CPCCBC4001

Apply building codes and standards to the construction process for Class 1 and 10 buildings

Assessment 3 of 3

Project

Assessor Guide

SWINBURNE OPEN EDUCATION

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Assessment Instructions

Task overview

Part A

You will need to complete **three (3)** case study tasks related to three (3) scenarios with provided floor plans or illustrations (one related to a bathroom, one related to a small family house/single dwelling and one related to a small house extension with swimming pool.

Part B

You will need to complete **six (6)** project tasks related to the Banksia House (Melbourne) project. You will need to access the project plan and technical drawings provided in order to complete the project tasks. These documents are hyperlinked to Task 1, but they can also be found in the Case Study module (Module 1) of the course, under 'Projects'.

To complete this assessment, you will need to access National Construction Code (NCC) 2019 Volume 2 that is explained in the learning and is available upon free registration on the Australian Building Codes Board's (ABCB) website. For Project Task 2, you will need to conduct an internet search.

Tables or boxes are provided after each question where you can provide your answers.

Additional resources and supporting documents

- Project plan and technical drawings for Banksia House (Melbourne) project

Assessment Information

Submission

You are entitled to three (3) attempts to complete this assessment satisfactorily. Incomplete assessments will not be marked and will count as one of your three attempts.

All questions must be responded to correctly to be assessed as satisfactory for this assessment.

Answers must be typed into the space provided and submitted electronically via the LMS. Hand-written assessments will not be accepted unless previously arranged with your assessor.

Reasonable adjustment

Students may request a reasonable adjustment for assessment tasks.

Reasonable adjustment usually involves varying:

- the processes for conducting the assessment (e.g. allowing additional time)
- the evidence gathering techniques (e.g. oral rather than written questioning, use of a scribe, modifications to equipment)

However, the evidence collected must allow the student to demonstrate all requirements of the unit.

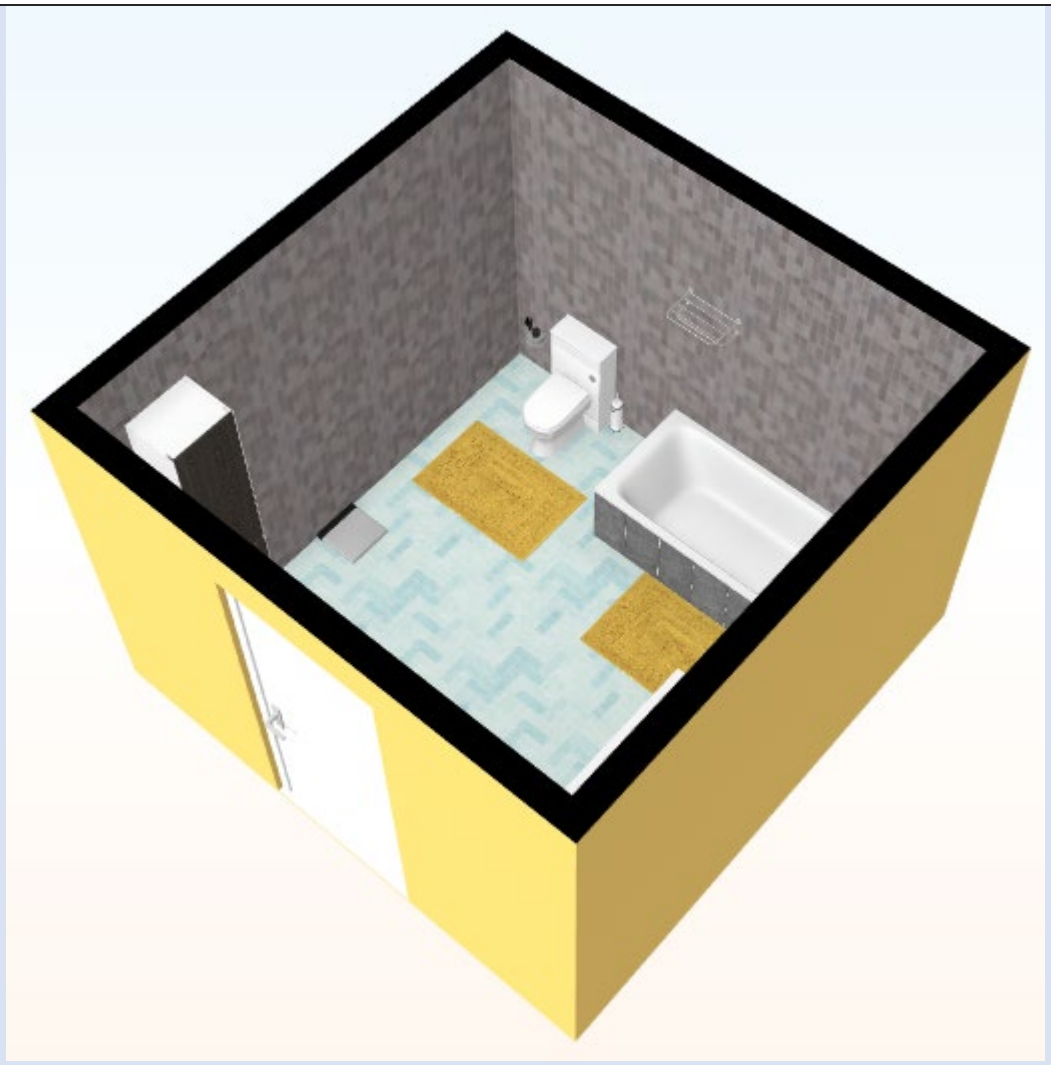
Refer to the Student Handbook or contact your Trainer for further information.

Please consider the environment before printing this assessment.

Part A: Case Study Tasks

SCENARIO 1 - Bathroom

You are given the task of reviewing the building project plan for constructing an additional bathroom in a house. You are required to look for non-conforming construction methods. Refer to the following two (2) illustrations for the bathroom:



Information that was provided to you indicates that the illustrations above were provided by the owner of the house themselves who has no building or construction experience whatsoever.

