

CPCBC4001A

APPLY BUILDING CODES AND STANDARDS TO THE CONSTRUCTION PROCESS FOR LOW RISE BUILDING PROJECTS

ASSESSMENT SUMMARY

The assessment activities for *CPCBC4001A Apply building codes and standards to the construction process for low rise building projects* cover all aspects of the unit of competency required. To demonstrate competence in this unit, a participant must undertake all tasks and complete them satisfactorily and consistently. For Apprentices and Trainees, this includes employer completion of the Employer Record Book (ERB).

Participants must read all the information given before starting any assessment task. The assessment tasks are intended to be equitable, fair and flexible. If a participant has any questions or requires alternative arrangements to be made such requests should be directed to their Trainer/Assessor, who should note such arrangements in the 'Assessor Comments' on the affected assessment. If a participant feels they are not yet ready to be assessed, they should discuss their options with their Trainer/Assessor.

To satisfactorily complete the assessment, the participant is required to answer all questions correctly and demonstrate their skills to industry standards. If a participant does not answer some questions or perform some tasks, they will be deemed 'Not Satisfactory' for the task and 'Not Yet Competent' for the unit of competency. The Trainer/Assessor is able to provide the participant with additional information on interpreting the assessment outcomes and provide guidance on the participant's options. Should a participant still be deemed 'Not Satisfactory' they will have the opportunity to undertake a supplementary assessment or appeal the result.

By signing the cover page for each assessment item, the participant acknowledges they understand the assessment instructions and requirements and consent to being assessed. The participant also verifies and assures the RTO that the work submitted is their own work.

Participant Name	Tess Veldink
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Task	Assessment Results	
Theory Exam	☐ Satisfactory	☐ Not Yet Satisfactory
Practical Assessment	☐ Satisfactory	☐ Not Yet Satisfactory
Outcome for Unit of Competency	☐ Competent	☐ Not Yet Competent

Assessor Name	
Assessor Signature	
Unit Competence Determination Date	Click here to enter a date.

CPCCBC4001A

APPLY BUILDING CODES AND STANDARDS TO THE CONSTRUCTION PROCESS FOR LOW RISE BUILDING PROJECTS

THEORY EXAM INSTRUCTIONS

1. This exam will occur under standard assessment conditions.
 1. An oral examination may be allowed under certain circumstances, whereby the Participant's answers will be documented by a party other than the Participant. This must be acknowledged in writing (e.g. FT001 and Assessor Comments)
2. Participants must provide enough detail in their responses to demonstrate their knowledge and skills.
3. Please fill in the details below, providing your name, signature and date of assessment.
 1. Your signature acknowledges that this is your own work.
4. Assessors are to complete marking in pen of a different colour to the Participant.
5. If a Participant initially answers a question incorrectly but modifies their response, they must follow the instructions below:
 1. If a Participant changes their response in writing, they must put their initials next to the written change.
 2. If a Participant changes their response verbally, this must be noted on the exam paper by the assessor.

Participant name Tess Veldink1

Participant signature

Tess Veldink

Date 16/02/2021

Assessor name

Assessor signature

Date Click here to enter a date.

Number of questions	Number of questions answered correctly	Task outcome (Tick)	
		Satisfactory	Not Yet Satisfactory
38		☐	☐

- Q1. A Performance Solution must abide by which of the following?
Tick all that apply.**

Answer

Choice	Possible Answers
☒	Be assessed according to one or more of the Assessment Methods
☒	Go beyond the requirements of Deemed-to-Satisfy Provisions
☒	Comply with the Performance Requirements

- Q2. True or False (Tick your response): The Performance Requirements of the National Construction Code can be achieved by using a Performance Solution, a Deemed-to-Satisfy Solution, or a combination of both.**

Answer

☒	True
☐	False

- Q3. True or False (Tick your response): The term 'Performance Solution' in the NCC was formerly known as 'Alternative Solution'.**

Answer

☒	True
☐	False

- Q4. Where a Performance Solution has been proposed, which of the following documentation should be prepared and retained?
Tick all that apply.**

Answer

Choice	Possible Answers
☒	Details of the relevant Performance Requirements
☒	Assessment Methods used to establish compliance with the relevant Performance requirements
☒	Details of any Expert Judgement relied upon
☒	Details of any tests of calculations used to determine compliance with the Performance Requirements
☒	Details of any Standards or other information which were relied upon

Q5. **True or False (Tick your response): Where a Deemed-to-Satisfy solution has been proposed, all relevant plans/specifications should be retained.**

Answer

☒	True
☐	False

☐

Q6. **Identify the Volume and Parts of the NCC that outline the Assessment Methods used to determine whether a Performance Solution or a Deemed-to-Satisfy Solution complies with the Performance Requirements for Classes 1 and 10, and Classes 2 to 9.**

Answer

Classes 1 and 10	Classes 2 to 9
Volume 2 Part 1.0 Application – 1.0.9 Assessment methods	Volume 1 Part A0 Application – A0.5 Assessment methods

☐

Q7. **Identify the Australian Standard that relates to artificial lighting needed for safe movement, as noted in the NCC.**

Answer AS/NZS 1680.0

☐

Q8. **Identify the Volume and Parts of the NCC that outline the requirements for artificial lighting needed for safe movement for Classes 1 and 10, and Classes 2 to 9.**

Answer

Classes 1 and 10	Classes 2 to 9
Volume 2 Part 2.4 – F2.4.4 Light B	Volume 1 Section J energy efficiency Part J6

☐

Q9. Fill in the blanks for the statement below, referring to Volume 1 of the NCC with regards to lighting:

Where a Deemed-to-Satisfy Solution is proposed, Performance Requirements

_____ to _____ are satisfied by complying with

1. _____ to _____; and
2. For a building containing an occupiable outdoor area, _____; and
3. for farm buildings and farm sheds, _____.

Where a Performance Solution is proposed, the relevant Performance Requirements must be determined in accordance with _____ and _____ as applicable.

Answer☐**Q10. Fill in the blanks for the statement below, referring to Volume 2 of the NCC with regards to light:**

Where an alternative light system is proposed as a Performance Requirement to that described in Part 3.8.4, that proposal must comply with –

1. Performance Requirement P2.4.4; and
2. the relevant Performance Requirements determined in accordance with 1.0.10 and _____ as applicable.

Answer☐**Q11. Identify the Australian Standard that relates to each of the listed types of fire fighting equipment, as noted in the NCC.****Answer**

Equipment	Australian Standard
Fire hydrants	AS 2419 C2.12
Fire hose reels	AS 2441 E1.4
Portable fire extinguishers	AS 2444 E1.6
Smoke alarms	AS 3786 E2.2a

☐

Q12. For each of the listed types of fire fighting equipment, identify whether they are required by the NCC (if so, identify the relevant Part).

Answer

Equipment	Volume 1	Volume 2
Fire hydrants	Part E1 Fire fighting equipment E1.3	
Fire hose reels	Part E1 Fire fighting equipment E1.3	
Portable fire extinguishers	Part E1 Fire fighting equipment E1.6	
Smoke alarms	E2.2a Smoke detection and alarm systems	3.7 Fire Safety – 3.7.2 smoke alarms



Q13. Identify the applicable Act in your jurisdiction that outlines the requirements for smoke alarm installation in domestic dwellings. Briefly identify the requirements.

Answer

Act name and section(s)	Requirements
Building Fire Safety (Domestic Smoke Alarms) Legislation Amendment Regulation 2016	1. A smoke alarm must be installed in each bedroom of the domestic dwelling, in a place that complies with section 13AD. 2. (2) Each smoke alarm must— 1. (a) comply with AS 3786–2014; and 2. (b) contain a photoelectric sensor; and 3. (c) not also contain an ionisation sensor; and 4. (d) be hardwired to the domestic dwelling's electricity supply; and 5. (e) be interconnected to every other smoke alarm installed in the dwelling. 3. (3) A smoke alarm (the <i>first smoke alarm</i>) is interconnected to another smoke alarm if— 1. (a) the first smoke alarm sounds an alert if the other smoke alarm is activated because its sensor detects smoke; and 2. (b) the other smoke alarm sounds an alert if the first smoke alarm is activated because its sensor detects smoke.



