

CPCCBC6001

APPLY BUILDING CODES AND STANDARDS TO THE CONSTRUCTION PROCESS FOR LARGE BUILDING PROJECTS

ASSESSMENT SUMMARY

The assessment activities for *CPCCBC6001 Apply building codes and standards to the construction process for large building projects* cover all aspects of the unit of competency. For Apprentices/Trainees, this includes supervisor completion of the Apprentice/Trainee Record (ATR).

Participants must read all the information given before starting any assessment task. The assessment tasks are intended to be fair, flexible, valid and reliable. 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 all questions or perform all tasks, they will be deemed 'Not Satisfactory' for the task and 'Not Yet Competent' for the unit of competency.

The Trainer/Assessor can provide the Participant with additional information on interpreting the assessment outcomes and guide the Participant's options. If a Participant is still deemed 'Not Satisfactory' they will have the opportunity to undertake a supplementary assessment or appeal the result as per the process in the Student Handbook.

By signing below, the Participant acknowledges:

- They understand the assessment instructions and requirements, and consent to being assessed.
- The work submitted is to be their own work – with the work of/with others needing to be clearly acknowledged and documented.
- They consent to any photo/video recording of their work that occurs during assessment.

Participant name	Ryan Hay
Participant signature	

Pre-requisite unit(s) to be achieved and authenticated prior to undertaking assessment

☐ Not applicable

Task	Date completed	Assessment Results	
Theory Exam	Select Date.	☐ Satisfactory	☐ Not Satisfactory
Workbook	Select Date.	☐ Satisfactory	☐ Not Satisfactory
Practical Assessment	Select Date.	☐ Satisfactory	☐ Not Satisfactory
Outcome for CPCCBC6001	Select Date.	☐ Competent	☐ Not Yet Competent

Evidence requirements checklist (ticked by assessor and evidence supplied to RTO)

- | | |
|---|---|
| ☒ Theory Exam
☒ Workbook
☒ Practical Assessment | ☒ Workplace Quality document/s and/or Quality Assurance Template
☒ Existing building fire protection checklist
☒ Site and Working Plans |
|---|---|

Assessor name	
Assessor signature	

CPCCBBC6001

APPLY BUILDING CODES AND STANDARDS TO THE CONSTRUCTION PROCESS FOR LARGE BUILDING PROJECTS

THEORY EXAM

Participant name	Ryan Hay
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FOR THE PARTICIPANT
Instructions
• You will complete written questions as outlined on the following pages. You must attempt all questions and provide enough detail in your responses to demonstrate your knowledge. • It is anticipated that you should complete this assessment within two (2) hours, but additional time may be allowed upon negotiation with the Assessor. • You must complete all questions unassisted by the Assessor or other personnel but may refer to reference material as needed. All questions must be answered correctly for a 'Satisfactory' assessment outcome to be awarded. ◦ An oral examination may be allowed under certain circumstances, whereby your answers will be documented by another party. ◦ Any written questions that are incomplete, or not answered satisfactorily will need to be completed again after further training support. ▪ If you answer a question incorrectly but modify your response, put your initials next to the written change (or the Assessor must initial a verbal change).
Resources required
Pen

FOR THE ASSESSOR
Instructions
• Where oral examination has occurred, ensure that this is acknowledged in writing (e.g. FT001 and Assessor Comments) • All questions must be satisfactorily demonstrated by the Participant for a Satisfactory determination (indicated by an Assessor tick to the right of the question). • Assessors are to complete marking in pen of a different colour to the Participant. • If the Participant verbally modifies their response, write in the modified response verbatim and put your initials next to the written change.

ASSESSOR COMMENTS

As necessary, outline:

- Details on reattempts, alternative arrangements or reasonable adjustments made.
- Where a Participant is deemed 'Not Satisfactory', provide recommendations for future training.

Q1. Explain why it is important to understand references the NCC makes to Australian Standards.

Answer

While the NCC give technical performance requirements and are the minimum standard for buildings, building elements and plumbing//drainage systems, the Australian standards give detailed guidance on how this criteria should be met and your obligations for ensuring safety during construction and that the completed work is compliant.



Q2. You have been asked to develop a tender proposal for a large government building in your State/Territory. Discuss in depth any legislation and Codes your submission must comply with?

Answer

So lets assume that this government building is an office building so the NCC category would be Class 5 (A6G6).

The below would be a good base but may not cover everything as it would be dependant on design.

AS4120-1994

Building and construction COP 2000

Code for tendering and performance of building work Amendment instrument 2022

Volumes 1 and 2 of the BCA (given effect through the Environmental planning and assessment act 1979.

