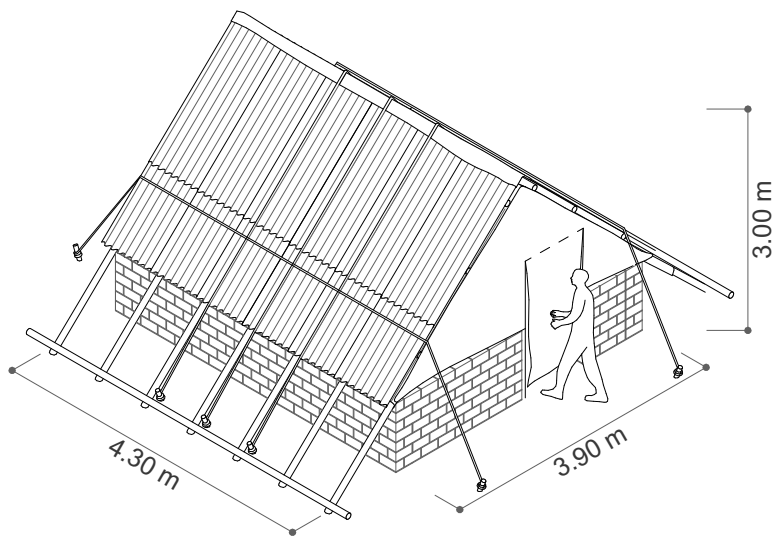
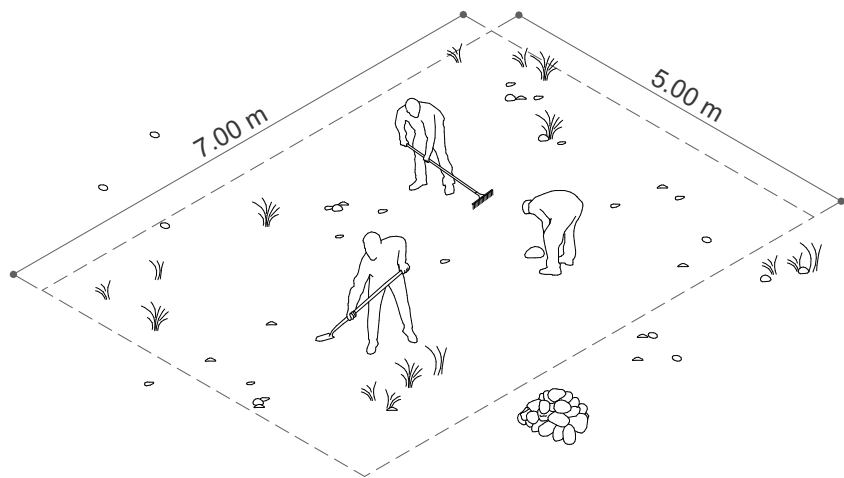




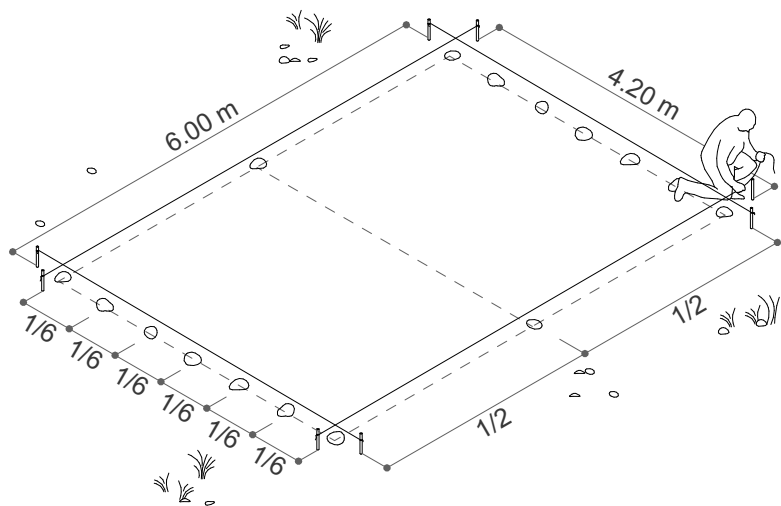
Tent Shelter
by
International Federation of Red
Cross and Red Crescent Societies



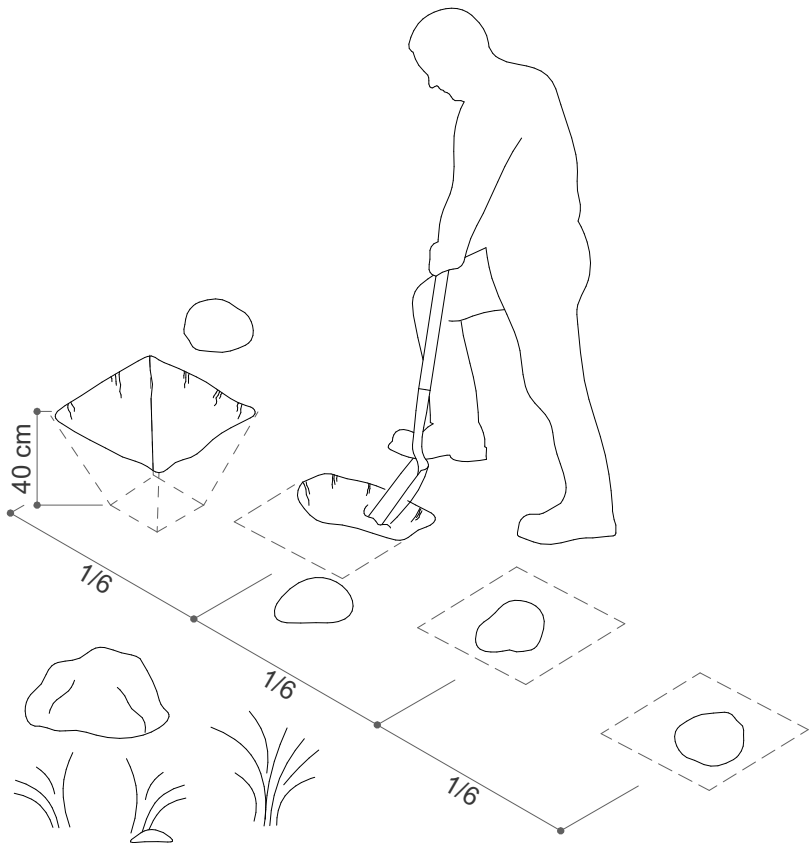
Instructions for tent shelter



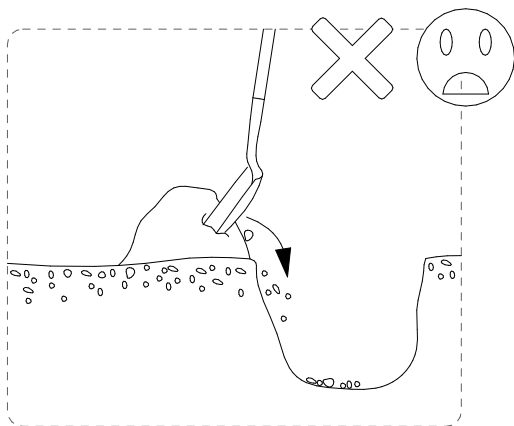
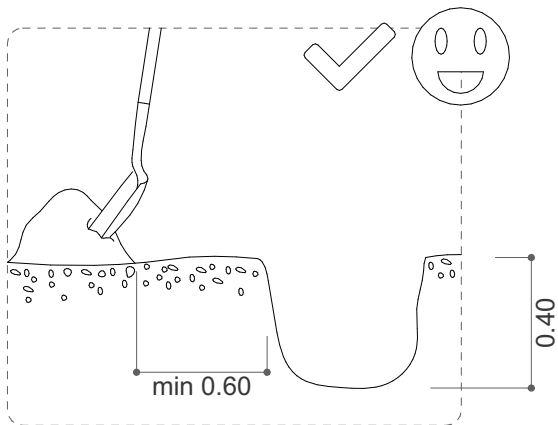
Clean out the a flat area of land, remove all stones, and plants.



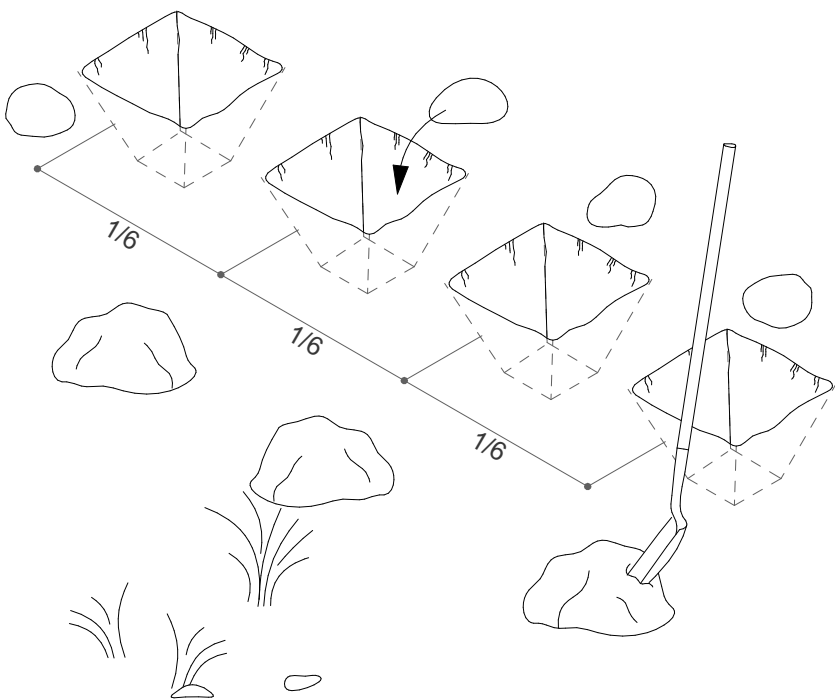
Mark the dimensions of the shelter.
Place a stone on each of the
marked points.



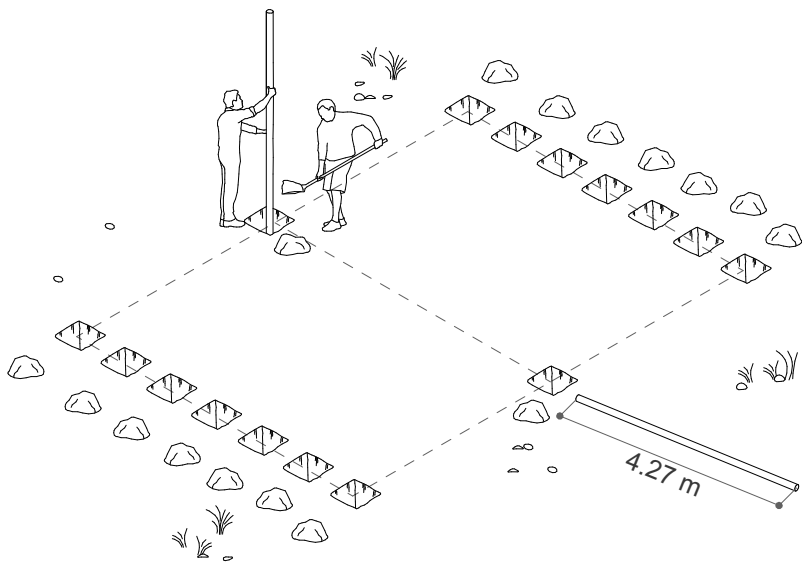
Where you have placed a stone,
dig a hole about 40 cm deep.



