

CPCCBC4012B

READ AND INTERPRET PLANS AND SPECIFICATIONS

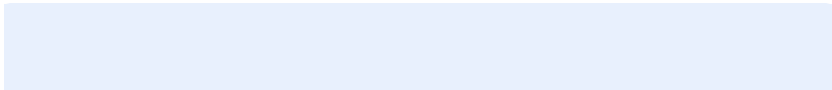
THEORY EXAM INSTRUCTIONS

- 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 Courtney Stallard

Participant signature 

Assessor name _____

Assessor signature 

Date 1/06/2019

Number of questions	Number of questions answered correctly	Satisfactory?	
		Yes	No
87		☐	☐

ASSESSOR COMMENTS

Q1. Plans and specifications are used to inform which of the following processes? Tick all that apply.

Answer	Choice	Possible Answers	☐
	☒	Building contracts	
	☒	Development applications	
	☒	Estimation	
	☒	Planning	
	☒	Supervisory tasks	
	☒	Tenders	

Q2. Which compass direction is always shown on plans and drawings?

Answer ☐

Q3. What information is provided on a location plan?

Answer ☐

Q4. What detail does a site or block plan contain?

Answer ☐

Q5. What do floor plans identify?

Answer

- Overall shape & size of building
- Internal layout & walls of rooms
- Joinery to Kitchens, Bathrooms, Robes & Linen Cupboards
- Plumbing requirements to sinks, showers, baths & toilets
- Location and size of windows and doors
- Types of floor coverings



Q6. What is a landscape plan and what information might it provide?

Answer

A landscape plan would be similar in layout to a Site Plan, but specifically show the design of the garden and outdoor living areas such as:

- Types of plants and location
- Size & shape of garden beds
- Size & layout of turfed areas
- Paths & Driveway
- Retaining Walls



Q7. What are elevation views? What do they provide to the plan reader?

Answer

Elevations are a view of the proposed structure from its sides (i.e. from north, south, east and west).

They provide the reader with a 2D visual of the front façade, along with the sides and back of house to see window and door sizes and locations, ceiling heights and finished floor levels, roof pitch, and external materials used.



Q8. What is a section?

Answer In most cases elevation and plan views cannot show sufficient information to enable a builder or tradesman to see how various structural parts are to be built or assembled. The section is a **view of the house after it has been cut vertically at some point**. Like the floor plan it shows the size and thickness of structural members and relationships between spaces



Q9. What are detailed drawings?

Answer Where a change is a change to the building project the design drawings will need to be amended to show the change made, as an up to date set of drawing is required to be lodged with any construction submission.



Q10. What are specifications?

Answer Specifications are details that support drawings and plans, providing details of the materials and techniques to be used, details of fixtures and fittings, and standards to be observed.



Q11. Explain the meaning of the abbreviations in the table below.

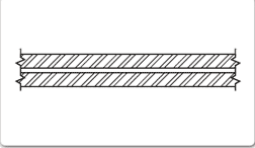
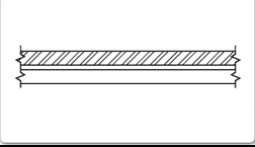
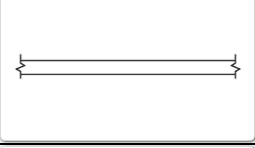
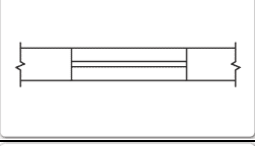
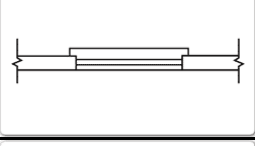
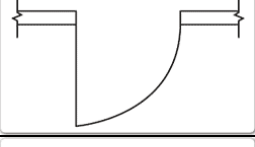
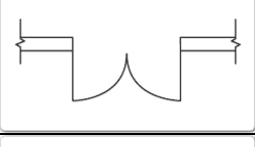
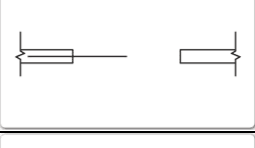
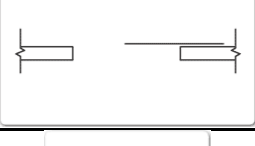
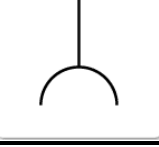
Answer

Abbreviation	Meaning
ACRYL	Acrylic
AS	Australia Standard
ASSD	Assumed Datum
B	Basin
BN	Bull Nose
BTH	Bath
BWK	Brickwork
CB	Concrete Block
CF	Concrete Floor
CG	Clear Glass
CJ	Ceiling Joise
CORR	Corrugated
CWT	Cold Water Tank
DG	Double Glazing
DH	Double Hung
DPC	Damp Proof Course
DSB	Distribution Switch Board
DW	Dishwasher
EJ	Expansion Joint
FPBD	Fibrous Plaster Board
FFL	Finished Floor Level
FHR	Fire Hose Reel
GPO	General Purpose Outlet
HBD	Hardboard
HTR	Heater
HWD	Hardwood



Q12. Name each of the drawing symbol images shown in the table below.

