

MANCHESTER SCHOOL OF ARCHITECTURE



Team

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Athina White (BA 01)

Ying Chen (BA 02)

Timothy Girgis (BA 02)

Partners

ModulARCH have collaborated with Manchester City Council who are considering future-proof modular housing options for upcoming residential development.

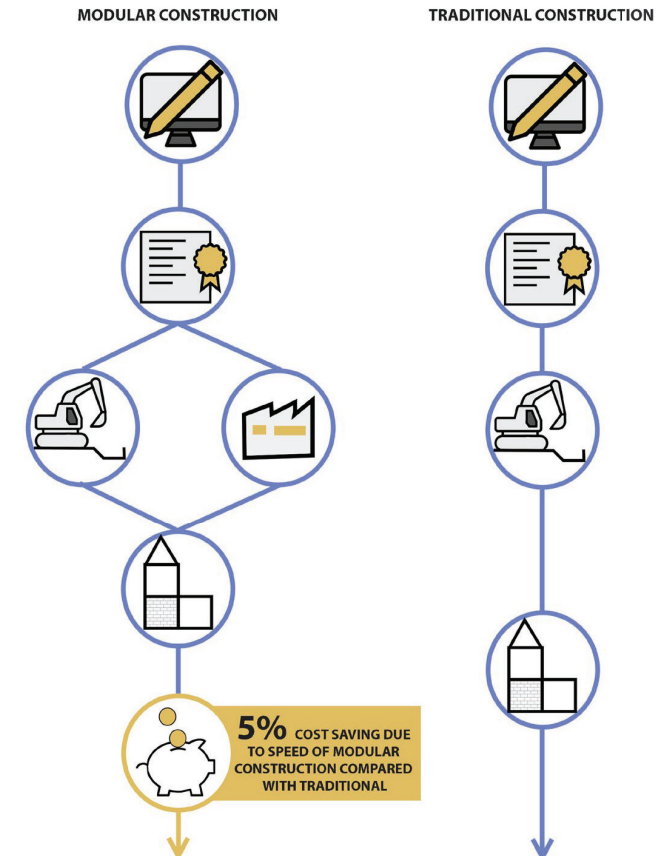
Working closely with Carol Western (Project Manager) and Emily Colgan (Project Assistant), this project explored flexible affordable housing options taking advantage of Modern Methods of Construction (MMC) through panellised and volumetric design.

Taking advice from the Planning and Building Control Departments, this project considered different conceptual modular options within budget alongside a materiality matrix, life-cycle data, high levels of energy efficiency and carbon ratings.

Agenda

ModulARCH

ModulARCH aims to provide solutions using modern construction methods which will have a lasting social impact on the community. Sustainable solutions will reduce energy thus, contributing towards a net-zero carbon city. New construction will create new jobs thereby, improving the employment in the local area. Affordable housing developments will ensure more housing for people in need.



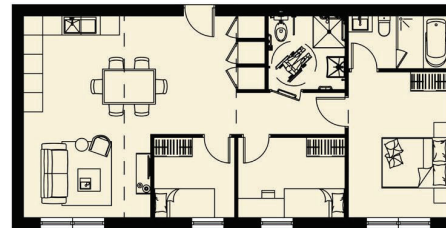
Site Plan



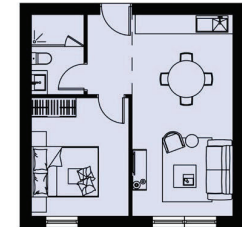
Apartments



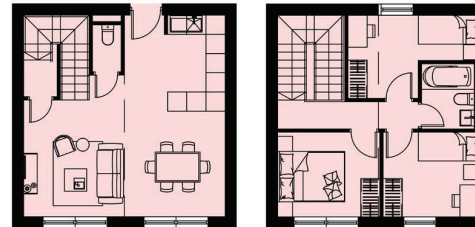
MODULE 1 - ACCESSIBLE SIMPLEX
 AREA: 98m²
 three bedroom



MODULE 2 - SIMPLEX
 AREA: 49m²
 one bedroom



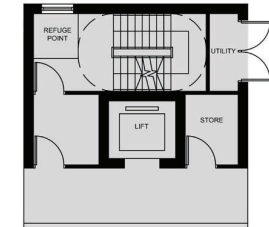
MODULE 3 - DUPLEX
 AREA: 98m²
 three bedroom



