

Compliance report

A summary of technical building inspections

2017-18

Contents

1.	Introduction	. 2
	Overview	
	Stages of building work	
	Categories of building work	
	Elements of building work	
	Focus area	
	hment A: Elements of building work (compliance) – 2017/18	

BUILDING AND ENERGY

1

1. Introduction

As part of its compliance strategy for registered building contractors, the Building and Energy directorate (formerly Building Commission) of the Department of Mines, Industry Regulation and Safety (DMIRS) has developed an audit program with the specific objectives of:

- monitoring whether building work is performed in accordance with a class of registration;
- monitoring whether a registered building contractor complies with its registration obligations;
- monitoring compliance with the applicable building standards;
- monitoring compliance with the plans and specifications specified in the applicable certificate of design compliance;
- monitoring compliance with manufacturer's installation guidelines for building products;
- providing advice and assistance to registered building contractors and practitioners;
- taking action to address non-compliant building work, including referring non-compliant work to the relevant permit authority;
- making recommendations to improve compliance; and
- referring serious non-compliance for enforcement action.

The audit program consists of Building Regulatory Compliance Audits and Building Technical Compliance Audits (also referred to as building inspections). In addition, random general inspections of buildings may also occur. Building and Energy has invested in app-based software which allows building inspectors to record inspection information while on site, including any building elements which are deemed satisfactory or unsatisfactory in relation to the applicable building standards and building plans and specifications.

This current approach differs from the historical building inspection focus, which was largely driven by consumer complaints. While inspections relating to consumer complaints still occur, the more proactive approach taken by Building and Energy will enable it to provide more in-depth information to registered building contractors as well as developing intelligence on areas of building work that may require greater focus when developing future risk-based audit programs.

This proactive auditing and inspections program is now in its fourth year and beginning to provide valuable information to Building and Energy on behaviours within the building industry and enable targeted education campaigns, further audits and recommendations for regulatory change.

There are 184 separate elements of building work that a building inspector may assess during an inspection, extending from excavation work through to the installation of fixtures and finishing work. In practice, inspectors will only assess a subset of these elements depending on the stage of building work completed and whether any completed work has since become concealed due to later works. Certain elements may also only be inspected in part, including instances where only a visual inspection is possible but where a more detailed inspection is preferred.

2. Overview

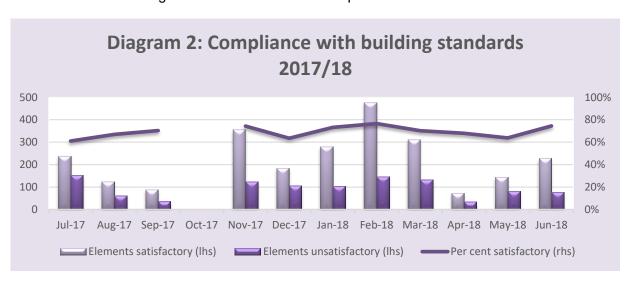
In 2017/18, 133 building inspections were undertaken as part of the building compliance program. Of these, 38 were building technical compliance audits and 95 were random general inspections (**Diagram 1**).

The number of building inspections conducted was down on the 204 conducted in 2016/17 and the 278 conducted in 2015/16. This reflects the high level of Building and Energy resources that have been directed into targeted audits and reviews, such as those associated with the Perth Children's Hospital and the state-wide cladding audit.



During these inspections, 3,562 separate building elements have been inspected, with 2,506 elements found to be satisfactory and 1,056 found to be unsatisfactory – an overall satisfactory level of 70 per cent, up on the 67 per cent recorded in 2016/17 and the 68 per cent recorded in 2015/16.

Unsatisfactory building elements are identified where the building work does not comply with the applicable building standards and/or approved plans where a suitable performance based solution is detailed. Where the approved plans appear to be inconsistent with the applicable building standards, this information may be referred to the building surveyor audit program. An audit may be commenced on the relevant building surveying contractor in order to assist with their understanding of how to demonstrate compliance.

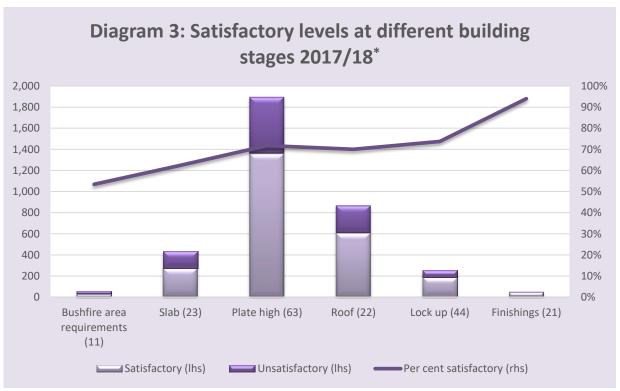


3. Stages of building work

Building elements can also be grouped into the relevant stage at which they are performed in order to provide an indication of the level of compliance during different stages of building work. This stage is determined by the stage of building work at which this element would normally be completed (e.g. excavation work is recorded in the stage to slab completion regardless of what stage of work the building is up to when it is inspected).

