



Date: 27 April 2022
Our Ref: P210110 (5)

NSW Land and Housing Corporation
C/-Barry Rush & Associates Pty Ltd
Suite 25a, 2 Beattie Street
Balmain NSW 2041
Att: Ms Mira Belanov

Dear Mira,

**RE: 2-8 Glenn Ave, Northmead
DESIGN COMPLIANCE ASSESSMENT**

Please find enclosed our BCA Compliance Report prepared in respect of the proposed attached dwellings to be situated at the above listed property.

In reviewing the content of this Report, particular attention is drawn to the content of Part 3 as Part 3 details the compliance status of the proposed design in terms of each prescriptive provision of the BCA.

The inclusion of this summary enables an immediate understanding of the compliance status of the proposed design to be obtained.

Should you require any further information, please do not hesitate to contact me on the number provided.

Yours faithfully

A handwritten signature in black ink, appearing to be 'Kieran Tobin', with a horizontal line extending to the right.

Kieran Tobin
Director

DESIGN COMPLIANCE ASSESSMENT

PREPARED FOR

NSW Land and Housing Corporation

REGARDING

2-8 Glenn Ave, Northmead
Prepared By



REPORT REGISTER

The following report register documents the development and issue of this report and project as undertaken by this office, in accordance with the *Quality Assurance* policy of BCA Vision Pty Ltd.

Our Reference	Issue No.	Remarks	Issue Date
P210110	1	Design Compliance Assessment – Sketch Stage	04 August 2021
P210110	2	Design Compliance Assessment – DA Stage	09 November 2021
P210110	4	Design Compliance Assessment – DA Stage	20 April 2022
P210110	5	Design Compliance Assessment – DA Stage	27 April 2022

The format, technical content and intellectual property associated with this report remain the property of BCA Vision Pty Limited, and has been prepared and may only be used, for the development / buildings the subject of this report.

CONTENTS PAGE

1.0	INTRODUCTION	5
1.1	GENERAL	5
1.2	REPORT BASIS	5
1.3	EXCLUSIONS	5
1.4	REPORT PURPOSE.....	5
2.0	BUILDING DESCRIPTION	6
2.1	GENERAL	6
2.2	RISE IN STOREYS (CLAUSE C1.2).....	6
2.3	BUILDING CLASSIFICATION (CLAUSE A3.2).....	6
2.4	ENERGY EFFICIENCY IN BUILDINGS (PART 3.12).....	6
2.5	BUSHFIRE PRONE LAND (PART 3.7).....	6
3.0	BCA ASSESSMENT – SUMMARY	7
3.1	SUMMARY	7
3.2	PART 3.1.1 – EARTHWORKS	7
3.3	PART 3.1.2 – EARTH RETAINING STRUCTURES	7
3.4	PART 3.1.3 – STORMWATER CONTROL.....	8
3.5	PART 3.1.4 – TERMITE RISK MANAGEMENT	8
3.6	PART 3.2 – FOOTINGS AND SLABS.....	10
3.7	PART 3.2.2 – PREPARATION	10
3.8	PART 3.2.3 – CONCRETE REINFORCING	10
3.9	PART 3.2.5 – FOOTING & SLAB CONSTRUCTION.....	11
3.10	PART 3.3.1 – UNREINFORCED MASONRY.....	11
3.11	PART 3.3.3 – MASONRY ACCESSORIES	11
3.12	PART 3.3.4 – WEATHERPROOFING OF MASONRY	12
3.13	PART 3.4.3 – TIMBER FRAMING	12

3.14	PART 3.4.4 – STRUCTURAL STEEL MEMBERS	13
3.15	PART 3.5.1 – SHEET ROOFING	13
3.16	PART 3.5.2 – GUTTERS & DOWNPIPES.....	19
3.17	PART 3.5.4 – WALL CLADDING	19
3.18	PART 3.6– GLAZING	24
3.19	PART 3.7.1 – FIRE PROPERTIES FOR MATERIALS AND CONSTRUCTION	25
3.20	PART 3.7.2 – FIRE SEPARATION OF EXTERNAL WALLS.....	26
3.21	PART 3.7.3 – FIRE PROTECTION OF SEPARATING WALLS AND FLOORS	29
3.22	PART 3.7.2 – SMOKE ALARMS.....	33
3.23	PART 3.8.1 – WET AREAS.....	33
3.24	PART 3.8.2 – ROOM HEIGHTS	34
3.25	PART 3.8.3 – SANITARY FACILITIES	35
3.26	PART 3.8.4 – LIGHT	35
3.27	PART 3.8.5 – VENTILATION	36
3.28	PART 3.8.6 – SOUND INSULATION	38
3.29	PART 3.8.7 – PLIABLE BUILDING MEMBRANE.....	41
3.30	PART 3.9.1 – STAIR CONSTRUCTION.....	43
3.31	PART 3.9.2 – BALUSTRADES	45

1.0 INTRODUCTION

1.1 GENERAL

This “BCA Compliance Assessment” report has been prepared at the request of NSW Land and Housing Corporation and relates to Units 13 to 16, 2-8 Glenn Ave, Northmead.

The project proposal includes construction of 4 attached class 1a dwellings.

This report is based upon, and limited to, the information depicted in the documentation provided for assessment, and does not make assumptions regarding “design intention” or the like.

1.2 REPORT BASIS

The content of this report reflects –

- (a) The principles and provisions of BCA 2019 (amendment 1) Volume 2;
- (b) Architectural documentation provided by Barry Rush and Associates:

Numbered	Titled	Dated
A01	Cover page	12/04/22
A04	Site and Ground Floor Plan	12/04/22
A05	First Floor Plan	12/04/22
A06	Roof Plan	12/04/22
A07	Elevations	12/04/22
A08	Sections	12/04/22
A10	Finishes Schedule	12/04/22

1.3 EXCLUSIONS

It is conveyed that this report should not be construed to infer that an assessment for compliance with the following has been undertaken –

- (a) Structural and services design documentation;
- (b) General building services (i.e. passenger lifts);
- (c) The individual requirements of service providers (i.e. Telstra, Water Supply, Energy Australia);
- (d) The individual requirements of the Workcover Authority;
- (e) Disability Discrimination Act (DDA).

1.4 REPORT PURPOSE

The purpose of this report is to identify the extent to which the architectural design documentation complies with the relevant prescriptive provisions of the BCA 2019 (amendment 1).

The status of the design is summarised within Part 3 of this report.

2.0 BUILDING DESCRIPTION

2.1 GENERAL

In the context of the Building Code of Australia (BCA), the subject development is described within items 2.2 – 2.6 below.

2.2 RISE IN STOREYS (CLAUSE C1.2)

The buildings are proposed to have a rise in storeys of two (2)

2.3 BUILDING CLASSIFICATION (CLAUSE A3.2)

The buildings incorporate the following classifications: -

Class 1A	A residential Dwelling
----------	------------------------

2.4 ENERGY EFFICIENCY IN BUILDINGS (PART 3.12)

A BASIX certificate is required for the dwellings.

2.5 BUSHFIRE PRONE LAND (PART 3.7)

An RFS Search indicates that the property is not considered to be Bushfire Prone Land.

3.0 BCA ASSESSMENT – SUMMARY

3.1 SUMMARY

We have reviewed the referenced plans and in our opinion the proposal can comply with the Building Code of Australia 2019 (amendment 1) subject to the following recommendations: -

3.2 PART 3.1.1 – EARTHWORKS

Clause	Requirement	Recommendation
3.1.1.0	Application	Adherence during construction is required For Reference by Builder during Construction
3.1.1.1	Un-retained bulk earthworks — site cut	
3.1.1.2	Un-retained bulk earthworks — fill	

3.3 PART 3.1.2 – EARTH RETAINING STRUCTURES

Clause	Requirement	Recommendation
3.1.2.0	Performance Requirement P2.1.1 is satisfied for an earth retaining structure associated with the construction of a building or structure if it is designed and constructed in accordance with AS 4678. Explanatory information: AS 4678 contains requirements for earth retaining structures between 800 mm and 15 m in height, and does not apply to structures which are founded in exceptional site conditions (e.g. landslips), are subjected to sustained cyclic loading or are used for the purposes of water-retaining (e.g. dams and reservoirs). It	Provide construction method in Project plans prior to Crown compliance Certificate.

should be noted that 3.1.2.0 is only one way of achieving compliance with P2.1.1.
 Other ways of complying include the following:
 (a) The relevant structural design manuals in Part 3.0.
 (b) The relevant provisions of other Parts of Section 3 relating to earth retaining structures.
 A Performance Solution that uses one of the other NCC Assessment Methods which verifies that compliance with (c) P2.1.1 will be achieved.