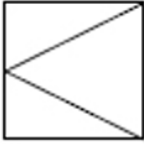
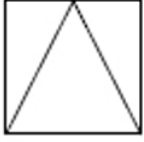
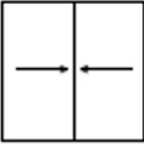
Answer

Name	Image
Double Brick wall	
Brick Veneer wall	
Internal Gyprock Stud wall	
Window	
Sill	
Single Swing Door	
Double Swing Doors	
Cavity Sliding Door	
Stacking Door	
Single Powerpoint	



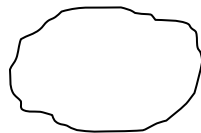
Q13. Identify what the following window symbols represent on elevations.

Answer

Item	Drawing
Casement Window	
Awning Window	
Sliding Window	
Fixed Window	

☐

Q14. What does a clouded area on a plan indicate?



Answer

On plans, revisions or amendments are represented by a clouded area

☐

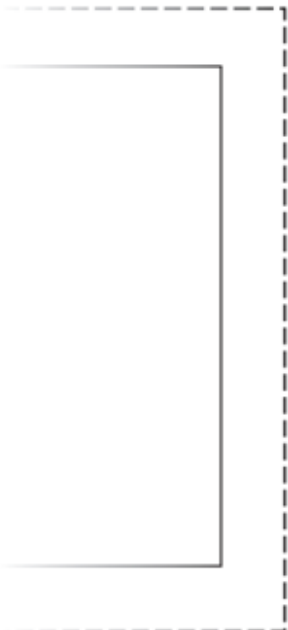
Q15. An amendment to specifications could relate to which of the following?
Tick all that apply.

Answer

Choice	Possible Answers
☐	Contact details of all construction crew members
☒	Materials or products used
☒	Methods of carrying out specified work

☐

Refer to the title block below to respond to Q16. to Q18.

	Site address: LOT 437, SOUTH ST, MARYVILLE WA	
	Client: JM & KL JOHNSON	
	Project # 2012/15	Project name: JOHNSON RESIDENCE
	Builder: HOTSHOT HOMES	
	Drawn by: MW	Date: July 2011
	AMENDMENTS: 5/10/2011 Window added to study 8/11/2011 Bed 3 robe deleted	
Title: FLOOR PLAN	Scale: 1:100	
Drawing # 3 OF 7		

Source: http://www.dtwd.wa.gov.au/sites/default/files/teachingproducts/BC1934_CCBY.PDF

Q16. On what date was an amendment made to the window details?

Answer ☐

Q17. True or False (Tick your response): Details of the window in Q16. should also be reflected in the specifications and confirmed with the client.