For 2017/18, the stage of work with the highest satisfactory level was in finishing work (94%), although it should be acknowledged that this is no longer a focus of the audit program, with greater emphasis placed on timing inspection visits to building stages where structural elements may be inspected.

Satisfactory rates for the other building stages range from 53 per cent for bushfire area requirements to 74 per cent for lock up (lock up includes wet area and water proofing requirements, fixing of ceilings and render or plaster work).



* The bracketed number on the x-axis provides the number of elements within each building stage

4. Categories of building work

Trends in compliance relating to the type of building work may also be useful in providing insight into the focus of future audit programs. As can be seen in **Table 1: Categories of building work, satisfactory levels**, the 184 building elements are grouped into 24 separate categories.

Table 1: Categories of building work – satisfactory levels¹

Building work category	Satisfactory	Unsatisfactory	Satisfactory
Excavation work	10	7	59%
Drainage work	4	2	67%
Termite Treatment	37	59	39%
Slab	244	101	71%
Brickwork	848	276	75%
Roof tie-down	187	109	63%
Structural Steel	115	88	57%
Timber Roof Framing	435	231	65%
Timber Wall Framing	39	45	46%
Steel Framing	19	7	73%
Roof Cladding	173	28	86%
Glazing	21	11	66%
Fire Separation	129	5	96%
Bushfire Area Requirements	31	27	53%
Wet Areas & External Waterproofing	5	9	36%
Wall & Floor Finishes	10	2	83%
Ventilation	2	3	40%
Safe Movement & Access	13	10	57%
Energy Efficiency	11	10	52%
Internal Render/Plaster	34	3	92%
External Render/Plaster	25	8	76%
Ceilings	67	12	85%
Painting	11	0	100%
Fixtures	36	3	92%
Total	2506	1056	70%

There were seven building work categories with a satisfactory level of at least 80 per cent, including painting (100% from 11 elements inspected), fire separation (96% from 134), fixtures (92% from 39), internal render/plaster (92% from 37), roof cladding (86% from 201), ceilings (85% from 79) and wall and floor finishes (83% from 12).

There were nine building categories with a satisfactory level of 60 per cent or under in 2017/18. These included wet areas and external waterproofing (36% from 14 elements), termite treatment (39% from 96), ventilation (40% from five), timber wall framing (46% from 84), energy efficiency (52% from 21), bushfire area requirements (53% from 58), structural steel (57% from 203), safe movement and access (57% from 23) and excavation work (59% from 17).

¹ Per cent satisfactory is based on the number of times an element is deemed satisfactory divided by the number of times an element is assessed. Where it is not possible to inspect an element at the time of inspection (e.g. it is concealed) then it is not included in the calculation.

5. Elements of building work

Individual elements of building work may also feed into Building and Energy's risk assessment in determining future audit programs. **Attachment A** provides the percentage deemed satisfactory for each building element from all building technical compliance audits conducted during 2017/18. These include s number of elements with a less than 50 per cent satisfactory rate, including termite treatment – physical barrier placement, slab – finished work (footings), Roof tie-down straps – corrosion protection type and mass and structural steel – columns, roof beams, chamfer and fixings.

The comments made by building inspectors in deeming each of these items as unsatisfactory have been assessed. This assessment provides a higher level of detail on potential non-compliance with applicable standards (see **Table 2: Elements of building work – satisfactory levels** for a consideration of those elements with a less than 50 per cent satisfactory rate).

Table 2: Elements of building work – satisfactory levels

Building work type	Satisfactory	Unsatisfactory	Satisfactory	Main reasons identified
Termite Management - Physical barrier placement	33	58	36%	Physical barrier not installed to entire building, particularly missing around garage area.
Slab – finished work (footings)	34	56	38%	Footing depth at point measured was less than required under the engineer approved plans.
Roof tie straps – corrosion protection type and mass	34	39	47%	Coating thickness less than required.
Structural steel – columns, roof beams, chamfer, fixings	34	43	44%	Fixtures to footings and roof either missing or insufficient in terms of number or type of fixings. Particular issues with alfresco areas.

6. Focus area

Class 2-9 Buildings (apartments and commercial)

As part of the compliance strategy for 2018/19, Building and Energy has developed an audit program for commercial buildings and apartment/unit buildings.

These types of buildings can have complex requirements that relate to safety, health and amenity for occupants and people in and around the building. Auditing of Class 2-9 buildings will include a review of the approved documentation and plans to ascertain the design characteristics of the building before inspections take place.

General Inspection Projects – bushfire area requirements, wet areas and cladding

Building and Energy will continue with its ongoing general inspection project for bushfire construction. Building and Energy will inspect a minimum of 50 buildings to assess how building standards are being applied. This general inspection will look at Bush Fire Attack Level assessments and how the construction is being carried out on site.

