

Producer Statement of all tiled wet areas at

11 Whistler Close

Rototuna

Hamilton

3210

3 Coates of Davco K10 water based polyurethane waterproofing membrane, have been applied to all shower and bath wet areas, in accordance to manufacturers instructions. Davco K10 plus meets the requirements of wet area membrane.

Darren Bowler

Phone 0212514101



Jason Riley
Ph: 027 2933032, A/H: 07 853 6675, Fx: 07 853 6175
Email: jrileynz@yahoo.com

31 Coleraine Dr
Hamilton

11 March 2007

To Whom It May Concern:

Producer Statement:

RE: Job for Mr & Mrs Bowler at

Lot 182
Horsham Estate
Hamilton

The new building will be plastered in accordance with the NZS 4251 standard guidelines and BRANZ good stucco book. There will be a double layer of building paper and the batten system to create an air cavity. We will apply a coat of 12mm solid plaster over galvcrimp netting, we then put a branz appraised fibreglass mesh over the entire plastered surface which we then embed with solid plaster, we then apply the final coat of solid plaster that is completed with the owners desired finish. We will have a pre-plaster inspection conducted by a Building Inspector to check that the flashing details are correct and that the galvcrimp netting had been fixed correctly. We will leave the job completed with the owners desired finish ready to be painted.

If you have any questions regarding this letter please do not hesitate to contact us.

Regards Jason Riley



Rogerson Plumbing

CRAFTSMEN PLUMBERS

Phone 0-7-846 0950
Mobile 027-240 9166
Fax 0-7-855 5829

brogerson@xtra.co.nz

80 Comries Rd
P.O Box 827
HAMILTON

INSPECTION AND MAINTENANCE OF BACKFLOW PREVENTION DEVICES

Note: Please use

BLOCK LETTERS

TEST REPORT

Occupier: Mr Darren Bowler	Authorised Tester's Name: Michael Rogerson
Address: 11 Whistler Close	Buisness Address: P.O Box 827
City: Hamilton	City: HAMILTON
Contact: Steve Cullane	I.Q.P.No. 110/2011/5453
Date of Test: 13 10 2014	Test Kit No. 0105345
Location Of Device:	Date Test Kit Last Certified: 22-01-14
Boundry off Whistler Close	

Please tick the appropriate box	DEVICE DETAILS AND TEST RESULTS
Make of Device: Febco Size(mm): 20mm Model No. 007M3-AVS ADC Serial No. 17121	
☐ Containment Protection	☐ Zone Protection Individual Protection

Permission received to shut off water	☐ Reduced Pressure Zone Device	☐ Pressure Type Vacuum Breaker		Down Stream Isolation Valve	
☐ Yes ☐ No	☐ Double Check Valve (columns 1&2)				
	Check Valve No 1	Check Valve No 2	Relief Valve	Check Valve	Air Inlet
Initial test before maintenance	☐ Closed tight ☐ Leaked kpa 18	☐ Closed tight ☐ Leaked kpa 15	☐ Open at ☐ Not opened kpa	☐ Closed tight ☐ Leaked kpa	☐ Open at ☐ Not opened kpa
Reason for failure					

Retest after maintenance	☐ Closed tight ☐ Leaked kpa	☐ Closed tight ☐ Leaked kpa	☐ Open at ☐ Not opened kpa	☐ Closed tight ☐ Leaked kpa	☐ Open at ☐ Not opened kpa	☐ Closed tight ☐ Leaked kpa
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Describe Maintenance	
----------------------	--

Remarks:

☐ PASS

☐ FAIL

Authorised Tester's Signature.....

Date..... 13 10 14

CONSULTING CIVIL &
STRUCTURAL ENGINEERS
39 Meadowland Drive
P.O. Box 39-101 Howick
Telephone: 09 534 6523
Facsimile: 09 537 5754
Email: iang@aireys.co.nz
www.aireyconsultants.co.nz



7 March 2007

Members of ACENZ 

In all correspondence please quote our ref: 2246/1365

The Manager
Pacbranz Ltd
PO Box 64320
BOTANY TOWN CENTRE

Attn: Vaughan Moss

Dear Sir

**Re: Zodiac swimming pools
at various locations in New Zealand**

This note is to confirm that we have been engaged by Pacbranz ltd to carry out a peer review of their Zodiac braced and braceless pool systems.

We are in a position certify that the design of the pools has been checked in accordance with the requirements of NZS/AS 1170, AS 4600 and AS 4100 and installation to B1/AS1 and B2 (intended life of in ground components 10years min) of the approved documents issued by the Building Industry Authority and the work described in the documents prepared by Qantec Mcwilliams engineers.

If you have any further queries please contact the writer.

Yours faithfully
AIREY CONSULTANTS LTD

A handwritten signature in dark ink, appearing to read "D McKenzie".

D McKENZIE
MIPENZ, CPeng





P.I.M. No.

Building Regulation Clause(s)

PRODUCER STATEMENT – PS2 – DESIGN REVIEW

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

ISSUED BY: Airey Consultants Ltd.
(Suitably qualified Design Professional)

TO: Pacbranz Ltd.
(Owner)

TO BE SUPPLIED TO: Various territorial Authorities.
(Territorial Authority)

IN RESPECT OF: Zodiac Swimming Pools (Braced and Braceless).
(Description of Building Work)

AT: Various Locations.

(Address)

LOT DP SO

..... Airey Consultants Ltd. has been engaged by Pacbranz Ltd.
(Review Firm) (Owner/Developer/Contractor)

to review the design documents for this project in respect of the requirements of Clause(s) B1

of the Building Regulations 1992. The design is for ☐ All ☒ Part only as specified in the building consent of the building work and has been prepared by Qantec McWilliams.
(Design Firm)

in accordance with Verification Method. (respectively) of the approved documents issued by
(verification method(s)/acceptable solutions(s))

the Building Industry Authority and is described in Qantec McWilliams
(Design Firm)

drawings titled Proposed Zodiac swimming pool and numbered various
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 advise that on the basis of the review I have undertaken I BELIEVE ON REASONABLE GROUNDS that subject to:

(i) the site verification of the following design assumptions 100kPa ground conditions exist

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

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

Date 7/3/07

..... BE(Civil), MIPENZ, CPeng
(Professional Qualifications)

Member

ACENZ ☒IPENZ ☒

NZIA

..... PO BOX 39101 Howick
(Address)

This form to accompany Form 3 of the Building Regulations 1992 for the issue of a Code Compliance Certificate.

October 94

GUIDANCE ON USE OF PRODUCER STATEMENTS

This producer statement has been prepared by a combined task committee consisting of members of the New Zealand Institute of Architects, Institution of Professional Engineers New Zealand, Association of Consulting Engineers New Zealand and the Building Officials Institute of New Zealand.

Four producer statements are available and brief details on the purpose of each are as follows:

- Design:** Intended for use by the person responsible for the design in circumstances where the Territorial Authority will rely on the producer statement to issue a Building Consent.
- Design Review:** Intended for use by a suitably qualified independent design professional where the territorial authority does not undertake an internal review and relies on the independent design professional's review to issue the building consent.
- Construction:** Intended for the use by the contractor of the building works where the territorial authority requires a producer statement at the completion of construction.
- Construction Review:** Intended for use by the person required by the Building Consent to undertake construction monitoring of the building works in circumstances where the Territorial Authority will rely on the producer statement to issue a Code Compliance Certificate.

The producer statements system is intended to provide territorial authorities with reasonable grounds for the issuing of a Building Consent or Code Compliance Certificate without having to duplicate design or construction checking by others.

The following criteria are recommended to Territorial Authorities with respect to the use of the producer statements.

Definition of Suitably Qualified Design Professional

A suitably qualified design professional should have recognised qualifications and experience for the work undertaken and should be either:

- (i) an active member of the Association of Consulting Engineers New Zealand (ACENZ) or;
- (ii) a member of the Institution of Professional Engineers New Zealand (IPENZ) having a current policy of Professional Indemnity Insurance for a sum not less than \$200,000 or;
- (iii) a member of the New Zealand Institute of Architects (NZIA) having a current policy of Professional Indemnity Insurance for a sum of not less than \$200,000.

Design Build Contracts

If the design professional is engaged by the contractor, the territorial authority should satisfy itself that it is appropriate for the territorial authority to rely upon a producer statement from the design professional.

Consulting Services during Construction Phase

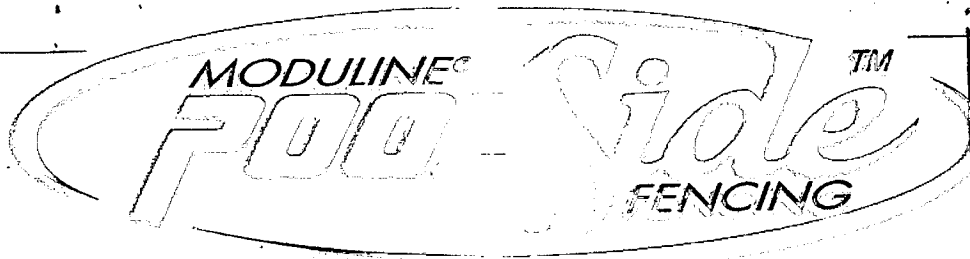
There are several levels of service which a design professional may provide during the construction phase of a project. The territorial authority is encouraged to require that the service to be provided by the design professional is appropriate for the project concerned.

Requirement to provide Producer Statement

Territorial authorities should ensure that the applicant is aware of any circumstances in which there may be a requirement for producer statements for the construction phase of building work at the time the building consent is issued as no design professional should be expected to provide a producer statement unless such a requirement forms part of the design professional's engagement.

Attached Particulars

Attached particulars referred to in this producer statement refer to supplementary information appended to the producer statement.



HAMILTON CITY COUNCIL

APPROVED

SUBJECT TO CONDITIONS
TO BE KEPT ON SITE

PEACE OF MIND

MODULINE® POOLSIDE FENCING™ has been designed to meet the requirements of the New Zealand Pool Fencing Act when installed correctly. Designing a fence that meets the Act, paving or through nearby gardens can be exciting instead of a headache. MODULINE® fencing.

Remember these key design factors: All pool gates must open outwards from the pool and there must be no gaps under the fence or the gates greater than 100mm and the top of the fence must be 1200mm away from the top of any climbable object such as a retaining wall or a tree trunk. Fencing must be a minimum of 1200mm high but MODULINE® do make taller panels if required to help overcome climb point problems. If you have a difficult site, be sure to discuss your design with your Council Inspector.



ALWAYS IN STYLE

The square profile of the vertical bars and rails of PoolSide™ fencing gives the fence a timeless look that will not date your property.



A product of BHP New Zealand Steel

In this day and age where time is money and spare time is even more valuable it certainly makes sense to fence with COLORSTEEL®. The low maintenance and long lasting properties of COLORSTEEL® save hours and hours of back-breaking labour over a period of time. MODULINE® fencing complements all the other low maintenance building materials we use around our homes to improve the quality of our lifestyle.

The COLORSTEEL® system consists of a galvanized or ZINCALUME® steel substrate to which an oven baked pre-painted finish system is applied. The system is designed to provide protection against corrosion. Expected PAINT LIFE is between 10 and 15 years, depending on the environment and maintenance. This means that your fence will still look good in 10 years time with washing every 6 months. (Refer to back page).



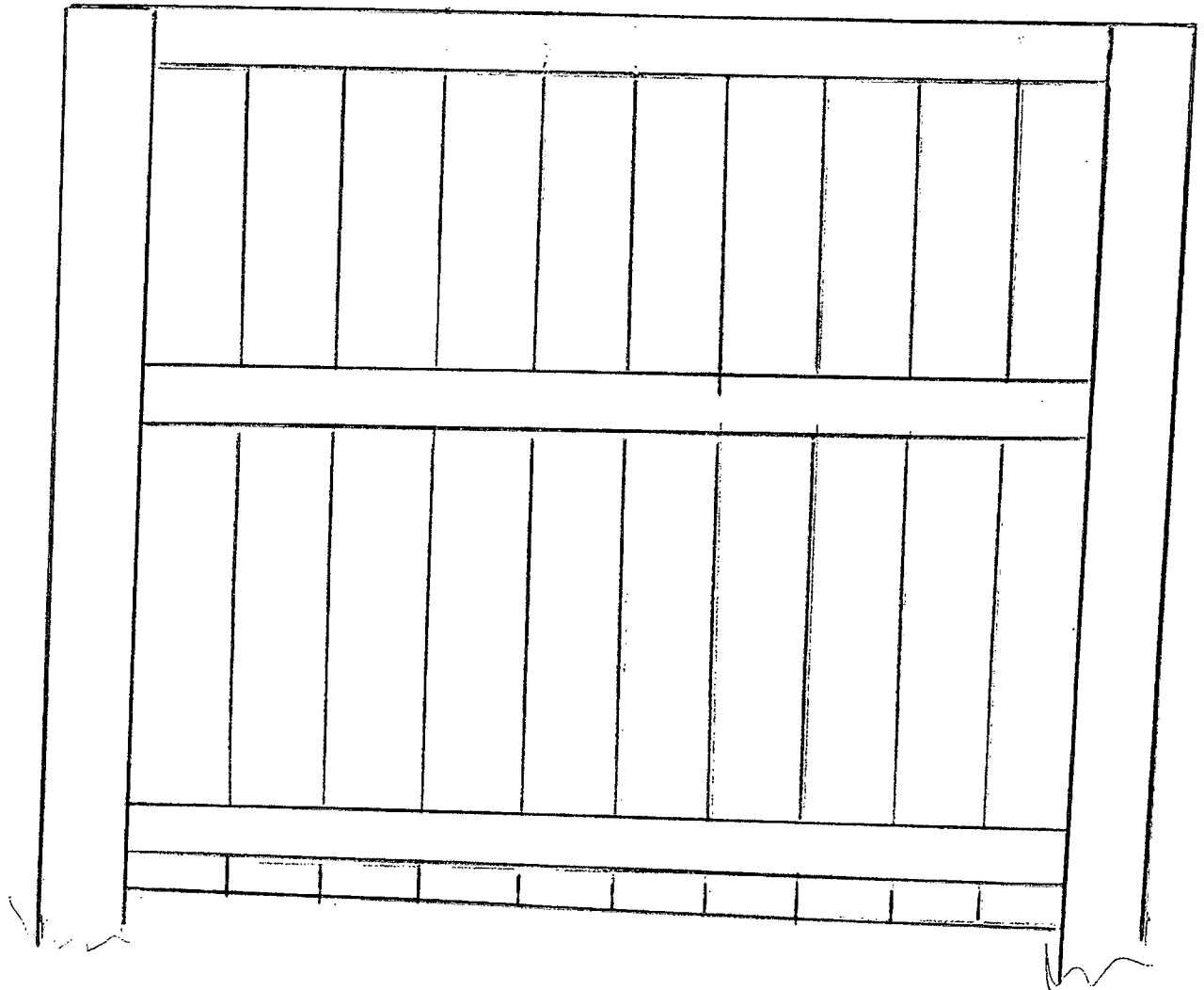
UNIQUE DESIGN

The ability of a fence to complement the design of your section is one of the key design features. MODULINE® fencing is the fence of 100mm. The fence of 100mm.



CHOICE OF COLOURS

Moduline® PoolSide™ fencing is available in a range of colours. The most popular colour is light green. The other colours have been chosen to blend with the environment.



* Boundary fence

- Bottom rail and middle rail distance
 no less than 900mm

- No gaps greater than 100mm
 through out fence.

AMENDED PLANS	
Date	19/2/08
PGU	
BLDG	

9.3 Stucco

9.3.1 Limitations

This Acceptable Solution is limited to the following types of *stucco cladding*:

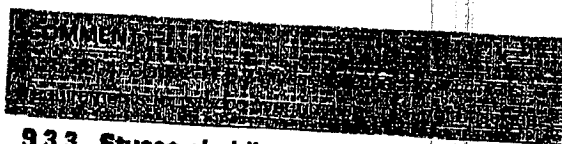
- Solid plaster *cladding* with a non-rigid backing and a *drained cavity*, and
- Solid plaster *cladding* with a rigid backing and a *drained cavity*.

9.3.2 Structure

The timber framing of *external walls* supporting *stucco wall claddings* shall comply with NZS 3604 and NZS 4251. The *cladding system* shall be attached to the *wall framing*.

The *framing* for buildings using *stucco exterior cladding systems* shall be supported on a:

- Concrete slab-on-ground, or
- Continuous reinforced concrete foundation wall, or
- Reinforced concrete masonry foundation wall.



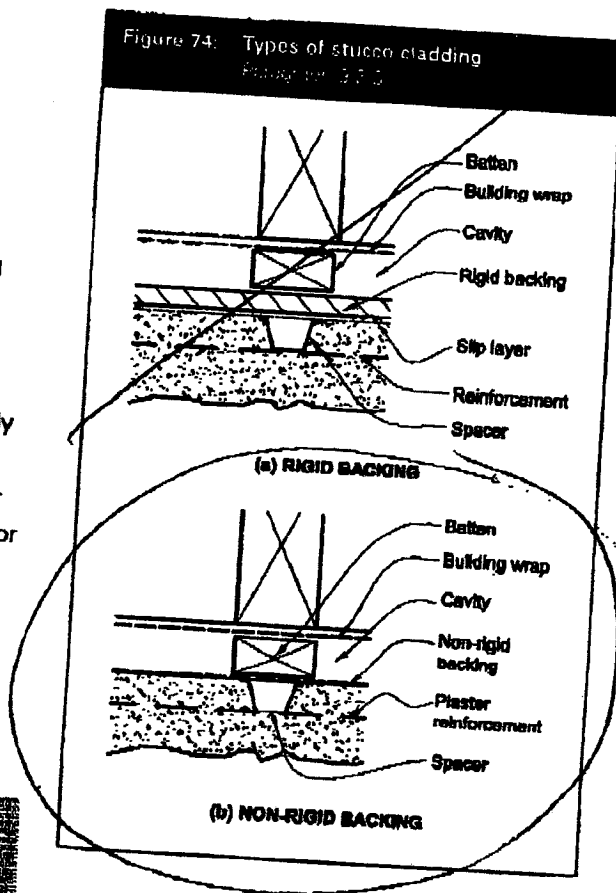
9.3.3 Stucco cladding system

All *stucco claddings* shall be used over a *drained cavity* as described in Paragraph 9.1.8, and shown in Figure 74.

All *stucco cladding* shall have *building wrap*:

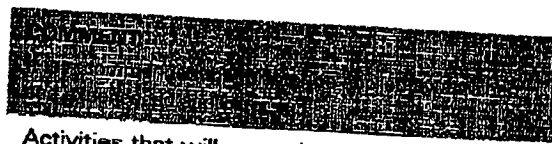
- Fixed to the *framing* as specified in Table 23, and
- Provided as an overlay to rigid backings to provide a slip layer that permits the independent movement of plaster and backing.

Figure 74: Types of stucco cladding
Paragraph 9.3.3



9.3.4 Installation

9.3.4.1 General



Activities that will cause impact or vibration during plaster application are not permitted until all plastering is completed and fully cured.

The materials, proportions, mixes, thickness, reinforcement materials and fixing, *control joints*, and application and curing of plaster shall comply with NZS 4251.

9.3.4.2 Movement control joints

Movement *control joints* shall be as required in NZS 4251.

Amend 2
Jul 2005

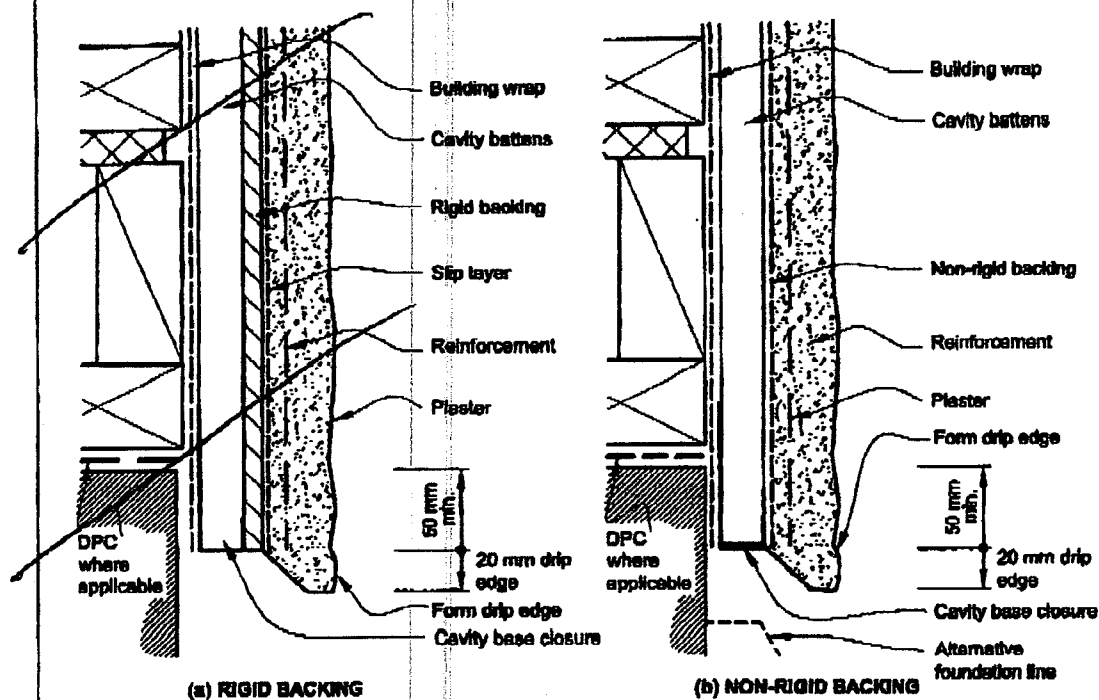
Amend 2
Jul 2005

EXTERNAL MOISTURE

Acceptable Solution E2/A51

Figure 7b: Bottom of stucco cladding
Paragraph 9.3.5

NOTE: 6 mm offset of framing to foundation is not necessary where drained cavities are used.



9.3.10 Decorative attachments

Where decorative attachments are used, the final weatherproofing system shall be applied prior to the attachments. Attachments shall not interfere with the functioning of critical joints such as *control joints*.



9.3.11 Windows and doors

Windows and doors shall comply with Paragraph 9.1.10, as shown in Figure 76.