Answer

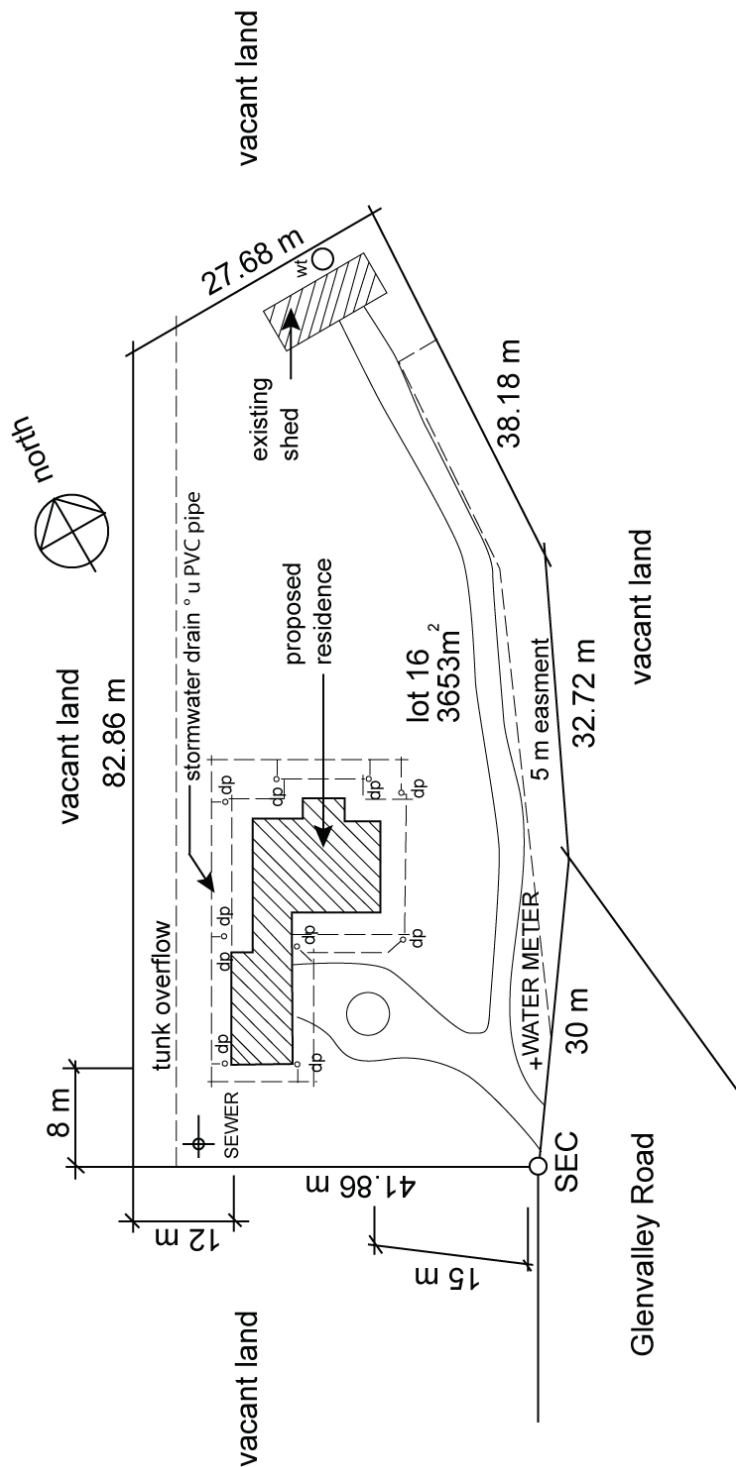
☒	True
☐	False

☐

Q18. What amendment occurred on 08/11/2011?

Answer ☐

Refer to the site plan below to respond to Q19. to Q26.



Site Plan 2

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

Q19. What structure is being built on this site? Tick your response.

Choice	Possible Answers
☒	Residence
☐	Road
☐	Shed
☐	Water meter

Q20. What is the Lot number of this site?

Answer	16
--------	----

Q21. What is the size of this lot?

Answer	3653 Sq/m
--------	-----------

Q22. Is the shed at the north-east of the proposed structure to be removed or retained? Tick your response.

Choice	Possible Answers
☐	Removed
☒	Retained

Q23. True or False (Tick your response): The sewer is at the eastern boundary of the property.

Answer	☐ True
	☒ False

Q24. True or False (Tick your response): The driveway is located to the south of the proposed property.

Answer	☒ True
	☐ False

Q25. What size is the easement on the eastern boundary of the site?

Answer 5m

☐

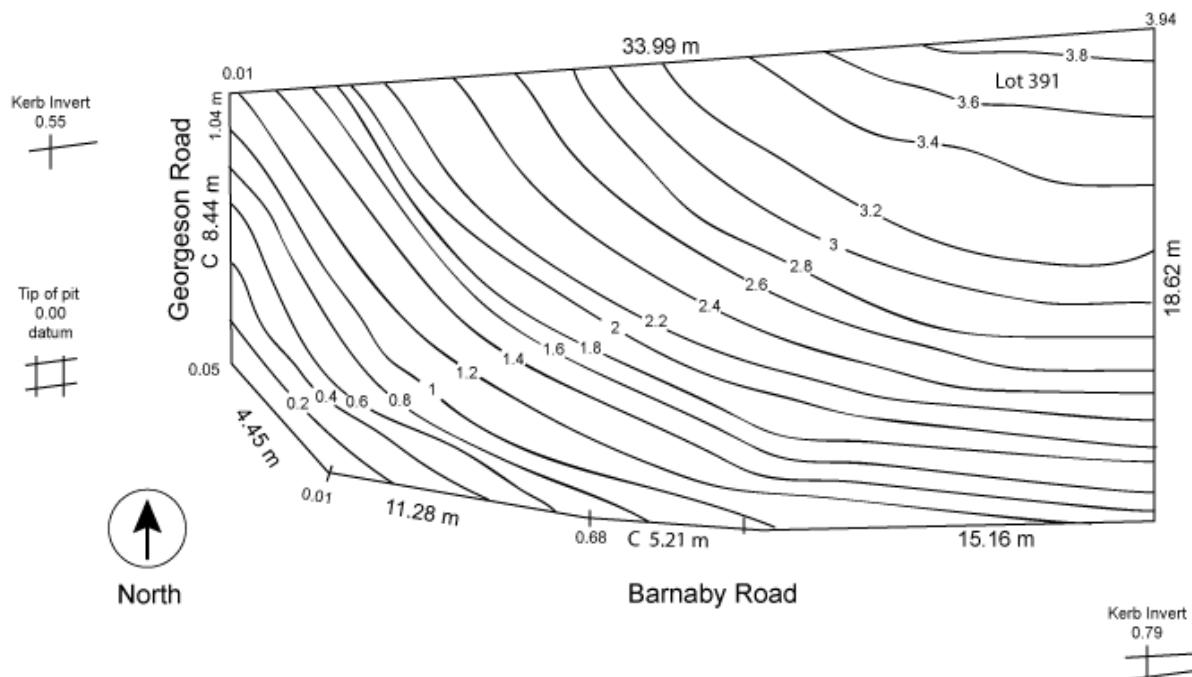
Q26. True or False (Tick your response): The stormwater drain is constructed from PVC pipe.

Answer

☒	True
☐	False

☐

Refer to the contour plan below to respond to Q27. to Q28.



Q27. What is the level at the northernmost point of the site?

