

CPCBC4004

IDENTIFY AND PRODUCE ESTIMATED COSTS FOR BUILDING AND CONSTRUCTION PROJECTS

ASSESSMENT SUMMARY

The assessment activities for *CPCBC4004 Identify and produce estimated costs for building and construction 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	Rex Henderson
Participant signature	

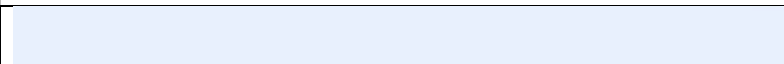
Pre-requisite unit(s) to be achieved and authenticated prior to undertaking assessment

☒ 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 CPCBC4004	Select Date.	☐ Competent	☐ Not Yet Competent

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

- | | |
|---|--|
| ☐ Theory Exam
☐ Workbook
☐ Practical Assessment
☐ Compliance sheet (HO1)
☐ Project Details (HO2)
☐ Materials and consumables costing (HO3) | ☐ Off-site production cost estimation (HO4)
☐ Labour cost estimation (HO5)
☐ Physical resources cost estimation (HO6)
☐ Risk mitigation sheet (HO7)
☐ Costings estimate spreadsheet template (HO8)
☐ Building Construction estimate spreadsheet (HO9) |
|---|--|

Assessor name	
Assessor signature	

CPCBC4004

IDENTIFY AND PRODUCE ESTIMATED COSTS FOR BUILDING AND CONSTRUCTION PROJECTS

THEORY EXAM

Participant name	Rex Henderson
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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. How is the construction industry in Australia regulated?

Answer

The QBCC is the independent regulator that manages over 80 available industry licences including building, plumbing and drainage, mechanical services, fire protection, termite management, building and hydraulic design, and building inspection and certification



Q2. How do you determine which Australian Standards are mandatory and therefore enforceable?

Answer

Standards are not laws, so there is no general requirement to conform to a Standard. However, conforming to specific Standards is mandatory if there is a law which says you must conform with it. The WHS laws require conformance with only a small number of Standards



Q3. Discuss how builders and others on construction sites and ensure the safety of all on site.

Answer

1. Awareness. Before any worker — no matter his or her role or experience level — can set foot on a construction site, he or she must be fully aware of the possible hazards. ...
2. Training. ...
3. Communication. ...
4. Documentation. ...
5. Proper Equipment. ...
6. Supervision. ...
7. Innovation. ...
8. Transparency.



Q4. Why do construction projects have to abide by environmental protection legislation and regulations?

Answer

Without these laws, there would be no regulations concerning pollution, contamination, hunting, or even response to disasters. Environmental law works to protect land, air, water, and soil. Negligence of these laws results in various punishments like fines, community service, and in some extreme cases, jail time.



Q5. Describe the Environmental Protection Authority (EPA) and how environmental protection is monitored in the state/territory you work.

Answer

The role of Queensland's environmental regulator is currently undertaken by the Queensland Government Department of Environment and Science (DES). In this role, DES manages and monitors environmental risk through a range of assessment, compliance, investigation and enforcement activities.



Q6. Explain why workplace policies and procedures are important in relation to legislation.

Answer

compling with employment and other associated legislation. demonstrate that the organisation is being operated in an efficient and businesslike manner. ensure uniformity and consistency in decision-making and operational procedures.



Q7. Why should you understand the 'scope' of the workplace when producing estimated costs for building and construction projects?

Answer

Better planning: Accurate cost estimating allows you to plan the sub-tasks needed to finish a task properly. You can more quickly create a task breakdown structure and guarantee that your project team sticks to the project schedules.



Q8. Explain the importance of construction schedules in relation to contracting tradespeople, material resourcing and inspections.

Answer

A well-structured construction schedule enables construction professionals to manage resources more efficiently, saving both time and money. It helps anticipate potential hiccups before they become major issues, ensuring that the work stays on track.



Q9. Discuss why builders should keep and maintain records of subcontractors, site supervisors and workers qualifications, competencies and licences.

