

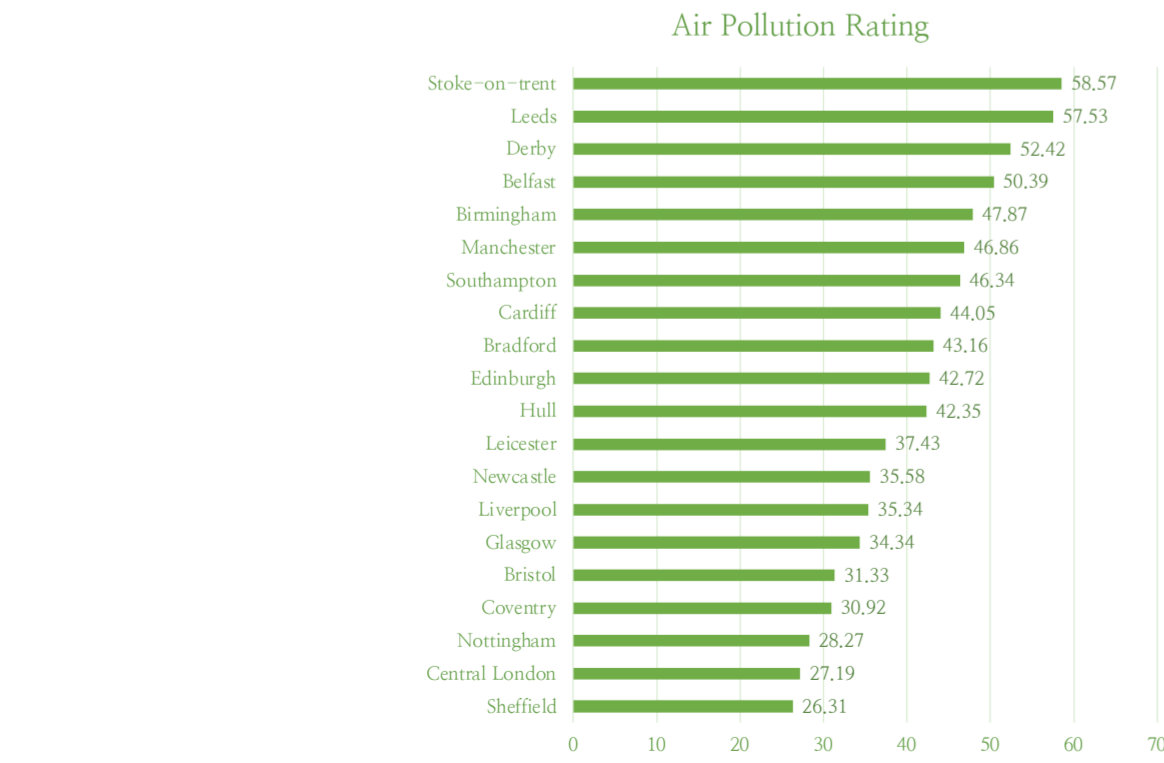
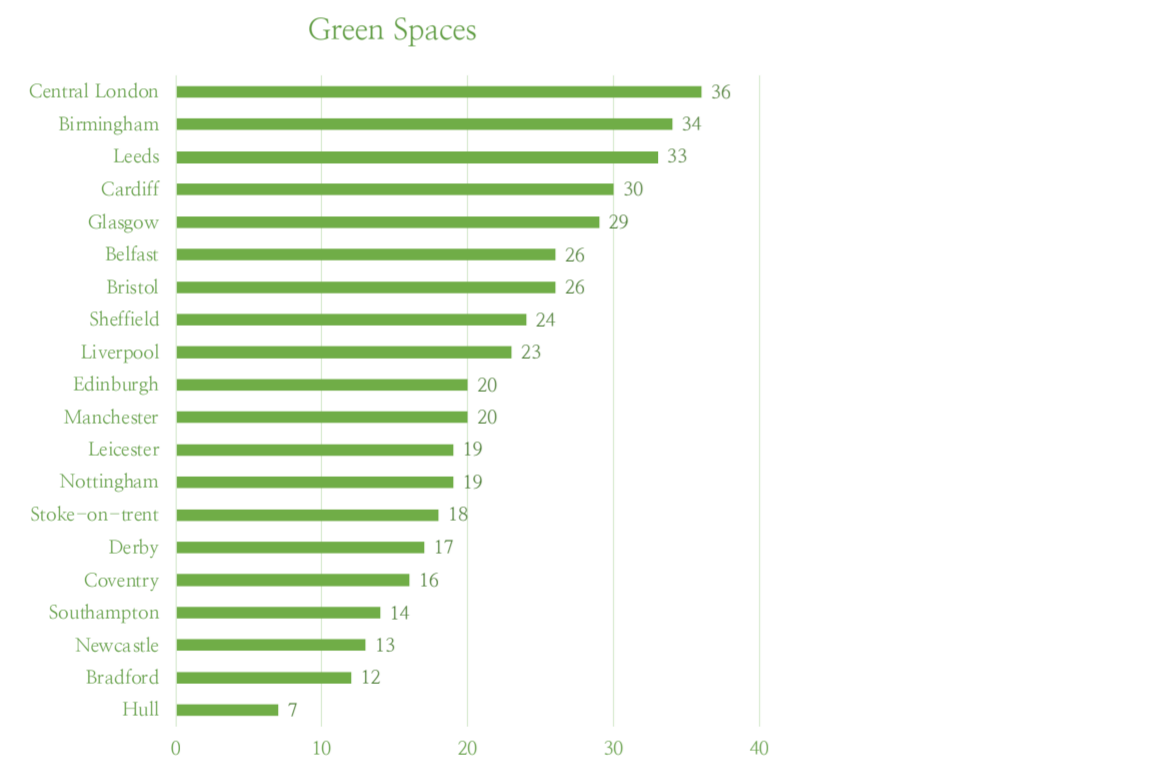
# DEMAIN

"Demain" translates to tomorrow in French

"Demain" is a education sustainability project, created to teach key stage 2 students on the importance of sustainability and how to live a more sustainable life-style. Whilst educating, "Demain" hosts a large hydroponics farm that houses over 17,500 strawberry plants, which product strawberries that handpicked and delivered directly to schools across Leeds.

