

CPCBC4012

READ AND INTERPRET PLANS AND SPECIFICATIONS

ASSESSMENT SUMMARY

The assessment activities for *CPCBC4012 Read and interpret plans and specifications* cover all aspects of the unit of competency. For Apprentices/Trainees, this includes supervisor completion of the Apprentice/Trainee Record (ATR).

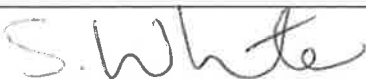
Participants must read all the information given before starting any assessment task. The assessment tasks are intended to be fair, flexible, valid and reliable. If a Participant has any questions or requires alternative arrangements to be made such requests should be directed to their Trainer/Assessor, 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	Shauna White
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 CPCBC4012	Select Date.	☐ Competent	☐ Not Yet Competent

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

- | | |
|---|---|
| ☐ Theory Exam | ☐ Slab Plan for Activity 3 (HO3 available) |
| ☐ Workbook | ☐ Cost Estimation Sheet for Prac (HO5 available) |
| ☐ Practical Assessment | |

Assessor name	
Assessor signature	

CPCCBC4012

READ AND INTERPRET PLANS AND SPECIFICATIONS

THEORY EXAM

Participant name	Shauna White
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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.

Q1. What is the significance of concept drawing/sketches?

Answer Concept drawings are essential in the creative process, providing a visual foundation for the development of ideas and designs across different disciplines. They play a crucial role in the early stages of a project, helping creators articulate and communicate their vision.



Q2. Discuss when you may come across concept drawings/sketches.

Answer Concept drawings/sketches are the early stages of the design process. They are a visual representation of an architect's ideas and design concepts for a building or structure.



Q3. Explain what is meant by architectural plans.

Answer Architectural plans are the overall design of a building. Architectural plans have information regarding the aesthetic, function and just a general feel of the building



Q4. Provide four (4) plans that are considered part of the architectural plans.

Answer

1. Architectural floor plan
2. Site plan
3. Elevations
4. section



Q9. What is the purpose for mechanical plans?

Answer These drawings contain specifications related to mechanical equipment ie heating, cooling & ventilation.

☐

Q10. Discuss three (3) details you may find in mechanical plans.

Answer

1. Size, type, and layout
2. HVAC layout
3. Heat-loss and heat gain calculations

☐

Q11. When would electrical plans be used?

Answer These drawings are used to acquire & locate electrical systems or circuits

☐

Q12. Provide three (3) examples of details contained in electrical plans.

Answer

1. Wiring layout
2. Location of panels & switches
3. Schedule of loads

☐

Q16. What can occur if an outdated version of the plans is used?

Answer Having outdated versions of plans & specifications will lead into incorrect building/construction of a project and also costs estimates being incorrect.



Q17. Discuss what site plans are drawn to reflect.

Answer Site plans provides an overview of the entire property. It gives you an idea of the entire scope of works.



Q18. Discuss the purpose of reading the floor plan.

Answer A floor plan is a graphical representation of the building. So it's a view from the top of the building looking down to ground level. It shows the elements such as walls, columns, doors, and windows. It shows the different spaces of a project.



Q21. Why is it important to measure from a datum point?

Answer Measuring from the datum point identifies the building location and is important since it defines the state/territory requirements that the building and construction project must follow



Q22. Discuss what reduced levels (RL) are and how these are established in construction drawings.

Answer Reduced levels are vertical measurements taken from the datum



Q27. Describe why examining detail drawings is important.

Answer Detail drawings provide a larger scale view which gives you more information on how to build a certain section/portion. I.e size, thickness, diameter.



Q28. What is the difference between utilities plans and specifications and services plans and specifications in the context of building construction?

Answer Utilities plans & specifications are information on the supply of electricity, water, lifts, gas supply, sewage and
Services plans & specifications is used for information on the flow of operations i.e fire safety detection & protection, lighting, security & alarm systems



Q29. Describe what is meant by each of the following drawing descriptions.