	(4) Subsections (1) and (2) do not apply to a sole-occupancy unit in a class 2 building if a smoke detection system that complies with the BCA, specification E2.2a, clause 4 has been installed in the domestic dwelling. (5) If the BCA is inconsistent with this section, this section prevails to the extent of the inconsistency.
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Q14. Identify the applicable Act in your jurisdiction that outlines the requirements for testing smoke alarms in domestic dwellings. Briefly identify the requirements.

Answer

Act name and section(s)	Requirements
Building Fire Safety Regulation 2008	<i>maintenance</i> , for a prescribed fire safety installation, means inspection and testing, or repair, of the installation necessary to ensure that it continues to operate at its original performance level and in accordance with any relevant Australian Standards.



Q15. Identify the applicable Act in your jurisdiction that outlines what must occur if smoke alarm in a domestic dwelling does not operate upon testing and when any rectification must occur. Briefly identify the requirements.

Answer

Act name and section(s)	Requirements
Clause 8 Replacement of s 104RC (Lessor must replace smoke alarm)	1. The owner of a domestic dwelling must replace a smoke alarm in the dwelling under this section 27 within 10 years after the day the smoke alarm was 28 manufactured. 29 Maximum penalty—5 penalty units. 30 2. (2) Also, if a smoke alarm in a domestic dwelling 31 does not operate when tested, the owner of the 32 dwelling must immediately replace the smoke 33 alarm under this section. Maximum penalty—5 penalty units.



Q16. In observation of NCC Volume 2, identify three (3) aspects which should be checked with regards to smoke alarms.

Answer

Connected to the consumer main power where consumers power is supplied to the building, be interconnected where there is more than one alarm and comply with the correct Australian standard



**Q17. Must all smoke alarms be interconnected in domestic dwellings?
Explain your response with reference to legislation.**

Answer A 10-year phased rollout of interconnected photoelectric smoke alarms in Queensland will happen over three specific periods starting from 1 January 2017.

- From 1 January 2017: In all new dwellings and substantially renovated dwellings (this applies to building applications submitted from 1 January 2017).
- From 1 January 2022: In all domestic dwellings leased and sold.
- From 1 January 2027: In all other domestic dwellings



Q18. Fill in the blanks for the definition of fire compartments, referring to Volume 1 of the NCC:

Fire compartment means –

1. The total space of a building; or
2. When referred to in –
 1. The Performance Requirements – any part of a building separated from the remainder by barriers to fire such as walls and/or floors having an appropriate resistance to the spread of fire with any floors adequately protected; or
 1. The Deemed-to-Satisfy Provisions – any part of a building separated from the remainder by walls and/or floors each having an FRL not less than that required for a fire wall for that type of construction and where all openings in the Separating construction are protected in accordance with the DtS Provisions of the relevant Part.

Answer



Q19. Identify the Volume and Parts of the NCC that outline the requirements for fire compartmentation and separation for Classes 1 and 10, and Classes 2 to 9.

Answer	Classes 1 and 10	Classes 2 to 9
	Volume 2 Part 3.7 Fire Safety. 3.7.1 Fire separation	Volume 1 part C3 Protection of opening C3.1 Application of part



Q20. Fill in the blanks for the statement below, referring to Volume 1 of the NCC with regards to fire compartmentation and separation:

Where a Deemed-to-Satisfy Solution is proposed, Performance Requirements

CP1 to CP9 are satisfied by complying with

1. C1.1 to C1.13, C2.1 to C2.14 and C3.1 to C3.17; and
2. in a building containing an atrium, Part G3; and
3. for additional requirements for Class 9b buildings, Part H1; and
4. for farm sheds, Part H3.

Where a Performance Solution is proposed, the relevant Performance

Requirements must be determined in accordance with A0.7 and _____ as applicable.

Answer

☐

Q21. Fill in the blanks for the statement below, referring to Volume 2 of the NCC with regards to fire separation:

Where an alternative fire separation design is proposed as a Performance

Solution to that described in Part 3.7.1 that proposal must comply

with Performance Requirement P2.3.1; and the relevant Performance

Requirements determined in accordance with 1.0.10 and

P2.3.1 as applicable.

Answer

☐

Q22. Identify the Australian Standard referenced in NCC Volume 1 with regards to compartmentation and separation for electricity supply systems.

Answer AS/NZS 3013

☐

Q23. Identify the Volume and Parts of the NCC that outline the level of fire resistance required for Classes 1 and 10, and Classes 2 to 9.

Answer

Classes 1 and 10	Classes 2 to 9
Volume 2 Part 1.2, 1.2.3 Fire resistance of building elements	Volume 1 Section C Part C1, C1.1 Fire resisting construction

☐

Q24. In a building's specifications, an FRL is stated as being 90 / 60 / -. If exposed to a standard fire test, how many minutes can you expect this building element to last for the criteria listed below?

Answer

Minutes	Criteria
60	Insulation
60	Integrity
60	Structural adequacy

☐

Q25. Fill in the blanks:

According to NCC Volume 1, an electricity substation located within a building must be separated from any other part of the building by construction having an FRL of no less than 120 / 12 / 120 and have any doorway in that construction protected with a self-closing fire door having an FRL of not less than - / 12 / 30.

Answer

☐

Q26. Fill in the blanks: According to NCC Volume 2, if an electrical wire or cable penetrates a separating wall, the service and building element at the penetration must be identical with a prototype assembly which has been tested and achieve an FRL of not less than - / 60 / 60.

Answer

☐

Q27. Identify the applicable Act in your jurisdiction that outlines the occupier's requirements for maintaining prescribed fire safety installations (e.g. fire doors). Briefly identify the requirements.

Answer

Act name and section(s)	Requirements
Building Fire Safety Regulation 2008. Part 5 Prescribed fire safety installation	This section applies to a person carrying out maintenance of a prescribed fire safety installation. The person must carry out the maintenance of the installation in compliance with QDC, part MP6.1. Maximum penalty—30 penalty units. This section applies if a person who is carrying out, or has carried out, maintenance of a prescribed fire safety installation for a building, becomes aware, or ought reasonably to be aware, of a critical defect in the installation. The person must give the occupier of the building a notice about the defect in the approved form (a <i>critical defect notice</i>) within 24 hours after the person carries out the maintenance of the installation. Maximum penalty—30 penalty units.



Q28. Identify the applicable Regulation in your jurisdiction that outlines the timeframes in which repair or corrective action must be taken when maintaining prescribed fire safety installations. Briefly identify the requirements.

Answer

Regulation name and section(s)	Requirements
Building Fire Safety Regulation 2008. Part 5 division 3 obligations of occupiers	1. Subsection (4) applies if the record of maintenance for a prescribed fire safety installation for a building shows that repair or other corrective action is required for the installation. 2. (4) The occupier of the building must ensure the repair is carried out or the corrective action is taken no later than 1 month after the maintenance of the installation was carried out, unless the occupier has a reasonable excuse.



Q29. NCC Volume 1 outlines that fire doors must be fitted with smoke seals and the assembly must be tested in accordance with Australian Standards. To which classes of building does this specification apply?

Answer AS 1530.7—2007 Methods for fire tests on building

materials, components and structures. Part 7: Smoke control assemblies— Ambient and medium temperature leakage test procedure



Q30. Do all fire doors require tags? Explain your response with reference to legislation.

Answer Buildings approved after 1 April 1976 under the Building Act 1975 **all require tags** to be fitted to the **fire doors**.

Fire doors need to be tagged in accordance with AS/NZS 1905.1. the information on the tag includes:

- The component standard – AS/NZS 1905.1
- Fire resistant Level (FRL) – e.g. -/60/30
- Manufacturer's name (Company name)
- Applicant's name
- Certifier (Company name)
- Door tag number
- Year of manufacturing



Q31. Match the building classifications and their descriptions by writing the appropriate letter next to each number in the centre column.