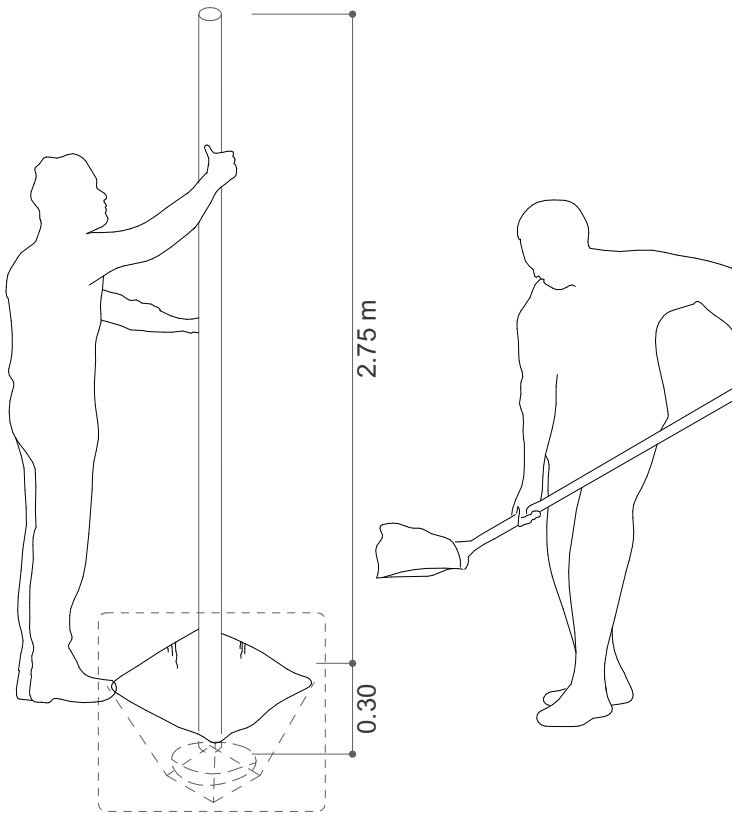
Pile the soil far enough away from the holes to prevent collapse.



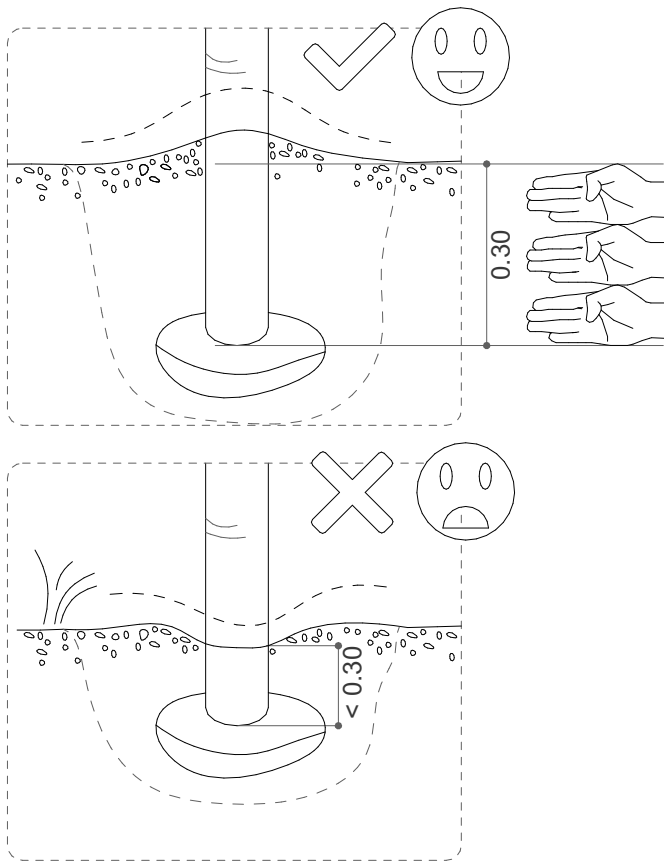
Add a stone base into each hole.



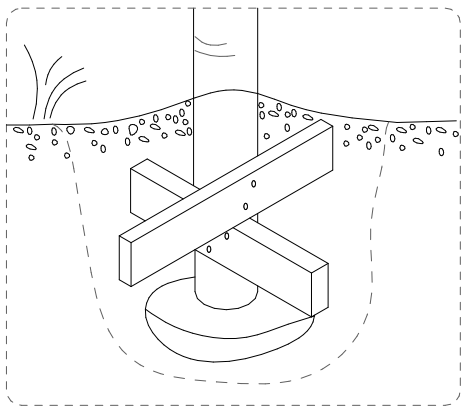
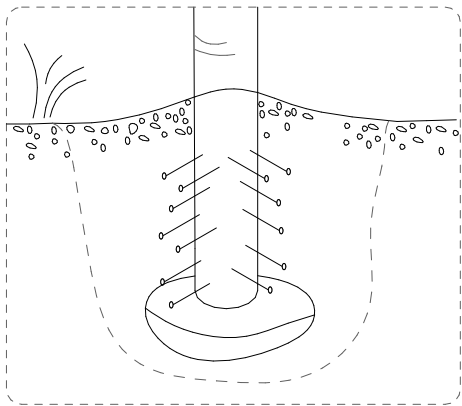
Place the two vertical columns
onto the stone base...



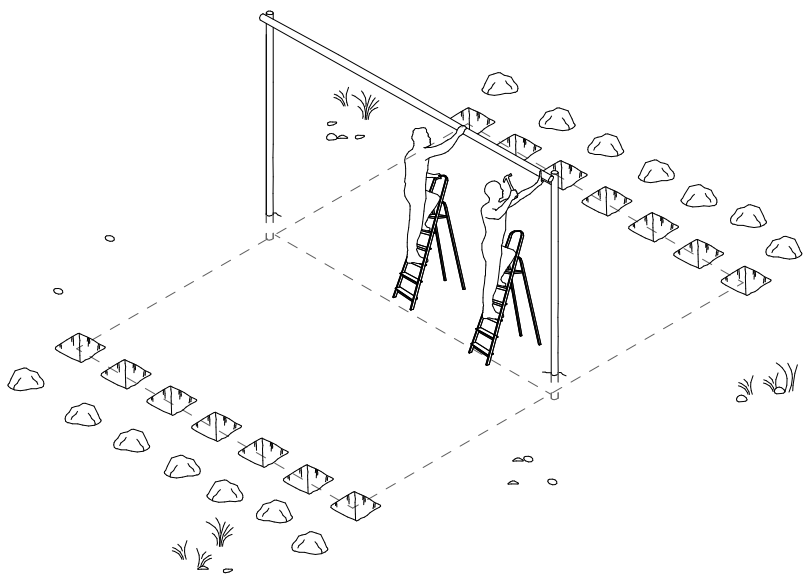
...and fill the hole with soil. about 30 cm of the column should be burried.



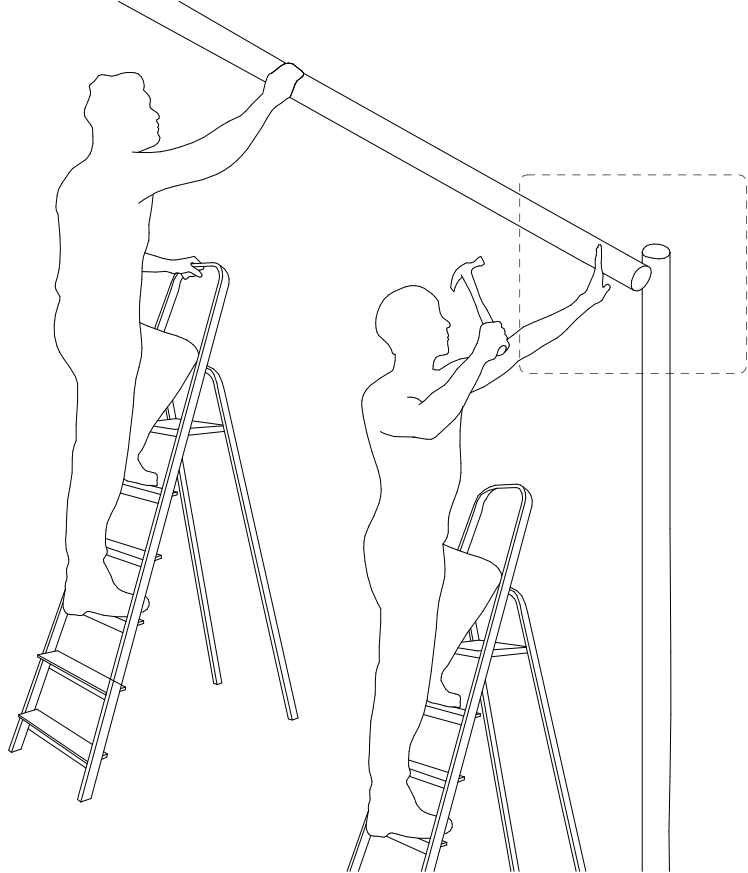
Make sure the column is well buried and water will drain away from the wood.



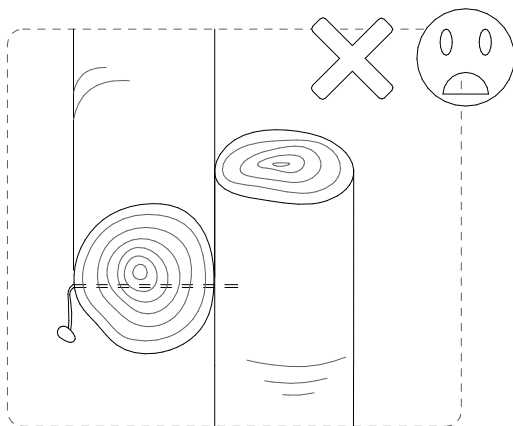
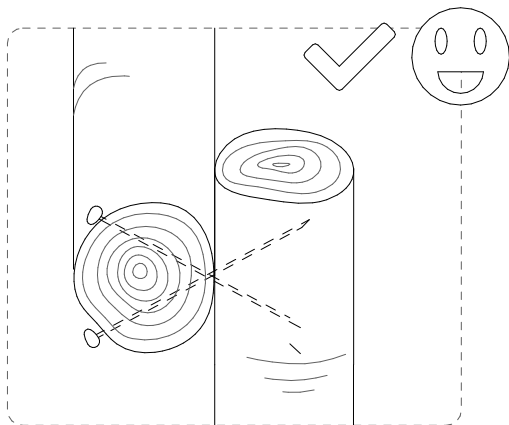
If the column is not stable, add nails or a wooden anker.



Fix the ridge beam to the vertical columns.

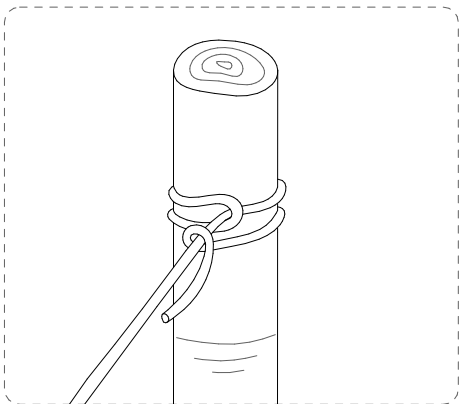


Nail the ridge beam to the column
or use ropes, if nails are not available.

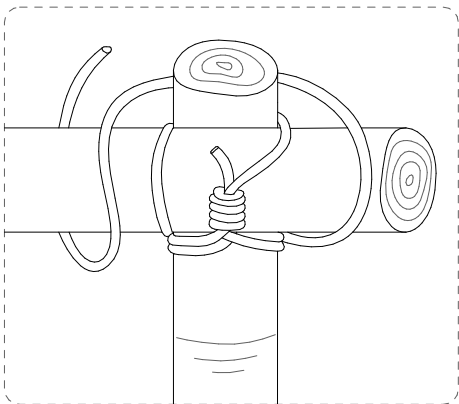


Connect the two posts well.
Us at least two nails at an angle.

1

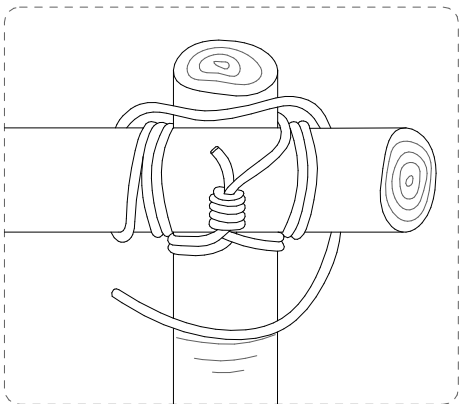


2

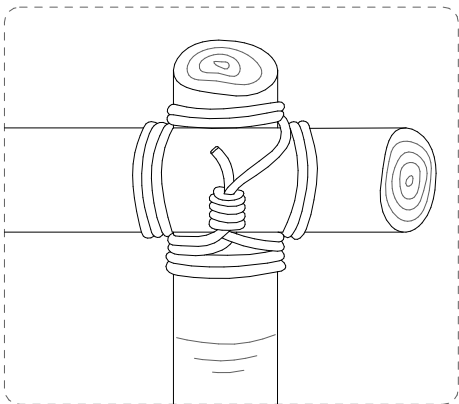


If nails can not be used or are not sufficient,
use ropes.

