### Studio 6

### Olivia Neves Marra and Shawn Adams

### → Studio Agendas

Architecture is not a problem-solving discipline but, instead, "a collective form of knowledge produced through the efforts of a multitude." (San Rocco No.6, 2013). Studio 6 is interested in how we, architects, can shape our education and practice to become better listeners and observers as we think and make things together. In this sense, how to engage with grassroot organisations and local communities? What are the social principles of their circular economies, coexistence, and compromise, dissensus and difference? Our studio invites you to study the specific spaces where these processes take place and to reimagine what it means to live-and-work in postcolonial London.

### → Methodology

We will push the boundaries of drawing, both as a process of developing ideas and a mode of representation and communication. By using conventional and unconventional techniques, large- and small-scale drawings, you will articulate information about the site, individual experiences, communities, and their specific forms of living. Drawings will be the starting point for every tutorial and the focus of exercises throughout the three terms. Large texts will be replaced by images that you will be asked to speak through. Studio 6 will also centre around collaboration, not only about sharing the workload but thinking collectively. Early in the first term, we will prioritise group work to share ideas and research findings.

### → Year theme

This year, our studio will investigate how architecture may enable groups to gather, self-organise, and collectively practice everyday rituals and mutual solidarity. We invite you to address this question by analysing the apparently 'informal' mundane spaces inhabited by either settled communities or emerging groups. We will be asking you to carefully research their daily lives to develop schemes that directly speak to the subjects and uses we are designing for. How can you create a space for people doing things that they already do?

### ⇒ Site

Mitcham, we would argue, is a paradigmatic case of London's ongoing processes of endless expansion which we will further understand by analysing how local communities live and organise themselves spatially. The former site of Mitcham Gasworks is soon to be privately redeveloped with facilities catering to normative market-driven ideas of urban space. Could this be an opportunity to claim spaces for local communities? Students will work together to identify the points of intervention as our studio challenges this redevelopment with localised counter projects to form a spatial network of shared space, materials, knowledge, care, and so on.





The former site of Mitcham Gasworks (in 1990) to be privately redeveloped in 2024.

# 01 Definition analysis

# Architecture is a collective form of knowledge produced through the efforts of a multitude

To shield themselves from the elements and wild animals, individuals joined forces to construct secure and comfortable spaces for raising the next generation. This collaborative effort has propelled the evolution of architecture from rudimentary habitats to intricate social structures. As civilization advanced, humans began incorporating architecture into the fabric of culture and society. Architecture, far from being solely a functional necessity, also encapsulates the crystallization of the past—symbols and meanings that encompass social, religious, and political dimensions.

### # Coexistence and Compromise

Different languages and historical backgrounds contribute to the world, much like the presence of multiple encyclopedias in a library. Inevitably, confusion and contradiction arise when different elements collide, but it is within this collision that the melting pot of knowledge is forged. Opinions and voices intertwine, creating a rich spectrum of ideas. The existence of a library symbolizes the pursuit and reverence for knowledge, mirroring how individuals seek common understanding and values when exploring different cultures and histories.

The challenge presented by differences propels us beyond individual narrowness towards a more open and inclusive mindset. Coexistence and compromise are not instantaneous but demand continuous effort and understanding. Just as books in a library require sorting, classification, and interpretation, individuals also need to engage in cross-cultural communication and dialogue when encountering different cultures. This process is not only one of individual growth but also a journey of collective progress for society as a whole.

### # post-colonial

Assessing multiculturalism on a macro scale is challenging, given varying levels of permeability and adaptability. It can resemble a fluid ocean where individuals craft their own narratives of recognition, At worst, it's a majestic mountain where people are isolated in complex perspectives and lost the love of the present moment. Recognizing the nature of these differences marks the inception of a sense of identity. In my understanding, the core concept of post-colonization aims to unveil stereotypes of the dominated, simplify the post-multipolar world, and discover common ground by setting aside differences in pursuit of resonance. It's about finding shared dreams and love amidst the diversity.



Rural arbutus greenhouses, Lin 'an, China.

To prevent rain from knocking off the fruit during the fruiting period, greenhouses were built according to the terrain to adapt to the land.



Battersea Power Station, UK

The conversion of an abandoned power station into a comprehensive residential area is a renewed attempt to integrate more functions into one space.

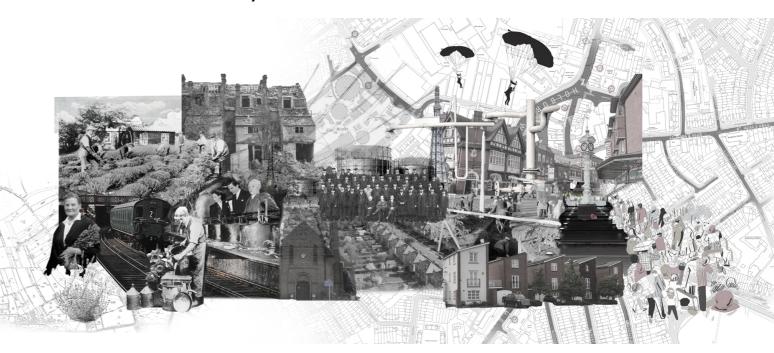


Guggenheim Museum US

"Human knowledge is not (or does not follow) a straight line, but a curve, which endlessly approximates a series of circles, a spiral."

-- Vladimir Ilyich Lenin

### **02** Mitcham History





During the Tudor and Stuart dynasties of the 16th to 18th centuries, lavender was valued for its medicinal properties, and it was promoted and widely recognized in Mitcham due to its favorable growing conditions, and lavender became an integral part of Mitcham's cultural and economic identity. The lavender fields of Meacham are usually harvested in late summer, when large tracts of land are transformed into a spectacle of vibrant colours and scents. A booming herbal distillation industry followed, which contributed to the local economy and became synonymous with the region's heritage.



The front yard of a local resident

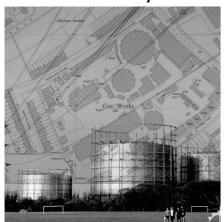


The changes brought about by the war brought more narrative back into the lives of the inhabitants. New markets and residential redevelopment and development require fast and affordable material solutions, and a mixture of different community functions and egalitarianism are on the table. When it comes to equality, this means striving for consistent weight, from the subconscious down to the everyday. This resulted in the background panels of London's South Bank - low brick houses economically faster than concrete schemes - with successive, identical architectural facades, no more refined, no more prominent, and a collective subconscious, paranoid egalitarian quest for democracy. The next owner who inherits the land will also be forced to submit to this great discipline.



A house around the site

# **03 Site History**



1900



2000



2023





Mitcham Gas Works was built in 1849 by James Stevens and Company. It is understood that during its history there were four gas storage tanks, while at its peak there were three gas storage tanks and 192 distillation houses. In the 1930s, about 200 tons of coal were burned every day. Gas manufacturing ended in 1960, but gas tanks continued to be used to store gas for several years. The office was built in the second half of the 20th century and used by British Gas until it was demolished in 2006. Improvements in gas storage technology have made the tanks redundant, thus providing an opportunity for redevelopment of the site. In 2022, with parliamentary approval, National Grid removed the gas storage tanks.

A piece of land of nearly 30,000 square meters that has been vacant for more than 20 years, there are a small number of national grid staff walking inside, and there is still a remaining signal tower that has not been dismantled. The government plans to build a residential area by 2050.



### 04 Site Walk



This is my first time reaching out to such a vast site and attempting to intervene. Despite being a local resident, I approached this experience with the curiosity of a child encountering something new. The open-air car park of ASDA across Western Road reveals the neighborhood's industrial past, where rents were affordable, and space was abundant.

By 14:00, completing a circuit around the site, it becomes evident that nearly all areas are now part of private residential zones, excluding three rows of low-rent housing in the southeast. Notably, there is a lack of noisy traffic, indicating effective community policing and contributing to a stable environment.





Digimap 2015



Rhino modelling
A miniature landscape made following
the storage bottles of the herbal culture
attempts to preserve the memories of
Mitcham's group life. Starting with a slight
narrative to understand the task activities
and environmental character of the site
and avoiding cold war thinking.