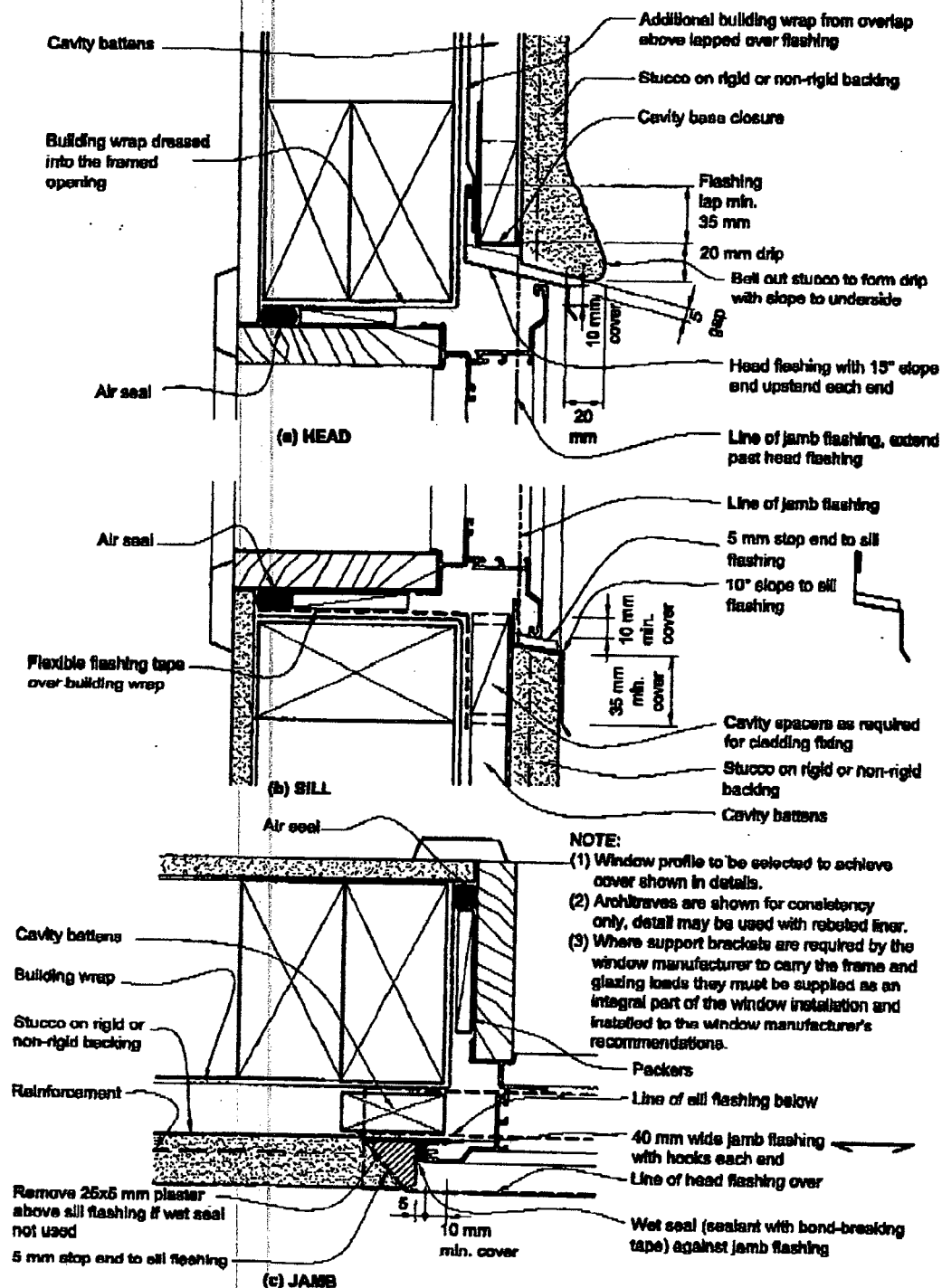
Acceptable Solution E2/AS1

EXTERNAL MOISTURE

Figure 76. Windows in stucco cladding

Paragraph 10.17

- GENERAL:** (a) Refer Figure 72 for wrapping of framed opening prior to window installation.
 (b) Sliding and bi-fold windows will require specific design.
 (c) A minimum of 8 mm effective cover at sill shall be permitted where necessary to allow for tolerances.

Amend 2
Jul 2005

EXTERNAL MOISTURE

Acceptable Solution E2/AS1

Figure 72: General window opening

Paragraphs 8.1.5 and 8.1.14.1, Figures 70, 81, 85, 90, 91, 96, 98, 118, 119, 127 and 128

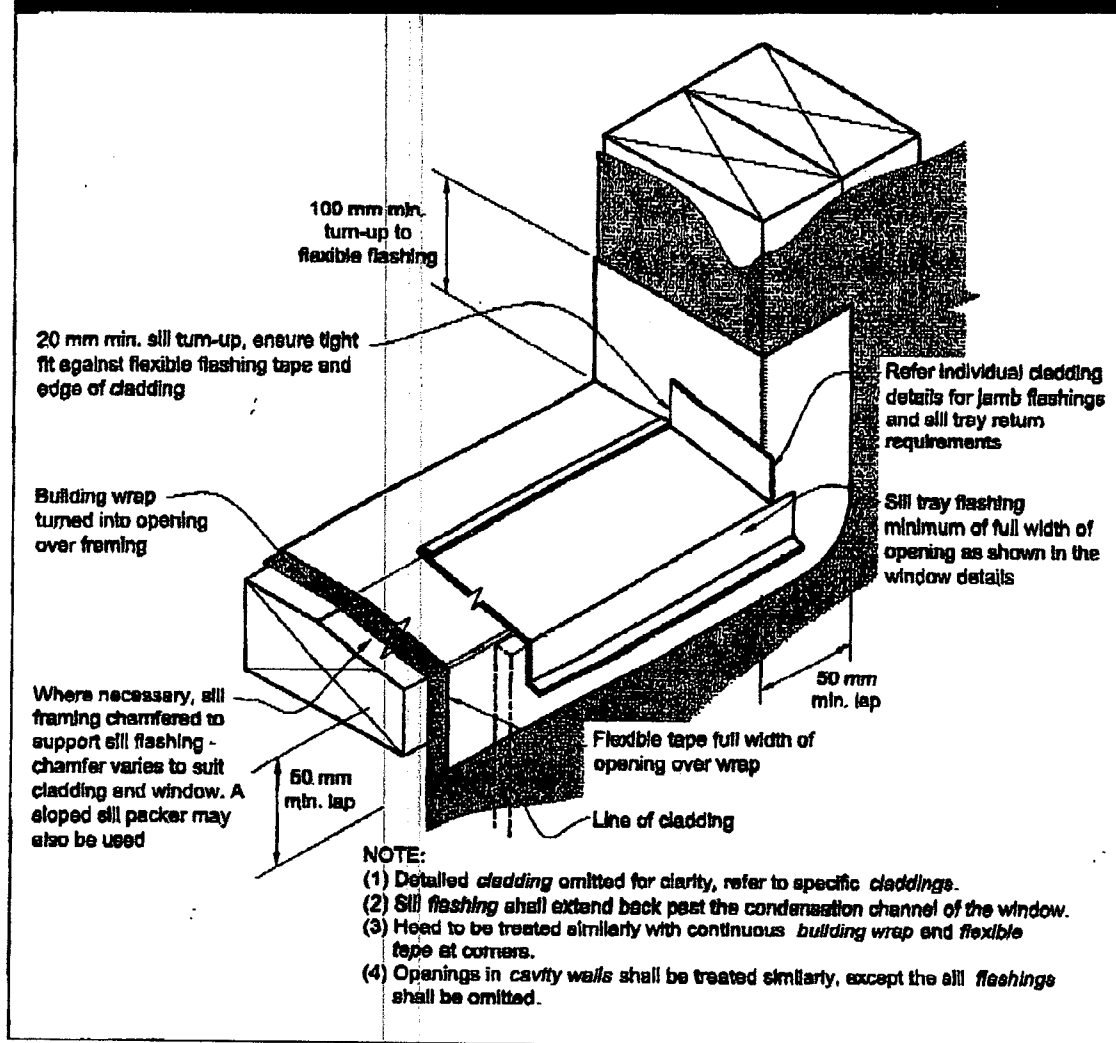
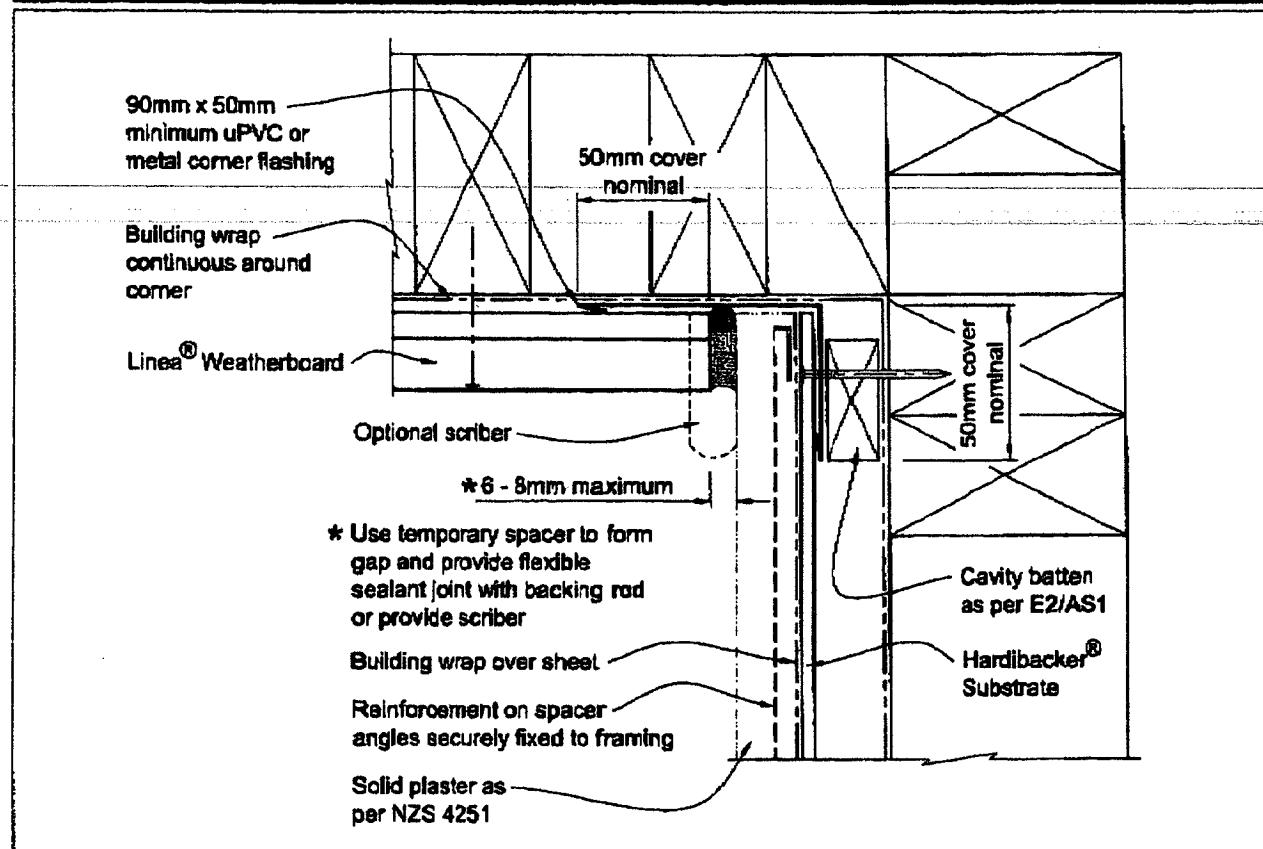
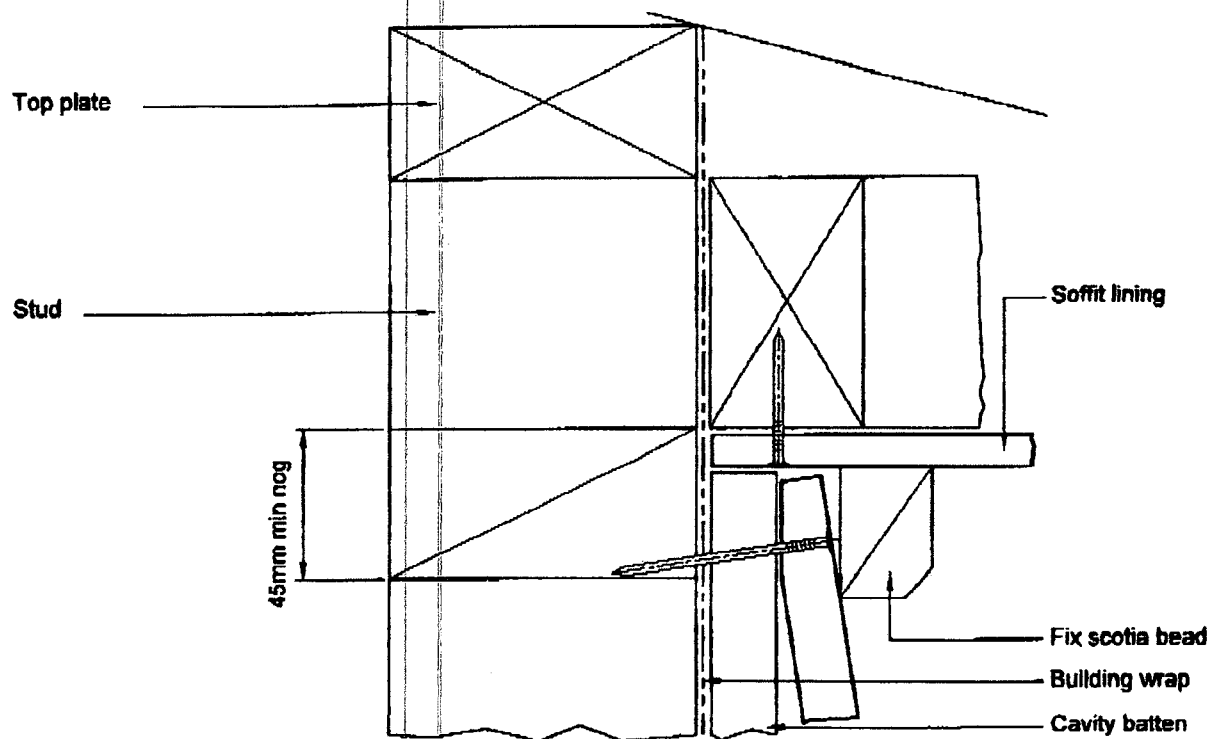
Amend 2
Jul 2006

FIGURE 8: INTERNAL CORNER JUNCTION BETWEEN LINEA® WEATHERBOARD AND STUCCO PLASTER CLADDINGS



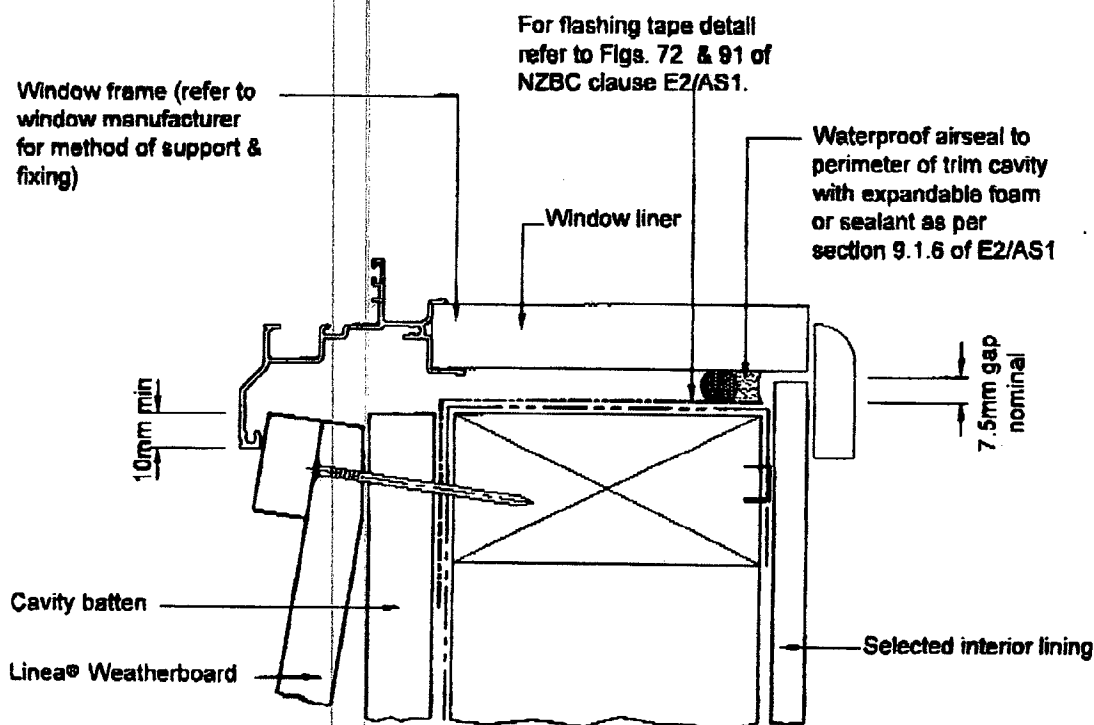
**James Hardie****Linea® Weatherboard**CAVITY SOFFIT JUNCTION
FIGURE 27

www.jameahardie.co.nz

Scale 1:2

8 October 2005

n_zr-l_w-tbc-fig27.dwg



General notes for materials selection

1. Flashing materials must be selected based on environmental exposure, refer to NZS 3604 & table 20 of NZBC clause E2/AS1.
2. Building wrap must comply with acceptable solution NZBC clause E2/AS1 & NZS 3604.
3. Flashing tape must have proven compatibility with the selected building wrap & other materials with which it comes into contact as per table 21 of NZBC clause E2/AS1.

Refer to the manufacturer or supplier for technical information for these these materials .



James Hardie

Linea® Weatherboard

CAVITY WINDOW SILL WITHOUT FACINGS

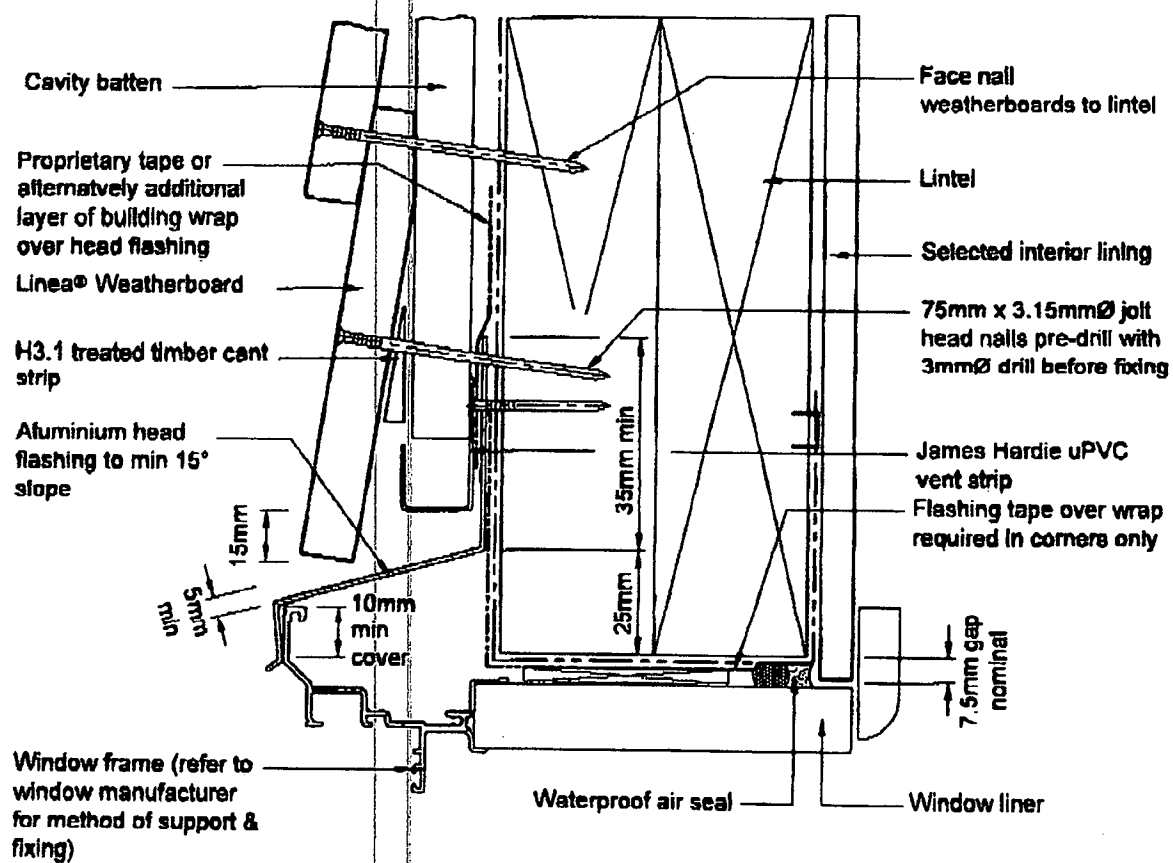
FIGURE 40

www.jameshardie.co.nz

Scale 1:2

7 June 2008

n_zn_lw-iso-fig40.dwg



James Hardie

Linea® Weatherboard

CAVITY WINDOW HEAD WITHOUT FACINGS
FIGURE 41

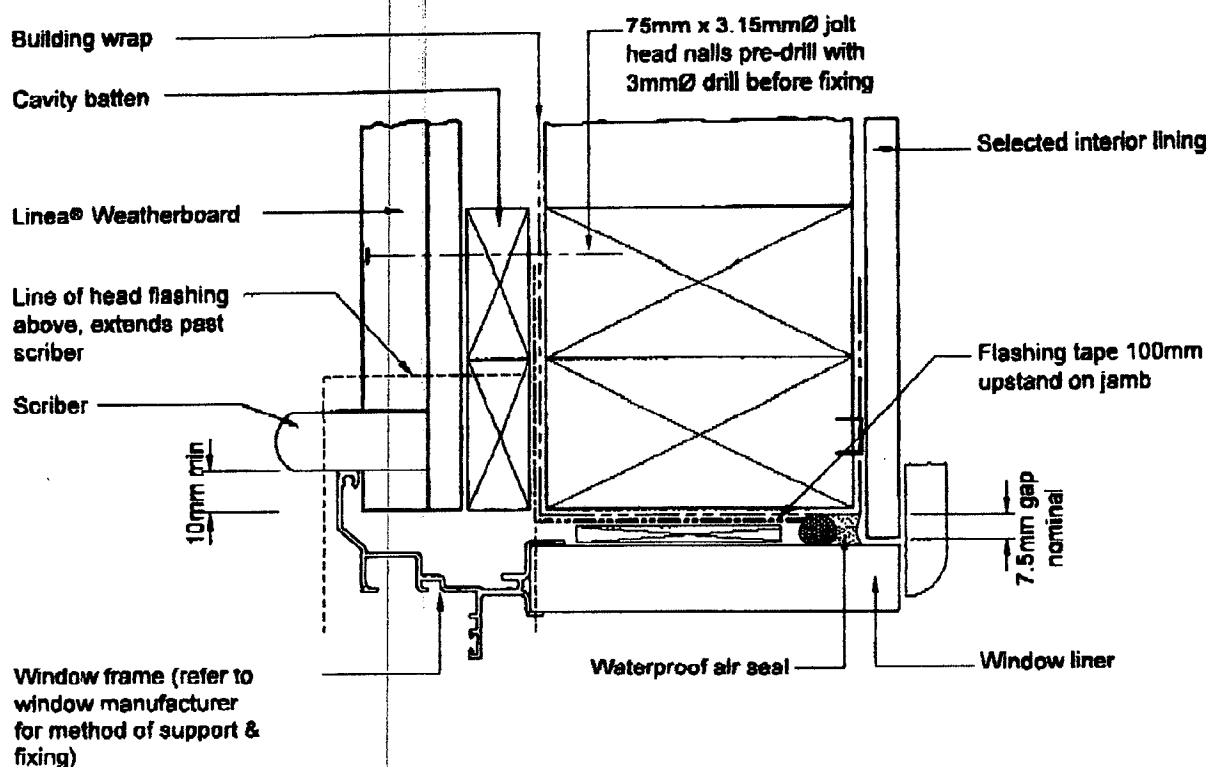
www.jameshardie.co.nz

Scale 1:2

8 October 2005

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Also refer Fig 91
NZBC clause E2/A51
document for head &
jamb details.



