

MANCHESTER SCHOOL  
OF ARCHITECTURE

RE-USE



Visit [msa.ac.uk](http://msa.ac.uk) for more information



MSA  
LIVE 21

## Team

**Enis Tan Ulman** (M Arch 01)

**Jack Francis** (M Arch 01)

**Ismael Zaman** (M Arch 01)

**Rebecca Beer** (M Arch 01)

**Matthew Galan** (M Arch 01)

**Jordan Bartlett** (M Arch 01)

**Saffron Parker Mitchell** (BA 01)

**Chih-Chieh Yu** (BA 01)

**Riya Sophia Glosch** (BA 01)

**Harrison Baker** (BA 01)

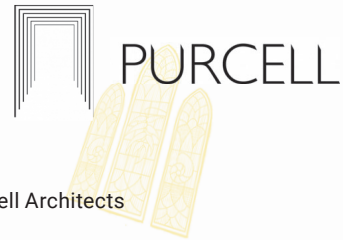
**Han Xu** (BA 02)

**Miruna Larisa** (BA 02)

**Jake Iskandar** (BA 02)

**Jasmina Kate Watson Millard** (BA 02)

## Partners



Purcell Architects

Purcell is an architectural design practice with 13 regional studios in the UK and international offices. We are working on collaboration with Vanessa Torri from the Manchester Studio.

Vanessa is an Architect who is part of the Purcell team working on the refurbishment of Grade I Listed Manchester Town Hall, where she is also responsible for several educational outreach programmes that add social value to the project, alongside work as a visiting tutor at Manchester School of Architecture.

Prior to her involvement with the Town Hall project, Vanessa worked on a variety of projects spanning across different sectors, specialising in large cultural schemes such as Battersea Power Station and Drapers' Hall, and smaller scale residential/mixed use projects before relocating to Manchester to undertake her Masters degree, where her joint thesis project was nominated for the RIBA Silver Medal Award (2017).



# Agenda

## RE-USE

MSA LIVE Group 28, RE-USE, aims at exploring the repurposing of materials from the Manchester Town Hall Project in collaboration with Purcell Architects. The project aims at designing the basis of a re-use framework, which consists of a developed analytical guide to inform the re-usability of materials that may be found on any construction site, as well as making use of niche objects found within such specific conservation retrofit projects. Taking forward this idea of repurposing, the design team will then progress further from their curated frameworks in developing model projects consisting of, temporary interactive pavilions for the opening of MTH in 2024, in hopes to encourage a recycling initiative.

Research Week 1: The construction industry being a large source of environmental damage, MSA LIVE Group 28 RE-USE, aimed to gain a broader understanding of what the construction and conservation industries considered to be waste, through the exploration of the Manchester Town Hall site in collaboration with Purcell Architects. The week began with the group listing and cataloguing materials that could be identified and found within the project through various resources including planning drawings and Multivista, site photographs, given to us by our collaborator Vanessa. Further research was then conducted to learn how these materials could be reused through explored precedents, as well as advancing our knowledge through the creation of an initial framework, that could be used within any construction site, providing a guide to explain how to extract, restore and reuse materials to ensure a circular economy is achieved.

Design Week 2: Following on from the reuse research and framework, the second week consisted of designing two temporary interactive spaces in Albert Square from the materials defined in Week One. The structures aimed at promoting the opening of the MTH, as well as furthering the recycling initiative within the architectural conservation project. The concepts aim to illustrate examples of how the framework can create a life for disposed of materials once removed from Town Hall. These space will aim to reuse waste materials, consider the 'cradle to cradle' process and optimise the potential for future reuse.