Volume 3 of the Australian plumbing code. Given through the environmental planning and assessment act 2011.

1. NCC vol.1 J6D6 Ductwork insulation
2. NCC vol.1, Specification 5 Fire-resisting construction S5C19 Type A fire-resisting construction — carparks
3. NCC vol.1, C1P1 structural stability during a fire
4. NCC vol.1, C1P2 Spread of fire



5. NCC vol.1, C2D3 Calculation of rising in storeys
6. NCC vol.1, C2D4 Buildings of multiple classifications
7. NCC vol.1, D2D3 Number of exits required
8. NCC vol.1, D3D27 Re-entry from fire-isolated exits
9. NCC vol.1, E1D4 Sprinklers
10. NCC vol.2, Part H4D4 Room heights
11. NCC vol.2, Part H2D4 Masonry

In addition to the above, construction processes and methodologies would need to be assessed to ensure that everything is covered.

E.g the use of precast or tilt up panels, Curtain wall systems, Post tension slabs etc.

All requirements to ensure safe work practices and that you are compliant with all legislation and codes in regards to safety need to be assessed along with the methodology.

Q3. Describe the listed NCC compliance assessment methods used to determine compliance using a Performance Solution pathway.

Answer

Assessment method	Description
Evidence of suitability	Basically gives supporting information showing that a product, system of work or an alternative design meets the same performance requirements. e.g. Blockwork instead of concrete for fire rating or a product like Speed wall instead of either. This would need to be approved by engineer or the like.
Verification methods	This may be product testing results and/or procedure that quantifies the performance of the solution and compares it to the performance requirements of the NCC. Again in reference to fire rating, Concrete block suppliers and Speedwall have taken there product and put them in laboratory conditions and tested there fire rating abilities. These are documented on their specification sheets. If we think about design it may be that we change products for ease of construction or speed of construction methods. Eg. Structural Precast instead of insitue concrete. All that needs to be shown is that through engineers documented design, testing results and approval is



	that the new product has the same performance as the original. This would need to be approved by engineer or the like.
Comparison with DTS Provisions	“Deemed to satisfy” means that the proposed method, materials or design are correct as per the NCC and meet the performance criteria.
Expert Judgement	This is used when performance test may not be possible or are difficult to calculate effectively. The Expert would need to have documentation showing both the experts knowledge and supporting documents to support the DTS provision.

Q4. Discuss the importance of documenting quality assurance and quality control processes relevant to the build.

Answer ☐ A Quality plan should be put together to ensure that systems of works are completed in a way that allows for systematic hold points where quality can be checked and verified as being correct.

This would include but not be limited to ensuring correct materials are used, installation methods that are specified are adhered to and would document proof of all the checks that have taken place.

This will not only document that works have been checked and completed correctly but will show that defective works were detected and fixed during construction before the works continued. This is very important in areas where access to view areas gets closed and inspections are impossible after.

i.e. Fire rated wall construction (gyprock) where multiple layers of sheeting maybe required or risers etc.

This also ensures that if issues or defects are found later, as a builder you can show and prove that works were completed to the specifications and that the issues were not caused by poor workmanship.

Having a Quality plan will also help with planning resources in both documentation and project personnel required to ensure that someone will be there for the hold points and correct information is on the documentation.

Q5. Discuss the basic principles of structural design and how stress or strain occurs.

Answer ☐ Stress and strain occurs when loads are enforced on a structure.

Stress and strain is the reaction these forces have on a structure.

Stress is the force on a structure where as strain is when a structure bends or deforms while under load.

Live loads where movements on the structure during every day operation or during construction create loads that react differently to dead loads or non moving loads.

Dead load could be furniture or joinery, plant and equipment etc. Dead Loads are basically items that need to be accounted for that are stationary once installed

Q6. Discuss compressive and tensile stresses on buildings?

Answer Compression loads where direct pressure is places on a column or similar pushing structural components together.



Tensile force is a force that tends to stretch or pull on elements

Q7. Describe considerations you make when writing workplace procedures.

Answer In short the procedure should detail in sequence how works will be completed in a safe manner while achieving compliance with WHS legislation.



Considerations :

Practicality of the procedure.

Risks involved with the works

How the risks will will be mitigated

PPE involved when completing the tasks

Licensing requirements needed to complete the works

The use of chemicals and requirementrs for SDS's to be on site.

Details of plant and equipment to be used and maintenance schedules created to ensure its safe use.

People responsible for ensuring that the above is completed and verified,

Access ways and emergency exits etc.

