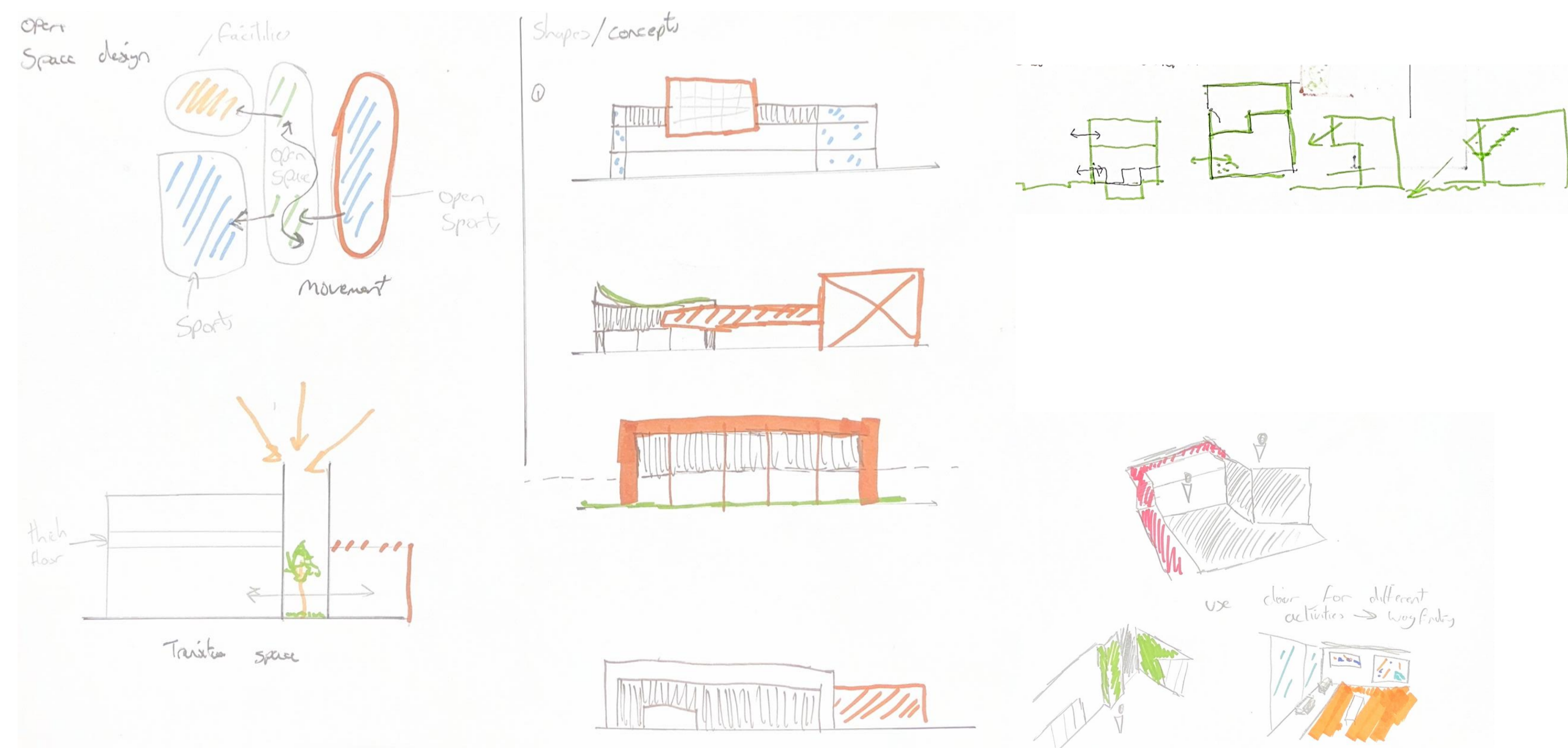


# INTERGENERATIONAL COMMUNITY CENTRE



## ARC 3003 – Detailed design

### INITIAL PLANS



Owen Challis - 27895322

### PRECEDENT STUDY

#### SPATIAL APPROACH

Fragrant hill hotel – I.M.Pei



This hotel has a unique spatial layout centred around a courtyard which then branches off into hotel room and courtyards. This gives the hotel a sense of travel while providing peace of mind while exploring. The large atrium provides many passive design features which make the building have an improved ventilation and diffused lighting. The structure also uses reinforced concrete and steel which allows for the big open spans while including timber in places which need little weight.

- Inspiration
- Courtyards
  - lighting
  - Ventilation
  - Structure
  - material

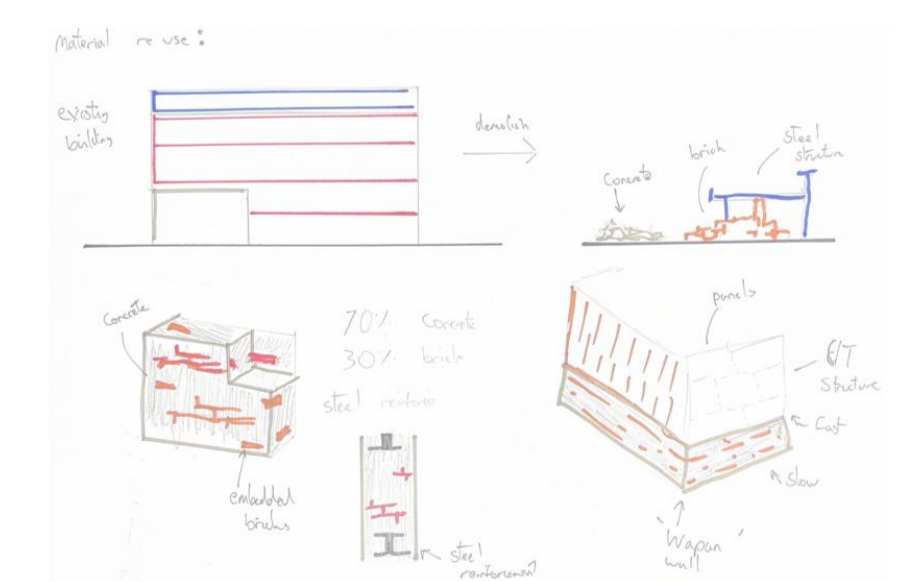
#### NET ZERO APPROACH

##### RECYCLE MATERIALS

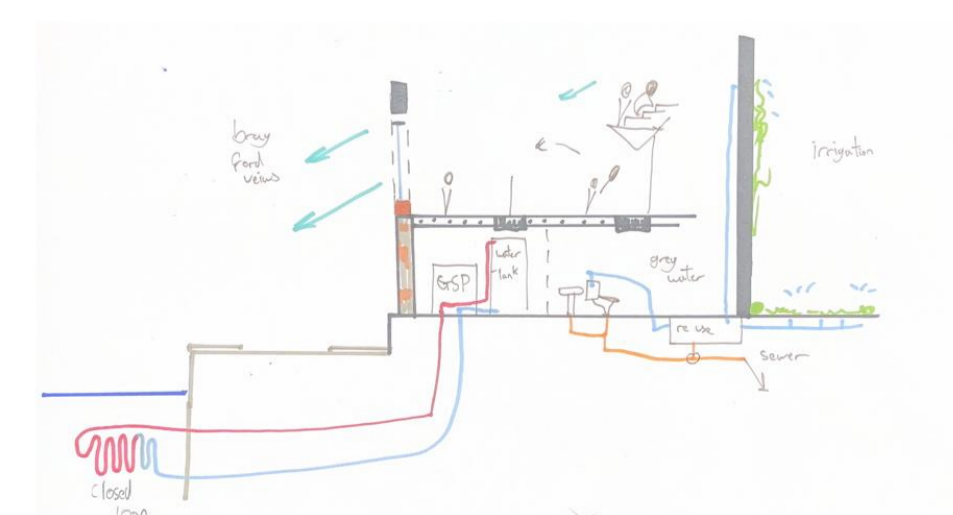
Wang Shu Ningbo History Museum



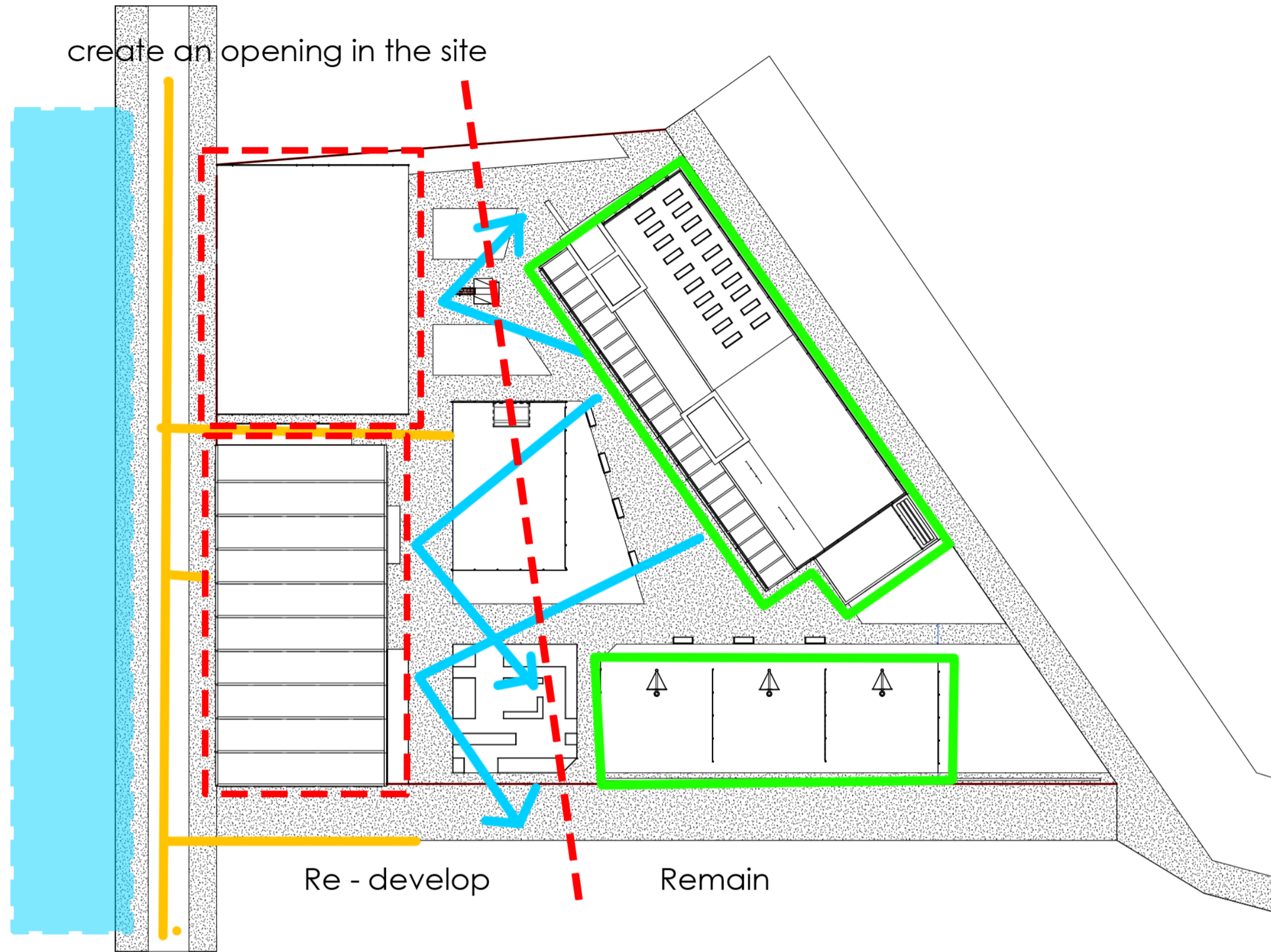
- Recycled steel structure
- Recycled bricks embedded
- Colors remain similar to existing building



##### AIRFLOW



## ORIGINAL PLAN



## WHAT TO CHANGE?

- The east side of the original site is to be remained the same as this area maintains a spatial flow and facilities needed
- From the west side the two sports facilities block the view of the Brayford and are small which means the facilities are not as efficient, this may be changed into a bigger area to support more sports
- The access to the site is also limited so a wider more defined opening is to be created to enter the site from the west.
- More green spaces to be created as the original goal was to have a green location to promote wellness and more garden spaces.
- The diversification of sports facilities to accommodate more niche sports into the roster
- NETZERO principles are key to be included into the re design of this site. Including, passive lighting and ventilation, greenspaces, low carbon design

These proposed changes will make the site into a more accessible site which has a generous spatial plan to make use of the sites excellent location and make measures to improve the flooding within the site.

