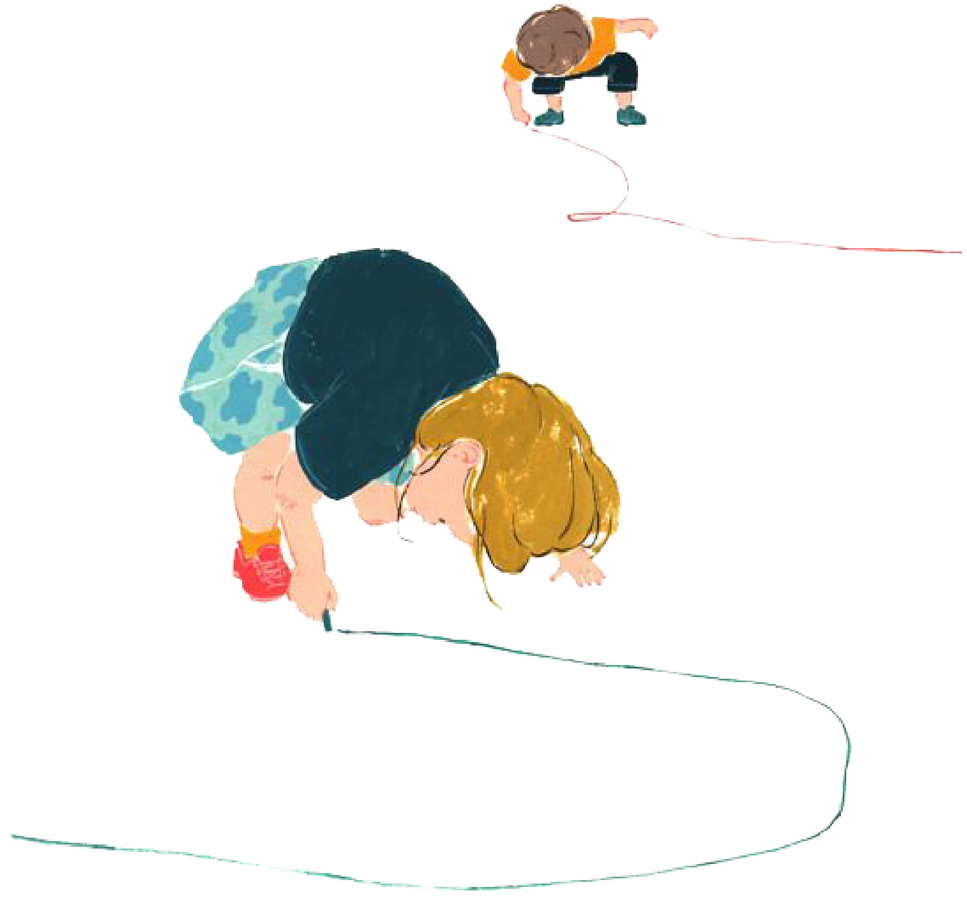
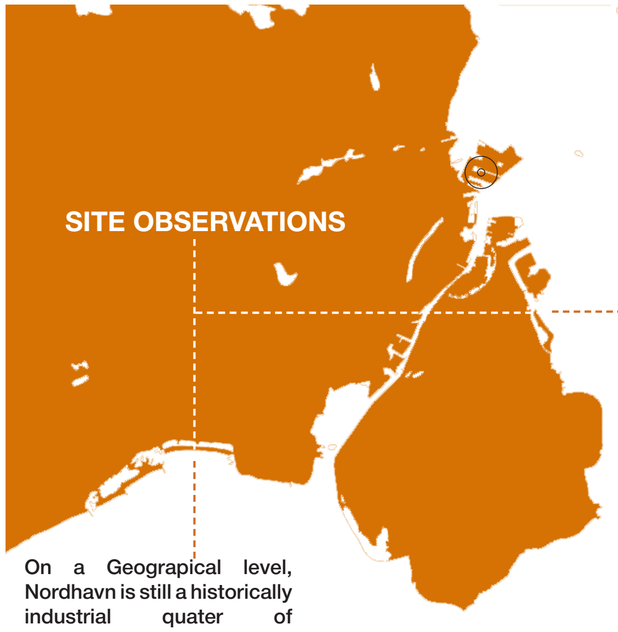
THE NORDHAVN SCHOOL OF ART AND DESIGN

My project bases itself around the similarities of how both children and artists learn, through touch, failure, repitition and curiosity. My programme imagines a shared environment where the craft of art and everyday discoveries of school combine. The project proposes a new kind of workshop, where both education and culture combine through the architecture that weaves them together. Neither the school nor artist recidency hide from the other, both series of spaces become visable and public to each other. The project imagines education as a public act and sculpture as a social process. It argues that a city grows not only through housing and infrastructure, but through places where generations meet and make. This architecture is therefore not a container but a conversation—between child and artist, between discipline and freedom, between the future city and the hands that will shape it.