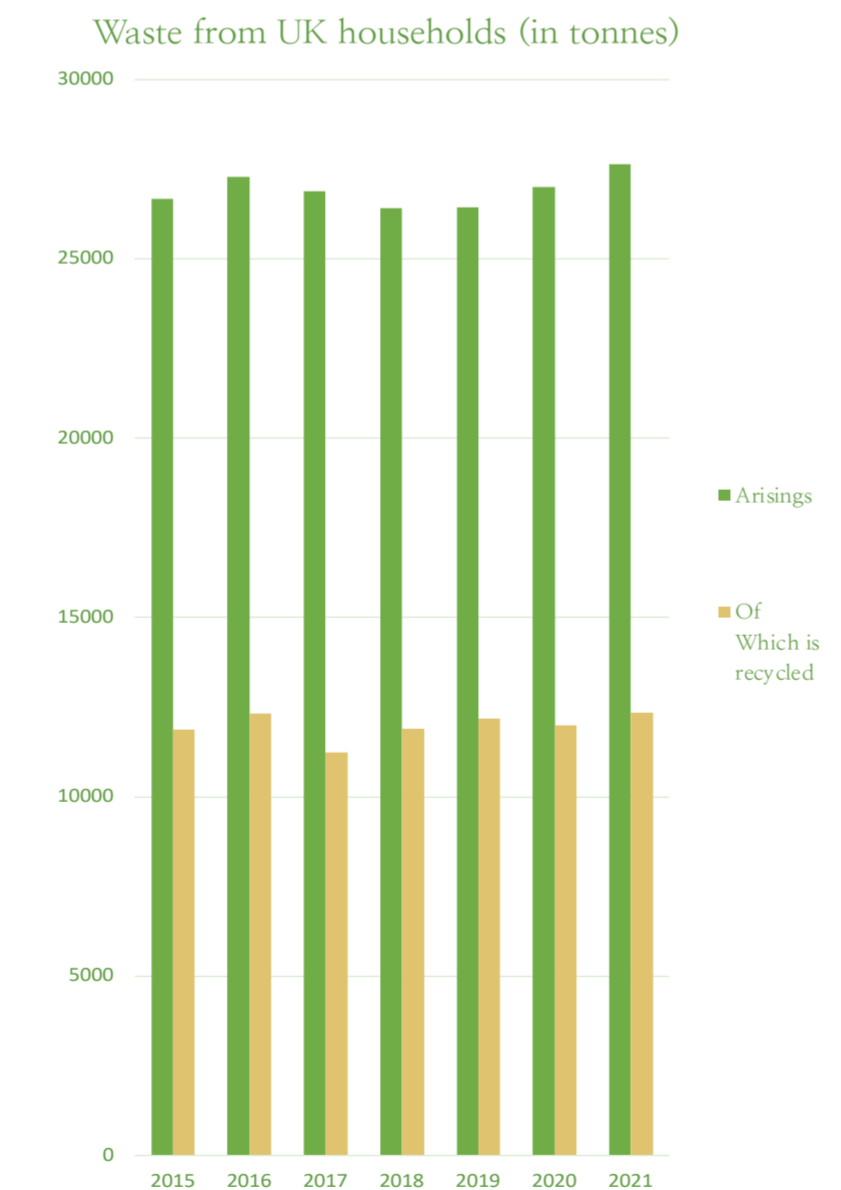
The inspiration behind this project came from the global issue of air pollution. "Demain" offers alternatives of power generation and farming that has a lesser impact in regards to air pollution, and that benefits the environment.

Biophilic design patterns and Montessori design principles have been implemented through the building, the increase the levels of engagmt amongst the students as well as the inspire them to look at what "their tomorrow" could look like. Biophilic design has become a selected method as it increases levels of cognitive performance, and emotional controll, and naturally reduces stress levels. Montessori is a teaching method which is complete student lead. It uses a selected colour palette of red, yellow, blue, and green, pairing them with neutral tones of beige, brown and natural wood tones, to create an environment that is relaxing but engaging to the students.



According the Green Cities Index, for its "Green Spaces", Leeds placing 3rd, scoring 33/60, being beaten by Central London and Birmingham. In juxtaposition to this, Leeds placing 2nd for "Air Pollution Rating" scoring 57.53/60, having a lower score to only Stoke-on-trent. These facts was the initial factors that lead to the decision to place the building within Leeds.

The graph showcases the differences between the arising waste in Leeds and how much of it was recycled