# **05** Curious perspective



Most representative of Mitcham's proud history, although the historic lavender fields no longer exist, the Lavender Fields area memory is still faithfully recorded in the local museum.



Mitcham Town Centre has experienced continuous urban development, with the surrounding residential and commercial properties increasing in volume and becoming congested. It is noisy and has all kinds of amenities, shops and public transport.



Mitcham Common Park is a large open space with recreational facilities and also serves as a local economic woodland. Surrounded by residential areas. It attracts families and individuals who want to be close to green Spaces but also enjoy the amenities of the city.



Morden Hall Park is a green space in south-west Mitcham. As a leisure place for local residents and tourists, there are characteristic B&B hotels. The floating population is large.



Eastfields built the first local railway in the past, experienced urban renewal and new housing projects, and the area's burgeoning population grew.



London Road Cemetery is next to a local Christian church, and with no large industry around it, it's a very quiet place to meditate.



No man's land, where residents are used to his quietness, has seen renewed curiosity since the gas tank frame was removed last year

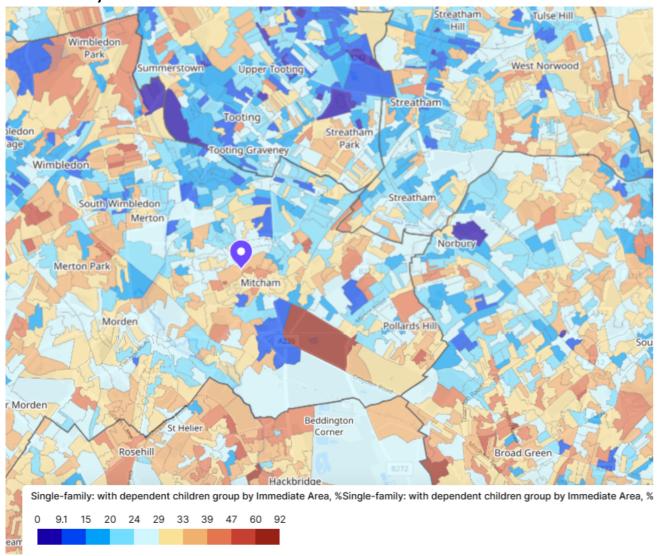








# **06** Family situation



### **Household Type**

Single-family: with dependent children	35%
One-person household	21%
Single-family: no children	15%
Multiple families or unrelated people	13%
Single-family: with non-dependent children	11%
Single-family: all aged 66 and over	2.2%
Single-family: other	2.2%

### Residents Age

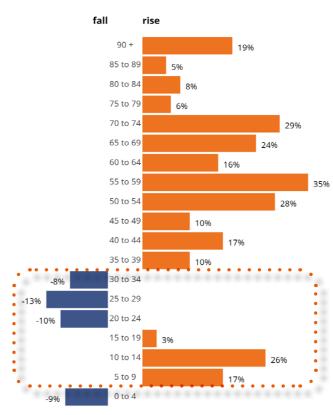
Aged under 20	34%
Aged 40 to 59	29%
Aged 20 to 39	25%
Aged 60 to 79	10%
Aged 80 and over	2.1%

Date Source: Office for National Statistics--2021

### **Ethnic Makeup**

White British	26%
Other White	16%
Other Asian	11%
Mixed	8%
Indian	7%
Other	7%
Black African	7%
Black Caribbean	5%
Pakistani	4%
White Irish	1.9%
Chinese	1.7%
Other Black	1.7%
Roma	1.3%
Gypsy	1%
Bangladeshi	1%
Arab	0.6%

### **07** Core issue



Population change by age group over 10 years



High in households with children, low in independent households
Single-family: with dependent children: 35% (London average: 27%)

One-person household: 21% (London average: 29%) Single-family: all aged 66 and over: 2.2% (London average: 4%)

Generally younger age under 20, fewer in the 20-39 age group

Aged under 20: 34% (London average: 24%)

Aged 20 to 39: 25% (London average: 33%)

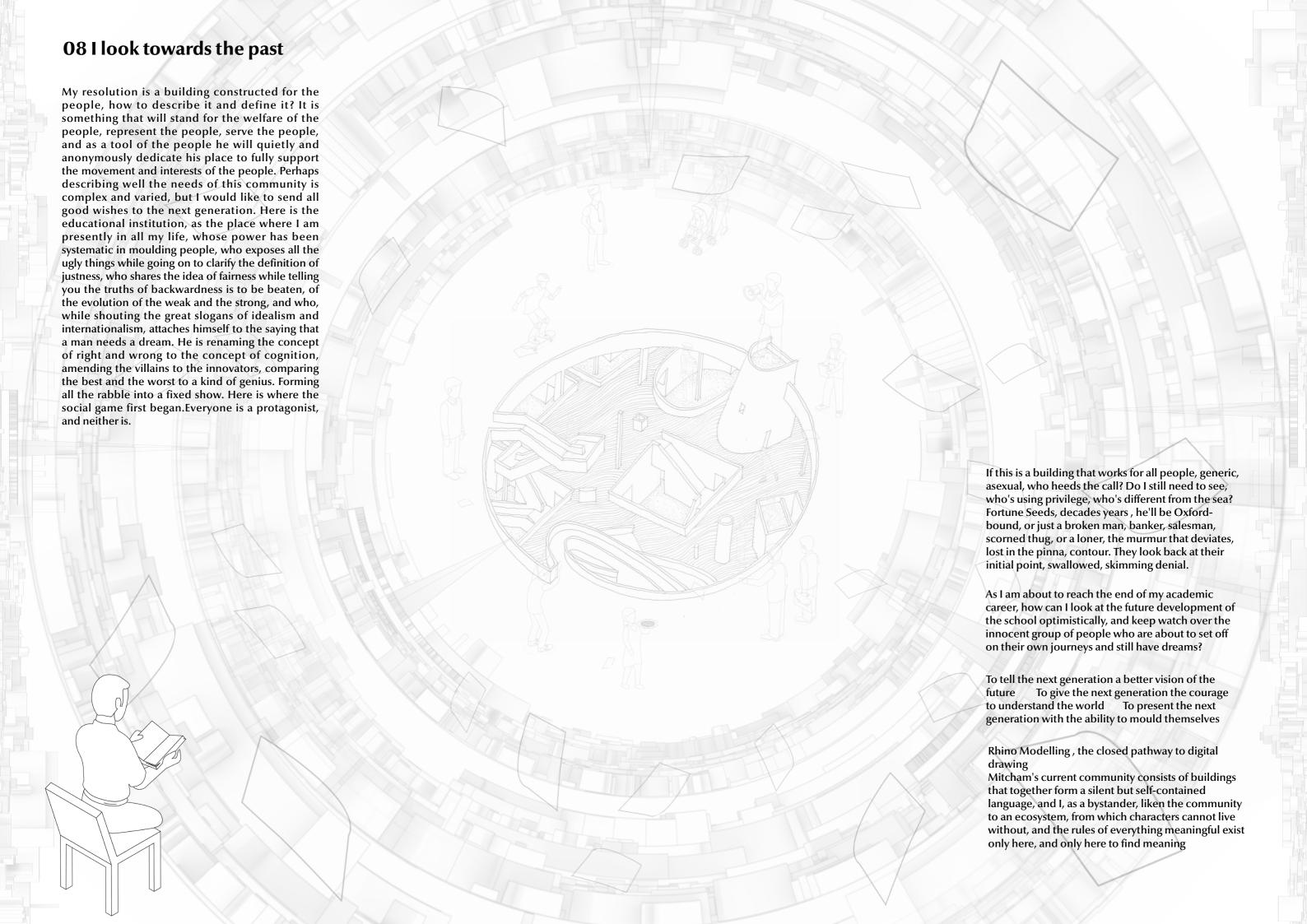
Mitcham is currently In Mitcham, population growth is concentrated among those over 35 and under 15 years old. The 20-35 age group is leaving for larger cities, leading to children being entrusted to others for care.