Answer

Effective subcontractor management allows for more accurate cost estimates as well as better control of labor costs. This ensures that projects remain financially viable, especially when dealing with complex construction sites with multiple vendors and subcontractors.



Q10. Why is it important to identify the site conditions during planning?

Answer

A robust site investigation enables value engineering in the design of foundations. This not only ensures safe development but also meets the requirements of building control. The development of a site can change the loading on the ground and altering the stress state can on occasion lead to ground movement



Q11. The 'Managing the work environment and facilities Code of Practice' states that a PCBU must so far as reasonably practicable provide adequate and accessible facilities for the welfare of workers. Discuss what must be organised to meet this requirement.

Answer

- provision and maintenance of a safe work environment.
- provision and maintenance of safe plant and structures.
- provision and maintenance of safe systems of work.
- safe use, handling and storage of plant, structures, and substances.



Q12. Why should you determine the temporary boundary fencing requirements for the site?

Answer

It serves as a strong visual barrier as well as deterring thieves and vandals. Before you install temporary fencing on your construction or demo site, ensure it meets the necessary Standard. This ensures that you're getting a quality product.



Q13. Why is it important to establish communication protocols for the site?

Answer

By establishing clear communication protocols with your builder, you can ensure that your project runs smoothly, and that any issues or concerns are addressed promptly. Effective communication is the key to a successful construction project



Q14. Discuss what must be determined when identifying waste removal requirements.

Answer

- Legal Requirements. ...
- Environmental Consequences. ...
- Cost. ...
- Waste Capacity. ...
- Permit Status. ...
- Compliance History. ...
- Facility Acceptance. ...
- Distance from Waste Generation Points



Q15. What are the different costs to be considered when determining waste removal requirements for the site?

Answer

Focus first on waste prevention, which will help eliminate waste at the source, saving natural resources and energy and cutting costs. Evaluate recycling and composting options to manage waste that cannot be prevented. Implement waste reduction activities best suited for your organization.



Q16. Discuss additional project-specific statutory, approvals or compliance costs that must be met.

Answer

the goal that organisations aspire to in their efforts to ensure that they are aware of and take steps to comply with relevant laws, policies, and regulations.



Q17. Discuss what a quantity take off is.

Answer

Quantity take-offs (QTO) are a detailed measurement of materials and labor needed to complete a construction project. They are developed by an estimator during the pre-construction phase. This process includes breaking the project down into smaller and more manageable units that are easier to measure or estimate.



Q18. How can you make use of modern technology when producing a take off?

Answer

A takeoff completed in a construction cost estimating software platform that offers takeoff capability



Q19. Discuss how you would estimate the cost of precast concrete components.

Answer

Price per sqm depends on a number of variables such as size, thickness, finishes and complexity of the panel, however as a general rule, Akura precast concrete panels are anywhere between \$150-300/sqm.



Q20. Briefly discuss what is needed for the safe operation of the following physical resources at a current and active worksite in your state or territory.

Answer

Physical resource	Requirement for operation
Bulldozer	• Avoid operating the machine across the slope greater than a 2/1 batter. Wear high-visibility clothing when working around heavy mobile equipment. • Avoid positioning yourself in a blind spot or riding on moving equipment. • Avoid setting up your work area near heavy mobile equipment. ... • Avoid walking or working under a suspended load.
Excavator	• Don't allow anyone to ever ride in the bucket or cab. • Decrease the equipment's speed when working on rough terrain or in high traffic areas. • Keep the bucket low to the ground when transporting materials. • When moving the excavator, try to stay on flat ground.
Hoist	• Stand completely clear of the load. • Seat the load properly in the hook. • Move hoist controls smoothly. Avoid abrupt, jerky movements of the load. ... • Remove all loose materials, parts, blocking and packing from the load before starting the lift. • Make sure everyone is away from the load before starting to hoist.
Forklift	• Tines must be down if the forklift is not carrying a load. • Avoid excessive speed. • Drive smoothly, refraining from excessively rapid acceleration and quick stops. • Ensure the load is balanced and can be safely lifted. • DO NOT exceed the carrying capacity of the forklift.



