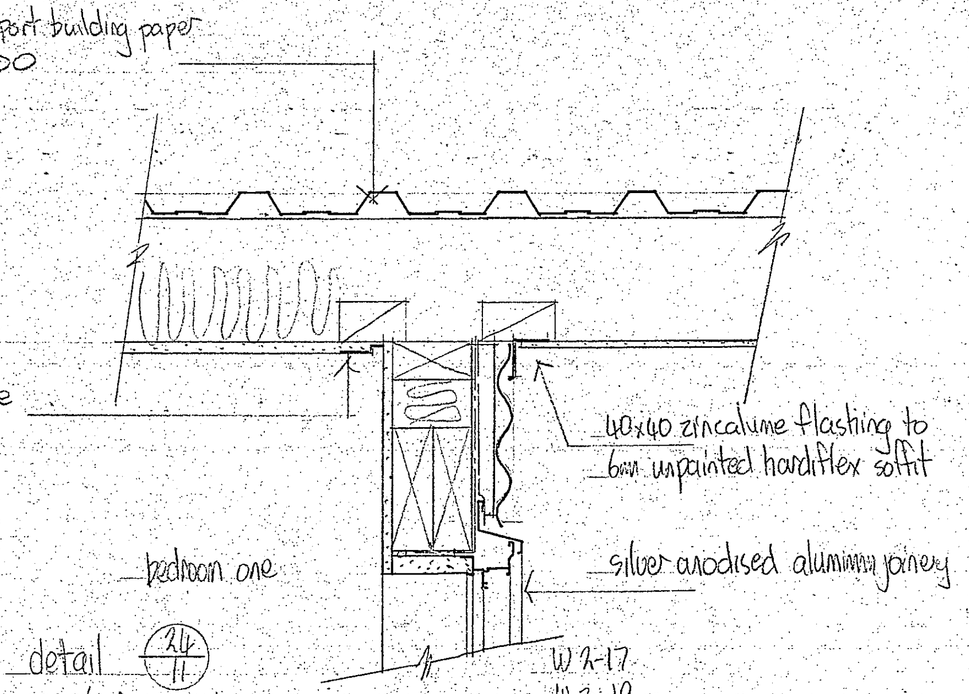
DESIGNER: MARTIN DESIGN
Noel J. Martin. NZIOD Arch.
ARCHITECTURAL DESIGNER.
DATE: June 05
DESIGNED: njm.
DRAWN: njm.
SCALE: 1:9
DRAWING NUMBER: wd19
JOB No. 04a001
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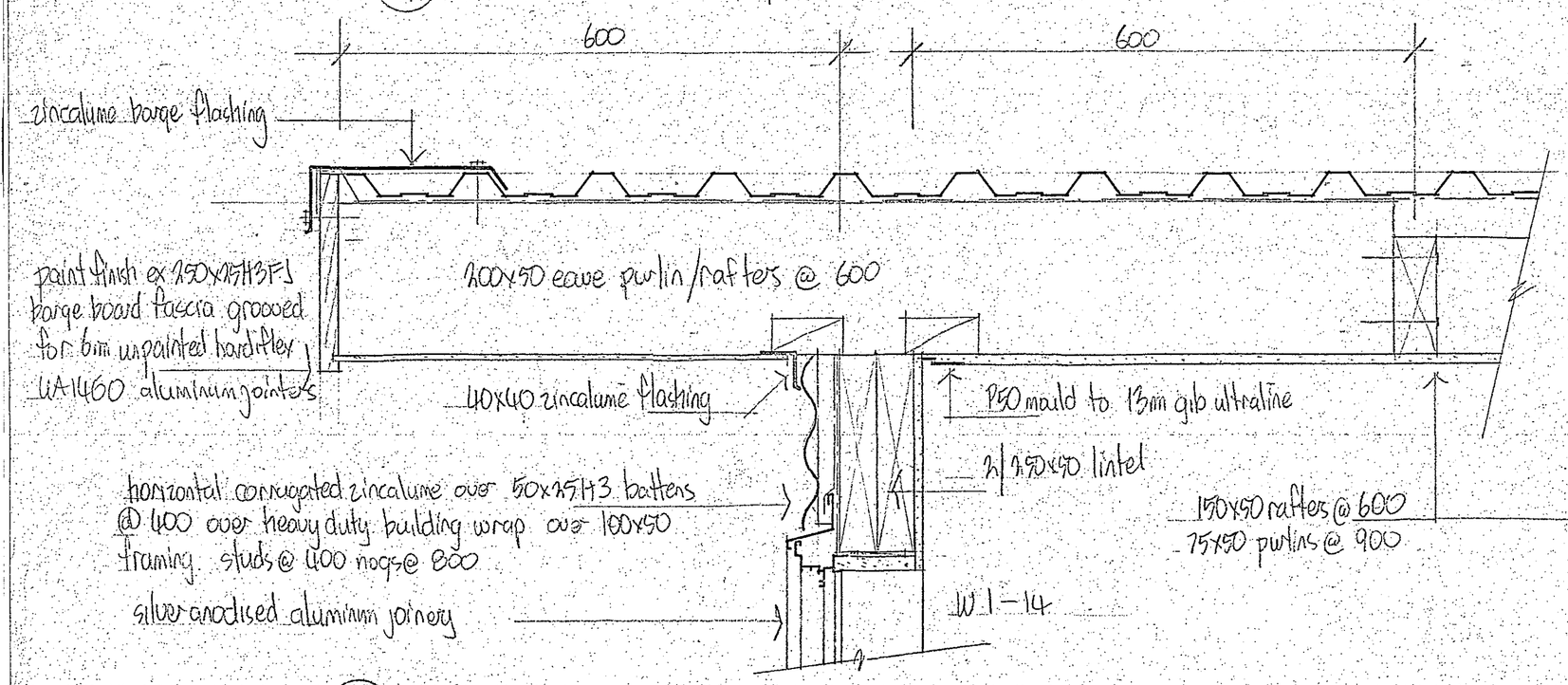
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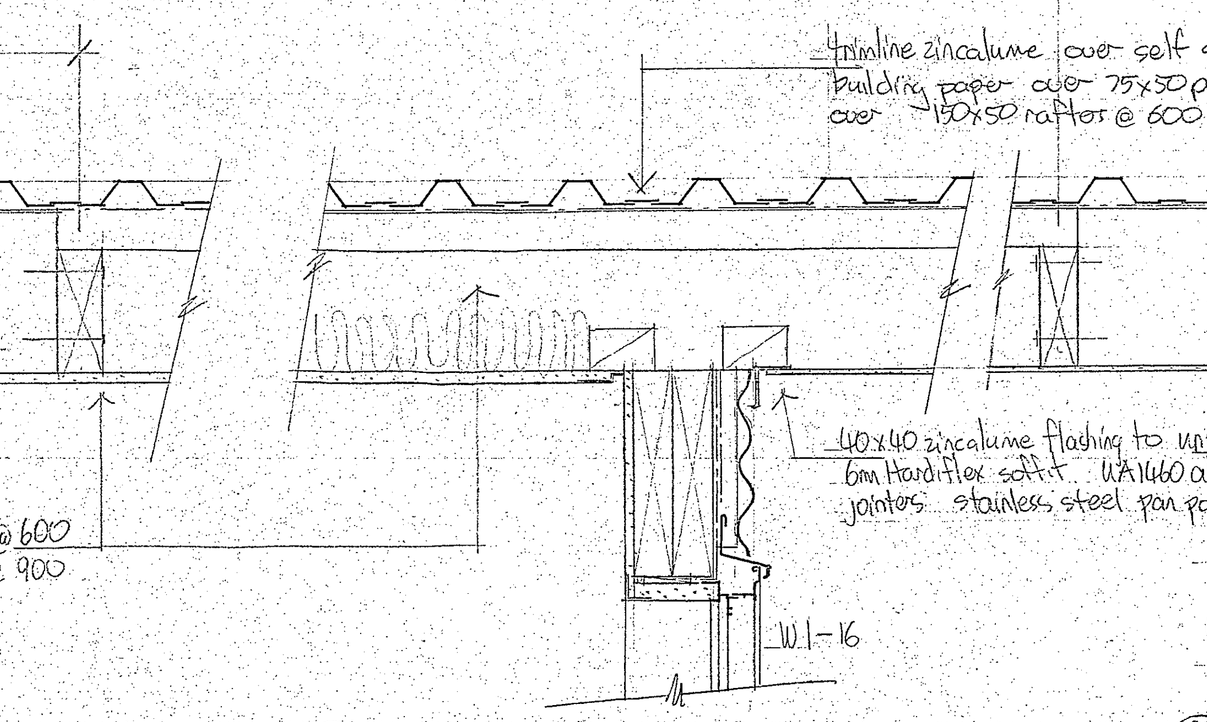
detail (23/11) wardrobe eave apartment 2, 3,



detail (24/11) wall/soffit apartment 2, 3

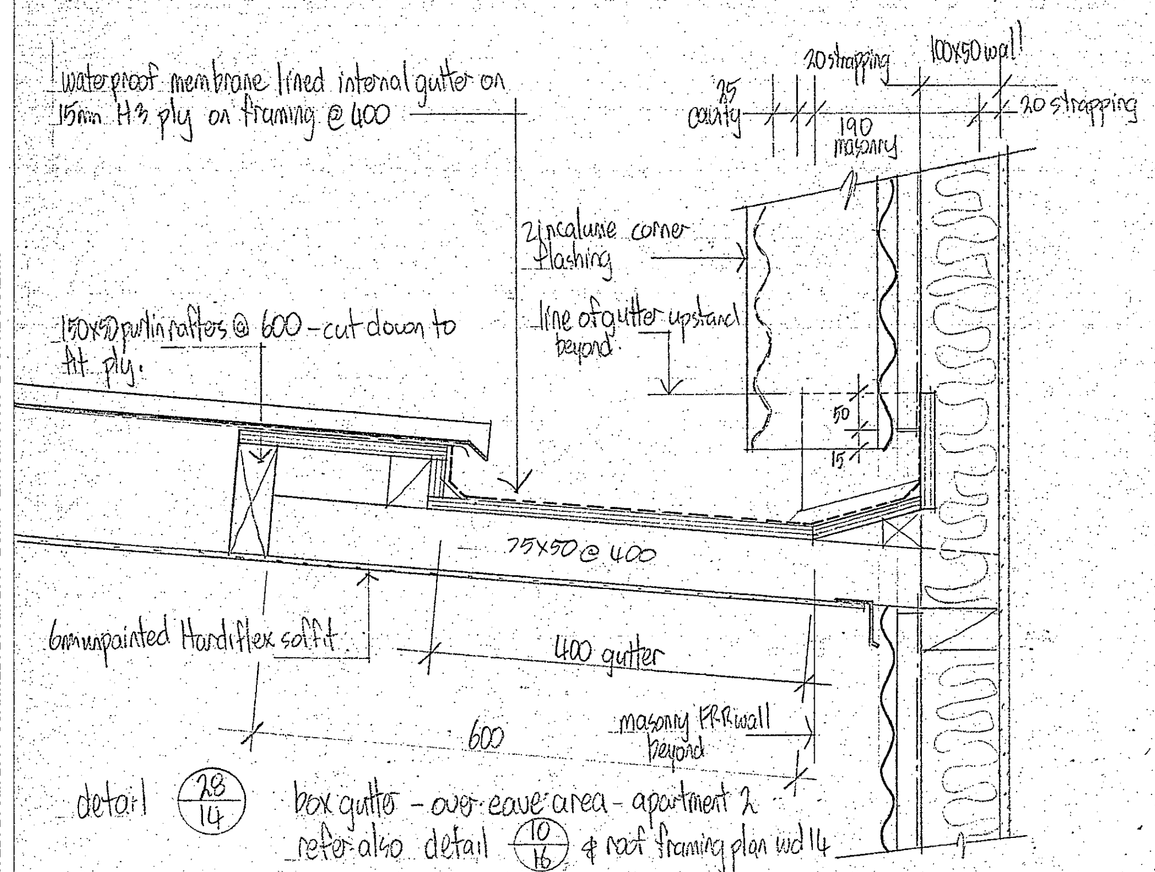


detail (25/11) eave overhang apartment 1.

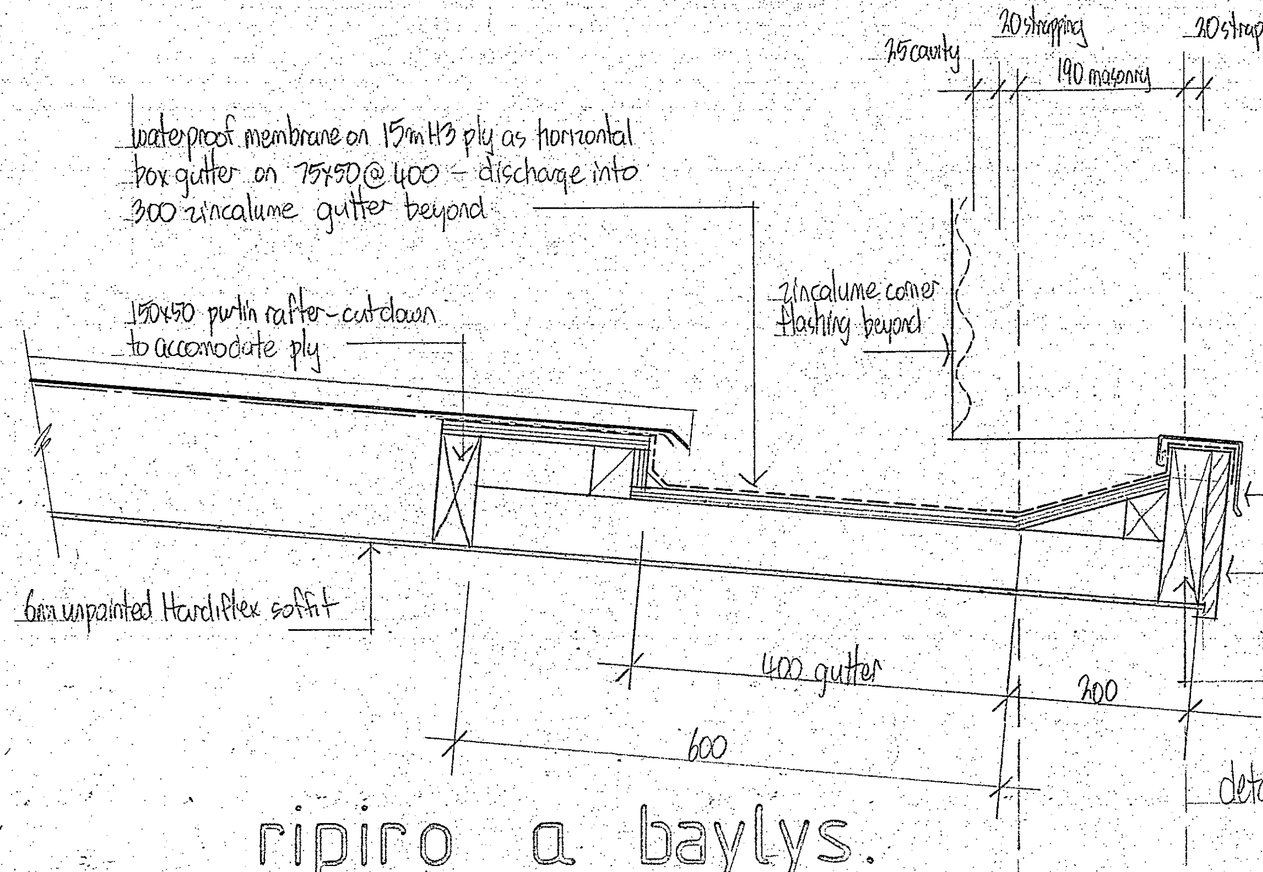


soffit/wall (26/11) apartment 1.

detail (27/11) eave overhang/deck apartment 1.



detail (28/14) box gutter - over eave area - apartment 2
refer also detail (10/16) & roof framing plan wd 14



detail (29/14) box gutter - over eave area
apartment 3
refer also detail (10/16) & roof plan wd 14

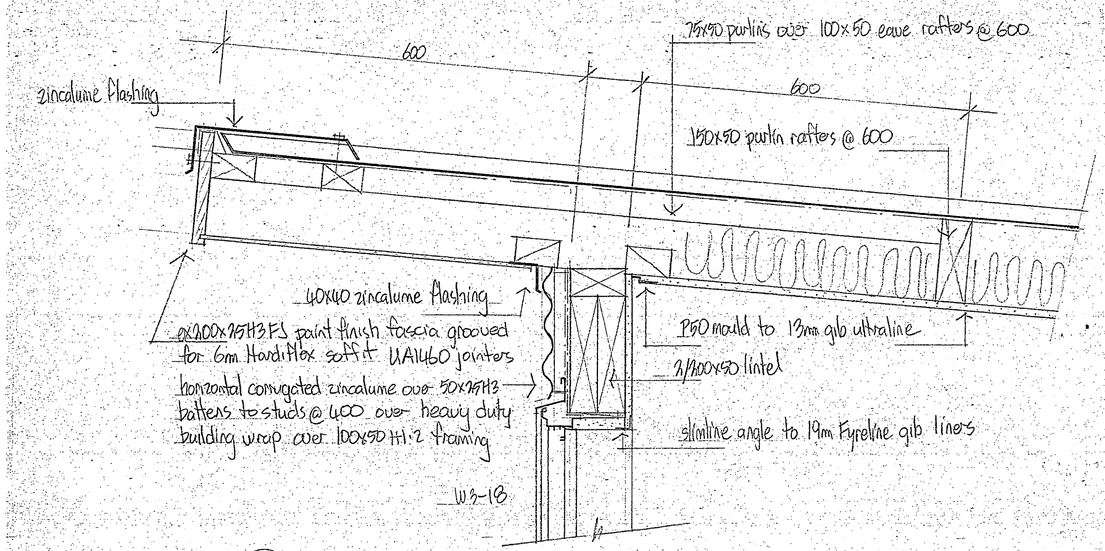
ripiro a baylys.