James Hardie

Linea® Weatherboard

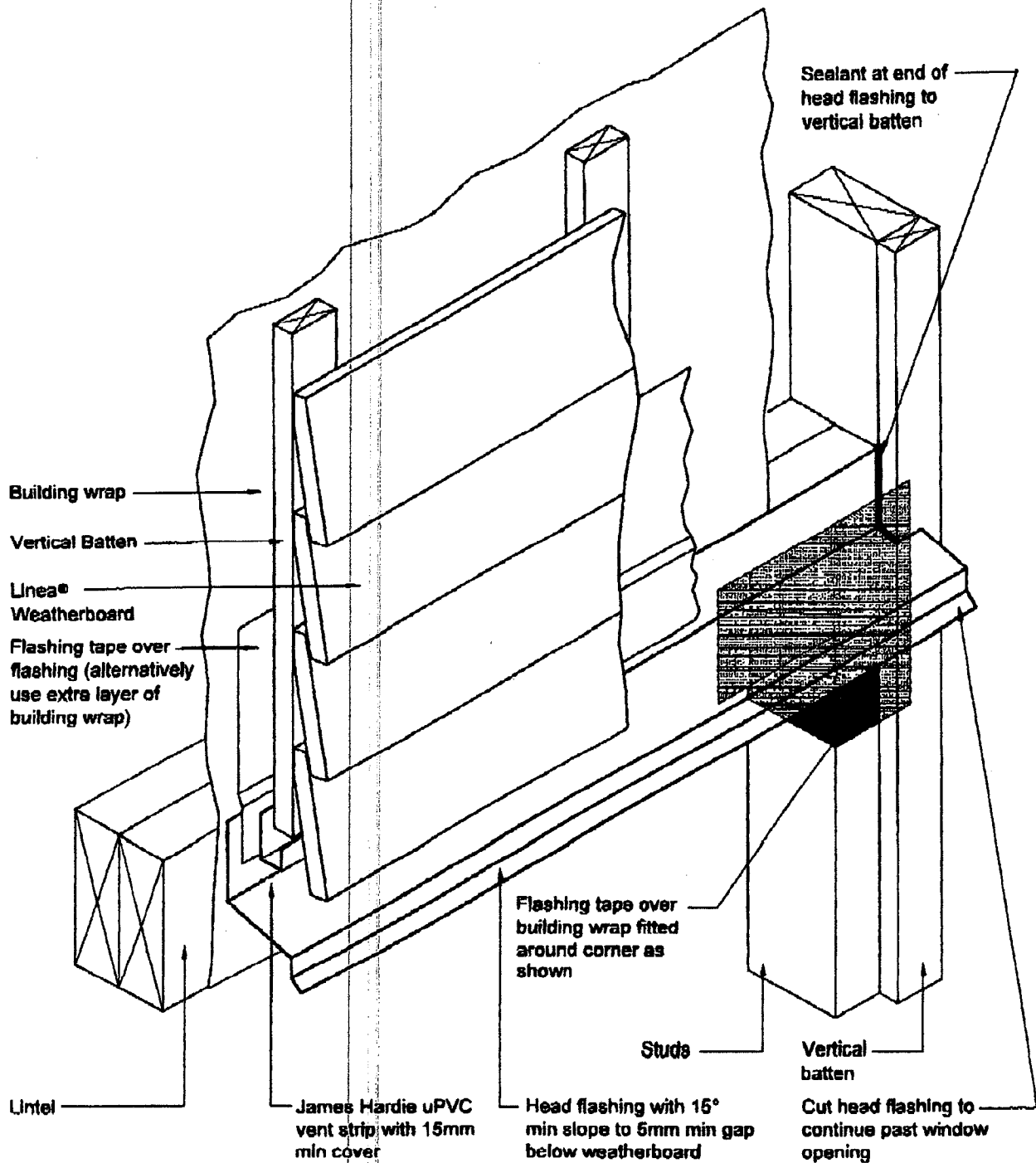
CAVITY WINDOW JAMB WITHOUT FACINGS
FIGURE 42

www.jameshardie.co.nz

Scale 1:2

7 June 2008

n_zr-l_w-tee-fig42.dwg



James Hardie

Linea® Weatherboard

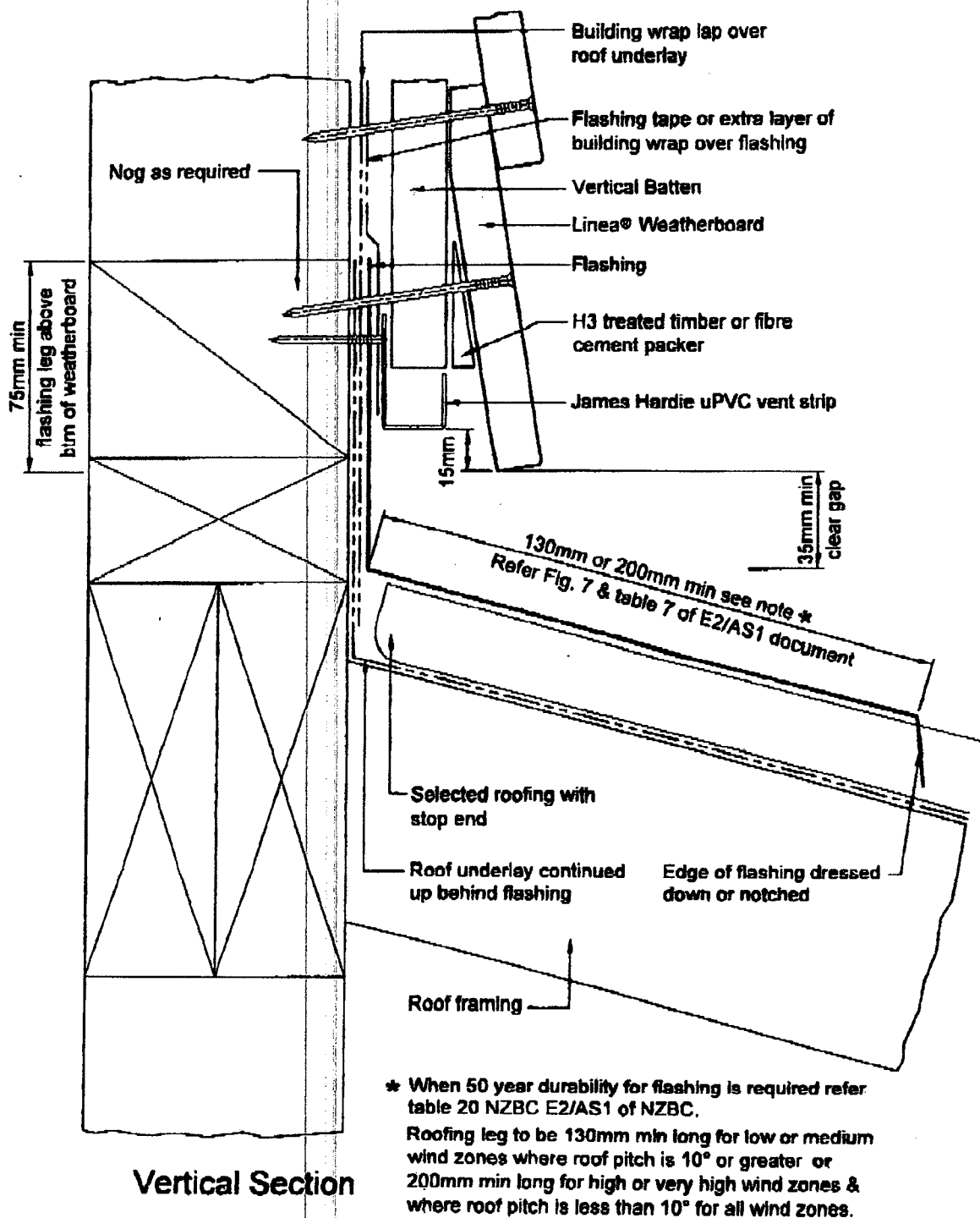
HEAD FLASHING TERMINATION
FIGURE 43

www.jameshardie.co.nz

Scale 1:5

8 October 2006

n_zh_w-tofig43.dwg



James Hardie

Linea® Weatherboard

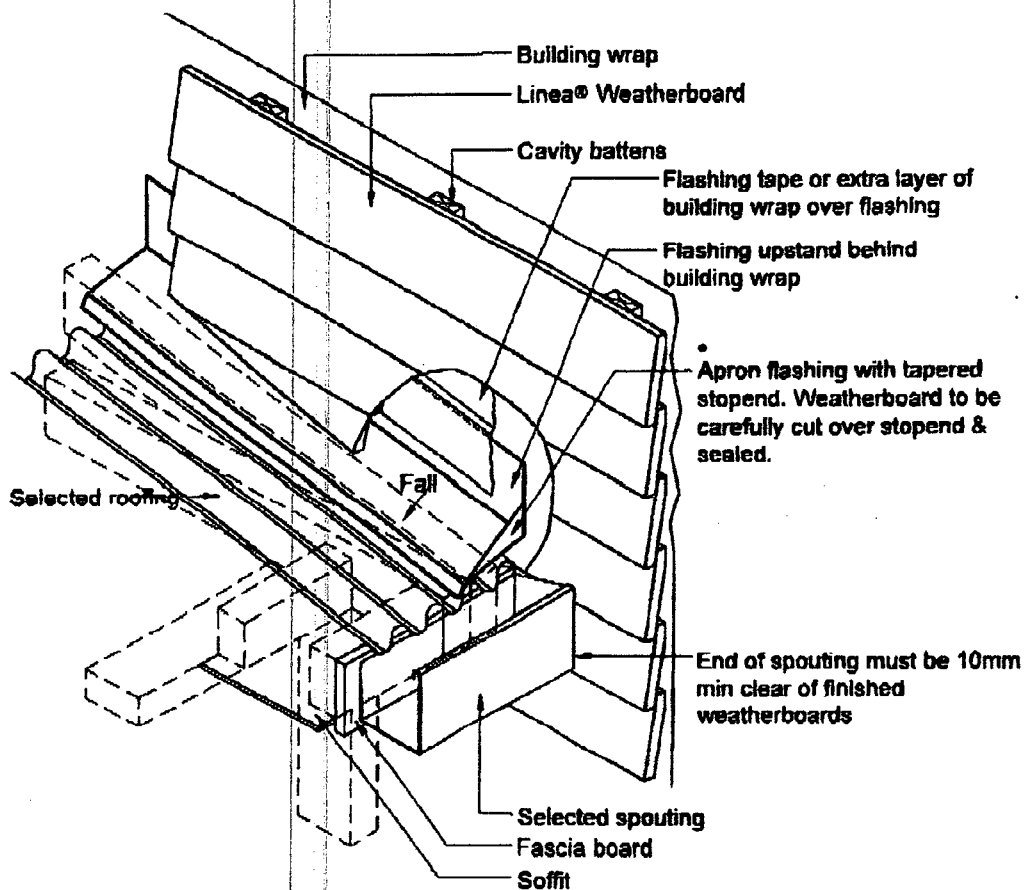
CAVITY ONE PIECE APRON FLASHING JOINT
FIGURE 44

www.jameshardie.co.nz

Scale 1:2

8 October 2005

n_zr-l_w-to-flg44.dwg



When 50 year durability for flashing is required refer table 20 NZBC E2/AS1 document.

Roofing leg to be 130mm min long for low or medium wind zones where roof pitch is 10° or greater or 200mm min long for high or very high wind zones & where roof pitch is less than 10° for all wind zones.



James Hardie

Linea® Weatherboard

CAVITY ONE PIECE GUTTER/WALL JUNCTION
FIGURE 45

www.jameshardie.co.nz

Scale 1:2

8 October 2005

n_zr_l_w-tao-fig45.dwg

Bowler (Lot 182 Whistler Close)

Table 2: Building envelope risk matrix
Paragraph 3.1.2, Figure 1

Risk factor	Risk severity				Subtotals for each risk factor
	LOW	MEDIUM	HIGH	VERY HIGH	
Wind zone (per NZS 3604)	0	0	1	2	0
Number of storeys	0	1	2	4	0
Roof/wall intersection design	0	1	3	5	0
Eaves width	0	1	2	5	0
Envelope complexity	0	1	3	6	0
Deck design	0	2	4	6	0

(Enter the appropriate risk severity score for each risk factor in the score columns. Transfer these figures across to the right-hand column. Finally, add up the figures in the right-hand column to get the total risk score.)

Total risk score:

3

Table 3: Suitable wall claddings

Paragraphs 3.1.2, 3.4.1.1, 3.4.2.1, 3.4.2.2, 3.4.3.2, 9.1.1, 9.4.1.2, 9.4.1.3, 9.6, Figure 1

Risk Score

Suitable wall claddings⁽¹⁾

0 - 6

Direct fixed to framing

- a) Timber weatherboards – all types
- b) Fibre cement weatherboards
- c) Vertical profiled metal ⁽²⁾ – corrugated and symmetrical trapezoidal only
- d) Fibre cement sheet ⁽⁴⁾
- e) Plywood sheet
- f) EIFS

Over 20 mm minimum drained cavity

- a) Masonry veneer ⁽²⁾
- b) Stucco
- c) Horizontal profiled metal ⁽²⁾ – corrugated and trapezoidal only

7 - 12

- a) Bevel-back weatherboards
- b) Vertical board and batten
- c) Vertical profiled metal ⁽²⁾ – corrugated only

- a) Masonry veneer ⁽²⁾
- b) Stucco
- c) Horizontal profiled metal
- d) Rusticated weatherboards
- e) Fibre cement weatherboards
- f) Fibre cement sheet
- g) Plywood sheet
- h) EIFS

13 - 20

- a) Vertical profiled metal ⁽²⁾ – corrugated only

- a) Masonry veneer ⁽²⁾
- b) Stucco
- c) Horizontal profiled metal
- d) Rusticated weatherboards
- e) Fibre cement weatherboards
- f) Fibre cement sheet
- g) Plywood sheet
- h) EIFS
- i) Bevel-back weatherboards

Over 20

- a) Redesign the building to achieve a lower score, or
- b) Specific design
 - The design may need changing to reduce the risk
 - The territorial authority or building certifier will require more comprehensive details and documentation providing evidence of weathertightness
 - The territorial authority, building certifier, designer or owner may require more inspections
 - A third party audit of design by a weathertightness expert may be required.

NOTES:

- (1) The wall claddings in this table are limited to those covered in this Acceptable Solution.
- (2) Traditional masonry veneer as per SNZ HB 4236, with minimum 40 mm cavity.
- (3) Refer Figure 38 for profiles.
- (4) Except stucco over a fibre cement backing.

Specifier: Tom Hansen

MEMBER SIZE OPTIONS

1) Member Description

2) Design Inputs

Span
Maximum rafter spacing
Roof mass
Lateral restraint condition
Serviceability criteria
Wind classification

Common rafters

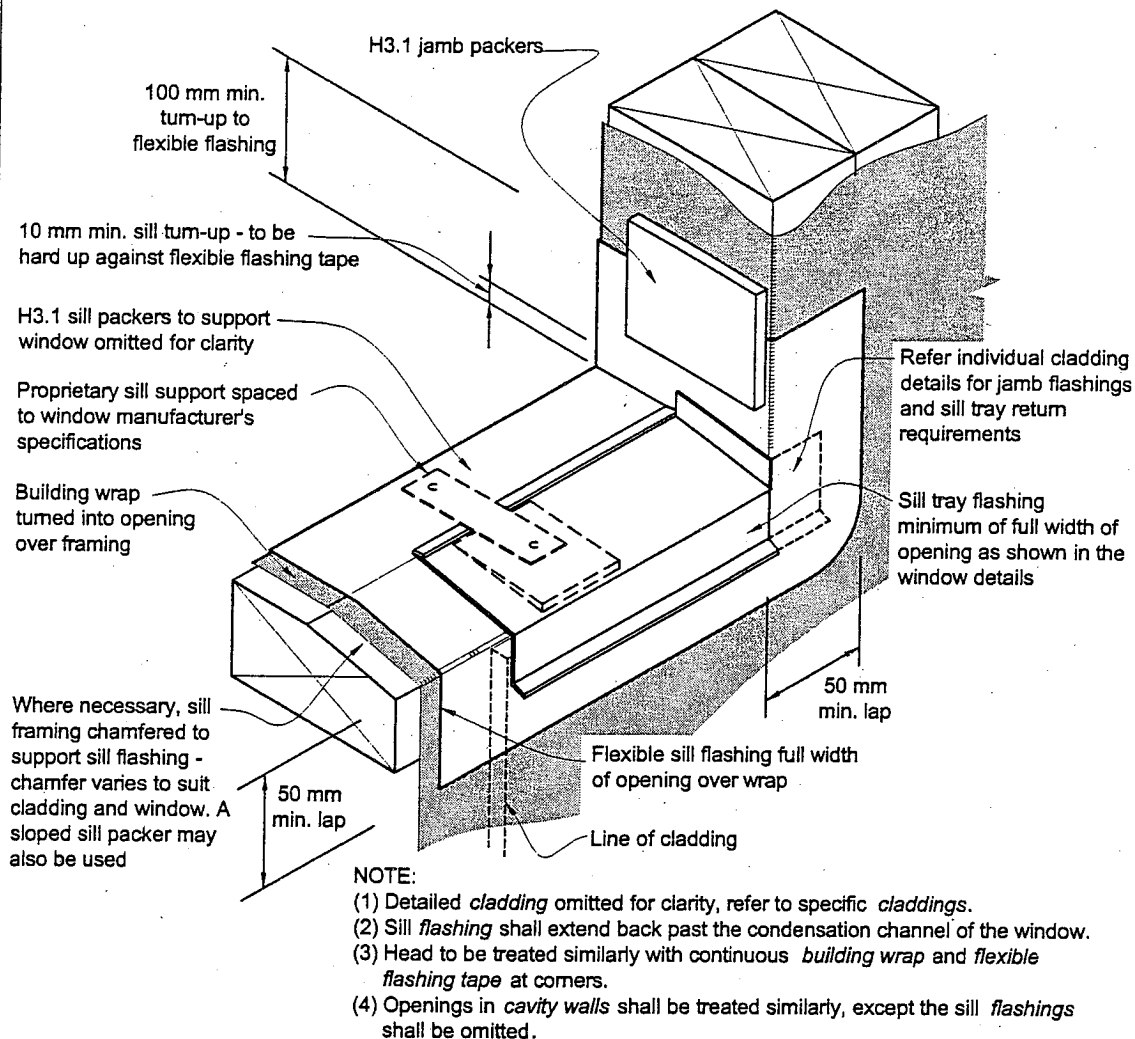
5.3 m - single
600 mm
40 kg/m²
Bottom edge restrained by ceiling / ceiling battens at 600 crs max.
AS 1684.1-1999
MEDIUM

Lounge Rafter

Member Size & grade	Maximum span (m)	Installation requirements
200 x 45 hySPAN	5.6	Rafter overhang of 600 mm meets the requirements with birdsmouth not to exceed D/3
200 x 63 hySPAN	6.1	
HJ240 63 hyJOIST	6.5	Install 'Type A' tiedown at supports - see Details R12, R13 or R14 Fixing and support in accordance with Detail R10 or R11
240 x 45 hySPAN	6.6	
240 x 63 hySPAN	7.2	
HJ240 90 hyJOIST	7.3	Install 'Type A' tiedown at supports - see Details R12, R13 or R14 Fixing and support in accordance with Detail R10 or R11
HJ300 63 hyJOIST	7.7	Install 'Type A' tiedown at supports - see Details R12, R13 or R14 Fixing and support in accordance with Detail R10 or R11

Figure 72: General window opening

Paragraphs 9.1.5 and 9.1.10.2, Figures 76, 81-86, 90, 91, 95, 99, 115, 116, 127 and 128



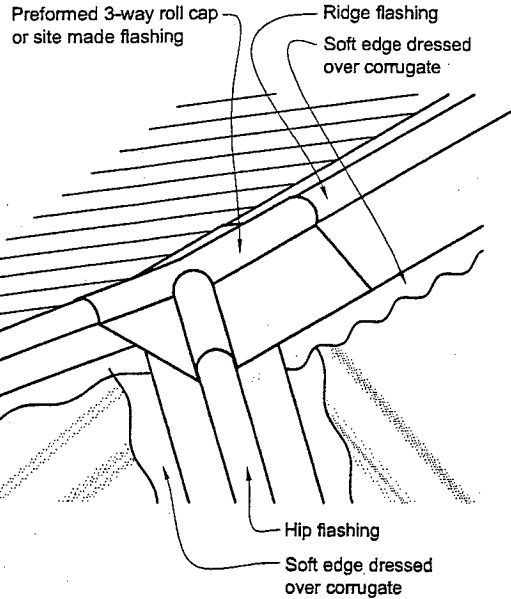
COMMENT:

Reduced cover for barge and *apron flashings* may be applicable for specifically designed roofs in low *wind zones*. For further information refer to the New Zealand Metal Roof and Wall Cladding Code of Practice.

Amend 2
Jul 2005

Figure 43: Corrugated – ridge to hip
Paragraphs 8.4.11 a) and 8.4.12 a)

NOTE: *Flashing cover varies according to wind zone – refer Table 7.*
For other ridge to hip flashings refer to New Zealand Metal Roof and Wall Cladding Code of Practice.