Mobile Crane	• Among the most useful pieces of equipment found in construction projects are mobile cranes. ... • Understanding the Requirements of the Job. ... • 2. Personal Protective Equipment (PPE) Check. ... • Check for Potential Electric Hazard. ... • Read Operator Manuals. ... • Crane Operator Training
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Q21. Discuss what you need for the safe and effective operation of a compressor, generator or a pump at the work site.

Answer Safety gear is a must when operating power tools or heavy machinery, so the first thing you'll want to do is put on safety goggles for eye-protection, a pair of closed-toe shoes, earmuffs, and any other protective wear you might need for safe operation of your tools and compressor.



Q22. Describe how you can obtain the supplier prices for physical resources such as the hire of earthmoving equipment or smaller equipment such as generators.

Answer . Large plants and machinery will likely be hired instead of bought by your organisation for a construction project, which means suppliers will likely give you the cost to hire the specified plants and machinery per day of use. It is also important to discuss how the physical resources will be transported to the construction site with the supplier. Additional transportation costs may apply to large plants and machinery such as bulldozers, mobile cranes, and excavators.
Like in the previous section related to obtaining prices from suppliers, the procedure of doing so may vary between organisations. Typically, obtaining supplier prices may be as simple as sending the supplier a list of physical resources needed for a construction project. A schedule of usage for the physical resources is also sent with the list. Access and review your organisation's policies and procedures for obtaining prices from suppliers.



Q23. Discuss how you confirm additional transport costs that may apply to the hire of plant and equipment.

Answer

Simply ask the question, are there any additional cost for Travel, weight, distance.



Q24. Discuss what is meant by 'overhead costs' and why these must be included when calculating and estimating costs for a job.

Answer

In estimating costing, overhead costs are typically added to the direct costs of production to arrive at the total cost of a product or service. This total cost is then used to set a price for the product or service.



Q25. How is an overhead margin calculated?

Answer

To calculate the overhead rate, divide the indirect costs by the direct costs and multiply by 100. If your overhead rate is 20%, the business spends 20% of its revenue on producing a good or providing services. A lower overhead rate indicates efficiency and more profits.



Q26. Discuss risks associated with estimating project costs that you must manage and mitigate.

Answer

Identify and analyse the Risks
Prioritize and Assign Risks
Empower Persistent Communication.
Maintain Complete Audit Trails



Q27. Describe how you manage and mitigate the risks associated with estimating costs?

Answer

Create a project risk register. ...
Identify project risks. ...
Identify opportunities. ...
Determine likelihood and impact. ...
Determine the response. ...
Estimation. ...
Assign owners. ...
Regularly review project risks.



CPCCBC4004

IDENTIFY AND PRODUCE ESTIMATED COSTS FOR BUILDING AND CONSTRUCTION PROJECTS

WORKBOOK

Participant name	Rex Henderson
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FOR THE PARTICIPANT
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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.

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** (State/ Territory or Federal) documentation, including legislation, regulations, codes of practice, standards and guidance publications when required.

ACTIVITY 1

Access the internet and locate the project plan below:

[Case Study: Caloundra, Queensland](#)

After reviewing the project plan, answer the following questions:

- a) What is the size of the land?
- b) Based on the floor plan, how many bedrooms does the house have?
- c) In which cardinal direction is the living room oriented?
- d) What type of slab is required?
- e) What type of building is shown for this project?
- f) Specify the materials used to support the sustainability of this construction.

a) What is the size of the land?

Size of land: 320m²

b) Based on the floor plan, how many bedrooms does the house have?

3 bedrooms

c) In which cardinal direction is the living room oriented?

north facing living area opens to a rear alfresco area facing the yard.

d) What type of slab is required?