AS and WHS requirements for the works being performed

First aiders and equipment location

Fire fighting equipment

Emergency procedures and training.

Q8. Discuss the listed levels found in the NCC Performance Hierarchy.

Answer

Performance Hierarchy	Description
Objectives	To create a performance based code that state the minimum requirements that builders and plumbers along with building elements must meet.
Functional statements	Are statements which describe how buildings and building elements achieve the requirements set out in the NCC.
Performance requirements	Are the minimum level that buildings, building elements and plumbing /drainage systems must meet.
Building Solutions	Performance solutions addresses the performance requirements set out in the NCC by using one or more of the assessment methods. Deemed to satisfy solution is a solution that is set out in the NCC. Alternative solution is a solution that has the required documentation and input from experts or licensed professionals that show that it meets the performance requirements of the NCC.



Q9. Discuss two (2) properties, two (2) characteristics and two (2) limitations of concrete when used for buildings.

Answer		Concrete	☐
	Properties	Good Fire rating properties. Workability. With the correct design and workmanship it can be moulded into different shapes and forms.	
	Characteristics	Finished product is hard and resistant to wear. A good product when used outdoors as it is durable against the elements. Fire resistant	
	Limitations	Can be expensive in comparison to other products when also taking into account labour required for formwork, reinforcement and Post tensioning. Requires structural columns placed at regular spacings dependant on reinforcement. Shrinkage can occur if it hasn't been effectively allowed for	

Q10. Discuss three (3) benefits of using glass in buildings?

Answer	1.	Lets in natural light reducing the amount of lighting required to be used during the day time	☐
	2.	When using the correct glass design it has good sound proofing properties	
	3.	As above with Sound it also has good thermal properties while being non combustible.	

Q11. Describe information you can determine from the working drawings and specifications when organising the excavation for the site of a three (3) storey unit block with underground parking.

Answer

Ground conditions:
Types of soil, foundation levels, water table levels (potentially).

Spoil type:
Some tips or dumping grounds only take certain types of soil.
Potentially soil can be cleaned to make the soil more desirable for different places.
Soil can also sometimes be contaminated.

Foundation detail:
Depth of piles and footings.
Design of footings and foundations including reinforcement and concrete strength and design.
Compaction requirements for new footings and piles etc.

In ground services:
Design and quantity play a big part in programming out works for excavation.

Design for slab on ground:
Preparation requirements like compaction, design of drainage layer or the like, waterproffing requirements if any.



Q12. Who would you discuss materials and plans with to ensure compliance with NCC Performance Requirements and site safety. Provide two (2) and explain your answers.

Answer

Designers:
Generally designers are not builders so a lot of the time their ideas are not feasible either by cost issues, time issues or buildability issues (or all of those combined)
A lot of the time designs are changed for this reason so it's important that the designs and builders/trades know the construction methodology to meet the requirements of the NCC.

Site teams:
Different products, designs and construction methodologies have different requirements that need to be achieved.
Teams need to be across requirements with both safety and quality to ensure issues do not arise as a result of the people involved not knowing these requirements.



Q13. Why may you need to use a combination of Performance Solutions and Deemed-to-Satisfy (DtS) solutions to comply with the Performance Requirements of the NCC

Answer

If Buildings have multiple classifications.
If different floors have different uses then a different class maybe used for one floor but not the others.



CPCCBBC6001

APPLY BUILDING CODES AND STANDARDS TO THE CONSTRUCTION PROCESS FOR LARGE BUILDING PROJECTS

WORKBOOK

Participant name	Ryan Hay
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FOR THE PARTICIPANT
Instructions
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Resources required
Pen

FOR THE ASSESSOR
Instructions
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ASSESSOR COMMENTS

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- Details on reattempts, alternative arrangements or reasonable adjustments made.
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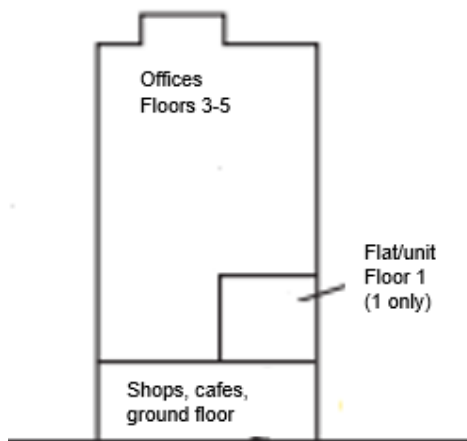
NOTE

At times, you will be provided with a specific business context to which you must respond, otherwise it is anticipated that you will use a workplace of your choosing (your own, or hypothetical) to provide the context to the task.

