

# CATALOGUE OF MATERIALS FOR FORMAL AND INFORMAL STRUCTURES



# MATERIAL SUPPLY FOR INFORMAL STRUCTURES

ITEM	ITEM DESCRIPTION	QUANTITY
1.	125MM WIRE NAILS	1kg
2.	32MM BRASS PADLOCK 32MM	1
3.	50X76X4.2M TIMBER - GRADING	12
4.	38X114X4.2M TIMBER - GRADING	8
5.	NPC CEMENT 50KG 32.5	4
6.	CONCRETE STONE MIX 40KG	6
7.	CORR ROOF SHEETS 2.4M L/D - 0.35 THICKNESS	20
8.	CORR ROOF SHEETS 5.4M L/D - 0.35 THICKNESS	12
9.	GUMPOLES 75X100X3M TREATED POLE	14
10.	HASP & STAPLE 100MM	1
11.	HINGE BUTT STEEL 100MM	1
12.	PINE DOOR 813X2032 – LEDGE & BRACE	1
13.	PINE WINDOW AND GLASS	2
14.	ROOFING SCREW P/100	3
15.	PINE DOOR FRAME	1
16.	PUTTY	1

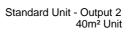


## MATERIAL SUPPLY FOR FORMAL STRUCTURES



SUBSIDY HOUSING TYPOLOGY AND COSTS STUDY: DELIVERABLE human settlements
PART 3:BILL OF QUANTITIES FOR STANDARD 40M2 UNIT

The cost of material supply for a formal structure that requires to be rebuilt or reconstructed is limited to the current prevailing Emergency Housing Assistance subsidy quantum of R140 085.00 for 2022/23





1	1	1	1
	SECTION NO. 2		
	Builders Work		
	BILL NO. 1 EARTHWORKS		
	EARTHWORKS (PROVISIONAL)		
	The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition) and the Supplementary Preambles hereunder.		
	SUPPLEMENTARY PREAMBLES		
	Carting away of excavated material:		
	Descriptions of carting away of excavated material shall be deemed to include loading excavated material onto trucks directly from the excavations or, alternatively, from stock piles situated on the building site.		
	SITE CLEARANCE. ETC.		
	Site clearance, etc.:		
1	Digging up and removing rubbish, debris, vegetation,		
	hedges, shrubs, bush, etc and trees not exceeding 200mm girth.	m²	250
2	Strip average 150mm thick layer of topsoil and stockpile on site.	m²	250
	EXCAVATION. FILLING. ETC. OTHER THAN BULK		
	Excavation in earth not exceeding 2m deep:		
3	Trenches average 800mm deep, including risk of collapse and keeping excavations free of water.	m³	14
	Extra over all excavations for carting away:		
4	Surplus material from excavations and/or stock piles on		
7	site to a dumping site to be located by the Contractor.	m³	4
	FILLING. ETC.		
	Filling with selected material from the excavations and compacted in 150mm thick layers to a density		
	of at least 95% Mod AASHTO maximum density for:		
5	Backfilling to trenches, holes, etc.	m³	11
	Section No. 2		
	Bill No. 1		
	Earthworks		
	2-1		



		Unit	Quantity
	Earth filling supplied by the Contractor, including compaction in 150mm layers to 95% Mod AASHTO density, including scarifying and compaction of existing ground surface to a depth of 150mm;		
6	Under floors.	m³	12
	Surface preparation:		
7	Compaction of ground surface, including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 95% Mod AASHTO density.	m²	17
	SOIL POISONING		
	Soil insecticide in accordance with SANS 5859:		
8	Under floors etc. including forming and poisoning shallow furrows against foundation walls etc., filling in furrows and ramming.	m²	40
9	To bottoms and sides of trenches etc.	m²	79
	Carried to Collection Section No. 2 Bill No. 1		
	Earthworks 2-2		



SECTION NO. 2 Builders Work BILL NO. 1 EARTHWORKS		
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Section No. 2		
Bill No. 1 Earthworks		