STUDIO MARIOTTA LTD
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REF: 04207 DATE: 24/6/05

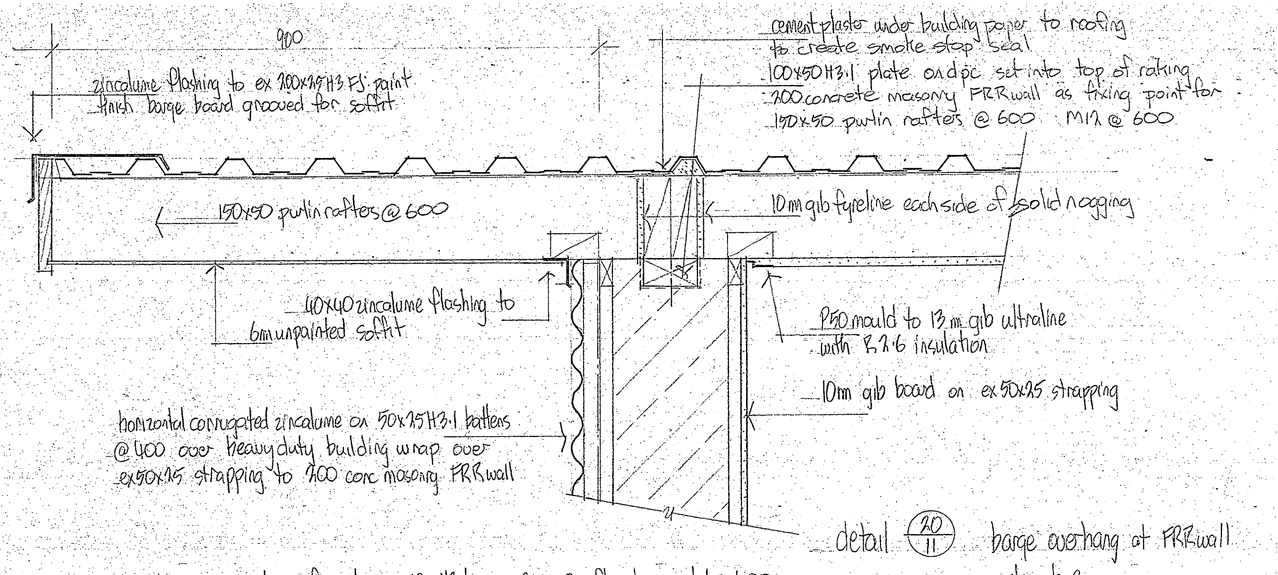
DESIGNER :	DATE : may 05
MARTIN DESIGN WHANGAREI	DESIGNED : AJM.
MARTIN DESIGN	DRAWN : NJM.
MARTIN DESIGN	SCALE : 1:5
MARTIN DESIGN	DRAWING NUMBER : wd 18
MARTIN DESIGN Telephone A.H.	JOB No. 04 DW01

Noel J. Martin. NZCD Arch.
ARCHITECTURAL DESIGNER.

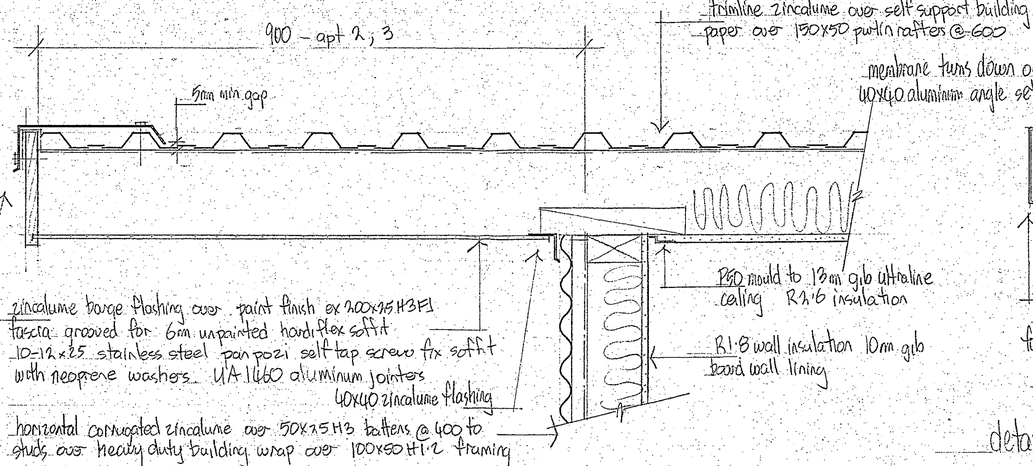
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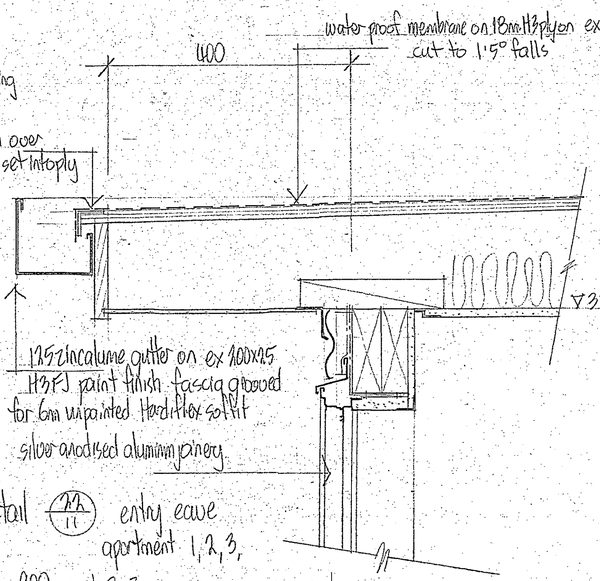
detail (15/10) eave overhang apartment 3



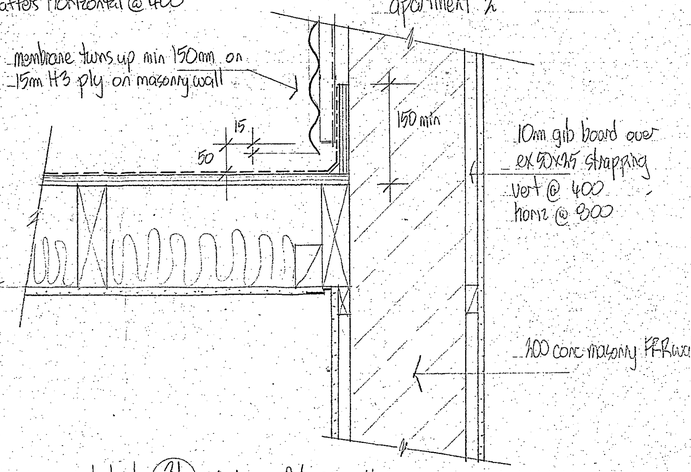
detail (20/11) barge overhang at FRR wall



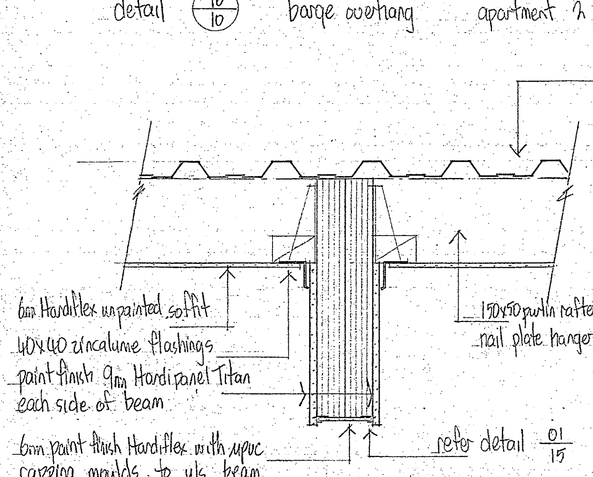
detail (16/10) barge overhang apartment 2, 3.



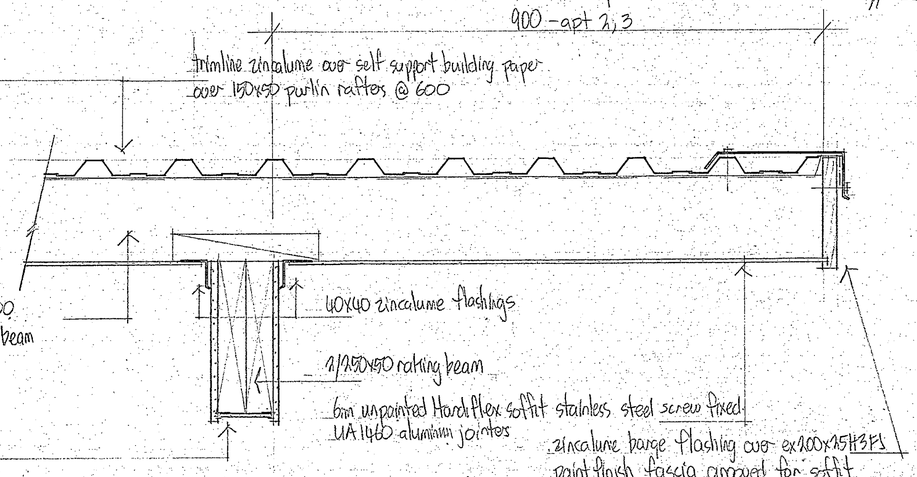
detail (17/10) entry eave apartment 1, 2, 3,



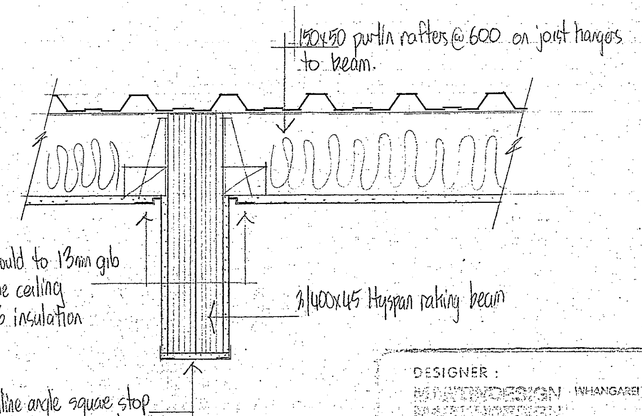
detail (21/11) entry roof/FRR wall apartment 2



detail (17/10) hyspan beam over patio apartment 2, 3



detail (18/10) barge overhang over patio - apartment 2, 3



detail (19/10) hyspan beam over living apartment 2, 3.

STUDIO ALBERTA LTD
This plan has been checked for compliance only with the extent of the work described on our schedule of
REF: 04101 DATE: 22/6/05

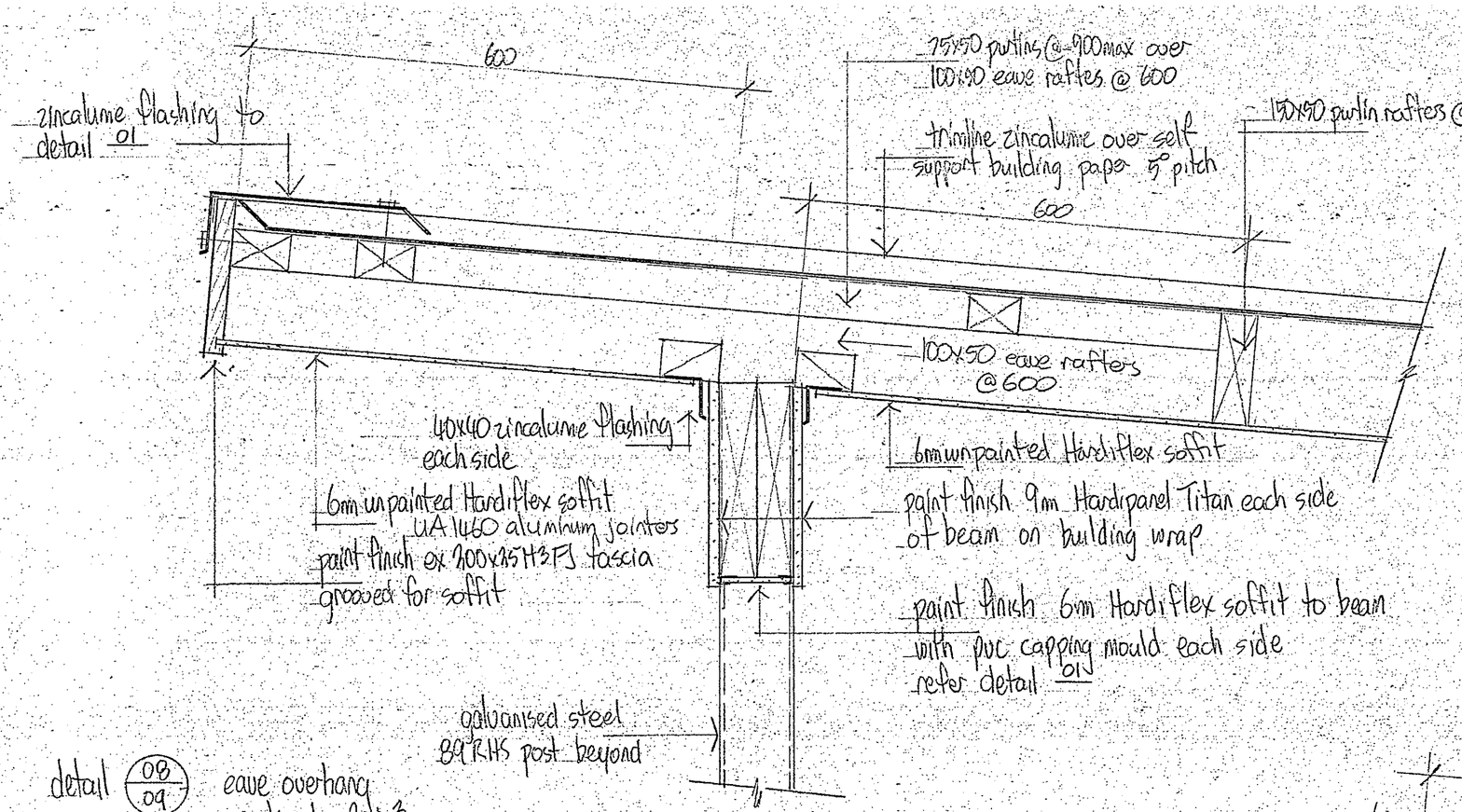
DESIGNER : MARTIN DESIGN WHANGAREI
Tel/Fax
Ross C. Martin NZRD Arch. Architectural Designer

DATE : may 05
DESIGNED : njm
DRAWN : njm
SCALE : 1:5
DRAWING NUMBER : wd17
JOB No. : 04DW01

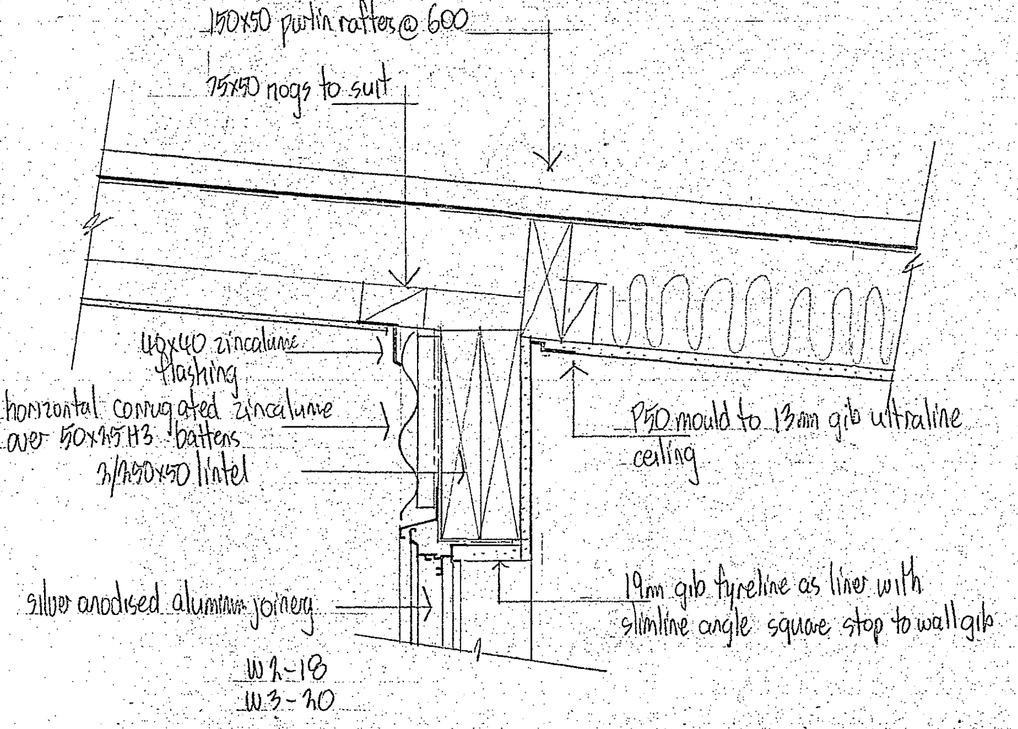
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ripiro @ baylys