Answer 3.94

☐

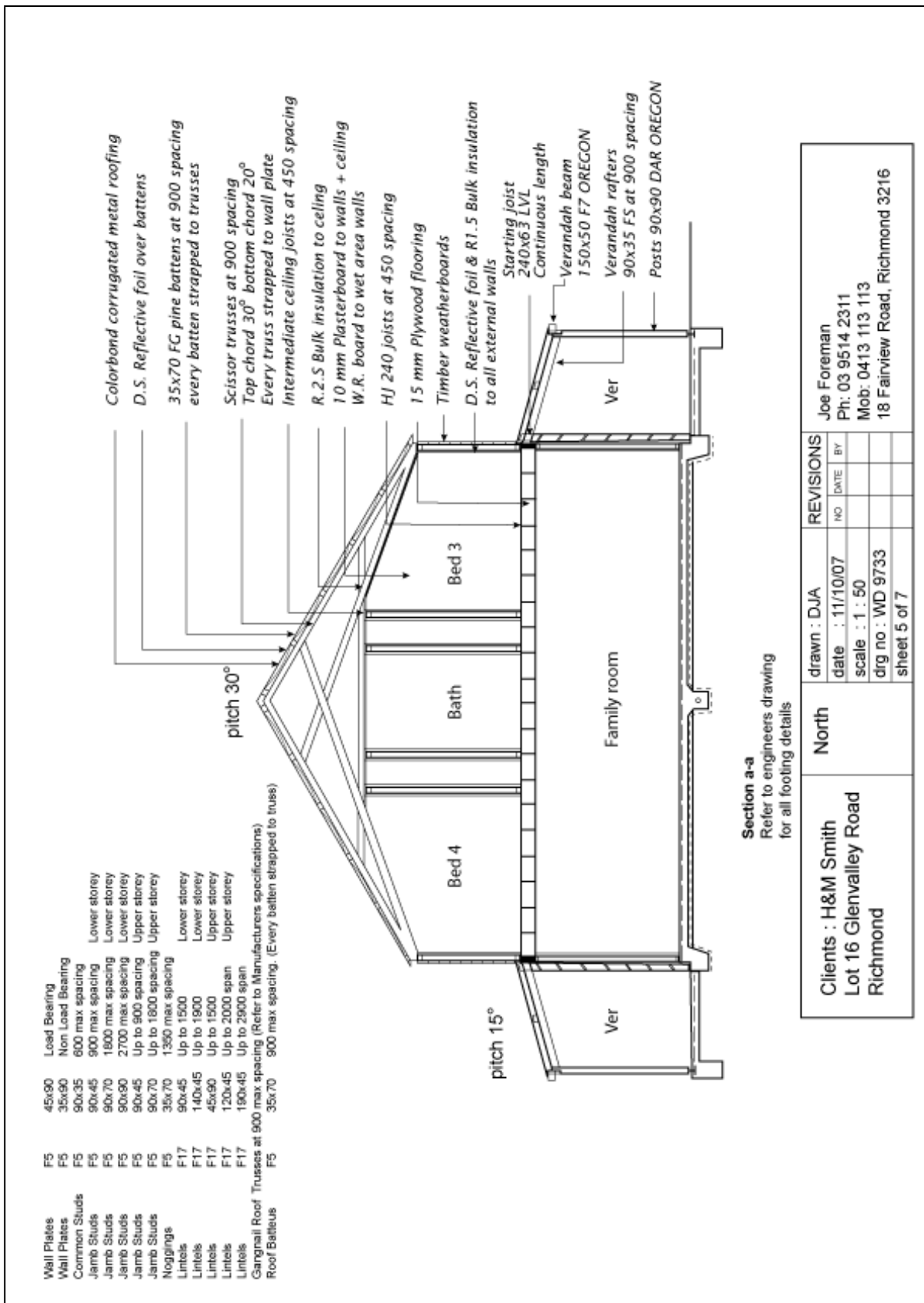
Q28. Which end of the site has the lowest level? Tick your response.

Answer

Choice	Possible Answers
☐	East
☒	West

☐

Refer to the sectional drawing below to respond to Q29. to Q49.



Q29. Give a brief description about the building from the detail available in the sectional drawing. Is it the same structure proposed in Q19. to Q26. ?

Answer
☐

Q30. Who is the client?

Answer
☐

Q31. Where is this project to be built?

Answer
☐

Q32. What are the contact details for the draftsman?

Answer
☐

Q33. What sheet number is this drawing?

Answer
☐

Q34. What timber is required for loading and non-load bearing walls?

Answer
☐

Q35. What spacing is recommended for common studs?

Answer ☐

Q36. What type of roof truss is to be installed?

Answer ☐

Q37. What centres are the trusses positioned at?

Answer ☐

Q38. What size are the veranda posts?

Answer ☐

Q39. What timber species are the veranda posts to come from?

Answer ☐

Q40. What pitch is the roof?

Answer ☐

Q41. What size are the noggings and at what spacing?

Answer ☐

Q42. What size are the ceiling joists?

Answer ☐

Q43. What timber is used for roof battens and what spacing?

Answer F5 35x70mm at 900mm spacing

☐

Q44. What thickness is the plasterboard sheeting?