Building and Energy will undertake a general inspection project for waterproofing in wet areas. This project will include both single residential and domestic apartment buildings. The objective is to gain an understanding of how building standards and manufacturer's installation guidelines are being applied in the area and report the findings to the industry to garner improvements.

Building and Energy have been carrying out a general inspection into combustible cladding on high rise buildings in accordance with the country wide audit. Progress of the audit can be found on the 'State-wide cladding audit' website.

In addition to the data that is collated for this report all project general inspections will produce a report that can be viewed on the Building and Energy website once published.

² Available at: <u>www.commerce.wa.gov.au/building-commission/state-wide-cladding-audit</u>

Attachment A: Elements of building work (compliance) - 2017-18

Building element	Satisfactory	Unsatisfactory	Satisfactory
Excavation work - Excavation: Unprotected Embankment	2	1	67%
Excavation work - Excavation: Other	1	1	50%
Excavation work - Retaining adequate: Other	7	5	58%
Excavation work	10	7	59%
Drainage work - Drainage Systems: Water diverted away	3	2	60%
Drainage work - Drainage Systems: Other	1	0	100%
Drainage work	4	2	67%
Termite Treatment - Termite System: Durable Notice	0	0	N/A
Termite Treatment - Termite System: Other	4	1	80%
Termite Treatment - Physical barrier placement	33	58	36%
Termite Treatment	37	59	39%
Slab BCA 3.2 - Finished Work - Footing excavation/ embedment/ foundation material	13	3	81%
Slab BCA 3.2 - Finished Work - Footings	34	56	38%
Slab BCA 3.2 - Finished Work - Cracking (acceptable): Other	96	0	100%
Slab BCA 3.2 - Finished Work - Parging: Other	8	4	67%
Slab BCA 3.2 - Finished Work - Alignment: Other	69	18	79%
Slab BCA 3.2 - Finished Work - Concrete Paving: Isolation & Control Joints	0	9	0%
Slab BCA 3.2 - Prep-Work - Clean fill: Other	1	0	100%
Slab BCA 3.2 - Prep-Work - DPM: Placement - (Note: Slab entirely underlaid)	0	1	0%
Slab BCA 3.2 - Prep-Work - DPM: Penetrations	0	1	0%
Slab BCA 3.2 - Prep-Work - DPM: Other	0	0	N/A
Slab BCA 3.2 - Prep-Work - Reinforcement: Bar Chairs - Refer Notes if Required	0	1	0%
Slab BCA 3.2 - Prep-Work - Reinforcement: Re- entrant	0	1	0%
Slab BCA 3.2 - Prep-Work - Reinforcement: Cover	0	1	0%
Slab BCA 3.2 - Prep-Work - Reinforcement: Steel lap	1	0	100%
Slab BCA 3.2 - Prep-Work - Reinforcement: Other	0	1	0%
Slab BCA 3.2 - Second storey - Propping: Other - (Suspended slab temporary)	6	1	86%
Slab BCA 3.2 - Second storey - Steel Framing: Other - (Floor trusses)	4	2	67%
Slab BCA 3.2 - Second storey - Set Out: Other - (All Concrete)	4	0	100%
Slab BCA 3.2 - Second storey - Slip Joints: Other	8	2	80%
Slab	244	101	71%

Building element	Satisfactory	Unsatisfactory	Satisfactory
Brickwork BCA 3.3 - Workmanship - Built In	97	8	92%
Frames: Alignment			
Brickwork BCA 3.3 - Workmanship - Built In	18	2	90%
Frames: Attachments			
Brickwork BCA 3.3 - Workmanship - Built In	3	2	60%
Frames: Other	40	47	540 /
Brickwork BCA 3.3 - Workmanship - Weep Holes:	48	47	51%
Brickwork BCA 3.3 - Workmanship - Lintel:	67	17	80%
Coating & thickness	0.	••	0070
Brickwork BCA 3.3 - Workmanship - Lintel:	11	31	26%
Other			
Brickwork BCA 3.3 - Workmanship -	59	10	86%
Workmanship: Utility		_	2221
Brickwork BCA 3.3 - Workmanship -	76	7	92%
Workmanship: Coarse/ openings	50	04	CE0/
Brickwork BCA 3.3 - Workmanship - Workmanship: Perpends & Joints	58	31	65%
Brickwork BCA 3.3 - Workmanship -	84	5	94%
Workmanship: Bonding	04	o O	94%
Brickwork BCA 3.3 - Workmanship -	75	13	85%
Workmanship: Face	. •	. •	55,5
Brickwork BCA 3.3 - Workmanship -	3	18	14%
Workmanship: Other			
Brickwork BCA 3.3 - Technical - Structure	36	13	73%
Brickwork BCA 3.3 - Technical - Cavity: Cavity Size	57	1	98%
Brickwork BCA 3.3 - Technical - Cavity: Clean	24	19	56%
Brickwork BCA 3.3 - Technical - Cavity: Other	1	0	100%
Brickwork BCA 3.3 - Technical - Gavity: Other	10	4	71%
Brickwork BCA 3.3 - Technical - DPC: Liquid	1	5	17%
Brickwork BCA 3.3 - Technical - DPC: Physical	3	0	100%
Brickwork BCA 3.3 - Technical - DPC: Other	0	0	N/A
Brickwork BCA 3.3 - Technical - Flashings:	28	13	68%
Above openings			55,5
Brickwork BCA 3.3 - Technical - Flashings:	4	8	33%
Below openings			
Brickwork BCA 3.3 - Technical - Flashings:	2	6	25%
Other Brickwork BCA 3.3 - Technical - Wire Ties:	14	13	52%
Spacing	14	13	JZ /0
Brickwork BCA 3.3 - Technical - Wire Ties:	69	2	97%
Coating			
Brickwork BCA 3.3 - Technical - Wire Ties:	0	1	0%
Other	0.40	070	750/
Brickwork	848	276	75%
Roof tie-down - Tie Down Straps: Dimensions	66	23	74%
Roof tie-down - Tie Down Straps: Corrosion protection type & mass	34	39	47%
Roof tie-down - Tie Down Straps: Placement	63	24	72%
Roof tie-down - Tie Down Straps: Attachment &	24	23	72% 51%
appropriate fixings	47	20	J 1 /0
Roof tie-down	187	109	63%
1,001 110 401111	107	100	00 /0

