

CPCCBC4004A

IDENTIFY AND PRODUCE ESTIMATED COSTS FOR BUILDING AND CONSTRUCTION PROJECTS

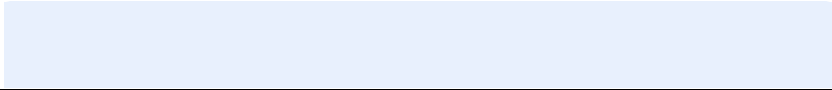
THEORY EXAM INSTRUCTIONS

- This exam will occur under standard assessment conditions.
 - An oral examination may be allowed under certain circumstances. Answers will be documented and FT003 (Oral examination declaration form) must be completed.
- 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.
- 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 Barbra McCandlish

Participant signature 

Assessor name _____

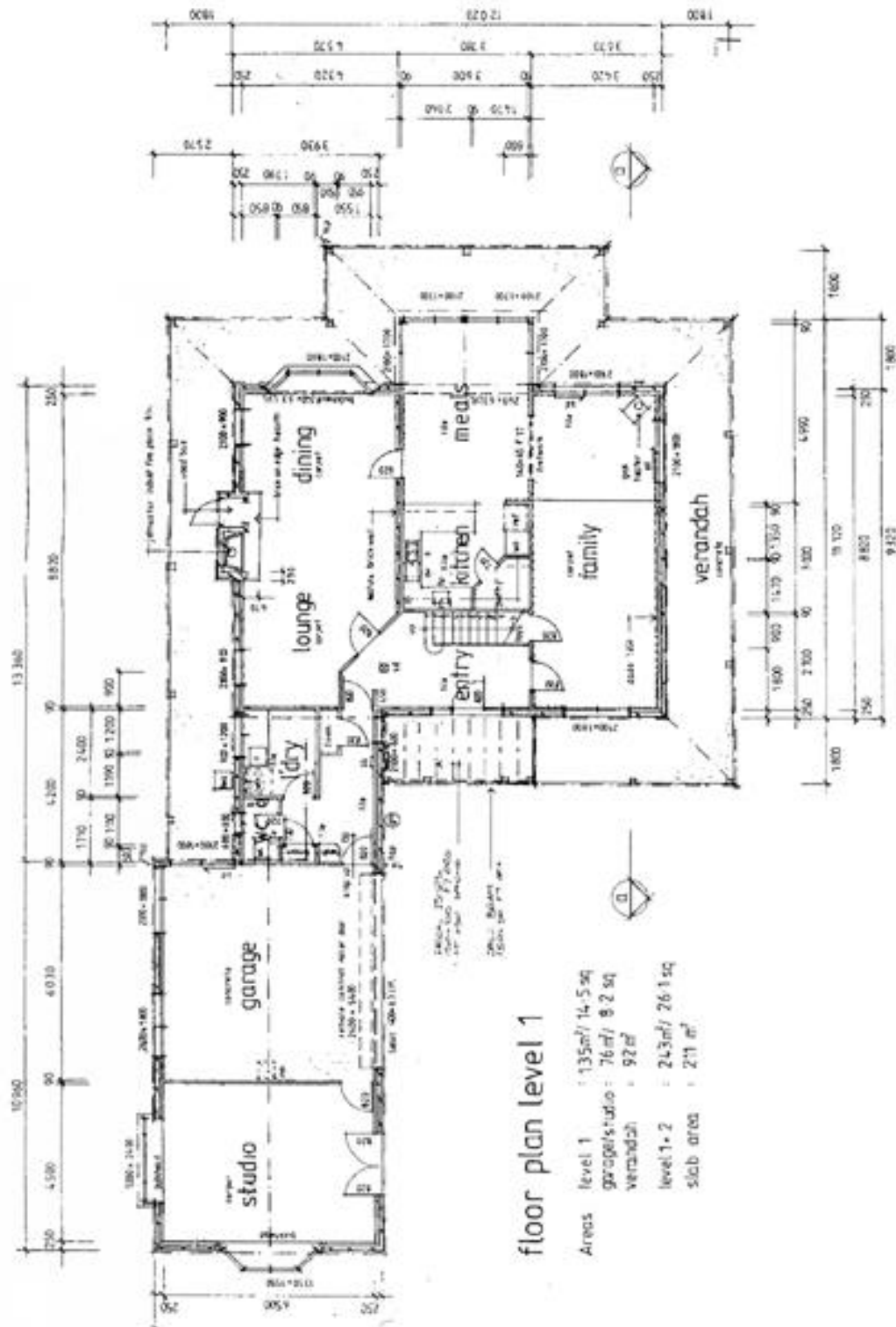
Assessor signature 

Date 30/07/2019

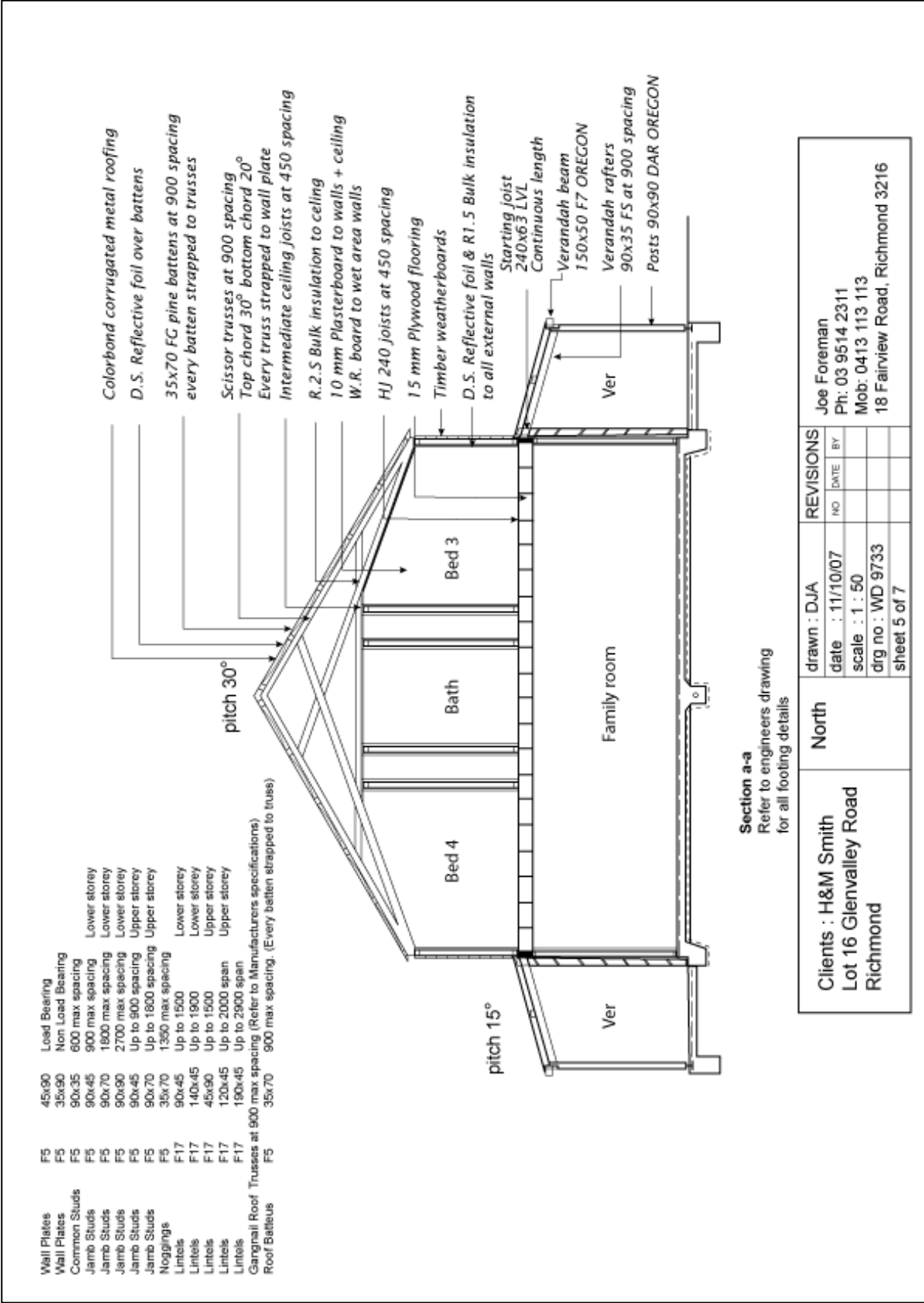
Number of questions	Number of questions answered correctly	Satisfactory?	
		Yes	No
37		☐	☐

