

ONE ROOM SHELTER

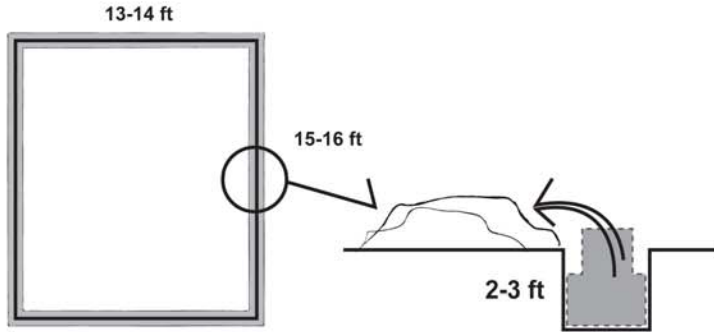


FIRED BRICK SHELTER

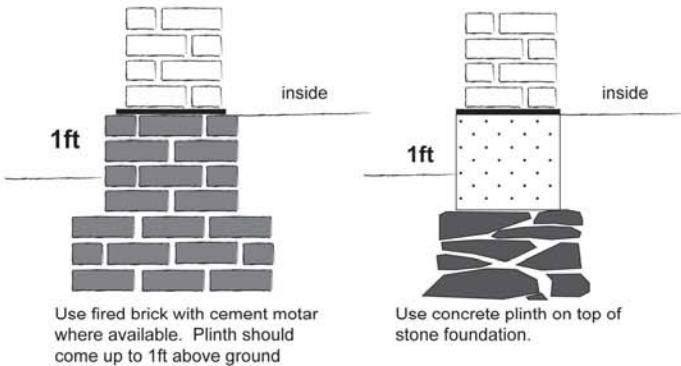


IOM International Organization for Migration

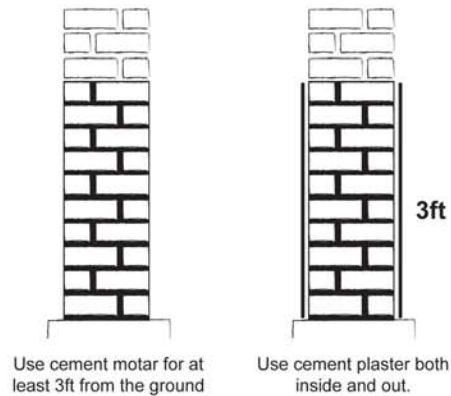
EXCAVATION



STABLE FOOTING



PROTECTION AT GROUND LEVEL

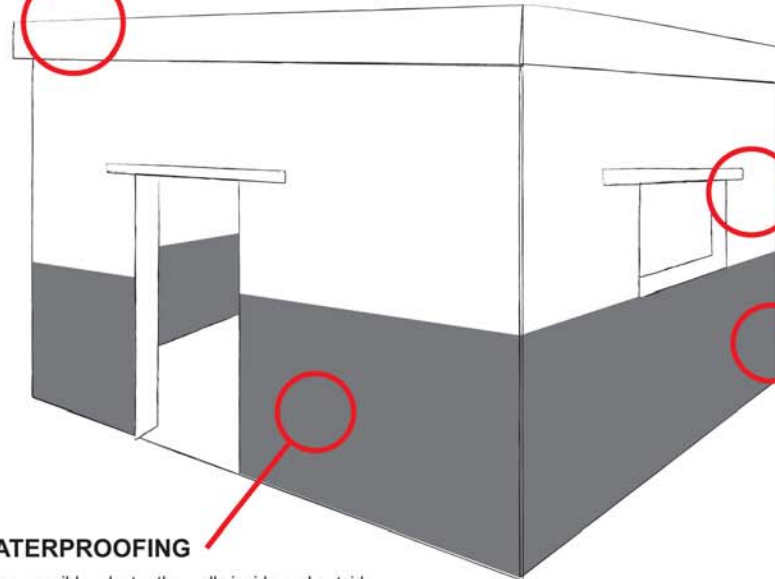
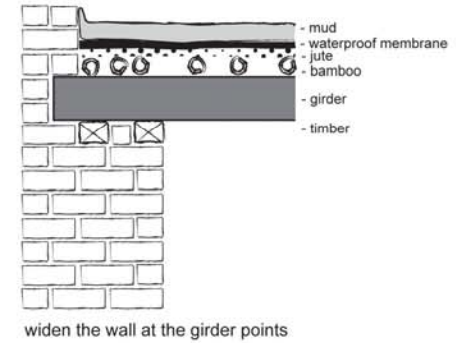
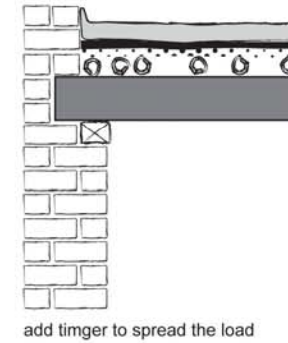


