Msc 3/4 Graduation Projct
Public Building Studio

Our stories begins with a *'seed'*

Tzu-Shou (Ferrari) Huang

Our Stories begins with a '*Seed*'

A '*Public Condenser*', a place to nuture, play and learn

Tzu-Shou(Ferrari) Huang

Public Building Graduation Studio submitted in partial fulfilment of the requirements for the Master of Architecture degree, TUDelft , 2024-2025.

How do we initiate and plant the seed, collectively?

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Chapter 1

Chapter 1 - Power, Protest and Media of Parallel Society

1.1 Transition in Power in Denmark
1.2 The Formation of Parrallel Society
1.3 Media Protrayal & Protests
1.4 Social Data on Demographics

1. Architecture & Voilence

Power, Protest and Protryal of Parallel Society

Introduction to Power in Denmark

Assignment 1: Writing relate to Richard Sennet, The Public Realm, 2008

To explore the role of power in public space, it is essential to first define these terms. Power can be understood as the capacity to shape or influence outcomes in one's environment. Public space, as Sennett describes, is "a place where strangers meet." However, in the context of power, this meeting is more accurately described as an exchange of power rather than a mere interaction.

The dynamics of this power exchange are shaped by the degree of anonymity in the space. In highly anonymous settings, the lack of predefined behavioral expectations influences the distribution of power between strangers. As the public space becomes more intimate—when familiarity develops between participants—the power dynamic shifts. The character of the public space also plays a critical role in this exchange: spaces designed to encourage contact enhance anonymity, while those with representative or symbolic elements foster intimacy.

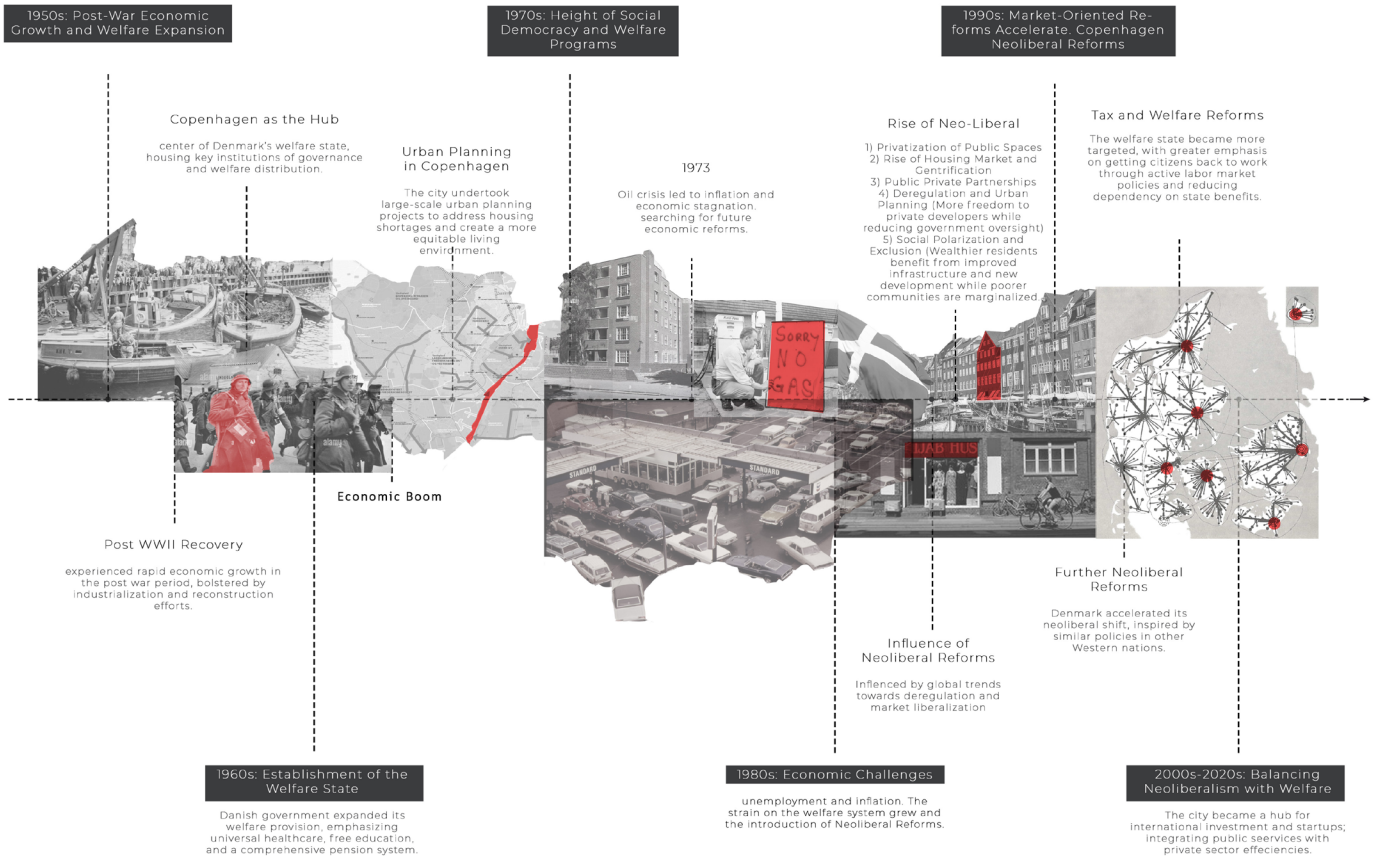
Sennett further distinguishes between two regulatory approaches to public spaces: open and closed systems. Open systems empower communities to shape public spaces according to evolving needs, reflecting Hannah Arendt's notion of collective development. Closed systems, by contrast, aim for static harmony, resulting in what Sennett terms the "dinosaur effect"—rigid environments incapable of adapting to change. While open systems enable innovation and equitable power distribution, a purely open or closed system is unattainable. True openness is limited by the necessity of control and restriction, while innovation cannot flourish in a wholly closed system. The modern world reflects a complex, imperfect interplay of these systems, balancing their strengths and limitations.

Introduction to Power in Denmark - cont

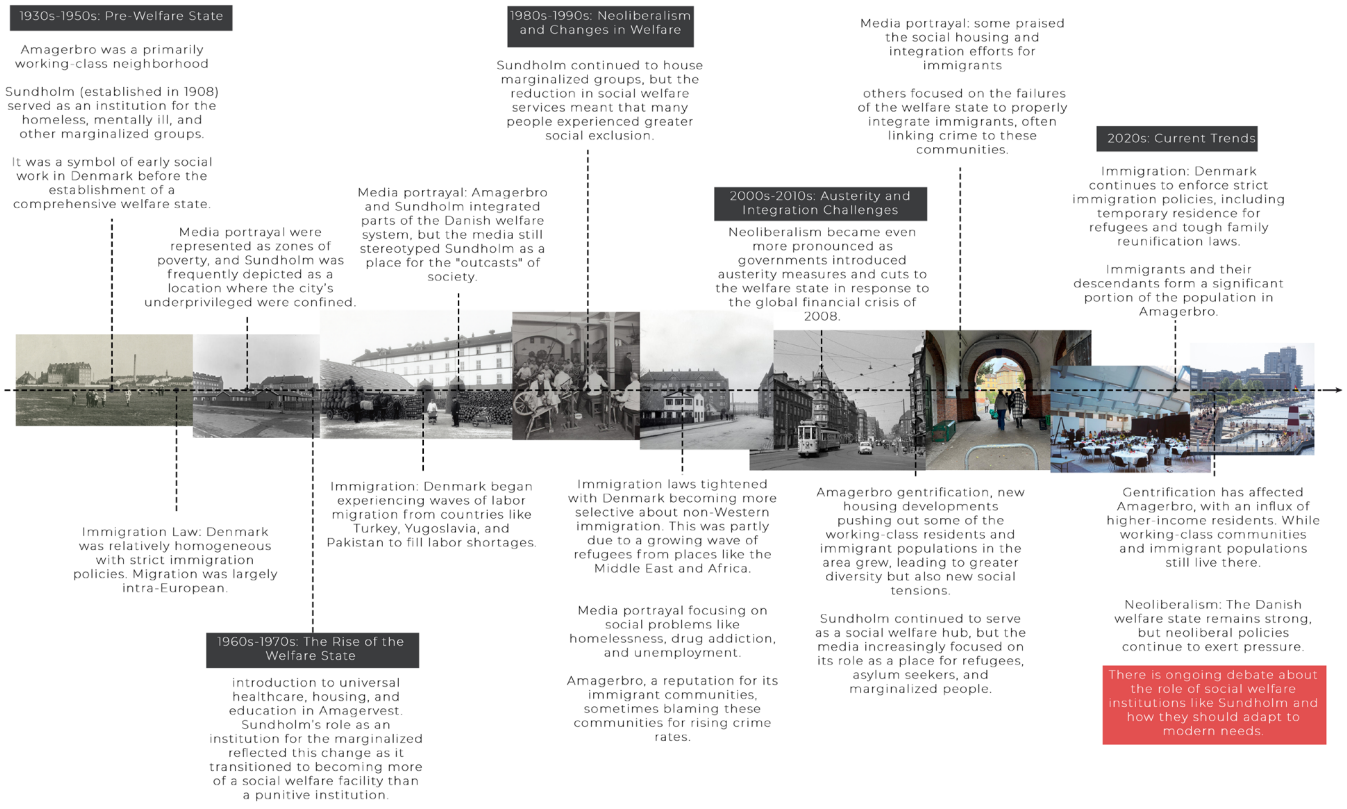
Writing relate to Richard Sennet, The Public Realm, 2008

Copenhagen exemplifies this dynamic through its urban development. The Kritisk By (Critical City) initiative traces Copenhagen's evolution under neoliberalism and the welfare state, illustrating the interplay of open and closed systems in urban planning. While the city is celebrated for its green initiatives and innovation, its planning approach combines top-down frameworks with grassroots participation. Since the 1990s, neoliberal policies—such as privatization of public spaces, gentrification, deregulation, and public-private partnerships—have fostered economic growth but also exacerbated social polarization, favoring wealthier residents. Despite this, Copenhagen balances neoliberal and welfare state principles, integrating institutional guidance with citizen engagement. Public-private partnerships have advanced sustainability goals, such as cycling networks, green spaces, and carbon neutrality by 2025, showcasing the balance between open and closed approaches.

Both Critical City and Forming Welfare highlight the influence of political ideologies on Denmark's urban context. The universal welfare state has left a profound mark on architectural forms in public and private realms, reflecting its values in the power dynamics of public spaces. Yet, the shift from the humanist ideals of the welfare state—embodied in the concept of "the good life"—to neoliberal slogans of liveability and sustainability has reshaped these power relations. This raises critical questions: What values currently guide the creation of public spaces? How do they reflect or challenge the power dynamics of today's built environment?



Timeline demonstrates the transition of Power
from Welfare State, Neo-Liberalism and now striving a balance



Sundholm history and transformation from the 1900s

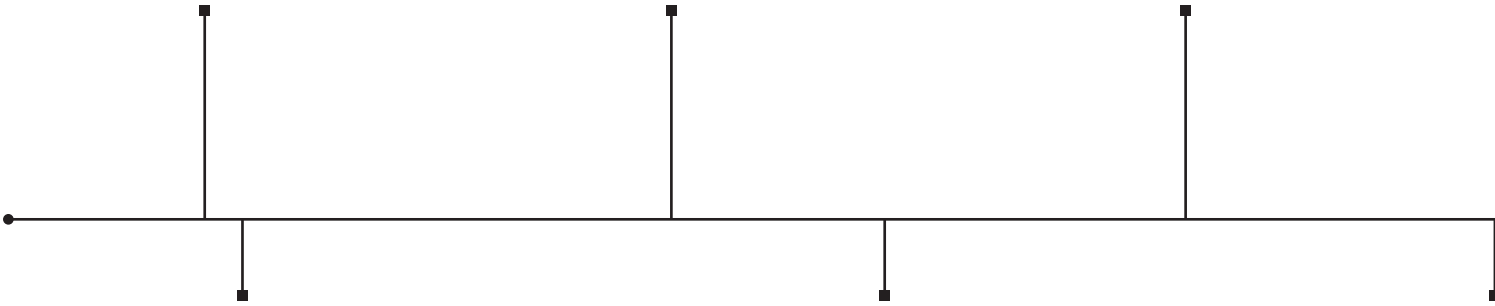
Chapter 1: The Trumphal Progress of Democracy

the Danish Model was never about abolishing capitalism but rather humanising it by insisting on a fundamental social structure that could provide more equal rights and strong security for the individual as opposed to the free play of market forces.

The Social Democrats, in collaboration with trade unions, contributed to the development of Danish welfare through redistribution and support for the less privileged.

Chapter 3: The Interaction Between Trade Unions and the Political System

Denmark's strong trade union movement has been a critical force in negotiating better wages and working conditions. Unions and employers have long had pragmatic relationships, helping create collective agreements with minimal conflict. The occupational pension schemes negotiated by unions have led to strong national savings, helping stabilize government finances and support long-term welfare sustainability.



The Danish Model from crisis and war to the major welfare advances

Economic conditions- the slump and the mass unemployment of the 1930s.

Made a huge political settlement with the opposition Liberals. The deal addressed unemployment, consolidated agricultural earnings and laid the groundwork for a social reform that gave social welfare benefits to those in need as a right – not as alms. Huge public investments with the aim of creating jobs

What are the job opportunities ?
- agricultural sector lost workforce of 460,000
- industrial sector has lost 170,000
- construction and civil engineering sector has grown by 60,000
- public service sector by 635,000
private service sector by 655,000
since 1950

Chapter 2: The Danish Model: From Crisis and War to Major Welfare Advances

Sub-themes: Economic Crisis, Welfare State Development, Public Investments
Key Points:
Denmark responded to the economic crises of the 1930s with Keynesian-like public investment, creating jobs and social reforms.
After WWII, Denmark continued its policy of full employment and welfare expansion, supported by technological advances and shifts in family and labor structures.
A major revolution included the entry of women into the labor market and the decline of agriculture, with services and public sectors growing in importance.

welfare establishments
1) solid general level of education
2) individual owned companies for the bulk of private employments
3) liberal industrial policy- more technological development the demand for more competitive market
4) economic policy has supported growth and changes in the private sectors
5) new form of production

Chapter 4: After
Unemployment and

The 1973 oil crisis led
and inflation,
devaluations in Denm
Though these d
competitiveness, the
rates, which hurt inves
further.
Denmark abandoned
and adopted a fixed ex
credibility but leadin
challenges.

r the Oil Crisis: Devaluation Strategies

l to high unemployment prompting currency nark.
levaluations restored y led to high interest stment and employment

d devaluation policies xchange rate, improving ng to further economic

Chapter 5: 1982-1993: From Active Reform to High Unemployment

Sub-themes: Reform, Fixed Exchange Rate, Taxation
The 1980s saw reforms under a centre-right government, including the end of devaluation and control over inflation. Tax reforms during this period helped reduce the budget deficit, but unemployment remained high as private consumption and property market issues weakened the economy.

Chapter 6: The Renewal of the Danish Model (1993-2001)

A new Social Democratic government initiated reforms in 1993, targeting unemployment and cyclical management.
Policies included labor market reforms, tax reforms, and active policies promoting education, energy, and public infrastructure.
The unemployment rate dropped from 12% to 5% during this period, and Denmark experienced strong economic growth.

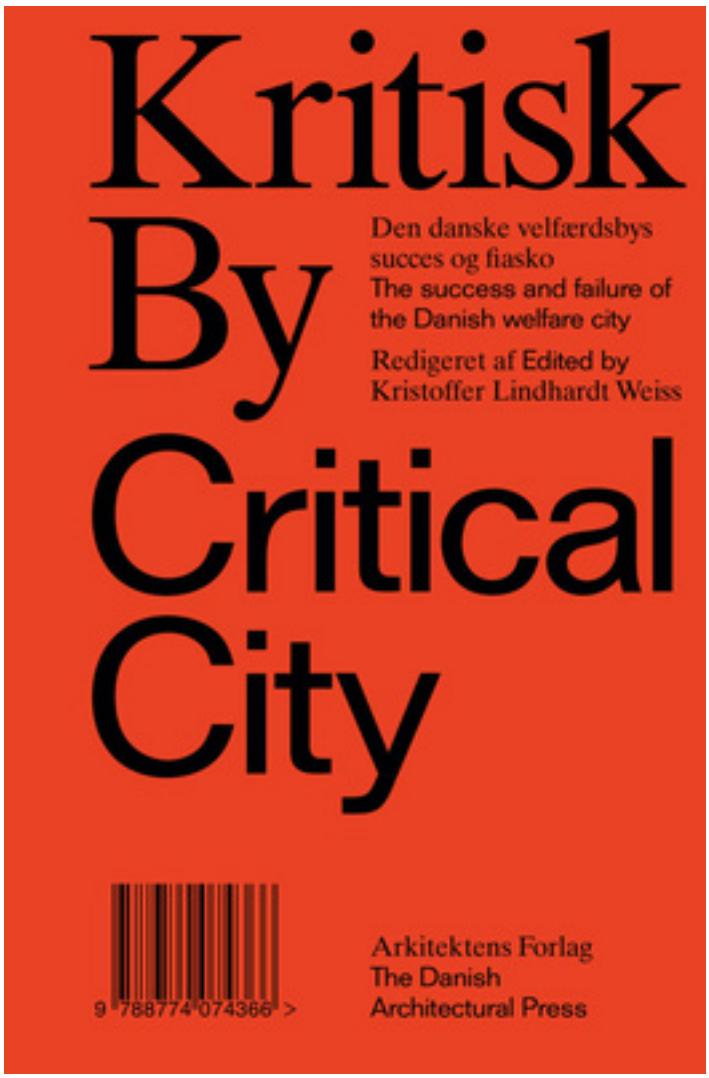
Chapter 7: Many People on Transferred Income

A significant number of people in Denmark are on transferred income, but the country has one of the highest employment rates in the world.
Immigrants from non-Western countries face higher unemployment rates due to lack of language skills and discrimination.
Active labor market policies have helped reduce structural unemployment, though integration challenges for immigrants persist.

Chapter 8: “Freedom of Choice” and “Tax-Freeze”

The centre-right government introduced a tax-freeze policy, focusing on reducing taxes while maintaining welfare services for native Danes.

While these policies contributed to a consumption-driven economic boom prior to 2008, they also exacerbated inequality.
Private sector competition in public services, particularly health care, raised concerns about the sustainability of public welfare, with a shift towards private insurance.



An Introduction to the Neo-liberal approach

The privatization and the 'Rise and Fall'

An Introduction to the Neo-liberal approach

The privatization and the 'Rise and Fall'

Kritisk By ("Critical City") by Critical City delves into the urban development of Copenhagen, focusing on how the city's transformation has been deeply influenced by shifts in governance from the welfare state model to a more neoliberal approach.

Copenhagen: From Welfare to Neoliberal Governance
In the mid-20th century, Copenhagen was shaped by the ideals of the welfare state. Urban planning and governance were centered on egalitarian principles, with a strong emphasis on social housing, public services, and equitable access to urban resources. The city's development reflected a commitment to reducing social inequalities, fostering collective well-being, and ensuring that all citizens had access to essential services, including housing, healthcare, and education. The welfare state model prioritized public investment in urban infrastructure, community facilities, and welfare programs that aimed to support vulnerable populations and create a cohesive, socially integrated city.

However, by the late 20th century, Copenhagen, like many cities around the world, began to experience a shift towards neoliberalism, a political-economic approach that emphasizes market-driven growth, privatization, and individual responsibility. This transition marked a significant reconfiguration of power within the city, as the focus shifted from collective welfare to economic competitiveness, deregulation, and private sector-led development. Neoliberal reforms aimed to reduce the role of the state in managing urban affairs and instead promoted the idea that market forces and private investment were better suited to driving urban growth and innovation.

5 Results due to transition from Welfare to Neoliberalism

1. Privatization of Public Spaces
Copenhagen, once known for its well-maintained public spaces, has seen an increasing shift towards privatization. Neoliberal policies favor the commercialization and corporate control of urban areas, which has led to public spaces being repurposed for private profit rather than public enjoyment.

2. Housing Market and Gentrification
Under neoliberalism, Copenhagen's housing policies have shifted towards market-driven solutions, which has accelerated gentrification. Affordable housing is increasingly scarce as real estate developers prioritize profit, pricing out lower-income residents.

3. Public-Private Partnerships
Lindhardt discusses the rise of public-private partnerships in Copenhagen's urban development. These collaborations between the state and private companies are intended to stimulate investment in infrastructure and services

4. Deregulation and Urban Planning
Neoliberalism in Copenhagen has led to the deregulation of urban planning, giving more freedom to private developers while reducing governmental oversight. Focus on economic growth and competitiveness

5. Social Polarization and Exclusion
Wealthier residents benefit from improved infrastructure and new developments, while poorer communities are marginalized, inequality, limited quality housing, and employment opportunities within the city.

An Introduction to the Neo-liberal approach- cont

The privatization and the 'Rise and Fall'

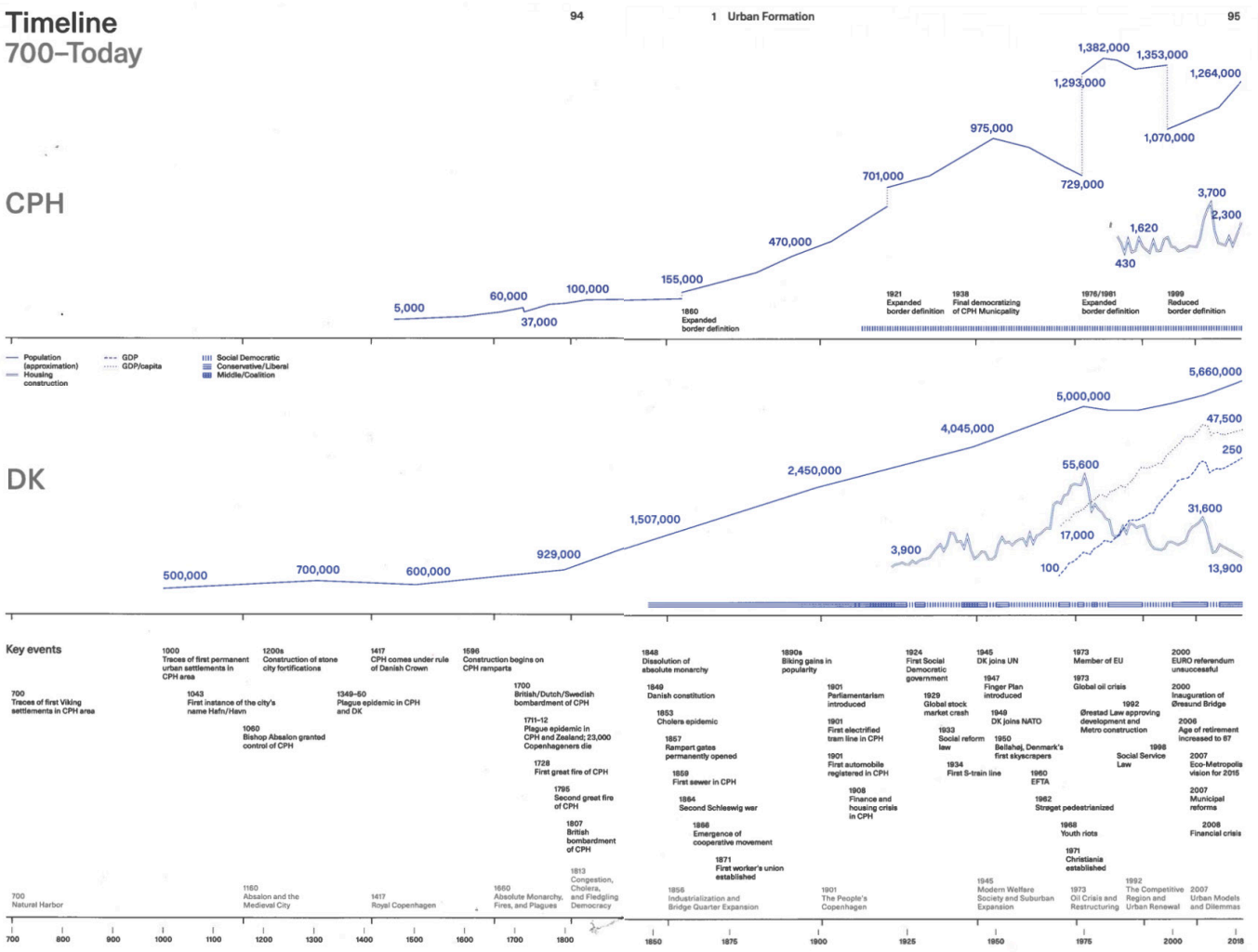
Neoliberal Transition in Urban Governance

The neoliberal transition in Copenhagen led to a profound change in the city's governance structures. As the welfare state model receded, urban policies began to prioritize attracting global capital, fostering real estate development, and encouraging entrepreneurialism. Key aspects of the neoliberal shift included the privatization of public assets, the reduction of social housing, and the increasing role of private developers in shaping the city's skyline. Large-scale urban regeneration projects, such as the redevelopment of the harbor areas, became emblematic of Copenhagen's neoliberal turn, with the aim of transforming the city into a competitive global metropolis.

This transition has not been without its social costs. The book critically explores how neoliberal policies have exacerbated social inequalities, particularly in terms of housing affordability and access to public services. As real estate prices soared and gentrification reshaped neighborhoods, lower-income residents were increasingly pushed to the periphery of the city, creating new forms of spatial and social exclusion. The diminishing role of the welfare state has left many vulnerable groups without adequate support, as market-driven policies often prioritize profit over social equity.

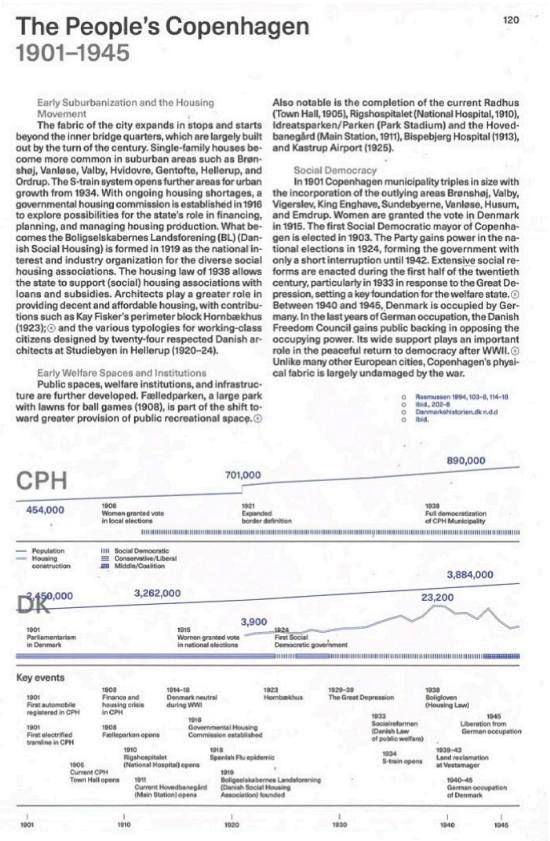
Kritisk By argues that Copenhagen's neoliberal transformation reflects broader trends in urban governance, where the balance of power has shifted away from the state and towards market actors. This shift has raised critical questions about the future of cities as spaces of social justice and inclusivity, challenging the very foundations of the welfare state model that once defined Copenhagen's urban identity.

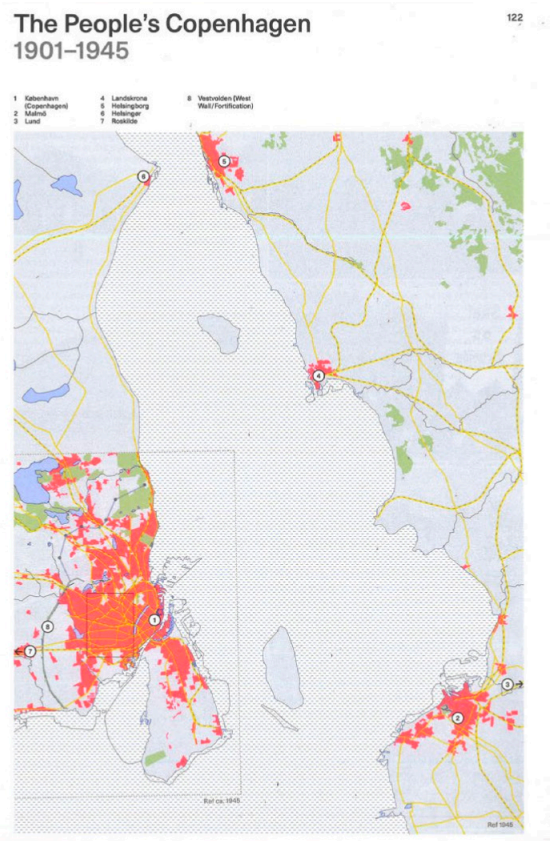
In summary, the book offers a critical analysis of the power dynamics underlying Copenhagen's urban development, highlighting the transition from welfare state principles to neoliberal governance and its implications for social equity, urban space, and the role of government in shaping the city.

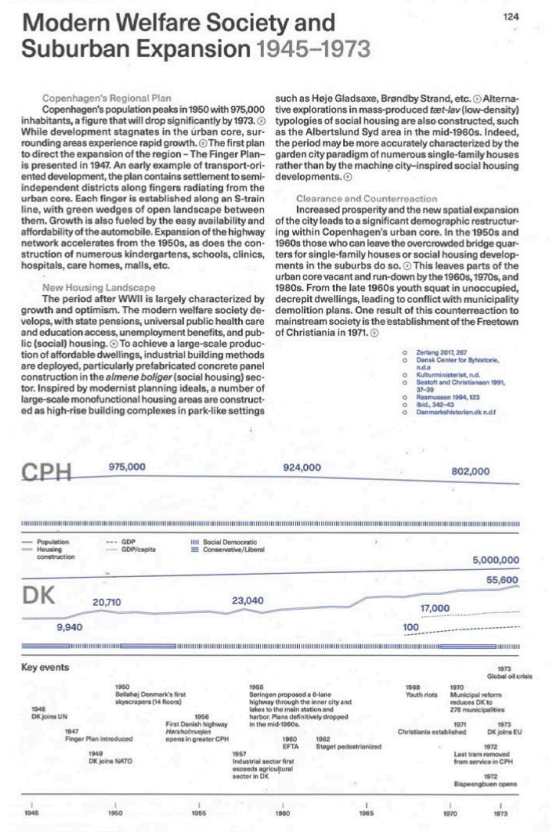


Urban Formation changes in relation to power transformation

Dean Simpson et al. Atlas Of The Copenhagens (p. 94-95). (2018).

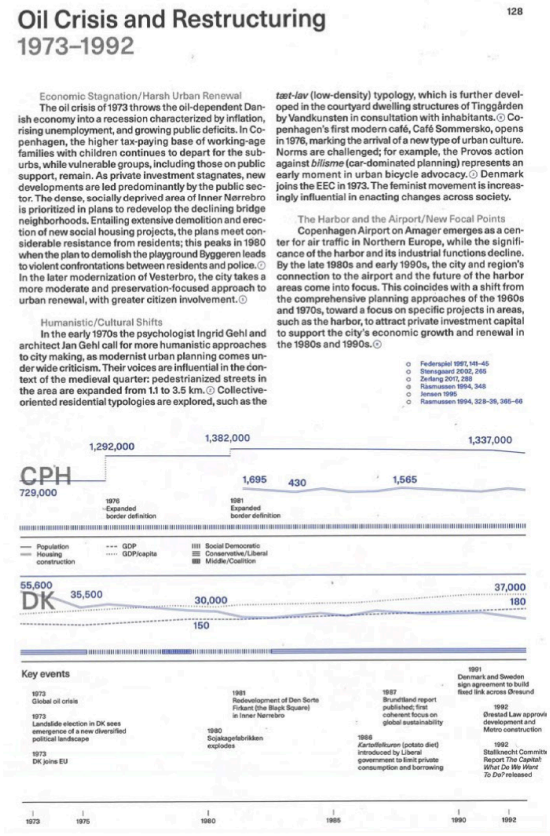


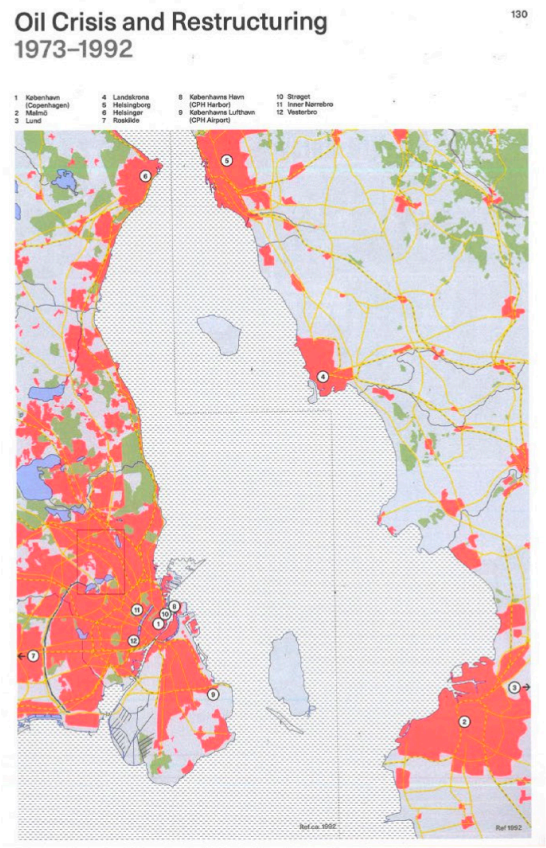


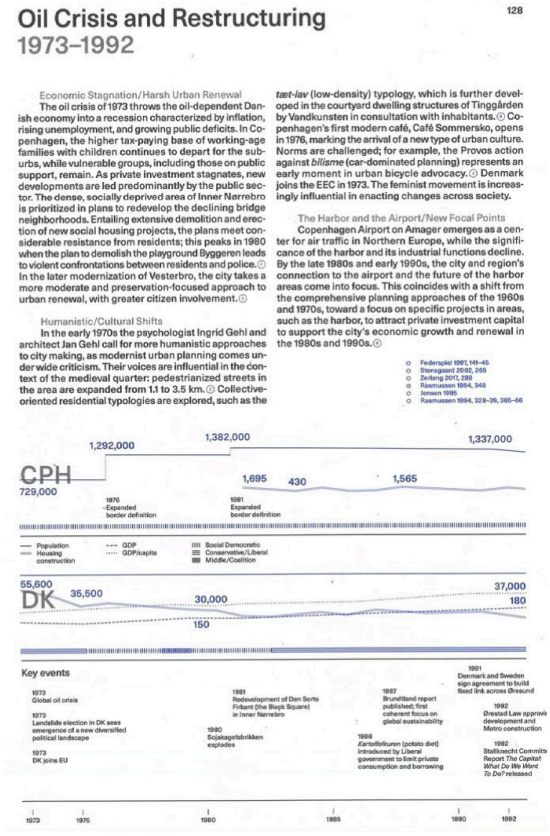


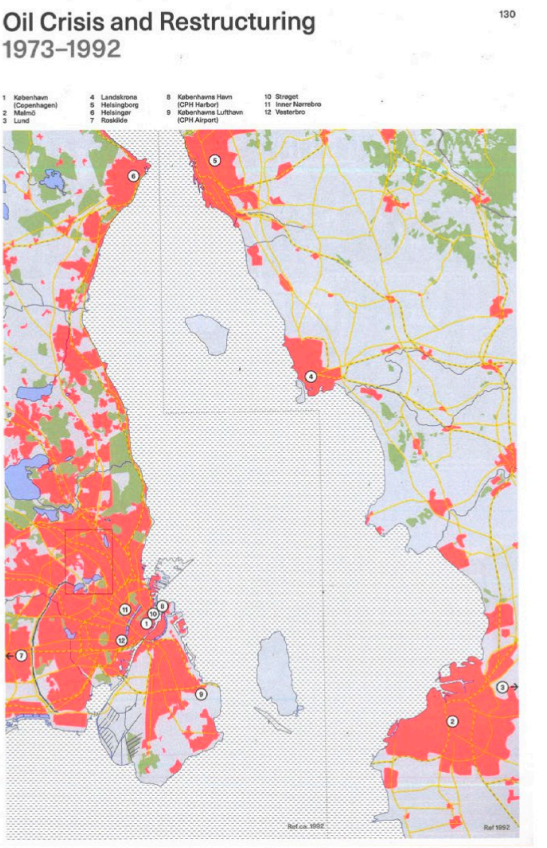
Urban Formation 1900- 1973

Dean Simpson et al. Atlas Of The Copenhagens (p. 94-95). (2018).









Urban Formation 1973- 1992

Dean Simpson et al. Atlas Of The Copenhagens (p. 94-95). (2018).

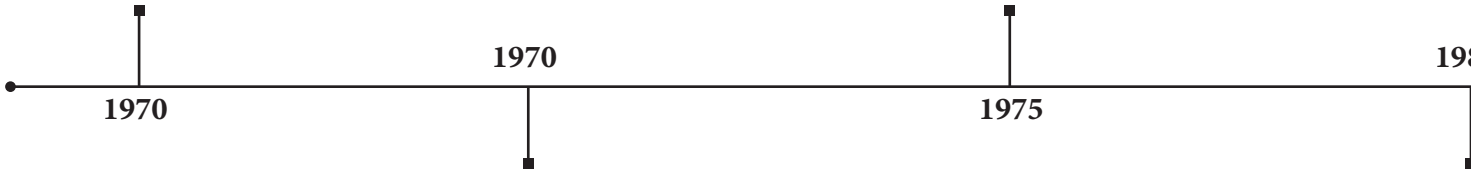
Danish People Party History

DF and its predecessor, the Progress Party, which began as a neoliberal populist movement focused on tax abolition but gradually shifted its agenda towards nationalism and anti-immigration policies. The Progress Party's decline in the 1980s paved the way for the formation of the DF in 1995 under Pia Kjaersgaard, who shifted the focus from neoliberalism to a combination of welfare nationalism, Euroscepticism, and anti-immigration stances.

Chapter 2: A Cleavage Approach

Sub-themes: Changing Cleavage Structure, Postindustrialism, Globalization

Key Points:
The chapter uses a cleavage-based analytical model to explain the rise of new right-wing parties like DF.
Traditional class-based cleavages in Danish politics shifted due to globalization, post-industrial society, and the Europeanization process.
A new conflict dimension, primarily based on value politics (immigration, multiculturalism, national identity), replaced traditional socioeconomic conflicts.
DF's rise is tied to its ability to capitalize on these new cleavages, particularly regarding immigration and cultural issues.



Chapter 1: The Premature Birth and Metamorphosis of the New Right in Denmark

Sub-themes: Formation of Progress Party, Leadership Change, Ideological Shifts

Key Points:
The Progress Party was founded by tax lawyer Mogens Glistrup in 1972 with a focus on neoliberal populism and the abolition of income taxes.
Initially enjoyed high electoral success, gaining 15.9% of the vote in 1973, but began losing support in the 1980s. The party gradually shifted from neoliberalism to anti-immigration rhetoric under the leadership of Pia Kjaersgaard after Glistrup's imprisonment in the mid-1980s. Internal conflict led to the formation of the Danish People's Party (DF) in 1995, with a more nationalist and welfare-supportive platform.

Chapter 3: The Changi Denmark

Sub-themes: Political Issue Immigration on the Agenda

Key Points:
The focus of political issue time, with immigration em starting in the 1980s.
Taxes, the primary issue o 1970s, lost salience, whil permanent concern for vote In the 2001 election, immigr health care and care for t voters' agenda, with DF po player on both.

Left to Right Wing Governmen

The document explores the rise and transformation of the Danish People

Chapter 4: A Right-Wing Party, but What Kind of Right-Wing?

Sub-themes: Party Ideology, Position on Political Spectrum, Voter Attitudes

Key Points:
The DF is placed on the far right on the value dimension (especially regarding immigration), but is centrist on the traditional socioeconomic left-right dimension.
DF voters tend to support welfare expansion, especially for pensioners, while also holding anti-immigration views.
The DF's Euroscepticism differentiates it from traditional right-wing parties, further appealing to voters opposed to European integration.

Chapter 7: Delicate Balances and Possible Futures

Sub-themes: Political Strategy, Future Challenges, Competition

Key Points:
DF faces a balancing act: it must distinguish itself from the governing Liberal-Conservative coalition while maintaining respectability to avoid the extremism that hurt the Progress Party.

The tightening of immigration laws in 2002 reduced the saliency of the immigration issue, posing a potential challenge to the DF's continued success.
However, the value cleavage around immigration and multiculturalism is expected to remain central in Danish politics, ensuring the DF's relevance in the long term.

80 **1985** **1990** **1985**

ing Political Agenda in

s, Public Concerns, Rise of

es in Denmark shifted over erging as a central concern

f the Progress Party in the le immigration became a rs in the 1990s and 2000s. ation and welfare (especially the elderly) dominated the positioning itself as a strong

Chapter 5: Marginalization and Alienation?

Sub-themes: Marginalization Theory, Unemployment, Social Trust

Key Points:
The chapter critiques the theory that support for the DF is driven by marginalization due to globalization and post-industrialism.
While unemployed and low-income voters tend to support the DF, this is more a reflection of class composition than marginalization.
Distrust of politicians and low social trust are significant characteristics of DF voters, but economic exclusion alone is not a determining factor.

Characters

Migrants and Refugees

immigrants often reside in marginalized areas, contributing to the city's cultural diversity but facing social exclusion and limited power

Right- wing government

push for stricter immigration policies and urban development strategies that reshape social housing, wielding significant political influence

Private Investors

drive gentrification and economic growth, playing a crucial role in urban regeneration with substantial financial power to reshape public spaces and housing policies.

Media Portrayal

Current

Studies have shown that the external image affects the internal ones. Residents internalize negative representation and question their own spatial experience.

1997

newspaper Ekstra Bladet, launched a campaign against the "foreigners" and against a multiethnic society, marking a major escalation in hostile rhetoric.

2005

Publication in danish newspaper- Muhammad cartoons- global outrage and protests among muslim communities

Social Housing

Mjølnerparken, Copenhagen

highlighted for its high concentration of immigrants, low-income families, and reported criminal activity. It has appeared on Denmark's "ghetto list" multiple times.

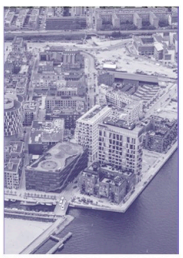
Tingbjerg, Copenhagen

associated with social challenges, including a high crime rate and unemployment. A diverse immigrant population with issues related to social exclusion and stigmatization.

Gellerup Masterplan, Aarhus

(though Gellerup is not in Copenhagen, it is an influential case and serves as a model for other Danish cities with similar social housing issues)

Private infrastructure Monopoly



PensionDanmark

Nordhavn and investments in high-end real estate, have played a pivotal role in gentrifying formerly industrial or less developed areas, attracting affluent residents and businesses,

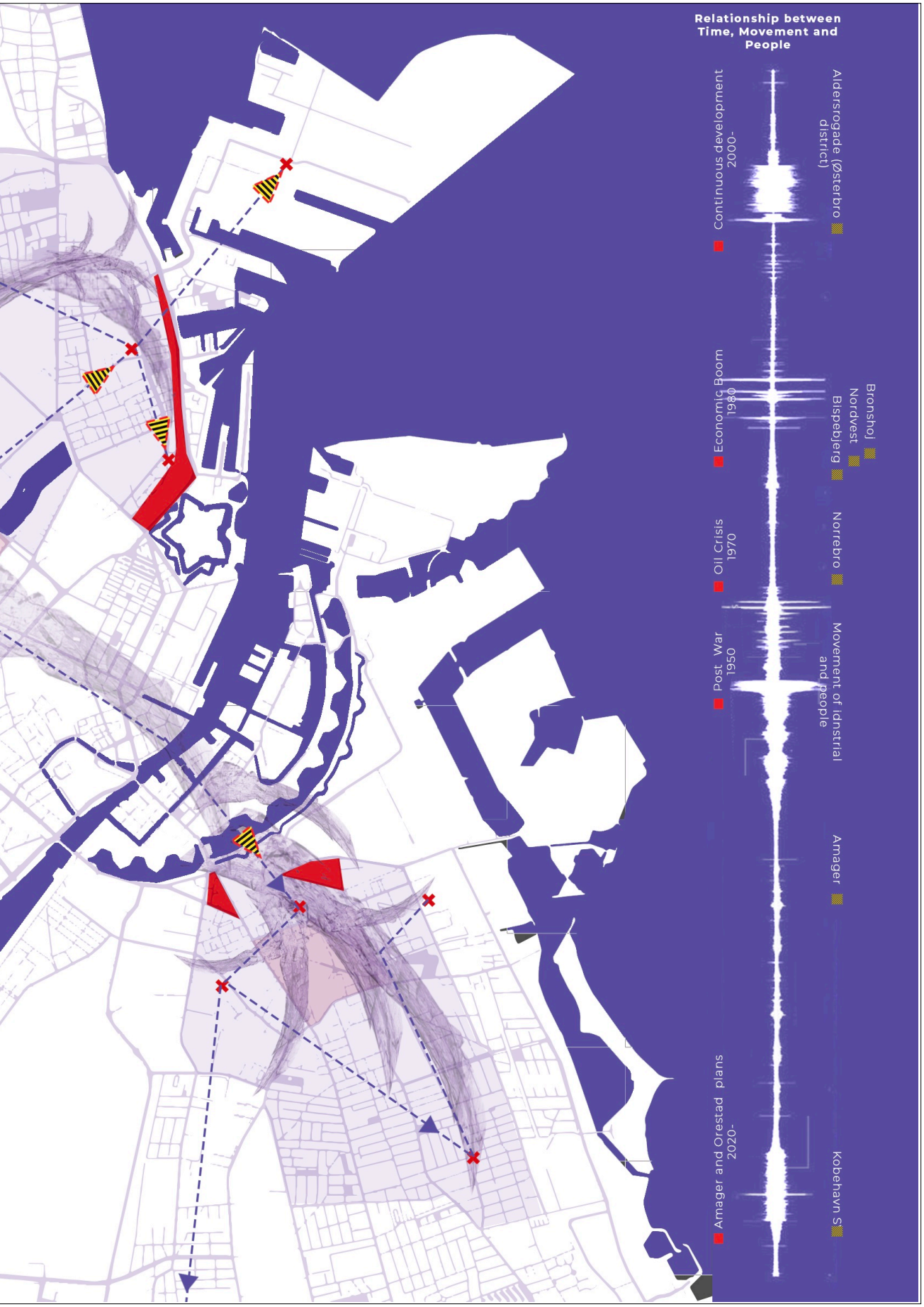
NREP

is behind major projects like UNI7 Village in Ørestadfocus on premium, sustainable housing developments often leads to higher property prices, attracting wealthier demographics

ATP Ejendomme

contributing to Copenhagen's transformation through high-profile office buildings, shopping centers, and luxury residential developments- turning former working-class

Copenhagen transforma



ation. “Agent VS Player”

Creation of Parallel Society - "The Ghetto"

Current Problems

In 2017, the Danish parliament noted 'with concern that today there are areas in Denmark where the proportion of immigrants and descendants from non-Western countries is more than 50 per cent' (Henriksen et al., 2016). These areas have been designated 'Ghettos' by the Danish government.

Ghetto Requirement
two of five criteria based on residents' connection to the labour market:
1) share of residents with a non-Western background
2) crime rates
3) low education levels
4) income

2 Options to remove the Ghetto protrayl
The government want to remove the word ghetto from government documents, and replace it with "parallel societies"

1) There are school implementation classes for ghetto neighbourhoods over 30%. They need to spend 25 hours per week in childcare to learn Danish language and Danish values

2) buildings can be demolished in an effort to change the character of low-income ... largely muslim neighbourhoods. As a result, leading to the sale of affordable housing to real estate investment firms.

What are the portray of ghetto and immigrants from danish people
A majority believed crime rates among young men from non-Western backgrounds were rising dramatically (while in reality these have been falling). Survey respondents also hugely underestimated support for democracy and gender equality among non-Western immigrants (ibid.). The research found that, while voters for all Danish political parties had significant misconceptions around immigrants' integration, 'misunderstandings are greater the further right a voter stands politically'

people's fear of crime and security concerns are key in determining attitudes towards immigration in Denmark

For example, those supporting right-leaning parties in Copenhagen were found to be six times more likely to want fewer immigrants and more than twice as likely to wish immigrants could not attain citizenship. Those with a higher fear of crime were twice as likely 12 ODI Country study to want fewer immigrants and 84% more likely to wish immigrants could not become citizens

Creation of Parallel Society - Amagervest - cont

Current Problems

Sønderbro, a neighborhood in Copenha- gen’s Amager district, is home to around 9,128 residents living in 4,698 housing units. Despite its central location, the area faces significant socio-economic, infstructural, and social challenges. Surrounded by major streets like Amagerbrogade and Sundholmsvej, Sønderbro suffers from urban fragmentation, where disconnected architectural styles and poorly linked streets hinder mobility, particularly for pedestrians and cyclists. Wide, traffic heavy roads and high fences cut the neighborhood off from other parts of the city.

Socio-Economic Challenges
The neighborhood struggles with high unemployment — 35% of residents are without work — and education levels are low, with 25% of residents having only primary schooling or none at all. Around 43% of the population lives on low income, particularly in areas like Sunholm and Hørgarden. These underprivileged areas have long been associated with vulnerable groups, with Sundholm originally built as a workhouse in 1908, now providing social services to the city’s most marginalized residents.