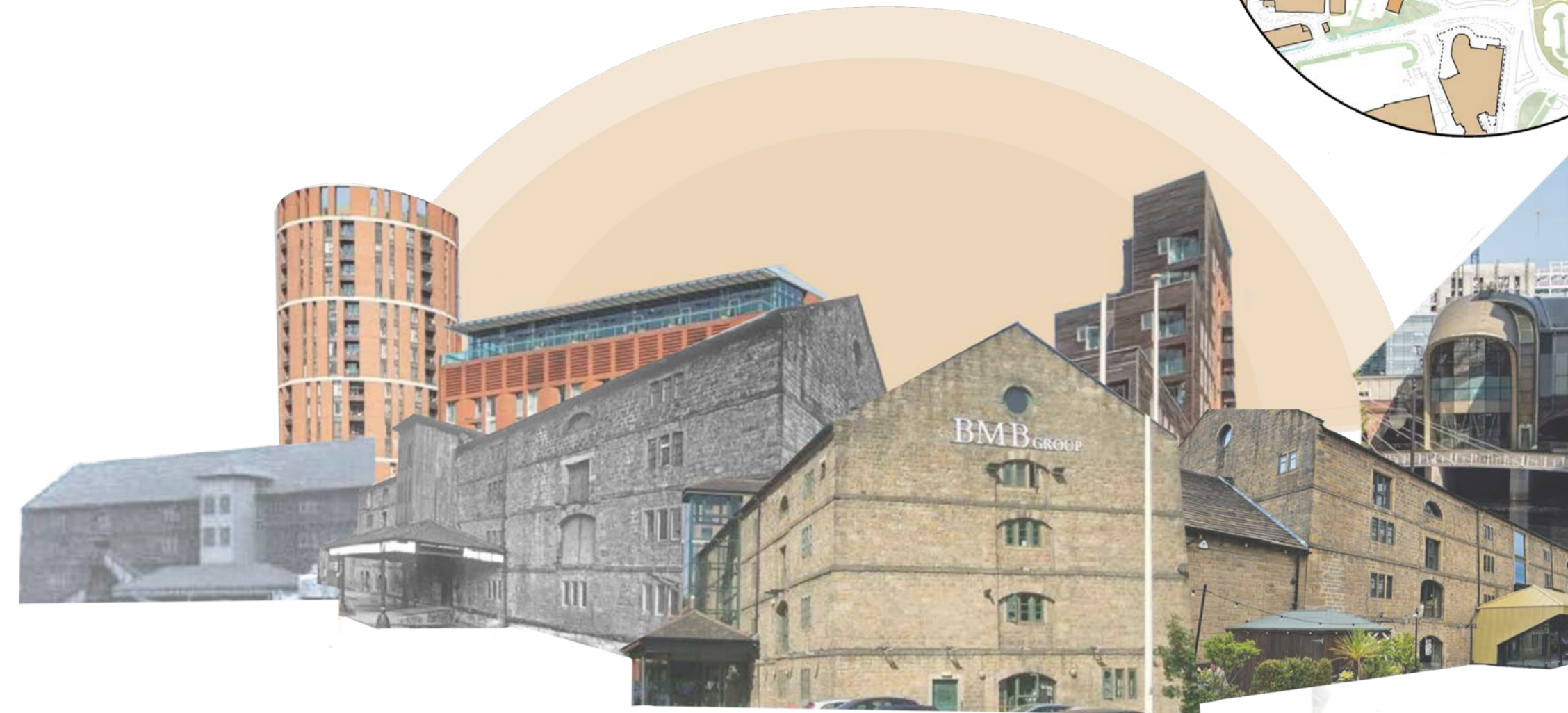


### Recycling / Circular Economy

The project takes inspiration from the Circular Economy too. The secondary journey around the space follows the strawberries and how they are grown and then distributed to the schools within Leeds. This then allows for the primary user to come to the space to see how the strawberries are produced.

### The Granary Building:

The image below is a timeline showing the development of the Granary Building. Starting in 1939 progressing to 1987, 2016 and finishing in 2023.



The selected building is an old agricultural warehouse situated on the meeting point of the Leeds-to-Liverpool Canal and the River Aire. The gantry (tower on the south-facing elevation) has been modified over the years, despite the building receiving Grade II Listing status in August of 1976. It used to be a base for the Baird Group, which is a heritage menswear company. Nowadays, it is used partially as office within the main part of the building, however the western side of the building beneath the hipped roof is used as a bar, called Water Lane Boathouse.

### Client



Veolia Environnement SA, is a French transnational company, and the UK lead resource manager, providing multiple services, including energy, water and waste management.

#### Why Veolia?

Back in 2012, Veolia had signed a 25-year private finance initiative contract with Leeds County Council, this was intended for residual municipal waste treatment and energy recovery. In 2021, the average household in the UK would recycle 44.6% of their household waste, whereas household waste to recycled percentage in Leeds was only 40%. Leeds is home the Recycling and Energy Recovery Facility (RERF) and they manage all the black bin waste within the city. It is located Newmarket Approach, Leeds, LS9 0RJ.

Together, Leeds County Council and Veolia have been providing educational opportunities to Key Stage 3 and 4 students, providing worksheets and visits to the RERF, to understand the waste management services.

"Demain" is an extension of Veolia, explaining on its educational services as well as giving back to the community. Providing the opportunity to expand and educate key stage 2 students and allow them to learn about sustainability at a younger age.

### Users

"Demain" caters towards three users.

Primary User - Key Stage 2 Students  
Age: 7 - 11 years older.  
Location: Leeds.

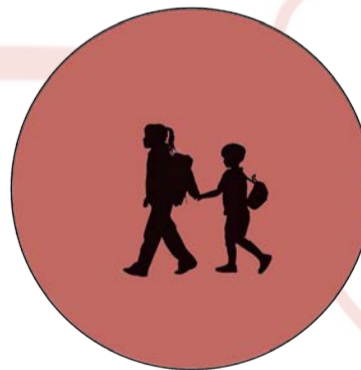
Design needs: Due to the height variation with this age range, it is important to make sure that everything is a suitable height for them. The spaces for the students shouldn't be too high up, and the students should not be exposed to being high up as the fear of heights is a common fear amongst this age range.

Secondary User: Staff Members  
Age: 18+

Location: Leeds, England, United Kingdom.  
Design Needs: For this project, there are multiple members of staff each of them having different jobs and different needs. Some staff members interact directly with the other users of the space, whereas some staff members will only interact with a few other staff members. In general, the staff will need space to store their personal belongs, there will be many opportunities and space for the staff to take breaks when they need to.

Tertiary User: Teachers

Age: 20+  
Location: Leeds, England, United Kingdom  
Design Needs: Teachers have a duty of care for the primary users. Their main design need to for the students to be always visible to them. They also need to be able to take care of their basic needs.