Standard Unit - Output 2

Unit Quantity **SECTION NO. 2 Builders Work BILL NO. 2 CONCRETE. FORMWORK AND REINFORCEMENT CONCRETE. FORMWORK AND REINFORCEMENT** The Tenderer is referred to the relevant clauses in the separate document Model Preambles for Trades (2008 Edition) and the following supplementary preambles. SUPPLEMENTARY PREAMBLES Cost of tests: The costs of making, storing and testing of concrete test cubes as required under clause 7 'Tests' of SABS 1200 G shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests to the Principal Agent. The testing shall be undertaken by an independent firm or institution nominated by the Contractor to the approval of the Principal Agent. (Test cubes are measured separately). Formwork: Descriptions of formwork shall be deemed to include use and waste only (except where described as left in or permanent), for fitting together in the required forms, wedging, plumbing and fixing to true angles and surfaces as necessary to ensure easy release during stripping and for reconditioning as necessary before reuse. The vertical strutting shall be carried down to such construction as is sufficiently strong to afford the required support without damage and shall remain in position until the newly constructed work is able to support itself. Formwork to sides of bases, pile caps, ground beams, etc., will only be measured where it is prescribed by the Engineer for design reasons. Formwork necessitated by irregularity or collapse of excavated faces will not be measured and the cost thereof shall be deemed to be included in the allowance for taking the risk of collapse of the sides of the excavations, provision for which is made in Earthworks. Section No. 2 Bill No. 2

Concrete, Formwork And Reinforcement





		Unit	Quantity
	Formwork to soffits of solid slabs etc., shall be deemed to be to slabs not exceeding 250mm thick unless otherwise described.		
	UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES		
	10 MPa/19mm Concrete:		
1	Strip footings foundations including formwork for steps, etc.	m³	4
	UNREINFORCED CONCRETE		
	10 MPa/19mm Concrete:		
2	Surface beds on waterproofing.	m³	3
3	Apron slabs cast in panels including for formwork to edges not exceeding 300mm high or wide.	m³	2
	CONCRETE SUNDRIES		
	Finishing top surfaces of concrete smooth with a steel float:		
4	Surface beds, slabs, etc.	m²	40
	Wire brushing of concrete surfaces to expose aggregate:		
5	Apron slabs, including for forming channels in top.	m²	17
	Section No. 2		
	Bill No. 2		
	Concrete, Formwork And Reinforcement 2-5		



SECTION NO. 2
Builders Work
BILL NO. 2
CONCRETE. FORMWORK AND REINFORCEMENT
COLLECTION

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Section No. 2 Bill No. 2 Concrete, Formwork And Reinforcement





		Unit	Quantity	
	SECTION NO. 2 Builders Work BILL NO. 3 MASONRY			
	MASONRY			
	The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition) and the Supplementary Preambles hereunder.			
	SUPPLEMENTARY PREAMBLES			
	BRICKWORK			
	Sizes in descriptions:			
	Where sizes in descriptions are given in brick units, 'one brick' shall represent the length and 'half brick' the width of a brick.			
	BRICKWORK IN FOUNDATIONS (PROVISIONAL)			
	Brickwork in "Big Max" cement bricks in Class II mortar. size 290 x 140 x 90mm:			
1	140mm Brick walls.	m²	8	
	BRICKWORK IN SUPERSTRUCTURE			
	Brickwork in "Big Max" cement bricks in Class II mortar, size 290 x 140 x 90mm;			
2	140mm Brick walls.	m²	50	
3	Ditto, but in beamfilling.	m²	3	
3	Ditto, but in beamfilling.  90mm Brick walls.	m² m²	3 29	
	-			
4	90mm Brick walls.	m²	29	
4	90mm Brick walls.  Ditto, but in gable walls.	m²	29	
5	90mm Brick walls.  Ditto, but in gable walls.  Brickwork reinforcement:	m² m²	29	
4 5	90mm Brick walls.  Ditto, but in gable walls.  Brickwork reinforcement:  75mm Wide reinforcement built in horizontally.	m² m² m	29 3 181	
4 5	90mm Brick walls.  Ditto, but in gable walls.  Brickwork reinforcement:  75mm Wide reinforcement built in horizontally.	m² m² m	29 3 181	
4 5	90mm Brick walls.  Ditto, but in gable walls.  Brickwork reinforcement:  75mm Wide reinforcement built in horizontally.	m² m² m	29 3 181	
4 5	90mm Brick walls.  Ditto, but in gable walls.  Brickwork reinforcement:  75mm Wide reinforcement built in horizontally.  110mm Wide reinforcement built in horizontally.  Section No. 2	m² m² m	29 3 181	
4 5	90mm Brick walls.  Ditto, but in gable walls.  Brickwork reinforcement:  75mm Wide reinforcement built in horizontally.  110mm Wide reinforcement built in horizontally.	m² m² m	29 3 181	



