

# 1/2 Improved design of urban low cost housing in Dinajpur, Bangladesh

This study has been undertaken as part of Urban Partnerships for Poverty Reduction Project, a project aimed at reducing poverty in urban communities across Bangladesh. This is a pilot project to build 10 low cost houses in Jorgen Babur Mart, a slum in Din

	Quantity	Unit	Material Cost (Tk)	Labour Cost (Tk)
Labour to lay mud				500
<b>8 Cross bracing</b> For each external wall, use 8 cross bracing pieces, 7' length Assume 3 piece per bamboo Total bamboo required, @220Tk/culm Labour	13	no.	2933	1250
<b>9 Roof frame</b> Wall plate assume one culm per N-S wall Bamboo required @220/culm Purlins, use timber 2"x2.5" @ 8Tk/ft Purlins @3ft c/c with 1'6" c/c at edges Total no. purlins per house Length of one purlin, including 2 ft overhang Total length Labour to fix purlins	3 13 21 273	no. no. ft ft	660 2184	1000
<b>10 Roof</b> Use 0.35mm thick CI sheet at 6000Tk per 72"x2.5' Total width = 21 ft = 9 sheets wide Total length per sheet Total length Roofing nails	25 225	ft ft	18750 230	1000
<b>11 Walls</b> Internal walls or protected walls assume all bamboo mat Cost of mat, 100Tk for 5' x 6' sheet Total length of internal & protected wall Extra soling bricks for ground floor to protect from damp  External walls assume composite of: 2.5' CI sheet 5' bamboo mat 1.5' bamboo slatted louver (assume slats from left over pieces) Total length of external walls Labour for fixing internal and external walls	23 74 65 83 17 0 100	Tk/ft wall ft no. Tk/ft wall Tk/ft wall  ft	1727 324  10000	2000
<b>12 Borax treatment</b> @ 2Tk per 1ft bamboo Total culms (25') Total length to be treated Assume labour undertaken by household	72 1810	ft ft	1810	0
<b>13 String, nails, hinges etc</b>			2500	
<b>14 Doors and windows</b> Basic option - make using left over materials Expensive option - make with good timber				2500
<b>Total</b>			<b>60900</b>	<b>14750</b>
<b>Grand Total</b>			<b>75650</b>	<b>Tk</b>
<b>Cost per household</b>			<b>37825</b>	<b>Tk</b>
<b>Cost per square foot</b>			<b>131</b>	<b>Tk/sqft</b>

## Solution

Jorgen Babu Mart is a slum with relatively secure land tenure. Although the area has not been subject to any recent disasters, the area is subject to regular flooding and households suffer from an extreme lack of space. The community is from mixed backgrounds but are cohesive with residents having living there for many years. A Community Development Committee set up by the UPPRP is active.

Rather than suggest a single design to be indiscriminately copied we are promoting a range of improved building techniques that will strengthen or improve parts of the house which are particularly weak and vulnerable to the local climate e.g. treatment of bamboo against insect attack, small concrete

foundation posts to keep bamboo out of contact with the ground, stabilization of earth using a small

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Creative's profile

ahmuda



**mahmuda** PRO

Creative's top 5 skills

Architecture