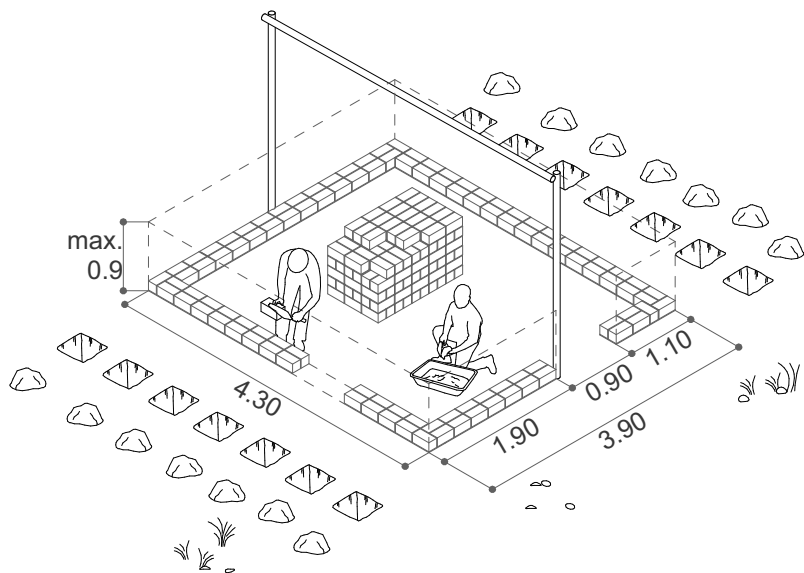
3



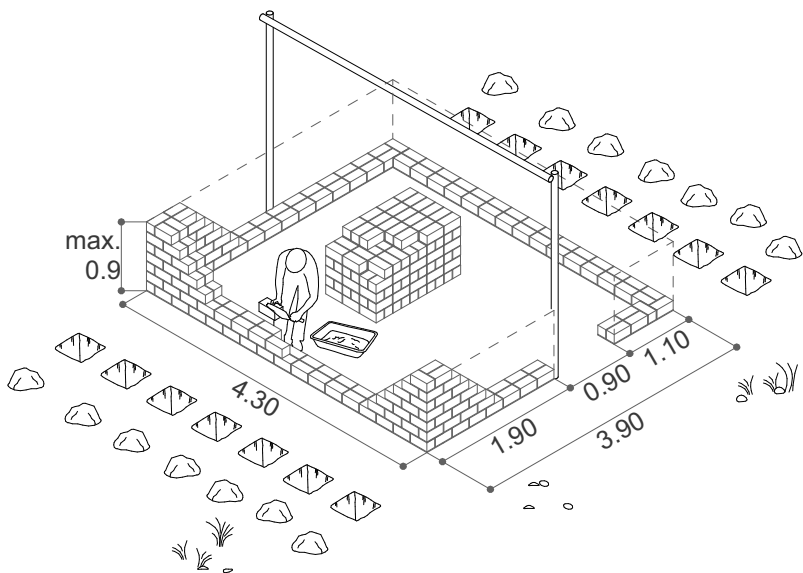
4



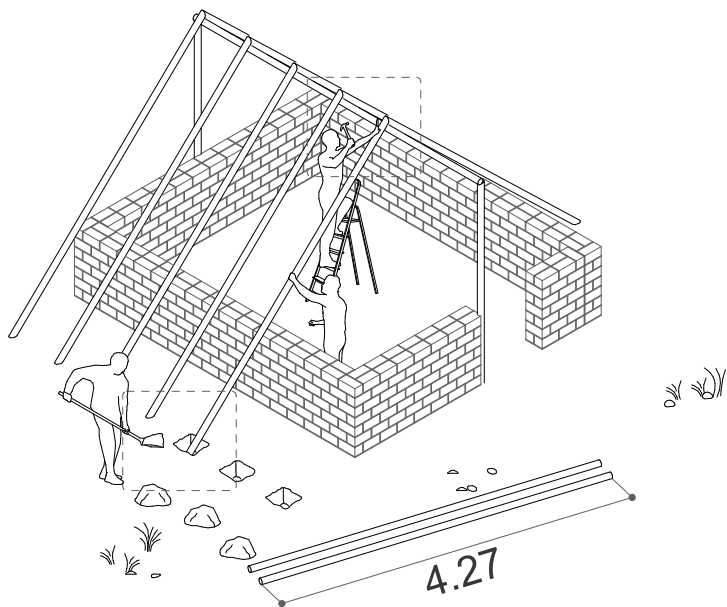
Make sure the beams is well connected to the pole.



Make the base wall out of masonry.
make the base 4.3 m long 3.75 m wide and
90 cm high.

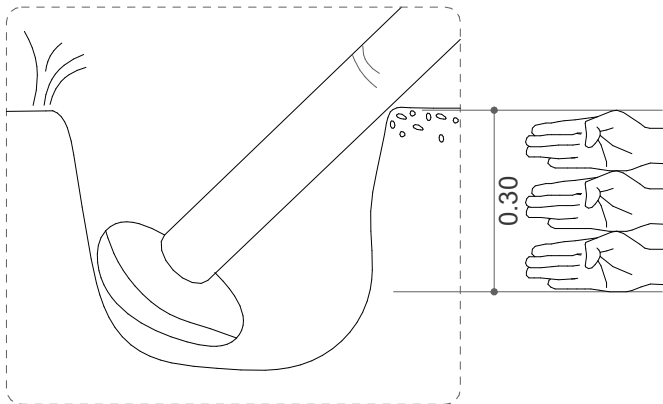


After laying one layer of bricks,
build up the corners to full height.
Then complete the walls.

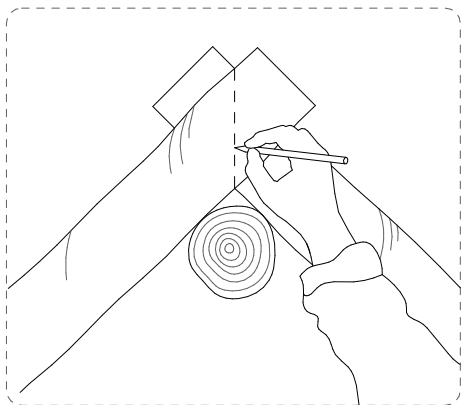


Place and fix the rafters.

1

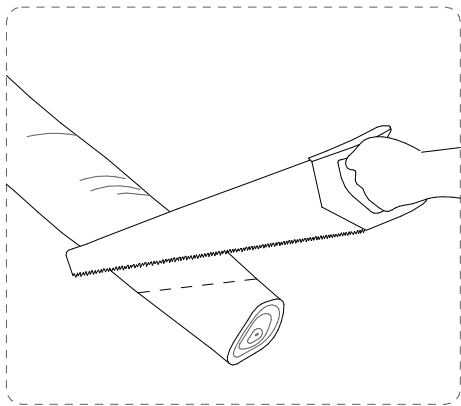


2

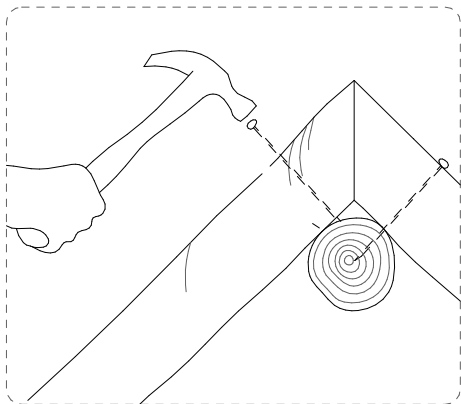


Place the rafters on the stone foundation,
measure and mark their length.

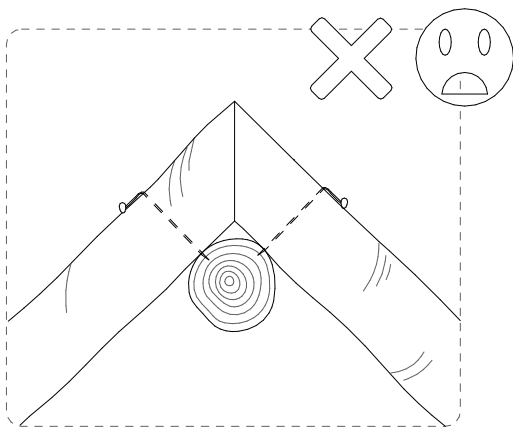
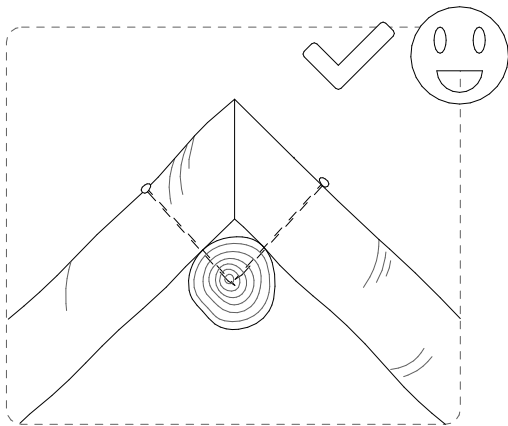
3



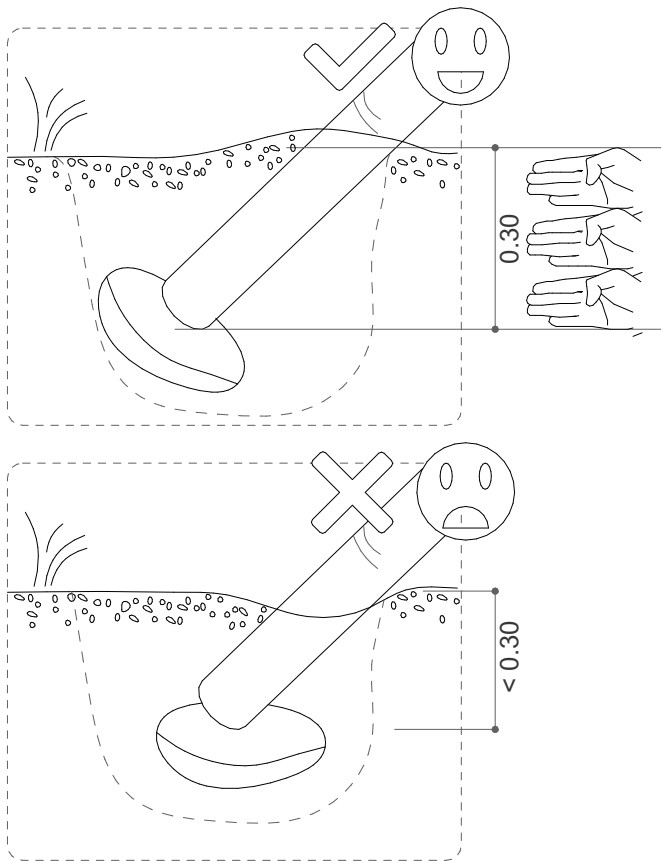
4



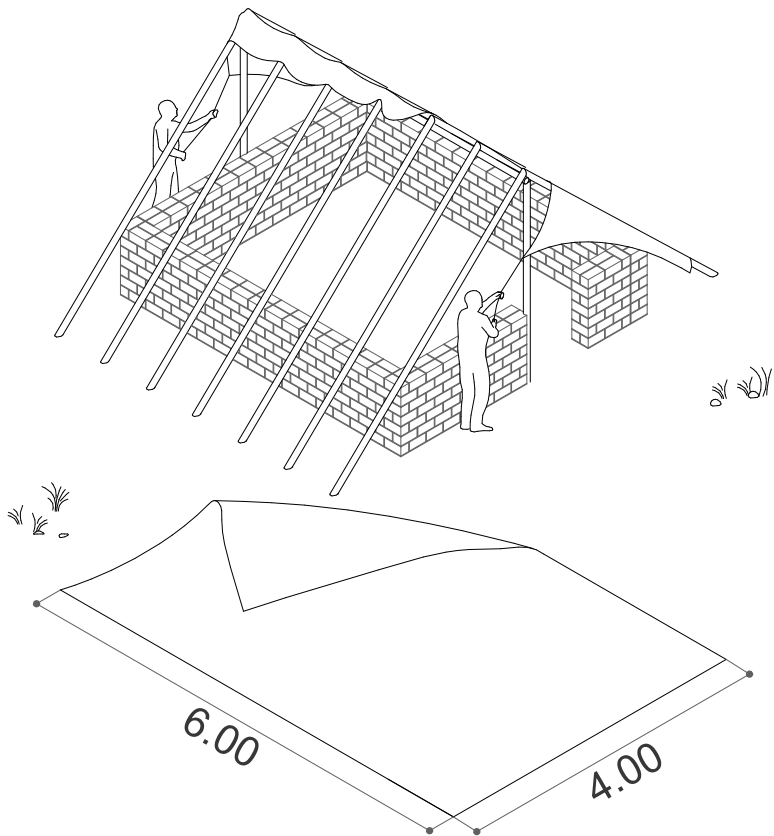
Cut the rafters to length,
and place them back into the hole and fix
them to the ridge beam.



