

## Case Study

# Humanitarian Demonstration Shelter

Promoting sustainable approaches to disaster recovery – at the BRE Innovation Park



The idea of the shelter is to provide a focus and exhibition space to provide information and understanding of humanitarian shelter and recovery after disasters. This is to inform, educate, and hopefully inspire the general public and construction professionals, and to allow the humanitarian sector to engage with BRE and others working in the built environment.

Providing shelter for displaced people and families is one of the first critical components of disaster relief. Shelters need to be designed for resilience, rapid construction and deployment, but also crucially able to make use of local skills, labour and materials. It is with this in mind that CRS (Catholic Relief Services) and BRE (Building Research Establishment) collaborated to create a demonstration of the techniques and materials that can be used to create an effective humanitarian shelter. How a shelter contributes to the wider humanitarian effort and rebuilding process is also considered.

The shelter exhibition structure was manufactured in Wales and transported as a flat pack to BRE. It was constructed on site by CRS with the support of a team of BRE staff volunteers. It was officially opened by Jamie Richardson from CRS and Deborah Pullen representing the BRE Trust on 17th November 2017.

**"Our collaboration with BRE is designed to create a focal point for demonstration and research in the provision of humanitarian shelters"**

Jamie Richardson, Shelter and Settlements Technical Advisor for CRS.



## Key sustainability & resilience features

The shelter is designed to be occupied by an average family of five, based on Sphere Standards, and covers 17.5 square metres, (minimum space advised). It sits on prefab concrete platforms, and is built with timber, bamboo, concrete and corrugated galvanised iron roof sheets. Other features include:

- Legally sourced timber
- Ramp promoting inclusivity
- Hipped roof for cyclone resistance
- Demonstrations of timber and bamboo construction techniques and connections
- Demonstration of masonry construction including stabilized compressed earth blocks
- The inclusion of a latrine to emphasize the importance of sanitation

Amenities include a latrine integrated into the shelter structure to increase awareness that the shelter is not just about providing a roof, but integrating it in with other programs for example WASH. In a typical situation in a developing country light inner partitions for privacy and to address the needs of women and children could be incorporated.



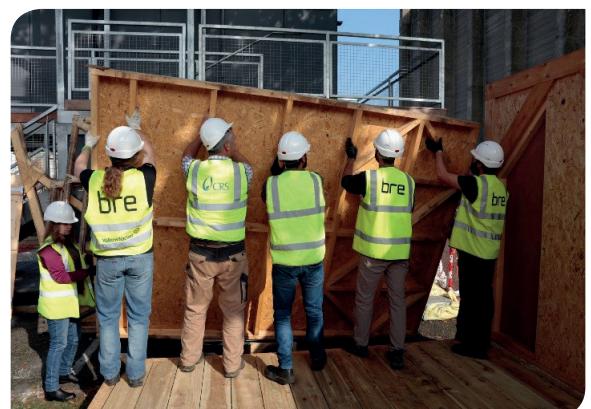
## CRS and BRE – a focal point for research

The collaboration between BRE and CRS is designed to create a focal point for demonstration and research into the provision of humanitarian shelter, with a view to building upon this foundation in the future. The shelter itself is designed to act as a stimulus for wider research and understanding on issues such as climate change resilience and sustainability. It provides an opportunity to collaborate and share knowledge, as well as showing the benefits of QSAND to organisations involved in reconstruction after natural disasters.

CRS and BRE have a long history in climate change and sustainable development initiatives. The two organisations have collaborated to focus on their mutual aims and to provide an amazing opportunity to display building techniques and materials that can be available following a natural disaster. The structure demonstrates a range of construction techniques that CRS and other organisations are applying worldwide. It includes display boards explaining the different construction techniques and showing their application, used to share information with stakeholders and the wider public on the sustainable reconstruction issues faced throughout the aftermath of a natural disaster, and how best to reconstruct buildings sustainably.

**"Working with CRS will continue to create outputs which will be beneficial for all those delivering sustainability and resilience in the built environment"**

Yetunde Abdul, QSAND Programme Manager, BRE



## Project Team

Lead Organisations	CRS, BRE
Collaborating partners	Humanitarian Benchmark Consulting, Center for Alternative Technology, CADECOM, Habitat for Humanity, CRAterre, HRRP Nepal, Oxford Brookes (CENDEP), Build Change, Global Shelter Cluster, CARE International, ARUP, Engineers without Borders, RedR, Cordaid, Shelter Center, CAFOD, IFRC, Shelter Research Unit and Caritas Bangladesh.

## Contact

Email: [QSAND@bre.co.uk](mailto:QSAND@bre.co.uk)

Tel: +44 (0)333 321 88 11

[www.qsand.org](http://www.qsand.org)



Follow us on Twitter  
@QSANDcalling