3.4 PART 3.1.3 – STORMWATER CONTROL

Clause	Requirement	Recommendation
3.1.3.2	Drainage requirements	Hydraulic Engineers Details will be required prior to the Crown Certificate
3.1.3.3	Surface water drainage	
3.1.3.4	Subsoil drainage	
3.1.3.5	Stormwater drainage	

3.5 PART 3.1.4 – TERMITE RISK MANAGEMENT

Clause	Requirement	Recommendation
3.1.4.2	<p>Requirements for termite management systems</p> <p>(a) The requirements of this Part apply where:</p> <p>(i) a Class 1 or 10 building is constructed in an area where subterranean termites are known to present a potential risk of attack; and</p> <p>(ii) a primary building element of a Class 1 or 10 building is considered susceptible to termite attack.</p> <p>(b) For the purposes of</p> <p>(a), a primary building element consisting entirely of, or a</p>	<p>Pest Protection must comply with AS 3660</p> <p>Provide construction method in Project Specification prior to Crown compliance Certificate.</p> <p>A Compliance Certificate will be required on completion of works on site</p>

	<p>combination of, any of the following materials is considered not subject to termite attack:</p> <ul style="list-style-type: none"> (i) Steel, aluminium or other metals. (ii) Concrete. (iii) Masonry. (iv) Fibre-reinforced cement. (v) Timber — naturally termite resistant in accordance with Appendix C of AS 3660.1. (vi) Timber — preservative treated in accordance with Appendix D of AS 3660.1. 	
3.1.4.3	<p>Termite management systems</p> <p>Where a termite management system is required it must—</p> <ul style="list-style-type: none"> (a) be selected appropriate to Table 3.1.4.1; and (b) comply with— <ul style="list-style-type: none"> (i) AS 3660.1; or (ii) have been tested and passed the tests required by Section 5 of AS 3660.3; and (c) have a durable notice installed in accordance with 3.1.4.4; and (d) where a chemical termite management system is used, the chemical must be included on the appropriate authority's pesticides register. 	
3.1.4.4	<p>Durable notice</p> <p>A durable notice must be permanently fixed to the building in a prominent location, such as in a meter box or the like, indicating—</p> <ul style="list-style-type: none"> (a) the termite management system used; and (b) the date of installation of the system; and (c) where a chemical is used, its life expectancy as listed on the appropriate authority's register label; and 	

(d) the installer's or manufacturer's recommendations for the scope and frequency of future inspections of termite activity.

3.6 PART 3.2 – FOOTINGS AND SLABS

Clause	Requirement	Recommendation
3.2.1	FOOTINGS AND SLABS	Structural Engineers Advice is required. Provide Structural Engineers Details & Structural Design Certificate prior to Crown compliance Certificate A Compliance Certificate will be required on completion of works on site

3.7 PART 3.2.2 – PREPARATION

Clause	Requirement	Recommendation
3.2.2.1	Excavation for footings	Structural Engineers Advice is required. Provide Structural Engineers Details & Structural Design Certificate prior to Crown compliance Certificate A Compliance Certificate will be required on completion of works on site
3.2.2.3	Foundations for footings and	
3.2.2.5	Stepped footings	

3.8 PART 3.2.3 – CONCRETE REINFORCING

Clause	Requirement	Recommendation
3.2.3.1	Concrete	Structural Engineers Advice is required. Provide Structural Engineers Details & Structural Design Certificate prior to Crown compliance Certificate A Compliance Certificate will be required on completion of works on site
3.2.3.2	Steel reinforcement	

3.9 PART 3.2.5 – FOOTING & SLAB CONSTRUCTION

Clause	Requirement	Recommendation
3.2.5.1	Footing and slab construction	Structural Engineers Advice is required. Provide Structural Engineers Details & Structural Design Certificate prior to Crown compliance Certificate A Compliance Certificate will be required on completion of works on site
3.2.5.3	Shrinkage control	
3.2.5.4	Minimum edge beam dimensions	
3.2.5.5	Footings for fireplaces on Class A and S sites	

3.10 PART 3.3.1 – UNREINFORCED MASONRY

Clause	Requirement	Recommendation
3.3.1.2	External walls	Unreinforced Masonry must comply with AS 3700. Provide construction method in Project Specification prior to Crown compliance Certificate. A Compliance Certificate will be required on completion of works on site
3.3.1.3	Internal walls	
3.3.1.4	Isolated piers	
3.3.1.5	Masonry units	
3.3.1.6	Mortar mixes	
3.3.1.7	Mortar joints	
3.3.1.8	Vertical articulation joints	
3.3.1.9	Sub Floor Ventilation	
3.3.1.10	Shrinkage allowance for timber framing	

3.11 PART 3.3.3 – MASONRY ACCESSORIES

Clause	Requirement	Recommendation
3.3.3.2	Wall ties	Masonry Accessories must comply with AS 3700. Provide construction method in Project Specification prior to Crown compliance Certificate.
3.3.3.3	Fixing straps and tie-down systems	
3.3.3.4	Lintels	

3.3.3.5	Corrosion protection	A Compliance Certificate will be required on completion of works on site
---------	----------------------	--

3.12 PART 3.3.4 – WEATHERPROOFING OF MASONRY

Clause	Requirement	Recommendation
3.3.4.2	Width of cavity	<p>Weatherproofing of masonry must comply with AS 3700. Provide construction method in Project Specification prior to Crown compliance Certificate. A Compliance Certificate will be required on completion of works on site</p>
3.3.4.3	Cavity ventilation and drainage	
3.3.4.4	Damp-proof courses — materials	
3.3.4.5	Damp-proof courses—installation	
3.3.4.6	Flashings	
3.3.4.7	Location of flashings	
3.3.4.8	Flashings at the base of cavity walls	
3.3.4.9	Sill and head flashing	
3.3.4.10	Flashings at a roof abutting a wall	

3.13 PART 3.4.3 – TIMBER FRAMING

Clause	Requirement	Recommendation
3.4.3.0	Residential timber-framed construction	<p>Timber Wall and roof framing must comply with AS 1684. Structural Engineers Advice is required. Provide Structural Engineers Details & Structural Design Certificate prior to Crown compliance Certificate A Compliance Certificate will be required on completion of works on site</p>

3.14 PART 3.4.4 – STRUCTURAL STEEL MEMBERS

Clause	Requirement	Recommendation
3.4.4.2	Structural steel members	Structural Engineers Advice is required. Provide Structural Engineers Details & Structural Design Certificate prior to Crown compliance Certificate A Compliance Certificate will be required on completion of works on site
3.4.4.3	Columns	
3.4.4.4	Corrosion protection	

3.15 PART 3.5.1 – SHEET ROOFING

Clause	Requirement	Recommendation
3.5.1.1	<p>Application</p> <p>Performance Requirements P2.1.1 and P2.2.2 are satisfied for sheet roofing if it complies with one or a combination of the following:</p> <p>(a) Metal roofing:</p> <p>(i) AS 1562.1; and</p> <p>(ii) In wind regions C and D in accordance with Figure 3.0.1 (cyclonic area), metal roof assemblies, their connections and immediate supporting members must be capable of remaining in position notwithstanding any permanent distortion, fracture or damage that might occur in the sheet or fastenings under the pressure sequences A to G defined in Table 3.5.1.0.</p>	<p>Provide construction method in Project Specification prior to Crown compliance Certificate.</p> <p>A Compliance Certificate will be required on completion of works on site</p>
3.5.1.2	<p>Corrosion protection and compatibility requirements for roofing</p> <p>(a) Metal sheet roofing must be protected from corrosion in accordance with Table 3.5.1.1.</p> <p>(b) Where different metals are used in a roofing system,</p>	As Above

