MANCHESTER SCHOOL OF ARCHITECTURE

INFINITY FOOTBALL

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MANCHESTER 1824
The University of Manchester

Manchester Metropolitan University

Infinity Initiatives F.C.

MSA LIVE 23

Team

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Partners

The collaborators for the Infinity Football Project are Infinity Football Initiatives FC, who are actively working to help and improve their local community in Ashton through sports. In today's fast-paced world, inducing continuous stress and possible mental health and well-being issues, it is important to partake in activities that help alleviate the pressure. Physical activities such as football is shown to increase not only physical health but mental health also.

Infinity Initiatives started by working with men in the local community to support men's mental health struggles through football, and have since expanded to 4 men's teams, 1 women's team, and 1 youth team. Infinity Initiatives are continuously involved in improving their local community by providing help and support for people with multiple needs (substance misuse, poverty, crime, etc.). They engage with the community and provide a safe space to talk about any issues and concern and supply a platform where they can empower and express themselves to improve their well-being through sport and physical activity.

Agenda

Infinity Football

Infinity Initiatives FC are looking for the design of a stadium to house their local community based teams, with a special focus on providing an economical, sustainable and community centric design with a capacity of 500-800 seating spaces and a further 1000-1500 standing spaces. The stadium will include amenities and facilities such as changing rooms, training spaces, merchandise shop, and a bar space as well.

Given the strong community and mental health focus of Infinity Initiatives FC, it is important that the stadium resonates with this message and character of the collaborators, aiming to provide a stadium that boosts the well-being and sense of community of not only the players, but staff, spectators, and locals as well. As such, the design focuses on the impacts any design decisions will have on these aspects, from the materiality to the structure, layout, and form of the stadium.

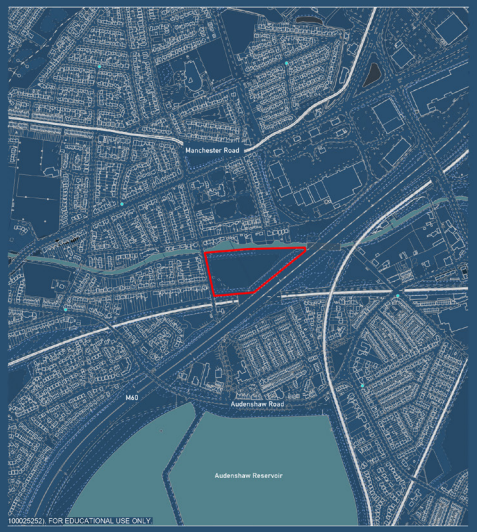
The proposed design is achieved through a series of collaborative workshops over an intensive 2-week period involving the three different cohorts of MArch1, BA1, and BA2 students, working alongside each other to discuss and shape the proposal utilising each other's skill sets. The design process involved initial perspective sketches, concept collages, spatial explorations on plan, and 3D massing exercises in the first week. In the final week, the massing is finalised and developed up in more depth, producing renders and schematic design.

Throughout this process, a range of digital software have been utilised alongside the concept sketches such as Adobe Software, SketchUp, and Lumion, building on the existing skill sets and proficiencies of the students and providing tutorials for further development.

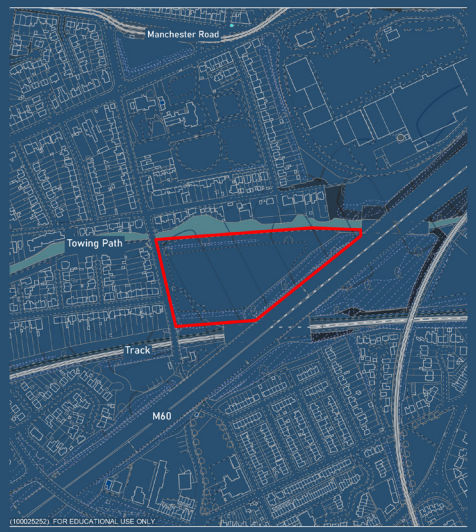
The collaborators are also actively engaged in the design direction, providing feedback on the initial ideas and concept designs halfway through the project, to guide the final design in the direction they have envisioned for the project. Having chosen a direction that best aligns with the aspirations of the client, the massing iteration is further developed to provide the final outputs of visuals and axonometric showing the stadium in its' full glory.

