

CPCCBC4004

IDENTIFY AND PRODUCE ESTIMATED COSTS FOR BUILDING AND CONSTRUCTION PROJECTS

ASSESSMENT SUMMARY

The assessment activities for CPCCBC4004 *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	Kandy-Lee Ashby
Participant signature	

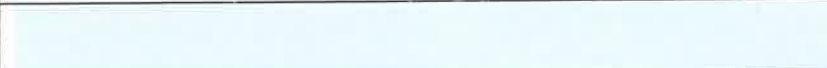
Pre-requisite unit(s) to be achieved and authenticated prior to undertaking assessment

☒ Not applicable

Task	Date completed	Assessment Results	
Theory Exam	Select Date. 20/05/24	☐ Satisfactory	☐ Not Satisfactory
Workbook	Select Date. 21/05/24	☐ Satisfactory	☐ Not Satisfactory
Practical Assessment	Select Date. 21/5/24	☐ Satisfactory	☐ Not Satisfactory
Outcome for CPCCBC4004	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	Kandy-Lee Ashby
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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 National Construction Code (NCC) sets the minimum technical requirements. The NCC covers the design phase, construction and performance of building projects. The Australian Government works with each state or territory to promote the NCC. ^{Each} The states government regulate ~~the~~ Building and construction.

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

Answer

While reviewing the construction drawings we can determine if the structure is for commercial or residential purposes. Once confirmed you will be able to review the correct class in the BCA.

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

Answer

Builders and construction sites must follow The Work Health and Safety Act. The WH&S Act provides strict requirements that must be adhered to. It is everyone's responsibility to abide by these. Construction sites will also place a Site Safety Adviser to monitor.



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

Answer

It is essential for all construction projects and personnel abide by the Environmental Protection Authority's regulations. These regulations help avoid any damage or future damage to or pollution to the environment.



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

Answer

The Environmental Protection Authority are an independent statutory body who enforce regulations regarding environmental concerns. In Queensland, the Queensland Government Department of Environmental and Science manages environmental risks. They conduct a range of assessments, compliance, investigations and enforcement activities.



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

Answer

Policies and procedures are implemented by our company. These are a step by step ~~processes~~ instructions to & assure we are complying with the legislation. ~~the~~ Implementing the same procedures and policies across the company means we are all following the same process.



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

Answer

It is important to understand the full scope of the project and its requirements prior to estimating the costs. The reason for this is that unexpected could arise (Hazardous materials as an example) If we do not consider these while tendering this could lead to the project losing money and being behind program.



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

Answer

Construction schedules provide our Project Manager a list of activities that need to be completed and a time frame. It is important to know when we need to secure trades, materials and equipment. Allowing sufficient time for ~~the~~ items to be manufactured and to arrive onsite. The schedules help us avoid delays and extra costs. ~~Items~~



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

Answer

It is important to maintain records ~~for~~ of licences and qualifications for all site personnel. It is the builders responsibility to make sure all site staff is qualified for the role they are completing onsite. It is the builders responsibility to keep all safe while working. If not licenced it could lead to injury, accidents and ~~if not covered~~ would not be covered by insurances.



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

Answer

During the initial planning stages of any project it is important to know all site conditions prior to estimating the costs. If not known this could lead to increased costs and a delayed program. Some reasons for costs increase: -

- poor soil
- uneven land
- existing pipes or structures
- environmental hazards



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

When setting up a construction site we need to provide all site personnel access to the below facilities

- Toilets
- lunch rooms with air conditioning
- Showers (if site staff require to change)
- clean drinking water
- Shade cover (if working outside in heat)



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

Answer

It is the Builders responsibility to provide the temporary boundary fencing. This includes safety signage, height requirements, access points. It is important to consider this at the time of tendering as each state has different requirements that we must ~~be~~ comply with.



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

Answer

Construction sites must have effective communication, from site deliveries, staff coordination, and emergencies. We must all follow the same communication method onsite. This ensures everyone onsite is safe and go home at the end of the day.



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

Answer ☐ The Environmental Protection Agency regulates the disposal of construction waste. There are certain types of construction waste that requires to be disposed at appropriate facilities. Once we have identified the types of waste that needs to be removed and the particular requirements we need to comply with, we can then confirm disposal costs.

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

Answer ☐ When estimating waste removal costs we need to consider the below:

- Hazardous material
- Approved waste bins
- Disposal fees
- Specialty trades (Asbestos) licences
- Disposal transportation
- PPE for waste removal

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

Answer ☐

- Qleave
- AFES
- NBLD
- Energex
- QULU
- Operational works
- Plumbing and drainage

Q17. Discuss what a quantity take off is.

Answer ☐ Quantity take off is when we create a list using the construction drawings and specifications. This list has materials and consumables and the required quantities of each item.

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

Answer

Pro Programs like AutoCAD allow us to scan construction drawings or input project specifications. The program then provides a quantity list. This cuts down estimating time significantly.



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

Answer

After reviewing tender documents and measuring ~~how~~ how many panels are required. We then contact suppliers with a bill of quantities requesting a quote along with transportation fees.



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	- Person operating the Bulldozer is required to have a L2 licence. - PPE - Site safety (included onsite)
Excavator	- Person operating the Excavator is required to have a LE licence. - PPE - Site safety (included onsite)
Hoist	- Person operating the Hoist is required to have a High Risk Work licence HP. - PPE. - Site Safety (included onsite)
Forklift	- Person operating the forklift is required to have a LF or LO High Risk Work licence. - PPE - Site Safety (included onsite)
Mobile Crane	- Person operating the crane is required to have a High Risk^{HP} licence C2. - PPE - Site safety (included onsite)



Q21. Discuss what you need for the safe and effective operation of a compressor, generator or a pump at the work site.

Answer The equipment must be in working order with its test and tag up to date.



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 Once we have reviewed the tender package drawings and specs. we would list all plant, equipment and machinery we will require during construction. Then send the required items along with timeframes to our suppliers requesting a quote.



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

Answer When we send our request for quote to our suppliers I would also ask them to include transportation to and from site costs.



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

Answer

Overhead costs are charges from our company. The costs cover office facilities, electricity, office supplies etc. We must add this into our tender price, if not included our company will not cover this.



Q25. How is an overhead margin calculated?

Answer

The overhead margin is a set company percentage. We add this percentage on top of our price to ~~ee~~ build the project.



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

Answer

Risks with estimating include:

- ~~assumptions~~
- assumptions
- insufficient details
- lack of resources
- weather / delays
- ~~costs~~

- Construction cost inflation



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

Answer

To decrease the chances it is important to have a thorough understanding of the project and the requirements. Implementing our company's procedures, programs and policies help avoid unexpected costs. Once we have our final price, we review to make sure nothing is overlooked.