Initial Concept Collage

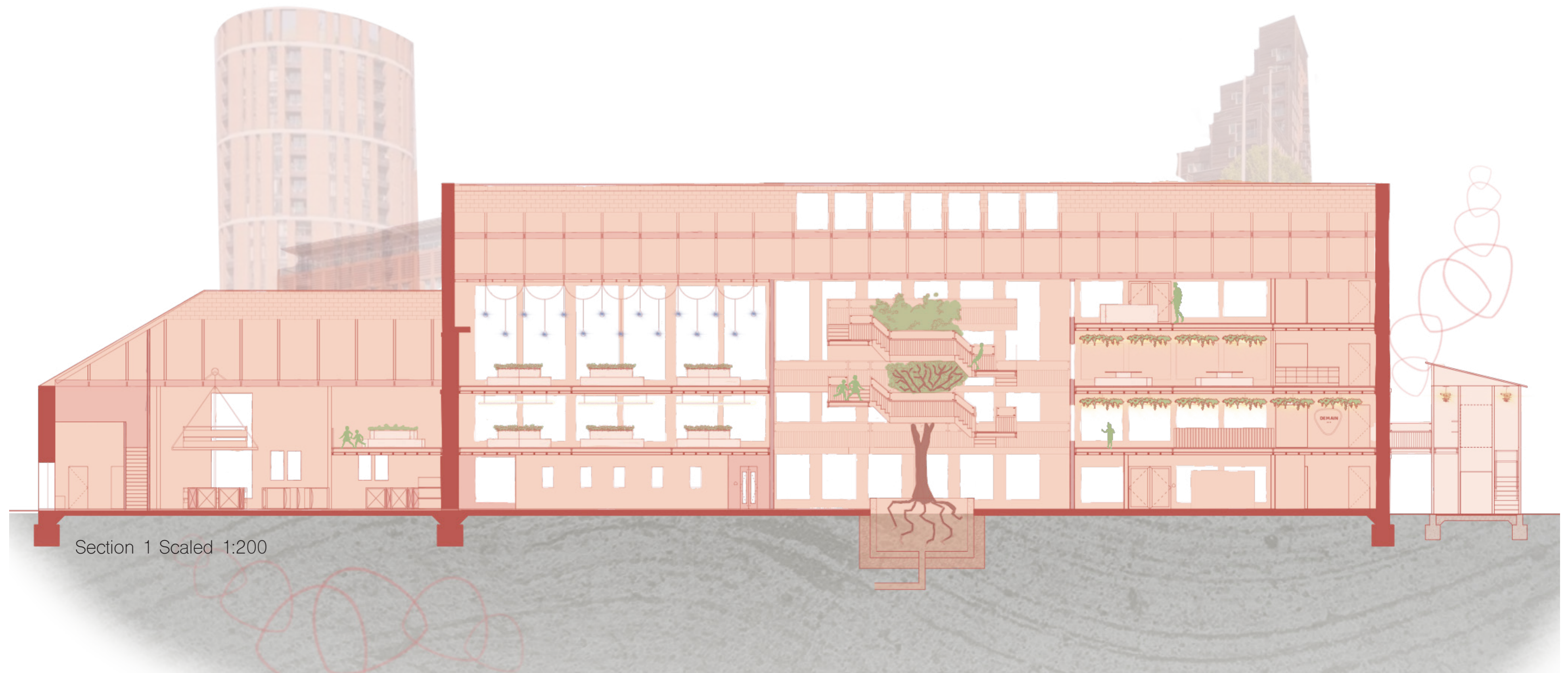
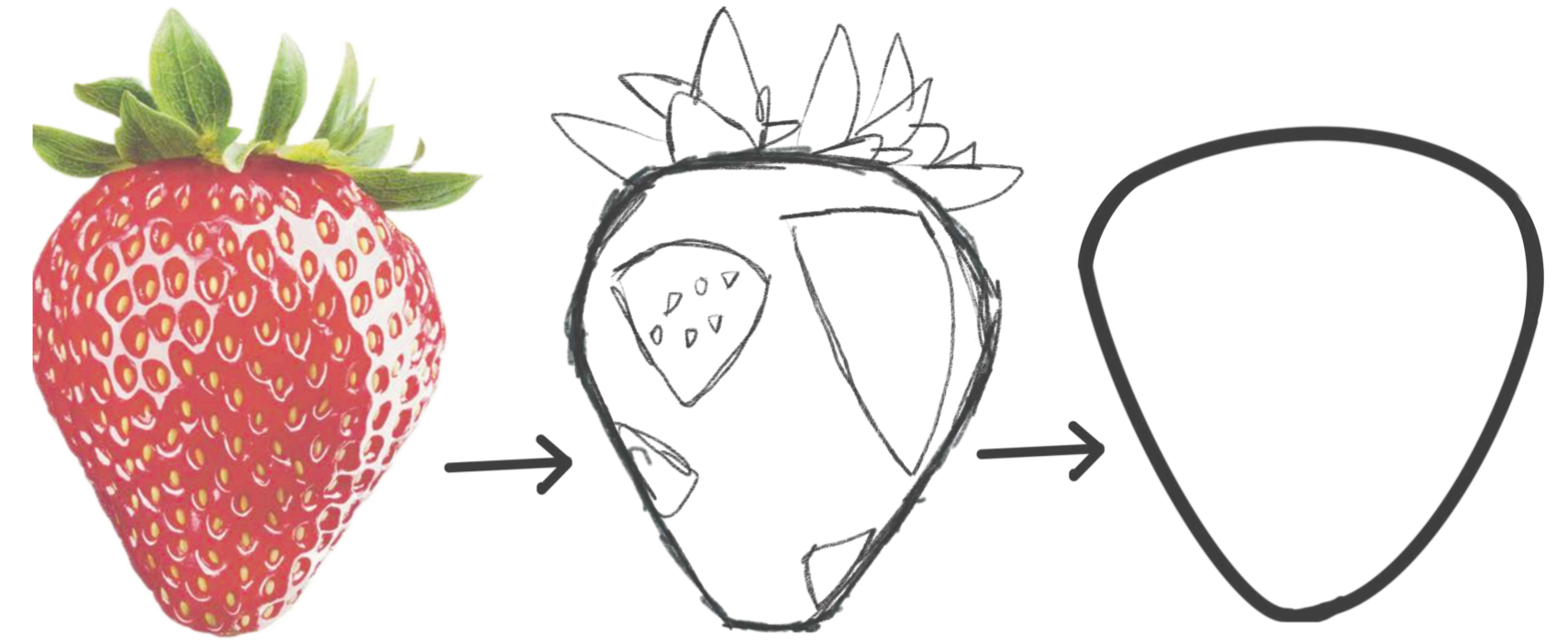


Initial inspiration came from places like Farmone in New York and the Centre Pompidou in Paris. The Collage takes aspects from the Centre Pompidou and combines them with Hydroponic farming and biophilic design. The project is intended to be dedicated to giving back to the environment and community and bridging the gap between both.