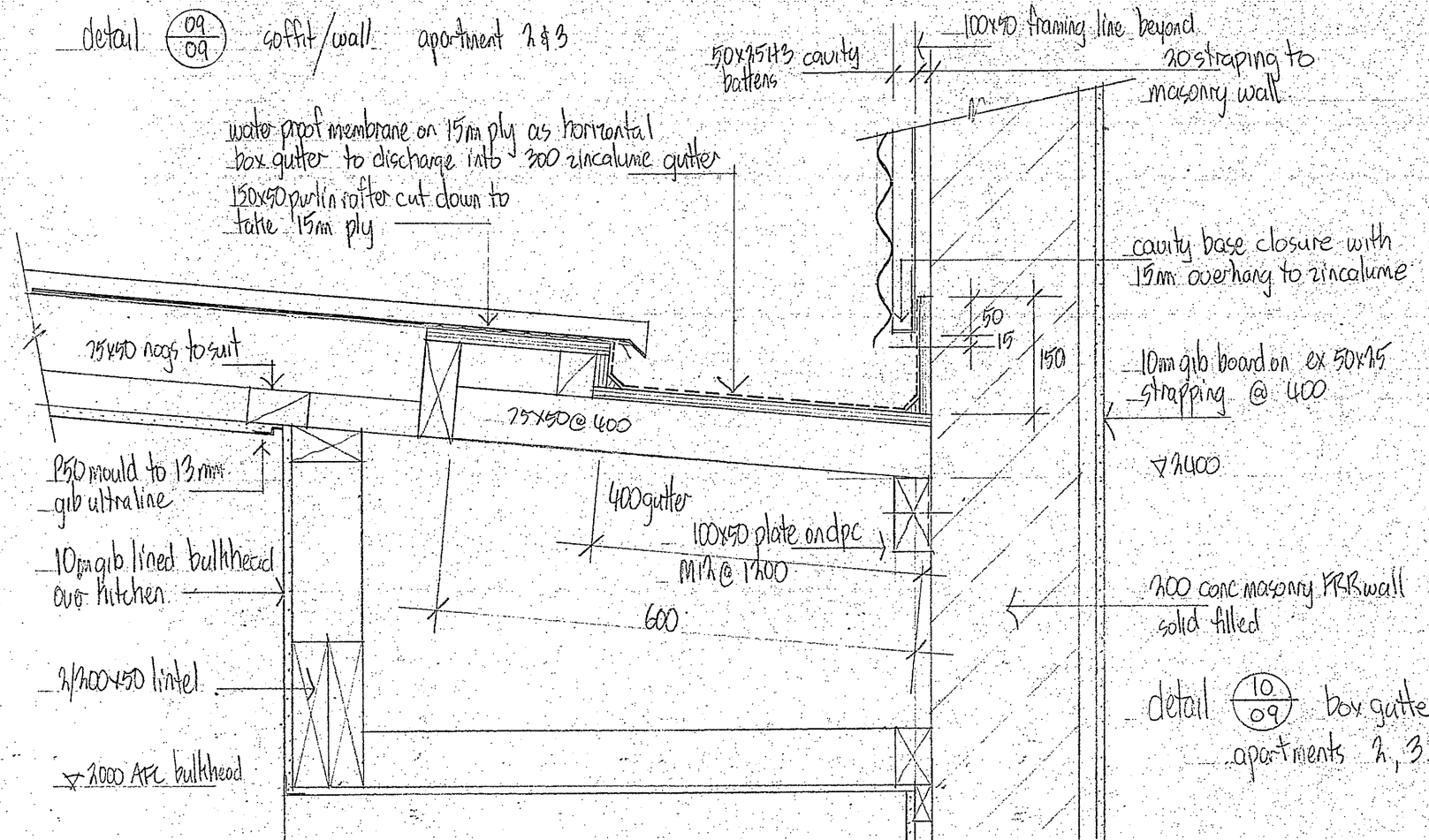
RECEIVED: 24 Jan 2011 SCANNED: 24 Jan 2011 BOX: 1 BATCH: 67088 DOC: KDCAALWN



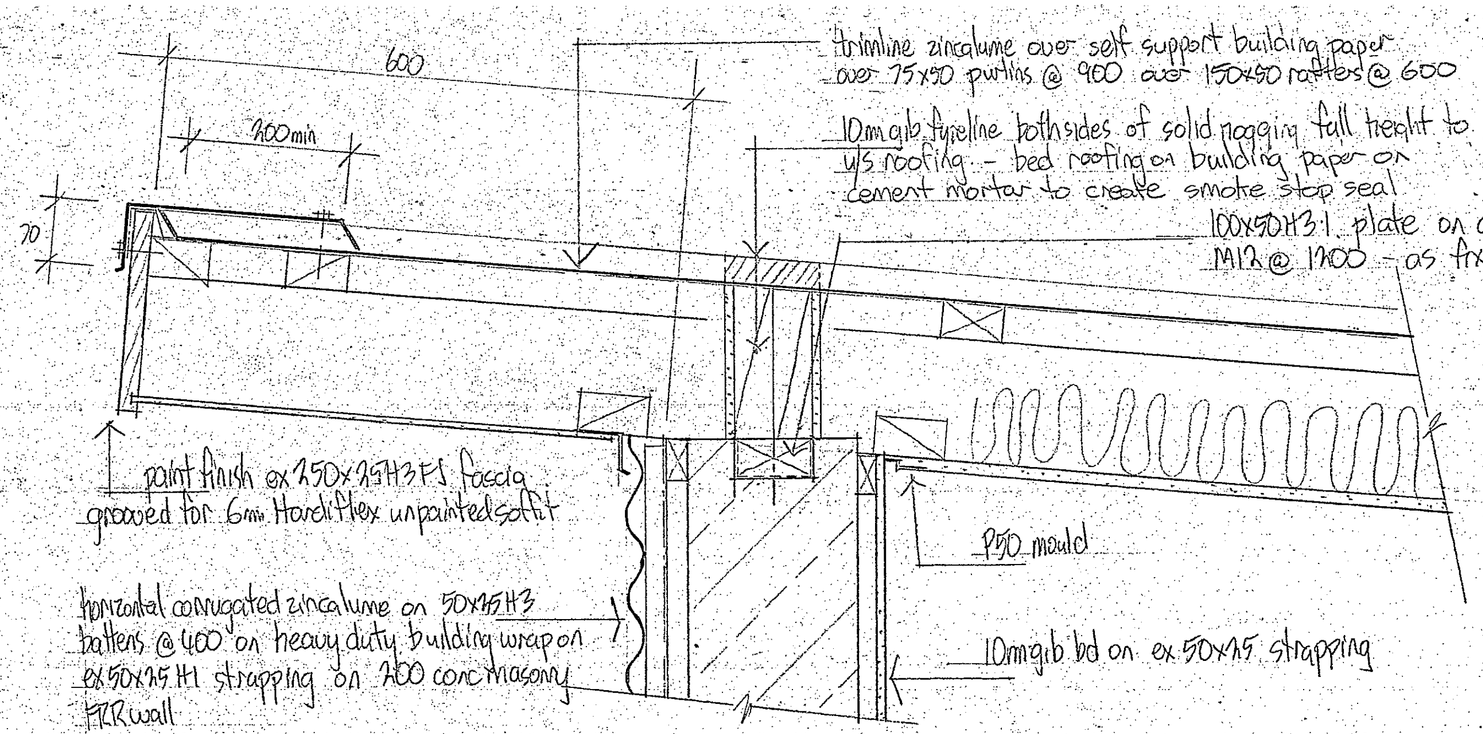
detail (08/09) eave overhang apartment 2 & 3



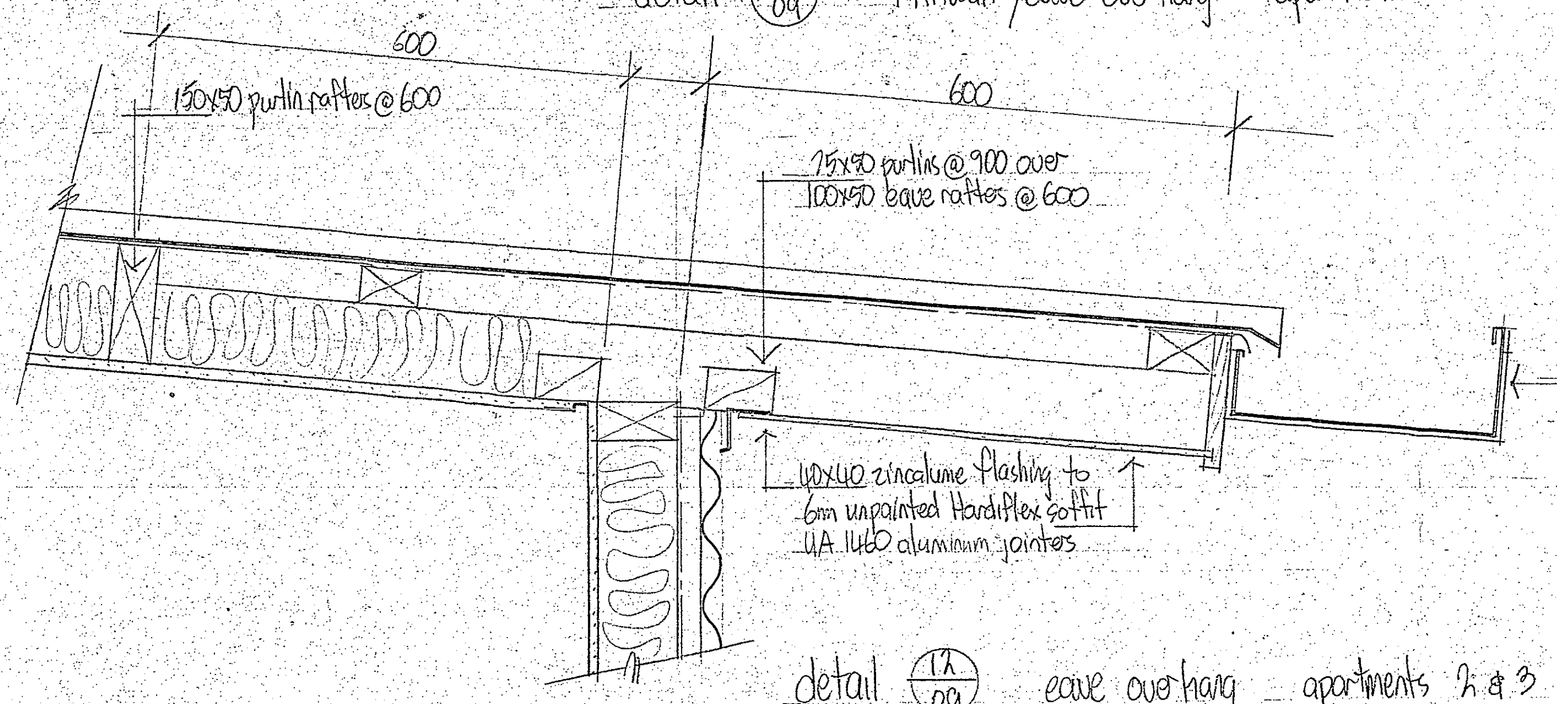
detail (09/09) soffit/wall apartment 2 & 3



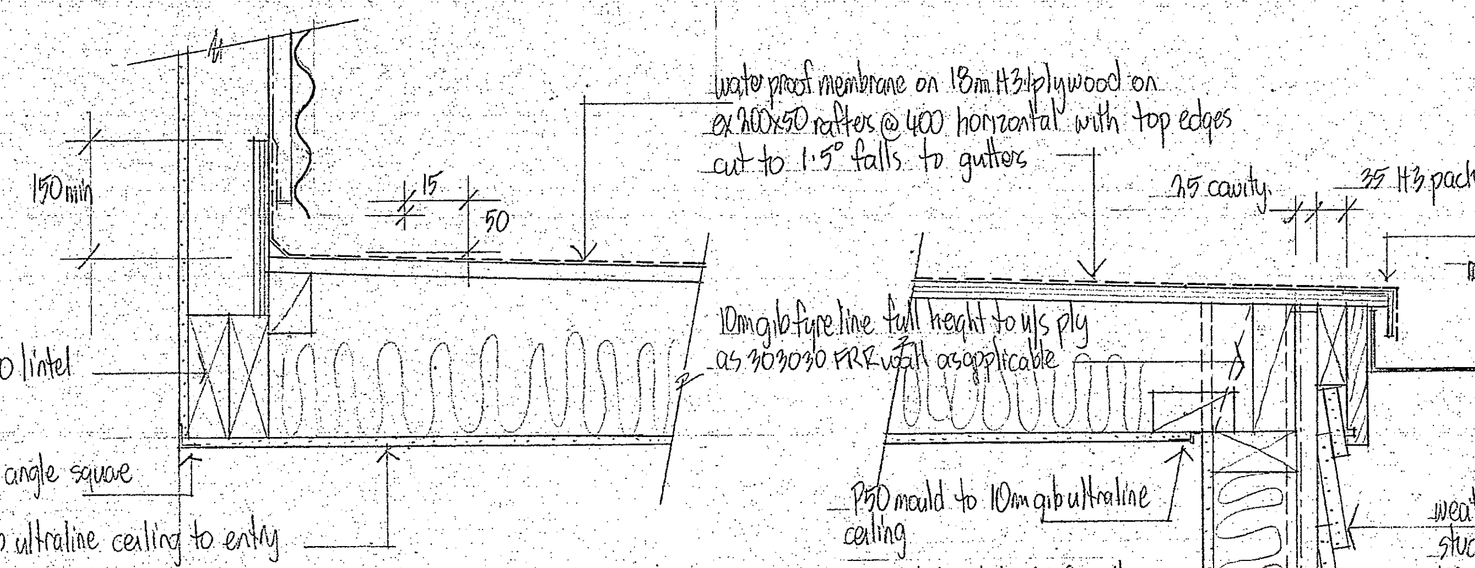
detail (10/09) box gutter/FRR wall apartments 2, 3



detail (11/09) FRR wall/eave overhang apartment 1.



detail (12/09) eave overhang apartments 2 & 3



detail (13/09) entry roof/wall apartment 1, 2, 3

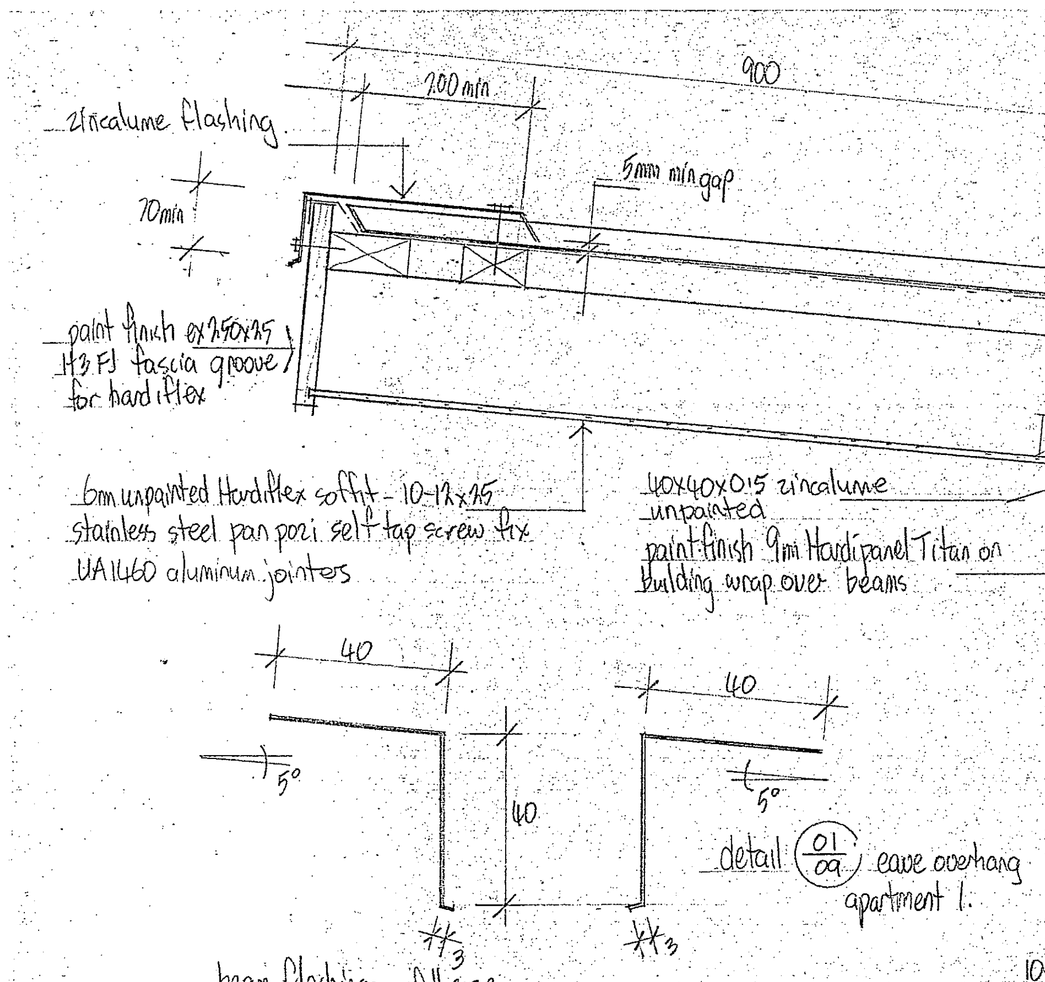
detail (14/09) entry roof apartment 1, 2, 3.