At all times, the responses in your assessment must reference **Australian** (Queensland or Federal) documentation, including legislation, regulations, codes of practice, standards and guidance publications.

ACTIVITY 1

Access the NCC via the internet to determine the Building Classification/s that apply to the building diagram below. The building is to contain offices in the upper floors, one caretaker flat on the first floor and shops and cafes on the ground floor. Explain your findings below.



Answer

Class 4: Caretakers are able to be located in a class 5-9 building. As long as there is only one residence.

Class 5 Offices for professional or commercial purposes.

Class 6 Shops and cafes

**Satisfactory
Outcome**



ACTIVITY 2

Access the NCC via the internet to locate the requirements applicable to a building development in the Brisbane area, containing 6 sole-occupancy units, two (2) on each level, each being a separate dwelling.

This building includes one (1) basement level designated for car parking.

The proposed building structure requires reinforced concrete floors and columns.

Document your findings or where in the NCC the information can be located.

Building Description

Classification

Class 2

Building classifications

Page 62 Vol 1

Class 2 could not cover the carpark due to it being multistorey building.

7a for the carpark.

Page 65 . Vol 1

Rise in Storeys

Is the sum of the greatest number of storeys above ground level .

Page 101 Volume 1

Number of Storeys

3

Page 101 Volume 1

Type of construction

Table C2D2 page 108 volume 1: Type A

Climate Zone and description

Zone 2 ABCB climate zone map

Or page 169 volume 2

Fire resistance and stability

Locate fire resistance information

Table C2D2 page 108 volume 1: Type A
C2D33 storey building as the basement is not counted.
C2D4 (1) In a building of multiple classifications, the Type of construction required for the building is the most fire-resisting Type resulting from the application of Table C2D2 on the basis that the classification applying to the top storey applies to all storeys.

Compartmentation and fire separation

Specification 5 Fire resisting construction

S5C3 Fire protection for a support of another part [2019: Spec C1.1: 2.2] (1) Where a part of a building required to have an FRL depends upon direct vertical or lateral support from another part to maintain its FRL, that supporting part, subject to (2), must— (a) have an FRL not less than that required by other provisions of this Specification; and (b) if located within the same fire compartment as the part it supports have an FRL in respect of structural adequacy the greater of that required— (i) for the supporting part itself; and (ii) for the part it supports; and (c) be non-combustible— (i) if required by other provisions of this Specification; or (ii) if the part it supports is required to be non-combustible

Table S5C11g
Floors 90/90/90
Roofs 90/60/30
Columns 90/--/--

S5C15 Type A fire-resisting construction — roof: Concession [2019: Spec C1.1: 3.5] A roof need not comply with Table S5C11g if its covering is non-combustible and the building— (a) has a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification 17 installed throughout; or Building element FRL (in minutes): Structural adequacy / Integrity / Insulation Class 2, 3 or 4 part Class 5, 7a or 9 Class 6 Class 7b or 8 Other loadbearing internal walls, internal beams, trusses and columns 90/--/ 120/--/ 180/--/ 240/--/ Floors 90/90/90 120/120/120 180/180/180 240/240/240 Roofs 90/60/30 120/60/30 180/60/30 240/90/60 S5C11 (1 May 2023) Fire resistance NCC 2022 Volume One - Building Code of Australia Page 138 (b) has a rise in storeys of 3 or less; or (c) is of Class 2 or 3; or (d) has an effective height of not more than 25 m and the ceiling immediately below the roof has a resistance to the incipient spread of fire to the roof space of not less than 60 minutes.

S5C17 Type A fire-resisting construction — internal columns and walls: Concession [2019: Spec C1.1:3.7] For a building with an effective height of not more than 25 m and having a roof without an FRL in accordance with S5C15, in the storey immediately below that roof, internal columns other than those referred to in S5C11(1)(d) and internal walls other than fire walls and shaft walls may have— (a) in a Class 2 or 3 building: FRL 60/60/60; or

So in summary:

Assumed there are sprinklers in the building

Slabs are concrete and are FRL 90/90/90

Columns are 90/--/-- except the top floor for columns supporting the roof. They can be FRL 60/60/60 due to the concession S5C17.

Internal dividing walls to the two occupancies can be either be load bearing or non-load bearing and must be 90/90/90

Basement level must be a separate compartment to the rest of the building.