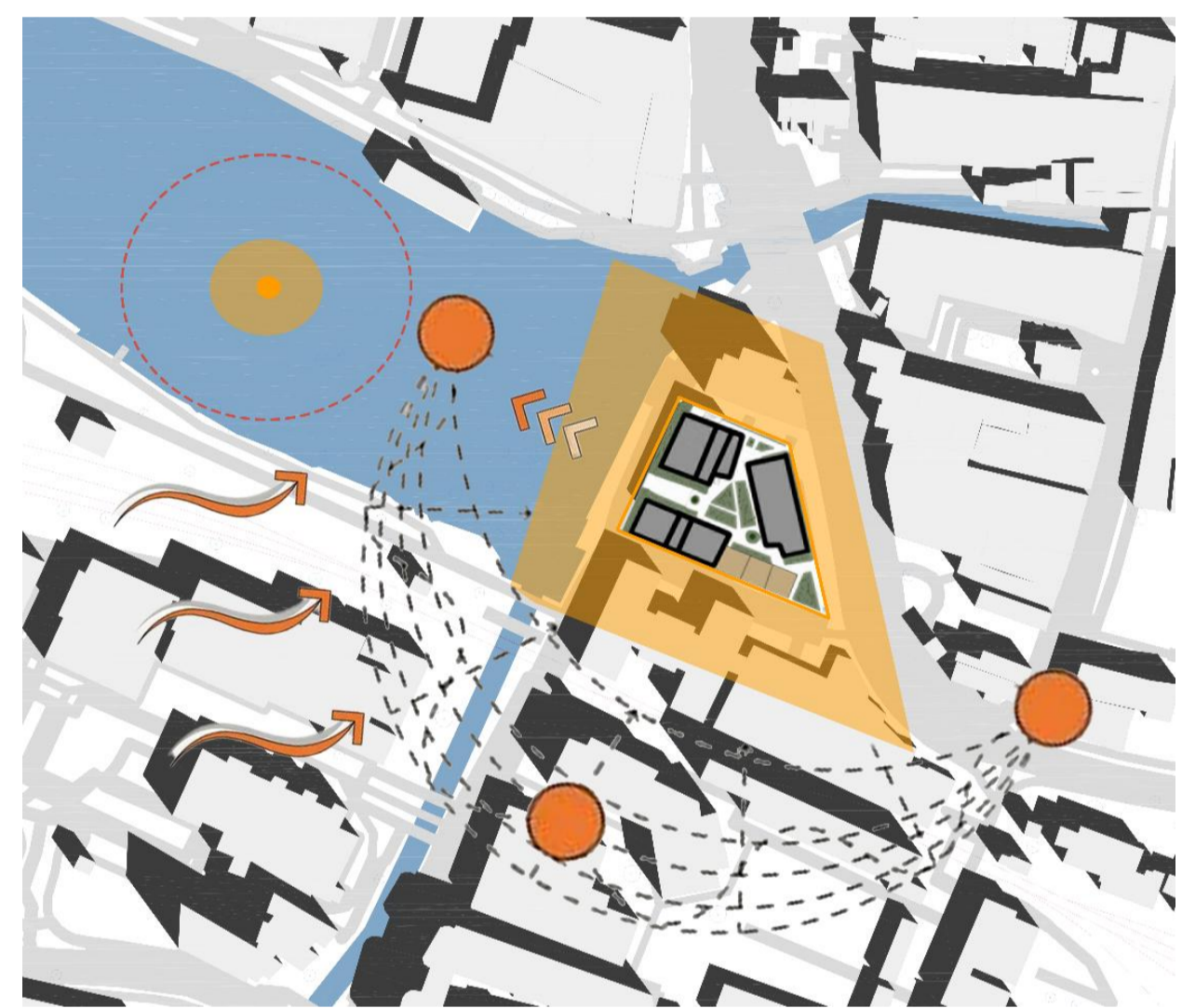
## PROPOSED PLAN

- On the south side of the site a hybrid indoor/outdoor space has been provided with two large courts and an atrium to create a dynamic contrast within the site and allowing an opportunity for natural ventilation and lighting.
- To the north a new main building has been proposed with bigger spaces and a café while maintaining an atrium and acting as the hub for all sports with the biggest hall
- The two atriums are aligned to create a strip of green through the building and offer a constriction and release effect through the buildings in a green space.
- Access and site lines have been improved to maximise the synergy with the Brayford and connect towards the Highstreet
- A wider range of sports facilities added which will make the project more attractive to potential clients.
- Natural light and ventilation have been incorporated through perforated panels and shading which will also the sporting facilities a more suitable space without using any mechanical solutions

These new changes improve the projects NET Zero attributes, its carbon content and its spatial qualities. This makes the project more accessible and suitable towards the clients and creates a more refined plan.