Answer

Classification		Answers
1	Class 1	1 - E
2	Class 2	2 - H
3	Class 3	3 - C

Description	
A	A non-habitable building or structure.
B	A laboratory or a building in which a handicraft or process for the production, assembling, altering, repairing, packing, finishing or cleaning of goods or produce is carried on for trade, sale or gain.
C	A residential building other than Class 1 or 2 which is a common place of long term transient living for a number of unrelated persons.



4	Class 4	4 - D	D	A dwelling in a building that is Class 5, 6, 7, 8 or 9 if it is the only dwelling in the building.
5	Class 5	5 - F	E	May be a single dwelling or a boarding house, guest house or hostel with a floor area less than 300m ² .
6	Class 6	6 - B	F	An office building used for professional or commercial purposes, excluding buildings of Class 6, 7, 8 or 9.
7	Class 7	7 - I	G	A shop or other building for the sale of goods by retail or the supply of services direct to the public.
8	Class 8	8 - G	H	A building containing 2 or more sole-occupancy units, each being a separate dwelling.
9	Class 9	9 - J	I	A building which is a carpark or for storage/display of goods or produce for sale by wholesale.
10	Class 10	10 - A	J	A building of a public nature.

Q32. What class of building would shops, restaurants and cafes belong to?

Answer Class 6

☐

Q33. What class of building would a general medical practitioner's office belong to?

Answer Class 9a

☐

Q34. True or False (Tick your response): At the design stage, it may not be clear who the final tenant will be (or how they will be using their tenancy), so as long as the design meets the minimum requirements of all the classifications, it could be used for any of the purposes.

Answer

☒	True
☐	False

☐

Q35. Where parts of a building have different purposes, the classification of Class 1 may apply to the whole building if not more than what percentage of the floor area is used for a purpose which is a different classification? Tick your response.

Answer

Choice	Possible Answers
☐	5%
☒	10%
☐	25%
☐	50%

☐

Q36. The NCC aims to ensure structures appropriately withstand normal forces. Match the terms and definitions below by writing the appropriate letter next to each number in the centre column.

Answer

Term		Answers	Definitions	
1	Bending		A	A force which shortens or crushes.
2	Compression	2 - A	B	A fore which stretches and squashes at the same time.
3	Shear	3 - F	C	A force which tries to pull something apart.
4	Strain	4 - D	D	Intensity of the internally distributed forces that resist a change in the form of a body.
5	Stress	5 - E	E	Physical change in the dimensions of a structure that results from applying a load.
6	Tension	6 - C	F	Created where two opposite forces try to cut, tear or rip something in two.

☐

Q37. True or False (Tick your response): When a beam is loaded, the top is compressed and the bottom is in tension.

Answer

☒	True
☐	False

☐

Q38. True or False (Tick your response): When a cantilever is loaded, the top surface is in tension and the bottom is in compression.

Answer

☒	True
☐	False

☐

**** Please note

Unable to find answer to question 9 in volume 1 of the NCC

Questions 10 & 20 are slightly different in the volumes – cant find the answer for the last missing part of each passage.

Can you please advise?

HEALTH AND AMENITY

PART 3.8.4 LIGHT

Appropriate *Performance Requirements*:

Where an alternative lighting system is proposed as an *Alternative Solution* to that described in **Part 3.8.4**, that proposal must comply with—

- (a) *Performance Requirement P2.4.4*; and
- (b) the relevant *Performance Requirements* determined in accordance with **1.0.10**.

Acceptable construction practice

3.8.4.1 Application

Compliance with this acceptable construction practice for a Class 1 building satisfies *Performance Requirement P2.4.4* for lighting.

3.8.4.2 Natural lighting

Natural lighting must be provided in a Class 1 building to all *habitable rooms*, in accordance with the following:

- (a) Natural lighting must be provided by—
 - (i) *windows*, excluding *roof lights* that—
 - (A) have an aggregate light transmitting area measured exclusive of framing members, glazing bars or other obstructions of not less than 10% of the *floor area* of the room; and
 - (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
 - (ii) *roof lights* that—
 - (A) have an aggregate light transmitting area measured exclusive of framing members, glazing bars or other obstructions of not less than 3% of the *floor area* of the room; and
 - (B) are open to the sky; or
 - (iii) a proportional combination of *windows* and *roof lights* required by (i) and (ii).

FIRE RESISTANCE

PART C3 PROTECTION OF OPENINGS

Deemed-to-Satisfy Provisions

C3.0 Deemed-to-Satisfy Provisions

- (a) Where a *Deemed-to-Satisfy Solution* is proposed, *Performance Requirements CP1* to *CP9* are satisfied by complying with—
- (i) *C1.1* to *C1.13*, *C2.1* to *C2.14* and *C3.1* to *C3.17*; and
 - (ii) in a building containing an *atrium*, *Part G3*; and
 - (iii) for additional requirements for Class 9b buildings, *Part H1*; and
 - (iv) for *farm sheds*, *Part H3*.
- (b) Where a *Performance Solution* is proposed, the relevant *Performance Requirements* must be determined in accordance with *A0.7*.

CPCBC4001A

APPLY BUILDING CODES AND STANDARDS TO THE CONSTRUCTION PROCESS FOR LOW RISE BUILDING PROJECTS

PRACTICAL ASSESSMENT INSTRUCTIONS

5. The following practical assessment will require the Participant to complete work related activities.
6. The Assessor will conduct observations of the Participant's work to determine whether they display sufficient practical skills and knowledge.
7. Please fill in the details below – providing your name, signature and date of assessment.
 1. The Participant's signature acknowledges that the Assessor provided clear instructions and the Participant understood what was required to complete this assessment.
8. The Assessor may substitute a Practical Task with an alternate task of equal value.
 1. Alternate tasks must be fully documented by the assessor in the Assessor Comments area.

Participant name Tess Veldink

Participant signature

Tess Veldink

Date 2/03/2021

Assessor name

Assessor signature

Date 2/03/2021

Task	Task outcome (Tick)	
	Satisfactory	Not Yet Satisfactory
Task 1 (Occasion 1)	☐	☐
Task 1 (Occasion 2)	☐	☐

ASSESSOR COMMENTS

CPCBC4001A

APPLY BUILDING CODES AND STANDARDS TO THE CONSTRUCTION PROCESS FOR LOW RISE BUILDING PROJECTS

Practical Task 1 (2X)		
Description of task: On two (2) occasions, a suitable observer is to verify the participant's ability to access, interpret and apply relevant building codes and standards. 9. Occasion 1: Construction classified as Class 1 and 10 construction 10. Occasion 2: Construction classified in Classes 2 to 9 with a gross floor area not exceeding 2000 square metres, not including Type A or Type B construction The participant is to gather evidence of how they have completed each component of the Practical Task, which is to be submitted with this Practical Assessment sheet. Evidence to be submitted may include: 11. Documented evidence of determining a compliant solution on a project including: 1. Correspondence such as letters, emails, and records of other communications 2. Certifier reports, instructions 12. Other compliance documentation for a project including: 1. Council or private certifier inspection reports 2. Structural inspection certificates 3. Occupation certificates The observer is to provide detailed comments on the tasks completed by the participant. The assessor is to verify the observer's comments in the Assessor Comments section, and provide the Practical Assessment outcome on the front cover of this document.		
Resources required: Drawings and specifications, National Construction Code, Australian Standards, Relevant legislation.		
Assessment of task		
Name of participant:	Tess Veldink	
Name of observer:	Abbey Bowden	
Role of observer (Confirm suitability to sign)	Operations and Safety Administration	
Email address of observer	Tess.v@ushergroup.com.au	
Signature of observer:		
Date:	2/03/2021	
When completing the task, did the participant:	Tick if satisfactorily completed. Provide comments if left unticked.	
	1 st Occasion	2 nd Occasion
1 Access and interpret codes and standards		
Q39. Identify relevant performance requirements from the National Construction Code that apply to individual projects described as low rise.	☒	☒

