

Bill of Quantity - Transitional Mudbrick Shelter (3.3x6.5m, 2.3m height), all inclusive

407.68

No.	Description	Unit	Quantity for one shelter	Tot qty for 272 shelters	Estimated Cost (NGN)		Estimated Cost (USD)		Remarks
					Unit Cost (NGN)	Total Cost (NGN)	Unit Cost (USD)	Total Cost (USD)	
Perimeter blockwork									
1	Sandcrete hollow blocks: 6"x 18"x 9" (150x450x230mm) -- for perimeter blockwork (floor plinth), one course below and one course above NGL, to be filled with mud, and for front doorsteps	pcs	110.00	29,920		0.00	0.00	0.00	
2	Cement in 50Kg bags -- for blockwork and blinding. Two bags for the mortar and three bags for the blinding. Including for footing of studded poles at verandah.	Bags	5.00	1,360		0.00	0.00	0.00	
3	Sharp sand for blockwork and blinding, inclusive of transport to site. 0.4m ³ (6 wheelbarrows) for mortar, 0.6m ³ (8 wheelbarrows) for blinding.	CuM	1.00	272		0.00	0.00	0.00	
4	Water for mixing/curing	L	500.00	136,000		0.00	0.00	0.00	
5	Damp proof membrane (DPM). Plastic sheet high puncture resistance extremely durable water & vapour resistant polythene, 1 mm thickness. To cover a perimeter of 23m with 300mm width per shelter. To be laid over plinth to protect walls from water capillarity	SqM	7.00	1,904		0.00	0.00	0.00	
Subtotal perimeter blockwork						0.00	0.00	0.00	
Superstructure (walls and verandah)									
6	Mudbricks (150x150x450mm), including preparation and screening of soil of agreed grain composition, mixing with water and vegetable fibres, labour for moulding. To be moulded on site or including transport to site.	pcs	700.00	190,400		0.00	0.00	0.00	12 courses of bricks above the plinth to reach 2.3m above NGL, plus overhead course above wall plate on long sides. Including internal partition and gables. Bricks to be molded with local workers where possible, including direct shelter beneficiaries.
7	Earth-based mortar (mud) for laying of mudbricks wall, soil and water to be delivered and mixed at construction site.	CuM	1.50	408		0.00	0.00	0.00	
8	External earth-based plaster, 15mm thickness, mixture of soil, sharp sand, boiled bitumen and used engine oil, to be applied in at least two coats. Inclusive of all required materials for the mixture, water and labour costs.	SqM	50.00	13,600		0.00	0.00	0.00	
9	Obeche Timber poles, 2x6 inches - 330 cm length -- for wall plates along the full perimeter of the shelter at 2.3m above NGL	Pcs	6.00	1,632		0.00	0.00	0.00	To be secured with langalanga to the brick walls two or three courses below
10	Obeche Timber poles, 2x4 inches - 250 cm length -- for studded poles at front verandah, 60cm deep below NGL and termite treated at base up to 30cm above NGL. To be cast in sand-cement footing.	Pcs	3.00	816		0.00	0.00	0.00	
Subtotal walls						0.00	0.00	0.00	
Roofing									
11	Obeche Timber poles, 2x6 inches - 330 cm length - for roof ridge beam	Pcs	2.00	544		0.00	0.00	0.00	
12	Obeche Timber poles, 2x4 inches - 230 cm length - for rafters	Pcs	7.00	1,904		0.00	0.00	0.00	
13	Obeche Timber poles, 2x4 inches - 330 cm length - for central rafters and wall plate at front verandah	Pcs	4.00	1,088		0.00	0.00	0.00	
14	Obeche Timber poles, 2x3 inches - 100 cm length - for tie collar	Pcs	5.00	1,360		0.00	0.00	0.00	
15	Obeche Timber poles, 2x3 inches - 330 cm length - for purlins	Pcs	21.00	5,712		0.00	0.00	0.00	To be nailed to rafters and secured with langalanga
16	Timber plank, 1x6 inches - 330cm length - for fascia board along the whole perimeter of the roof	Pcs	8.00	2,176		0.00	0.00	0.00	
17	CGI Sheet (2.4m x 0.6m x 0.2mm thick) - for roofing including verandah. 28 pcs full length for roof, 4 pcs cut in half for verandah roof extension.	Pcs	32.00	8,704		0.00	0.00	0.00	
18	Aluzinc ridge cap, 0.35mm thick * 400mm wide, folded at the centre	m	7.00	1,904		0.00	0.00	0.00	
Subtotal roofing						0.00	0.00	0.00	