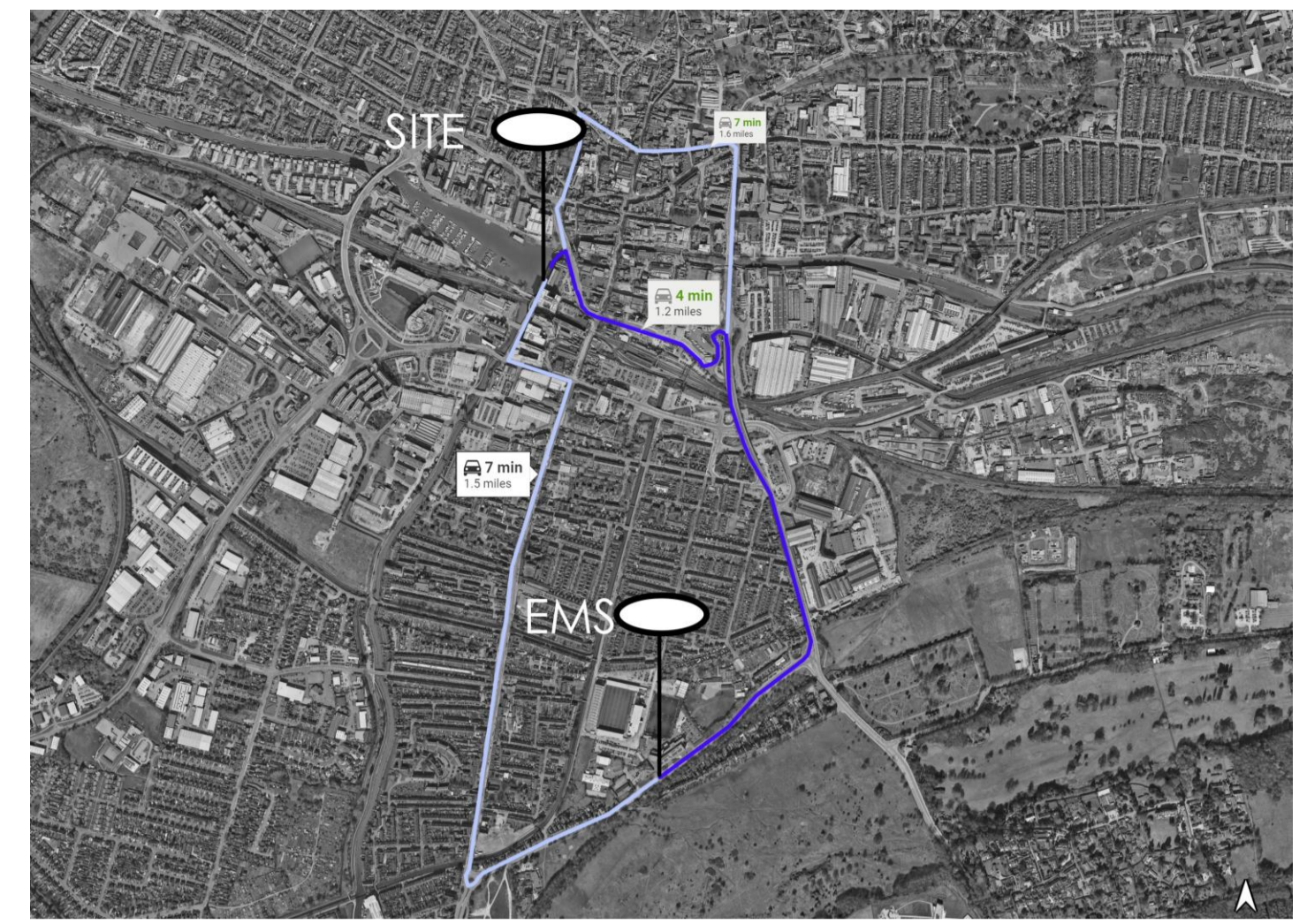
GREEN SPACE, SPORTS, TRANSPORT



SUN, WIND, BRAYFORD VIEW



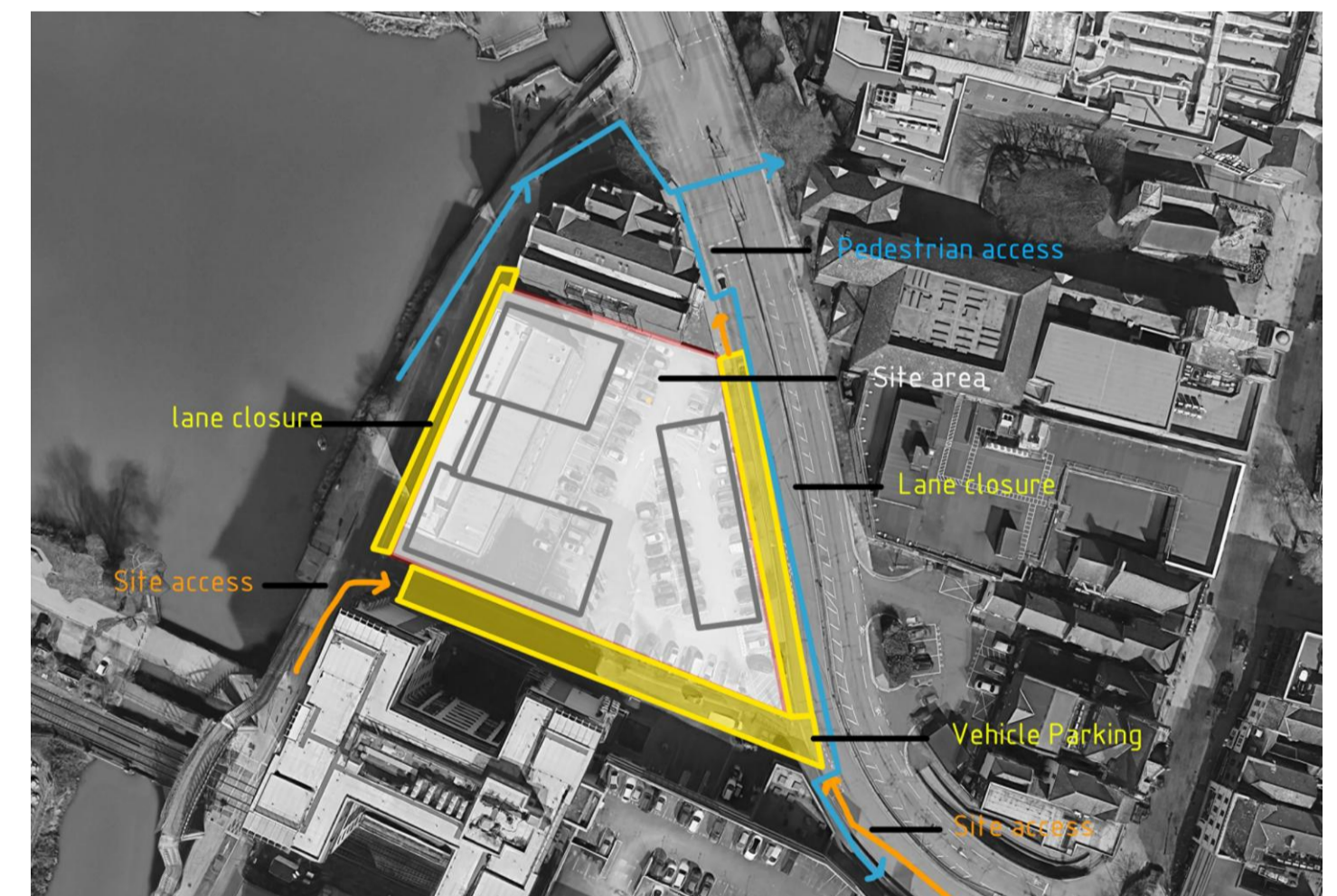
POINT OF INTERESTS AROUND LINCOLN



EMERGENCY ROUTES



EMERGENCY PLAN



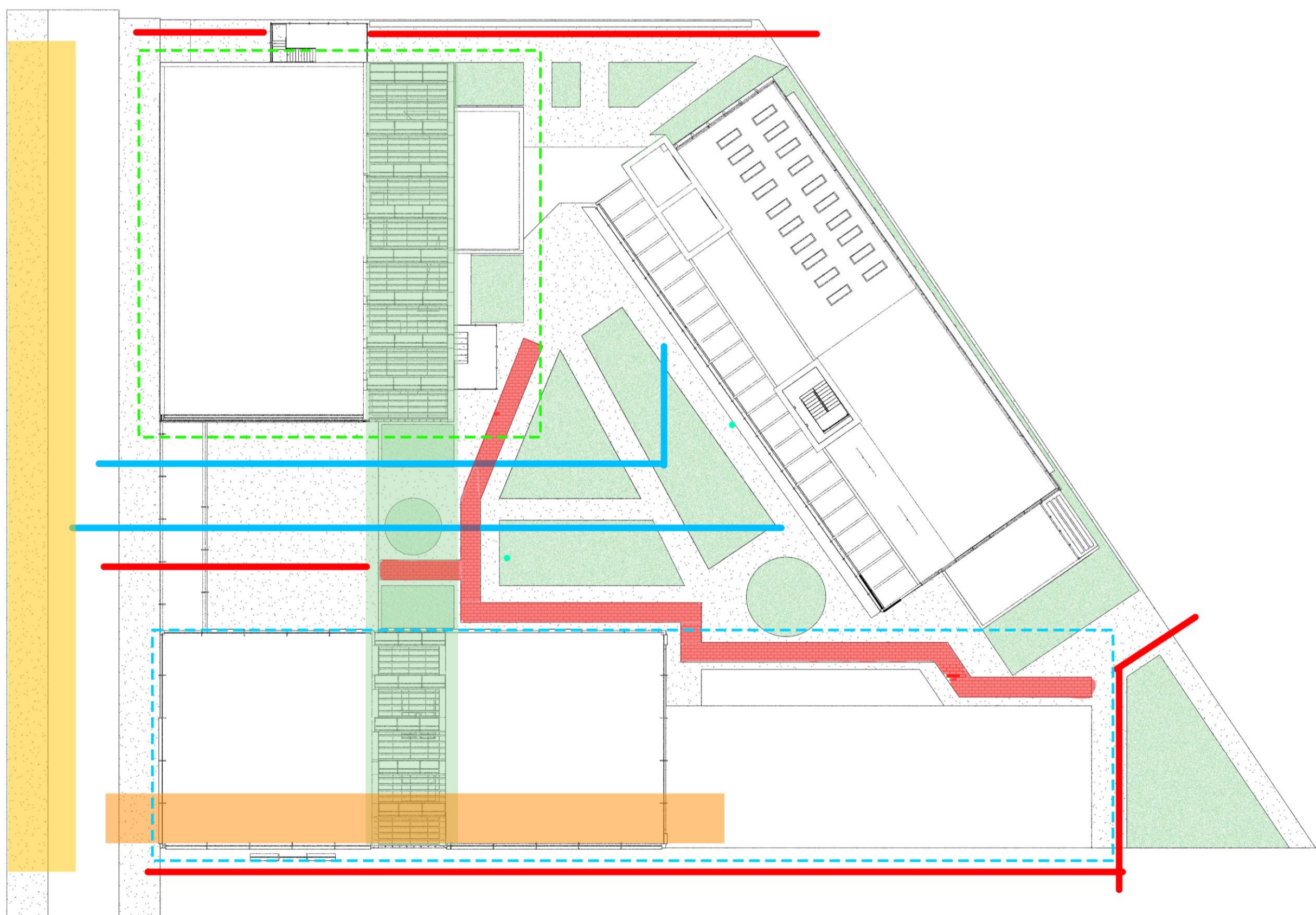
CONSTRUCTION PLAN

## SITE ELEMENTS

The site demands a building which respects the Brayford and enhances it as a quality which when utilised will create a peaceful waterfront setting. The surrounding buildings are height matched with the new building proposed which creates the need for natural shading as the building located south no longer provides this.

The transports routes are excellent and gives the site a prime location along these routes which allow for more clients to enter the site and use the facilities.

## REFINED PLAN

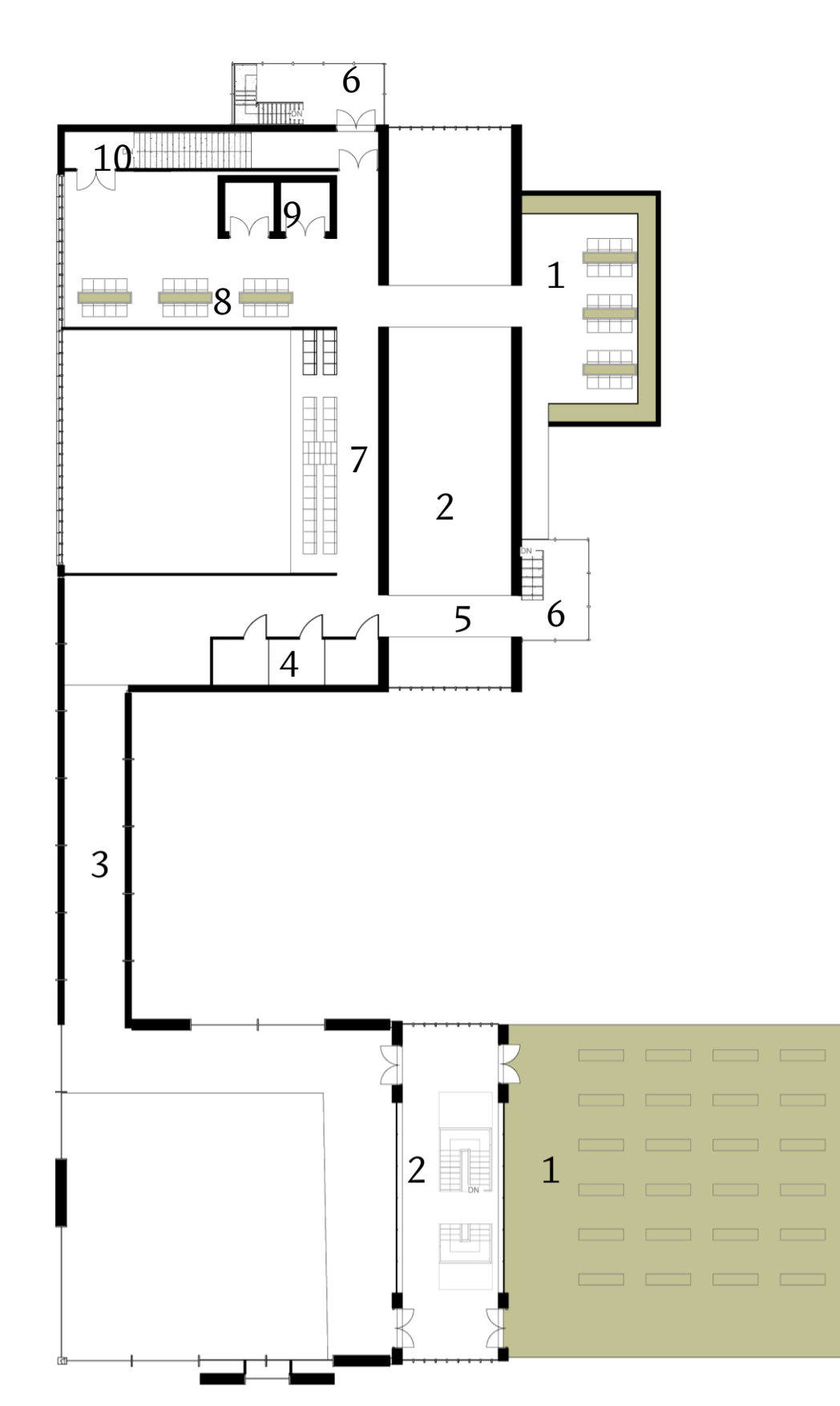
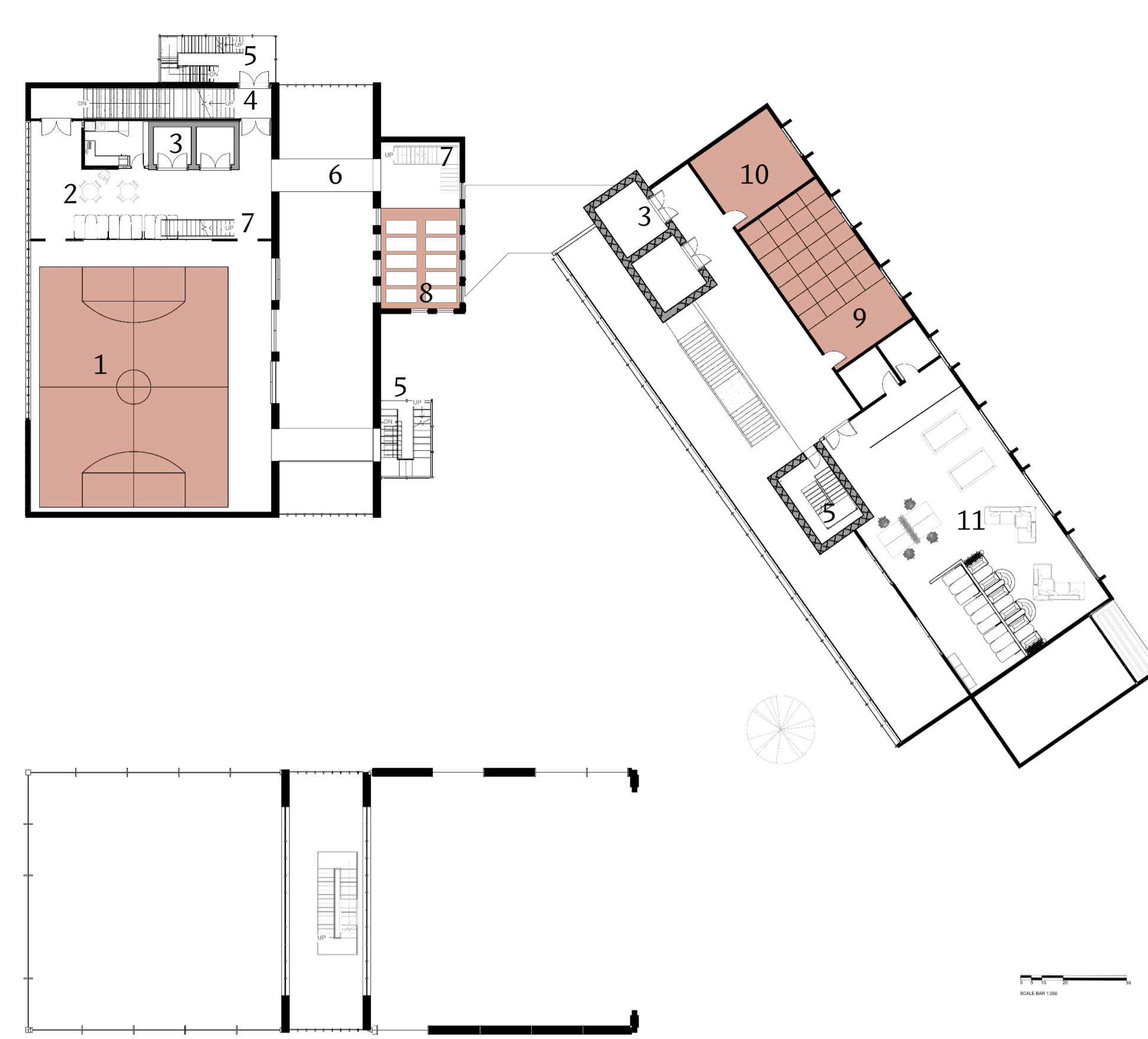
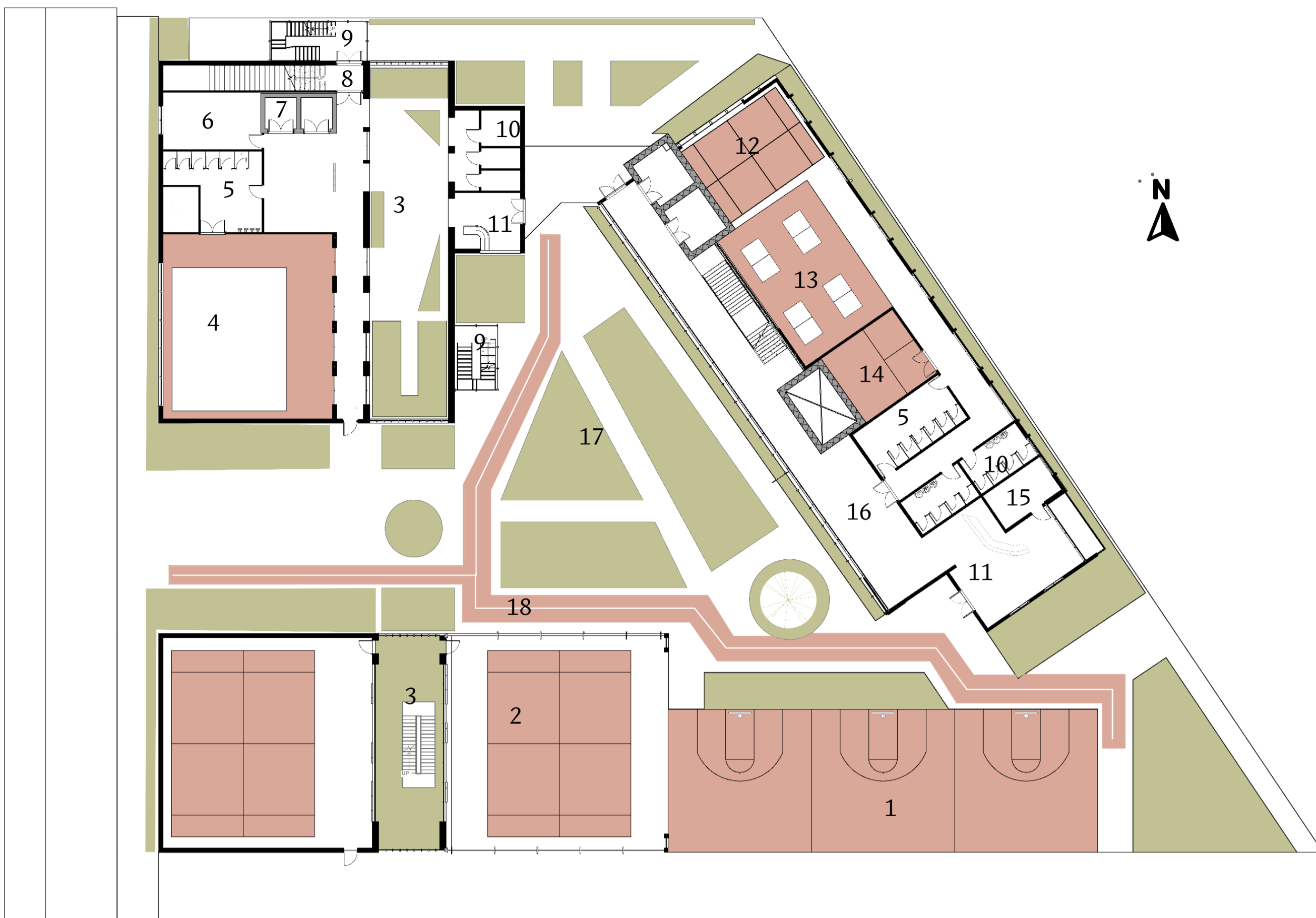