Q40. Determine requirements of relevant National Construction Code deemed-to-satisfy (DTS) provisions.	☒	☒
Q41. Access and interpret requirements of relevant Australian standards referenced in the National Construction Code.	☒	☒
2 Classify buildings		
1. Determine the nature of building according to its use and arrangement.	☒	☒
2. Apply National Construction Code criteria to determine the defined classification.	☒	☒
3. Identify and interpret National Construction Code requirements for multiple classification.	☒	☒
3 Solutions for compliance		
1. Determine range of criteria to ensure that construction methods comply with National Construction Code performance requirements.	☒	☒
2. In accordance with company policy and procedures, discuss and propose alternative solutions to a design or construction problem that complied with National Construction Code requirements, considering basic design principles and the behaviour of materials and structures under stress, strain, compression, bending or combined actions.	☒	☒
3. Identify and document performance-based solutions in accordance with National Construction Code requirements.	☒	☒
4. Analyse and apply assessment methods referenced in the National Construction Code to determine whether a building solution complied with performance requirements or DTS provision.	☒	☒
5. Identify and complete relevant documentation in accordance with National Construction Code requirements.	☒	☒
6. Effectively communicate using the following methods:	☒	☒
7. Language/concepts appropriate to cultural differences	☒	☒
8. Non-verbal communication	☒	☒
4 Fire protection requirements		
1. Identify and apply passive and active fire control elements for low rise buildings, as required by the National Construction Code and other legislation (including WHS requirements).	☒	☒
2. Determine level of fire resistance required for the construction of various low rise buildings.	☒	☒
3. Check existing buildings for compliance with passive and active fire protection requirements, in accordance with National Construction Code requirements.	☒	☒
The Participant's performance was: ☒ Satisfactory ☐ Not Satisfactory		

OBSERVER COMMENTS

Both occasions discussed and applied building codes to different occasions associated with NCC volume 1 and 2. The first occasion was a residential house with a termite issue and the second occasion was a shopping centre not exceeding 2000m² with a parents/changing room not containing a changing table. Both occasions used email and meeting minutes as correspondence, included certifiers reports, plans included in occasion 2 and occasion one had a compliance certificate. The practical used correct terminology and effective communication when references the NCC and used many non-verbals to get information across.

Access and interpret codes and standards

The first part of both occasions was an introduction to what the NCC is and performance requirement. This section was discussed in detail as it set up what was to be discussed later on. DTS and performance solutions was explained and the assessment method.

Classify Buildings

The next part was an sub introduction to the NCC and how buildings are classified. The nature and criteria of the chosen buildings for each occasion was discussed in detail to give background.

Solution of Compliance

In this section it highlighted the important to fully understand the project before working on it to ensure you are complying with the NCC requirements. A problem situation was then discussed in detail giving an overview, performance solution, final design and the benefits. Occasion 1 discussed a termite issue and occasion 2 discussed a parent room issue. Both performance solutions referenced the NCC volumes.

A certificate from occasion 1 was referenced which showed what type of performance based solution was used. Occasion 2 didn't have a certificate but explained the solution used. Both occasions discussed the different assessment methods and which one the occasion used.

Keeping the relevant information and duplicating it was touched on explaining the importance in case the builder needs to refer back in case of inspections.

Fire Protection Requirements

The importance of the fire safety requirements was explained along with the different fire safety measure in a house and shopping centre. An active and passive system chart was included which both occasions made reference to. The FRL was explained with a diagram and the was referred back to each occasion. To finish off the role of a building certifier was touched on and his importance in the building industry was referenced.

Occasion 1 – Single Dwelling with a shed

Access and interpret codes and standards

To: Dion@ushergroup.com.au

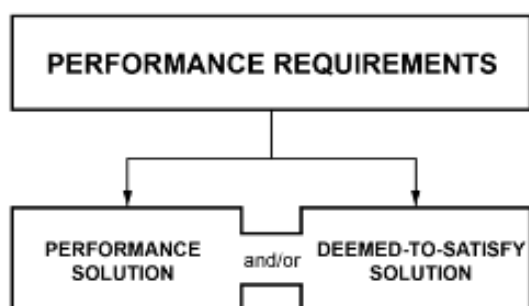
From: Tess@ushergroup.com.au

Subject: Building division – Single Dwelling Project

Hi Dion,

Welcomes to the Usher Group! The Building division can't wait to have you on our team to guide us with all of the administration and ensuring we are following guidelines and Australian Building Regulations in every aspect.

Here's a background on Australian Building Regulations (ABR) to get your head around. In a nutshell ABR was written for - when we do something and how it should be done. Today, each Volume of the National Construction Code (NCC) contains mandatory general requirements or general provisions. Practitioners must meet the Performance Requirements as outlined in the General Requirements. This can be achieved by using a Performance Solution, a Deemed to satisfy (DtS) Solutions or a combination of both.



The NCC requires that Performance Solutions must be assessed by using Assessment Methods listed in Part A2.2 of each volume. The four Assessment Methods are:

1. **Evidence of Suitability** in accordance with Part A5 of each volume
2. **Verification Methods**
3. **Expert Judgement**
4. **Comparison with Deemed-to-Satisfy Provisions**

The next thing to understand is determining requirements of relevant NCC deemed to satisfy provisions.

The deemed to satisfy building solutions establishes a clear and concise process for compliance. A builder will more often than not, adopt the DTS building solutions as outlined in the NCC, this is to ensure what they are doing complies with the NCC instead of trying to develop a new way of performance requirements. These provisions are detailed and usually in references to an Australian Standard. See below an example from the NCC.

Example

Class 1 building must be provided with:

- (i) a kitchen sink and facilities for the preparation and cooking of food; and
- (ii) a bath or shower; and
- (iii) clothes washing facilities, comprising at least one washtub and space in the same room for a washing machine; and
- (iv) a closet pan and washbasin.

The performance requirement for this provision is:

- (a) Suitable sanitary facilities for personal hygiene must be provided in a convenient location within or associated with a building, appropriate to its function or use.
- (b) ***** (this clause has been deliberately blanked out).

(c) Laundering facilities or space for laundering facilities must be provided in a convenient location within or associated with a building, appropriate to its function or use.

(d) A food preparation facility must be provided which includes:

- (i) a means for food rinsing, utensil washing and waste water disposal; and
- (ii) a means for cooking food; and
- (iii) a space for food preparation.

(e) A sanitary compartment must be constructed with sufficient space or other means to enable an unconscious occupant to be removed from the compartment.

Building solution:

The deemed-to-satisfy provision responds to the performance requirement as outlined. If an alternative approach is proposed, it must adequately address the performance requirements. In responding to the performance requirements the deemed-to-satisfy option aims to achieve a minimum acceptable standard for construction.

(From BCA Volume Two, P2.4.3: Facilities)

The NCC makes reference to Australian Standards. These Standards contain technical provisions for the design and construction of building and other structures including building structure, fire resistance, access and egress, service and equipment and health and amenity. The standards set out specifications, procedures and guidelines that aim to ensure products, services, and systems are safe, consistent, and reliable.

Classify Buildings

To: Tess@ushergroup.com

From: Dion@ushergroup.com

Subject: Building division – Single Dwelling Project

Hi Tess,

Thanks for all of the information. I'm really excited to start and to learn everything about building and the guidelines and standards. I can see that we have completed many different types of projects from houses, apartment blocks, shopping centres and restaurants. These are all categorised in the system under 'classes' – can you please advise?

Thanks Dion

Junior Contract Administrator

To: Dion@ushergroup.com.au

From: Tess@ushergroup.com.au

Subject: Building division – Single Dwelling Project

Hi Dion,

The NCC sets out the minimum technical requirements for new buildings, in doing so they have categorised the different types of builds by their function and use. The buildings are then referred to by their class in the NCC. Learning the different classes and information is an important thing to understand when working in the building industry. The building classifications are labelled Class 1 to Class 10. Some classifications also have sub classifications. Class 2 to 9 buildings are mostly covered by Volume One of the NCC and Class 1 and 10 buildings are mostly covered by Volume Two of the NCC. The project you will

start on is a single dwelling with a shed, as you will see under class 1 the buildings are houses and class 1a building is a single dwelling - detached house. Class 10 buildings are non-habitable building or structures class 10a include sheds.

