

CPCBC4004A

IDENTIFY AND PRODUCE ESTIMATED COSTS FOR BUILDING AND CONSTRUCTION PROJECTS

ASSESSMENT SUMMARY

The assessment activities for *CPCBC4004A Identify and produce estimated costs for building and construction projects* cover all aspects of the unit of competency required. To demonstrate competence in this unit, a participant must undertake all tasks and complete them satisfactorily and consistently. For Apprentices and Trainees, this includes employer completion of the Employer Record Book (ERB).

Participants must read all the information given before starting any assessment task. The assessment tasks are intended to be equitable, fair and flexible. 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 some questions or perform some tasks, they will be deemed 'Not Satisfactory' for the task and 'Not Yet Competent' for the unit of competency. The Trainer/Assessor is able to provide the participant with additional information on interpreting the assessment outcomes and provide guidance on the participant's options. Should a participant still be deemed 'Not Satisfactory' they will have the opportunity to undertake a supplementary assessment or appeal the result.

By signing the cover page for each assessment item, the participant acknowledges they understand the assessment instructions and requirements and consent to being assessed. The participant also verifies and assures the RTO that the work submitted is their own work.

Participant Name	Melissa Robertson
------------------	-------------------

Task	Assessment Results	
Theory Exam	☐ Satisfactory	☐ Not Yet Satisfactory
Practical Assessment	☐ Satisfactory	☐ Not Yet Satisfactory
Outcome for Unit of Competency	☐ Competent	☐ Not Yet Competent

Assessor Name	
Assessor Signature	
Unit Competence Determination Date	Click here to enter a date.

CPCCBC4004A

IDENTIFY AND PRODUCE ESTIMATED COSTS FOR BUILDING AND CONSTRUCTION PROJECTS

THEORY EXAM INSTRUCTIONS

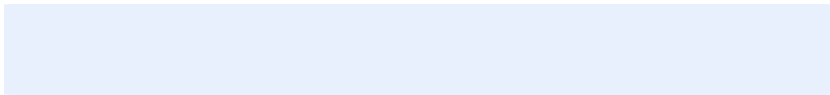
- This exam will occur under standard assessment conditions.
 - An oral examination may be allowed under certain circumstances, whereby the Participant's answers will be documented by a party other than the Participant. This must be acknowledged in writing (e.g. FT001 and Assessor Comments)
- Participants must provide enough detail in their responses to demonstrate their knowledge and skills.
- Please fill in the details below, providing your name, signature and date of assessment.
 - Your signature acknowledges that this is your own work.
- Assessors are to complete marking in pen of a different colour to the Participant.
- If a Participant initially answers a question incorrectly but modifies their response, they must follow the instructions below:
 - If a Participant changes their response in writing, they must put their initials next to the written change.
 - If a Participant changes their response verbally, this must be noted on the exam paper by the assessor.

Participant name Melissa Robertson

Participant signature 

Date [Click here to enter a date.](#)