Answer 10mm

☐

Q45. What type of flooring is to be installed?

Answer 15mm Plywood

☐

Q46. What is the roof cladding material?

Answer Colorbond Corrugated Metal Roofing

☐

Q47. Where will you find information about the footings?

Answer Engineers Drawings

☐

Q48. What do the letters 'DAR' refer when timber ordering?

Answer **DAR** indicates that the **timber** is dressed all round, which means simply that it has been planed smooth on all surfaces. ... This is a machined finish with a finely bevelled appearance on the surface of the **timber**.

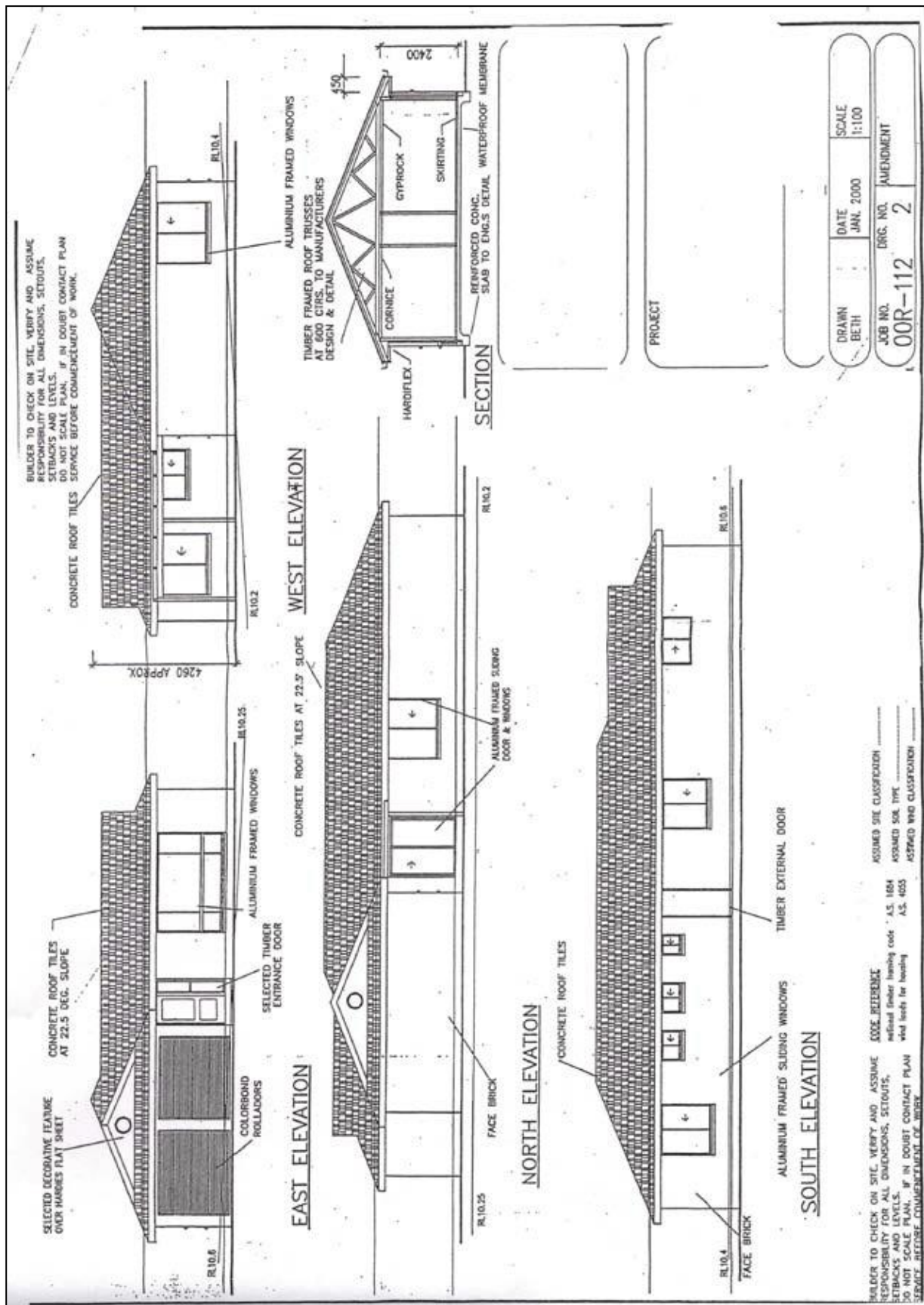
☐

Q49. Explain what '240 x 63 LVL' refers to on the sectional drawing. What do the letters 'LVL' refer to?

Answer Laminated veneer **lumber** (**LVL**) is an engineered wood product that uses multiple layers of thin wood assembled with adhesives. It is typically used for headers, **beams**, rimboard, and edge-forming material.

☐

Refer to the drawing below to respond to Q50. to Q65.



Q50. What is the number of the drawing?

Answer ☐

Q51. What is the Job Number?

Answer ☐

Q52. What is the scale of the drawing?

Answer ☐

Q53. What does the drawing show?

Answer ☐

Q54. Which view shows the front of the house?