There will be some projects in the future that will have multiple classifications for example residential tower at the top, that goes into a shopping precinct and then basement car parks. This build will need to ensure that will different areas are following the rules and guidelines not just in their own classification but all of them involved in the build.

Solutions for compliance

To: Tess@ushergroup.com

From: Dion@ushergroup.com

Subject: Building division – Single Dwelling Project

Hi Tess,

Thanks for that information I will be sure to use the NCC if I have any more questions about building classifications. What happens if there is a problem in the construction stage?

Thanks Dion

Junior Contract Administrator

To: Dion@ushergroup.com.au

From: Tess@ushergroup.com.au

Subject: Building division – Single Dwelling Project

When the project first starts ensuring to be familiar with the plans, contract and specification of the project, this will ensure that you are across the project. If an issue was to occur you will be able to identify the criteria that you will need to compare to the DTS outlined in the NCC

You should also be aware of other documentation related to construction. Below is an example of a problem we ran into during construction before you started.

Situation Overview

Our client engaged us (Usher Group) as the builder and Cottee Parker as the architects and designers of their new build. Once the design and specifications were finalised with the client, we did a site walk of the slab and noticed termites in old timber pieces on site. This was something no party thought of when discussing and designing the build. We did some research and found that there is a high percentage on termites around the perimeter of Queensland. The high rate of termites made us question if our timber framing would uphold.

Performance Solution

Looking at the NCC Part 3.1.3 Termite Risk Management there are a number different materials we can use for the building instead of timber. Under 3.1.3 Application of this Part it states that, steel, aluminium or other metals can be used, concrete, fibre-reinforced cement, naturally termite resistant timber or preservative treated timber both according with AS 3660.1.

Final Design included

The Usher Group and Cottey Parker presented the client with the NCC and highlighted to them the options they have for their residential build. They decided to go with steel framing for the house, a polished concrete for all the flooring and naturally termite resistant timber for the stairs in the kitchen and stair well for the second floor. All of these products were listed in volume 1 3.1.3 and 3.1.3.2. See attached the termite report confirming this property had termites.

Benefits

Below are a list of benefits for having steel frames

- Termites can't eat steel
- Fire resistance
- Solid foundations
- 50 years structural warranty
- 100% recyclable

Using these 3 products on a house instead timber is an expensive exercise, however if you can afford it, it's worth it. Following 3.1.3.2 installation of termite barriers.

It's important to have every decision documented and to have copies of official documents. In this case we followed a DTS solution which is a set recipe for when an issue arises. See attached a certificate of conformity for the termite barriers, which shows expert judgement has signed off on the solutions provided by the NCC. Ensure to follow this when trying to comply with the NCC.

Assessment Methods are used to determine whether a Building Solution complies with the relevant NCC Performance Requirements. The assessment methods are verification method, evidence of suitability, expert judgement and comparison with DTS provisions. We turned to the verification method/expert judgement, to get the house to the suitable requirements in volume 2 we got a professional to certify the building

In the building industry it's important to keep all documentation and notes (example, all calculations, specifications, analysis, plans, quotes, performance solutions) This is to ensure that the building is compliant and can pass assessment. The ability to refer to detailed documentation provides a vital reference tool required for inspections of key building elements; this ensures they are not inadvertently overlooked.

Fire protection requirements

When planning to build a house it's important to think about fire safety requirements and ensure the house is fully equip. The occupants need to be able to escape fast and safely. In a residential house there is usually 1 method or a combination of fire safety, the most common one would be a safe evacuation plan and to extinguish a fire, there are also active and passive measures.

In this house active systems that will be included are - smoke detection and alarm systems and portable fire extinguishers and passive systems include - fire resistant materials as mentioned in the scenario.

Active Systems (activate when exposed to the products of fire or are manually operated)	Passive Systems (Elements of the building fabric, compartmentation, providing open space between buildings and other potential sources of fire)
Automatically activated: • Sprinkler systems • Smoke detection and alarm systems • Emergency lighting, warning and intercommunication • Stair shaft pressurisation Manually activated • Portable fire extinguishers • Fire hydrants/hose reels • Break-glass alarms	• Fire isolated stairs and passageways • Fire resistant materials (walls, floors, roofs, openings) • Fire doors • Fire curtains • Fire rated ceilings • Fire stop collars (in floor slabs)

Fire protection systems are references in the Queensland Building Act 1975, Fire and Emergency Services Act 1990 and Building Fire and Safety Regulations 2008.

Performance provisions for Fire Safety are also references in part 3.7 of volume 2.

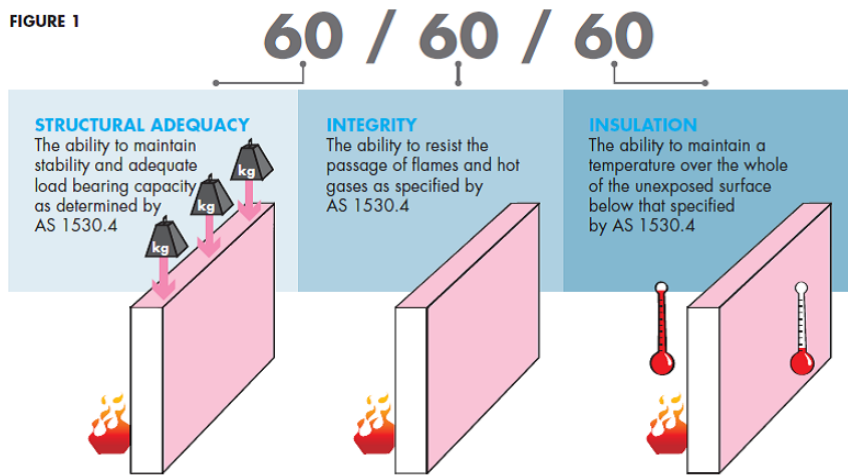
The Fire Resistance Level (FRL) is the ability of a building element to withstand a fire under test conditions for a certain period of time and consists of the three criteria listed below:

- Structural adequacy
- Integrity
- insulation

There are many ways in which an FRL can be determined. They are listed in NCC and include the following:

- A standard fire test in accordance with AS 1530.4 Methods for fire tests on building materials, components and structures
- Australian Standards for steel, timber, concrete or masonry structures
- NCC Volumes 1 & 2: Schedule 5
- A Registered Testing Authority report which is based on a fire test
- Calculation based on a fire test

FIGURE 1



This shows a FRL of 60/60/60 this means that if the building was exposed to a fire test the structure would not be expected to fail for 60 minutes in each criterion. This test and method are used for all of the elements in a house. For example, the steel framing of the house would be 90/90/90. It's important to carefully review the requirements of the legislation with regards to existing buildings, as new laws may apply to older builds.

A building certifier is responsible for ensuring specific compliance is achieved for each system on a number of levels, by referring to the NCC requirements. The certifier will look over the important parts of the house but also does random check of smaller areas, this is to ensure everything complies with the guidelines and codes, doing this is part of their schedule. For example fire safety items/features will be required to be certified both the active and passive fire systems.

Occasion 2 – Small shopping Centre

Access and interpret codes and standards

To: Dion@ushergroup.com.au

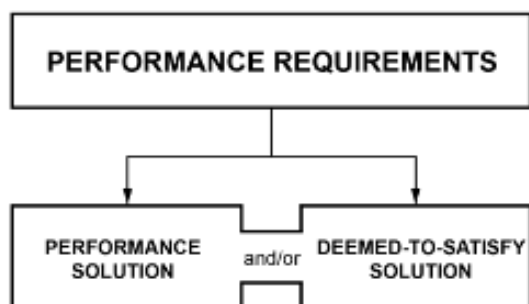
From: Tess@ushergroup.com.au

Subject: Building division – Single Dwelling Project

Hi Dion,

Welcomes to the Usher Group! The Building division can't wait to have you on our team to guide us with all of the administration and ensuring we are following guidelines and Australian Building Regulations in every aspect.

