

CPCCBC4004

IDENTIFY AND PRODUCE ESTIMATED COSTS FOR BUILDING AND CONSTRUCTION PROJECTS

WORKBOOK

Participant name	<i>Korindy-Lee Ashby</i>
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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.

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:

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

a) What is the size of the 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

d) What type of slab is required?

Concrete Slab

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

Residential

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:	Track-mounted excavator	
Timeframe:	30 days	
Operational Costs:	\$ 23,160 -	
Associated Costs:	Cost per day of use	Total
Fuel	\$ 125.00	\$ 2,750.00 (22 working days)
Operator's wage	\$ 880.00	\$ 19,360.00 (22 working days)
Maintenance	\$ 35.00	\$ 1,050 (30 days)
Hire costs	\$ 120.60	\$ 3,618.00
Transport cost	\$ 3.91	\$ 117.25
Total cost	\$ 26,895.25	

Plant for hire:	Track mounted bulldozer	
Timeframe:	30 days	
Operational Costs:	\$ 23,160 -	
Associated Costs:	Cost per day of use	Total
Fuel	\$ 125.00	\$ 2,750.00 (22 working day)
Operator's wage	\$ 880.00	\$ 19,360.00 (22 working day)
Maintenance	\$ 35.00	\$ 1,050.00 (30 days)
Hire costs	\$ 131.70	\$ 3,951.00 (30 days)
Transport cost	\$ 3.91	\$ 117.25 (30 days)
Total cost	\$ 27,228.25	

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

$$\$30,000 \div 2 \text{ m depth}$$

$$= \$15,000 \text{ - per metre of depth.}$$

b) Cost of building the masonry walls per square metre

$$49 \text{ m}^2 \text{ (} 2 \times 14 \text{ m}^2 \text{ \& } 2 \times 10.5 \text{ m}^2 \text{)}$$

$$\$3,500 \div 49 = \underline{\underline{\$71.43}} \text{ per m}^2$$

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

$$\$5,000 \div 20 \text{ m}^2 = \$250 \text{ m}^2.$$

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

$$\$2000 \div 49 \text{ m}^2 = \$40.82 \text{ per m}^2.$$

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

$$\begin{aligned} \$3,000.00 & \div 12 \text{ m}^2 \\ & = \$250 \text{ per m}^2. \end{aligned}$$

b) Cost of installing the pipes per square metre.

$$\begin{aligned} \$6,000 & \div 20\text{ m} \\ & = \$300.00 \text{ per metre.} \end{aligned}$$

c) Cost of installing sanitary ware per unit.

$$\$18,000 \div 8 = \$2,250.00$$

d) Cost of tiling per square metre.

$$\begin{aligned} & \text{Floor } 9\text{ m}^2 \\ & \text{Nails } 4.5\text{ m}^2 \\ & \hline & \text{Tiled area} = 13.5\text{ m}^2 \\ & \$1,000 \div 13.5\text{ m}^2 = \$74.07 \text{ per m}^2. \end{aligned}$$

Satisfactory
Outcome