Image Top:  
Purcell Architects

Image Bottom:  
Vanessa Torri

# DOES ARCHITECTURE HAVE A WASTE PROBLEM?

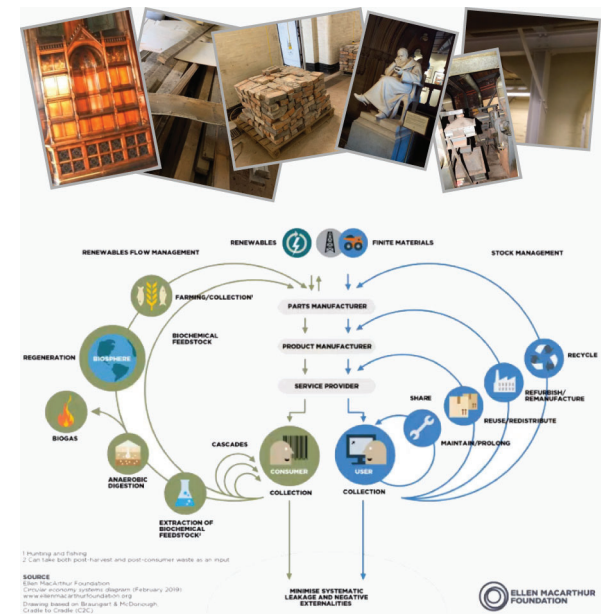
## 400 million tonnes used in the construction industry each year - 100 million wasted

## What is considered waste, and how can we derive value?

Within this diagram, we explored some of the initial materials that may be accessible for repurposing such as bricks, timber and carpets found within the Manchester Town Hall site. The initial presentations by our collaborator Vanessa in research week 1, gave us an in-depth knowledge of some of the findings we could expect. Helping us to consider what may or may not be identified as a historical asset, therefore, resulting in a source for reclaimed materiality. The question of 'Does Architecture have a waste problem?', was a key driver within this task, and helped identify issues that may not only be found on the MTH site, but also within the industry as a whole.

Parallel to our work we had presentations from Liam Bentley, who is the assistant design manager and from Craig Dick, the environmental sustainability manager of the Manchester Town Hall Projects. These presentations gave insight to how the process of documenting, restoring, storing, and moving the assets in the construction area while thinking circular economy principles;

- Design out waste and pollution
- Keep products and materials in use
- Regenerate natural systems









# Re-Use Pavillions



Once we had defined our 'Re-Use Framework' in Week One, we set ourselves the task of designing two temporary interactive spaces in Albert Square to promote recycling and re-use, particularly within architectural conservation. It aims to provide an example, running parallel with the 'Re-Use Framework,' showing different construction and design methodologies that utilise materials that have previously been considered waste.

We limited ourselves to the space of Albert Square, with the interactive spaces to debut in 2024, coordinated with the reopening of the Manchester Town Hall. The designs had to reuse waste materials from the refurbishment, and consider the 'cradle to cradle' process for materials.

In order to do this we have considered what happens to these materials after the project is dismantled, such as who they are given to, where they could go, what other purposes they could have, and how to improve its future adaptability.

We discovered from our research conducted in Week 1, that when waste materials are reused, and thus processed to adapt to their new purpose, the less recyclable they become. As a result, we decided as a team that within our design task we should modify or customise the materials as little as possible, in order for them to be as adaptable for further future uses as possible, after the interactive space is dismantled so these materials can be reused elsewhere.