Site Analysis

Site Location - 1:10,000

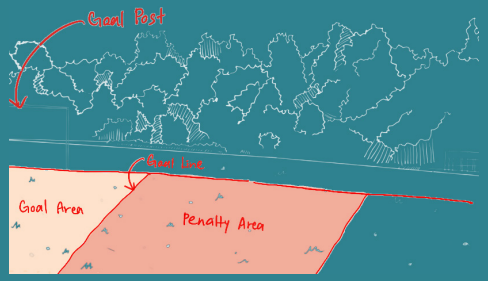


Site Location - 1:5000



Site Analysis - Dominant Wind Direction

Site Analysis - Sunpath



Site Visit

The site is located in Audenshaw, Tameside. To allow the BA1/2 students to evaluate the viability of the project requirements and visualise the project, we went on a site visit to come out with a better understanding of the scale, site context, and limitations. The primary vision of the project is to provide a physical football stadium and engage the community.

Content Production

To achieve the final required outputs for this project, we split into groups focusing on different parts feeding into the deliverables. The groups are split to focus on: site analysis, precedent research, and initial sketch ideas/concepts.

The groups were split to have a mix of both BA1 and BA2 students, alongside an MArch 1 student to help with any questions and queries, making the best use of the range of skills and experience between the groups, proving to be a successful approach to this group work project.

We then come together as a whole group to discuss findings and agree on a design route to take based on the research undertaken. The discussions led to deciding to use CLT material, since timber is shown to help improve mental health and well-being, as well as possessing various other beneficial material properties.

The site analysis also revealed that the current pitch is not orientated for maximum visual and thermal comfort, so different options were investigated to be presented to the client.

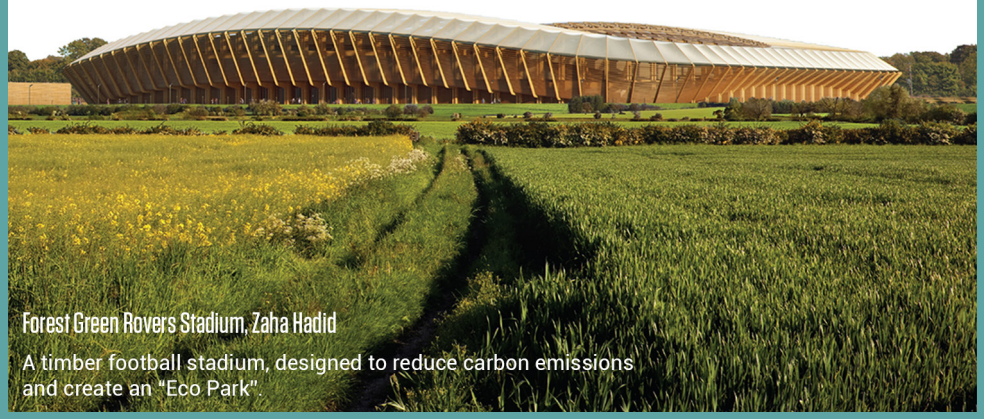
Once again, the students split into groups to work up these iterations, ready for a meeting with the client at the end of the first action week to discuss the design direction taken for the remaining action week.

Initial Ideas & Sketches

Biophilic design - A concept used to increase connection between occupant and nature

Exposure to the sight of wood (at a 45% composition) resulted in comfortable feelings evoked and a decrease in diastolic blood pressure and a significant increase in pulse rate. Whereas, when exposed to a 90% composition of wood, it decreased brain activity and induced relaxation.