Assessor name _____

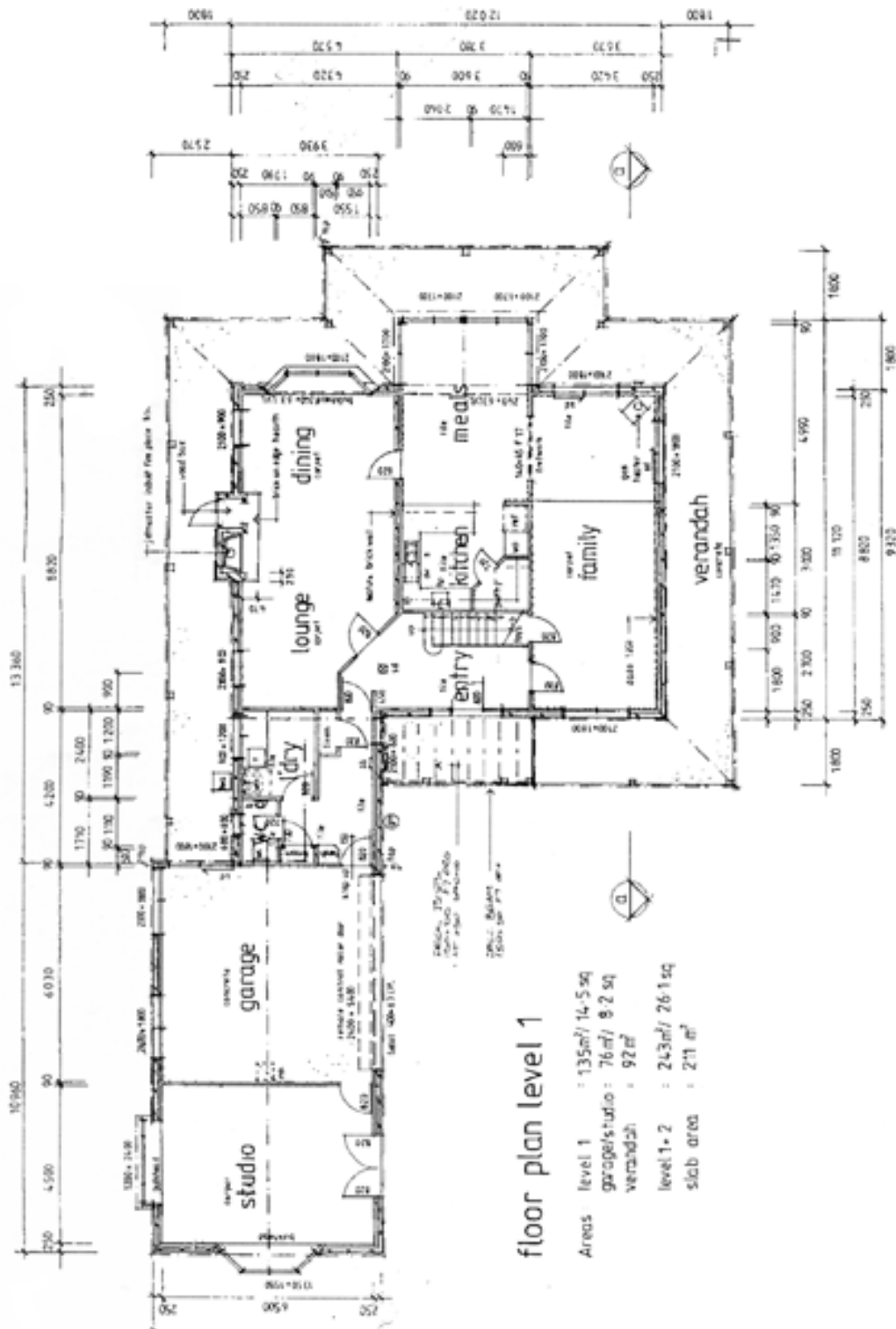
Assessor signature 

Date [Click here to enter a date.](#)