Why Strawberries?

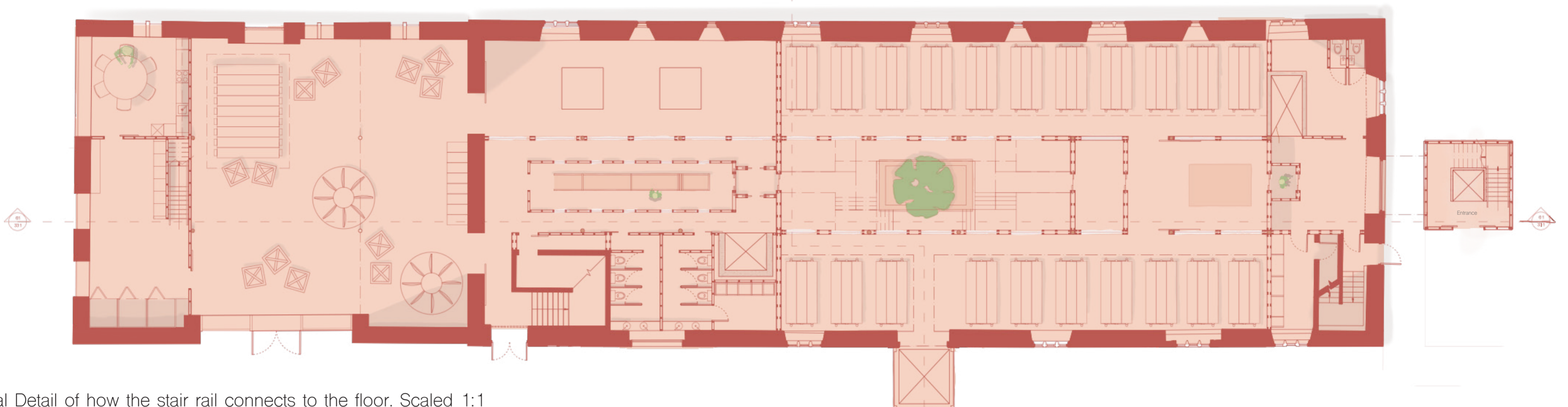
A study from 2022 shows that strawberries are the UK favourite fruit. Their high popularity and ease when growing hydroponically seems like the perfect match. They're also small enough to transport them effectively.

The shape of the strawberry inspired design aspects within the project, most notably some seating and the signage on the exterior and interior of the building.