Environmental and Public Space Deficiencies
Sønderbro has a shortage of public green spaces, with only a few like Sætterdalsparken and Blå Bane available for residents. The urban landscape is characterized by a lack of biodiver- sity and green areas, and many buildings and public spaces are rundown. Inadequate infra- structure, such as fragmented bike paths and poorly maintained streets, adds to the challenges faced by residents in their day-to-day mobility. Public safety is a major concern in Sønderbro, particularly in sub-neighborhoods like Urbanplanen and Hørgården, where residents report feeling unsafe due to criminal activity. Social isolation is also a significant issue, with many residents, especially in Amager Vest, feeing disconnected from both the broader city of Copenhagen and from their immediate neighbors.

Social Isolation and Safety Issues
Public safety is a major concern in Sønderbro, particularly in sub-neighborhoods like Urbanplanen and Hørgården, where residents report feeling unsafe due to criminal activity. Social isolation is also a significant issue, with many residents, especially in Amager Vest, feeling disconnected from both the broader city of Copenhagen and from their immediate neighbors.

Creation of Parallel Society - Amagervest- cont

Plans for Transformation (2024-2029)

The "Kvarterplan 2024-2029" aims to tackle challenges in Sønderbro, focusing on improving public safety and reducing social isolation through urban renewal. The plan includes upgrading public spaces, adding new green areas, and improving infrastructure to enhance mobility for pedestrians and cyclists, reconnecting the area with the rest of Copenhagen. Community engagement is central to the plan, with residents actively involved in decision-making through workshops and collaborative projects. The plan also prioritizes social integration in underprivileged areas like Sundholm and Hørgården, aiming to improve education, employment, and housing.

Environmental Sustainability
A key aspect of the "Kvarterplan 2024-2029" is environmental sustainability, with initiatives focusing on energy-efficient housing, waste reduction, and enhancing biodiversity. The plan emphasizes using solar power and improving waste management systems to make Sønderbro a more eco-friendly neighborhood. Additionally, efforts to create and enhance green spaces, such as urban gardens, aim to increase biodiversity and provide residents with better access to nature.

Revitalizing Public Spaces
The plan also focuses on upgrading public spaces by renovating neglected structures and creating new community meeting spots. Historical buildings, such as the "Laden," will be refurbished and transformed into vibrant spaces for social interaction and community events.

Overall, the project seeks to address both physical and social challenges in Sønderbro, aiming to build a stronger, more connected community, improve local well-being, and foster a safer, more sustainable environment for residents. With a budget of over DKK 84 million, the transformation will unfold in multiple phases, ultimately integrating Sønderbro more closely with Copenhagen.

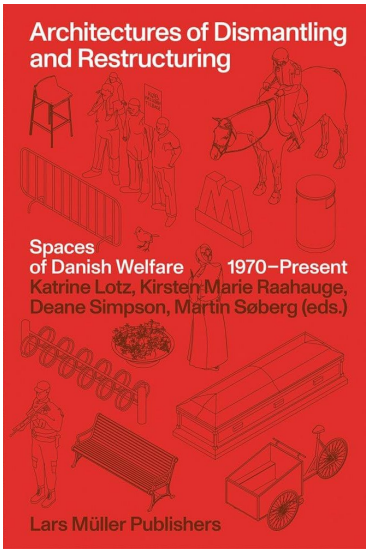
Sønderbrom, Sundholm
Sundholm, located on Amager in Copenhagen, was originally built as a workhouse in the early 20th century. Over time, it has evolved into a mixed-use area that includes social housing, shelters for homeless individuals, and various public services. The area's architecture still reflects its institutional roots, with large brick buildings that once housed vulnerable populations in a more segregated and controlled environment. While Sundholm has undergone transformation efforts to integrate marginalized groups more fully into the urban fabric, it continues to face challenges. The spatial design and layout of the area reflect ongoing tensions between inclusion and marginalization, as Sundholm remains somewhat isolated from the more vibrant areas of Amager and central Copenhagen.

Spaces of Danish Welfare

What are the problems & protests of Denmark

Chapter 1- Critique on Children Imagination and Standardization in Norrebro and Vesterbro Slum Clearance

1930- slum clearance addressed in Arkitekten for working class areas of Norrebro and Vesterbro- densely built housing blocks stemming from the period 1860. very bad and unsanitary conditions. Cultural theorist Walter Benjamin “children possessed a heightened receptiveness and unique capacity to imagine alternative worlds. The children’s imagination proved to be the most prolific source for a rethinking of the city onto the existing city that productively transform it into another world, so Benjamin tried to juxtapose images of his childhood with perceptions from the present, while Moholy Nagy montaged scenes of children play with images of the fast paced urban life.



Children are transformed into standardised, model children for standardised cation, that is abstracted ideals of welfare space . Their small bodies, along with natural elements such as trees and clouds, bring the sharp lines and prismatic geometric forms of modern architecture to life. Children’s urban environment is poor and full of dangers. Children’s point of view provided a general lens through which to coin the critique the lack of welfare either nonexistent welfare measures

Chapter 2- Open floorplan school experimentation

Open floorplan school experimentation. In the late 1960s and 70s. school Rugvaengets skole in Ballerup Malov without an modern architect suggested an open plan school with furniture and other equipment should be moveable- and was interagted into many schools during the 1970s and 1980s. with classrooms grouped around open communal areas with the intention of creating an impression of schools in schools.

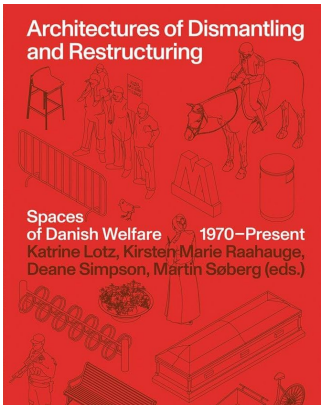
new architecture approach- after WW2- relate architecture to the actual human body providing measures to space that also for an empathetic current of bodily sensation to enter architectural discourse. Study of renaissance body-centralised body in space characterised by potential yet controlled movement , the modernist body is psychological, a no physical body of psychoanalytical space The goal was to lead the children towards a health social comprehension because of dense urban housing- poor conditions for children’s playground were addressed by landscape architects--- it is extremely important to provide toddlers the possibility of staying outdoors of interest for children’s well-being

Spaces of Danish Welfare

What are the problems & protests of Denmark

Chapter 3- Media Protrayl

Holes in the Space of the Welfare State . Media Coverage and Resident's Responses in the So Called Hardest Ghettos in Denmark. today, 20% of all housing units in the country is social housing ever since WW2 post war- the national fund supports modern housing schemes. 2004- several riots in social housing area Rosenhoj, the danish government decided to launch its first so called ghetto strategy. 2010- came a fully coherent strategy and was revised in 2013- ambition to dissolve parallel communities and reintegrate them into Danish society- "One Denmark.



2010- came a fully coherent strategy and was revised in 2013. "the so called hardest ghettos"; Bispehaven, Gellerupparken, Vollsmose, Taastrupgard, Tingbjerg, Finlandsparken, Motalavej, Mjolnerparken. media portray them as the stereotypical scenes of crime, drugs and social problems because of this, studies have shown that the external image affects the internal ones, as residents tend to internalize negative representation of their neighbourhoods and question their own spatial experience. residents blamed the media for the gap between how they esteem their neighbourhood in comparison to how they think outsiders perceive the area. As a resident puts it, these stories are out of proposition of course we have problems out here but the media only pay attention to the bad things and makes it a lot worse than it is.

Chapter 4 On the Battle for Amager Common. A Power Play of Housing Politics in Copenhagen

2021 protesters chained themselves to the fence around a construction site on Amager Faelled in Copenhagen, blocking access to the site for the landowner- which was publicly owned by partnership By & Havn (Copenhagen City and Port) Development. green fanatics tried to stop the property development projects (affordable housing)

Since 1995, the area had been planned as the last stage of the new town Orestad. the green party already had support to design a proposal for Orestad Faelled Kvarter. Winning proposal with principles of nature based solutions by architecture office Vandkunsten. project was going to work with By&Havn and Pension Danmark (largest noncommercial pension fund)

"We must say no to the Green narrow mindedness and stand by our sustainable green and red vision for town and country, people and nature. The species I fear the most in my city ; the species I reakon to be threatened most of all- threatened by the right wing belief in the market and the left wing brick allergy is the common working class family with two-three children who just wants an attractive affordable apartment.

Community friends are once again calling for a building site at Amager Fælled
Andreas Kirkeskov, Orestadavis News Article 7 August 2023

Orestad Faelled Kvarter Master Plan
Project name: Masterplan for Ørestad Common Neighborhood (2016)

The Danish Immigration policy 1970-2020 (The Alien Act)

Right-wing parties have successfully constructed a narrative portraying immigrants as a threat to Danish culture and values and as a drain on Denmark's welfare system – a narrative that has also been adopted by left-wing parties over the past 20 years.

in 1970, there was economic boom, therefore the government relaxed the rules for immigration from other EEC countries.

Alien Act was lenient as there was steady flow to support economic growth

1) rules on residence permits and expulsion
2) all expulsion should be conducted in court instead of border police
3) refugee appeal court - more lenient attitude towards granting of refugee status and family reunification

1977: committee on immigration law established
social democrat government established a cross party committee- how could immigration areas which are unregulated be better managed?

Rise of Anti-Immig
The 1980s also
anti-immigration
political parties
Party (and later th
Party in the 1990
fears about immig
even stricter immi

1988-1990:
The progress
against danish in
immigration, calli
immigration contr

1970

1980

19

1967-1970:

in 1960s, Denmark was portrayed as economic growth and prosperity, Lots of production technology in private sectors therefore permitted to invite "Guest workers" - foreign workers to the country

In 1967- 20,000 non-danish workers - mostly from Turkey, Pakistan and Yugoslavia. the agreement was that they would work in Denmark for a few years then they would return to their homeland

1973: Oil crisis

Denmark introduces an immediate stop c labour immigration

at the end of 1973, the first oil crisis hit. Denmark which led to unemployment for the first time in a decade

The social democrat Minister for Work, Erling Dinesen (1910-1986) Immigrants were already framed as a drain on the welfare system

They feared that immigration would lead to wages being reduced and that there would be a relatively high need for social assistance amongst immigrants.

this lead to the development towards "parallel society"

Increased Refugee Arrivals 1980

a rise in asylum seekers and refugees- from conflict zones such as iran and iraq and vietnam

Refugee Provisions: The Alien Act continued to adapt to this situation by including provisions for processing asylum applications. Denmark, being a signatory of the 1951 Refugee Convention, had to comply with international obligations to protect refugees.

Public Concerns: By the late 1980s, the increasing number of immigrants, particularly refugees, began to spark public debate about integration, social welfare, and the capacity of the Danish state to accommodate non-European foreigners.

The Creation of Ghettos a

Discusses the migrants and refugee

gration Sentiment:
saw the rise of
sentiment, with
like the Progress
he Danish People's
0s) capitalizing on
gration, calling for
igration controls.

party's revolt
mmigration policy
ng for even stricter
rols.

Follow up from the mass media and numerous reports around the increasing fear of immigrants among the Danes.

The second generation whom are not Danish, are named "the other" and was singled out for too different to integrate into Danish society--- emphasising cultural threaten and differences and abuses of the welfare system.

MEDIA PROTRAYL:
In 1997, the newspaper Ekstra Bladet, launched a campaign against the "foreigners" and against a multiethnic society, marking a major escalation in hostile rhetoric.

uncessesful integration of Muslim immigrants in Danish society. Far right parties present Muslims as a radical threat

publication in danish newspaper in 2005 Muhammad cartoons- global outrage and protests among muslim communities

MEDIA PROTRAYL:
Due to high profile evenets - stigmatisation of Muslims

Denmark continues to pursue a combination of neoliberal economic policies and restrictive immigration measures. The Social Democrats, traditionally left-leaning, adopted stricter immigration policies under Prime Minister Mette Frederiksen in 2019, continuing the trend of limiting immigration while emphasizing welfare protections for Danish citizens.

In recent years, Denmark has passed laws aimed at reducing the concentration of immigrant communities in certain urban areas.

"anti-ghetto laws" impose stricter requirements on immigrants living in designated "ghetto" areas, including mandatory Danish-language education for children and potential penalties for not adhering to integration plans.

2020s: immigration policies and tightening control. Neoliberal and Anti-Immigration Trends

90 **2000** **2010** **2020**

1991-1992: The Palestinian Cases

1991, 300 Palestinians from Lebanon had their asylum applications rejected becuase

1. it is "peaceful" enough
2. no grounds for asylum and was sent home

humanitarian reasons were intended only for individuals and not for groups consisting of hundreds of people.

2000s The influence of the Danish People's party and neoliberal policies

2001s: aliens package and strict immigration controlS. Anders Fogh Rasmussen came into power, relying on support from the Danish People's Party (DF), which pushed for harsher immigration policies

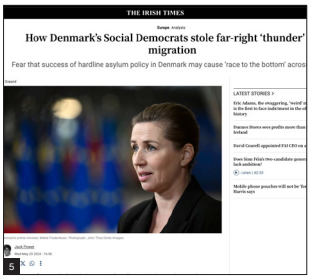
New requirements included financial guarantees, language skills, and tougher conditions for refugees seeking permanent residency.

Refugee Crisis of 2015

The Syrian Civil War and the broader European refugee crisis of 2015 led to a surge in refugees and asylum seekers arriving in Denmark. In response, the Danish government introduced even more restrictive measures to control the flow of migrants.

In 2017, Denmark introduced further conditions for permanent residency, requiring applicants to meet strict criteria, including employment, language proficiency, and a clean criminal record. The process for obtaining Danish citizenship also became more stringent.

nd history of immigration
es and the proposal of the Alien Act


THE IRISH TIMES

How Denmark's Social Democrats stole far-right 'thunder' migration

Fear that success of hardline asylum policy in Denmark may cause 'race to the bottom' across

5

In Copenhagen, residents of a 'ghetto' put up a fight

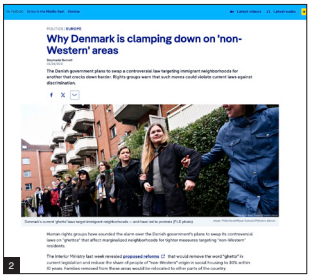
In the Mjolnerparken district in the north of the Danish capital, residents are refusing to be evicted and have taken the Danish state to court, accusing it of discrimination on ethnic grounds.

3

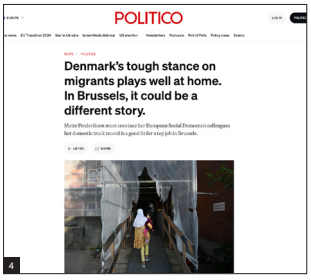
POLITICO

Danish left veering right on immigration

1


Why Denmark is clamping down on 'non-Western' areas

2


POLITICO

Denmark's tough stance on migrants plays well at home. In Brussels, it could be a different story.

4

Transformation of marginalized society and the media protrayl

2017 – Anti-Ghetto Laws Protests:

Immigrants living in areas designated as "ghettos" under Denmark's controversial policies protested against the stigmatization and forced relocations, as well as the curbing of their welfare rights under right-wing government policies.

2006 – Muhammad Cartoon Protests:

The publication of cartoons depicting the Prophet Muhammad sparked massive protests among Denmark's Muslim communities, highlighting the growing tension between cultural integration and free speech. Though the issue was international.

1993 - Nørrebro Riots:

Following the Maastricht Treaty referendum in Denmark, violence broke out in the Nørrebro district of Copenhagen. Immigrants, particularly from the Middle East and Africa, protested Denmark's increasingly nationalistic rhetoric, which included anti-immigration sentiments.

1970s – Guest Worker Protests:

Immigrant laborers, particularly from Turkey and Pakistan, began to organize protests demanding better working conditions and rights as the guest worker program,

first signs of immigrant unrest due to discriminatory policies.

2020s – Anti-Alien Act Protests:

Recent protests have erupted in response to the right-wing Danish government's increasingly stringent immigration laws, including the Alien Act, which aims to deport more non-Western immigrants and restrict asylum seekers' rights.

POLITICO

/ar in Ukraine | Israel-Hezbollah war | US election | Newsletters | Podcasts | Poll of Polls | Policy

NEWS

Denmark’s new government bridges left-right divide

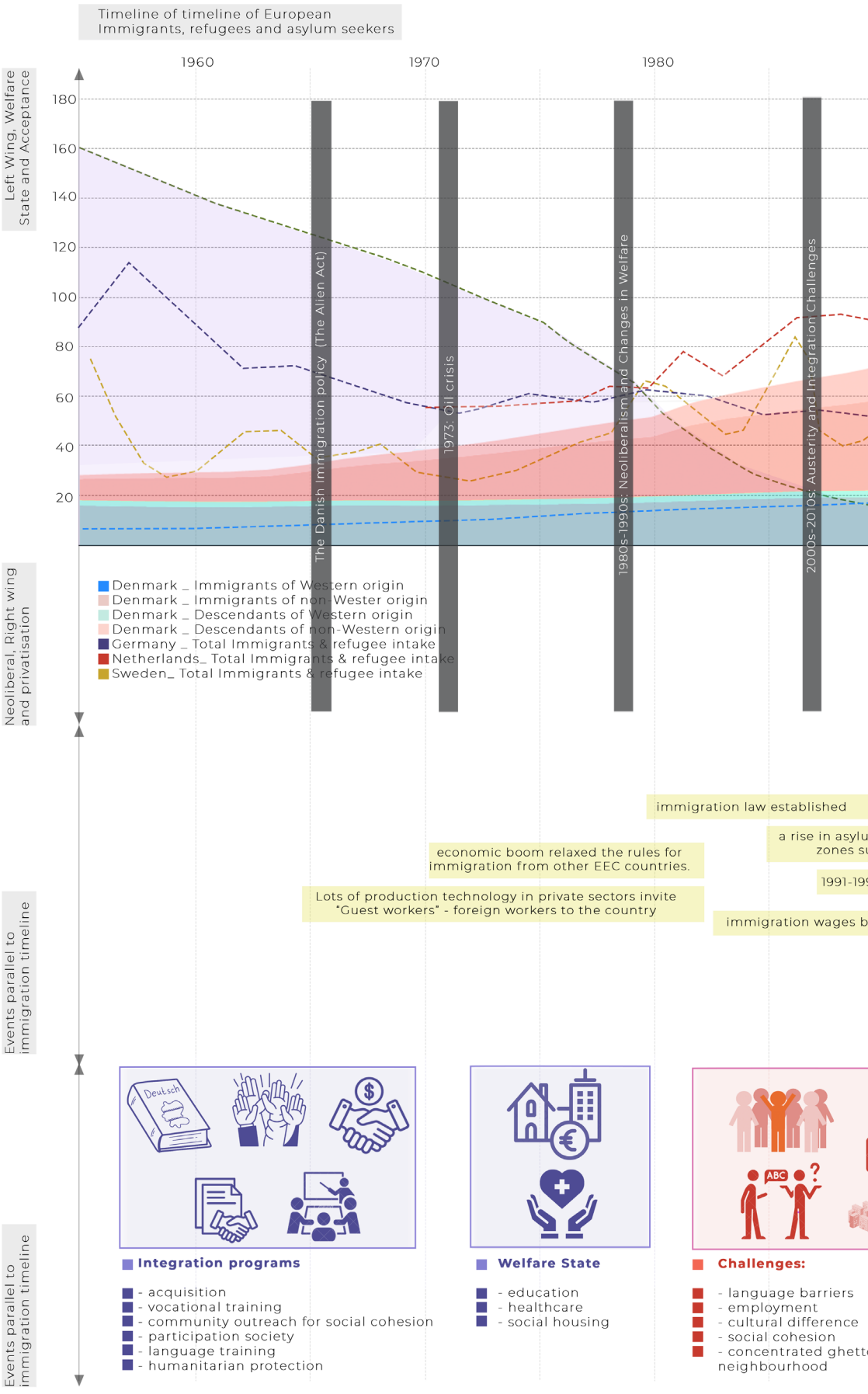
The new coalition consists of the Social Democrats, the Liberals and the Moderates.

SHARE

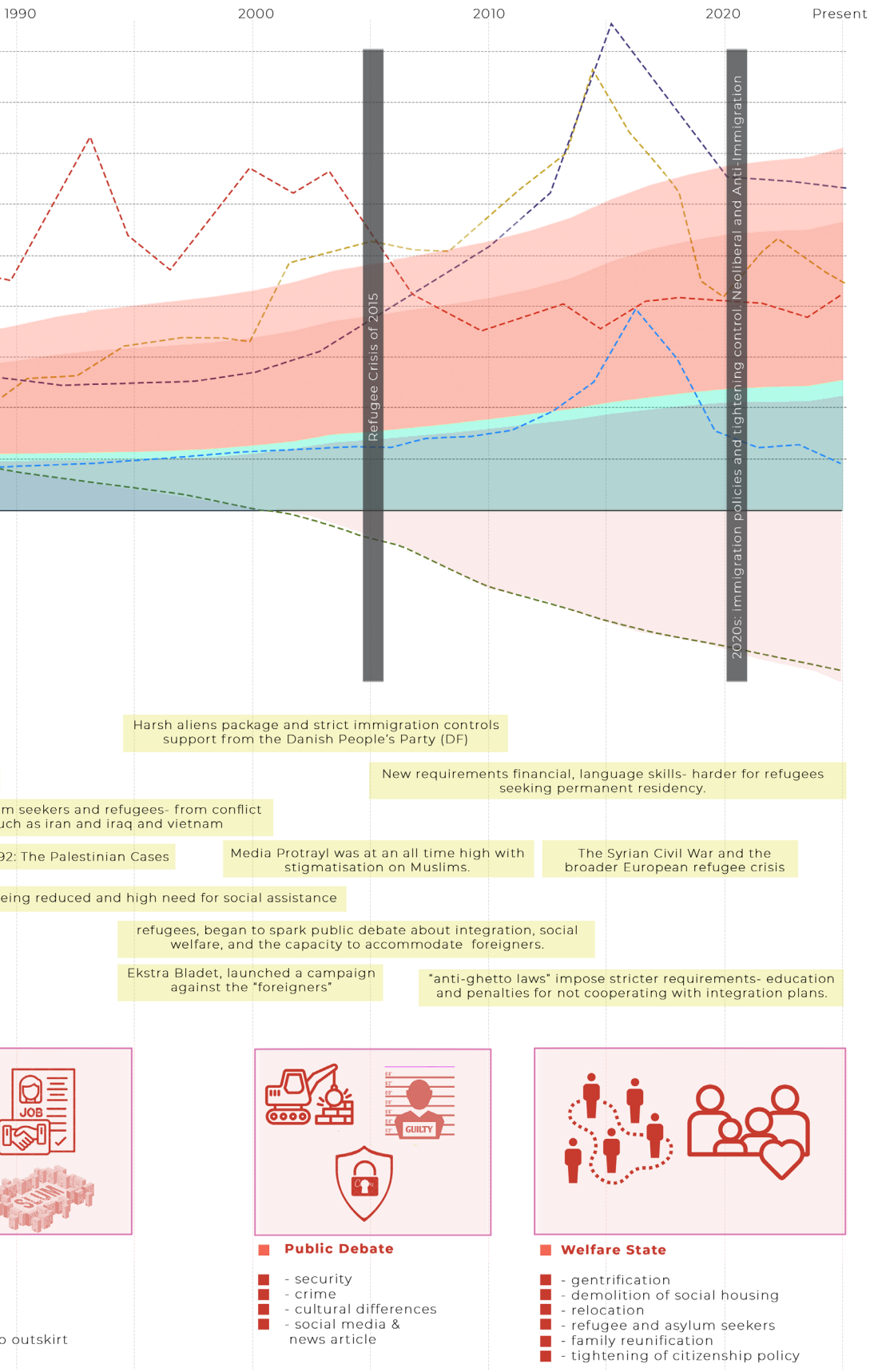
“One Denmark”

“Denmark's Social Democratic leader Mette Frederiksen said Tuesday evening she had agreed to form a bipartisan government, breaking the traditional Danish left-right divide for the first time in more than four decades.”

Immigration Protests. Is there a possibility for “One Denmark”



Immigration comparision to the rest of th



e EU (Netherlands, Germany and Sweden)

Chapter 2

Chapter 2 - Site Lecture

2.1 Deane Simpson KADK
2.2 Jan Gehl Lecture
2.3 Cobe Lecture

2. Amager Site Visit & Lectures

Regenerating Copenhagen

Lecture by Deane Simpson at Royal Danish Academy

4 Stages of Urban and Societal Change- The 4 chapters in the history timeline is 1852, 1947, 1989, 2018

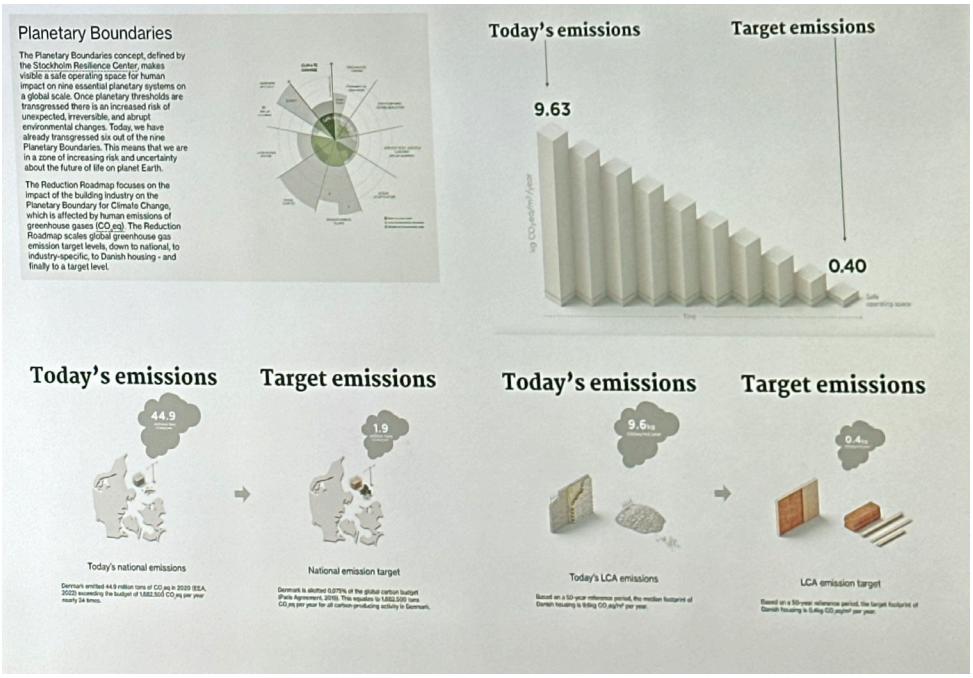
1852
- next level of defence
-colour epidemic
- industrial revolution and railway
- changing of labour movement
- focus on health care (due to impact of industrial city)
- parks, schools, hospitals, social housing not for profit

1947
- fingerplan (bottom up approach and not a London or a Beijing ring approach to urban planning)
- mobility - key driver back to the centre
- make life outside the central. make sure each of the finger has a coherent landscape throughout to have variety of spaces and not rely on the central.
nordic welfare state
- finding balance between low and medium suburban

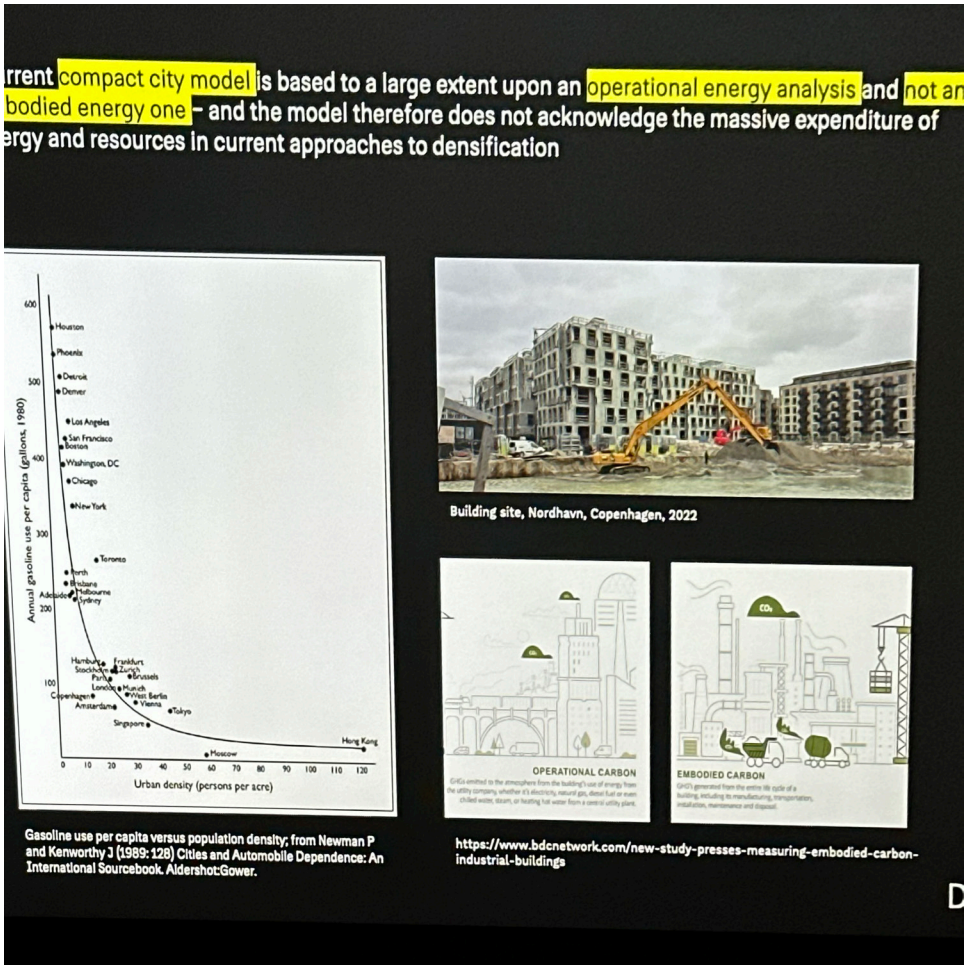
1989
- people going to outside the city. outskirts/ rotten banana
- 1980 city was bankrupt
- capital was empty, iron crisis and people leaving
- how to make the capital great again?
- answer would be better planning and emergence of competition capital region
- entreprenurial - combination of private and public sectors
- competitive welfare society good health and transport
- prioritising the capital and facilitating the developers (Politiken)
- Land Value Capture - research
- Entreprenuerial unused lands
- Social Composition- giving resources to the younger generation (25-30)

2018
- Example 1. Post industrial (Nordhavn 2021)
- Example 2. Lynetteholmen- an example of top down proposal (extension of humanmade)
- Example 3. Development of Orestad
- Although named as the “Most Liveable City” but have the aftermath of Ghetto
- Rich becomes more rich while the poor becomes more poor
- Less non profit projects in 2018 and more private
- Blackstone - Blackstone’s entry into Copenhagen’s housing market led to a major public outcry, influencing changes in Danish housing policy to protect tenants and limit the effects of speculative real estate investments.

- Difference between urban planning for “Late- capitalist” and “Modernist”
Late Capitalist = entreprenurial planning, stage facilitated, public and private partnership and neoliberal competitive logics. Designed for competition for tourists, investment capitals, qualified labour and corporation



1.11. Planatry Boundaries from Lecture Deane Simpson



1.11. Planatry Boundaries from Lecture Deane Simpson

Healthy Places are a choice

Lecture from Jan Gehl Studio (louise@gehlpeople.com)

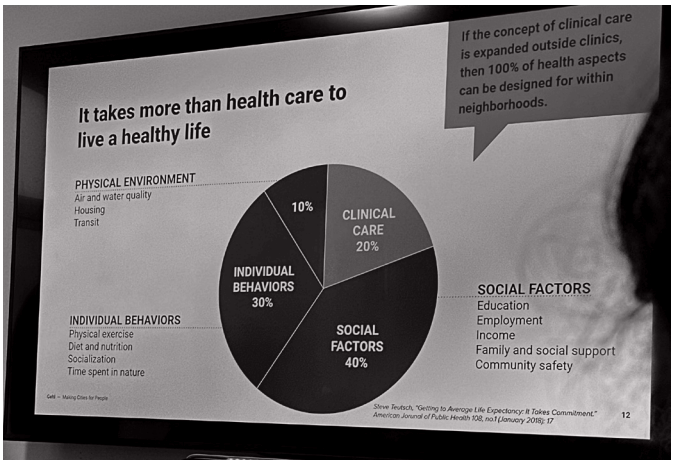
Healthy Places steps are LIFE, SPACE AND BUIDLING
- Places is for changing behavior (creating inviting behaviour and physical activities
- Clinical core- make people healthier through physical, individual and social
- A public concender that works with storm water management
- Interventions for better air/ how to manage and get better with urban planning?
- Food and study behaviour
- Anthrologist- data and social scientist
- public health are trying to solve issues. however it should be the urban planning job to avoid and prevent these issues from forming in the first place.

Example 1.
- Foodscape in Lisbon Portugal
- poor side, limited access to healthy food and quality of public realm, and individual process
- from dwelling to supermarket there are no space for rest.
- include a busstop to rest
- not a solution but a process to stop and rest

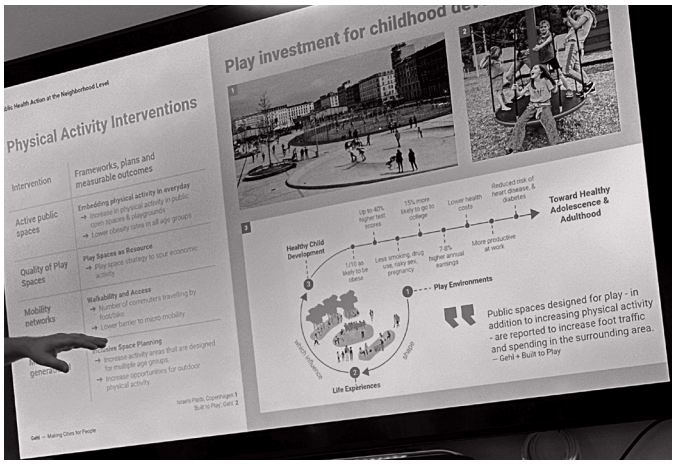
Example 2.
- Child Obeasity in London
- Observing the foodscape
- the only resting spot next to a busy bus stop is McDonald and the only place for rest and hangout. However this leads to downfall of students going to McDonald everyday while waiting for the bus.
- Look at the public transportation resting spaces - who am I targetting? calculating public spaces and transport

Example 3.
- Urban Belonging (Gehl Research Project)
- sense of belonging
- bias and media protrayl
- some places from different people perspective

Example 4. Munchen Munich Marienplatz
- qualitative analysis on what people enjoy the most about Munich city ?
- winter and summer experience
- do people like leaving the central?
- In a Vein diagram - you have frequency, place and needs and in the middle is the usuage frequency



Physical Environment, Individual Behavior and Social factors makes a good healthy life



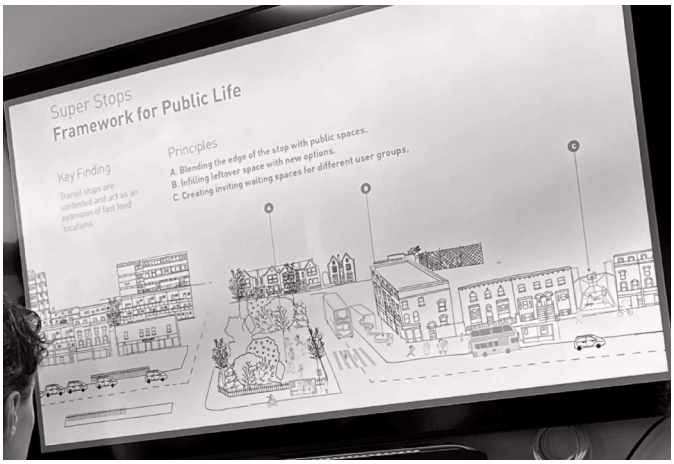
Physical Activity Interventions & play investment for childhood development

Neighbourhoods are places of intersection. Place represents a combination of social environment, physical environment and cultural patterns and habbits

Who we are designing for? Look at the age, how they commute and population expansion and the income.

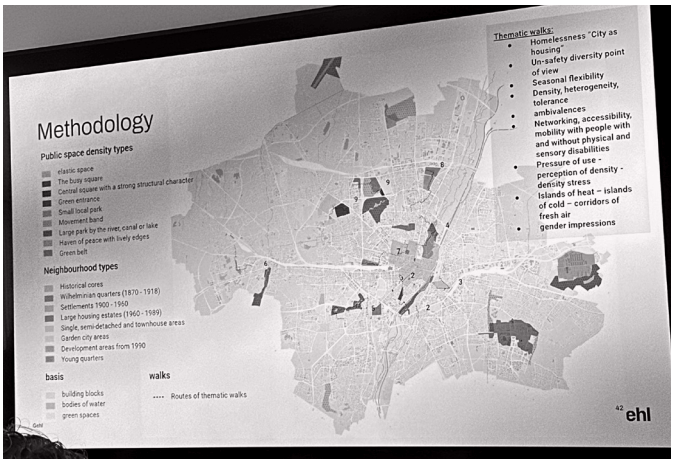
Journey from home to grocery store. What are the typography an microclimates? Where should they rest?

Ajuda Super Store- create a resting spot between the journey.



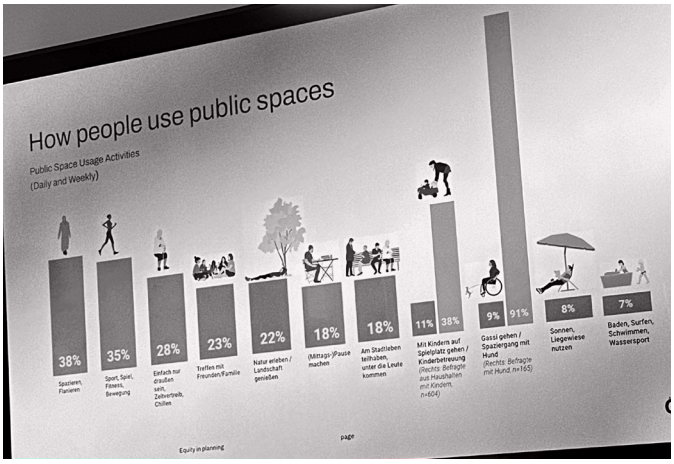
Super Stops- Framework for Public Life

Together, we can co-created a design brief. See what the public wants- the location, environment and offering.

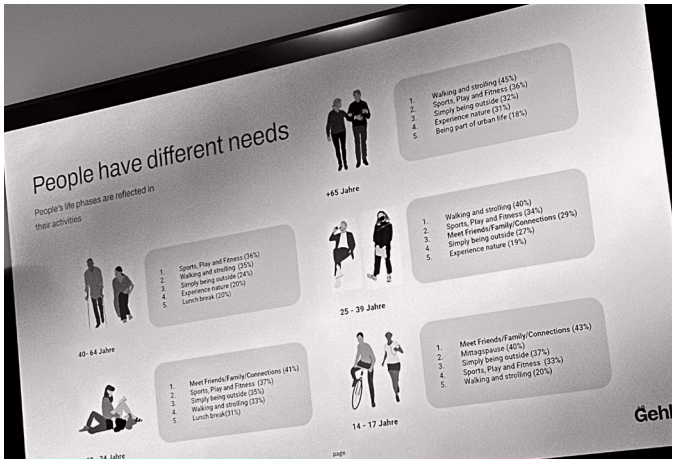


Methodology- what kind of existing public space do they have? what form of neighbourhoods? what are their schedules?

On a nice day, Wwat is the most important aspect in the city and where would you go? Answer is: your own neighbourhood



How people use public spaces?



People have different needs. Different functions and users for different age groups.

Chapter 3

Chapter 3 - Site Analysis of Sundholm, Amagervest

3.1 Lecture with Rasmus on Integrated Urban Renewal
3.2 Site History & Interviews
3.3 Site Analysis and Mapping
3.4 Targeted groups and social data

3. Amager Site Visit & Analysis

Section AA
Section BB
Section CC
Section DD
Sundholm Boundary
Nature
Community Garden
Government Garden
Water
Nature_ Tree
Typologies
Leisure
Playground
Public
Culture House
Libraries
Public Amenities
Day Care & school
School
Day care
0
100
200
300
400 m

Hostile Architecture

What is Hostile Architecture

“Hostile architecture is defined as: Coercive design meant to prevent unwanted behavior, which can potentially injure those it targets.”

Hostile Architecture seen in Copenhagen

The fieldwork settings are detailed in this sub-chapter, beginning with public spaces, where unrestricted access is assumed (e.g., Sundholm). This location includes a “book-bench,” an example of hostile architecture designed to prevent lying down, illustrating spatial control in public areas. In quasi-public spaces like Hovedbanegården (Copenhagen’s central train station), the architecture creates a regulated yet accessible environment, blending private interests with public access. Lastly, Tivoli Gardens, as a private space, utilizes spiked walls to limit access and regulate behavior, showcasing a privatized approach to spatial control.

Darkness in Architecture

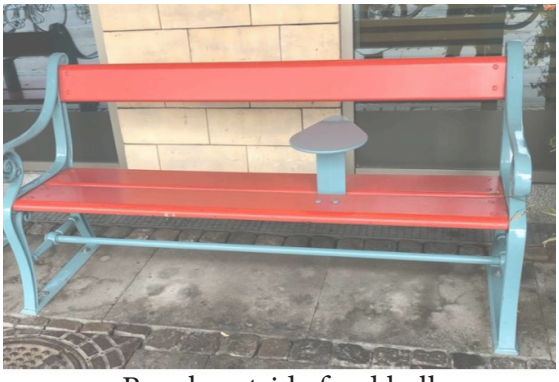
Ole B. Jensen (2018) uses the 12 term dark design. Darkness refers to the hidden power structure behind design features that lead to exclusion. Jensen claims that the main proponent of dark design is to restrict and obstruct movement while simultaneously leading people through predetermined paths. For him, dark design is a declaration of war against the poor and the homeless. In this war, the weapons used are laws, regulations, technology, and design (Jensen, 2018). Although dark design, defensive design, and defensive architecture overlap with hostile architecture in some ways, they do not provide a complete definition of it.

Book-bench at Sundholm

Tunnel leading to Sundholm

Motorized fence with spike

Slanting bars over heating vent



Bench outside food hall

Homeless Individuals
Sundholm, a center aimed for homeless people, providing shelters, day centers, and social services.

Migrants and Refugees
Lack stable housing or social networks, end up in Sundholm or similar areas. issues like language barriers, lack of employment, and legal uncertainties, which can contribute to their marginalization.

Drug Addicts
Use hard drugs like heroin or cocaine. Need services in the area are tailored towards harm reduction, providing needle exchanges, medical care, and addiction counseling.

People with Alcohol Dependence
Alcohol addiction. The area has programs and support systems designed to help those dealing with alcohol dependency.

People with Mental Health Issues
Individuals suffering from mental health problems who are unable to live independently or who do not have adequate access to the mental health care system.

Marginalized Families
While Sundholm is mostly known for accommodating individuals, often low-income families

Ex-Prisoners
Sundholm is also a temporary residence for some people recently released from prison. They may be in transition as they try to reintegrate into society but face challenges with housing, employment, or social acceptance.

Socially Excluded Youth
Dysfunctional backgrounds or those who have been involved in petty crime, struggle with substance abuse or mental health issues and can find support in the form of shelters and youth programs.

Long-Term Unemployed
Those who are long-term unemployed and have difficulty reentering the workforce due to low skills, health issues, or social stigmatization

Elderly People without Support Systems
Some elderly individuals, especially those who are estranged from their families or have no social support. And they are lonely

Parallel Society characters includes

Communities from Sundholm:
"This place is doomed - drugs and alcohol."

"not a nice area"

"does not want to live here"

"They characterized the people in the area as a mix of different groups: "the crazy," children, and fellow artists. Despite the variety of residents, there is a feeling of community. The artists appreciate the vibrancy and uniqueness of the space, highlighting it as an important aspect of the area's identity""

"politicians stigmatize people living in ghettos, making them feel more excluded and unstable"

Children from Sundholm:
" all my friends live here and they play out alot and school is 20 minutes away"

"kids roam on the streets in their free time - 6-7th grade and further on - SPORTS, football is the national sport (also handball, badminton, volleyball) lack of skating areas"

University Students
"Personally never been but heard about it, seen the documentaries. People who live there suffer from mental health, addictions. Never felt in danger in the area. If you study here you don't really know the sundholm - they don't mix."

"they might behave according to the relation they have to the people - kind of a role model."

Teddy Rasmussen - volunteer centre Sonderbro
The interview with Teddy Rasmussen focuses on the volunteer center in Sonderbro, Copenhagen, which tackles social issues like loneliness, homelessness, and youth disengagement through collaboration with local NGOs. Teddy emphasizes the center's role in fostering community engagement and addressing social fragmentation caused by a lack of cohesive urban planning. Despite resource constraints and limited political support, the center provides spaces for interaction, promoting democratic participation and civic responsibility, especially among marginalized groups. The discussion highlights the importance of community organizations in building connections and addressing social inequalities.

Community and Social Dynamics:
The artists expressed a strong sense of belonging to the local community, describing the area as lively and diverse. They characterized the people in the area as a mix of different groups: "the crazy," children, and fellow artists.

Despite the variety of residents, there is a feeling of community. The artists appreciate the vibrancy and uniqueness of the space, highlighting it as an important aspect of the area's identity.

Safety Perception:
Although the artists mentioned occasionally feeling unsafe, they did not view it as a significant or recurring issue. The sense of unsafety seemed more circumstantial and did not detract from their overall appreciation of the space.

Area Usage and Activity:
The area around the Fabrikken building is a shortcut for people passing through, leading to a lot of activity. The constant movement of people adds to the energy of the area but also contributes to the occasional feelings of unease.

Community Interaction:
The artists felt that the different social groups in the area could benefit from more interaction. They suggested that the groups—such as the artists, children, and others—tend to operate within their own social circles and could be encouraged to engage more with one another.

External Involvement and Spatial Interventions:
The interviewees were resistant to the idea of outside involvement in the area. They felt that improvements or spatial interventions, such as new buildings or public spaces, should not involve people from outside the community. Their preference was for local, community-driven initiatives, emphasizing the need to maintain the unique character of Sundholm.

Conclusion: The artists' views reflect a deep appreciation for the sense of community in Sundholm, despite occasional feelings of unsafety. While they see potential in fostering more interaction among the area's diverse groups, they strongly believe that any interventions should emerge from within the community itself, rather than being imposed by external forces. The area's vibrancy and local identity are key values they wish to preserve.

Interviews during Site Visit

What are the potentials nearby?

How can we design a Green Mile?

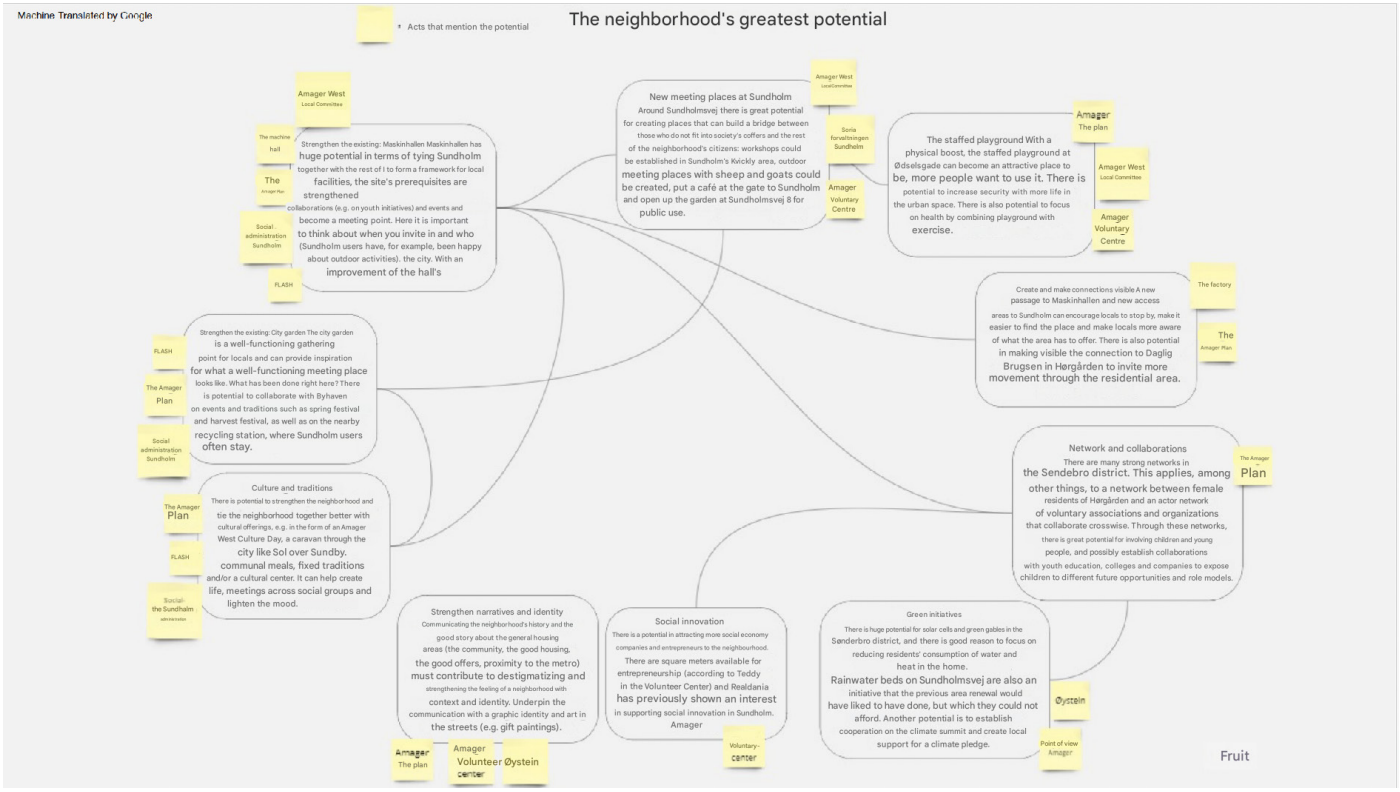
Amager Fælled (The Common)
Amager Fælled, or Amager Common, is a large natural area located on the island of Amager in Copenhagen, Denmark. Historically, it was used as a military training ground in the 18th and 19th centuries. Over time, it has transitioned into a protected green space that serves as a cherished recreational area for Copenhagen's residents. Its rich biodiversity includes a mix of wetland, meadow, and forested habitats that provide sanctuary for various flora and fauna, such as rare orchid species, marsh harriers, and the protected spidery fen plants. Today, Amager Fælled faces considerable pressure from urban development, with plans to build housing on parts of the land sparking protests from conservationists, environmental groups, and citizens alike. Activists argue that development would irreversibly harm its delicate ecosystem, while proponents stress Copenhagen's housing needs.