		Quantity	Unit	
	BRICKWORK SUNDRIES			
	Prestressed fabricated lintels including necessary temporary supports:			
8	90 x 140mm Lintels in lengths not exceeding 3m.	m	9	
	Galvanised hoop iron cramps, ties, etc:			
9	30 x 1,6mm Roof tie 1,5m long with one end fixed to timber and other end anchored into 600mm deep groove formed in 6 courses of brickwork.	No.	14	
	Bagging of 1:3 cement and sand mixture:			
10	On brick walls.	m²	114	
	FIBRE CEMENT WINDOW CILLS			
	Fibre cement cills bedded in class I mortar including metal fixing lugs etc:			
11	15mm Thick cills set sloping and slightly projecting.	m	7	
	Section No. 2 Bill No. 3 Masonry 2-			



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Builders Work		
BILL NO. 3		
MASONRY		
COLLECTION		
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Section No. 2 Bill No. 3 Masonry



	Unit	Quantity
SECTION NO. 2 Builders Work BILL NO. 4 WATERPROOFING		
The Tenderer is referred to the relevant clauses in the separate document Model Preambles for Trades (2008 Edition).		
DAMPPROOFING OF WALLS AND FLOORS		
One layer of 375 micron "Consol Plastics Brikgrip DPC" embossed damp proof course:		
1 In walls, cills.	m²	7
One layer of 250 micron green polyethylene waterproof sheeting (SANS 952-1985 type C) sealed at laps with PVC self-adhesive tape:		
2 Under surface beds.	m²	40
Section No. 2 Bill No. 4 Waterproofing		



	Unit	Quantity
SECTION NO. 2		
Builders Work BILL NO. 5		
ROOF COVERINGS		
The Tenderer is referred to the relevant clauses in the separate document Model Preambles for Trades (2008 Edition).		
ROOF COVERINGS. ETC.		
CORRUGATED METAL SHEETING AND ACCESSORIES		
0.5mm "Fullhard" corrugated sheeting fixed to timber purlins or rails with 75mm long "El Toro" drive screws. in strict accordance with manufacturer's specifications.		
1 Roof covering with pitch not exceeding 25 degrees.	m²	46
Section No. 2		
Bill No. 5		
Roof Coverings 2-	-11	
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		Unit	Quantity
	SECTION NO. 2 Builders Work BILL NO. 6		
	CARPENTRY AND JOINERY		
	The Tenderer is referred to the relevant Clauses in the separate document "Model Preambles for Trades" (2008 Edition) and to the Supplementary Preambles incorporated hereunder.		
	SUPPLEMENTARY PREAMBLES		
	Prefabricated trusses shall be fabricated in a factory by a truss fabricator who has been awarded a Certificate of Competence by the Institute of Timber Construction and is approved by the Principal Agent.		
	All trusses shall be designed by a registered Professional Engineer in accordance with SABS Code of Practice for Design of Timber Structures.		
	The complete structure shall be inspected by the truss designer to ensure that the manufacture and erection details have been complied with.		
	PREFABRICATED ROOF TRUSSES. ETC.		
	Sawn softwood:		
	ROOF BEAMS. ETC		
	Sawn SA Pine Grade 6		
1	50 x 152mm Roof beams	m	48.08
	DOORS, ETC.		
	40mm Frame ledged, braced and batten door, hung		
	to steel frames (elsewhere measured):		
2	Single door, size 813 x 2032mm high.	No.	2
	40mm "Hardboard" hollow core flush panel door		
	hung to steel frames (elsewhere measured):		
3	Single door, size 813 x 2032mm high.	No.	3
	Section No. 2 Bill No. 6		
	Carpentry And Joinery		
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		Unit	Quantity	
	SECTION NO. 2 Builders Work BILL NO. 7 IRONMONGERY			
	The Tenderer is referred to the relevant Clauses in the separate document "Model Preambles for Trades" (2008 Edition).			
	IRONMONGERY FIXED TO DOORS. ETC.			
	LOCKS:			
1	Two lever "CZ 69424955" mortice lockset complete with lockset and door furniture.	No.	2	
2	Three lever "CZ 69424955" mortice lockset complete with lockset and door furniture.	No.	3	
	BATHROOM FITTINGS			
	Stainless steel:			
3	Toilet roll holder plugged.	No.	1	
	Section No. 2			
	Bill No. 7			
	Ironmongery 2-13			