The right combination of horizontal and vertical mass was needed to achieve a 10 star rating, with a [concrete slab](#) providing horizontal thermal mass. The concrete sits on and around a series of waffle pods, thus the slab is mostly resting above the ground and is less susceptible to changes in ground temperature. The air pockets created by the pods form an insulating layer between the structure and the ground.

e) What type of building is shown for this project?

Building type: low density

f) Specify the materials used to support the sustainability of this construction

- Concrete slab
- Reverse brick veneer
- Lightweight construction
- Insulation
- Energy saving windows
- Energy-efficient appliances
- Solar photovoltaic system
- Rainwater tank

Satisfactory
Outcome



ACTIVITY 2

Following organisational procedure, you have contacted the appropriate supplier to enquire about the price to hire a bulldozer and an excavator for a construction project across a 30 day period.

You have clarified workplace requirements that the supplier transport the plant from the supplier to the construction site and collect after use. The supplier has responded to with the following quote:

Plant Hire	Cost /per day	Transport cost (Combined delivery and pick-up)
1 x Track-mounted excavator	\$120.60	\$234.50
1 x Track-mounted bulldozer	\$131.70	

Complete the costing sheets below for each item.

Plant for hire:	1 x Track-mounted excavator	
Timeframe:	30 day period	
Operational Costs:		
Associated Costs:	Cost per day of use	Total
Fuel	42.60	1278.00
Operator's wage	84.20	2562.00
Maintenance	18.00	540.00
Hire costs	\$120.60	3618.00
Transport cost	\$234.50	234.50
Total cost	8232.50	

Plant for hire:	1 x Track-mounted bulldozer	
Timeframe:	30 day period	
Operational Costs:		
Associated Costs:	Cost per day of use	Total
Fuel	42.60	1278.00
Operator's wage	84.20	2562.00
Maintenance	18.00	540.00
Hire costs	\$131.70	3618.00
Transport cost	\$234.50	234.50
Total cost	8232.50	

**Satisfactory
Outcome**



ACTIVITY 3

Swayze Construction recently built a new bedroom as an extension to an already-existing bungalow. These are the specifications and features of the new room:

- The room has a mat foundation that is 2 m deep.
- The room has four masonry walls:
 - Two walls are 4 m wide and 3.5 m tall.
 - Two walls are 3 m wide and 3.5 m tall.
- All walls are painted eggshell white.
- The steel tray roofing is 20 m² large.

Laying the mat foundation cost \$30,000.00. This includes labour and materials.

Putting up all the masonry walls cost \$3,500.00. This includes labour and materials.

Laying the steel tray roofing cost \$5,000.00. This includes labour and materials.

Painting the masonry walls cost \$2,000.00. This includes labour and materials.

Given the information above, calculate for the following:

- a) Cost of laying the foundation per metre of depth.
- b) Cost of building the masonry walls per square metre.
- c) Cost of laying the steel tray roofing per square metre.
- d) Cost of painting the masonry walls per square metre.

You must show the calculations to your answers.

Round up your answers to the nearest dollar.

a) Cost of laying the foundation per metre of depth

Mat foundation size is 3mt x 4mt x 2mt deep=24sm

Cost \$30,000.00 divided by 24sm =\$1250.00

b) Cost of building the masonry walls per square metre

Masonry walls 4mt x 3.5mt x 2 walls =28sm

Masonry walls 3mt x 3.5mt x 2 walls =21sm

Total = 49sm

Cost of building Masonry wall \$3500.00 Divided by 49sm =\$71.42

Rounded up to nearest dollar = \$72.00 sm

c) Cost of laying the steel tray roofing per square metre.

Cost of laying the steel tray roofing is \$5000.00
The steel tray roofing is 20 m² large
\$5000.00 divided by 20 sm = \$250 sm

d) Cost of painting the masonry walls per square metre.