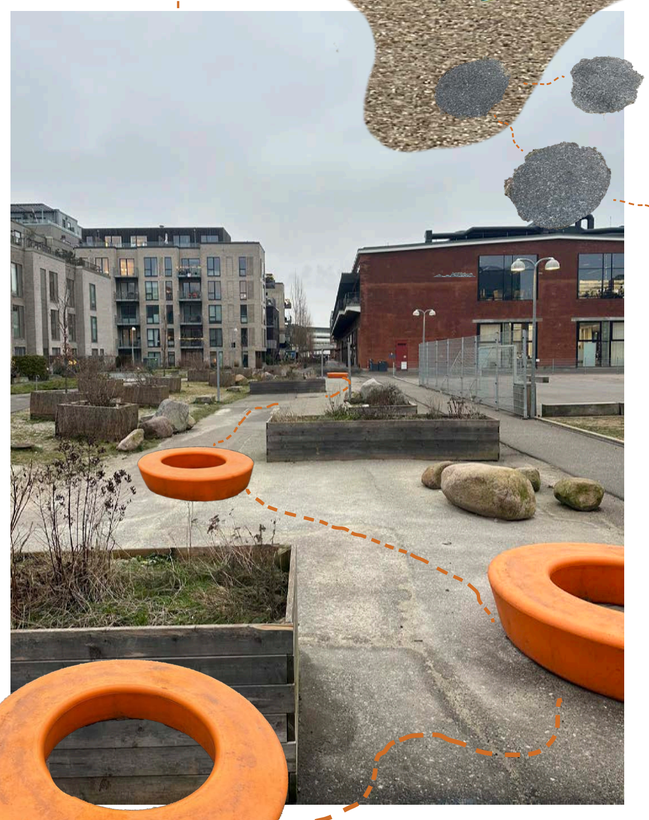
Copenhagen

SITE OBSERVATIONS

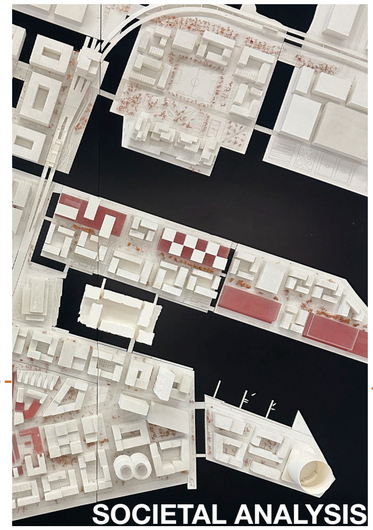


On and around the site, there are many expressive forms of sculture through public pavillion spaces meant for sitting, sun bathing, socialising, swimming, playing and much more. This observation I have made is crutial to the understanding of Nordhavns Future impact on the urban fabric in Copenhagen.

On a Geograpical level, Nordhavn is still a historically industrial quater of copenhagen. The adapting mixed use offerings this arm of copenhagen has to offer is at the forefront of design within the Nordhavn masterplan[National 'issue'], bring more people to live, educate and work in the area.



On the rear side of the site is an apartment complex with an interesting curved shaped outdoor garden space that winds itself around play equipment and outdoor storage for residents to create a shared place for the residents to share and use together. From my observations the path that acts as a buffer between the apartments and the site is currently under utilised and an eyesore. I witnessed people walking dogs and conversating in this space that has much potential, which i have initially collaged using just this orange ring which appears on the site as it scultpurally transforms the space as a place for sitting and extends the community space through sculpture.



Nordhavn in Copenhagen Denmark, is a newly developing masterplan attatched to the already thriving city. Much of the population targeted to populate this newly developed and growing area is younger 20-49 year olds[Local 'issue'], many whom are looking for work or to start a family.

RANKED IN THE TOP 10 MOST CREATIVE CITIES GLOBALLY

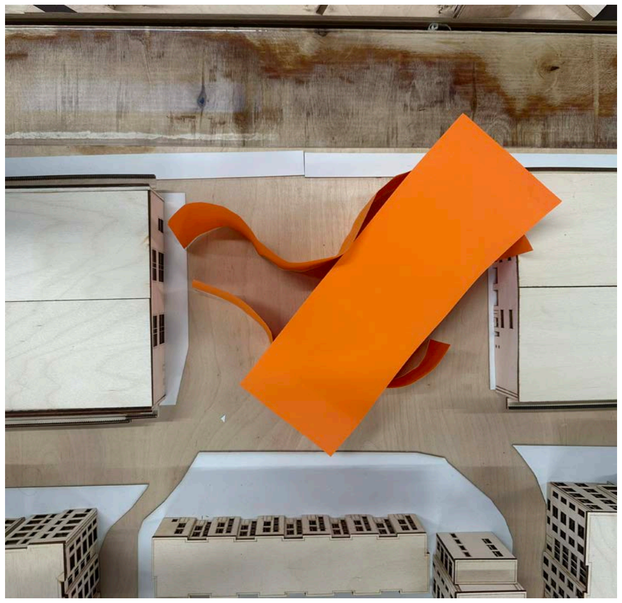
INTERVENTION / INTENTION

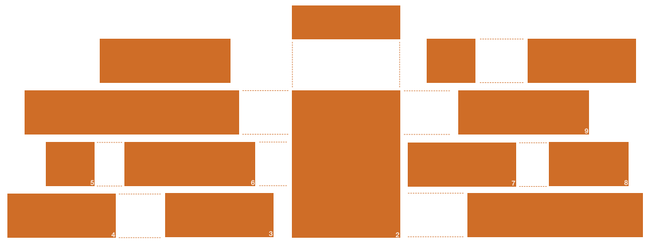
My Intervention will focus on bringing artistic ambition into nordhavns growing presence and impact on wider copenhagen by proposing a traditional primary/secondary school approach, combing this with an artist residency for sculpters,artists and designers. I imagine large exhibition and events spaces to exhibit collaborative works between artists and pupils with large impact on space and design.

Design Development

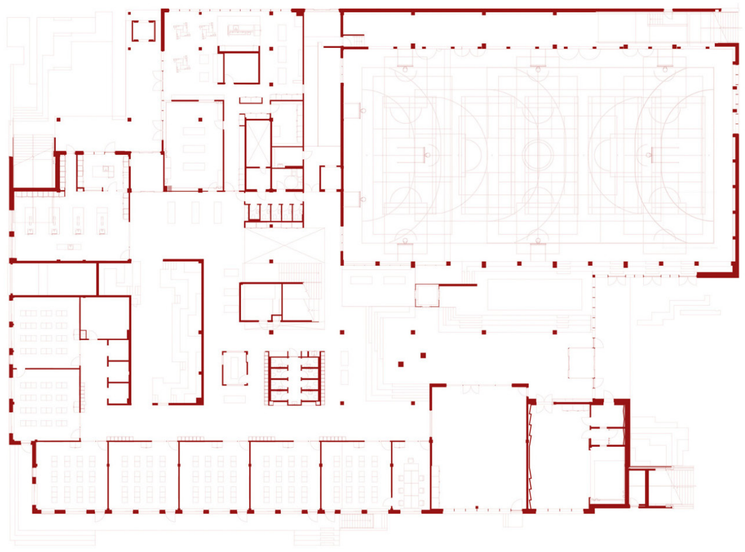
1 Shared Making / Teaching
2 Project Space / Entrance Hall
3 Cafe
4 Shop