Answer ☐

Q55. How many motor vehicles can be parked in the garage?

Answer ☐

Q56. What are the window and doors made from?

Answer ☐

Q57. What is the size of the eaves?

Answer ☐

Q58. What are the eaves lined with?

Answer Hardiflex

☐

Q59. What type of roof structure is the roof built from?

Answer Timber Framed Roof Trusses at 600mm spacing

☐

Q60. Which Part of the NCC should be read for more detail about the requirements for the roof structure in Q59. ?

Answer 3.4.3.0 Timber Framing

☐

Q61. Which Australian Standard should be read for more detail about the roof structure in Q59. ?

Answer AS 4440-2004 Installation of nailplated timber roof trusses

☐

Q62. What is the roof cladding materials made from?

Answer Concrete Roof Tiles

☐

Q63. Which Part of the NCC should be read for more detail about the roof cladding materials in Q62. ?

Answer 3.5.1.2 Roof tiling

☐

Q64. Which Australian Standard should be read for more detail about the roof cladding materials in Q62. ?

Answer AS 1757-1989 Concrete roofing tiles

☐

Q65. What is the roof pitch?

Answer 22.5 degrees

☐

Q66. Identify one (1) regulatory body you may need to submit plans to for approval?

Answer Local Council or Private Certifier



Q67. Briefly describe the approval process and timeframes for an approval through the regulatory body in Q66.

Answer We submit the following documents to our Private Certifiers and receive Full Building Approval within 1 week.

- 1- Foundation/Bracing Engineering
- 2- DA Form
- 3- Energy Efficiency Report
- 4- Plumbing Approval
- 5- Soil Report
- 6- Working Drawings
- 7- QBCC & QLeave Receipts



Q68. What is a prime cost (PC) item? Give an example.

Answer A PC item is:

- An amount of money included in a contract sum to purchase a specified item such as tiles, taps, doors or bathroom fittings
- An agreed estimated amount is included at contract signing but the specific products are not selected until a later stage
- A builder must estimate the cost of such items at or above the lowest amount these items could reasonably cost

For example if a client selects a more expensive door than allowed by the PC item, say a \$500 door compared with a \$440 PC amount, a variation will be required to cover the additional \$60. If the PC item varies, so will the final contract sum.



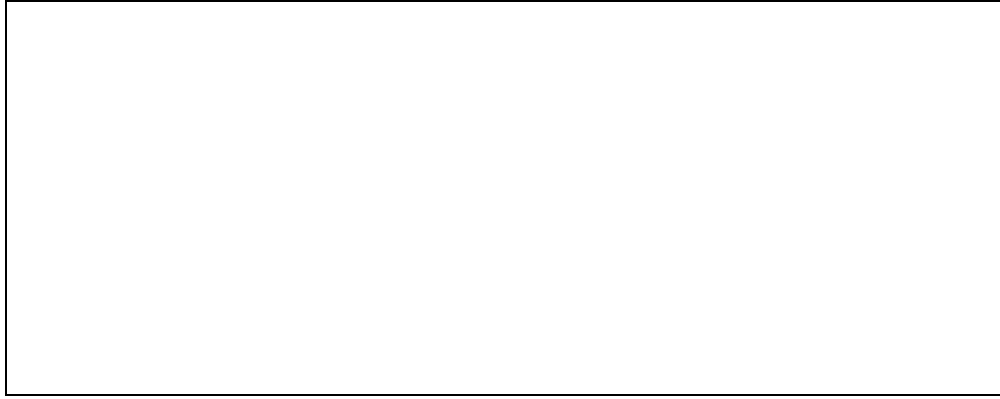
Q69. What is a provisional sum (PS) item? Give an example.

Answer A provisional sum is:

- An amount of money included in contract sum to cover work and/or materials, not detailed when entering the contract
- Typically builders will include a PS for site work costs
- The builder is legally required to take reasonable steps to ensure an accurate site works cost estimate but unforeseen events mean that the provisional sum is exceeded which is added to the contract sum

For example a building site may seem sandy and clean with minimal siteworks required, however, there may be large limestone rocks/tree trunks concealed below the surface which only emerge once siteworks commence, causing cost overrun.





Refer to the Bill of Quantities below to respond to Q70. to Q76.



Organized Builders Estimating Solutions

Bill Summary

7 October 2011

Web2Stem Website Template 2 storey
Organized Builders
P.O. Box 5280 Frankston South 3199
0413 770 956