Enhance natural views towards the brayford

## GROUND FLOOR

## FIRST FLOOR

## SECOND FLOOR



- SPORTS FACILITIES
- GREEN SPACES

## FLOORPLANS

### GROUND FLOOR

- 1 - basketball courts
- 2 - tennis courts
- 3 - green atrium
- 4 - swimming pool
- 5 - changing room
- 6 - plant room
- 7 - lifts
- 8 - stairway
- 9 - emergency exit
- 10 - WC
- 11 - reception
- 12 - badminton
- 13 - table tennis
- 14 - squash
- 15 - staff room
- 16 - atrium
- 17 - green space
- 18 - running track

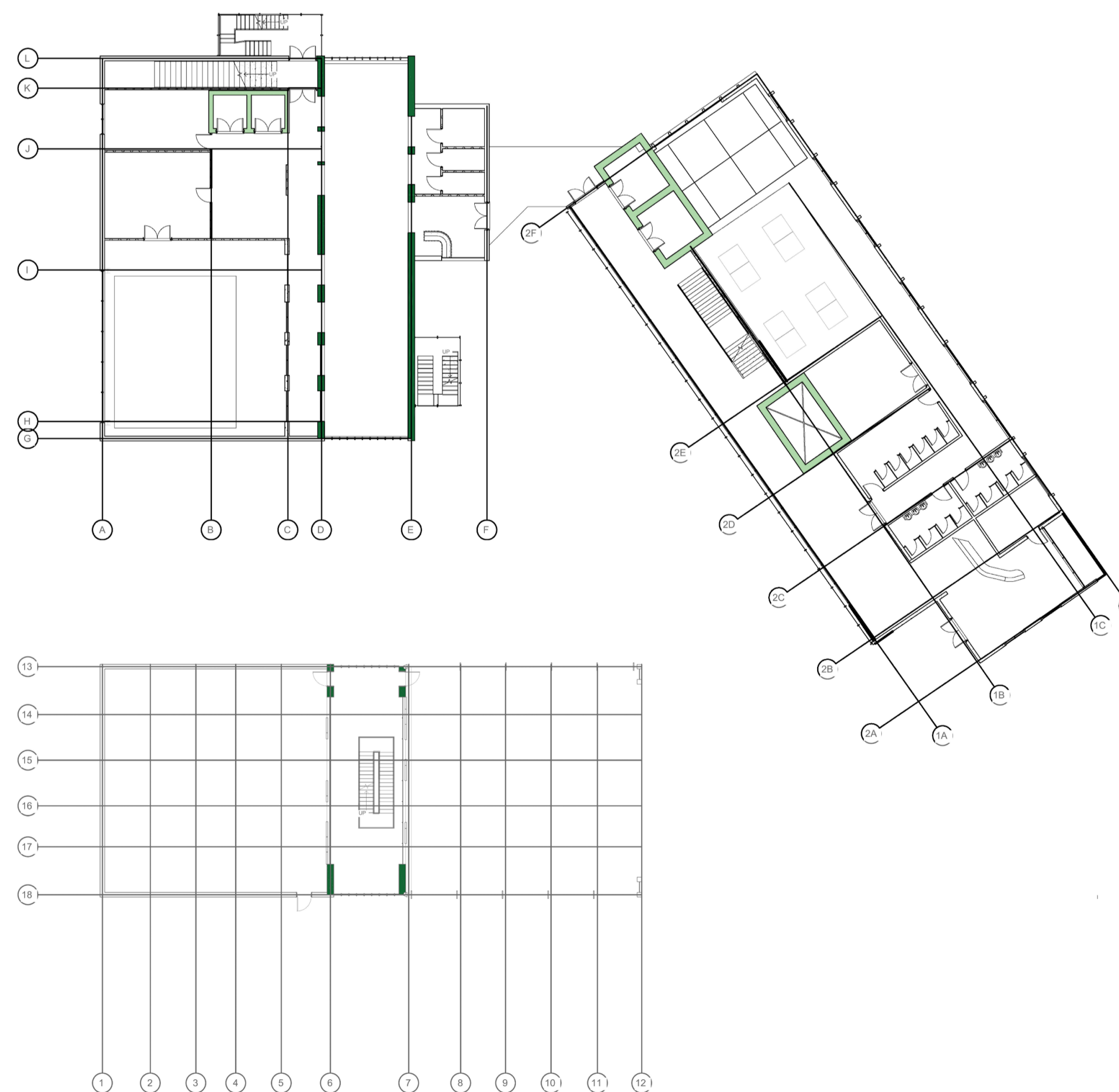
### FIRST FLOOR

- 1 - sports hall
- 2 - café
- 3 - lifts
- 4 - stairs
- 5 - emergency exit
- 6 - sky bridge
- 7 - floor 1.5
- 8 - Pilates studio
- 9 - judo/jiujitsu
- 10 - physio space
- 11 - relaxation space

