

Emergency Shelter Project

UN house / PoC3, Juba

Design, progress and challenges

Shelter/NFI cluster meeting, 5th June 2014

New PoC site

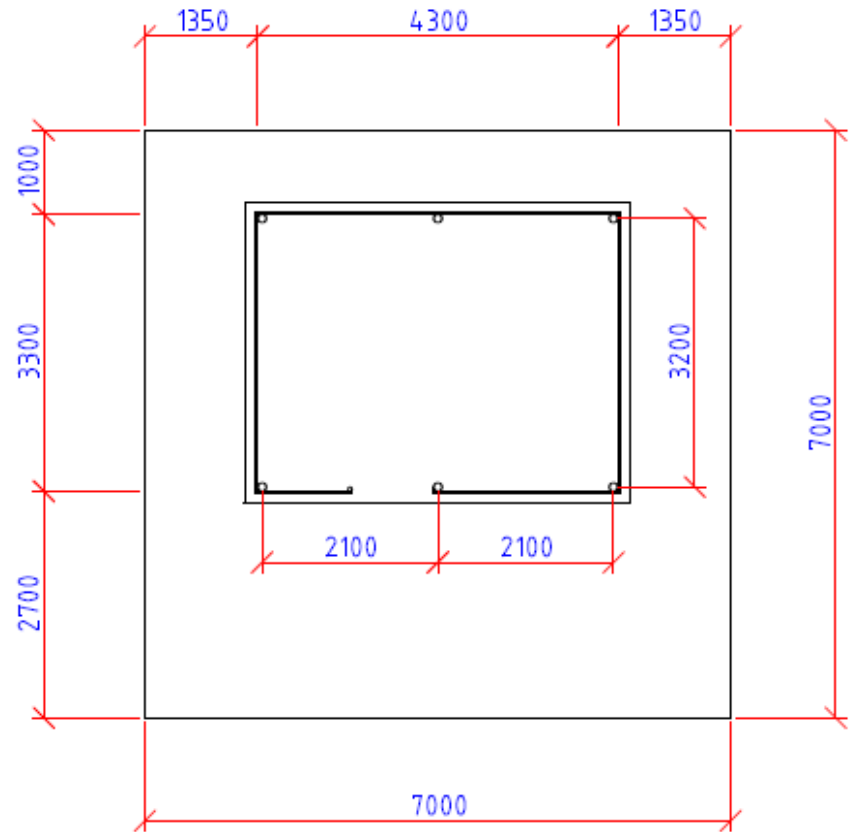
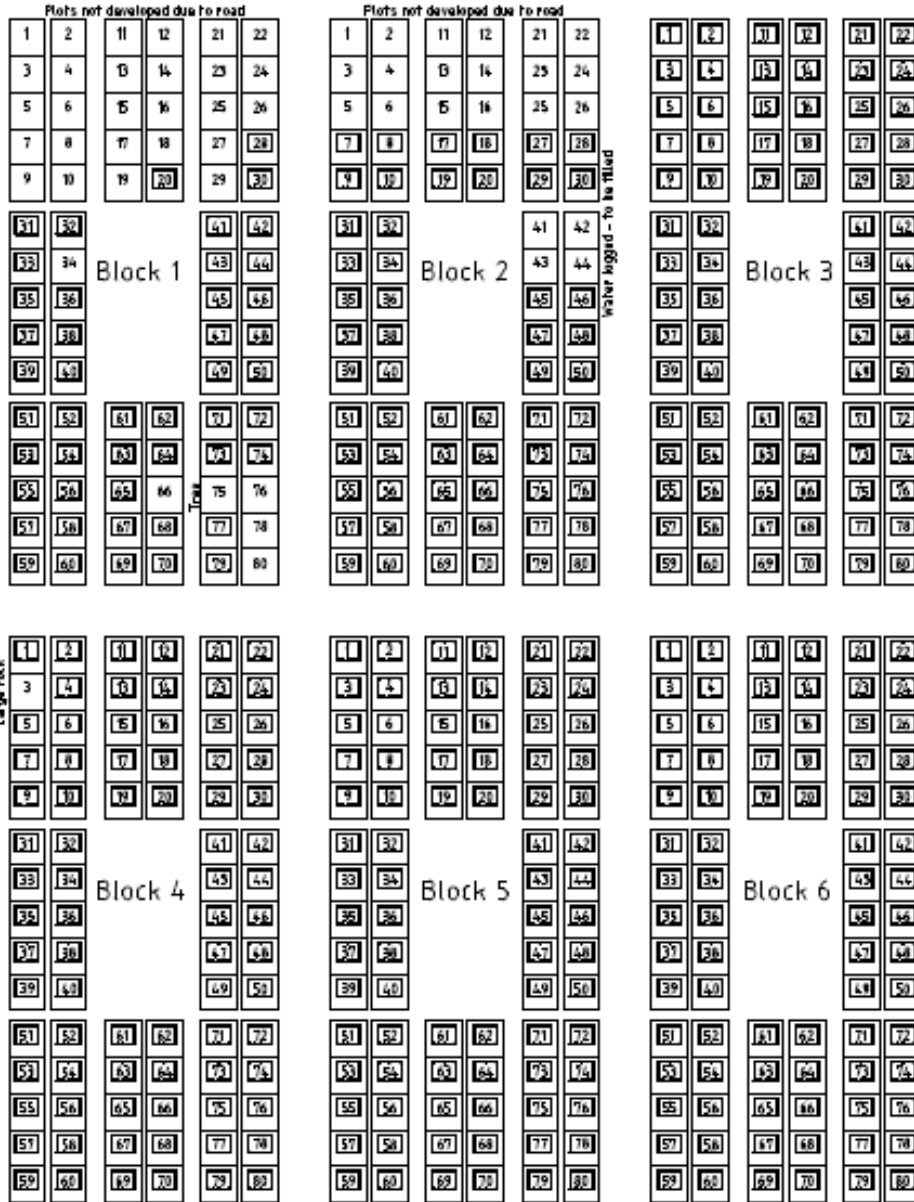
- No buildings on site
- No IDP's on site
- Site cleared and developed
- Layout prepared according to Sphere standards