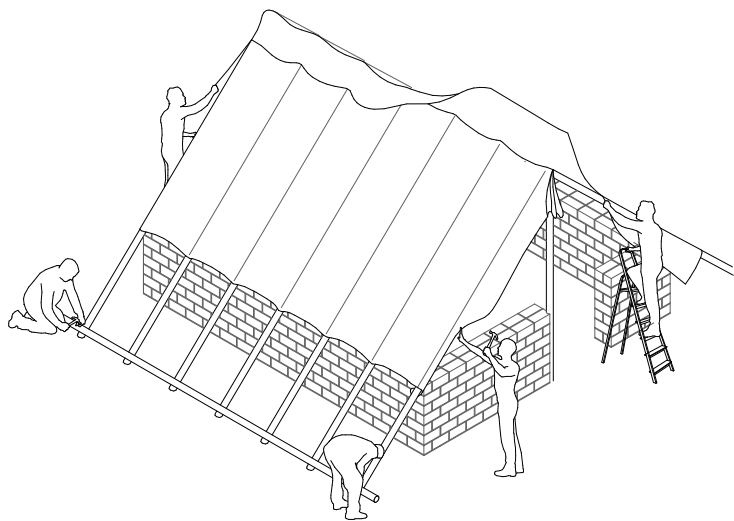
Make sure the rafters are properly fixed to the ridge beam.



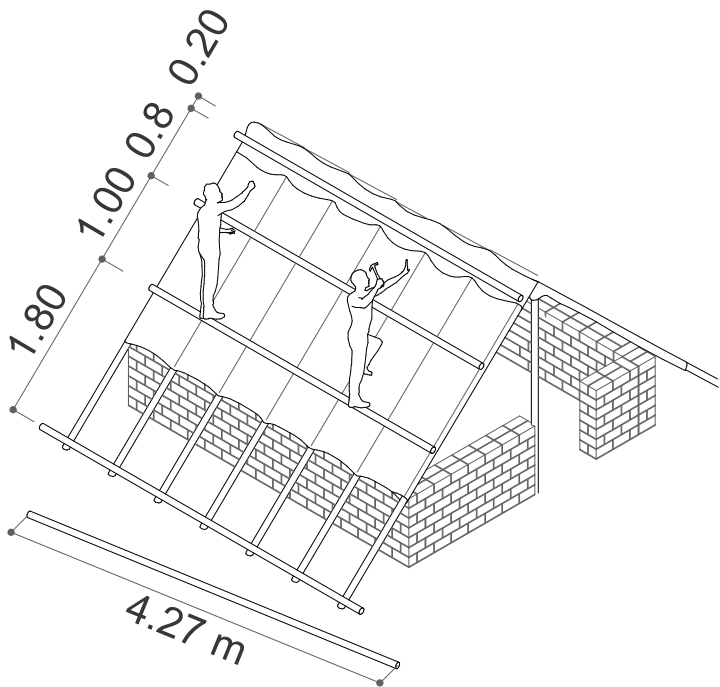
Make sure the foundation is deep enough and water drains away from the wood.



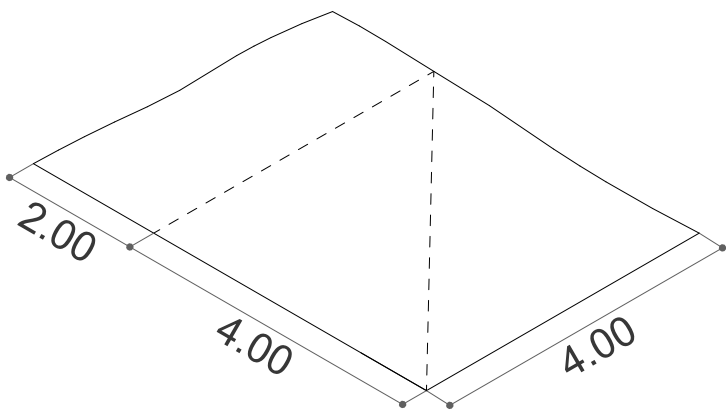
Cover the rafters with two of the plastic sheeting.



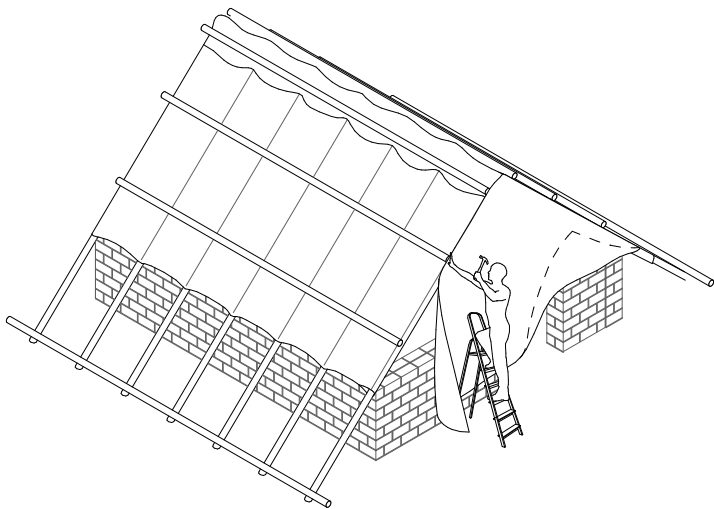
Make sure the sheets overlap on top of the structure.



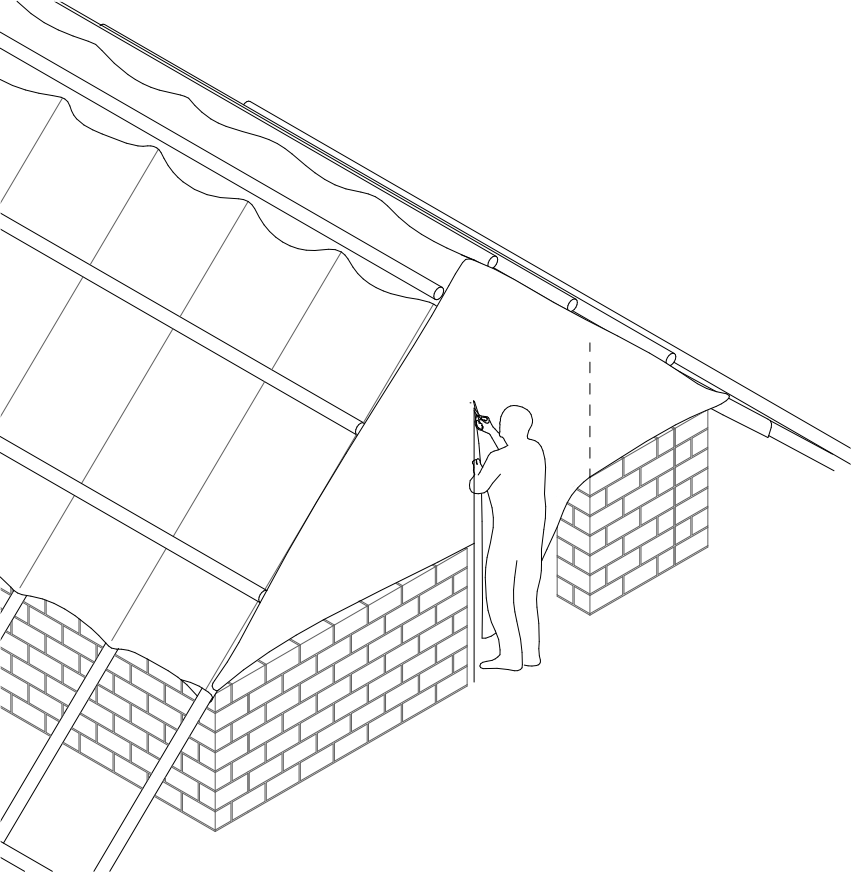
Fix the purlins on top of the plastic sheeting.



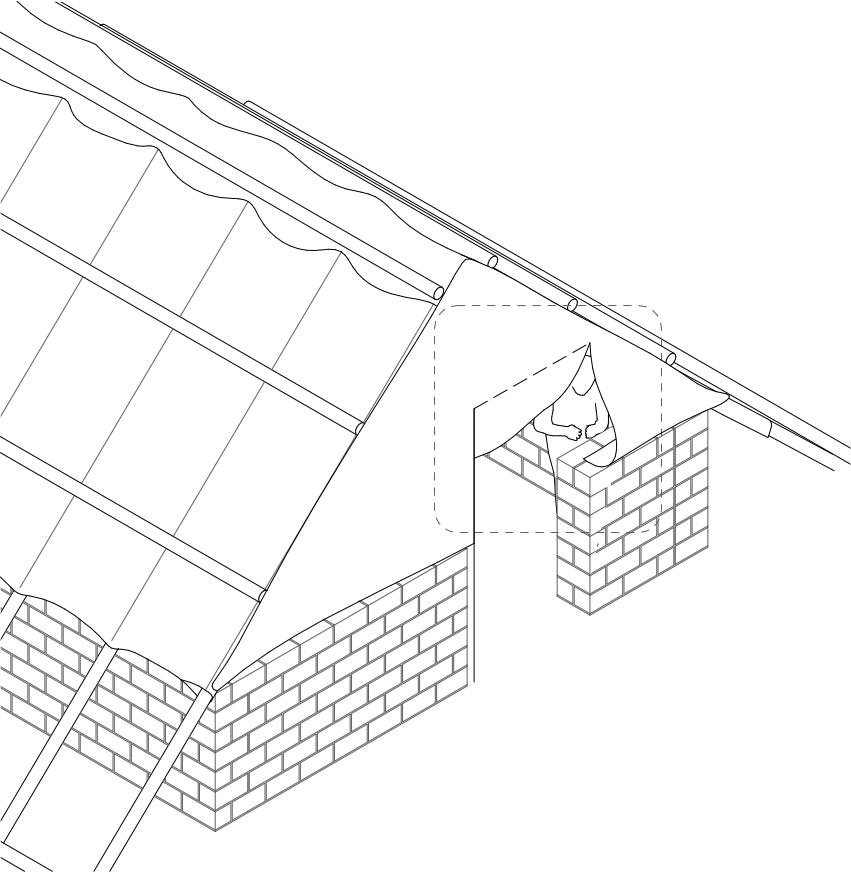
Cut the remaining plastic sheet along the above shown pattern.



