## Healthy Housing for the Displaced Transitional Shelters

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https://www.hhftd.net/

"The objective is to lay alongside the necessary emergency/reactionary approach, a scientific one, where materials and form are co-debated, tested in a laboratory setting, then under field conditions, and then rolled out physically or as guidance."

- **RO1:** Linked thermal, air quality, and social study in five camps.
- **RO2:** Thermal modelling of existing stock
- **RO3:** Construction of prototypes at the BRP and in-country
- **RO3:** Create optimisation process that will seek to improve living conditions while providing dignified living and customary domestic and intracommunity relations.
- **RO5**: Create a methodology for the future shelters that utilises technological changes and data collected from field responses.



Jordan Year: 2013 Capacity: 150,000 Shelters: 20,000 Day time: 38°C

THE





## **Survey:** Design preferences



Ranking of importance of design consideration

## **Survey:** Shelter adaptations - Azraq



Garden enclosure

Vent pipes blocked/window cut for summer vent shut in winter



Added insulation



'Privacy shade'

## Retrofit Adaptations T Shelter- Azraq Camp, Jordan

















- Can't change appearance
- Ventilate wall cavities
- Bond insulation to inner skin
- Tackle condensation
- Improved ventilation
- Thermal mass
- Windows with shading
- Roof overhang
- Evaporative cooling

Also asked to advise on underground cooling pipes......