LOWER LEVEL

UPPER LEVEL

MODULE - CIRCULATION
 AREA: 49m²



Apartment Elevations



APARTMENT ELEVATION | 1:100
BRICK + METAL

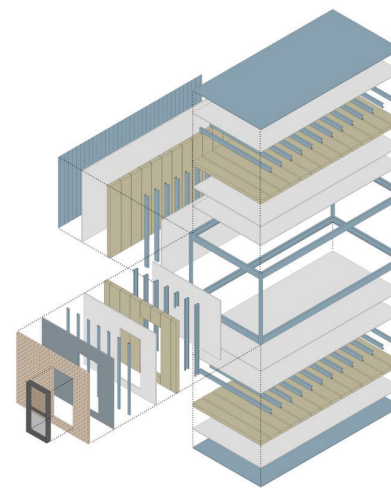
Apartment Section



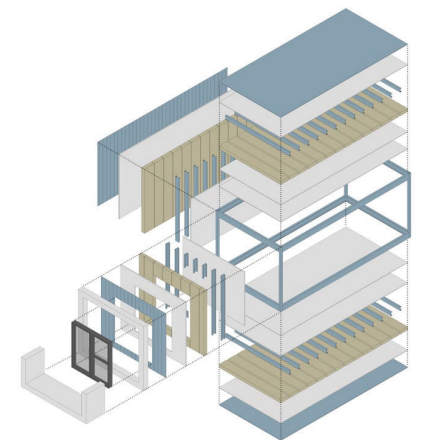
Exploded Construction Isometrics



APARTMENT ELEVATION | 1:100
BRICK + RENDER



Apartment Option A - Brick Slips



Apartment Option B - Metal Cladding

Apartment Construction Sequence

2

foundation structure installed on site

4

First floor installation

6

Roof and back corridor installation

1

Foundation

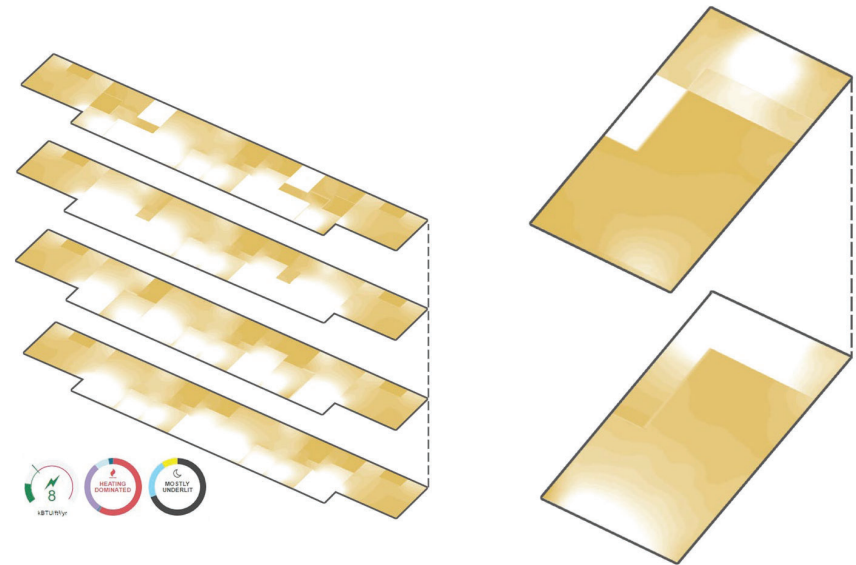
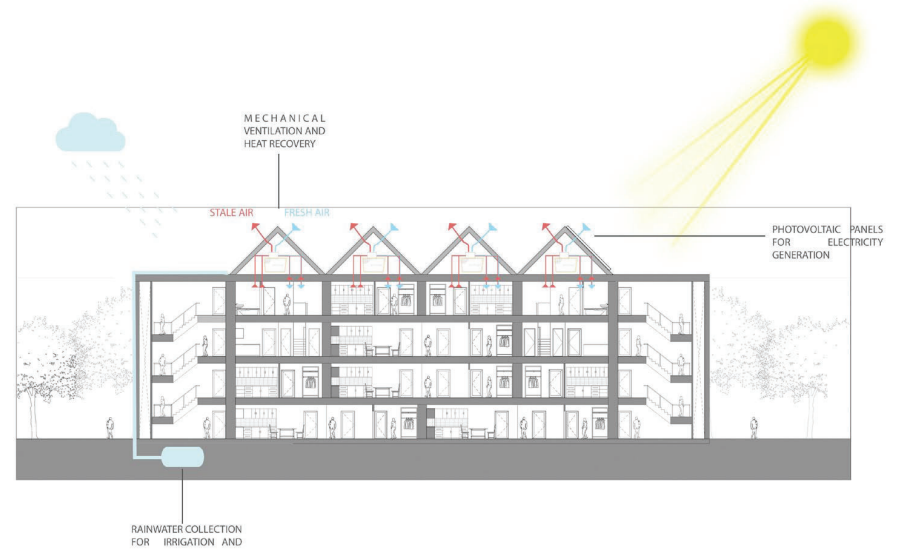
3