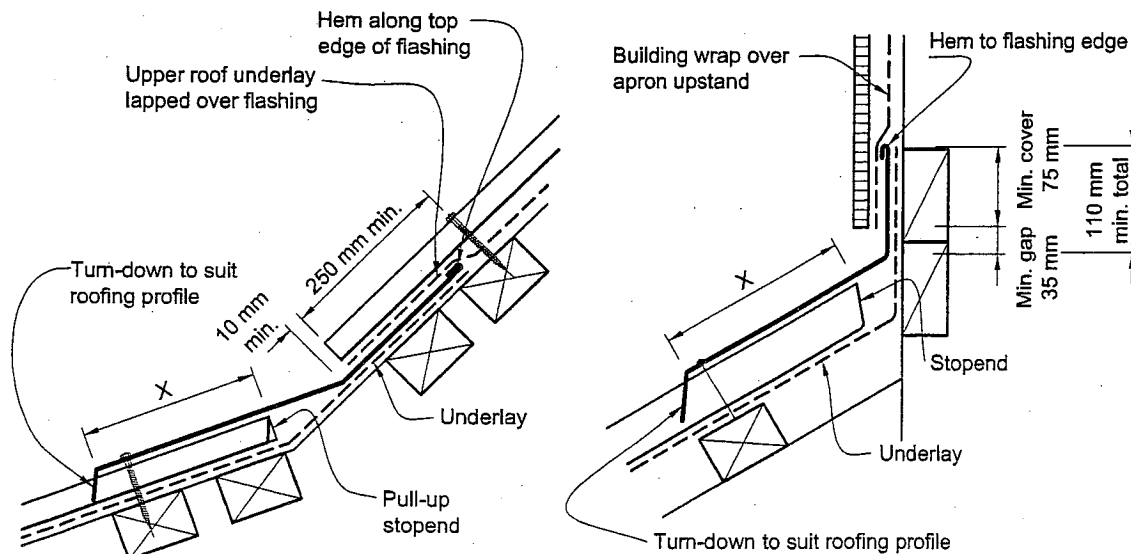


Amend 2
Jul 2005

Amend 2
Jul 2005

Figure 44: Apron flashing and change in pitch for profiled metal
Paragraphs 4.6.1.3, 8.4.11 and 8.4.12 b)

NOTE: X = variable according to *wind zone* – refer Table 7.



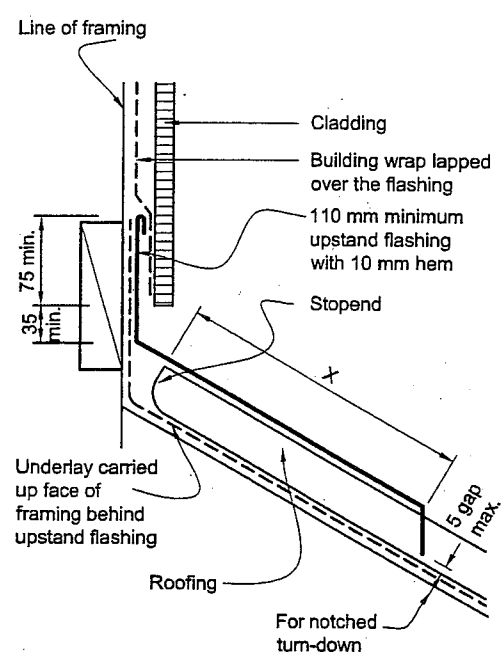
(a) CHANGE IN PITCH

(b) APRON FLASHING

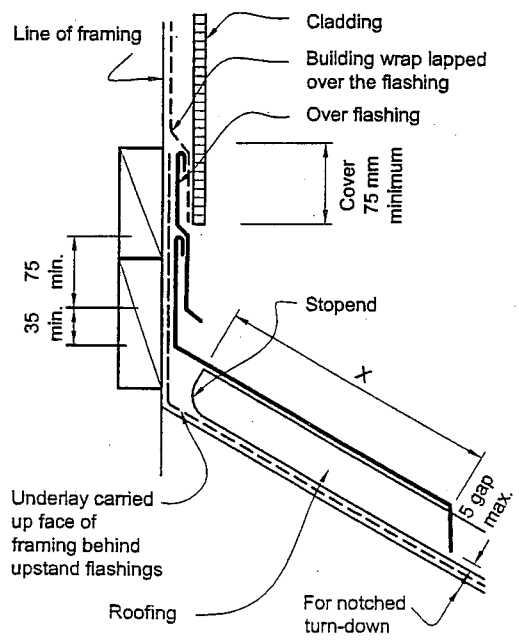
Amend 2
Jul 2005

Figure 7: Basic apron flashing
Paragraphs 4.2.1, 4.6.1.1 a), 4.6.1.4 b), and 5.1

NOTE: (1) X = variable according to *wind zone* – refer Table 7.
(2) *Stopends* to profiled metal – refer Figure 49.



(a) ONE PART FLASHING



(b) TWO PART FLASHING

4.6.1.5 Barges

Refer to Figure 47 for example of use.

- a) There shall be a minimum effective overlap to the barge board, excluding the *drip edge* to the *flashing*, in accordance with Table 7.
- b) The apron cover over the roof *cladding* shall be as for Paragraph 4.6.1.1.

4.6.1.6 Window heads

Refer to Figure 81 for example of use.

- a) Slopes and covers of *flashings* at window heads shall comply with Table 7.
- b) Overlap cover of *cladding* to the *flashing* upstand and clearance from the bottom of the *cladding* to top of head *flashing* slope shall be in accordance with Table 7.

COMMENT:

Details for door penetrations shall be based on those applying to windows, except for the sill which depends on the specific threshold.

4.6.1.7 Inter-storey junctions

Refer to Paragraph 9.1.9.4 and Figure 70.

- a) Minimum slopes and covers of *flashings* shall be in accordance with Table 7.
- b) Overlap cover of the *cladding* to the *flashing* upstand, and clearance from the bottom of the *cladding* to the top of the slope of the head *flashing*, shall be in accordance with Table 7.

5.0 Roof/Wall Junctions

5.1 Apron flashings

All roof-to-wall junctions shall be made *weathertight* by using an *apron flashing* as outlined in Paragraph 4.6.1.1, and shown in Figure 7, that:

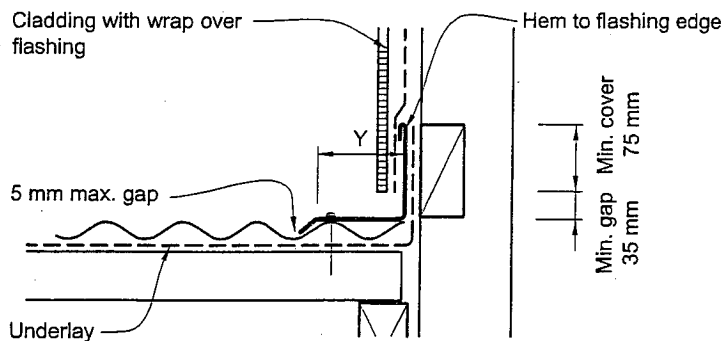
- a) Provides a minimum lap under the wall *cladding* of 75 mm in accordance with Table 7, except that:
 - i) pressed metal tiles shall have a *flashing* fitted to achieve the minimum required overlap of wall *cladding*, as shown in Figure 35,

Amend 2
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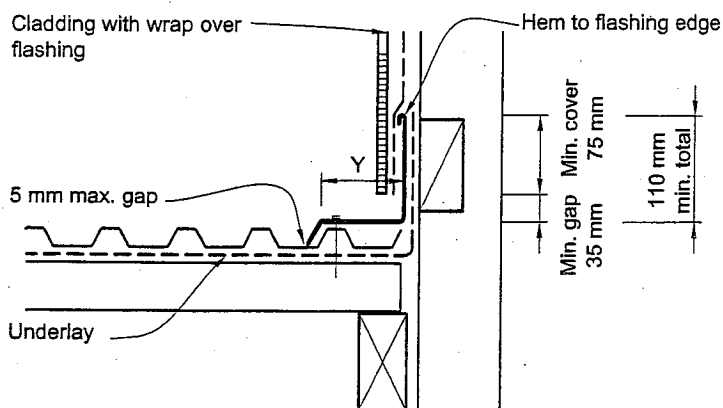
Amend 2
Jul 2005

Figure 48: Parallel apron flashings for profiled metal
Paragraph 8.4.12.4)

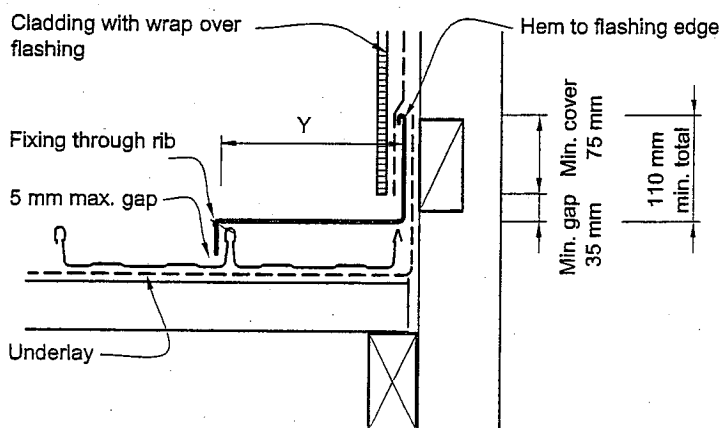
NOTE: Y = to cover minimum of two crests – refer Table 7.



(a) CORRUGATED PROFILE



(b) TRAPEZOIDAL PROFILE



(c) TROUGH PROFILE

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Jul 2005

9.3 Stucco

9.3.1 Limitations

This Acceptable Solution is limited to the following types of *stucco cladding*:

- Solid plaster *cladding* with a non-rigid backing and a *drained cavity*, and
- Solid plaster *cladding* with a rigid backing and a *drained cavity*.

9.3.2 Structure

The timber *framing* of *external walls* supporting *stucco wall claddings* shall comply with NZS 3604 and NZS 4251. The *cladding system* shall be attached to the *wall framing*.

The *framing* for buildings using *stucco exterior cladding systems* shall be supported on a:

- Concrete slab-on-ground, or
- Continuous reinforced concrete foundation wall, or
- Reinforced concrete masonry foundation wall.

COMMENT:

NZS 3604, Clause 11.8.2 gives *stud spacing* requirements for *stucco* over rigid and non-rigid backing.

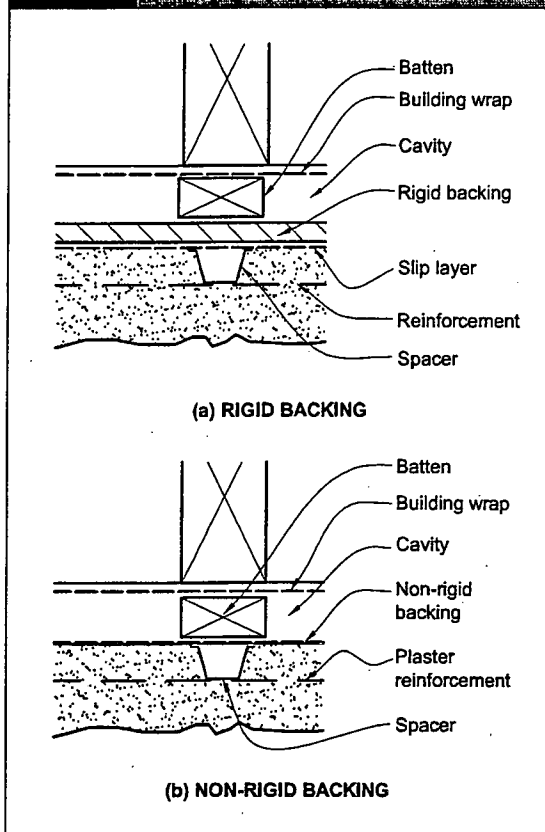
9.3.3 Stucco cladding system

All *stucco claddings* shall be used over a *drained cavity* as described in Paragraph 9.1.8, and shown in Figure 74.

All *stucco cladding* shall have *building wrap*:

- Fixed to the *framing* as specified in Table 23, and
- Provided as an overlay to rigid backings to provide a slip layer that permits the independent movement of plaster and backing.

Figure 74: Types of stucco cladding
Paragraph 9.3.3



9.3.4 Installation

9.3.4.1 General

COMMENT:

It is recommended that plaster be applied by a trained and experienced applicator.

Activities that will cause impact or vibration during plaster application are not permitted until all plastering is completed and fully cured.

The materials, proportions, mixes, thickness, reinforcement materials and fixing, *control joints*, and application and curing of plaster shall comply with NZS 4251.

9.3.4.2 Movement control joints

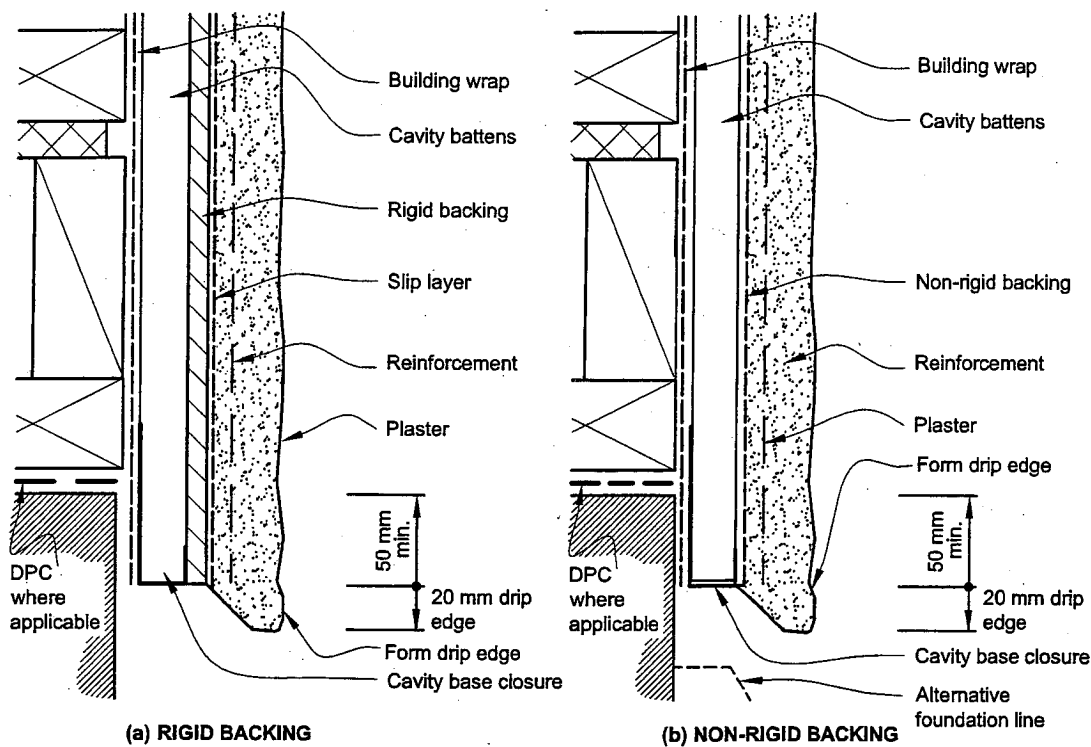
Movement *control joints* shall be as required in NZS 4251.

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Amend 2
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Figure 75: Bottom of stucco cladding
Paragraph 9.3.8

NOTE: 6 mm offset of *framing* to foundation is not necessary where *drained cavities* are used.



9.3.10 Decorative attachments

Where decorative attachments are used, the final weatherproofing system shall be applied prior to the attachments. Attachments shall not interfere with the functioning of critical joints such as *control joints*.

COMMENT:

Regular inspections and maintenance are necessary to identify and seal movement cracks. It is advisable to do such work on an annual basis.

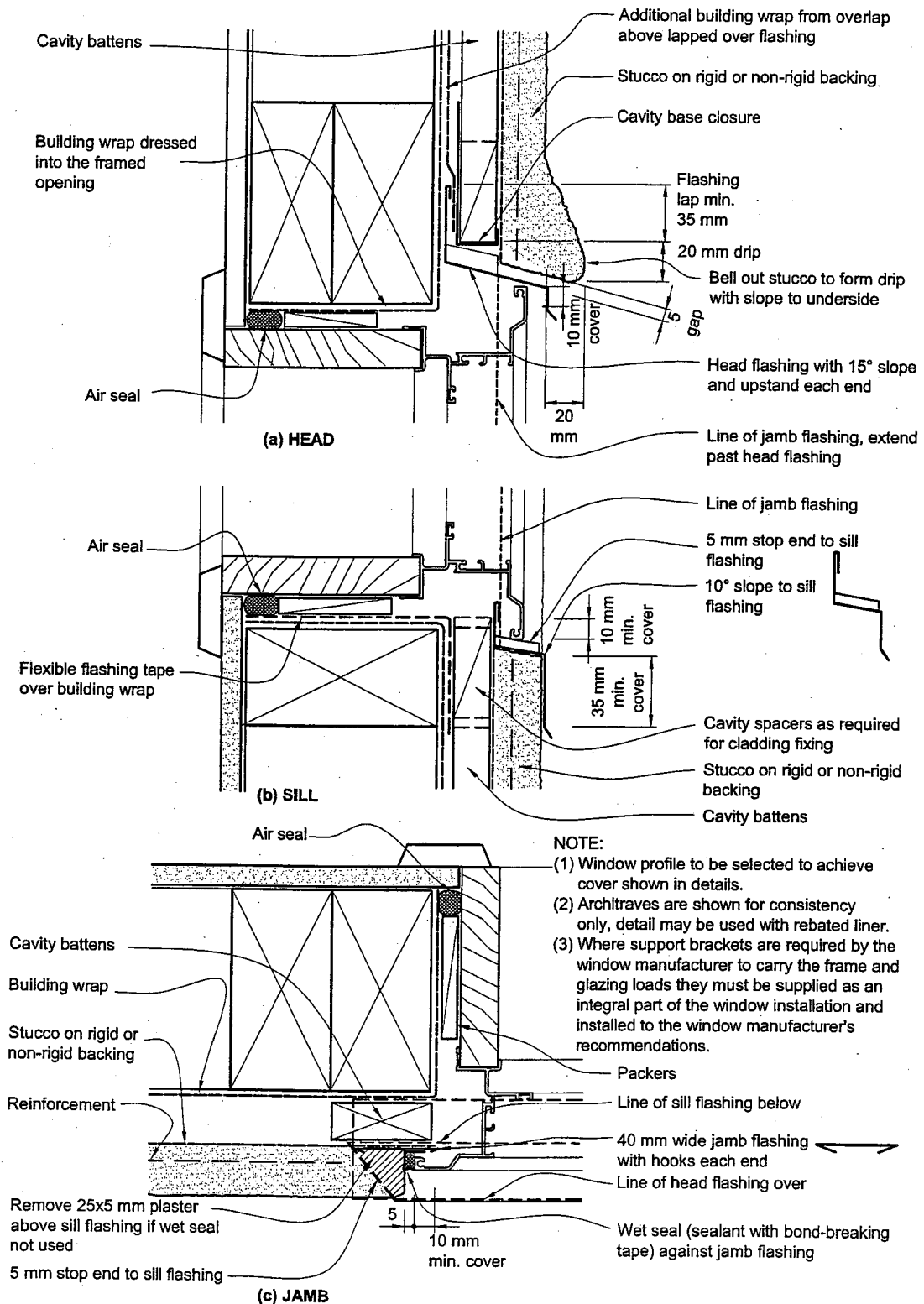
9.3.11 Windows and doors

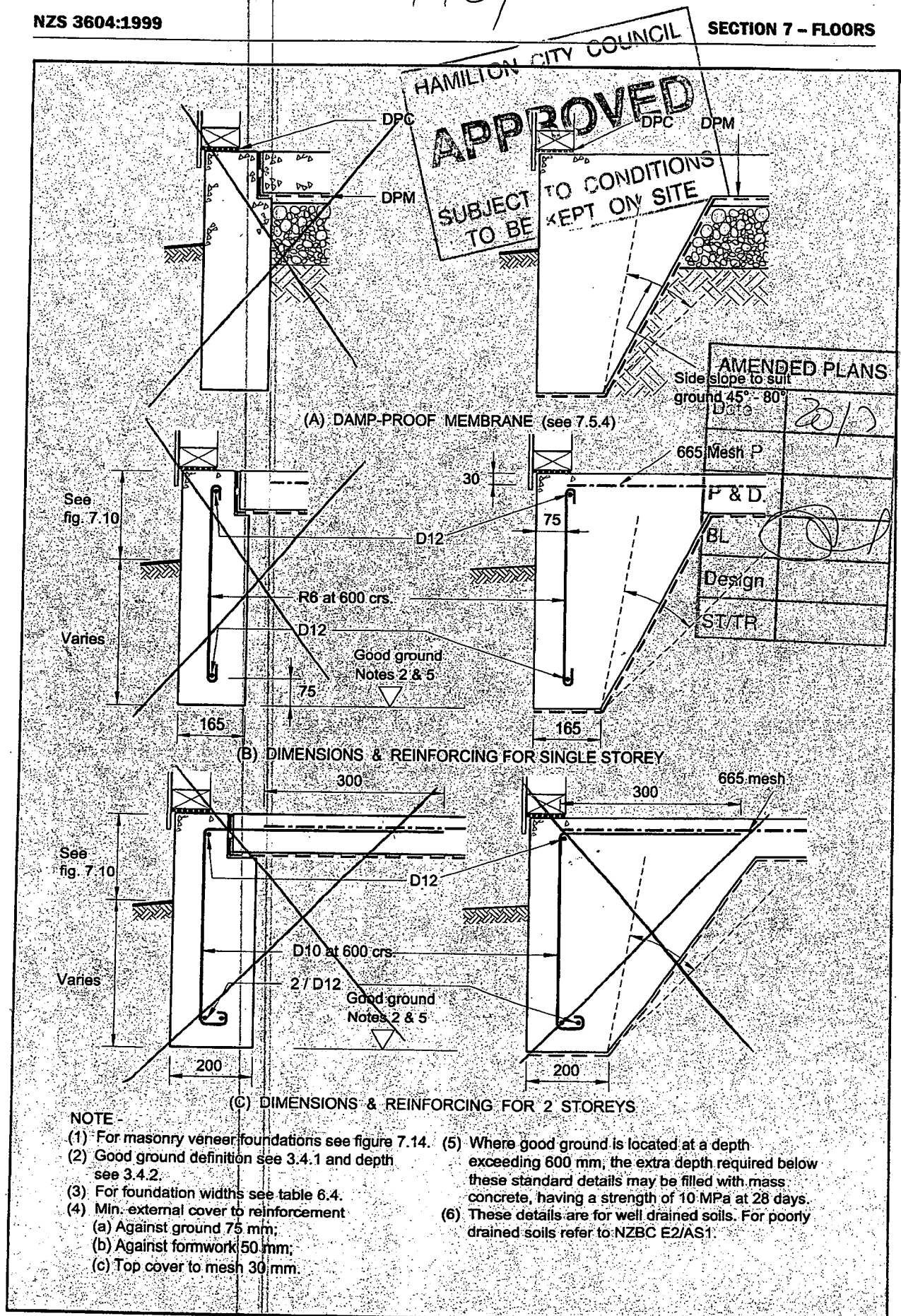
Windows and doors shall comply with Paragraph 9.1.10, as shown in Figure 76.