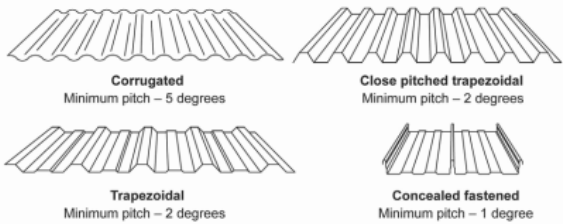
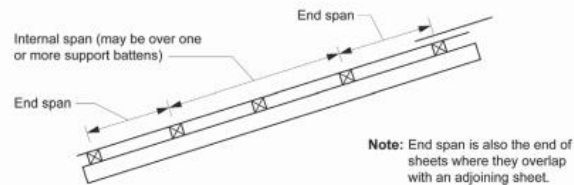
	<p>including flashings, fasteners, guttering, downpipes, etc., they must be compatible with each other as described in Tables 3.5.1.2a to 3.5.1.2d and—</p> <p>(i) no lead materials can be used upstream from aluminium/zinc coated materials; and</p> <p>(ii) no lead materials can be used on roofs that form part of a potable (drinking) water catchment area; and</p> <p>(iii) no copper materials can be used upstream from galvanized coated materials.</p>	
3.5.1.3	<p>Minimum pitches for metal sheet roofing profiles</p> <p>Metal sheet roofing must comply with the minimum pitch requirements for the associated roof profile in accordance with Figure 3.5.1.1.</p> <p><small>Figure 3.5.1.1 Minimum pitch requirements for metal roofing profiles - Roof slope and pitch drainage capacity</small></p>  <p>Corrugated Minimum pitch – 5 degrees</p> <p>Close pitched trapezoidal Minimum pitch – 2 degrees</p> <p>Trapezoidal Minimum pitch – 2 degrees</p> <p>Concealed fastened Minimum pitch – 1 degree</p>	As Above
3.5.1.4	<p>Maximum spans</p> <p>Metal sheet roofing must comply with the maximum span limitations between roofing supports in accordance with Table 3.5.1.3 and Figure 3.5.1.2.</p>	As Above

Table 3.5.1.3 Maximum roofing spans between supports

Sheet roofing profile	Sheet roofing base metal thickness (mm)	Max. end span (mm) ^{Note 1}	Max. internal span (mm) ^{Note 1}
Corrugated	0.42	900	1200
Close pitched trapezoidal	0.42	1800	2400
Trapezoidal	0.42	1300	1700
Concealed fasteners — narrow sheet	0.42	1750	2100
Concealed fasteners — wide sheet	0.48	1800	2100

Figure 3.5.1.2 Maximum spans for roofing between supports



3.5.1.5

Fixing of metal sheet roofing

Metal sheet roofing must— (a) be either fixed through the roofing (crest fastening) or have concealed fasteners; and
(b) be fixed at spacings in accordance with Table 3.5.1.4; and

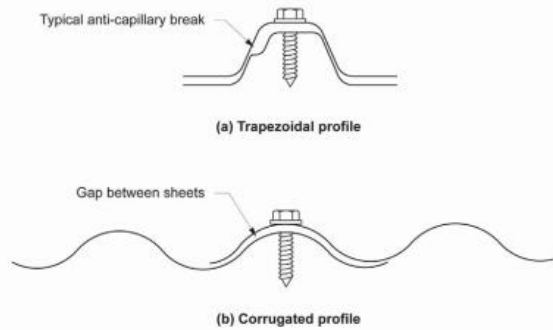
Table 3.5.1.4 Fixing requirements for sheet roofing

Sheet roofing profile	Fixing: End span	Fixing: Internal spans
Corrugated	Side lap and every second rib	Side lap and every third rib
Close pitched trapezoidal	Side lap and every second rib	Side lap and every third rib
Trapezoidal	Every rib	Every rib
Concealed fasteners	Every rib	Every rib

(c) use fixings of a compatible metal to the roof in accordance with Tables 3.5.1.2a to 3.5.1.2d; and (d) when using both clipped and pierced fastening systems, employ an anti-capillary feature in the side lap of the sheet (see Figure 3.5.1.3).

As Above

Figure 3.5.1.3 Side lap fastening detail



3.5.1.6

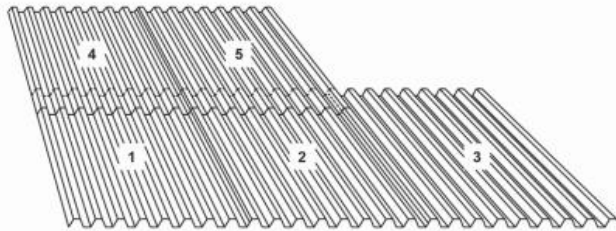
Installation of roofing sheets

Sheets must be—

- (a) laid wherever possible using complete lengths from the fascia to ridge; or
- (b) where a complete length cannot be laid—
 - (i) each run must be laid from bottom to top before moving on to the next run (see Figure 3.5.1.4); and
 - (ii) the minimum end lap must be—
 - (A) for roof slopes above 15 degrees (1:4) – 150 mm; and
 - (B) for roof slopes between 5–15 degrees (1:12-1:4) – 200 mm; and
- (c) stop ended (i.e. each valley turned up 60 degrees) at the ridge line of each length.

As Above

Figure 3.5.1.4 Sheet laying sequence



3.5.1.7

Flashings and cappings

(a) Sheet metal roof flashings and cappings must comply with the following:

- (i) Roof flashings and cappings must be purpose made, machine-folded sheet metal sections of material compatible with all up and downstream metal roof covering materials in accordance with 3.5.1.2(b).
- (ii) The type of fasteners for flashing and cappings must comply with 3.5.1.5.
- (iii) The fastener and fixing frequency for flashings and cappings must comply with Table 3.5.1.5.

Table 3.5.1.5 Fastener frequency for flashings and cappings

Roof type	Fixing frequency	Fastener type
Concealed fastener roofs	Every rib	Rivets and self drilling screws
Pierced fastener roofs	Every second rib	Self drilling screws or rivets
Corrugated roofs	Every fourth rib	Self drilling screws or rivets

(iv) Joints in flashings and cappings must be not less than 75 mm, lapped in the direction of the fall of the roof, and fastened at intervals not more than 40 mm.

(v) Wall and step flashings must be fastened into masonry walls with galvanized or zinc/aluminium sheet metal wedges at each end of each length and at intermediate intervals of not more than 500 mm and must overlap by not less than 75 mm in the direction of flow.

As Above

	<p>(vi) Lead flashings must not be used with prepainted steel or zinc/aluminium steel or on any roof if the roof is part of a potable (drinking) water catchment area.</p> <p>(vii) Anti-capillary breaks must be installed in accordance with Figure 3.5.1.5 and be—</p> <p>(A) for flat surfaces – 10 mm/30 degree fold; and</p> <p>(B) all other surfaces – 10 mm/90 degree or 135 degree fold.</p> <p>(b) Flashing of penetrations must comply with the following:</p> <p>(i) Collar flashings must permit the total drainage of the area above the penetration.</p> <p>(ii) On completion of installation, the roof structure must be restored to its original strength by installing roof trimmers and soaker supports as necessary.</p> <p>(iii) The type of fasteners for flashings and cappings must comply with 3.5.1.5.</p> <p>(iv) Lead flashings must not be used with prepainted steel or zinc/aluminium steel or on any roof if the roof is part of a potable drinking water catchment area.</p> <p>(v) Acceptable flashings for penetrations are shown in Figure 3.5.1.7.</p> <p>(vi) Clearance for heating appliance roof support members must be in accordance with Part 3.10.7.</p>	
3.5.1.8	<p>Water discharge</p> <p>Where an eaves gutter is provided in accordance with Part 3.5.3, sheets must overhang the fascia, or end batten where there is no fascia, by not less than 35 mm</p>	As Above

3.16 PART 3.5.2 – GUTTERS & DOWNPIPES

Clause	Requirement	Recommendation
3.5.2.2	Materials	Gutter and downpipe installation must comply with AS/NZS 3500 Provide construction method in Project Specification prior to Crown compliance Certificate.
3.5.2.3	Selection of guttering	
3.5.2.4	Installation of gutters	
3.5.2.5	Downpipes — size and installation	