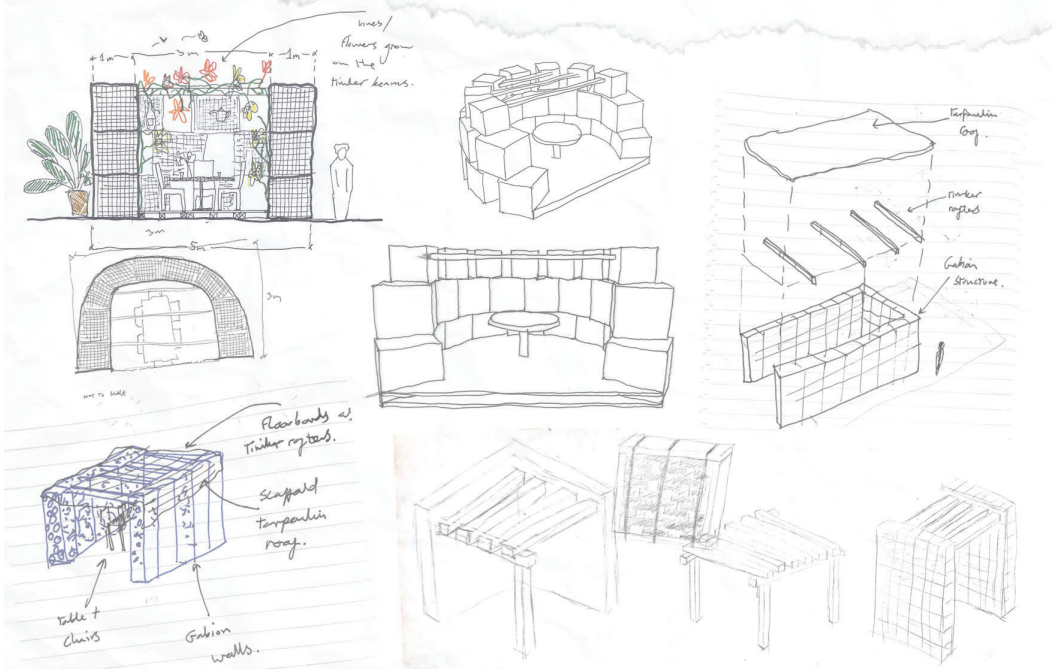
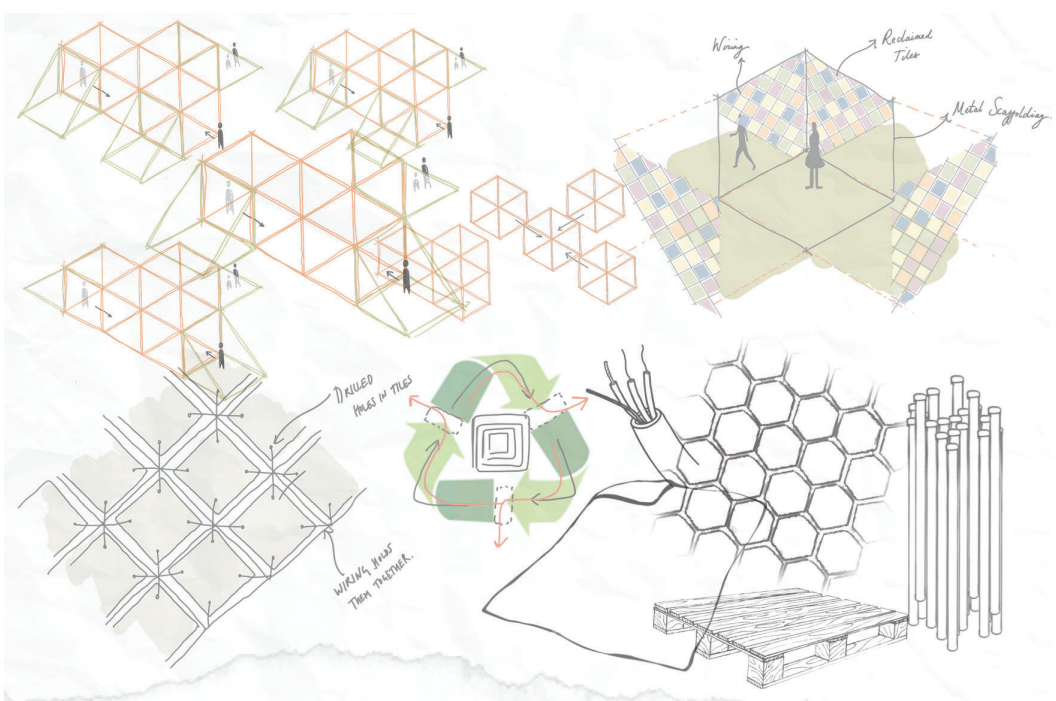
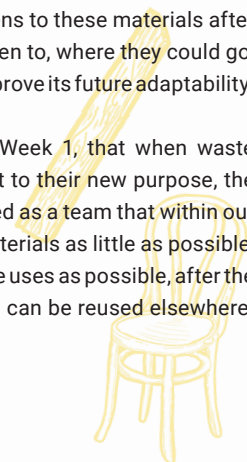


Image Left:  
Collage of the group works



# GROUP 1

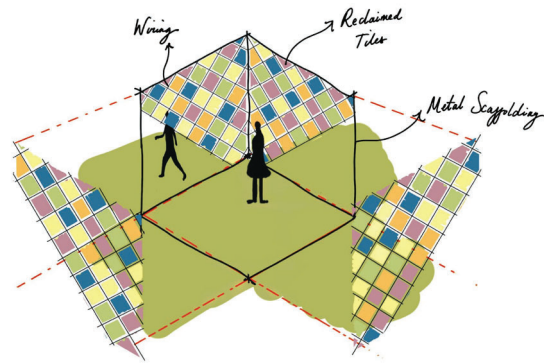
In our pavilion design, we focus on the concept of "Re-Use", "Reclaim", and "Recycle". There are three pavilions to be designed around the Albert Sculpture. Each of them takes one design concept.