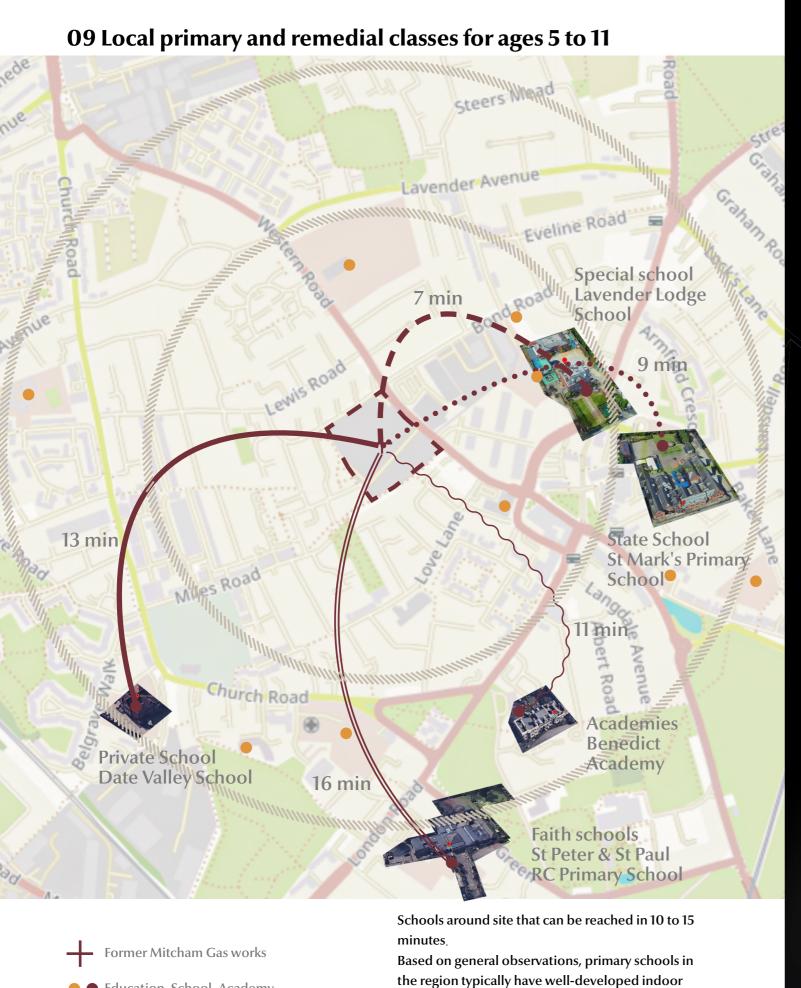
potentially resulting in a problem of children being left behind.

The problem of remaining behind is an unavoidable impact of rapid social development. Based on my childhood experience and the example of a classmate with a first-generation immigrant family, parents need to put a lot of effort into their work to ensure that the family has enough financial support. According to the interviewer, the first generation of immigrants may not have established a well-developed social support network, including relatives and friends. This causes them to become more dependent on other resources for child support, such as grandparents or neighbors. Such a situation may arise problems such as:

- 1. Lack of communication with children and unmet emotional needs increase the risk of mental health problems
- 2. Lack of family support and supervision when children face challenges. May be more dependent on peers or neighbors, mature early in terms of independence and responsibility.

In response to the problems that may arise, this unit project will consider the educational institutions offered to children, and foster the exploration of personal interests and the spirit of community cooperation in primary school students. My entry point is how to harness the power of community to heal emotional stress when parents are absent from child care due to work, to step in proactively and make friends with more peers.





spaces, but many of the outdoor spaces and facilities

are either old or lacking.

**00** If

Rhino Modelling, the ceiling that was smashed open and a beam of light came in from outside.

There is no road in the world, walking more people into the road, human beings for science is always in the bold assumptions and careful forensics, we need to go to iterate the existing environment, break the stereotypes? Is what everyone shouts is right always right? We don't believe so.

Education, School, Academy

# 11 Spatial type study 1.1

Movement

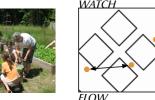
# Prototype





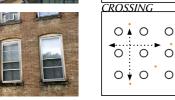




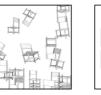


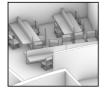




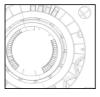


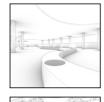
Event







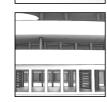
















The individual inevitably invades an orderly controlled building, in which the building is also a vessel for user communication, in effect resisting or obeying the rules carefully constructed by the architect.

### Event:

Movement:

The translation of motion by the source of the event, and the occurrence of the event includes either instantaneous properties or continuous properties. This in turn can be reversed to the composition of the building, but when they occur in the building, they become part of the architectural narrative.

### Sp

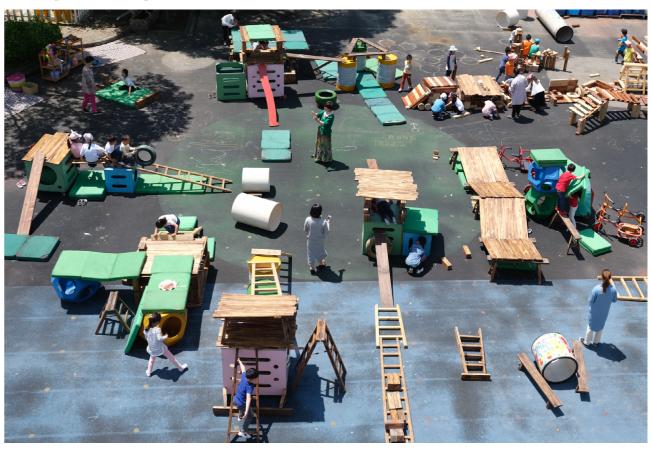
The concept of space extracted from the prototype is transplanted to the real scene through operation and modeling.

Here is just a comparison of schools within Mitcham, pointless, as I gradually zoom out to the UK, Europe, the world. schools in Mitcham are still stuck at the last century stage, it's time to make upgrades for the community.

# 12 Spatial type study No Power Park

# Anji Play

http://www.anjiplay.com/guide https://www.youtube.com/watch?v=cuksYrro7Cc&t=5s



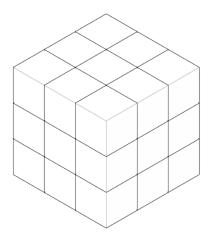
### **Child Development**

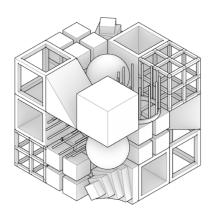
Anji Play is an innovative approach to early childhood education and play. It emphasizes the importance of self-directed, open-ended play as a means for children to explore, learn, and develop essential life skills. Key features include open-ended materials, adult facilitators rather than instructors, a focus on risk and challenge, and documentation of children's play experiences.

### Reflection

The marker of educational success should not just be the percentage of top schools or the percentage of high salaries, but should be diverse. For example, children raised in different modes were surveyed to see how many close friends they each had after work, how many times they experienced a willingness to cooperate with a stranger, and whether there were any differences in their physical fitness levels, anonymously. I think these absolute indicators of happiness in life are more worthy of reference than the relative indicators of admission to elite schools.

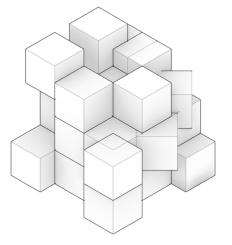
# 13 Spatial type study 1.3

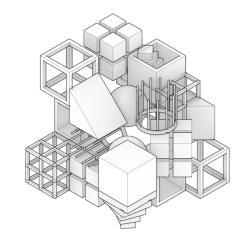




# Organising

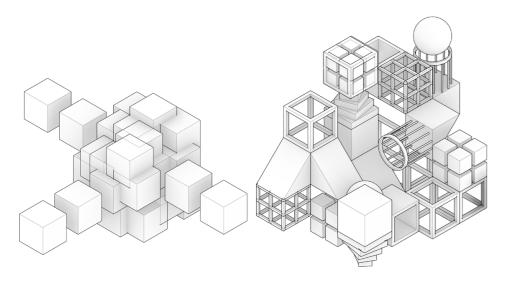
Any function can be simplified by describing it as something that happens in a space that corresponds to a situation.