5 Staff Room
6 Indoor Playspace
7 Artist / Sculpture Workshop
8 Store



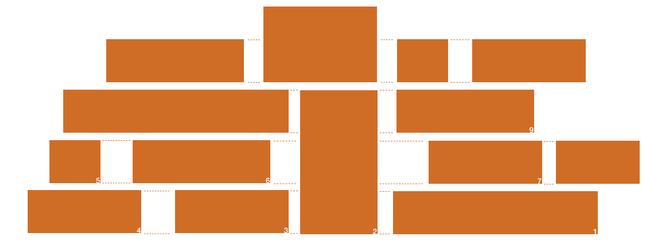


1 Shared Making / Teaching
2 Project Space / Entrance Hall
3 Cafe
4 Shop
5 Staff Room
6 Indoor Playspace
7 Artist / Sculpture Workshop
8 Store
9 Classroom
10 Sports Hall
11 Classroom
12 Staff Room
13 Classroom
14 Outdoor Space



Nordøstamager School is located within a context of red brick residential buildings, and its ceramic façade responds to this existing streetscape while offering a contemporary alternative to traditional brick. This relates to my site observations, where surrounding buildings also use red brick, leading me to explore similar material approaches to maintain the character of the street.

The project's interior organisation is also influential, with more private and secure spaces for younger pupils located higher in the building away from the street. Its playful internal design — including slides, climbing nets and open stair spaces — has informed my thinking around room adjacencies, circulation, and integrating opportunities for play throughout my own school design.



1 Shared Making / Teaching
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11 Classroom
12 Outdoor Space
13 Staff Room