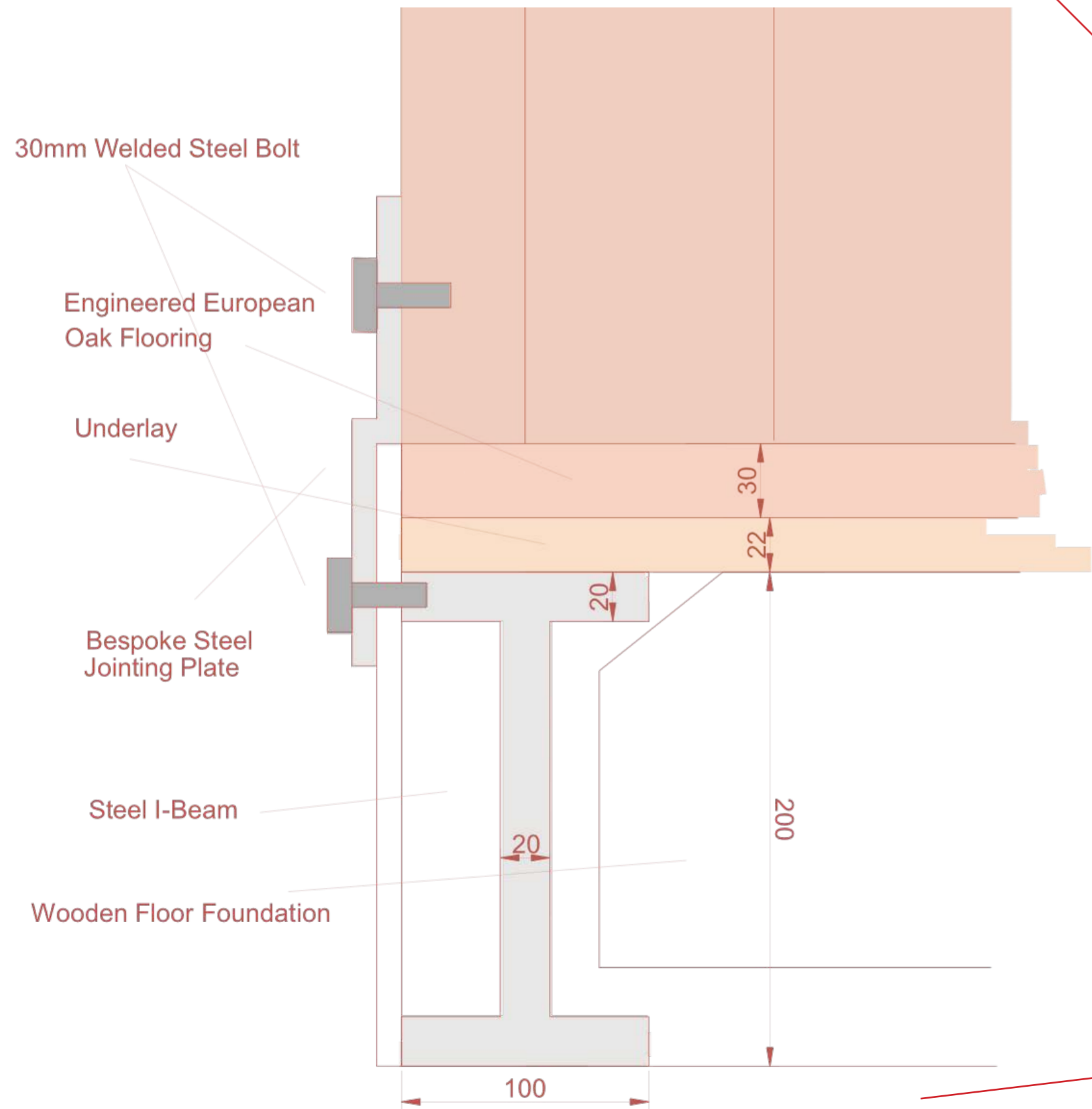


Section 1 Scaled 1:200

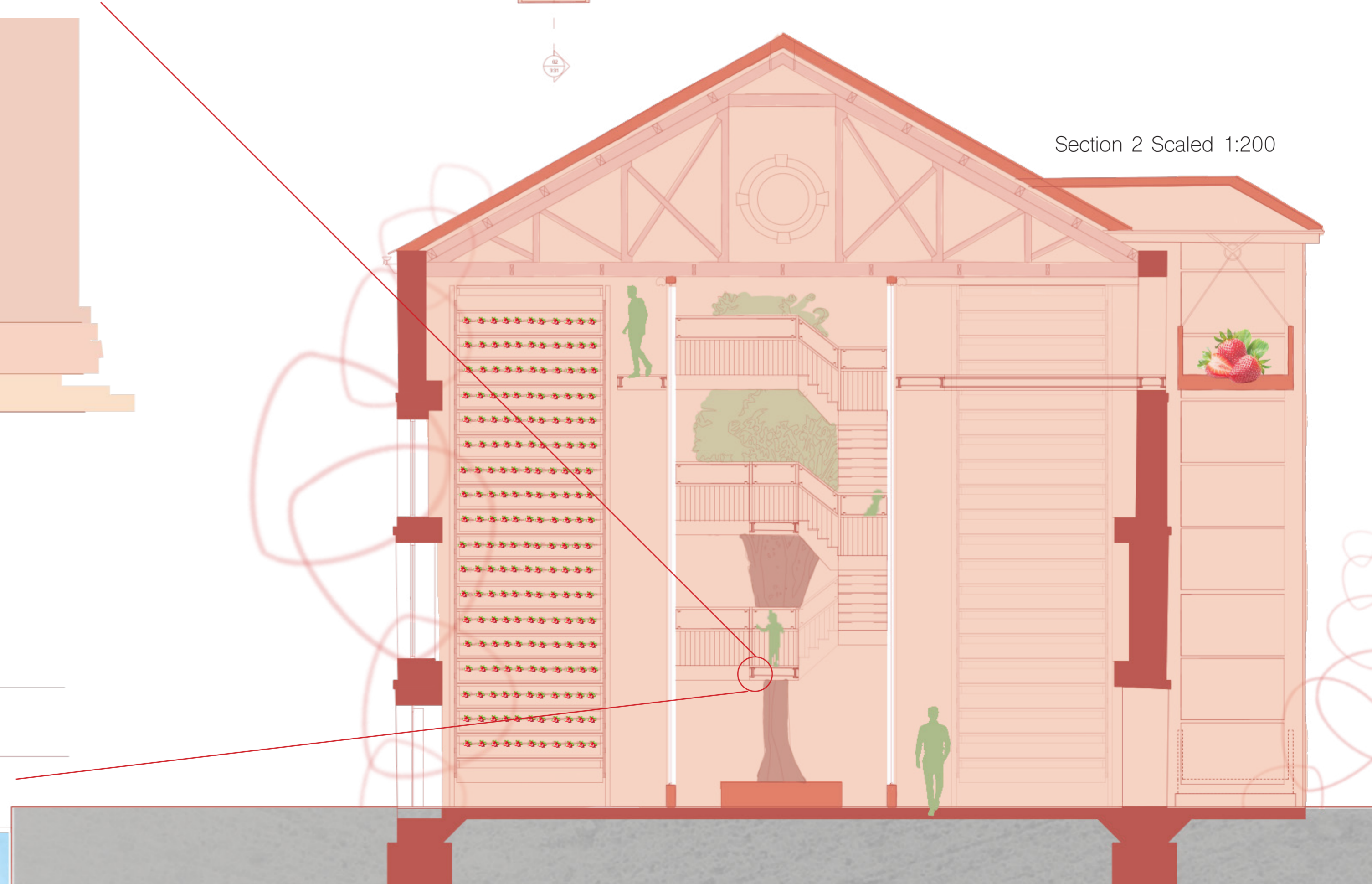