Answer

Drawing description	Meaning
Isometric drawings	Are 3D drawings on a 2D surface where the same scale is used of all axes
Oblique drawings	Are the 2D projection of 3D drawings that represent an object accurately by showing the true shape and form of the object based on the point of view of the observer
Perspective drawings	3D drawings which show an approximate representation of what it might look like
Orthographic drawings	Wherein 3D images are presented in 2D, in which three views are generally produced.



Q32. What is building information modelling (BIM)?

Answer BIM is used to design and document building & infrastructure designs. It then generates more visualisation representation



Q33. Explain how the NCC is relevant to construction drawings.

Answer The NCC sets out the technical provisions for the design, construction, and performance of buildings, plumbing and drainage systems.



Q34. Discuss the importance of complying with standards during a building and construction project.

Answer You need to comply with the NCC which contains the rules and instructions



Q37. Reasonable allowances are made by builders for the different construction items in a building project. Discuss what Prime Cost (PC) items are.

Answer

Prime Cost is an allowance for supply and installation of items where prices can't be determined or confirmed at the time of the contract is entered.



Q38. Explain what Provisional Sum (PS) items are.

Answer

A provisional sum is an allowance for construction work that will be carried out but are not yet determined and the builder is unable to establish a accurate cost.



Q39. Explain how to locate installation points of the services to the building from the plans.

Answer

Key features like installation points for services can be viewed on utilities and services plan



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WORKBOOK

Participant name	Shauna White
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FOR THE PARTICIPANT

Instructions

- You will complete written activities as outlined on the following pages. You must attempt all questions and provide enough detail in your responses to demonstrate your knowledge.
- The timeframe for these tasks will be established by your Assessor or Training Plan, 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.

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.

For the following activities, name the State/Territory you will base your research on.

State/ Territory	NSW
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ACTIVITY 1

Research and document your findings regarding legislation and codes that apply in your state/territory relevant to the following three (3) items. Summarise the requirements relevant to building drawings and sketches you identified and provide the URL where you sourced your responses.

- Smoke alarms in a new building
- Pool fences
- Protection of waterways

a) Smoke alarms**Name of Legislation (Commonwealth or State)**

Environmental Planning and assessment Act 1979 Division 7A of Part 9 of the Environmental Planning and assessment regulation 2000. Australian standard AS3786

Summary of relevant excerpt/requirement

owner of a class 1a building or relocatable home must ensure that the building or home is equipped with smoke alarms that are located on or near the ceiling—
 in any storey of the building or home containing bedrooms—in every corridor or hallway associated with a bedroom, and if there is no such corridor or hallway associated with a bedroom, between that part of the building or home containing the bedroom and the remainder of the building or home, and
 in any other storey of the building not containing bedrooms.
 The owner of a class 1b building must ensure that the building is equipped with smoke alarms that are located, on or near the ceiling—
 in any storey of the building containing bedrooms—
 in every bedroom, and
 in every corridor or hallway associated with a bedroom, and if there is no such corridor or hallway associated with a bedroom, between each part of the building containing the bedroom and the remainder of the building, and
 in any other storey of the building not containing bedrooms.

Source (URL or web source)

Environmental Planning and Assessment Regulation 2000 - NSW Legislation

**Satisfactory
Outcome**



ACTIVITY 3

Access Handout 2 (HO2 - Footing Plan) and Handout 3 (HO3 - Slab Plan) and respond to the following:

- a) Specify the size and type of reinforcing to be used for BP.1 in Handout 2 (HO2 - Footing Plan)
- b) How do you determine where each BP.1 footing pier should be placed?
- c) Mark each of the load bearing points in Handout 3 (HO3 - Slab Plan)

a) Specify the size and type of reinforcing to be used for BP.1

Vertical 5.N12
Ligs R6 Helix – 200mm Pitch
Cover 40mm top + sides
75mm Base of pier

b) How do you determine where each BP.1 footing pier should be placed?

They are located on the footing plan as BP1, 12 in total

c) Mark each of the load bearing points in Handout 3 (HO3 - Slab Plan)

Done. Highlighted purple.