Exposure to the sight of green facilitated creative performance



Forest Green Rovers Stadium, Zaha Hadid

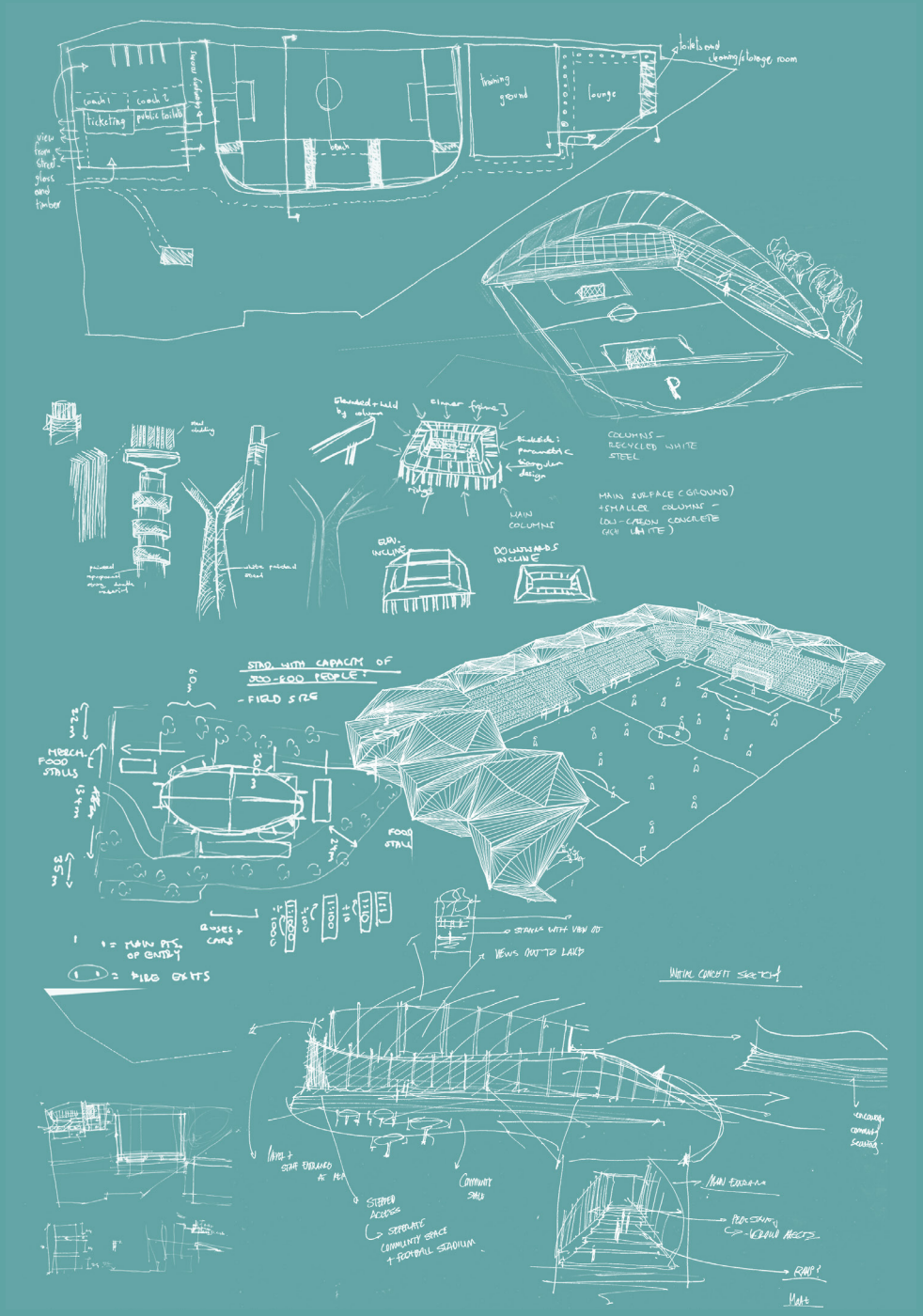
A timber football stadium, designed to reduce carbon emissions and create an "Eco Park".

Noise control via thick cross-layered stacks of wood, effective for diffusing any noises and vibrations made from football matches and fans. This would be useful in creating soundproof past the shrubs, towards the canal and residencies.

Resistance against fire is strong, which will prove useful when surrounded by trees and shrubs; a potential fire risk.

CLT can be water-tight as a roof or ceiling, preventing any leaks and sheltering the stands and fans from rain and water

Thermal control - CLT acting as walls and floors can be airtight, creating strong levels of thermal conductivity.



Massing Iterations

Option 1:

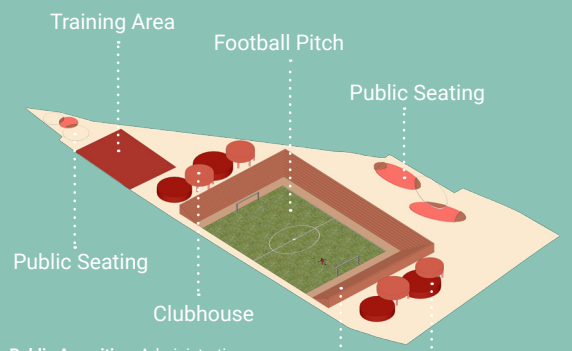
To enhance the players, coaches', and supporters experiences, important facilities are designed. Training areas are provided for the players to prepare for upcoming matches, focus on developing their skills, and stay mentally / physically fit. Public amenities are created to support football events, positively impacting the community by providing income and job opportunities.