Ørestad, IT University, and DR Byen
The Ørestad area in Copenhagen, where the IT University of Copenhagen (ITU) and DR Byen (the headquarters of the Danish Broadcasting Corporation) are located, represents one of the city's most ambitious urban revitalization projects. Developed from the mid-1990s as part of a master plan to modernize Copenhagen, Ørestad was designed to be a high-tech and educational hub, with cutting-edge architecture and efficient infrastructure connecting it to the rest of the city. The IT University, established in 1999, brings a vibrant academic community focused on technology and innovation, while DR Byen, inaugurated in 2006, houses Denmark's national television and radio. Both institutions have contributed to the cultural and intellectual appeal of the area.

Amager Faelled

IT University Kobehavn

The Neighbourhood's biggest challenges



The Neighbourhood's biggest potential

Information from Rasmus

Machine Translated by Google

Connection between challenges and potentials

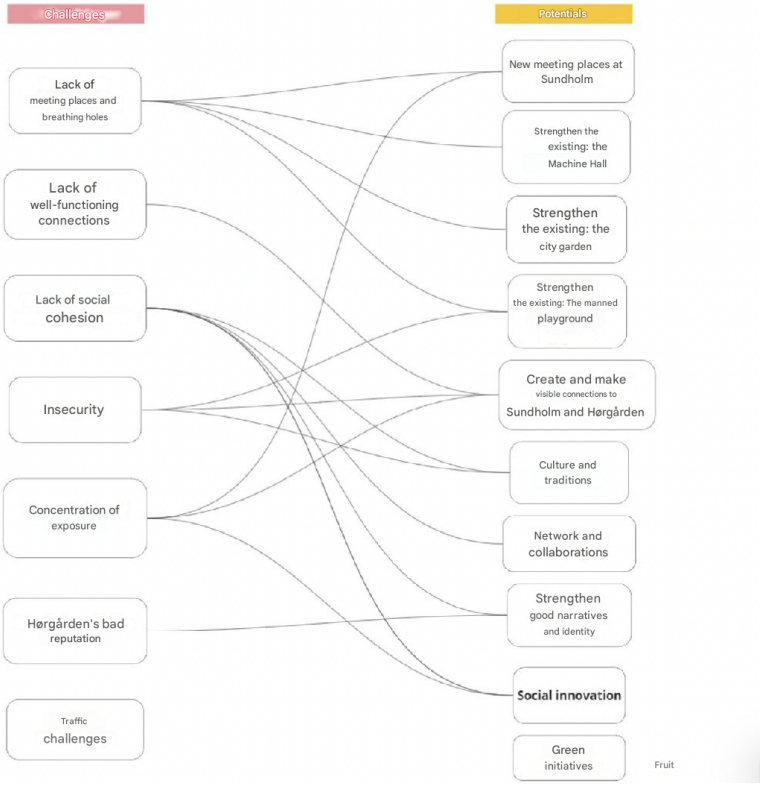
During the coffee conversations, several of the players draw parallels between the neighbourhood's challenges and potentials.

The figure primarily shows the parallels they themselves draw, but also the connections I myself have seen between the mentioned challenges and solutions/ potentials.

It is worth noting that although the neighborhood has many serious challenges, it also has a lot of potential - and thus **good opportunities to tackle the problems.**

For example the actors see many places in the neighborhood that, with the right boost and effort, can become gathering points and meeting places. Parts of the neighborhood seem closed to the outside world, but the actors see concrete opportunities in opening up and creating new connections.

A recurring pattern in the coffee conversations is that a challenge is rarely without a possible solution or potential for further work.



Connection between challenges and potentials

Machine Translated by Google

Said target groups within the children and youth category

Figure legend:

Blue = resident group

Green = neutral characteristic of the group

Red = challenge by the group

Children and young people are a recurring theme in the interview material. There are many actors who work with and target their efforts towards young people in the neighbourhood. There is a desire to engage children and young people in their neighborhood to a greater extent due to various challenges – including the proportion of young people at risk of crime and the fact that girls lack meeting places in public rum.

Target groups within the children and youth category

The Stakeholder Interviews- Rasmus

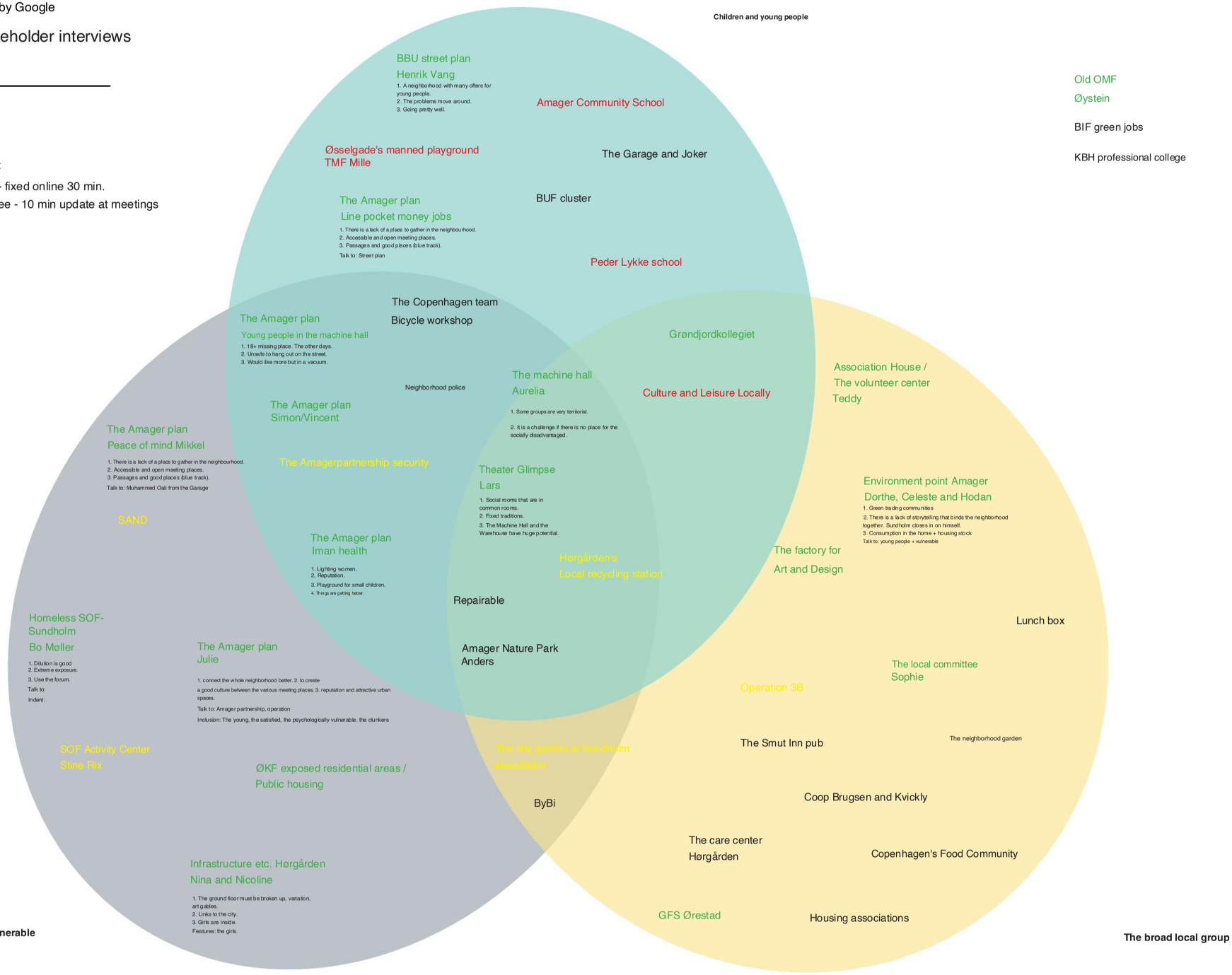
Machine Translated by Google

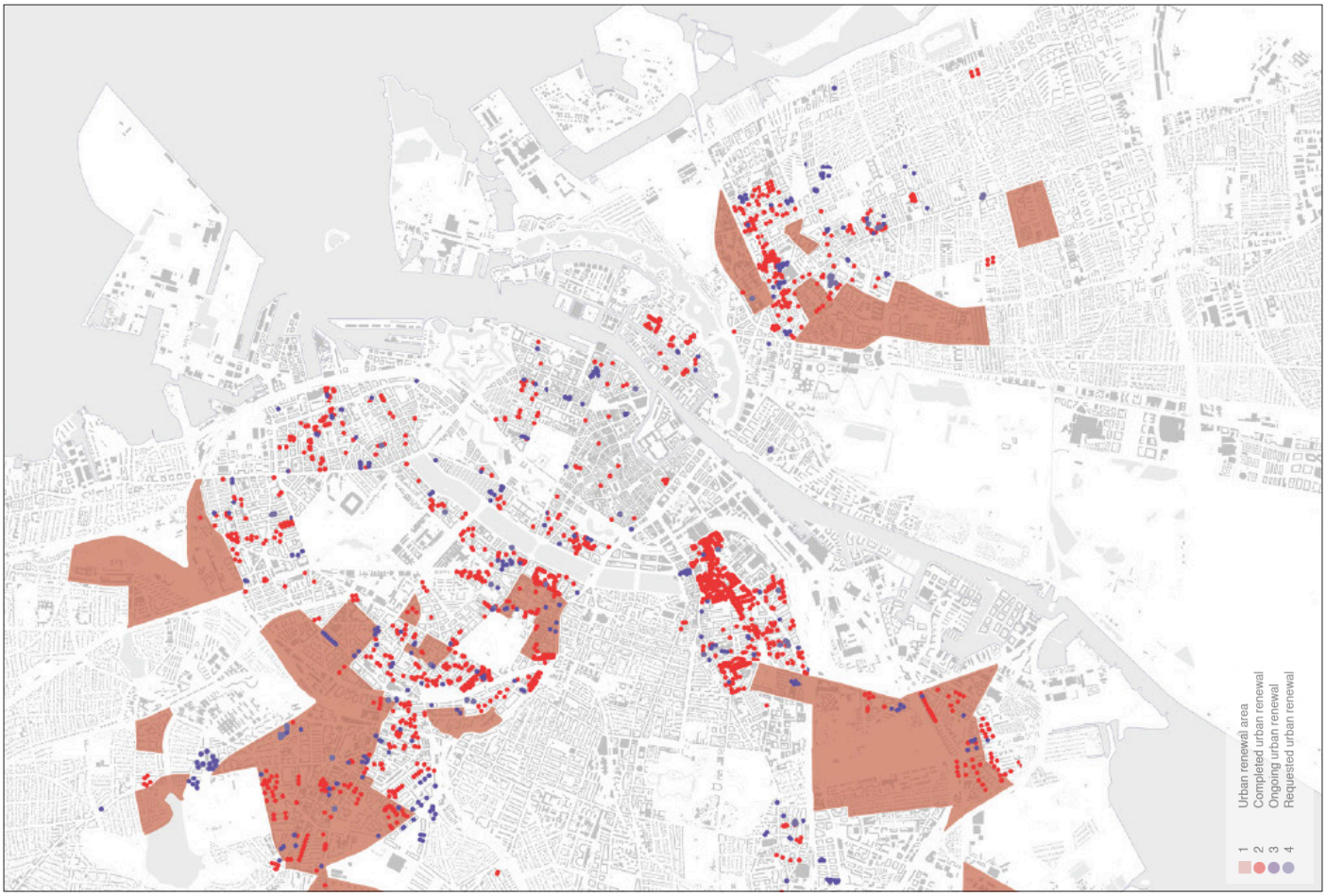
The first stakeholder interviews Overview

Regular meetings:

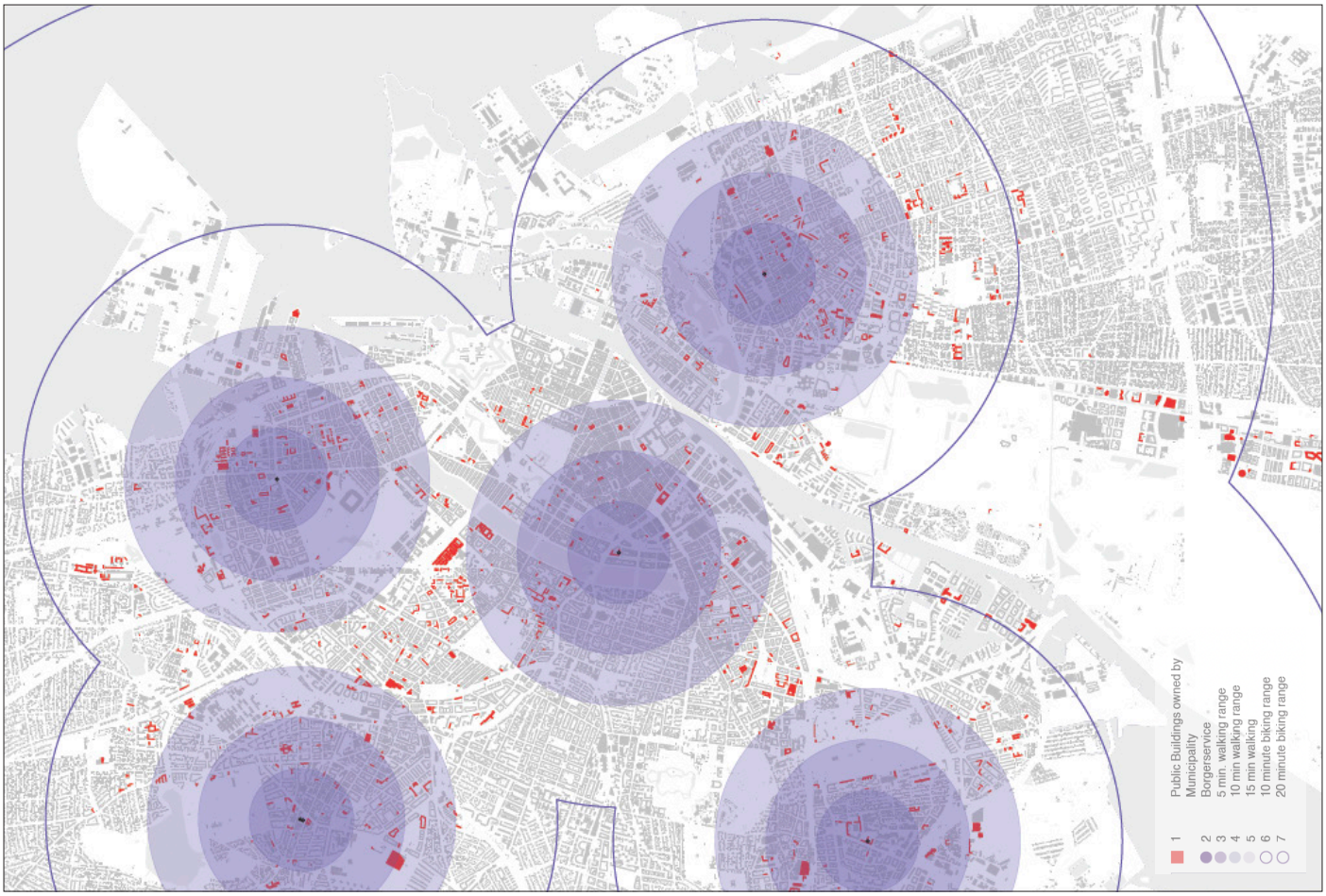
The Amagar plan - fixed online 30 min.

The local committee - 10 min update at meetings



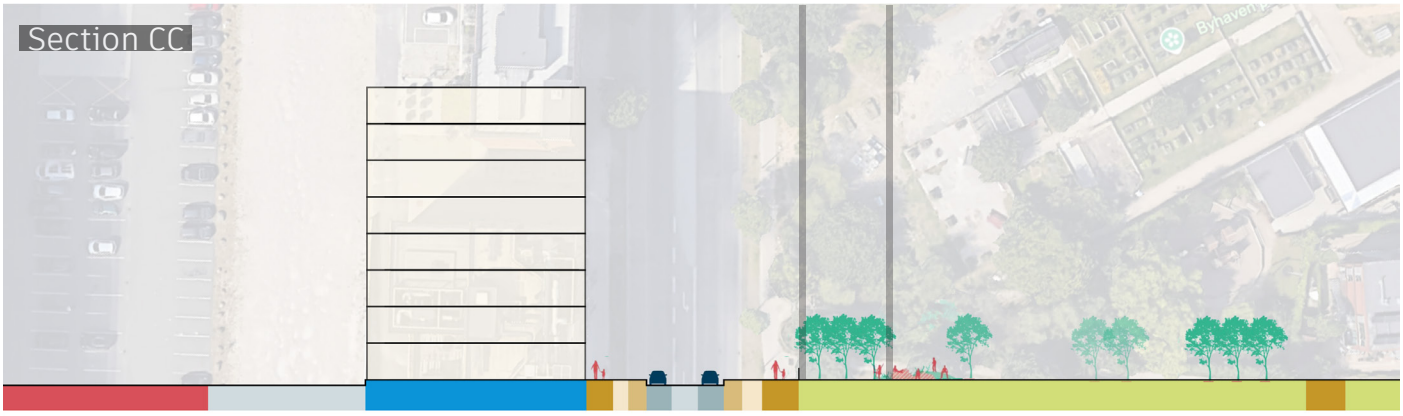


Locating urban renewal

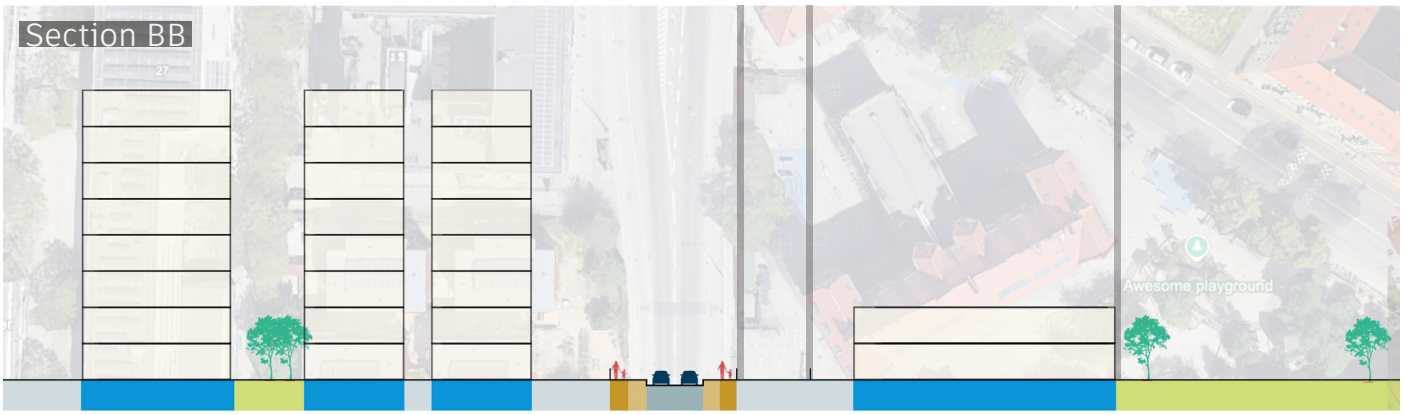


Municipal Presence & Distance to Power

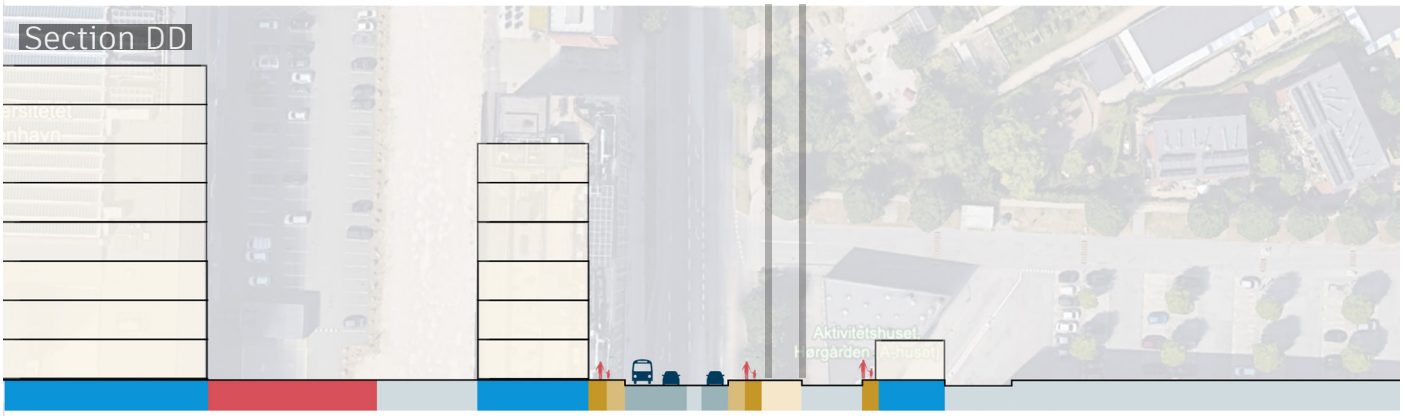
Housing attorney Amager | Amagerfaelledvej street | Entrance into Sundholm



IT University Kobehavn | Amagerfaelledvej street | City Garden and Kindergarden



IT University Kobehavn | Amagerfaelledvej street | Basketball/ Juvenile



DR Byen | Amagerfaelledvej | Sundholm Horgarden

Street Section

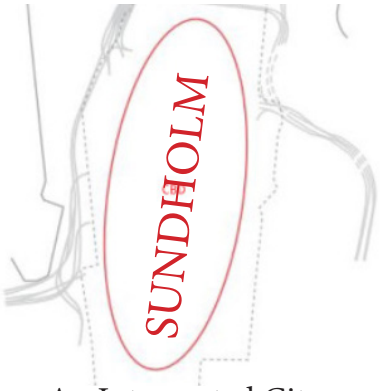
Topologies and Functions

Movement and Circualtion

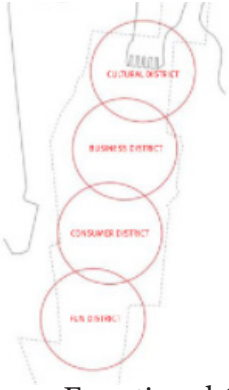
Problem with Urban Planning- Isolated Sundholm

A Traffic Dominated City

Lack of Street Hierachy - Vertical

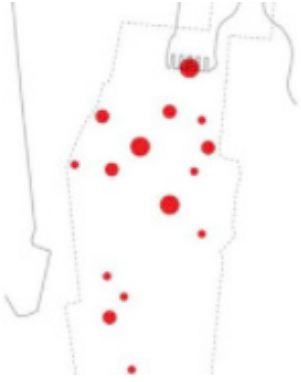


An Introverted City



A Mono-Functional City

No Horizontal Access



Scattered Open Spaces

Lack of street hierarchy; absence of horizontal axis and A mono-functional public spaces – you have nature, university and Sundholm (within includes art studios, social housing, and juvenile centres), Amagervest main street but lacks integration with each other

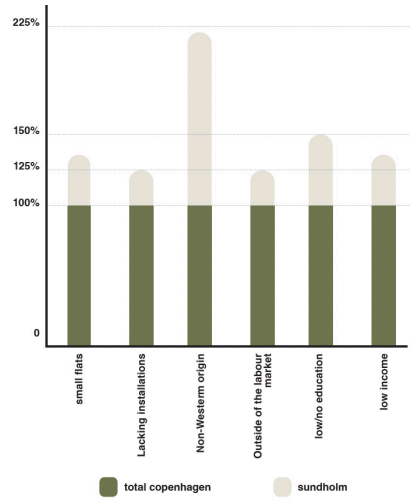
Targeted group

Targeted group

IT University Students (Role Model)
University students living in Sundholm Dormitry

Socially Excluded Children
(fostering through learning and play- targetting afterschool care from kindergarden to highschool)

Parents with Mental Health Issues
(Prevention and Aftercare- social working spaces)



Social Data on Adults

Parents with Mental Health Issues
(Prevention and Aftercare- social working spaces)

1. Depression and anxiety:
These are common across vulnerable populations, particularly among those facing poverty, isolation, or lack of family support.

2. Substance use disorders:
A significant portion of residents struggle with addiction, often with co-occurring mental health issues (dual diagnoses).

3. Schizophrenia and bipolar disorder:
These more severe mental illnesses are present among some residents who receive targeted support through various social and healthcare services.

4. Post-Traumatic Stress Disorder (PTSD):
Some residents, especially those who have experienced trauma related to migration, homelessness, or abuse, may suffer from PTSD.

5. Ex-prisoners and Youth in Transition:
Some residents are ex-prisoners who are reintegrating into society, a process that can be very challenging without support. Additionally, there are young adults who may have aged out of the foster care system or left family homes.

Social Data on Childre

So
(fostering t
terschool

1. Early Childhood (Ages 3–6)

Attachment Issues: For childr
ing up in unstable homes or e
riencing parental mental healt
substance abuse issues. These
may exhibit separation anxiet
ness, or a fear of strangers, im
social development. Language
Cognitive Delays: struggle wit
tion, focus, or basic language

2. Middle Childhood (Ages 7–12)

Anxiety and School-Related S
may face academic pressure, c
with potential instability at ho
This can lead to generalized a
school refusal. Children from
come or immigrant backgrou
feel "different" from their pee
sense of otherness can result i
difficulities and isolation, low
teem, and feelings of inadequa
they face bullying or discrimi

The Targeted group fo

n

Mental and Education

ocially Excluded Youth
through learning and play- targetting af-
care from kindergarden to highschool)

3. Early Adolescence (Ages 13–15)

Identity and Cultural Conflict: Adolescents in immigrant or multicultural communities. Balancing family traditions with Danish social norms can be stressful, leading to confusion or a sense of not fully belonging anywhere. This can increase their risk of mental health issues like anxiety, depression, or even rebellious behavior. May exhibit risky behaviors, including truancy, theft, or involvement in local gang activity. lack of positive role models.

4. Late Adolescence (Ages 16–18)

Academic and Career Stress: Late adolescence often comes with pressure to succeed academically and make future career decisions. Adolescents from lower-income backgrounds may feel especially stressed about meeting these expectations due to financial limitations or lack of support, leading to anxiety, sleep problems, or burnout. Some teenagers may turn to alcohol or drugs as a way to cope with emotional pain

Psychological Medicine

cambridge.org/psm

Original Article

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Corresponding author:
Peter Schofield;
Email: peter.1.schofield@kcl.ac.uk

Neighborhood social composition and refugee mental health – quasi-experimental evidence of associations from a Danish population register study

Peter Schofield[1], Christopher Jamil de Montgomery[2], Anna Piil Damm[3] and Esben Agerbo[4]

[1]Population Health Science, King's College London, London, UK; [2]Department of Public Health, University of Copenhagen, Copenhagen, Denmark; [3]Department of Economics and Business Economics, Aarhus University, Aarhus, Denmark and [4]National Centre for Register-Based Research, Aarhus University, Aarhus, Denmark

Abstract

Background. Refugees are at an elevated risk of some mental disorders with studies highlighting the contributing role of post-migration factors. Studies of migrant groups show neighborhood social composition, such as ethnic density, to be important. This is the first longitudinal study to examine this question for refugees and uses a novel quasi-experimental design.
Methods. We followed a cohort of 44 033 refugees from being first assigned housing under the Danish dispersal policy, operating from 1986 to 1998, until 2019. This comprised, in effect, a natural experiment whereby the influence of assigned neighborhood could be determined independently of endogenous factors. We examined three aspects of neighborhood social composition: proportion of co-nationals, refugees, and first-generation migrants; and subsequent incidence of different mental disorders.
Results. Refugees assigned to neighborhoods with fewer co-nationals (lowest *v.* highest quartile) were more likely to receive a subsequent diagnosis of non-affective psychosis, incident rate ratio (IRR) 1.25 (95% confidence interval (CI) 1.06–1.48), and post-traumatic stress disorder (PTSD), IRR 1.21 (95% CI 1.05–1.39). A comparable but smaller effect was observed for mood disorders but none observed for stress disorders overall. Neighborhood proportion of refugees was less clearly associated with subsequent mental disorders other than non-affective psychosis, IRR 1.24 (95% CI 1.03–1.50). We found no statistically significant associations with proportion of migrants.
Conclusions. For refugees, living in a neighborhood with a lower proportion of co-nationals is related to subsequent increased risk of diagnosed mental disorders particularly non-affective psychosis and PTSD.

Social Composition and refugee mental health in Parallel Society

Table 4.1: *Feelings about schoolwork, by ethnicity, gender, and school results (")*

	I feel good about schoolwork		
Ethnic origin-gender	Yes/rather yes	Rather no/no	Total
Majority-boy	61	39	100
Majority-girl	89	11	100
Minority-boy	79	21	100
Minority-girl	89	11	100
Total	81	19	100
Overall school performance			
Excellent	96	4	100
Good	89	11	100
Satisfactory	80	21	100
Sufficient	73	27	100
Total	84	16	100

How well the majority vs minority perform in school?

Table 4.3: *Feelings about school, performance, ethnic identity and parents' status (")*

	Feelings about school			
	Strong, positive	Dominantly negative	Mixed	Total
Overall school performance				
Excellent	67	4	30	100
Good	44	5	52	100
Satisfactory	35	5	60	100
Sufficient	22	7	70	100
Total	40	5	55	100
Ethnic identity and parents' status				
Majority and upper-status parents	46	5	48	100
Minority and upper-status parents	47	6	47	100
Mixed and upper-status parents	50	3	47	100
Majority and lower-status parents	26	11	62	100
Minority and lower-status parents	29	9	62	100
Mixed and lower-status parents	41	5	55	100
Total	40	7	54	100

How well minority feel about their identity and self?

Chapter 4

Chapter 4 - The Brief and Framework

4.1 The Research Question
4.2 The Design Proposal & Targeted groups
4.3 The 3 Phases Research Framework

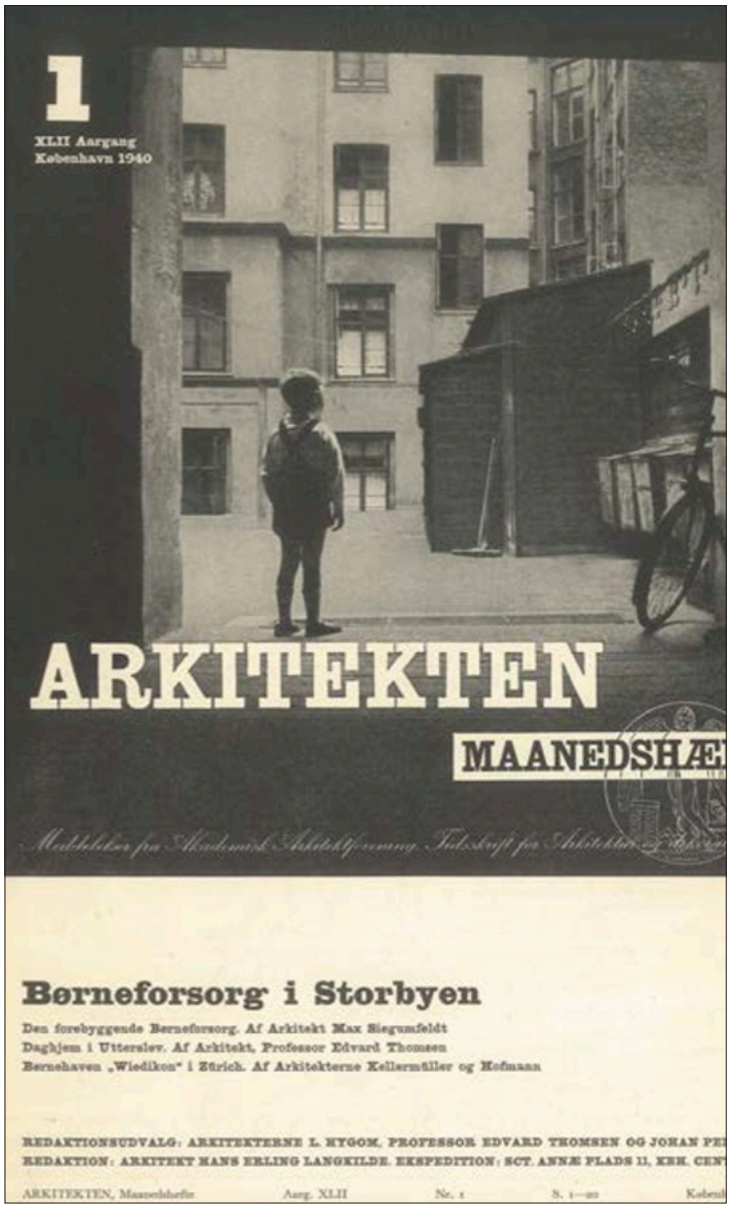
4. The Brief & The Framework

Research Question

What is the vision? The Green Mile and the Public Condenser

How can the design of a public condenser address the concept of parallel societies and transform the stigmatized identity of Sundholm as a ‘ghetto’?

How can we design an inclusive, playful and educational public condenser, *‘Library-City’* that promotes biodiversity facilitates coexistence among diverse communities? How can an ecological ‘Green Mile’—socio-engineering on reintroducing biodiversity in light of the potential disappearance of Amager Fælled—foster social well-being for marginalized communities while reshaping the media portrayal of Sundholm Amager Vest and its so-called “parallel society”?



Sub Questions

1. How can socio-engineering facilitate a ‘Green Mile’ that connects Ørestad Fælled, the University, and Sundholm to strengthen community bonds and environmental awareness?

2. In what ways can such a space be designed to foster new form of education through play and wellbeing mental health for children, role models, and parents with mental health challenges?

3. How can nature contribute to healing, and to what extent can public architecture, through its representational role, promote environmental responsibility and awareness? How can nature-inclusive designs and an emphasis on material properties be integrated into programmatic and architectural qualities to influence user behavior, mannierism and foster mental well-being?

4. What design strategies can effectively create a Green Mile that supports a self-sustaining biodiversity ecosystem, nurtures species, and serves the needs of non-human inhabitants?

How can Sundholm build power?

How can having power change the stigmatization?

Hard and Soft Power

The concepts of **hard** and **soft** power in architecture provide a framework for understanding how spaces influence behaviour and exert control. These ideas are explored in **Joseph Nye's** book Power and Interdependence, where the American political scientist delves into the dynamics of hard and soft power.

Hard power is rooted in tangible structures and mechanisms, such as zoning laws, physical barriers, and resource allocation, which dictate access to opportunities and facilities.

In contrast, **soft power** operates symbolically, shaping perceptions and fostering community identity through aesthetics, cultural representation, and public spaces. These forms of power are further categorized as positive power, which supports inclusion and development, and negative power, which marginalizes and excludes communities.

Sundholm lacks both Hard and Soft power

Residents often lack both hard and soft power. Limited access to stable housing, quality education, and meaningful employment diminishes their hard power, while societal stigmatization and negative media portrayals erode their soft power. This lack of power is closely tied to income and tax brackets; Many Sundholm residents work in low-wage sectors, performing essential yet undervalued labour, while the government seeks to integrate them economically and reduce reliance on social welfare. While higher-income neighbourhoods wield greater influence due to their economic contributions and cultural capital, enabling them to attract investments and shape public narratives.

Osterbro with high Hard and Soft power

In Copenhagen, neighborhoods like Østerbro and Frederiksberg stand out as areas with significant "hard power" and "soft power," reflecting their affluence and influence. These districts are characterized by high property values, excellent public services, and affluent residents within the upper tax brackets. Østerbro, for example, is known for its elegant residential streets, proximity to parks like Fælledparken, and high-end amenities. Frederiksberg, an independent municipality surrounded by Copenhagen, is similarly affluent, boasting cultural landmarks, prestigious educational institutions, and well-maintained public spaces. These neighborhoods combine strong economic power with cultural and social capital, underpinned by vibrant community activities, historic architecture, and attractive living standards.

How to build Soft and Hard Power ?

The process and what aspects to focus on?

The Vision of a Public Condenser to build ‘Soft and Hard power’
To address the challenges faced by marginalized neighbourhoods like Sundholm and counter negative media portrayals, it is essential to build both hard power and soft power.

Building Hard Power
Hard power involves tangible improvements to infrastructure, such as housing, **education, healthcare,** transportation, and **job opportunities,** ensuring that basic needs are met and residents have access to essential resources. Initiatives like job creation, vocational training, and political advocacy provide systemic support, empowering residents to enhance their living conditions and economic prospects.

Building Soft Power
Once these foundations are established, soft power can be cultivated by fostering community identity, promoting cultural initiatives such as festivals and public art, and amplifying resident-led projects that reimagine Sundholm’s narrative. Storytelling that highlights the neighbourhood’s diversity and potential, coupled with strengthened social networks, can foster pride and reshape external perceptions.

A Phased Approach
Beginning with hard power to address immediate needs and laying the groundwork for sustainable soft power development, can transform Sundholm into a vibrant, inclusive, and integral part of Copenhagen, shedding its “ghetto” label and embodying the city’s commitment to sustainable urban development.

Education
Learn through Play

Learn and Play theorists determine the building’s circulation and function

How can different targeted groups percieve play?

+

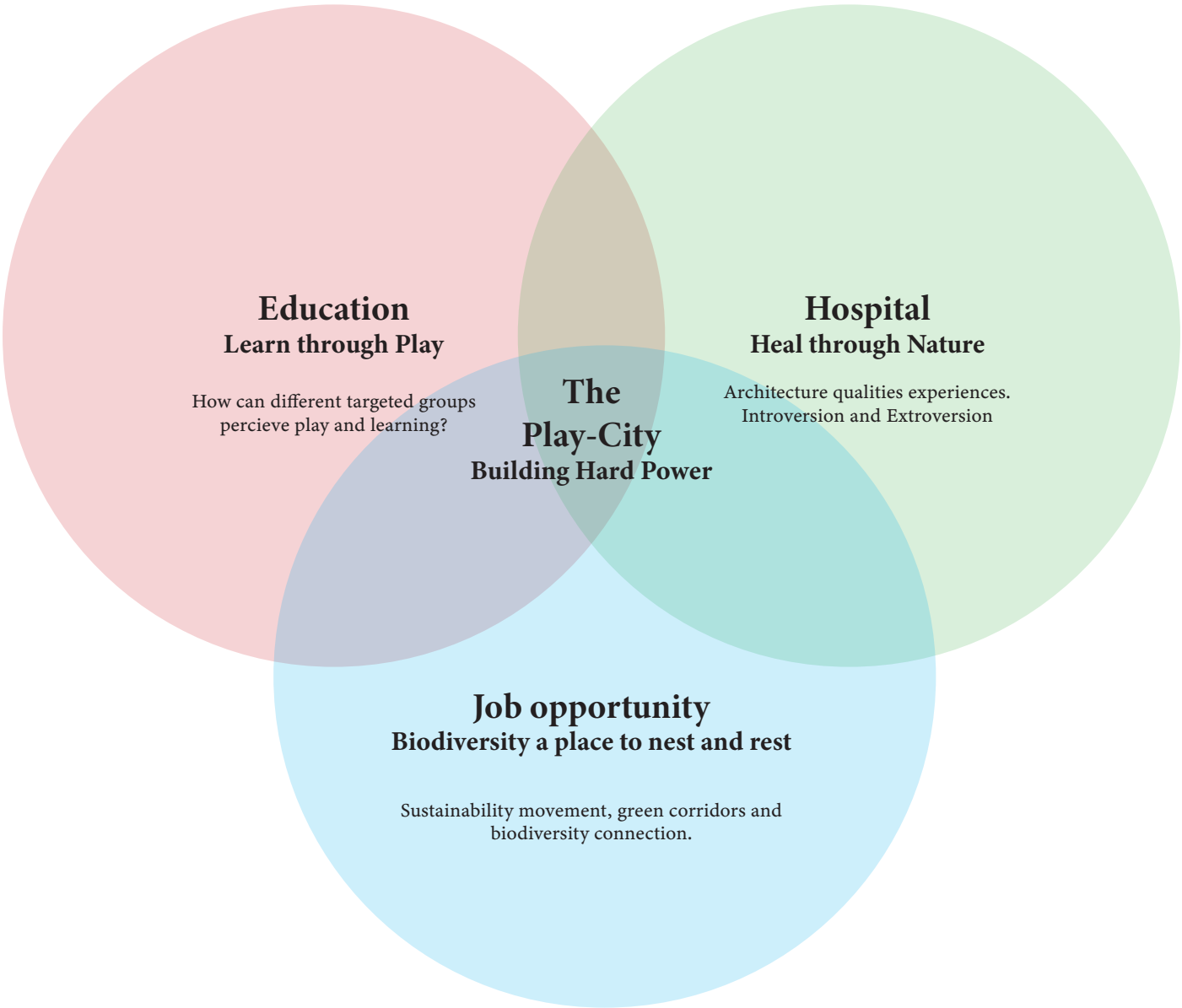
Hospital
Heal through Nature

Architecture qualities experience is through biobased ecological materiality, facade and indoor/ exterior experience

+

Job opportunity
Biodiversity a place to nest and rest

Sustainability movement, green corridors and biodiversity connection.



‘Library-City’. The Methodology behind this concept.
Learn through play? Heal through nature?

Communal Cooking & Fireplace for Homeless

Engaging the homeless in communal cooking not only provides them with nutritious meals but also fosters a sense of community and empowerment.

Art Fabric Workshop (Art Therapy, Music and Dance)

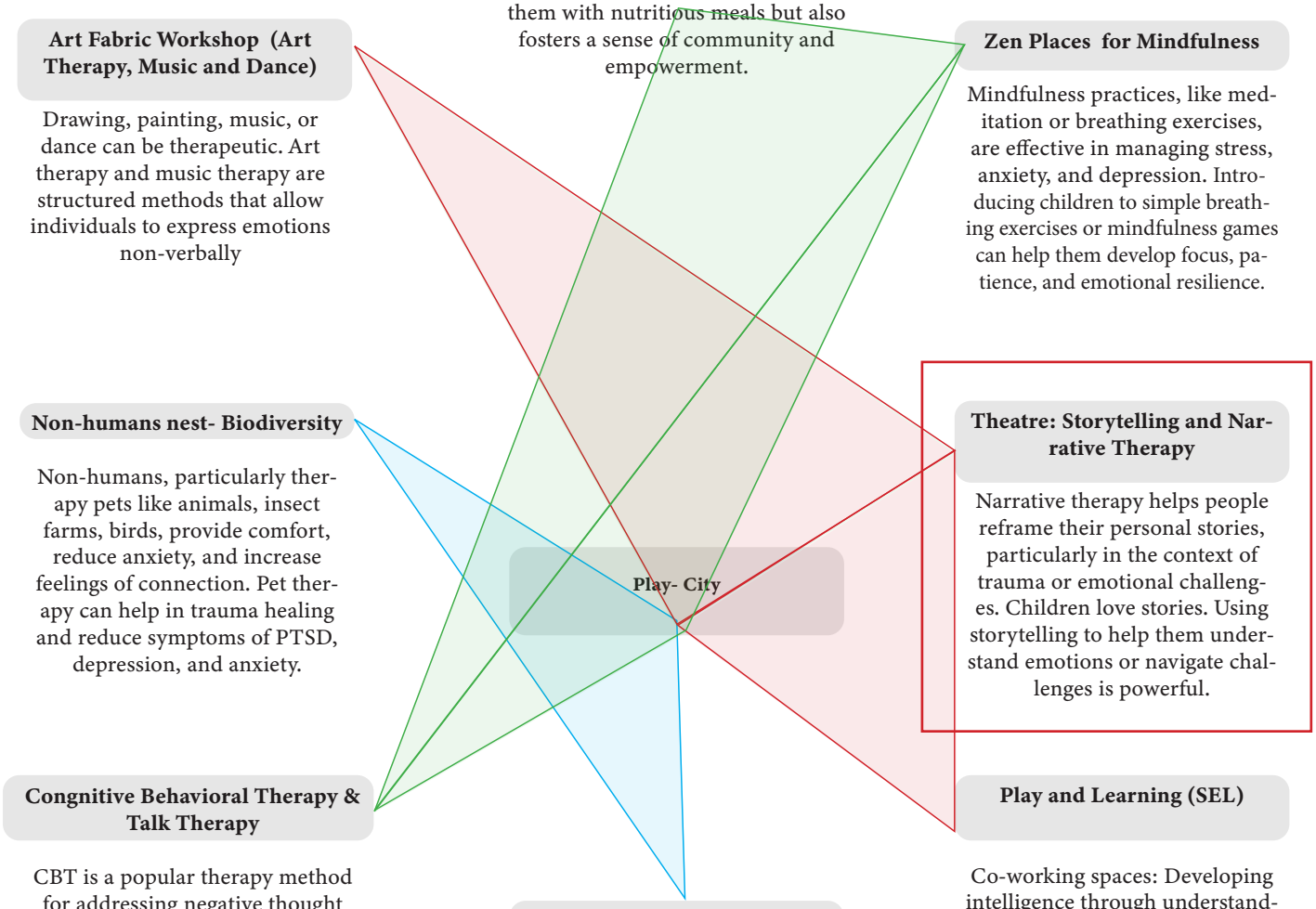
Drawing, painting, music, or dance can be therapeutic. Art therapy and music therapy are structured methods that allow individuals to express emotions non-verbally

Zen Places for Mindfulness

Mindfulness practices, like meditation or breathing exercises, are effective in managing stress, anxiety, and depression. Introducing children to simple breathing exercises or mindfulness games can help them develop focus, patience, and emotional resilience.

Non-humans nest- Biodiversity

Non-humans, particularly therapy pets like animals, insect farms, birds, provide comfort, reduce anxiety, and increase feelings of connection. Pet therapy can help in trauma healing and reduce symptoms of PTSD, depression, and anxiety.



Theatre: Storytelling and Narrative Therapy

Narrative therapy helps people reframe their personal stories, particularly in the context of trauma or emotional challenges. Children love stories. Using storytelling to help them understand emotions or navigate challenges is powerful.

Congnitive Behavioral Therapy & Talk Therapy

CBT is a popular therapy method for addressing negative thought patterns and behaviors, helping to develop healthier thinking habits. Individual or group therapy

Play and Learning (SEL)

Co-working spaces: Developing intelligence through understanding one’s own emotions and building social skills is key for personal and relational well-being. Adults can benefit from group support or peer networks to foster positive social connections. Afterschool programs being taught by university students.

Community Garden

Ecotherapy, or nature therapy, involves spending time outdoors to reduce stress and improve mood. Forest bathing, hiking, or even gardening.

The Public Condenser - The Library City

Functions to foster a new method of learing, play, and foster better mental health

Perception and Realities

Perception of Spaces

During an interview with children discussing their perception of Sundholm, the response was notably positive and free of concern:

"It's great, all my friends live nearby. The school is 20 minutes by bike. I have no problems."

This reaction reflects a sense of innocence and a limited awareness of the broader societal context surrounding Sundholm. Such perspectives underline the way age and experience shape the perception of a place. For children, architecture and urban spaces might primarily serve as a backdrop for social interaction, play, and daily routines, focusing on proximity to friends or schools. Adults, however, might assess the same space through a lens of socio-economic factors, safety, or long-term living quality.

Translating these insights into architectural design highlights the importance of creating multifunctional spaces that cater to diverse age groups. For children, spaces may emphasize safety, play, and vibrant aesthetics. For adults, the same area could incorporate functionality, cultural relevance, and practical amenities. This approach ensures that a single space is versatile enough to meet different needs, bridging perceptions across generations while fostering inclusivity and connection.