First of all, the "Re-Use" pavilion is made of scaffolding, metal duct work, wiring for connections. Each pipes contain a plant for people who walk through the pavilion, able to take a plant away.

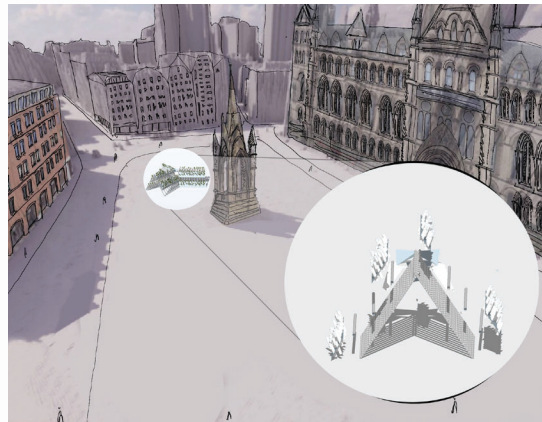
Second, the "Recycle" pavilion is made of wood panels and floorboards. It contains the design of vertical planter and recycling area.

Last, the "reclaim" pavilion is made of metal scaffolding and tiles tiled with wire.

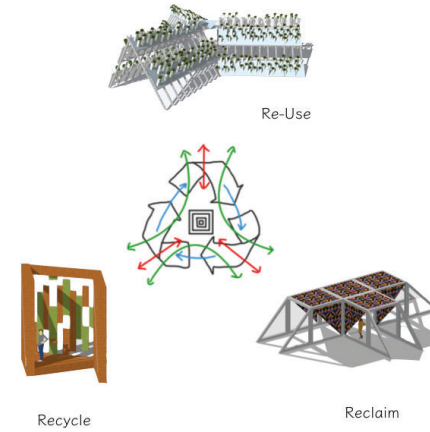
## Concept Sketches



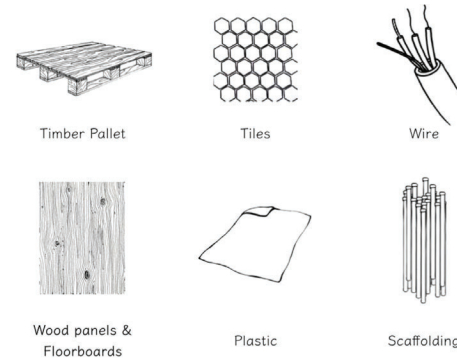
## Exploded Axonometric Drawing



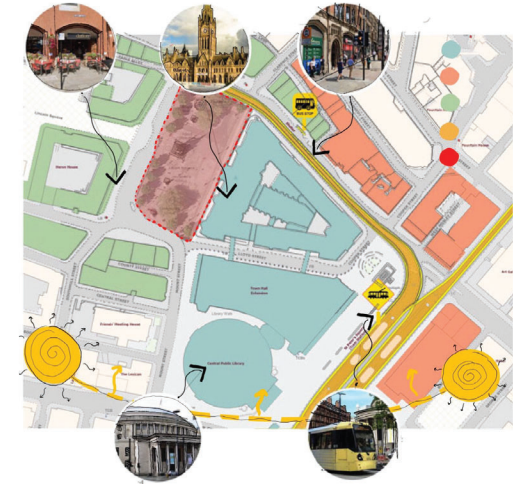
## Concept



Materials: Timber Pallet, Tiles, Wiring, Wood panels&Floorboards, Plastic, Scaffolding