Circulation core installation

5

Upper Floors stack on top

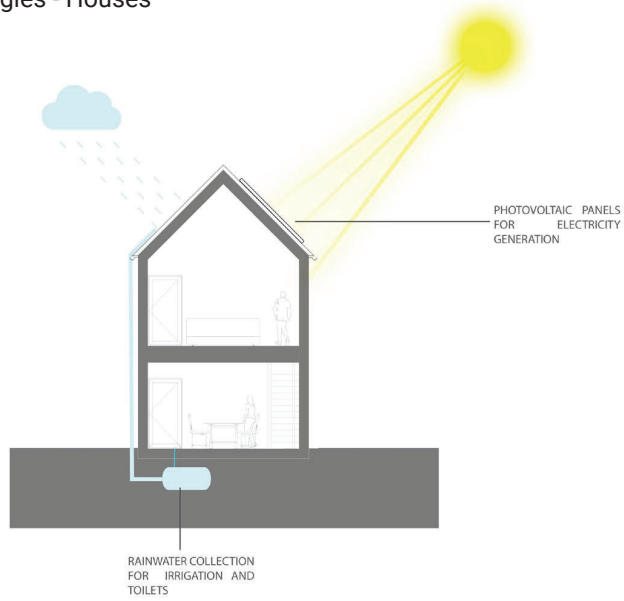
Environmental Strategies - Apartments



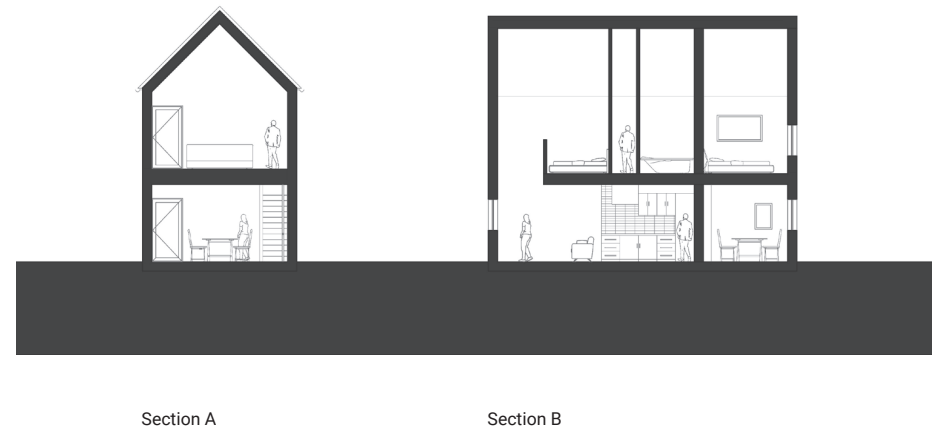
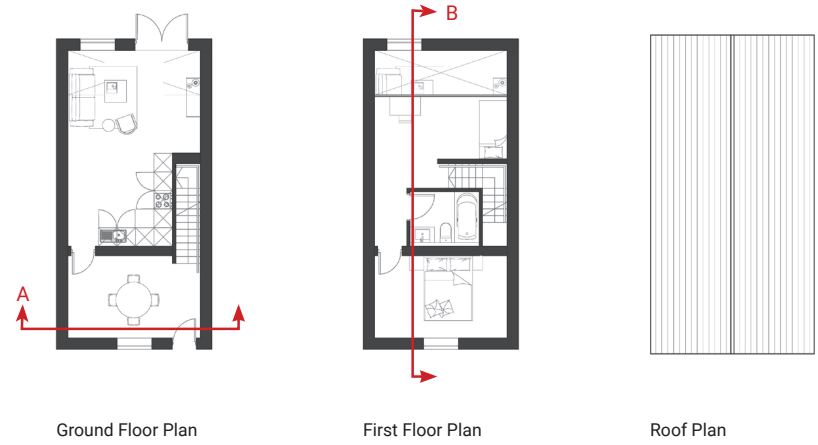
Sefaira Analysis - Apartments