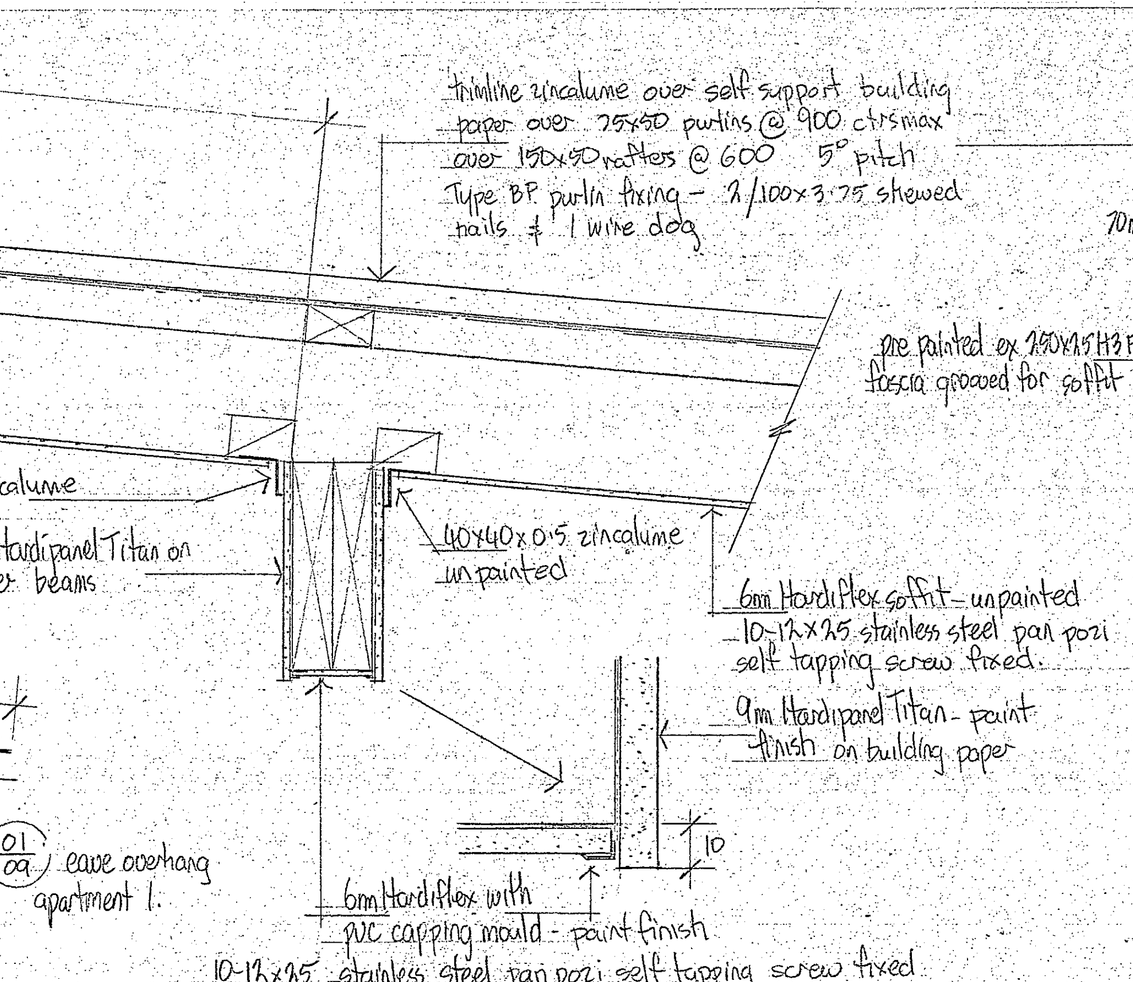
STUDIO MARTIN-ETD
This drawing has been checked for compliance with the extent of the work described on our calculations of
REF: 0907 DATE: 4/06/09

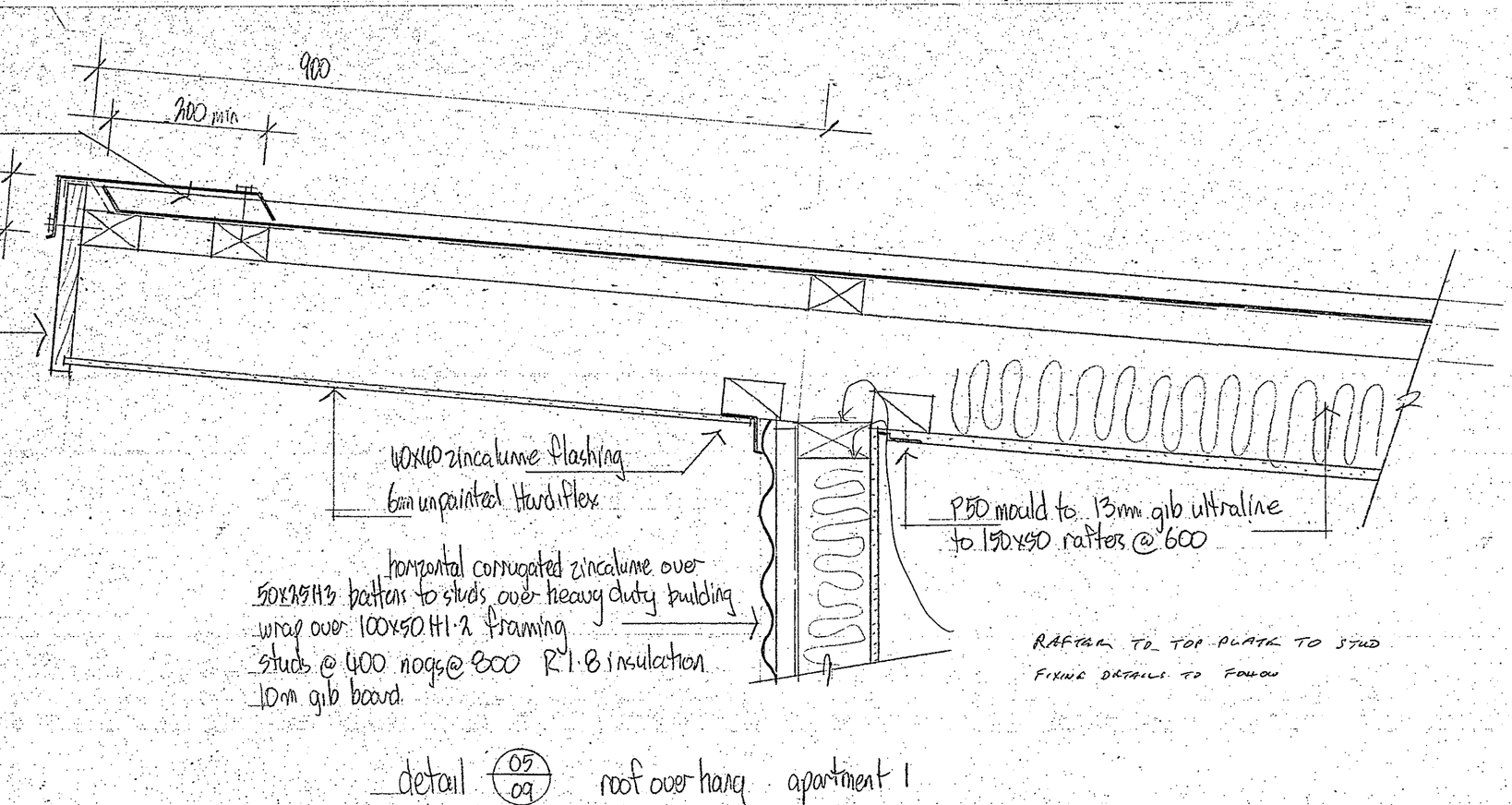
DESIGNER :
DATE : may 09
DESIGNED : njm
DRAWN : njm
SCALE : 1:5
DRAWING : wd16
NIGEL J. MARTIN, NZCD Arch.
ARCHITECTURAL DESIGNER.
JOB NO. 04 DW 01
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ripiro @ baylys.

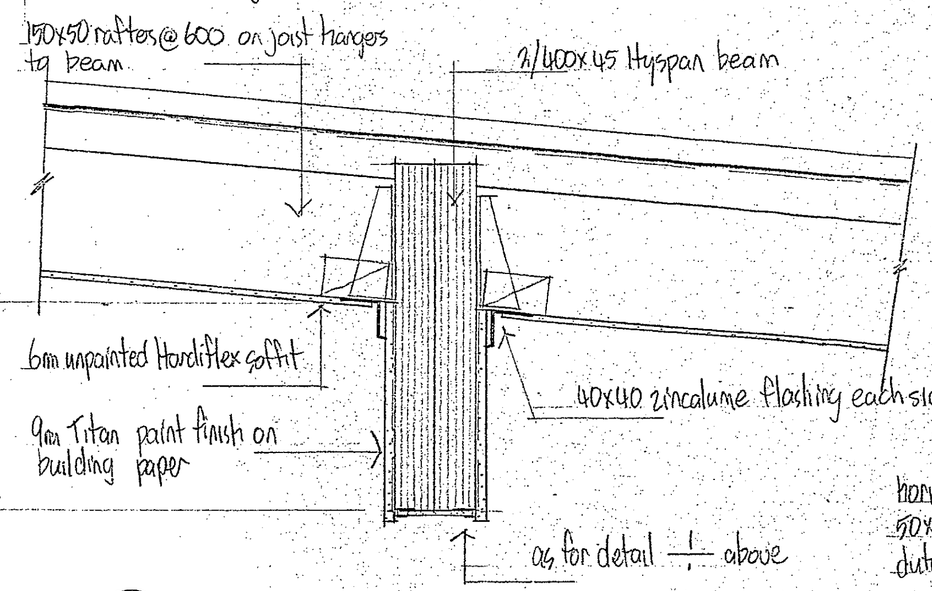
RECEIVED: 24 Jan 2011 SCANNED: 24 Jan 2011 BOX: 1 BATCH: 67088 DOC: KOCAALWN



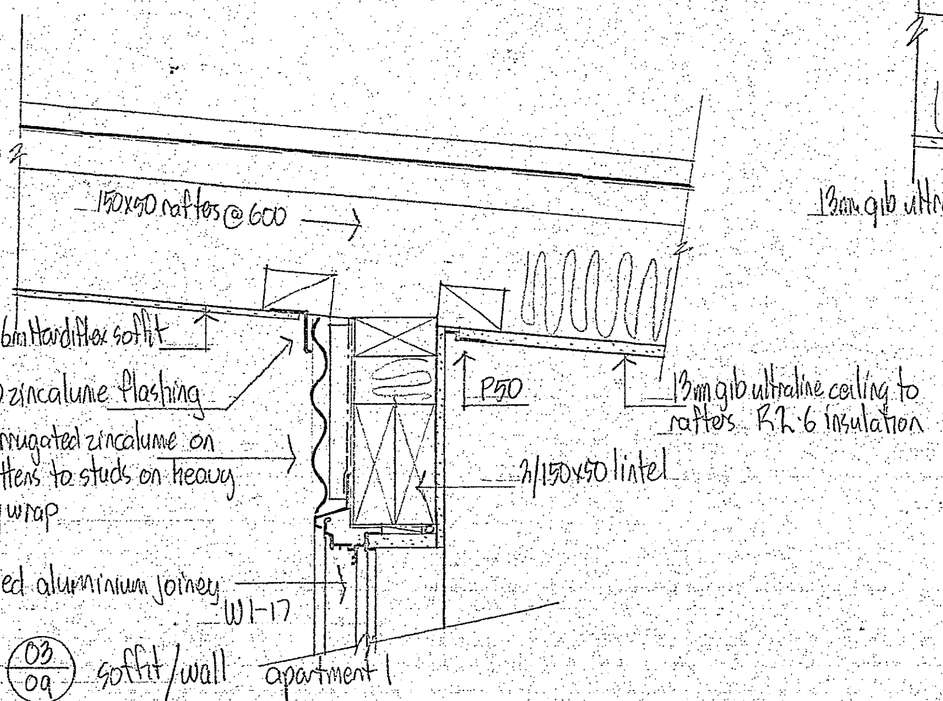




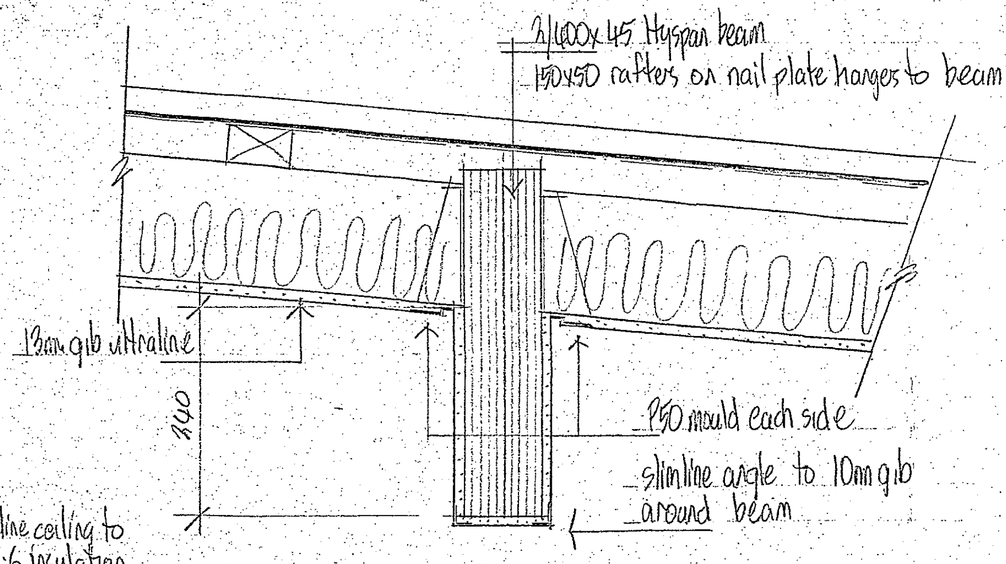
detail 05/09 roof overhang apartment 1



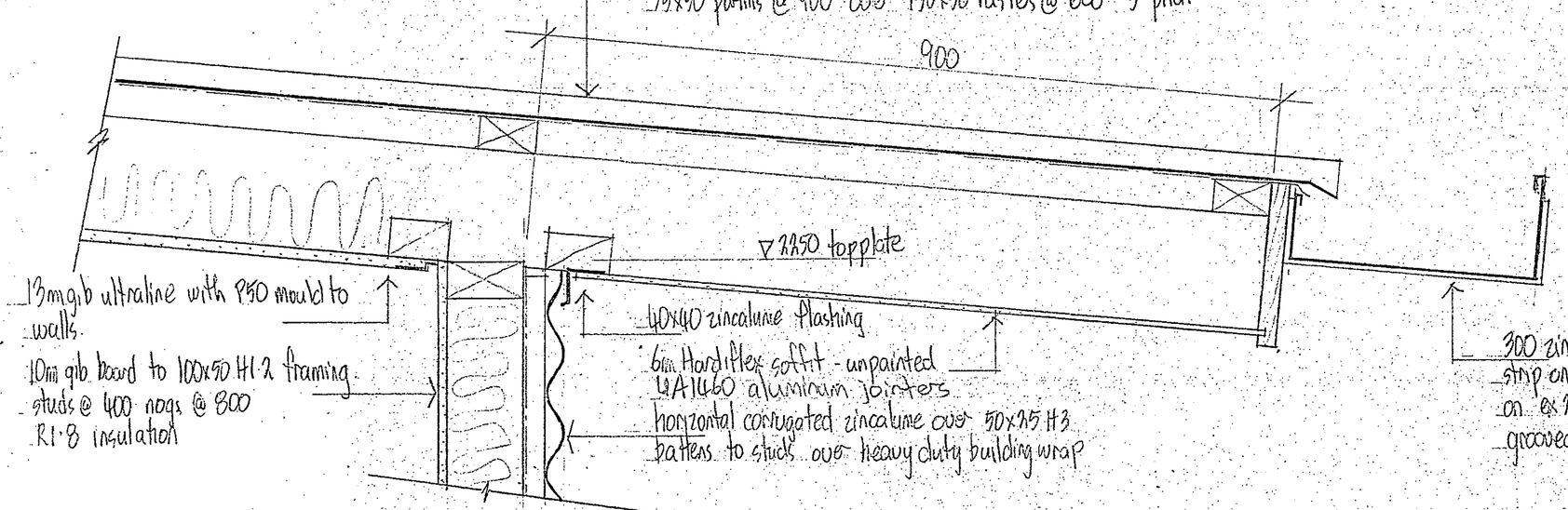
detail 02/09 hyspan beam soffit apartment 1



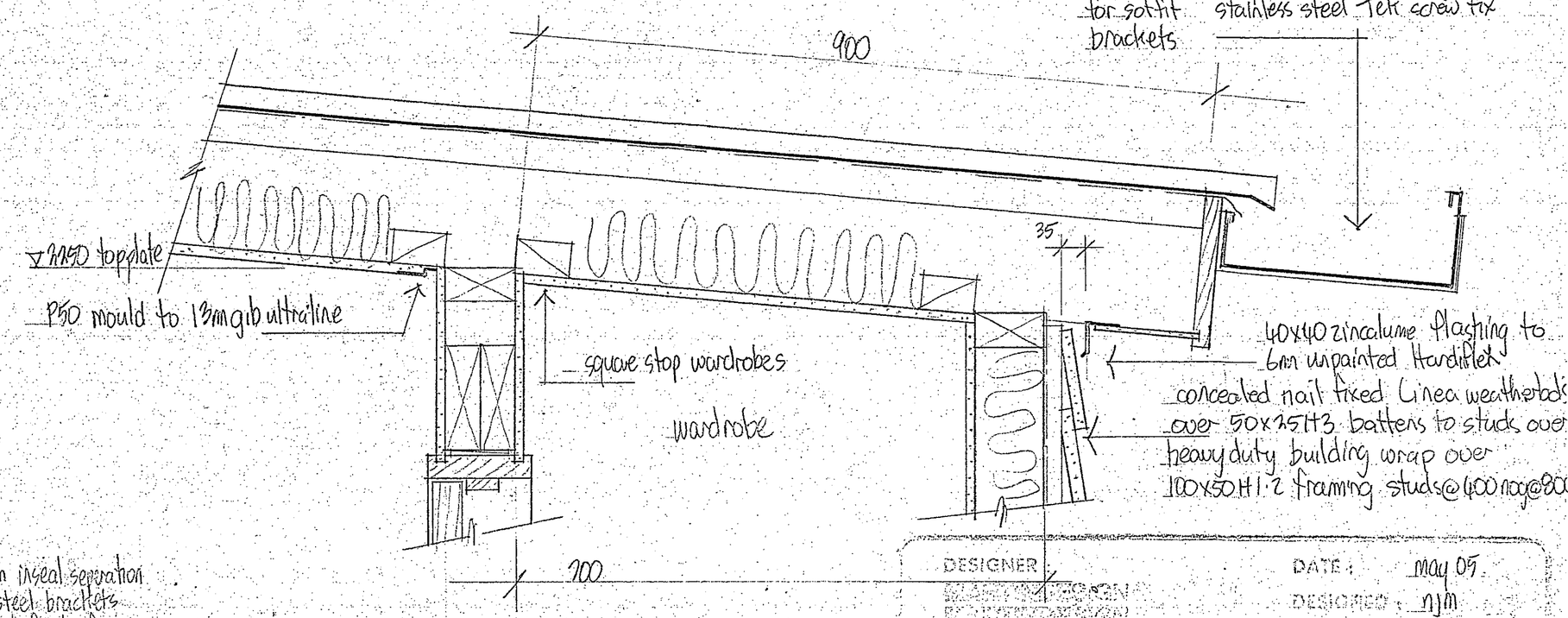
detail 03/09 soffit/wall apartment 1



detail 06/09 roof beam - internal



detail 04/09 eave over hang



detail 07/09 overhang/wardrobe

STEVO MARTIN LTD
This drawing has been checked for compliance with the extent of the work described on our calculations of
REF 05107 DATE: 16/7/09