Task 1

Review the information provided in Scenario 1: Bathroom, then answer the questions in the table below:

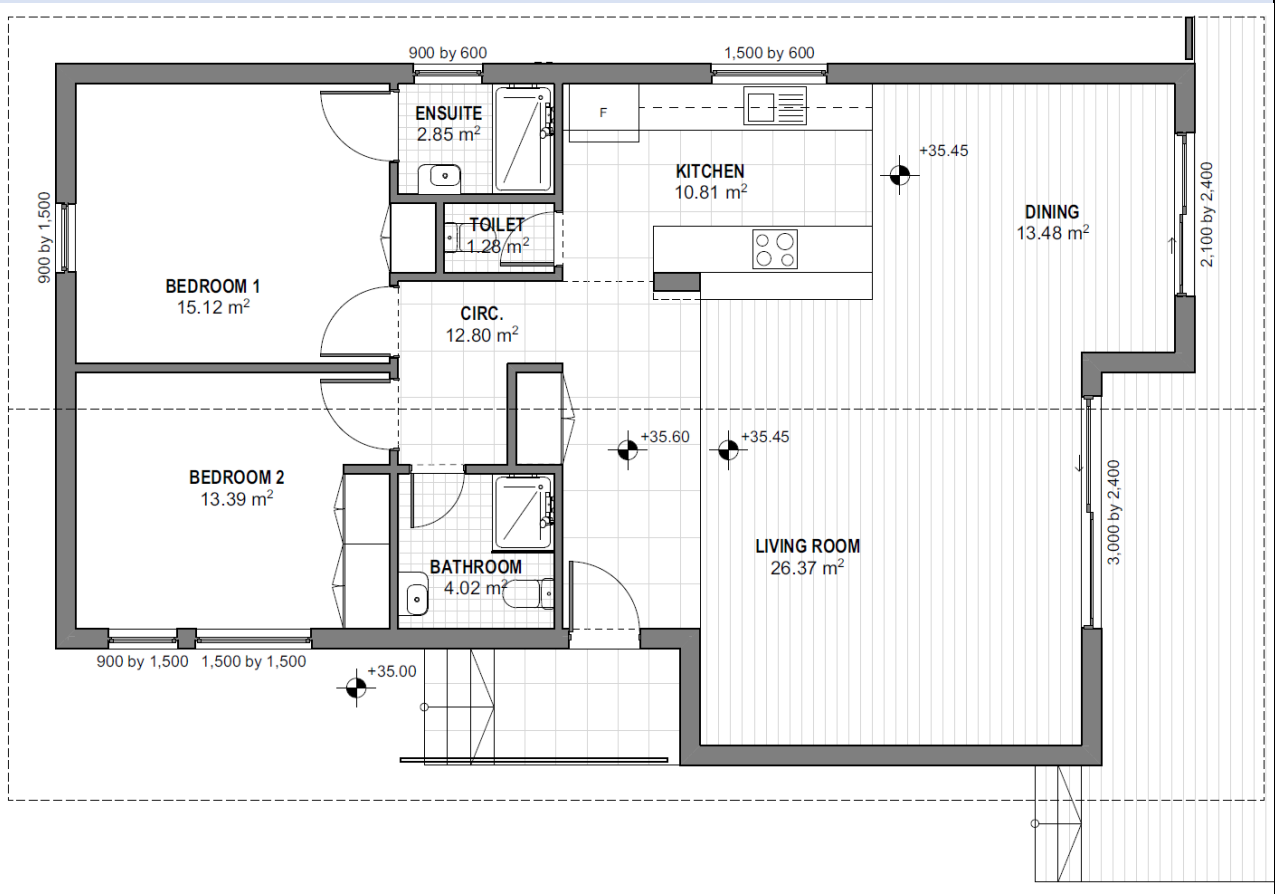
This is an example of a competent response:

Identify the non-conforming construction method (25-30 words)	The bathroom in the plan has no windows or any form of ventilation. However, section / RCP are not available – there can be a ceiling vent installed.
Briefly explain why the drawings do not conform to NCC's construction methods (10-15 words)	Bathrooms are a source of humidity and need proper ventilation, according to the NCC.
Identify the probable source of the non-conformity (10-15 words)	The person who designed the bathroom has no experience in building or construction.
Identify a solution to ensure that the drawing conforms to the NCC (5-10 words)	Introduce window(s) or mechanical ventilation.

Identify a solution to rectify the probable source of the non-conformity (20-25 words)	Ensure that construction plans are made by experienced building and construction professionals/qualified professionals. Consult with building certifier.

SCENARIO 2 - Small Family House / Single Dwelling

You are given the task of reviewing the floor plan of a proposed single dwelling below. You are required to look for non-conforming design solutions.



Information provided to you indicates that the floor plan above was prepared by the friend of the house owner. The friend is not a qualified architect or building designer. Being a person with technical background, the friend had a good intention to help the owner with plans and ideas. They are seeking your advice on the proposed design and whether the design meets the necessary requirements. Therefore, the owner asked you to review the plan for any non-compliances and to suggest changes to achieve a compliant design.