### SECOND FLOOR

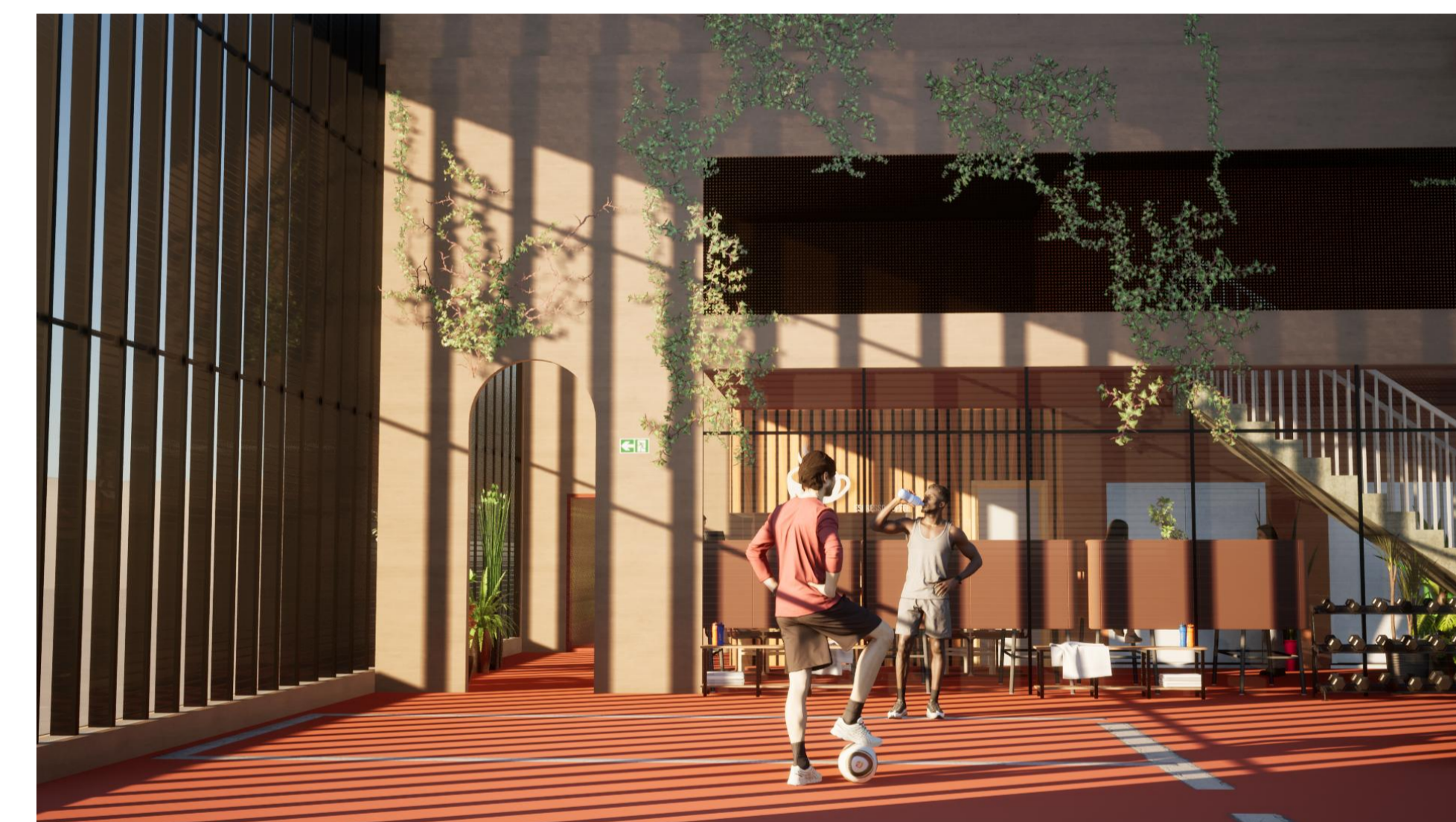
- 1 - rooftop gardens
- 2 - atrium
- 3 - skybridge
- 4 - WC
- 5 - walkway
- 6 - emergency exit
- 7 - viewing platform
- 8 - seating area
- 9 - lifts
- 10 - stairway

## GRID STRUCTURE DIAGRAM

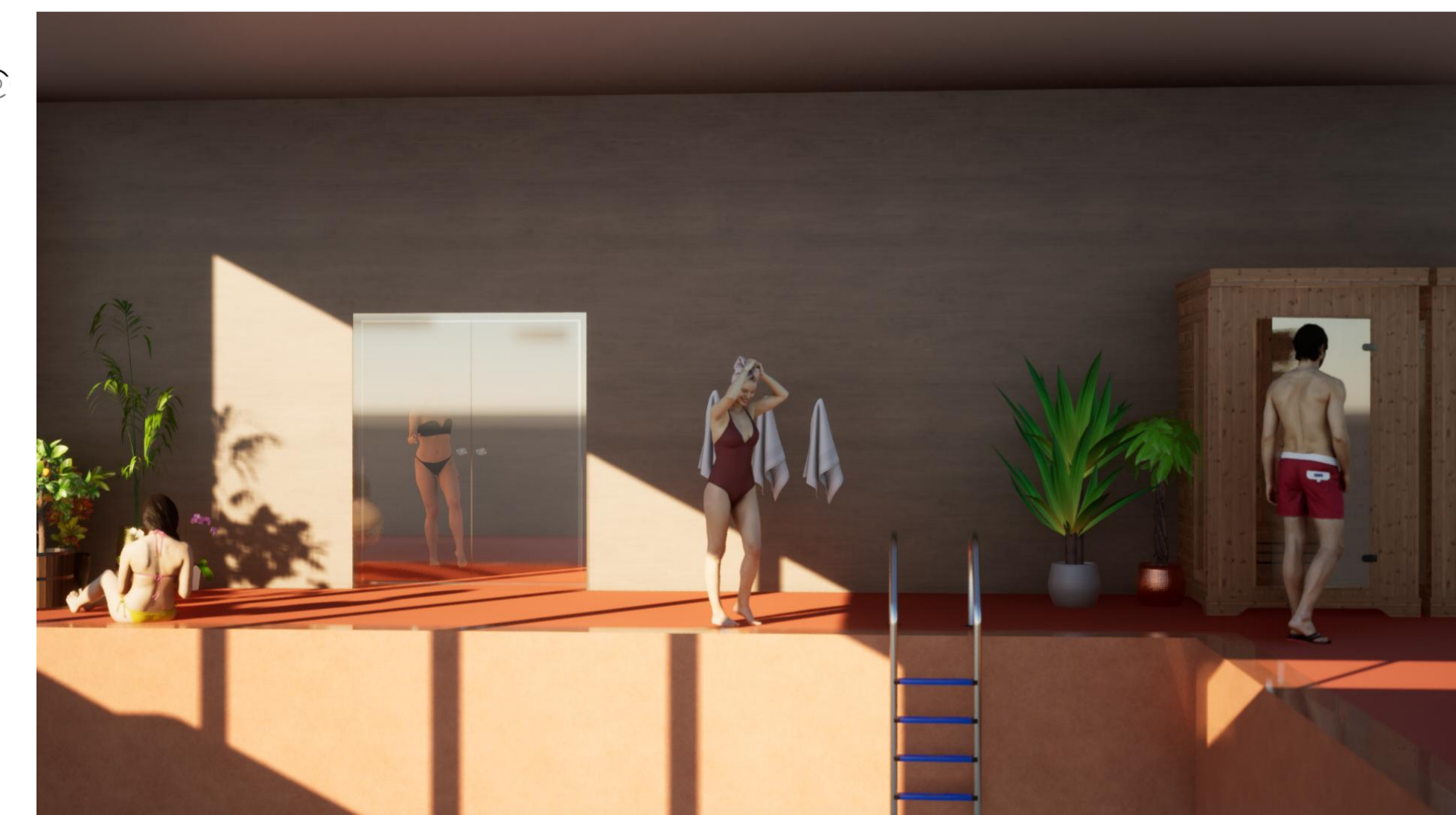


## STRUCTURAL GRID

The structure for this building is run on a reinforced steel system embedded into the Wapan walls, this create a heavy but sturdy structure. This system acts as a base for the glulam structure and allows this to have a strong base to hold the building and its clients. The project is building on a lightweight system, this creates a smaller need for the project to use steel however it is best used as a precaution to make it safe for its users.

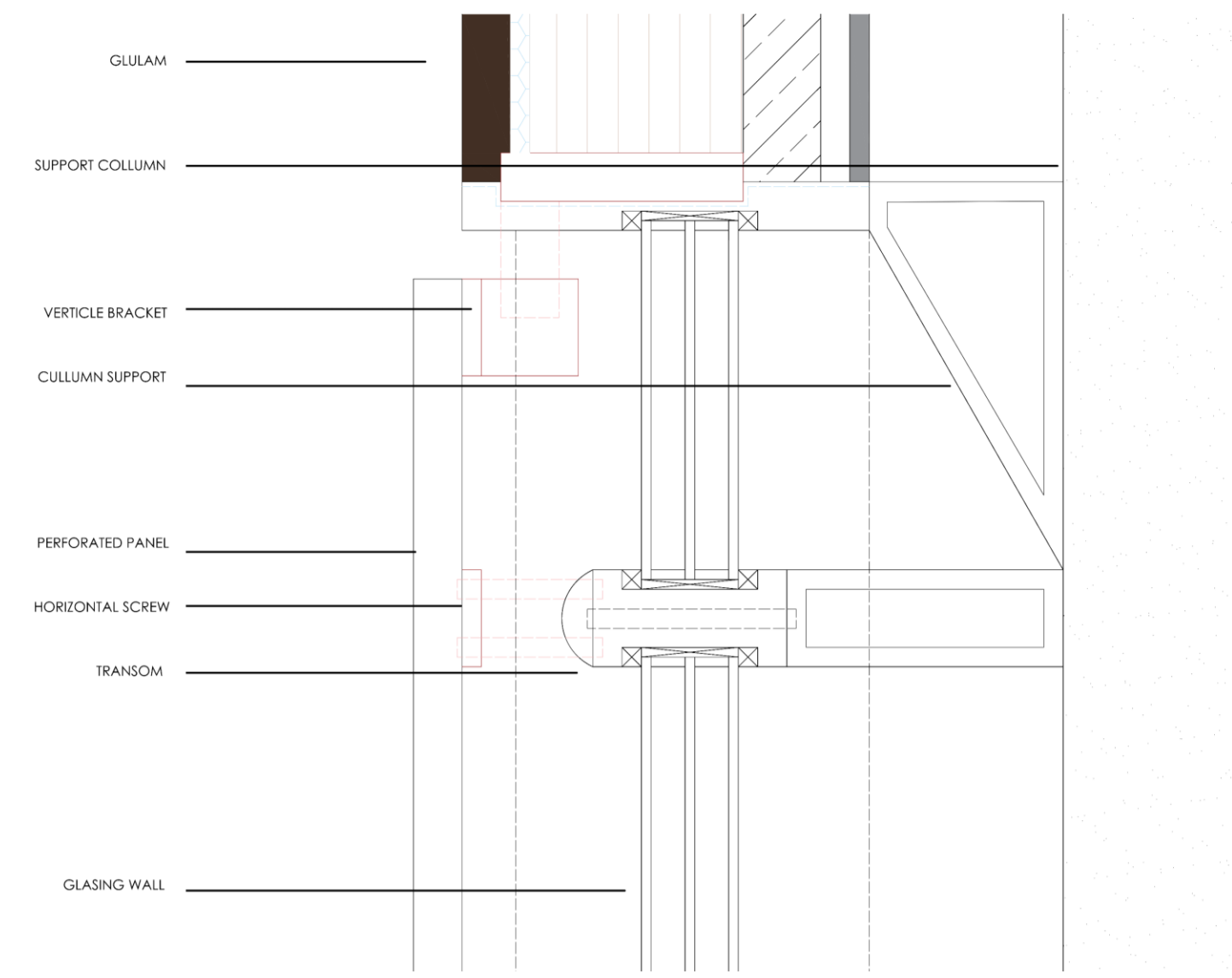
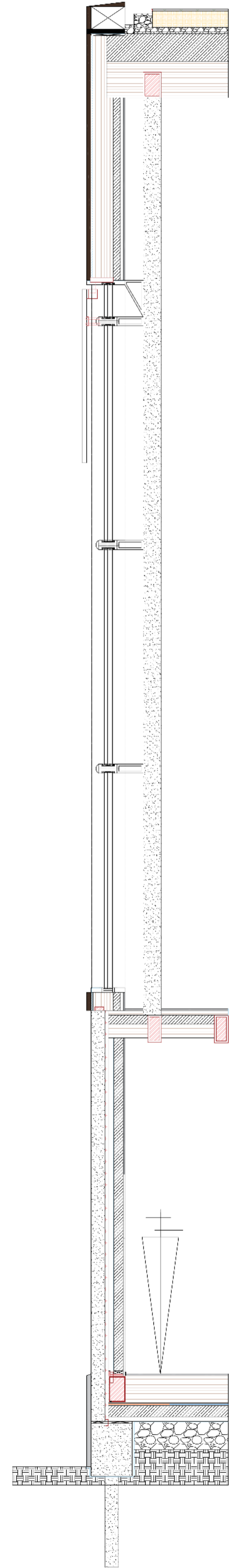