Figure 76: Windows in stucco cladding

Paragraph 9.3.11

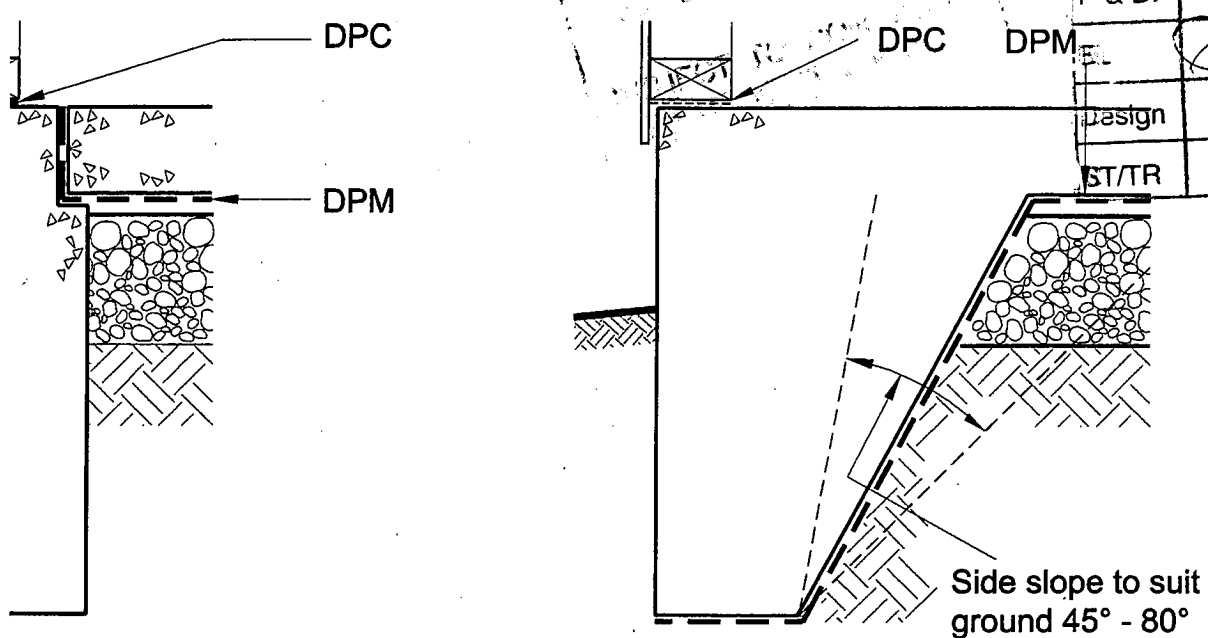
- GENERAL: (a) Refer Figure 72 for wrapping of framed opening prior to window installation.
 (b) Sliding and bi-fold windows will require specific design.
 (c) A minimum of 8 mm effective cover at sills shall be permitted where necessary to allow for tolerances.

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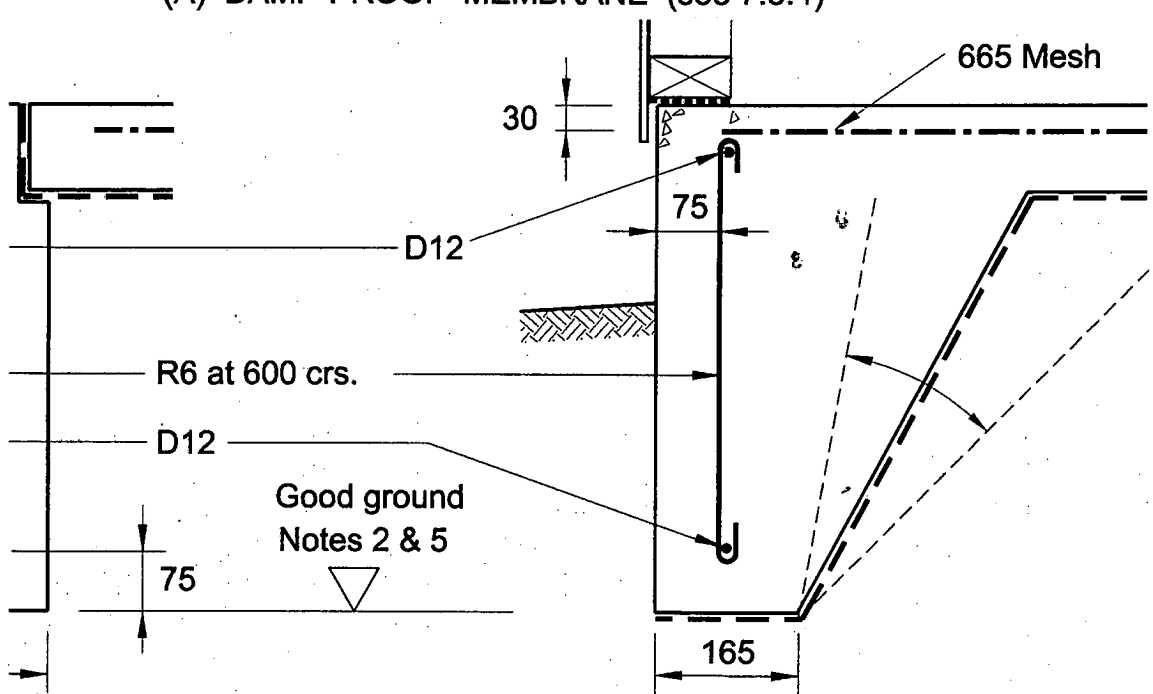
Figure 7.12 - Foundation edge details - *In situ* concrete (see 7.5.2.3)

HAMILTON CITY COUNCIL

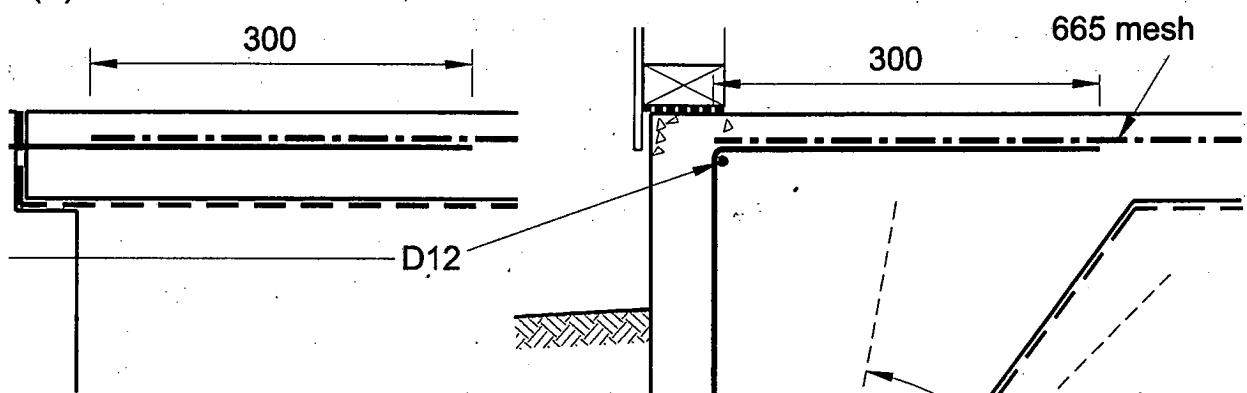
AMENDED PLANS	
SECTION 7 - FLOORS	
Date	20/7
Scale	
P & D.	
Design	
ST/TR	



(A) DAMP-PROOF MEMBRANE (see 7.5.4)



(B) DIMENSIONS & REINFORCING FOR SINGLE STOREY





Warren Farrar 17 Marire Ave Hamilton
Ph: 027 293 3031 A/H (07) 847 0228
GST: 46-283-546

DATE: 18.8.2007

PRODUCER STATEMENT: Darren Bowler
Horsham Estate
Lot 182
Hamilton

JOB DETAILS

AMOUNT

Exterior plastering of house at the above address.
Solid plaster over galvkrimp netting over 20mm cavity.
Plastering performed to correct specifications.

Regards Warren Farrar



Letter of Confirmation to Manufacture: Trusses and/or Frames

Date: 6/8/2007

Customer: Darren Bowler

Legal Description: lot 182 Whistler close Horsham
Estate

Company Contact: Darren Bowler 8549282
6212514101.

The above residential house has been booked in and accepted for supply from Acorn Building Supplies Limited.

No additional floor thickenings are required at the above address.

At pre-line inspection a producer statement and final truss layout will be provided to the council.

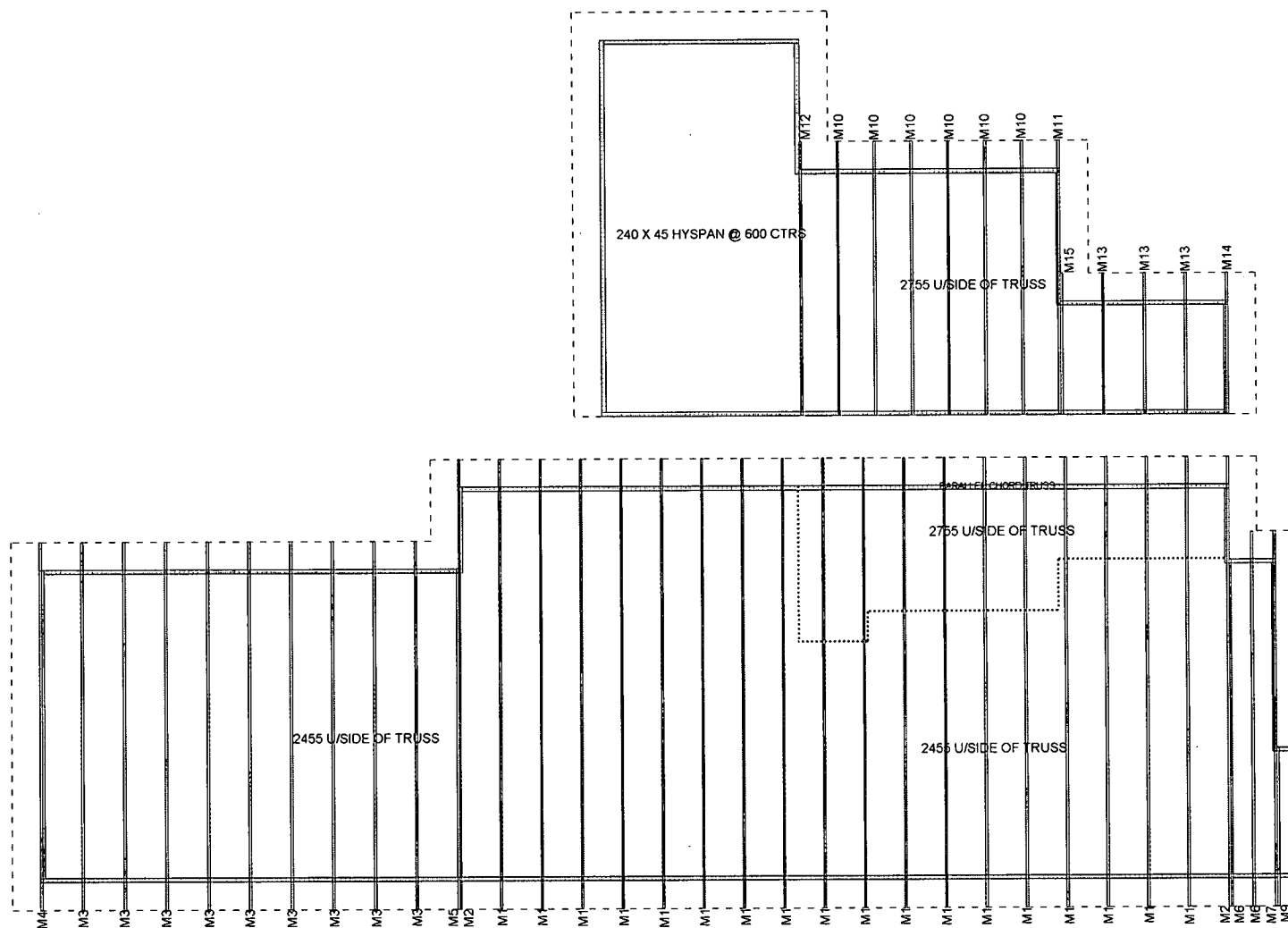
This will be designed in Pryda Software.

As agreed by representatives from both Acorn Building Supplies Limited and Hamilton City Council.

Should you have any queries please do not hesitate to contact the undersigned.

Manufacturing Manager
Ph: 856 6789

Tony Pryor



Roofing: Corrugated Iron
Pitch : 15.00 deg
Spacing: 900 mm
Design Wind Velocity: 37.00 m/s (Ult.)
Detailer: Tony Pryor

Job Ref: QBOWLER
Scale 1:100
(on: A3)
Page 1 of 1

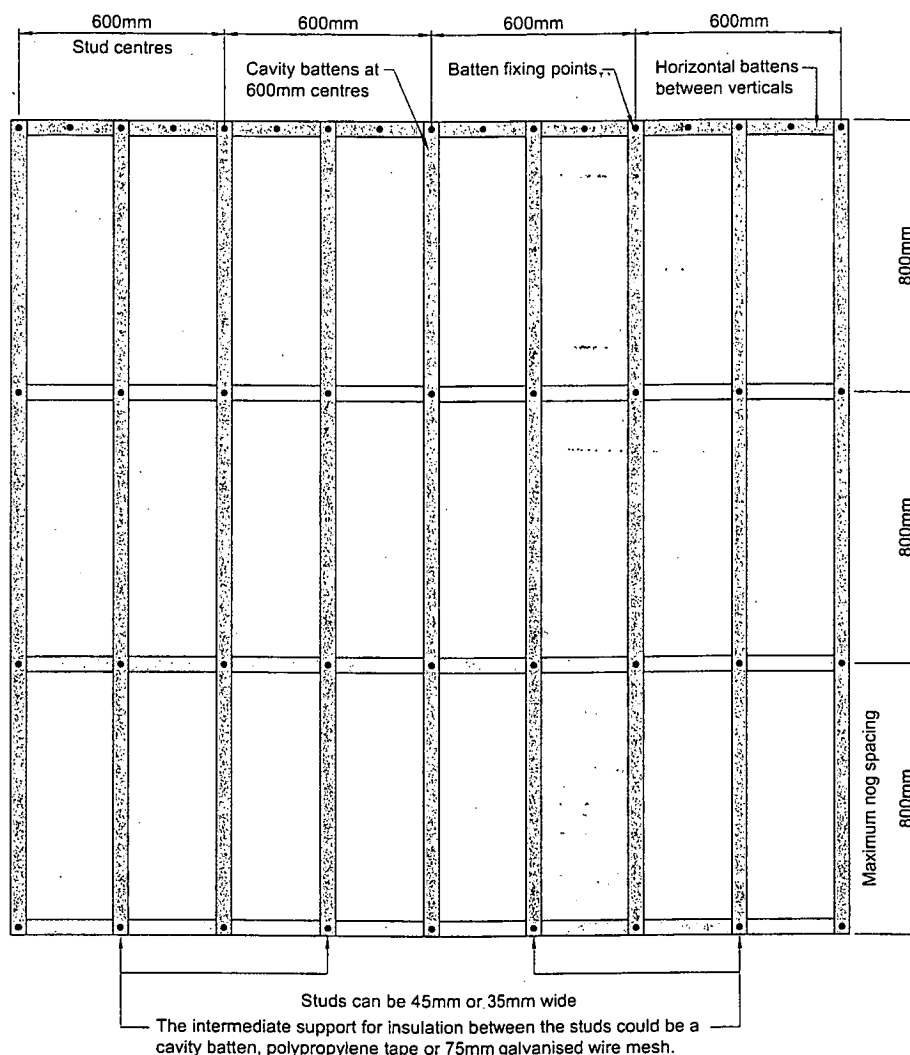


FIGURE 25: CAVITY BATTEN FIXING

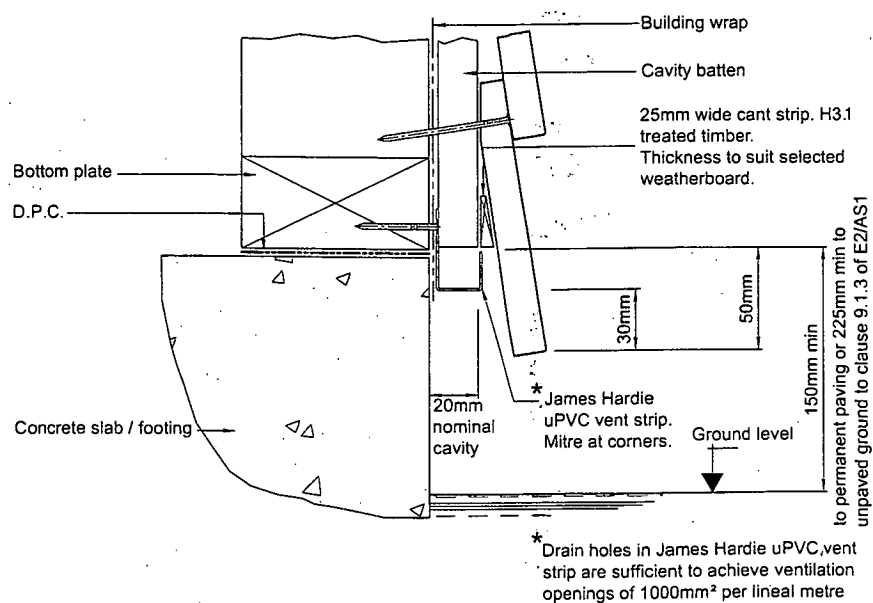


FIGURE 26: CAVITY FOUNDATION

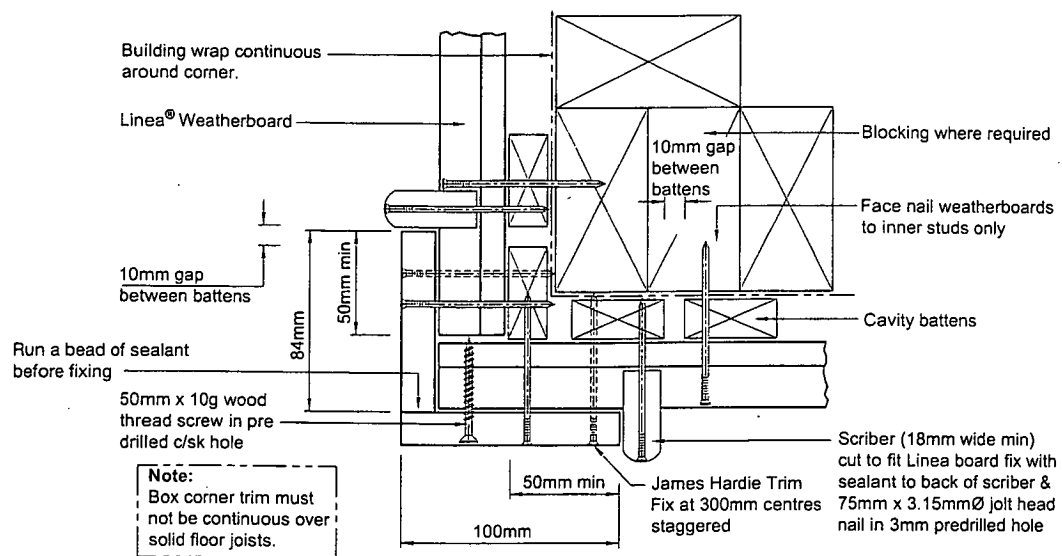


FIGURE 29: CAVITY BOXED CORNER

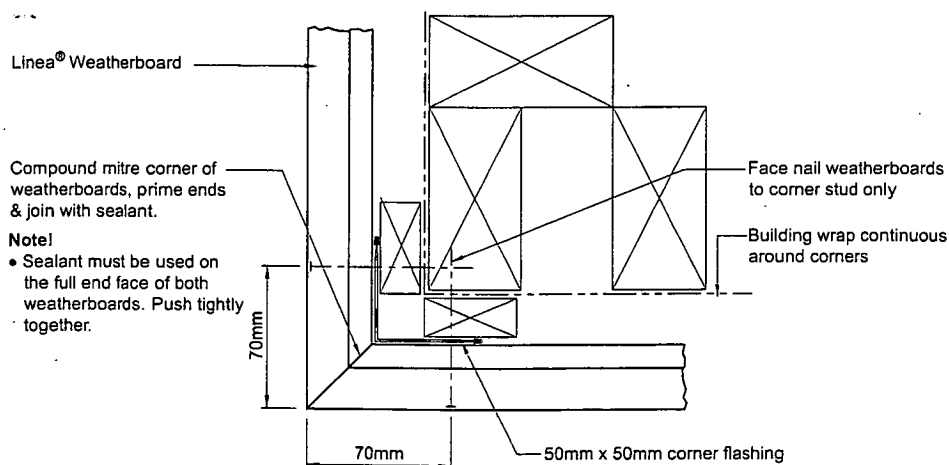


FIGURE 30: CAVITY MITRE CORNER

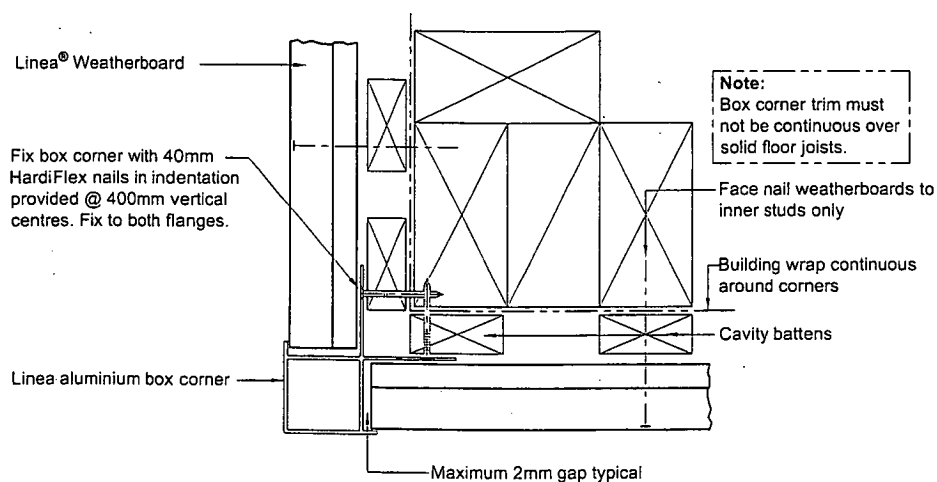
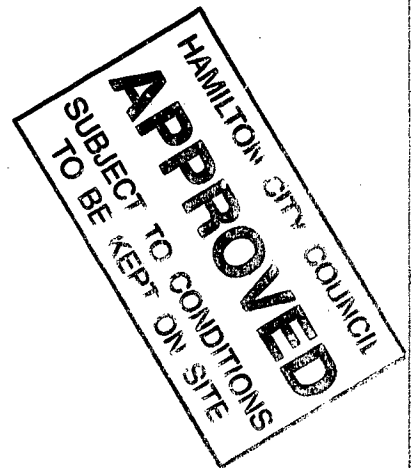
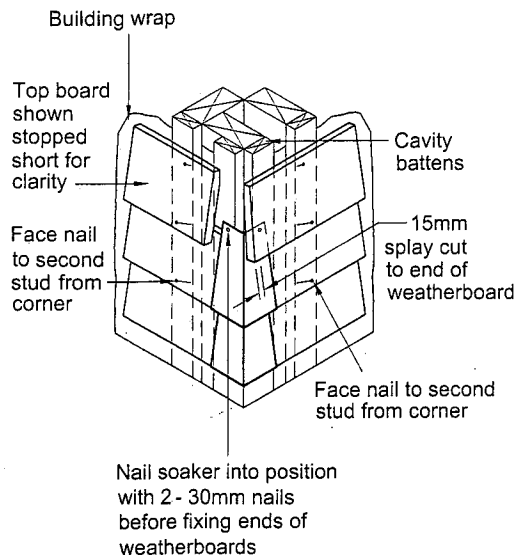