Task 2

Review the information provided in Scenario 2: Small Family House / Single Dwelling, then answer the questions in the table below:

This is an example of a competent response:

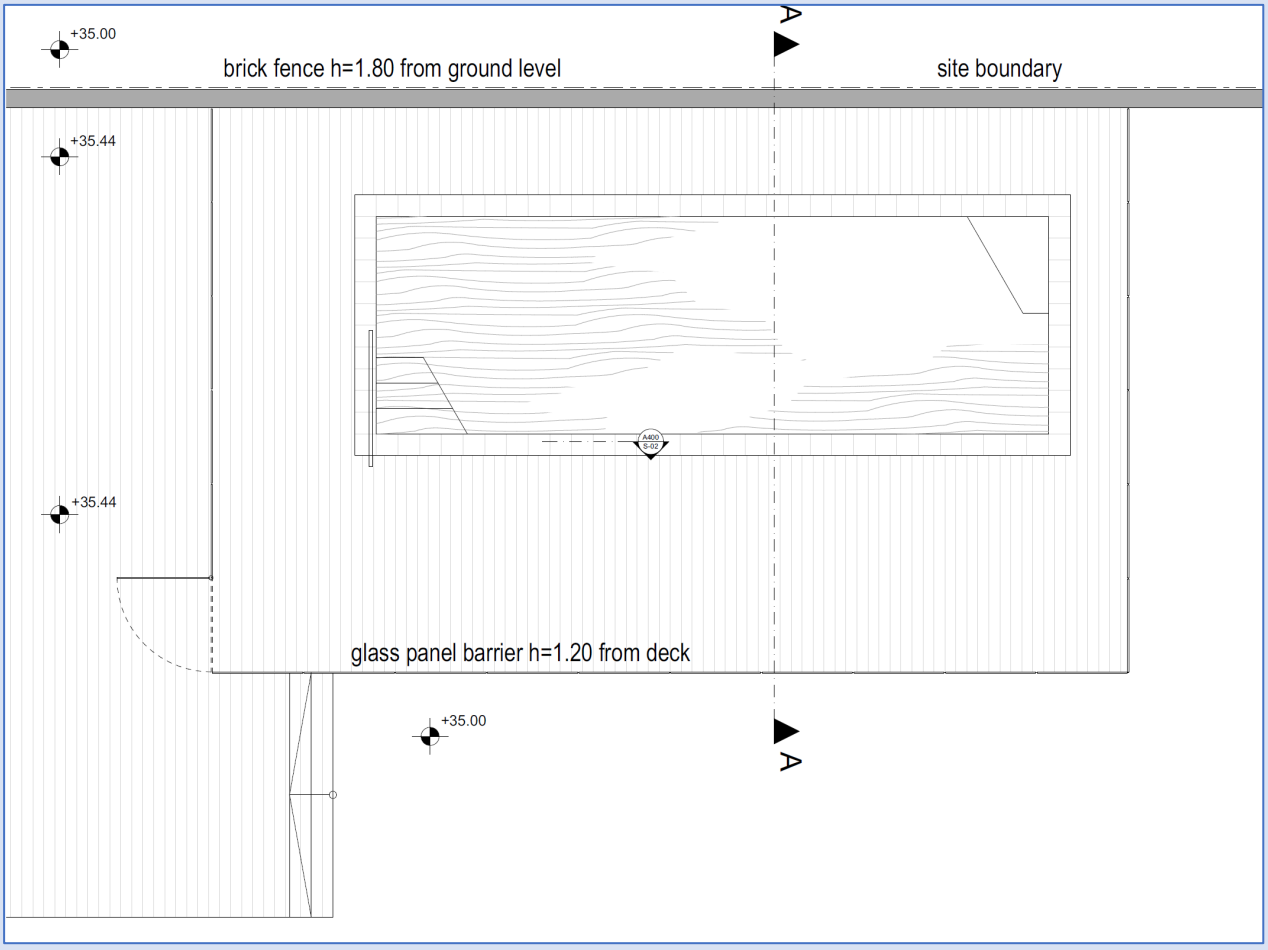
Student Name: Click or tap here to enter text.
Student Number: Click or tap here to enter text.