14 Classroom

Aeriel View

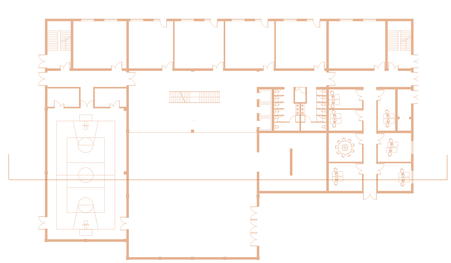
Exterior Playground View

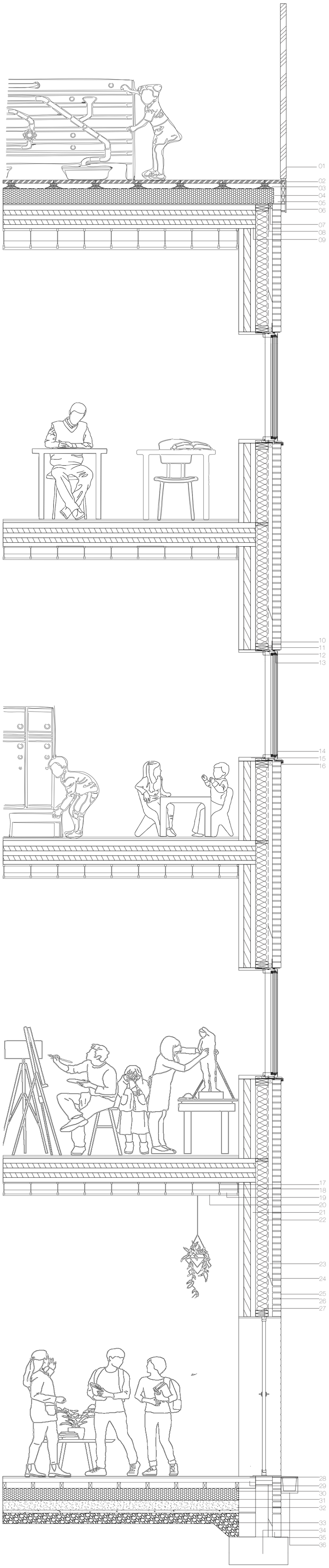
Interior Atrium View

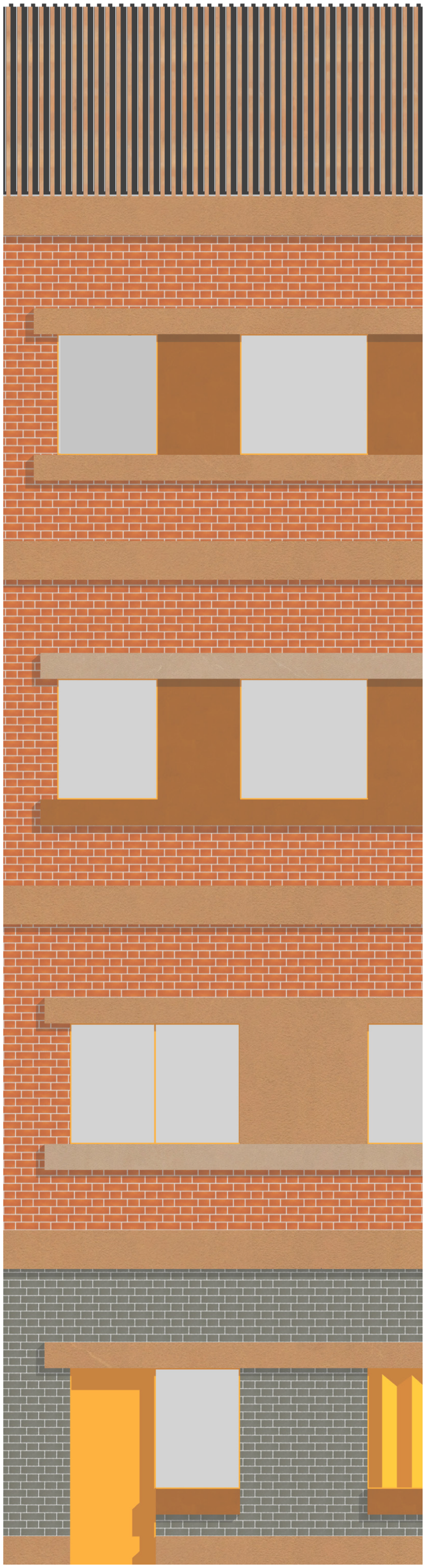
Exterior Street View

1:50 Section

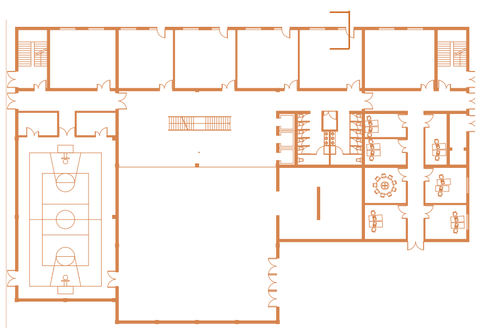
0 2.5 5







01- Corten Steel Slatted Fencing
02- Rubber Playground Tiles
03- 62-82mm BALANCE Adjustable Self Levelling Pedestal
04- Continuous Damp Proof Membrane
05- Slot Gutter
06- Steel Facia
07- 150mm Extruded Polystyrene (XPS) Insulation
08- 15mm Structural OSB Board
09- CLT Panel 300mm
10- Facade Bracket
11- Double Battening
12- Cavity Blocker
13- Aluminium Window Frame
14- Triple Glazing
15- Timber Window Cill
16- Sealant
17- Dropped Ceiling Fixing
18- 60mm Service Cavity
19- 40mm Sound Insulation
20- Plywood Ceiling Finish
21- CLT Panel 200mm
22- 150mm Rockwool Insulation
23- 50mm Cavity
24- Cavity Tray/Flashing
25- K-Briq
26- Lime Motar
27- Aluminium Door Frame
28- Vinyl Flooring
29- 15mm OSB
30- Single Battens
31- 150mm Kingspan Insulation
32- Concrete Screed
33- Gravel
34- Concrete Foundation
35- Breeze Block
36- Flush Gutter