<u>Cost Centre</u>		<u>Amount</u>	
01	PRELIMINARIES	\$21,239.00	5.9%
01A	Preliminary Stage	\$0.00	.0%
02	SITE PREP & DEMOLITION	\$6,010.00	1.7%
03	HIRE ITEMS	\$8,909.70	2.5%
04	SET OUT	\$1,350.00	.4%
05	POWER PROVISION	\$2,670.00	.7%
06	WATER CONNECTION	\$1,550.00	.4%
07	SEWERAGE & STORMWATER	\$9,400.00	2.6%
	01 - Prelims	\$51,128.70	14%
08A	Base Stage	\$0.00	.0%
08	PUMP & CRANE HIRE	\$2,070.00	.6%
09	TERMITE CONTROL	\$700.00	.2%
13	FOUNDATION PACKAGE	\$19,079.00	5.3%
17	STRUCTURAL STEEL	\$12,000.00	3.3%
	02 - Base	\$33,849.00	9%
20A	Frame Stage	\$0.00	.0%
20	FRAME TIMBER	\$5,127.16	1.4%
22	FLOOR TRUSSES	\$2,249.60	.6%
23	ROOF TRUSSES	\$3,360.00	.9%
24	WINDOWS ALUMINIUM	\$25,541.00	7.1%
29	FRAME CARPENTER	\$7,336.00	2.0%
	03 - Frame	\$43,613.76	12%
30A	Lockup Stage	\$0.00	.0%
31	METAL ROOF	\$16,538.90	4.6%
32	RENDERING	\$9,096.00	2.5%
34	BRICK SUPPLY	\$3,276.00	.9%
35	BRICK SAND	\$600.00	.2%
36	STEEL LINTELS	\$828.52	.2%
38	BRICKLAYER	\$8,460.00	2.4%
39	ELECTRICIAN	\$152.01	.0%
40	INTERCOM & SECURITY	\$1,200.00	.3%
41	PLUMBER	\$6,775.00	1.9%
42	DUCTED HEATING & COOLING	\$18,900.00	5.3%
43	INTERNAL LOCKUP MATERIALS	\$921.85	.3%
45	INTERNAL LOCKUP CARPENTER	\$2,400.00	.7%
46	WALL INSUALTION	\$3,285.50	.9%
47	EXTERNAL LOCKUP MATERIALS	\$1,938.70	.5%
48	EXTERNAL LOCKUP CARPENTER	\$11,770.00	3.3%
	04 - Lockup	\$86,142.48	24%
50A	Fixing Stage	\$0.00	.0%

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Organized Builders Estimating Solutions
Bill Summary

7 October 2011

Web2Stem Website Template 2 storey
 Organized Builders
 P.O. Box 5280 Frankston South 3199
 0413 770 956

<u>Cost Centre</u>	<u>Amount</u>	
50 PLASTERER	\$12,900.00	3.6%
51 STAIRCASE & BALUSTRADE	\$7,000.00	1.9%
52 CABINET MAKER	\$22,000.00	6.1%
53 SINKS & BASINS	\$2,086.03	.6%
54 FIX MATERIALS	\$2,010.69	.6%
55 FIX CARPENTER	\$3,631.60	1.0%
56 INTERNAL TILE SUPPLY	\$6,100.00	1.7%
57 INTERNAL TILER	\$7,398.80	2.1%
58 PAINTER	\$16,075.90	4.5%
59 SHOWER SCREENS & MIRRORS	\$1,448.00	.4%
61 TOILET SUITES	\$1,500.00	.4%
05 - Fixing	\$82,151.02	23%
61A Completion Stage	\$0.00	.0%
62 KITCHEN APPLIANCES	\$2,700.00	.8%
63 HOT WATER SUPPLY	\$2,408.80	.7%
64 TAPWARE SUPPLY	\$2,745.00	.8%
67 GARAGE DOOR SUPPLY	\$1,437.84	.4%
68 HOUSE CLEANER	\$1,088.00	.3%
71 CARPET, VYNIL & FLOATING FLOORS	\$3,350.00	.9%
72 CLOTHES LINE & MAILBOX	\$700.00	.2%
73 WINDOW FURNISHINGS	\$5,000.00	1.4%
74 FENCING	\$4,665.50	1.3%
76 LANDSCAPING	\$12,000.00	3.3%
78 OFFICE FEES & COSTS	\$26,000.00	7.2%
06 - Completion	\$62,095.14	17%
Total	\$358,980.10	
Contingency Sum 1.0%	\$3,589.80	
Profit & Overheads 18.0%	\$65,262.58	
GST 10.0%	\$42,783.25	
Total	\$470,615.73	
Prices do NOT include GST		

Q70. True or False (Tick your response): This Bill of Quantities represents a job for a two-storey house.

Answer

☒	True
☐	False

☐

Q71. Identify two (2) materials being used for the floors?

Answer

☐

Q72. True or False (Tick your response): A landscaper has been contracted for this job.

Answer

☒	True
☐	False

☐

Q73. How much does the contracted plasterer cost?

Answer

☐

Q74. How much do the kitchen appliances cost?

Answer

☐

Q75. What percentage of the total cost does the fixing stage represent of the building contract?

Answer

☐

Q76. What percentage of the total cost does the completion stage represent of the building contract?

Answer

☐

Refer to the Purchase Order below to respond to Q77. to Q82.