Fire hazard properties of materials, assemblies, fixtures and linings

Volume one Section C Fire resistance

Specification C1.10. Page 112

C2C11 Fire hazard properties states that class 2 buildings must comply with specification 7

Table S7C2: Fire hazard property requirements

Lining, material or assembly	Requirement
Floor linings and floor coverings	S7C3
Wall linings and ceiling linings	S7C4
Air-handling ductwork	S7C5
Lift cars	S7C6
In fire control rooms subject to Specification 6 and fire isolated exits	S7C7
In Class 9b buildings used as a theatre, public hall or the like — fixed seating in the audience area or auditorium; and a proscenium curtain required by Specification 32	S7C7
Escalators, moving walkways and non-required non-fire-isolated stairways or pedestrian ramps subject to Specification 14	S7C7
Sarking-type material	S7C7
Attachments to internal floors, walls and ceilings	S7C7
Other materials including insulation	S7C7

C2D10 page 110. Non-combustible building elements details that Type A construction must have a number of Non-Combustible building elements

Material requirements

Reinforced concrete requirements relative to Australian Standards

Concrete must conform to AS3600

Post installed fastenings and cast in's AS 5216

B1D4 (b) Concrete page 93 volume 1

Part 3.2.3 Concrete and reinforcing NCC 2019 A1

Volume 2

Specification 1 Fire resistance of building elements

S1C2 Rating

A building element meets the requirements of this Specification if—

(ii) AS 3600 if it is a concrete structure;

FRL's deemed to be achieved by walls Table S1C2b
Page 63 and 64

NCC 2019 ammendment 1 part 3.2 state particulars about concrete and reinforcement conformity.

Glazing requirements specifically for windows, sliding doors with frames and balconies.

C3D77 vertical separation of openings in external walls page 119 Volume 1

Again assuming that the building has a sprinkler system so In short the need for designing compliant separation or spandrels or the like are greatly reduced :

(2) The requirements of (1) do not apply to—

(c) a building which has a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification 17 installed throughout; or

(d) openings within the same stairway; or (e) openings in external walls where the floor separating the storeys does not require an FRL with respect to integrity and insulation.

(3) For the purposes of C3D7, window or other opening means that part of the external wall of a building that does not have an FRL of 60/60/60 or greater

Glazing: For the purposes of— (a) Section J of Volume One, except for a sole-occupancy unit of a Class 2 building or a Class 4 part of a building—

(i) a transparent or translucent element and its supporting frame located in the envelope; and

(ii) includes a window other than a roof light; or

(b) Section J of NCC Volume One, for a sole-occupancy unit of a Class 2 building or a Class 4 part of a building

Definitions NCC 2022 Volume Two - Building Code of Australia Page 179

(i) a translucent element and its supporting frame located in the external fabric of the building; and

(ii) includes a window other than a roof light; or (c) Part H6 of NCC Volume Two and Section 13 of the

**Satisfactory
Outcome**



ACTIVITY 3

The building discussed in ACTIVITY 2 includes one (1) basement level designated for car parking.

Provide information required for

- Bored piling to retain the soil and enable basement walls.
- Work Health and Safety
- Water proofing
- Water ingress

Document your findings or where the information can be located.

Bored piling to retain soil and enable basement walls

1st would be to understand the soil and ground conditions.

This would be done by a geotechnical survey of the area to understand bearing pressures below the basement level so a design can be completed on the piles that allow strength for soil retention, taking into account ground water levels and water pockets in the ground.

After that is done a design is completed by an engineer stating pile diameters, reinforcement sizes, capping beam design and concrete strengths. This will also take into account the complete building structure and how the foundation work with the final product.

Depending on the amount of ground retention or force imposed on the piles around the excavation, pile anchors maybe introduced.

This is when a drill machine, drills a hole through the piles and into the ground beyond the perimetres of the wall and then a steel cable is installed and the end of the cable is grouted into the ground.

Once the grout has been verified as strong enough the steel cable would have a plate put on the end of it and a machine pulls the cable to a designed tension.

Once the tension is achieved the cable is locked off with a clamp where it would remain until a design influenced designated time.

Pile depths are critical as the "socket" depth must be achieved.

The socket is the depth into the solid ground (design influenced) that the pile would need to not only take the compression force of the building above but also the lateral forces of the ground the piles are holding up.

For the design there could be a number of options on how the wall is built.

Contiguous piles are where piles are drilled in next to each almost touching which forms a continuous wall after the gap between the piles are filled in after excavation. Usually used where unstable ground condition wont enable the piles to be further apart as the excavation would collapse in between the piles during excavation works.