FIGURE 31: CAVITY ALUMINIUM BOX CORNER



Soaker material	Nail material
Copper	Copper or phosphor bronze
Aluminium	Hot dip galvanised/Stainless steel
Stainless steel	Stainless steel

FIGURE 32: CAVITY EXTERNAL CORNER SOAKER

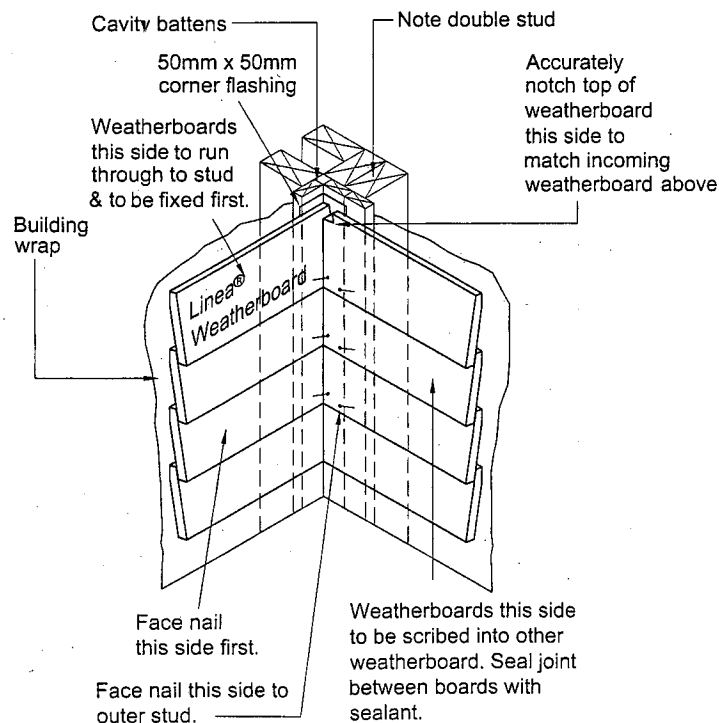


FIGURE 33: CAVITY INTERNAL CORNER

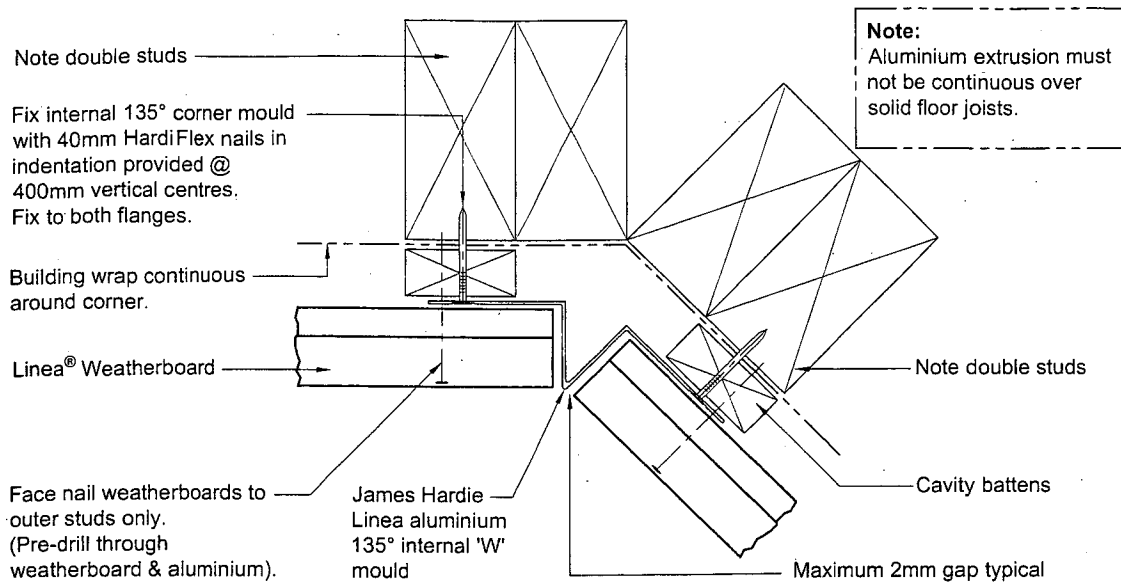


FIGURE 34: CAVITY INTERNAL 135° ALUMINIUM 'W' MOULD CORNER

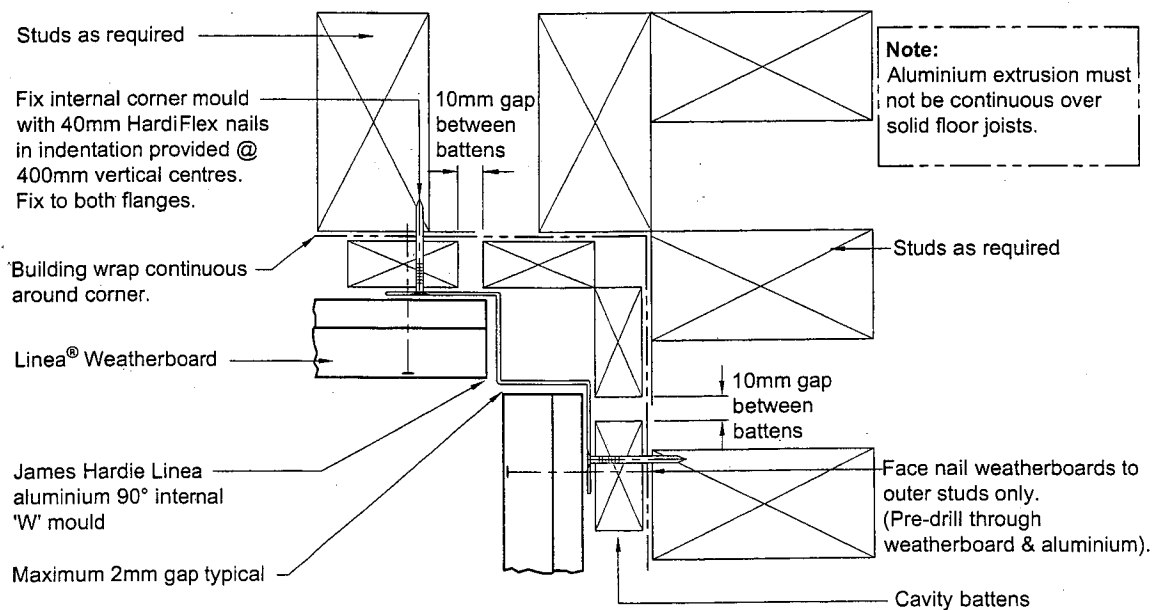


FIGURE 35: CAVITY INTERNAL 90° ALUMINIUM 'W' MOULD CORNER

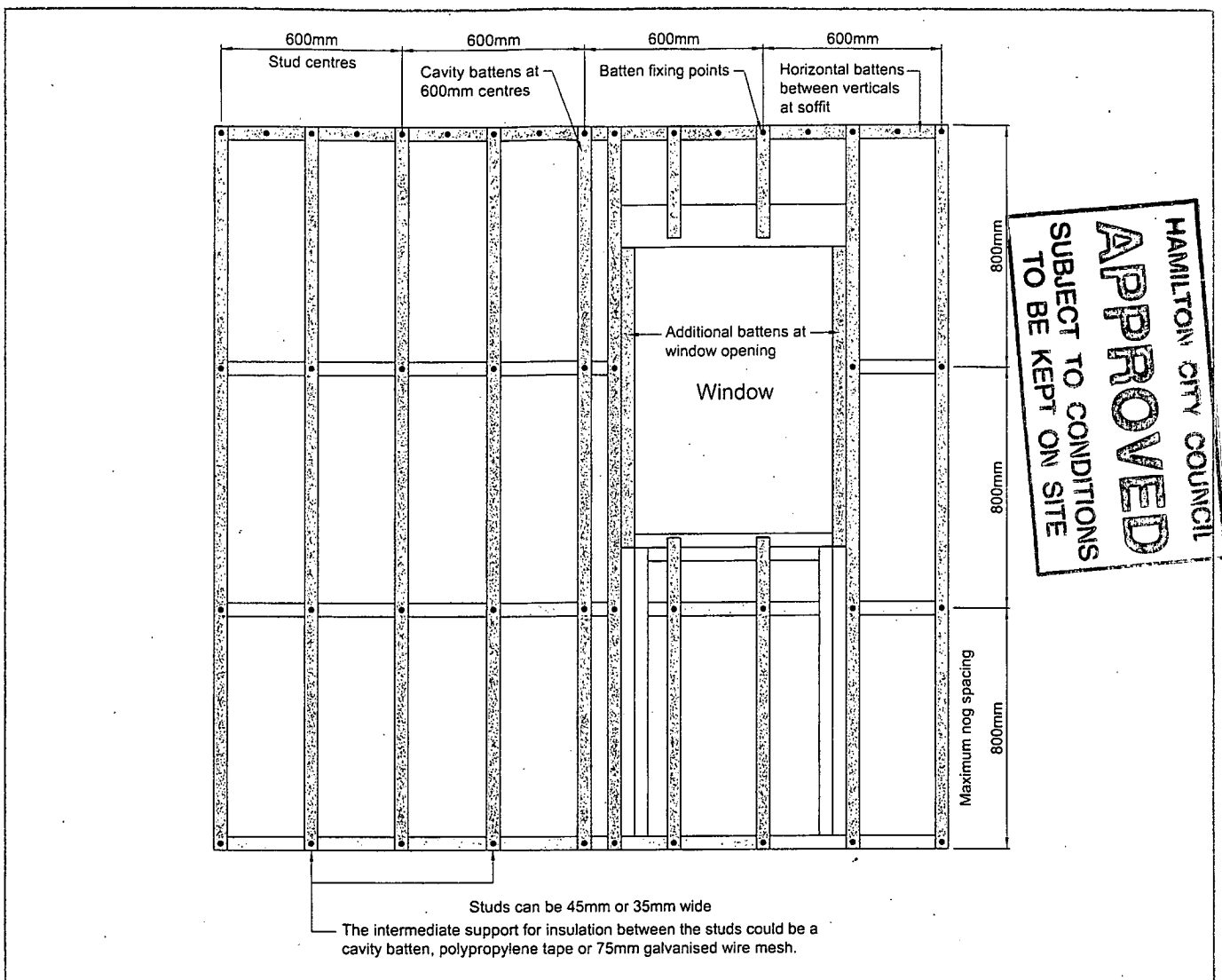


FIGURE 36: CAVITY BATTEN LAYOUT AT WINDOW OPENING

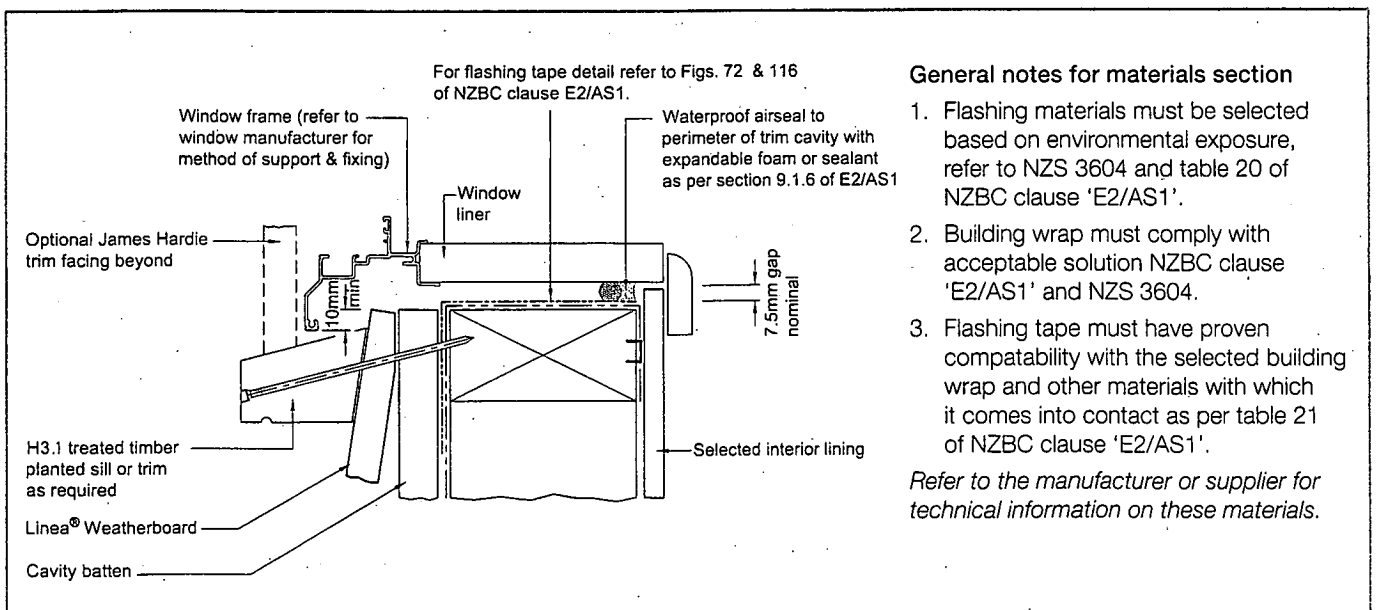


FIGURE 37: CAVITY WINDOW SILL WITH FACINGS

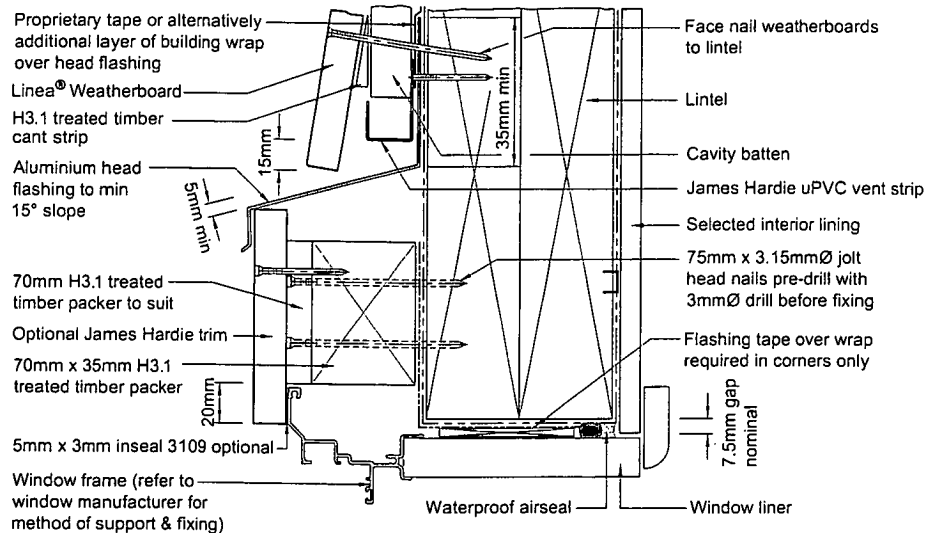


FIGURE 38: CAVITY WINDOW HEAD WITH FACINGS

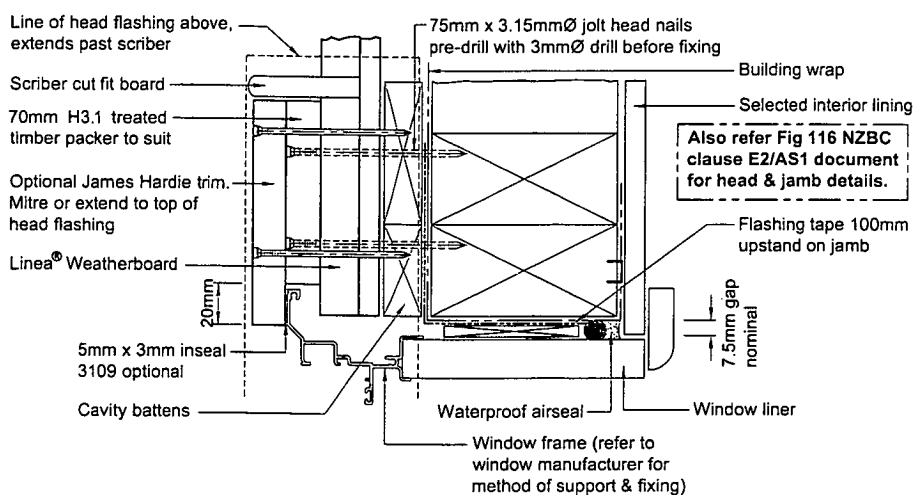
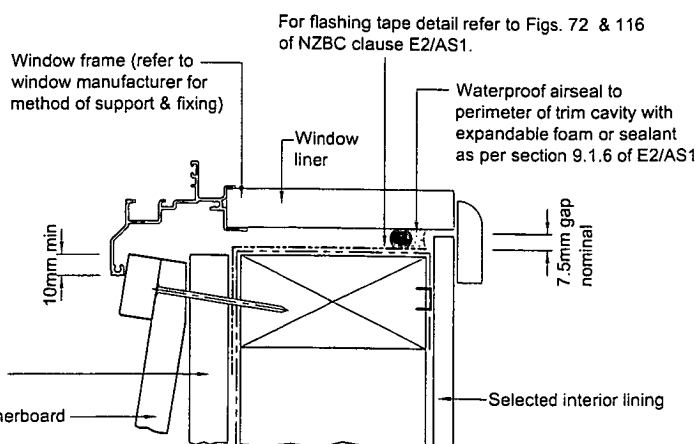


FIGURE 39: CAVITY WINDOW JAMB WITH FACINGS



General notes for materials section

1. Flashing materials must be selected based on environmental exposure, refer to NZS 3604 and table 20 of NZBC clause 'E2/AS1'.
2. Building wrap must comply with acceptable solution NZBC clause 'E2/AS1' and NZS 3604.
3. Flashing tape must have proven compatibility with the selected building wrap and other materials with which it comes into contact as per table 21 of NZBC clause 'E2/AS1'.

Refer to the manufacturer or supplier for technical information on these materials.

FIGURE 40: CAVITY WINDOW SILL WITHOUT FACINGS

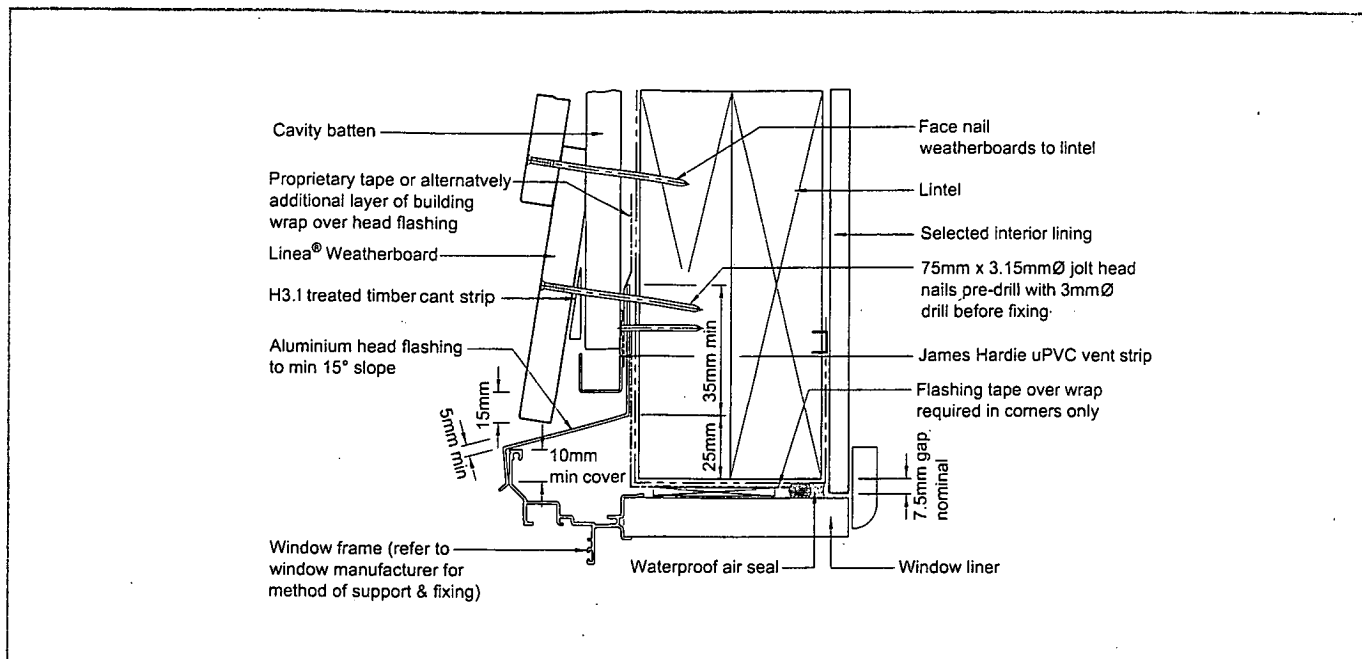


FIGURE 41: CAVITY WINDOW HEAD WITHOUT FACINGS

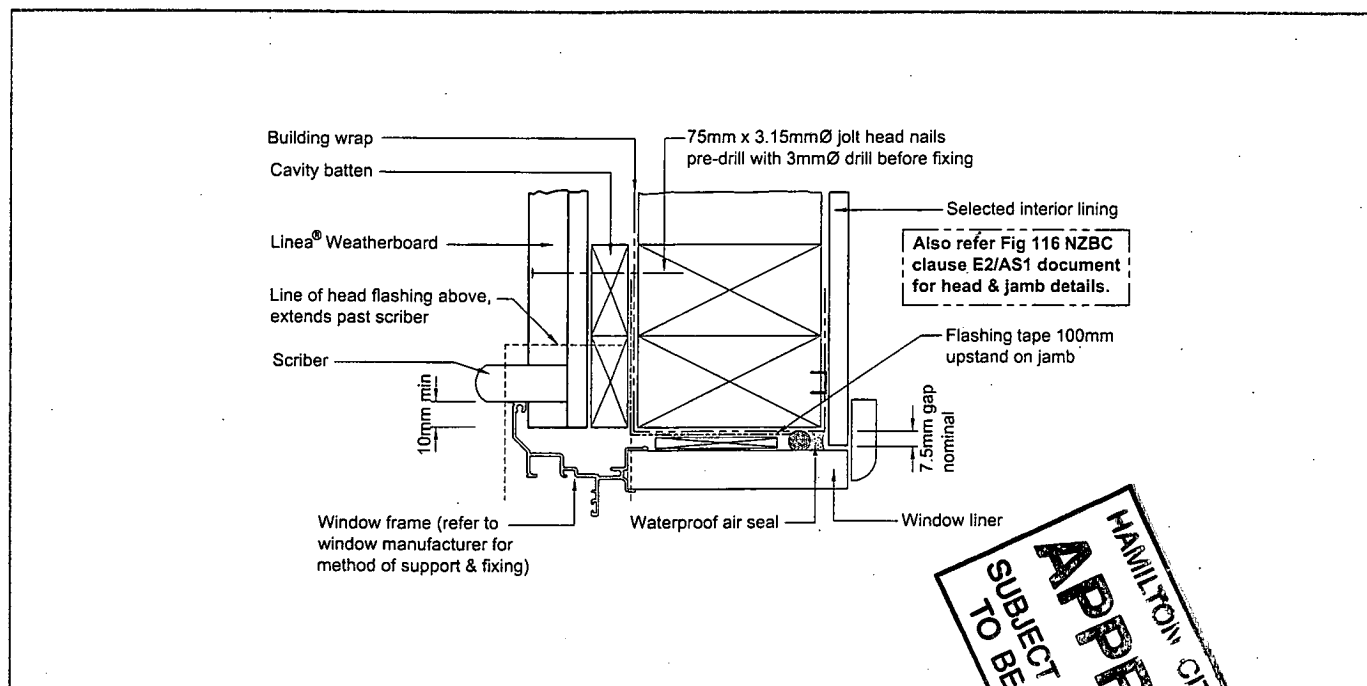
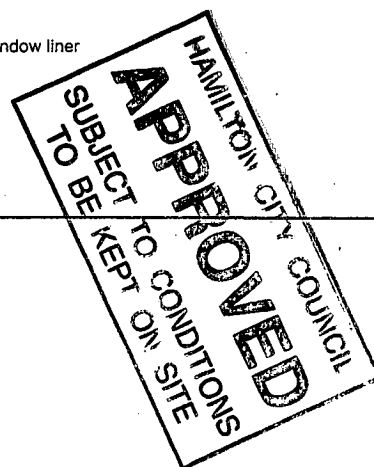