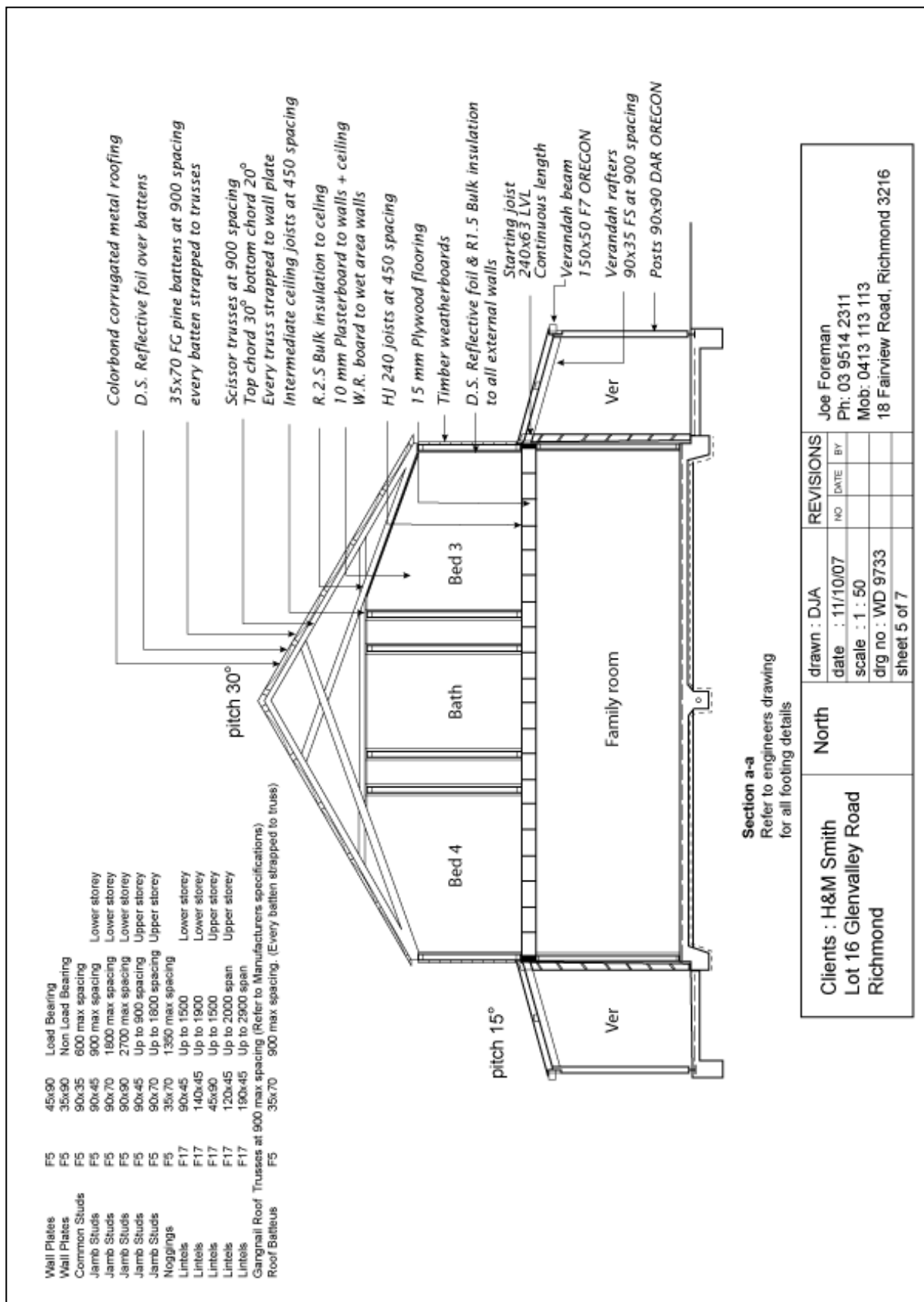
Number of questions	Number of questions answered correctly	Task outcome (Tick)	
37		Satisfactory	Not Yet Satisfactory
		☐	☐