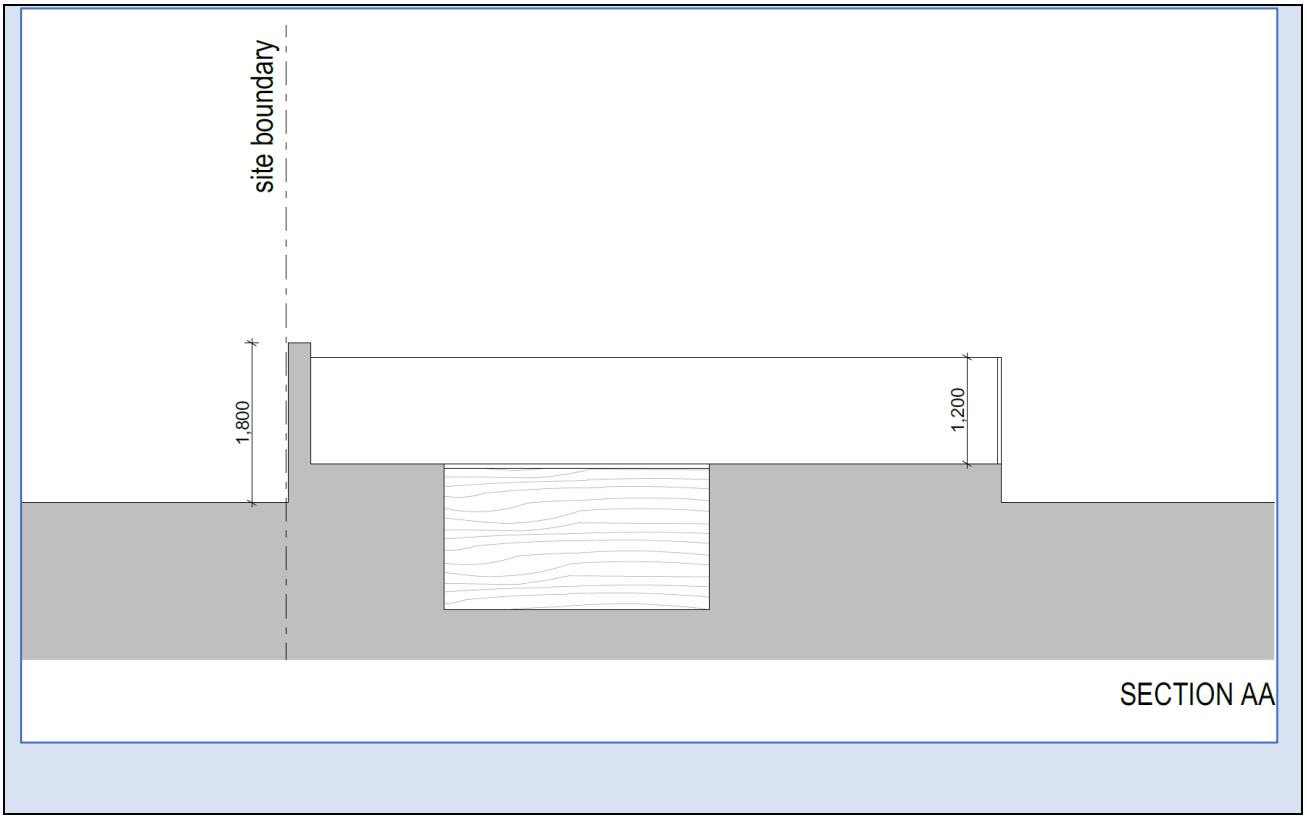
NCC building class and subclass (2 words)	Class 1a
Identify at least three (3) non-conforming construction methods	Students can list any 3 from the following: 1. In BEDROOM 1 there is no sufficient amount of natural light. 2. Not enough door clearance in toilet. 3. Toilet opening directly from kitchen. 4. One step (150mm) level difference between living and dining area. 5. Bathroom has no natural or mechanical ventilation. 6. There is no laundry proposed.
For each three (3) non-conforming construction method, briefly explain why these items do not conform to NCC's provisions (10-40 words each)	Explanations listed below match with the order of items above. Students must provide an explanation for each of the 3 identified non-conforming construction methods, in accordance with the word count: 1. NCC requires all habitable rooms to have windows with glass surface area min. 10% of the floor area of the room, or to be provided with sufficient skylight (3%) but there is no indication of skylight on the plan. 2. If the door of the sanitary compartment opening inward, you need to provide at least a 1200mm radius clear area measured from the hinges. Required, so that an unconscious person can be removed from the sanitary compartment. 3. Sanitary compartments must not open directly into a kitchen, unless mechanically ventilated. 4. Minimum two risers required in order to conform to NCC's provisions. 5. Bathrooms need openable window or mechanical ventilation. 6. Clothes washing facilities with washtub to be provided.
For each three (3) non-conforming construction method identify a solution to ensure that they will conform to the NCC provisions (5-15 words each)	Solutions listed below match with the order of items listed at first question of the table. Students must provide an explanation for each of the 3 identified non-conforming construction methods, in accordance with the word count: 1. Increase window size so glazed surface to be minimum 10% of floor area. 2. Rearrange floor plan, open the toilet from the circulation area with sliding door. 3. Rearrange floor plan, introduce air lock, or mechanical ventilation. 4. Increase level difference so you can have two risers or get rid of the level difference.

	5. Introduce window or ventilation. 6. Rearrange floor plan, introduce laundry.
Identify the probable source of the non-conformity (10-15 words)	The person who designed the house has no knowledge of NCC.
Identify a solution to rectify the probable source of the non-conformity (10-15 words)	Ensure that construction plans are made by a licenced professional.

SCENARIO 3 - Small house extension with swimming pool

The McGregor family has approached UP Building and Construction to review the plans as they want to extend their house with a swimming pool. The plans were prepared by their son studying architecture at the university, and Mr. Gregor wants to make sure the plans conform to regulations before he submits them to the council for approval.





Task 3

Review the plans provided in Scenario 3: Small house extension with swimming pool, then answer the questions in the table below.

Students must base their answers on the plans provided, in accordance with NCC.
This is an example of a competent response:

NCC building class and subclass (2 words)	Class 10b
Relevant Australian Standard (2-5 words)	AS 1926.1-2012 Swimming pool safety
Identify the non-conforming construction method (5-10 words)	Barrier on the site boundary is not tall enough.
Briefly explain why the drawings do not conform to NCC's construction methods (20-25 words)	Where a boundary fence acts as a barrier to a pool, it shall have a height not less than 1800mm on the inside.
Identify the probable source of the non-conformity (10-15 words)	The person who designed the house has no knowledge of AS 1926.1-2012
Identify a solution to ensure that the drawing conforms to the NCC (10-15 words)	Increase the height of the fence to 1.8m from the top of the deck.
Identify a solution to rectify the probable source of the non-conformity (10-15 words)	Ensure that construction plans are made by a licenced professional.
Identify one (1) Performance Requirement regarding the pool's structure, in accordance with NCC provisions,	The swimming pool must comply with the structural requirements of the Housing Provisions. The structural requirements refer to

(55-60 words)	the swimming pool being designed and constructed to withstand any combinations of loads and other actions to which it may reasonably be subjected and the structural resistance of the materials and forms of construction used in the swimming pool.
Give one (1) example of a Deemed-to-Satisfy Solution in relation to the pool's structure, in accordance with NCC provisions. (5-10 words)	Continuous in-situ reinforced concrete tank structure.
Identify one (1) Performance Requirement regarding the pool's energy efficiency, in accordance with NCC provisions. (35-40 words)	Swimming pool design and construction should follow the basic principles of energy efficiency requirements in order to consume the least amount of energy for heating and water circulation and the least amount of water replacement.
Give one (1) example of a Deemed-to-Satisfy Solution in relation to the pool's energy efficiency, in accordance with NCC provisions. (35-40 words)	Possible answers: • Swimming pool or spa pool to have a cover to reduce evaporation can be required in special circumstances, and subsequent heat loss, and time switches to control the operation of the heater. • Heating for a swimming pool must be by a solar heater not boosted by electric resistance heating; or a heater using reclaimed energy; or a gas heater; or a heat pump; a combination of solar and heat pump. Where some or all of the heating required by (a) is by a gas heater or a heat pump, the swimming pool must have a cover unless located in a conditioned space; and a time switch to control the operation of the heater. • A time switch must be provided to control the operation of a circulation pump for a swimming pool.