Site plan, PoC3

Title: Protection of Civilian Area 3 (POC 3)
Location: Adjacent to UN House
Date: 16 th April 2014
Scale: 1mm to 4 m
Designed by: Ariyo Cummings, Site Planner, UNHCR

Block/plot layout



Shelter designs



1. Curved roof (from PoC1)



4 samples done by NRC team

2. «Mingkaman style»



3. Gable roof

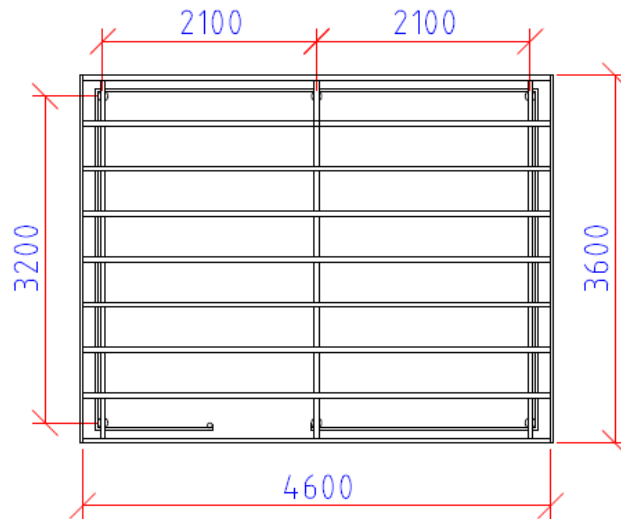
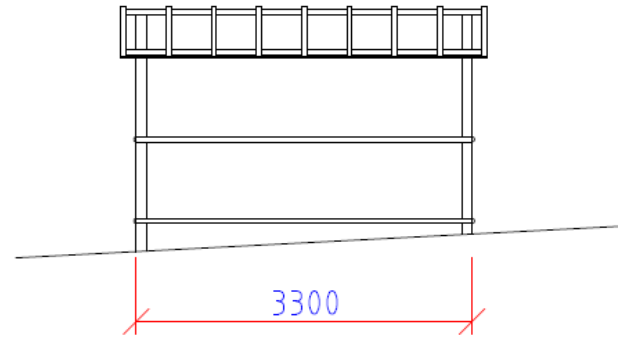
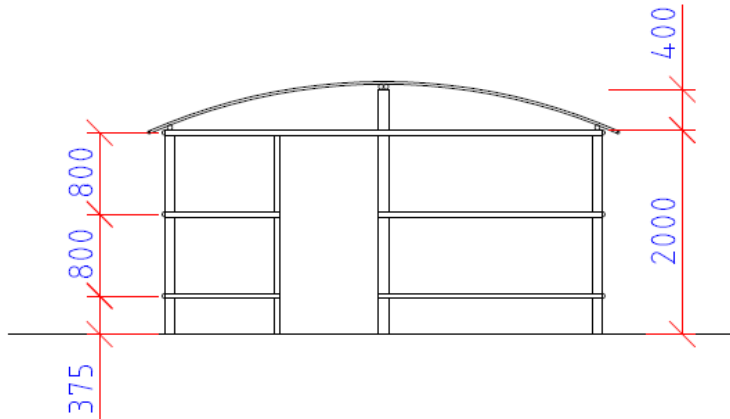