Communal Kitchen

Theatre/ Amphitheatre

Zen Places

Co-working areas

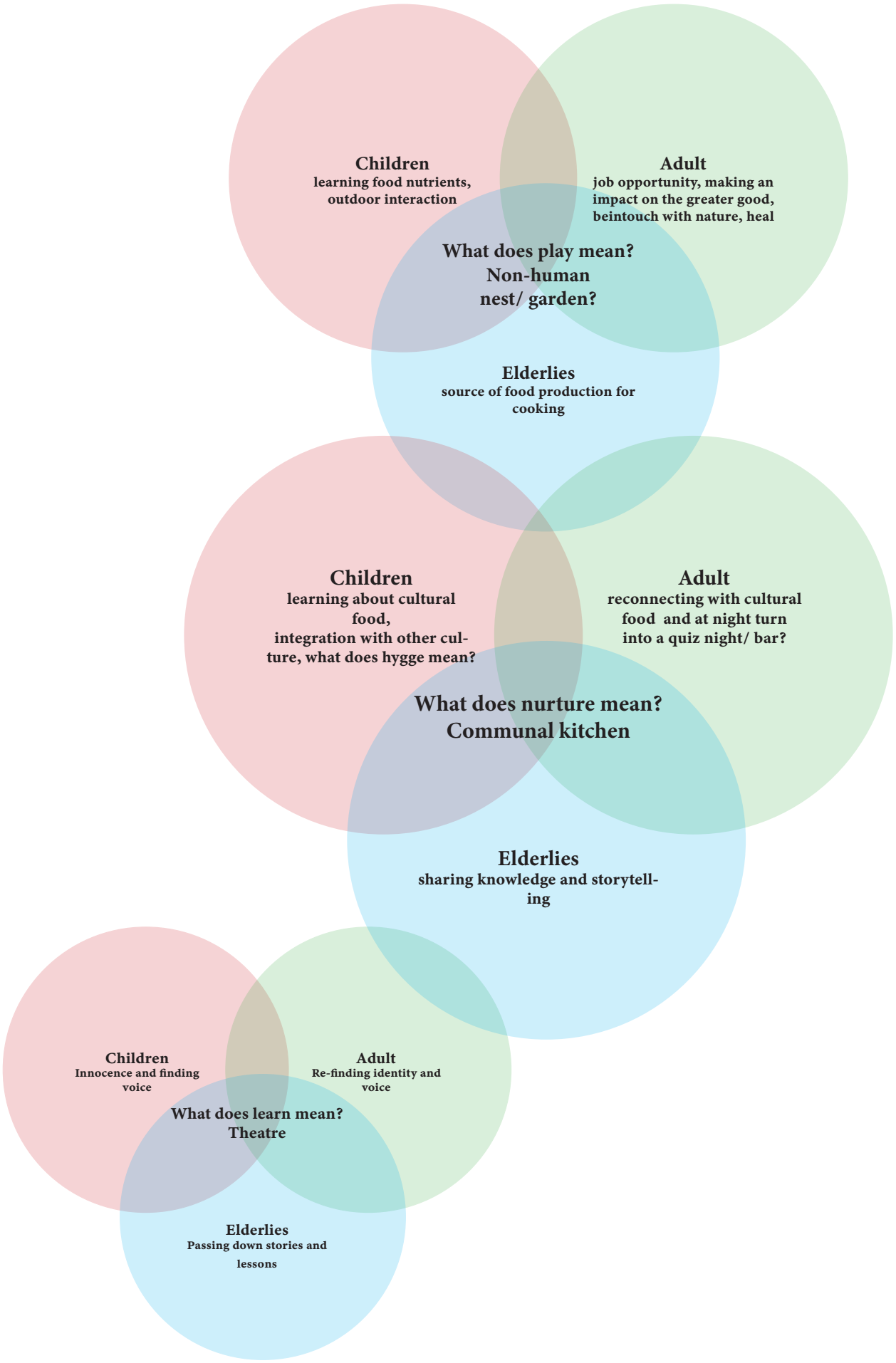
Community Garden

Non-human nests

Art- Fabric Workshops

Relationship between the targeted groups

How can spaces be percieved differently?



Nurture, Play and Learn

What are the definition of these words?

Phase 1: Hybridity and Multiplicity

Education
Learn through Play

Learn and Play theorists determine the building's circulation and function. How can different targeted groups percieve play?

+

Phase 2: Healthiness

Hospital- Heal through Nature
Architecture qualities experience is through biobased ecological materiality, facade and indoor/ exterior experience

+

Functions and Circulation

Biophilic design- Mater

'Play-City'. The Methodo
The Research framework and th

Phase 3: Sustainability

Job opportunity
Biodiversity a place to nest
Sustainability movement, green corridors and biodiversity connection.

=

Play- City
A series of characters within Sundholm and surrounding site, working together as a network like biofilms

riality and Spatial Qualities

logy behind this concept.
he 3 phases to build Hard Power

Chapter 5

Chapter 5 - The Research framework

5.1 Phase (1)– Learn through Play
5.1.1 Where is play found?
5.1.2 Play Theorists and its influence on program and circualtion
5.1.3 Case Studies

5.2 Phase (2)– Heal through Nature
5.2.1 The benefits of Urban Community Garden
5.2.2 Case Studies within Copenhagen
5.2.3 Biophilic Designs and Case Studies

5.3 Phase (3)- Biodiversity implementation in Architecture
5.3.1 Urban loss of Biodiversity
5.3.2 MIT Senseable Lab prototype
5.3.3 Architecture with integration to biodiversity ecosystem

phase 1:

learn through
play

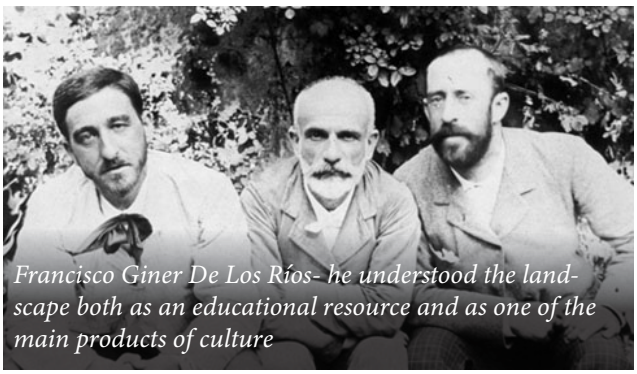
Towards a Playful City → Play & Learning

Lefebvre
Lefebvre's notion of the street as a place of 'disorder'. He writes, The street is a place to play and learn. The street is disorder. All the elements of urban life, which are fixed and redundant elsewhere, are free to fill the streets and through the streets flow to the centers, where they meet and interact, torn from their fixed abode. This disorder is alive. It informs. It surprises.

Play is identified as an instigator for creative social encounters, one which redirects and vitalizes the diversity of urban life and values.

Johan Huizinga
Johan Huizinga in Homo Ludens: A Study of The Play-Element in Culture as one of the innate conditions for cultural development. play serves as a medium for learning and cognitive development in the classroom environment.

Andrzej Zieleniec
Andrzej Zieleniec identifies these characteristics as the: functional delineation of spaces and people in the city, a homogenous experience of the environment, and a dominance of traffic over walking and possibilities for lingering in space.



Francisco Giner De Los Ríos- he understood the landscape both as an educational resource and as one of the main products of culture

Johan Huizinga
Johan Huizinga, play is foundational to culture-making Homo Ludens: A Study of The Play-Element in Culture, he argues that the development and generation of culture and civilisation rest upon a 'contested' realm for which the dialectic nature of play is innately present

Reggio Emilia
Reggio Emilia curriculum seeks to playfully engage children with interactive learning experiences in the classroom environment as means to encourage a self-instigated discovery of knowledge. These classrooms are designed to be highly provocative spaces whereby colour, sound, light, and materiality are manipulated to instigate curiosity and creative engagement with learning materials. Social encounters and interactions are also encouraged as part of the students' cognitive development. Therefore, the classrooms are spatially arranged around a central common, referred to as the piazza (the Italian word for the city square)

Paulo Freire
Paulo Freire, an originator of Experiential Education, points to the capacity for learning in developing social consciousness and societal action.

In the Pedagogy of the Oppressed, conscientizacao leads to physical agency in developing and enhancing people's capacities to participate in active citizenships.

he argued current system oppress creativity due to:
1) inherent social hierachy between teacher and student
2) diological approach between teacher and student by allowing an open exchange of dialogue.

play and learning are united by their shared ambitious towards socio-cultural development and transformation against oppresive societal systems and spaces

'Library-City, Fields, a

The typology of libraries has evolved over the years, transitioning

Where does play happen? Introduction to Intersection

Play as a Methodology

Quentin Stevens
Quentin Stevens defines what he terms the ‘ludic city’ as play that does not occur randomly, but at intensifying spaces such as urban intersections which unexpectedly concentrate diverse people and events.

At intersections, proximity, visibility and movement force unexpected social encounters with people of different needs and interests. Dualistically, the vision at intersections can broaden and thereby divert people’s attention beyond predetermined routes and objects.

Patricia Hill Colliins and Sirma Bilge
Patricia Hilll Collins and Sirma Bilge in the book, Intersectionality, describe the contemporary notion of ‘intersectionality’ as an interdisciplinary analytical framework for studying the complexity of human identity and experiences.

When it comes to social inequality, people’s lives and the organisation of power in a given society are better understood as being shaped not by a single axis of social division, be it race or gender or class, but by many axes that work together and influence each other.

Play
Play has been implemented across a diverse range of mediums including drawing, collaging, mapping and model making, to investigate and integrate spatial and socio-cultural complexity, or an ‘intersectionality’, within the built fabric.

Aarti Kanekar
In Architecture’s Pretexts: Spaces of Translation, Aarati Kanekar believes that architectural complexity builds through the ‘translation’ between mediums whereby the richness of meaning accumulates through the “slippages, dislocations, and transformations

and Learning Devices’
from purely functional spaces to increasingly inclusive public hubs

From Public Condenser to Library City

Library as City-Making

Huib Haye van der Werf
Huib Haye van der Werf in The Architecture of Knowledge: The Library of the Future, writes the contemporary public library no longer merely houses and catalogues books and records. It also provides public access to the Internet, computer workstations, recreation facilities such as café/restaurant, exhibition spaces, educational programs and in some cases even day-care facilities. In many ways, the library has become an appendage of public space.

Shannon Mattern
As Shannon Mattern has identified, libraries amount to a multimodal "network of integrated, mutually reinforcing, evolving infrastructures - in particular, architectural, technological, social, epistemological, and ethical.

Huib Haye van der Werf
Huib Haye van der Werf puts it: "In the case of the public library, the architecture of knowledge is also the architecture of society

Caue Capille
Cauê Capillé argues that "the architecture of contemporary libraries—although perhaps freed from the traditional educational function—still frames social relationships in modes of its traditional ideologies of politics and culture."

Zeiger
An alternative and socially focused strategy for disseminating the library can be found in the increasingly common pop-up, interventionist libraries. As Mini Zeiger sees it, they provide "provisional, opportunistic, ubiquitous, and odd tactics guerrilla and DIY practice and urbanism." These interventional libraries, often small, kinetic and motivated by social or political aims, temporarily reappropriate small areas of urban spaces

(Instead of one giant library- how can you design interventions at intersections through pop up scale.

At an extreme, they may even align with protest and anti-institutional movements such as the Occupy Wall Street movement.

Zeiger
This project borrows the interventionist spirit of pop-up libraries. It seeks to test the viability of such socio-politically charged dissemination of the library as a model for revitalising the neighbourhoods. Of crucial value is the notion of intersecting, in more radical terms, the library and the city.

Rather than a library-in-the-city model, it suggests the possibility of a city-as-library itself which seeks to reconfigure citizenry rights and agency to cities. Less subject to the monotony and monopoly of commercial interests, this research proposal

Zeiger
This communal ownership of pop-up libraries is most evident in their partnerships with galleries, schools, cafes, museums, or theatres. In pursuit of broader social outreach, these 'libraries' eschew singular place-attachment by tapping into and fostering geographical-social exchange networks and new forms of librarianship.

'Library-City, Fields, a

The typology of libraries has evolved over the years, transitioning

Learning Devices, Fields & Cities
Case Studies from multiscale XS, S, M, XL

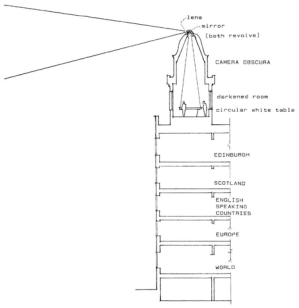
Precedents
Split into three parts ranging from architectural object, the urban field and the city/ regional network:

1) Learning Devices: singular room to the building, may orchestrate and frame learning processes in a socially collaborative and interactive manner. In serving this social dimension of learning, architecture serves as a malleable and adaptive instrument

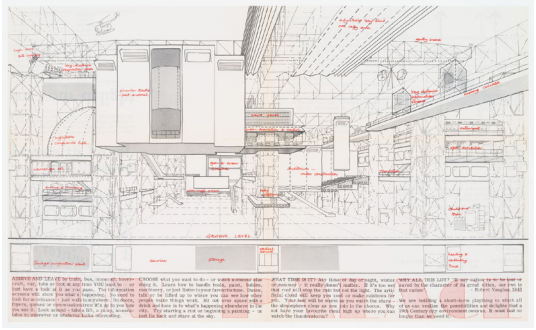
2) Learning Field: broaden the focus from the building towards the reprogramming of urban landscapes as strategies to remediate the social and ecological fabric. Typically described as landscape urbanism, these projects contest traditional models and understandings of cities. can be considered as fields of complex superimpositions of programs, events and circulation.

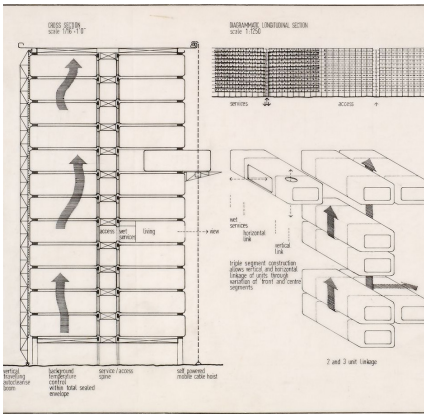
3) Learning Cities: Learning Cities describe a new formula for urbanism whereby educational and cultural interventions are injected into the existing, and often dilapidating, urban environments as strategies for socio-cultural revitalisation. The selected precedents demonstrate the regeneration and adaptive re-use of existing urban infrastructures with anticipation for further growth and mutation in their operational functions over time

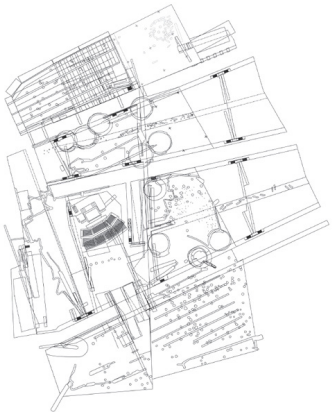
Wunderkammern and Wunderkabinette

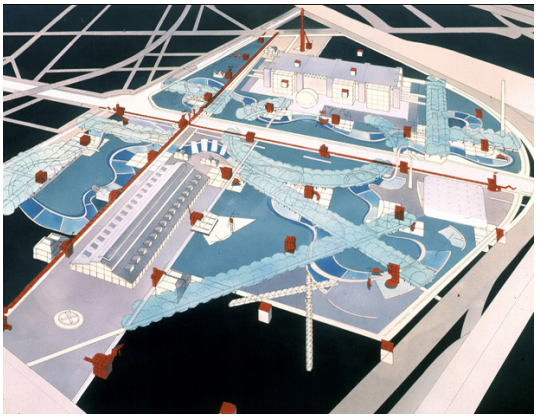


Outlook Tower, Patrick Geddes


Fun Palace, Cedric Price and Joan Littlewood


Potteries Thinkbelt, Cedric Price


Grand Egyptian Museum, Smout


Parc de La Villette Competition, Rem Koolhaas

and Learning Devices’
from purely functional spaces to increasingly inclusive public hubs

Froebel's Kindergarten Theory

Core Principles

1) The Child as a Unique Individual
Froebel believed that every child is a divine creation, possessing unique talents and potential. Education, therefore, should respect and nurture the individuality of each child.

2) Play as a Central Component
Froebel emphasized play as the primary method of learning for young children. Play is seen as purposeful, allowing children to explore, experiment, and express their thoughts creatively.

3) Unity and Connection
Froebel highlighted the importance of interconnectedness:

4) Between the child and the natural world.
Between the child and their family or community.
Within the learning process itself, integrating physical, mental, and spiritual development.

5) The Role of Nature
Nature plays a vital role in Froebel's educational philosophy. He encouraged learning from and through nature to develop a sense of wonder and understanding of the world.

6) Self-Activity and Creativity
Froebel believed that education should foster self-expression and creativity. Activities like drawing, modeling, and building allow children to externalize their inner thoughts and feelings.

7) Education as Development
Learning, according to Froebel, is a process of unfolding, where a child's innate capacities grow naturally. The educator's role is to support this unfolding by providing an environment conducive to exploration and discovery.

Montessori education (child-centered, hands-on learning).

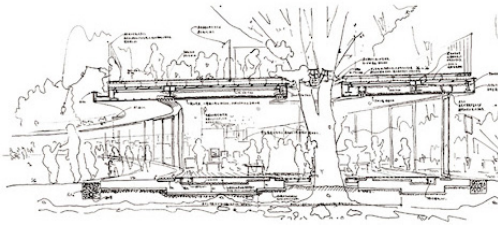
Waldorf education (holistic and nature-based approaches).

The global kindergarten movement, recognizing the importance of structured early childhood environments.

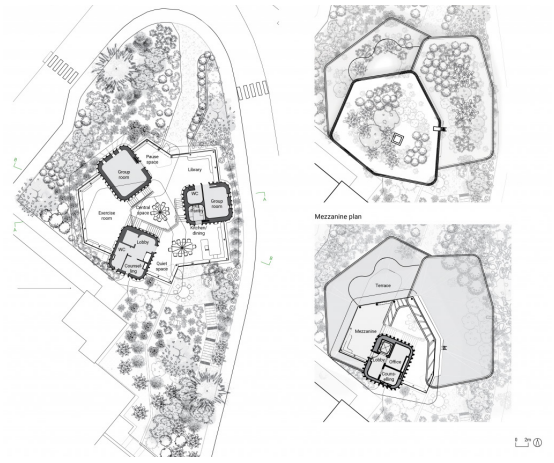
Froebel’s Kindergarten Theory

Play and Education

Fuji Kindergarten (Tokyo, Japan) Tezuka Architects- Location: Tachikawa, Tokyo, Japan
A circular kindergarten with a roof designed as a continuous play space. Open classrooms blur the line between indoor and outdoor learning, encouraging exploration.
Trees are incorporated into the building structure, with branches penetrating classrooms and play areas. Relevance: Encourages free play, collaborative learning, and interaction with nature.
Takeaway: Architecture as an active participant in children’s education and growth.



Maggie’s Centre Leeds (Leeds, UK)
Architect: Heatherwick Studio
Combines education with mental health support in a garden-like environment. Focuses on playfulness and human-centered design to create a calming yet interactive space. Includes indoor spaces for workshops and support groups and outdoor areas for exploration. Takeaway: Blends educational opportunities with playful, restorative interactions with nature.



Froebel’s Kindergarten
centered around play, the child’s interaction and understanding of nature and the underlying principle that children were intelligent in their own right. Singing, making music, arts and gardening were among the early occupations that founded Kindergarten pedagogy.

Froebel’s seventh gift, a series of parquetry tiles in various shapes and colours that can be tiled to form patterns. The seventh gift moves from the more three-dimensional pure geometries and moves into the flat plane of representation, wherein the surface is no longer just a quality comprising the larger solid, rather the defining feature of the object, which would be rendered in pairs of complementary colours.

Open Air School

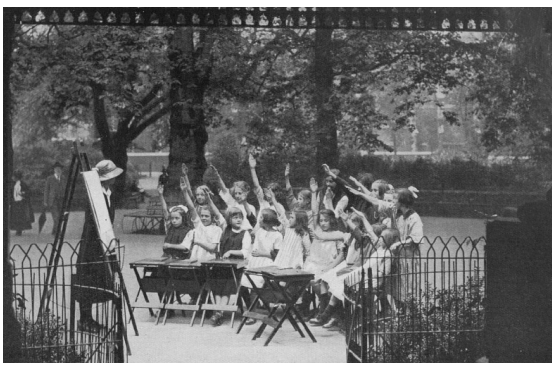
Core Principles

Open-air schools are institutions designed to provide education in an outdoor environment to promote physical health and wellbeing, particularly for children at risk of or recovering from illnesses like tuberculosis. These schools emphasize exposure to fresh air, sunlight, and nature, often incorporating open or semi-open structures and outdoor classrooms. Here are some notable examples:

Charlottenburg Open-Air School (Germany, 1904)
The first open-air school, established in a forest near Berlin. It aimed to improve the health of undernourished children by combining education with fresh air and physical activity.

Brockwell Park School (London, UK, 1907)
One of the earliest open-air schools in England, located in a park. It featured open-sided buildings and emphasized healthy eating, rest, and outdoor activities.

Montessori Open-Air Classrooms (Italy)
Maria Montessori incorporated open-air concepts into her educational philosophy, emphasizing outdoor activities and the natural environment.
and exploration.



Open Air School

Core Principles

Forest Schools (Scandinavia, 20th Century)
Originating in Denmark and Sweden, these schools are rooted in the open-air education tradition and focus on learning through outdoor play and exploration.

Modern Examples
Waldkindergarten (Germany and Austria)
Also known as “forest kindergartens,” these schools operate entirely outdoors, regardless of weather, and are popular across Europe.

Outdoor Charter Schools (United States)
Schools like Teton Science Schools in Wyoming and IslandWood in Washington emphasize outdoor and environmental education as part of their curriculum.

Green School Bali (Indonesia)
A modern take on open-air education, this school combines sustainable design with outdoor and experiential learning.

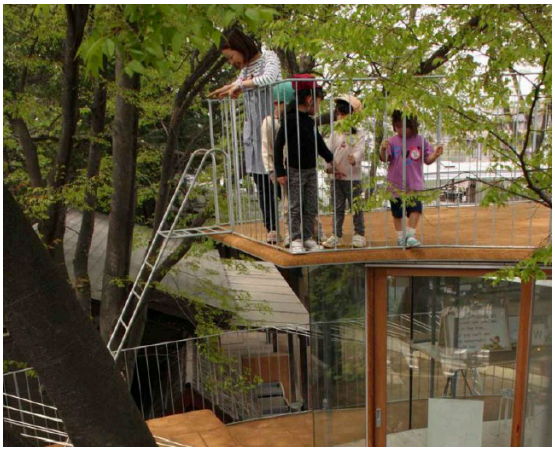
Forest School Movement (Global)
A resurgence of open-air education, these programs focus on nature-based learning for preschool and elementary-aged children, especially in the UK, Canada, and the US.

Froebel's Kindergarten Theory

Core Principles

OB Kindergarten and Nursery by HIBINO-SEKKI + Youji no Shiro.

The net itself is fixed only at the top, which allows for the net to actively respozn d to the movement of the children as they climb through the funnel, making for more interactive gross-motor development and offering a more challenging and imaginative way than a traditional staircase.

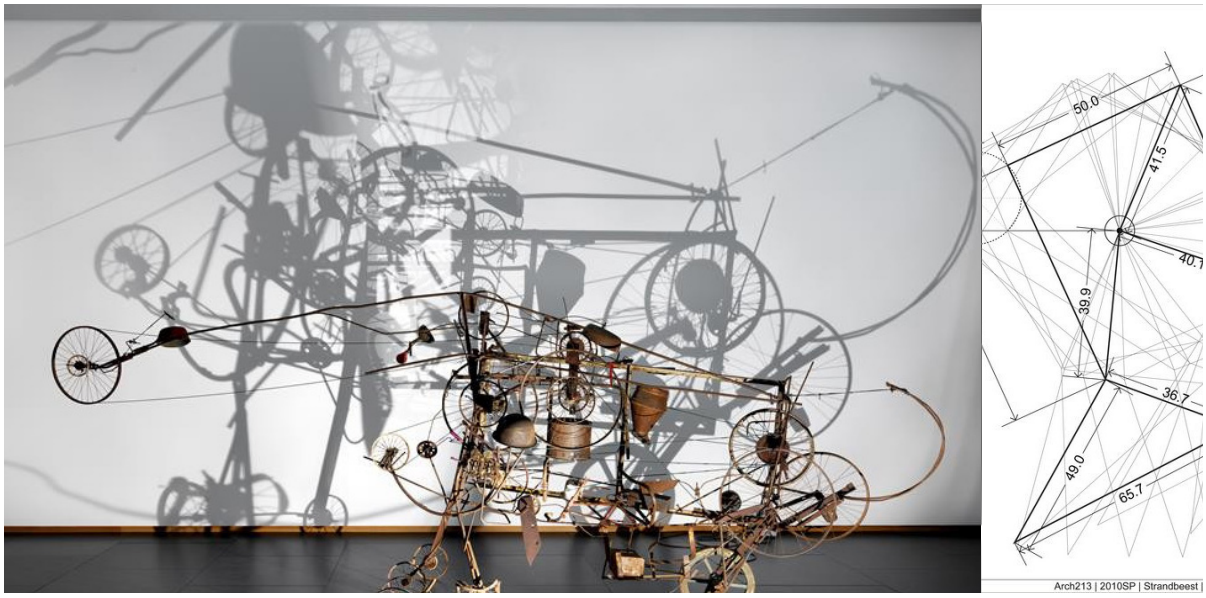


Japanese firm Tezuka Architects designed Fuji Kindergarten
to incorporate tree-climbing as a means of traversing the building. Children circulate and play on the helical structure that surrounds the tree. This structure seems to fall somewhere between the realm of a playground and a functional space, with pockets of robust interior space located intermittently as children climb up through the structure.

Architect Isamu Noguchi can be viewed as a design approach that aims to dissolve the playground paradox, replacing the traditional catalogue of swings, slide and see-saws with what would be the first 'designed playscapes', or rather playgrounds that utilised the ground condition as the primary means of forming the playground.

Moving. Alive. Living.

Jean Tinguely and Strandbeest



phase 2:

heal through nature

What does Garden mean?

It's not always a Dream, Garden of Eden

Beyond Eden and Romanticism: Gardens are more than idyllic retreats or symbols of paradise. They are practical, evolving spaces reflecting the challenges and aspirations of humanity.

Wealth and Privilege: Historically, gardens have been markers of social status and privilege, showcasing the wealth of their owners through their elaborate designs, rare plants, or sheer scale.

Testing Grounds for Ideas: In the face of pressing global challenges such as the climate crisis. They can demonstrate methods for resilient agriculture, biodiversity conservation, or even new modes of community living.

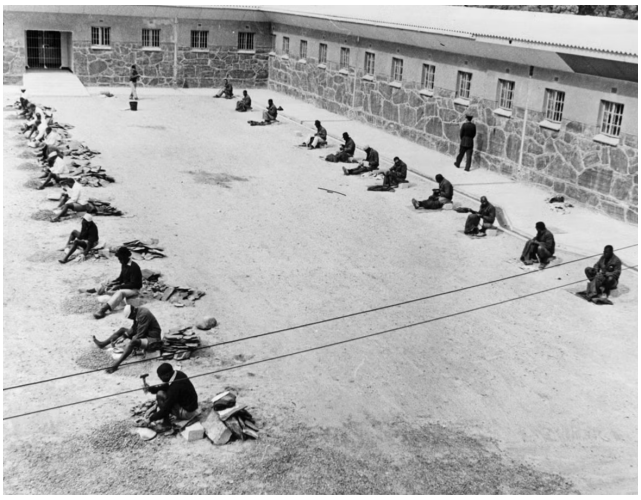
Manual Labor and Seasons: Behind the beauty of gardens lies relentless work—planting, tending, and enduring the endless cycles of nature. This manual effort underscores the connection between humans and the earth, reminding us of the labor that sustains life.

Gardens of Struggle and Resistance: War Gardens: Like those documented by Lalage Snow, war gardens become a means of survival and resilience during crises, demonstrating how gardens can support life even in the most dire circumstances. Mandela's Prison Garden: Nelson Mandela's garden in prison was not just a source of physical sustenance but a profound metaphor for intellectual growth, political resistance, and self-determination. The act of gardening transformed his prison courtyard into a site of hope and ideological cultivation.

Accessible and Functional Gardens: Figures like Mien Ruys contributed to democratizing garden design, ensuring gardens were not just luxuries for the privileged but accessible to wider populations. Functional and aesthetic designs for everyday people transformed gardens into spaces for all.

War Gardens, by photographer Lalage Snow

War Gardens, by photographer Lalage Snow

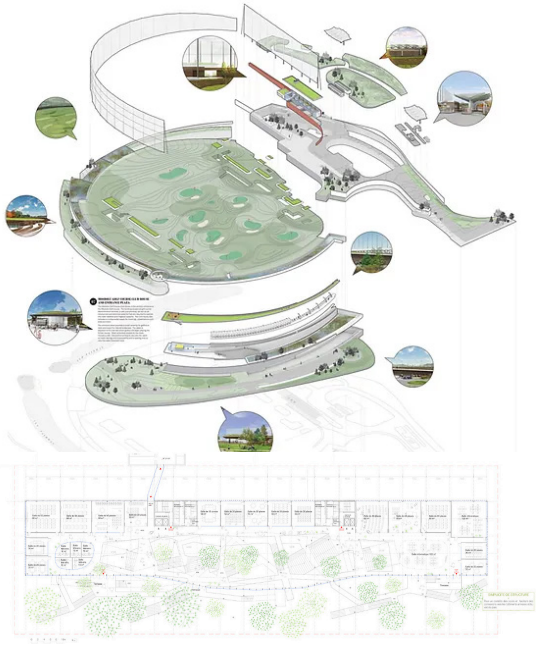


Nelson Mandela's Prison Garden

Garden apart of city?

Playful Nature Architecture

House K by fujimoto
House K is a residential project designed by renowned Japanese architect Sou Fujimoto. Located in Oita, Japan, the house exemplifies Fujimoto's innovative approach to blending interior and exterior spaces while challenging traditional notions of architecture.



croton water filtration plant
About: The Croton Water Filtration Plant, located in the Bronx, New York, is a cutting-edge facility that filters and supplies millions of gallons of drinking water daily to the city. Hidden largely underground to preserve green space above, the plant integrates advanced water purification technology with innovative design. It addresses urban water needs while balancing environmental sustainability, providing a crucial lifeline for one of the world's largest metropolises. z

Sou Fujimoto Learning Center
With an idea based on “flexibility, mingling and openness,” Sou Fujimoto Architects, Manal Rachdi OXO Architects and Nicolas Laisné Associates have been announced as winners of a restricted competition to design a new Ecole Polytechnique learning center at Paris-Saclay University. The winning scheme, chosen over four finalists, will consolidate six institutions under one roof: Ecole Polytechnique, Institut Mines-Telecom, AgroParisTech, ENSTA ParisTech, ENSAE ParisTech and Institut d’Optique (IOGS).

Vertical Farms SOA Architecten
Designed by SOA + holdUP, the FERME DARWIN Proposal synthesizes a vertical farm and cultural facilities in an original manner. Stacking these disparate elements of art, music, and education up is like celebrating the insertion of agriculture in the very heart of the city. Anchored in a visionary city like Bordeaux, the project also addresses health, food, ethical and social concerns. More images and architects’ description after the break.

Urban Gardening as Social Innovation

Levkoe
Many volunteers in urban gardens mentioned multiple health benefits eg. stress reduction , physical fitness, and an increased understanding of nutrition and healthy eating.

Louv
As cities get denser, community gardens may provide in, some cases, the only opportunity for residents to experience contact with nature and biodiveirsty.

Firth et al.
Urban gardening initiatives provide shared third space and joint atcitivites, inculding among others growing, cooking and eating, which allowed people with different background and ages to interact. the green aspect of garden invite for leisure use. As a result of the diversity of the people involved, it also makes an ideal place to integrate immigrant communities within the local one and provides community access to locally grown food.

Krasny and Tidball
the ability of urban community gardens to gather together individuals holding diverse practical and scieitific knowledfge, thereby adding an element of knowledge exchange and educatino to the gardening experience; foster cross-displinary learning, integrate science, environmental learnings, civic actions, as well as multicultural and integrational understanding.

Case Studies/ Interviews in Copenhagen

Urban Reg

"we have converted an anti-terrorist wall into a beautiful bench on top, that is pleasant to look at" [...] nobody wants Copenhagen to be transformed in a concrete jungle" (Respondent 11); "we make the city greener and more beautiful"

"with drug addicts we wanted to create a sense purpose in their lives" ; "after we started this gardening program, less criminality has been noticed in the area [...] it is really easier to talk to homeless people when all are working in the garden and ask each other for advices"

Social R

"close community of people living in the area, by favoring social interactions and engagement in common projects"

see my clients becoming more cohese, more patient and respectful towards one-another"; "in schools, kids learn how to work together to achieve common results, learn that we depend from one another
and need each other"

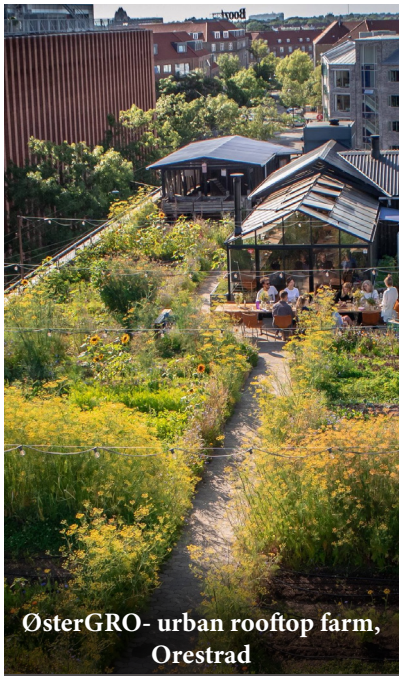
It starts with a seed: The diffusion of social i
case studies of urban commun

generation → **Environmental Resilience**

Byhaven 2200 (Nørrebro’s Urban Garden)

“the urban farmers provide people with new connections to food and environment” (Respondent 1); “the municipality loves what we are doing for the city and they are well aware of the immense potential of urban farming for the environment

“we want people to learn about plants and animals so they can start taking care of it now and in the future” ; “gardening and contact with nature and learning about it, changes people mentality for the better” , “We get people the chance to grow things so they become knowledgeable [...] enriching the classroom experience through hands on learning”


ØsterGRO- urban rooftop farm, Orestrad

esilience → **Well-being**

The Generational Gardens” (Generationshaverne), Valby

“kids are not used to talking to elderlies in their daily lives, but the elderlies see kids and they just want to hug them”; “this is a place where we want everybody to feel welcomed and accepted [...] our recipe is to always create a fun and friendly atmosphere”

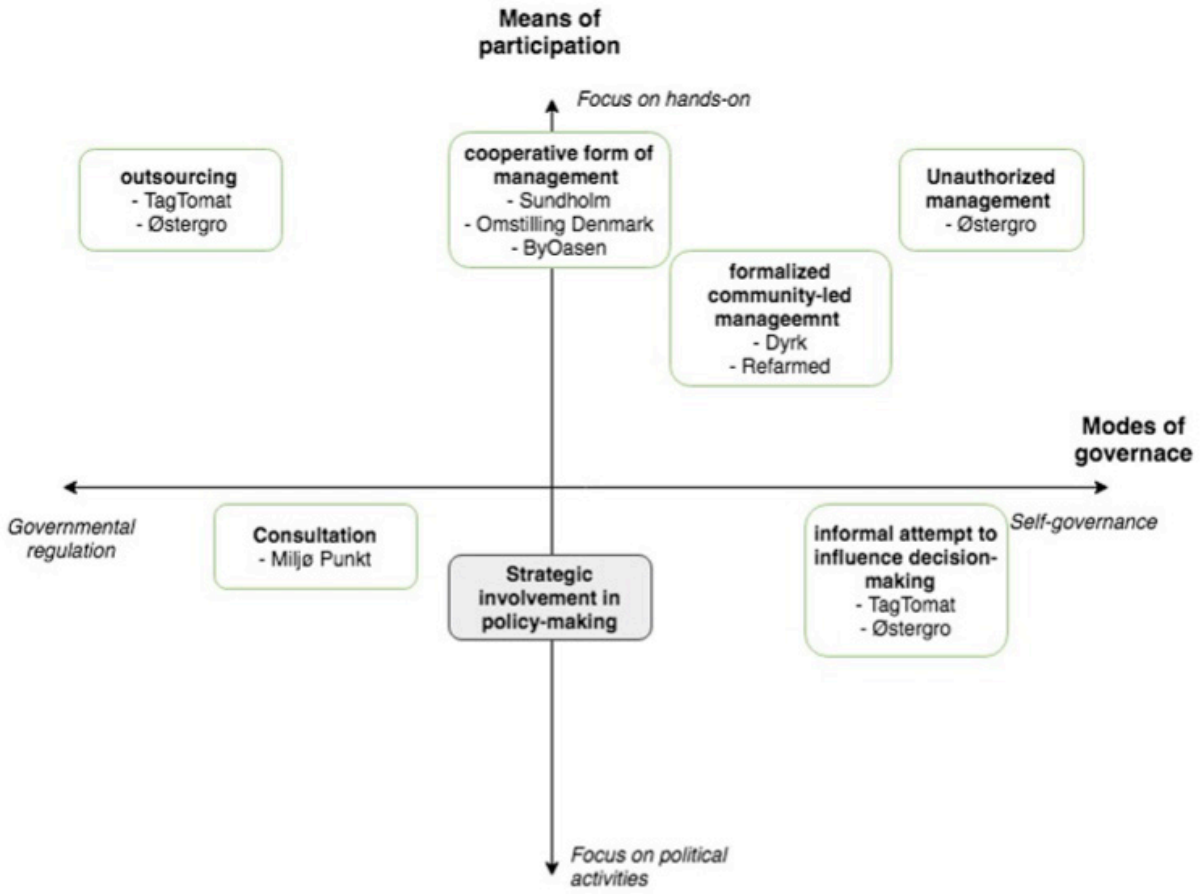
“people are tired of busy lives and to eat things that are produced God knows where, [...] through gardening they learn to develop patience and learn how to exercise care” , “a while after starting to garden in communities you realize that people want to start eating organic and enjoy living “slow””

Sydhavnen Urban Garden (Sydhavnens Haver)

nnovation in an urban governance context :
nity gardening in Copenhagen

Participatory Architecture
A balance of top-down and bottom- up architecture

As a result of the wave of liberalization that took place within the 1980s, there has been a progressive shift towards a new model, often denominated as the 'New Public Management paradigm' (Hughes, 2012). Many experts however do not actually consider it as a proper paradigm, but rather as the introduction of new principles and mechanisms of governing that supplemented and created tensions with respect to the classical system of public administration (Torfing et al, 2013:14).



Two-dimensional matrix depicting clusters of participatory govermance practices by mode of govermance and means of participation.

Biophilic Design

- Biophilic Design: Integrating nature into the hospital environment to reduce patient stress (e.g., Khoo Teck Puat Hospital, Singapore).
- Child-Centric and Family-Friendly Design: Customizing hospital environments to meet the unique needs of children and their families (e.g., Royal Children’s Hospital, Melbourne).
- Patient-Centered Design: Creating comfortable, non-clinical spaces with elements that make patients feel more at home (e.g., Maggie’s Centres).

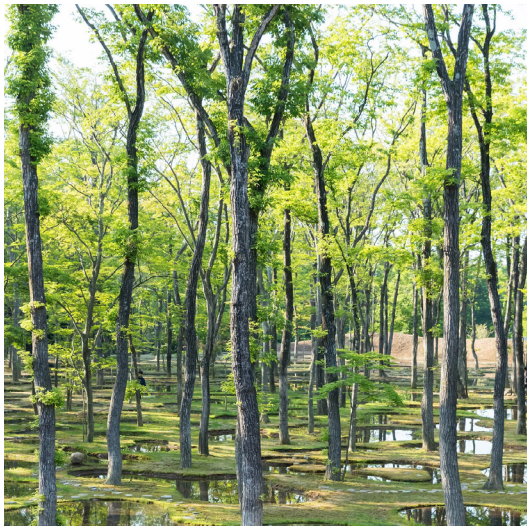
Maggie’s Centres by OMA

Maggie’s Centres by Snohetta

Underwood Family Sonoran Landscape Laboratory

Maggie’s Centres by Renzo Piano

Paimio Sanatorium by Alvar Aalto



“Architecture from Someone’s Imagination is not Enough”, Junya Ishigami

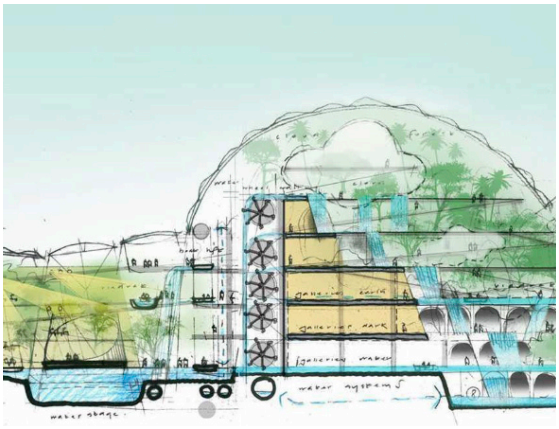
Circular Economy
Laboratories, hybridity foodhalls

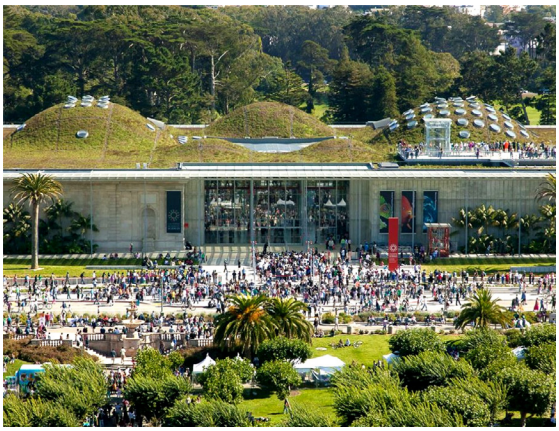
The Eden Project – Grimshaw Architects
Influence: Ecological thought and interconnectedness.
Design Features: Biomes that house ecosystems from around the world, showcasing Morton's idea of the "mesh" of life while promoting ecological education and coexistence.

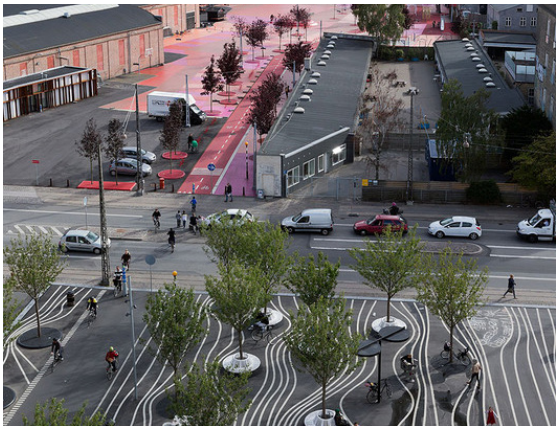
Living Roofs at California Academy of Sciences (San Francisco, USA), Renzo Piano
A living roof covering the academy's exhibits, with rolling hills mimicking the natural landscape.
Supports native plants and pollinators, such as bees and butterflies.
Acts as both a biodiversity hotspot and an educational tool for visitors.
Takeaway: Demonstrates how architecture can create a functional habitat for non-human life while serving as a sustainable human facility.

Case Study: Superkilen Park (Copenhagen, Denmark) BIG (Bjarke Ingels Group), Topotek 1, Superflex
A vibrant urban park blending play areas, gardens, and multicultural educational elements.
Features biodiversity zones alongside playgrounds and picnic spaces.

ICO Eataly World (Bologna, Italy)
Architects: Carlo Ratti Associati (concept)
Design Concept: A "food theme park" combining markets, restaurants, and agricultural exhibits.
Sustainability Features:
Onsite renewable energy systems power the facility, including solar panels and biodigesters.
Urban farms and gardens demonstrate sustainable growing techniques.



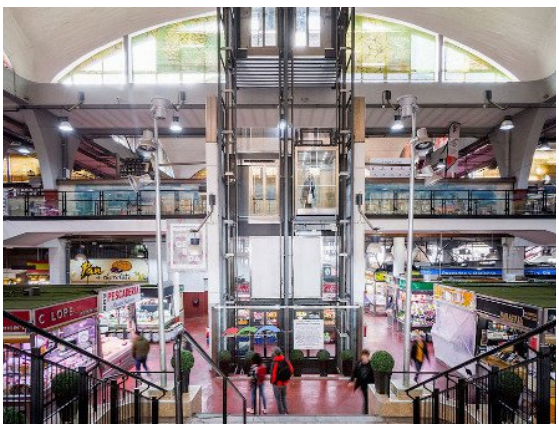




Circular Economy
Urban forest and markets

Pasona Urban Farm (Tokyo, Japan), Kono Designs
Scope: An office building with integrated farming systems.
Design:
Hydroponic and soil-based crops grown inside and outside the building.
Farmed produce is used in the onsite cafeteria.
Functions:
Employees participate in farming activities to reduce stress.
Provides food while showcasing sustainable urban farming techniques.
Takeaway: Integrating food production into corporate spaces fosters a connection to nature and sustainability

ReGen Villages (Almere, Netherlands), Effekt Architects
Scope: A self-sustaining community focused on food and energy production.
Design:
Integrates vertical farming, aquaponics, and greenhouse systems.
Houses are designed to optimize resource efficiency. Produces food for residents while closing waste loops through composting and recycling.
Encourages communal living and shared responsibility for resources



Mercado de la Cebada (Madrid, Spain)
Architects: AMID.cero9 (renovation proposal)
Design Concept: A landscaped market hall with a dynamic, colorful roof featuring vegetation, solar panels, and open-air spaces. Solar panels for energy generation and rainwater harvesting systems.
Community farming areas integrated into the structure to produce local food.
Circular Economy:
Focuses on minimizing food waste with onsite composting and a biogas plant.

phase 3:

a nest for biodiversity

Sensing Garden Prototype → **Biodiversity System within the Public Condenser**

Loss of biodiversity due to urbanisation

Importance of biodiversity:
critical roles in pollination and nutrient cycling and a food source for other species- need to maintaining ecosystem stability.

Need for testing:
report lack of consistent sampling techniques across long term monitoring, seasonality of insect, extreme weather events might cause mass insect death episodes.

How are they testing now?
they are used for pest control testing- have process however they are require manual collection of geolocated image. currently there is one AI model with 40 and containing 4500 images.
another had 16 insect species with 88,670 images.

Goal now:
AI trained 1.5 million web scrapped images- focusing on western Europe region , can classify 2584 insects species

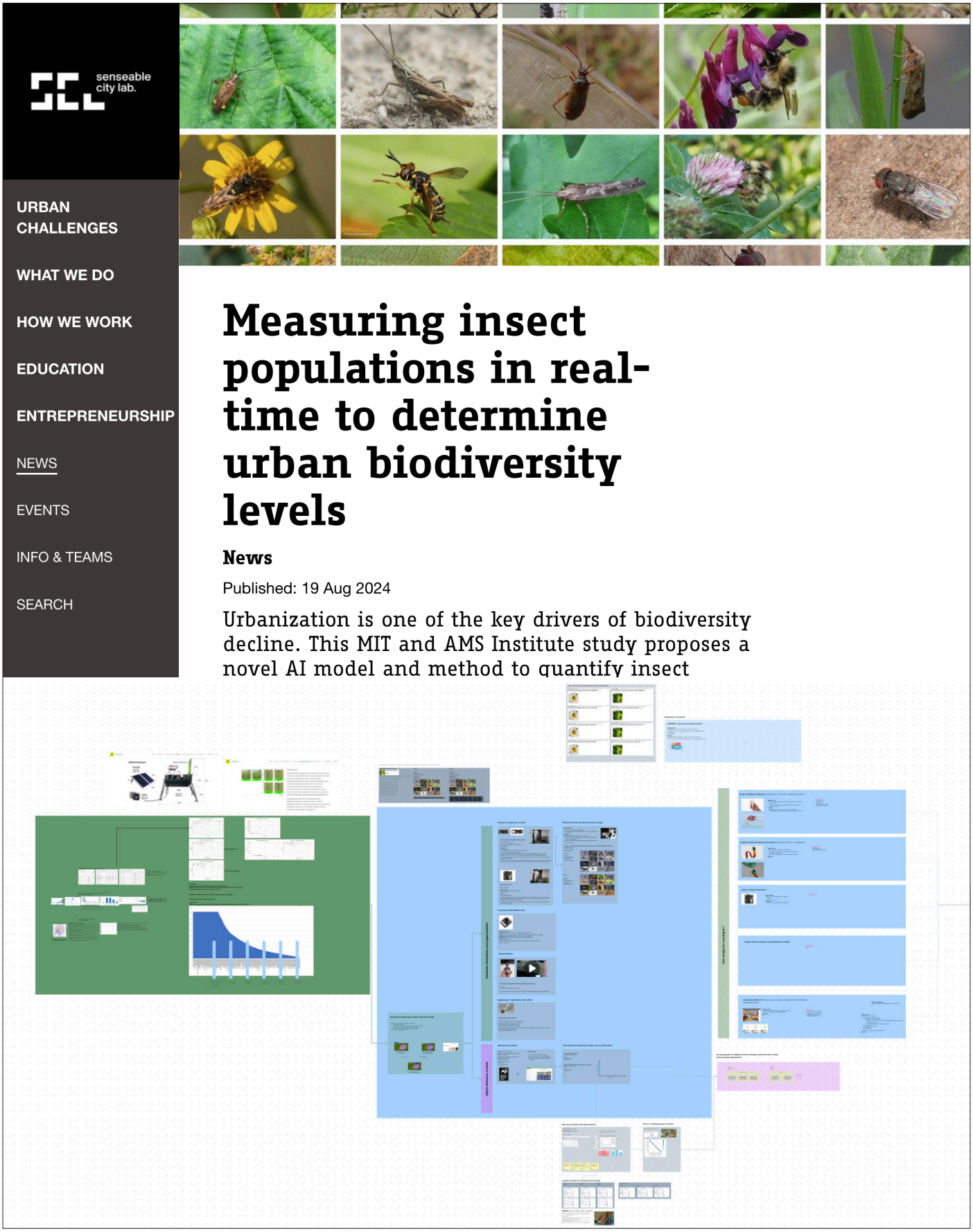
this could be deployed on images collected from high- definition cameras in urban, suburban, agricultural and natural areas. we present a code repository which uses 16 million images dataset to train custom AI models for local insect species of interest. (80% for training - 1.53 million images) and 20% for validation (0.4 million images)

Learning Fields

- what kind of biodiversity in Copenhagen?
- what attracts?
- the diveresity and designing an ecology
- contact ecologist
- visual and acoustics
- ecological monitoring
- designing nests

MIT Senseable Lab Prototype - Sensing Garden

Designing an biodiversity ecosystem



MIT Senseable Lab Prototype - Sensing Garden
Designing an biodiversity ecosystem

Relationship between biodiversity, nature, learning and children

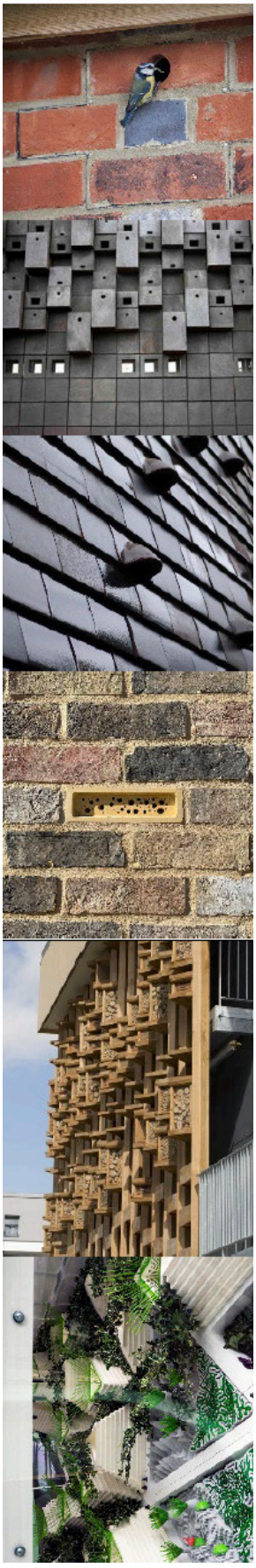
1. Cognitive Development: Enhanced Curiosity and Environmental Awareness
Biodiversity-rich environments promote curiosity, problem-solving, and environmental awareness, helping children learn about ecosystems, life cycles, and interdependencies in nature.