Cost of painting outside of the masonry walls is \$2000.00
Area of walls(outside) is 49sm
\$2000.00 divided by 49 sm =\$40.81per sm
Rounded up to nearest dollar = \$41.00 per sm

**Satisfactory
Outcome**



ACTIVITY 4

Swayze Construction recently built a new bathroom as an extension to an already existing bungalow. These are the specifications and features of the new bathroom:

- The foundation slabs cover an area of 12 m²
- A total of 20 m of pipes were installed as part of the bathroom's plumbing.
- There are eight new pieces of sanitary ware in the bathroom:
 - One toilet
 - Two washbasins
 - Two sink taps
 - Two shower taps
 - One shower outlet
- The floor area of the bathroom is 9 m². All of the bathroom floor is tiled.
- The bathroom has four walls.
 - Each wall is 3 m wide and 3 m tall.
 - Only half the height of the wall is tiled.
- Laying the slabs cost \$3,000.00. This includes labour and materials.
- Installing the pipes cost \$6,000.00. This includes labour and materials.
- Installing all the sanitary ware cost \$18,000.00. This includes labour and materials.
- Tiling the tiled sections of the bathroom (i.e. all of the bathroom floor and half the height of each wall) cost \$1,000.00. This includes labour and materials.

Given the information above, calculate for the following:

- a) Cost of laying of the slabs per square metre.
- b) Cost of installing the pipes per square metre.
- c) Cost of installing sanitary ware per unit.
- d) Cost of tiling per square metre.

*You must show the calculations to your answers.
Round up your answers to the nearest dollar.*

a) Cost of laying of the slabs per square metre

Cost of laying of the slabs per square metre is \$3000.00 divided by 12sm (slab size) = \$250.00 sm

b) Cost of installing the pipes per square metre.

Cost of installing the pipes is \$6000.00 divided by 20sm = \$300.00 per sm

c) Cost of installing sanitary ware per unit.

Cost of installing sanitary ware is \$18,000.00
 There are eight new pieces of sanitary ware in the bathroom
 \$18,000.00 divided by 8(pieces) = \$2250 per unit

d) Cost of tiling per square metre.

Cost of tiling bathroom is \$1000.00
 Floor area of Bathroom is 9 sm
 Wall area of Bathroom is 3m x 1.5m x 4 walls = 6 sm
 9sm + 6sm = 15sm
 \$1000.00 divided by 15sm = \$66.66 per sm
 Rounded up to nearest dollar = \$67.00 per sm

**Satisfactory
Outcome**



CPCCBBC4004

IDENTIFY AND PRODUCE ESTIMATED COSTS FOR BUILDING AND CONSTRUCTION PROJECTS

PRACTICAL ASSESSMENT

Participant name	Rex Henderson
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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	Select Date.	☐ Workplace ☐ Simulation		☐	☐

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 drawings, specifications and plans reviewed for compliance:
1.2A. 1.3C.	Specify how supplier list was determined:
1.2C. 1.2D.	Specify how contractors, sub-contractors and employees were selected:

CPCBC4004

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Practical Task 1

Description of task:

The participant must demonstrate the ability and knowledge to effectively estimate the cost of one (1) residential OR commercial building and construction project, ideally, the task will be undertaken for a workplace project, using workplace documentation, however, own templates can be used for cost calculations. Some templates are available for use as needed if workplace documents are not available. The assessor will be looking for evidence of:
estimate project costing from construction drawings, specifications and written information
list physical resources appropriate for the construction of the project
produce project cost using an appropriate software program.