Building element	Satisfactory	Unsatisfactory	Satisfactory
Structural Steel BCA 3.4.4 - Steel Member: Column, roof beams, chamfer, fixings	34	43	44%
Structural Steel BCA 3.4.4 - Steel Member: Corrosion protection	54	3	95%
Structural Steel BCA 3.4.4 - Steel Member: Tiedowns	25	34	42%
Structural Steel BCA 3.4.4 - Steel Member: Other	2	8	20%
Structural Steel	115	88	57%
Timber Roof Framing - BCA 3.4 - Rafter correctly tied down	27	37	42%
Timber Roof Framing - BCA 3.4 - Rafter other	21	12	64%
Timber Roof Framing - BCA 3.4 - Timber roof battens in 1200 mm edge zone for sheet roofs	12	8	60%
Timber Roof Framing - BCA 3.4 - Timber roof batten general area sheet roofs	10	11	48%
Timber Roof Framing - BCA 3.4 - Metal roof batten	28	2	93%
Timber Roof Framing - BCA 3.4 - Connections: remainder of roof	40	26	61%
Timber Roof Framing - BCA 3.4 - Struts	48	24	67%
Timber Roof Framing - BCA 3.4 - Underpurlins	51	16	76%
Timber Roof Framing - BCA 3.4 - Collar Ties	36	15	71%
Timber Roof Framing - BCA 3.4 - Ridge: Rafter to rafter at ridge connection sheeted roof (AS1684 Table 9.24A & 9.24B)	61	3	95%
Timber Roof Framing - BCA 3.4 - Timber truss correctly tied down	1	9	10%
Timber Roof Framing - BCA 3.4 - Tie down of timber roof beams	23	32	42%
Timber Roof Framing - BCA 3.4 - Timber roof beams other	12	13	48%
Timber Roof Framing - BCA 3.4 - Ceiling Joists	64	11	85%
Timber Roof Framing - BCA 3.4 - Other compliance	1	12	8%
Timber Roof Framing	435	231	65%
Timber Wall Framing - BCA 3.4 - Roof: Other	2	0	100%
Timber Wall Framing - BCA 3.4 - Walls: Bracing	7	6	54%
Timber Wall Framing - BCA 3.4 - Walls: Insulation - (within and to frames)	2	0	100%
Timber Wall Framing - BCA 3.4 - Walls: Bottom plate connection to concrete slab.	5	2	71%
Timber Wall Framing - BCA 3.4 - Walls: Other	4	11	27%
Timber Wall Framing - BCA 3.4 - Connections: remainder of roof	7	1	88%
Timber Wall Framing - BCA 3.4 - Floor: Posts/columns	2	2	50%
Timber Wall Framing - BCA 3.4 - Floor: Joists	5	6	45%
Timber Wall Framing - BCA 3.4 - Floor: Connections	5	8	38%
Timber Wall Framing - BCA 3.4 - Floor: Other	0	9	0%
Timber Wall Framing	39	45	46%