Part B: Project Tasks

Task 1

UP Building and Construction has been contracted to evaluate the Banksia House project to ensure it complies with NCC provisions. You have been appointed to complete the evaluation.

Access and review the project plan and the technical drawings related to the Banksia House (Melbourne) project. These documents can also be found in the Case Study module (Module 1) of the course, under 'Projects'. Read the short site description below, then complete the following *Project Plan Information* form with the specific information required related to the project plan. The second part of the form is designed for Performance Solution identification, where you need to identify a Performance

Requirement, a Deemed-to-Satisfy (DTS) Solution and a Performance Solution for each area, where possible.

Site description: The project site is located in North-East Melbourne in a well-established suburb, in a settled residential area, where only a few residential lots have been left vacant. The site has been examined by a geotechnical expert preparing Soil Survey. The Geotechnical report indicates the presence of slightly reactive clay.

Answers must be in accordance with the project and NCC Volume 2.
This is an example of a competent response:

PROJECT PLAN INFORMATION	
Project name and location (2-3 words)	Banksia House, Melbourne
NCC building class and subclass (2 words)	Class 1a
Building configuration (4-5 words)	Detached /free standing single dwelling
Class of the site where the building will be constructed on (2 words)	Class S Further information for assessor: This is based on the information about slightly reactive clay
Proposed type of construction of the building's footing. Define minimum size requirement of key components (10-15 words)	100mm concrete slab with minimum 300mm waffle slab or beam-grid
Australian Standard relevant to footings (1-5 words)	AS2870 Residential slabs and footings
Nature of the building (2-5 words)	Single dwelling
Identify the relevant building and construction code, then briefly, in about 10-15 words, explain the relevance to the project plan	NCC Volume 2 (Building classes 1 and 10). It is relevant because this is a Class 1a project.
PERFORMANCE SOLUTION IDENTIFICATION	
Energy efficiency	
Identify one (1) Performance Requirement (80-85)	Students must provide one example. Answers may be copied from NCC: • A building must have thermal performance to facilitate the efficient use of energy for artificial heating and cooling

	appropriate to the function and use of the building; and the internal environment; and the geographic location of the building; and the effects of nearby permanent features such as topography, structures and buildings; and solar radiation being utilised for heating; and controlled to minimise energy for cooling; and the sealing of the building envelope against air leakage; and the utilisation of air movement to assist cooling. • A building must achieve an energy rating, including the separate heating and cooling load limits, using house energy rating software, of greater than or equal to 6 stars.
Give one (1) example of a Deemed-to-Satisfy Solution (35-40 words)	Possible examples: Option 1: Energy Rating — testing and installation of insulation, thermal breaks, compensation for downlights other than where the house energy rating software used can automatically compensate for a loss of ceiling insulation, floor edge insulation and detailed provisions for building sealing. Option 2: Elemental Provisions — Total R-Values of roofs, walls and floors, the glazing allowances and the air movement requirements. These detailed provisions also include the testing and installation of insulation, thermal breaks, compensation for downlights, floor edge insulation and detailed provisions for building sealing. Source: https://greenformenergy.com.au/services/compliance-services/performance-solutions/
Give one (1) example of a Performance Solution (20-25 words)	With reference to building assessment and/or full modelling single glazing in windows can be used. This verification method can save / optimise costs.
Damp and weatherproofing	
Identify one (1) Performance Requirement (20-30 words)	Students must provide 1 example. Answer may be copied from NCC: • Surface water must not enter or damage the building. • Roof and external wall must prevent the penetration of water that could cause damage, health issues, loss of amenity, undue dampness or deterioration of building elements. • A building is to be constructed to provide resistance to moisture from the outside and moisture rising from the ground.
Give one (1) example of a Deemed-to-Satisfy Solution (10-20 words)	Possible examples: • metal roofing to comply with AS1562.1 Design and installation of sheet roof and wall cladding • minimum gradient for the roof type as per Australian Standard.
Give one (1) example of a Performance Solution (15-20 words)	Slightly lower angle roof than NCC provision with a safety membrane underlay. Performance of underlay member to be verified.
Fire safety	

Identify one (1) Performance Requirement (50-60 words)	Answer may be copied from NCC: The building must be protected from the spread of fire from another building other than an associated Class 10 building; and from the allotment boundary, other than a boundary adjoining a road or public space.
Give one (1) example of a Deemed-to-Satisfy Solution (10-20 words)	Possible examples: • External walls closer than 900mm to site boundary have to have fire rating 60/60/60mins. • Heat resistant or wired glazing or heat attenuation metal screen near site boundary.
Give one (1) example of a Performance Solution (15-20 words)	Fire engineered solution with on-boundary fire rated shielding wall can be assessed. Heat modelling can be required performed by fire engineer.
Health and amenity	
Identify one (1) Performance Requirement (35-40 words)	Students must provide 1 example. Answer may be copied from NCC: • In wet areas to protect the structure of the building and to maintain the amenity of the occupants, water must be prevented from penetrating behind fittings and linings, or into concealed spaces of sanitary facilities, bathrooms, laundries and the like. • A room or space must be of a height that does not unduly interfere with its intended function. • 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.
Give one (1) example of a Deemed-to-Satisfy Solution (10-20 words)	Possible examples: • Sufficient (10%) size window glazing • Roof light (3%)
Give one (1) example of a Performance Solution (15-25 words)	A mix of window, shared (borrowed) light and sun tunnel to provide the required natural light. Lighting designer / engineering solution can be required.
Structure	
Identify one (1) Performance Requirement (80-85 words)	Answer may be copied from NCC: A building or structure, during construction and use, with appropriate degrees of reliability, must perform adequately under all reasonably expected design actions; and withstand extreme or frequently repeated design actions; and be designed to sustain local damage, with the structural system as a whole remaining stable and not being damaged to an extent disproportionate to the original local damage; and avoid causing damage to other properties, by resisting the actions to which it may reasonably be expected to be subjected.