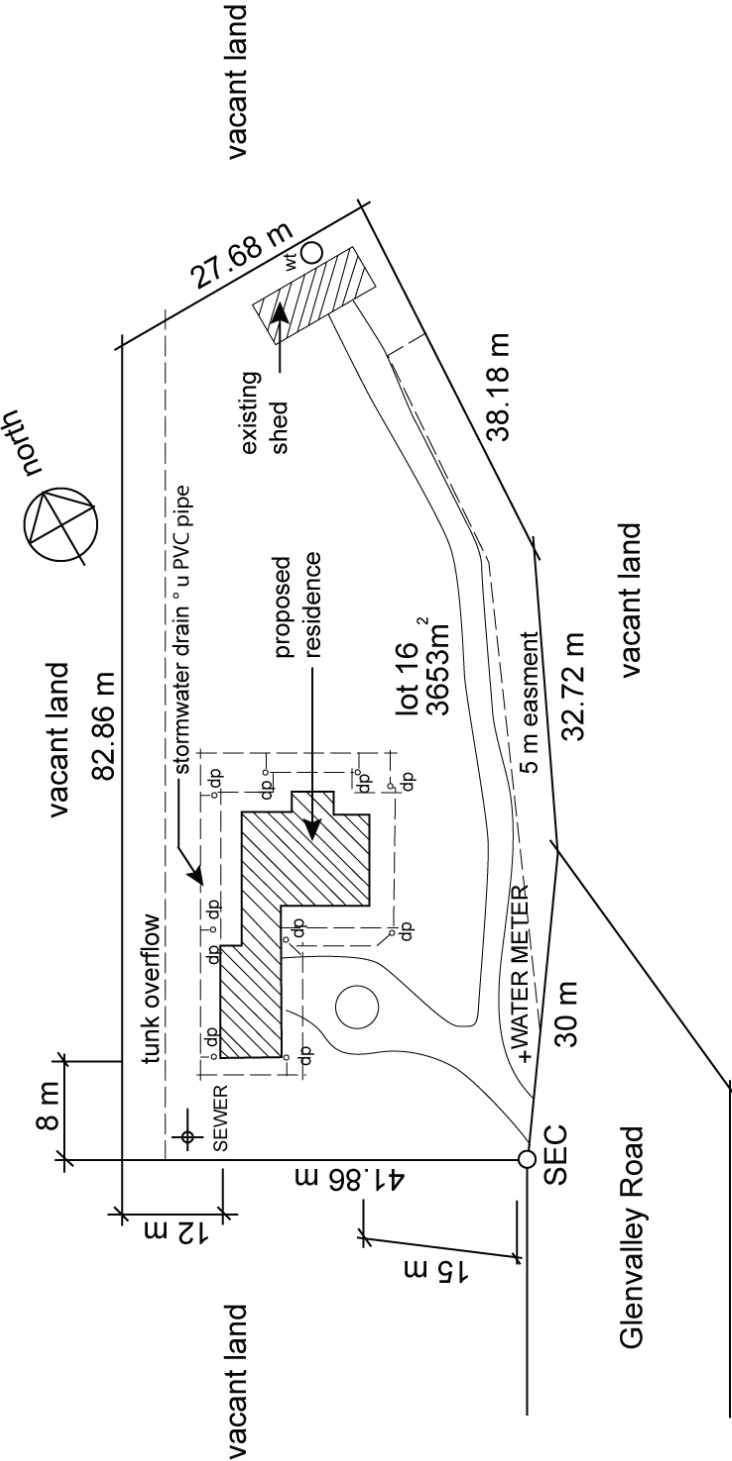
ASSESSOR COMMENTS

Refer to the plans and specifications below to respond to Q1. to Q9.



Clients : H&M Smith Lot 16 Glenvalley Road Richmond	North	drawn : DJA		REVISIONS	
		date : 11/10/07	NO	DATE	BY
		scale : 1 : 50			
		drg no : WD 9733			
		sheet 4 of 7			
		Joe Foreman Ph: 03 9514 2311 Mob: 0413 113 113 18 Fairview Road, Richmond 3216			





Site Plan 2

Clients : H&M Smith Lot 16 Glenvalley Road Richmond	North	drawn : DJA date : 11/10/07 scale : 1 : 500 drg no : WD 9733 sheet 6 of 7	REVISIONS		Joe Foreman Ph: 03 9514 2311 Mob: 0413 113 113 18 Fairview Road, Richmond 3216
			NO	DATE	BY

Q1. Match the sheet numbers and document types by writing the appropriate letter next to each number in the centre column.

Sheet Number	Answers	Document Type
1 Sheet 4	1 - A	A Floor plan
2 Sheet 5	2 - B	B Section plan
3 Sheet 6	3 - C	C Site plan

Q2. Which sheet number of Drawing WD 9733 identifies the storm water drainage for the proposed structure? Tick your response.

Choice	Possible Answers
☐	Sheet 4
☐	Sheet 5
☒	Sheet 6

Q3. Identify the Volume and Parts of the NCC that outline the requirements for stormwater drainage for Classes 1 and 10, and Classes 2 to 9.

Classes 1 and 10	Classes 2 to 9
Volume 2 Part 3.1.3.5.	Volume 1 Part F1.1

Q4. Which Australian Standard is referenced in the NCC with regards to storm water drainage?

Answer	AS/NZS 3500.3
--------	---------------

Q5. What is the area of the verandah? Tick your response.

Choice	Possible Answers
☐	76m ²
☒	92m ²
☐	135m ²
☐	211m ²
☐	243m ²

Q6. What is the pitch of the verandah roof?