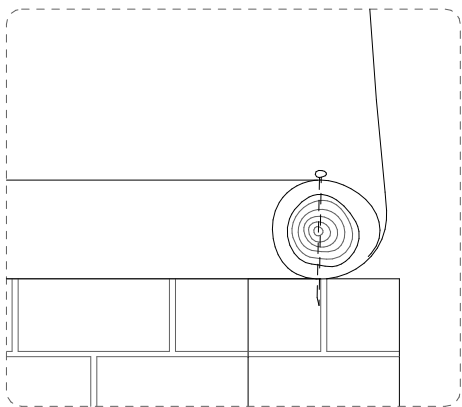
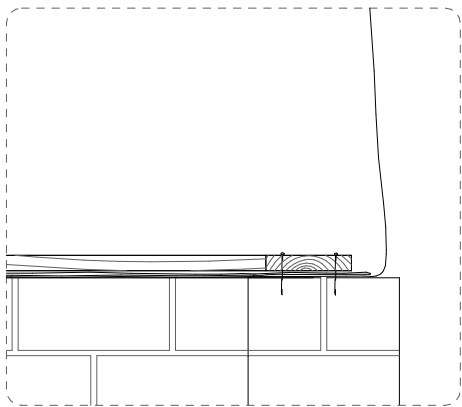
Attach one triangle at the front and one at the back of the shelter.



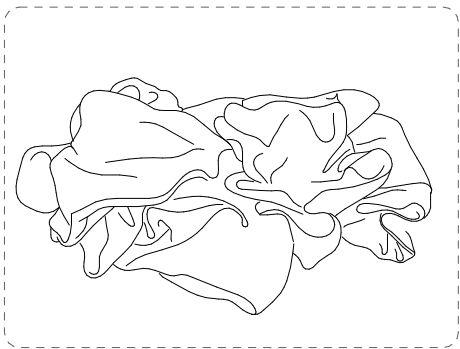
Cut the opening for the door on the front.



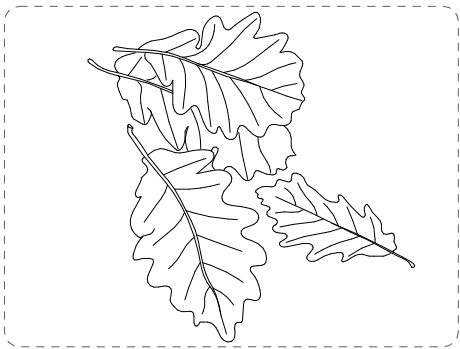
Fix the plastic sheeting onto the brick wall.



Use a piece of wood to fix the plastic sheeting onto the masonry wall

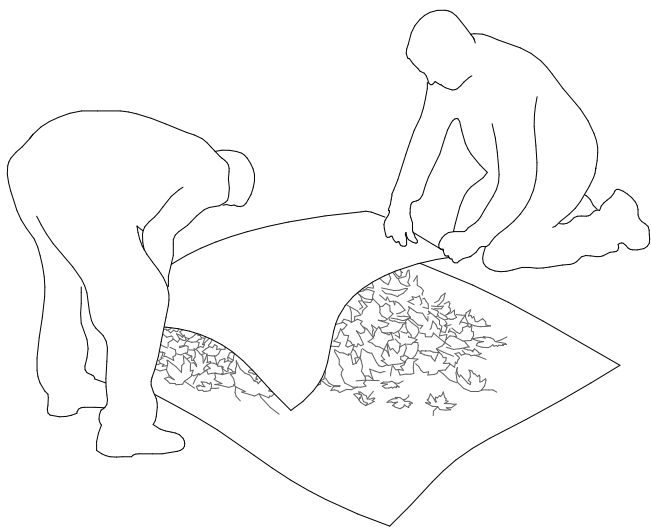


Rags of fabric

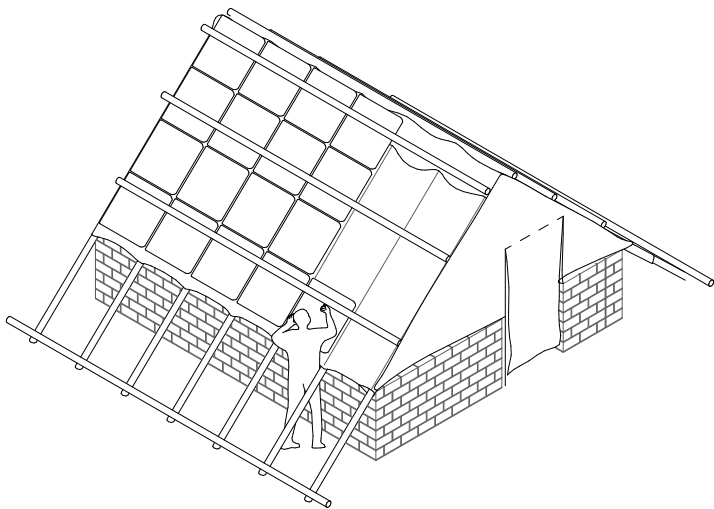


dry leaves or grass

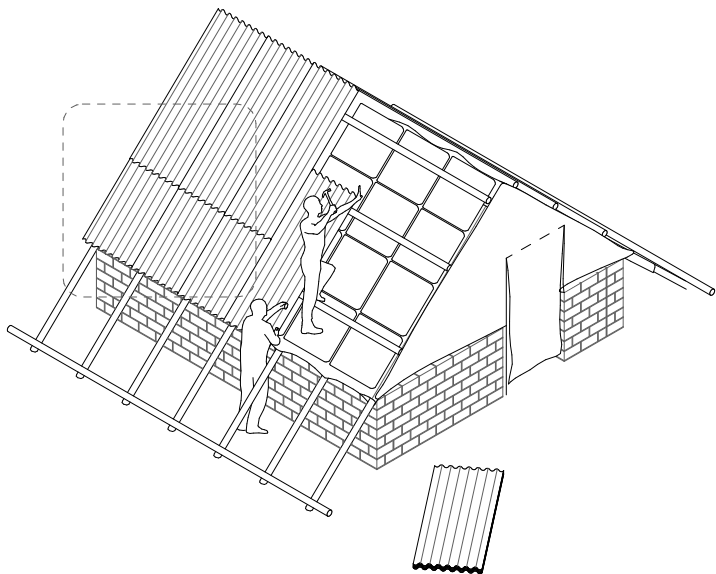
Gather dry plant material and rags to be used as insulation.



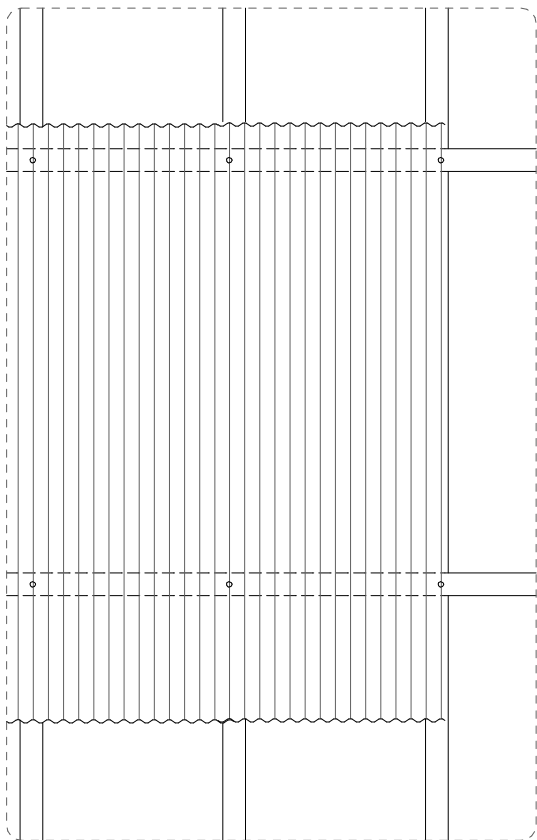
Make packages of insulation material to be put on the roof.



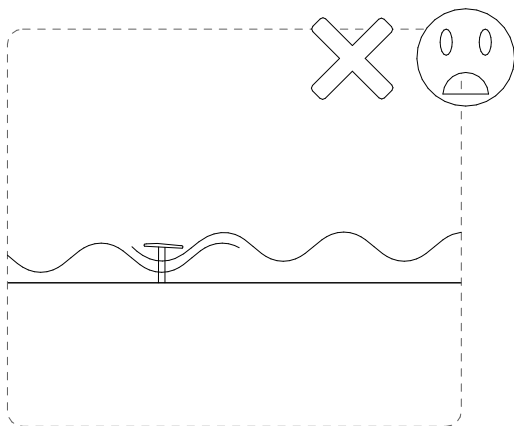
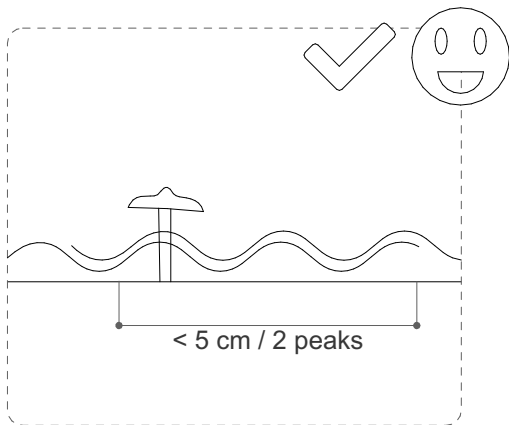
Place the insulation material on the roof between plastic sheeting and purlin.



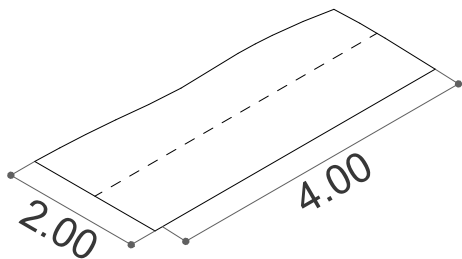
Add the roof sheeting on top of the purlins and nail them to the structure.



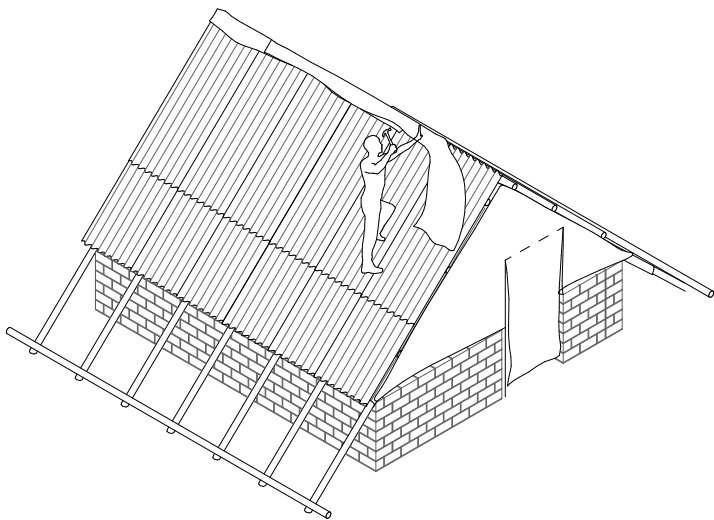
Nail the corrugated metal sheets to the purlins. Start with the lower ones.



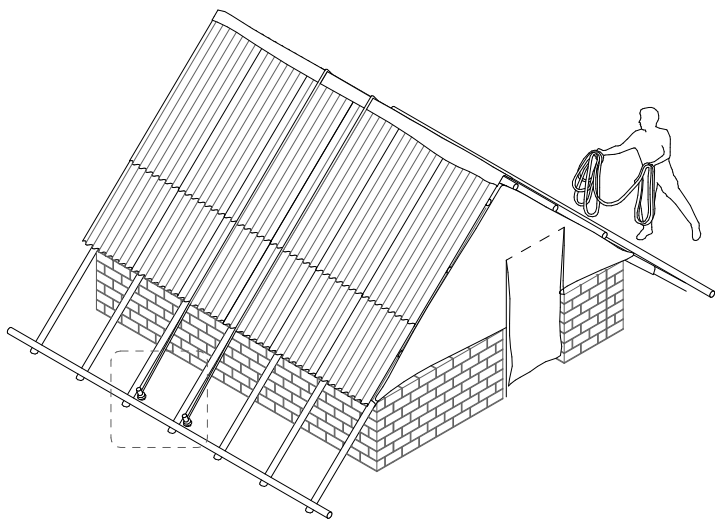
Overlap the sheets.
Use umbrella or twisted roofing nails.