# Manipulating

The boundaries between spaces are broken down and begin to organise themselves in different ways, creating interesting forms for each other.



# Connecting

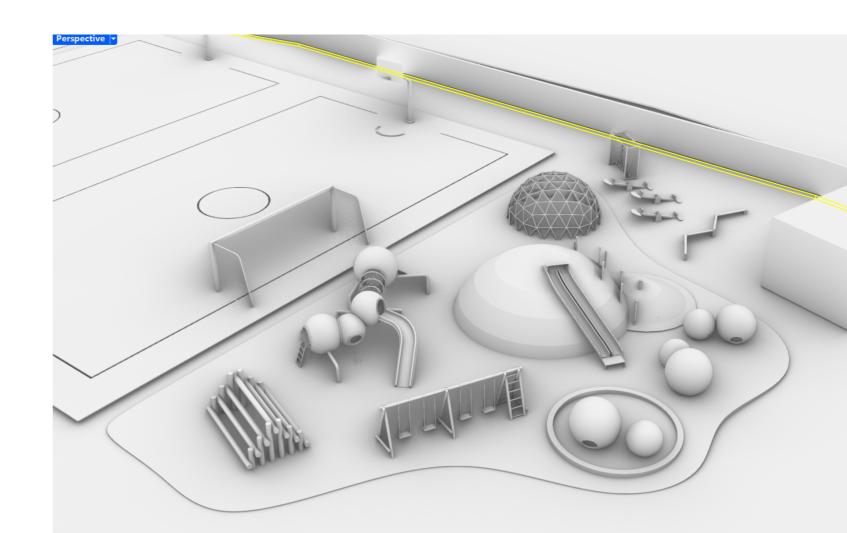
Spaces of different forms that create stories for each other combine to form a larger, complex three-dimensional space.



The unpowered playground at Sir John Mcdougal Gardens invites people of all ages to come here through the different types of classification of recreational equipment, good greenery blocks out street noise, and overall it is quiet.

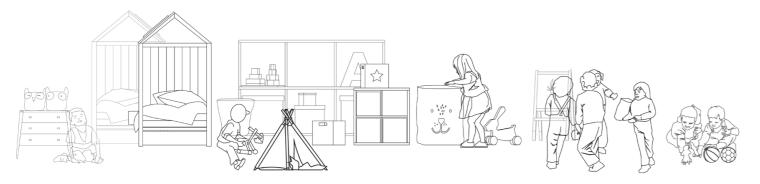


Consider designing an unpowered playground for all ages that allows for relaxation and recreation, integrating everything from plywood cabins with individual hideouts to basketball and football games of an openly cooperative nature.



# 14 Activity arrangement

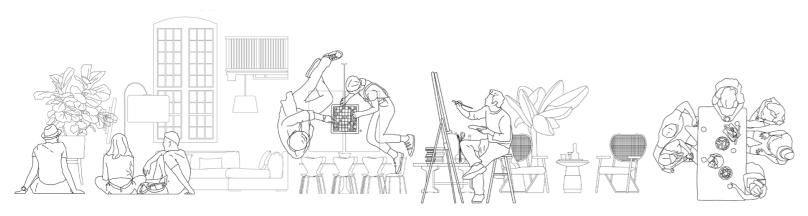
5-8 years old Soft beds, sand pits, graffiti, jigsaw puzzles



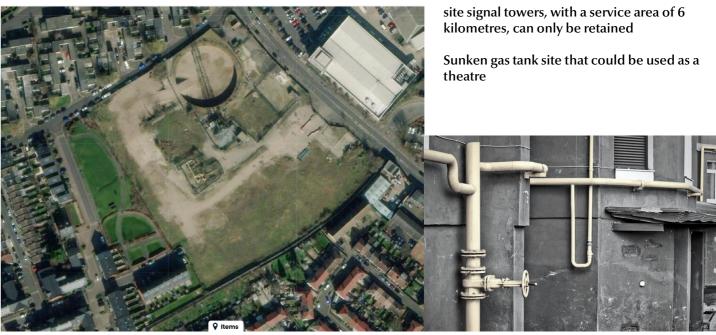
8-10 years old Reading, hobby groups, kitchen



9-11 years old Crafts, science experiments, chess, movies, reading books









Installations found in art museums

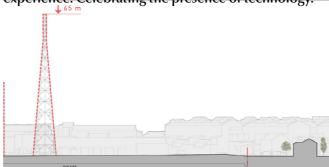


Signal towers like the one found in Mitcham in Shanghai, built independently of other buildings, separate metal structures on the ground (truss structures?)., probably with a later century of maintainability in mind, and with building cycles usually in the 50-70 year range, the two attributes can't be built on top of each other.



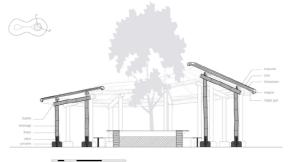
Signal towers found in fire stations in London also fall into the category of state property and cannot be easily moved by building plans.

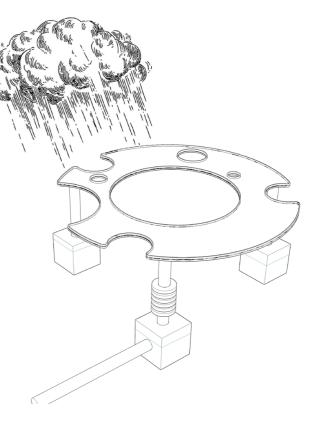
Through this site, I found out for the first time that the normally inconspicuous cellular network signal towers have an extremely deep connection with our daily lives, and are the basic security of life in modern society, they appear every few hundred metres with a small base station, and a few kilometres with a large base station placed. Their role may radiate the quality of life for several kilometres around them, during the research the government said it was going to completely overhaul the site by 2030, but I still couldn't be sure how they were going to deal with the presence of the towers, so I chose to embrace the big guy, a different form of experience. Celebrating the presence of technology.











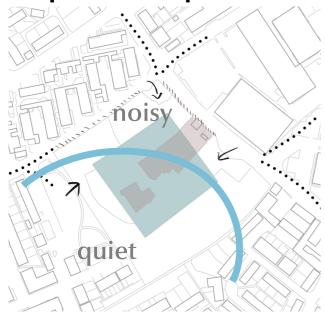
The site has a problem of stagnant water, for possible flooding need to consider how to guide the flow of water and water collection, in the early roof treatment considered the use of different means of filtration to make the rainwater to meet the drinking standard, but later on, considering that the site is still in the big city area, the possibility of pollutants, the programme has been abandoned. Instead, the only consideration was how to better channel the water to the rainwater pipes of the water board and hand it over to the officials to purify the water.

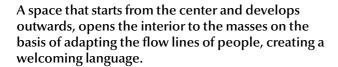
Located in the theatre steps of the FORMER GAS WORK, the construction of a triangular semi-circular pavilion using wooden structures can be done very inexpensively.



Pre-embedded drainage pipes

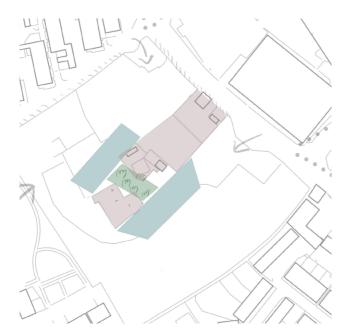
# 16 Spatial development







There is a 65-meter-high signal tower in the center of the site, and the red area contains the exposed gas pipeline and the National Grid office.