Give one (1) example with a brief explanation of a Deemed-to-Satisfy Solution (10-20 words)	Possible examples: • According to NCC base slab to be 300mm waffle slab with 10mm top slab. • Structural steel to comply with AS4100 or AS/NZS4600 • If a steel bearer supporting a timber floor complies to NCC Volume 2, section 3.3.4 (table 3.4.4.1) is a DTS Solution.
Give one (1) example with a brief explanation of a Performance Solution (15-25 words)	Possible examples: • For cost saving 85mm top slab to be used. Structural engineer calculation provided as part of performance solution. • Builders who would like to use sections not listed in table 3.4.4.1a (NCC Volume 2, section 3.3.4), a structural engineer can provide a solution based on calculations.
Safe movement and access	
Identify one (1) Performance Requirement (80-90)	Students must provide 1 example. Answer may be copied from NCC: • People can move safely to and within a building, walking surfaces must have safe gradients; and any stairway or ramp must have suitable handrails where necessary to assist and provide stability to people using the stairway or ramp; and have suitable landings to avoid undue fatigue of users; and be suitable for safe passage in relation to the nature, volume and frequency of likely usage; and have slip-resistant walking surfaces on ramps, and on stairway treads or near the edge of the nosing. • P2.5.2 Fall prevention barriers: Where people could fall 1 m or more, from a floor or roof or through an opening (other than through an openable window) in the external wall; or due to a sudden change of level within or associated with a building; or 2 m or more from a floor through an openable window in a bedroom; or 4 m or more from a floor through an openable window not covered by a barrier must be provided which must be continuous and extend for the full extent of the hazard; and of a height to protect people from accidentally falling from the floor or roof or through the opening or openable window; and constructed to prevent people from falling through the barrier; and capable of restricting the passage of children; and of strength and rigidity to withstand, the foreseeable impact of people; and, where appropriate, the static pressure of people pressing against it.
Give one (1) example of a Deemed-to-Satisfy Solution (5-15 words)	Possible examples: • Minimum two risers in stairways. • Balustrade to be provided on the edge of the slab of a mezzanine.
Example of Performance Solution	N/A

Ancillary provisions	
Identify one (1) Performance Requirement (100-110 words)	Answers may be copied from NCC: The Objective is to safeguard young children from drowning or injury in a swimming pool; and safeguard people from drowning or injury due to suction by a swimming pool water recirculation system; and safeguard the occupants from illness or injury caused by fire from heating appliances installed within the building; and safeguard the occupants from illness or injury in alpine areas from an emergency while evacuating the building; and protect a building from the effects of a bushfire; and reduce the likelihood of fatalities arising from occupants of a Class 1a dwelling not evacuating a property prior to exposure from a bushfire event.
Example of Deemed-to-Satisfy Solution	N/A
Example of Performance Solution	N/A

Task 2

As part of the evaluation, determine the compliance of construction methods for the Banksia House project plan provided in Task 1 by completing the following *Construction Method Compliance* form. Please list at least **one (1)** item per topic, preferably clearly visible from the provided drawings and description. In case of an assumed (suggested) solution, for example, 'installed smoke detector', please indicate that your answers are based on assumption, having the word 'assumption' in brackets, i.e. (assumption). The form is used to document the criteria that can be used to determine the compliance of the construction methods with the Performance Requirements set by the NCC.

Answers must be in accordance with the project plan and NCC Volume 2.
This is an example of a competent response:

CONSTRUCTION METHOD COMPLIANCE	
Project name and location	Banksia House, Melbourne
Energy efficiency	
Identify one (1) construction method (4-10 words)	Possible answers: • Aluminium sunshades over windows • Roof overhang over full height gazing have been provided
Give one (1) criterion for the construction method chosen (10-15 words)	Solar radiation to be controlled to minimise energy for cooling.
Damp and weatherproofing	
Identify one (1) construction method	Possible answers:

(4-10 words)	1. External walls are with sarking and insulation 2. Roof has 8 degrees Colorbond KLIPLOK roofing
Give one (1) criterion for the construction method chosen (15-10 words)	Roof and external wall must prevent the penetration of water that could cause damage or health issues.
Fire safety	
Identify one (1) construction method (4-10 words)	Possible answers: • Smoke detectors installed (assumption) • Openings to neighbouring property protected by heat attenuation metal mesh
Give one (1) criterion for the construction method chosen (15-10 words)	Possible answers. The criteria chosen must match with the options given above: • safeguard the occupants from illness or injury by alerting them of a fire in the building so that they may safely evacuate • building must be protected from the spread of fire from the allotment boundary
Health and amenity	
Identify one (1) construction method (4-10 words)	Possible answers: • Bathroom has been provided • Laundry has been provided
Give one (1) criterion for the construction method chosen (5-15 words)	Possible answers. The criteria chosen must match with the options given above: • Suitable sanitary facilities for personal hygiene must be provided. • Washing facility with washtub to be provided.
Structure	
Identify one (1) construction method (4-10 words)	Possible answers: • The brick veneer external wall and timber frame internal walls along with the timber rafters are constructed according to the NCC DTS provisions. • The 85mm waffle slab is a result of an engineered Performance Solution.
Give one (1) criterion for the construction method chosen (5-15 words)	The structure must perform adequately under all reasonably expected design actions.
Safe movement and access	
Identify one (1) construction method (4-10 words)	Access stair has two risers.