Answer ☐

Q7. What size are the verandah beams?

Answer ☐

Q8. Which of the following Jamb Studs are to be used for both the upper and lower storeys? Tick all that apply.

Answer ☐

Choice	Possible Answers
☒	90x45
☒	90x70
☐	90x90

Q9. Identify three (3) subcontractors that may work on this construction project.

Answer ☐

Q10. Identify three (3) items of plant and/or equipment that may be used on this construction project.

Answer ☐

Q11. Identify the Volume and Part of the NCC that outlines the requirements for the timber weatherboards identified in Sheet 5.

Answer

Volume 2 part 3.5.4.2 Timber wall cladding

☐

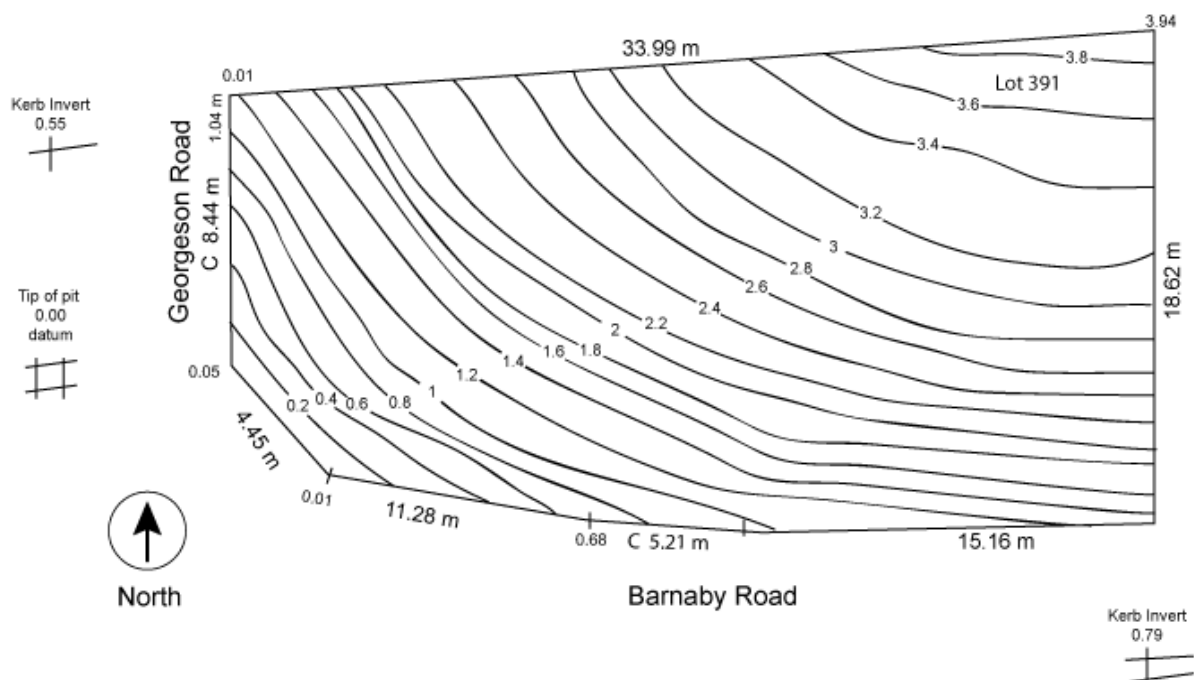
Q12. Which Australian Standard is referenced in the NCC with regards to timber structures?

Answer

AS 1684.2, AS 1684.3, AS 1684.4

☐

Refer to the contour plan below to respond to Q13. to Q15.



Q13. What is the datum reading at the tip of the pit?

Answer

0.00

☐

Q14. What is the level at the kerb invert?

Answer

0.79 & 0.55

☐

Q15. True or False (Tick your response): The lowest point on the site is found at the northernmost point.

Answer

☐	True
☒	False

☐

Q16. True or False (Tick your response): A Gantt Chart may assist with determining the numbers of on-site personnel required and the time requirements for a project.

Answer

☒	True
☐	False

☐

Q17. Identify labour that may be required for non-contract elements of a construction project.