FIRST FLOOR HALL

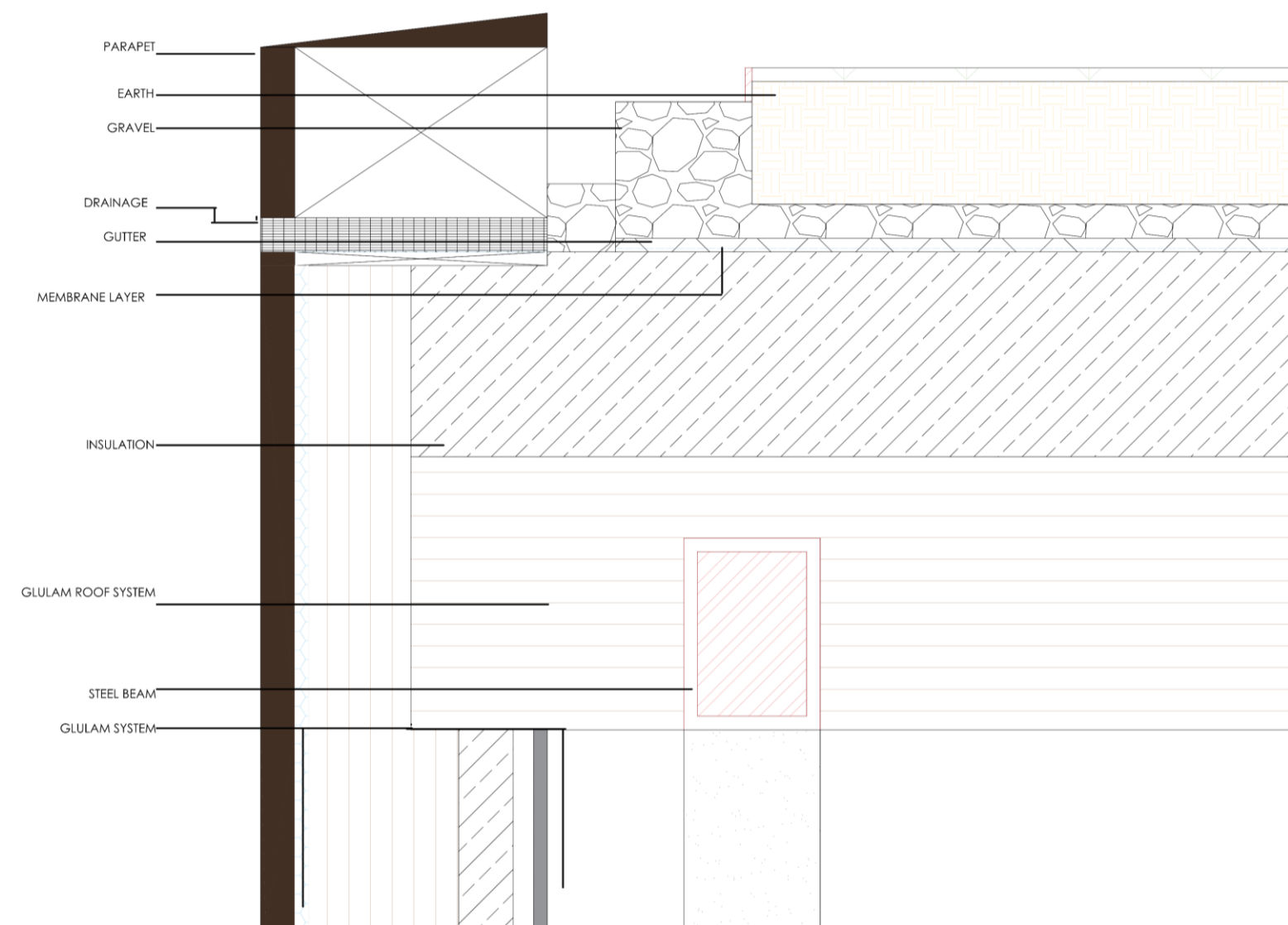


GROUND FLOOR HALL

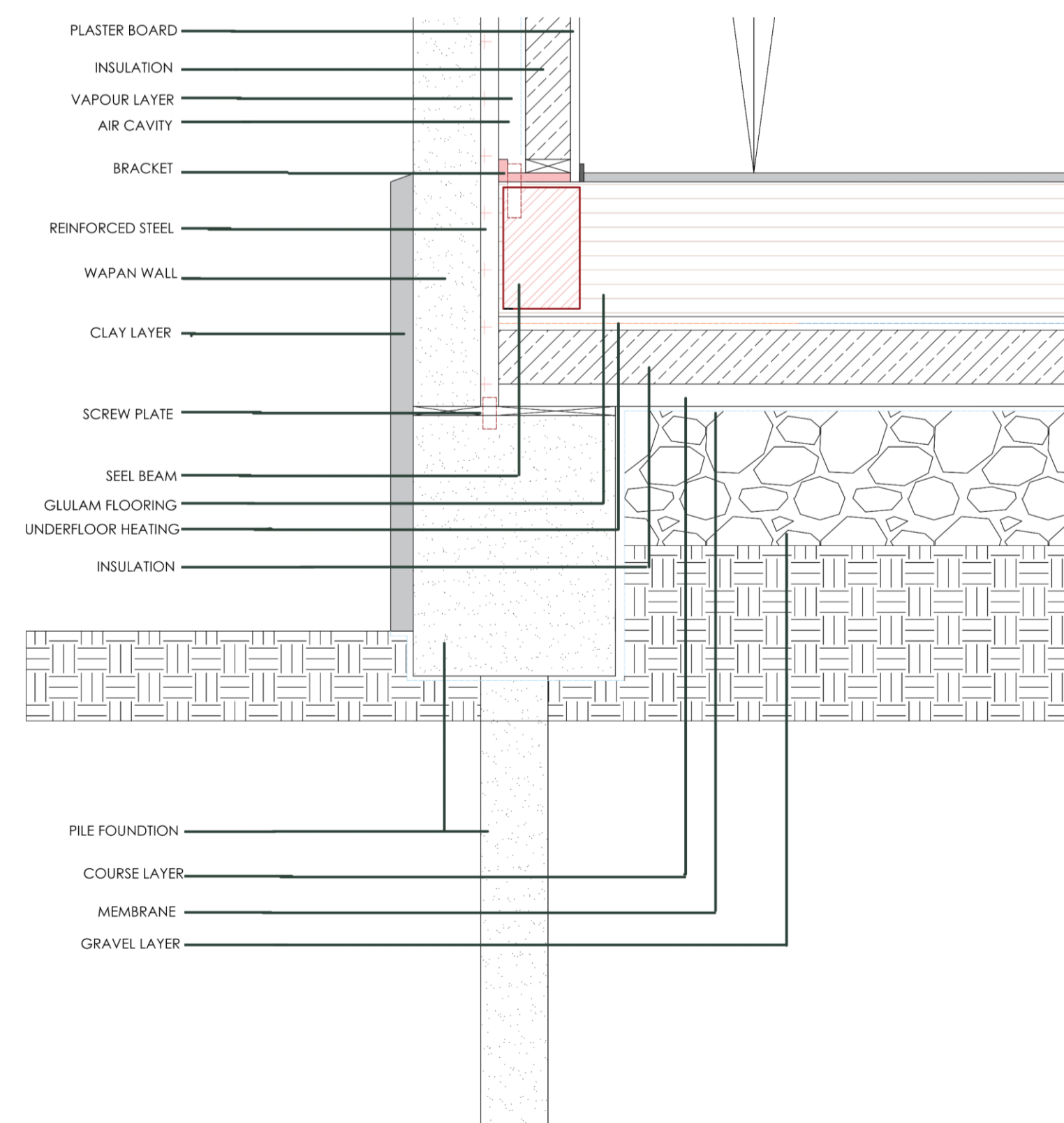
FLOOR TO ROOF SECTION 1:50



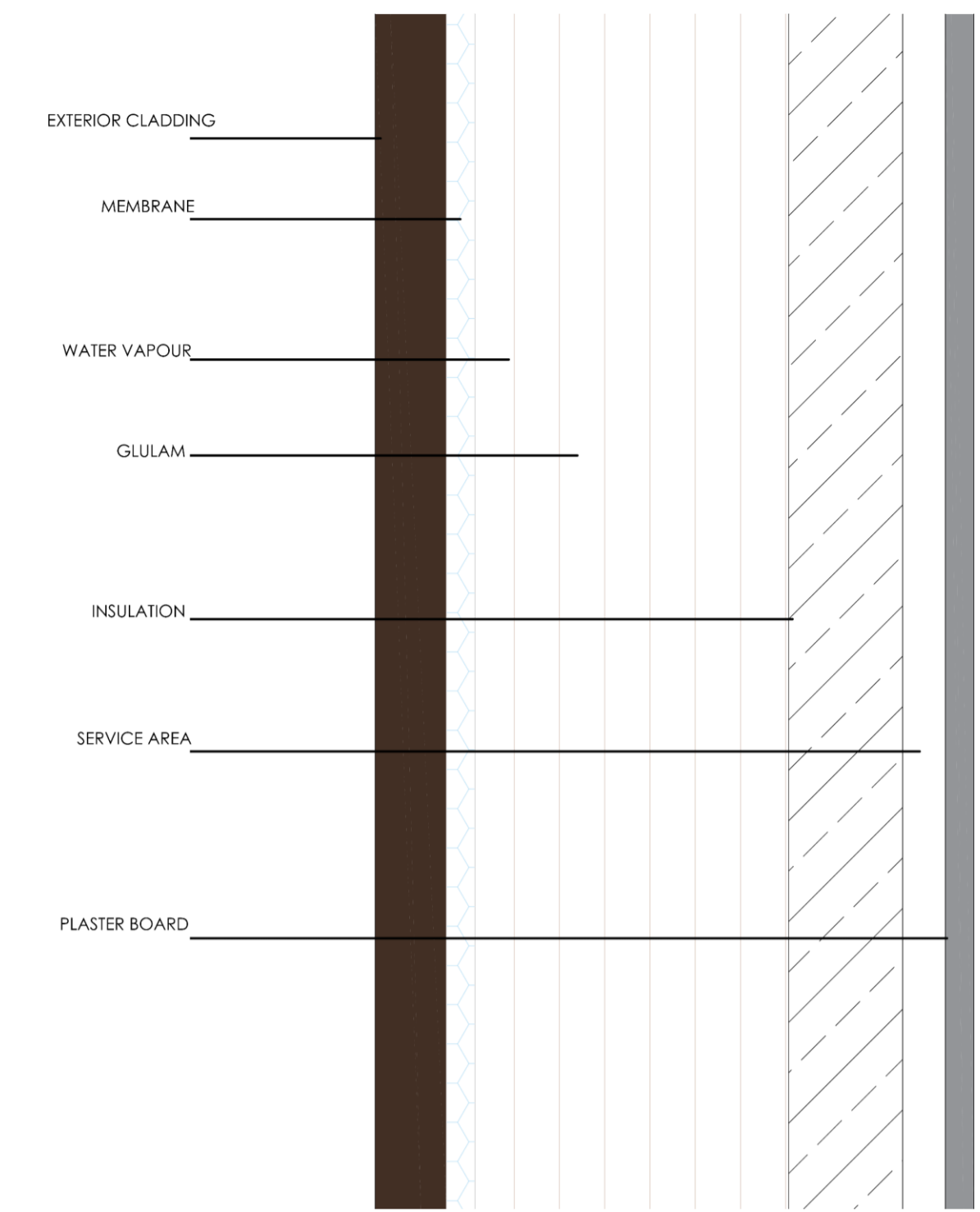
PERFORATED PANEL 1:10



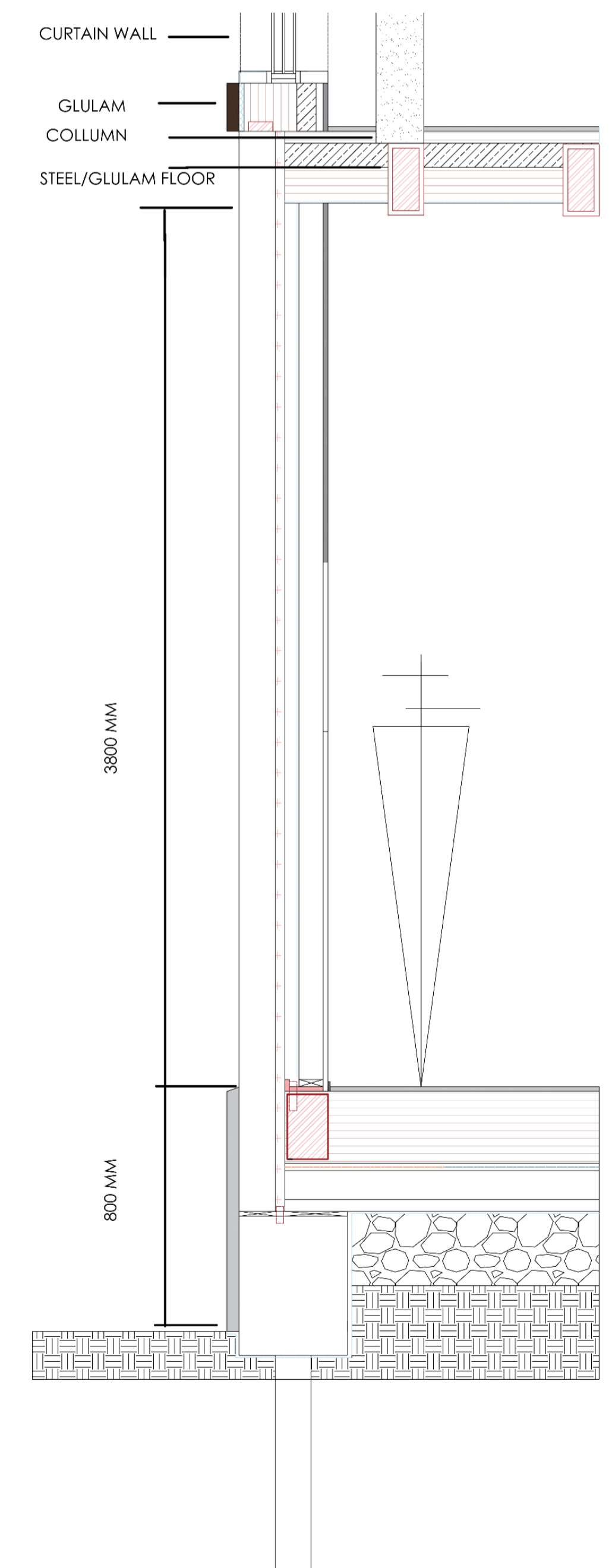
GREEN ROOF 1:10