**Satisfactory
Outcome**



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PRACTICAL ASSESSMENT

Participant name	Shauna White
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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.	

1.2H.	Specify site features located to be removed/ retained: The site plan in this instance doesn't identify any items that need to be retained or removed.
1.2J.	Specify variations found: No variations found.
1.3A.	Specify concrete footing and slab information identified: Refer to concrete slab/footing plan. Drawing S100 & S101 These plans show you the positions of the footings which are labelled
1.3B.	Specify how load bearing points were recognised: Refer to the slab/footing plan and locate the schedule which identifies the load bearing point. In this case the legend column identifies the loading bearing points labelled C1. You can also refer to the schedule on the right hand side which contains other load bearing information. 3.2 Concrete quality.
1.3C.	Specify how wind bracing and tie down requirements were confirmed: Refer to the roof framing plans and locate the schedule details. This will tell you the requirements of the wind bracing & tie down. In this scenario on the plans they are labelled XB.3 & XB.1
1.4B. 1.4C.	Specify how installation points and fixtures were determined: Installation points are usually located on the floor plans and be located in bathrooms and/or ensuites/kitchens. On floor plans they can be identified as water closet (WC), floor waste (FW) and shower recess (SHR) drains. Fixtures are located on floor plans and are in bathrooms i.e shower/tub/sink, Doors & windows, electrical installations i.e light fittings/power points.
1.4B.	Specify how connection points were determined: Connection points were identified by referring to the site plans and locating these points outside the building, which are usually consumer poles (for electricity, sewer connections for floor wastes etc to drain too & main water supply where water is to be supplied too ie bathroom taps/kitchen taps.
1.4C.	Specify where finishing details were located: Finishes are identified and detailed in the finishes specification document which include, but not limited to painting, tiles, flooring, windows. In this instance paint colour for internal walls 2 coats of low sheen acrylic wall paint in colour dune.

When completing the task, did the Participant:	Tick if satisfactorily completed. Provide comments if left unticked.
1 Identify types of plans	
1.1A. Check and confirm that the current version of plans, specifications and amendments are being used.	☐
1.1B. Use the appropriate plans and aspects of drawings for relevant purposes.	☐
1.1C. Confirm that the details on plans comply with the specifications.	☐
1.1D. Identify environmental controls from plans/specifications.	☐
2 Read and interpret the plan	
1.2A. Read and confirm standards of work and tolerances from job specifications.	☐
1.2B. Determine building layout, spaces and dimensions from floor plan.	☐
1.2C. Determine internal linings, external cladding and roof materials from plans and specifications. (Template available for use HO5 - Cost Estimation)	☐
1.2D. Determine material sizes, thickness and construction methods from detail drawings. (Template available for use HO5 - Cost Estimation)	☐
1.2E. Recognise and confirm job specifications located in drawings, notes, and descriptions.	☐
1.2F. Apply information from plans to estimation, planning and supervisory tasks. (Template available for use HO5 - Cost Estimation)	☐
1.2G. Gain access to the site, achieve orientation and identify services, datum and reduced levels.	☐
1.2H. Locate site features to be removed or retained.	☐
1.2I. Determine the building location from the site plans to actual.	☐
1.2J. Verify plans recognising variations between the plans and the actual site, reporting findings as required.	☐
1.2K. Appropriately communicate with others to be understood.	☐
1.2L. Adhere to site safety requirements, including requirements relating to hazard identification.	☐
3 Identify structural details	
1.3A. Identify concrete footing and slab sizes and position and type of reinforcing required.	☐
1.3B. Identify structural load bearing points of the building and compare information from specification.	☐
1.3C. Identify wind bracing and tie-down requirements checking for accuracy against the wind bracing table.	☐
4 Identify non-structural details	
1.4A. Identify provisional sum (PS) and prime cost (PC) items when estimating costs. (HO5)	☐
1.4B. Locate installation and connection points of services to the building.	☐
1.4C. Identify location of fixtures from plans and details of finishes from specifications.	☐