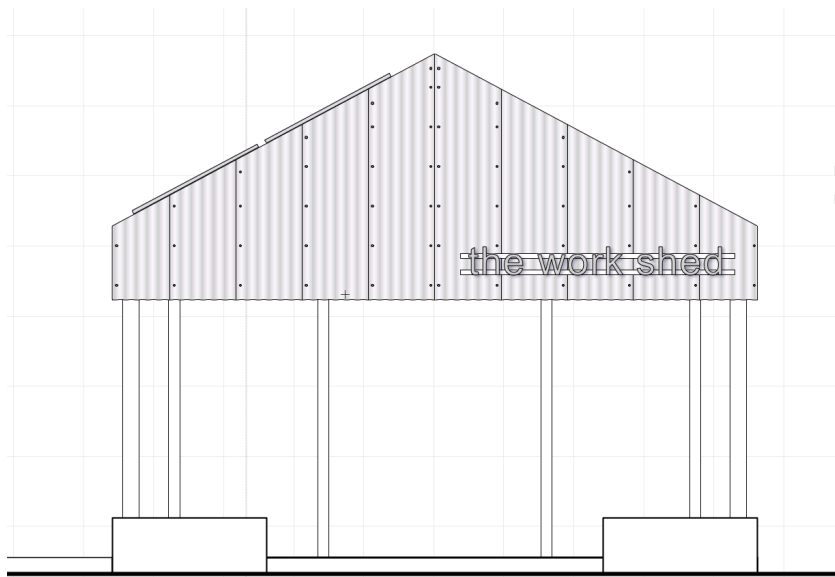


# Design & Access Statement

## Live Project Structure

### Oxford Brookes University

Rev C 2024-01-12



#### Contents:

1. Design Principles and Concepts
2. Existing site
3. Consultation
4. Light Study
5. Context led design
6. Access
7. Key Issues
8. Conclusion

## Design Principles and Concepts

Architecture and Interior Architecture students at Oxford Brookes University are involved in a long-term project to focus on sustainable design through the re-use of materials.

As part of the strategy to enable students to learn through making, we are seeking to construct a 'living lab' type structure on campus, adjacent to the existing facilities.

Students have been involved in the co-design of a modular, demountable, sustainable structure to be situated in one of the under-utilised spaces on campus.

In preparation, students and staff have undertaken the production of a prototype, curation of a public exhibition, and conducted a stakeholder consultation, before seeking to make this application. The prototype included donated waste material from construction sites currently in progress on campus.



**Image of prototype by students at Oxford Brookes University made from 100% recycled and re-purposed materials**

A simple open-framed timber structure is proposed, with a sheet roof covering akin to a bike shelter or similar ancillary structure that are deployed elsewhere on the campus. The Gipsy Lane car park features a similar such shelter.

Following the erection of the frame and roof, the walls of the structure will be clad using a series of modular wall panels designed and assembled by students. The wall panels will be made, so far as practicable, from reclaimed or re-purposed materials sourced from hyper-local construction projects and businesses. Through this method, the materiality of the new structure will represent and tie in with the materials of the surrounding area. This approach was trialled in a 2023-24 prototype made by students with materials donated from current construction sites on campus (See image on page 2). Cladding materials included metal, timber, ceramic / stone and plastic.

This approach generates an eclectic but well designed aesthetic that embodies and celebrates the sustainable principles behind the project. A good example of the aesthetic that such a procurement strategy engenders, is shown in the Ebury Edge project in London, and the Paper Garden, Canada Water, by Jan Kattein Architects.



Images by Jan Kattein Architects

## Existing site

Drawing L01 outlines the existing site of the courtyard space between Gibbs, Sinclair and JHBB buildings. This courtyard space is presently an un-designed and under-utilised part of the campus. Gravel has been used to cover a large area which was previously a mixture of hard standing and the footings of demolished buildings.

The gravel area includes a path through the space linking the Gibbs building to the JHB Building, and a number of loosely arranged picnic benches and plant pots. The picnic benches and plant pots are lightweight and not fixed to the ground in a permanent way, and are occasionally moved or reconfigured within the space.