Option 2:

Training areas are not provided in this iteration as bigger spaces are needed for the clubhouse. This iteration is focusing more on indoor facilities for the players to rehabilitate and maintain their fitness while being protected from unpredictable weather conditions. The indoor facilities promote an active lifestyle, and bring the players/community closer, whilst there is more parkland left for community use.

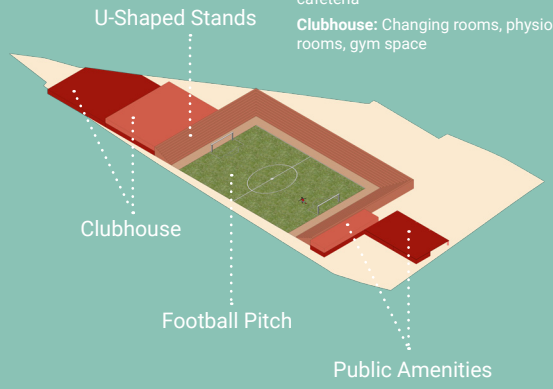
Option 3:

Public seating is not provided in this iteration as the space is prioritised for a curved edge forming U-shaped stands for better viewing from the spectator's angle. The training area and clubhouse are positioned nearby, making it easier for the players to move into changing rooms and other spaces inside for better circulation. The pitch is once again along the canal for biophilic connection.



Public Amenities: Administration and reception, ticket counter, store, cafeteria

Clubhouse: Changing rooms, physio rooms, gym space



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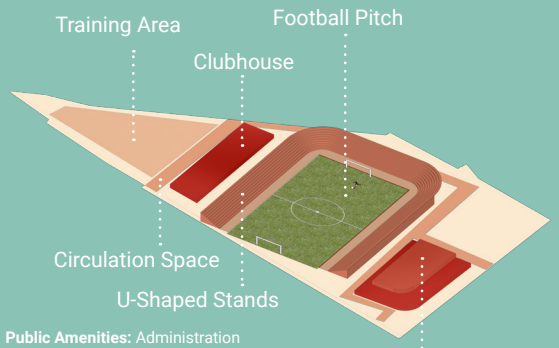

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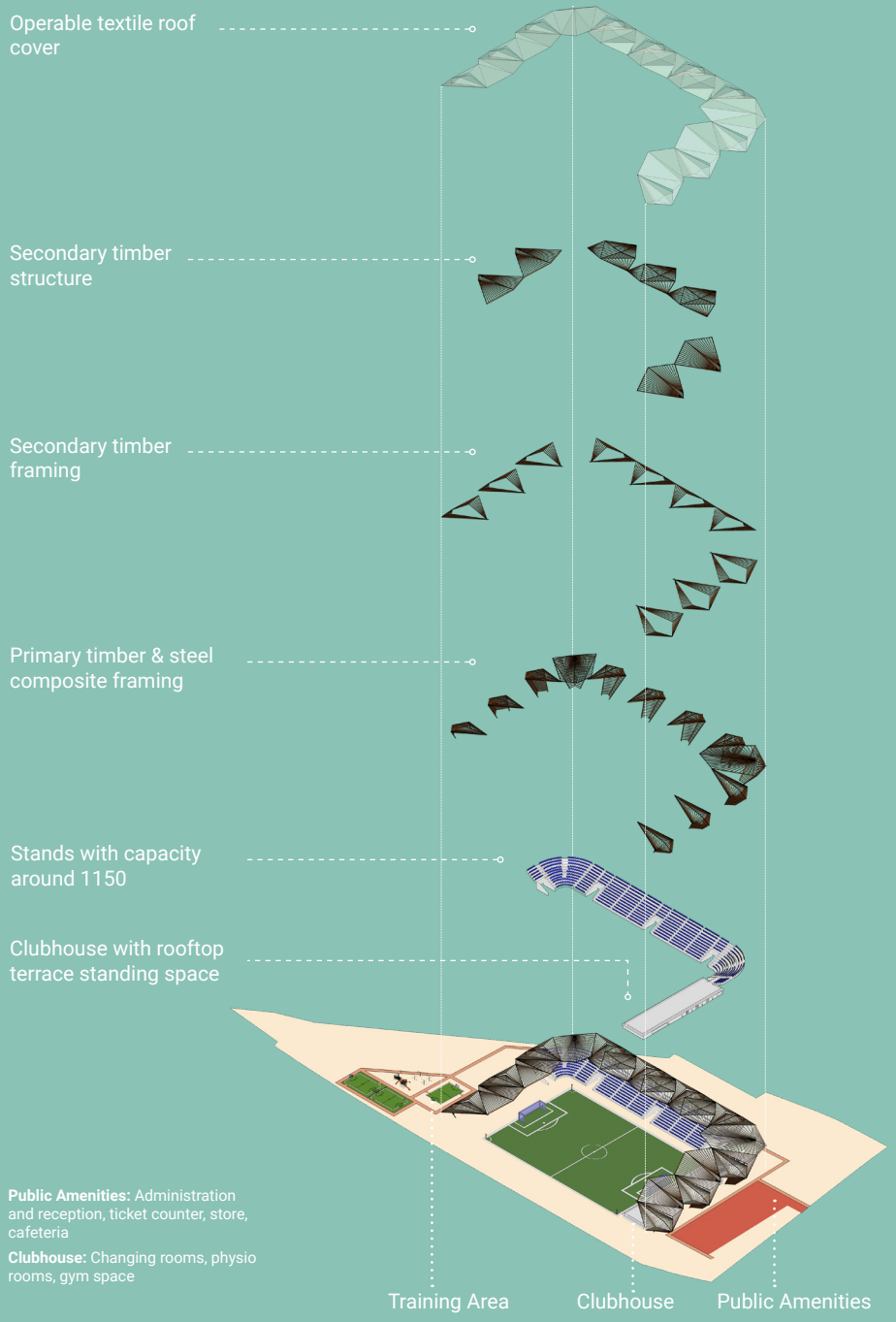
Final Iteration