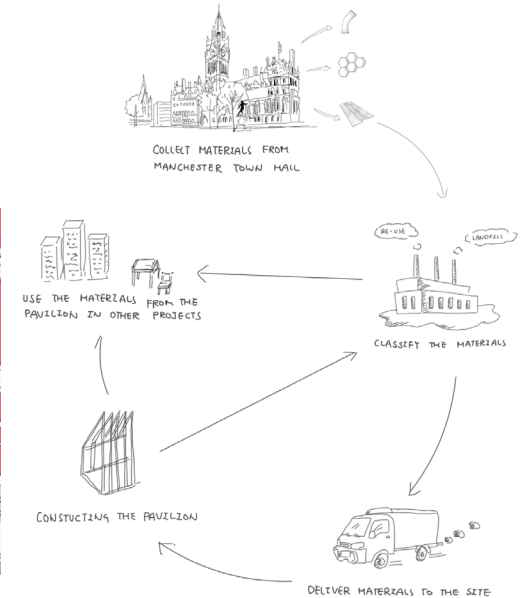
## Site Analysis



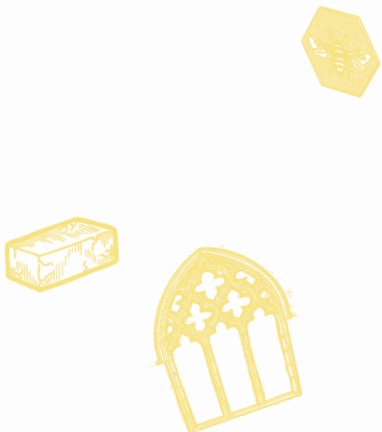
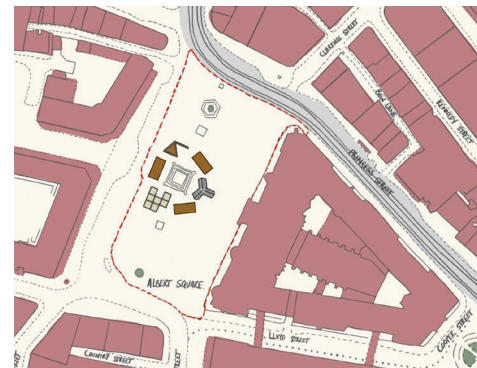
## Render



## Cradle to Cradle Flow Diagram

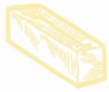


## Plan





# GROUP 2



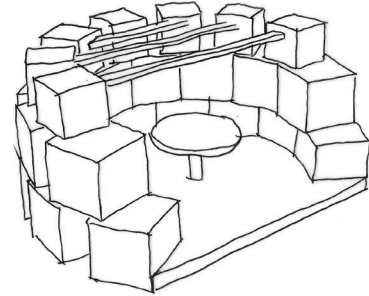
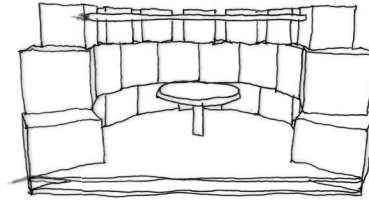
These temporary pavilions are intended as open dining spaces, serviced by local cafes and restaurants to be used during the summer time.

The project will consist of six individual pavilions with table and seating. They will be constructed from waste materials collated from the renovation of Manchester's Town Hall and put together in a way that will ensure each material can be reused again once the project is finished. Each pavilion will use gabion boxes filled with bricks to create a semi-open space. The gabions will also display historical artifacts found in the renovation. Wooden beams will span across on the top to provide shade and enable planting to grow. Wooden pallets and OSB board will create a raised flooring creating a sense of separation from street level.

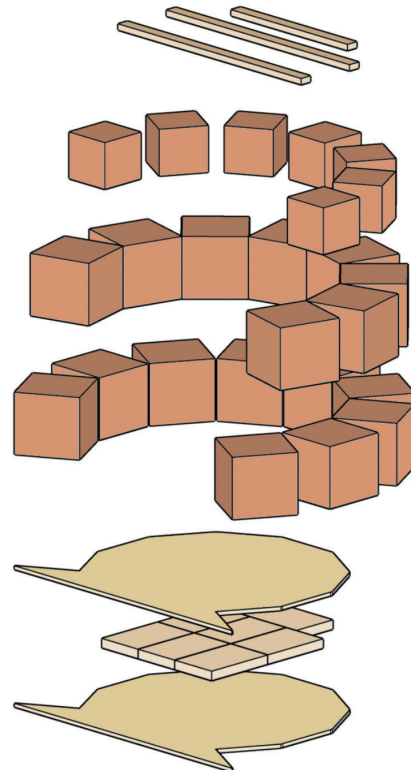
The project aims to celebrate the 2024 reopening of the town hall and encourage public engagement with the project