2. Physical Development: Gross and Fine Motor Skills through Natural Play Elements
Playing in varied natural environments enhances motor skills, coordination, and strength, as children navigate different terrains, climb, balance.

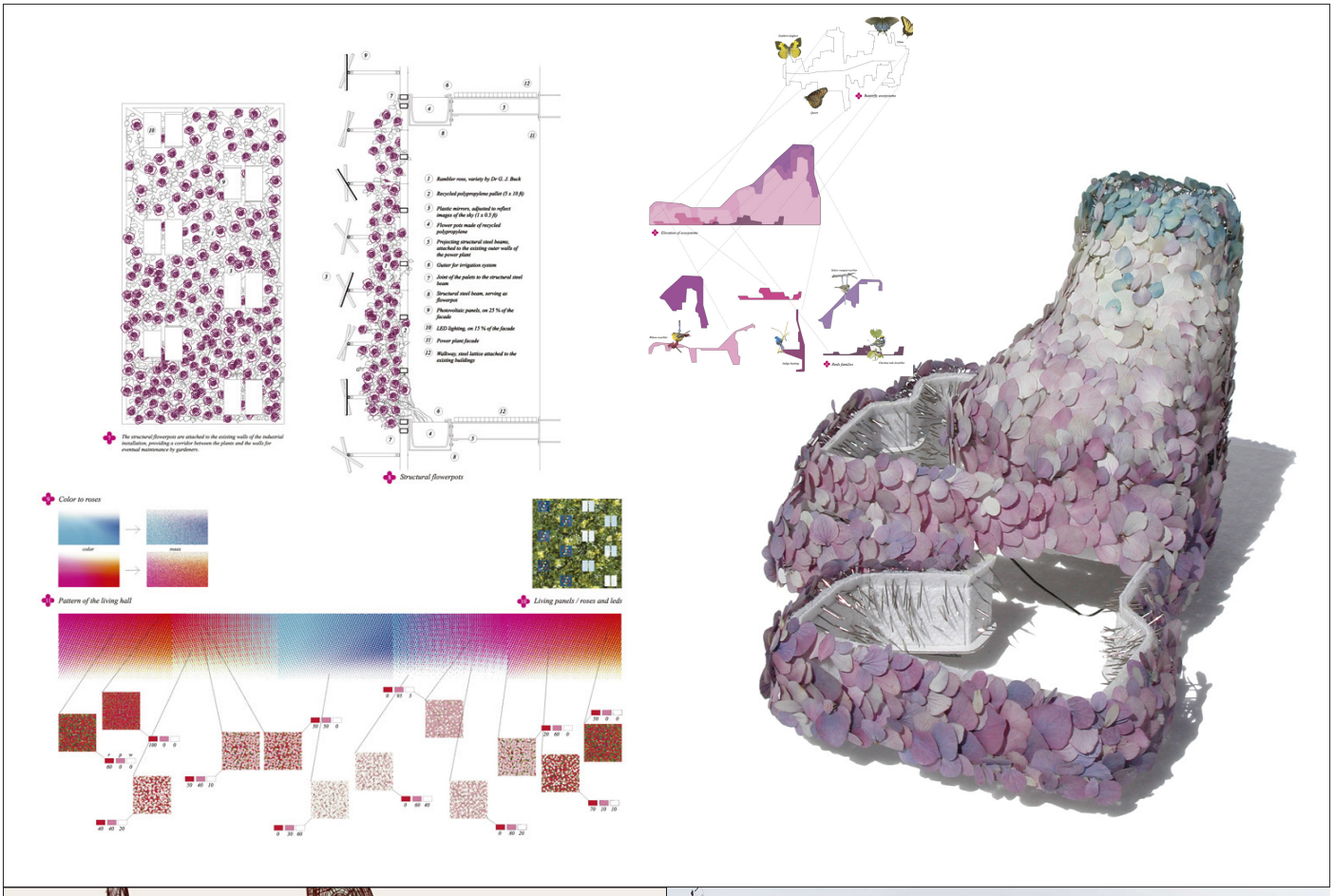
3. Social-Emotional Development: Collaboration and Empathy for Nature
Interaction with natural play spaces encourages teamwork, collaboration, and empathy for living things, fostering positive social skills and emotional resilience.

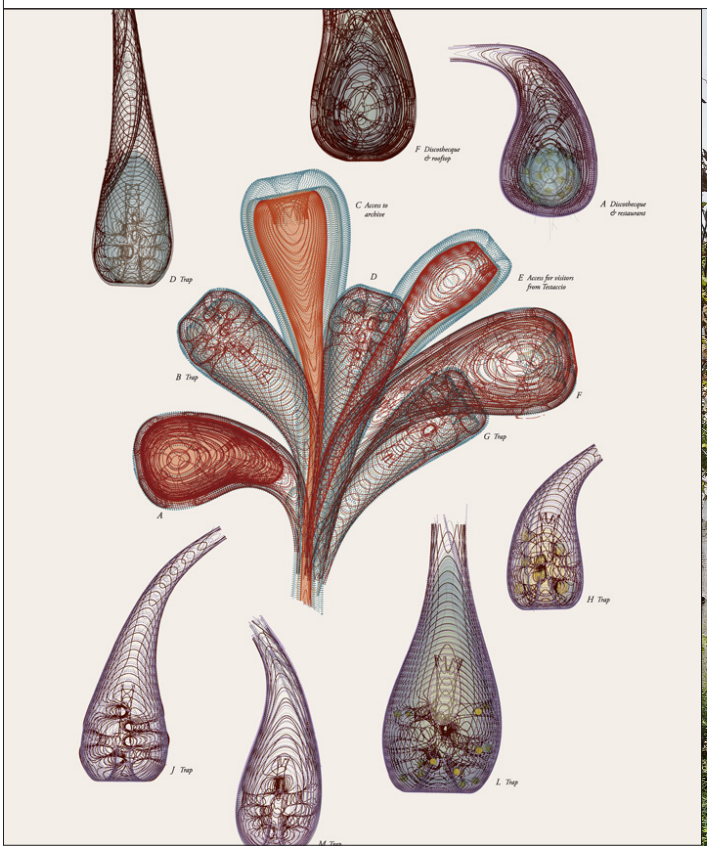
4. Sensory Stimulation: Rich Multi-Sensory Experiences
Biodiversity offers a multi-sensory experience, with different smells, textures, and sounds that enhance sensory awareness and cognitive processing.

5. Creative and Problem-Solving Skills: Adaptive Play and Nature-Based Learning
Natural environments inspire imaginative play, as children use natural elements in unstructured, open-ended ways, stimulating creativity and adaptability.



Role of Biodiversity
How can non-humans live among humans?





Biodiversity: how it relates to humans and materiality and experience

Where do they nest?

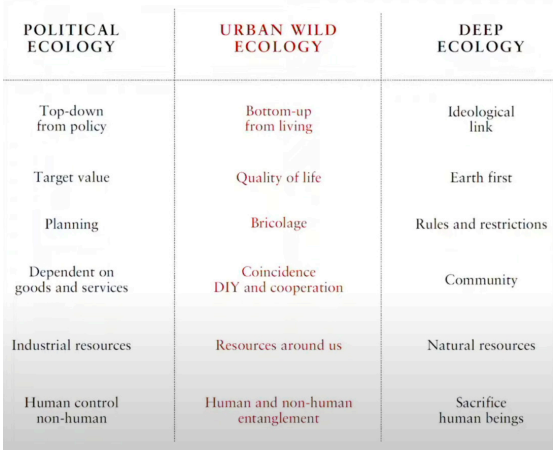
Loss of Biodiversity
and it's impact from urban scale

When did they start urbanization and a loss of biodiversity?
Urbanization in Denmark, including Copenhagen, began in earnest during the late 19th and early 20th centuries, driven by industrialization. However, earlier urban settlements date back to the medieval period. The rapid expansion of Copenhagen in the 20th century, particularly post-World War II, coincided with habitat destruction, wetland drainage, and farmland conversion to accommodate housing and infrastructure, leading to significant biodiversity loss.

What were their country species, and where were they located?
Denmark's landscape historically included:
• Forests: Home to species like red deer, pine martens, and various bird species such as woodpeckers and owls.
• Wetlands and Lakes: Hosted frogs, newts, dragonflies, and migratory birds like cranes and geese. AMAGERVEST what kind of species are there?
• Grasslands and Heaths: Supported hares, skylarks, and diverse wildflower species, which in turn fed native bees and butterflies. AMAGERVEST what kind of species are there?
• Coastal Areas: Provided habitat for seals, seabirds, and unique marine invertebrates.

. What was the cause of the loss?
• Urbanization and Infrastructure Development: Expansion of Copenhagen reduced green spaces and fragmented habitats.
• Agricultural Intensification: Conversion of wild areas to farmland, use of pesticides, and monoculture farming have severely impacted native species.
• Wetland Drainage: Denmark's large-scale wetland reclamation efforts in the 20th century, such as draining the Skjern River Delta, destroyed critical habitats for amphibians and waterbirds.

Important Non-Human in Copenhagen
• **Bees** (e.g., Wild Bees and Honeybees): Role: Vital for pollination of urban gardens, orchards, and wildflowers. Pollinators are crucial for food production and biodiversity in both natural and cultivated ecosystems. Decline: Habitat loss, pesticide use, and urban sprawl threaten these populations.
• **Butterflies and Moths**: Role: Secondary pollinators and indicators of ecosystem health. Caterpillars serve as food for birds, linking trophic levels.Decline: Loss of flowering plants and pesticide use.
• **Earthworms**: Role: Decomposers that aerate soil and recycle nutrients, improving fertility for urban agriculture and gardens. Decline: Soil sealing (pavement), pollution, and habitat changes.
• **Birds** (e.g., Sparrows, Starlings, and Owls): Role: Control pest populations (insects, rodents) and disperse seeds. Decline: Loss of nesting sites and food sources due to urbanization.
• **Bats**: Role: Natural pest controllers by feeding on insects, including agricultural pests. Decline: Habitat fragmentation and light pollution.
• **Amphibians** (e.g., Frogs and Newts) Role: Control mosquito populations and are indicators of water quality. Decline: Wetland drainage and water pollution have decimated populations.



Solitary Bees

Honey Bees

Butterfly

Cricket

House sparrow

Herring gull

Great Tit

Wood Pigeon

Falcon

Bees

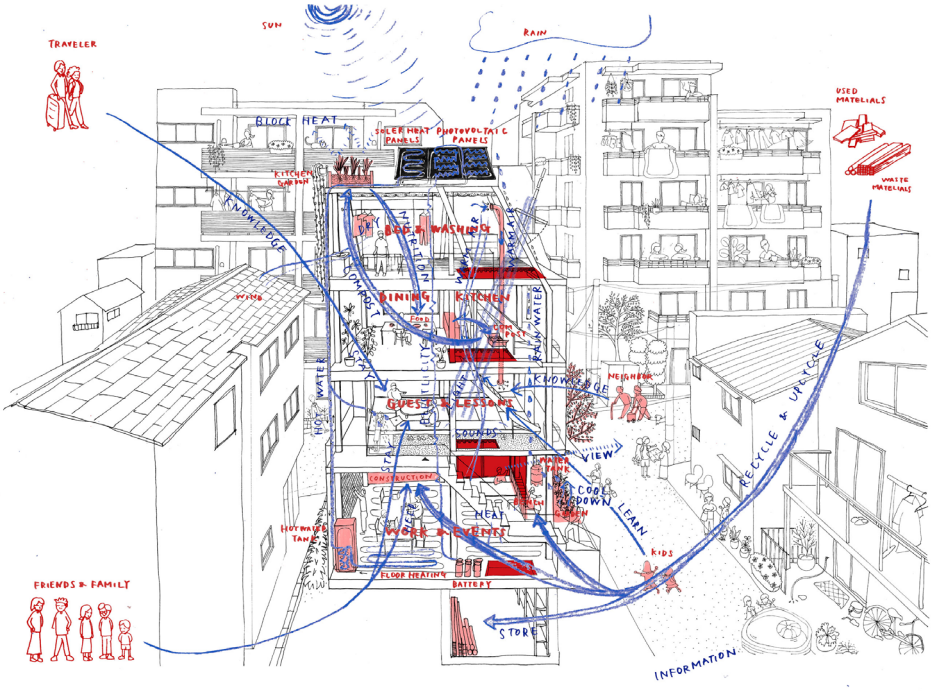
Swifts

Amagervest Faelled and neighbourhood animal users

Designing nests for these species

Participatory Urban Architecture

Job Opportunity ? Thinking from bigger scale?



Urban Wild Ecology
Studio MNM philosophy

Missing Roles
Roles in Pollination, Nutrient Cycling, and Ecosystem Stability

Food Chain Hierachy

These species contribute directly to:
• **Pollination**: Insects like bees and butterflies ensure the reproduction of many plants, including food crops and wild species that stabilize ecosystems.
• **Nutrient Cycling**: Earthworms and decomposers recycle organic material, maintaining soil health and supporting plant growth.
• **Pest Control**: Birds, bats, and predatory insects reduce pest populations, which helps sustain local gardens and small-scale urban farming.
• Ecosystem Stability: A diverse array of species ensures resilience to disturbances like disease outbreaks, extreme weather, or invasive species.

Impacts of Their Decline

• **On Agriculture and Crops**:
Reduced Yields: A decline in pollinators reduces the productivity of fruit, vegetables, and flower crops, directly impacting urban gardeners and local agriculture. **Increased Pest Damage**: Without natural predators like birds and bats, pest populations can surge, leading to more damage to crops and plants. Soil Degradation: A decline in decomposers results in poor soil fertility, which makes growing healthy plants more challenging.

• **On Urban Ecosystems:**
Reduced Biodiversity: Loss of these species leads to cascading effects on other species, disrupting food webs. **Weakened Green Spaces:** Urban parks and gardens may struggle to maintain healthy plant diversity without proper pollination and soil health. **Economic Costs:** Reduced natural pest control and pollination increase reliance on chemical inputs (pesticides and fertilizers), which are costly and harmful to the environment.

What Can Be Done?

To mitigate these impacts, Copenhagen has been working on creating biodiversity-friendly urban policies, such as:
• **Green Corridors:** Linking urban green spaces to support wildlife movement.
• **Pollinator Gardens:** Planting diverse native flowering plants in parks and neighborhoods.
• **Pesticide-Free Zones:** Reducing chemical use in urban and suburban areas.
• **Education Campaigns:** Encouraging communities to understand the value of non-human species and participate in conservation efforts.

What Will Attract These Animals?

• **Habitat Restoration:** Planting native vegetation that provides food and shelter.
• **Green Corridors:** Connecting isolated green spaces to allow species movement.
• **Water Features:** Ponds and wetlands to attract amphibians, insects, and birds.
• **Pollinator Gardens:** Using native flowering plants to attract bees, butterflies, and other pollinators.
• **Nesting Structures:** Installing birdhouses and bat boxes in urban parks.

Non-Human Nests
Pollen station, bird nest, insect farms

Case Studies

• **Amager Fælled Nature Laboratory:**
A natural area within Copenhagen that serves as a testing ground for biodiversity-friendly urban planning.
Includes habitat restoration, monitoring of native species, and public education on biodiversity.

• **University of Copenhagen Greenhouses:**
Located in the Botanical Garden, these greenhouses support research on native and exotic plant species and their roles in urban ecosystems.
The facility conducts studies on pollination biology and urban vegetation’s role in climate resilience.

• **Copenhagen Green Roofs Initiative:**
Promotes biodiversity by mandating green roofs in new urban developments.
Experimentation includes creating habitats for insects, birds, and plants.

• **Kalvebod Fælled Rewilding:**
A large-scale project to reintroduce native species and study ecosystem interactions in an urban wetland setting.

Bird Façades

• **Sydhavn Bird-Friendly Architecture:**
In Copenhagen, buildings in Sydhavn incorporate bird-friendly designs such as reflective glass patterns to prevent collisions and nesting spaces integrated into façades.
These structures attract species like swallows, sparrows, and kestrels, which are critical for urban pest control.

• **Bird Nesting Walls:**
Urban parks and apartment complexes include nesting boxes within building walls to support urban bird populations.

Insect Farms

• **City Bee Copenhagen:**
A local initiative that maintains urban beehives to support pollination and produce honey while educating communities about insect biodiversity.

• **Insect Hotels:**
Public parks like Valbyparken host insect hotels to provide shelter for bees, butterflies, and other pollinators. These projects aim to combat habitat loss and support urban agriculture.

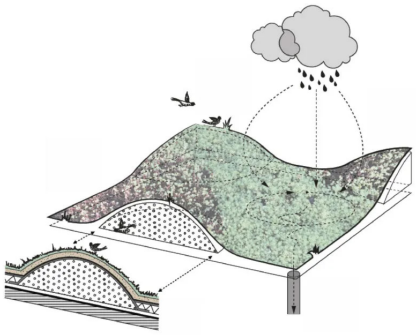
•**Netherlands Urban Insect Farming:**
Research facilities in the Netherlands explore insect farming for food production and biodiversity enhancement. Urban insect farms supply food-grade insects and support local pollinator populations.

• **Berlin’s Insect Lab:**
Studies insect-plant interactions in urban settings and develops prototypes for insect-friendly green spaces.

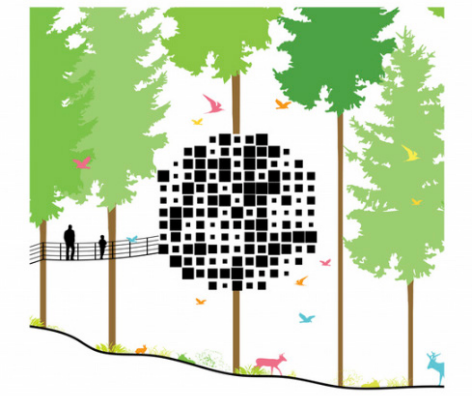
Designing Artificial Ecosystem
Eco- Engineering Biotopes

Nature in Urban: Strategies and Development

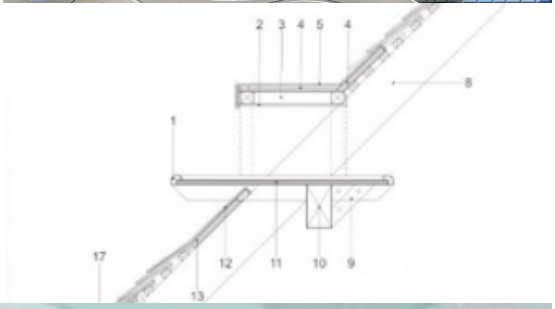
Roof Ecology
Recent green roof development focus on biodiversity considerations. Mille Arbres in Paris is a realized “house of biodiversity”. The project features two layers of roof hosting thousands of trees. It is a biomimicry of forest ecology and is managed by the League of Protection of Birds. Finding natural analog in green roof design is a strategy to include entire plant community and create wider range of habitat for animals. In Switzerland, variation in substrate thickness is adopted as a method to mimic nature microhabitat. (Marinelli, 2006) “Grassy Hill Roof” developed by Rooflife Amsterdam is a lightweight undulating polystyrene form to deliver different media depth without the usual heavy weight load.

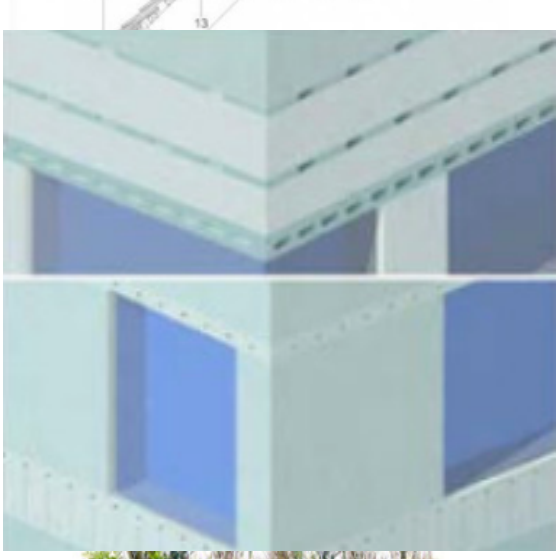


Wall Ecology
Despite the biodiversity potential, green roofs are disconnected patches elevated from ground which limited movement and formation of communities. The development of wallscape ecology can potentially form a 3- dimensional urban landscape with Green roofs. Green facades are for aesthetic purpose and involve climbing vegetation system. Living walls is a vertical extensive roof dominated by herbal plant. The biomimicry of green wall is stone walls and cliff in rocky habitat. Living wall system is detachable from building surface depending on the load bearing capacity of building is a limitation. Hydroponic technology can eliminate substrate layer and reduce weight of living wall. Façade modular system with prefabricated façade element is an expensive technical development. Modules are designed as pre-planted system with possible automatic watering system attached.



Designing Artificial Ecosystem
Eco- Engineering Biotopes





Nature in Urban: Strategies and Development

Nesting in Buildings
Two types of nesting tool can be found in building depends the building- animal relationship. A range of building elements such as eaves and chimneys are transformed into multifunctional habitat elements. Nest box is commonly conceived as a tool to provide habitat for opportunistic insect, birds and bats. The appearance and placement in building are determined by design principles based on ecology studies. As a form of artificial nature, it is common in both new buildings and refurbishment of existing building. It can be applied as non- structural ready-made items, alternatively, there is a range of mass- produced habitat- integrated structural elements which can substitute standard bricks and blocks in buildings. Habitat elements can also be non- transferable customized design such as the habitat façade in Sloterdijk N1 N3.

Animal Aided Design
AAD is in essence a knowledge/ evidence-based design principle that use a species’ life cycle to improve open space planning and conservation in urban landscape. By making animals integral part of the design process, the objective of an organized wilderness is to provide habitat requirements for a species to thrive in different stages and different living behaviors. The tool of AAD is species profile including biological data and connection with human. It is a method for wildlife recruitment in city and the conservation value depends on the target species. Developers can implement AAD to recruit species that are not native but popular to human occupants in their projects. (Weisser, Hauck, 2017) A conceptual design in USA integrated the whole life of butterfly into various building components, the building serves as a breeding ground, waystation and sanctuary for monarch butterfly. The connected roof & façade system provides food and shelter, terraces are used as stop over habitat and atrium can be used as semi-enclosed colonies that foster population growth.

Chapter 6
The Architecture

Chapter 6 - The Architecture process and concepts

6.1 Preliminary Process and Concepts - P2
6.2 Development Design- P3
6.3 Further Development and Technical Design- P4

Chapter 6
The Architecture

Design process for P2

Library-City as Learning Field

Learning Fields as Catalyst : Interventions Across Scales (XS, S, M, L)- Multiplicity in design

Increasing in scale, the field models move beyond the architectural object towards more expansive systems of library organisation across a programmatic landscapes. More specifically, the ground surface is manipulated, in the literal sense, as an active framework for containing and enabling the new library system.

L: The Green Mile—An Urban-Scale Healing Corridor

At the largest scale, the project extends beyond its immediate footprint, envisioning the creation of The Green Mile Garden, a physical and symbolic thread connecting Ørestad Fælled, the University, and Sundholm. This green corridor invites movement, interaction, and shared experience, dissolving the boundaries between "ghettoized" areas and the broader urban context.

M: Public Facilities for Education, Creativity, and Healing

The mid-scale interventions of The Public Condenser house communal spaces for education spaces for learning, art workshops for creativity, theatre for cultural exchange. Within the building, children are given the tools and spaces to learn, while university students take on roles as mentors. The exterior spaces include areas for sports and outdoor activities

S: Spaces for Reflection and Isolation

For individuals struggling with mental illness, the built environment can be a source of either healing or alienation. The project creates small, intimate spaces for solitude, reflection and recovery routes, offering moments of stillness in an otherwise chaotic world. These spaces are designed not for isolation in the negative sense, but as opportunities for self-care and quietude.

XS: Nesting Areas and Non-Human Sanctuary

At the smallest scale, the project acknowledges the interdependence between humans and nature by providing sanctuaries for non-human life. Here, birds, insects, and other creatures find spaces to nest and rest, mirroring the refuge that people seek in the nature reserve. The architecture responds to the needs of ecosystems

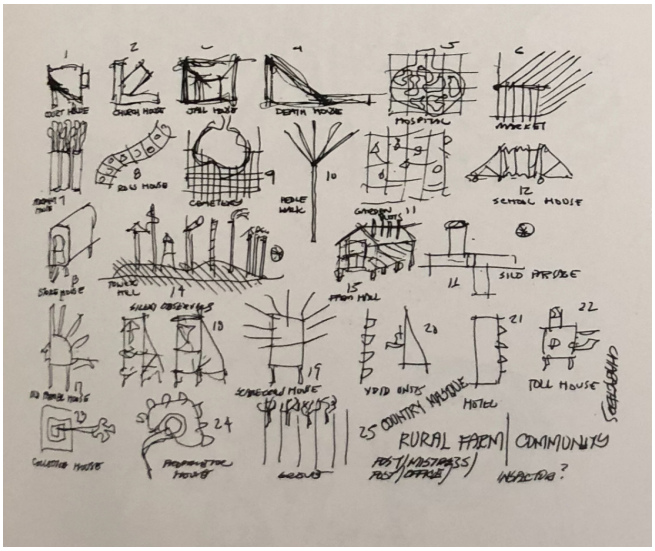
An Introduction to the concept, 'Library-City'

Interventions across different scales; XS, S, M, L

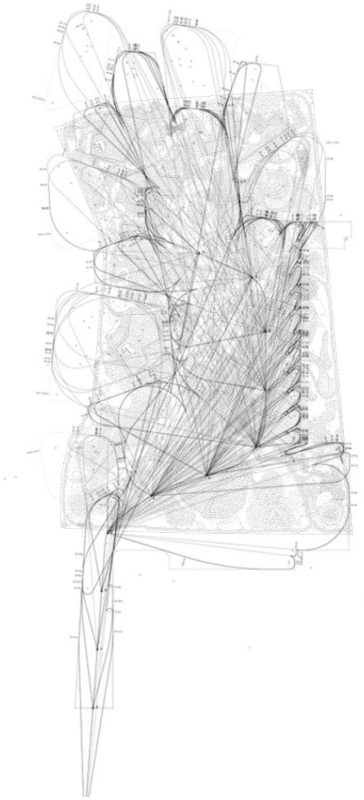
Library-City

Nelson Goodman
Nelson Goodman’s view of world making as a ‘remaking’ of existing relationships, quoting much but by no means all worldmaking consists of taking apart and putting together, often conjointly: on the one hand, of dividing wholes into parts and partitioning kinds into sub-species, analyzing complexes into component features, drawing distinctions; on the other hand, composing wholes and kinds out of parts and members and subclasses, combing features into complexes, and making connections.

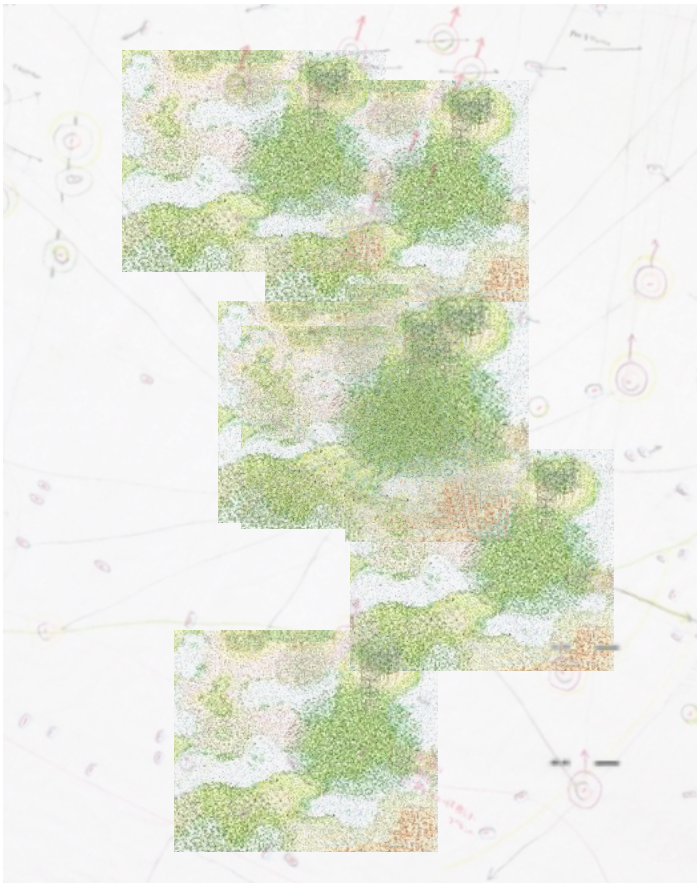
John Hejduk’s Masque
A naming practice has been implemented to further investigate the performativity of each model by an association of a figurative vocation. This naming practice is influenced by John Hejduk’s method of architectural storytelling through anthropomorphising architecture. His work features symbolic and allegorical architectural objects, or ‘actors’, each assigned with unique vocations and roles in a narrative performance. Hejduk’s architecture likens to the abstractness of notations, bending the boundaries between “abstraction and representation, the functional and the fantastic, buildings and animals” in search for new unpredictable constellations and unprecedented uses



Masque
John Hejduk- Anthropomorphising architecture



Journey Through the Garden Library City

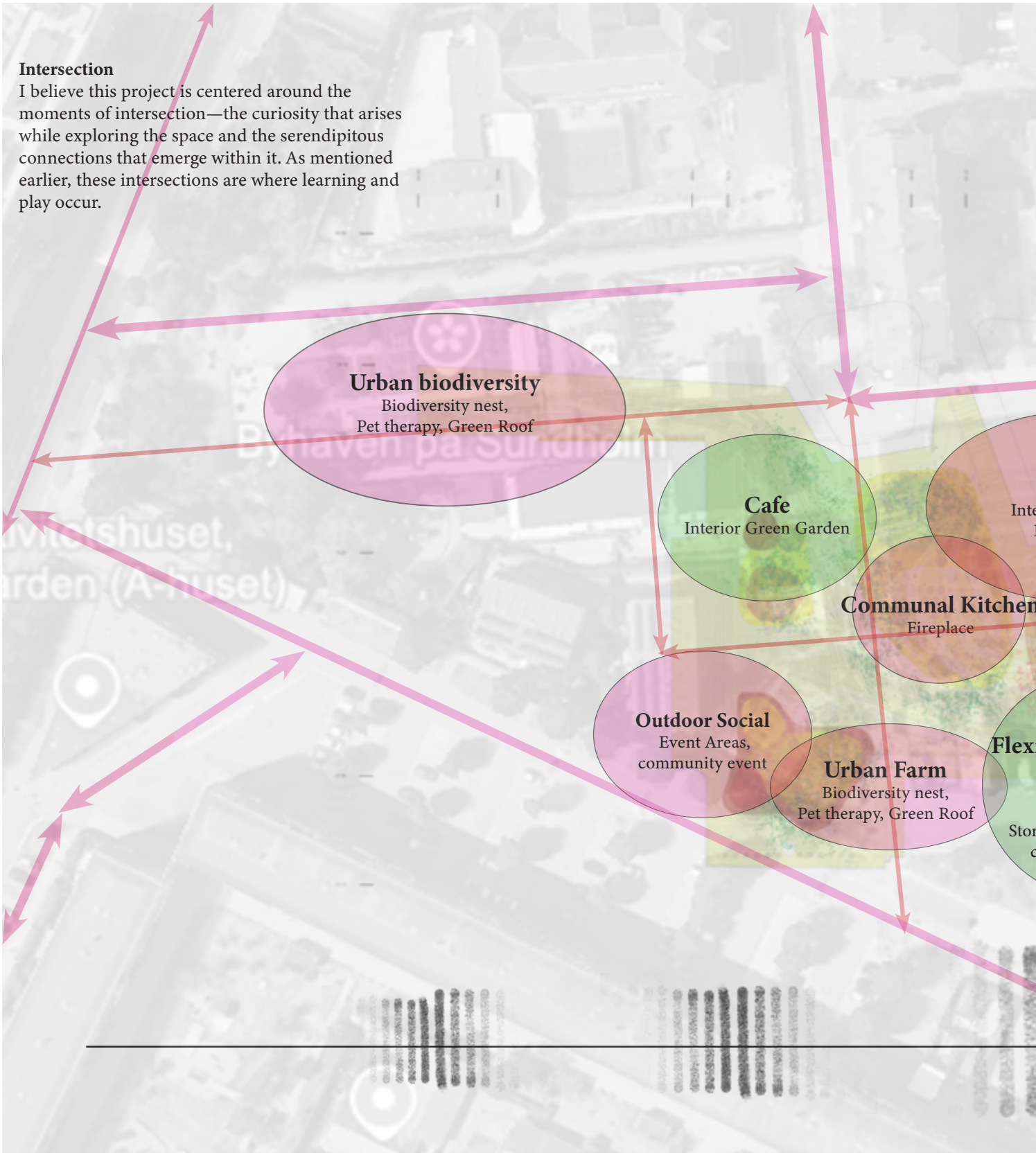


The Central Garden

An Introduction to the concept, ‘Library-City’

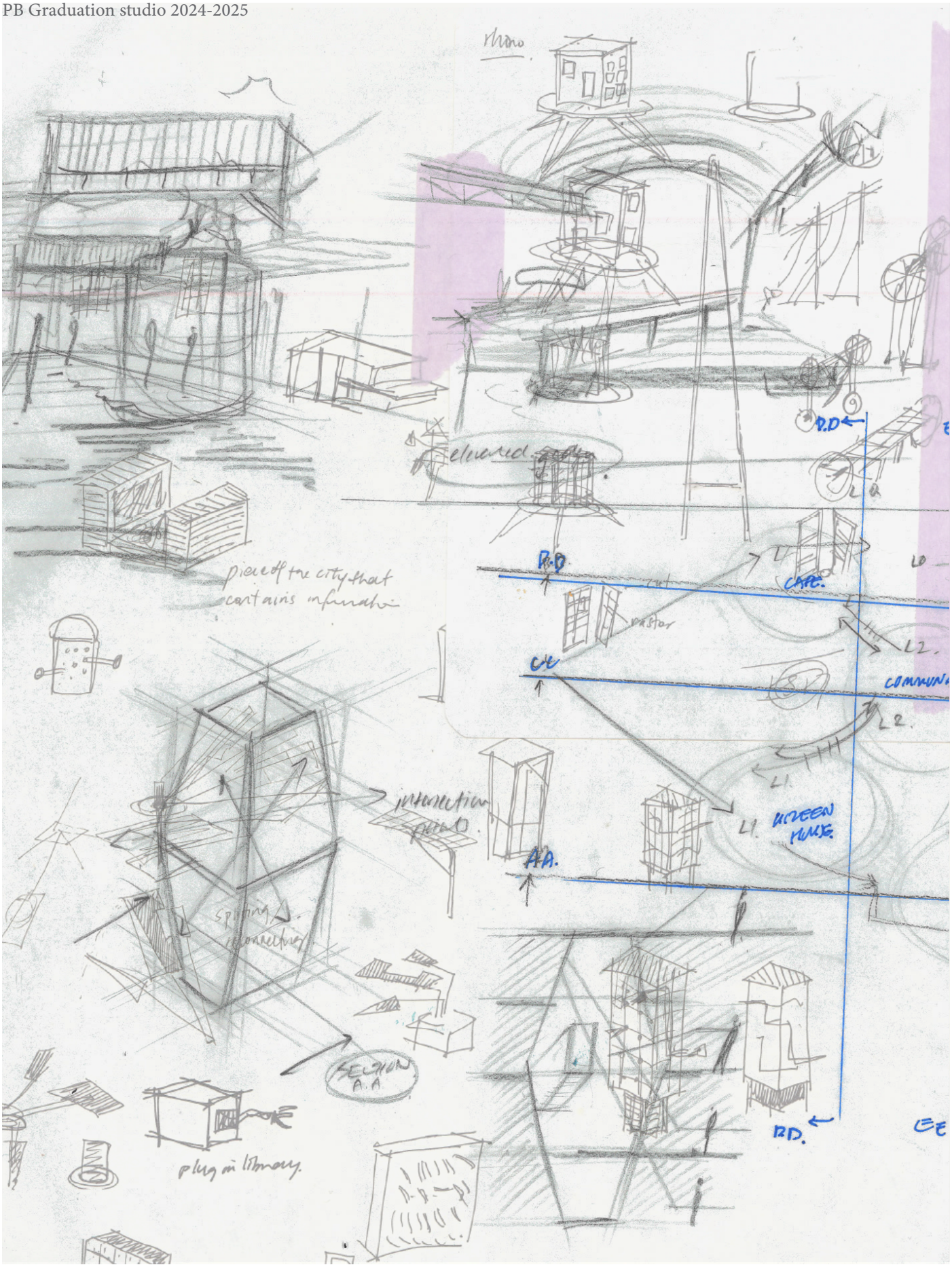
Interventions across different scales; XS, S, M, L

Intersection
I believe this project is centered around the moments of intersection—the curiosity that arises while exploring the space and the serendipitous connections that emerge within it. As mentioned earlier, these intersections are where learning and play occur.



An Introduction to the
Programs and Anthropo

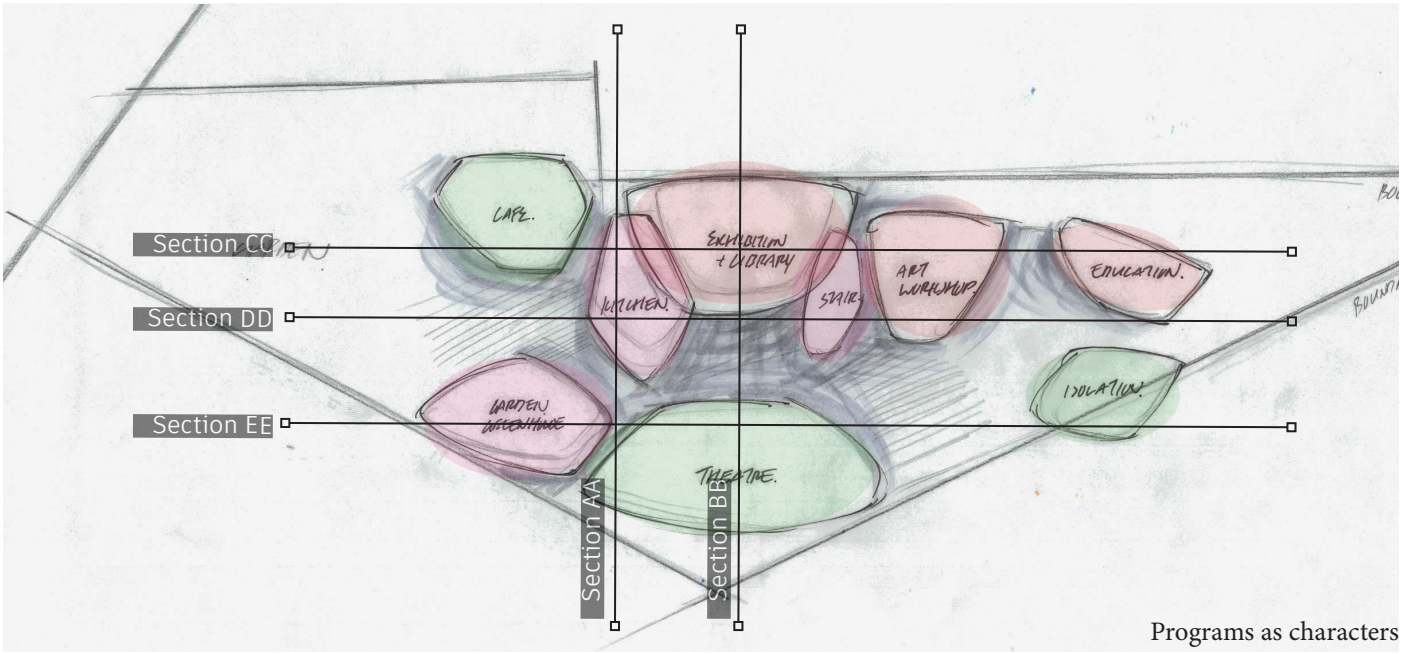
concept, ‘Library-City’
morphising Architecture



Anthropomorphizing Architecture: I wanted each of these programs to have its own character. inspired by Masque from John Hejduk's architectural characters, each space can be seen as having its own personality and unique experience

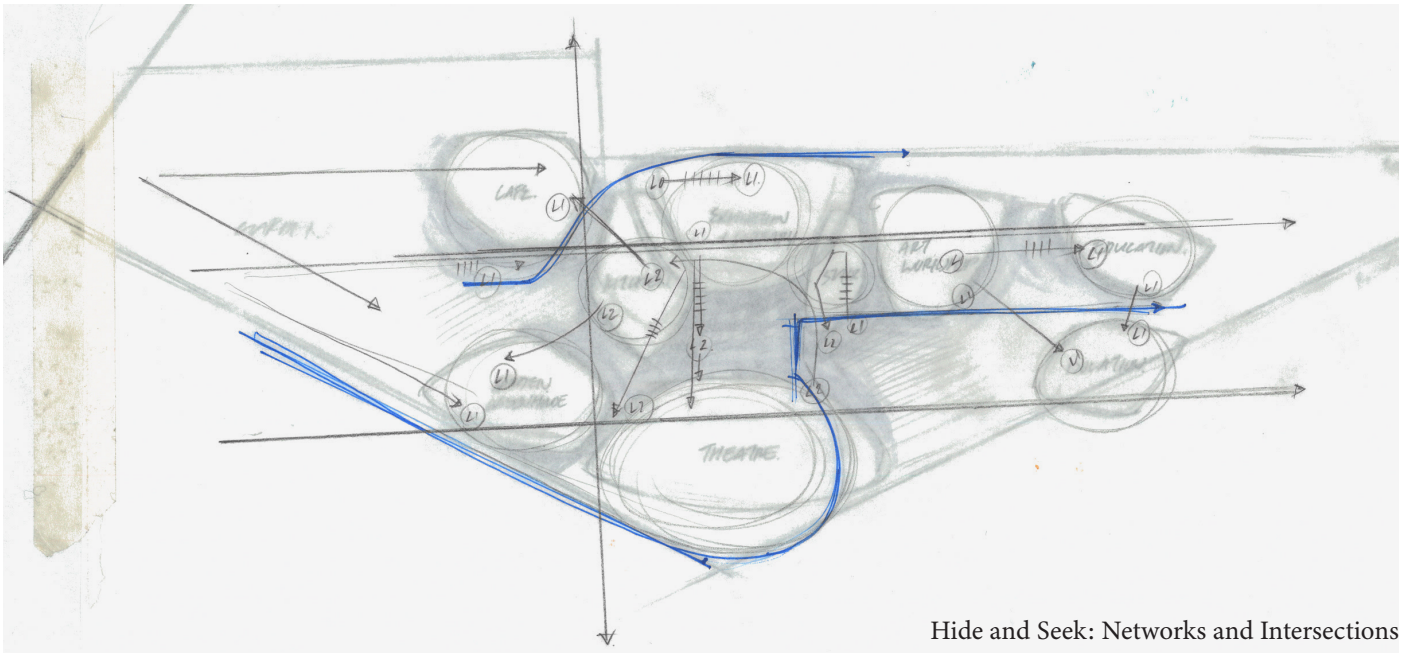
An Introduction to the concept, 'Library-City'

Initial Concepts and Floorplans



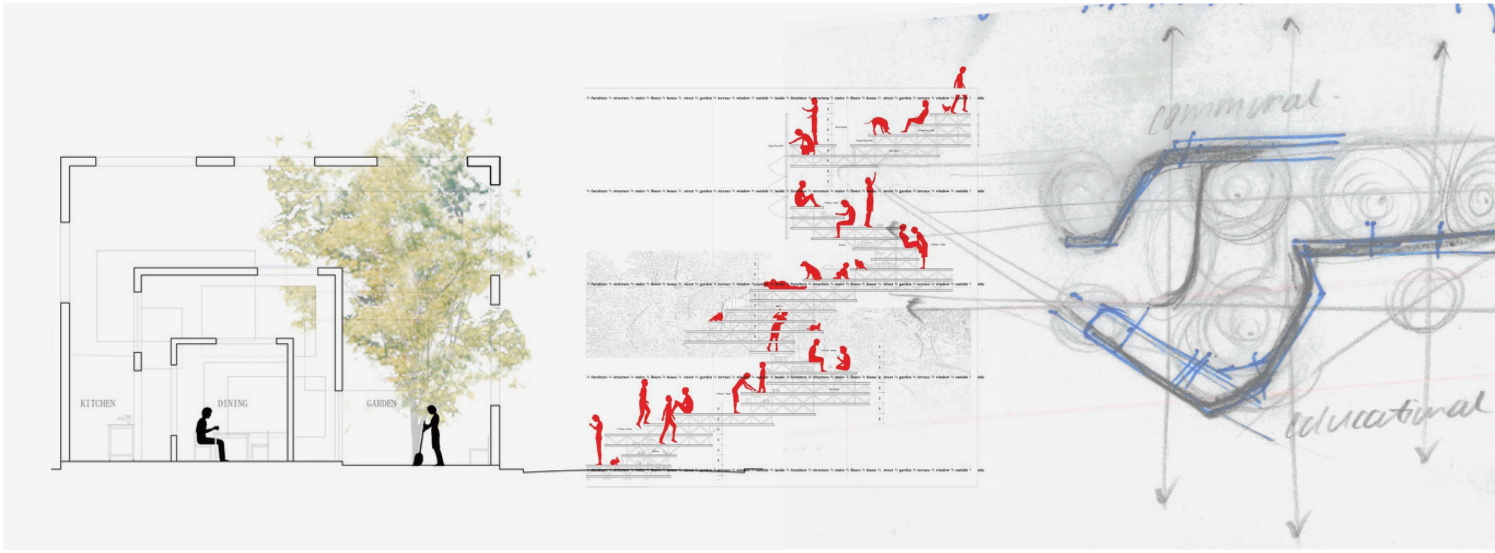
Programs as characters

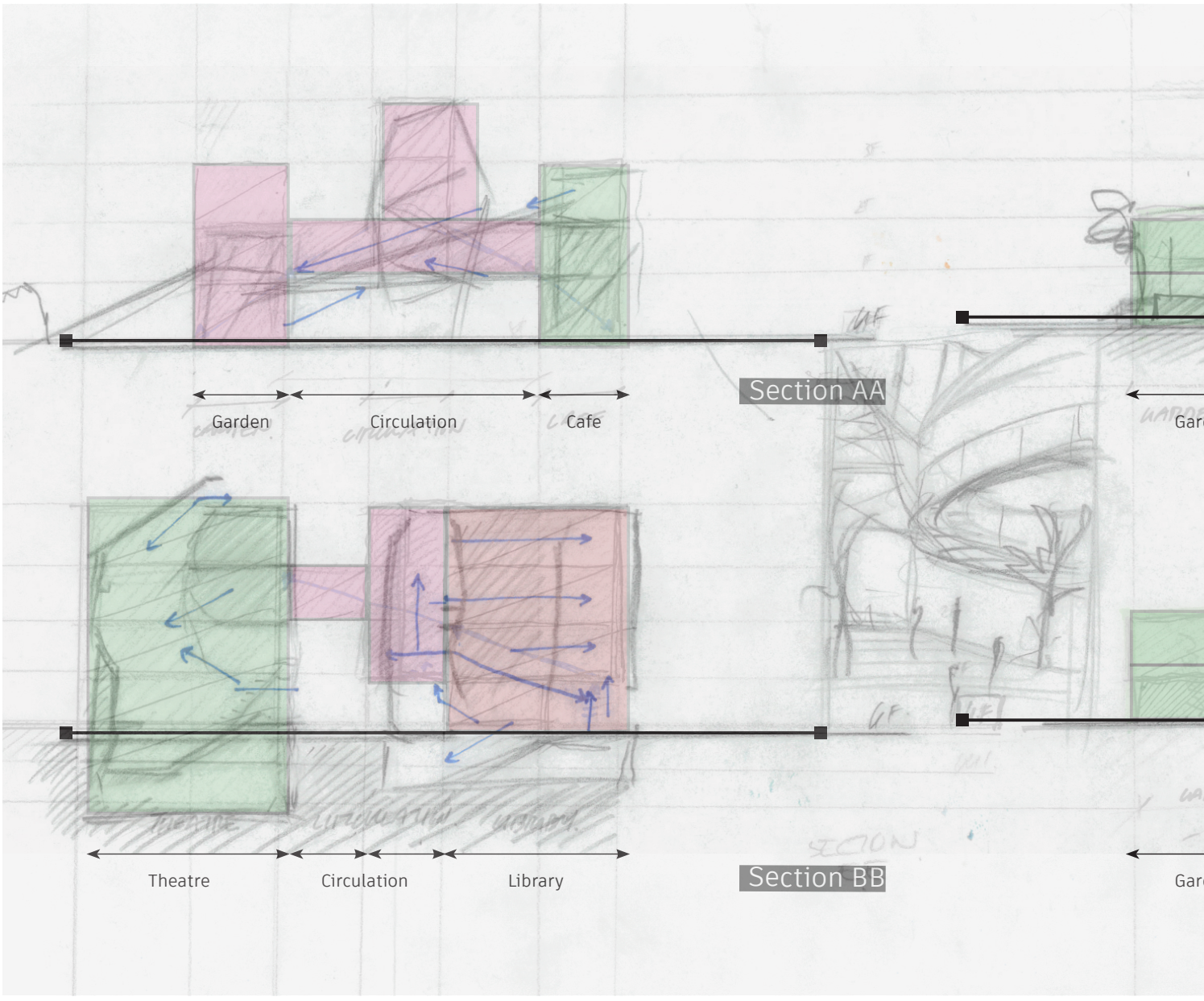
Floor Plan: The floor plan illustrates the different programs as pavilions with a central safe guarded garden for children to roam around and for adults to take strolls within the artificial landscape.