Here's a background on Australian Building Regulations (ABR) to get your head around. In a nut shell ABR was written for - when we do something and how it should be done. Today, each Volume of the National Construction Code (NCC) contains mandatory General Requirements or General Provisions. Practitioners must meet the Performance Requirements as outlined in the General Requirements. This can be achieved by using a Performance Solution, a Deemed to satisfy (DTS) Solutions or a combination of both.



The NCC requires that Performance Solutions must be assessed by using Assessment Methods listed in Part A2.2 of each volume. The four Assessment Methods are:

1. **Evidence of Suitability** in accordance with Part A5 of each volume
2. **Verification Methods**
3. **Expert Judgement**
4. **Comparison with Deemed-to-Satisfy Provisions**

The next thing to understand is determining requirements of relevant NCC deemed to satisfy provisions.

The deemed to satisfy building solutions establishes a clear and concise process for compliance. A builder will more often than not will adopt the DTS building solutions as outlined in the NCC, this is to ensure what they are doing complies with the NCC instead of trying to develop a new way of performance requirements. These provisions are detailed and usually in references to an Australian Standard. See below an example from the NCC.

Example

Class 1 building must be provided with:

- (i) a kitchen sink and facilities for the preparation and cooking of food; and
- (ii) a bath or shower; and
- (iii) clothes washing facilities, comprising at least one washtub and space in the same room for a washing machine; and
- (iv) a closet pan and washbasin.

The performance requirement for this provision is:

- (a) Suitable sanitary facilities for personal hygiene must be provided in a convenient location within or associated with a building, appropriate to its function or use.
- (b) ***** (this clause has been deliberately blanked out).

(c) Laundering facilities or space for laundering facilities must be provided in a convenient location within or associated with a building, appropriate to its function or use.

(d) A food preparation facility must be provided which includes:

- (i) a means for food rinsing, utensil washing and waste water disposal; and
- (ii) a means for cooking food; and
- (iii) a space for food preparation.

(e) A sanitary compartment must be constructed with sufficient space or other means to enable an unconscious occupant to be removed from the compartment.

Building solution:

The deemed-to-satisfy provision responds to the performance requirement as outlined. If an alternative approach is proposed, it must adequately address the performance requirements. In responding to the performance requirements the deemed-to-satisfy option aims to achieve a minimum acceptable standard for construction.

(From BCA Volume Two, P2.4.3: Facilities)

The NCC makes reference to Australian Standards. These Standards contain technical provisions for the design and construction of building and other structures including building structure, fire resistance, access and egress, service and equipment and health and amenity. The standards set out specifications, procedures and guidelines that aim to ensure products, services, and systems are safe, consistent, and reliable.

Classify Buildings

To: Tess@ushergroup.com

From: Dion@ushergroup.com

Subject: Building division – Single Dwelling Project

Hi Tess,

Thanks for all of the information. I'm really excited to start and to learn everything about Building and the guidelines and standards. I can see that we have completed many different types of projects from houses, apartment blocks, shopping centres and restaurants. These are all categorised in the system under 'classes' – can you please advise?

Thanks Dion

Junior Contract Administrator

To: Dion@ushergroup.com.au

From: Tess@ushergroup.com.au

Subject: Building division – Single Dwelling Project

Hi Dion,

The NCC sets out the minimum technical requirements for new buildings, in doing so they have categorised the different types of builds by their function and use. The buildings are then referred to by their class in the NCC, learning the different classes and information is important thing to understand when working in the building industry. The building classifications are labelled Class 1 to Class 10. Some classifications also have sub classifications. Class 2 to 9 buildings are mostly covered by Volume One of the NCC and Class 1 and 10 buildings are mostly covered by Volume Two of the NCC.

The project you will start on is a small shopping centre no exceeding 2000m², as you will see under class 6 the building are typically shops, restaurants and cafes – this class is for buildings for the purpose of sales of retail or services to the public.

There will be some projects in the future that will have multiple classifications for example, residential tower at the top, that goes into a shopping precinct and then basement car parks. This build will need to ensure that will different areas are following the rules and guidelines not just in their own classification but all of them involved in the build.

Solutions for compliance

To: Tess@ushergroup.com

From: Dion@ushergroup.com

Subject: Building division – Single Dwelling Project

Hi Tess,

Thanks for that information I will be sure to use the NCC if I have any more questions about building classifications. What happens if there is a problem in the construction stage?

Thanks Dion

Junior Contract Administrator

To: Dion@ushergroup.com.au

From: Tess@ushergroup.com.au

Subject: Building division – Single Dwelling Project

When the project first starts ensuring to be familiar with the plans, contract and specification of the project, this will ensure that you are across the project, if an issue was to occur you will be able to identify the criteria that you will need to compare to the DTS outlined in the NCC

You should also be aware of other documentation related to construction.

See below the meeting minutes from the other day, which we discussed a past problem we ran into when pricing the project.

MEETING MINUTES – 25/02/2020 **SMALL SHOPPING CENTRE PROJECT**

Situation Overview

Once the client had spoken with the architect and everything was confirmed ie. Finishes, plans and schedule, the plans were then forwarded to us to quote. When quoting we noticed that toilet facilities didn't comply with the NCC volume 1 F2.2 Facilities in class 3 to 9 buildings. In the parents/changing room there was no changing table – this is something that may have been forgotten in a rush to get the drawings out for quoting

Performance Solution

To help the client out we decided to add in the changing table into our drawings and quote accordingly, we followed the requirements in the NCC.

- within 1 m of a separate adult hand washing facility;
- not less than 0.9 m² in surface area for the top of the bench;
- not less than 850 mm and not more than 900 mm from the finished floor level to the top of the bench. This height range is specified for ergonomic and safety reasons;
- provided with a means of storing access steps by a space of not less than 800 mm high x 800 mm deep x 500 mm wide; and
- provided in a location so that the play area is visible at all times, to allow adequate supervision of other children whilst changing a child.