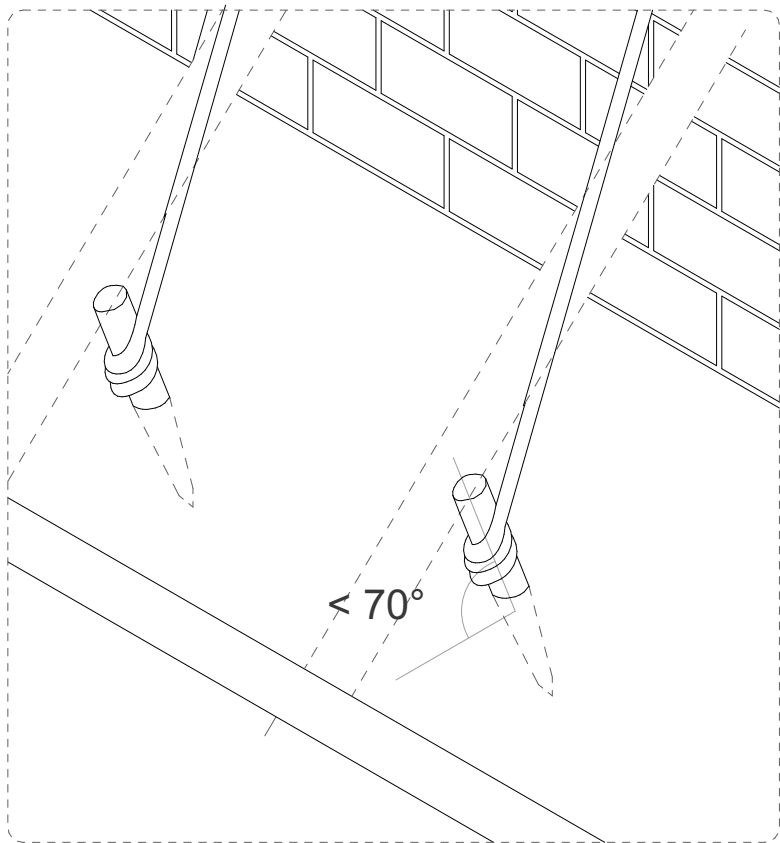
Cut the remaining 4 m long plastic sheeting
in two 1 m wide stripes



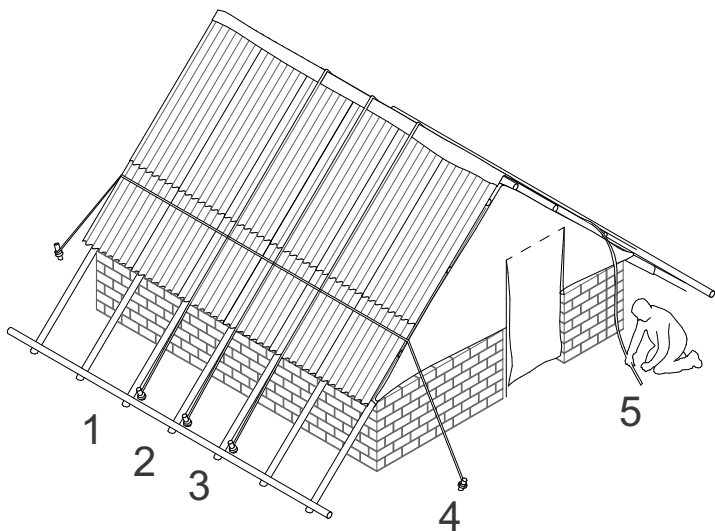
Nail the two strips on top of the roof to cover the gap between the metal sheets



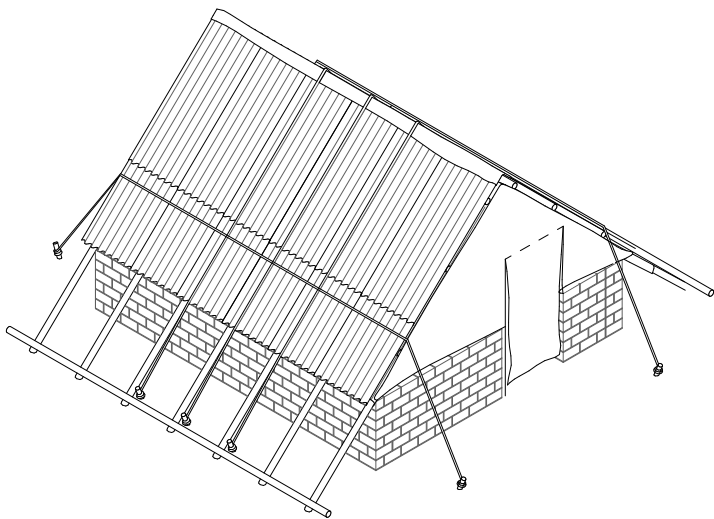
Place three of the guy ropes over the roof.



Tie the ropes to stakes.
Angle the stakes for better support.

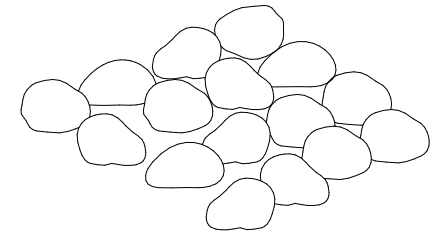


Place the other two guy ropes along the side and tie them down in the same way.

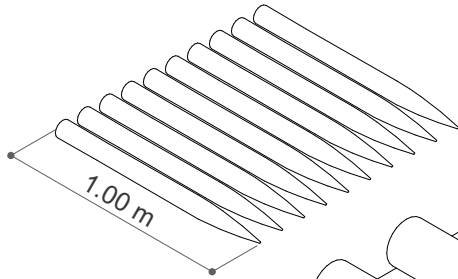


The shelter is finished.

16 x Stone Base
ca. 0.20 x 0.20 x 0.10

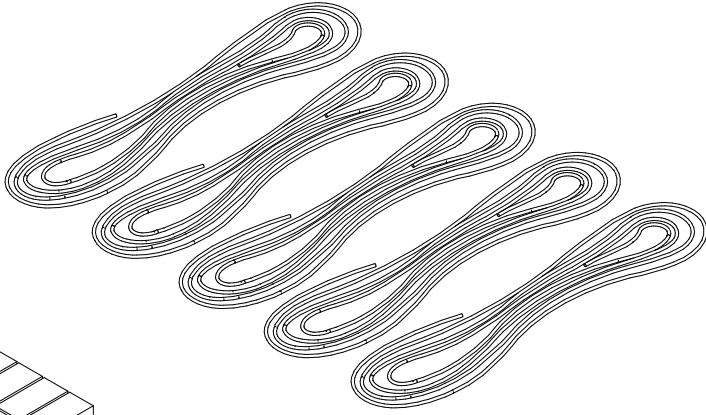
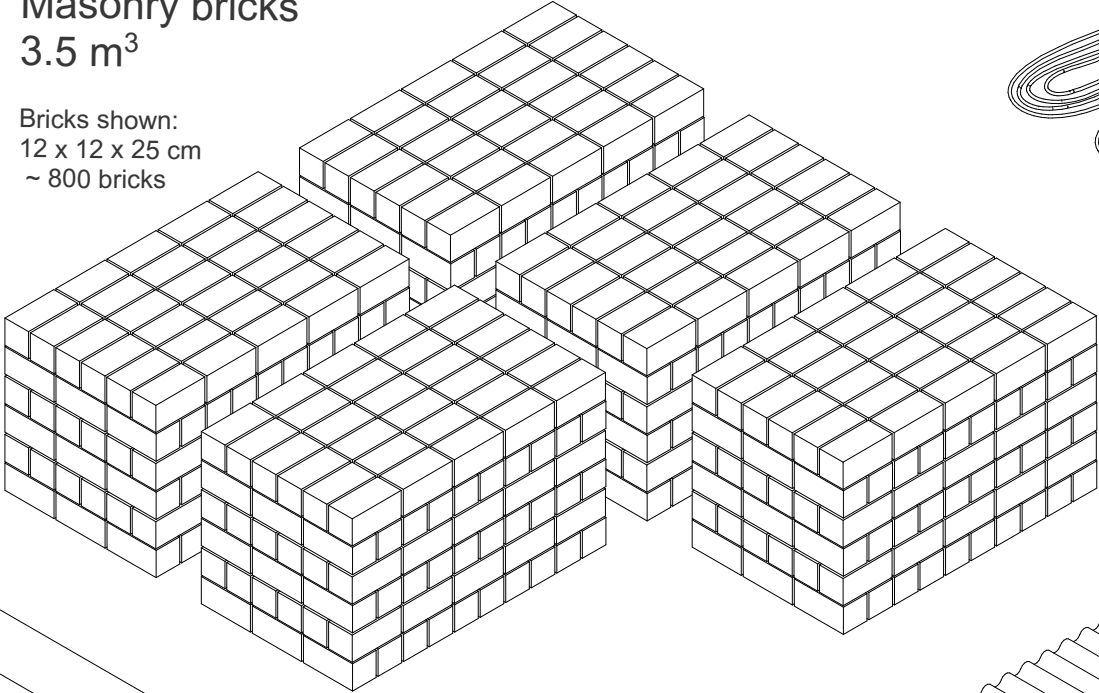


10 x Guy rope stakes
dia. 75 mm, L=1.00 m



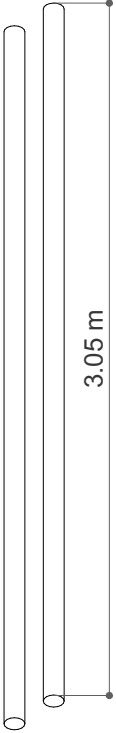
Masonry bricks
3.5 m³

Bricks shown:
12 x 12 x 25 cm
~ 800 bricks

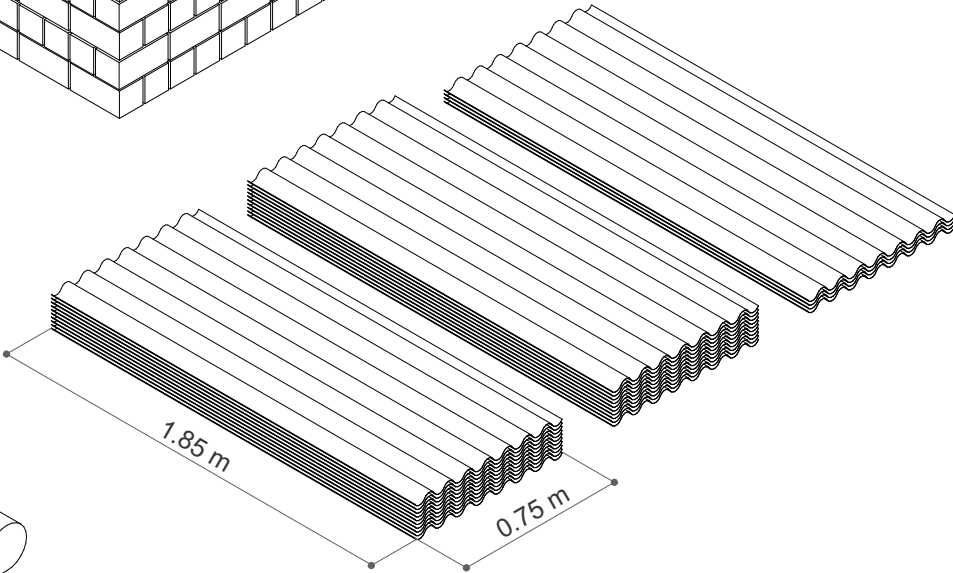
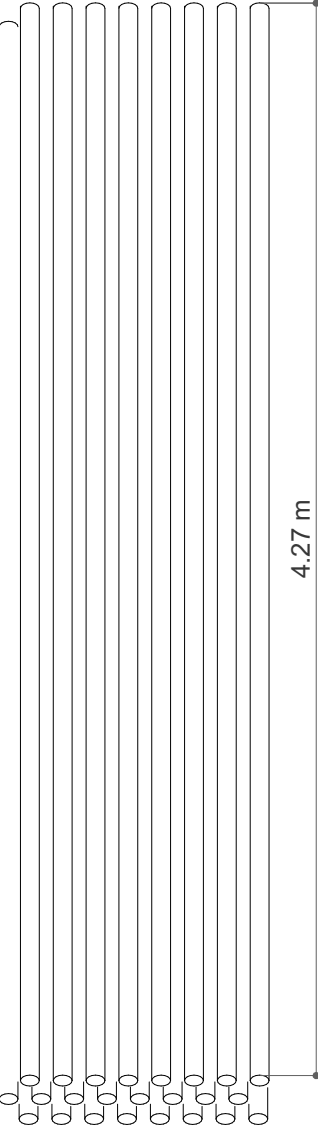