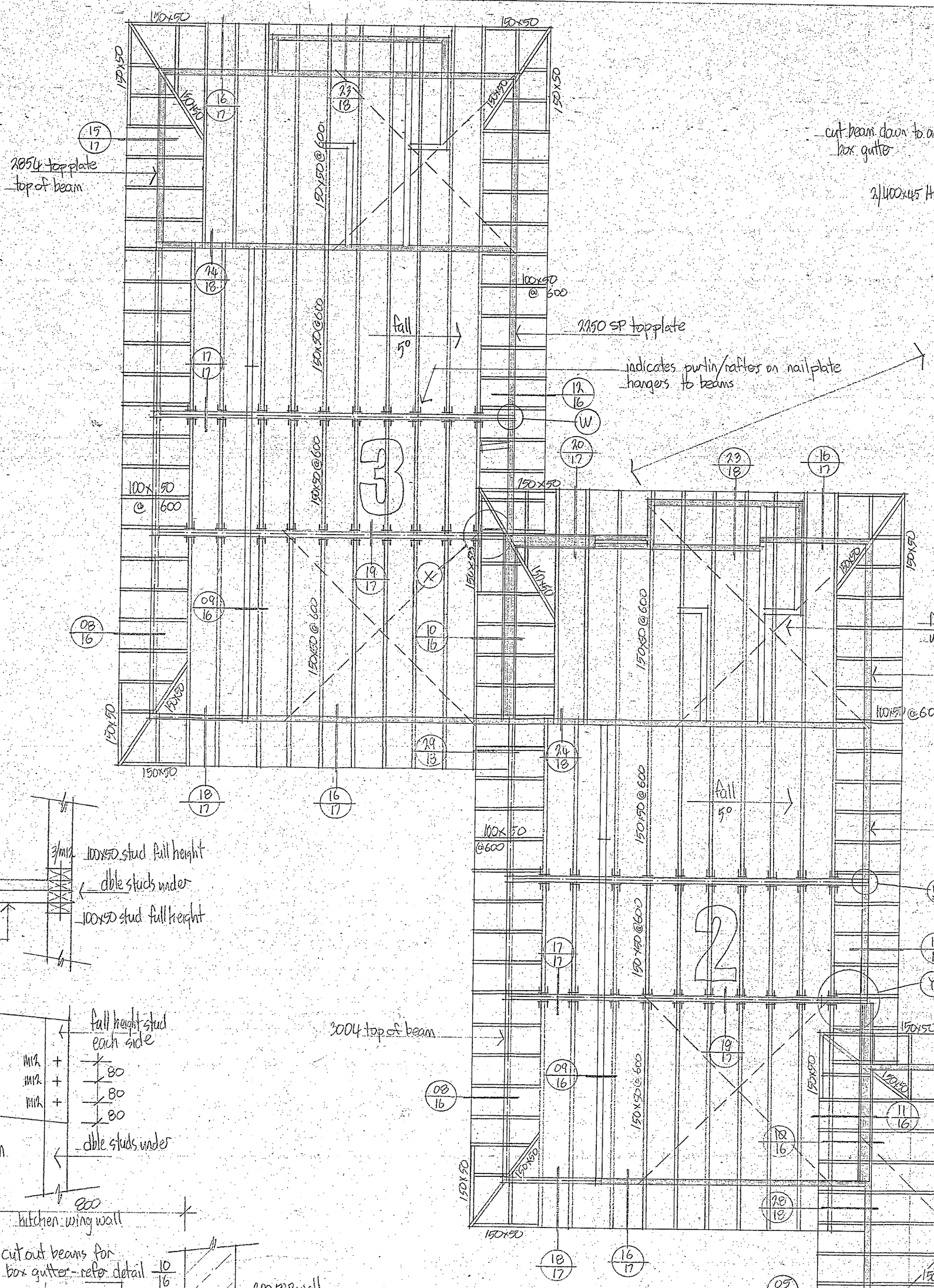
DESIGNER	
DRAWN	njm
SCALE	1:5
DRAWING NUMBER	wd15
JOB NO.	04 DW01

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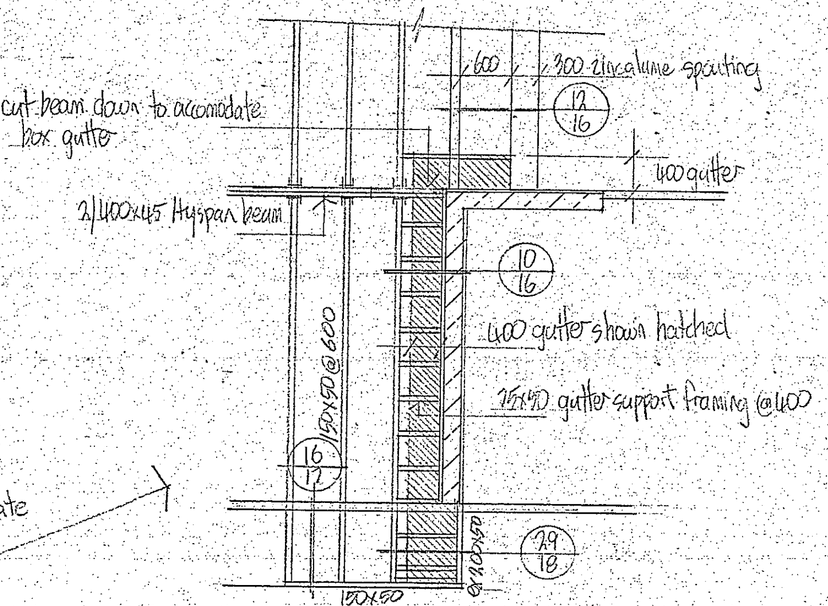
ripiro a baylys.

RECEIVED: 24 Jan 2011 SCANNED: 24 Jan 2011 BOX: 1 BATCH: 67088 DOC: KDCAALWN

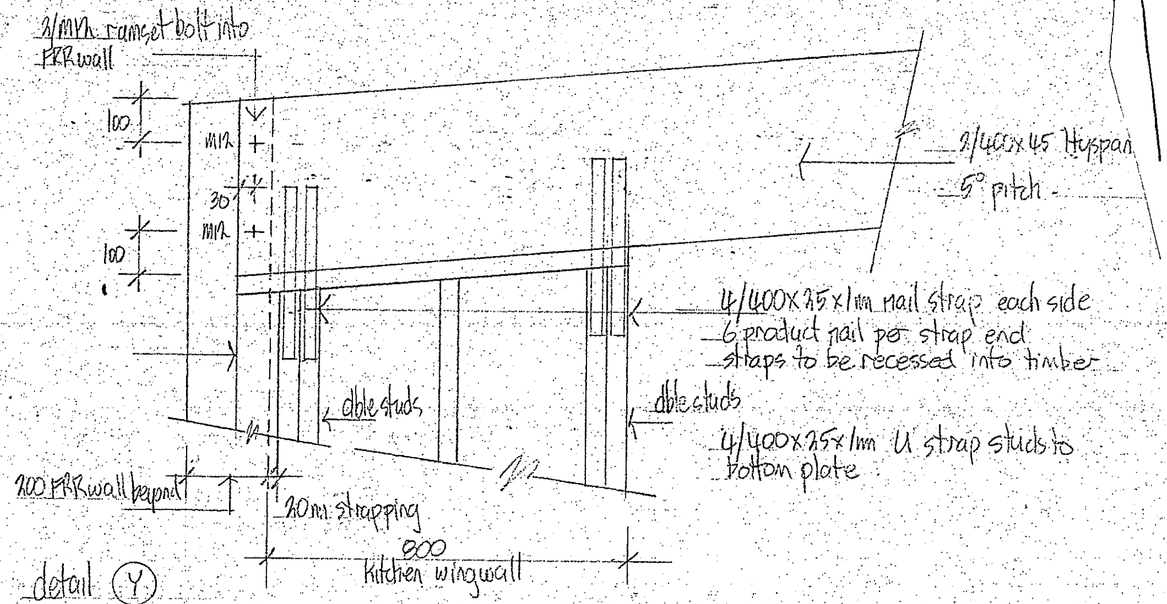
RECEIVED: 24 Jan 2011 SCANNED: 24 Jan 2011 BOX: 1 BATCH: 67088 DOC: KOCAALWN



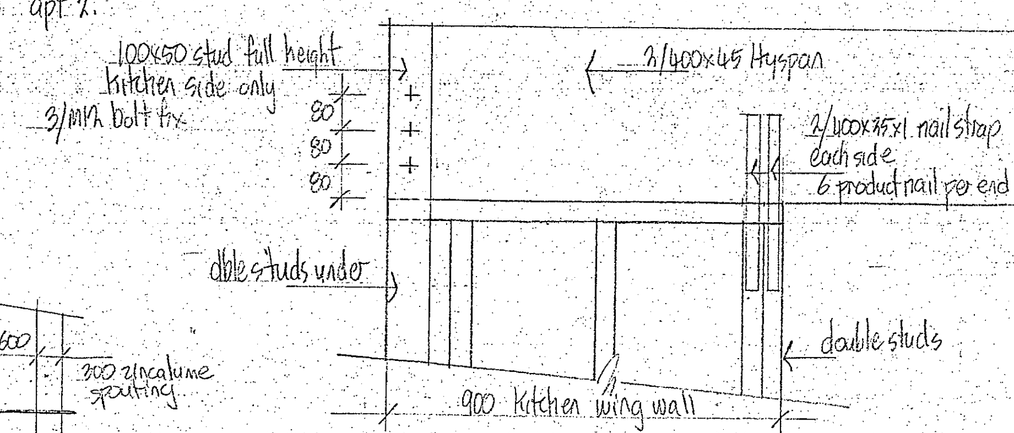
roof framing plan.



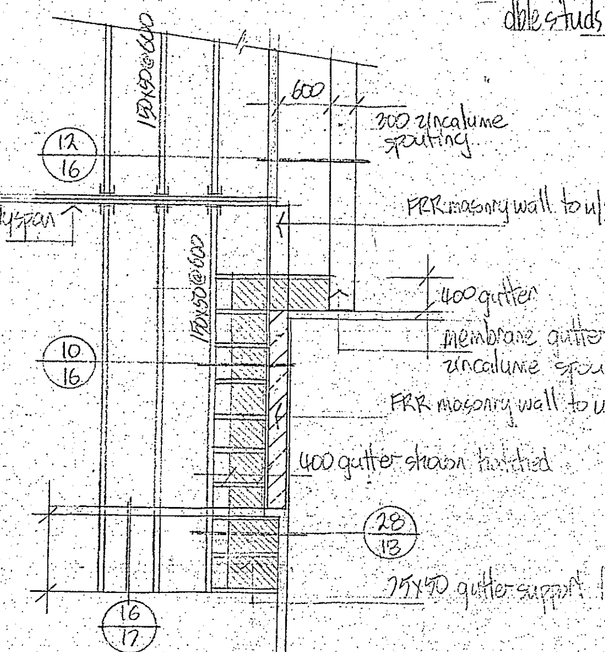
plan. box gutter/FRR wall apartment 3



detail (Y) Hyspan/wall apt 1.



detail (Z) Hyspan wall apt 1.

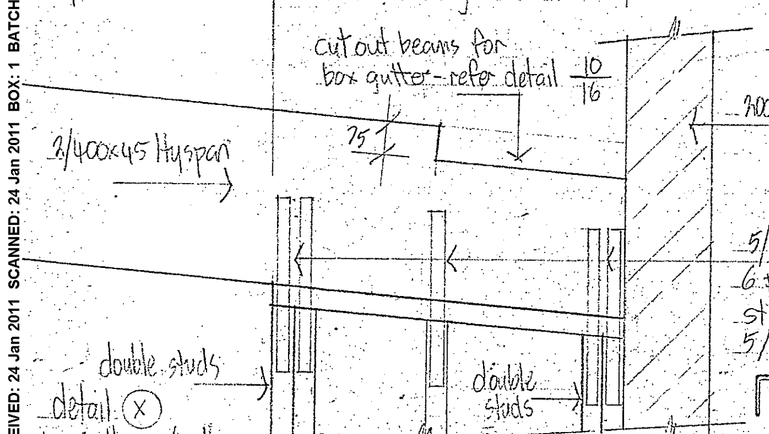


plan - box gutter/FRR wall apartment 2.

plan

elevation

detail (W) Hyspan/wall apartments 1, 2, 3



detail (X) Hyspan/wall apt 3

STUDIO ARCHITECTA LTD
This drawing is for consent purposes only and is not to be used for construction purposes. It is the responsibility of the builder to ensure compliance only with the extent of the work described on our calculations ref: 0401 DATE: 6/06/06

DESIGNER:	
DRAWN:	
DATE:	Nov 05
	1/50

wd14

ripiro @ baylys.

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remove top & bottom flange back to wall line refer detail 40/20

beam #6

extra joist @ compressed sheet joint

extra 150x50 joist well nailed to 200x50 joist for shower falls

250UB37

2/300x50

2/300x50

300x50

2/300x50

2/300x50

GARHS

post #9

G

post #8

GARHS

2/300x50

2/300x50

sink waste drops in wall

200 conc masonry FRR wall

200x50 plate on wall, M12 fix joists on nail plate hangers

18mm Handyes compressed sheet floor entire ensuite

extra joist @ compressed sheet joint

extra 150x50 well nailed to 200x50

joists cut topedge to falls to shower

extra 150x50 joist well nailed to mainjost thru shower area.

250UB37

2/300x50

M12

M12

M12

M12

M12

sink

Q

FB15L

beam #15

beam #16

beam #12

GARHS

300x50

beam #4

NOTE:

all RHS posts to roof over post #7

beam #14 200UC52 pack 5mm above level at wall

D

200UB29

200UB29

2200x50

H

340x50

post #10 89RHS under beam #14

prefabricated aluminum spiral stair unit trim opening to suit.

beam #13

post #6

89RHS

2/300x50

2/300x50

100x50

2/300x50

sink waste drops in wall

post #5

89RHS

FB15L

beam #13

beam #11

beam #12

beam #9

2/300x50

sink

M12

M12

M12

M12

M12

sink

Q

I

prefabricated aluminum spiral stair unit trim out to suit

post #4

89RHS

N

beam #10

200UB29

200UB29

300x50

H

D

O

beam #10 200UC52 pack 5mm above level at corner

6R cleats to UB/UC M12 bolt fixing

200x110x1.6mm nail plate bent to suit

200 conc masonry FRR wall

stairwell

sink waste in wall

2/300x50

2/300x50

M12

M12

sink

beam #2

beam #3

2/300x50

2/300x50

E

F

F

G

D

beam #7

250UB37

2/300x50

2/300x50

prefabricated aluminum spiral stair unit trim out to suit

beam #8

beam #9

FB15L

beam #11

FB15L

beam #18

89RHS

89RHS

post #1

beam #8 200UC52 pack 5mm above level at corner

H

I

300x50

Q

250UB37

extra 150x50 joist well nail to 200x50 & cut down to falls for shower

2/300x50

2/300x50

w/h & shower wastes under joists in soffit space

bath

shower

soil stack/ vent pipe in wall

200x50 joists @ 400 - floor

150x50 joists @ 400 - deck

extra joist @ compressed sheet/particle bd joint

load bearing walls shown shaded.

solid nog @ mid span - typical for 200x50 joists.

remove top & bottom flange back to wall line refer detail 40/20

pack to suit

2200 AFL ground floor

▽FFL

20 flooring

190 joist

2490 AFL

100 step

50 fall

20 ply

160 joist/steel - 150UB18 155x75

▽ u/s steel

2330 AFL

2/300x50 joist

layout - deck step

▽FFL 2700 AFL

20 flooring

190 joist @ 400

2490 ▽ ceiling

270 steel

FHR @ 1200

2410 AFL u/s steel

75x50 each side

250UB37

256 + 8mm precamber = 264

STUDIO CAROTTA LTD

This drawing has been checked for compliance only with the consent of the works described on our calculations of

REF 04201 DATE 26/05/05

DESIGNER

DATE: may 05

DESIGNED: nm

DRAWN: nm

SCALE: 1:50

PROJECT NO: 04 DW01

wd13

ripiro @ baylys

RECEIVED: 24 Jan 2011 SCANNED: 24 Jan 2011 BOX: 1 BATCH: 67088 DOC: KDCAALWN

3

FFL 99200

tub

soilstack

140
150x50 frame wall

800 1200 in floor shower

350

90

RHS

1000

strap wc

90
100x50 frame wall

1800 screen

400

tub

soilstack

140
150x50 frame wall

indicates 100x100 H5 posts to screen walls to 1800 AFL set in 350 p x 900 concrete

600

wall mount whb waste in wall

RHS

hwc

300

12mm dia drain

3500

wall #3

wall #2

200 conc masonry FRR wall

50

RHS RHS

RL 99400

1800 screen

spiral stair

2

FFL 99400

800 1200 in floor shower

350

90

RHS

1000

strap wc

90
100x50 frame wall

1800 screen

100mm oxide tinted exposed aggregate concrete patios/paths with 665 HRC mesh on compacted hardfill

600

wall mount whb waste in wall

RHS

hwc

300

12mm dia drain

3500

300 wide x 200 slab thickening to load bearing walls over
2/D12 longit. R10 @ 600

wall #1

56

200 conc masonry FRR wall

RHS

indicates 89x89x3.6 RHS posts on 6mm base plates 4/M12 chemset bolt fixed to slab

RL 99400

aluminium prefabricated spiral stairs - center pole set in 600 dia x 1200 concrete

slab/foundation plan.