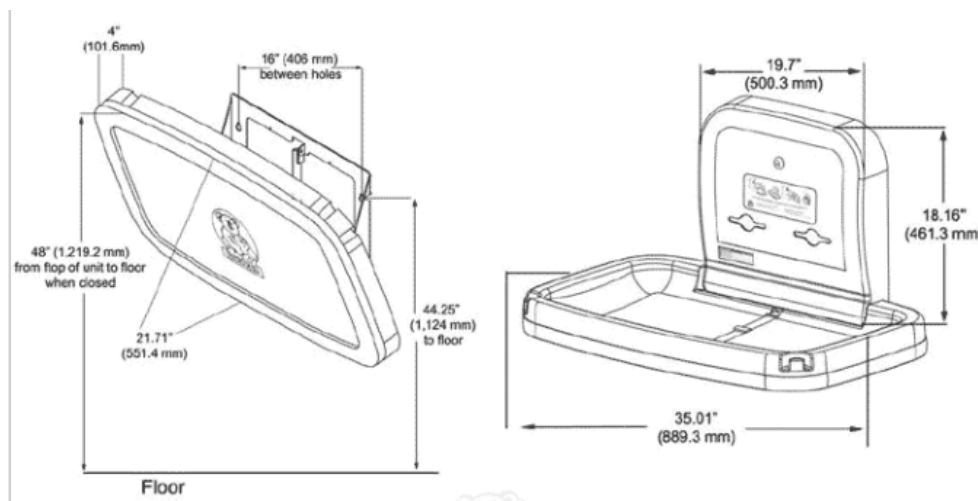
Final Design

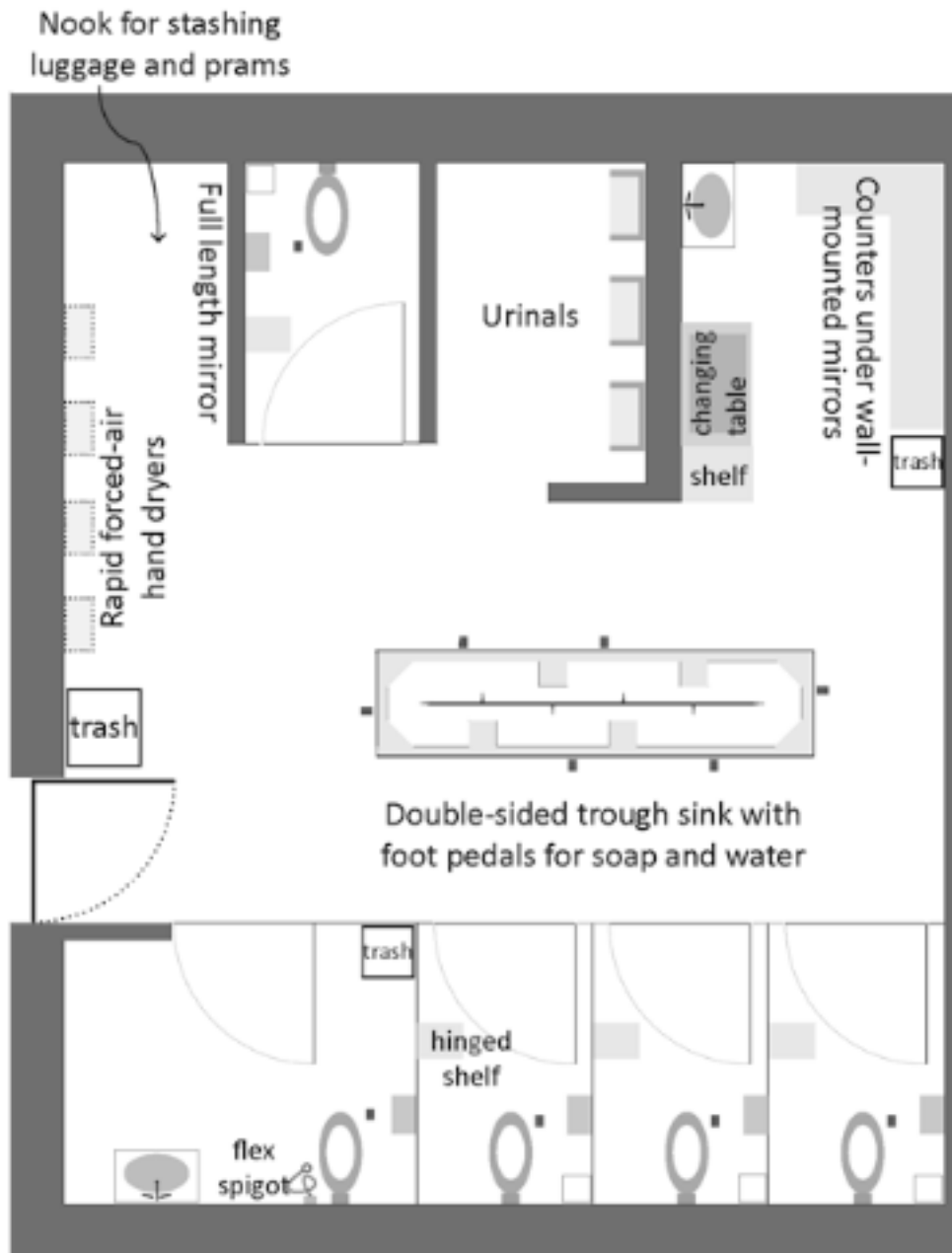
Adding the changing table to the changing room meant adding mitres to the room. This is to ensure there is enough room to stand when the table is down and 1m away from the hand washing area. We were lucky when adding the table in that nothing was in the way – it was a simple addition to the room and a few room measurements had to be changed thus us getting an extension for the due date. See below the commercial changing table that will be added in the finishes schedule, and a floor plan of the parent's room/changing room with the additional of the shelf and changing table.

Benefits

The benefits of adding a changing table include;

- Having all features included in a new parent/changing room which align with the NCC Part F2 Sanitary and other facilities, F2.3 Class 3 to 9 Buildings requirements.
- Encourage parents to come out shopping, therefore spending money and boosting the economy
- Creating a safe and user-friendly space for parents, giving a good lasting impression





It's important to have every decision documented and to have copies of official documents. In this case we followed a DTS solution which when followed meets the Performance Requirements.

See attached a bathroom report that will be completed by the certifier once the build is done, this report is in align with the NCC and Australia Standards. If there's a problem, it will be a fail but we will have the opportunity to change it and receive a pass. If it's to do with the finishes we will pass it onto the correct subcontractor, however if it's the structure it could be something we need to correct.

Assessment Methods are used to determine whether a Building Solution complies with the relevant NCC Performance Requirements. The assessment methods are verification method, evidence of suitability, expert judgement and comparison with DTS provisions.

In this case regarding the changing table, we are the builders turned to the evidence of suitability method. This requires evidence to support claims that the material/design meets the Performance requirements. We had to change the design of the changing/parents bathroom to accommodate for the changing table and ensure it still complies with the NCC requirements.

In the building industry it's important to keep all documentation and notes (example, all calculations, specifications, analysis, plans, quotes, performance solutions) This is to ensure that the building is compliant and can pass assessment. The ability to refer to detailed documentation provides a vital reference tool required for inspections of key building elements; this ensures they are not inadvertently overlooked.

Fire protection requirements

When the government is building a shopping centre, it's important to think about fire safety requirements and ensure the centre is fully equip. the occupants need to be able to escape fast and safely. In a public space there is usually multiple methods of fire safety, the most common one would be a safe evacuation plan and extinguish a fire - there are also active and passive measures.

In this public space some active systems include - sprinkler systems, emergency lighting and warning signs, break glass alarms, fire hydrants/hose reels and smoke detections. In a passive system some include - fire resistant materials, fire isolated stairs, passageways, fire doors, fire rated ceilings

Active Systems (activate when exposed to the products of fire or are manually operated)	Passive Systems (Elements of the building fabric, compartmentation, providing open space between buildings and other potential sources of fire)
Automatically activated: • Sprinkler systems • Smoke detection and alarm systems • Emergency lighting, warning and intercommunication • Stair shaft pressurisation Manually activated • Portable fire extinguishers • Fire hydrants/hose reels • Break-glass alarms	• Fire isolated stairs and passageways • Fire resistant materials (walls, floors, roofs, openings) • Fire doors • Fire curtains • Fire rated ceilings • Fire stop collars (in floor slabs)

Fire protection systems are references in the Queensland Building Act 1975, Fire and Emergency Services Act 1990 and Building Fire and Safety Regulations 2008.

Performance provisions for Fire Safety are also referenced in section C in volume 1.

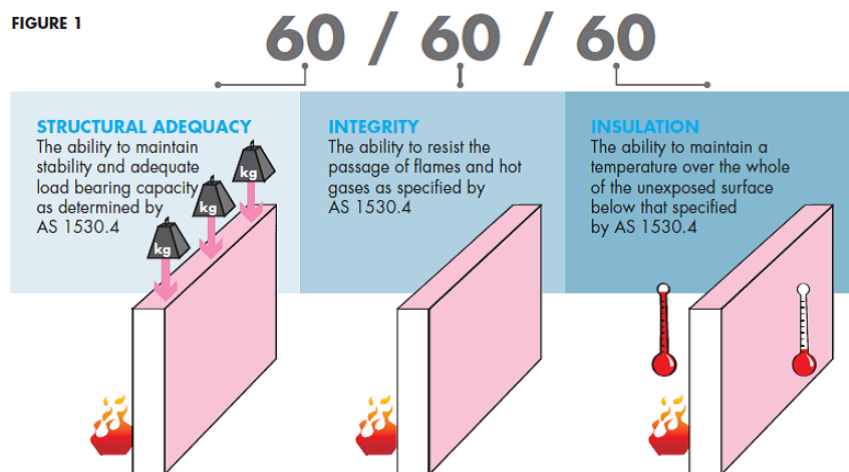
The Fire Resistance Level (FRL) is the ability of a building element to withstand a fire under test conditions for a certain period of time and consists of the three criteria listed below:

- Structural adequacy
- Integrity
- Insulation

There are many ways in which an FRL can be determined. They are listed in NCC and include the following:

- A standard fire test in accordance with AS 1530.4 Methods for fire tests on building materials, components and structures
- Australian Standards for steel, timber, concrete or masonry structures
- NCC Volumes 1 & 2: Schedule 5
- A Registered Testing Authority report which is based on a fire test
- Calculation based on a fire test

FIGURE 1



This shows a FRL of 60/60/60 this means that if the building was exposed to a fire test the structure would not be expected to fail for 60 minutes in each criterion. This test and method are used for all of the elements in a structure including a shopping centre. For example, you can purchase different types of fire doors which have various fire ratings from one hour to four hours. It's important to carefully review the requirements of the legislation with regards to existing buildings, as new laws may apply to older builds.