FIGURE 42: CAVITY WINDOW JAMB WITHOUT FACINGS



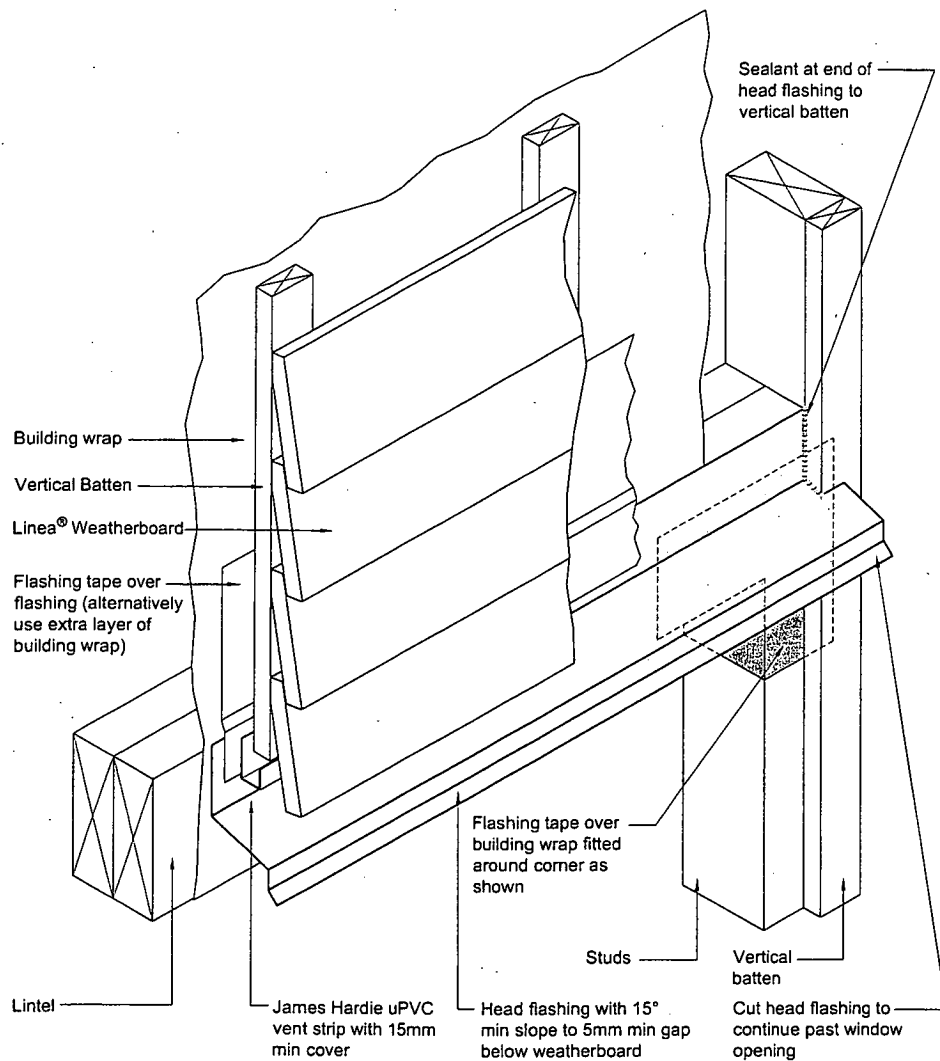


FIGURE 43: HEAD FLASHING TERMINATION

HAMILTON CITY COUNCIL
APPROVED
 SUBJECT TO CONDITIONS
 TO BE KEPT ON SITE

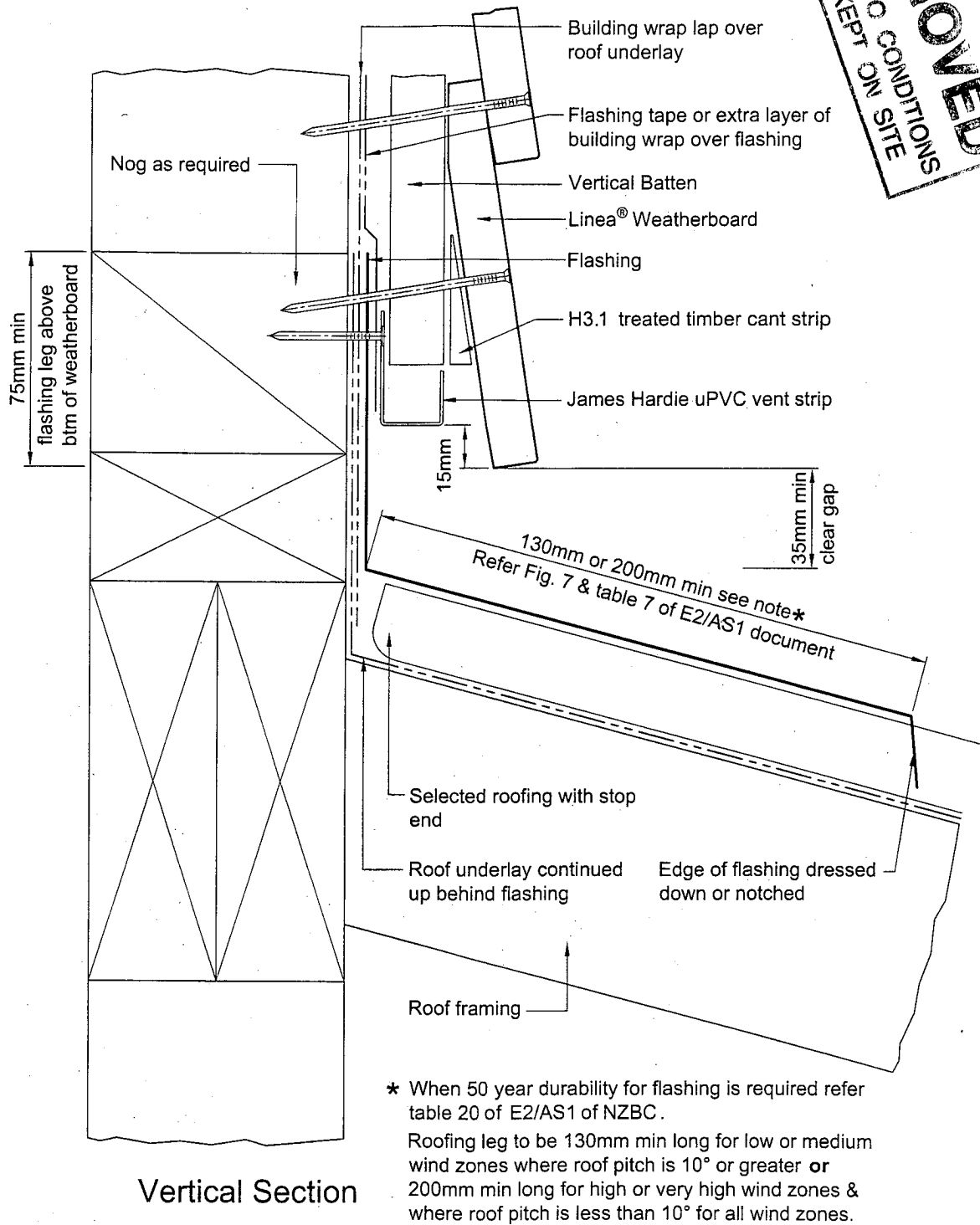
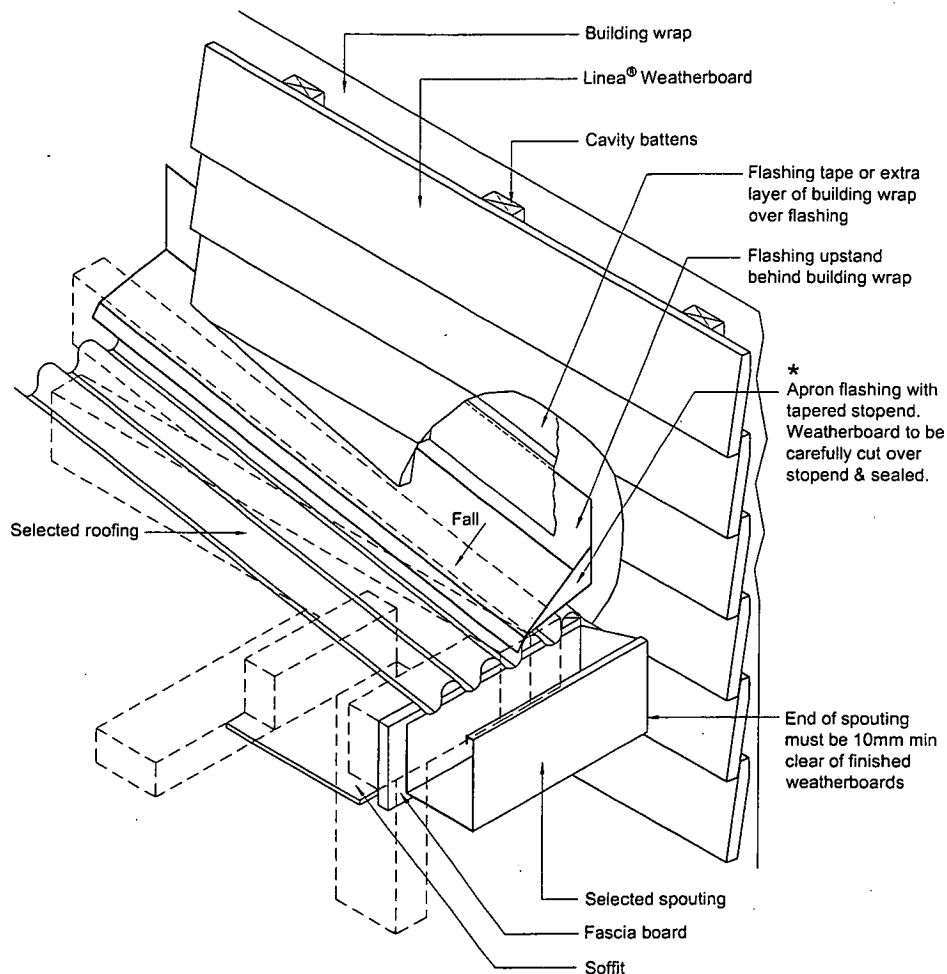


FIGURE 44: CAVITY ONE PIECE APRON FLASHING JOINT



★
When 50 year durability for flashing is required refer table 20 NZBC E2/AS1 document.
Roofing leg to be 130mm min long for low or medium wind zones where roof pitch is 10° or greater or 200mm min long for high or very high wind zones & where roof pitch is less than 10° for all wind zones.

FIGURE 45: CAVITY ONE PIECE GUTTER/WALL JUNCTION

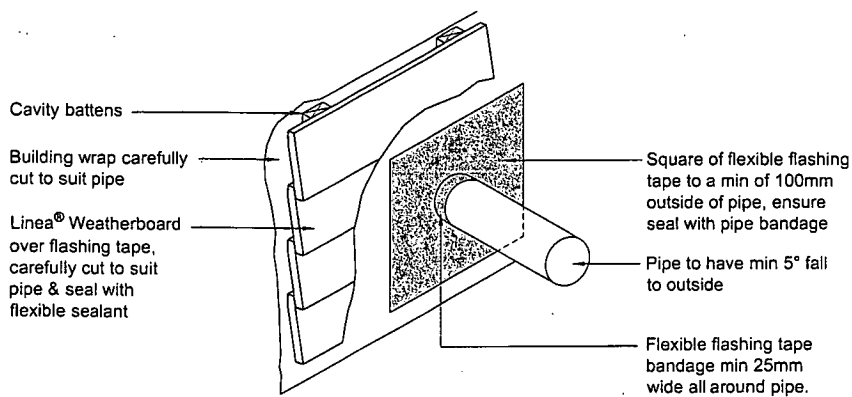


FIGURE 46: CAVITY PIPE PENETRATION

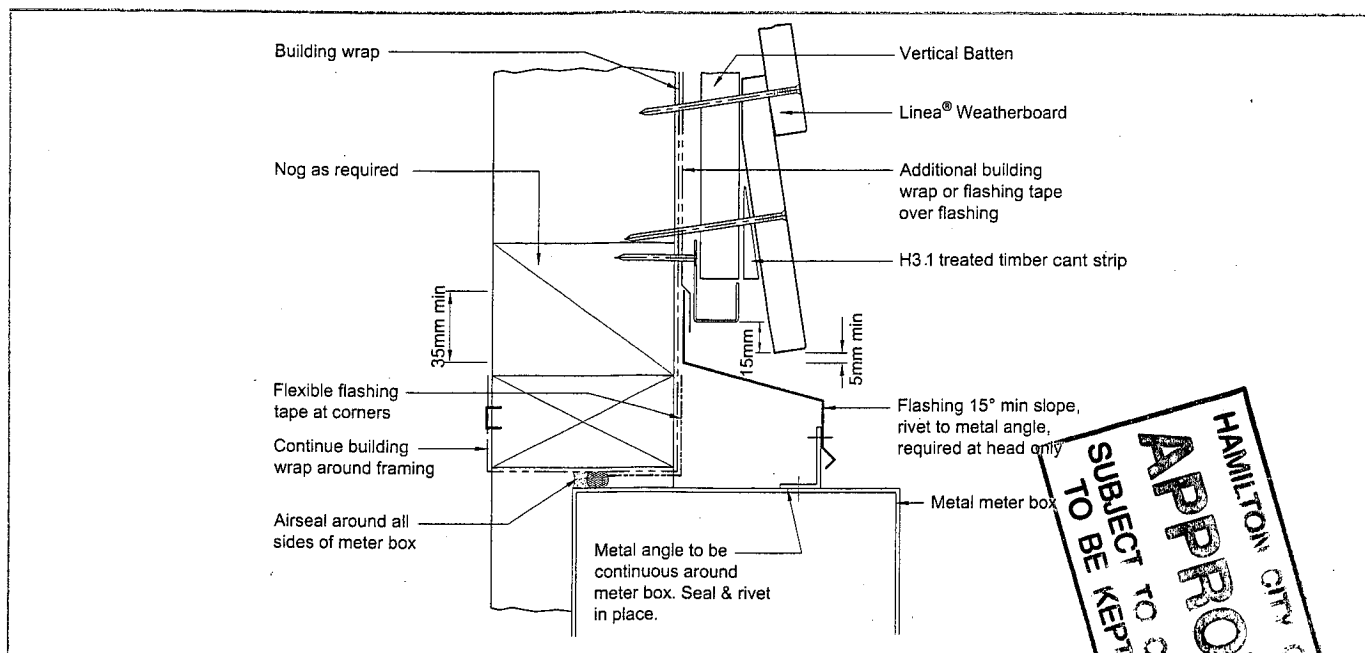


FIGURE 47: CAVITY METER BOX AT HEAD

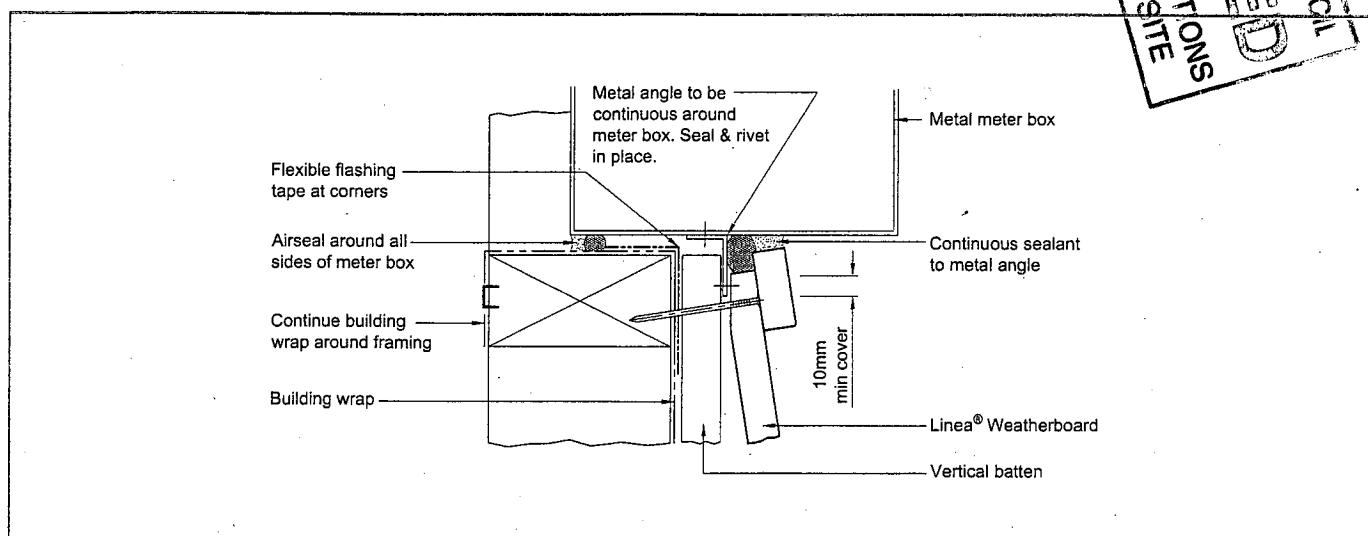


FIGURE 48: CAVITY METER BOX AT SILL

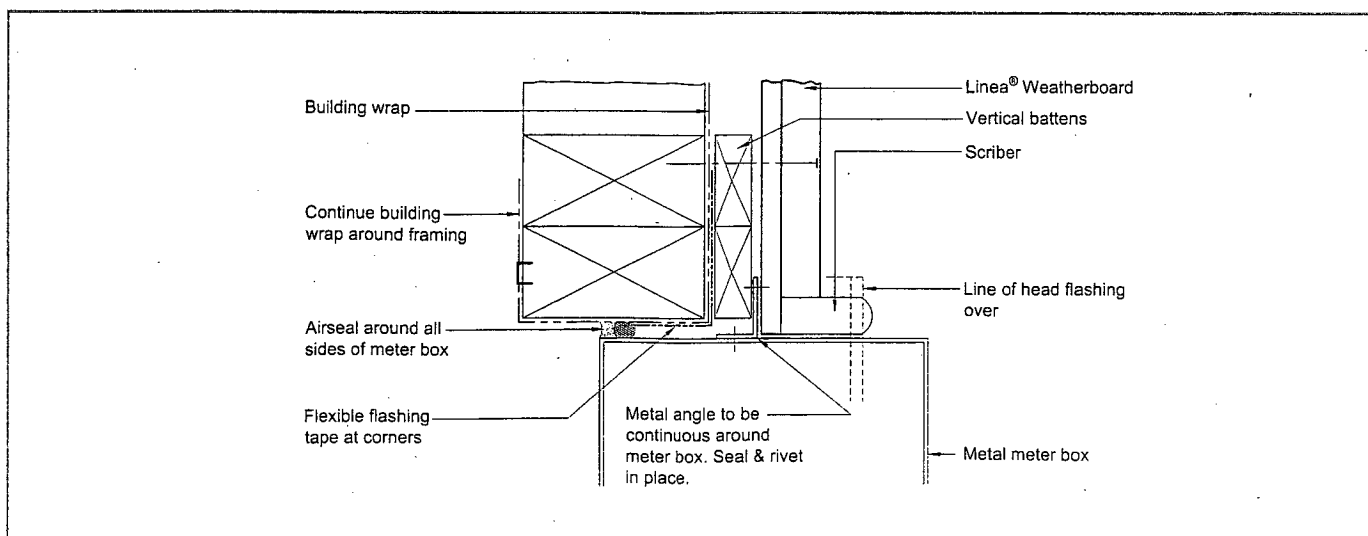


FIGURE 49: CAVITY METER BOX HEAD FLASHING AT JAMB

RESIDENTIAL SPECIFICATION

Specification of the work to be done and the materials to be used in the erection and completion of a residence as per the accompanying drawings.

for

Mr and Mrs.....BOWLER

At LOT 182 WHISTLER CLOSE HORSHAM ESTATE HAMILTON

This specification is to be read in conjunction with the accompanying drawings and any other drawing which may be issued during the currency of the contract.

Any item in this specification and not shown on the drawings and vice versa shall be equally binding as though included in both.

The Contractor shall provide a form of contract which is to be completed by all parties before the commencement of any work on the site.

Any additions, omissions or variations to the contract shall be authorised in writing and an agreed price stated.

The Owners are to ensure that all boundary marker pegs are in place and exposed for inspection.

Owners.....BOWLER

Contractor.....

Owner's Solicitor.....

Loan Company.....

Local Authority.....HAMILTON CITY COUNCIL



IN THE EVENT OF THERE BEING DIFFERENCES BETWEEN
THE DRAWINGS AND THIS SPECIFICATION,
THE DRAWINGS WILL TAKE PRECEDENCE

Building Consent

The Contractors shall arrange to obtain building consent, etc., arrange all inspections and pay all fees as required by the territorial authorities, and the various supply authorities.