Give one (1) reason for the construction method chosen (5-15 words)	Minimum two risers in a stairway.
Ancillary provisions	
Identify one (1) construction method (4-10 words)	Hot water unit and boiler are installed with heat resistant backing materials and with safe distance from structures.
Give one (1) criterion for the construction method chosen (5-15 words)	Safeguard the occupants from illness or injury caused by fire from heating appliances.

Task 3

Draft an email for each of the following professionals:

- a design professional
- a building professional
- a construction professional.

The purpose of the emails is to seek clarification regarding the Performance Solutions identified in the Project Task 1 for the Banksia House project. (60-150 words for each email)

When discussing the Performance Solutions, be aware of the topics you will cover with each professional:

- Design Professional, such as a structural engineer: discuss energy efficiency, health and amenity, safe movement access.
- Building Professional, such as an environmental engineer or building energy consultant: discuss fire safety, ancillary provisions
- Construction Professional, such as a roofer: discuss damp and weatherproofing and structure.

Ensure that your communication is effective, concrete, clear and courteous, using a professional language.

A competent answer must include a relevant subject. This is an example of a competent response:

Email 1
To: Design professional / Structural engineer
Subject: must be relevant to the topic, for example: Seeking clarification
[draft your email here] Draft email must have: • an appropriate greeting (for example: 'Good morning Mr Smith') • an introduction (for example: 'I'm writing to seek clarification regarding a project in Victoria. Please advise on the possibility of reducing the floor slab thickness to 85mm from the NCC DTS required 100mm.

- an appropriate closure and signature (for example: Looking forward to hearing back from you. Kind regards, John Citizen.)

Email 2
To: Building professional / environmental engineer / building energy consultant
Subject: must be relevant to the topic, for example: Seeking clarification on possible Performance Solution for building materials in terms of thermal performances to comply with the required energy rating
[draft your email here] Draft email must have: • an appropriate greeting (for example: 'Good morning Mr Smith') • an introduction (for example: 'I'm writing to seek clarification on the possible Performance Solution for building materials in terms of thermal performances to comply to required energy rating. Please advise, if using full energy modelling can we use single glazing, instead of the proposed double glazing, for cost-saving reasons. Alternatively, please advise if we can offset the requirements with on roof solar system, and please advise on the required capacity as well. • an appropriate closure and signature (for example: Looking forward to hearing back from you. Kind regards, John Citizen.)

Email 3
To: Construction Professional/ Roofer
Subject: must be relevant to the topic, for example: Seeking for evidence of compliance
[draft your email here] Draft email must have: • an appropriate greeting (for example: 'Good morning Mr Smith') • an introduction (for example: 'I'm writing to seek evidence for NCC compliance for the Lysaght Colorbond KlipLok roof sheeting system you proposed instead of the originally proposed roof cladding system. Please forward all available compliance certificates and/or technical statements. • an appropriate closure and signature (for example: Looking forward to hearing back from you. Kind regards, John Citizen.)

Task 4

Assess the construction methods listed in the table below, then complete the *Assessment Method* form to document your findings whether the given construction methods comply with the Performance Solution or Deemed-to-Satisfy (DTS) Solution. Provide a brief explanation of the compliance decision for each area.

This is an example of a competent response:

ASSESSMENT METHOD	
Energy efficiency	
Construction method	Western windows shaded by vertical louvres; Northern terrace entry protected by awning
Performance Solutions or **Deemed-to-Satisfy Solution**	Deemed-to-Satisfy Solution
Assessment method applied [4-6 words]	Comparison with DTS provisions
Brief explanation of how the assessment method was applied [6-10 words]	Current construction method was checked against NCC Volume 2.
Construction method compliant with Performance Solution/Deemed-to-Satisfy Solution?	☒ Yes ☐ No
Brief explanation of compliance decision [6-10 words]	Proposed Construction method is the same as DTS.
Damp and weatherproofing	
Construction method	Damp-proof courses and flashings applied
Performance Solution or **Deemed-to-Satisfy Solution**	Deemed-to-Satisfy Solution
Assessment method applied [4-6 words]	Comparison with DTS provisions
Brief explanation of how the assessment method was applied [6-10 words]	Current construction method was checked against NCC Volume 2.
Construction method compliant with Performance Solution/Deemed-to-Satisfy Solution?	☒ Yes ☐ No
Brief explanation of compliance decision [6-10 words]	Construction method is the same as DTS.
Fire safety	
Construction method	External wall 900 mm from site boundary constructed as a brick veneer wall, brick thickness 110 mm.
Performance Solution or **Deemed-to-Satisfy Solution**	Deemed-to-Satisfy Solution
Assessment method applied [4-6 words]	Comparison with DTS provisions
Brief explanation of how the assessment method was applied [6-10 words]	Current construction method was checked against NCC Volume 2.

Construction method compliant with Performance Solution/Deemed-to-Satisfy Solution?	☒ Yes ☐ No
Brief explanation of compliance decision [6-10 words]	Construction method is the same as DTS.
Health and amenity	
Construction method	Constructing building elements in wet areas
Performance Solution or **Deemed-to-Satisfy Solution**	Performance Solution Further information for assessor: Kitchen will have upholstered walls lined with cotton.
Assessment method applied [4-6 words]	Comparison with DTS provisions
Brief explanation of how the assessment method was applied [6-10 words]	Current construction method was checked against BCA Volume 2.
Construction method compliant with Performance Solution/Deemed-to-Satisfy Solution?	☐ Yes ☒ No
Brief explanation of compliance decision [6-10 words]	Cotton is not neither waterproof nor water resistant.
Structure	
Construction method	Instead of 100mm, 85mm slab on ground construction with total depths of 300mm.
Performance Solution or **Deemed-to-Satisfy Solution**	Performance Solution
Assessment method applied [2-6 words]	Verification method
Brief explanation of how the assessment method was applied [6-10 words]	Current construction method was checked against NCC Volume 2.
Construction method compliant with Performance Solution/Deemed-to-Satisfy Solution?	☒ Yes ☐ No
Brief explanation of compliance decision [6-10 words]	Construction method is professionally verified
Safe movement and access	
Construction method	Safety balustrade installed on the edge of the terrace, above 1.1m from ground level.
Performance Solution or **Deemed-to-Satisfy Solution**	Deemed-to-Satisfy Solution

