



The project aimed to demonstrate the power of digital construction



The project would create a new adventure play 'plotting shed'



BAM was able to provide support throughout the whole project

CASE STUDY: COMMUNITY ENGAGEMENT: WIKIHOUSE PROJECT

BAM is always keen to get involved with community projects, but when we were invited to be construction partner for a student project focussed on digital construction and involving a WikiHouse, we were even more excited by the opportunity!

WIKIHOUSE PROJECT OVERVIEW

Architecture students from The University of Edinburgh's School of Architecture worked with students from Heriot-Watt University on a project to test their skills in digital fabrication using WikiHouse (an open source construction system for sustainable homes and technologies that can be customised, locally manufactured and self-assembled).

The aim of the project was to demonstrate the power of digital fabrication in empowering communities to self-assemble high-quality construction. The students therefore teamed up with the Baltic Street Adventure Playground (BSAP) Dalmarnock, Glasgow, to use the opportunity to design and construct a WikiHouse playground 'plotting shed' for them, providing a long-term resource for the BSAP.

COMMUNITY INTERACTION

The BSAP is a community interest company providing children with complex and unpredictable family lives a safe environment where they can play, learn about risk, and take control while learning essential skills. The new plotting shed would provide a perfect area to

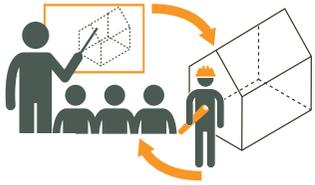
allow adventure play, while the whole experience of designing and constructing it would give them exposure to different groups of people, helping the children to realise a sense of self-agency and a chance to be involved in new experiences – such as computer-aided design and practical construction.

CONSTRUCTION PARTNER

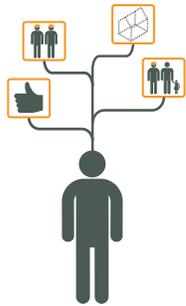
When BAM was approached by the University to be the construction partner and sponsor the project, we were delighted! The architecture students led the project working with BAM and the children from the BSAP, who helped to co-design and construct the 4.7m x 4m, insulated 'plotting shed'.

BAM was able to provide support throughout the project, and with the help of subcontractor SCS, also provided specialised plywood and materials for the project. Ten BAM staff gave their volunteering time to help this project, clearing the ground and erecting the WikiHouse structure. One volunteer was Assistant Site Manager Mark Gowrie, who led the BAM team and ensured health and safety measures were in place.

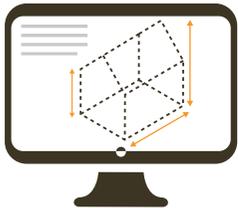




The project allowed students to transfer their classroom skills to the real world



Projects like this provide a range of benefits



With our commitment to digital construction, this was a perfect project to get involved with

WIKIHOUSE CONSTRUCTION

Before the construction of the WikiHouse, a smaller model was produced. Used as a learning experience during an initial workshop, it was then utilised on site so the local community and children could be involved.

It then took 9 days, more than 20 students and children and ten BAM volunteers, but we did it! All stakeholders were involved throughout and the BAM team was able to see the project through from the start - attending the initial workshop in Edinburgh, seeing the plywood being cut, helping prepare the ground on site and then finally erecting the structure.

MORE THAN JUST A SHED

Projects like this are a great way for students to transfer classroom skills into the real world. The students improved their digital skills in the classroom before they worked on a live project, where they were able to put their knowledge into practice. The experience also highlighted the power of community engagement, which gave them both the chance to work with local children and to experience working with an external contractor giving them valuable exposure to a variety of opportunities and careers in construction.

NOT JUST GOOD FOR THE COMMUNITY

These projects are good for us too - our team got a tremendous feeling of goodwill and satisfaction from being involved and it was great to meet the next generation of architecture students. It was also inspiring to see how the young people and staff from BSAP were able to transform an empty space into a fantastic community pavilion and play space.

Community projects like this are important to BAM. We are able to offer our skills, resources and expertise while our staff get the opportunity to meet colleagues from across the business and people from different organisations. They get the chance to learn new skills and improve team-working, all while raising the awareness of a valuable local community service.

DIGITAL CONSTRUCTION

This type of interaction between students, children and contractor would not have been possible without the ingenious nature of the open-source WikiHouse design, which allows anyone to design and then construct a building using light-weight plywood jigsaw pieces with nothing more than a mallet. With BAM's commitment to digital construction, this was a perfect project for us to get involved with.

'BAM'S ENGAGEMENT WITH THIS PROJECT WAS INVALUABLE. IT WAS A BRILLIANT OPPORTUNITY TO ENGAGE ARCHITECTURE STUDENTS DIRECTLY WITH OTHERS IN THE INDUSTRY, AND FOR THE LOCAL KIDS THIS WAS VALUABLE EXPOSURE TO A VARIETY OF OPPORTUNITIES AND CAREERS IN CONSTRUCTION. AS WIKIHOUSE IS A CREATIVE COMMONS ENDEAVOUR, THE LEARNING FROM THIS PROJECT WILL ALSO BE FED BACK INTO THAT INTERNATIONAL RESEARCH COMMUNITY.'

Alex MacLaren, Lead Tutor,
The University of Edinburgh

'BEING A PART OF THE DALMARNOCK BALTIC STREET PLAYGROUND PROJECT WAS A BRILLIANT EXPERIENCE AND ONE I WOULD LOVE TO BE A PART OF AGAIN. SEEING HOW EXCITED ALL THE CHILDREN AND STAFF WERE TO BE PROVIDED WITH THEIR 'PLOTING SHED' GAVE ME A REAL SENSE OF PRIDE IN BOTH MYSELF AND THE COMPANY.'

Annie Davies, Trainee Site Manger