4. Slope on one side

Comparison of designs

No	Description	Unit	Qty from pipeline	1. Round roof	2. "Mingkaman type"	3. Gable roof	4. Slanting roof
1	Poles	Pcs	6	6	6	6	6
2	Bamboo	Pcs	20	37	37	45	39
3	Rubber rope	Bundle	1	1	1	1	1
4	Nylon rope	Meter	30	30	30	30	30
5	Roofing nails 2,5"	Pcs	0	83	79	79	65
6	Plastic sheets	Pcs	2	3	2,5	3	3
7	Sand bags	Pcs	36	42*	42*	42*	42*
	* The number of sandbags will depend on the nature of the ground. 42 is the maximum number and most shelters in PoC3 will not need this.		Advantages:	<ul style="list-style-type: none"> • Water drain off the roof due to the curved surface • The overhang keeps water off the walls • The roof design resist wind and heavy rain 	<ul style="list-style-type: none"> • Roof construction is strong. • Using less plastic sheets than other designs. 	<ul style="list-style-type: none"> • The roof is strong due to the use of whole bamboos without splitting them. • The overhang keeps water off the walls 	<ul style="list-style-type: none"> • The shelter is easy to construct and requires less time for construction. • It consumes less materials.
			Disadvantages:	<ul style="list-style-type: none"> • Time consuming in construction due to split bamboos for roof. • Cutting plastic sheet to fit gable ends walls. 	<ul style="list-style-type: none"> • Construction of roof is time consuming and requires technical competency. • Sharp ends on the roof construction can easily puncture the plastic sheets. 	<ul style="list-style-type: none"> • Construction is time consuming to fit ends of bamboo along the ridge. • It consumes more bamboo because rafters are whole bamboos. • Cutting plastic sheet to fit gable ends walls. 	<ul style="list-style-type: none"> • The roof can easily log water if the slope is not sufficient and to get desired levels require technical skills.

Chosen shelter design



Construction process

Target: 3750 shelters – constructed in 2 phases

Phase 1:

- 400 shelters constructed by a contractor
- 85 construction workers from Tongping will be relocated to PoC3 and trained to continue frame construction for 3350 shelters (dig holes, construct frames with poles, bamboo, ropes and nails).
- NRC has a team of 8 shelter staff who will supervise progress, quality and use of materials.

Construction process cont.

Phase 1 – progress plan:

- 40 teams of 2 persons
- Each team will construct 4 shelter frames per day.
- 800 shelters per week.
- Approx. 5 weeks for completion of frames

(if all goes according to plan 😊)



Construction method cont.

Phase 2:

- IDPs will receive 2 plastic sheets to cover their shelters, and sand bags and marram to elevate/level the floors.
- The most vulnerable IDPs will be assisted with plastic sheet covering and elevation of floors.
- Progress will depend on the relocation schedule from Tongping to PoC3.



Challenges

- Quantity of materials in standard kits.
- Quality of work – level of supervision required.
- IDP's may not bring materials from Tongping to supplement the standard kit
- Correct use of sandbags, elevation of floors, digging of drainages.



Thank you!