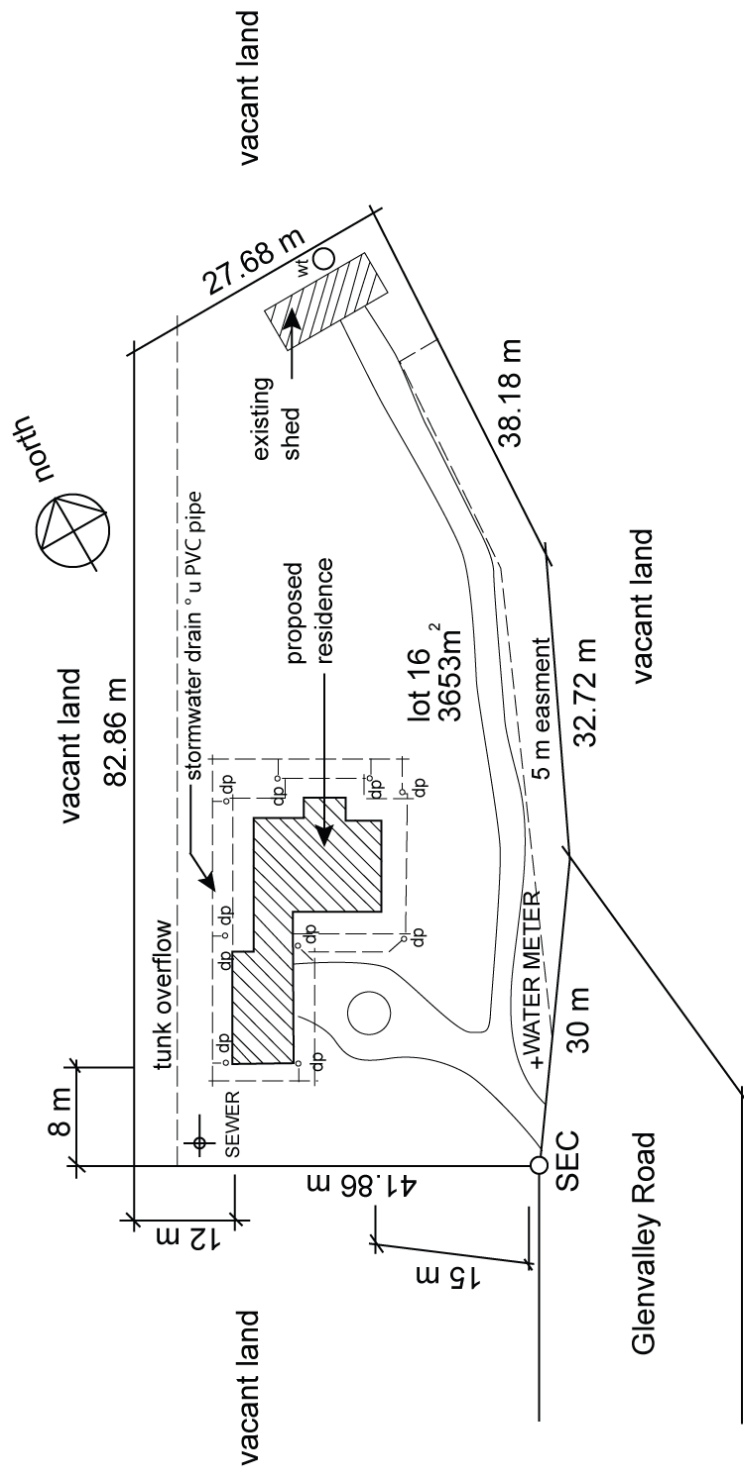
ASSESSOR COMMENTS

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.

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

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

Answer	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.

Answer	Classes 1 and 10	Classes 2 to 9	☐
	Single dwelling, Vol 2 Part 3	Units/Commercial/Industrial etc Vol 2 Part 3	

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

Answer	AS NZS3500 Part 3.1.3.5	☐
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Q5. What is the area of the verandah? Tick your response.

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

Q6. What is the pitch of the verandah roof?

Answer 30degrees

☐

Q7. What size are the verandah beams?