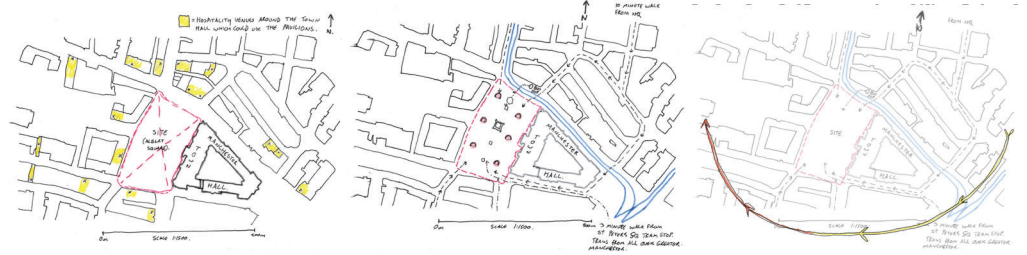
## Concept Sketches



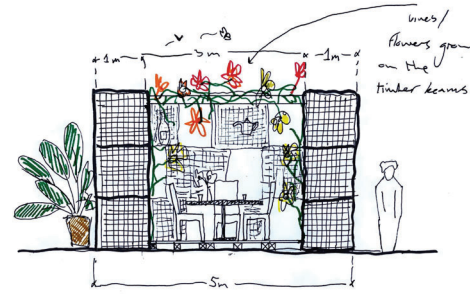
## Exploded Axonometric Drawing



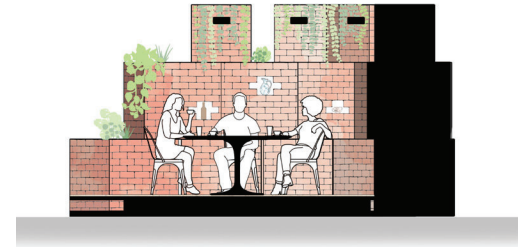
## Site Analysis



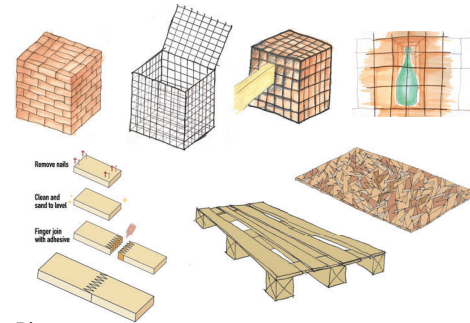
## Concept



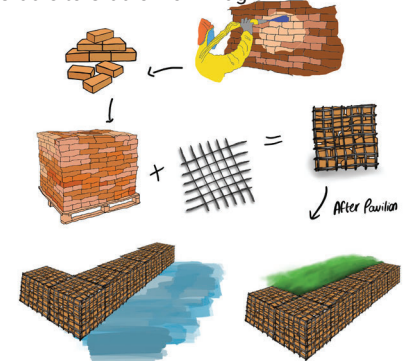
## Section



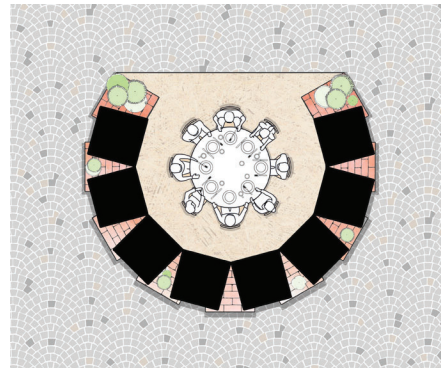
## Materials: Gabion boxes, Bricks, Timber Board, Wood Pallet and OSB Board