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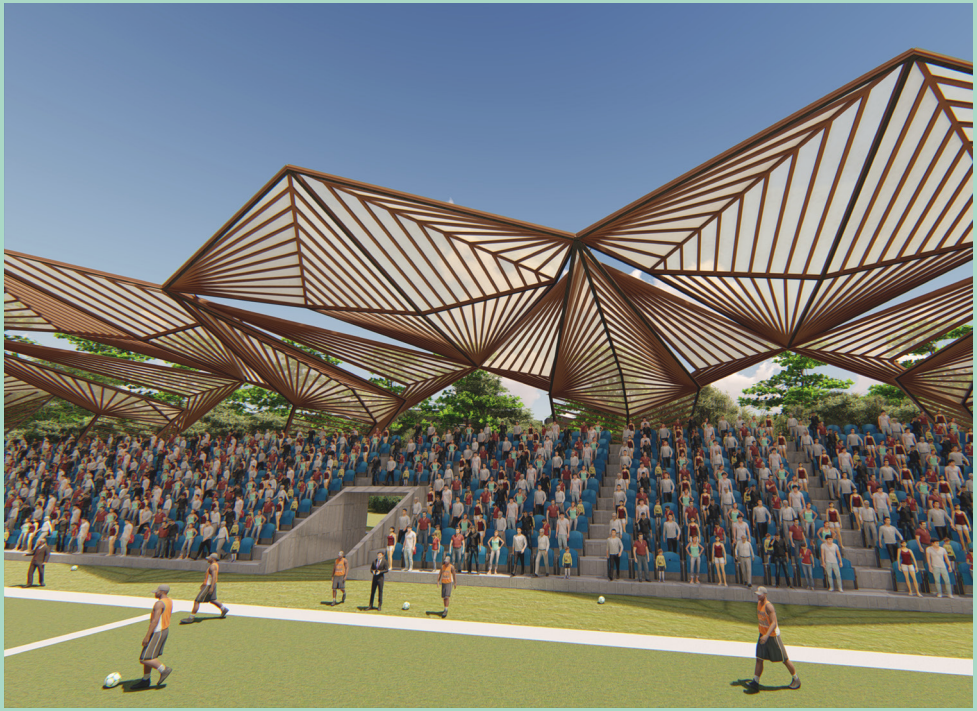