Answer Office administration staff

☐

Q18. Explain how the following methods may be used to calculate the costs for on-site work.

Answer

Method	Explanation
Per hour	Labour rates can be calculated per hour or per day, you can break a day rate down to an hourly rate based on anticipated hours per day
Per unit	Per item such as doors or light fittings
Per metre	Materials can be per lineal meter, square meter or cubic meter. This is calculated by determining the size of the area e.g. wall sheets, flooring, concrete.

☐

Q19. Which of the following documents may you refer to when establishing material quantities for a construction project? Tick all that apply.

Answer

Choice	Possible Answers
--------	------------------

☐

☒	Plans
☒	Project contract
☒	Specifications
☐	Standard construction contracts

Q20. True or False (Tick your response): The fast way to locate suppliers, such as manufacturers and wholesalers, is to find them online.

Answer

☒	True
☐	False

☐

Q21. Explain how each of the following factors affects supplier selection.

Answer

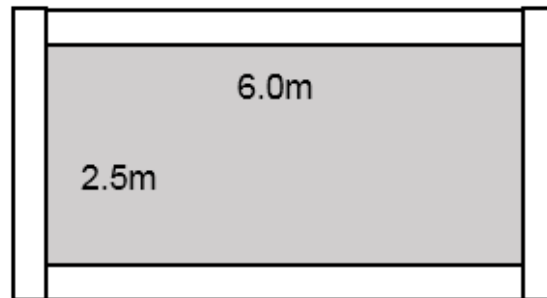
Factor	Impact
Location	Dealing with distant suppliers might mean longer delivery times and extra freight costs
Price	Affordability is a key factor, but cheap does not always equate with quality
Reliability	Suppliers should be able to deliver the right goods and on time
Stability	Look for experienced suppliers who have been in business a long time. This illustrates financial stability.

☐

Supplier groups	While using a single supplier has its advantages, it also has risks. It might be better to use a carefully selected group of suppliers as insurance against any problems occurring
-----------------	--

Read the following information to respond to Q22. to Q27.

The diagram below shows formwork that is required for a concrete slab.



The table below outlines the costs for this task.

Item	Cost
Timber	\$2.50 per metre
Concrete	\$50.00 per cubic metre (excluding GST)
Labour	\$49.50 per hour

Q22. Calculate the lineal meters of timber (150mm wide x 25mm thick) required to form up the edge of a concrete slab which is 6.0m x 2.5m x 150mm. Provide no allowance for waste. Show your answer to two decimal places.

Answer

17.10 LM

Long edges 6m each
Short edges 2.55m each

Timber to stand on edge, covers 150mm depth of slab



Q23. Use your response to Q22. to calculate how much the timber will cost. Show your workings and answer to two decimal places.

Answer

17.10 x \$2.50
\$42.75



**Q24. Calculate how many cubic metres of concrete are required.
Show your workings and answer to two decimal places.**

Answer $6 \times 2.5 = 15$
 $15 \times 0.15 = 2.25\text{m}^3$

☐

**Q25. Use your response to Q24. to calculate the cost of the required concrete.
Show your answer to two decimal places and ensure it includes GST.**

Answer $2.25 \times \$50.00 = \112.50 ex. GST
 $\$112.50 \times 1.1 = \123.75 inc. GST

☐

**Q26. Calculate how much the labour will cost if the job takes 6 ½ hours.
Show your workings and answer to two decimal places.**