	Further information for assessor: A continuous barrier must be provided along the side of a terrace where it is possible to fall 1 m or more measured from the level of the trafficable surface to the surface beneath
Assessment method applied (4-15 words)	Assessment of project conditions and necessity. There is no 1m or higher trafficable surface.'
Brief explanation of how the assessment method was applied (6-10 words)	Current construction method was checked against BCA Volume 2.
Construction method compliant with Performance Solution/Deemed-to-Satisfy Solution?	☒ Yes ☐ No
Brief explanation of compliance decision (6-10 words)	Barrier is not required; design is compliant without barrier.
Ancillary provisions	
Construction method	80mm gap provided between vertical bars of pool fence
Performance Solution or **Deemed-to-Satisfy Solution**	Deemed-to-Satisfy Solution. Further information for assessor: According to Australian Standard AS 1926, the gap must be less than 100mm.
Assessment method applied (4-6 words)	Comparison with DTS provisions
Brief explanation of how the assessment method was applied (6-10 words)	Current construction method was checked against BCA Volume 2.
Construction method compliant with Performance Solution/Deemed-to-Satisfy Solution?	☒ Yes ☐ No
Brief explanation of compliance decision (6-10 words)	Construction method surpasses DTS provisions.

Task 5

Based on the project plan for Banksia House used in Task 1, complete the *Evidence of Suitability Requirements* form below. It has been decided that they are going to use a lightweight façade cladding and ceiling insulation. You will need to find a product as an example for each material type and document how the products meet the evidence of suitability requirements set by the National Construction Code.

Gather a CodeMark Australia Certificate of Conformity as evidence of suitability for each product identified. Provide the certificate number and the hyperlink to the certificate for each product, as indicated in the table below. You will also need to indicate what equipment and program you have used to locate the required information, for example, internet/internet browser.

This is an example of a competent response:

EVIDENCE OF SUITABILITY REQUIREMENTS	
Project name and location	Banksia House, Melbourne
Material 1	Lightweight façade cladding
Product (Identify 1.)	Student can list 1 from the following: • Weathertex Selflok weatherboard cladding system • Cemintel barestone walling system
Evidence of suitability (Certificate number and hyperlink)	Student can list 1 from the following, in accordance with the product chosen: Certificate nr: CM20189 https://www.weathertex.com.au/wp-content/uploads/2021/01/Weathertex-CodeMark-Certificate-CM20189-20201210.pdf Certificate nr.: CM20199 Rev1, https://www.cemintel.com.au/media/2484/certificate-cm20199-rev-1-20200317.pdf
Equipment used to access information (1-2 words)	PC
Program used to access information (1-2 words)	Windows / Chrome browser
Material 2	Ceiling insulation
Product	Student can list 1 from the following: • Knauf insulation • Pink Batts
Evidence of suitability (Certificate number and hyperlink)	Student can list 1 from the following, in accordance with the product chosen: • Certificate nr.: CM30094 Rev3 https://pim.knaufinsulation.com/files/download/30094_rev3.pdf • Certificate nr.: GM-CM3006 Rev C1, https://insulationeasy.com.au/wp-content/uploads/2019/07/Pink%C2%AE-Batts-CodeMark%E2%84%A2-Certification.pdf
Equipment used to access information (1-2 words)	PC
Program used to access information (1-2 words)	Windows / Chrome browser

Task 6

As part of the evaluation, you need to determine the required fire resistance level (FRL) for the construction of the external wall related to the Banksia House project used in Task 1. Complete the following *Fire Protection Compliance* form, assuming that the external wall along the site boundary is constructed as a traditional brick veneer wall.

Answers may vary. This is an example of a competent response:

FIRE PROTECTION COMPLIANCE	
Project name and location	Banksia House, Melbourne
NCC requirement for passive fire control (75-80 words)	Fire separation to be provided. An external wall of a Class 1 building, and any openings in that wall, must comply with 3.7.2.4 if the wall is less than 900 mm from an allotment boundary other than the boundary adjoining a road alignment or other public space; or 1.8 m from another building on the same allotment other than a Class 10 building associated with the Class 1 building or a detached part of the same Class 1 building.
Building's existing passive fire control measure (5-10 words)	Brick veneer wall, brick layer thickness is 110mm
Legislative requirement for active fire protection (2-5 words)	Smoke alarm to be installed (this applies to all states/territory) Further reference: Australian Fire Regulations, Fire Safety Legislation Australia
Building component (3-5 words)	External brick veneer wall
Material (1-5 words)	Masonry – common brick external veneer
Actual thickness of building's component (in mm)	110mm (this is the standard brick width)
Building compliant with requirements for fire protection?	☒ Yes ☐ No
Explanation of conclusion of compliance (15-20 words)	There is no need to examine the entire layered wall, the external brick veneer layer itself provides the required fire rating.

Assessment checklist

Students must have completed all questions within the assessment before submitting. This includes:

Part A: Case study tasks		
Task 1	Complete table based on Scenario 1 (Bathroom)	☐
Task 2	Complete table based on Scenario 2 (Small Family House/Single dwelling)	☐
Task 3	Complete table based on Scenario 3 (Small house extension with swimming pool)	☐
Part B: Project task		
Task 1	Complete the *Project Plan Information* form, including Performance Solution identification	☐
Task 2	Complete the *Construction Method Compliance* form	☐
Task 3	Draft 3 emails	☐
Task 4	Complete the *Assessment Method* form	☐
Task 5	Complete the *Evidence of Suitability Requirements* template	☐
Task 6	Complete the *Fire Protection Compliance* form	☐

Congratulations, you have reached the end of Assessment 3!