		Unit	Quantity
	SECTION NO. 2 Builders Work BILL NO. 8 METALWORK		
	The Tenderer is referred to the relevant clauses in the separate document Model Preambles for Trades (2008 Edition).		
	PRESSED STEEL DOOR FRAMES		
	1mm Thick "Durowin" rebated frames suitable for 90mm wide brick walls, with and including ironmongery and red oxide paint finish:		
1	Frame for door 813 x 2032mm high.	No.	3
	1mm Thick "Durowin" rebated frames suitable for 140mm wide brick walls, with and including ironmongery and red oxide paint finish:		
2	Frame for door 813 x 2032mm high.	No.	2
	STEEL WINDOWS. DOORS. ETC.  1mm Thick "Durowin Type F7" residential windows complete with ironmongery, paint, etc. and fixing to brickwork or concrete:		
3	Window, type NE1, size 533 x 654mm high.	No.	1
4	Window, type NC4, size 1511 x 949mm high.	No.	2
5	Window, type ND54F, size 1511 x 1245mm high.	No.	2
	Section No. 2 Bill No. 8 Metalwork		
	2-14		



		Unit	Quantity
	SECTION NO. 2 Builders Work BILL NO. 9 PLASTERING		
	The Tenderer is referred to the relevant Clauses in the separate document "Model Preambles for Trades" (2008 Edition).		
	EXTERNAL PLASTER		
	One coat "Cemcrete-Stipplecoat" waterproof cement based textured finish to approved colour, prepared and applied in strict accordance with the manufacturer's instruction		
1	On walls including narrow widths.	m²	58
	Section No. 2 Bill No. 9 Plastering 2-15		



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	Unit	Quantity	
SECTION NO. 2 Builders Work BILL NO. 10 PLUMBING AND DRAINAGE			
The Tenderer is referred to the relevant clauses in the separate document Model Preambles for Trades (2008 Edition).			
SUPPLEMENTARY PREAMBLES			
'Polycop' polypropylene pipes:			
Polypropylene pipes 54mm diameter and under shall be seamless copper coloured class 16 pipes jointed with 'Fast-fuse' heat welded thermoplastic or brass compression fittings as designed for use with copper pipes as stated.			
Pipes shall be firmly fixed to walls etc with coloured nylon snap-in pipe clips with provision for accommodating thermal movement and jointed and fixed strictly in accordance with the manufacturer's instructions.			
All pipe diameters are nominal external.			
'Polylink' polypropylene pipes:			
Polypropylene pipes 63mm diameter and over shall be class 12 pipes jointed with cast iron 'Supraclamp' running joints.			
Fusion welded bends, once or twice mitred as necessary, and tees shall be factory manufactured.			
Fusion welded bends and tees shall include jointing to pipes with PVC rubber ring double X joint couplers.			
Branch tees shall include flanged and bolted joints to 'Polycop' branch pipes in addition and for brass compression male iron to copper straight couplers.			
Reducers shall include jointing to pipes with PVC rubber ring double Z joint couplers and reduces shall be of sufficient overall length to accommodate same.			
All pipes shall be jointed and fixed strictly in accordance with the manufacturer's instructions.			
All pipe diameters are nominal external.			
Section No. 2 Bill No. 10 Plumbing And Drainage			