3.17 PART 3.5.4 – WALL CLADDING

Clause	Requirement	Recommendation
3.5.4.1	<p>Application</p> <p>Compliance with this acceptable construction practice satisfies Performance Requirements P2.1.1 and P2.2.2 for wall cladding provided—</p> <p>(a) It is installed in accordance with—</p> <p>(i) 3.5.4.2 for timber cladding, including weatherboards and profiled boards; and</p> <p>(ii) 3.5.4.3 for fibre-cement and hardboard wall cladding boards; and</p> <p>(iii) 3.5.4.4 for fibre-cement, hardboard and plywood sheet wall cladding; and</p> <p>(b) fibre-cement sheet eaves where provided, are installed in accordance with 3.5.4.5; and</p> <p>(c) openings and penetrations in cladding are flashed in accordance with 3.5.4.6; and</p> <p>(d) the bottom surface of the cladding terminates in accordance with 3.5.4.7; and (e) parapets, where</p>	<p>Provide construction method in Project Specification prior to Crown compliance Certificate.</p> <p>A Compliance Certificate will be required on completion of works on site</p>

	provided, are flashed in accordance with 3.5.4.8.	
3.5.4.2	<p>Timber wall cladding</p> <p>Timber wall cladding must be installed as follows:</p> <p>(a) Splayed timber weatherboards must be fixed in accordance with Figure 3.5.4.1 and with a lap not less than—</p> <p>(i) 30 mm for hardwood, Cypress and treated pine; and</p> <p>(ii) 20 mm for Western Red Cedar; and</p> <p>(iii) 25 mm for Baltic Pine.</p> <p>(b) Profiled timber boards must be—</p> <p>(i) fixed in a horizontal, vertical or diagonal direction with the overlap and groove closely fitted, where provided; and</p> <p>(ii) with tongue and groove profile, fixed with tongue edge up, where they are fixed in a horizontal or diagonal direction; and</p> <p>(iii) where fixed in a vertical or diagonal direction, provided with a vapour permeable sarking complying with AS/NZS 4200.1 installed behind boards with—</p> <p>(A) each adjoining sheet or roll being—</p> <p>(aa) overlapped not less than 150 mm; or</p> <p>(bb) taped together; and</p> <p>(B) sarking fixed to supporting members at not more than 300 mm centres.</p> <p>(c) Splayed and profiled timber weatherboards must be fixed in accordance with Table 3.5.4.1, with—</p> <p>(i) one fixing at each stud or equivalent framing member for splayed timber weatherboards; and</p> <p>(ii) one fixing provided at each stud or equivalent framing member for profiled timber boards not more than 130 mm wide; and</p>	As Above

	<ul style="list-style-type: none"> (iii) two fixings provided at each stud or equivalent framing member for profiled timber board more than 130 mm wide; and (iv) fixings located so that the fixing does not penetrate the tip or thinner edge of the board beneath. 	
3.5.4.3	<p>Wall cladding boards</p> <p>Wall cladding boards must—</p> <ul style="list-style-type: none"> (a) for 7.5 mm (minimum) thick fibre-cement — comply with AS/NZS 2908.2 or ISO 8336; and (b) for 9.5 mm (minimum) thick hardboard — comply with AS/NZS 1859.4 for exterior grade; and (c) be fixed in accordance with Tables 3.5.4.2a and b with— <ul style="list-style-type: none"> (i) one fixing provided at each stud or equivalent framing member for wall cladding boards not more than 130 mm wide; and (ii) two fixings provided at each stud or equivalent framing member for wall cladding boards greater than 130 mm wide; and (iii) fixings located along the studs at not more than 100 mm centres; and (iv) fixings located so that they do not penetrate the tip or thinner edge of the board beneath; and (d) have a lap not less than— <ul style="list-style-type: none"> (i) for 7.5 mm (minimum) thick fibre-cement—25mm; or (ii) for 9.5 mm (minimum) thick hardboard—20 mm. 	As Above
3.5.3.5	<p>Eaves and soffit linings</p> <p>Where provided, external fibre-cement sheets and linings used as eaves and soffit linings must—</p> <ul style="list-style-type: none"> (a) comply with AS/NZS 2908.2 or ISO 8336; and (b) be fixed in accordance with Table 3.5.4.6 and Figure 	AS Above

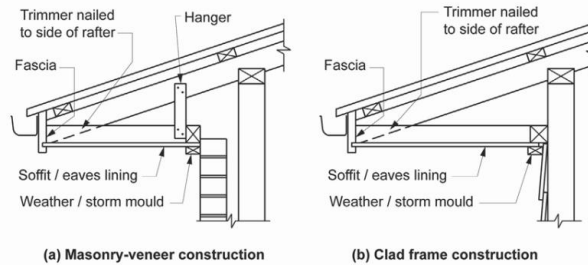
3.5.4.4 using—

- (i) 2.8×30 mm fibre-cement nails; or
- (ii) No. 8 wafer head screws (for 4.5 mm and 6 mm sheets only); or
- (iii) No. 8 self embedding head screws (for 6 mm sheets only).

Table 3.5.4.6 Trimmer and fastener spacings for 4.5 and 6 mm fibre-cement eaves and soffit linings

Maximum eaves width	Design wind speed	Maximum trimmer spacings (mm)		Maximum fastener spacings (mm)	
		Within 1200 mm of the external corners of the building	Elsewhere	Within 1200 mm of the external corners of the building	Elsewhere
600	N1	600	900	200	300
	N2	600	800	200	300
	N3	500	700	200	300
1200	N1	600	750	200	300
	N2	600	700	200	300
	N3	500	650	200	300

Figure 3.5.4.4 Eaves trimmer detail



3.5.3.6

Flashings to wall openings

Openings in external wall cladding exposed to the weather must be flashed with materials complying with AS/NZS 2904 and in accordance with the following:

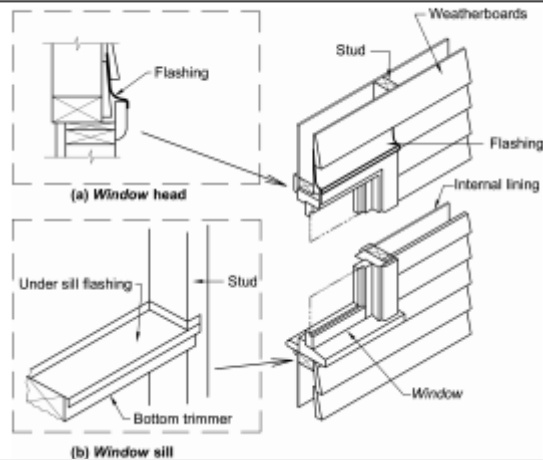
- (a) Flashings must be provided to bottom, tops and sides of openings, except as permitted by (d), and must be installed so that the flashing—
 - (i) extends not less than 110 mm beyond the reveals on each side of the opening where practicable; and

As Above

- | | |
|---|--|
| <ul style="list-style-type: none"> (ii) is attached to the window and wall framing; and (iii) at the top and bottom of the opening, drains to the outside face of the wall or cladding. (b) Joins in the flashing must— <ul style="list-style-type: none"> (i) overlap by not less than 75 mm in the direction of flow; and (ii) be securely fastened at intervals of not more than 40 mm; and (iii) have sealant installed between laps. (c) The method of flashing must be suitable for the framing and cladding used and any reveal for the window or door system or any architrave or finishing trims that may be installed. (d) The top of an opening need not be flashed where it is adequately protected by an eave of a width more than 3 times the height of the cladding above the opening (e) Flashings must be securely fixed at least 25 mm under the cladding and extend over the ends and edges of the framing of the opening. | |
|---|--|

Figure 3.5.3.5

TYPICAL WINDOW FLASHING DETAIL



3.5.5.0

Metal Wall Cladding

Application Performance Requirements P2.1.1 and P2.2.2 are satisfied for a metal wall cladding if it is designed and constructed in accordance with AS 1562.1.

Provide construction method in Project Specification prior to Crown compliance Certificate.