ROOF SUPPORT

Do not place girders over openings in the wall. Ensure that load of the girder is spread out by adding a piece of timber 2-3ft long underneath.

Waterproof membrane help protects the roof.

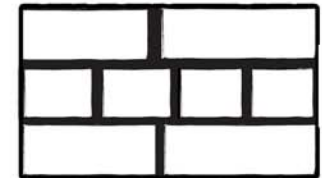
A small slope is required to drain water away.



openings should not be too close to corners - at least 1ft away.

lintels should be at least 1ft wider than the opening on both sides

One finger of mortar between all surfaces of bricks makes equal spacing and avoid vertical crack line



WATERPROOFING

When possible, plaster the walls inside and outside for 3ft above ground with cement mortar.

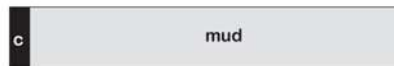
Or use mud mixed with cement or lime for waterproofing.



5% cement
1 bag of cement for 4 walls - inside and out - or make 2,000 mud bricks!



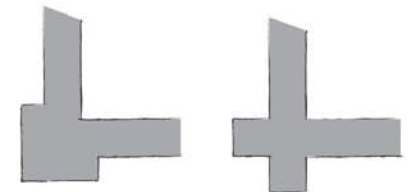
10% lime



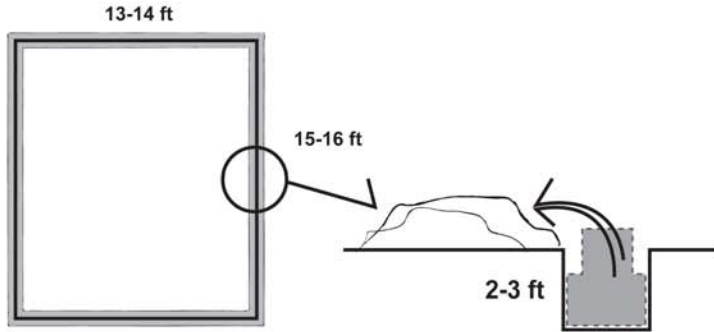
Bitumen plaster, stabilising mud with straw can also be used.

PROTECT THE CORNERS

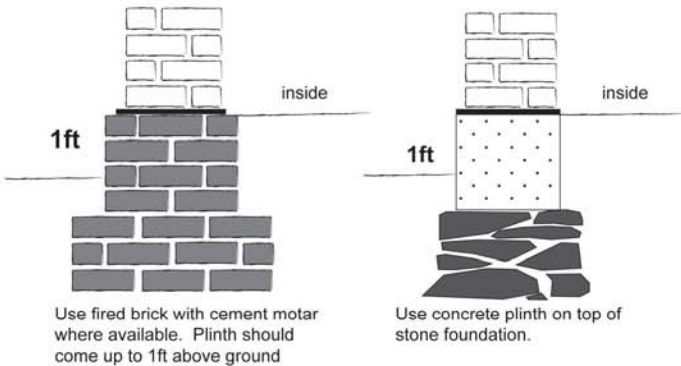
Increase thickness at corner, or make buttresses by overlapping the walls