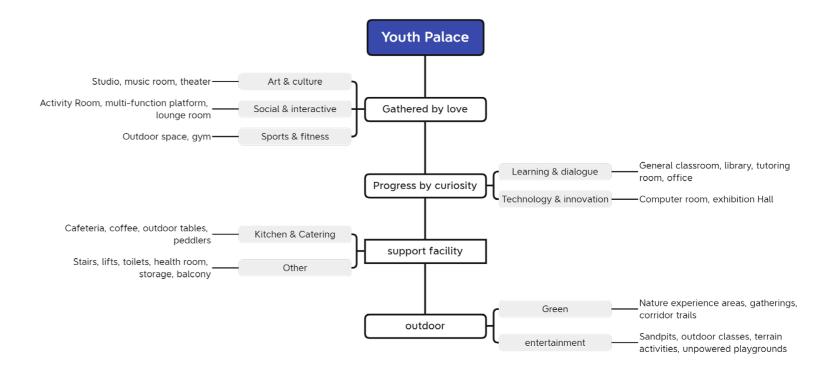
Non-removable pipes and towers form a unique landscape, dividing the ground floor into two parts, and a hollow atrium becomes a social space within the building.



A wide variety of studios and interests will be brought here, and I chose to use the circular arc to represent a sense of harmony and integration, rather than the rectangular sharp edges and corners.

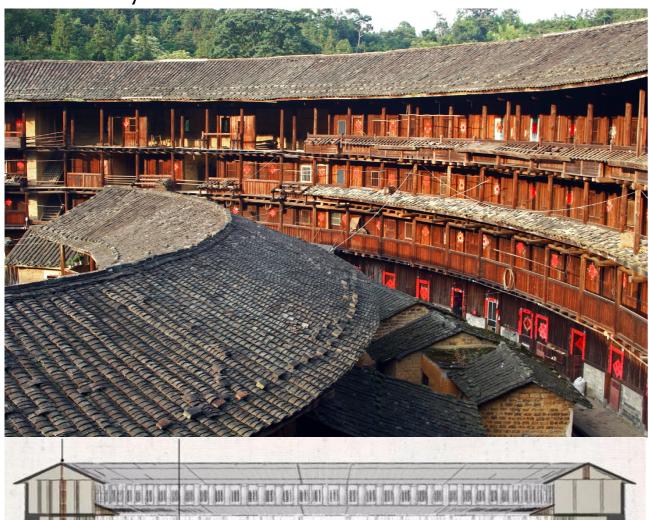


The building presents a sense of balance when viewed from all angles, and the surrounding green space makes this new gathering place a safe fortress or a nest.



What features do I need

# 17 Case study





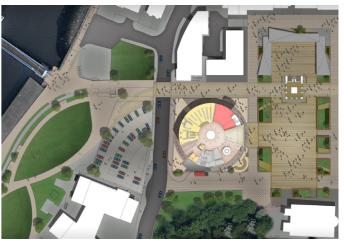
### Tulou 土楼 in Fujian Collective vs. solitary

As for the other earth building, made of rammed earth and bamboo strips. by this ring-like building structure provides a sense of security of mutual trust among the residents, as well as the empty atrium leaves a social space for daily interaction. Group living can promote better mental health and ease the financial strain of renting. This strong sense of community can lead to collective achievement and prosperity, shaping a positive future for the neighbourhood and the next generation.









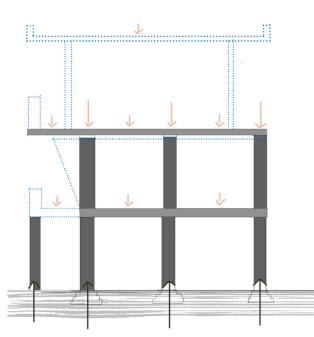
The Word – National Centre for the Written Word By FaulknerBrowns Architects

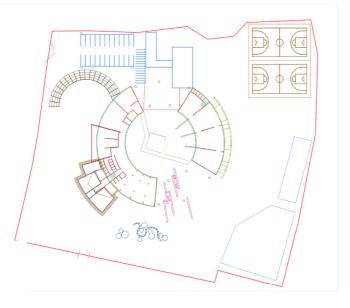
A hollow building, a breathing white space.

In circular (ring) building types, the presence of an atrium has a strong centripetal force, a sense of obligatory interaction, a bit like the idea of a "circular prison", but in my site, the centre is missing, so the people are atomically distributed in circles.

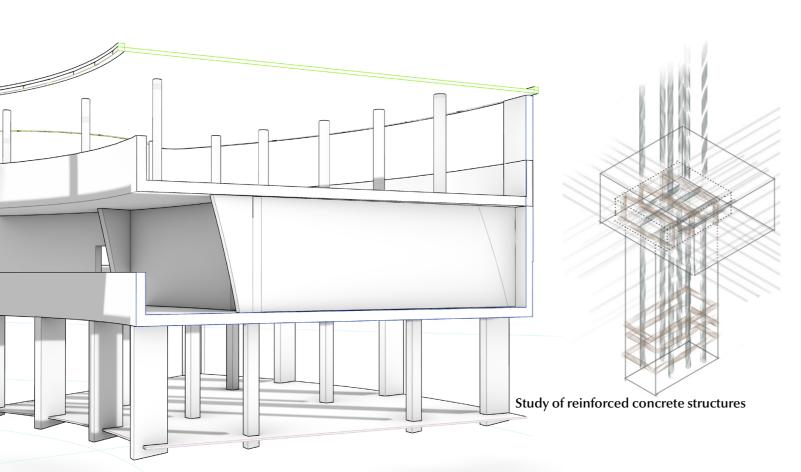


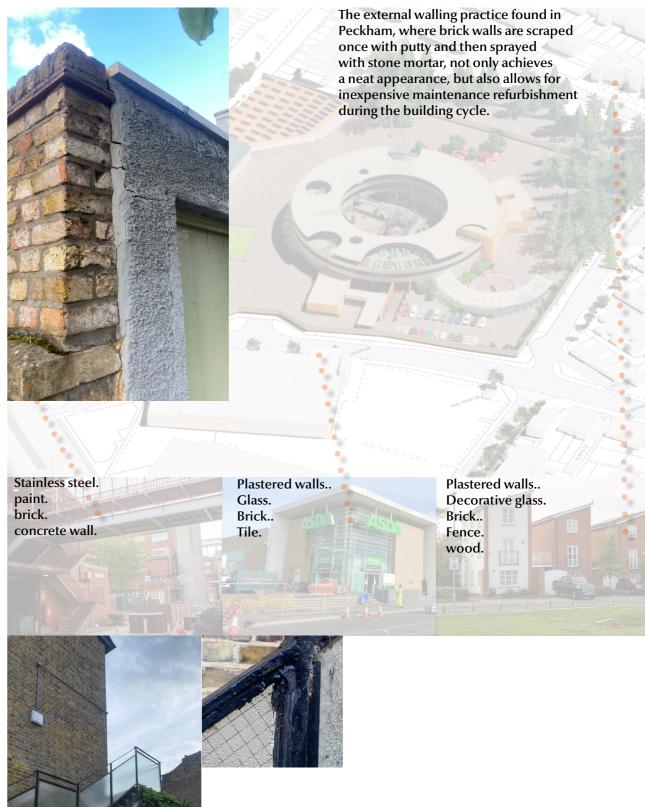
Frobisher Crescent in the Barbican Estate