	Organized Builders Estimating Solutions	Page 1 of 2
	A.B.N. 36089592003	
	info@organizedbuilders.com.au	
	P.O. Box 5280 Frankston South 3199 0413 770 956	7 October 2011

Purchase Order No Web2Stem/20

Delivery Date

Order Date 7/10/2011:

TO TO BE ALLOCATED TO	JOB Organized Builders P.O. Box 5280 Frankston South 3199 0413 770 956 Supervisor Builder Job Type Two Storey
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Please Supply: FRAME TIMBER

Reference	Description	Quantity	Units	@	Amount
	Frame timber	1		\$0.00 *	\$0.00
	Ground floor walls and beams to ceiling / floor				
	Pine 90 x 35 mpp10 (long lengths)	130	m	\$1.00 *	\$130.00
	Pine 90 x 45 mpp10 (Long Lengths)	120	m	\$1.00 *	\$120.00
	Pine F5 90 x 45 studs 2.4 m long	100	each	\$1.00 *	\$100.00
	Studs Cut to mm				
	Pine F5 90 x 45 studs 2.7 m long	45	each	\$1.00 *	\$45.00
	Studs Cut to mm				
	Pine 90 x 45 mpp10 (Long Lengths)	322.5	m	\$1.00 *	\$322.50
	studs over 2.7				
	80/3.0 25/3.3				
	90 x 45 KDHW F17	189.3	m	\$1.00 *	\$189.30
	15/5.4 1/2.7 2/1.9 9/3.0 22/2.4 8/3.0				
	140 X 45 KDHW F17	70.8	m	\$1.00 *	\$70.80
	13/3.6 7/2.4 4/1.8				
	240 X 45 KDHW F17	40.5	m	\$1.00 *	\$40.50
	alternate option / better to use E14 beams in lieu of F17				
	7/3.6 2/3.3 1/2.1 1/1.5 1/1.2 1/3.9				
	240 X 45 KDHW F17	22.8	m	\$1.00 *	\$22.80
	Must be H2 treated				
	2/3.6 4/3.9				
	290 x 45 F17 KDHW	71.4	m	\$1.00 *	\$71.40
	6/3.9 2/3.3 4/4.2 6/3.6 1/1.2 1/1.8				
	Sheet brace 2400 x 1200 4mm Ply	3	sheet	\$1.00 *	\$3.00
	Sheet brace 2700 x 1200 4mm Ply	6	sheet	\$1.00 *	\$6.00
	Sheet brace 3000 x 1200 4mm Ply	4	sheet	\$1.00 *	\$4.00

This Order is subject to our Standard Notes and Conditions. Authorised by:

Organized Builders

c2011 Databuild www.databuild.com.au 2 - 35 C:\Program Files (x86)\Databuild\reports\CI00rda4.rpt Scott May 09:13

Source: <http://organizedbuilders.com.au/sites/default/files/Databuild-Bill-of-Quantities.pdf>

Q77. How many Pine F5 90 x 45 studs (2.4m long) are required?

Answer 100

☐

Q78. If the material in Q77. increased in cost to \$2.75 each, what would be the total cost for this material?

Answer \$275.00

☐

Q79. How many sheet of ply are required in total (i.e. all sizes)?

Answer 13

☐

Q80. What material has the highest total cost?

Answer Pine 90 x 45 mgp10 (Long Lengths)

☐

Q81. How many metres are required of the material in Q80. ?

Answer 322.5

☐

Q82. What beam is identified as being a better option than F17?

Answer E14 Beams

☐

Refer to the labour chart below to respond to Q83. to Q86.

LABOUR		Registered (for des trac
BUILDING WORKS		Skilled Worker
Per hour		A \$
17001	Asphalter (Road Construction).....	107.40
17002	Bamboo Scaffolder.....	187.20
17003	Bar Bender and Fixer.....	214.30
17004	Bricklayer.....	136.70
17005	Builder's Lift Operator.....	-
17006	Carpenter (Formwork - Building Construction).....	201.10
17007	Concrete Repairer (Spalling Concrete).....	185.60
17008	Concretor.....	194.50
17009	Construction Plant Mechanic.....	150.60
17010	Demolition Worker.....	165.60
17011	Drainlayer.....	166.00
17012	Floor Layer.....	139.20
17013	General Welder.....	152.00
17014	Glazier.....	154.80
17015	Joiner.....	139.20
17016	Leveller.....	150.20
17017	Marble Worker.....	179.80
17018	Mason.....	146.10
17019	Metal Scaffolder.....	131.00
17020	Metal Worker.....	154.70
17021	Painter and Decorator.....	127.40
17022	Painter (Texture-Spray).....	-
17023	Pipelayer.....	166.00
17024	Plant and Equipment Operator (other than cranes)	129.60
17025	Plant and Equipment Operator (cranes generally).....	168.50
17026	Plasterer.....	154.70
17027	Plumber.....	140.20

Source: https://www.archsd.gov.hk/media/89170/sor2013_vol1_builders_works_2013_11_04.pdf

Q83. Based on the hourly rates given, which is the least expensive trade to contract?

Answer ☐

Q84. If the trade in Q83. were to be contracted for two (2) hours' work, how much would this cost?

Answer ☐

Q85. Based on the hourly rates given, which is the most expensive trade to contract?

Answer ☐

Q86. If the trade in Q85. were to be contracted for six (6) hours' work, how much would this cost?

Answer ☐

Q87. Name the building legislation (Act and Regulations) that apply within your jurisdiction and should be referenced when reading plans and building contracts.

Answer ☐