1800 screen

RL 99600

300

hwc

3500

600 dia drain

RHS

wall mount whb waste in wall

600

1

FFL 99600

1000

90

in floor shower

1400

800

RHS

strap wc

140
150x50 frame wall

garage door & aluminium joinery sill recess. check with Designer & Manufacturers

soilstack

typical slab: 100mm concrete with 665 HRC mesh on 0.25mm polythene on sand on min 100mm compacted hardfill

200 concrete masonry base walls on 300x250 concrete footing

1900

3510

2/D12 longit

2/D12 longit

3350

1900

2400

apt 1 ▽FFL 100300

D16@400
1000 lap to starters

apt 2 ▽FFL 99400

▽FFL 99600
apart 1

200

250

D12 horiz @ 800

D16 starters @ 400

1710

3580

5°

2/D12 longit

2/D12 longit

D12 horiz @ 800

D12 horiz @ 800

3000

200

▽FFL 99600
apt 3

250

FRR wall #1 View from apt 2.

wall #3

wall #2

View from apt 3.

detail 52 typical foundation

300 min

250

300

D12 starters @ 600 alternate
300 lap to mesh
400

2/D12 longit

75 cover

RS TIES AT 600 CTRS

cladding on 50x45 H3 vert battens to studs on heavy duty building wrap on 100x50 H1.2 framing. studs @ 400 ncg @ 800

2357min

50

100x50 H3.1 bottom plate on dpc

6mm overhang slab edge M12 @ 1400 max

▽FFL

2/D12 with R6 @ 600 to bond beam

D16 vert @ 600
1000 lap to starters

D16 starters @ 400

100mm concrete slab with 665 HRC mesh on 0.25mm polythene on sand on min 100mm compacted hardfill

▽FFL

200

250

D12 @ 800

D12

D12

75 cover

D12 floor starters @ 400 - 600 lap to mesh 665 HRC mesh

4/D12

D16 starters alternate

75 cover

800
c on wall

FRR wall - 200 conc masonry all cells filled

detail 56

STUDIO MAROTTA LTD
The following has been checked for compliance with the Acceptance of the work described on our calculations of
REF: 04/61
DATE: 28/6/05

DESIGNER :
MARTIN DESIGN
Nigel J. Martin. NZCD Arch.
ARCHITECTURAL DESIGNER.
Telephone & Fax

DATE : may 05
DESIGNED : njm
DRAWN : njm
SCALE : 1:50, 1:10
DRAWING NUMBER : wd12
JOB No. 04/W01

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ridiro @ bayLys

RECEIVED: 24 Jan 2011 SCANNED: 24 Jan 2011 BOX: 1 BATCH: 67088 DOC: KDCAALWN

waterproof membrane over 18mm plywood over ex 200x50 rafters cut to 1.5° fall top edge at 400 ctrs horizontal R2.6 insulation 10mm gib ultraline ceiling

125 zincalume box gutter on ex 200x25 H3 fascia grooved for 6mm unpainted Hardiflex soffit

silver anodised aluminium joinery

100mm exposed aggregate oxide tinted concrete entry paving with 668 HRC mesh on compacted hardfill

150x50 purlin rafters @ 600

2/400x65 Hyspan rafting roof support beams

2/150x50 lintel

2/150x50 rafting beam

6mm HardiFlex soffit to rafters aluminium jointers. zinc Tek screw fixed

zincalume clad screenwall beyond to 2000 AFL

150x50 deck joists @ 400 beam #13

FFL 102.100

6mm unpainted HardiFlex soffit to 150x50 joists @ 400 aluminium jointers. zinc Tek screw fix

FFL 99400

bedroom one · bathroom · bedroom two · garage · entry

W2-17 · W3-13

150UB37 beam #14 · 200UC52 beam #10

strip of 10mm gib bd lining RC wall

section 11/03

150x50 purlin rafters @ 600

2/400x145 Hyspan rafting roof beams. 10mm gib around

2/150x50 lintel

linea weatherboards over ex 50x15 H3.1 battens to studs over heavy duty building paper over 100x50 H1.2 framing studs @ 400 noggs @ 800

FFL 102.100

bedroom one · living · dining · garage · entry foyer · bedroom three

W2-09 · W2-20 · W2-11 · D2-06

beam #6 350UB37

zincalume capping

1800 AFL

corrugated zincalume over building paper over 100x50 H3 framing as screen wall

100x50 H3.1 bottom plate on dpc M12 @ 1400 ctrs max

FFL 99400

100x100 H5 posts set in 350 dx 900 concrete

section 17/03

200x50 eave purlin rafters @ 600

25x50 purlins on flat @ 900 over 150x50 rafters @ 600 5° pitch

water proof membrane over 18mm plywood over ex 200x50 rafters cut to 1.5° fall top edge @ 400 ctrs horizontal R2.6 insulation 10mm gib ultraline ceiling

W1-14

beam #7 200UB29

2/250x50 lintel

2/250x50 rafting beam, 18mm board each side. 6mm HardiFlex to u/s galvanised 89 RHS posts

kitchen · dining · deck

W1-16

FFL 102.300

200UC52 beam #8 150x50 joists @ 400

bedroom three · wardrobe · bedroom two

D1-06

FFL 99600

99800

125 zincalume box gutter on ex 200x25 H3 fascia grooved for 6mm unpainted Hardiflex soffit

silver anodised aluminium joinery

W2-12

entry

entry drive

FFL 99400

19mm HD particle board stairs ex 50 under stringer

section 13/03

linear weatherboards over ex 50x15 H3.1 battens to studs over heavy duty building wrap over 100x50 H1.2 framing: studs @ 400 noggs @ 800 R1.8 wall insulation 10mm gib tapeline each side as 30/30/30 FRR wall - GibGBTL 30 - wall reduce framing thickness to accomodate gib both sides

200x50 eave purlin rafters @ 600

25x50 purlins on flat @ 900 over 150x50 rafters @ 600

2/200x50 rafting roof beam to galvanised 89 RHS posts

2/150x50 lintel

2/200x50 beam

W1-23

▽3750 u/s ex 200x50 rafters

beam #7 200UB29

W1-16a 1.5° fall

PFC 150 lintel

FFL 102.300

W1-09

under stair store · D1-01 · D1-02 · D1-03 · bathroom

FFL 99600

99750

section 14/03

trimline zincalume over self support building paper over 25x50 purlins on flat @ 900 over 150x50 rafters @ 600 5° pitch R2.6 insulation 13mm gib ultraline

200x50 eave purlin/rafters @ 600

600 eave

25/18 similar

ex 250x25 H3 fascia grooved for 6mm unpainted Hardiflex soffit

silver anodised aluminium joinery

tiles on waterproof membrane on 18mm hardies compressed sheet to shower enclosure cut 200x50 joists to falls to waste - install extra 150x50 well nailed to main joist

2/150x50 lintel

2/200x50 lintel

W1-21

FFL 102.300

2/200x50

2/400 soffit

6mm HardiFlex soffit with aluminium jointers

easyline

D1-13

bedroom one

W1-18

2/150 PFC lintel

horizontal corrugated zincalume on ex 50x25 H3 battens on heavy duty building wrap

garage

W1-13

FFL 99600

99500

section 15/03

STUDIO KAKARIA LTD
This drawing has been checked for compliance only with the extent of the work described on our calculations of
REF: 04/04 DATE: 26/6/05

DESIGNER :
DRAWN :
CHECKED :
DATE : April 05
SCALE : 1:50

wd 11
04 DEC 01

ripiro @ baylys.

RECEIVED: 24 Jan 2011 SCANNED: 24 Jan 2011 BOX: 1 BATCH: 67088 DOC: KDCAALWN

line of 100x50 timber frame wall
100x50 eave rafters @ 600
150x50 purlin rafters @ 600
100x50 eave rafters @ 600
▽2400 top plate
18mm Hardies compressed sheet floor to ensuite
6mm Hardiflex soffit @ underside of steel floor beam - pack down from floor joists to suit
100mm concrete slab with 665HRC mesh on 0.25mm polythene on sand on min 100mm compacted hardfill
galvanised 89RHS posts to 2/150x50 beam
400 gutter
straight line masonry FRR wall
2/150x50 lintel
▽2400 AFL
2/100x50 lintel
beam #16 200UB29 in wall
dining
kitchen
bedroom one
ensuite
2/150x50
102.100
101900 FFL
1.5° fall
beam #15
EQPTL kitchen lintel 150mm
6mm unpainted Hardiflex soffit aluminium jointers
straight line 300 conc masonry FRR wall
150x50 FFL lintel beam #3
bedroom two
wardrobe
bedroom three
garage
99400 bdy
99400 FFL
original ground line
section 06/03

2/200x50 beam - Hardies Titan board each side of Hyspan beams beyond
line of glb bit square stopped 2/400x45 Hyspan beams beyond
▽2450 top plate
2/150x50 lintel
2/150x50
2/200x50 posts @ 600
▽3750 u/s of 200x50 rafters @ 600
1.5° fall
2/300x50
150x50 joists @ 600
GIBTEC 30 30-30-30 FRR wall full height
10mm glb fyreline both sides
FFL 101900
bathroom
original ground line
99350
FFL 99900
225 min
300 min
section 07/03

25x50 purlin over 100x50 eave rafters @ 600
Hrimline zircalume over self support building paper over 150x50 purlin rafters @ 600 5° pitch R2.6 insulation 13mm glb ultraline ceiling
15x50 purlin over 100x50 eave rafters @ 600
▽2450 SP
2/100x50 lintel
silver anodised aluminium joinery
W3-18
W3-15
2/100x50
▽2612 AFC u/s soffit
2/150x50 beam #5
paint finish meranti ply sectional door
silver anodised aluminium joinery
100mm exposed aggregate oxide tinted concrete with 665HRC mesh on compacted hardfill
FFL 101900
garage
W302
99100
FFL 99400
section 08/03

2/400x45 HS fascia grooved for 6mm Hardiflex soffit, aluminium jointers zinc-Tek screw fixed
200x50 joists @ 400 ctrs. 10mm glb ultraline
101900
2/150x50 lintel
bedroom one
W3-19
150UB37 beam #6
deck
150x50 deck joists @ 400 R3.6 insulation 10mm glb ultraline
beam #17 PFC 15L
1200UC52 beam 14
prefabricated aluminium spiral stairs - set in 1200x600ø concrete
garage
bathroom
bedroom two
W3-10
W3-03
99100
section 09/03

2/400x45 Hyspan rafting beams Titan board each side. 6mm Hardiflex to u/s beams
2/350x50 rafting beam - Titan board each side. 6mm Hardiflex to u/s
6mm unpainted Hardiflex soffit aluminium jointers

height to boundary infringment refer to Resource Consent
900
joists cut to falls to shower cubicle with compressed sheet over
ensuite
living
kitchen
101900
2/150x50
2410 AFC underside 250UB32 - beam #6 10mm glb bd square stop around.
garage
under stair store
bedroom
original ground level
99400
99100
2/400x45 Hyspan as roof support beams 150x50 purlin rafters @ 600 on nail plate hangers 10mm glb board line & square stop
corrugated zincalume horizontal over ex 50x25 H3.1 battens over heavy duty building wrap over 100x50 H1.2 framing studs @ 400 nogs @ 800 R1.8 insulation 10mm glb fyreline both sides - reduce framing thickness to suit
19mm HD particle board flooring over 200x50 joists @ 400 noise control insulation to bedrooms. 10mm glb ultraline ceiling
H3.1 bottom plate on dpc. M12 bolt fix @ 1400 ctrs max
section 10/03

ripiro @ baylys

STUDIO MAROTTA LTD
This drawing has been checked for compliance only with the extent of the work described on our calculations of
REF: 04101 DATE: 26/05/05

DESIGNER :
DRAFTSPERSON :
DATE : April 05
DESIGNED : MJM
DRAWN : MJM
SCALE : 1:50
BRANCH : wd 10
NUMBER :
JOB No. 04DW01
MARTIN MARTIN NZCID Arch.
ARCHITECTURAL DESIGNER

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ex450x45 H3 FL fascia.

3350 topplate

2/250x90 beam

2/400x45 Hyspan beams 150x50 rafters @ 600 5° pitch

trimline zincalume over self support building paper over 75x50 purlins @ 900 over 150x50 rafters @ 600. R2.6 insulation. 13mm gib ultraline

6mm unpainted Hardiflex with aluminium jointers to soffit. Tek screw fixed

beam #8 200uc52

membrane & ply over steel beams to suit

beam #9

150x50 @ 400

200x50 @ 400

250UB37 beam #2

W1-17

W1-18

FB15L Plitch lintel

FFL 102300

FFL 102300

FFL 99600

W1-05

bedroom two

bathroom

garage

horizontal corrugated zincalume over ex50x25 H3 battens to studs over heavy duty building wrap over 100x50 H1.2 frame walls. studs @ 400 nogs @ 800. R1.8 insulation. 10mm gib bd. 100x50 H3.2 bottom plate on dpc. M12 @ 1400 max

100mm concrete slab with 665 HRC mesh on 0.25mm polythene on sand on min 100mm compacted hard fill

saligna decking loose laid panels over water proof membrane over 18mm plywood laid to 1.5° falls on ex50 flooring on 150x50 joists @ 400 ctrs. R2.6 insulation to 10mm gib ultraline ceiling to u/s joists

section 01/03

section 02/03

dining

living

bedroom one

bedroom two

D1-05

D1-08

garage

200x50 joists @ 400

beam #2 250UB37

10mm gib & square stop around beam

900 zincalume box gutter on galvms brackets on ex 250x25 H3 fascia grooved for 6mm Hardiflex soffit

2200 ceiling - 10mm gib ceiling

linear weather boards over ex50x25 H3 battens to studs over heavy duty building wrap over 100x50 H1.2 framing studs @ 400 nogs @ 800

20mm HD particle board flooring over 200x50 joists @ 400. noise control insulation over bedrooms. 10mm gib ultraline to u/s joists

NOTE: battens to horizontal corrugated zincalume to be face primed

ex400x45 H3 FL fascia

2/250x50 beam

galv mild steel 89 RHS posts

100mm oxide tinted exposed aggregate concrete patio with 665 HRC mesh on compacted hard fill

150x50 purlin rafters @ 600

400 Hyspan beam beyond 400 gutter

2/400x45 Hyspan gib board & square stop around

75x50 purlins @ 900 over 150x50 rafters @ 600 5° pitch

2250 topplate

strap & line 200 conc masonry FRR wall

2/300x90 lintel

gib lined bulkhead to kitchen 2/300x90 lintel

beam #12 200uc59

beam #11 200uc59

beam #2 250UB37

FB15L kitchen lintel

200uc52 beam #10 deck support beam

strap & line 200 conc masonry wall

kitchen

dining

living

ensuite

entry

garage

bedroom two

bedroom three

W2-08

D2-04

FFL 102100

FFL 99400

FFL 102300

FFL 99600

section 03/03

section 05/03

DESIGNER:	
DATE:	April 05
DESIGNED:	MJM
DRAWN:	MJM
SCALE:	1:50
DRAWING NUMBER:	wd09
JOB No.:	04 DW01

Martin Martin NZIOD Arch. ARCHITECTURAL DESIGNER. Telephone & Fax

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Hardies Titan board each side of beams to deck roof. zinc Tek screw fix. 6mm Hardiflex soffit to beams.

ex200x25 H3 fascia grooved for 6mm Hardiflex soffit.

galvanised 89 RHS posts beyond

2/250x90 beam

2/250x90 lintel

2/150x50

W2-18

W2-06

FB15L lintel

50 fall

2/200x50

10mm gib ultraline ceiling to 150x50 joists @ 400 to bathroom

bathroom

D2-01

D2-05

D2-06

u/stair storage

section 04/03

trimline zincalume over self support building paper over 150x50 purlin/rafters @ 600 5° pitch. R2.6 insulation. 13mm gib ultraline ceiling

2400 top plate

water proof membrane roof over 18mm plywood on ex 200x50 rafters cut to 1.5° fall to top edge at 400 ctrs horizontal. R2.6 insulation. 10mm gib ultraline ceiling.

2750 u/s rafters entry roof

30-30-30 FRR wall - Gib GBTL30 - paint finish linea weather boards over ex 50x25 H3 battens to studs over heavy duty building wrap over 100x50 H1.2 framing studs @ 400 nogs @ 800. R1.8 insulation. 10mm gib tyneline both sides. 100x50 H3.1 bottom plate on dpc M12 @ 1400 max

19mm HD particle board stairs with ex50 under stringers

75x50 purlin over 100x50 eave rafters at 600 to ex 200x45 H3 paint finish fascia grooved for Hardiflex soffit

2/250x90 beam

Titan board each side 6mm Hardiflex to u/s beam

W2-13

W2-12

living

beam #3 250 PFC lintel

50 fall

2/200x150

10mm gib ultraline ceiling to 150x50 deck joists @ 400 & to 200x50 floor joists @ 400

10mm gib tyneline both sides 30-30-30 FRR wall

gib around steel floor beam beyond

garage

W2-02

section 05/03

150x50 purlin rafters @ 600 5° pitch

13mm gib ultraline ceiling.

75x50 purlin over 100x50 eave rafters @ 600

300 zincalume box gutter on galv mild steel brackets on ex 200x25 H3 paint finish fascia grooved for 6mm Hardiflex soffit

2400 top plate

19mm HD particle board floor over 200x50 joists @ 400.