FOUNDATION 1:10

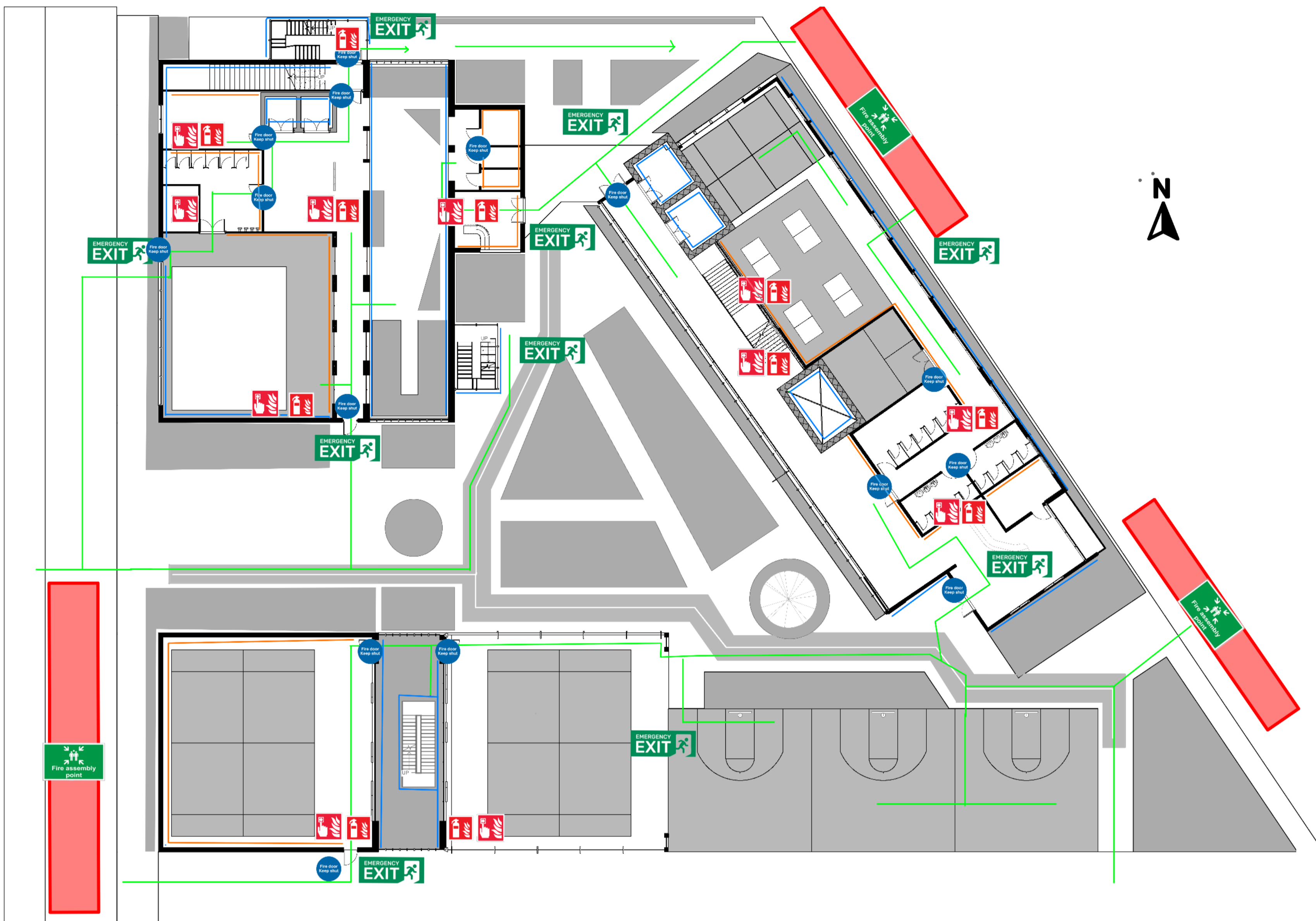


GLULAM STRUCTURE 1:5



FLOOR TO CEILING 1:20

FIRE PLAN GROUND FLOOR



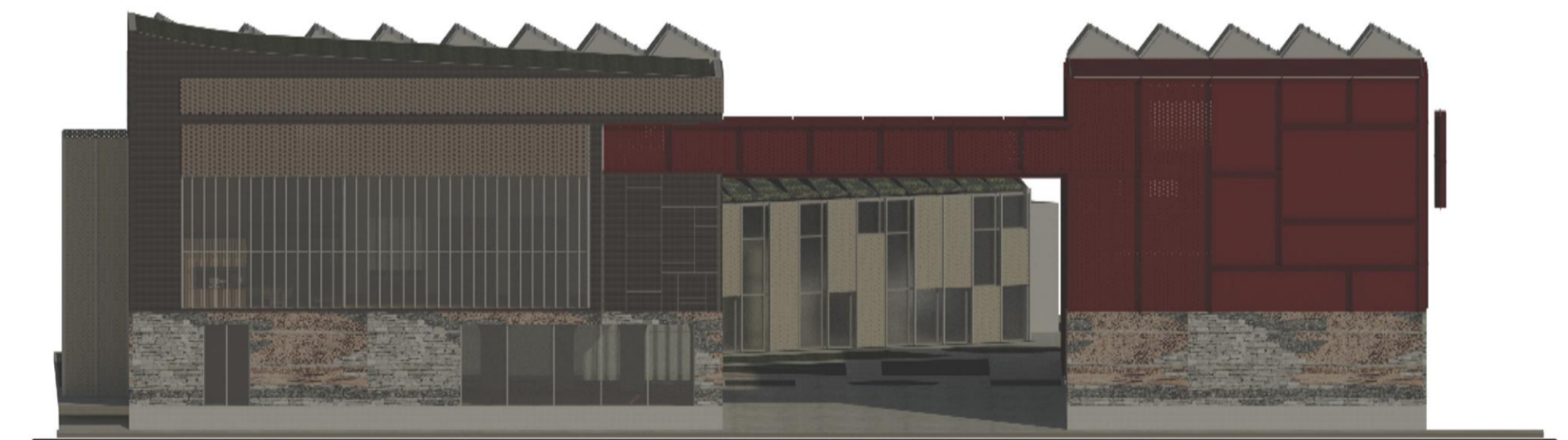
EAST ELEVATION 1:200



NORTH ELEVATION 1:200

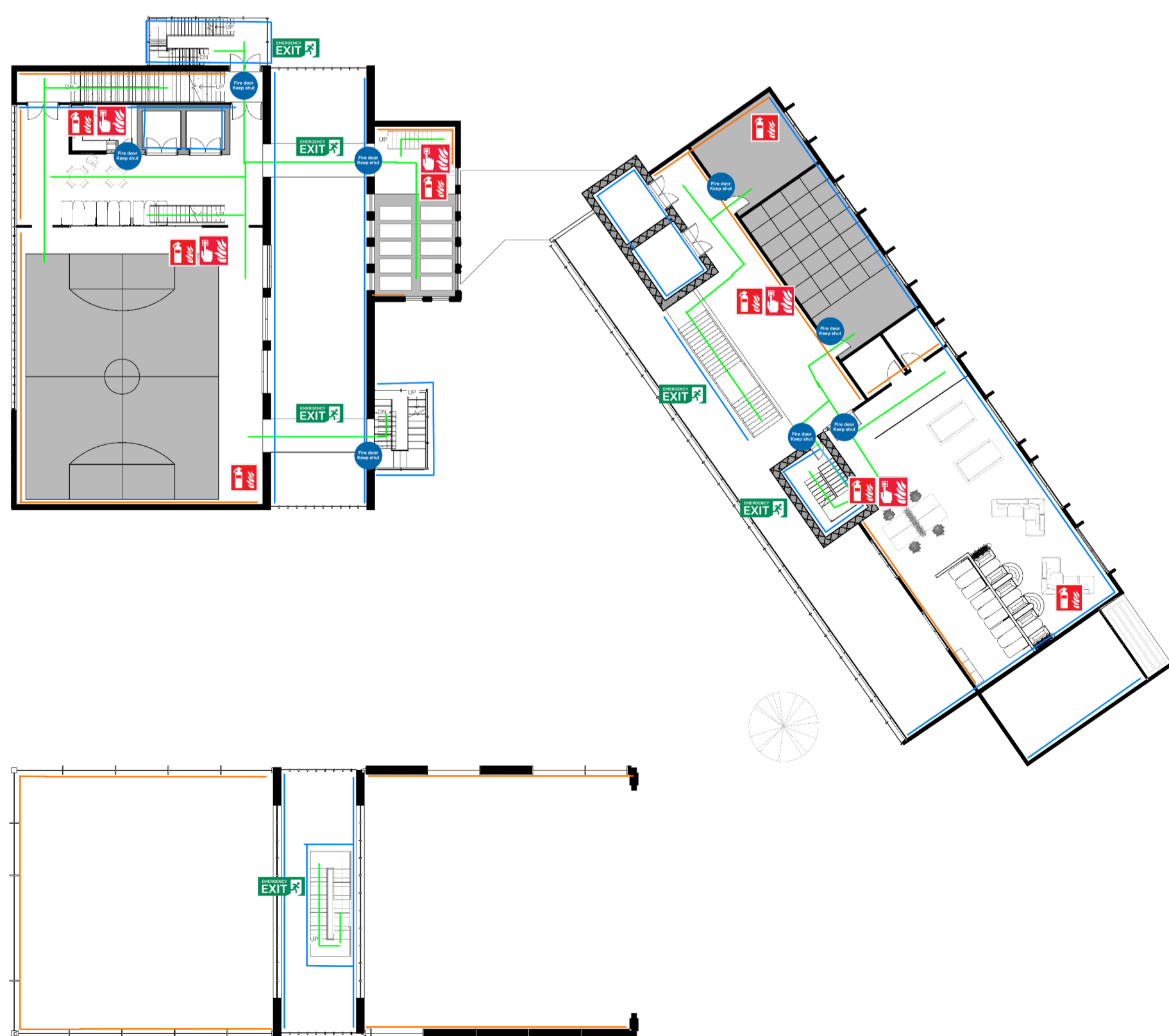