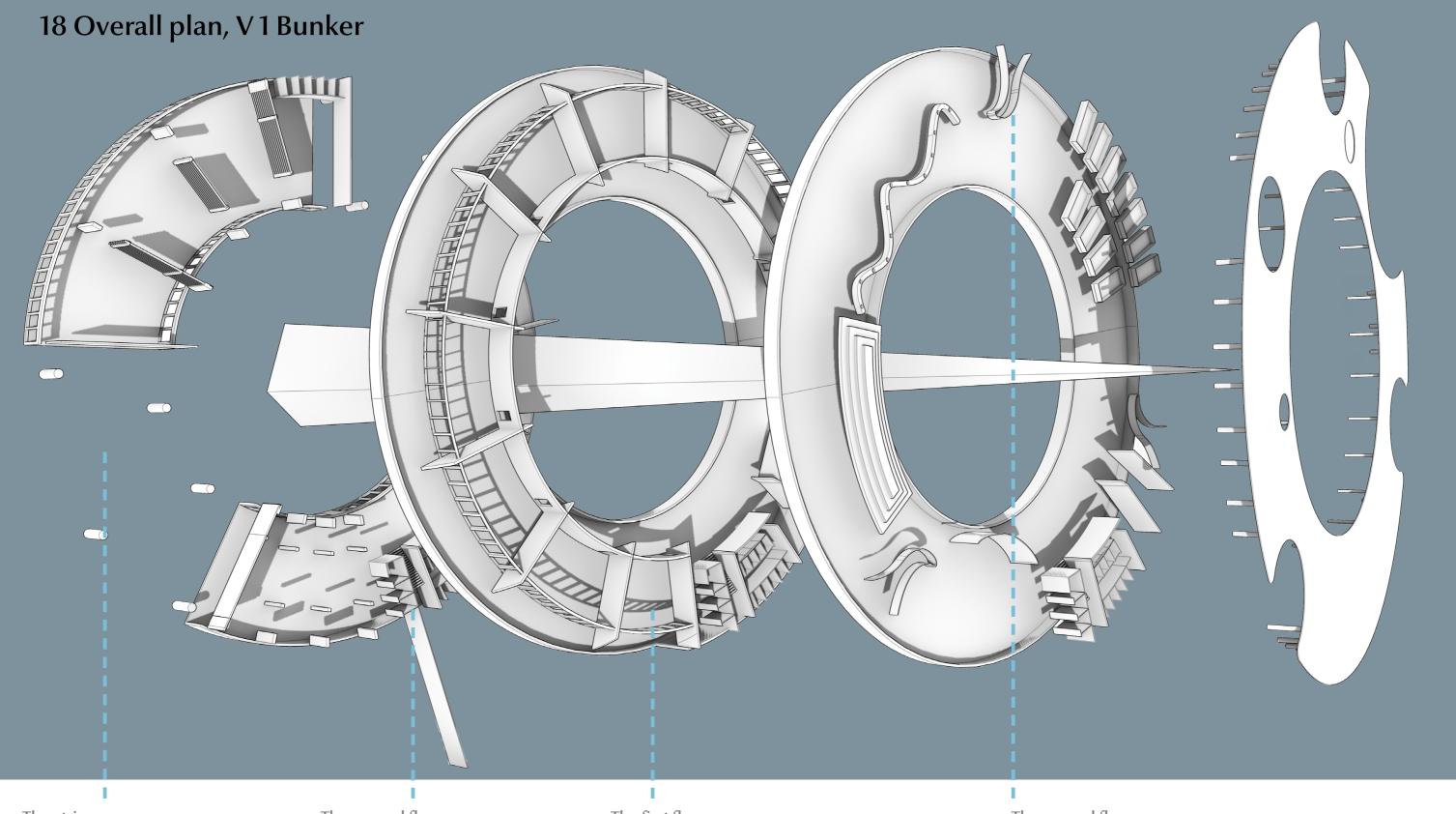


In the real world, reinforced concrete is the most versatile in terms of shaping power and economy, and due to the good shaping power my first material choice decided to use it, but due to future sustainability this concrete grid structure decided to replace it with a more superior material design.





Frosted glass fencing found in Mitcham is laminated with a metal mesh that allows the glass to be protected from large scale shards falling off in the event of breakage. At the same time the glass is a sustainable material and can be used continuously.



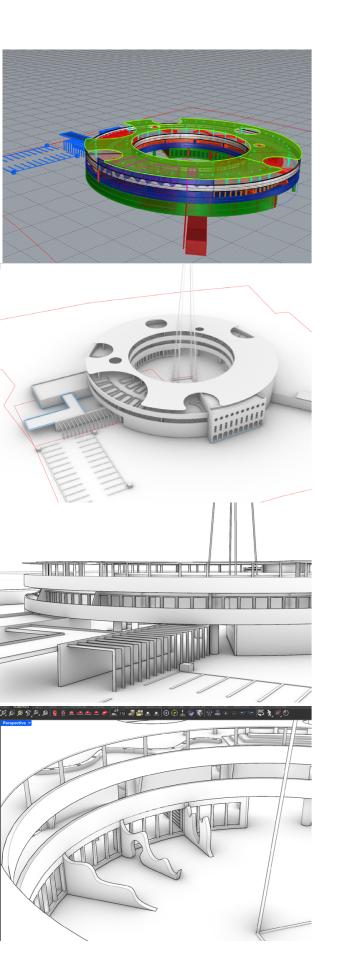
The atrium courtyard set aside in the current phase will create green Spaces and accommodate activities for ages 5-8. This also ensures that the adults inside the building will be aware of the unexpected.

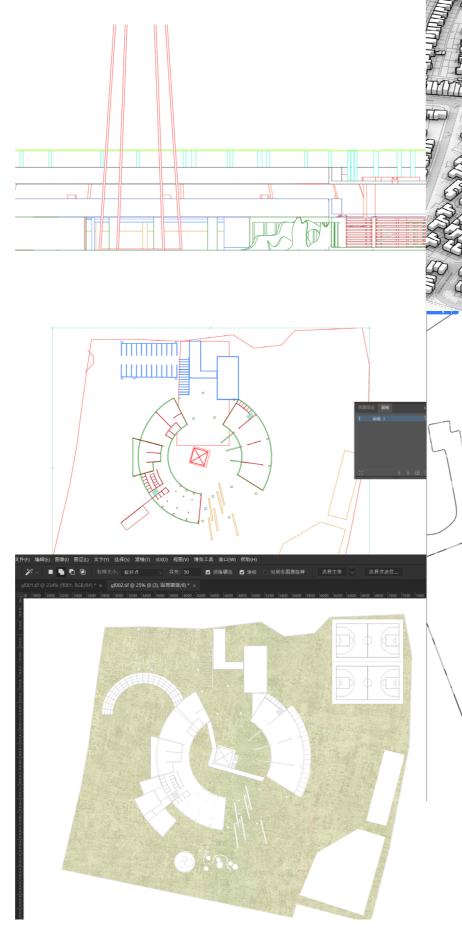
The ground floor is reserved for the canteen and the indoor greenhouse that can supply vegetables, and outdoor food stalls can be provided around it to attract the influx of nearby students.

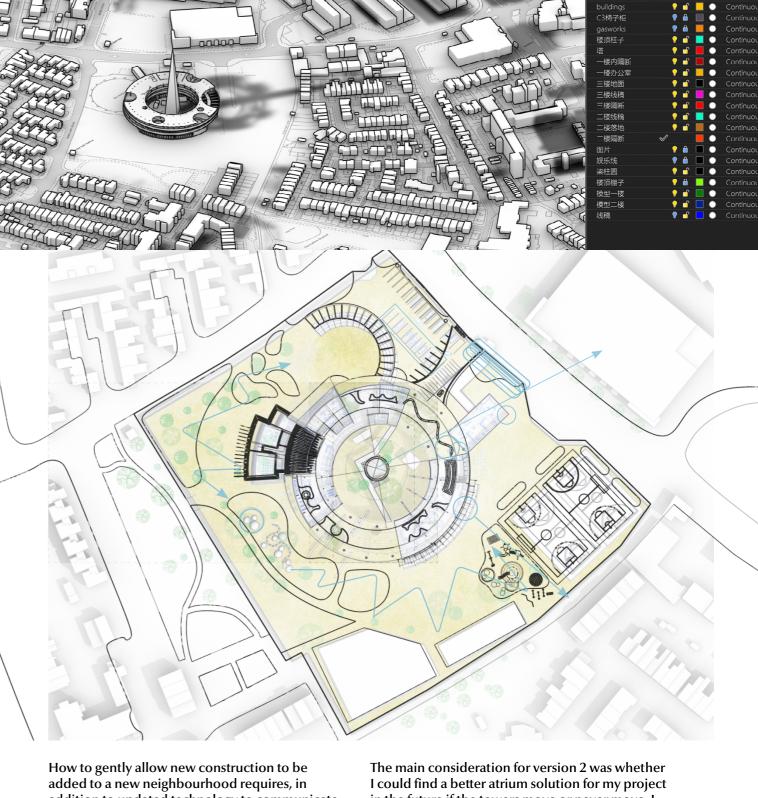
The first floor
will attract local teachers to prepare interest
classes for children of all ages, which will
provide career opportunities for adults and
broaden students' knowledge outside of school,
and they will be able to meet their partners to
do activities of interest after school. Such as
dance, music, chess, crafts. At the same time,
there is room for self-study, which can be used
for daily activities.

