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Year: 2019 Location: Kenya Program:

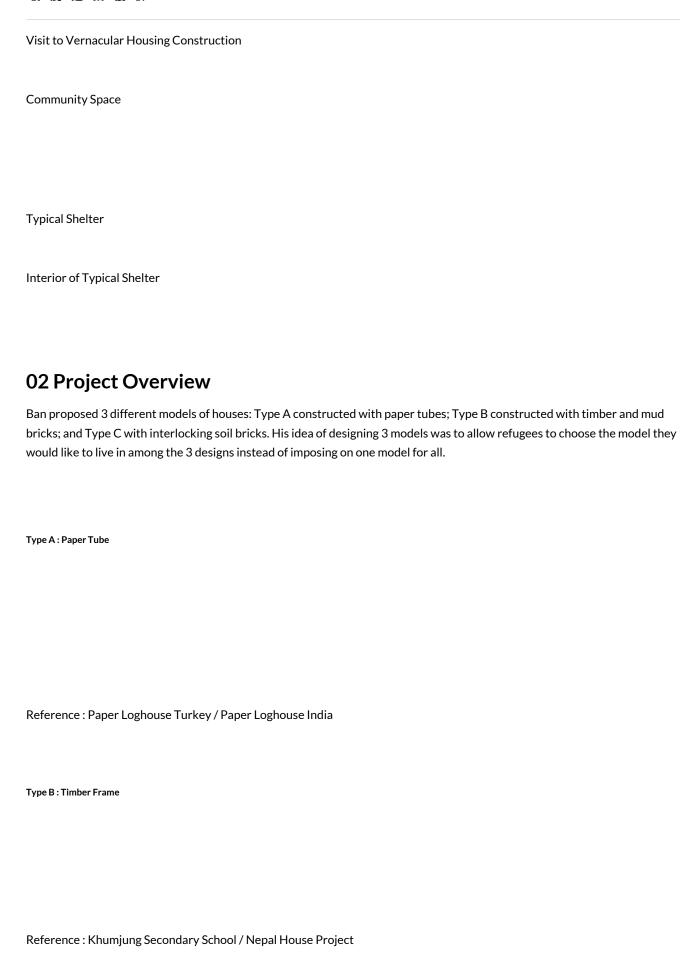
Supporting Planning In Kalobeyei Settlement, Kenya