A building certifier is responsible for ensuring specific compliance is achieved for each system on a number of levels, by referring to the NCC requirements. The certifier will look over the important parts of the shopping centre, but also does random check of smaller area this is to ensure everything complies with the guidelines and codes, doing this is part of their schedule. For example, fire safety items/features will be required to be certified both the active and passive fire systems.



CODEMARK™

CERTIFICATE OF CONFORMITY

This is to certify that

Protectant™



Product description
The Protectant™ termite barrier system is a geotextile fabric impregnated with Bifenthrin termiticide and / or Stainless Steel Barrier sealed with adhesive. The system comprises:
- Protectant™ Termite Barrier - Protectant™ Wall Sheeting - AD-TR-SOL Red (Adhesive) - AD-ULETH-TR (Adhesive) - PVC and Stainless Steel (316) Flanges for penetrations and Stainless Steel (316) for perimeter barriers (See Note 1)
Product purpose or use
The Protectant™ termite barrier system.
Certificate holder
The White Ant Co Unit 2 57-61 Burchill Street Loganholme, QLD 4129

Complies with the Building Code of Australia 2009:
- Volume One: BP1.1 and BP1.2 (limited only to actions by subterranean termites) - Volume Two: P2.1 (limited only to actions by subterranean termites) - State Variations: - Volume Two – QLD P2.1.1 (limited only to actions by subterranean termites)
PVC and Stainless Steel (316) Flanges for penetrations are deemed to satisfy products:
Subject to the following conditions and limitations:
- Installed by The White Ant Co accredited installers (holder of a current The White Ant Co Installation Licence) - Product installation, shall be carried out by a competent person: - As per the Installation Instructions dated March 2010 for Premium Flow and Protectant™ Barrier for the other products; and - Have ready access to all to the relevant technical information related to the product use. - The builder must install a durable notice must be permanently fixed to the building in a prominent location, such as a meter box or the like indicating: - The method of termite risk management; and - The date of installation of the system; and - The manufacturer's recommendations for the scope and frequency of future inspections for termite activity. - When used as a termite barrier in conjunction with a concrete slab the slab must be designed and constructed according to AS 2870: 1996 (up to amendment 4, 05/2003) or AS 3600: 2001 (up to amendment 2, 10/2004). - Brick mortar under the barrier needs to be full (have not gaps or porosity to provide an inspection zone).
Note 1: PVC and Stainless Steel (316) Flanges for penetrations are deemed to satisfy products in AS3660.1: 2000, have not been assessed against: - Volume One NT B1.4(i) - Volume Two QLD P2.1.1, QLD 3.1.3.0, NT 3.1.3.0

CodeMark Certification Body			15/4/2010	22/4/2010	15/4/2013	GM-10-CM30020
Global-Mark Pty Ltd, Suite 4.07, 32 Delhi Road, North Ryde NSW 2113, Australia - www.GlobalMark.com.au	Hervé Michoux Managing Director	Unrestricted Building Certifier, Peter Gardner	Date of issue	Last update	Date of expiry	Certificate Number

- This Certificate of Conformity is issued under arrangement with JAS-ANZ. The ABCB does not in any way warrant or represent that the Product the subject of this Certificate of Conformity conforms with the BCA, nor accepts any liability arising out of the use of the Product.
- It is advised to check that this Certificate of Conformity is currently valid and not withdrawn/ suspended or superseded by a later issue by referring to the ABCB website, www.abcb.gov.au.



Wood Destroying Insect Inspection Report

Notice: Please read important consumer information on page 2.

Section I. General Information

Inspection Company, Address, & Phone

Sherlock Homes Property Inspections
PO Box 4048
Evansville, IN 47724
(812) 477-3007

Company's Business Lic. No.

B-37010

Date of Inspection

1/03/2021

Address of Property Inspected

File Number:

Inspector's Name, Signature, & Certification, Registration, or Lic. #

Charles Zehner

Charles Zehner

F36806

Structure(s) Inspected

House & detached garage

Section II. Inspection Findings This report is indicative of the condition of the above identified structure(s) on the date of inspection and is not to be construed as a guarantee or warranty against latent, concealed, or future infestations or defects. Based on a careful visual inspection of the readily accessible areas of the structure(s) inspected:

☐ A. No visible evidence of a wood destroying insect infestation was observed.

☒ B. Visible evidence of a wood destroying insect infestation was observed as follows:

☐ 1. Live insects (description and location):

outside on old pieces of wood, before the build started.

☐ 2. Dead insects, insect parts, frass, shelter tubes, exit holes, or staining (description and location):

n/a

☒ 3. Visible damage from wood destroying insects was noted as follows (description and location):

timber, bracing and peeled away from Termite infestation.

NOTE: This is not a structural damage report. If box B above is checked, it should be understood that some degree of damage, including hidden damage, may be present. If any questions arise regarding damage indicated by this report, it is recommended that the buyer or any interested parties contact a qualified structural professional to determine the extent of damage and the need for repairs.

☒ Yes ☐ No It appears that the structure(s) or a portion thereof may have been previously treated. Evidence of previous treatment:

Holes in floor framing members

The inspecting company can give no assurances with regard to work by other companies. The company that performed the treatment should be contacted for information on treatment and any warranty or service agreement which may be in place.

Section III. Recommendations

☐ No treatment recommended: (Explain if Box B in Section II is checked)

☒ Recommended treatment for the control of:

using termite safe materials for the new build.

Section IV. Obstructions & Inaccessible Area

The following areas of the structure(s) inspected were obstructed or inaccessible:

☒ Basement *3, 6, 7, 9, 11, 24*

☐ Crawlspace

☒ Main Level *1, 3, 4, 6, 7, 8, 9, 11, 14, 24*

☒ Attic *5, 11, 24*

☒ Garage *6, 7, 8, 11, 14, 24*

☒ Exterior *17*

☒ Porch

☐ Addition

☐ Other

The inspector may write out obstructions or use the following optional key:

- | | |
|-------------------------|--|
| 1. Fixed ceilings | 13. Only visual access |
| 2. Suspended ceiling | 14. Cluttered condition |
| 3. Fixed wall covering | 15. Standing water |
| 4. Floor covering | 16. Dense vegetation |
| 5. Insulation | 17. Exterior siding |
| 6. Cabinets or shelving | 18. Window well covers |
| 7. Stored items | 19. Wood pile |
| 8. Furnishings | 20. Snow |
| 9. Appliances | 21. Unsafe conditions |
| 10. No access or entry | 22. Rigid foam board |
| 11. Limited access | 23. Synthetic stucco |
| 12. No access beneath | 24. Duct work, plumbing, and/or wiring |

Section V. Additional Comments and Attachments (these are an integral part of the report)

Attachments

Signature of Seller(s) or Owner(s) if refinancing. Seller acknowledges that all information regarding W.D.I. infestation, damage repair and treatment history has been disclosed to the buyer.

X

Signature of Buyer. The undersigned hereby acknowledges receipt of a copy of both page 1 and page 2 of this report and understands the information reported.

X

Ready Set Bathrooms

Inspection reports new & old - residential or commercial

Please note these report are conducted in accordance to the NCC and Australia Standards

Bathroom

	N/A	PASS	FAIL
Toilets (urinal incl)			
Shower heads			
Showertapware			
Basin taps			
Changing table			
Mirror			
Toilet paper dispenser			
disabled toilet			
Rails - toilet and shower			
Soap dispenser			

Additional notes and photos