Polyethylene rope
dia. 12 mm, L=50 m

21x Beam
Ridge beam (1), Rafters (14), Purlin (6)
dia. 75 mm, L=4.27 m

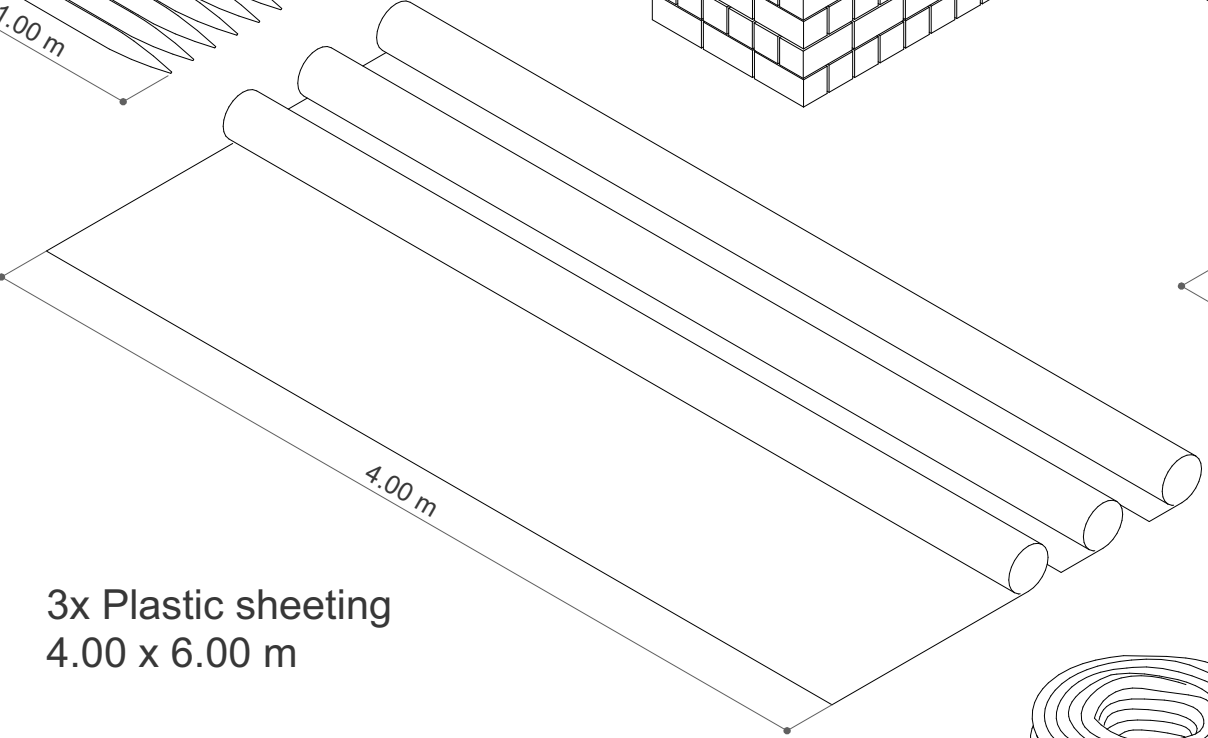


2x Vertical columns
dia. 75 mm, L=3.05 m

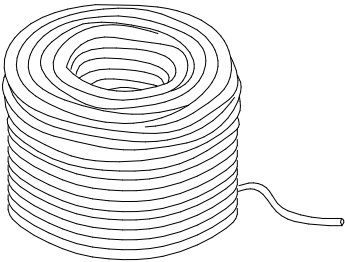


24x Roof sheeting
1.85 x 0.75 m

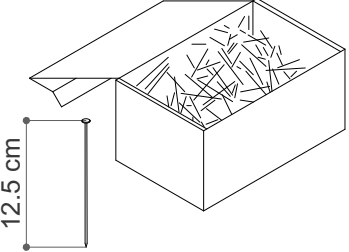
3x Plastic sheeting
4.00 x 6.00 m



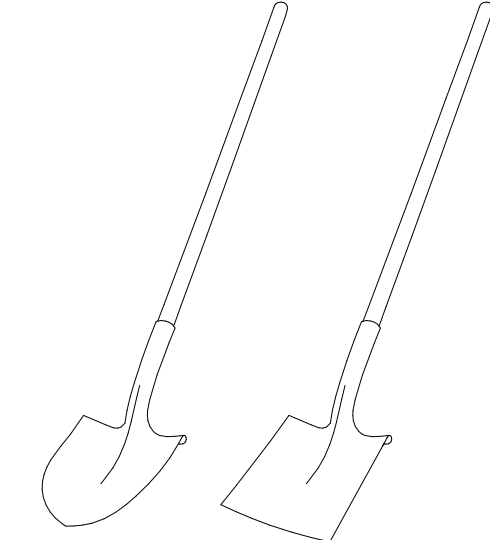
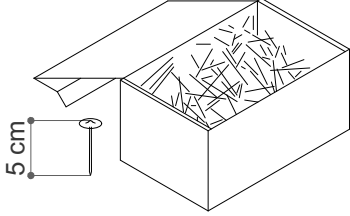
Additional rope
dia. 9.4 mm, L=100 m



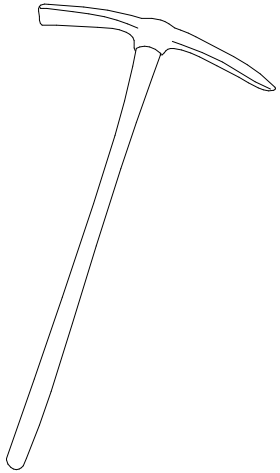
1 kg Carpenter nails
40d, 12.5 cm



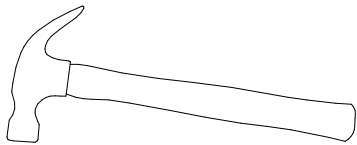
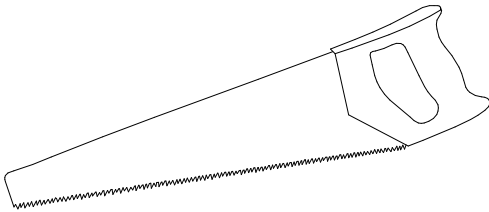
1 kg Umbrella nails
6d, 5 cm



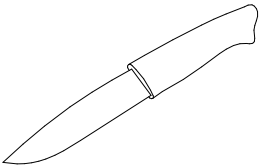
Shovel / Spade / Pickaxe
to dig small holes