The building is bounded on all sides by teaching and office buildings used by the university. There are no views of the site area from the public domain. The proposed structure is subservient to all of the existing buildings by a substantial margin - the surrounding buildings are generally comprised of four stories.

There are no trees within the application boundary or affected by the proposals.



Picture of existing site showing gravel area and moveable plant pots

## **Stakeholder Consultation**

The site is not visible from the public domain and is bounded by buildings in the sole use of Oxford Brookes University. Therefore, stakeholder engagement has been internal to the university.

Staff in teaching, technical support, operations and leadership roles have been consulted. The benefits to students in terms of learning and employability as well as the sustainability and innovation of the project received particular support.

Students were surveyed following completion of the prototype project and expressed very high levels of satisfaction about their learning of sustainability (91%) and professional skills (80%).

Estates and Campus Services and the university Health and Safety Manager visited site with us and were satisfied with the location for safety, access, maintenance and oversight purposes.

There is strong support for the project from the Head of Environmental Sustainability within the Estates and Campus services.

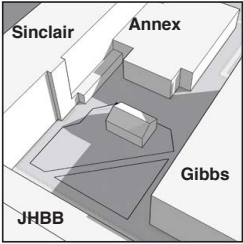
Further stakeholder consultation and a survey took place with the Student Union, HLS and HSS teaching, technical support and leadership staff who occupy the Gibbs, Sinclair and JHBB buildings in the courtyard. They were generally supportive of the project, particularly from a student experience and sustainability perspective but some did ask for further information about the impact on light, visual appearance, and how the space would be used.

The small scale and position of the building will not block light to adjacent buildings - a light study was produced to allay these concerns. (see overleaf).

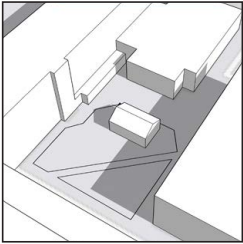
In response to the stakeholder engagement, it was agreed that a booking and management regime for the building will be implemented to control its use when it is occupied.

# Light Study

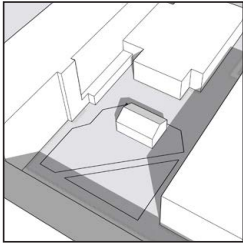
## Late September (beginning of semester 1)



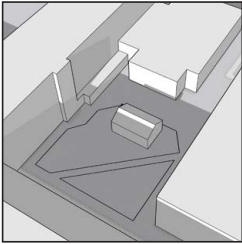
8.30am



11.00am

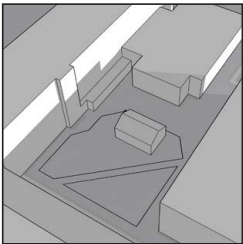


1.30pm

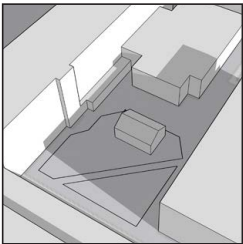


4.00pm

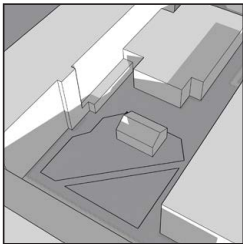
## Early December (end of semester 1)



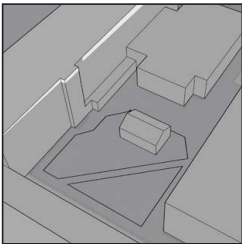
8.30am



11.00am

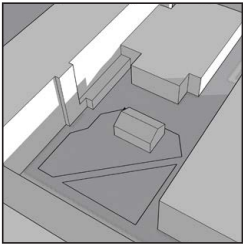


1.30pm

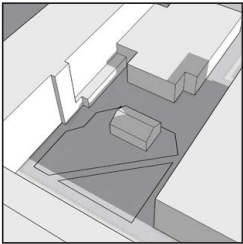


4.00pm

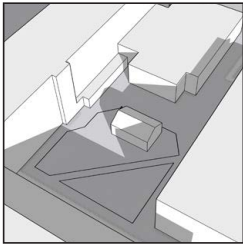
## Early February (beginning of semester 2)