A Compliance Certificate will be required on completion of works on site

3.18**PART 3.6– GLAZING**

Clause	Requirement	Recommendation
3.6.2	Glazing sizes and installation	Glazing must comply with AS 1288 and AS 2047 Provide construction method in Project Specification prior to Crown compliance Certificate. A Compliance Certificate will be required on completion of works on site
3.6.3	Fully framed glazing installed in perimeter of buildings	
3.6.4	Human impact safety requirements	
3.6.4.1	Doors	
3.6.4.2	Door side panels	
3.6.4.3	Full height framed glazed panels	

3.6.4.4	Glazed panels, other than doors or side panels, on the perimeter of rooms	
3.6.4.5	Bathroom, ensuite and spa room glazing	
3.6.4.6	Visibility of glazing	

3.19**PART 3.7.1 – FIRE PROPERTIES FOR MATERIALS AND CONSTRUCTION**

3.7.1.3	<p>General concession — non-combustible materials</p> <p>The following materials, though combustible or containing combustible fibres, may be used wherever a non-combustible material is required in the Housing Provisions:</p> <ul style="list-style-type: none"> (a) Plasterboard. (b) Perforated gypsum lath with a normal paper finish. (c) Fibrous-plaster sheet. (d) Fibre-reinforced cement sheeting. (e) Pre-finished metal sheeting having a combustible surface finish not exceeding 1 mm thick and where the Spread- of-Flame Index of the product is not more than 0. (f) Sarking-type materials that do not exceed 1 mm in thickness and have a flammability index not greater than 5. (g) Bonded laminated materials where— <ul style="list-style-type: none"> (i) each lamina, including any core, is non-combustible; and (ii) each adhesive layer does not exceed 1 mm in thickness and the total thickness of the adhesive layers does not exceed 2 mm; and (iii) the Spread-of-Flame Index and the Smoke-Developed Index of the bonded laminated material as a whole do not exceed 0 and 3 respectively. 	Provide construction method in Project Specification prior to Crown compliance Certificate.
3.7.1.4	<p>Fire hazard properties</p> <p>The fire hazard properties of materials used in a Class 1</p>	For Reference

	<p>building, including floor or ceiling spaces common with a Class 10 building, must comply with the following:</p> <ul style="list-style-type: none"> (a) Sarking-type materials used in the roof must have a flammability index not greater than 5. (b) Flexible ductwork used for the transfer of products initiating from a heat source that contains a flame must comply with the fire hazard properties set out in AS 4254.1. 	
--	---	--

3.20

PART 3.7.2 – FIRE SEPARATION OF EXTERNAL WALLS

3.7.2.2	<p>External walls of Class 1 buildings</p> <p>An <i>external wall</i> of a Class 1 building, and any openings in that wall, must comply with 3.7.1.5 if the wall is less than—</p> <ul style="list-style-type: none"> (a) 900 mm from an allotment boundary other than the boundary adjoining a road alignment or other public space; or (b) 1.8 m from another building on the same allotment other than an appurtenant Class 10 building or a detached part of the same Class 1 building. 	For Reference
3.7.2.3	<p>Measurement of distances</p> <ul style="list-style-type: none"> (a) The distance from any point on an <i>external wall</i> of a building to an allotment boundary or another building is the distance to that point measured along a line at right angles from the allotment boundary or <i>external wall</i> of the other building which intersects that point without being obstructed by a wall complying with 3.7.1.5. (b) Where a wall within a specified distance is <i>required</i> to be constructed in a certain manner, only that part of the wall (including any openings) within the specified distance need be constructed in that manner. 	For Reference

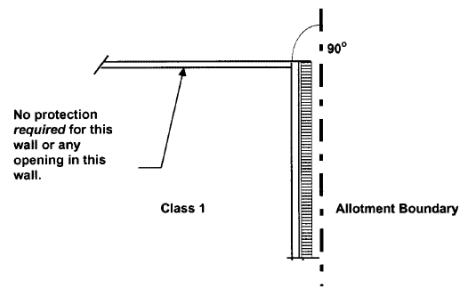
(see Figure 3.7.1.1 and 3.7.1.2a)

- (c) Where the distance measured is between buildings of different heights, the distance must be taken from the *external wall* with the highest elevation measured at right angles to a point that intersects a vertical projection above the adjacent wall (see Figure 3.7.1.2b).

Figure 3.7.1.1
WALLS AT RIGHT ANGLES TO THE BOUNDARY

Note:

1. No protection *required* for the wall at right angles or more to the boundary.
2. For protection of encroachments refer 3.7.1.7.



3.7.2.4

Construction of external walls

- (a) External walls (including gables) required to be fire-resisting (referred to in 3.7.2.2 or 3.7.2.5) must—
- (i) commence at the footings or ground slab, except where the external wall commences above a separating wall complying with 3.7.3.2; and
 - (ii) extend to—
 - (A) the underside of a non-combustible roof covering, except that a wall may terminate not more than 200 mm from the underside of a non-combustible roof covering, where the area between the external wall and underside of the roof covering is sealed with a non-combustible fascia, gutter or flashing; or
 - (B) the underside of a non-combustible eaves lining; and

Provide construction method in Project Specification prior to Crown compliance Certificate.

	<p>(iii) be constructed in accordance with (b).</p> <p>(b) A wall required by (a) must—</p> <p>(i) have an FRL of not less than 60/60/60 when tested from the outside; or</p> <p>(ii) be of masonry-veneer construction in which the external masonry veneer is not less than 90 mm thick; or</p> <p>(iii) be of masonry construction not less than 90 mm thick.</p> <p>(c) Openings in external walls required to be fire-resisting (referred to in 3.7.2.2 or 3.7.2.5) must be protected by—</p> <p>(i) non-openable fire windows or other construction with an FRL of not less than –/60/–; or</p> <p>(ii) self-closing solid core doors not less than 35 mm thick.</p> <p>(d) The requirements (c) do not apply to a window in a non-habitable room that is located adjacent to and not less than 600 mm from the boundary of an adjoining allotment or 1200 mm from another building on the same allotment provided that—</p> <p>(i) in a bathroom, laundry or toilet, the opening has an area of not more than 1.2 m²; or</p> <p>(ii) in a room other than one referred to in (i), the opening has an area of not more than 0.54 m² and—</p> <p>(A) the window is steel-framed, there are no opening sashes and it is glazed in wired glass; or</p> <p>(B) the opening is enclosed with translucent hollow glass blocks.</p> <p>(e) Subfloor vents, roof vents, weepholes, control joints, construction joints and penetrations for pipes, conduits and the like need not comply with (c).</p>	
3.7.2.7	<p>Allowable encroachments</p> <p>(a) An encroachment is any construction between the <i>external wall</i> of the building and the allotment boundary other than a boundary adjoining a road or other public space, or the <i>external walls</i> of two buildings on the same allotment and relates to any <i>external wall</i> of—</p>	<p>Provide construction method in Project Specification prior to Crown compliance Certificate.</p>

- | | | |
|--|--|--|
| | <ul style="list-style-type: none"> (i) a Class 10a building <i>required</i> to comply with 3.7.1.5; or (ii) a Class 1 building. <p>(b) The encroachments allowed within 900 mm of an allotment boundary or within 1.8 m of another building on the same allotment are—</p> <ul style="list-style-type: none"> (i) fascias, gutters and downpipes; and (ii) eaves with <i>non-combustible</i> roof cladding and <i>non-combustible</i> lining; and (iii) flues, chimneys, pipes, domestic fuel tanks, cooling or heating appliances or other services; and (iv) light fittings, electricity or gas meters, aerials or antennas; and (v) pergolas, sun blinds or water tanks; and (vi) unroofed terraces, landings, steps and ramps, not more than 1 m in height. <p>(c) Encroachments listed in (b)(i), if <i>combustible</i>, (b)(ii) and (b)(iii) must not be built within 450 mm of an allotment boundary nor be built within 900 mm of the <i>external wall</i> or associated encroachments of another building on the same allotment. (see Figure 3.7.1.9)</p> | |
|--|--|--|

3.21**PART 3.7.3 – FIRE PROTECTION OF SEPARATING WALLS AND FLOORS**

3.7.3.1	Application Compliance with this acceptable construction practice satisfies Performance Requirement P2.3.1 for protection of separating walls and floors.	For Reference
3.7.3.2	Separating walls	Provide construction method in Project Specification prior to Crown compliance Certificate.

- (a) A separating wall between Class 1 buildings, or a wall that separates a Class 1 building from a Class 10a building which is not associated with the Class 1 building must—
 - (i) have either— (A) an FRL of not less than 60/60/60; or (B) be of masonry construction not less than 90 mm thick; and
 - (ii) commence at the footings or ground slab (see Figure 3.7.3.1), except for horizontal projections to which 3.7.3.5 applies; and
 - (iii) extend—
 - (A) if the building has a non-combustible roof covering, to the underside of the roof covering; or
 - (B) if the building has a combustible roof covering, to not less than 450 mm above the roof covering; and
 - (iv) comply with (b) to (e) and 3.7.3.3 as applicable.
- (b) A separating wall of lightweight construction must be tested in accordance with Specification C1.8 of the NCC Volume One.
- (c) A separating wall complying with (a)(iii)(A)—
 - (i) must not be crossed by timber or other combustible building elements except for roof battens with dimensions of 75 x 50 mm or less, or roof sarking; and
 - (ii) must have any gap between the top of the wall and the underside of the roof covering packed with mineral fibre or other suitable fire-resisting material.
- (d) Where a building has a masonry veneer external wall, any gap between the separating wall and the external masonry veneer must be—
 - (i) not more than 50 mm; and
 - (ii) packed with a mineral fibre or other suitable fire resistant material with the packing arranged to maintain any weatherproofing requirements of Part 3.3.4.