Ground Floor Plan Scaled 1:200

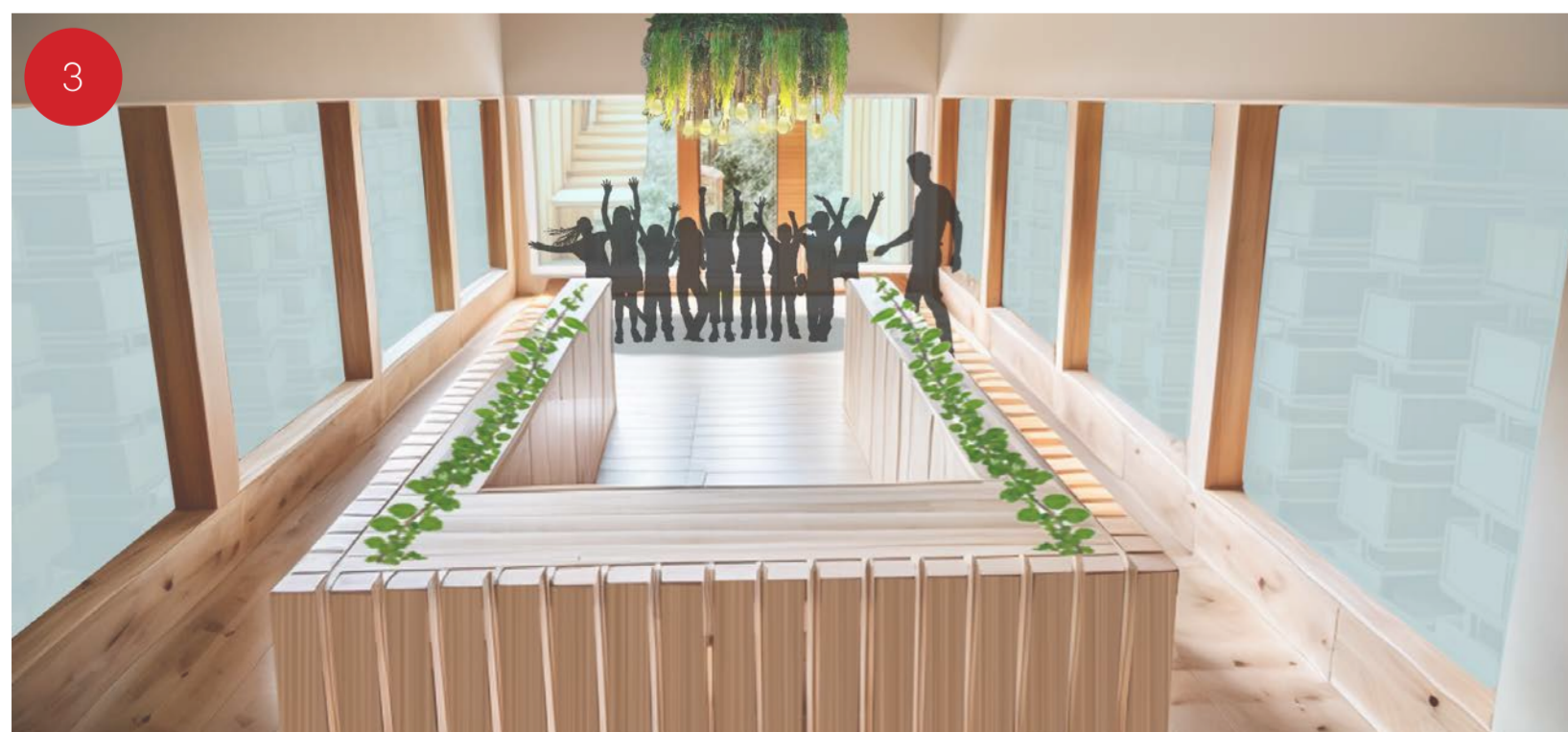
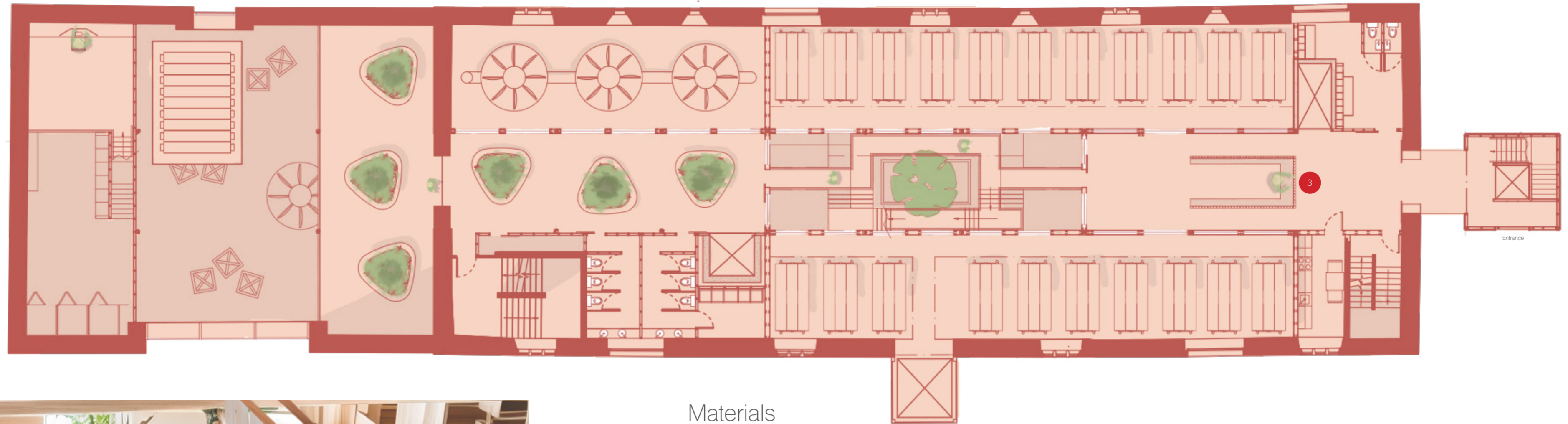