Sefaira Analysis - Houses

Environmental Strategies - Houses



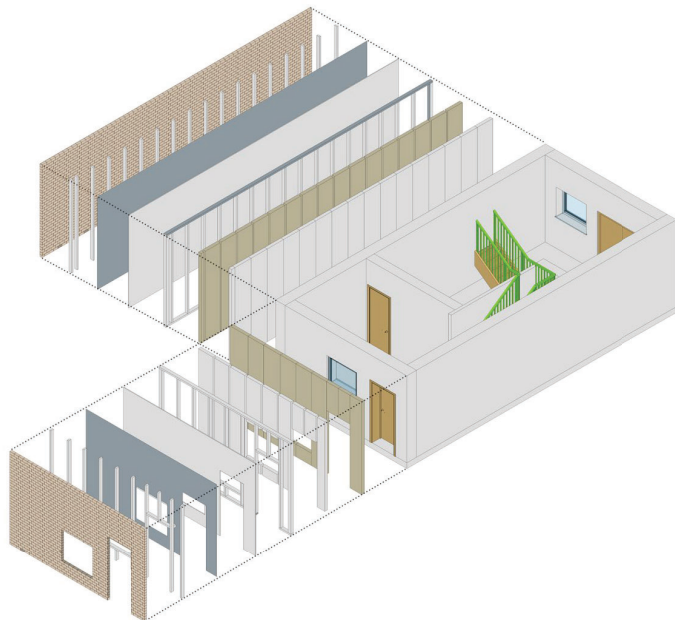
Housing GA Drawings



Housing Elevations



Exploded Construction Isometric



Housing Construction Sequence

2

Ground Floor Slab installation

4

Floor slab installation for first floor

6

Roof installation

1

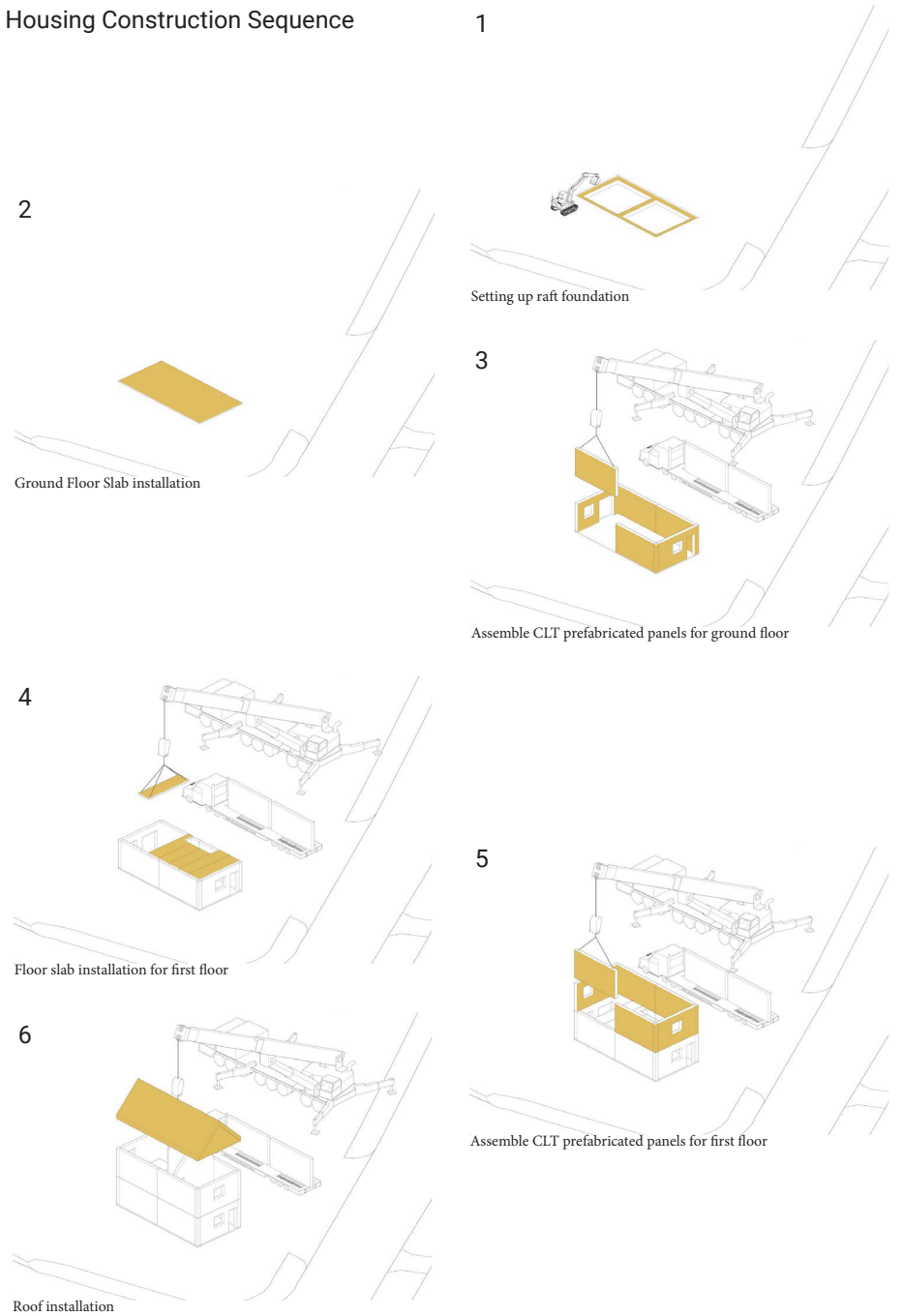