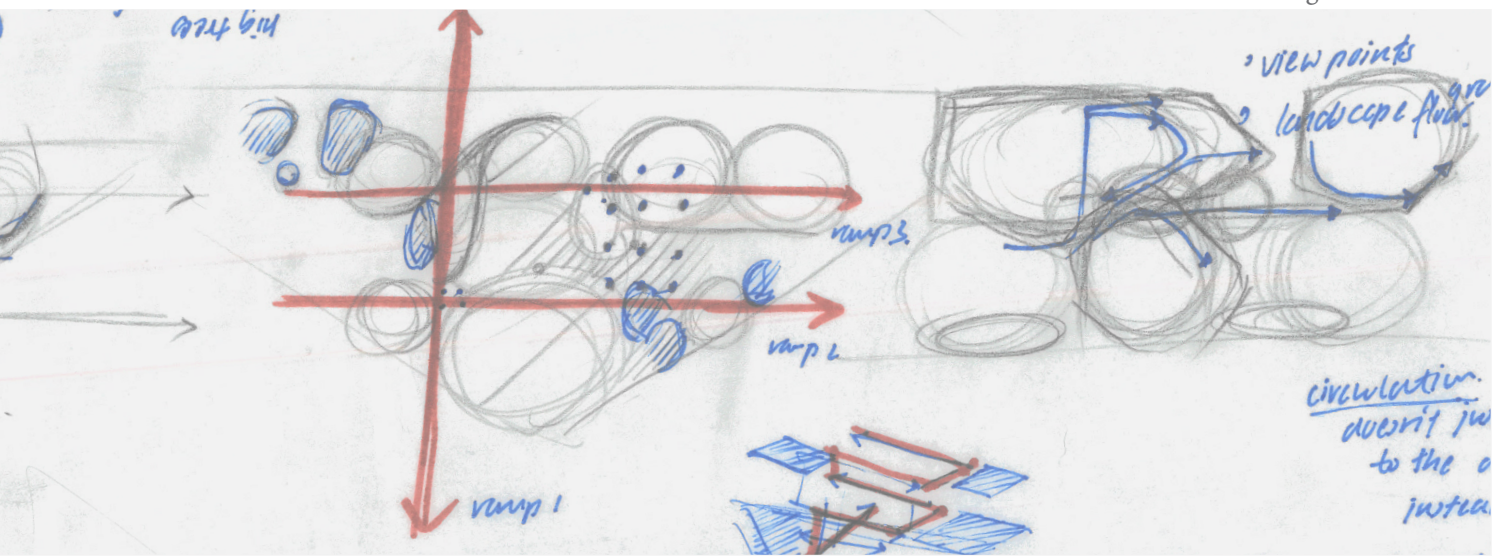
Hide and Seek: Networks and Intersections

Pathways and Journey: Visitors can choose between different routes. One path takes them directly to the designated program areas, while another offers a journey that shifts from quiet to loud, from private to public, indoor to outdoor, and back to private again, offering a dynamic experience.

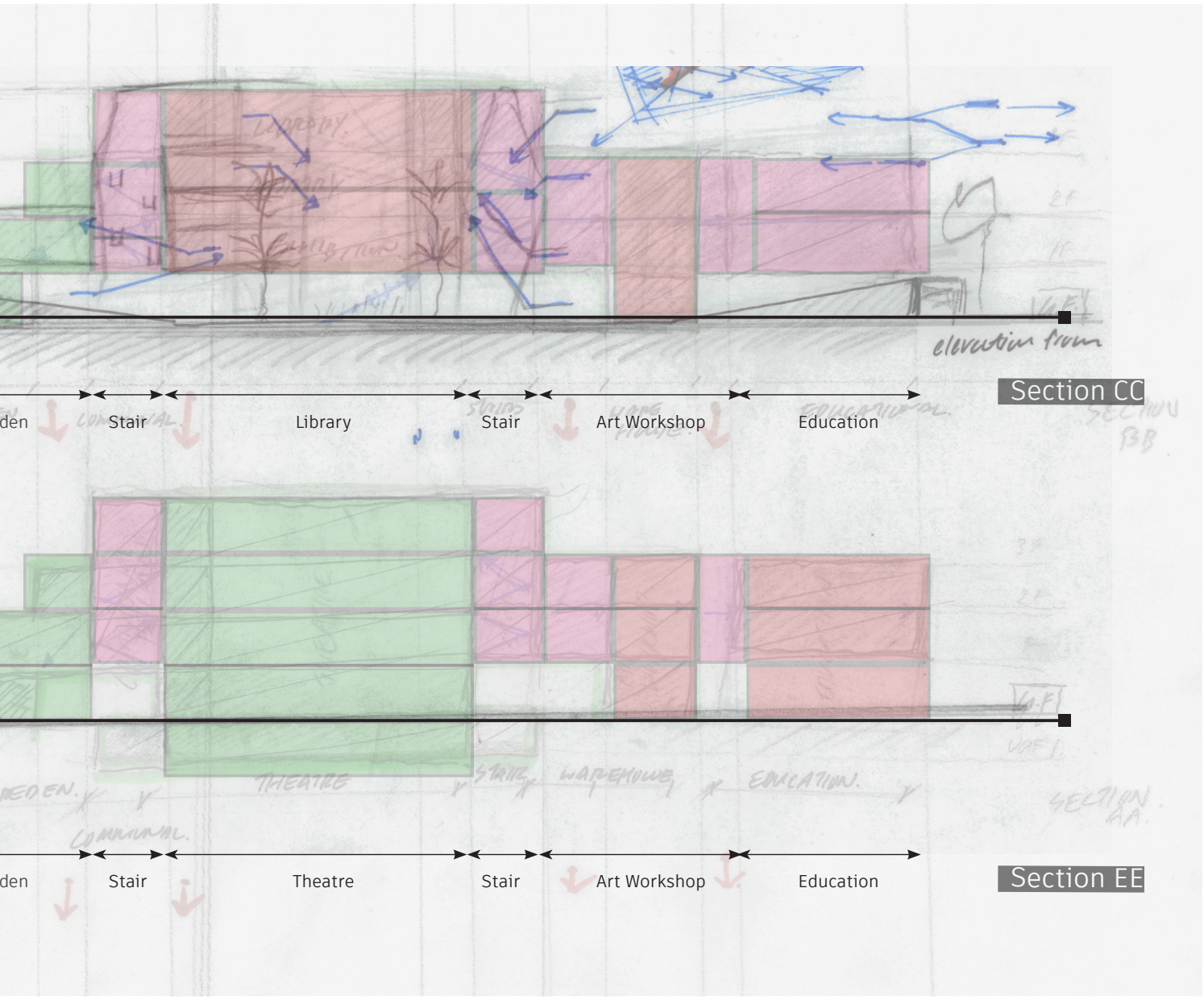




An Introduction to the
Initial Concepts

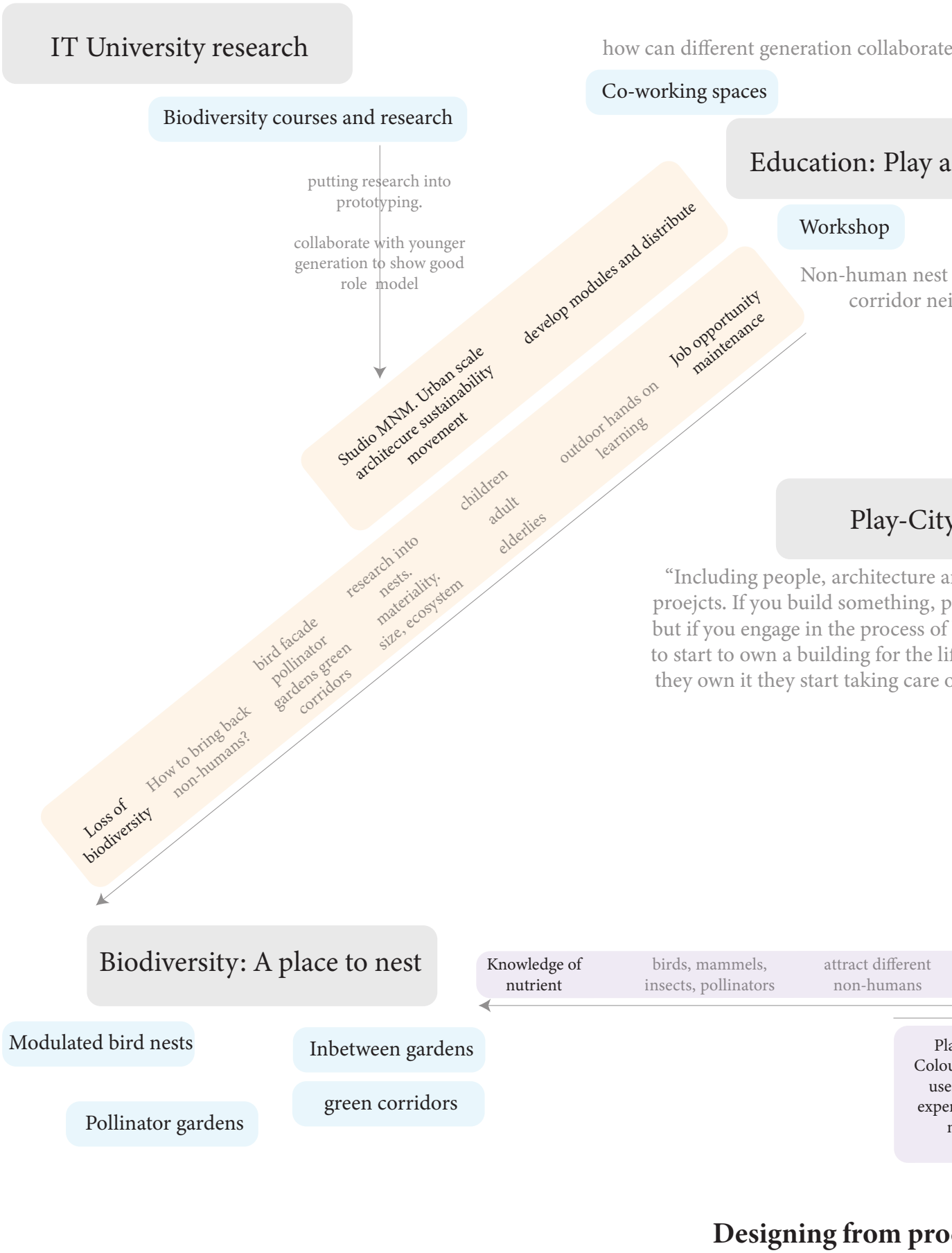


Designated circulations, Explore free routes, Thresholds and Inbetween spaces

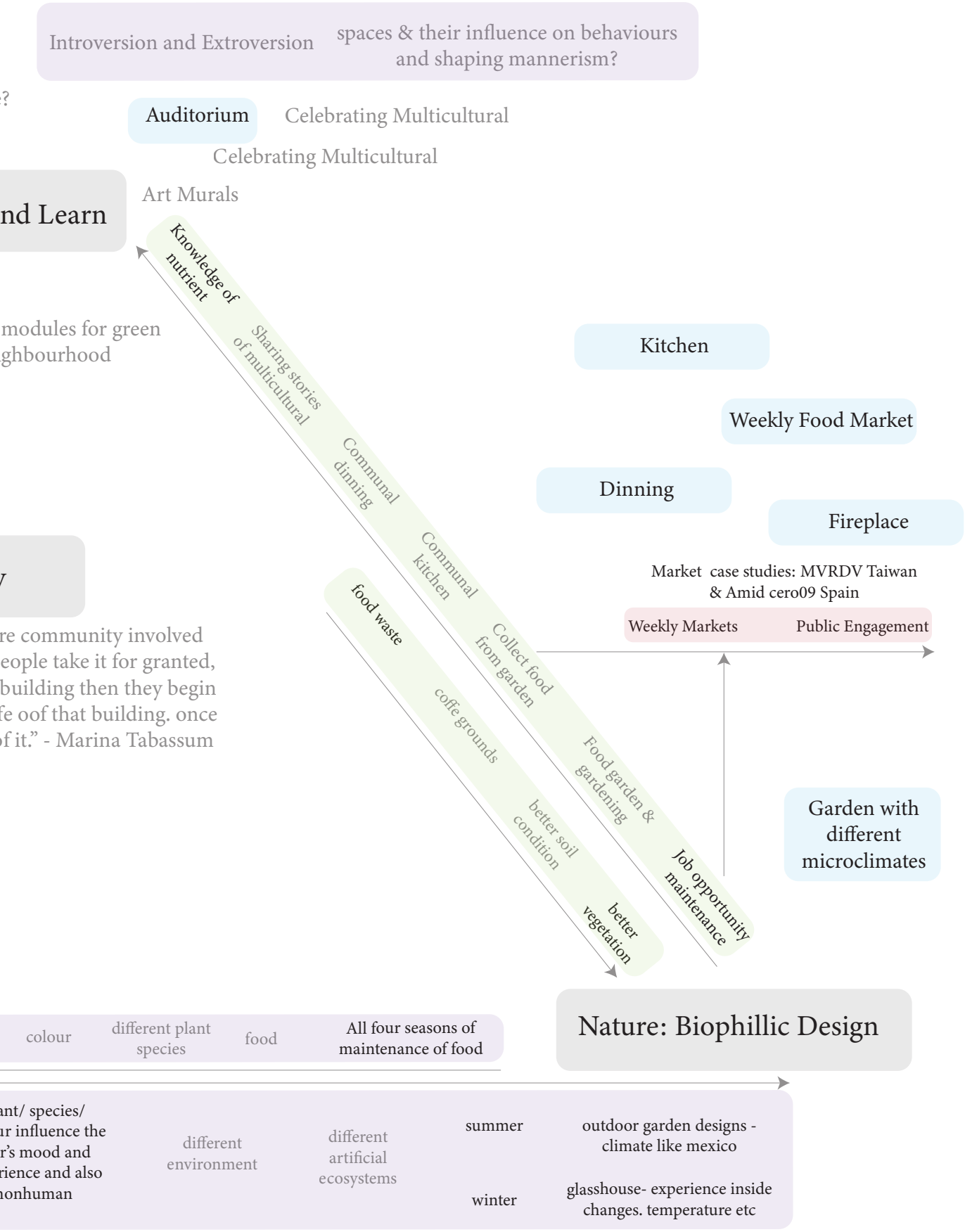


Section views: fragmented views and natural landscape to play under the buildings

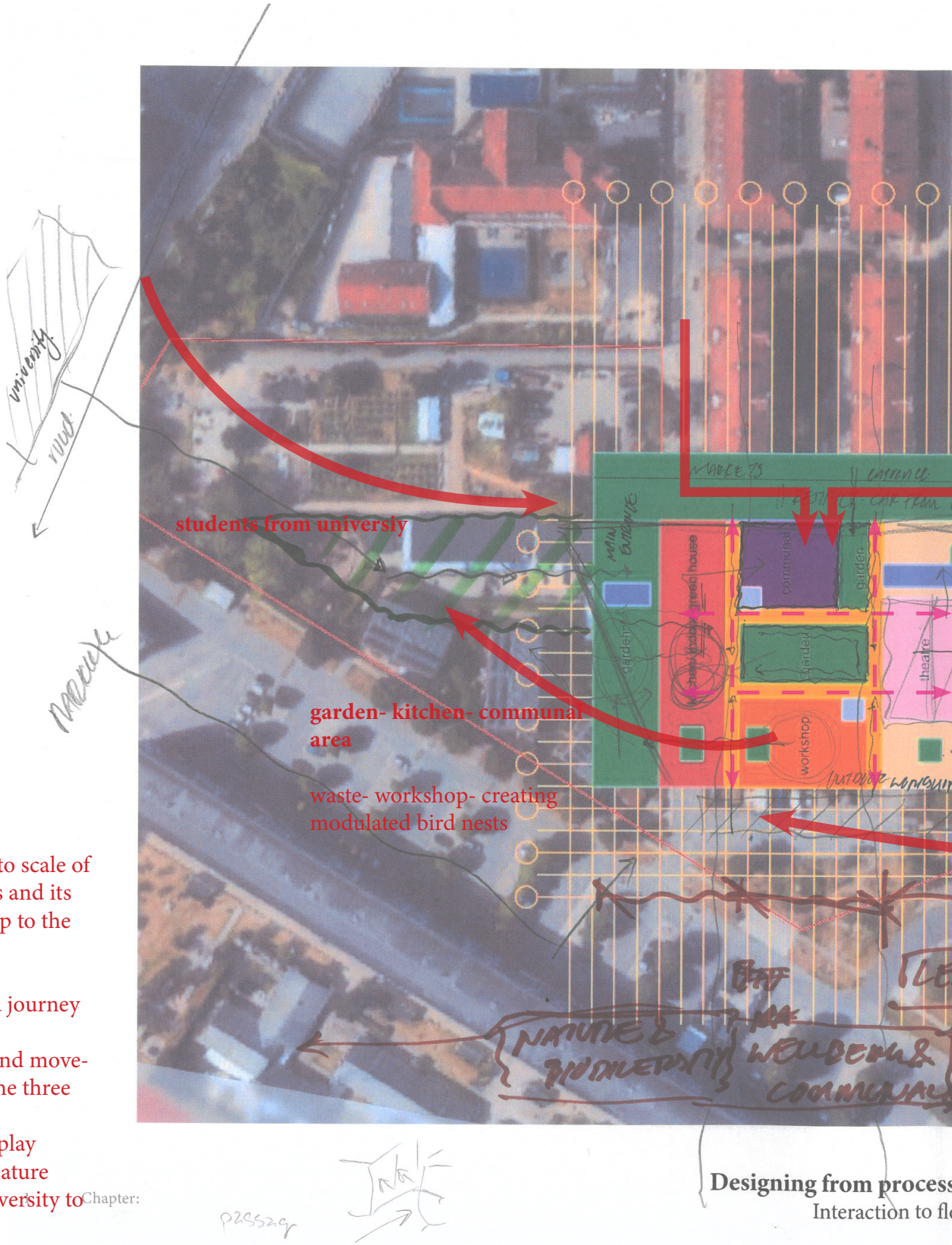
concept, ‘Library-City’
and Floorplans



Designing from pro
Interaction



cess and interaction
to floorplan



Task 1:

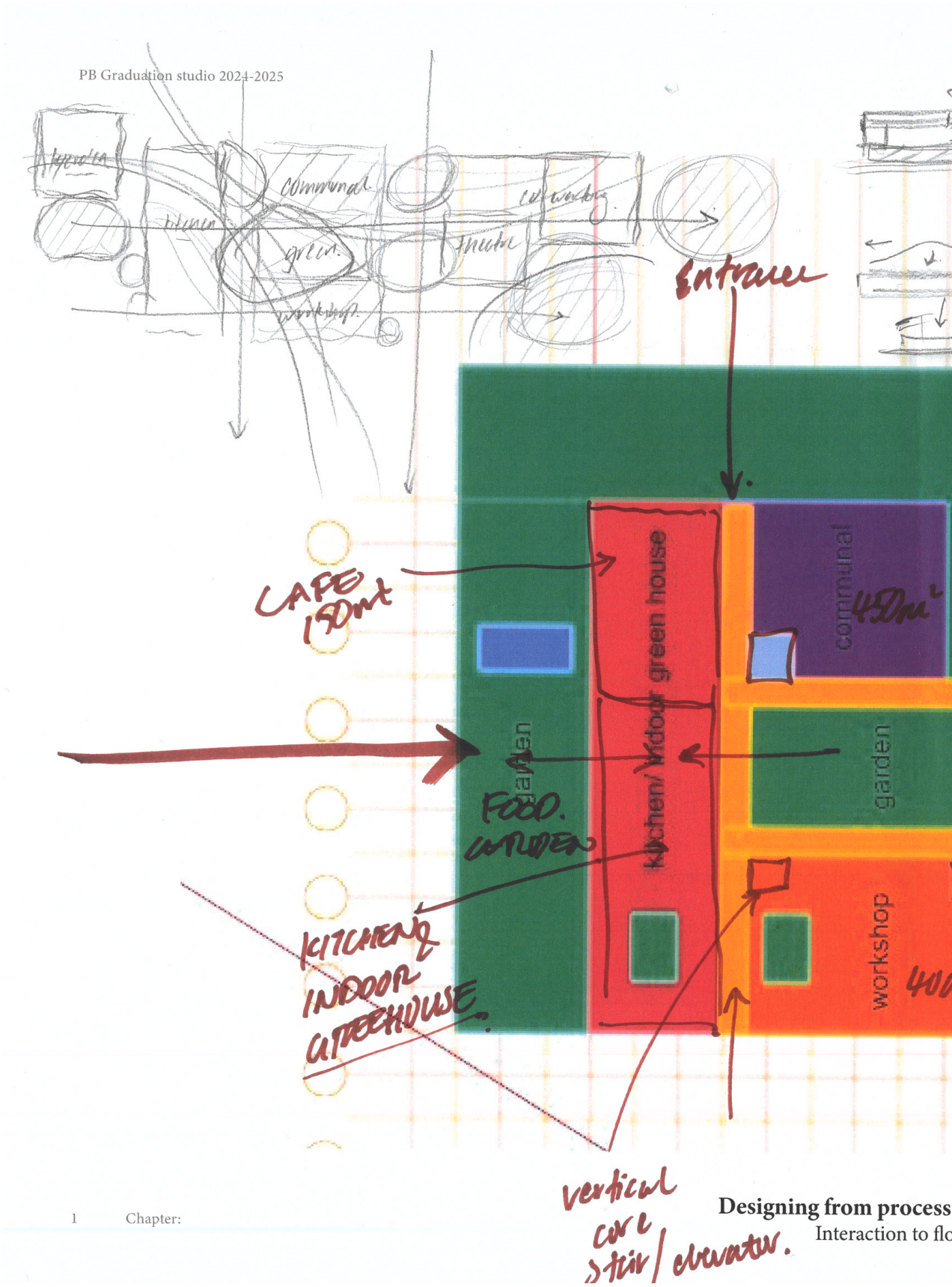
1. Introduction to scale of the programmes and its scale relationship to the triangle site

2. entrances and journey

3. relationship and movement between the three themes:
- learn through play
- heal through nature
- place for biodiversity to nest

s and interaction
oorplan

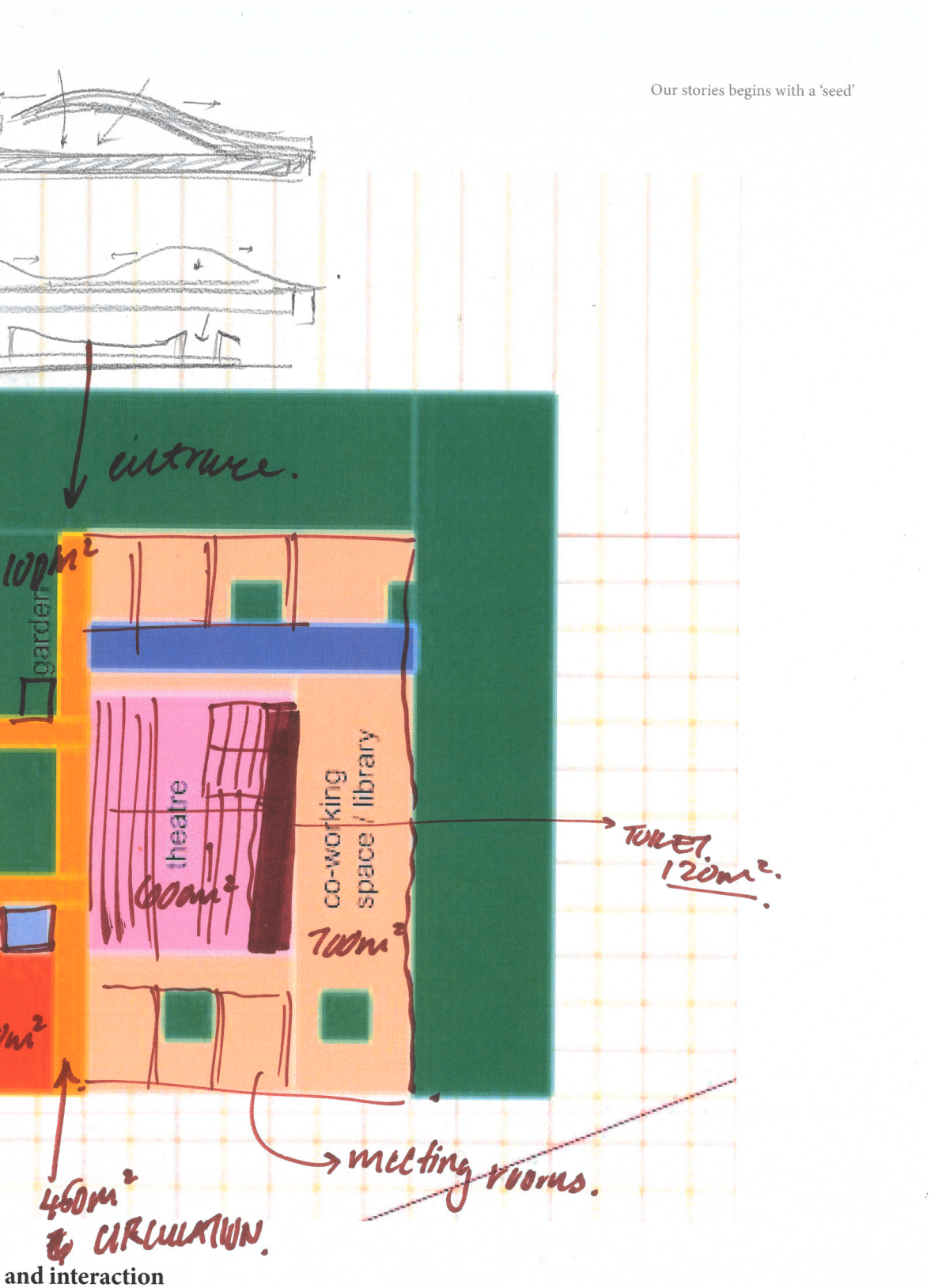
1



1 Chapter:

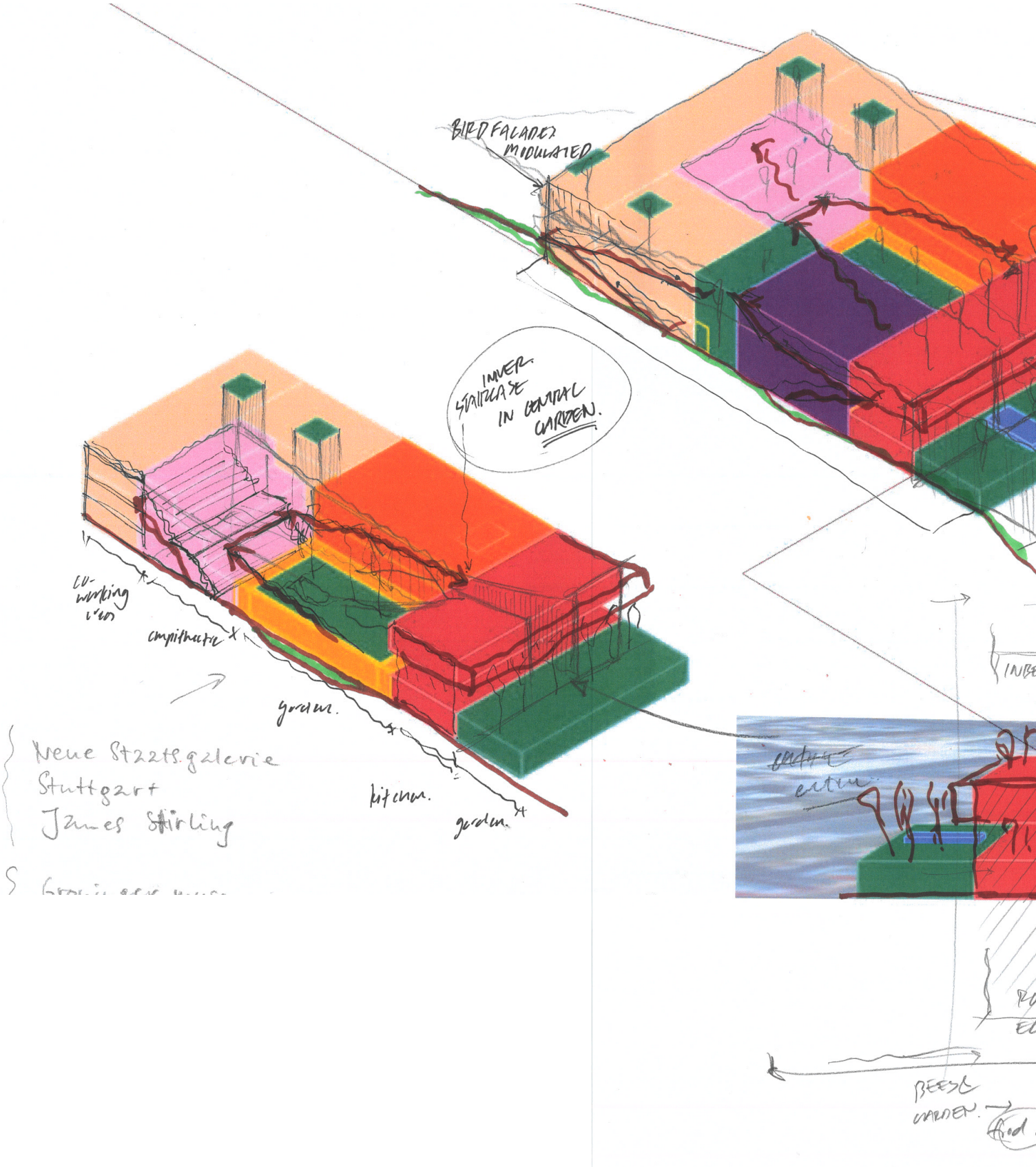
Designing from process
Interaction to flo

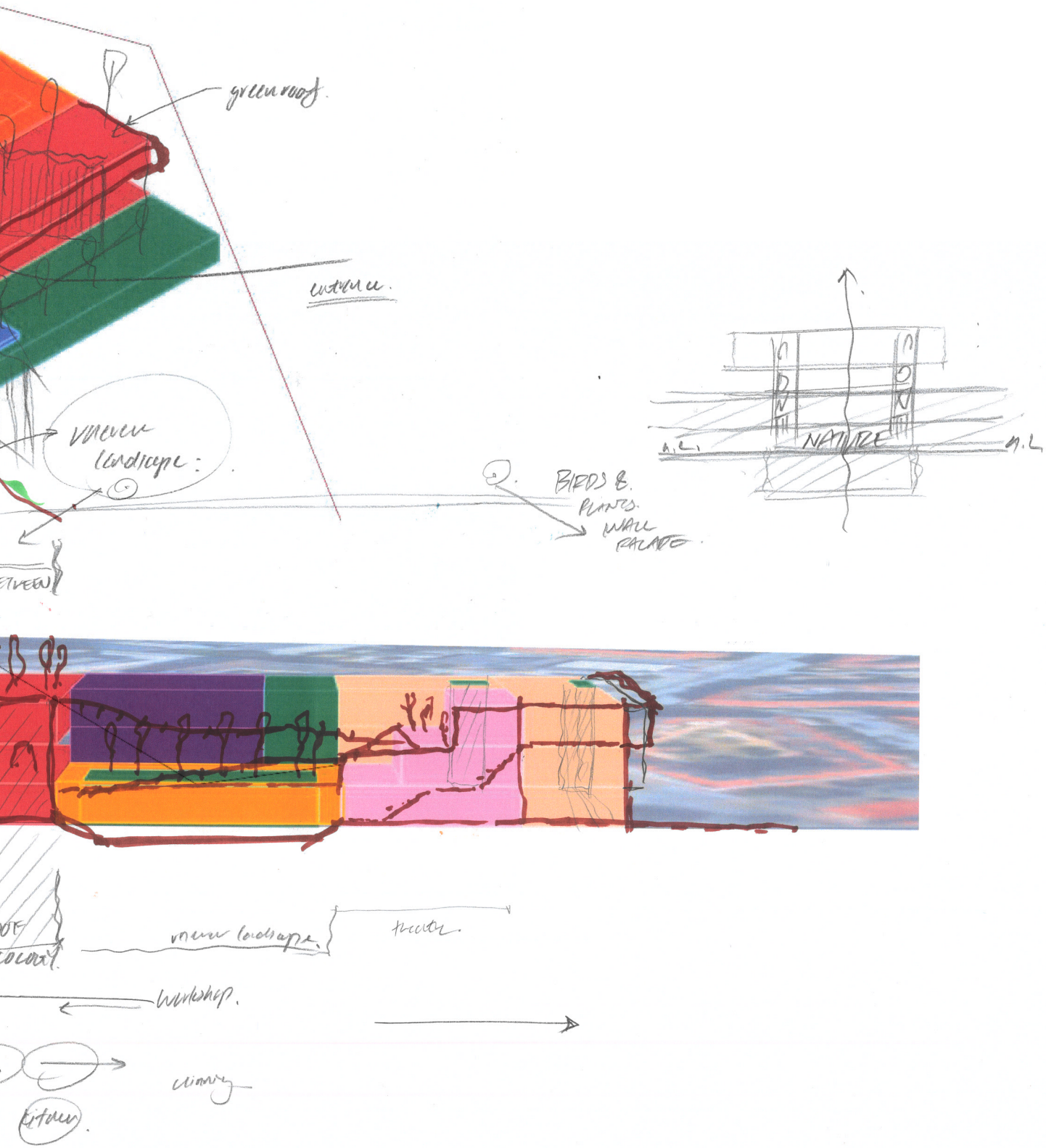
Our stories begins with a 'seed'



and interaction
oorplan

1


BIRD FACADES MODULATED
INNER STAIRCASE IN CENTRAL GARDEN.
co-working area
amphitheatre
garden.
kitchen.
garden.
Neue Staats.galerie
Stuttgart
James Stirling
BEESL
GARDEN.


green roof.
BIRDS &
PLANTS.
NATURE
workshop.
kitchen.

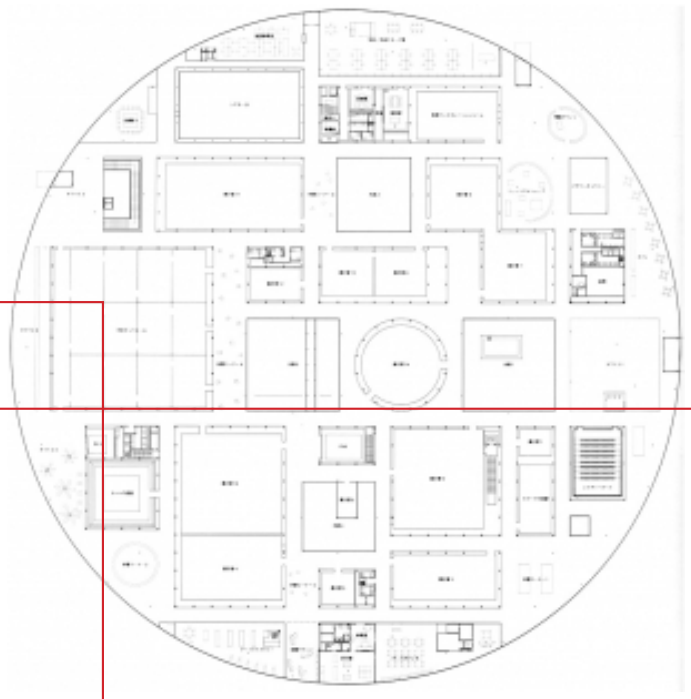
Talk with Sien- Urban Corridor
Circulation and Intersection

Designing from Interactions
- Architecture as an instruction- based art
- one interaction leads to the next
- spread out the programms- streets

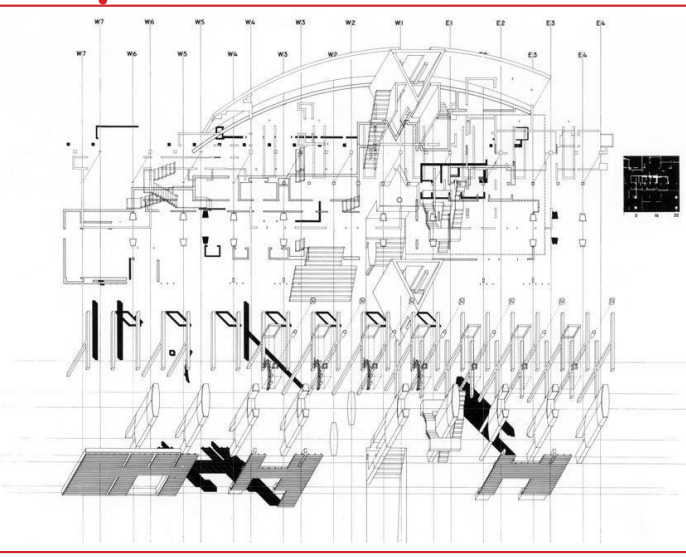
Non-human & Human interaction
humans and non-humans do not always want to be together?
- how to create barriers? do they need support? eg butterflies
- designated routes? see something but do not see it.

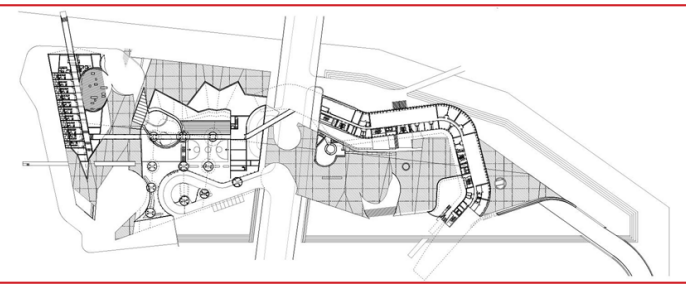
for example Piranesi architecture staircase, you see it but it leads you to no where, maybe just a place to see the biodiversity?
- bird towers? safe space for them- do they inhabit chimneys? something humans and non-human use.
- some nonhumans such as chicken can be interacted such as chicken. taking eggs. however some can not be interacted.
- moss, water, flower- critic the materiality
- zoo/ greenhouses
- greenhouses- protection, in between space, microclimates, cultivated nature, exchange of season
- intermediate- the difference of a forced space such as a zoo . or the background. you might hear the same animal chirp but you might have completely different spaces.

Circulation/ inbetween spaces/ movements
- sustainability- circular ecology
- sustainability as learning- urban context- A STREET? A MARKET FOR LEARNING? A CLEAR PATH? BUT ALSO HAVE SERENDIPITY PATHWAYS. street scape. different types of scales. not chosen path
- green corridors- watery, not city reflect water corridors.
- see the design in 3D. Rolex centre is what I am imagine currently, the ground is uneven, leading you into some spaces. voids. slabs are not always constant.