1:25 Bay Study

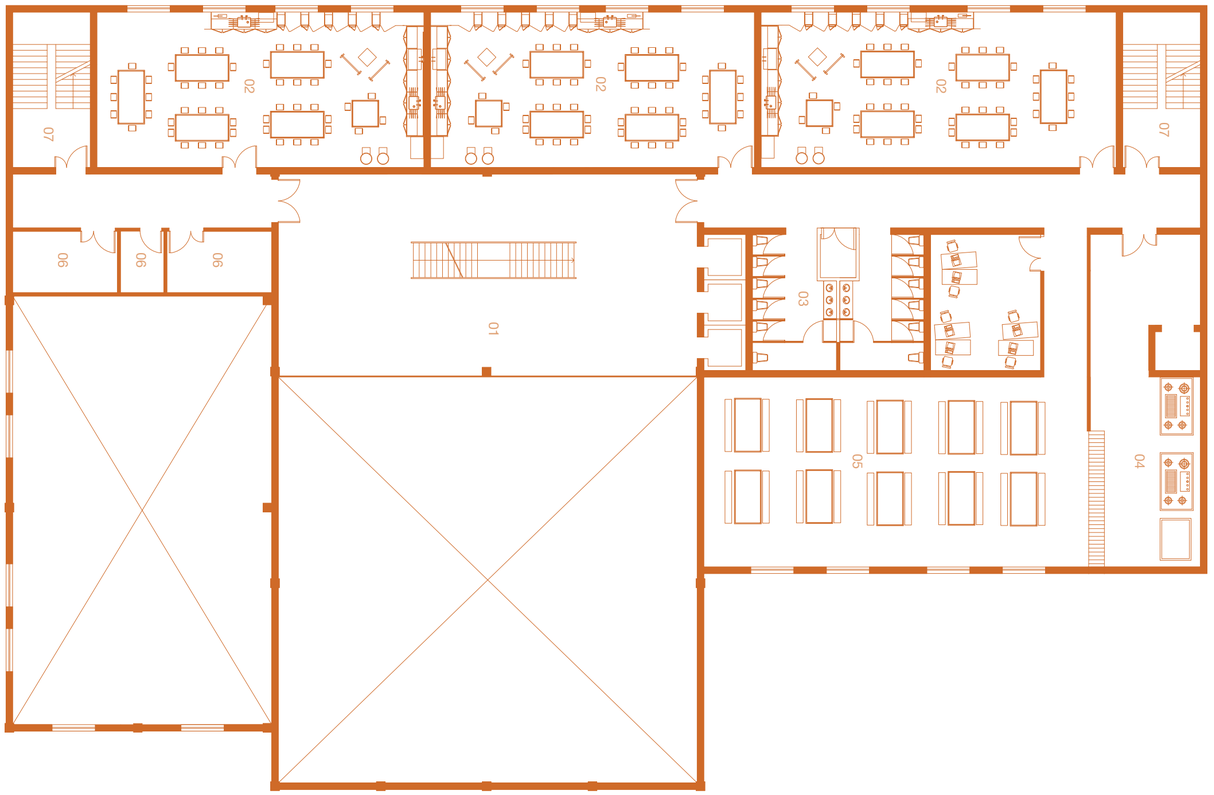
1 1.5 2

01 External Courtyard
02 Atrium
03 Shop
04 Cafe
05 Activity Hall

06 Store
07 Escape Stairs
08 Artists Studios
09 Offices
10 Service lift

Ground Floor

1 5 10

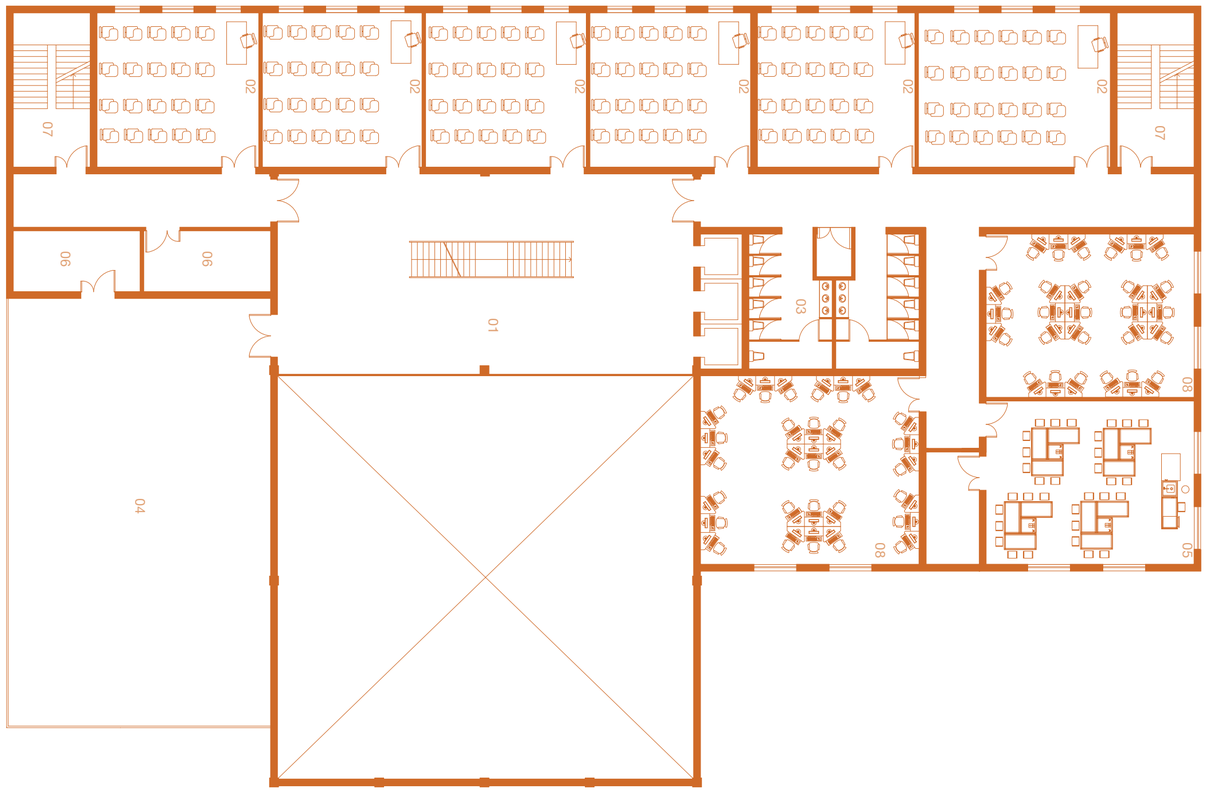


01 Mezanine
02 Workshop
03 Bathroom
04 Food Prep
05 Food Hall

06 Store
07 Escape Stairs

1st Floor

1 5 10

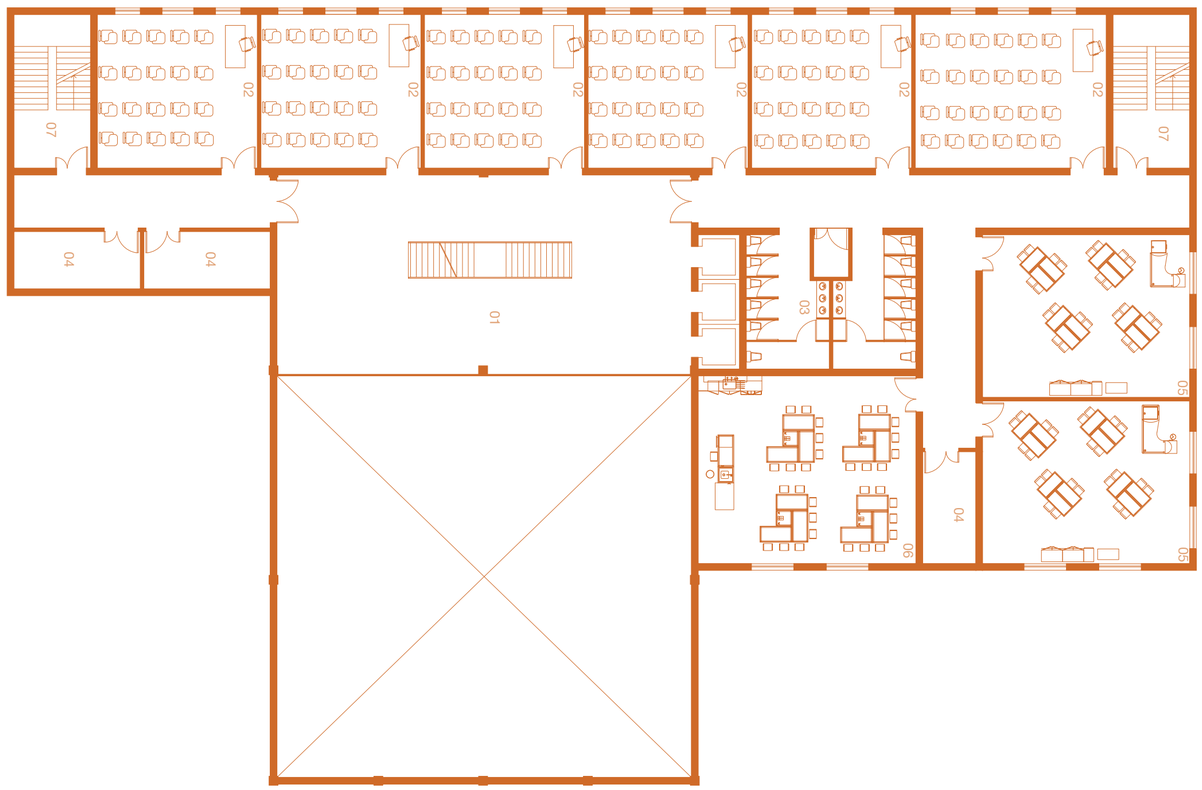


01 Mezanine
02 Homeroom
03 Bathroom
04 Outdoor Playground
05 Science Room

06 Store
07 Escape Stairs
08 Computer Room

2nd Floor

1 5 10

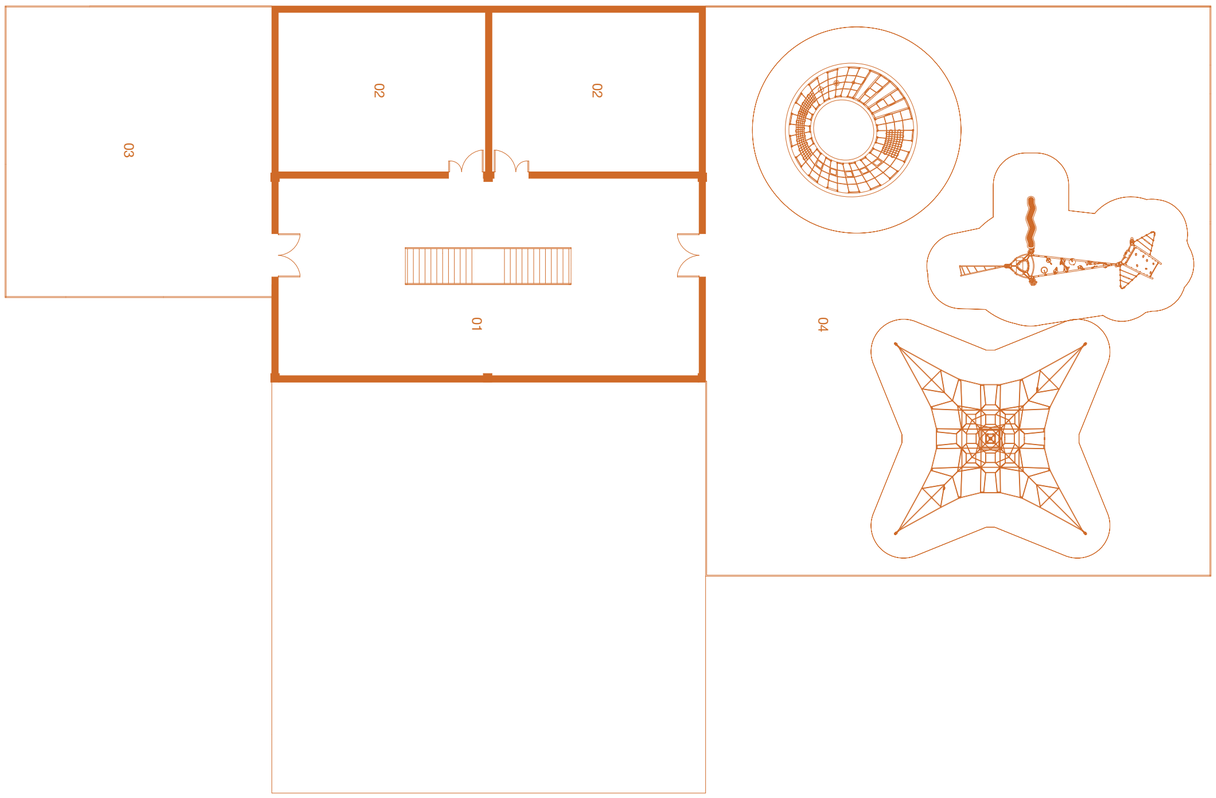


01 Mezanine
02 Homeroom
03 Bathroom
04 Store

05 Music Room
06 Science Room
07 Escape Stairs

3rd Floor

1 5 10

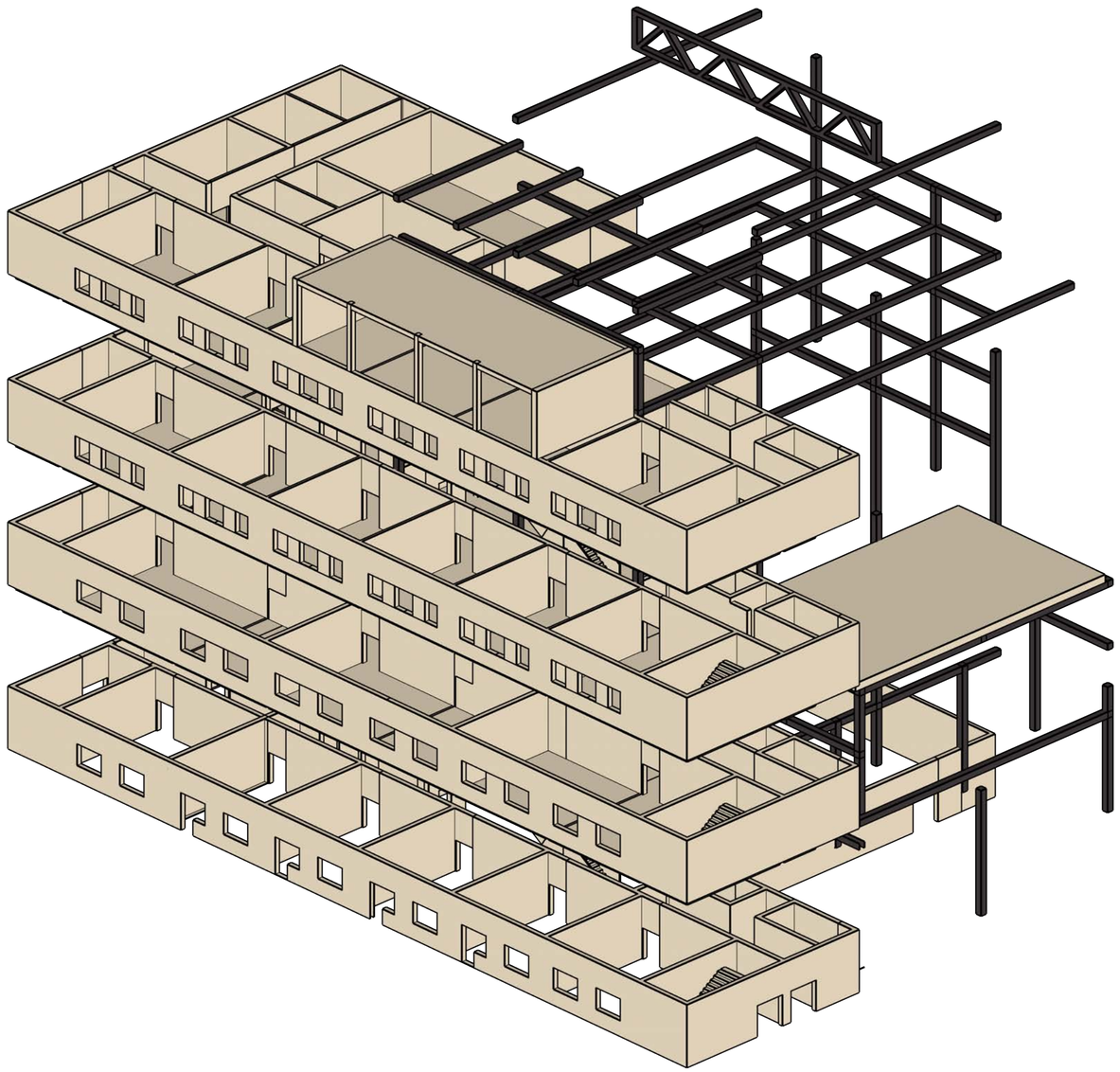


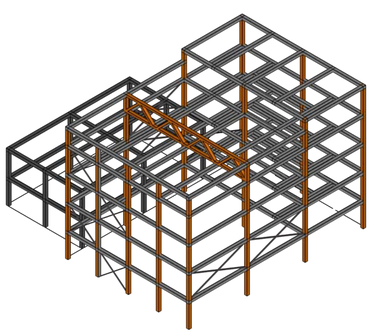
01 Landing Space
02 Garden Rooms
03 Outdoor Growing
04 Outdoor Playground

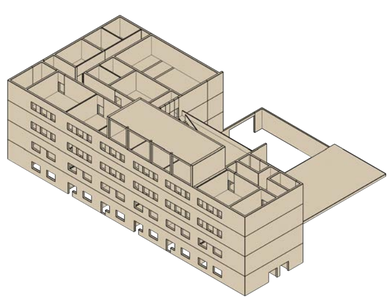
4th/Roof

1 5 10

Structural Strategy







My building uses a hybrid structural system combining cross-laminated timber (CLT) with a steel frame structure in the large atrium space. CLT floor slabs and walls provide the main structural support throughout the school and studio spaces, reducing embodied carbon while allowing fast off-site construction and a warm internal material quality. In the atrium, a steel frame is used to achieve larger spans and more open spaces that CLT alone would struggle to span efficiently.