Setting up raft foundation

3

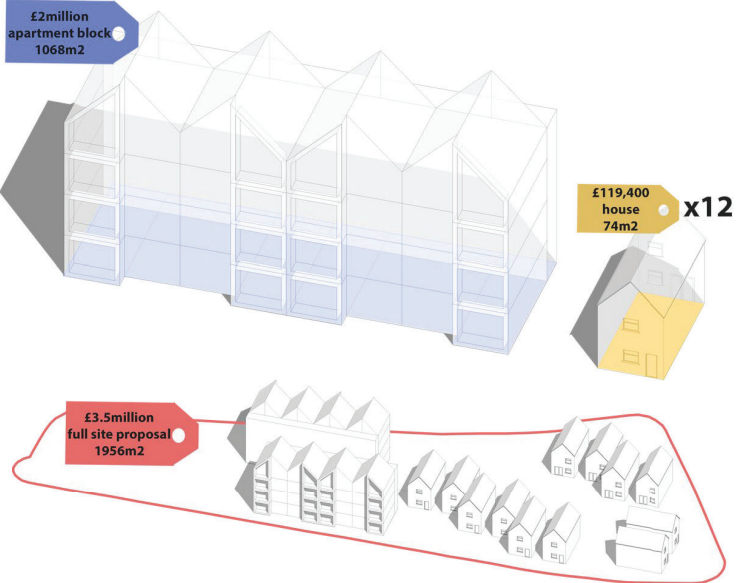
Assemble CLT prefabricated panels for ground floor

5

Assemble CLT prefabricated panels for first floor



Costing Analysis



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

BLOG

live.msa.ac.uk/2021

SOCIAL

#MSALive21
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WEBSITE

www.msa.ac.uk