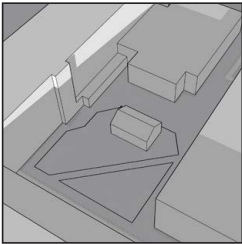
8.30am



11.00am

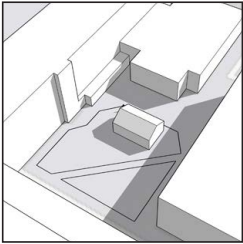


1.30pm

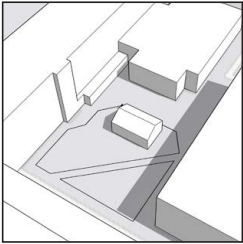


4.00pm

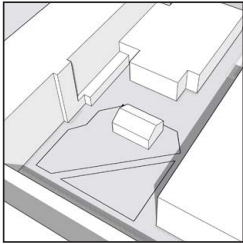
## Early May (end of semester 2)



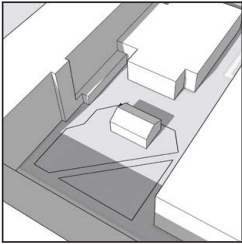
8.30am



11.00am

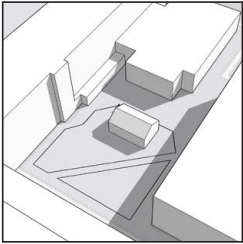


1.30pm

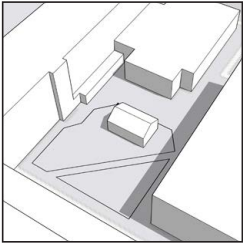


4.00pm

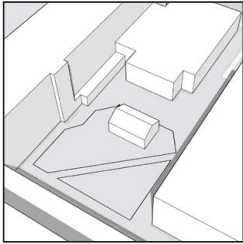
## Summer Solstice



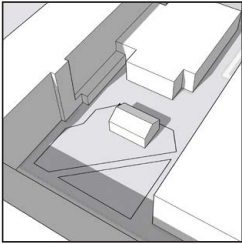
8.30am



11.00am



1.30pm



4.00pm



**Image of shadows taken at 1.20pm on Tuesday 18th April 2023**

The courtyard is currently a rather underused and undefined external space that blurs into the adjacent car park. The scale, position and function of the building relative to the large-scale surrounding buildings will help to redefine the courtyard as a human-scaled and distinct public space, forming an edge that separates it visually from the car park.

## Context led design

The small structure will match the scale of the picnic benches and plant pots in the courtyard, shielding it from the adjacent car park and enhancing its potential as a human-scaled outdoor amenity space within a large campus site. There will be no net loss of amenity or landscape space. Existing benches and plant pots will be rearranged within the courtyard and will not be removed. Sun studies informed the position the building to reduce shading of the gravel area for stakeholders who wish to use the courtyard as amenity space all year round.

The demountable structure is ground-bearing and lightweight in order to reduce ground works and intervention in the existing context to a minimum. The gravel surface of the courtyard will be retained. No water, gas or drainage infrastructure is required. Power will be supplied via a single above-ground bollard. The structure is designed for use during scheduled teaching and as such power and lighting will only be available to students when the structure is in supervised use.