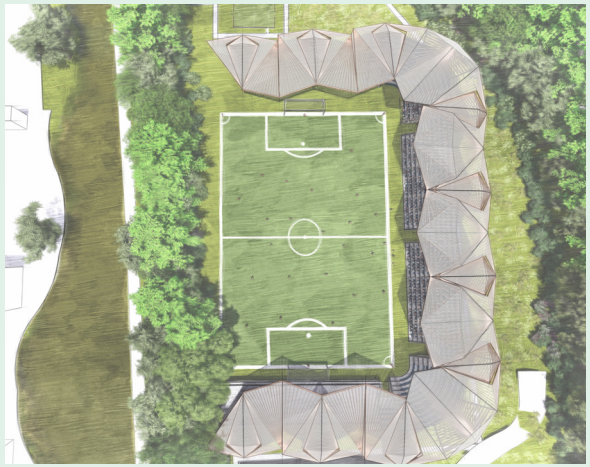
Final Presentation

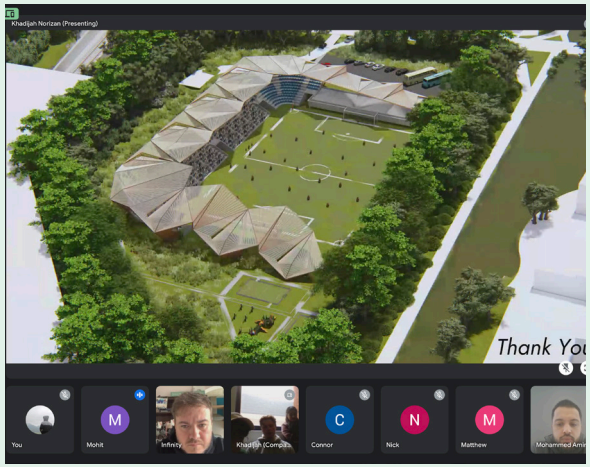
Having developed the final iteration of the stadium, the group has arranged for a final meeting with the collaborators to showcase the end product.

The BA1/BA2 students had the opportunity to lead the presentation, showing off their hard work over the past 2 weeks, which was met by very positive comments from the client team.

Overall, the project has been a successful one, working to deliver the expected outcomes for the project and going even beyond by producing a proposal for future expansion with the expected raise in popularity for the club overtime, as it grows bigger and attracts a larger fan base.

The group has performed very well together, given the limitations arising from varying attendance levels due to the extensions taken for other ongoing projects. However, the project plan ran smoothly and the final output was very satisfactory, with plenty of new skills picked up along the way in not only 3D and rendering software, but soft skills in dealing with live clients and collaborators, as well as working in a larger team. The individual days were modified based on the level of progression, but the main aims for each week were delivered on time, apart from construction details which were discussed with the client as unnecessary and instead a rough cost estimate plan was produced.

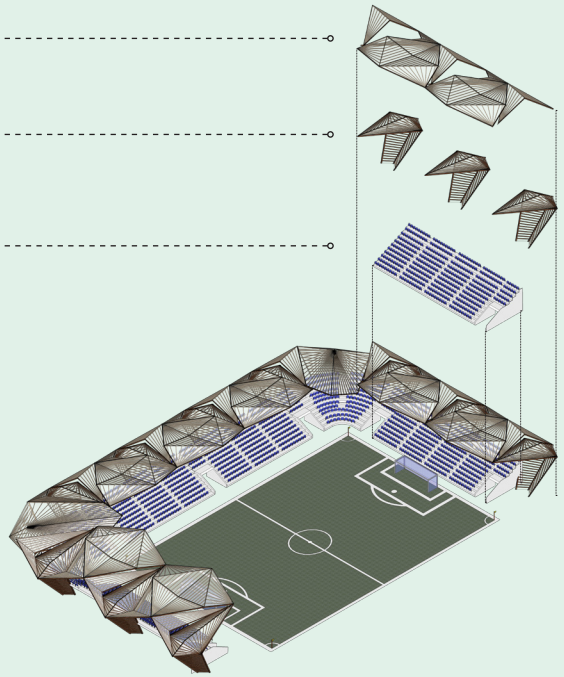




Re-use roof components from previous phase

Structural support recycled and increased in height

Additional stands for increased capacity



Future Expansion

The design allows for organic expansion of the stadium as the fan base naturally grows over time, increasing in size from a capacity of around 1,000 to 2,500 and even more with additional site works.

ABOUT

Each year the MSA LIVE programme unites Masters Architecture year 1 students with those in BA year 1 and year 2 and Masters Landscape Architecture 1 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 joined 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 650 students from 4 cohorts in MSA have worked on 42 projects with partners.

QUESTIONS

For questions about MSA LIVE please contact the MSA LIVE team:
msalive@mmu.ac.uk

BLOG

live.msa.ac.uk/2023

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