Steel Framing BCA 3.4 & 3.5 - Roof:	Building element	Satisfactory	Unsatisfactory	Satisfactory
Steel Framing BCA 3.4 & 3.5 - Roof: Tie down - (within and to frames) 4	Steel Framing BCA 3.4 & 3.5 - Roof:	4	1	80%
Steel Framing BCA 3.4 & 3.5 - Roof: Corrosion 6 0 100%	Steel Framing BCA 3.4 & 3.5 - Roof: Tie down -	4	2	67%
Steel Framing BCA 3.4 & 3.5 - Roof: Framing dimensions Comparisons	· ·	6	0	100%
Idimensions Steel Framing BCA 3.4 & 3.5 - Roof: Other				
Steel Framing BCA 3.4 & 3.5 - Walls: Framing		_		
Steel Framing BCA 3.4 & 3.5 - Walls: Insulation/		1	1	
Steel Framing BCA 3.4 & 3.5 - Walls: Other 0		0	1	0%
Steel Framing BCA 3.4 & 3.5 - Floor: Other 1 1 50%		0	0	N/A
Steel Framing	Steel Framing BCA 3.4 & 3.5 - Walls: Other	0	1	0%
Roof Cladding BCA 3.5 - Tiles: Other -	Steel Framing BCA 3.4 & 3.5 - Floor: Other	1	1	50%
(installation, fixings- centres, corrosion protection) Roof Cladding BCA 3.5 - Roof Sheeting: Fixing, including ridges & hips Roof Cladding BCA 3.5 - Roof Sheeting: 19 0 100% Penetrations (Flues) Roof Cladding BCA 3.5 - Gutters: Other 45 12 79% Roof Cladding BCA 3.5 - Gutters: Other 45 12 79% Roof Cladding BCA 3.5 - Downpipes: Spacing & 40 3 93% Size Roof Cladding BCA 3.5 - Downpipes: Location 43 7 86% Roof Cladding BCA 3.6 - Window Frames: Window 7 1 88% labelling Glazing BCA 3.6 - Window Frames: Restricted 2 6 25% openings 2 storey - (NB NCC Vol. 2 Part 3.9.2.5 Protection of openable windows) Glazing BCA 3.6 - Safety Glazing: Markings 11 1 92% Glazing BCA 3.6 - Safety Glazing: Other 1 3 25% Glazing BCA 3.6 - Safety Glazing: Other 1 3 25% Glazing BCA 3.6 - Safety Glazing: Other 1 3 25% Glazing BCA 3.7 - External Walls: 58 4 94% Within 900mm - (applicable to Class 1) Fire Separation BCA 3.7 - External Walls: Non-combustible materials - (applicable to Class 1) Fire Separation BCA 3.7 - External Walls: On 0 100% Fire Separation BCA 3.7 - Separating Walls: 0 0 0 N/A Girler Separation BCA 3.7 - Separating Walls: 0 0 0 N/A Girler Separation BCA 3.7 - Separating Walls: 0 0 0 N/A Girler Separation BCA 3.7 - Separating Walls: 0 0 0 N/A Girler Separation BCA 3.7 - Separating Walls: 0 0 0 N/A Girler Separation BCA 3.7 - Separating Walls: 0 0 0 N/A Girler Separation BCA 3.7 - Separating Walls: 0 0 0 N/A Girler Separation BCA 3.7 - Separating Walls: 0 0 0 N/A Girler Separation BCA 3.7 - Separating Walls: 0 0 0 N/A Girler Fire Separation BCA 3.7 - Smoke Alarms: Other 6 1 86%	Steel Framing	19	7	73%
Including ridges & hips Roof Cladding BCA 3.5 - Roof Sheeting: 19 0 100% Penetrations (Flues) Roof Cladding BCA 3.5 - Gutters: Other 45 12 79% Roof Cladding BCA 3.5 - Downpipes: Spacing & 40 3 93% Size Roof Cladding BCA 3.5 - Downpipes: Location 43 7 86% Roof Cladding BCA 3.5 - Downpipes: Location 43 7 86% Roof Cladding BCA 3.5 - Downpipes: Location 43 7 86% Roof Cladding 173 28 86% Roof Cladding 173 28 86% Roof Cladding 173 28 86% Roof Cladding 173 28 86% Roof Cladding 173 188% Roof Cladding 173 Roof Cl	(installation, fixings- centres, corrosion protection)	·	0	
Penetrations (Flues) Roof Cladding BCA 3.5 - Gutters: Other 45 12 79% Roof Cladding BCA 3.5 - Downpipes: Spacing & 40 3 93% Size Roof Cladding BCA 3.5 - Downpipes: Location 43 7 86% Roof Cladding BCA 3.5 - Downpipes: Location 43 7 86% Roof Cladding 173 28 86% Roof Cladding BCA 3.6 - Window Frames: Window 7 1 88% Roof Cladding BCA 3.6 - Window Frames: Restricted 2 6 25% 25% Roof Cladding BCA 3.6 - Window Frames: Other 0 0 N/A (Straps to frames). Roof Cladding BCA 3.6 - Safety Glazing: Markings 11 1 92% Roof Cladding BCA 3.6 - Safety Glazing: Other 1 3 25% Roof Cladding BCA 3.6 - Safety Glazing: Other 1 3 25% Roof Cladding BCA 3.7 - External Walls: 58 4 94% 94% Roof Cladding BCA 3.7 - External Walls: Non-combustible materials - (applicable to Class 1) Fire Separation BCA 3.7 - External Walls: Other 2 0 100% 10	<u> </u>	25	6	81%
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Size Roof Cladding BCA 3.5 - Downpipes: Location 43 7 86% Roof Cladding 173 28 86%	Roof Cladding BCA 3.5 - Gutters: Other	45	12	79%
Roof Cladding 173 28 86% Glazing BCA 3.6 - Window Frames: Window labelling 7 1 88% Glazing BCA 3.6 - Window Frames: Restricted openings 2 storey - (NB NCC Vol. 2 Part 3.9.2.5 2 6 25% Protection of openable windows) Frotection of openable windows 0 0 N/A Glazing BCA 3.6 - Window Frames: Other of trames 0 0 N/A Glazing BCA 3.6 - Safety Glazing: Markings of trames 11 1 92% Glazing BCA 3.6 - Safety Glazing: Other of trames 1 3 25% Glazing BCA 3.7 - External Walls: Other of trames 2 1 1 66% Fire Separation BCA 3.7 - External Walls: Non-combustible materials - (applicable to Class 1) 58 4 94% Fire Separation BCA 3.7 - External Walls: Other of the Separation BCA 3.7 - Separating Walls: 0 0 100% Underside of roof covering 0 0 N/A Fire Separation BCA 3.7 - Separating Walls: 0 0 0 N/A Other Fire Separation BCA 3.7 - Smoke Alarms: Other 6 1 86%		40	3	93%
Glazing BCA 3.6 - Window Frames: Window 7	Roof Cladding BCA 3.5 - Downpipes: Location	43	7	86%
labelling Glazing BCA 3.6 - Window Frames: Restricted openings 2 storey - (NB NCC Vol. 2 Part 3.9.2.5 Protection of openable windows) Glazing BCA 3.6 - Window Frames: Other 0 0 N/A (Straps to frames). Glazing BCA 3.6 - Safety Glazing: Markings 11 1 92% Glazing BCA 3.6 - Safety Glazing: Other 1 3 25% Glazing BCA 3.6 - Safety Glazing: Other 1 3 25% Glazing BCA 3.7 - External Walls: 58 4 94% Within 900mm - (applicable to Class 1) Fire Separation BCA 3.7 - External Walls: Noncombustible materials - (applicable to Class 1) Fire Separation BCA 3.7 - External Walls: Other 2 0 100% Fire Separation BCA 3.7 - Separating Walls: 3 0 100% Underside of roof covering Fire Separation BCA 3.7 - Separating Walls: 0 0 N/A Other Fire Separation BCA 3.7 - Smoke Alarms: Other 6 1 86%	Roof Cladding	173	28	86%
openings 2 storey - (NB NCC Vol. 2 Part 3.9.2.5 Protection of openable windows) Glazing BCA 3.6 - Window Frames: Other 0 0 N/A (Straps to frames). Glazing BCA 3.6 - Safety Glazing: Markings 11 1 1 92% Glazing BCA 3.6 - Safety Glazing: Other 1 3 25% Glazing BCA 3.6 - Safety Glazing: Other 1 1 3 25% Glazing BCA 3.7 - External Walls: 58 4 94% Within 900mm - (applicable to Class 1) Fire Separation BCA 3.7 - External Walls: Non-combustible materials - (applicable to Class 1) Fire Separation BCA 3.7 - External Walls: Other 2 0 100% Fire Separation BCA 3.7 - Separating Walls: 3 0 100% Underside of roof covering Fire Separation BCA 3.7 - Separating Walls: 0 0 N/A Other Fire Separation BCA 3.7 - Smoke Alarms: Other 6 1 86%		7	1	88%
(Straps to frames). Glazing BCA 3.6 - Safety Glazing: Markings 11 1 92% Glazing BCA 3.6 - Safety Glazing: Other 1 3 25% Glazing BCA 3.6 - Safety Glazing: Other 1 3 25% Glazing 21 11 66% Fire Separation BCA 3.7 - External Walls: 58 4 94% Within 900mm - (applicable to Class 1) Fire Separation BCA 3.7 - External Walls: Noncombustible materials - (applicable to Class 1) Fire Separation BCA 3.7 - External Walls: Other 2 0 100% Fire Separation BCA 3.7 - Separating Walls: 3 0 100% Underside of roof covering Fire Separation BCA 3.7 - Separating Walls: 0 0 N/A Other Fire Separation BCA 3.7 - Smoke Alarms: Other 6 1 86%	openings 2 storey - (NB NCC Vol. 2 Part 3.9.2.5	2	6	25%
Glazing BCA 3.6 - Safety Glazing: Other 1 3 25% Glazing 21 11 66% Fire Separation BCA 3.7 - External Walls: 58 4 94% Within 900mm - (applicable to Class 1) Fire Separation BCA 3.7 - External Walls: Noncombustible materials - (applicable to Class 1) Fire Separation BCA 3.7 - External Walls: Other 2 0 100% Fire Separation BCA 3.7 - Separating Walls: 3 0 100% Underside of roof covering Fire Separation BCA 3.7 - Separating Walls: 0 0 N/A Other Fire Separation BCA 3.7 - Smoke Alarms: Other 6 1 86%		0	0	N/A
Glazing211166%Fire Separation BCA 3.7 - External Walls:58494%Within 900mm - (applicable to Class 1)600100%Fire Separation BCA 3.7 - External Walls: Non-combustible materials - (applicable to Class 1)20100%Fire Separation BCA 3.7 - External Walls: Other20100%Fire Separation BCA 3.7 - Separating Walls:30100%Underside of roof coveringFire Separation BCA 3.7 - Separating Walls:00N/AOtherFire Separation BCA 3.7 - Smoke Alarms: Other6186%		11	1	
Fire Separation BCA 3.7 - External Walls: 58 4 94% Within 900mm - (applicable to Class 1) Fire Separation BCA 3.7 - External Walls: Non- combustible materials - (applicable to Class 1) Fire Separation BCA 3.7 - External Walls: Other 2 0 100% Fire Separation BCA 3.7 - Separating Walls: 3 0 100% Underside of roof covering Fire Separation BCA 3.7 - Separating Walls: 0 0 N/A Other Fire Separation BCA 3.7 - Smoke Alarms: Other 6 1 86%	Glazing BCA 3.6 - Safety Glazing: Other			
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combustible materials - (applicable to Class 1) Fire Separation BCA 3.7 - External Walls: Other 2 0 100% Fire Separation BCA 3.7 - Separating Walls: 3 0 100% Underside of roof covering Fire Separation BCA 3.7 - Separating Walls: 0 0 N/A Other Fire Separation BCA 3.7 - Smoke Alarms: Other 6 1 86%	•	58	4	94%
Fire Separation BCA 3.7 - Separating Walls: Underside of roof covering Fire Separation BCA 3.7 - Separating Walls: Other Fire Separation BCA 3.7 - Smoke Alarms: Other 6 1 86%	•	60	0	100%
Fire Separation BCA 3.7 - Separating Walls: Underside of roof covering Fire Separation BCA 3.7 - Separating Walls: Other Fire Separation BCA 3.7 - Smoke Alarms: Other 6 1 86%	`	2	0	100%
Fire Separation BCA 3.7 - Separating Walls: 0 0 N/A Other Fire Separation BCA 3.7 - Smoke Alarms: Other 6 1 86%	Fire Separation BCA 3.7 - Separating Walls:			
Fire Separation BCA 3.7 - Smoke Alarms: Other 6 1 86%	Fire Separation BCA 3.7 - Separating Walls:	0	0	N/A
		6	1	86%
	Fire Separation	129	5	96%

