

Roberta Wilkinson - EcoHouse Placement in Brazil, Summer 2014

This summer (2014) I spent almost 2 months in São Paulo, Brazil, as part of the Cambridge EcoHouse Initiative Student Society. EcoHouse Initiative's aim is to design low cost, sustainable products (predominantly housing) which enhance the quality of life for communities living in poverty across Latin America. We work in conjunction with TECHO ("TETO" in Brazil), an NGO which constructs thousands of transitional houses (designed to last for 5 years) for slum dwellers every year, as well as helping with community led social projects.

EcoHouse has had an ongoing relationship with TETO since 2010- throughout the academic year, the student society facilitates TETO's work by improving and testing the TETO house designs, including building full scale prototypes of the new designs in Cambridge. The society sends students out to Brazil (and Ecuador) every summer to help us to continue to work effectively with TETO.

The information we gather on placements is used for the benefit of the entire society. It is communicated through the means of presentations, the placement blog (which I updated whilst in Brazil), discussions and a full written report. Here is a summary of some the things we worked on over the summer.

Life in the favelas- Understanding the context of our work

One of the main aims of the trip, was to understand the favelas (slums) in which TETO works- who are we designing for? What are their needs? We built up a much clearer picture of peoples' lives in the favelas by visiting 6 different communities, carrying out surveys and interviews and by talking to the experienced TETO volunteers and directors. Some of the team also visited favelas in Rio de Janeiro.

In a favela, the community have usually built their own houses. Many are made from pieces of scrap wood, though some residents can afford to buy bricks and have built themselves sturdier structures. It is not uncommon for houses to flood when it rains- sometimes with sewage. TETO constructs housing for those families most in need.



Image 1: Anita Garibaldi Favela

The infrastructure to support basic services, such as water, sanitation and electricity, is rarely in place, and communities resort to illegal and often dangerous connections. In one favela we visited the home-made connections had given rise to two electrical fires in the past week. The sewage in the favelas tends to be disposed of into open air channels running through the streets and sometimes into a nearby river. This naturally leads to the proliferation of vermin and causes health problems.

Technical problems and constraints

We also used our time in Brazil to obtain a first hand understanding of the technical problems and constraints of the transitional house design. First, we got stuck into the practical side of things. We participated in "logistics" days in two communities, in which we moved panels and materials around favelas to where the houses were to be built. The terrain is often very difficult to negotiate- after shewing away a few stray dogs, we had to carry heavy panels through small alleyways and across makeshift bridges over streams of sewage. We also participated in construction weekends, in which we learnt just how difficult it is to dig foundation holes! Inspired by some of the problems we had faced, the team came up with solutions, including building a panel moving system (complete with wheels!), and coming up with methods to make digging the holes more efficient.

We also carried out around 20 surveys in order to identify the problems with the houses and better understand the lives of the people for whom EcoHouse is designing. We were asked by TETO to concentrate on how to make the house last longer. Therefore, we made sure to visit houses of different ages, to build up a picture of which problems occur first- we found that the floor, for example, was a common issue, with some having broken entirely after only a few years. We also set up some tests (that can be revisited by future EcoHouse placement teams) to investigate the long-term performance of a building material with different protective coatings. Throughout the trip, we tried to better understand and record the constraints we will have when designing in Cambridge- investigating the legal situation, the materials available etc.

Communication with TETO

We have tried to gain a clear understanding of TETO's process, as well as its values and aims, so that we can identify where we can be most helpful. One of the recurring themes in our discussions and our community visits, was that TETO is "not all about the house". TETO started off as a housing charity, but has developed into an NGO devoted to social projects. TETO's model is largely based around community led problem solving. We attended a "working table" meeting, in which members of the community of Spama, in central São Paulo, identified that sewage was the problem they would most like to solve. TETO will help the community to take action to fix this problem, while ensuring that it is always the community that leads the process. For TETO, the mobilisation of the community to fix their own problems is just as important as the result of the problem being fixed! The process itself strengthens the community.

With this method of working in mind, we spent our time forging links with TETO Directors and Volunteers. EcoHouse's work requires close links to TETO in order for us to respond effectively to the communities' needs, rather than our perceptions of them.

Finally, we agreed on some exciting future projects with TETO- namely L and T-shaped houses and a "progressive" house design. The trip was incredibly rewarding, eye-opening and a lot of hard work!



Image 2: Painting one of the finished TETO houses



Image 3: the Spama "working table" meeting, photo credit to Adailton Silver, TETO volunteer and Spama coordinator