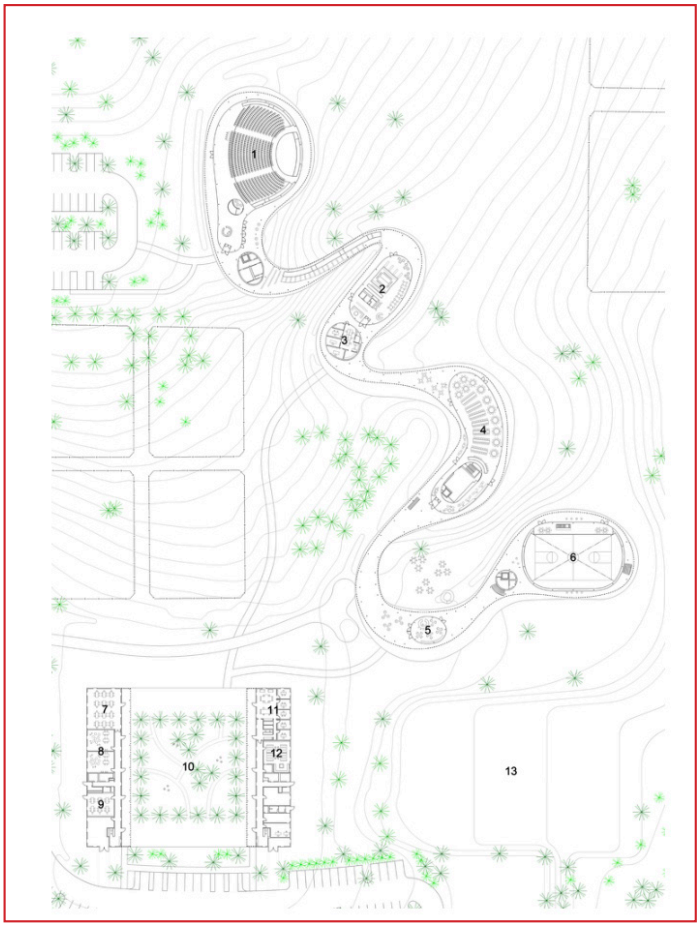


Kanazawa's 21st Century Museum of Contemporary Art/ SANAA

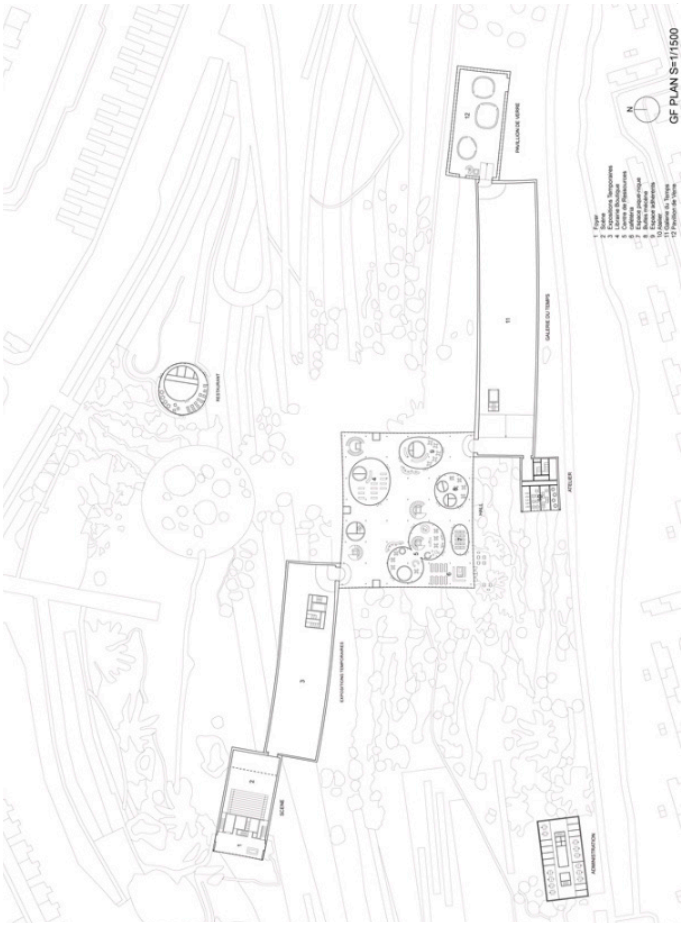


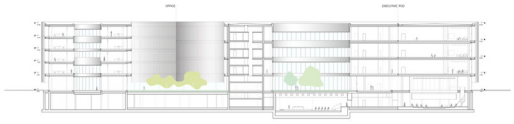


Morphosis Architects: interactive corporate headquarters

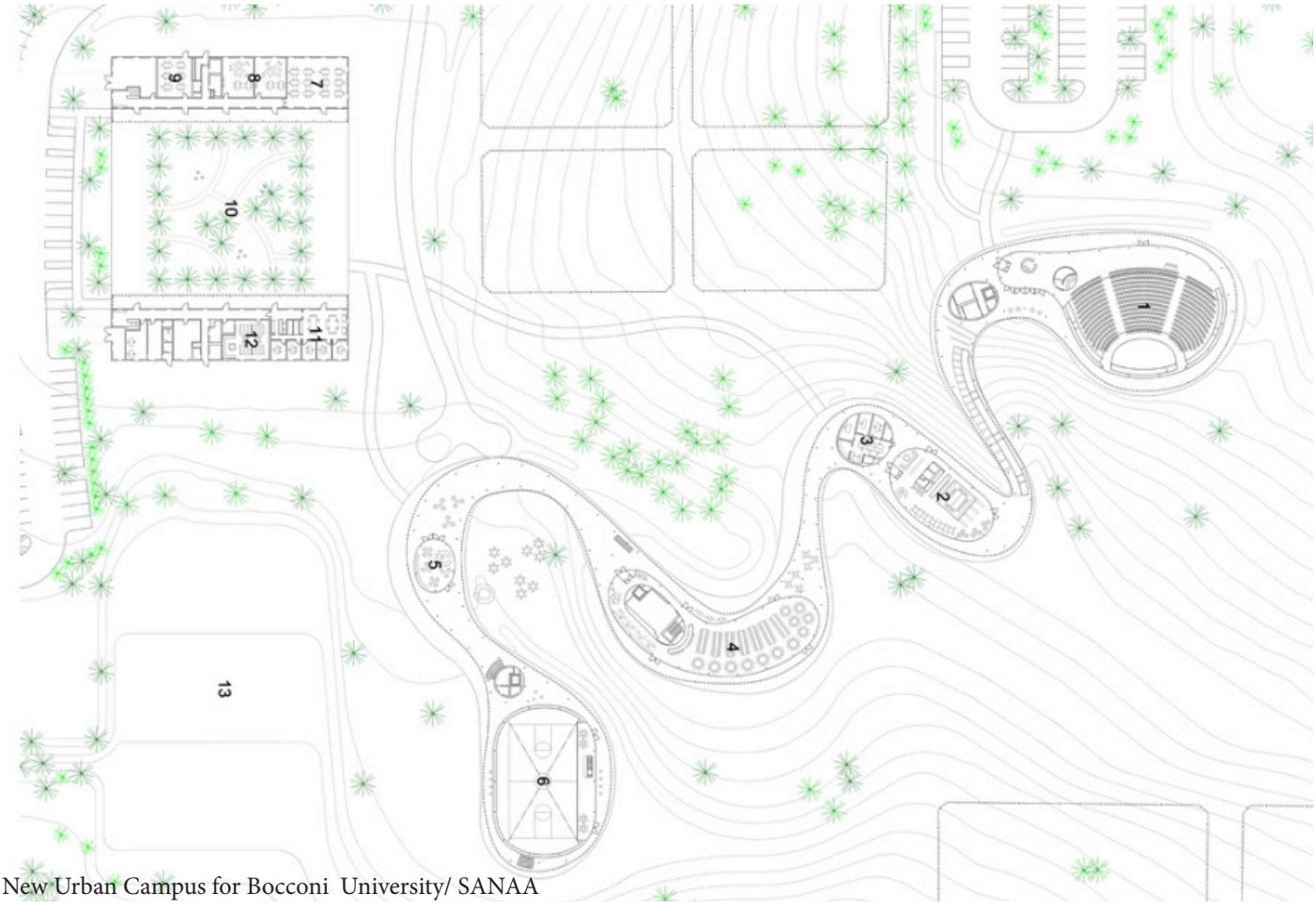


Grace Farm/ SANAA

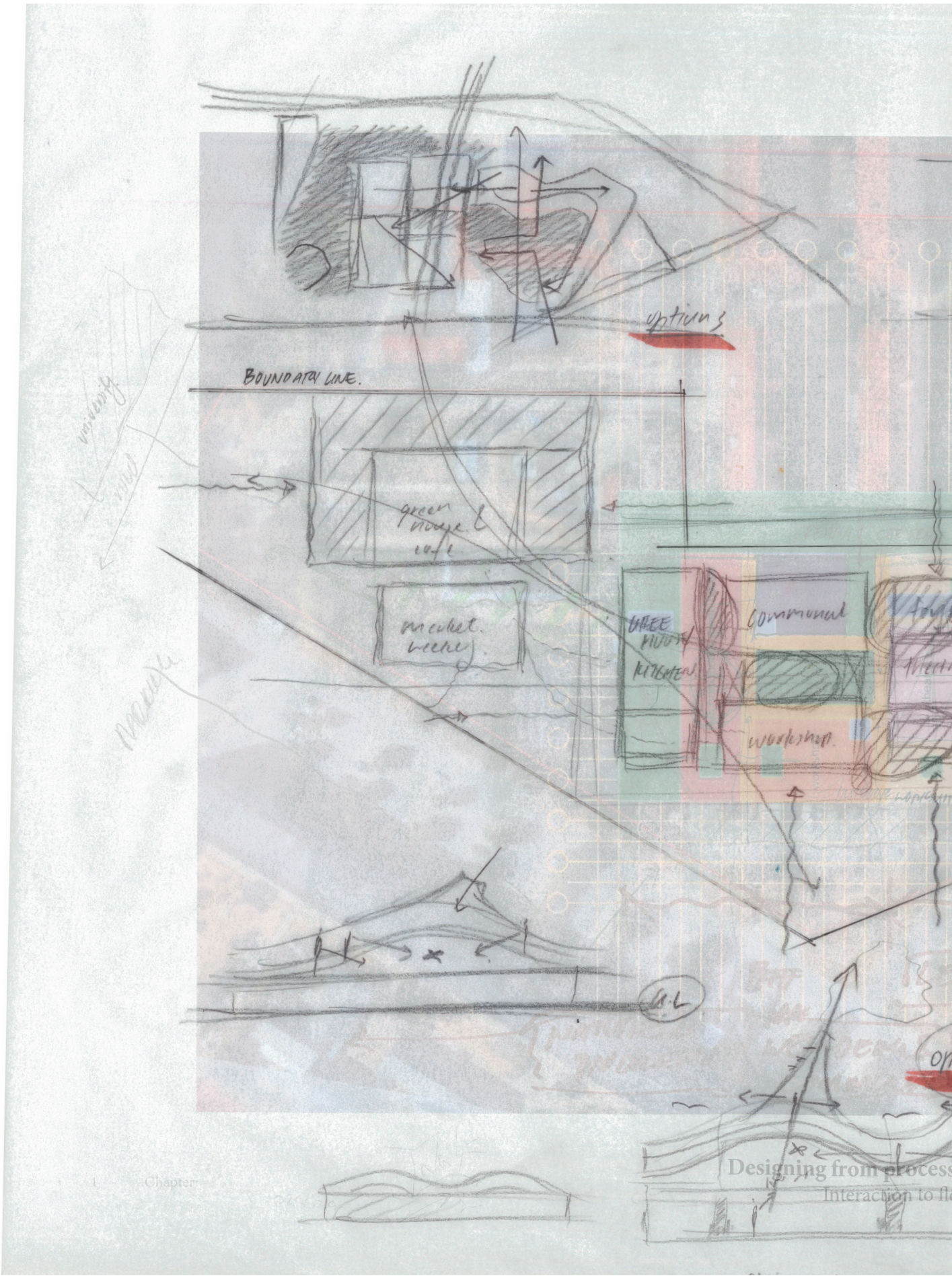


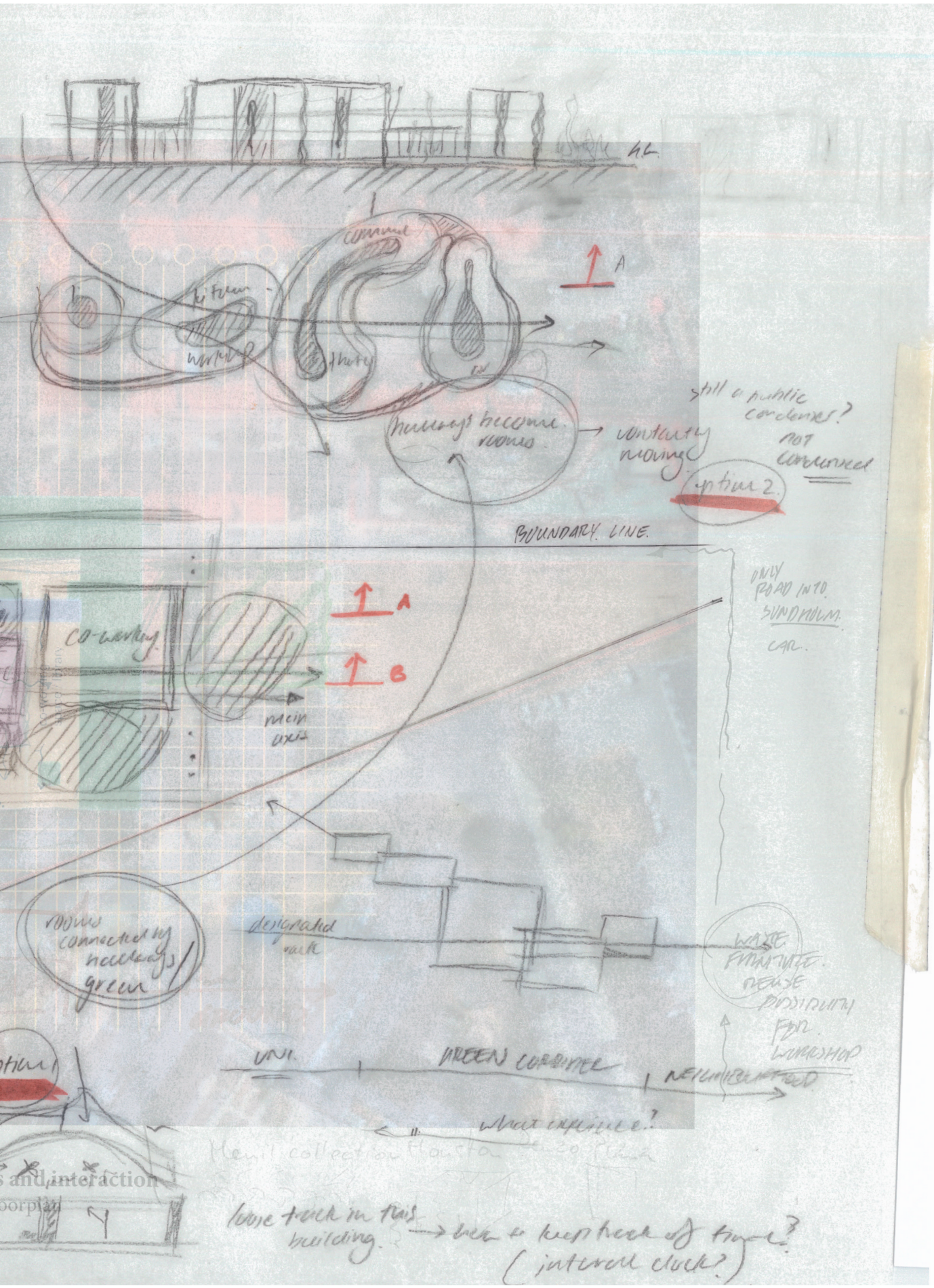


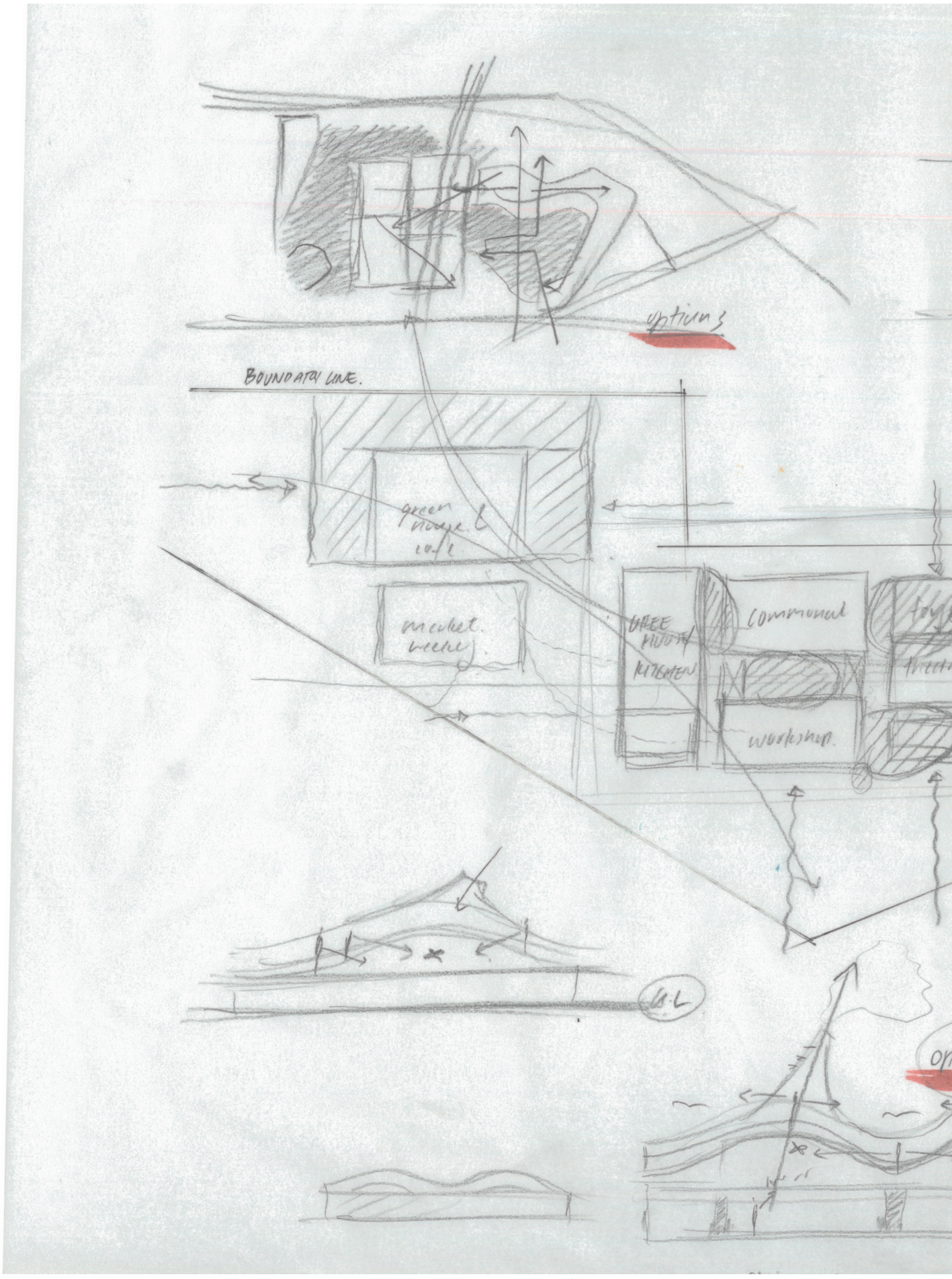
Louvre Lens/ SANAA

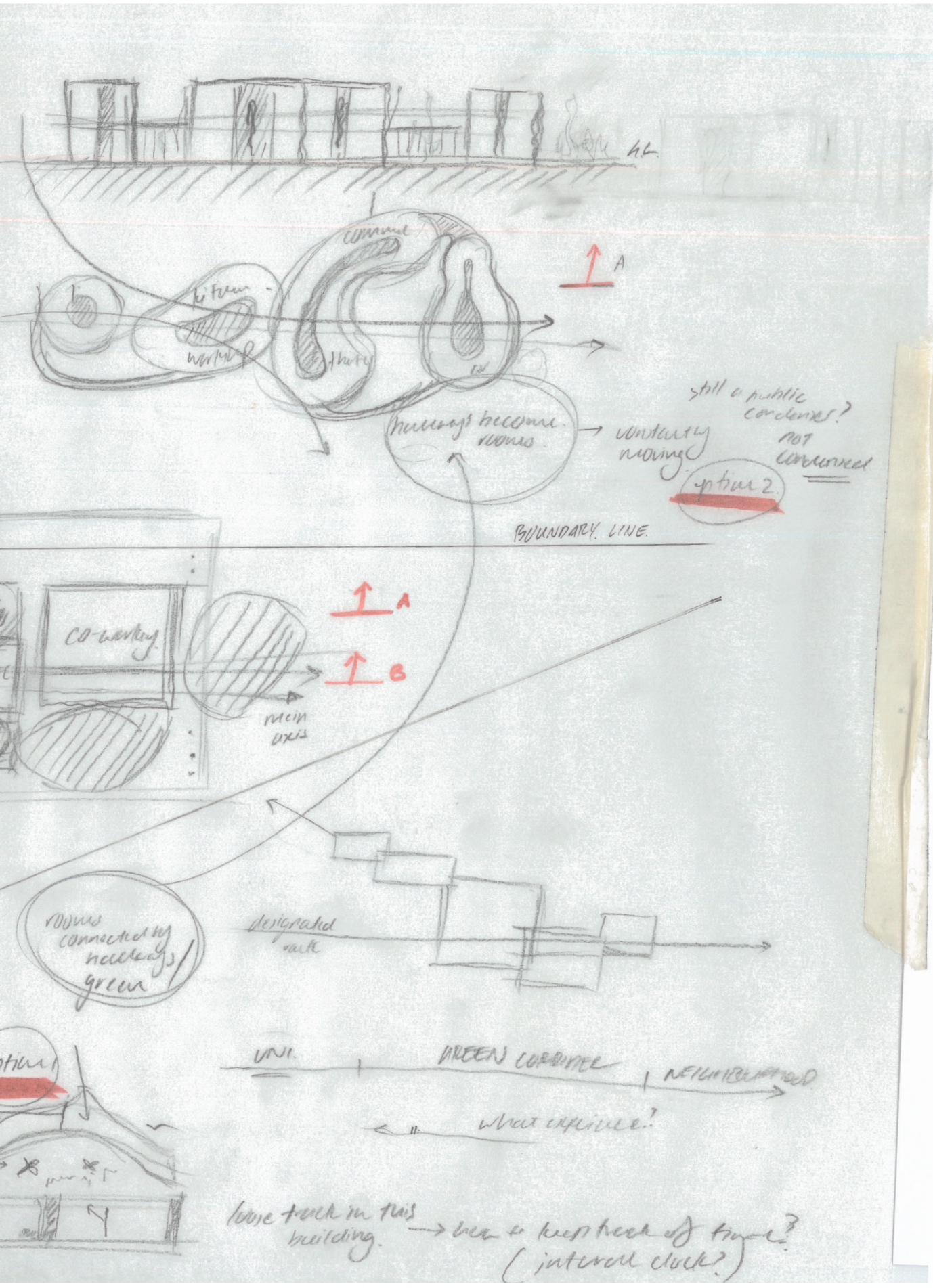


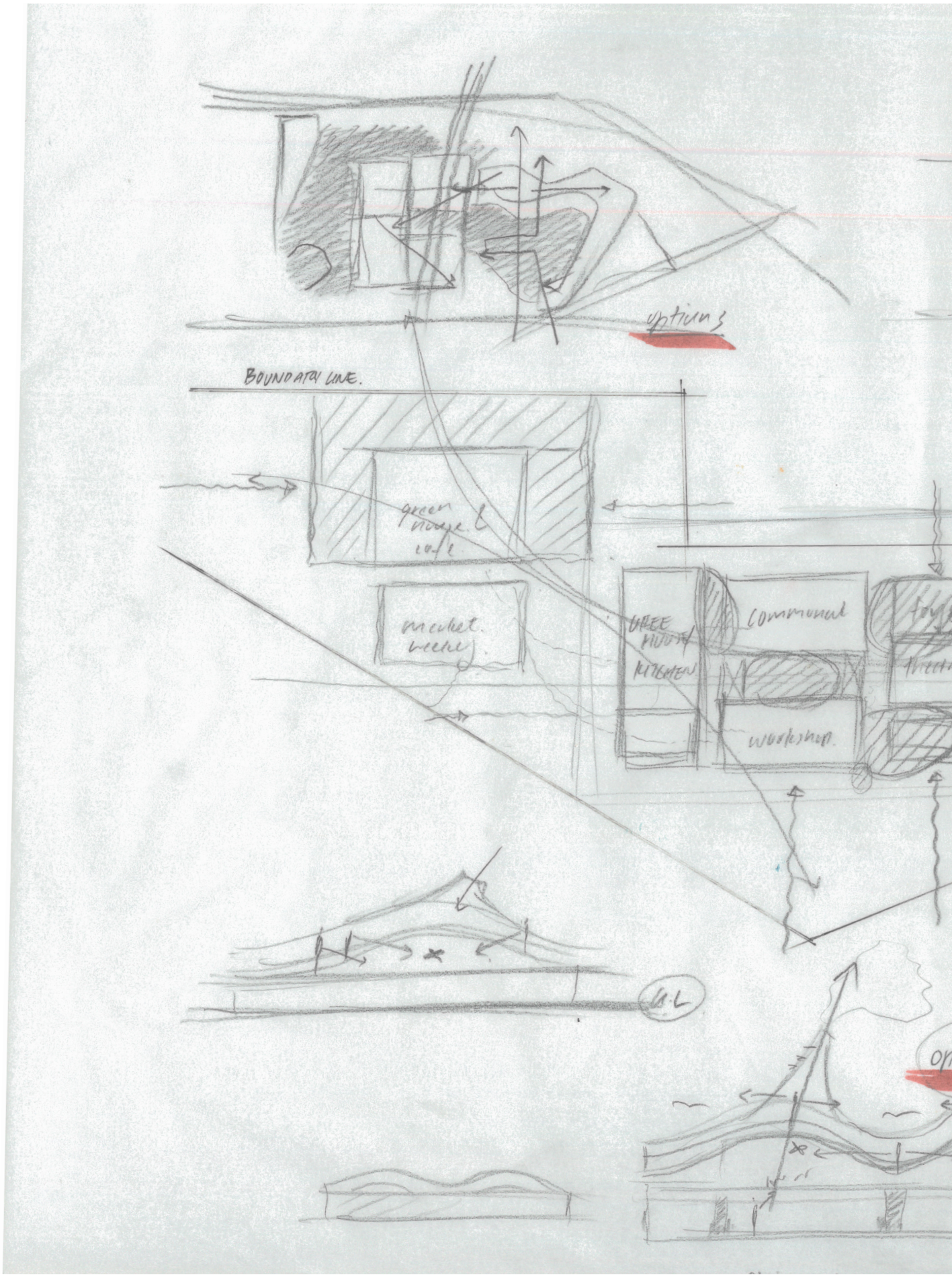
New Urban Campus for Bocconi University/ SANAA

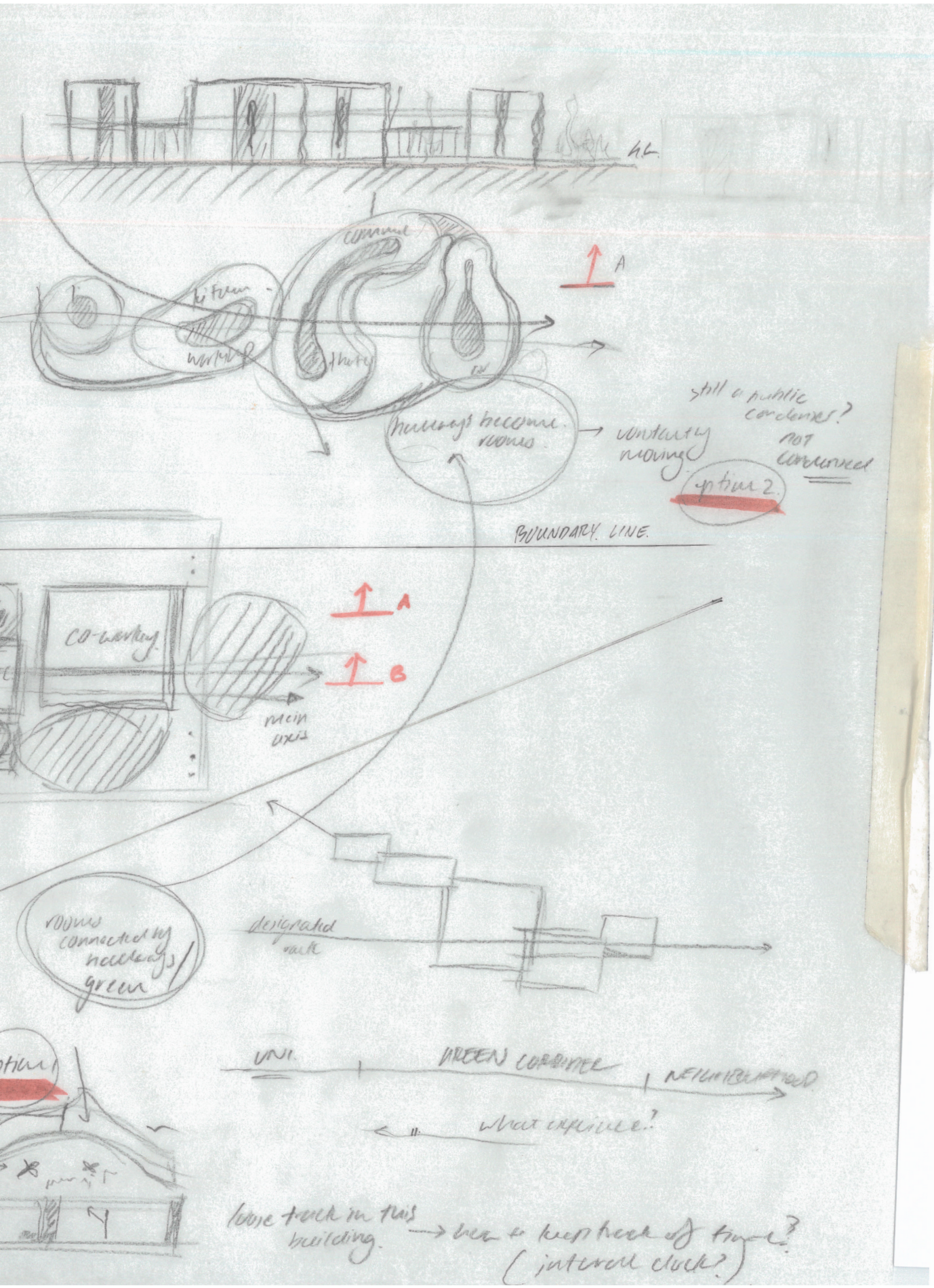

options
BOUNDARY LINE.
green
market
workshop

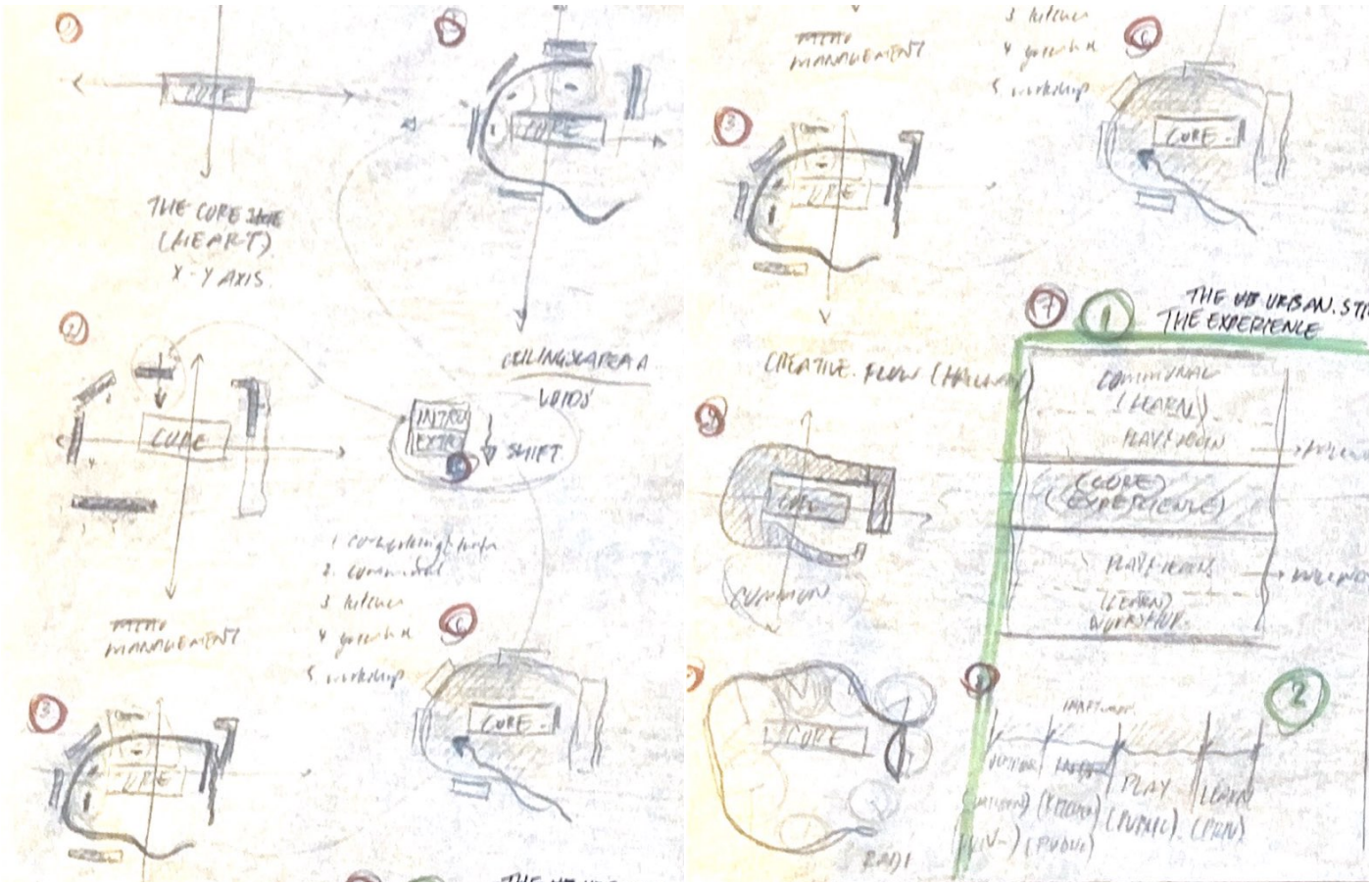

A
still a public corridor?
not connected
option 2.
BOUNDARY LINE.
ONLY ROAD INTO SUNDHOLM.
CAR.
A
B
co-working
main axis
designated walk
GREEN CORRIDOR
what experience?
and interaction
loose track in this building.


options
BOUNDARY LINE.
green
market
workshop

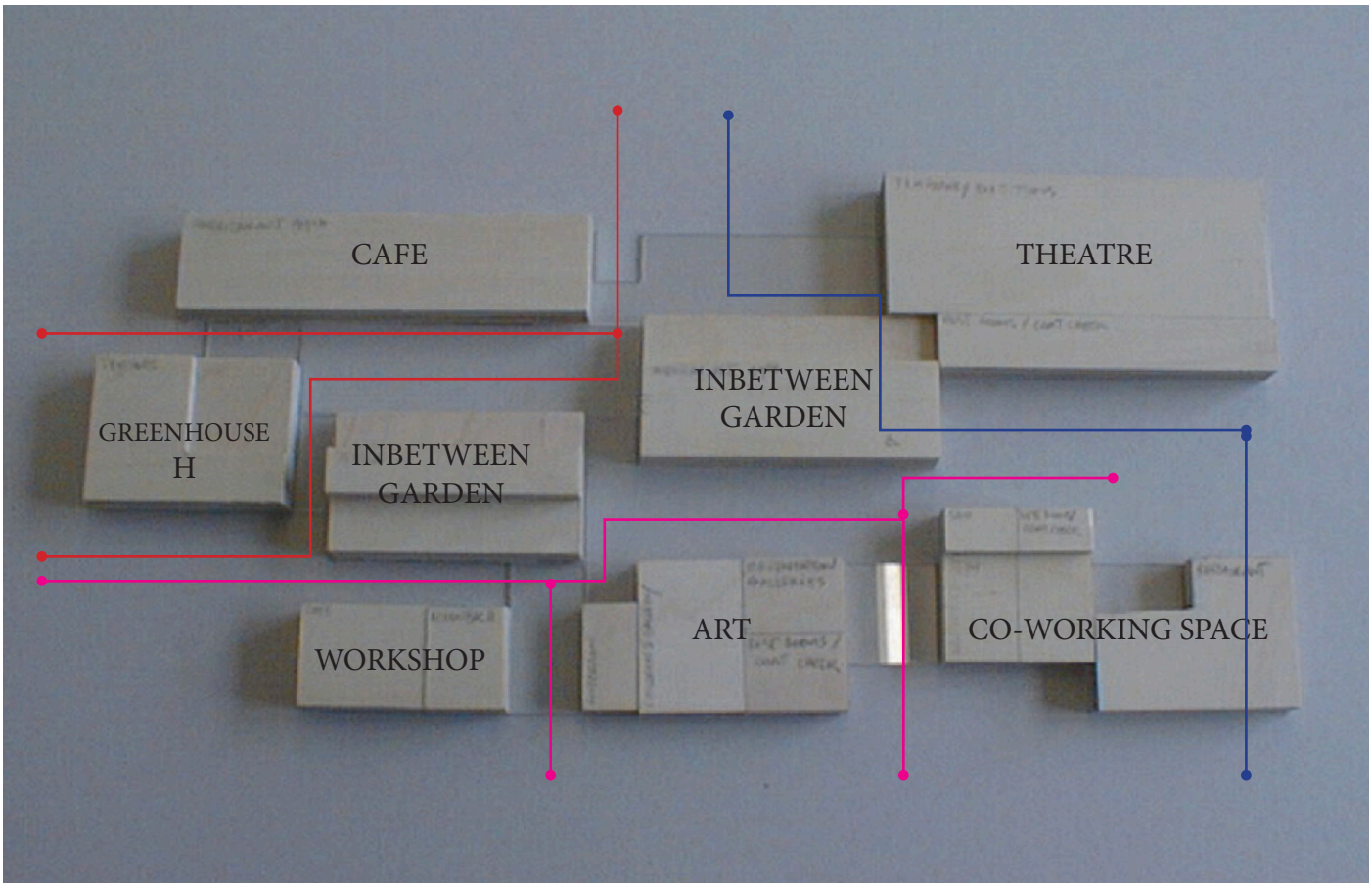

A
still a public corridor?
not connected
option 2.
BOUNDARY LINE
A
B
co-working
main axis
rooms connected by walkways / green
designated walk
UNI
GREEN CORRIDOR
NEIGHBOURHOOD
what options?
option 1
loose track in this building.
(internal clock?)


options
BOUNDARY LINE.
green
market
workshop

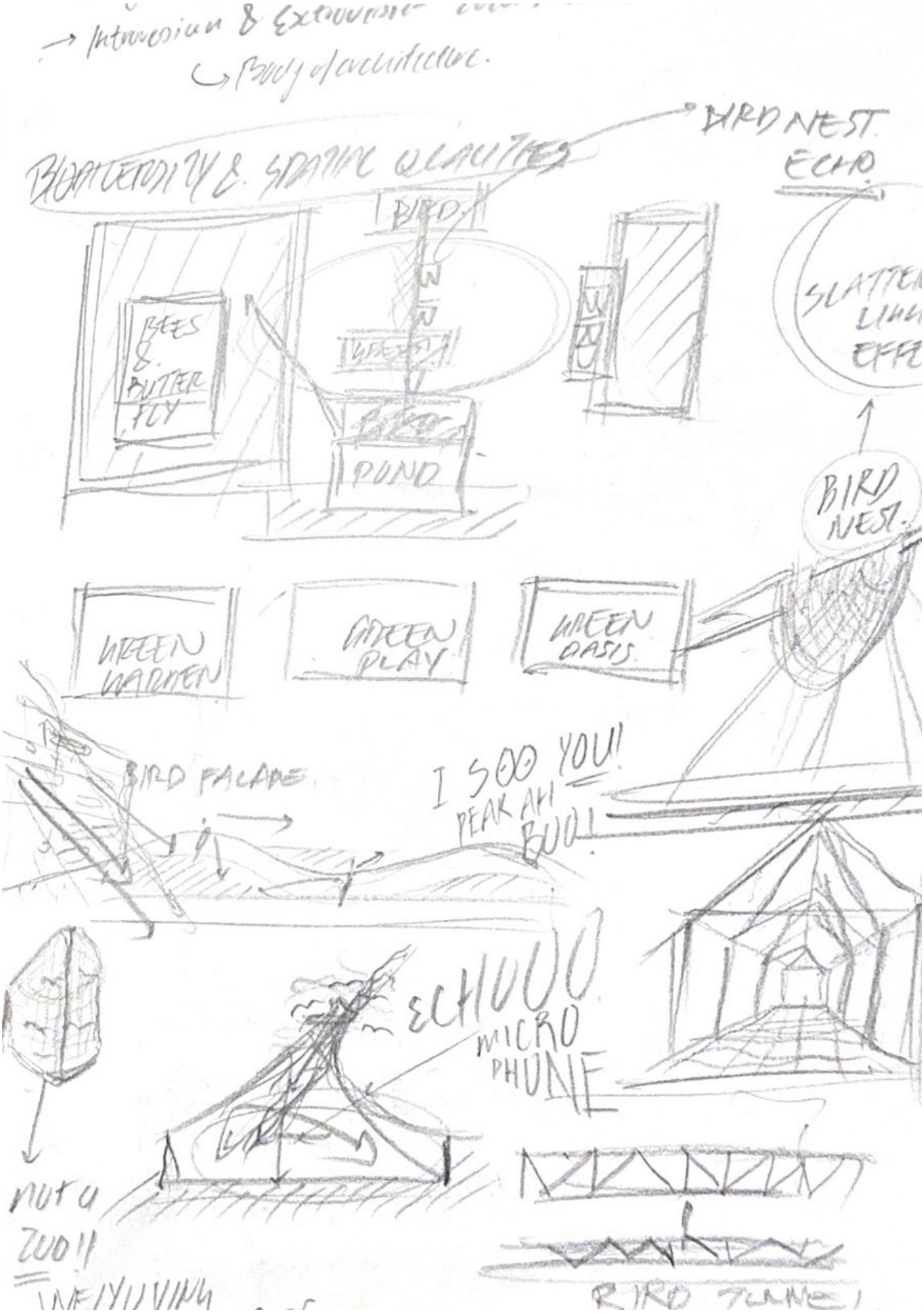

A
still a public corridor?
not connected
option 2.
BOUNDARY LINE
A
B
co-working
main axis
rooms connected by walkways / green
designated walk
UNI
GREEN CORRIDOR
NEIGHBOURHOOD
what options?
option 1
loose track in this building.
(internal clock?)



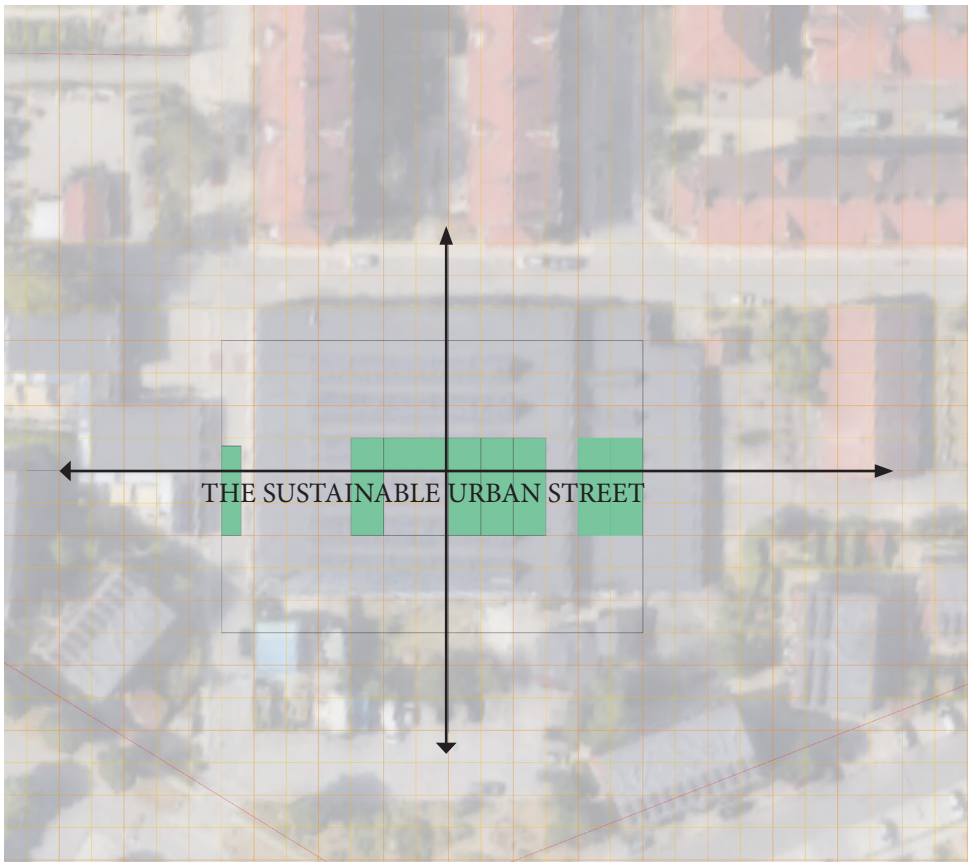
Creative journey / floorplan



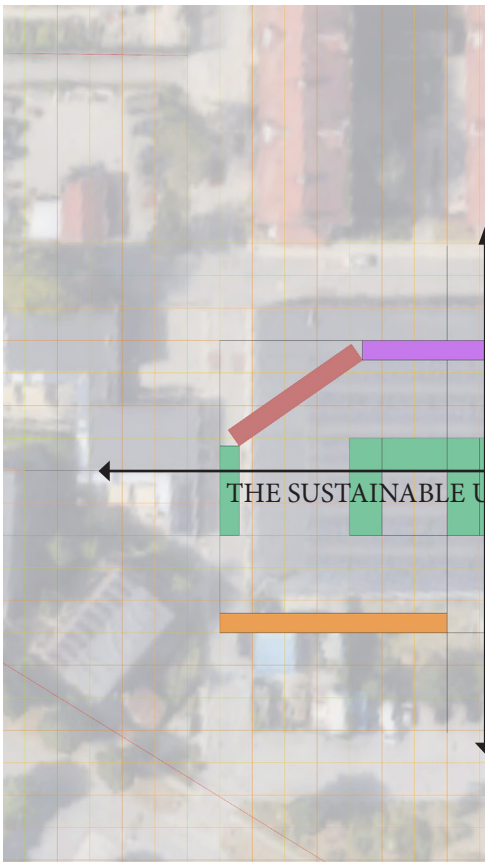
Model



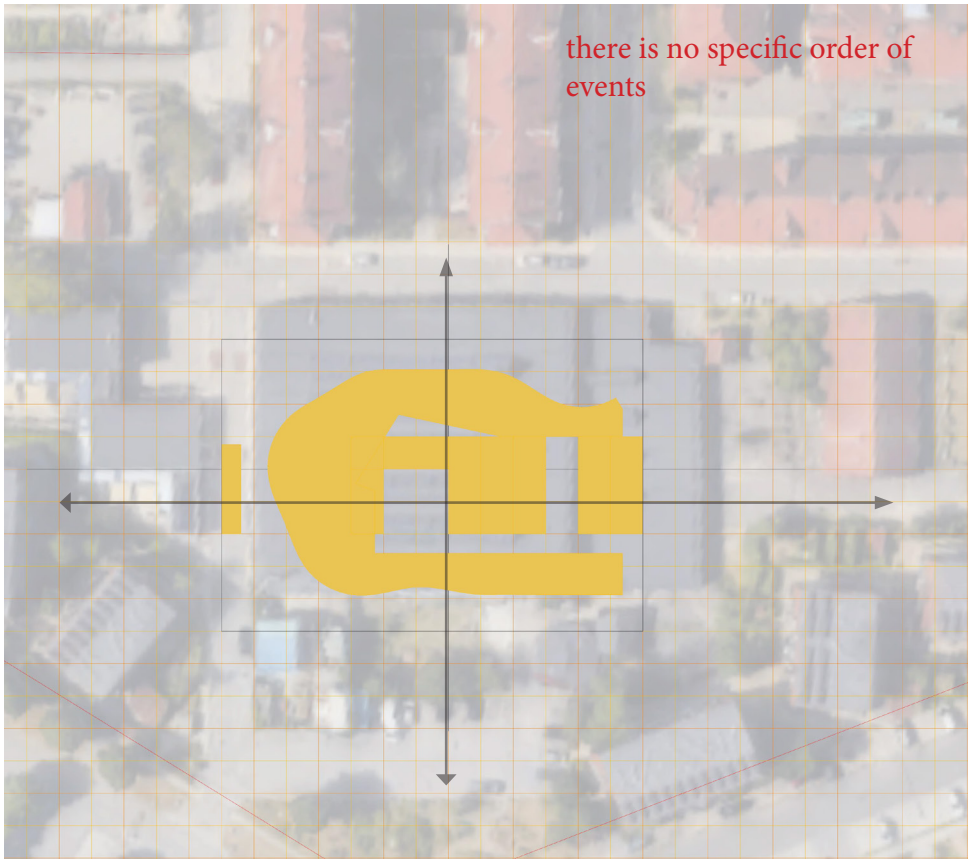
Biodiversity - software - creating spatial qualities



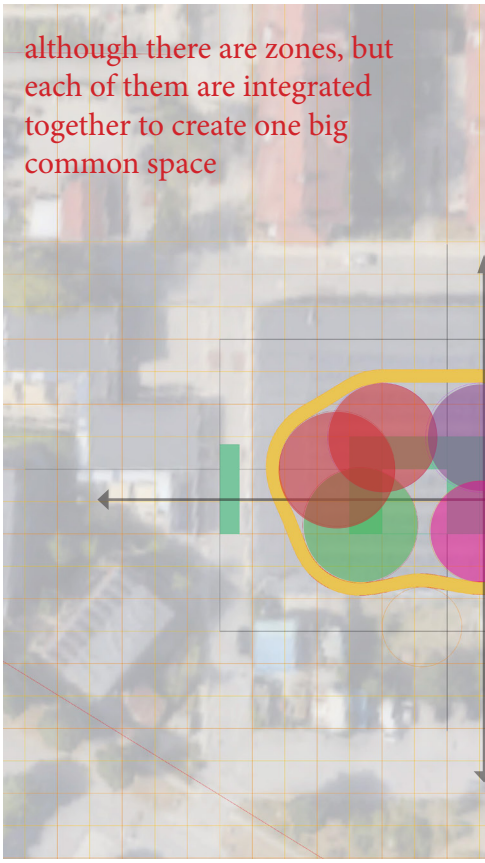
CORE



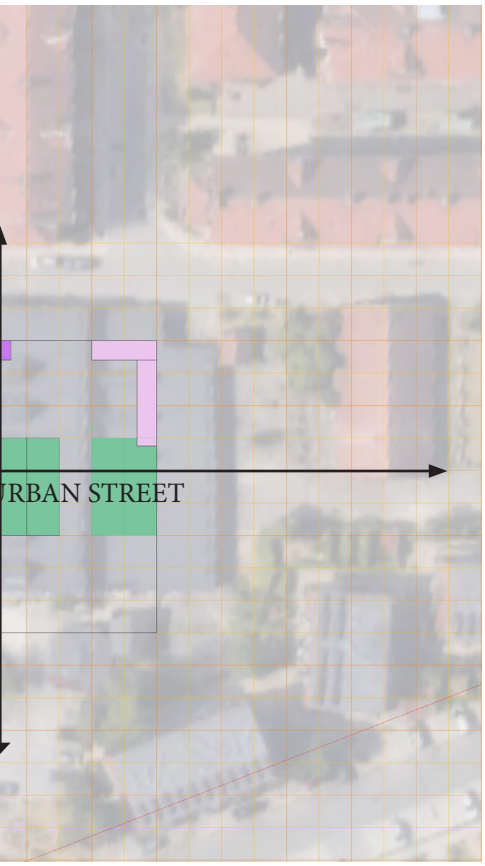
MANAGEMENT / I



THE COMMON SPACE FOR LEARN AND PLAY

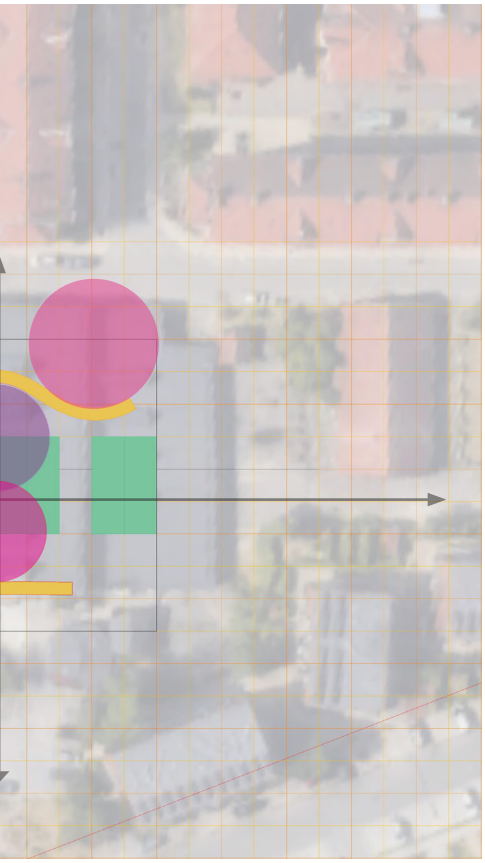


RADIUS - DEFFIRI



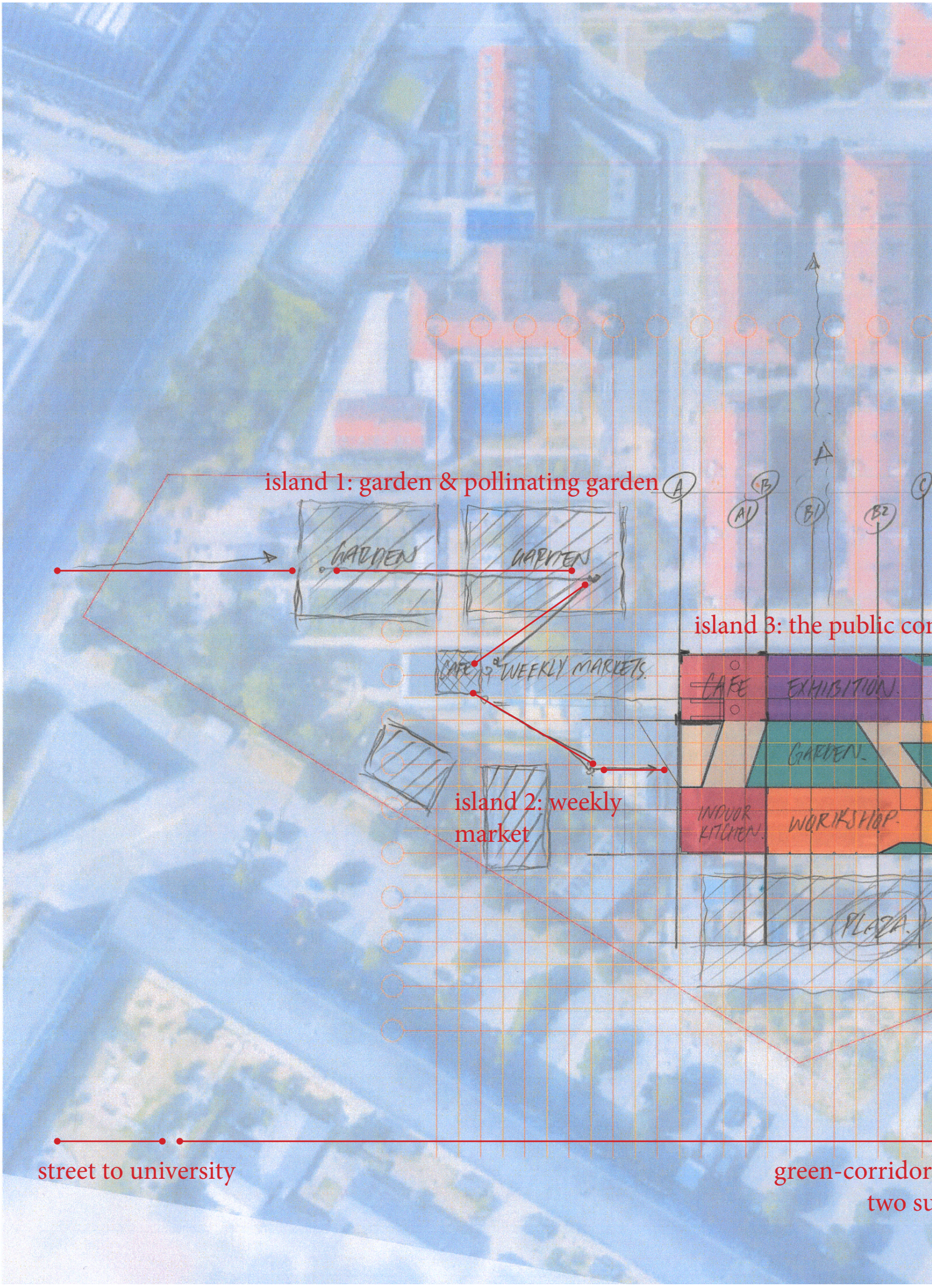
LEARNING ZONES

CREATIVE ZONES CRAVED OUT
MOVEMENT IN THE MIDDLE



IENTATED ZONES

ROOF TOP DESIGN: LEARNING ZONES WITH SKYLIGHT.
GREEN ROOF FOR BIODIVERSITY FOR COMMON


island 1: garden & pollinating garden
island 2: weekly market
island 3: the public co
street to university
green-corridor
two su

