

## Arts University Bournemouth - CRAB Studio



### Project Profile

**Project:** Drawing Studio

**Client:** Arts University Bournemouth

**Dates:** Completed 2016

**Contract Type:** JCC Contract

**Procurement Route:** Traditional

### Project Overview

The Drawing Studio at Arts University Bournemouth was a new addition to campus, designed by renowned architect Sir Peter Cook RA and his office CRAB studio. The building is accessible to students from all courses across the University enabling all creative artists, working in any genre, to be in the same space together, from costume designers to architects, animators to etchers. It also offers students from other disciplines the opportunity to share and observe others' work and interact with those from other creative fields.

The building is an iconic and free-standing pavilion that contains a large room, supported by a small internal service and storage territory. The external skin is a steel-sheet monocoque construction of 17 steel panels - prefabricated in the factory, transported to site and bolted as a kit of parts and then welded to form a smooth, waterproof enclosure. The studio is designed around the phenomenon of natural light, so it has a 30 sqm oval north-light window as main illumination, with a 'booster' light for the rear of the room from a clerestory window of 10 sqm which throws a softer light back from the rear wall.





## Best Practice

**Design technique:** Monocoque construction was used, which is a specialised technology which allows the use of the structure as an environmental envelope and finished architectural form, eliminating the need for a separate external applied cladding layer and reducing the amount of material, effort and capital invested in the project.

**Use of BIM:** BIM has been a vital tool in making this building possible. It has enabled us to embrace off-site technologies including the monocoque structural envelope and the multi-faceted pre formed curved glass reinforced gypsum (GRG) internal lining. The integration of building components, which are usually designed separately by different disciplines, enabled the creation of a more holistic, coordinated and sustainable design.

A close and integrated team with use of a BIM model allowed a much more fluid development with the design and construction due to the complex curved design. The influence of early subcontractor involvement was also key. 3D PDF's proved to be a very useful tool in displaying the design to the client enabling the viewer to either see the complete model or strip out layers to view specific elements.

**Meeting deadline and budget:** Early involvement of the steel fabricator CIG Architecture at concept stage enabled an accurate priced build-able solution and construction sequencing to be fixed early. One of the most significant challenges was how to assemble the structure on a site that was both tight and within a busy university environment. The erection method and sequence was coordinated in detail between the design team and contractors with everything incorporated into the BIM model including the temporary works. This extensive preparatory work allowed the structure to be installed in one week in conditions of strict safety and also in advance of the agreed program.



## Added Value

**Publicity:** Much to the client's benefit, the project has been heavily featured in the press with features in worldwide online articles and magazines, much to the delight of our client. This press interest has also resulted with people travelling from all over the UK to see this building.

**Relationship with the client:** With a heavy presence on site during the project development, CRAB Studio staff became embedded into campus life and formed good relationships with both University staff and students. Many students from various departments of the university worked closely with the project using its development to supplement their learning on spatial relationships with material; the AUB students a more grounded and dynamic layer to the curriculum.

The CRAB directors Peter and Gavin have many years of experience as academics and were asked by the client to give a number of lectures/ seminars to the students during the course of the project. This involvement with the university will continue enabling them to contribute a lot to student development.