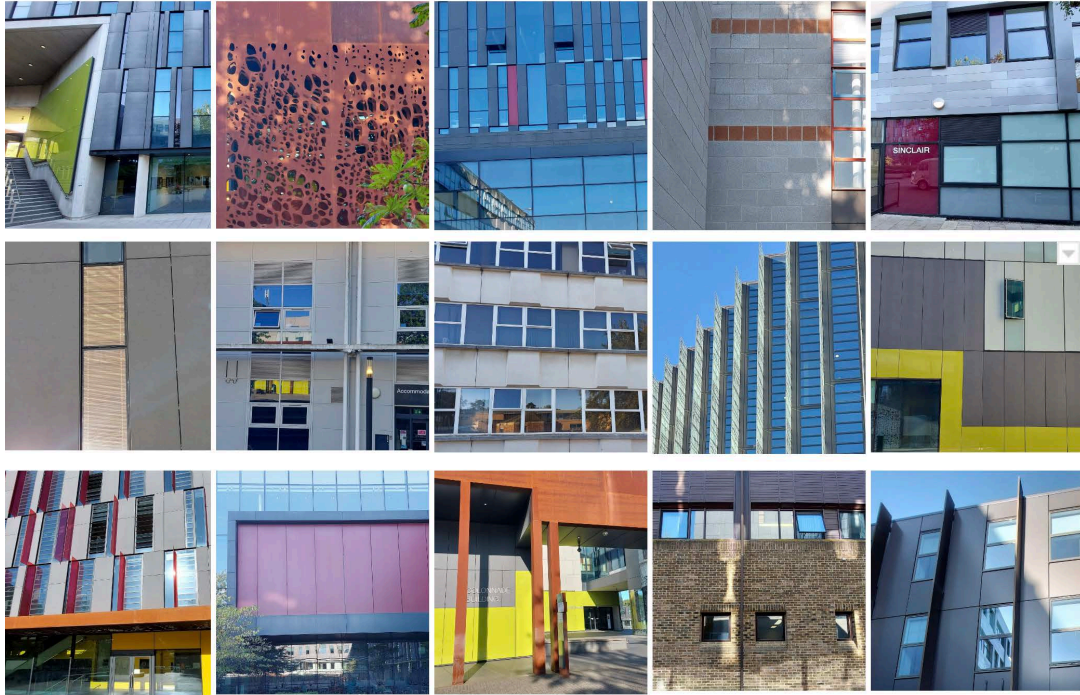
The material reuse strategy means that the building will be constructed from excess material from current construction activity on the Headington Hill Hall campus and will therefore harmonise with the materials found on campus. Cladding materials will be metal, timber, ceramic / stone and plastic. The timber structure takes its precedent in scale and material from the bike shelter on the Headington campus adjacent to Gipsy Lane and other amenity ancillary shelter structures common to university campuses generally.



Image of bike shelters at Gipsy Lane car park, Oxford Brookes University



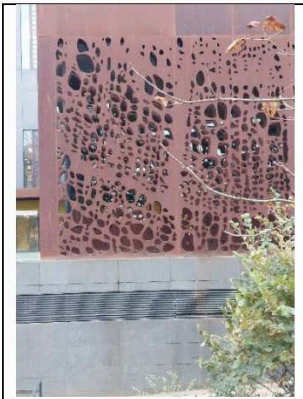
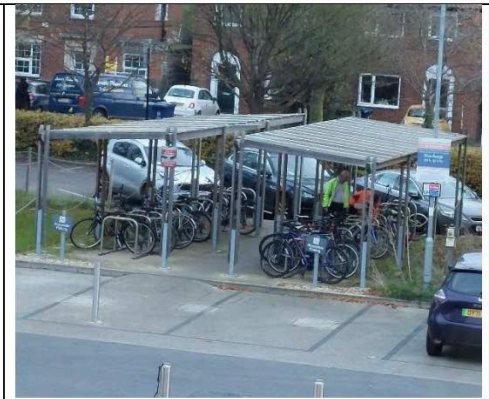
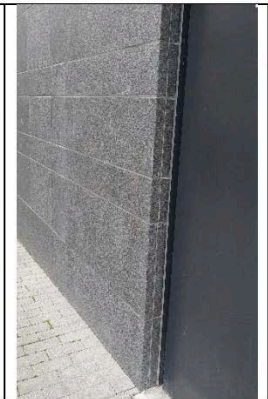
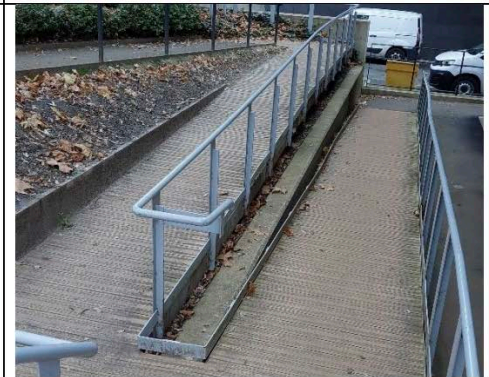
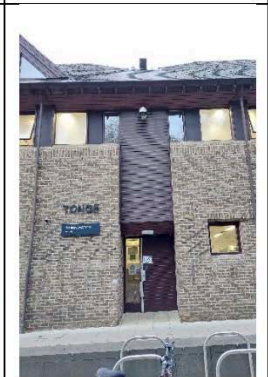
A study of the facade materiality of buildings on the campus shows an eclectic patchwork of different materials. Furthermore, the rectangular module emerges as a theme that informs the rectangular modular shape of the proposed facade.