Answer 150x50 F7

☐

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 Plasterer, Electrician, Carpenter

☐

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

Answer Drills, Crane lift for trusses, Drop saw for timber cuts

☐

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

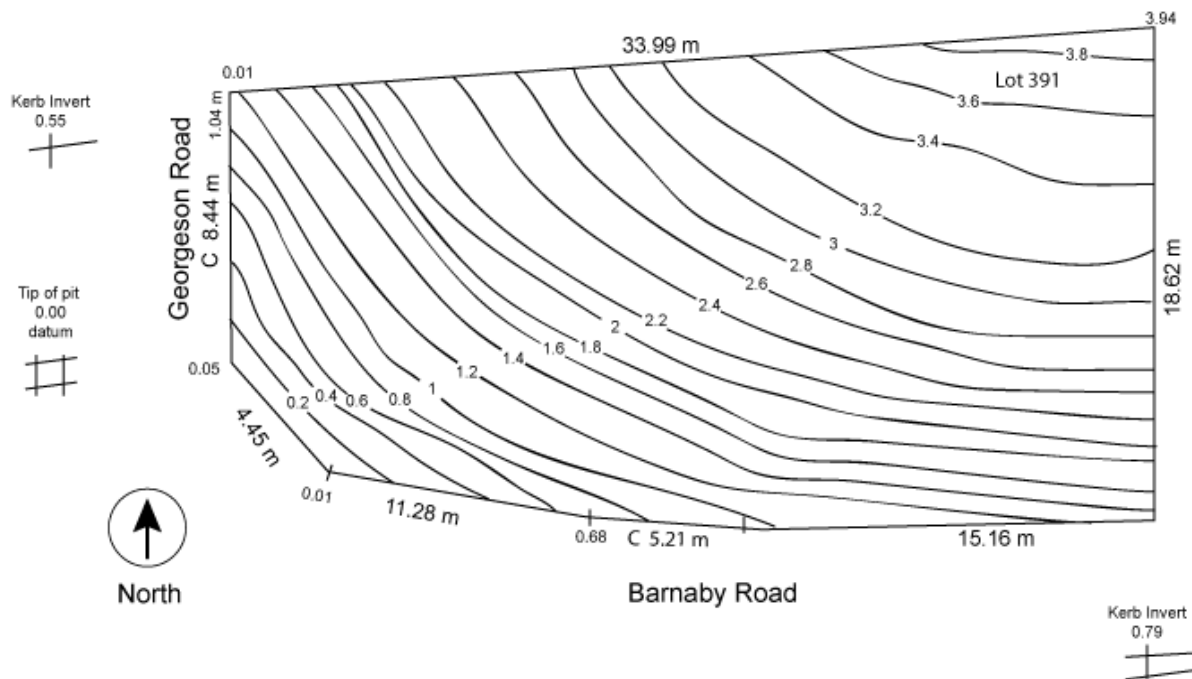
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Q12. Which Australian Standard is referenced in the NCC with regards to timber structures?

Answer AS 1720 Part 1&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 0.55 and 0.79



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 Cost of running the business, including office staff/accountants etc.

☐

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

Answer

Method	Explanation
Per hour	Multiply the hours by the time you expect the works to take = the number of hours.
Per unit	Can quote costs per item for example, windows or doors. Include the labour within each unit or separate it. Usually this is labour only, as it depends on the item chosen by client (low or high specification)
Per metre	Specify the exact dimension or type of item allowed for in the metre rate. Usually this is labour only, as it depends on the item chosen by client (low or high spec)

☐

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
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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.