Technical Detail of how the stair rail connects to the floor. Scaled 1:1



Section 2 Scaled 1:200

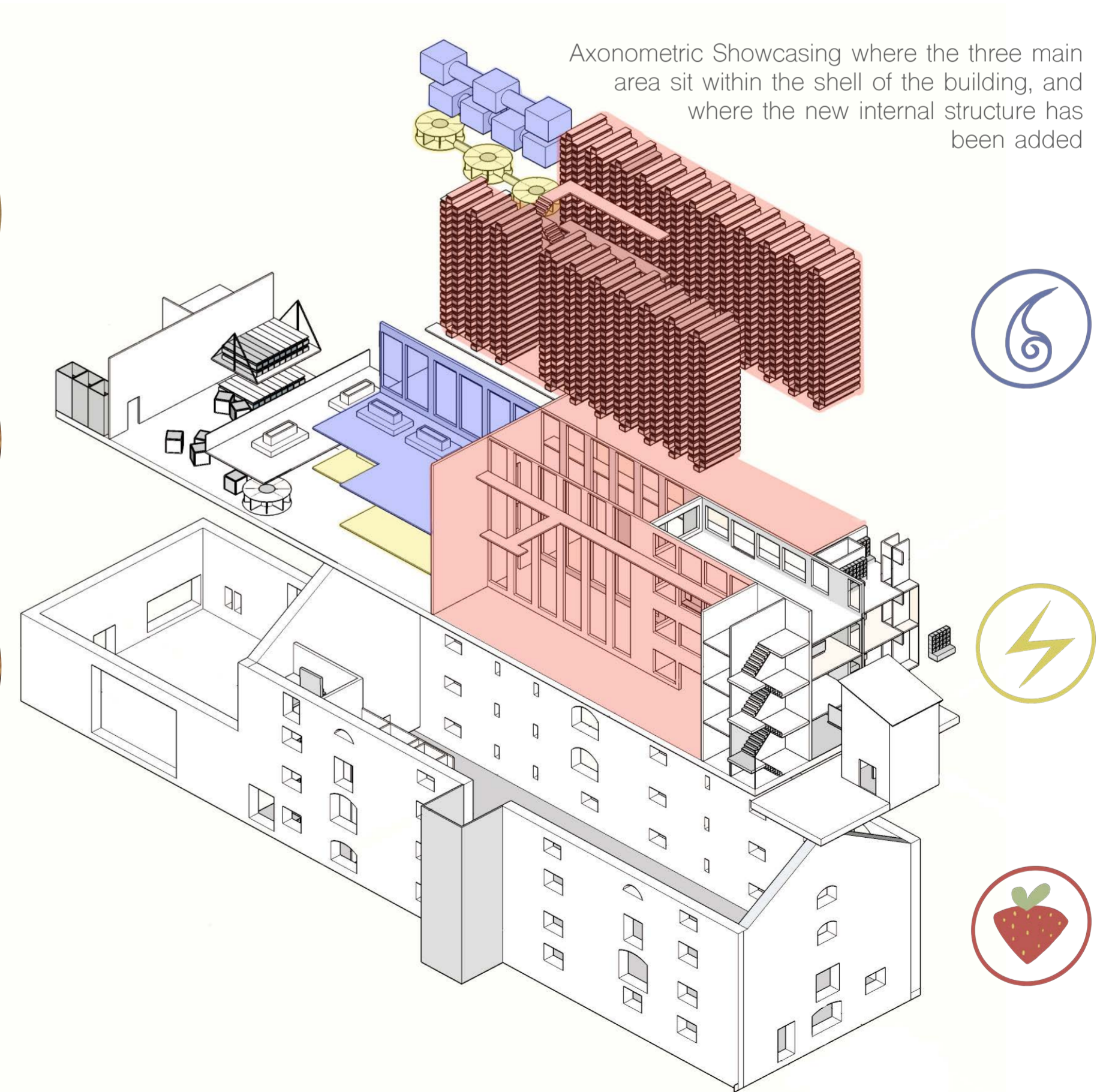




### Materials

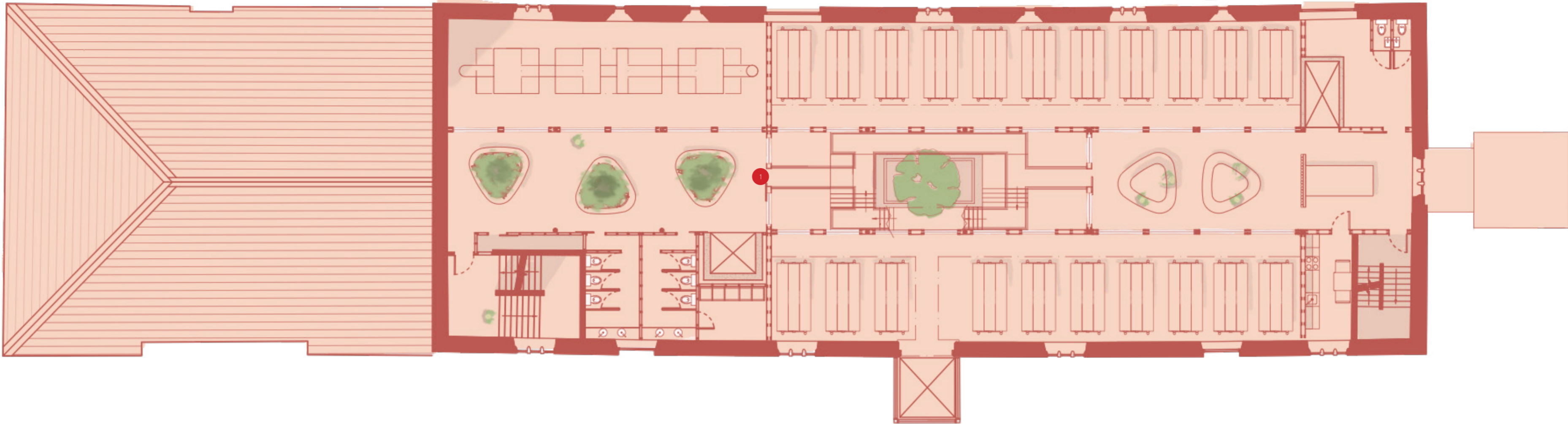


The material chose reflects the design principles behind Biophilic Design and Montessori Teaching Method. For Montessori to work effectively, the room needs to be in a very natural tone, and for biophilic design using a lot of wood is reflection of putting nature into the space. All the materials are naturally sourced, with flooring and wall paneling being made from a locally sourced eco friendly wood veneer and the carpet from local wool. The oak chevron flooring indicates the areas in which on staff are allowed to go whereas the oak flooring is for everyone. The carpets are indicators of rest areas.



Axonometric Showcasing where the three main area sit within the shell of the building, and where the new internal structure has been added

Second Floor Plan Scaled 1:200



Third Floor Plan Scaled 1:200