Building element	Satisfactory	Unsatisfactory	Satisfactory
Bushfire Area Requirements BCA 3.7 - General:	1	9	10%
Probe check Bushfire Area Requirements BCA 3.7 - General:	3	1	75%
Other	-	·	
Bushfire Area Requirements BCA 3.7 - Bushfire shutters	0	0	N/A
Bushfire Area Requirements BCA 3.7 - Subfloor	0	0	N/A
supports Bushfire Area Requirements BCA 3.7 - Floors	3	0	100%
Bushfire Area Requirements BCA 3.7 - External	11	0	100%
walls		-	
Bushfire Area Requirements BCA 3.7 - External glazed elements/ assemblies and external	2	3	40%
doors Bushfire Area Requirements BCA 3.7 - Roofs:	0	0	N/A
Roof mounted evaporative cooler Bushfire Area Requirements BCA 3.7 - Roofs:	2	13	13%
General	2	13	1370
Bushfire Area Requirements BCA 3.7 - verandas, steps, decks and landings	2	0	100%
Bushfire Area Requirements BCA 3.7 - Water and gas supply pipes	7	1	88%
Bushfire Area Requirements	31	27	53%
Wet Areas & External Waterproofing BCA 3.8 -	1	2	33%
Waterproofing: Waterproofed areas - (NB: wet areas includes balconies)	·	_	
Wet Areas & External Waterproofing BCA 3.8 - Waterproofing: Floor wall junctions	2	4	33%
Wet Areas & External Waterproofing BCA 3.8 -	2	0	100%
Waterproofing: Penetrations in shower Wet Areas & External Waterproofing BCA 3.8 -	0	1	0%
Waterproofing: Bath to wall		ı	U 70
Wet Areas & External Waterproofing BCA 3.8 - Waterproofing: Floor wastes	0	1	0%
Wet Areas & External Waterproofing BCA 3.8 - Waterproofing: Other	0	1	0%
Wet Areas & External Waterproofing	5	9	36%
Wall & Floor Finishes - Wall & Floor Tiling:	8	0	100%
Workmanship			
Wall & Floor Finishes - Wall & Floor Tiling:	0	2	0%
Other Wall & Floor Finishes - Floor Tiling: Correct falls	2	0	100%
to wastes Wall & Floor Finishes	10	2	83%
Ventilation - Ventilation: Exhaust Fan - (NB	2	2	50%
ducted to outside air)	_	_	2370
Ventilation - Ventilation: Other	0	1	0%
Ventilation	2	3	40%