The primary structure uses 200mm and 300mm thick cross-laminated timber (CLT) panels formed from 3 laminas vertically and 5 laminas horizontally, allowing efficient spansup to 8 metres across classrooms, studios, and circulation spaces. This structural grid supports flexible internal layouts while minimising the number of columns.

Material Strategy

Burnt Orange K-BRIQ | Grey K-BRIQ | Brushed Aluminium | Red Viroc Panel | CLT Structure | Playground Rubber | Structural Steel

K-Briqs are low-carbon construction bricks made from recycled construction waste, offering a circular-material alternative to conventional fired clay bricks.

The choice of K-BRIQ for my buildings design is to aim to mimic the sites context of regular clay bricks. I wanted to choose a similar material with a lower carbon footprint.

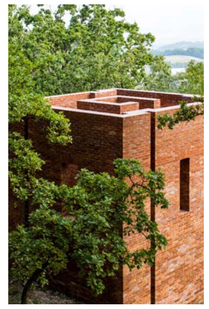
The Brushed aluminium façade panels are used around the large atrium space to provide a durable, lightweight, and recyclable cladding system that lends itself to the modern site.

Viroc panels are used as a protective skin over the lintels, combining the durability of cement-bonded particleboard with a raw, monolithic aesthetic.

CLT is used as the primary structure to reduce embodied carbon and align with Copenhagen's sustainable construction agenda.

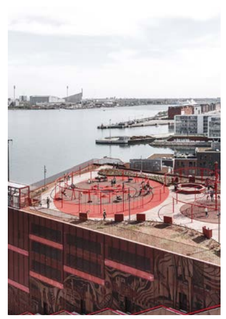