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l I	Unit	Quantity
uPVC pressure pipes and fittings:		
Pipes for water supply shall be of the class stated.		
Pipes of 40mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings.		
Pipes of 50mm diameter and greater shall have sockets and spigots with push-in type integral rubber ring joints. Bends shall be uPVC and all other fittings shall be cast iron, all with similar push-in type joints.		
Copper pipes:		
Pipes shall be hard drawn and half-hard pipes of the class stated. Class 0 (thin walled hard drawn) pipes shall not be bent. Class 1 (thin walled half-hard), class 2 (half-hard) and class 3 (heavy walled half-hard) pipes shall only be bent with benders with inner and outer formers. Fittings to copper waste, vent and anti-syphon pipes, capillary solder fittings and compression fittings shall be 'Cobra Watertech' type. Capillary solder fittings shall comply with ISO 2016. Only compression fittings shall be used in walls or in ground.		
Internal water supplies:		
Prices for all piping laid in ground, inspection chambers, etc. shall include for excavations, keeping free of water, distributing surplus material on site (carting away has been separately measured) and backfilling in selected material (imported fill where required will be separately measured).		
Holes, chases, etc., are deemed to be included in the descriptions of the pipework.		
Fixing of pipes		
Unless specifically otherwise stated, descriptions of pipes shall be deemed to include for fixing to walls etc. casting in, building in or suspending not exceeding 1m below suspension level		
Lead pipes and traps:		
All soldered joints shall be wiped and brass unions shall be used for jointing lead to steel.		
Section No. 2		



	Unit	Quantity	
Reducing fittings:			
Where fittings have reducing ends or branches they are described as 'reducing'. In the case of pipes with diameters not exceeding 60mm only the largest end or branch size is given. Should the Contractor wish to use other fittings and bushes or reducers he may do so on the understanding that no claim in this regard will be entertained. In the case of pipes with diameters exceeding 60mm all sizes are given and no claim for extra bushes, reducers, etc will be entertained.			
Wire gratings:			
Descriptions of gutter outlets etc shall be deemed to include wire balloon gratings.			
Exposed concrete surfaces:			
Exposed surfaces of concrete stormwater channels, cover slabs, inspection eye marker slabs, gulley tops, cleaning eye tops, catchpits, inspection chambers, etc shall be finished smooth with plaster.			
Excavations:			
No claim for rock excavation will be entertained unless the Contractor has timeously notified the quantity surveyor thereof prior to backfilling.			
'Soft rock' and 'hard rock' shall be as defined in 'Earthworks'.			
Laving, backfilling, bedding, etc of pipes:			
Pipes shall be laid and bedded and trenches shall be carefully backfilled in accordance with manufacturers' instructions.			
Where no manufacturers' instructions exist pipes shall be laid in accordance with clauses 5.1 and 5.2 of each of the following: SABS 1200 L: Medium pressure pipelines LD: Sewers LE: Stormwater drainage Pipe trenches etc shall be backfilled in accordance with clause 3, 5.5, 5.6, 5.7 and 7 of SAB.			
Flush pans:			
Flush pans shall have straight or side outlets and 'P' or 'S' traps as necessary.			
Section No. 2 Bill No. 10			