Building element	Satisfactory	Unsatisfactory	Satisfactory
Safe Movement & Access BCA 3.9 - Stairs: Riser & going dimensions	4	10	29%
Safe Movement & Access BCA 3.9 - Balustrades: Structure, handrails	4	0	100%
Safe Movement & Access BCA 3.9 - Balustrades: Height and spacing's	5	0	100%
Safe Movement & Access BCA 3.9 - Balustrades: Other	0	0	N/A
Safe Movement & Access BCA 3.9 - Swimming Pool: Barrier - (NB access, pre 2005?)	0	0	N/A
Safe Movement & Access BCA 3.9 - Swimming Pool: Climbable gate and latch	0	0	N/A
Safe Movement & Access BCA 3.9 - Swimming Pool: Other	0	0	N/A
Safe Movement & Access	13	10	57%
Energy Efficiency BCA 3.12 - Insulation: Roof foil installed correctly	8	0	100%
Energy Efficiency BCA 3.12 - Insulation: Ceiling insulation	2	0	100%
Energy Efficiency BCA 3.12 - Insulation: Wall insulation	0	8	0%
Energy Efficiency BCA 3.12 - Insulation: Other	0	0	N/A
Energy Efficiency BCA 3.12 - Building Sealing: Building a conditioned space?	1	2	33%
Energy Efficiency BCA 3.12 - Building Sealing: Other	0	0	N/A
Energy Efficiency	11	10	52%
Internal Render/Plaster - Internal Float: Render	12	0	100%
Internal Render/Plaster - Internal Float, Set: Hardness/Curing/Workmanship	10	0	100%
Internal Render/Plaster - Internal Float, Set: Other	2	2	50%
Internal Render/Plaster - Linings: Fixings	3	0	100%
Internal Render/Plaster - Linings: Workmanship	7	1	88%
Internal Render/Plaster - Linings: Other	0	0	N/A
Internal Render/Plaster	34	3	92%
External Render/Plaster - External Render: Ground level finish	14	3	82%
External Render/Plaster - External Render: Other	6	2	75%
External Render/Plaster - External Acrylic: Ground level finish	1	3	25%
External Render/Plaster - External Acrylic: Workmanship	4	0	100%
External Render/Plaster - External Acrylic: Other	0	0	N/A
External Render/Plaster	25	8	76%
Ceilings - Linings: Fixings	9	4	69%
Ceilings - Linings: Back Blocking	20	4	83% 95%
Ceilings - Linings: Workmanship Ceilings - Linings: Other	20 1	1 2	95% 33%
Ceilings - Cirrings. Other Ceilings - Cornices: Other	17	1	94%
Ceilings - Cornices. Other	6 7	12	85%
	VI.	1.4	00 /0