Soldier piles are placed apart from each other and vary in spacings depending on ground conditions. Construction is completed during the excavation where after the excavation, wall is shaped to take a reinforced shotcrete wall.

AS2159-2009- Design and Installation.

AS3600 Concrete and reinforcements

NCC 2019 volume 2 A1 part 3.0 structural provisions

Work Health and Safety

Things to consider:

Safe work Method statements and procedures for workers prior to starting.
 Safe Sequence of works including the engineer detailing what excavation depths can be achieved before anchors or shotcrete walls are installed.
 Safe Access and Egress in and out of the excavation for both workers and vehicles/Trucks.
 Emergency preparedness for workers inside the excavation including emergency exits.
 The use of water to suppress dust and the like.
 Lighting for the works and access ways.
 Ensuring the plant is the correct type for the task.
 Ensuring plant is in good condition
 PPE- hi vis, hearing, eye and skin protection.
 Working with chemicals (concrete and fuel etc)

Most information can be found under the Excavation Code of practice 2021 and WHS Act and regulations.

Water proofing

Waterproofing designs for piled excavations can vary:

Wet walls are generally walls that are designed that water can seep through the wall but systems are in place to catch the water into designed drains and retain it to be pumped out or drained away.

There are also cases when excavating into rock that there is no shotcrete wall and water simply drains to the bottom of excavation and is drained through the designed system.

Normally shotcrete walls have drainage cells installed behind prior to shotcrete to channel the water down to a drainage system keeping the wall relatively dry.

There are several designs where water proofing of the shotcrete walls can be achieved. A common one is through additives that are put into the concrete and shotcrete that waterproofs the wall.

On construction joints of shotcrete or joints from shotcrete walls to piles a waterproofing detail could be achieved via a number of different products on the market.

AS2159-2009

Water ingress

Most designs have been completed with a known chance that water will come through the wall as completely waterproofing a excavated wall is a very hard task unless there is a way to get in behind the walls.

Designs of buildings should detail how the water will be dealt with and ensure that it does not come into the buildings critical areas.

This could be with perimeter drainage systems, secondary walls that are built in front of excavated walls and waterproofed, steps in slabs to ensure water does not come into areas that cannot be wet

AS2159-2009

**Satisfactory
Outcome**



CPCBC6001

APPLY BUILDING CODES AND STANDARDS TO THE CONSTRUCTION PROCESS FOR LARGE BUILDING PROJECTS

PRACTICAL ASSESSMENT

Participant name	Ryan Hay
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FOR THE PARTICIPANT
Instructions
• The tasks outlined on the following pages will require performance of normal workplace activities, as a result of a structured activity set by an Observer in the workplace or a simulated activity set by your Assessor/Observer. • The timeframe for these tasks will be established by your Assessor/Observer, in consideration of location conditions and industry requirements. • You must complete all tasks unassisted by the Assessor or other personnel, unless the steps note this assistance. • You must attempt all tasks (and itemised steps) for a 'Satisfactory' assessment outcome to be awarded. ◦ For any observation conducted that is incomplete, or without satisfactory performance, the observation will need to be completed again after further training support.

FOR THE ASSESSOR/OBSERVER
Instructions
• The following observation record should be used to judge and record your observations of the Participant as they complete the task(s) set. You must record your observations of the Participant's performance. ◦ For each occasion, indicate the task performed and whether it was a simulation or workplace-based task. ▪ Any simulated assessment must ensure the Participant still performs under workplace conditions which reflect industry standards. ◦ In the comments, provide clear detail regarding the task that the Participant was required to do (e.g. PPE used, materials handled, attachments connected, plant types). • All steps must be satisfactorily demonstrated by the Participant for a 'Satisfactory' determination (indicated by an Assessor tick to the right of each itemised step, or an Observer tick to the right of each itemised step, and confirmation by an Assessor in the Assessor Comments). ◦ Where you have determined that one or more task steps have not been satisfactorily demonstrated, provide the Participant with additional support and outline details of such assistance in the Assessor/Observer Comments. Allow the Participant two (2) further opportunities to demonstrate the task again to allow an opportunity for a 'Satisfactory' assessment outcome to be achieved. ◦ If after three (3) attempts the Assessor determines that the Participant cannot demonstrate the required steps, a 'Not Satisfactory' outcome is to be determined.

TASK OUTCOME					
Task	Date	Task Type (Tick)	Location	Task outcome (Tick)	
				Satisfactory	Not Satisfactory
Task 1	19/03/2024	☒ Workplace ☐ Simulation	Mackay Hospital	☒	☐

ASSESSOR COMMENTS: GENERAL

As necessary, outline:

- Details on reattempts, alternative arrangements or reasonable adjustments made.
- Where a Participant is deemed 'Not Satisfactory', provide recommendations for future training.