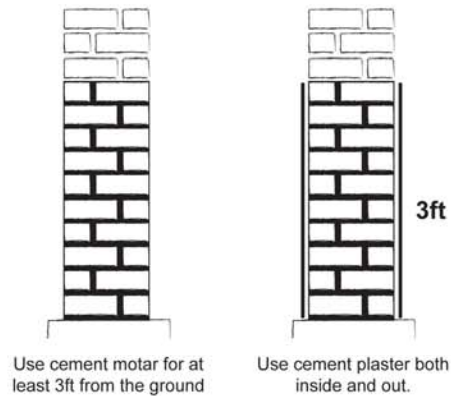
EXCAVATION



STABLE FOOTING



PROTECTION AT GROUND LEVEL

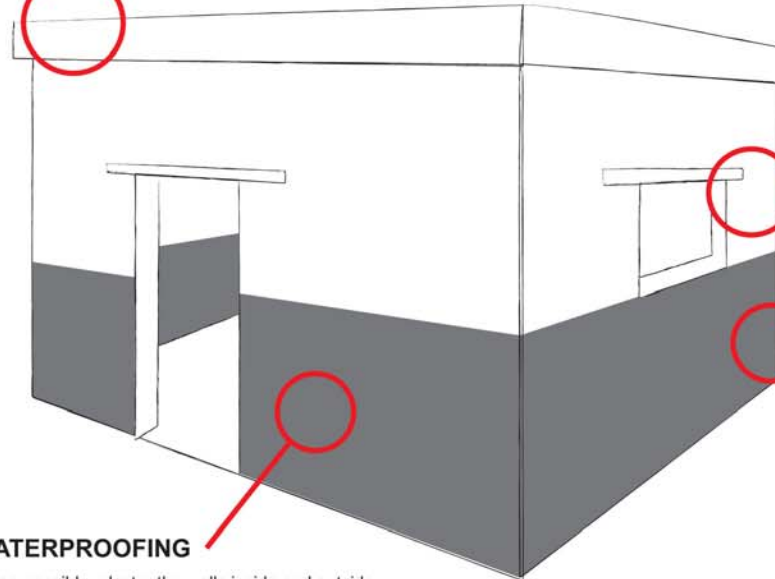
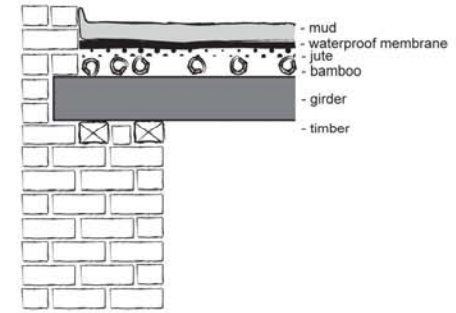
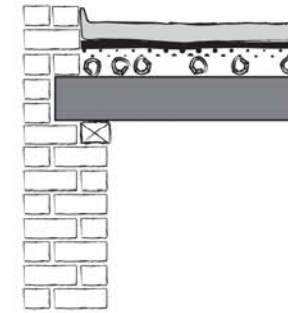