Building element	Satisfactory	Unsatisfactory	Satisfactory
Painting - Internal Walls:	2	0	100%
Painting - Ceilings:	4	0	100%
Painting – Doors: Top and Bottom edges:	0	0	N/A
Painting - Door Frames:	0	0	N/A
Painting - Window Frames:	0	0	N/A
Painting - Skirting:	0	0	N/A
Painting - Architraves:	0	0	N/A
Painting - External Walls:	1	0	100%
Painting - Eaves:	3	0	100%
Painting - Fascia:	0	0	N/A
Painting - Gutters & Downpipes:	1	0	100%
Painting	11	0	100%
Fixtures - Cupboards: Penetration sealing	2	1	67%
Fixtures - Cupboards: Support & joists, heat	2	0	100%
source proximity			
Fixtures - Cupboards: Workmanship	5	0	100%
Fixtures - Cupboards: Benchtop sealing	3	0	100%
Fixtures - Cupboards: Other	0	0	N/A
Fixtures - Fixing Carpentry: Other	1	0	100%
Fixtures - Internal Doors: Sanitary compartment - (NB including lift off hinges)	16	0	100%
Fixtures - Internal Doors: Door to frame gaps/alignment	4	2	67%
Fixtures - Internal Doors: Furniture	3	0	100%
Fixtures - Internal Doors: Other	0	0	N/A
Fixtures	36	3	92%
Total	2506	1056	70%

Department of Mines, Industry Regulation and Safety Building and Energy

Office: Level 1, 303 Sevenoaks Street, Cannington WA 6107

Post: Locked Bag 100, EAST PERTH WA 6892

Phone: 1300 489 099 Fax: (08) 6251 1501

Email: bcinfo@dmirs.wa.gov.au

Web: www.dmirs.wa.gov.au/building-and-energy

National Relay Service: 13 36 77

Quality of service feedback line: 1800 304 059

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