ASSESSOR COMMENTS: PRACTICAL TASK 1

- ☒ Individual student (as named on cover page)
☐ Multiple students [☐ All from Attendance Report, ☐ Specific students involved – identify students]

Task	Provide detail
1.1A.	Specify how scope of work was determined: Through Architectural scope page 14 and contractual arrangements outside the scope.
1.1A.	Specify how general requirements and prescriptive requirements of the NCC were determined and documented: Throughout the design process designers have cross referenced the NCC. This is documented in the specifications
1.1B.	How were relevant Australian Standards identified and located: Through out the specifications
1.2A. 1.2B. 1.3A. 1.3H. 1.5C. 1.5D.	Specify (✓) where building classifications, criteria requirements and performance solutions were documented: ☐ Workplace Quality document ☐ Quality Assurance Template ☒ Other (please specify): Referenced standards Glossary ☒ Document attached as evidence
1.3F.	Specify (✓) who was consulted regarding compliance options: ☒ Project management ☐ Relevant tradesperson ☒ Builder ☐ Supplier ☐ Other (please specify):
1.4A. 1.4B.	Specify (✓) where NCC requirements for passive and active fire protection and performance solutions were documented: ☐ Workplace Quality document ☐ Quality Assurance Template ☒ Other (please specify): Project specifications ☒ Document attached as evidence

ASSESSOR COMMENTS: PRACTICAL TASK 1	
1.4C.	Specify existing buildings checked for compliance with active fire protection requirements: ☒ Is checklist used attached as evidence? Not applicable of this project as it a new project
1.5A. 1.5B.	Specify (✓) communication methods applied to manage construction and other trades compliance: ☒ Emails ☒ Schedule ☐ Memos ☒ Daily meetings ☒ Site induction ☐ Other (please specify):
1.5E.	Specify how non-confirming building materials and products were managed using evidence of suitability: Not applicable on this project as its in design stage. If it does happen later it is reviewed by project certifiers to ensure compliance.

CPCCBC6001

APPLY BUILDING CODES AND STANDARDS TO THE CONSTRUCTION PROCESS FOR LARGE BUILDING PROJECTS

Practical Task 1

Description of task:

The participant must demonstrate the skills and knowledge to make a range of critical decisions in relatively complex situations while applying building codes and standards to one (1) building project over three (3) storeys, with below ground construction to meet the requirements of the National Construction Code (NCC) prior to the build commencing. The participant must also inspect existing buildings for fire compliance. Assessor and observer will be looking for evidence including:

- Interpret relevant codes and standards' requirements.
 - Determine the scope of works and NCC general requirements and Performance Requirements to achieve a DtS solution.
 - Identify Australian Standards referenced in the NCC Relevant to the build and confirm the requirements.
- Classify the building/s.
 - Determine the use and arrangement of the building and apply the appropriate NCC classification/s.
 - Locate and document NCC requirements for multiple classifications.
- Apply solutions to construction problems.
 - Determine the range of NCC criteria required to ensure project compliance.
 - Identify alternative, compliant solutions for construction problems to comply with NCC Performance Requirements.
 - Meet the Performance Requirement of the NCC by applying a Performance Solution supported by one or a combination of the Assessment Methods.
 - Use a Deem-to-Satisfy (DTS) solution supported by one or a combination of Assessment Methods to meet NCC compliance.
 - Use a combination of Performance Solutions and DTS solutions to comply with the Performance Requirements of the NCC.
 - Discuss compliance options with relevant construction personnel to ensure compliance with NCC Performance Requirements.
 - Identify and complete relevant documentation to meet Performance Requirements of the NCC.
- Apply fire protection requirements.
 - Read the NCC requirements to determine fire resistance required for all classes and types of buildings.
 - Identify and apply NCC requirements with respect to passive and active fire protection to all classes and types of buildings.
 - Check existing buildings for compliance with passive and active fire protection requirements according to NCC requirements. (See HO2 and NCC to create checklist)
- Implement strategy to manage construction compliance.
 - Establish strategies to manage construction compliance of large, complex and high-rise buildings with the NCC.
 - Implement and coordinate the work of professionals involved in the development and management of the building process.
 - Seek effective design solutions for buildings of more than three storeys to meet the needs of clients and ensure compliance with the NCC.
 - Design and implement quality assurance processes to ensure effective and compliant management of the construction process.
 - Detect non-conforming building materials and products and manage the evidence of suitability as required in the NCC.