	(e) Eaves, verandahs and similar spaces that are open to the roof space and are common to more than one Class 1 dwelling must be separated by a non-combustible vertical lining	
3.7.3.3	<p>Services in separating walls</p> <p>(a) Any service opening, other than those listed in (b), (c) and (d), in a separating wall must have construction with an FRL of not less than -/60/60.</p> <p>(b) If an electrical wire or cable penetrates a separating wall—</p> <p>(i) the service and building element at the penetration must—</p> <p>(A) be identical with a prototype assembly that has been tested in accordance with AS 4072.1 and AS 1530.4 and achieve an FRL of not less than -/60/60; or</p> <p>(B) differ from a prototype assembly of the service and building element in accordance with AS 4072.1; or</p> <p>(ii) the service must be installed so that—</p> <p>(A) the opening is neatly formed, cut or drilled and no closer than 50 mm to any other service; and</p> <p>(B) the opening is no larger in cross-section than—</p> <p>(aa) 2000 mm² if only a single cable is accommodated and the gap between the cable and the wall is no wider than 15 mm; or</p> <p>(bb) 500 mm² in any other case; and</p> <p>(C) any gap between the service and the wall is packed with mineral fibre or other suitable fire resistant material.</p> <p>(c) If an electrical switch, outlet, socket or the like is accommodated in a separating wall—</p> <p>(i) the service and building element at the penetration must—</p> <p>(A) be identical with a prototype assembly which has been tested in accordance with AS 4072.1 and AS 1530.4 and achieve an FRL of not less than -/60/60; or</p>	Provide construction method within the Architectural plans prior to Crown compliance Certificate.

	<p>(B) differ from a prototype assembly of the service and building element in accordance with AS 4072.1; or</p> <p>(ii) the service must be installed so that—</p> <p>(A) the opening or recess—</p> <p>(aa) is not located opposite any point within 300 mm horizontally or 600 mm vertically of any opening or recess on the opposite side of the wall; or</p> <p>(bb) does not extend beyond half the thickness of the wall; and</p> <p>(B) any gap between the service and the wall is packed with mineral fibre or other suitable fire resistant material.</p> <p>(d) Other than where a tested system is used in accordance with (c)(i), if an electrical switch, socket, outlet or the like is accommodated in a hollow separating wall, the cavity immediately behind the service must be framed and packed with mineral fibre or other suitable fire resistant material</p>	
3.7.3.5	<p>Horizontal projections</p> <p>(a) Where a horizontal projection forms part of a separating wall complying with 3.7.3.2, any horizontal projection within 1.8 m on each side of the separating wall (see Figure 3.7.3.4) must—</p> <p>(i) be a floor/ceiling or floor/soffit system incorporating a ceiling or soffit which has a resistance to the incipient spread of fire to the space above itself of not less than 60 minutes; or</p> <p>(ii) have an FRL not less than 30/30/30 when tested from the underside; or (iii) have a fire-protective covering on the underside of the floor, including beams incorporated in it, if the floor is combustible or of metal.</p> <p>(b) The part of the separating wall that projects outwards horizontally must—</p> <p>(i) extend to the underside of the floor/ceiling or floor/soffit</p>	Provide construction method in Project Specification prior to Crown compliance Certificate.

	<p>system complying with (a); and</p> <p>(ii) not be crossed by timber or other combustible building elements except for framing members with dimensions of 75 x 50 mm or less, or sarking; and</p> <p>(iii) have any gap between the bottom of the wall and the underside of the floor/ceiling or floor/soffit system packed with mineral fibre or other suitable fire-resisting material.</p> <p>(c) Where a floor subject to (a)(ii) depends on direct vertical or lateral support from another part to maintain its FRL, that supporting part must have an FRL of not less than 30/-/-.</p> <p>(d) Where a service passes through a floor referred to in (a), the penetration must not reduce the fire performance of the floor or covering.</p>	
--	--	--

3.22 PART 3.7.2 – SMOKE ALARMS

Clause	Requirement	Recommendation
3.7.2.2	Requirements for smoke alarms	Smoke alarm installation must comply with AS 3786. Provide construction method in Project Specification prior to Crown compliance Certificate.
3.7.2.3	Location — Class 1a buildings	Smoke alarms must be provided within hallways leading to a bedroom Where more than 1 smoke alarm is provided to a dwelling the alarms must be interlinked.

3.23 PART 3.8.1 – WET AREAS

Clause	Requirement	Recommendation
3.8.1.2	Wet Areas	Waterproofing to wet areas must comply with AS 3740

		Provide construction method in Project Specification prior to Crown compliance Certificate.
--	--	---

3.24 PART 3.8.2 – ROOM HEIGHTS

Clause	Requirement	Recommendation
3.8.2.2	<p>Ceiling heights</p> <p>Ceiling heights (see Figure 3.8.2.1) must be not less than—</p> <ul style="list-style-type: none"> (a) in a <i>habitable room</i> excluding a kitchen — 2.4 m; and (b) in a kitchen — 2.1 m; and (c) in a corridor, passageway or the like — 2.1 m; and (d) in a bathroom, shower room, laundry, <i>sanitary compartment</i>, airlock, pantry, storeroom, garage, car parking area or the like — 2.1 m; and (e) in a room or space with a sloping ceiling or projections below the ceiling line within— <ul style="list-style-type: none"> (i) a <i>habitable room</i>— <ul style="list-style-type: none"> (A) in an attic — a height of not less than 2.2 m for at least two-thirds of the floor area of the room or space; and (B) in other rooms — a height of not less than 2.4 m over two-thirds of the floor area of the room or space; and (ii) a <i>non-habitable room</i> — a height of not less than 2.1 m for at least two-thirds of the floor area of the room or space, <p>and when calculating the floor area of a room or space, any part that has a ceiling height of less than 1.5 m is not included; and</p> 	Provide construction method in Project Specification prior to Crown compliance Certificate.

(f) in a stairway — 2.0 m measured vertically above the nosing line

3.25 PART 3.8.3 – SANITARY FACILITIES

Clause	Requirement	Recommendation
3.8.3.2	<p>Required facilities</p> <p>(a) A Class 1 building must be provided with—</p> <p>(i) a kitchen sink and facilities for the preparation and cooking of food; and</p> <p>(ii) a bath or shower; and</p> <p>(iii) clothes washing facilities, comprising at least one washtub and space in the same room for a washing machine; and</p> <p>(iv) a closet pan; and</p> <p>(v) a washbasin.</p> <p>(b) If any of the facilities in (a) are detached from the main building, they must be set aside for the exclusive use of the occupants of the building.</p>	Provide construction method in Project Architectural plans prior to Crown compliance Certificate.

3.26 PART 3.8.4 – LIGHT

Clause	Requirement	Recommendation
3.8.4.2	<p>Natural lighting</p> <p>Natural lighting must be provided in a Class 1 building to all <i>habitable rooms</i>, in accordance with the following:</p> <p>(a) Natural lighting must be provided by—</p> <p>(i) <i>windows</i>, excluding <i>roof lights</i> that—</p> <p>(A) have an aggregate light transmitting area measured exclusive of framing members, glazing bars or other</p>	Provide construction method in Project plans prior to Crown compliance Certificate.