**Material swatch study of eclectic and patchwork materiality of the existing Headington Campus undertaken on 23rd August 2023**

# Contextual Examples of material types on campus

The images below demonstrate the use of materials on campus which are similar to those proposed for the new structure. There are many more instances of these materials being used throughout the campus this snapshot study is not exhaustive.

		
<p>Metal cladding</p>	<p>Polycarbonate / Plastic and timber frame</p>	<p>Ceramic / stone cladding</p>
		
<p>Composite / Cement Particle board</p>	<p>Timber decking</p>	<p>Timber cladding</p>

# Examples of prototype panels

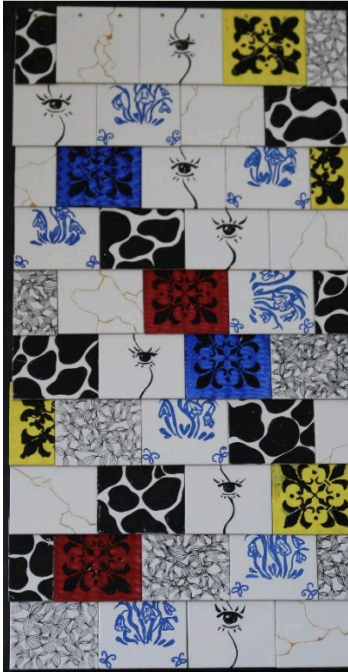
The images below show some of the prototype panels made by students in 2023. They are clad with waste material from construction sites on campus using offcuts saved from being sent to waste.



Steel angles



Rainwater pipes



Ceramic tiles



Steel rails and Cement Particle board



Timber off cuts



Termination strips on Cement Particle board

## **Access**

The proposed structure is single story with ramp access. All existing vehicular and pedestrian access is unchanged by the proposal. The university Health and Safety team and the Estates and Campus Service team were consulted on the location and position of the structure. The structure does not interfere with existing routes for emergency or maintenance access. The proposal does not interrupt any below-ground services or service routes.

## **Specific Issues**

There are three guiding principles driving this project: Demountability, Modularity and Material Re-use.

The design of this building and its construction strategy responds to pressing environmental and economic sustainability challenges faced globally, as well as locally in Oxford, where it is imperative to discover and showcase more sustainable ways to design our built environment.

Student learning and Student engagement are important to this proposal because the design, construction and use of the structure itself all function as a means to engage and educate students and the wider community about sustainability.

The structure will be a teaching tool to demonstrate that it is possible for young people and lay-people to become active in devising solutions to the environmental challenges that we face.

## **Conclusion**

We trust that the Local Authority find the proposals acceptable in policy terms and in line with the educational remit of the University helping forge a more sustainable future. We further hope that Oxford City Council are enthusiastic about the opportunities that the structure could provide for direct collaboration with OCC, in the re-use of reclaimed materials from their own estates and services, and extend a warm invitation to be involved through the donation of any unwanted materials for the students to build with.