

# Step-by-step guide to CSW house construction

## Foundations

- 1<sup>st</sup> Row -

### Layout, Digging

- 5 workers -  
- 1 day -

### CSW Cages

- 5 workers -  
- 1 day -

### Rock Fill-in

- 4 workers -  
- 2 days -



Layout the building using the Pythagore rule (3-4-5).



Dig your foundation 70cm deep and 80cm wide.



Level the foundation using a water pipe then compact the soil.



Place plastic sheet to prevent infiltration of water on ground level.



Place the first row of wire mesh cages.



Twist the cages in the corners together (side and bottom part).



Fill in until half way the first row with hand-size rocks.



Ligature each cages to avoid deformation with the weight of walls.



Finish filling the cages, level the row with gravels, fix the top layer.

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## Foundations

- 2<sup>nd</sup> Row -

### CSW Cages

- 5 workers -  
- 1,5 day -

### Rock Fill-in

- 5 workers -  
- 2 days -

### Twisting

- 1 workers -  
- 1 day -

### Ligature

- 2 workers -  
- 2 hours -



Stich the cages with the top layer.  
Stich with X shape on the corners.



Fix temporarily the second row of cages with 2mm GI wire.



Dig 15cm deep trenches every 30cm around the foundations.



Twist 1<sup>st</sup> row, top layer and 2<sup>nd</sup> row together at trenches location.



Twist the sides of cages where there is the overlape.



Before closing the top layer, place the door sill, trapped into the cage.

## Wall

- 3<sup>rd</sup> to 6<sup>th</sup> Rows -

### CSW Cages

- 5 workers -  
- 1 day/Row -

### Rock Fill-in

- 5 workers -  
- 2 days/Row -



Continue to rise the building adding the next rows.



Fix the frame of openings. They should be trapped inside the cages.



Rise the building until lintel level.

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## Lintels level

- 6<sup>th</sup> Row -

### Fixing, Leveling

- 5 workers -  
- 1 day -



Level 6th row, fix 7th row cages. Cut wires when necessary to place lintels.



Place 3 lintels by windows and 4 by doors. Level and strongly attach.



Place appropriate rocks between lintels.

## Tie Band

- 7<sup>th</sup> Row -

### Fixing, Leveling

- 5 workers -  
- 0,5 day -



Fill 7<sup>th</sup> row until half level. Ligature.



Open cages in order to place the tie band. Level.



Reinforce the corner with wooden pieces.

## Floor structure

- 7<sup>th</sup> Row -

### Wood preparation

- 5 workers -  
- 3 day -

### Fixing, Leveling

- 5 workers -  
- 3 day -



Cut the wires at joists emplacement.



Plug all joists into the tie band.



Connect all the joists and the tie band together by nailing connectors.

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## Finishing CSW

- 7<sup>th</sup> Row -

### Fixing, Leveling

- 3 workers -
- 1 day -



Fix the posts and web truss to the joist using 18mm plywood.



Fill up the 7th row and place the last layer. Cut the layer when needed.



Reinforced with 2mm GI wire where is it needed.

## Roof structure

### Wood preparation

- 5 workers -
- 4 day -

### Roof structure

- 5 workers -
- 5 day -

### CGI Sheets

- 5 workers -
- 1 day -



Fix the plywood connectors to later fix the rafters



Place the ridge beam. Use necessary supports.



Fix the rafters



Fix the purlins then the bracings



Fix the CGI Sheets.



Place the bracing between the surelevation post.

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