	<p>obstructions of not less than 10% of the <i>floor area</i> of the room; and</p> <p>(B) are open to the sky or face a court or other space open to the sky or an open verandah, carport or the like; or</p> <p>(ii) <i>roof lights</i> that—</p> <p>(A) have an aggregate light transmitting area measured exclusive of framing members, glazing bars or other obstructions of not less than 3% of the <i>floor area</i> of the room; and</p> <p>(B) are open to the sky; or</p> <p>(iii) a proportional combination of <i>windows</i> and <i>roof lights</i> required by (i) and (ii).</p>	
3.8.4.3	Artificial lighting	<p>Artificial Lighting must comply with AS 1680.0</p> <p>Provide construction method in Project Specification prior to Crown compliance Certificate.</p>

3.27

PART 3.8.5 – VENTILATION

3.8.5.2	<p>Ventilation requirements</p> <p>Ventilation must be provided to a <i>habitable room, sanitary compartment</i>, bathroom, shower room, laundry and any other room occupied by a person for any purpose by any of the following means:</p> <p>(a) Permanent openings, <i>windows</i>, doors or other devices which can be opened—</p> <p>(i) with an aggregate opening or openable size not less than 5% of the <i>floor area</i> of the room <i>required</i> to be ventilated; and</p> <p>(ii) open to—</p>	<p>Provide construction method in Project plans prior to Crown compliance Certificate.</p>
---------	--	--

- (A) a suitably sized court, or space open to the sky; or
 - (B) an open verandah, carport, or the like; or
 - (C) an adjoining room in accordance with (b).
- (b) Natural ventilation to a room may come through a *window*, opening, ventilating door or other device from an adjoining room (including an enclosed verandah) if—
- (i) the room to be ventilated or the adjoining room is not a *sanitary compartment*; and
 - (ii) the *window*, opening, door or other device has a ventilating area of not less than 5% of the *floor area* of the room to be ventilated; and
 - (iii) the adjoining room has a *window*, opening, door or other device with a ventilating area of not less than 5% of the combined *floor areas* of both rooms; and
 - (iv) the ventilating areas specified may be reduced as appropriate if direct natural ventilation is provided from another source.
- (See Figure 3.8.5.1)
- (c) An exhaust fan or other means of mechanical ventilation may be used to ventilate a *sanitary compartment*, laundry or bathroom provided contaminated air exhausts—
- (i) directly to outside the building by way of ducts; or
 - (ii) into a roof space that—
 - (A) is adequately ventilated by open eaves, and/or roof vents; or
 - (B) is covered by roof tiles without sarking or similar materials which would prevent venting through gaps between the tiles.

3.28

PART 3.8.6 – SOUND INSULATION

3.8.6.2	<p>Sound insulation requirements</p> <p>(a) To provide insulation from airborne and impact sound, a separating wall between two or more Class 1 buildings must—</p> <p>(i) achieve the weighted sound reduction index with spectrum adaptation term (R_C) and discontinuous construction requirements, as required by Table 3.8.6.1; and R_w tr</p> <p>(ii) be installed in accordance with the appropriate requirements of 3.8.6.3 and 3.8.6.4.</p> <p>(b) For the purpose of this Part, the R + C AS/NZS 1276.1 or ISO 717.1, using results from laboratory measurements. must be determined in accordance with</p>	Provide construction method in Project plans prior to Crown compliance Certificate.
3.8.6.3	<p>General installation requirements for walls</p> <p>(a) To achieve the appropriate level of sound insulation, walls must—</p> <p>(i) be constructed in accordance with the appropriate requirements contained in (b) to (f); and</p> <p>(ii) at the junction of sound insulated walls with any perimeter walls and roof cladding, be sealed in accordance with Figure 3.8.6.2.</p> <p>(c) Masonry units must be laid with all joints filled solid, except for adequately sound insulated articulation joints, including those between the masonry and any adjoining construction.</p> <p>(c) Concrete panels must have joints between panels and any adjoining construction filled solid.</p> <p>(d) Plasterboard must be installed as follows:</p> <p>(i) If one layer is required on both sides of a wall the joints must be staggered on opposite sides (See Figure 3.8.6.3).</p> <p>(ii) If two layers are required, the first layer must be fastened in accordance with (i) and the second layer joints must not coincide with those of the first layer (See Figure 3.8.6.3).</p> <p>(iii) The following joints must be taped and filled solid:</p>	Provide construction method in Project plans prior to Crown compliance Certificate.

	<p>(A) Outer layer joints between sheets.</p> <p>(B) Joints between sheets and any adjoining construction.</p> <p>(f) Timber studs and perimeter members must be installed as follows:</p> <p>(i) Studs must be fixed to top and bottom plates of sufficient depth to permit secure fixing of the plasterboard.</p> <p>(ii) Noggings and like members must not bridge between studs supporting different wall leaves.</p> <p>(iii) All timber members at the perimeter of the wall must be securely fixed to the adjoining structure and bedded in resilient compound or the joints must be caulked so there are no voids between the timber members and the wall.</p>	
3.8.6.4	<p>Services</p> <p>(a) Services must not be chased into concrete or masonry separating walls.</p> <p>(b) If a duct, soil, waste, water supply or storm water pipe serves or passes through a separating wall or is located in a separating wall—</p> <p>(i) a door or panel providing access to a duct or pipe required to be separated must—</p> <p>(A) not open into any habitable room, other than a kitchen; and</p> <p>(B) in any other part must be firmly fixed so as to overlap the frame or rebate of the frame by not less than 10 mm and be constructed of—</p> <p>(aa) wood, plasterboard or blockboard not less than 33 mm thick; or</p> <p>(bb) compressed fibre reinforced cement sheeting not less than 9 mm thick; or</p> <p>(cc) other suitable material with a mass per unit area not less than 24.4 kg/m² ; and</p> <p>(ii) in the case of a water supply pipe, it must—</p> <p>(A) only be installed in discontinuous construction; and</p> <p>(B) in the case of a water supply pipe that serves one</p>	Provide construction method in Project plans prior to Crown compliance Certificate.

	<p>dwelling, not be fixed to the wall leaf on the side of any other dwelling and have a clearance not less than 10 mm to the other wall leaf.</p> <p>(c) Electrical outlets must be offset from each other—</p> <p>(i) in masonry walling, not less than 100 mm; and</p> <p>(ii) in timber or steel framed walling, not less than 300 mm.</p>	
3.8.6.5	<p>General installation requirements for walls</p> <p>(a) To achieve the appropriate R_w and impact sound resistance, walls must—</p> <p>(i) be installed in accordance with the appropriate requirements contained in (b) to (f); and</p> <p>(ii) at the junction of sound insulated walls with perimeter walls and roof cladding, be sealed in accordance with any relevant detail in Figure 3.8.6.3.</p> <p>(b) Masonry units must—</p> <p>(i) be laid with all joints filled solid, including those between the masonry and any adjoining construction; and</p> <p>(ii) not be chased for services.</p> <p>(c) Joints between concrete slabs, wall units and any adjoining construction must be filled solid.</p> <p>(d) Plasterboard must be installed as follows:</p> <p>(i) If one layer is required under this Part, joints must be staggered with the joints in sheets on the opposite face of the wall.</p> <p>(ii) If 2 layers are required, the first layer must be fixed according to (i) and the second layer must be fixed to the first layer with nails, screws or adhesive so that the joints do not coincide with those of the first layer.</p> <p>(iii) Joints between sheets or between sheets and any adjoining construction must be taped and filled solid.</p> <p>(iv) Fire-protective grade plasterboard (when nominated) must be the grade manufactured for use in fire-resisting construction.</p> <p>(f) Timber studs and perimeter members must be installed</p>	<p>Provide construction method in Project plans prior to Crown compliance Certificate.</p>

as follows:

- (i) Studs must be fixed to top and bottom plates of sufficient depth to permit secure fixing of the plasterboard.
 - (ii) Noggings and like members must not bridge between studs supporting different wall leaves.
 - (iii) All timber members at the perimeter of the wall must be securely fixed to the adjoining structure and bedded in resilient compound or the joints must be caulked so there are no voids between the timber members and the wall.
- 3.8.6.4 Soil and waste pipes If a soil or waste pipe passes through a separating wall—
- (a) a door or panel providing access to the pipe must not open into any habitable room, other than a kitchen; and
 - (b) an access door or panel in any other part must be firmly fixed so as to overlap the frame or rebate of the frame by not less than 10 mm, be fitted with a sealing gasket along all edges and constructed of—
 - (i) wood, plasterboard or blockboard not less than 38 mm thick; or
 - (ii) compressed fibre reinforced cement sheeting not less than 9 mm thick; or
 - (iii) other suitable material with a mass per unit area not less than 24.4 kg/m².

3.29

PART 3.8.7 – PLIABLE BUILDING MEMBRANE

3.8.7.2

Pliable building membrane

- (a) Where a pliable building membrane is installed in an external wall, it must—
 - (i) comply with AS/NZS 4200.1; and
 - (ii) be installed in accordance with AS 4200.2; and
 - (iii) be a vapour permeable membrane for climate zones 6,

Detail on plans OR Provide construction method in Project Specification prior to Crown compliance Certificate.