Plumbing And Drainage



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	Unit	Quantity
Stainless steel basins, sinks, wash troughs, urinals, etc:		
Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable.		
Waste unions:		
Descriptions of waste unions shall be deemed to include rubber or vulcanite plugs and chains fixed to fittings.		
'Densyl' petrolatum anti-corrosion tape as manufactured by Denso SA (Ptv) Ltd:		
Pipes to be taped shall be coated with the appropriate primer and the tape shall be applied with minimum 15mm lap per spiral unless otherwise described.		
Couplings and fittings to pipes shall be taped in strict accordance with the manufacturer's instructions including all mastic, tape, 'Layflat' sheeting, securing of same, etc.		
Prices for wrapping of pipes shall include for all work as described to couplings in the length.		
SANITARY FITTINGS		
Sanitary fittings:		
Ceramic flush toilet with close couple cistern including plumbing and drainage, installed complete.	No.	1
Vaal Bantam white ceramic wash hand basin including plumbing and drainage, installed complete.	No.	1
800 x 460 Kwikot stainless steel sink and drainer unit including plumbing and drainage, installed complete.	No.	1
Shower including plumbing and drainage, installed complete.	No.	1
Section No. 2		
Bill No. 10		
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# SECTION NO. 2 Builders Work BILL NO. 10 PLUMBING AND DRAINAGE COLLECTION

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Section No. 2 Bill No. 10 Plumbing And Drainage



	Unit	Quantity	
SECTION NO. 2 Builders Work BILL NO. 11 ELECTRICAL WORK			
The Tenderer is referred to the relevant clauses in the separate document Model Preambles for Trades (2008 Edition).			
PREPAID ELECTRICITY METER			
Prepaid electricity meters:			
1 Prepaid ready board electrical unit complete with one light point and one plug point together with the supply cable.	No.	1	
Section No. 2			
Bill No. 11 Electrical Work 2-21			



	Unit	Quanti
SECTION NO. 2 Builders Work BILL NO. 12 GLAZING		
The Tenderer is referred to the relevant clauses in the separate document Model Preambles for Trades (2000 Edition).		
GLAZING TO STEEL WITH PUTTY		
3mm Clear float glass:		
Panes exceeding 0,1m² and not exceeding 0,5m².	m²	
3mm Obscure float glass:		
Panes exceeding 0,1m2 and not exceeding 0,5m2.	m²	0.3
Section No. 2 Bill No. 12 2-22		
Glazing		



		Unit	Quantity
	SECTION NO. 2 Builders Work BILL NO. 13 PAINTWORK		
	The Tenderer is referred to the relevant clauses in the separate document Model Preambles for Trades (2008 Edition).		
	ON WOOD SURFACES		
	Prepare and apply two coats carbonlineum:		
1	On roof timbers at eaves and verges.	m²	3
	Prepare and apply one coat polyurethane varnish for exterior use:		
2	On doors.	m²	18
	ON METAL SURFACES		
	Prepare and apply one coat primer and two coats enamel paint.:		
3	On door frames.	m²	4
4	On window frames (b.s.m)	m²	14
	Section No. 2 Bill No. 13 Paintwork		
	2-23		



	SECTION NO. 2	
	Builders Work	
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	Section No. 2	
	SECTION SUMMARY	

Detailed cost breakdown of a 40m <sup>2</sup> subsidised house effective from 1 April 2022					
	Output 3 -Energy				
	Output 2 -	efficiency			
	Construction Cost	compliance with			
	and Subsidy	SANS 400, SANS	Output 4 - Fully		
Output 2- Construction Cost and Subsidy	Amount for a	400RX & SANS	fledged electrical		
Amount for a 40m <sup>2</sup> house	40m² house	10400X	installation	Total	
Earthworks (provisional)					
Concrete, Formwork & Reinforcement					
Brickwork					
Roof Structure					
Ceiling and insulation					
Windows					
Doors and Frames					
Finishing and Paintwork					
Electrical					
Plumbing and Toilet					
Material					
Labour - included					
Sub-Total					
P &G					
Overheads - included					
Transfer Costs - excluded					
Beneficiary Administration -excluded					
Profit - included					
Total					
Total (Rounded Off)					