SOUTH ELEVATION 1:200

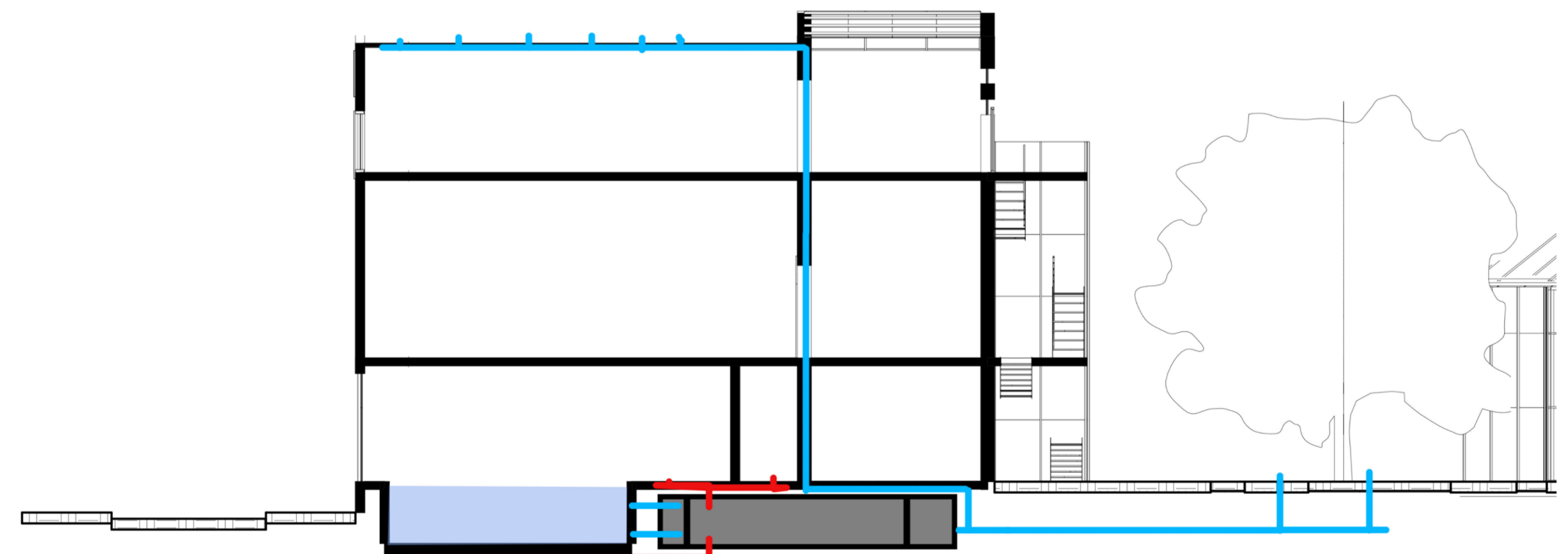
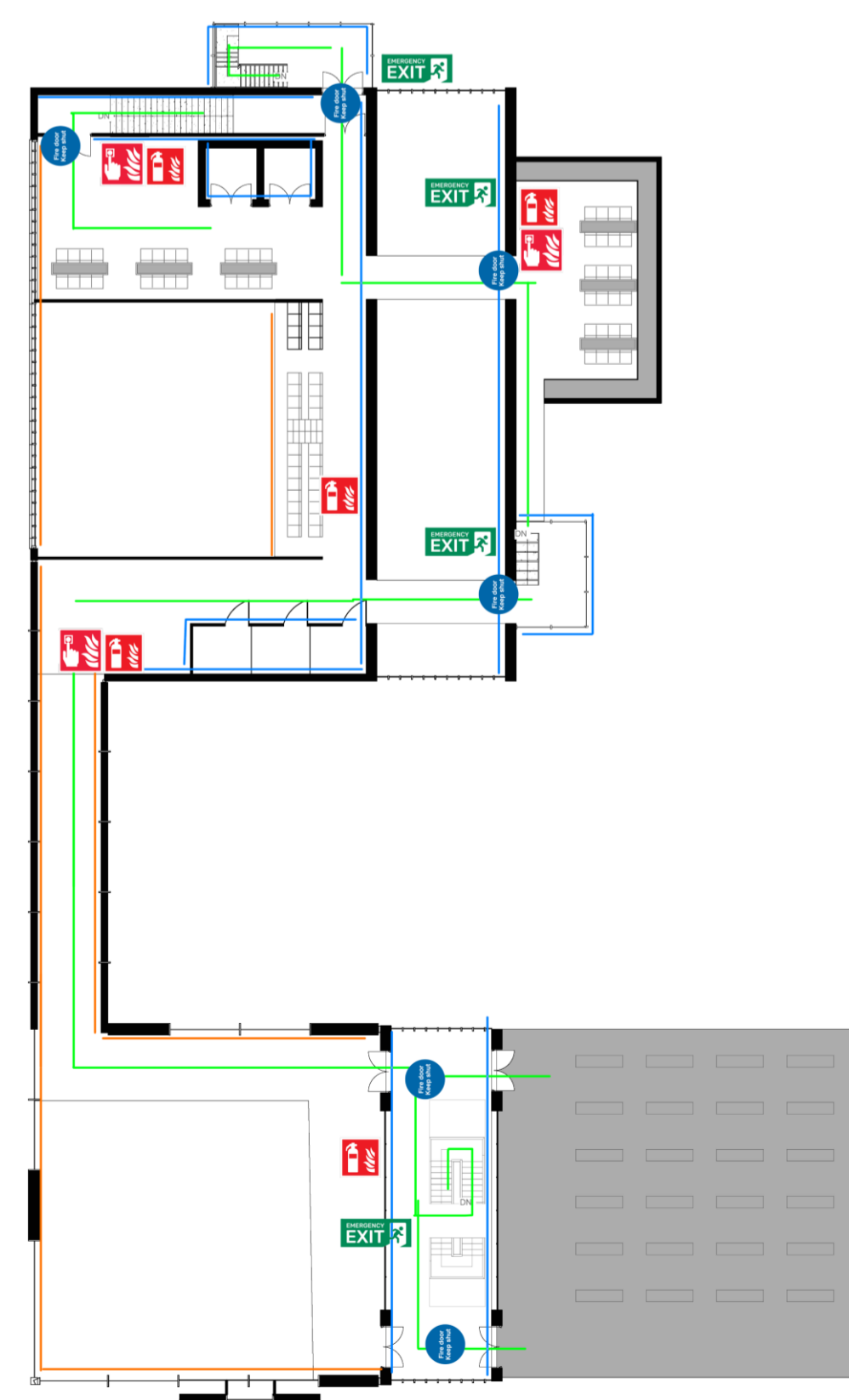


WEST ELEVATION 1:200

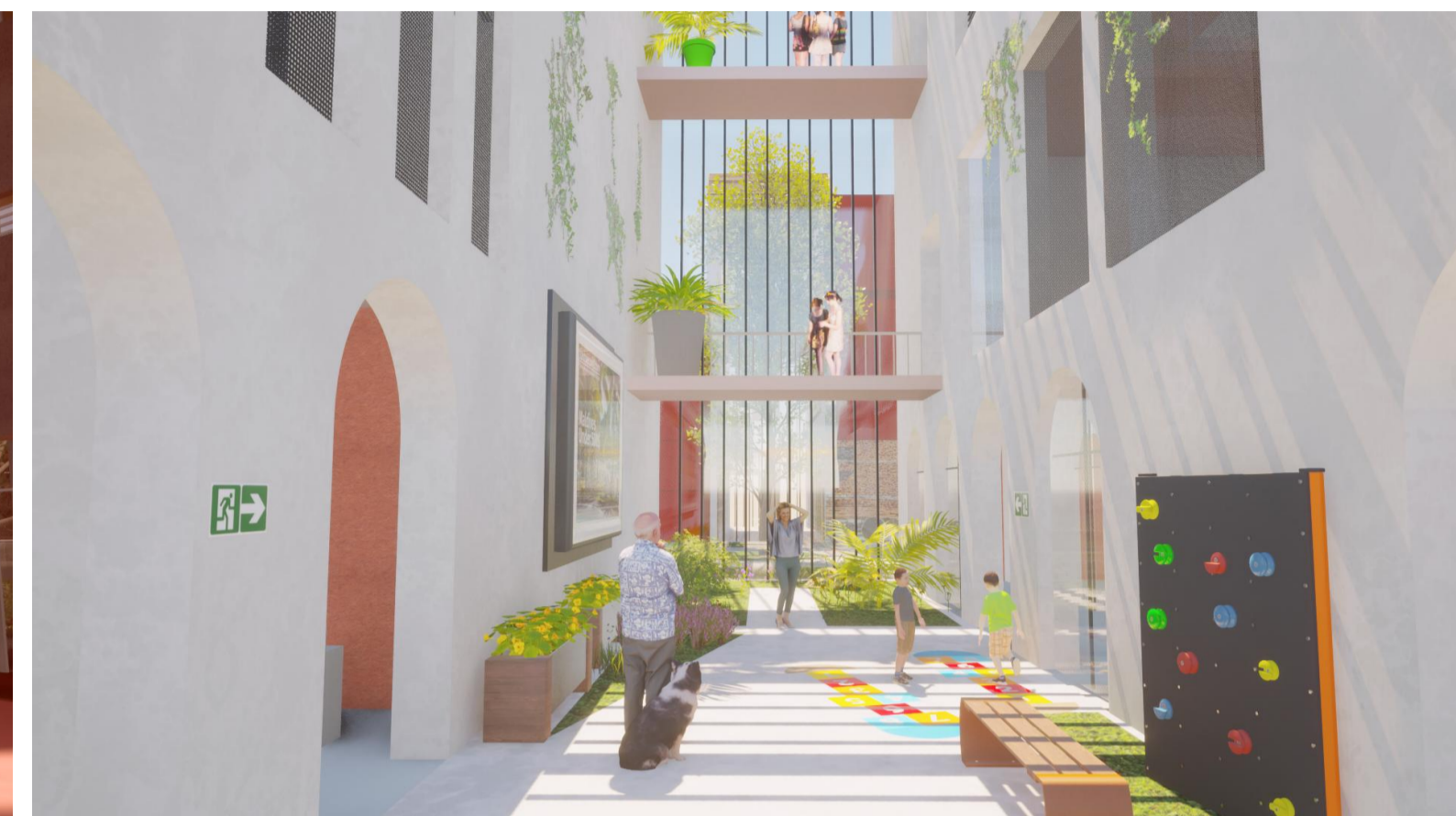
FIRE PLAN FIRST FLOOR



FIRE PLAN SECOND FLOOR



GREY WATER DIAGRAM



NET ZERO SECTION 1:100