	<p>7 and 8; and</p> <p>(iv) be located on the exterior side of the primary insulation layer of wall assemblies that form the external envelope of a building.</p> <p>(b) Except for single skin masonry or single skin concrete, where a pliable building membrane is not installed in an external wall, the primary water control layer must be separated from water sensitive materials by a drained cavity.</p>	
3.8.7.3	<p>Flow rate and discharge of exhaust systems</p> <p>(a) An exhaust system installed in a kitchen, bathroom, sanitary compartment or laundry must have a minimum flow rate of— (i) 25 L/s for a bathroom or sanitary compartment; and</p> <p>(ii) 40 L/s for a kitchen or laundry.</p> <p>(b) Exhaust from a bathroom, sanitary compartment, or laundry must be discharged—</p> <p>(i) directly or via a shaft or duct to outdoor air; or</p> <p>(ii) to a roof space that is ventilated in accordance with 3.8.7.4.</p>	Detail on plans OR Provide construction method in Project Specification prior to Crown compliance Certificate.
3.8.7.4	<p>Ventilation of roof spaces</p> <p>(a) Where an exhaust system covered by 3.8.7.3 discharges into a roof space, the roof space must be ventilated to outdoor air through evenly distributed openings.</p> <p>(b) Openings required by (a) must have a total unobstructed area of 1/300 of the respective ceiling area if the roof pitch is more than 22°, or 1/150 of the respective ceiling area if the roof pitch is not more than 22°.</p> <p>(c) 30% of the total unobstructed area required by (b) must be located not more than 900 mm below the ridge or highest point of the roof space, measured vertically, with</p>	Detail on plans OR Provide construction method in Project Specification prior to Crown compliance Certificate.

the remaining required area provided by eave vents.	
---	--

3.30**PART 3.9.1 – STAIR CONSTRUCTION****3.9.1.2****Stairway construction**

- (a) A stairway must be designed to take loading forces in accordance with AS/NZS 1170.1 and must have—
- (i) not more than 18 and not less than 2 risers in each flight; and
 - (ii) goings (G), risers (R) and a slope relationship quantity ($2R + G$) in accordance with Table 3.9.1.1, except as permitted by (b) and (c); and
 - (iii) constant goings and risers throughout each flight, except as permitted by (c) and (d), and the dimensions of goings (G) and risers (R) in accordance with (a), (b) and (c) are considered constant if the variation between—
 - (A) adjacent risers, or between adjacent goings, is no greater than 5 mm; and
 - (B) the largest and smallest riser within a flight, or the largest and smallest going within a flight, does not exceed 10 mm; and
 - (iv) risers which do not have any openings that would allow a 125 mm sphere to pass through between the treads
- c) In the case of a stairway with winders—
- (i) a maximum of 3 consecutive winders in lieu of a quarter landing in a flight and a maximum of 6 consecutive winders in lieu of a half landing in a flight; and
 - (ii) the going (G) of all winders in lieu of a quarter or half landing may vary from the going of the straight treads within the

Detail on plans OR Provide construction method in Project Specification prior to Crown compliance Certificate.

	same flight provided that the going (G) of such winders is constant															
3.9.1.4	<p>Slip-resistance The requirements for slip-resistance treatment to stair treads, ramps and landings are as follows:</p> <ul style="list-style-type: none"> (a) Treads must have— (i) a surface with a slip-resistance classification not less than that listed in Table 3.9.1.3 when tested in accordance with AS 4586; or (ii) a nosing strip with a slip-resistance classification not less than that listed in Table 3.9.1.3 when tested in accordance with AS 4586. (b) The floor surface of a ramp must have a slip-resistance classification not less than that listed in Table 3.9.1.3 when tested in accordance with AS 4586. (c) Landings, where the edge leads to the flight below, must have— (i) a surface with a slip-resistance classification not less than that listed in Table 3.9.1.3 when tested in accordance with AS 4586, for not less than 190 mm from the stair nosing; or (ii) a nosing strip with a slip-resistance classification not less than that listed in Table 3.9.1.3 when tested in accordance with AS 4586. <p>Table 3.9.1.3 SLIP-RESISTANCE CLASSIFICATION</p> <table border="1"> <thead> <tr> <th rowspan="2">Application</th><th colspan="2">Surface conditions</th></tr> <tr> <th>Dry</th><th>Wet</th></tr> </thead> <tbody> <tr> <td>Ramp not steeper than 1:8</td><td>P4 or R10</td><td>P5 or R12</td></tr> <tr> <td>Tread surface</td><td>P3 or R10</td><td>P4 or R11</td></tr> <tr> <td>Nosing or landing edge strip</td><td>P3</td><td>P4</td></tr> </tbody> </table>	Application	Surface conditions		Dry	Wet	Ramp not steeper than 1:8	P4 or R10	P5 or R12	Tread surface	P3 or R10	P4 or R11	Nosing or landing edge strip	P3	P4	Detail on plans OR Provide construction method in Project Specification prior to Crown compliance Certificate.
Application	Surface conditions															
	Dry	Wet														
Ramp not steeper than 1:8	P4 or R10	P5 or R12														
Tread surface	P3 or R10	P4 or R11														
Nosing or landing edge strip	P3	P4														
3.9.1.5	<p>Thresholds Where a threshold is more than 190 mm above the adjoining</p>	Detail on plans OR Provide construction method in Project Specification prior to Crown compliance Certificate.														

	surface it must incorporate steps having <i>riser</i> and <i>going</i> dimensions in accordance with 3.9.1.4	
3.9.1.6	<p>Landings Landings must—</p> <ul style="list-style-type: none"> (a) be not less than 750 mm long and where this involves a change in direction, the length is measured 500 mm from the inside edge of the landing ; and (b) have a gradient not steeper than 1:50; and (c) be provided where the sill of a threshold of a doorway opens onto a stairway or ramp that provides a change in floor level or floor to ground level greater than 3 risers or 570 mm and (d) extend across the full width of a doorway; and (e) in the case of a stairway serving only non-habitable rooms, such as attics, storerooms and the like that are not used on a regular or daily basis, the requirements of (a) may be substituted with a minimum length of landing being not less than 600 mm long. 	Detail on plans OR Provide construction method in Project Specification prior to Crown compliance Certificate.

3.31**PART 3.9.2 – BALUSTRADES**

3.9.2.3	<p>Construction of barriers to prevent falls</p> <ul style="list-style-type: none"> (a) The height of a barrier required by 3.9.2.2 must be in accordance with the following: <ul style="list-style-type: none"> (i) The height must not be less than 865 mm above the nosings of the stair treads or the floor of a ramp. (ii) The height must not be less than— (A) 1 m above the floor of any access path, balcony, landing or the like; or 	Detail on plans OR Provide construction method in Project Specification prior to Crown compliance Certificate.
---------	---	--

	<p>(B) 865 mm above the floor of a landing to a stair or ramp where the barrier is provided along the inside edge of the landing and does not exceed a length of 500 mm.</p> <p>(b) A transition zone may be incorporated where the barrier height changes from 865 mm on the stair flight or ramp to 1 m at the landing</p> <p>(c) Openings in barriers (including decorative balustrades) must be constructed so that they do not permit a 125 mm sphere to pass through it and for stairs, the opening is measured above the nosing line of the stair treads.</p> <p>(d) A barrier to a stairway serving a non-habitable room, such as an attic, storeroom or the like that is not used on a regular or daily basis, need not comply with (c) if—</p> <p>(i) openings are constructed so that they do not permit a 300 mm sphere to pass through; or</p> <p>(ii) where rails are used, the barrier consists of a top rail and an intermediate rail, with the openings between rails not more than 460 mm.</p> <p>(e) A barrier, except a window serving as a barrier, must be designed to take loading forces in accordance with AS/NZS 1170.1.</p>	
3.9.2.4	<p>Handrails</p> <p>(a) Handrails to a stairway or ramp must—</p> <p>(i) be located along at least one side of the flight or ramp; and</p> <p>(ii) be located along the full length of the flight or ramp, except in the case where a handrail is associated with a barrier the handrail may terminate where the barrier terminates; and</p> <p>(iii) have the top surface of the handrail not less than 865 mm vertically above the nosings of the stair treads or the floor surface of the ramp; and</p> <p>(iv) have no obstruction on or above them that will tend to break a handhold, except for newel posts, ball type stanchions, or the like.</p> <p>(b) The requirements of (a) do not apply to—</p>	Detail on plans OR Provide construction method in Project Specification prior to Crown compliance Certificate.

	(i) a stairway or ramp providing a change in elevation of less than 1 m	
--	--	--

Author**KIERAN TOBIN****ACCREDITED CERTIFIER BPB NO 0409**27 April 2022