These tasks may be simulated or real. 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 includes site plan and workplace documents covering the information required. A template is available.

Practical Task 1	
The Observer is to provide detailed comments on the tasks completed by the Participant (on the Observer Comments, overleaf). The Assessor is to verify the Observer's comments, noting their findings in the Assessor Comments (on the back of the Practical Assessment cover page) and provide the assessment outcome.	
Resources required: Construction schedules, plans, drawings and specifications for one (1) building project over three (3) storeys, with below ground construction; workplace quality policies and procedures; technology to access building and related industry codes, standards and manufacturer product information and materials specifications; Technology to access the NCC and current relevant Acts and Regulations. PPE as required.	
Observer details	
Name of observer:	Micheal Brady
Role of observer (Confirm suitability to sign)	Project Manager
Email address of observer	MBrady@besixwatpac.com
Signature of observer:	
Date:	Select Date.

When completing the task, did the Participant:	Tick if satisfactorily completed. Provide comments if left unticked.
1 Interpret relevant codes and standards' requirements	
1.1A. Determine the scope of works and NCC general requirements and Performance Requirements to achieve a DTS solution.	☒
1.1B. Identify Australian Standards referenced in the NCC Relevant to the build and confirm the requirements.	☒
2 Classify the building	
1.2A. Determine the use and arrangement of the building and apply the appropriate NCC classification/s.	☒
1.2B. Locate and document NCC requirements for multiple classifications.	☒
3 Apply solutions to construction problems	
1.3A. Determine the range of NCC criteria required to ensure project compliance.	☒
1.3B. Identify alternative, compliant solutions for construction problems to comply with NCC Performance Requirements.	☒
1.3C. Apply a Performance Solution supported by one or a combination of the Assessment Methods to meet the Performance Requirement of the NCC.	☒
1.3D. Use a Deem-to-Satisfy (DTS) solution supported by one or a combination of Assessment Methods to meet NCC compliance.	☒
1.3E. Use a combination of Performance Solutions and DTS solutions to comply with the Performance Requirements of the NCC.	☒
1.3F. Discuss compliance options with relevant construction personnel to ensure compliance with NCC Performance Requirements.	☒
1.3G. Lead discussions to explore solutions to complex design problems with relevant construction personnel.	☒
1.3H. Identify and complete relevant documentation to meet Performance Requirements of the NCC.	☒

When completing the task, did the Participant:	Tick if satisfactorily completed. Provide comments if left unticked.
4 Apply fire protection requirements	
1.4A. Read the NCC requirements to determine fire resistance required for all classes and types of buildings.	☒
1.4B. Identify and apply NCC requirements with respect to passive and active fire protection to all classes and types of buildings.	☒
1.4C. Check existing buildings for compliance with passive and active fire protection requirements according to NCC requirements. <i>(See HO2 and NCC to create checklist)</i>	☒
5 Implement strategy to manage construction compliance	
1.5A. Establish strategies to manage construction compliance of large, complex and high-rise buildings with the NCC.	☒
1.5B. Implement and coordinate the work of professionals involved in the development and management of the building process.	☒
1.5C. Seek effective design solutions for buildings of more than three storeys to meet the needs of clients and ensure compliance with the NCC.	☒
1.5D. Design and implement quality assurance processes to ensure effective and compliant management of the construction process.	☒
1.5E. Detect non-conforming building materials and products and manage the evidence of suitability as required in the NCC.	☒

Observer comments:

Ryan is a foreman on the Mackay Hospital Expansion project and is currently working through designs and buildability issues with the team while supervising some minor works.

He has knowledge of the process through design and the need to comply with the many Australian Standards and Codes applicable to both design and the construction process.

He acknowledged the class of building which is 9A and explained that other sections of the Hospital could come under a different class if the buildings were not used for medical reasons and did not require occupants to be assisted in the event of an evacuation.

He understands the requirements for fire engineers to design buildings so that they are protected as much as possible and that buildings are compartmentised to stop the spread of fire.

He showed an understanding of performance solutions being a deviation from a DTS and stated how proof of how it meets the requirements would need to be documented.

Currently the hospital is undertaking works around the façade removing combustible materials and as a builder, Ryan has been involved in other buildings in a similar situation and understands the need to ensure the materials comply with the NCC in regards to be combustible materials.

He has been involved in site setup discussions and construction processes with the team along with working with subcontractors on a building required to meet AS1428 with detailing ramps and pathways.