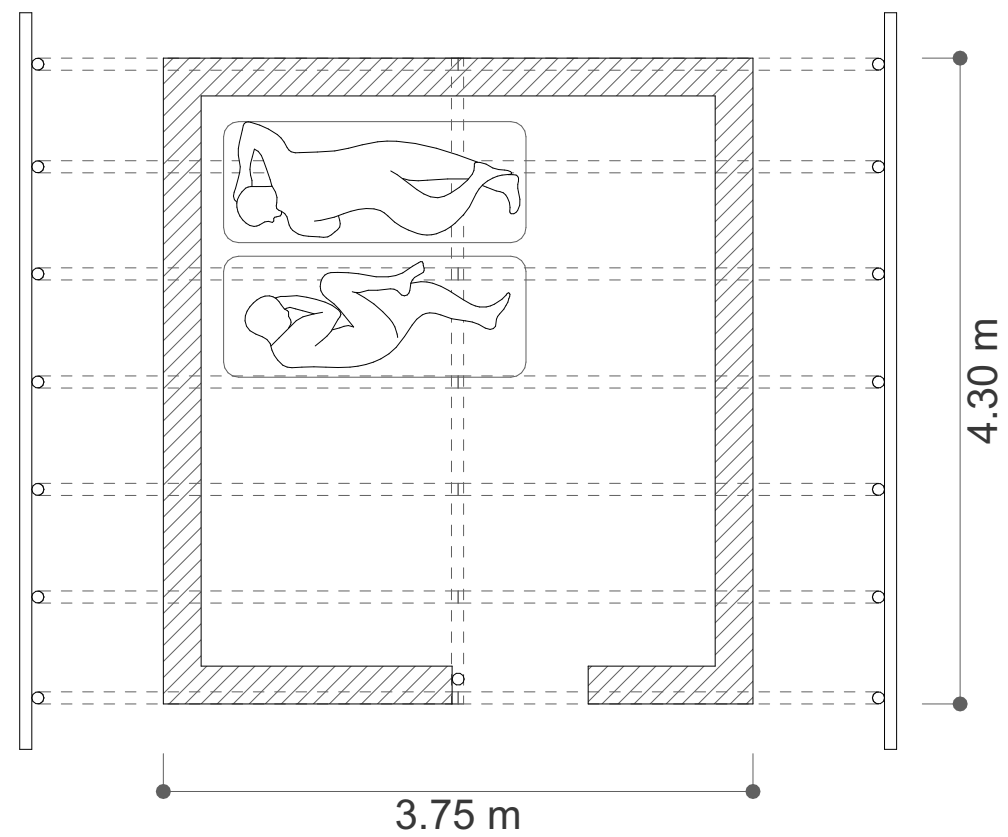
Saw
to cut the wood to the right length



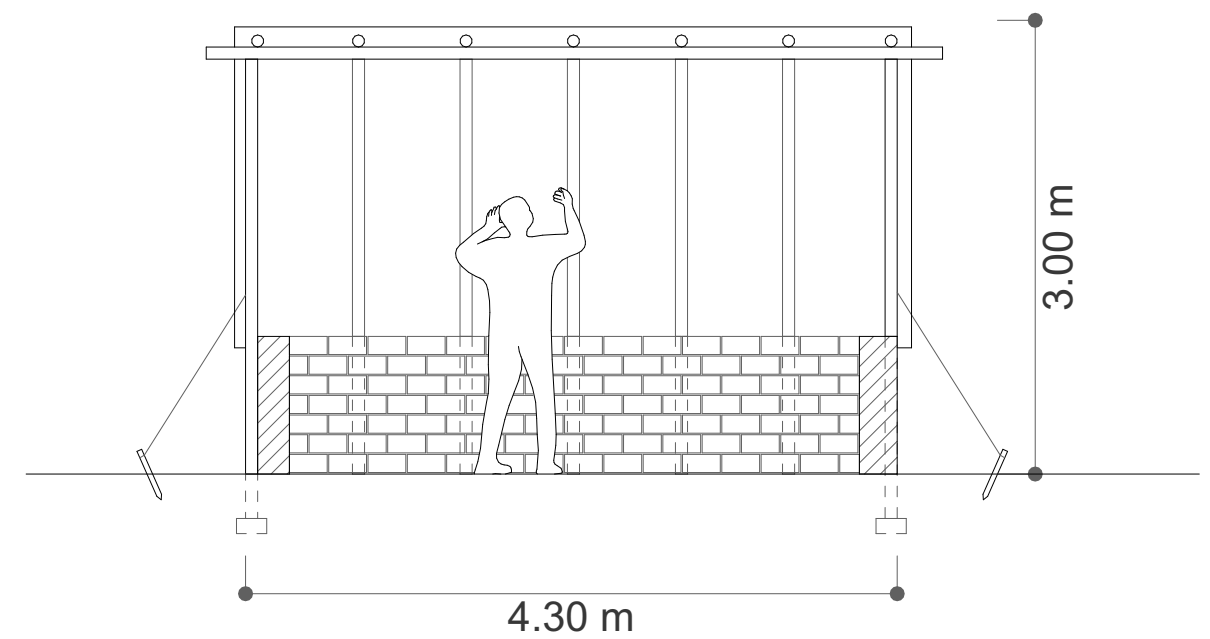
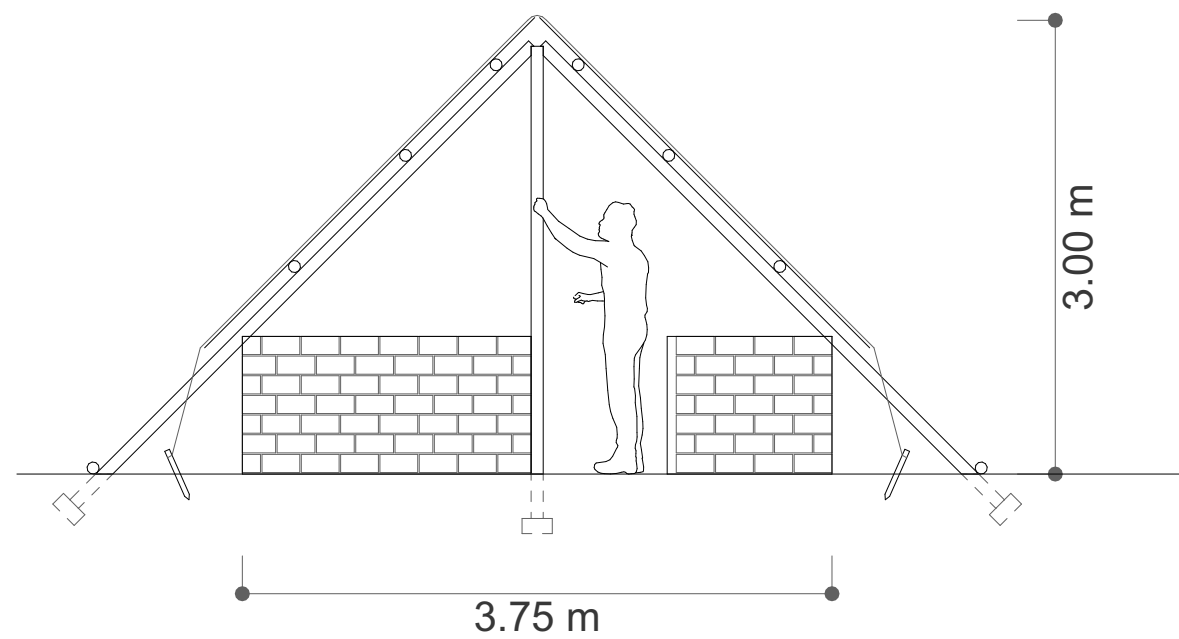
Hammer
to nail different pieces together



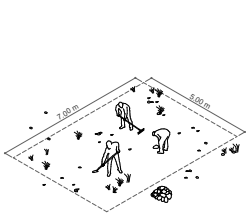
Knife
for cutting fabric and rope



Tent Shelter
by
International Federation of Red Cross and Red Crescent Societies

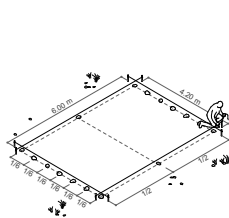


Foundation



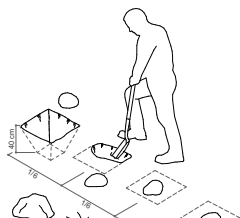
Clean out the a flat area of land, remove all stones, and plants.

1



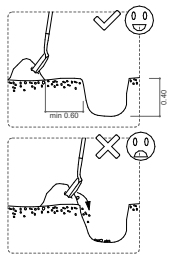
Mark the dimensions of the shelter. Place a stone on each of the marked points.

2



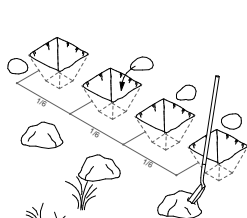
Where you have placed a stone, dig a hole about 40 cm deep.

3



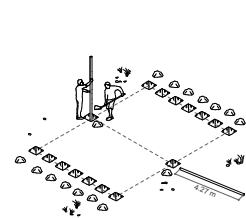
Pile the soil far enough away from the holes to prevent collapse.

4



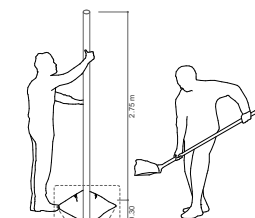
Add a stone base into each hole.

5



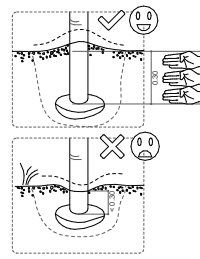
Place the two vertical columns onto the stone base...

6



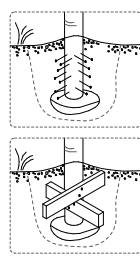
...and fill the hole with soil, about 30 cm of the column should be buried.

7



Make sure the column is well buried and water will drain away from the wood.

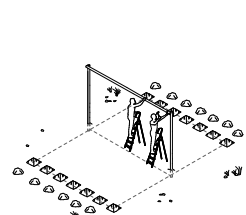
8



If the column is not stable, add nails or a wooden anchor.

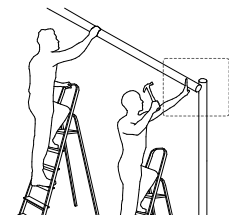
9

Ridge Beam



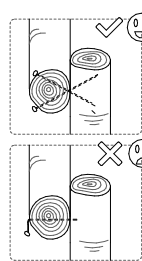
Fix the ridge beam to the vertical columns.

10



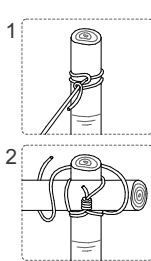
Nail the ridge beam to the column or use ropes, if nails are not available.

11



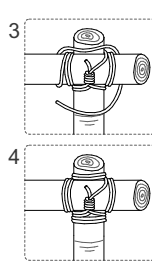
Connect the two posts well. Use at least two nails at an angle.

12



If nails can not be used or are not sufficient, use ropes.

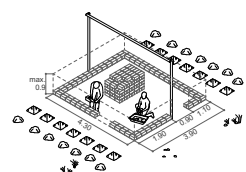
13



Make sure the beams is well connected to the pole.

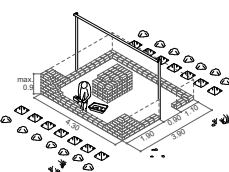
14

Masonry



Make the base wall out of masonry, make the base 4.3 m long 3.75 m wide and 90 cm high.

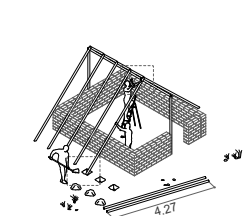
15



After laying one layer of bricks, build up the corners to full height. Then complete the walls.

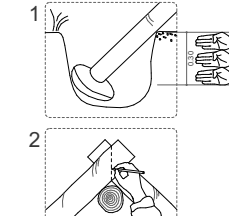
16

Roof Structure



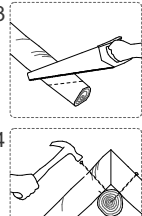
Place and fix the rafters.

17



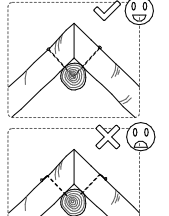
Place the rafters on the stone foundation, measure and mark their length.

18



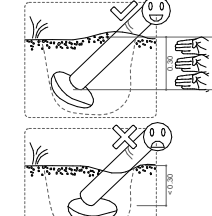
Cut the rafters to length, and place them back into the hole and fix them to the ridge beam.

19



Make sure the rafters are properly fixed to the ridge beam.

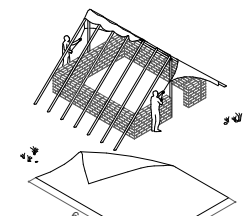
20



Make sure the foundation is deep enough and water drains away from the wood.

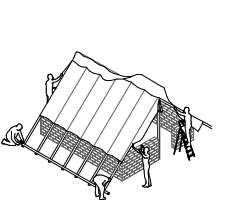
21

Water Proofing



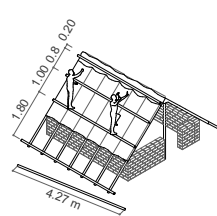
Cover the rafters with two of the plastic sheeting.

22



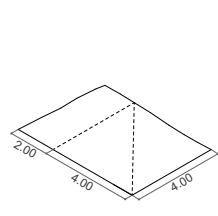
Make sure the sheets overlap on top of the structure.

23



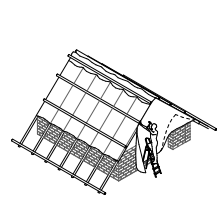
Fix the purlins on top of the plastic sheeting.

24



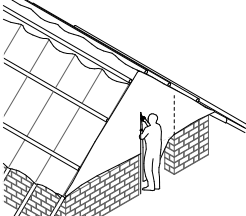
Cut the remaining plastic sheet along the above shown pattern.

25



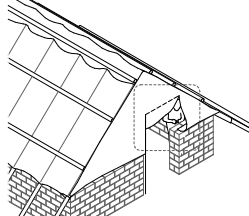
Attach one triangle at the front and one at the back of the shelter.

26



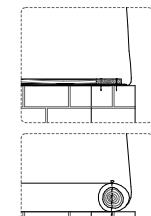
Cut the opening for the door on the front.

27



Fix the plastic sheeting onto the brick wall.

28



Use a piece of wood to fix the plastic sheeting onto the masonry wall

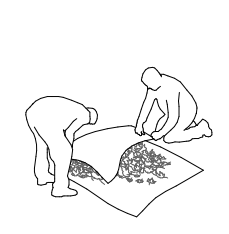
29

Insulation



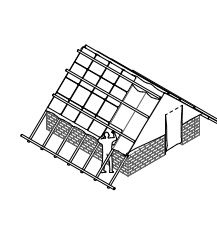
Gather dry plant material and rags to be used as insulation.

30



Make packages of insulation material to be put on the roof.

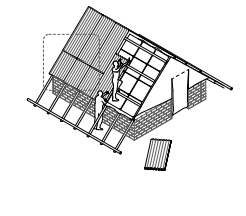
31



Place the insulation material on the roof between plastic sheeting and purlin.

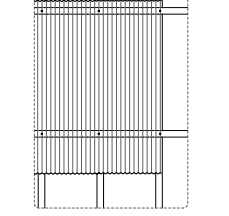
32

Metal Roof



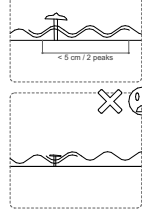
Add the roof sheeting on top of the purlins and nail them to the structure.

33



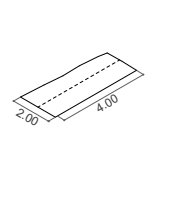
Nail the corrugated metal sheets to the purlins. Start with the lower ones.

34



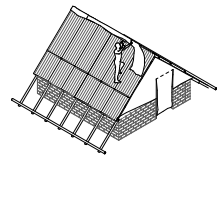
Overlap the sheets. Use umbrella or twisted roofing nails.

35



Cut the remaining 4 m long plastic sheeting in two 1 m wide strips

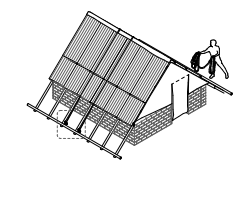
36



Nail the two strips on top of the roof to cover the gap between the metal sheets

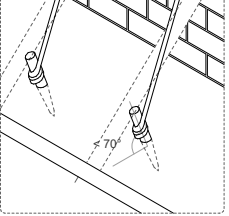
37

Guy Ropes



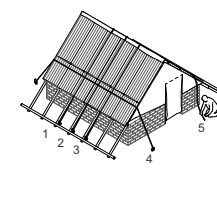
Place three of the guy ropes over the roof.

38



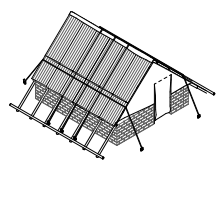
Tie the ropes to stakes. Angle the stakes for better support.

39



Place the other two guy ropes along the side and tie them down in the same way.

40



The shelter is finished.

41