6mm unpainted Hardiflex soffit on 50mm framing @ 600 to line with u/s steel floor beam mid span of garage. aluminium jointers. SS pan pozi screw fix.

FFL 102100

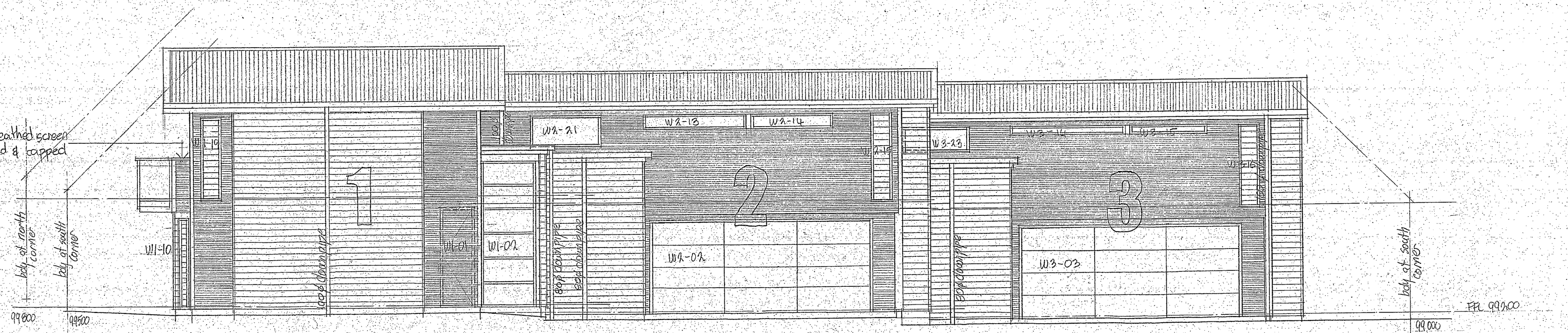
FFL 99600

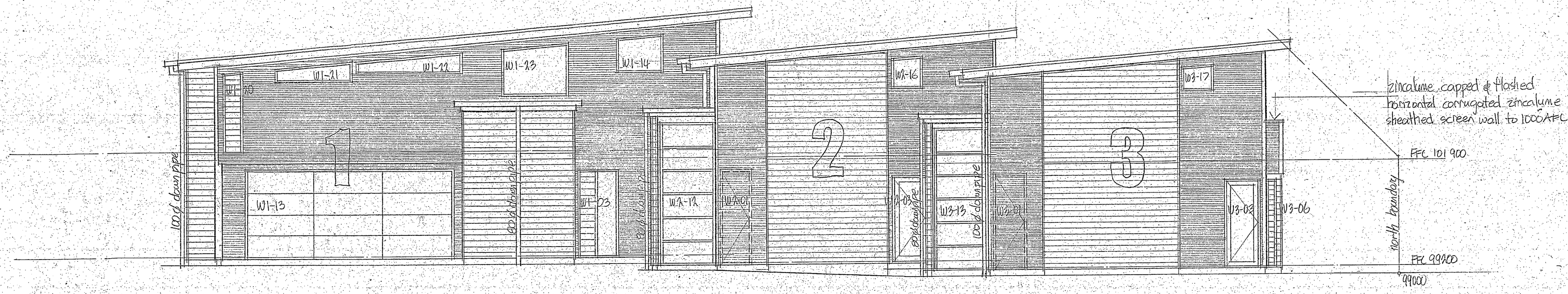
100mm oxide tinted exposed aggregate concrete entry drive with 665 HRC mesh on compacted hardfill to falls.

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ripiro @ baylys.

RECEIVED: 24 Jan 2011 SCANNED: 24 Jan 2011 BOX: 1 BATCH: 67088 DOC: KDCAALWN





ripiro @ baylys.

DESIGNER :
MARTIN DESIGN
DATE : april 09
DESIGNED : njm
DRAWN : njm
SCALE : 1:50
DRAWING NUMBER : wd08
JOB No. 01 DW01
Telephone & Fax
Nigel J. Martin. NZCD Arch. ARCHITECTURAL DESIGNER.
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RECEIVED: 24 Jan 2011 SCANNED: 24 Jan 2011 BOX: 1 BATCH: 67088 DOC: KDCAALWN

height to boundary infringment to north corner. approved as per Resource Consent #040455

linea sheathed screen wall to 2000 AFL zincalume capped

zincalume capped linea sheathed screen walls to 2000 AFL

FFL 101900

FFL 99300

99250

lofy at north corner

W3-18 W3-20 W2-18 W1-15 W1-17 W3-06 W3-07 W3-09 W2-06 W2-08 W1-05 W1-08

overflow

natural finish jarrah handrail to aluminum frame balustrade with Plexiglass Satinice DC selected colour infill panels

prefabricated aluminum spiral stair units from upper level decks

FFL 101300

FFL 99600

99800

north elevation.

zincalume flashings to paint finish ex 200X45H3.F) fascias

prefabricated aluminum spiral stairs from deck area.

2000AFL screen wall - paint finish linea weathboard

linea weather board on cavity on building wrap as screen wall to 2000 AFL zincalume capped

zincalume flashings to paint finish ex 250X25H3.F) fascia

300 zincalume gutter on hotdip galv mild steel brackets

paint finish Hardie Titan board to beams 6mm Hardiflex soffit

hot dip galv mild steel RHS posts to roof beams

downpipe capacity
100ϕ dp = 155 sq m roof
80ϕ dp = 100 sq m roof

paint finish linea weathboard 2000AFL screen wall

paint finish Hardie Titan board to roof support beams

hot dip galv mild steel RHS posts to roof

prefabricated aluminum spiral stair unit

paint finish linea weather board facing to decks

W3-19 W2-21 W3-22 W2-17 W2-19 W2-20 W1-16 W1-18 W3-08 W3-10 W3-11 W2-10 W1-09 W1-07 W1-11 W1-12

overflow

paint finish etch prime pvc downpipes

102300

100ϕ downpipe

99600

1800AFL screen wall - horizontal corrugated zincalume on building wrap silver anodised aluminium joinery

1800 AFL screenwall - horizontal corrugated zincalume on heavy duty building wrap

paint finish linea weather boards on 50X25H3.1 batten cavity on heavy duty building wrap

horizontal corrugated zincalume on 50X25H3.1 batten cavity on heavy duty building wrap

west elevation

ripiro @ baylys.

DESIGNER : [redacted]
DATE : April 05
DESIGNED : njm
DRAWN : njm
SCALE : 1:50
DRAWING NUMBER : wd07
JOB No. 04 DW 01

[redacted]
Telephone & Fax
Neal J. Martin. NZCD Arch.
ARCHITECTURAL DESIGNER.

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RL99100 set out point A. 150x50 wall soilstack
W3-03 BA2.b. 3200 BA5. 1800 n/150x90 lintel
W3-04 W3-02 W3-05 W3-06 W3-07 W3-08 W3-09 W3-10 W3-11 W3-12 W3-01 W3-13
garage FFL 99200 beam #5 450 PFC lintel
250 UB37 over beam #6
entry bathroom bedroom two bedroom three
D3-01 D3-02 D3-03 D3-04 D3-05 D3-06 D3-07 D3-08
FB15L lintel 6ARHS BA2a. 1800 Gib2b. 2800
wall #1 3710 masonry wall wall #3 1720 masonry wall
1800 screen wall 100x100HS
W2-03 2/150x50 lintel soilstack 150x50 wall
garage FFL 99400 beam #3 450 PFC lintel 250UB37 over beam #4
W2-02 W2-04 W2-05 W2-06 W2-07 W2-08 W2-09 W2-10 W2-11 W2-12 W2-01
D2-01 D2-02 D2-03 D2-04 D2-05 D2-06 D2-07 D2-08
RL99400 RL99600
D1-01 D1-02 D1-03 D1-04 D1-05 D1-06 D1-07 D1-08
FFL 99600 garage
floor over 150x50 wall soilstack 250 PFC lintel beam #1 250UB37 over beam #2 1/150x50 lintel
W1-01 W1-02 W1-03 W1-04 W1-05 W1-06 W1-07 W1-08 W1-09 W1-10 W1-11 W1-12 W1-13
deck over RL99500
08/10 07/10 06/10 09/10 10/10 11/11 12/11 13/11 14/11 15/11 01/09 02/09 03/09 04/09 05/09

risk matrix calculation :

			score
wind zone	very high		1
number of storeys	two	- high risk	2
roof/wall intersection	exposed eaves	- high risk	3
eave width	600mm @ 2nd storey	- high risk	1
envelope complexity	complex	- high risk	3
deck design	enclosed deck	- very high risk	6
		Total score :	18

horizontal corrugated z/aculume over cavity - 13-20 ok.
fibre cement weatherboards over cavity - 13-20 ok.

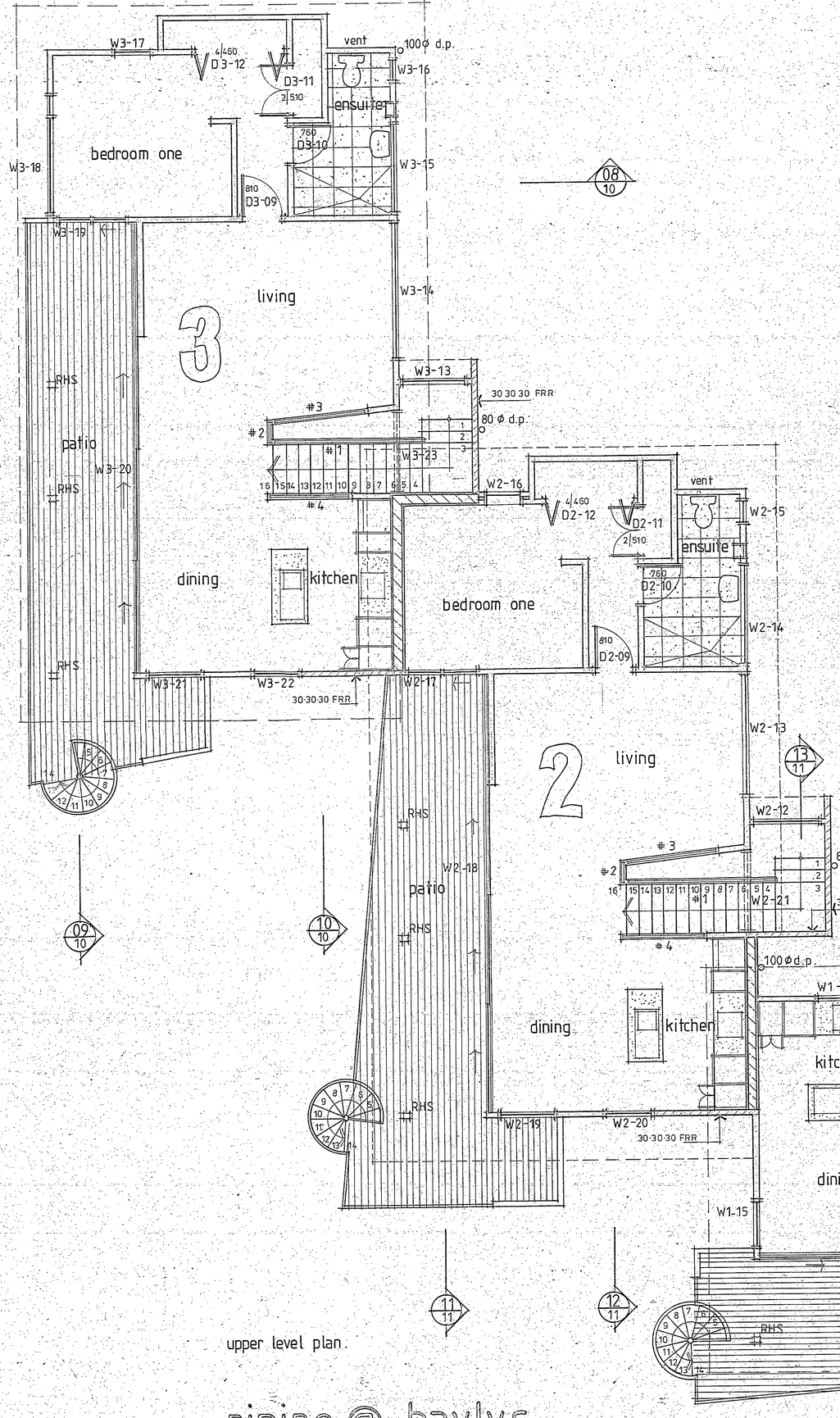
NOTE: wall framing to be 100x50 H1.2 unless noted otherwise
studs @ 400 nogs @ 800
100x50 H3.1 bottom plate

1. 30.30.30. FRR walls - 200 concrete masonry solid filled
- 100x50 framing reduce thickness to accomodate lining both sides - 10mm gib fyreline each side
- full height to u/s roofing - refer gib tech details for Gib GBTL30 type wall.

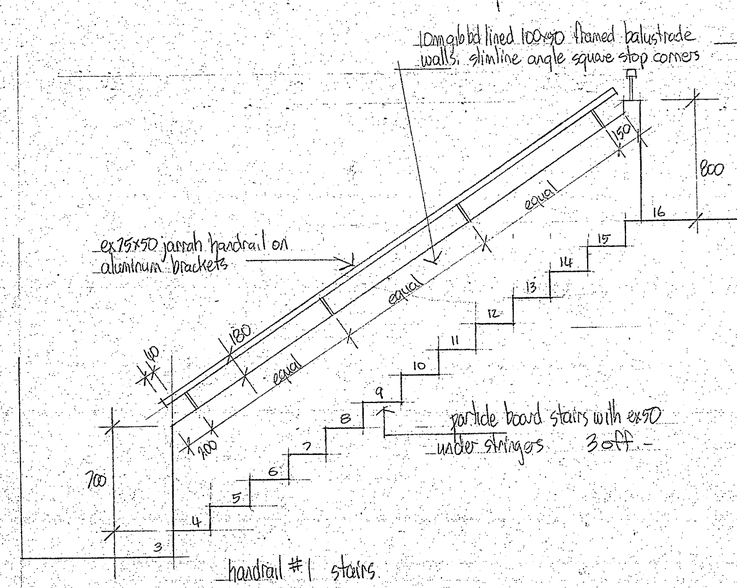
DESIGNER :
DATE : April 05
SCALE : 1:50
wd05
ground floor
ripiro @ baylys
STUDIO MAHOWALD
The Engineer has not checked for compliance with the extent of the work described on our calculations of
REF: 04/01 DATE: 24/01/05

RECEIVED: 24 Jan 2011 SCANNED: 24 Jan 2011 BOX: 1 BATCH: 67088 DOC: KDCAALWN

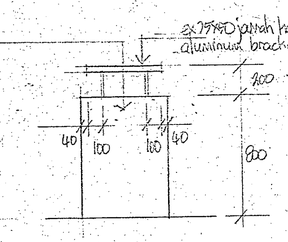
bedroom one
ensuite
living
dining
kitchen
bedroom one
ensuite
living
dining
kitchen
living
dining
bedroom one
ensuite
1000 high screen wall zincalume sheathed
11430 deck o.a.
10390 deck o.a.
Stairs
W3-17
W3-16
W3-18
W3-15
W3-19
W3-14
W3-13
W3-23
W3-20
W3-21
W3-22
W2-16
W2-15
W2-14
W2-17
W2-13
W2-18
W2-12
W2-21
W2-19
W2-20
W1-14
W1-23
W1-22
W1-21
W1-20
W1-15
W1-16
W1-17
W1-19
W1-18
W1-02
2/400x45 Hyspan
2/150x50
2/300x45 FAR
BR2a 1800
BR2a 2400
BR2a 1200
BR5 1800
GR1HS
GR2a 1800
2/510
2/410
4/410
2/450 LVL
2/300x45 Hyspan
2/400x45 Hyspan
2/300x45 Hyspan
2/450x90 lintel
BR1 900
08 10
07 10
06 10
05 09
04 09
03 09
02 09
01 09
09 10
10 10
11 11
12 11
13 11
14 11
15 11
upper level plan
wd 06
04/04/01
ripiro @ baylys
DESIGNER:
DATE:
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STEVE CAMAROTTA LTD
This drawing has been checked for compliance with the extent of the work described on our calculations of
REF: 04/01 DATE: 26/4/05



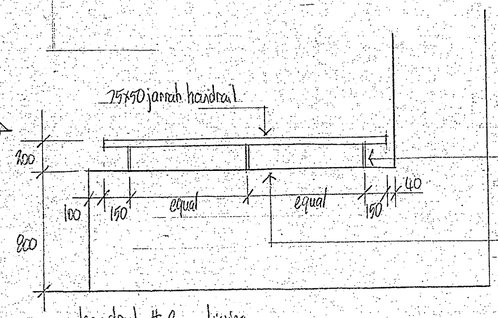
upper level plan.