Rubber flooring is used within the rooftop playground to provide a durable, impact-absorbing surface suited to outdoor recreation and child safety.

Steel is used within the atrium structure to achieve wide-span spaces with minimal columns, creating an open and flexible interior environment.



My façade design is influenced by the work of Per Kirkeby, drawing on layered textures and brick like compositions to create depth, rhythm, and material richness across the elevation.

The street-level façade draws inspiration from the work of Studio Mutt, using expressive material detailing and texture to create a more tactile and human-scale relationship with the london Street. I used this in my facade as inspiration to involve the artist studios directly onto the street to aid involvement with the community.



The rooftop playground strategy is informed by Konditaget Lüders, which transforms the roof of a parking structure into an active public space. Its integration of play, exercise, and social activity above street level influenced the project's approach to creating accessible recreational space within a dense urban context.

K-BRIQ 17gCO_2e/unit

Clay Brick 450gCO_2e/unit

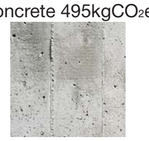
Facade Embodied Carbon Calculation

A Kenoteq K-BRIQ is 215 x 102.5 x 65mm and from my calculations contains 26x less CO_2 than a normal fired clay brick.

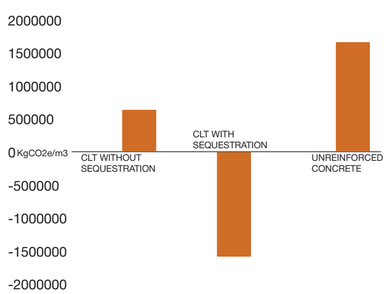
450/17= 26.47

CLT 205kgCO_2e/m_3 (Without Sequestration)