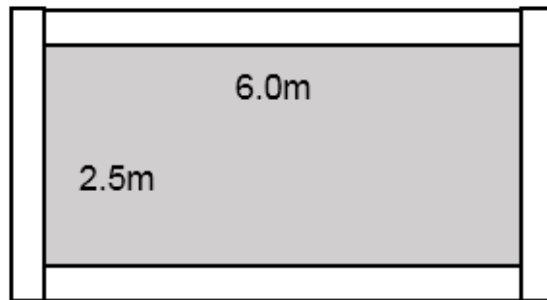
Answer

Factor	Impact
Location	Freight from the location can be expensive if too far away. Clients generally specify or prefer local manufacturer/suppliers. This can be a draw card.
Price	Need to compare apples to apples. Sometimes the price can show an error in what the supplier has allowed. Need to ensure they aren't doubling up on something you have already allowed elsewhere (ie.. plumbing trenching may be left in or out depending on who you plan to complete)
Reliability	If a supplier is unreliable it can cost in the long run, due to delays and can affect your reputation.
Stability	Supplier needs to be a stable business with good trustworthy people. You need to be sure they are well supported, by both good people and also well covered by insurance (ie. Insurance checks), to instil confidence that they can finish the job or at least be covered if something does go wrong.. check their QBCC license for any marks on their name
Supplier groups	Supplier groups could be useful if you are time poor and in need of quick supplier options. I note that fees are involved.. for example 'local buy' used by Redland City Council which the contractor pays to Council in response to being awarded works.

☐

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 17.10LM



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

Answer $17.1 \times 2.5 = \$42.75 + \text{gst}$



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

Answer 17.1 + 10% wastage = 18.9Lm x 150mm depth of concrete which is 2.82m³
(round up to 3m³)

☐

**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 3m³ x \$50 = \$150.00+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 6.5hours x \$49.50/hr = \$321.75+gst

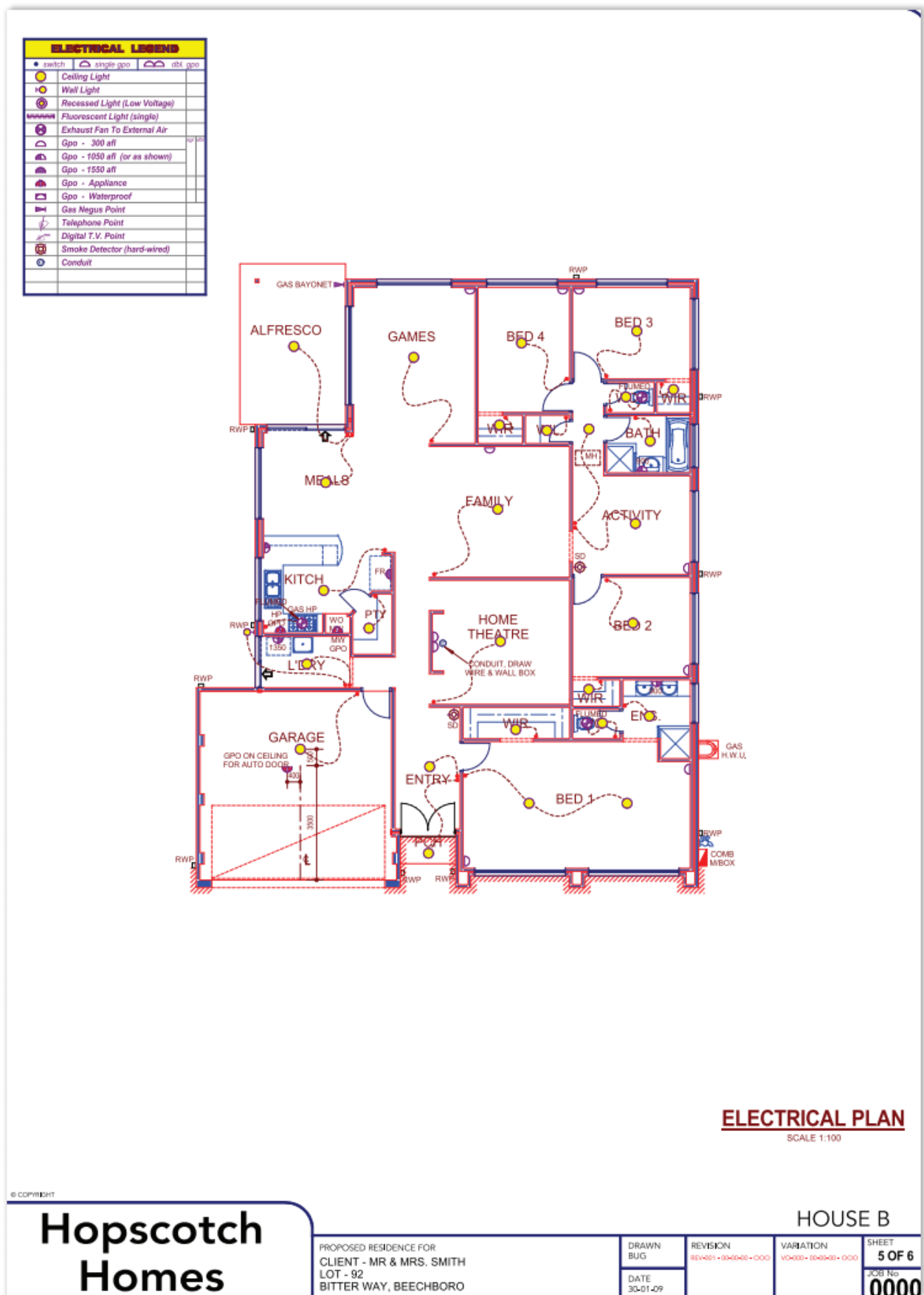
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**Q27. Use your responses for Q23. Q25. and Q26. to calculate how much this
project will cost. Show your workings and answer to two decimal places.**