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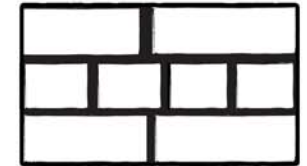
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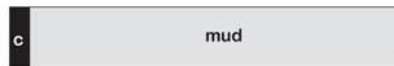
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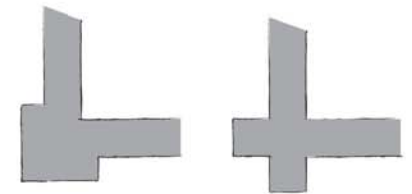
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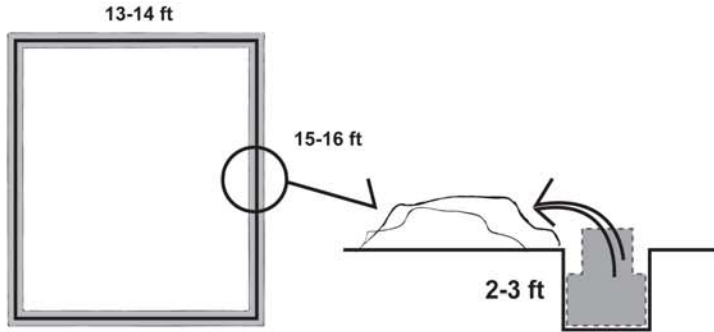
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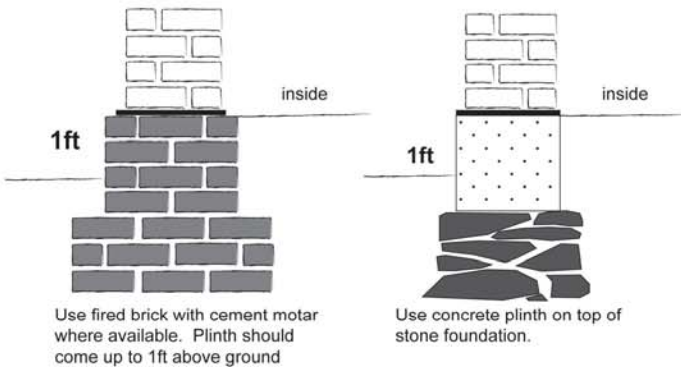
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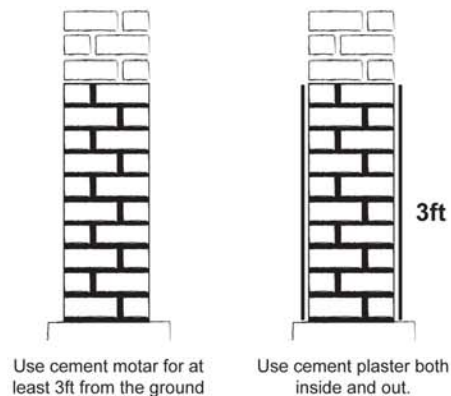
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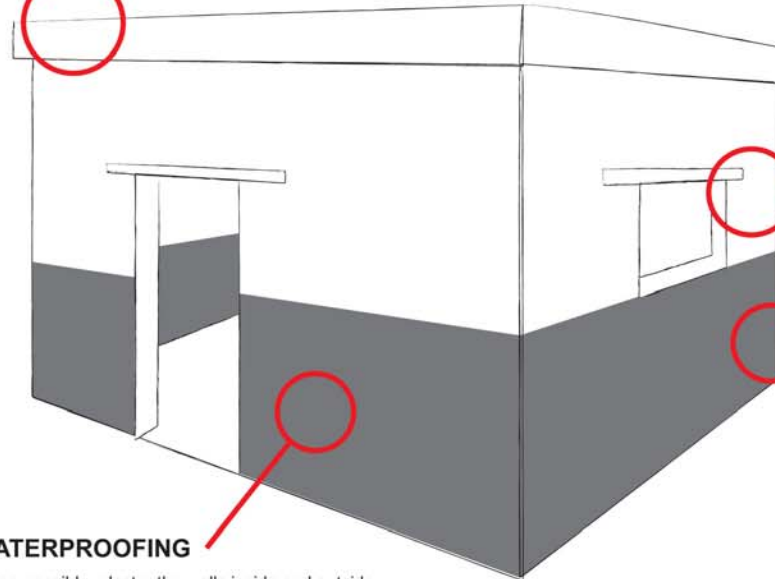
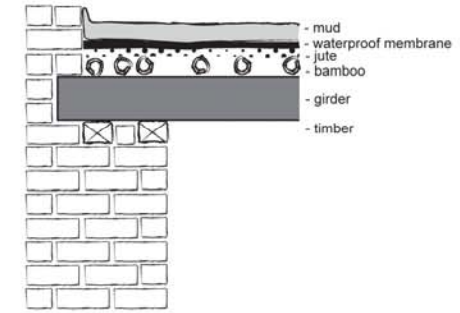
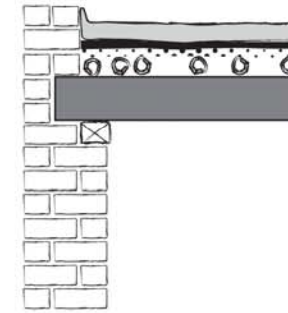


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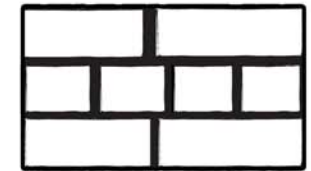
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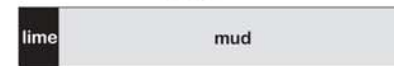
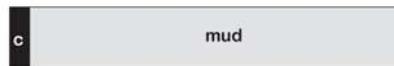
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