	Doors and windows								
19	Timber poles, 2x3 inches - 200 cm length -- for door panel sides of two doors	Pcs	4.00	1,088		0.00	0.00	0.00	Two front doors 200x80cm
20	Timber poles, 2x3 inches - 60 cm length -- for door panel top/bottom/mid bracing	Pcs	6.00	1,632		0.00	0.00	0.00	
21	Timber poles, 2x3 inches - 110 cm length -- for door panel diagonal bracing	Pcs	4.00	1,088		0.00	0.00	0.00	
22	Timber poles, 2x4 inches - 200 cm length -- for door frames (sides)	Pcs	4.00	1,088		0.00	0.00	0.00	
23	Timber poles, 2x4 inches - 80 cm length -- for door frames (top/bottom)	Pcs	4.00	1,088		0.00	0.00	0.00	
24	Timber poles, 2x3 inches - 60 cm length -- for front windows side panel and frames (two windows)	Pcs	8.00	2,176		0.00	0.00	0.00	Two front windows 60x40cm
25	Timber poles, 2x3 inches - 40 cm length -- for front windows top/bottom frames	Pcs	4.00	1,088		0.00	0.00	0.00	
26	Timber poles, 2x3 inches - 30 cm length -- for front windows panel top/bottom and mid bracing	Pcs	6.00	1,632		0.00	0.00	0.00	
27	Timber poles, 2x3 inches - 40 cm length -- for back windows frames	Pcs	8.00	2,176		0.00	0.00	0.00	Two back or side windows at wall plate level for cross ventilation, 40
28	Timber poles, 2x3 inches - 30 cm length -- for back windows panels	Pcs	8.00	2,176		0.00	0.00	0.00	
29	Timber poles, 2x6 inches - 100 cm length -- for lintel above front windows	Pcs	2.00	544		0.00	0.00	0.00	
30	100 mm (4 inch) Door hinges, three per door	Pair	3.00	816		0.00	0.00	0.00	
31	125mm Door latches	Pair	2.00	544		0.00	0.00	0.00	
32	75 mm (3 inch) Window hinges	Pair	4.00	1,088		0.00	0.00	0.00	
33	100mm (4 inches) Tower bolts for windows (inside)	Nos	4.00	1,088		0.00	0.00	0.00	
34	CGI Sheet (2.4m x 0.6m x 0.2mm thick)	Pcs	3.00	816		0.00	0.00	0.00	For cladding of doors and windows
	Subtotal doors and windows					0.00		0.00	
	Fixings								
35	Nails - 5 inch	Kg	0.50	136		0.00	0.00	0.00	Fixing thicker wooden poles together (mainly rafters to ridge beam)
36	Nails - 4 inch	Kg	4.00	1,088		0.00	0.00	0.00	Fixing thicker wooden poles together
37	Nails - 3 inch	Kg	2.00	544		0.00	0.00	0.00	Fixing wooden poles together (mainly doors and window frames)
38	Nails - 1 1/2 inch	Kg	0.50	136		0.00	0.00	0.00	For fixing langalangs and battens
39	Wind security (Langa langa) - 1m length	Pcs	30.00	8,160		0.00	0.00	0.00	For key connections including tying of purlins and rafters to the superstructure, and tying of wall plate to walls
40	Cap nails	Packet	2.00	544		0.00	0.00	0.00	Fixing the CGI roof
	Subtotal fixings					0.00		0.00	
41	Labour (masonry and carpentry)	LS	1.00	272		0.00	0.00	0.00	Masonry: Setting out, excavation and bricklaying. Carpentry: Assembling of doors/windows, roof structure and covering. Brick molding and plaster labour costs excluded. Workforce to be employed locally where available.
42	Transport of materials (excluding bricks, soil, sand and water)	LS	1.00	272		0.00	0.00	0.00	Excluding transport of bricks, soil and sand
	Total Cost for 1 Shelter					0.00		0.00	