Answer $6.5 \times \$49.50 = \321.75

☐

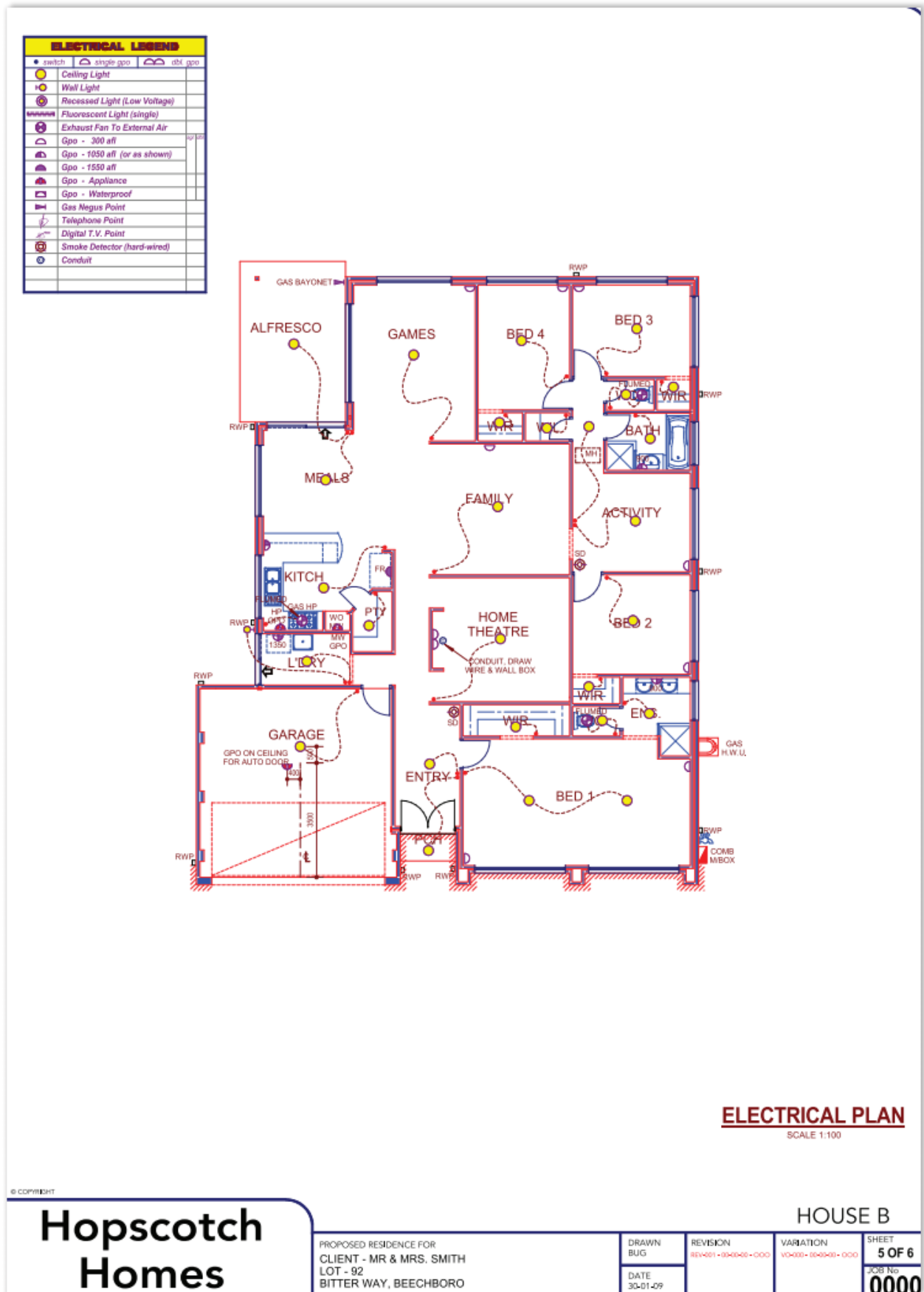
Q27. Use your responses for Q23. Q25. and Q26. to calculate how much this project will cost. Show your workings and answer to two decimal places.

Answer Timber \$42.75
 Concrete \$123.75
 Labour \$321.75

 $42.75 + 123.75 + 321.75 = \488.25

☐

Refer to the electrical plan below to respond to Q28. and Q29.



Source: https://www.dtwd.wa.gov.au/sites/default/files/teachingproducts/BC1944_CCBY.PDF

Q28. Measure the required quantities for the items listed below.

Answer

Quantity	Item
25 (ex. porch and alfresco)	Ceiling light
1	Wall light
2 (porch and alfresco)	External light
3	Exhaust fan
2	Smoke detector



Q29. The costs for each of the items are provided in the table below.

