

# International Congress on Architectural Technology

Student Event, Thursday 18<sup>th</sup> January 2024

Atlantic Technological University, Galway City

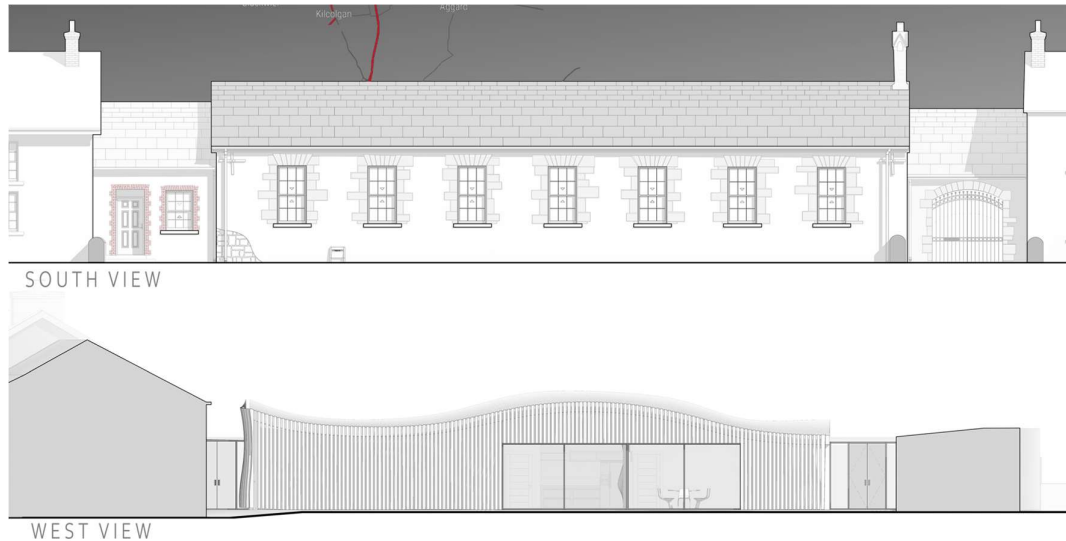


Image courtesy of Christopher Spain, Year 4 BSc Architectural Technology ATU Galway City 2022/23

## ICAT 2024 The 10th International Congress on Architectural Technology

### Conference Theme: Architectural Technology Transformation

The profession of architectural technology is influential in the transformation of the built environment regionally, nationally, and internationally. The congress provides a platform for industry, educators, researchers, and the next generation of built environment students and professionals to showcase where their influence is transforming the built environment through novel ideas, businesses, leadership, innovation, digital transformation, research and development, and sustainable forward-thinking technological and construction assembly design.

### Student Event Brief

Students from years 1 to 4 of Architectural Technology programmes, in groups to be allocated on the day, are invited to demonstrate, in keeping with the conference theme, their technical detailing sensibilities to transform our built environment. The ICAT board encourage all students to come to this event prepared with novel ideas by taking leadership through research and design development, to create an innovative, sustainable, forward-thinking technological and construction assembly design on the day.

The output will require the group to detail two to four plan and/or section details to a scale 1:1 suitable for use in a two-storey building. All details must be fully specified. All details must demonstrate a difficult junction, for example, around a corner (plan detail), or across a jamb detail between a wall and a window or door (plan detail), or through a foundation, floor, or roof (section detail).

Your medium for output can be drawn by hand on paper using scale rulers on the day or drawn by hand over a Revit or CAD printout which is drafted and printed on the day. Please note that you must bring your own drawing materials, scale rulers, and drawing equipment on the day. Paper will be provided to students to complete hand drawn details on in the studio rooms that day.

As a group you will be asked to indicate in your presentation, in a manner of your choosing, how your group has met the following requirements:

1. How does it resist water ingress?
2. How does it resist heat loss and thermal bridges?
3. How is it made airtight?
4. How is it made structurally stable and buildable?
5. How is it made aesthetically pleasing, internally and externally?
6. How is it made safe in terms of fire?
7. In what way(s) does it contribute to the built environment?

The ways your detailing can contribute to the built environment can vary. By way of example, but not limited to these suggestions, this could be done by reducing embodied carbon with the material(s) chosen, by generating electrical and/or thermal energy from the assembly, by providing heat sink(s) in appropriate locations, by contributing to reduce environmental service requirements in some way, by reducing excessive solar gain and/or glare, by reducing the risk of overheating, by capturing rainwater in a novel way, by contributing additional oxygen into the environment with a green wall and/or a green roof, by incorporating circular economy principles into detailing for assembly and disassembly, or by incorporating passive house principles.

All group names, year of study of each student, and their representative university should be clearly indicated on the bottom right-hand corner of each of the detail sheets, along with title and scale under each of the details. Thumbnail cross-references to the location of each detail in the two-storey building is also required for signposting for the judges.