Answer \$42.75+
\$150.00+
\$321.75=
\$514.50+gst

☐

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
28	Ceiling light
None found	Wall light
1	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
\$1372.00	Ceiling light
-	Wall light
\$82.00	External light
\$87.00	Exhaust fan
\$78.00	Smoke detector
\$1619.00	TOTAL



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

Answer

Workcover Qld
www.worksafe.qld.gov.au



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

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

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

Answer	Tree Protection Zones, including Wildlife zones EPA – Environmental Protection Agency Workcover fees (per year covering all employees)	☐
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Q33. Which two (2) of the following methods are commonly used when determining the profit on a project? Tick all that apply.

Answer	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	

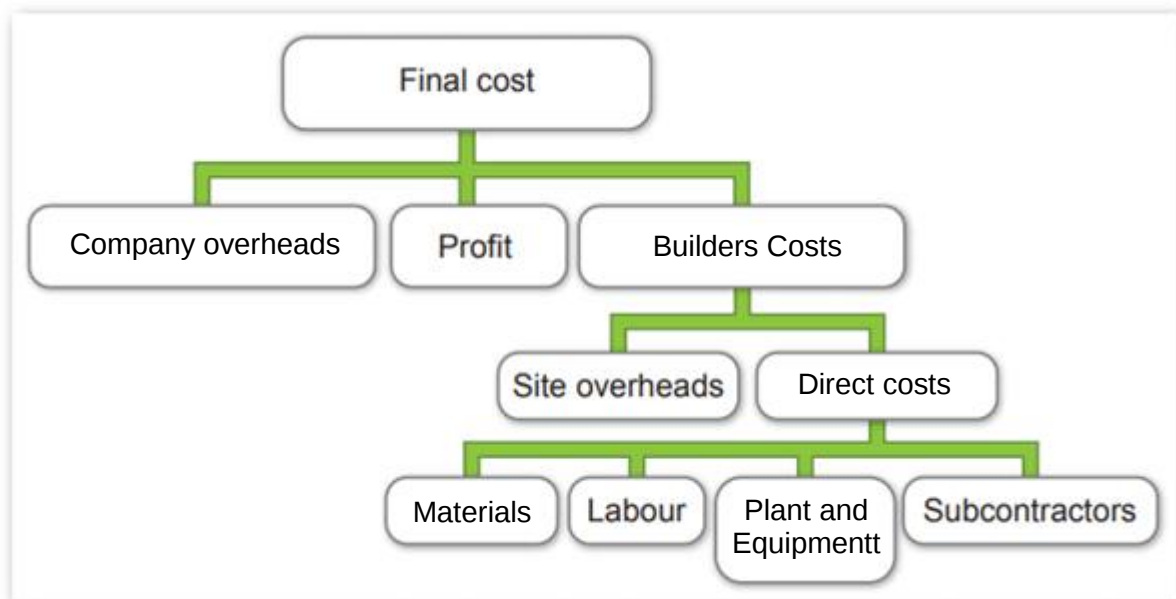
Q35. Identify one (1) example of company overheads for each of the listed categories.

Answer

Factor	Impact
Business premises	Rent or lease payments to owner (if not mortgaged)
Staff and professional fees	Accountants fees, and Administration staff wages
Transport	Fuel costs, Tolls and registration, purchase or lease of vehicles
Finance	Bank fees and charges. ie. Bank guarantee facility)



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

☐