The second floor

is an open-air balcony that will create a circular stadium. Miniature open-air garden view pools will be scattered in all directions. Each corner continues to be divided into small Spaces to facilitate the crowd to stay and gather, while the hollowing of the roof also corresponds to the bonsai area below.







How to gently allow new construction to be added to a new neighbourhood requires, in addition to updated technology to communicate, the power of humanistic care, introducing greenery in advance of the construction of this new building, and communicating goodwill to the surrounding community through the placement of new landscaping that absorbs the noise and dust of the construction.

The main consideration for version 2 was whether I could find a better atrium solution for my project in the future if the towers move or never move, I don't have the right to define who is useless and needs my middle classification to neuter the existing community functions. But my project is flexible and able to change the proposed plan all the time, so I looked to the trussed domes of modern stadiums for inspiration and tried to iterate the roof into a lightweight cable dome. The result is a drier, more airy environment.

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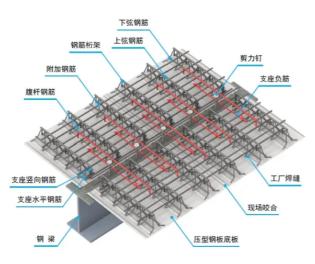
# 19 V2 Iteration Cases



London- Coleman Street truss and floor slab construction



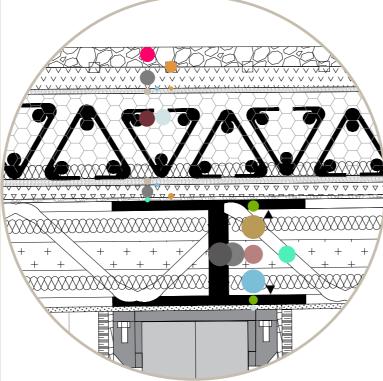
**Colli Truss and Frame** 



梁上搭接节点大样

How to maximise the use of sustainable materials in large buildings so that they can be recycled to new places at the end of their life cycle was first considered with steel, where a grid was built up through the steel structure, a wooden truss structure was used within the grid to assist in the support, and then galvanised steel was used as a base for the floors, and then put into the steel trusses for the secondary reinforcement, which ensured that the building was solid and at the same time, greatly reduced the concrete overall dosage in the building.





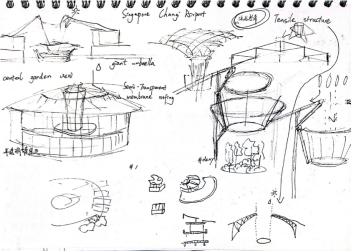


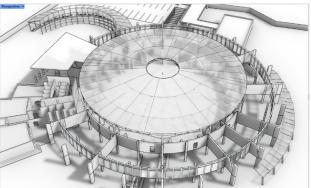
Brasilia National Stadium



**Brasilia National Stadium** 

I learnt about Richard Buckminster Fuller's Tensile monolithic structures from The O2 Arena project, and within this structural logic I chose to use a cable dome as a canopy for the atrium, which is a lightweight tensile structure of steel cables and columns, covered with a membrane that creates tension and compression within the structure, which combine to form a stable whole.

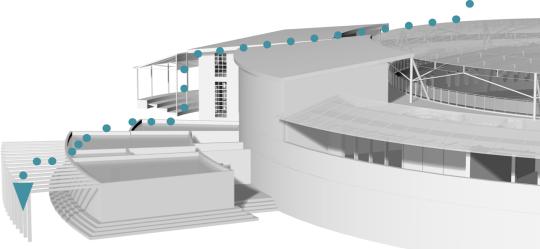














The rainwater will flush the sludge from the top floor and discharge into the rainwater wells around the OSC, and the middle section of the ETFE membrane will direct the rainwater to the pond landscape in the middle of the ground floor

21:00



The planted landscape around the OSC serves as a habitat for urban fauna and will bring about a complete ecological chain, ensuring the sustainability of the plants on the site and adjusting the microclimate.