Cost	Item
\$49 each	Ceiling light
\$29 each	Exhaust fan
\$82 each	External light
\$39 each	Smoke detector
\$59 each	Wall light

Determine the total costs for each item (using the numbers from Q28.) and the total cost for all items.

Answer

Cost	Item
\$1,225.00	Ceiling light
\$59.00	Wall light
\$164.00	External light
\$58.00	Exhaust fan
\$78.00	Smoke detector
1,584.00	TOTAL



Q30. Name one (1) organisation that provides workers' compensation insurance.

Answer

WorkCover



Q31. Which of the following environmental costs should be considered when determining project costs? Tick all that apply.

Choice	Possible Answers
☒	Approvals
☒	Environmental protection
☒	Permits
☒	Waste management

Q32. List three (3) statutory costs that should be considered when determining project costs.

Answer Licences Registration of Vehicles Training
--

Q33. Which two (2) of the following methods are commonly used when determining the profit on a project? Tick all that apply.

Choice	Possible Answers
☐	Double the builder's cost
☒	Lump sum based on market conditions
☒	Percentage on builder's total cost

Q34. True or False (Tick your response): Usually a percentage is added to the estimate to cover company overheads.

Answer ☒ True	☐
☐ False	

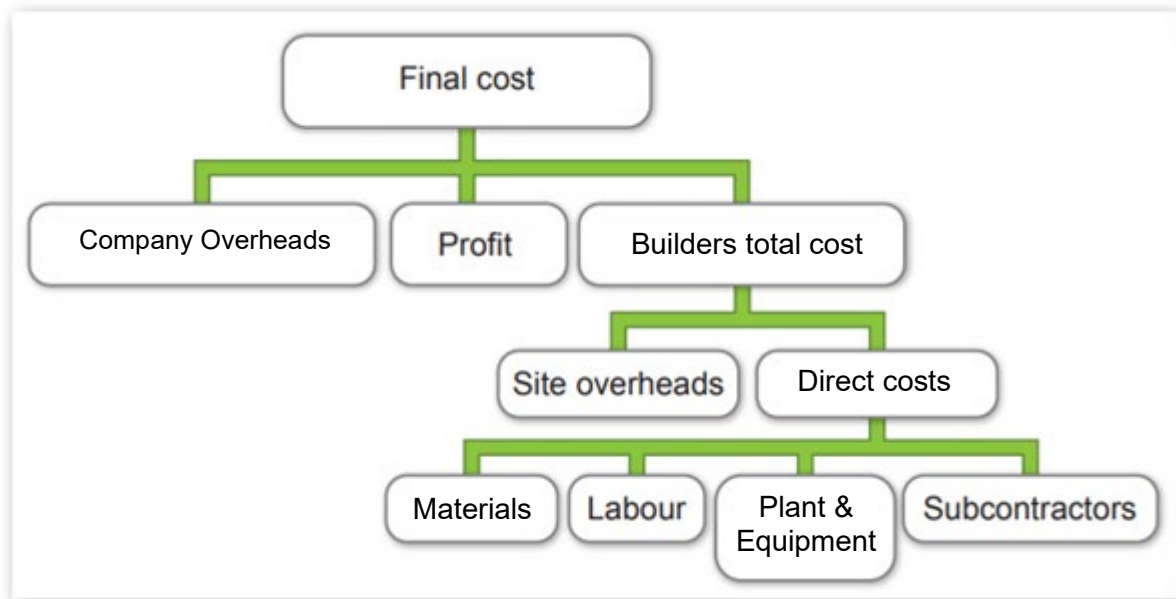
Q35. Identify one (1) example of company overheads for each of the listed categories.

Answer

Factor	Impact
Business premises	Electricity
Staff and professional fees	Wages
Transport	Company car
Finance	Bank account fees

☐

Q36. Fill in the blanks: Complete the following chart to identify what is included in the final cost for a project.



Choose from

Builder's total cost | Company overheads | Direct costs | Materials | Plant and equipment

☐

Q37. Which of the following should be included in a letter of quotation?
Tick all that apply.

Answer

Choice	Possible Answers
☒	Conditions to your price
☒	Discrepancies
☒	Final cost
☒	Invitation to proceed

☐