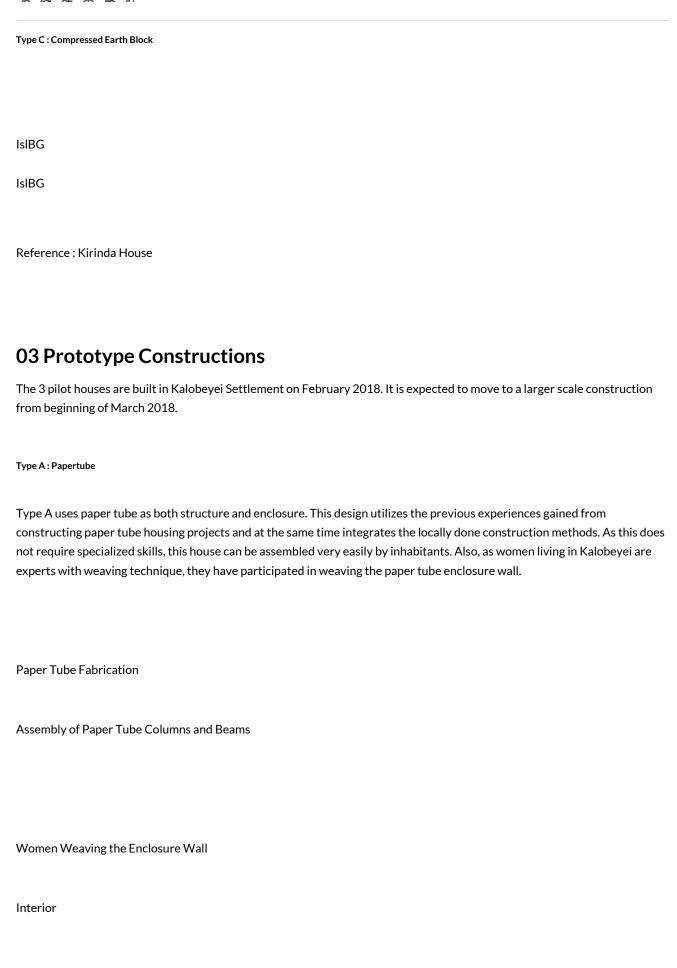
01 Site Visit

In March 2017, UN Habitat presented a major urban planning project for Kalobeyei refugee camp to Turkana County in Northern Kenya. With over 17,000 refugees arriving from countries such as South Sudan, the new settlement was in urgent need for shelters. Thus, in June, the UN program organization contacted Shigeru Ban to design a model for permanent shelters for their planning project in Kalobeyei Settlement. Shigeru Ban visited Kalobeyei Settlement to discover the site and its potential. During his visit, Ban studied about the local houses and its construction techniques, as well as the locally available materials.





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Completion of Type A
Type B: Timber Frame
Type B uses modular system of timber walls as the main structure. This system of earthquake-resistant structure was first
used in Nepal Project after the large scale earthquake in 2015. As timber frames are all pre-assembled, construction can be
done very quickly. Once the timber frames are in place, inhabitants can participate in infilling the frames with bricks for
enclosure.
Timber Frame Assembly
Completion of Timber Framework
Interior
Preparation for Brickwork
Brickwork to Infill the Frame
Completion of Type B
Type C : Compressed Earth Block
$Type\ C\ uses\ compressed\ earth\ blocks\ (CEB)\ as\ both\ structure\ and\ walls.\ These\ interlocking\ blocks\ are\ pressed\ using\ local\ soil\ pressed\ pressed\ using\ local\ soil\ pressed\ presse$
mixture nearby the site. This system was also used in Kirinda Reconstruction Project in Sri Lanka.



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Stacking of Compressed Earth Blocks 1
Stacking of Compressed Earth Blocks 2
Completion of Type C
04 Site Visit2
In March 2017, UN Habitat presented a major urban planning project for Kalobeyei refugee camp to Turkana County in Northern Kenya. With over 17,000 refugees arriving from countries such as South Sudan, the new settlement was in urgent need for shelters. In July 23rd, Shgieru Ban visited Kakuma camp and checked the completed prototypes. Besides the prototypes that have bee already completed so far, Shigeru Ban has also checked the new prototype houses, referring to the houses made of tree branches commonly seen in South Sudan and also adapting the timber frame house to have enlarged living space.
Photo : Takeshi KUNO
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Photo : Takeshi KUNO
Photo : Takeshi KUNO
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05 Construction Procedure + Prototype Constructions 2
- The construction of 8 houses at Kalobeyei
In March 2017, UN Habitat presented a major urban planning project for Kalobeyei refugee camp to Turkana County in Northern Kenya. With over 17,000 refugees arriving from countries such as South Sudan, the new settlement was in urgen need for shelters.
Mid-January 2019 UN Habitat started the construction of 8 houses based on a layout with 2 separate rooms adapting the timber frame house to have enlarged living space. The work should be completed at the end of August.
Timber Frame Fabrication
Timber Frame Assembly
Completion of Timber Framework
Exterior
Latest Procedure
The construction of 8 houses at Kalobeyei In March 2017, UN Habitat presented a major urban planning project for Kalobeyei refugee camp to Turkana County in Jorthern Kenya. With over 17,000 refugees arriving from countries such as South Sudan, the new settlement was in urgen leved for shelters. Alid-January 2019 UN Habitat started the construction of 8 houses based on a layout with 2 separate rooms adapting the imber frame house to have enlarged living space. The work should be completed at the end of August. Timber Frame Fabrication Timber Frame Assembly Completion of Timber Framework

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Supporting Planning In Kalobeyei Settlement, Kenya https://shigerubanarchitects.com/works/paper-tubes/kenya/

To show the construction method to UN-Habitat, we built the prototype similar to the houses under construction in Kalobeyei with the timber frames and brick infills in Nairobi June 2019. It took us 7 days with skilled people. We are going to rebuild it in several months as a community center in a slum in Nairobi.

Timber Frame Fabrication	
Timber Frame Fabrication	
Timber Framework	
Brickwork to Infill the Frame	
Completion	