- Establish project requirements
 - Read construction drawings and plans in conjunction with local regulations, relevant codes and standards to determine and document compliance requirements. *(template available – HO1)*
 - Confirm site features, type of building and method of construction, and specified building materials. *(template available – HO2)*
 - Determine and document site facilities, communication and temporary fencing requirements. *(template available – HO2)*
 - Determine and document waste removal costs including waste management site fees. *(template available – HO2)*
 - Determine and document other site specific statutory, approvals, permits or compliance costs. *(template available – HO2)*
- Calculate materials and labour costs.
 - Produce a materials and consumables quantity list and obtain a price from supplier. *(template available – HO3)*
 - Determine and estimate off-site production costs, including delivery. *(template available – HO4)*
 - Determine numbers of contractors, sub-contractors and employees appropriate for the project and work rates. *(template available – HO5)*
 - Estimate labour hours and calculate labour costs, including on-costs and worker insurance costs. *(template available – HO5)*
- Identify type and cost of physical resources.
 - Determine physical resources required for the project. *(template available – HO6)*
 - Determine limitations, conditions, operational costs and timeframes for hire of physical resources. *(template available – HO6)*
 - Obtain supplier prices, including transport of physical resources. *(template available – HO6)*
 - Identify, itemise and cost plant, equipment and machinery. *(template available – HO6)*
- Produce estimated project costs.
 - Review and document materials, consumables and off-site production costs and delivery charges.
 - Document labour costs inclusive of rates and entitlements. *(template available – HO5, HO9)*
 - Document costs of physical resources. *(template available – HO6, HO9)*
 - Apply organisational overhead recovery and margins. *(excel template available- HO8,HO9)*
 - Produce estimated project costs for inclusion in a tender or bill. *(excel template available- HO8,HO9)*
 - Manage and mitigate risks associated with estimating project costs. *(template available – HO7)*

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. 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:

Workplace documents including current construction drawings and specifications, HR contractor files and rates, insurance information, Access to PC to research compliance requirements from NCC, council, state legislation including WHS and environmental protection requirements. Access to take-off software or similar technology to achieve requirements. Templates (workplace or RTO).

Observer details	
Name of observer:	
Role of observer (Confirm suitability to sign)	
Email address of observer	
Signature of observer:	
Date:	Select Date.

When completing the task, did the Participant:	Tick if satisfactorily completed. Provide comments if left unticked.
1 Establish project requirements.	
1.1A. Read construction drawings and plans in conjunction with local regulations, relevant codes and standards to determine and document compliance requirements. <i>(template available – HO1)</i>	☐
1.1B. Confirm site features, type of building and method of construction, and specified building materials. <i>(template available – HO2)</i>	☐
1.1C. Determine and document site facilities, communication and temporary fencing requirements. <i>(template available – HO2)</i>	☐
1.1D. Determine and document waste removal costs including waste management site fees. <i>(template available – HO2)</i>	☐
1.1E. Determine and document other site specific statutory, approvals, permits or compliance costs. <i>(template available – HO2)</i>	☐
2 Calculate materials and labour costs.	
1.2A. Produce a materials and consumables quantity list and obtain a price from supplier. <i>(template available – HO3)</i>	☐
1.2B. Determine and estimate off-site production costs, including delivery. <i>(template available – HO4)</i>	☐
1.2C. Determine numbers of contractors, sub-contractors and employees appropriate for the project and work rates. <i>(template available – HO5)</i>	☐
1.2D. Estimate labour hours and calculate labour costs, including on-costs and worker insurance costs. <i>(template available – HO5)</i>	☐
3 Identify type and cost of physical resources.	
1.3A. Determine physical resources required for the project. <i>(template available – HO6)</i>	☐
1.3B. Determine limitations, conditions, operational costs and timeframes for hire of physical resources. <i>(template available – HO6)</i>	☐
1.3C. Obtain supplier prices, including transport of physical resources. <i>(template available – HO6)</i>	☐
1.3D. Identify, itemise and cost plant, equipment and machinery. <i>(template available – HO6)</i>	☐
4 Produce estimated project costs.	
1.4A. Review and document materials, consumables and off-site production costs and delivery charges.	☐
1.4B. Document labour costs inclusive of rates and entitlements. <i>(template available – HO5, HO9)</i>	☐
1.4C. Document costs of physical resources. <i>(template available – HO6, HO9)</i>	☐
1.4D. Apply organisational overhead recovery and margins. <i>(excel template available- HO8, HO9)</i>	☐
1.4E. Produce estimated project costs for inclusion in a tender or bill. <i>(excel template available- HO8, HO9)</i>	☐
1.4F. Manage and mitigate risks associated with estimating project costs. <i>(template available – HO7)</i>	☐

Observer comments: