

Multiproof compliance assessment report



The following example is for a semi-detached house, and shows the type of information you should provide as part of an application.

MULTIPROOF APPLICATION – COMPLIANCE ASSESSMENT REPORT				
Design name	Luna 2-bed			
Design description	2 bedroom single storey semi-detached with garage, floor area 139m². Timber framed with zone, foundation, plan, cladding, window and heating options.			
Classified use	Housing - Multi-unit dwelling (attached dwelling)			
Importance level	Importance level 2			

GENERAL	
Wind zones	Medium; High; Very high
Earthquake zone	Up to Zone 3
Subsoil classification	Up to Class E – Very soft soil types
Live loads	Up to 2 kPa
Snow loads	Up to 1.0 kPa
Exposure	Up to Zone C
Climate	Zones 1 & 2; Zone 3
Specified intended life	Not less than 50 years

CLAUSE/ELEMENT/COMPONENT	HOW COMPLIES
B1 Structure	
Ground	Foundation option limited to good ground as defined in NZS 3604 – ultimate bearing capacity of 300kPa. Site specific foundation option permitted where bearing capacity is less than this.
Foundation option 1	Concrete complying with NZS 3604. 20Mpa concrete complying with NZS 3104 for manufacture and NZS 3109 for construction Reinforcing complying with AS/NZS 4671. Bars shall be grade 300E. Mesh shall be grade 500N or 500E. 1:10 details provided (sheet 8) for foundation edge details, to internal loadbearing walls, and bottom plate fixings. Details based on NZS 3604.



Foundation option 2						
		Calculations, details and specifications, Producer Statement PS1 Design and Certificate of Design Work provided by LBP Rod Bridges CPEng 9999999. 1:10 details provided (sheet 8a)				
Framing	B1/AS1 specifie	B1/AS1 specified as means of compliance.				
	Timber comply	Timber complying with NZS 3602.				
		Table on framing plan (sheet 3) specifies sizes and grades of all wall, roof and ceiling framing and sizes for Medium, High and Very high wind zones.				
		ication schedules all fixing		ones.		
Wall framing	except interter centres for loa	Loadbearing and non-loadbearing walls defined on framing plan (sheet 3). All walls except intertenancy wall are 2.4m. 90 x 45 SG 8 used for all framing. Studs at 400ml centres for load bearing walls in Very high wind zones. 600mm centres for all other wind zones and non-loadbearing walls.				
		s thickness 90mm from	Table 8.5			
		valls framed from 140 x 4! Il increases up to maximu iming table.				
Lintels	Lintels shown	on framing plan (sheet 3)). Sizes to NZS 360	04 Table 8.9 fc	or light roof.	
Bracing	Calculations p	rovided for each wind zor	ne. GIB EzyBrace 2	011 Software ເ	ısed.	
	Bracing sum	mary				
				Wind zones		
			Med	High	Very High	
	Wind	Demand across	x	xx	xxx	
		Demand along	У	уу	ууу	
		Achieved across	X+	XX+	xxx+	
		Achieved along	у+	уу+	ууу+	
	Earthquake	Demand	z	Z	z	
		Achieved	Z+	Z++	Z++	
Roof framing	Technical spec	Bracing coded and dimensioned on framing plan. Technical specifications for bracing elements included in the specification. Verification Method B1/VM1 referenced for truss design.				
	Calculations, la	ations uses Eze-span NZ L ayout, fixings, Producer S I by LBP Rod Steel CPEng	statement PS1, De	_	ficate of Design	
	All other mem	bers and fixings to NZS36 ncillary framing members	604. Roof framing	plan provided	l locating roof	
Ceiling framing	Sizes to NZS 3	604 shown in table (shee	t 3).			
B2 Durability						
Foundation option 1	·	20 Mpa concrete complying with NZS 3101 Concrete Structures Part 1 Section 3 Reinforcing cover dimensioned.				
Foundation option 2		RibRaft – CodeMark – Certificate of Conformity CMA-CM40015 (Rev 2) covers compliance with B2				
Walls	H1.2 for all wal	NZS 3604 and B2/AS1 Table 1A referenced. H1.2 for all wall framing. H3.1 for cavity battens. H3.2 for weatherboard, external trim, window/door reveals.				

Roof	B2/AS1 Table 1A referenced. H1.2 for all trusses, roof framing, bracing and purlins. Coated steel roofing specified. Two products nominated as alternatives. uPVC gutters and downpipes specified. Technical specifications provided.				
Other	Windows and flashings specified as prefinished anodised aluminium. Anodising 25 micron thickness complying with NZ Specification WANZ SFA 3503-03:2005				
Steel fixings and fastenings	Specified as galva	nised steel comp	lying with NZS 36	04 4.4	
Compatibility of materials	Compliance with t	ables 21 and 22 o	f E2/AS1 reference	ed in specificatior	ı.
C Protection from fire	C/AS1 specified as	means of compli	ance. Risk group	SH.	
C2 Prevention of fire occurring	Gas burning applia C/AS1 referenced. Recess downlights				d cooking.
C3 Fire affecting areas beyond the fire source	Intertenancy wall required to be 30/30/30 FRR. 2 layers of 10mm xxx standard plaster board specified. Products and installation specification nominated and provided. Sealants specified. 1:5 details provided at floor, ceiling, roof and external wall junctions. Note on drawings - services penetrations not permitted. C3.2 does not apply. Building height less than 10m. C3.3 does not apply. Building eaves noted on plan as to be located not less than 1m from any boundary. C3.4 does not apply within household units in multi-unit dwellings.				
C4 Movement to a place of safety	Type 1 smoke alarr Dead end open pa				s plan.
C5 Access and safety for firefighting operations	C5.3 - C5.8 do not	apply within hou	sehold units in m	ulti-unit dwelling	S.
C6 Structural stability	Intertenancy wall	required to be 30	/30/30 FRR.		
D1 Access Routes	D/AS1 specified as means of compliance. Single 190 mm step dimension at entrance doors. All other access is site specific.				
D2 Mechanical installations for access	Does not apply.				
E1 Surface Water	E1/AS1 specified as means of compliance. Roof pitch, areas of roof, downpipe and gutter locations shown on the roof plan (sheet 5). uPVC gutter profile specified. Nominal cross sectional area of gutter allows for a maximum of 45m² of roof at a roof pitch of 0-25° (from fig 15). Downpipe allows for up to 60m² at roof pitch of 0-25°.				
	Gutters and do	wnpipes			
	Roof section	Areas (m²)	Downpipes (65NB)	Min gutter size (mm²)	Proposed gutter (mm²)
	А	23	1	4000	>5130
	В	26	1	4000	>5130
	С	35	1	4000	>5130
	D	32	1	4000	>5130
	E	44*	1	~5000	>5130
	F	44*	1	~5000	>5130
	* Includes handed	l area of roof of tl	ne adjacent unit.		

E2 External Moisture	E2/AS1 specified as means of compliance. Risk matrix provided on sheet 7.				
	Risk factor	Wir	nd zones - subto	otals	
	Risk factor	Med	High	Very High	
	Wind zone	0	1	2	
	No. of storeys	0	0	0	
	Roof/Wall intersection	0	0	0	
	Eaves width	1	1	1	
	Envelope complexity	0	0	0	
	Deck design	0	0	0	
	Risk score	1	2	3	
	Achieves a total risk score of les	s than 6 for Med, H	igh and Very high	wind zones.	
Floor	DPM specified and installation d provided for specified product.	etailed for foundat	ion option 1. BRA	NZ appraisal	
Walls	Minimum height above ground s	specified.			
	Bevel-backed weatherboard direct fixed. 1:5 details (sheets 9-10) provided at base, internal and external corners, eaves and barges; sill, jambs and head of windows and doors; and services penetrations. Detail also provided for optional deck fixing. Details all based on E2/AS1. Flashings, underlay and weatherboard joints specified. Flashings dimensioned. BRANZ appraisals provided for specified wall underlay and flashing tapes.				
Windows/doors	Window brand and range specified. Manufacturer required to be a member of WANZ and provide test results on request. NZS 4211: 2008 Specification for the Performance of Windows referenced. Specification requires windows the frames to be labelled, in accordance with NZS 4211, to show the brand, the standard, the wind zone or wind pressures and the air infiltration level. The WANZ Guide to Window Installation as described in E2/AS1 Amendment 5 referenced.				
Roof	0.4mm corrugated roofing specified. Two products nominated. Roof pitch 15°. 1:5 details provided (sheet 11) for eaves, barge, ridge, and roof penetrations. Roofing, flashings, underlay, fixings, installation, and manufacturing standards specified. Alternative solution for roof lights: design of flashings to roof lights, and roofing installation detailed to comply with NZ Metal Roofing Manufacturers Inc. code of practice Metal Roofing Design and Installation Handbook.				
E3 Internal moisture	E ₃ /AS ₁ specified as means of cor	npliance.			
Floor	Water splash areas identified. Wet areas: Tile underlay, membrane and sealants specified. 1: 5 details (sheet 15) provided for edges, junctions and drainage outlets. BRANZ appraisal provided for membrane. Vinyl and tile options provided to laundry. Minimum area defined. Coving detailed. Overflow to tub and floor outlet specified (sheet 18).				
Walls	Water splash areas identified. Paint finishes specified. Wet areas: Tile underlay, membrane and sealants specified. 1: 5 details (sheet 15) provided for edges, junctions and penetrations. BRANZ appraisal provided for membrane.				

Thermal resistance	R 2.2 fibreglass insulation specified to external walls and internal garage wall. R 3.6 fibreglass insulation specified to ceilings increasing to R 4.0 in Zone 3. R-value calculations provided.				
	R-values	Marian	Additional		
	Walls	Minimum	Achieved Min 2.07		
	Ceiling	1.5	Min 3.1		
	Insulation detailed and brand		1-1111 3-1		
F1 Hazardous agents on site	Not applicable for MultiProof.				
F2 Hazardous building materials F2/AS1 specified as means of compliance.					
		ver enclosure, window over ba	th, glazed doors,		
		•			
F3 Hazardous substances and process	Not applicable.				
F4 Saftey for falling	Only applies to deck option where deck or steps are 1m or more above the ground. F4/AS1 specified as means of compliance. Glazed and timber options detailed. Elevations and sections provided for 1m high deck barrier and 0.9m stair barrier.				
F5 Construction and demolition hazards	Not applicable.				
F6 Visibility in escape routes	Not applicable.				
F7 Warning systems	F7/AS1 specified as means of compliance. Type 1 Domestic smoke alarm system specified. Smoke alarms located on plan (sheet 16). Product standards nominated in specification.				
F8 Signs	Not applicable.				
F9 Restricting access to residential pools	Not applicable.				
G1 Personal hygiene	G1/AS1 specified as means of compliance. WC pan and cistern, basin, bath/shower options located and specified. Manufacturing standards specified. WC separated from kitchen by door. >200mm door clearance provided to pan.				
G2 Laundering	G2/AS1 specified as means of compliance. Laundry tub located and specified. Space and service connections specified for washing machine. Hot and cold water supplies specified.				
G3 Food preparation	G3/AS1 specified as means of compliance. Sink and sink bench material options specified. Layout options shown. Each contain a sink, cooker, space for a fridge, storage under sink bench, and list options for additional storage, dishwasher and range hood. Painted surfaces specified with glass and stainless steel options behind the cooking top.				

G4 Ventilation

G4/AS1 specified as means of compliance.

Table below provides the room areas, the minimum opening size of window required for compliance and the area of ventilation achieved.

Ventilation areas shown on window/door schedule (sheet 11).

Natural ventilation to comply with G4/A51						
	Room area (m²)	Min vent area (m²)	Window options	Achieved (m²)		
Living/Kitchen	55	2.75	D2/D3/W1	5.4		
			D2/D3/D3	5.94		
Bed 1	18	0.9	W1 or D3	1.08-1.62		
Bed 2	14	0.7	W1 or W3	1.08-1.62		
Bathroom	8	0.4	W2	0.5		
Garage/Laundry	20/8	0/0.4	D4	0.4		

Vents specified for gas cooker and heating options.

G5 Interior environment

G5.2.2 only applies. Heating appliance to be installed in accordance with the manufacturer's instructions.

G6 Airborne and impact sound

Not less than 55 STC required to fire rated intertenancy wall.

Alternative solution proposed to achieve 58 STC and 30/30.2 layers of 10mm xxx standard plasterboard each side of double stud loadbearing wall with R1.8 fibreglass insulation. Manufacturer's technical specification (name) and BRANZ appraisal provided.

Framing and plasterboard at external wall based on G6/AS1 Detail D.

Framing and plasterboard extend up to underside of roofing material.

Note on drawings -services penetrations not permitted to intertenancy wall.

G7 Natural light

G7/AS1 specified as means of compliance.

Table below provides the room areas, the minimum areas of natural light required for compliance and the areas achieved.

Glazing areas shown on window/door schedule (sheet 11).

Natural light to comply with G7/AS1					
	Room area (m²)	Min glazed area (m²)	Window options	Achieved (m²)	
Living/Kitchen	55	5.5	D2/D3/W1	11.16	
			D2/D3/D3	12.6	
Bed 1	18	18	W1 or D3	2.16-3.6	
Bed 2	14	14	W1 or D3	2.16-3.6	
Bathroom	8	0	W2	1	
Garage/Laundry	20/8	0/0	D4	2.4	

G8 Artificial light

G8/AS1 specified as means of compliance.

20 lux minimum required to access routes. Minimum requirement shown on services plan. Table shows calculated W/m_2 .

G9 Electricity

Compliance with AS/NZS 3000 and NZECP 51 referenced. Products and options identified in the specification.

Earthing and equipotential bonding requirements noted.

G10 Piped services

G10/AS1 specified as means of compliance. AS/NZS 5601.1 Gas Installations referenced. Specification provided.

G11 Gas as an energy source

G11/AS1 specified as means of compliance in the specification. AS/NZS 5601.1 Gas Installations referenced in the specification. Specification provided.

G12 Water supplies		G12/AS1 specified as means of compliance. Gas instantaneous water heater specified. Sizes, products and options identified in the specification.				
G13 Foul water	Specification p	G13/AS1 specified as means of compliance. AS/NZS 3500.2 referenced. Specification provided. Fixture locations, pipe sizes and layout, traps, gradients and materials showing on plumbing plan.				
G14 Industrial liquid waste	Not applicable.	Not applicable.				
G15 Solid waste	Not applicable.	Not applicable.				
H1 Energy efficient provisions	Schedule meth	H1/AS1 specified as means of compliance. NZS 4218 referenced. Schedule method used (glazing is ≤ 30%). R-value calculations provided for floor, walls and ceilings. R-values for glazing from NZS 4218 Table C1.				
	Construction	Construction R-values				
		Zone 1 & 2	Achieved	Zone 3	Achieved	
	Roof ¹	R 2.9	R 3.1	R 3.3	R 3.3	

Construction R-values					
	Zone 1 & 2	Achieved	Zone 3	Achieved	
Roof ¹	R 2.9	R 3.1	R 3.3	R 3.3	
Wall ²	R 1.9	Min R 2.07	R 2.0	Min R 2.07	
Floor ³	R 1.3	Min R 1.35	R 1.3	Min R 1.35	
Windows & glazing ⁴	R 0.26	Min 0.26	R 0.26	Min 0.26	
Skylights ⁵	R 0.26	0	R 0.26	R 0.31	

¹ R3.6 fibreglass changes to R4.0 for Zone 3.

² R-value achieved increases to 2.16 where studs at 600mm crs.

³ Min R-value achieved is for uninsulated slab. R-value increases to > 1.86 when RibRaft used.

⁴ Insulated glass units in aluminium frame – clear glazing min 12mm space. Other glass options permitted.

⁵ Up to two skylights permitted – 1.2m2 max. Inner pane to be Low E for Zone 3.