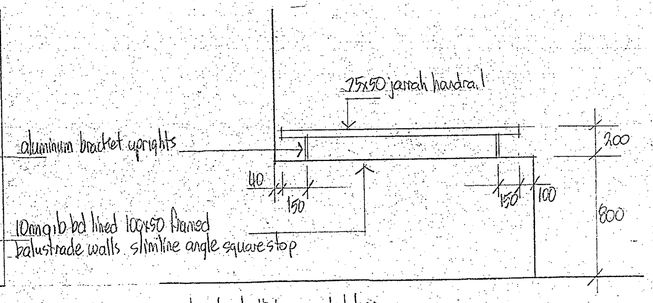
handrail #1 stairs



handrail #2 top of stairs

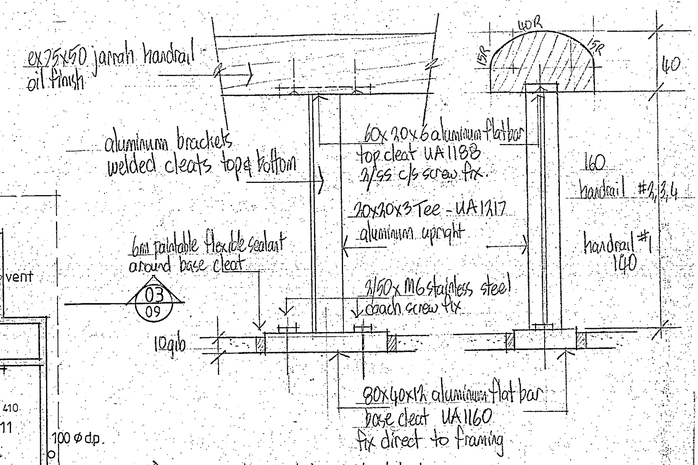


handrail #3 - living



handrail #4 - kitchen

internal stairs/ balustrade apartment 1, 2, 3.



handrail bracket detail
160 upright - 2 off
140 upright - 1 off

STUDIO TARGOTA LTD
This drawing is not to be used for construction purposes until the extent of the work described on our calculations of
REF 0107 DATE: 27/04/07

DESIGNER	
MARTIN DESIGN	
DRAWN BY	
PROJECT MANAGER	
MARTIN DESIGN	
DRAWING CHECKED	
MARTIN DESIGN	
REGD. ARCHITECT / DESIGNER	
ARCHITECTURAL DESIGNER	
DATE:	apr 07
DESIGNED:	rjm
DRAWN:	rjm
SCALE:	1:50
DRAWING NO:	wd04
JOB NO:	0407W01

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ripiro @ baylys

RECEIVED: 24 Jan 2011 SCANNED: 24 Jan 2011 BOX: 1 BATCH: 67088 DOC: KDCAALWN

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W3-03 laundry soil stack 100 ϕ d.p.
W3-04
garage 3
80 ϕ deck dp
W3-02
W3-05
W3-06 RHS
W3-01 W3-13 30·30·30 FRR
810 D3-01 FFL 99200 entry up 2700
80 ϕ d.p.
W3-07 bathroom
D3-02 760
2/460 D3-05
D3-08 710 sink waste 7 6 5 4
W2-03 soil stack
W3-08 RHS
80 ϕ deck dp
D3-03 810
D3-06 810
laundry
2/510 D3-07
W3-09 bedroom two
bedroom three
garage 2
2/510 D3-04
80 ϕ deck dp RHS RHS
W3-10 W3-11 W3-12
80 ϕ deck dp's
30·30·30 FRR
screen wall
W2-02
up 2700
W2-04
W2-05 80 ϕ deck dp
W2-01 W2-12
RHS
810 D2-01 FFL 99400 entry up 2700
80 ϕ d.p.
W2-06 bathroom
D2-02 760
2/460 D2-05
D2-08 710 sink waste 7 6 5 4
30·30·30 FRR
W2-07 RHS
D2-03 810
D2-06 810
100 ϕ d.p.
W1-03
entry
W1-02
2/510 D2-07
W2-08 bedroom two
bedroom three
bedroom three
W1-01
W1-13
soil stack
2/510 D2-04
80 ϕ deck dp RHS
30·30·30 FRR
W2-09 80 ϕ deck dp's W2-10 W2-11
W1-04
sink waste
D1-03 810
D1-02 D1-01 710 FFL 99600
2/510
100 ϕ d.p.
screen wall
2/510 D1-06
D1-05 810 D1-04 2/460
D1-08 810
W1-05
bedroom two
D1-07 760
garage 1
laundry
bathroom
80 ϕ deck dp RHS RHS RHS
W1-06 80 ϕ deck dp W1-07 W1-08 W1-09 W1-10 80 ϕ deck dp W1-11 W1-12
up 2700

08/10 07/10 06/10 05/09 04/09 03/09 02/09 01/09 09/10 10/10 11/11 12/11 13/11 14/11 15/11

ground floor plan.

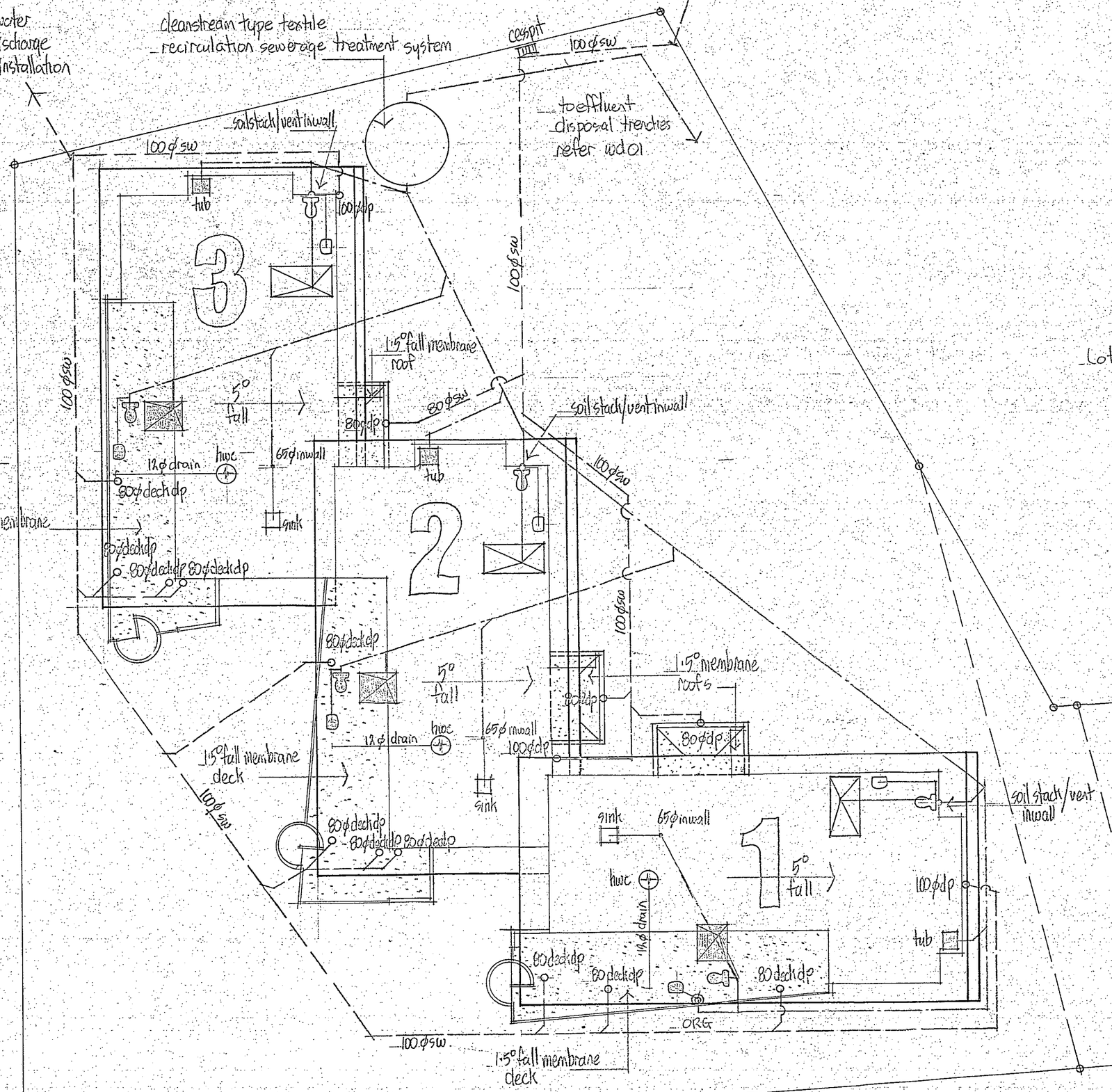
	ground floor	upper floor	total
one	92	72	164
two	91	71	162
three	92	72	164

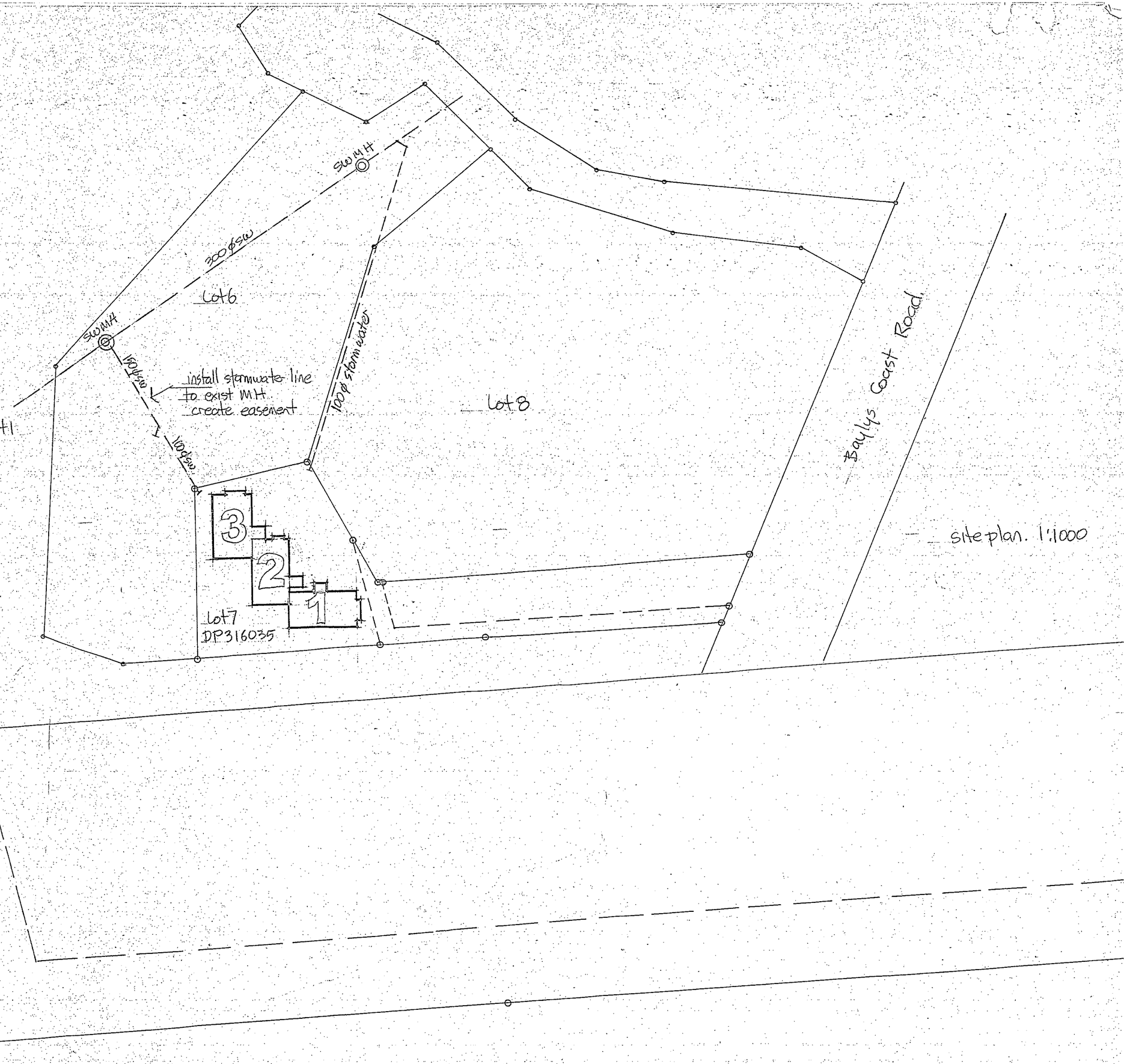
STUDIO TAROTA LTD
This drawing is not to be used for construction purposes unless checked for compliance with the Act to the extent of the work described on our calculations of
REF: 04109 DATE: 21/1/05

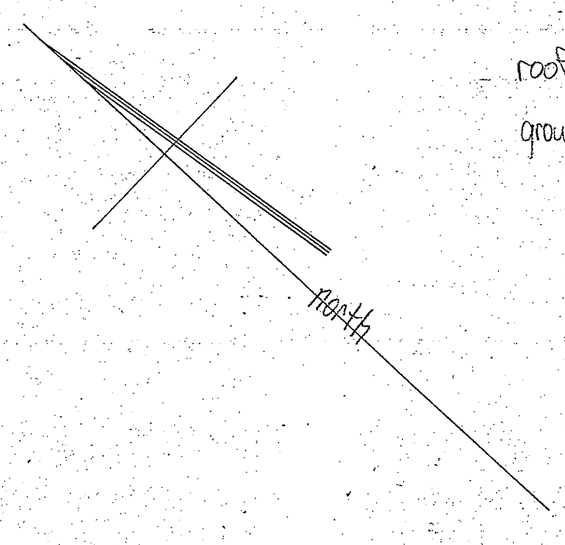
DESIGNER : MARTIN DESIGN
DRAWN : MARTIN DESIGN
CHECKED : MARTIN DESIGN
ARCHITECTURAL DESIGNER : MARTIN DESIGN
DATE : 20/1/05
DESIGNED : mjm
DRAWN : mjm
SCALE : 1:50
DRAWING NUMBER : wd03
JOB NO. : 04DW01

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ripiro @ baylys







roof & plumbing & drainage plan. 1:100
ground floor sanitary fixtures shown shaded.

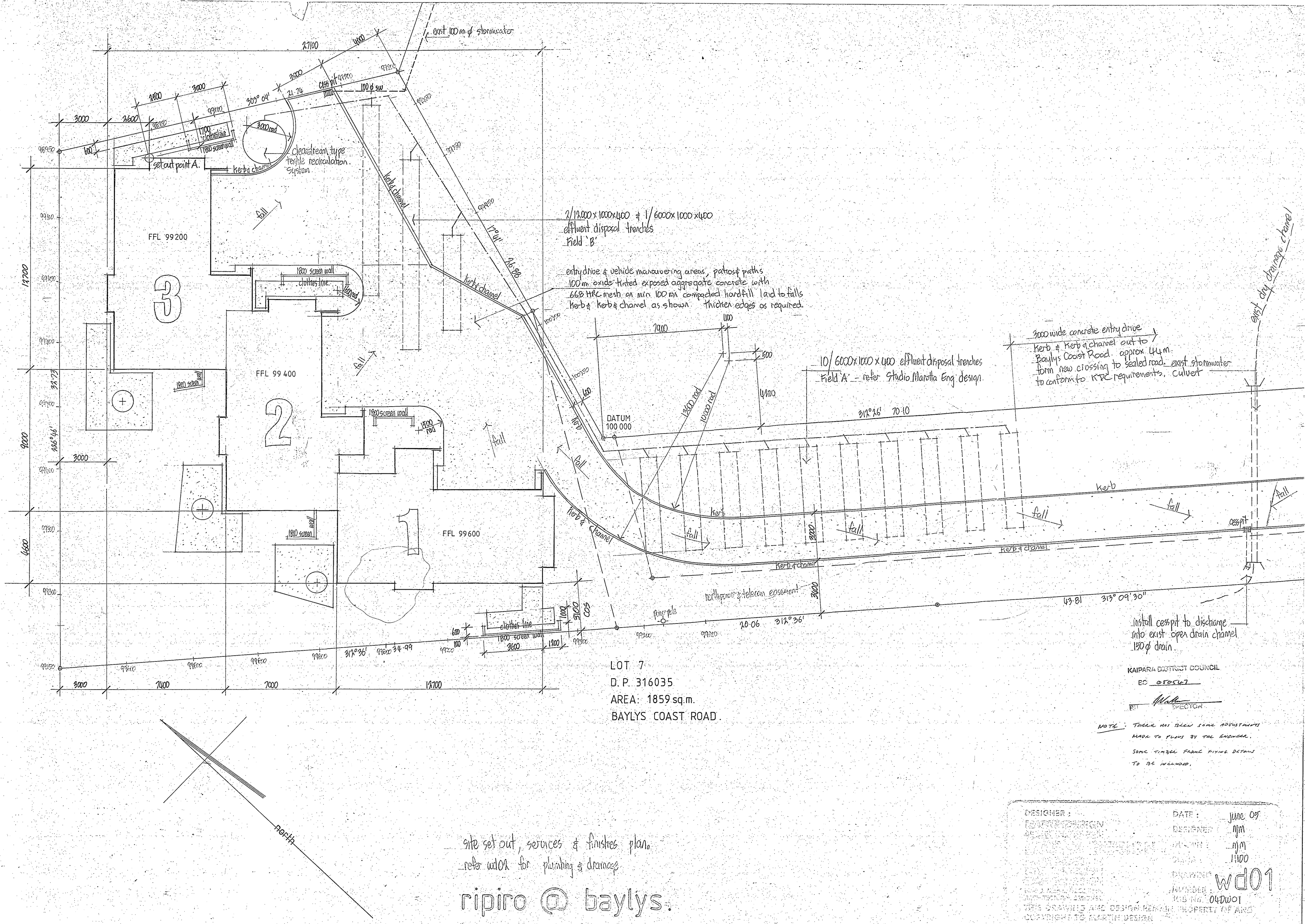
ripiro @ baylys.

DESIGNER :	DATE : June 05
DRAWN :	njm
CHECKED :	njm
SCALE :	1:100, 1:1000
DRAWING NO :	wd02
JOB No. :	04 DW01

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LOT 7
D. P. 316035
AREA: 1859 sq.m.
BAYLYS COAST ROAD.

KAIPARA DISTRICT COUNCIL
BC 050547
BY SPECTOR

NOTE: THERE HAS BEEN SOME ADJUSTMENTS MADE TO PLANS BY THE ENGINEER.
SOME TIMBER FRAME FIXING DETAILS TO BE INCLUDED.

site set out, services & finishes plan.
refer wd01 for plumbing & drainage

ripiro @ baylys.

DESIGNER :
DATE : June 05
DESIGNED : njm
DRAWN : njm
CHECKED : 1:100
DRAWING NUMBER : wd01
JOB NO. 04DW01

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