

The Embassy For Refugees Pavilion

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Toby has worked both in the UK and Australian Arup offices. As a former member of Arup's Advanced Geometry Unit, Toby works on complex geometrical projects and is a specialist facades and structure modeller.

Summary

Originally commissioned for Celebrating Sanctuary London Festival 2013, the Embassy for Refugees Pavilion is a small, demountable, temporary organic timber structure, created to explore concepts of sanctuary and representation for the underprivileged.

With only 8 weeks between the initial concept briefing and final installation, the design and fabrication process was severely constrained. Design services were also provided pro bono, and the structure was constructed wholly with donated materials. The charitable procurement steered a number of design decisions, yet meant that many key inputs were unknown for a number of weeks.

This paper outlines the parametric design approach that was adopted to overcome the numerous constraints and unknowns that this project faced. It describes the structural principles and key modelling decisions made, as well as the installation and future legacy.

Keywords: Timber; temporary structures; parametric modelling; optimisation.

1. Introduction

The Embassy for Refugees Pavilion was initiated by socially-engaged designer Natasha Reid [1], following several workshops with refugee children on the concepts of shelter and sanctuary. A full size installation was commissioned by the Celebrating Sanctuary Festival, to be installed on the South Bank in London during Refugee Week in June 2013. The pavilion would provide a focal point for the festival, as well as a platform for the United Nations High Commissioner for Refugees (UNHCR) to launch their latest report.



Fig. 1: Initial artistic rendering would be required.

The initial timber concept was created in reference to natural refuges found in forests. The scheme required the creation of a group of three, organic shell-like timber structures, with clear arch spans of up to 8m. As part of the festival activities, the largest structure was also required to seat 50 people.

Natasha Reid approached Arup in mid-April 2013 with her initial concepts, and asked us to help develop a structural scheme that would best suit the site. It was clear that there were a number of constraints to the design from the outset and to achieve a successful and timely installation, a novel design approach