Protection of Work

All parts of the work liable to injury and all adjoining property, existing work, footways, trees, etc., are to be protected until completion of the contract.

PC Sums (Nett Sums)

The PC sums quoted in this specification are nett and the contractor or sub-contractor concerned must add any cartage, fixing charges and profit required to all such items.

Site

The site of the works will be pointed out to Tenderers who are advised to visit same and check the slope of the ground, quality of the soil, etc. as no extras will be paid for foundation work, site drainage and levelling not detailed or specified.

Acts Regulations and By-laws

The whole of the work in this contract is to be carried out in strict accordance with the Building Act and Building Regulations and the territorial authorities' regulations, and to be of a standard as approved by the Building Code and as approved by the loan company.

Extent of Work

This contract comprises the erection and completion in the soundest and most workmanlike manner of all the work shown or reasonably implied on the accompanying drawings and in accordance with this specification and the supply of all plant, tools, labour, materials, fixtures and fittings required for the due completion of the work.

Insurance

The Contractor shall at all times, keep the whole of the works fully covered by insurance. Fire. Public Liability. Workers' Compensation, etc.

Temporary Services

The Contractor shall arrange for all temporary services, pay all fees in connection therewith and remove same on completion of the contract. Sheds, toilet, power, water, access to the building site, scaffolding.

Maintenance

The Contractors shall maintain the property for a period of 30 days after completion, and damage done, arising during that time through faulty workmanship or materials shall be made good at the Contractor's expense.

Completion

On completion all trade debris is to be moved from the site and the building left clean and ready for occupancy, with all services and mechanical parts in good working order. The contractor is to arrange for and obtain a Code Compliance Certificate for the building.

Contingencies

Allow the sum of \$for contingencies. The whole, or any amount remaining unspent at the completion of the contract shall be credited to the Owners.

EXCAVATOR

Generally

Remove all turf or other vegetation, including trees, stumps etc., from the area to be built on.

Bulldoze the site to the levels shown on the drawings.
(Check original conditions).

Excavate as required for all wall footings, pile footings, steps etc. as shown on the drawings.

Footing excavations are to be taken down to a solid bearing and to be not less than 300mm deep (450mm in clay conditions).

Excavations are to be stepped to suit the slope of the ground, and kept level at the bottom, maintained free from water or fallen material and shall be firm before placing reinforcing or concrete.

Backfilled and ram the earth around the foundations after concrete work has firmly set.

Deposit the surplus spoil on the site or cart away as directed by the Owners.

CONCRETOR

TO COMPLY WITH CLAUSES B1 & B2 OF NZBC 1992

CONCRETE NZS 3104/3108/3112/3114/3122

REINFORCING STEEL NZS 3402/3109/3421/3422

Materials

Concrete to be pre-mixed with a test of 17,500 kPa after 28 days. Reinforcement to be round mild steel rods or reinforcing mesh, as detailed, free from scale, loose rust, paint, grease, dirt, etc.

Formwork shall be erected and braced in such a manner that the concrete shall finish to the dimensions shown or specified. The formwork is to be hosed out and kept wet before and while the concrete is being placed.

Concrete Work

Construct the various footings as detailed on the drawings and reinforced as shown.

Construct the various concrete comers, base walls, steps and porch slabs, chimney foundations, etc. as indicated on the drawings and reinforced as shown. Steps to have 150mm risers and 300mm treads.

Hard filling to be 75mm down scoria or 'run of the pit' metal compacted in layers of 150mm depth maximum. Blind with 25mm of sand and overlay with black polythene damp proof course with taped joints.

All floor slabs to be laid to true and straight surfaces, screeded, wood floated and finished with a steel float or power float to a fine finish. Thickness and reinforcing as detailed on the drawings.

Allow to build in all holding down bolts, pipes, wires, etc. as required, prior to the pouring of the concrete. Holding down bolts to be 300mm maximum from comers and at 1.2m centres maximum.

All exposed concrete work (except floors) to be roughened or scratched for subsequent plastering.

BLOCKLAYER

TO COMPLY WITH CLAUSES B1 & B2 OF NZBC 1992
NZS 3604/4229

Materials

Blocks are to be of the sizes as shown on the drawings, delivered to the site on pallets and to be free from cracks and chipped edges.

Mortar is to consist of sand, cement and a liquid lime based plasticiser, mixed according to the lime manufacturer's directions.

Laying

Construct the various block walls as shown on the drawings.

Corners to be plumbed both ways, courses to be level and straight.

The blocks are to be kept dry before and during laying and while the mortar is setting.

Sills are to be purpose made masonry unit sill blocks. Lamb blocks are to be rebated.

Ventilators are to be matching in colour and size, spaced 600mm from the corners and at 1.8m intervals.

Joints are to be 10mm thick max, rounded on exposed faces.

Build in holding down bolts 300mm from the corners and at 1.2m centres.

Reinforce and concrete fill the various bond beam courses and vertical cavities as shown on the drawings.

On Completion clean down all exposed faces of the block work and leave free from all defects and mortar stains.

CARPENTER

1. MATERIALS SCHEDULE

Material	Size	Grade	Remarks
Top and bottom plates	100 x 50mm	Radiata No H1.2	
Studs	100 x 50mm	Radiata No 1 H1.2	@ 600 CRS
Trimmer studs		Radiata No 1 H1.2	See table below
Lintels		Radiata No 1 H1.2	See table below
Nogging (Dwangs)	100 x 50mm	Radiata No 2 H1.2	1 row to walls (min)
Bracing	galv. metal angle or 100 x 25mm ex 40 thick	Radiata Merch H1.2	Checked in flush
Ceiling battens		Radiata No 1 UNTREATED KILN DRIED	150 x 40 above plates 75 x 40 elsewhere
Ceiling bracing	100 x 25mm	Radiata No 1 H1.2	Diagonal
	100 x 50mm	Radiata No 1 H1.2	Diagonal

Rafters	200 x 45 HYSPAN	Radiata No 1	H1.2	At 600mm crs
Purlins (Iron roof)	75 x 50mm	Radiata No1	H1.2	900mm crs max
Roof trusses	Gangnail or Pryda		H1.2	At 900mm centres
Fascia boards	METAL			
Barge Boards	METAL			
Weatherboards	HARDIES LINEA			
Interior door jambs	ex 25mm	DA Rimu or Radiata FJ		10mm beveled stops
Architraves	40 x 10mm	DA Rimu or Radiata FJ		Bevelled two edges
Skirtings	65 x 10mm	DA Rimu or Radiata FJ		Bevelled one edge
Sill boards	ex 25mm	DA Rimu, or Radiata FJ		Sanded. Grooved back
Cornices		Gib Cove		
Splash boards	ex 25mm	DA Rimu or Radiata FJ		Primed. Grooved back
Shelving	ex 25mm	Dressing grade or particle board		
Exterior Trim	Mouldings as required	Radiata M/S		
Interior trim	Mouldings as required	Radiata FJ or DA, Rimu or clean Radiata		

Trimming Studs (Light roof and heavy roof). See also NZS 3604 (1999)A2,

Single or top storey

Openings up to 1.8m wide	100 x 50mm
Openings 1.8m to 3m	100 x 75mm Solid or built
Openings 3m to	100 100mm Solid or built up

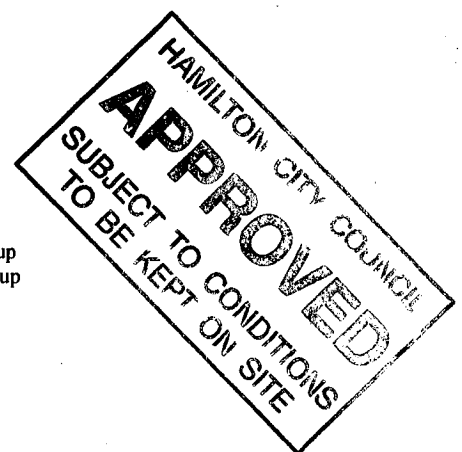
Lower of two storeys

Openings up to 1.8m wide	100 x 75mm
Openings 1.8m to 3.0m wide	100 x 100 mm Solid or built up
Openings 3.0m to 4.2m wide	100 x. 150 mm Solid or built up

Lintels See also NZS 3604 (1999)A2.

Opening Width

Up to	<u>SEE PLAN</u>	Lintel Size
to		100 x 100 mm
to		150 x 100 mm
to		200 x 100 mm
to		250 x.100 mm



Construction

All materials are to be the best of their respective kinds and grades, laid true to their various lines and levels and constructed in a proper tradesman like manner, to make the whole of the works a sound construction in accordance with the local by-laws.

All timber work abutting or resting on masonry units, concrete or brickwork is to be protected with a bitumen-fabric damp proof course.

. Plates to be in long straight lengths. Bottom plates and wall plates to be butt joined over continuous support, top plates to be halve jointed or butt jointed and fastened with nail plates.

Studs are to be set out to accommodate 2.4m high wall lining sheets, and are to be held to the plates with two 100mm flat headed nails at each end. Bowed studs are to be straightened with sawcuts, wedges and with 2 pieces of 100 x 25mm timber 450mm long (1 piece each side).

Lintels are to be checked 15mm minimum into solid trimmer studs. Where built up trimmer studs are used on one 100 x 50mm stud is to be run up past the trimmer to the top plate and the remaining 100 x 50 or 100 x 25 is to run up to the underside of the lintel, and blocked above.

Nogging (dwangs) shall be 50 x 50mm min spaced in rows at 1.350m centres, maximum set out to accommodate the wall lining sheets and where required drilled or notched for ventilation. To be nailed with two 75mm nails at each end.

Ceiling nogging. (dwangs) to be set out to accommodate the ceiling lining sheets and cornices. Around the perimeter of each room and in rows at 900mm centres maximum. Bracing to be let in flush with the face of the wall frames and raked as nearly as practicable to 45 degrees and not more than 55 degrees from horizontal max.

To be positioned as shown on the drawing and the bracing calculation sheet. The wall frames are to be assembled, squared, braced and erected, the bottom plates are to be straightened and fastened down, the corners are to be plumbed both ways using a plumb bob and line and the top plates are to be held straight with temporary bracing until the ceiling and roof framing and bracing has been completed.

Rafters to be plumb cut to ridges and hip rafters and to be birdsmouthed to plates and fastened with two 100mm nails to the plates.

Supply and fix the necessary ridge boards, hip rafters, valley rafters, valley boards, underpurlins, roof struts, strutting beams and collar ties and braces as required to complete the roof framing and as detailed on the drawings.

Alternatively, where detailed, the roof framing is to be constructed with Engineer designed 'Gangnail' or 'Pryda' roof trusses fixed plumb, fastened to the plates with Zed nails or framing anchors, stiffened with runners and braced at each end of the building. The trusses are to be positioned directly over studs or supporting nogging is to be fixed between the studs directly under the top plate.

Ceiling battens ex 40 thick to be double nailed to bottom chords of trusses.

Purlins (galv. steel roof) to be spaced to accommodate the roof covering and ridging and fastened to the rafters with one 100mm nail and one 75mm skew nail at every crossing.

Exterior Finish

All exterior joinery, exterior timber linings or trim and all end grain joints are to be given a coat of primer or stain prior to fixing.

Behind all wall cladding fit a breather type building paper lapped 100mm and carried up to top plate level.

Wall areas are to be covered with exterior lining as shown on the drawings.

Soffits, verges and porch ceilings to be lined with flat fibre-cement sheets with plastic jointer moulds.

Build in the various exterior joinery frames as supplied under 'Joiner'. Fit sill trays, head capping and flashing, trim at sides with scribes and under the sill with a quadrant mould, all as required.

Exterior doors to be fitted on one and half pairs of 100mm galvanised loose pin (brass) butts.

Interior Finish

Interior wall linings generally to be 10mm gibraltar board sheets fixed with vertical joints and nailed with flat headed galvanised clouts, double nailed to studs and nogging. Sheets to be used as bracing panels must be brace line nailed at 150mm crs around the perimeter with the appropriate nails.

All joints, nail holes and other imperfections are to be taped and stopped flush and left ready for the painter or paperhanger.

Shower linings to be selected formica wallboard with plastic jointer and corner mouldings.

Ceiling linings to be gibraltar board sheets, well glued to ceiling framing and with all joints, nail holes and other imperfections stopped flush and left ready for the painter, or plaster board sheets with taped joints.

Nog for and build in the various joinery fitments and plumbing fittings as supplied under 'Plumber' and trim around with splash boards primed and set in mastic and other finishing trim and mouldings as required.

Interior doors are to be fitted with 1 pair of 90mm AC or FB loose pin butts.

Architraves to be fitted in single lengths, with glued mitred joints.

Skirtings to be scribed to the floor and internal corners and mitred at external angles.

Sill boards to be housed to jambs and mullions and bevel scribed to sashes. To finish flush with the inside of the jambs and to be finished with a returned architrave.

Coat cupboard and wardrobes to be fitted with one shelf ex 300mm wide fixed 1.750m above the floor and with a 20mm galvanised pipe hanger rail under.

Linen, hot water and other cupboards to be shelved with slatted shelves ex 100 x 25mm as directed.

Allow the PC sum of \$.....for all hardware, and allow to order, take delivery of and fix same.

Form a ceiling access door in a convenient and inconspicuous place (wardrobe).

Co-operate with the Electrician in the building in of a meter box, and the building of a switchboard recess lined with fire resistant material and trimmed around as required.

Supply and fix the sundry internal finishing mouldings and trim as required. 12mm quadrants to internal corners of service rooms, etc.

Cut for, attend on, and make good after all trades and provide and fix all necessary blocks for securing the work of all other trades.

All internal finishing timbers shall be sanded to remove machine marks and on completion, shall be free from all hammer marks, splits or other defects.

All nails in exposed work (interior and exterior) are to be punched.

ROOFER

NZS 3441/4217

Generally

Refer to the drawings for the type of roofing to be used.

Longrun Corrugated Colorsteel

The roof area is to be covered with 75mm x 1mm galvanised wire mesh stretched taut and securely stapled to the purlins. Overlay with breather type building paper. Alternatively use a breather type underlay which will span over the purlins.

Roofing to be 0.5mm galvanised corrugated steel sheeting, with primed laps, in single lengths, with 1½ corrugations side lap and nailed with purpose-made nails in accordance with standard practise.

Ridges and hips to be covered with lead edged ridging, primed on the underside in long lengths with the lead edge dressed down into the corrugations of the iron.

Barge to be covered with purpose made barge flashings with a nailing edge on to the barge board.

Supply and fix all flashing lead caps etc. to make the roof thoroughly watertight and birdproof.

Priming to be calcium plumbate.

PLUMBER AND DRAINLAYER

TO COMPLY WITH CLAUSES B2 & E1 & G1 TO G15 OF NZBC 1992
AS/NZS 3500 PLUMBING SYSTEMS

Generally

The whole of the plumbing and drainlaying shall be done in strict accordance with the Building Code and territorial local authorities' by-laws and drains shall be laid by registered workmen only.

The plumbing contractor shall obtain all necessary permits for the work and pay all fees in connection thereto.

Exterior work

Supply and fix all necessary flashings, lead caps, sill trays etc. in conjunction with the Builder to make a thoroughly watertight job.

Supply and fix PVC spouting to all eaves, laid with even falls to 80mm diameter downpipes. Downpipes to be sealed into stormwater drains at foot.

Valleys to be standard, galvanised, laid over building paper.

Water Service

Lay on cold water from the main, feed through a pressure reducing valve to a hot water cylinder. Provide and set up the cylinder as shown on the drawings complete with insulation, case, seismic restraints, thermostatically controlled electric element and temperature control valve.

Lay on hot and cold water services to the various fittings as shown on the drawings and to 2 hose standards positioned as directed. Hot water service to run in copper. Main and cold water may run in plastic if approved by Owners, Loan Company and Territorial Authority Inspector.

Fittings

Provide and set up the fittings as shown on the drawings and provide regulation traps and wastes to same. Traps and wastes may be plastic if approved.

Bath, first quality, white.

Vanity unit - selected formica top, white basin, drawers and doors under.

Sink top -selected stainless steel.

Shower tray - stainless steel.

WC - white, china, wash-down pedestal with plastic double-flap seat and low-down plastic flushing cistern.

Tub -Supertub (Robinson Industries).

Washing machine - to be supplied by the Owner.

Taps - CP as selected by the Owners. exterior hose taps - brass.

Shower rose - CP swivel type.

Shower mixer unit as selected by the Owners.

Waste disposal unit to betype fitted with a copper trap and waste.

Drains

Stormwater to be taken in second quality socketed earthenware pipes or PVC pipes and fittings to street channel stormwater main connection, or standard soak holes or trenches.

Sewer drains to be first quality glazed socketed earthenware pipes or PVC pipes and fittings 100mm laid with even falls and easy bends to a main connection as directed.

Provide and fix all necessary gully traps, terminal and back vents, cleaning eyes, inspection junctions and bends, etc., as may be necessary to comply with the Building and territorial authorities' regulations.

Provide and set the field tile drains or draincoil set in scoria, if shown on the site or basement plan.

JOINER

Timber Grades

Interior Joinery - DA Rimu or Radiata finger jointed or clean Radiata.

All to be dry seasoned timber run to standard profiles.

Windows TO COMPLY WITH NZS 3604/4211/4223

Aluminum windows where detailed shall be delivered to the site, stored on edge and protected from breakages damage, plaster splashes, etc. To be installed as per the manufacturer's directions.

The windows are to be glazed with standard quality glass, with selected obscured glass to bathroom and WC windows and as directed.

Doors

Exterior door frames and doors are to be of standard sizes and of the types as shown on the drawings.

Interior doors are to be flush type with DA Rimu facing sheets and clashing strip to the closing edge.

Sizes SEE PLAN

Interior door jambs are to be ex 25mm with 10mm bevelled planted stops.

Glazing to doors or door frames to be selected obscured glass.

Fittings

Construct the various fittings as shown on the drawings and as directed.

Cupboards are to be of standard construction and divided into door and drawer units as directed.

Sink to as specified under 'Plumber'. Other bench tops to be of selected 'formica' with matching edges.

Cupboard doors to be of fibre board of selected pattern and fitted with concealed self closing hinges.

Drawers to be fitted with drawer slides.

Supply a standard bathroom cabinet with a mirror rebated and beaded to the door.

SOLID PLASTER

Materials

Cement to be ordinary Portland cement.

Sand to be clean river sand free from saline, vegetable or earthy matter.

Mortar to consist of sand, cement and a liquid lime based plasticiser, mixed according to the lime manufacturer's directions.

Chimney

Supply and erect one precast concrete chimney as indicated on the drawings.

All units to be well bedded in mortar.

The corners are to be plumbed both ways and reinforced with D. 12 rods, well grouted in.

Plastering

All exposed concrete steps and slabs, concrete base walls, precast concrete chimney, reinforced columns and beams etc. as indicated on the accompanying drawings shall be solid plastered to a fine finish.

All sharp exposed edges are to be rounded. Steps and slabs to fall slightly away from the building and not to hold water. Slabs to be coved up against the residence, under door sills etc.

Columns, beams and chimneys to be textured as directed.

INSULATION

Floors

Before laying the flooring cover the floor area with double sided perforated aluminium foil dished 100mm between the floor joists and with drain holes at the bottom of each dish.

Close all dished cavities at each end and fit the foil closely around all pipes etc.

Walls R 2.0

All the wall cavities are to be tightly packed with the required thickness of fibreglass batts or approved mineral fibre sprayed insulation.

Ceilings R2.2

For flat and skillion types of roof construction supply and fix an approved vapour barrier above the ceiling lining.

Insulate all ceiling areas with fibreglass batt or blanket insulation or with approved mineral fibre sprayed insulation, or with approved polystyrene sheets.

ELECTRICIAN

TO COMPLY WITH CLAUSES B2 & G8 & G9 OF NZBC 1992
AND LOCAL SUPPLY AUTHORITY

Generally

This contract includes the supply and installation of the electric wiring system complete. The whole of the work shall be carried out strictly in accordance with the Building, territorial and supply authority regulations and the electrical contractor is to obtain all permits from the supply authority, pay all fees in connection therewith and arrange for all inspections required.

Supply

Arrange for a mains supply to the building. Check the conditions before tendering.

Boards

Provide and set up as required on meter board and case with all necessary equipment thereon neatly labelled.

Provide and set up where directed a switchboard panel with all necessary fuses, switches and main switches properly mounted and labelled, and hinged on one side. This panel can be combined with the meter board if convenient to the Owners.

Lights

Provide and fix the lights; switches and power outlets as listed hereunder, all to be positioned by the Owners after the floor has been laid.

Passage and stairwell lights to have two way switches.

.....Interior lights

.....Exterior lights

.....Power outlets with switch gear

Fittings

Allow the PC sum offor the purchase of an electric range and allow to order, take delivery of and install same.

Allow to wire tip the thermostatically controlled hot water cylinder element, supplied under 'Plumber'.

Allow the PC sum offor the supply of an electric wall heater and allow to order, take delivery of and install same.

Allow the PC sum offor the purchase of special light fittings and allow to order, take delivery of and fit same.

Allow to supply and install an exhaust hood or fan as detailed on the drawings.

Allow to wire up for the waste disposal unit supplied under 'Plumber'.

Allow to provide and install a selected razor outlet positioned as directed by the Owners.

Earth all metal waste pipes and metal fittings as required by regulations.

Aerial, earth and TV aerial sockets as directed by the Owners.

PAINTER AND PAPERHANGER

TO COMPLY WITH CLAUSES B2 & E3 OF NZBC 1992

Generally

Allow to submit the drawings to a colour service for a colour scheme and thence to the Owners for approval.

All paint and varnish is to be delivered to the job in new tins, unopened and currently usable.

Exterior

Woodwork - Prime, stop and paint in one undercoat and one finish coat with a high gloss finish.

Stained work - one coat of stain prior to fixing, the nail holes, etc., are to be stopped with coloured stopping followed by one further coat of the stain.

Metalwork, including spoutings, downpipes, wrought iron work etc. Approved primer for galvanized iron, one undercoat and one finish coat.

Fibre-cement sheets - two coats of plastic paint. Solid plaster and concrete block work to be left unpainted.

Galvanised steel roof - to be left unpainted.

Interior

Interiors of all service rooms to be primed or scaled, stopped, undercoated, and finished with high gloss enamel.

All other ceilings to be given two coats of flat or satin finish ceiling paint.

All other wall areas to be lined with wallpaper, hung in single lengths, plumb, and with butt joints.

PC value.....per roll.

Flush doors only to be sealed, and given two coats of satin finish varnish.
To be rubbed down between coats.

All other interior finishing woodwork to be primed, stopped, undercoated and finished with a satin finish paint.

Completion

On completion the residence is to be left clean and tidy, window and other glasswork is to be cleaned. All trade debris is to be removed from the site and the building left clean and ready for occupancy.