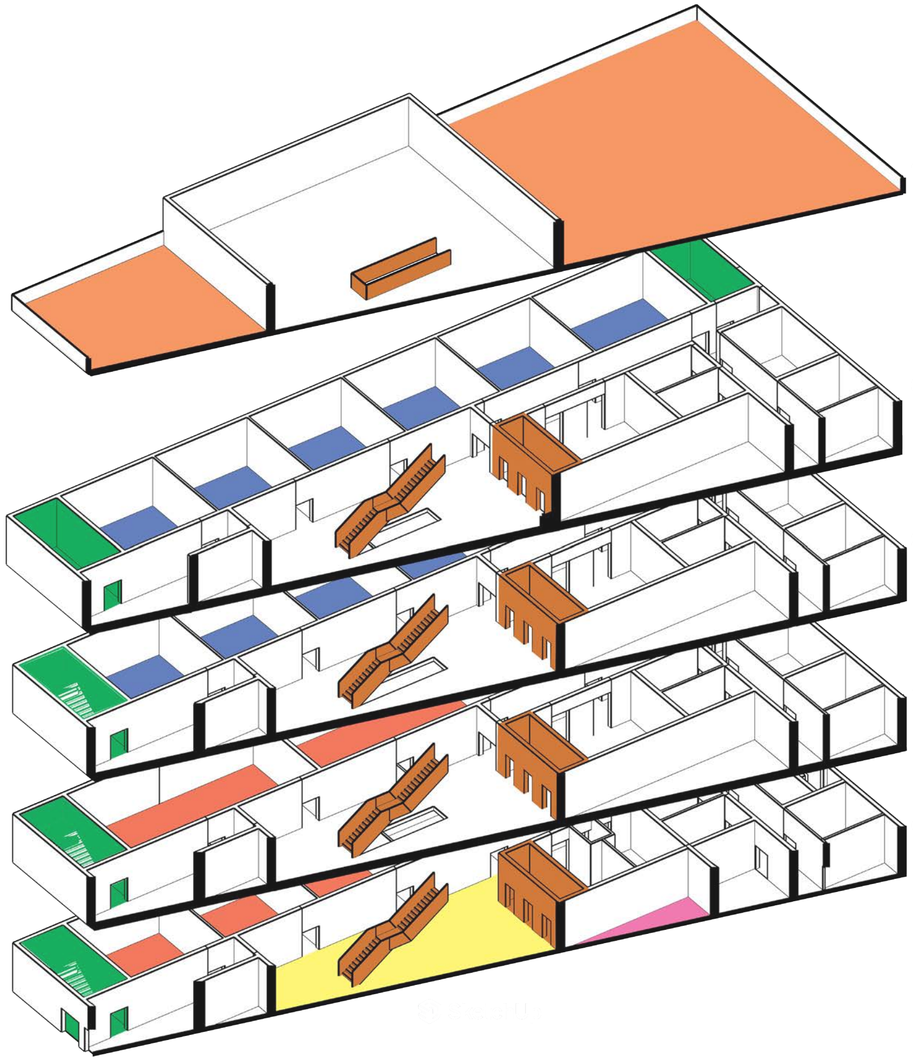
Concrete 495kgCO_2e/m_3



Structure Embodied Carbon Calculation

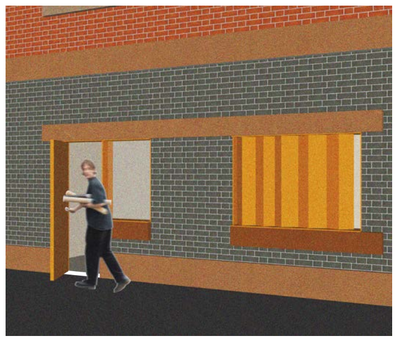


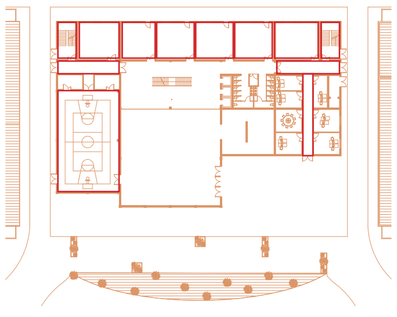
Fire & Access Strategy



My building is designed in accordance with Approved Document B to ensure safe evacuation and fire protection. My main fire strategies include two fire staircases on the northside of the building at each end of the main coridoor in accordance with the maximum distance to an escape route of 45m, these are compartments which run all the way to ground level straight out of the building without leaving the compartment. I also have included multiple fire doors that are FD30 or FD60 throughout my building that seperate compartments to give a longer rated time for escape.

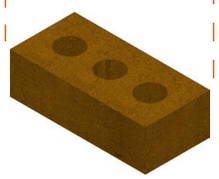
In line with Approved Document M, the building is fully accessible with step-free entrances, wide circulation routes, accessible toilets on each floor, and lift access to upper levels. The design also follows Approved Document K by providing secure edge protection to the roof playground, safe glazing, and clear protection at changes in level to prevent falls and injury.



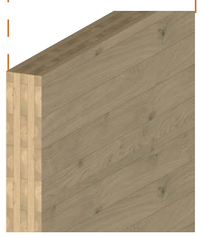


Environmental Strategy

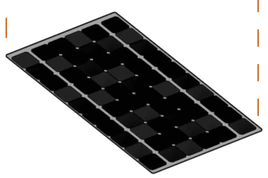
K-Briqs are low-carbon construction bricks made from recycled construction waste, offering a circular-material alternative to conventional fired clay bricks.



CLT is used as the primary structure to reduce embodied carbon and align with Copenhagen's sustainable construction agenda.



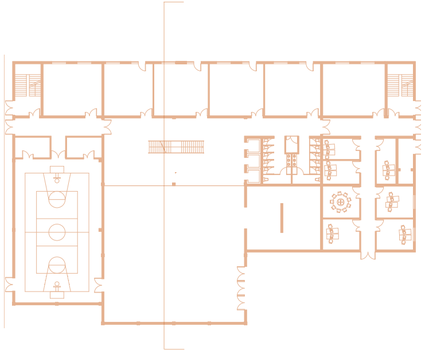
The large atrium uses glass (PV) panels to generate on-site renewable energy while still allowing abundant natural daylight. This lowers operational carbon emissions over the buidlings lifecycle.



The building's waste strategy focuses on separating waste at its source with clearly labelled recycling stations. In art studios, specific collection points are provided for material offcuts and reusable supplies to encourage reuse and reduce landfill.

Section
1:100

1 2.5 5



Elevation
1:100

1 2.5 5

Model Photos