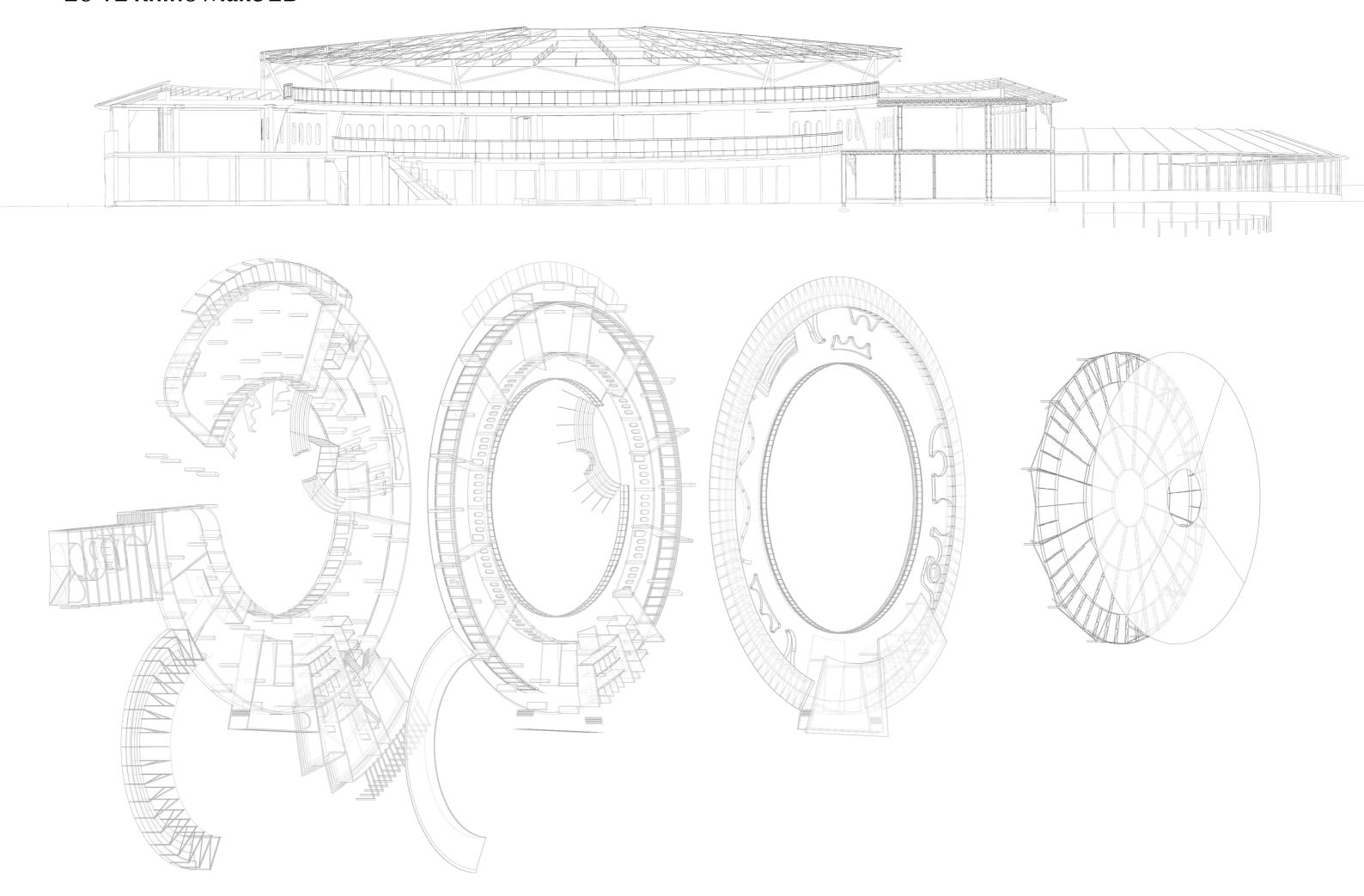
07:30

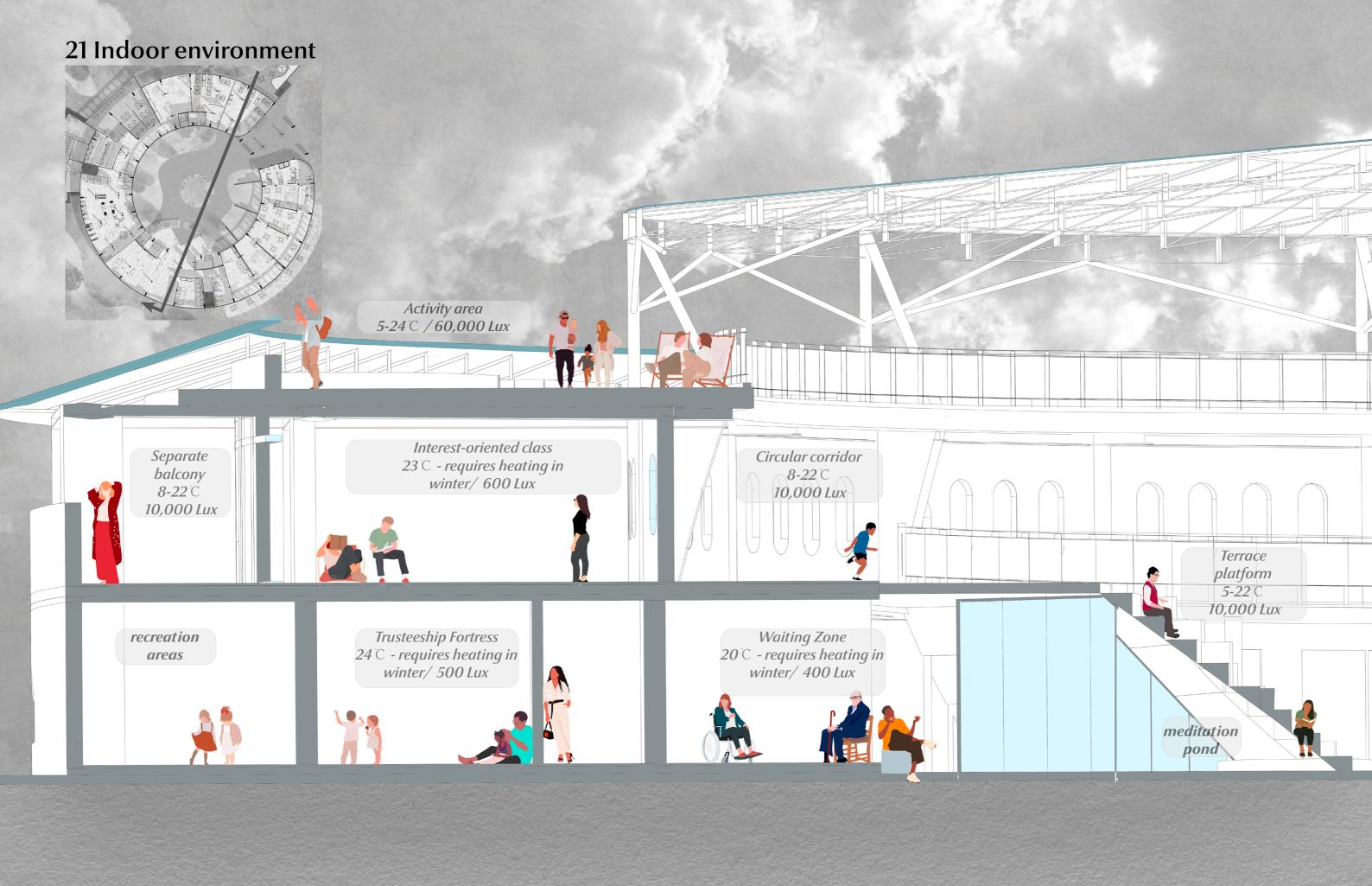


The roof space of the OSC is basically completely unobstructed by other buildings, where solar panels on a portion of the ETFE membrane can be considered, which can alleviate the burden of electricity inside the OSC.

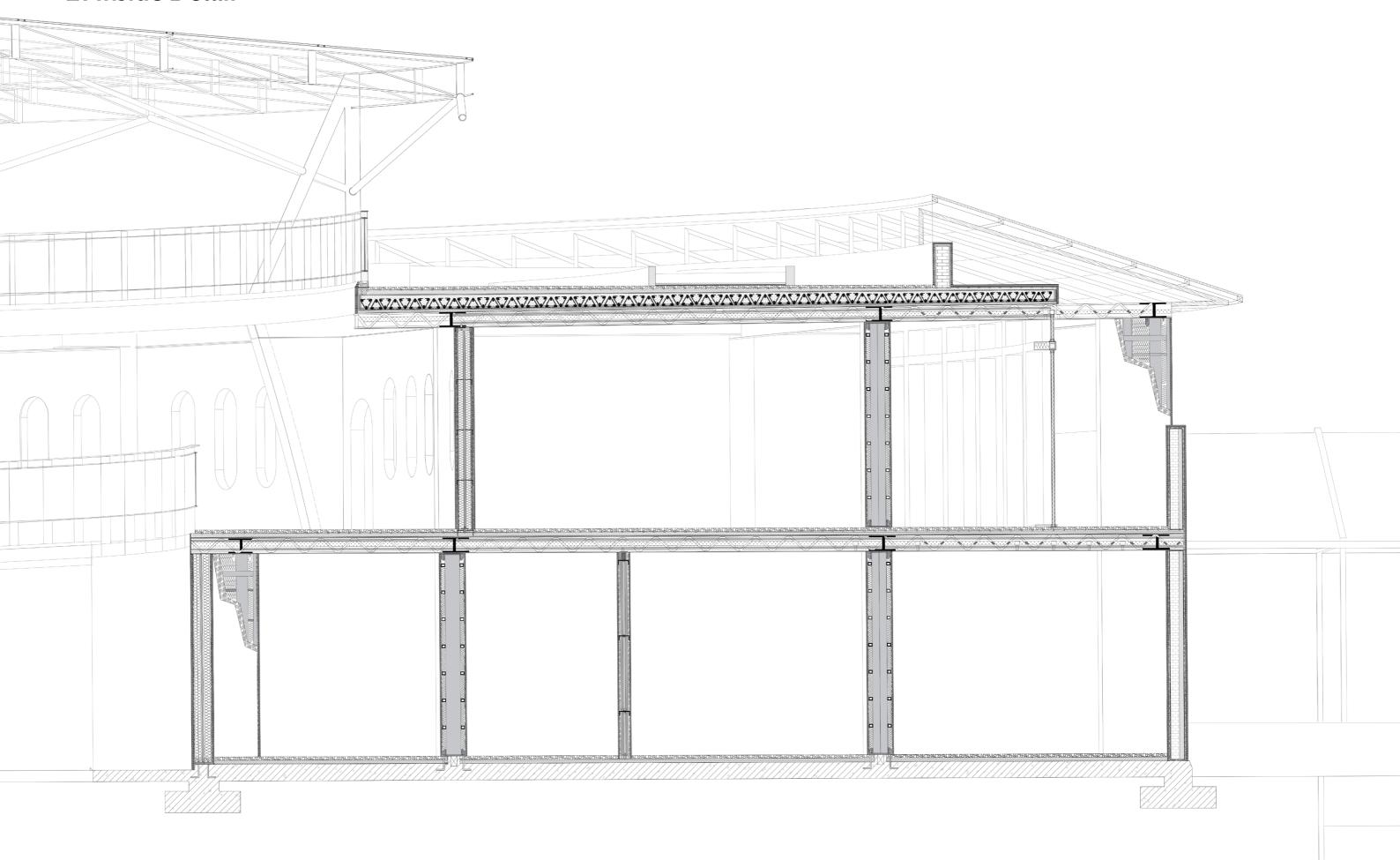
12:00

# 20 V2 Rhino Make 2D





# 21 Inside Detail



# 22 Detail process







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Thank You