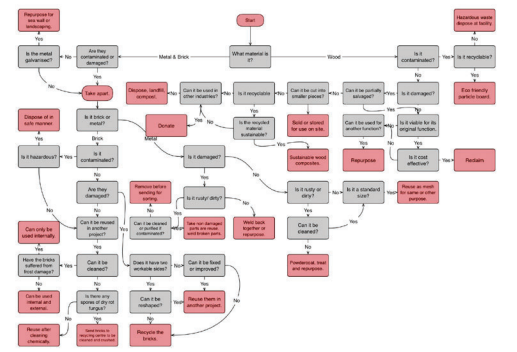
## Cradle to Cradle Flow Diagram



## Plan



## Framework



# Conclusion



Throughout the two weeks, we have used the experience to really look into the problems we identified at the beginning. In architecture, we are facing an increasing issue of waste, where over 50% of all of the emissions are generated by the construction industry. In the midst of a global climate emergency, a great deal is underway in terms of trying to tackle the waste generated by the process, but how much is really being done to address it? Within our first week, we looked into the overarching ideas behind recycling, re-use and also the general ideas of whole life-cycle use of materials. The students found that when reclaiming materials, it is very often the case that 'recycling' causes additional processes and generated more waste. Plastics, although recycled in the UK, often get shipped off overseas to sit in other landfills. Therefore the initial research and development of a framework allowed us to be able to tackle the problem on a more local scale, by identifying some of the materials available within construction sites such as (MTH), and how we may repurpose them more effectively and sustainably, that does not lead to further carbon emission and helps attain a circular economy. This then lead the students to think broadly on how such materials may be repurposed through various precedents, redefined within initial concepts created for the opening of Albert Square (MTH) in 20204. Their designs allowed an exploration of an opposing view, that material may not always need to be broken down to their raw material but may be used within their existing form through various applications identified throughout the blog and publication.



Overall the LIVE event has allowed all members of the group to gain a better understanding in terms of sustainability and the recycling of materials. There has been some great feedback throughout, with suggestions of incorporating recycling aspects on a more individual level, taking the basis of the taught tutorials into each student's architectural practice.

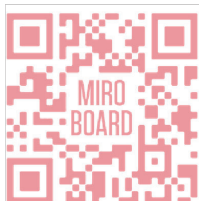
Image Left:  
Contex collage of the  
Manchester Town Hall

Miro Board Link:  
[https://miro.com/app/  
board/o9J\\_IFJvk2c=/](https://miro.com/app/board/o9J_IFJvk2c=/)

Blog Link:  
[https://live.msa.  
ac.uk/2021/group/28/](https://live.msa.<br/>ac.uk/2021/group/28/)



BLOG  
POSTS



MIRO  
BOARD





## ABOUT

Each year the MSA Live (formerly Events) programme unites M Arch. year 01 with B Arch. year 01 and 02 and M Land. Arch 01 in mixed-year teams to undertake live projects with external partners to create social impact.

## LIVE PROJECTS

All MSA Live projects are live. A live project is where an educational organisation and an external partner develop a brief, timescale, and outcome for their mutual benefit.

## SOCIAL IMPACT

All MSA Live projects have social impact. Social impact is the effect an organization's actions have on the well-being of a community. Our agendas are set by our external collaborators.

## EXTERNAL PARTNERS

MSA LIVE projects work with many organisations: charities, community groups, social enterprises, community interest companies, researchers, practitioners and educators.

## STUDENT-LED

Our MSA masters students take the lead in the project conception, brief development, delivery and co-ordination of a small project. Other cohorts join for an eventful 2 weeks of activities at the end of the academic year.

## KNOWLEDGE TRANSFER

Working in teams within and across year groups and courses; MSA students participate in peer to peer learning. In addition, collaborators, participants and students engage in the transfer of tangible and intellectual property, expertise, learning and skills.

## LARGE SCALE

This year approximately 600 students from 4 cohorts in MSA will work on 42 projects with partners.

## QUESTIONS

For questions about MSA Live 21 contact MSA Live Lead: Becky Sobell:  
[b.sobell@mmu.ac.uk](mailto:b.sobell@mmu.ac.uk)

## BLOG

[live.msa.ac.uk/2021](http://live.msa.ac.uk/2021)

## SOCIAL

#MSALive21

@TheMSArch

@MLA\_TheMSArch

## WEBSITE

[www.msa.ac.uk](http://www.msa.ac.uk)