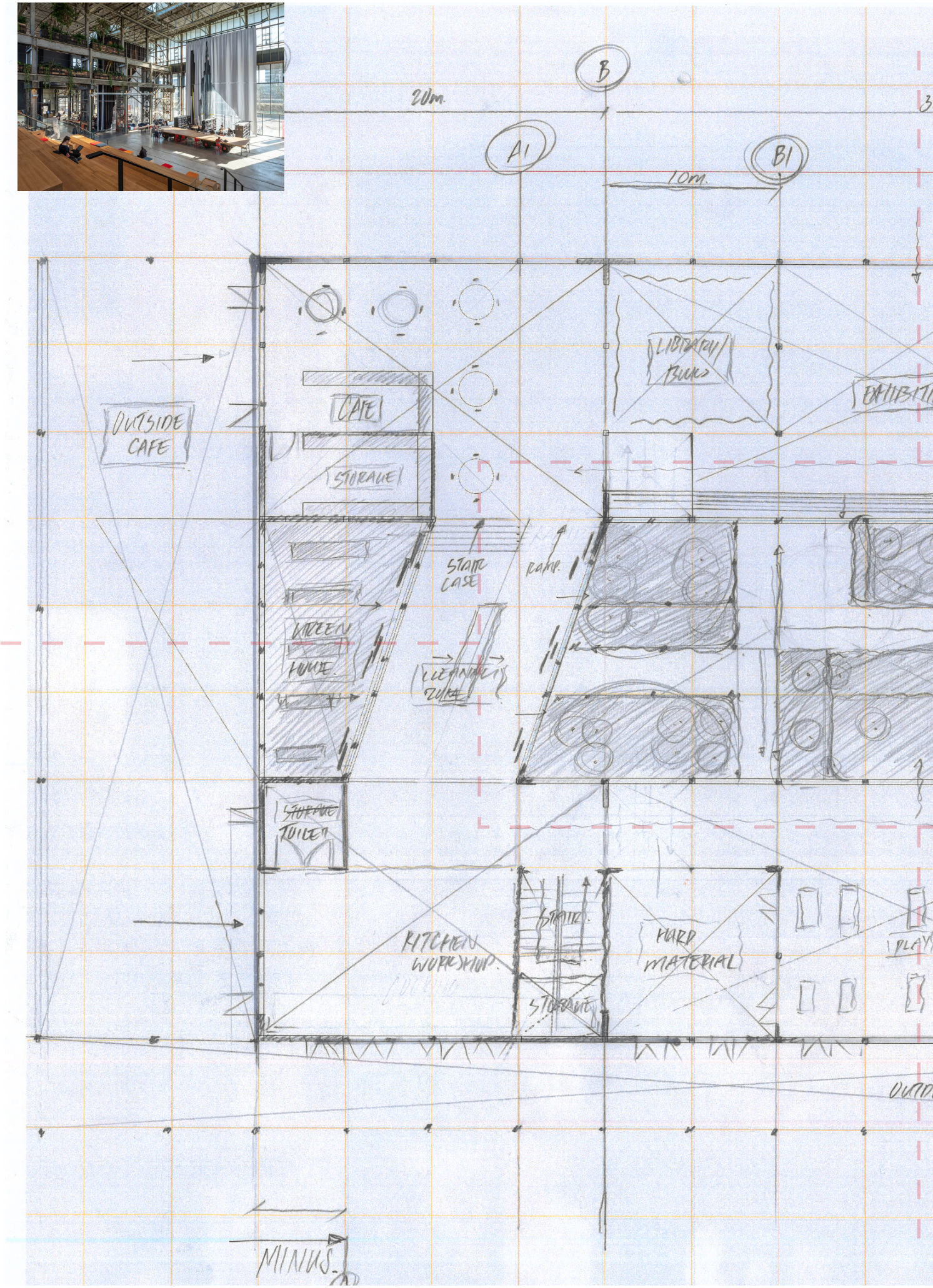
ndenser

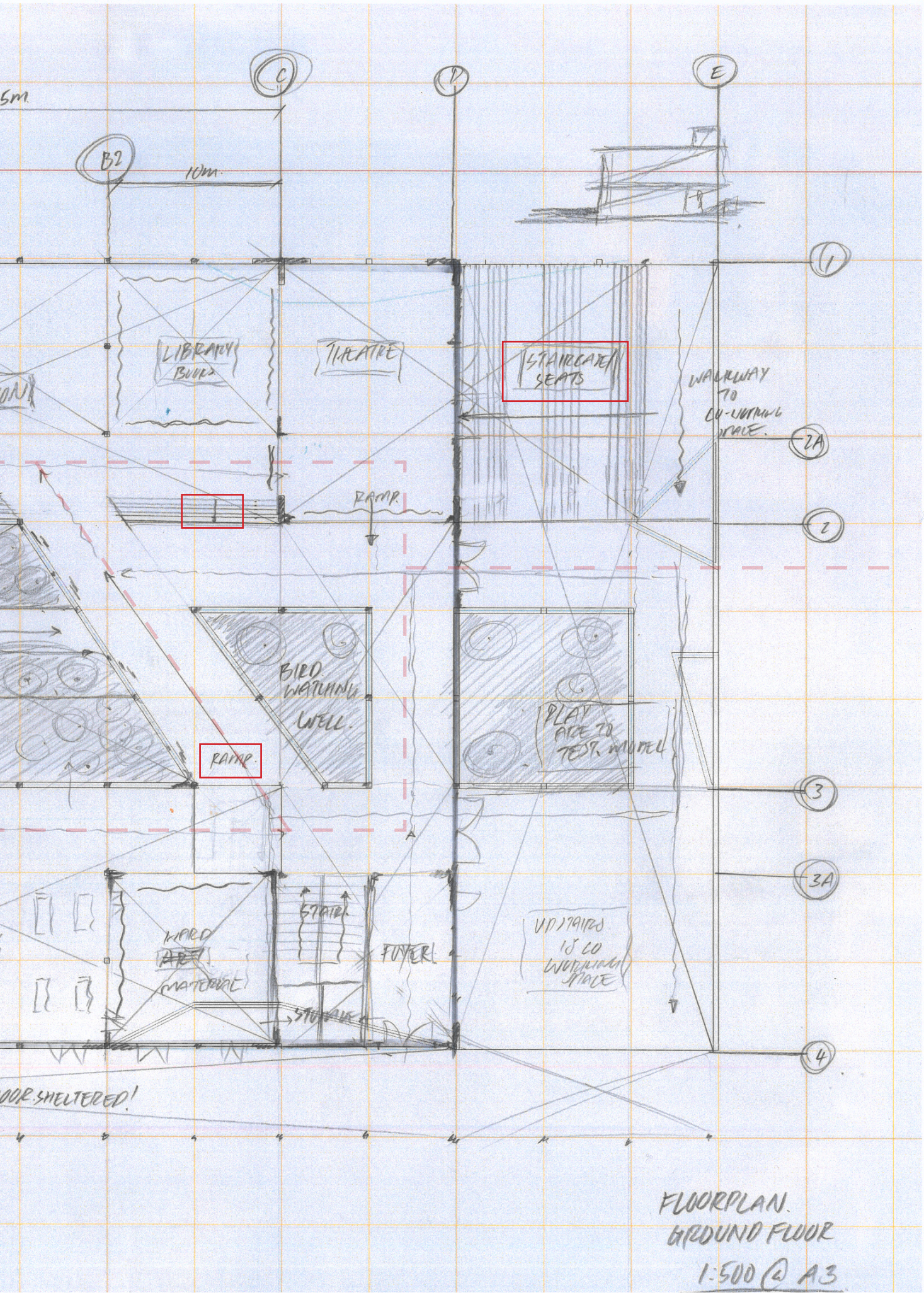
island 5: playground/ park

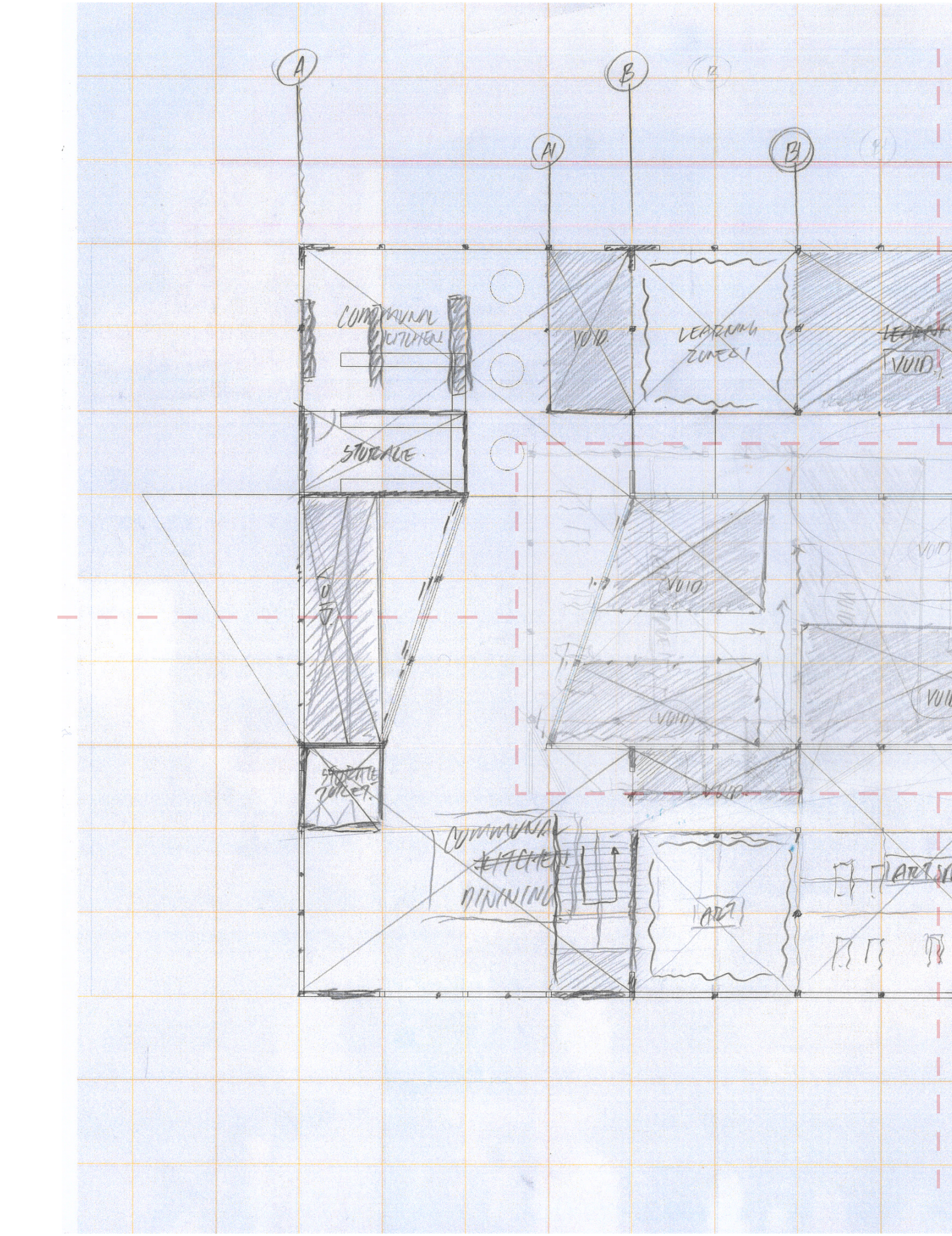
island 4: workshop
outdoor- biodiversity
distribution

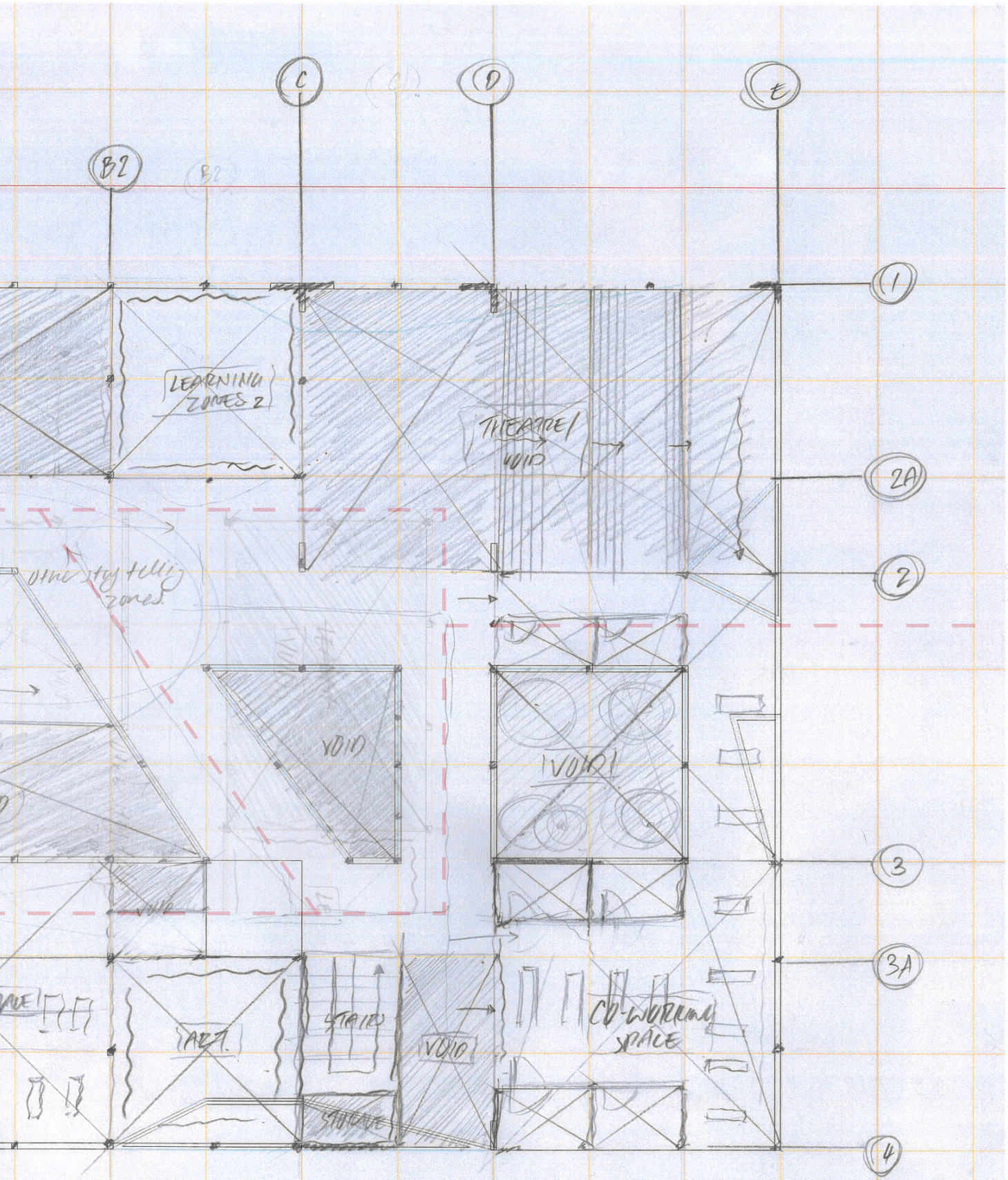
to connect the
uburbs

street

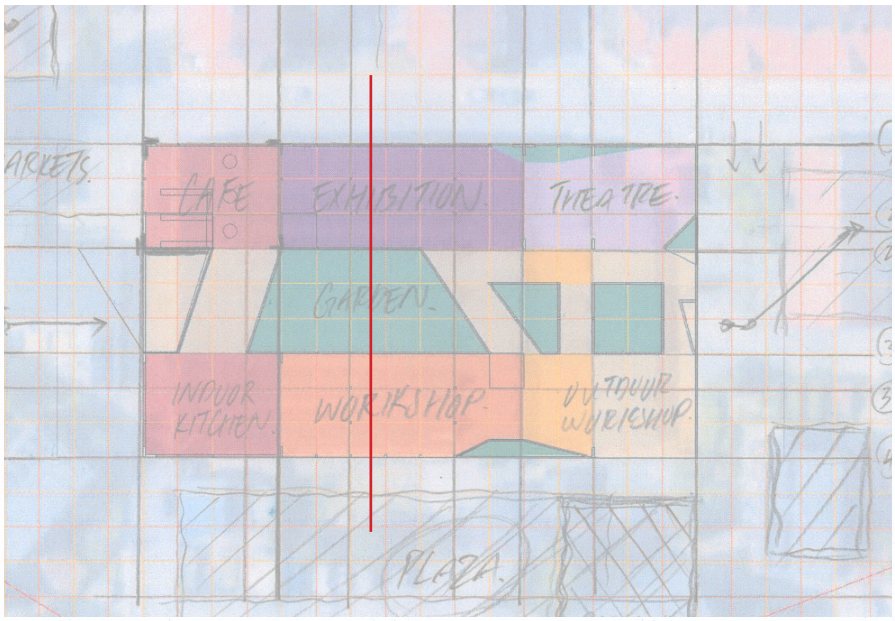

B
20m.
A1
B1
10m.
OUTSIDE CAFE
CAFE
STORAGE
STAIR CASE
RAMP.
KITCHEN
TOILET
LIBRARY / BOOKS
STAIR
STORAGE
KITCHEN WORKSHOP
HARD MATERIAL
PLAY
MINUS.


C
D
E
B2
10m.
1
2A
2
3
3A
4
LIBRARY BLDG
THEATRE
STAIRCASE/SEATS
WALKWAY TO CO-WORKING SPACE.
RAMP
BIRD WATCHING WELL.
RAMP.
PLAY AREA TO TEST WATER
STAIRS
FOYER
STORAGE
FLOORPLAN.
GROUND FLOOR
1:500 @ A3

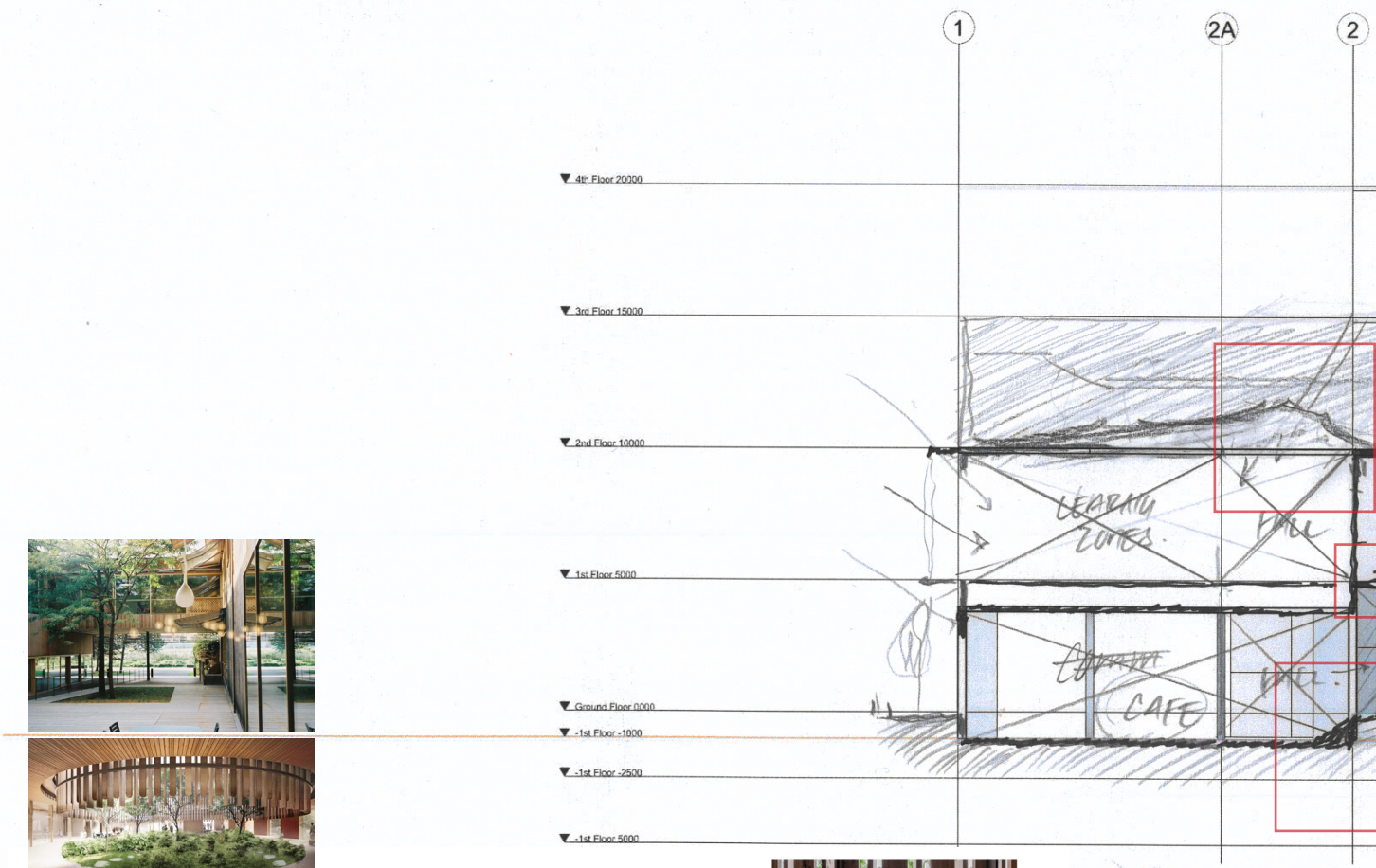

A
B
A1
B1
VOID
LEARNING ZONE
VOID
STORAGE
VOID
VOID
VOID
ART

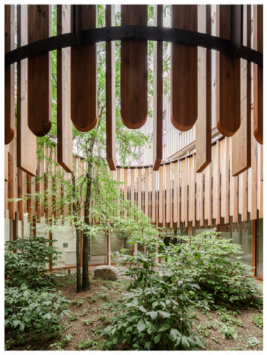


FLOORPLAN
1ST FLOOR
1:500 @ A3



skylight/ bird chimney/ e

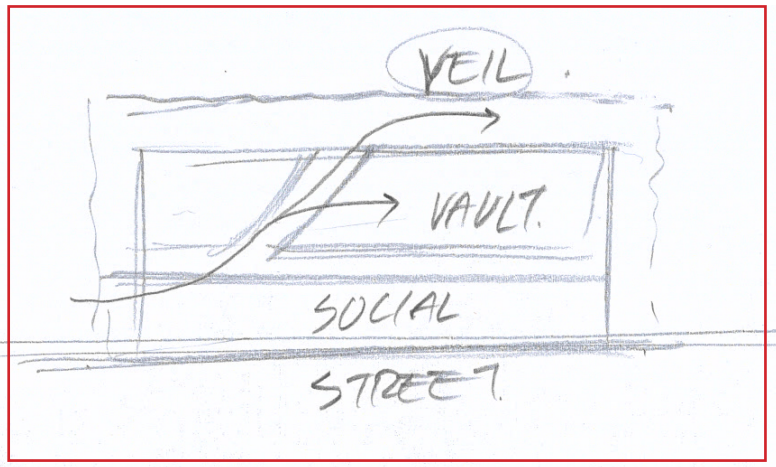




slight lev
different

Section AA through exhibi

echo

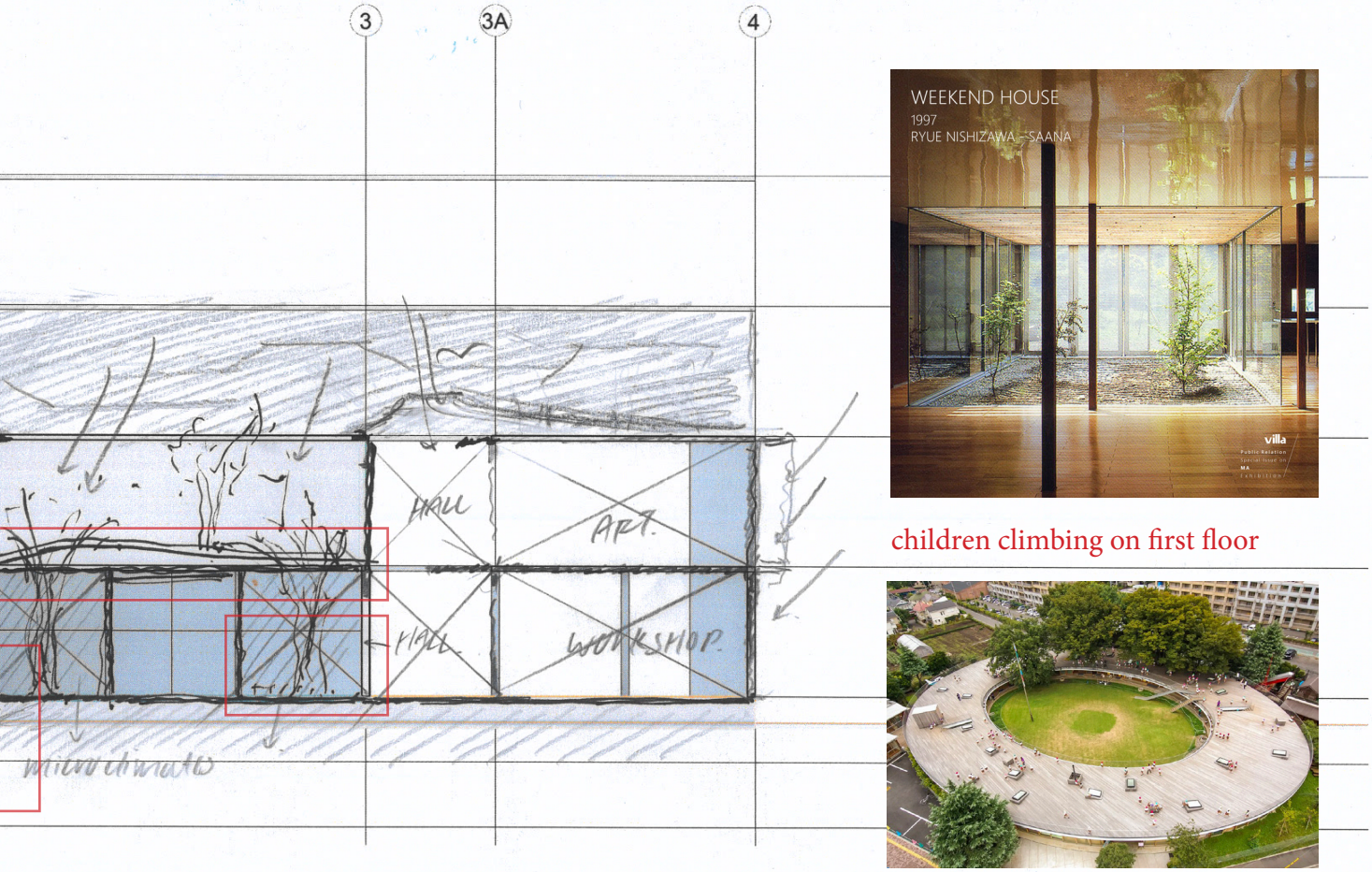


veil/ facade= place for biodiversity to nest

the first floor - the exploration for children

groundfloor- the teaching social zones

vertical corridor- traveling up to the “vault of knowledge”

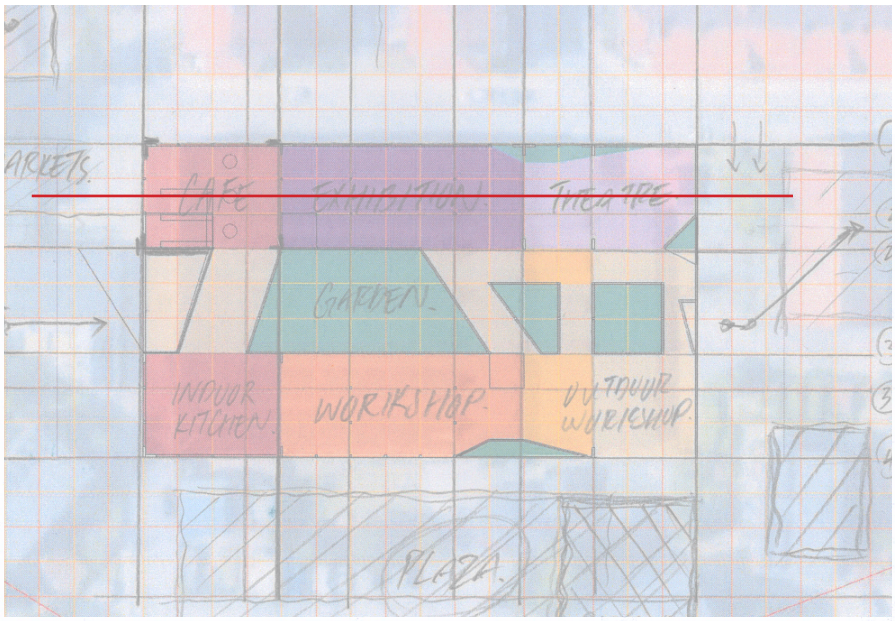


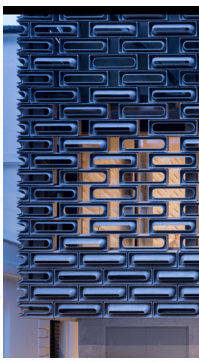
children climbing on first floor

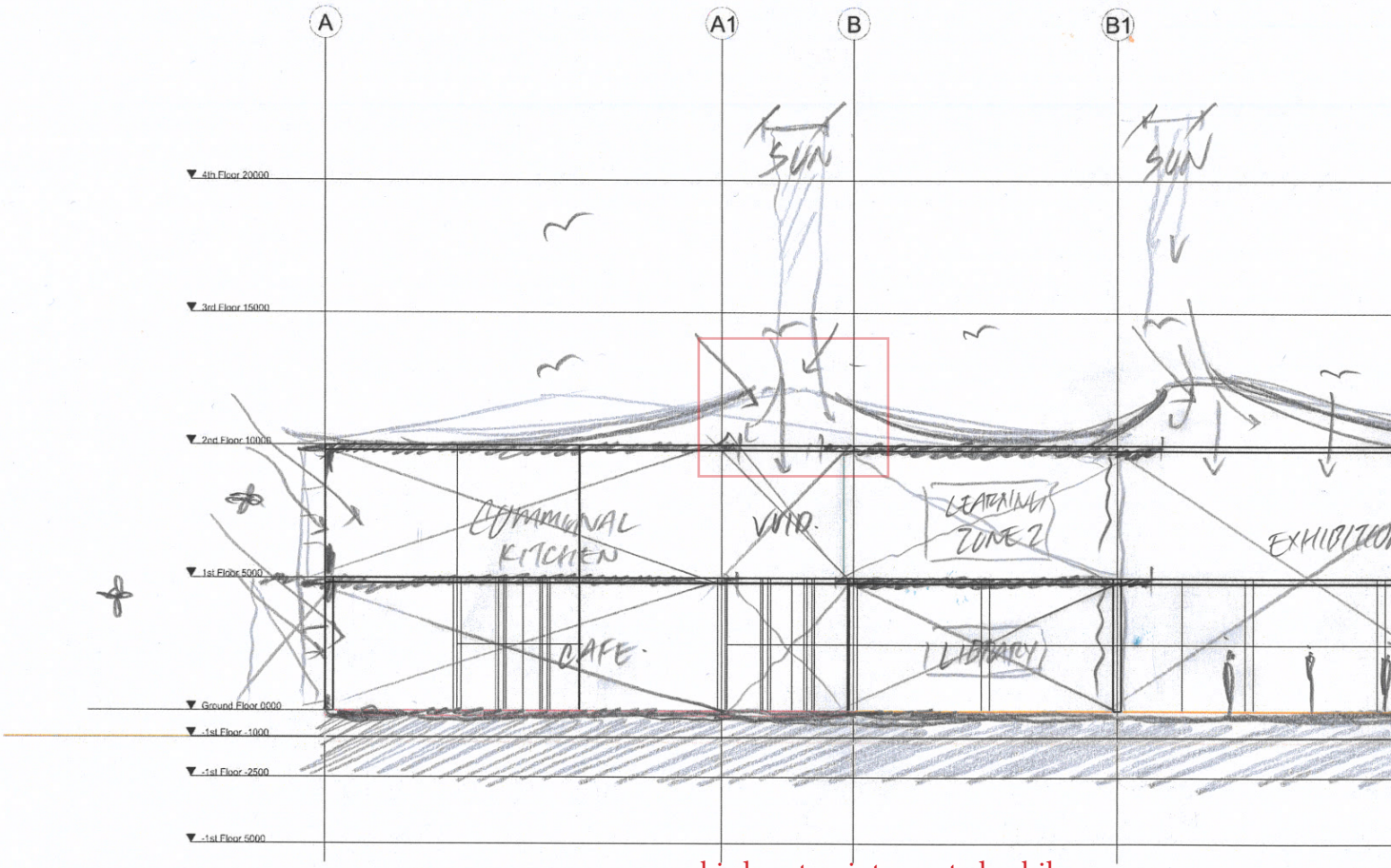
vel shifts to
iate spaces

microclimates for different purposes

tion, garden and workshop

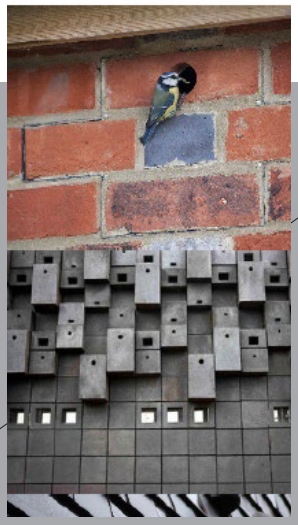






bird nest uninterrupted while nesting - but can still be taken care of by human

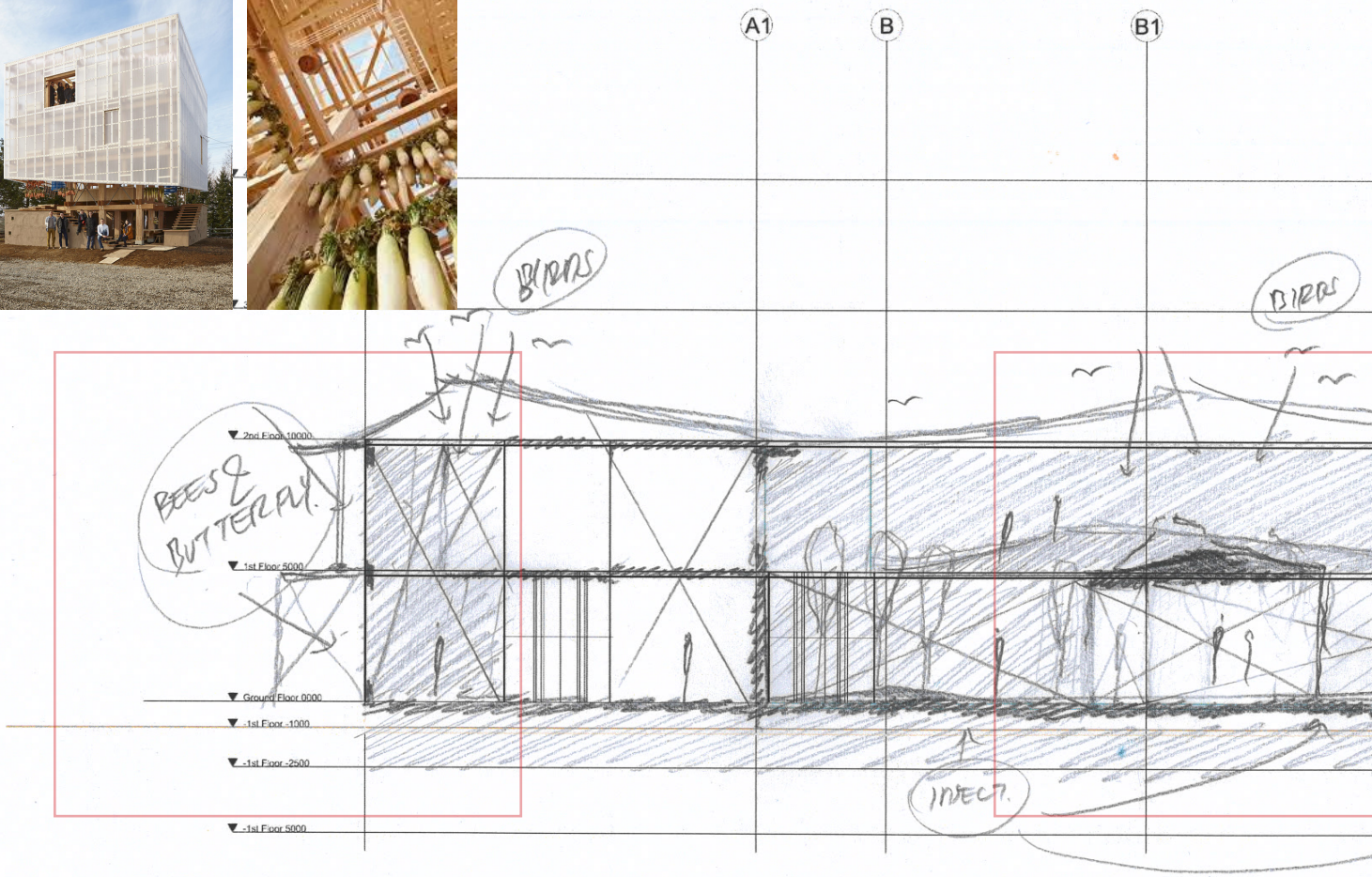
Section BB through Cafe & communal kit
and co-wor



biodiversity outlook from
co-working spaces

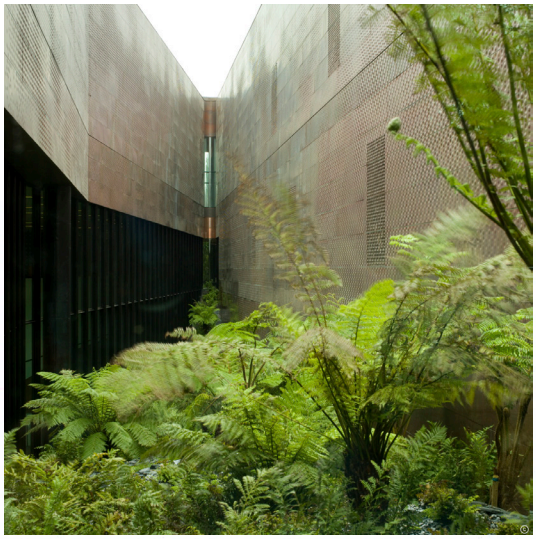
chen | Learning zones & Library | Theatre
king spaces

climbable spaces for childr
some outdoor

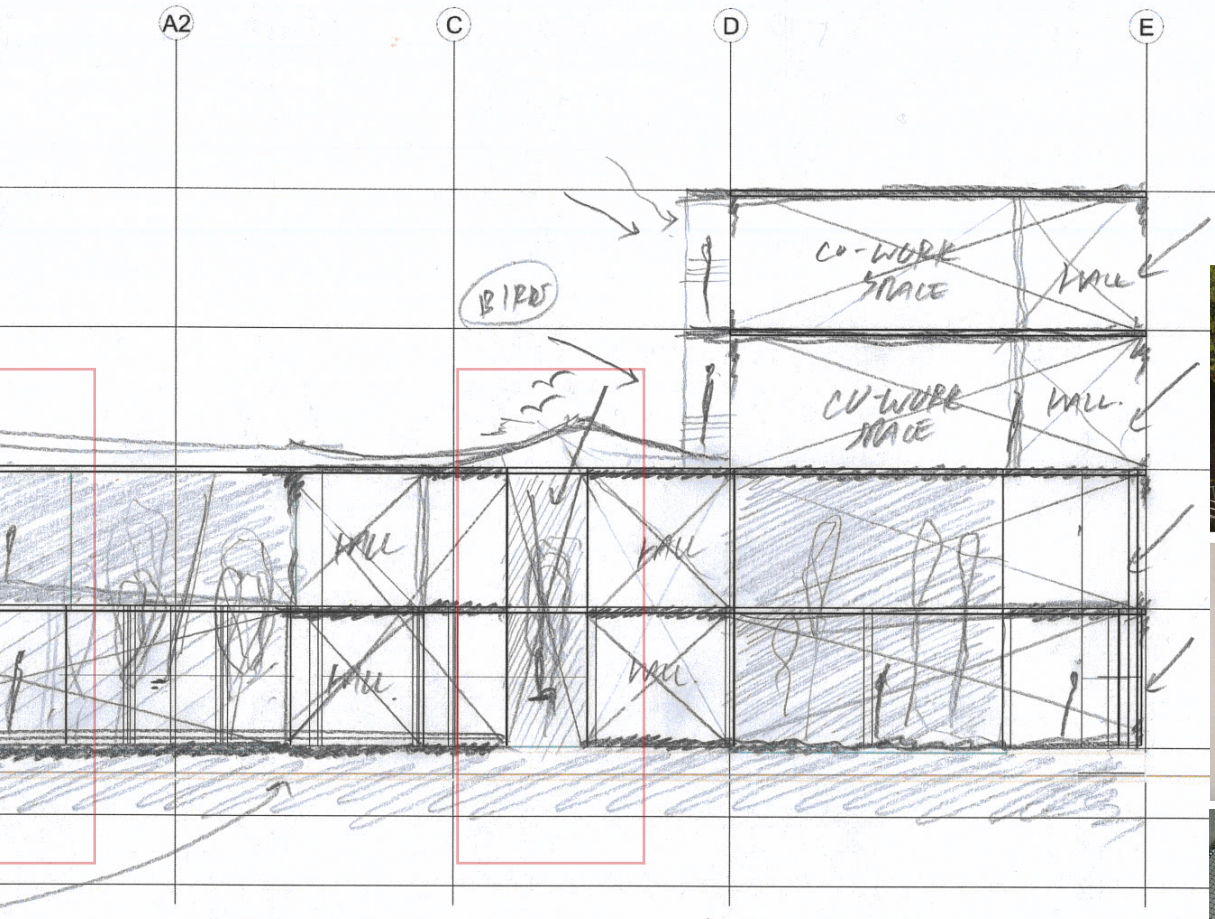


green house with microclimate and also butterfly and
bee pollinating/ facilitating space for winter

Section BB through Greenhouse | Gardens indoor a
on ro

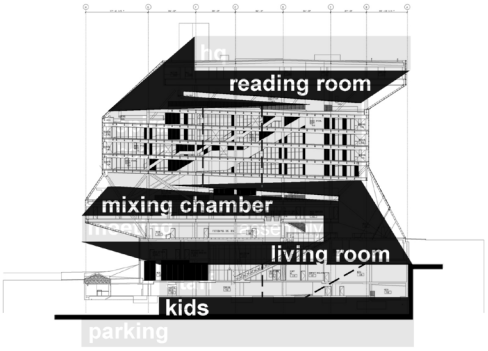


en - garden- some indoor



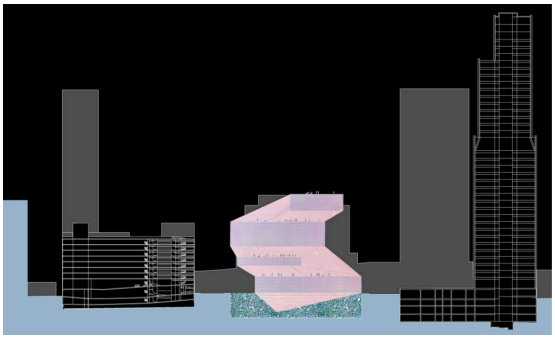
there are lots of public areas but also more private areas- this area is for swinging while seeing the birds from alove

nd outdoor | Coworking space and biodiversity nest
oftop

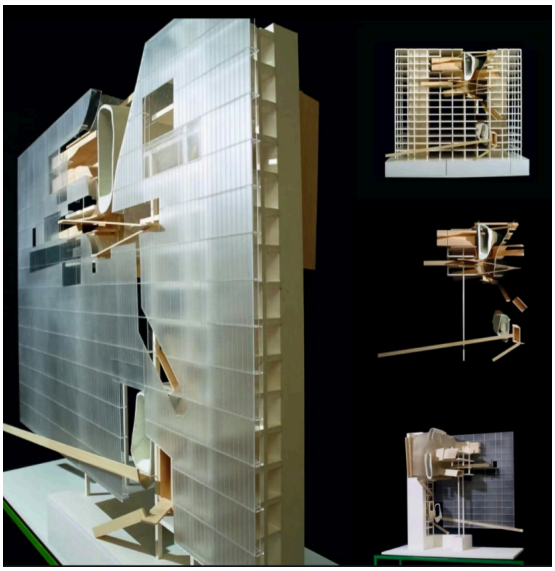


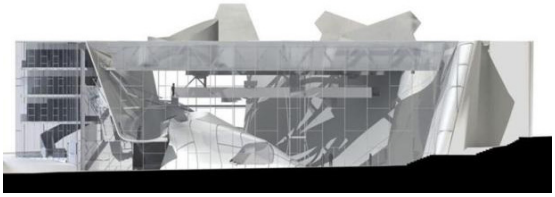
Movement and Atmosphere
exploring through section

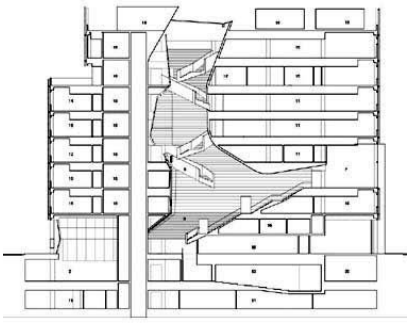
Rem Koolhaas
Gallery for Seattle Central Library
Integration into the Library's Zoning Concept
Koolhaas structured the library using a "zoning" system, where spaces are divided based on their function. The gallery space, while not a traditional gallery, is integrated into this zoning approach. The gallery areas are primarily used for displaying collections, community exhibitions, and rotating displays of art or literature-related content.

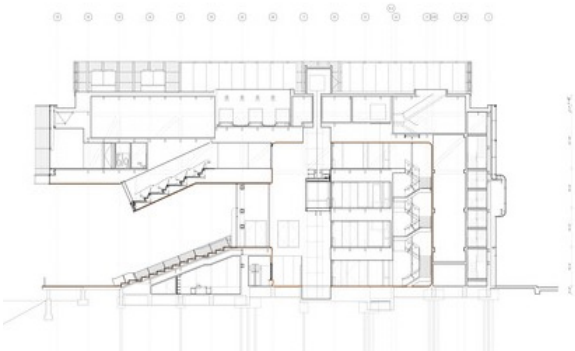


Wolfgang Tschapeller's Verwaltungsgebäude der Bundesländer-Versicherung
In Vienna, Austria, is a bold architectural exploration that merges concept, section, and circulation into a cohesive spatial narrative. The building's concept emphasizes lightness and transparency, achieved through elevated structural volumes and delicate material contrasts. Sectionally, the design reveals suspended floors and voids that redefine traditional office layouts, fostering dynamic vertical relationships between levels. Circulation is orchestrated through a network of floating walkways and staircases that traverse open spaces, creating a sense of movement and interaction. The atmosphere is one of ethereal lightness, where natural light penetrates the facade and interstitial spaces, crafting an environment that feels both futuristic and connected to its urban surroundings.



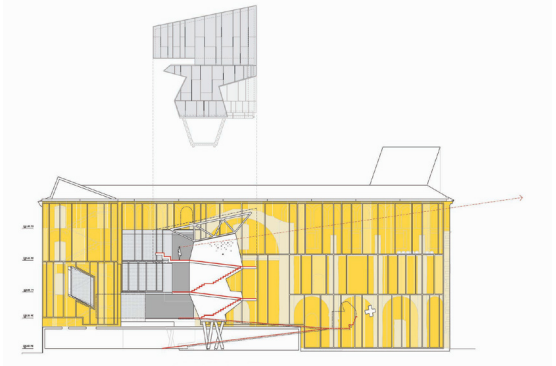




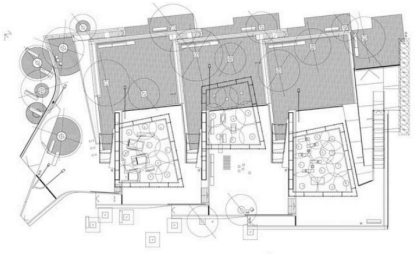


Movement and Atmosphere
exploring through section

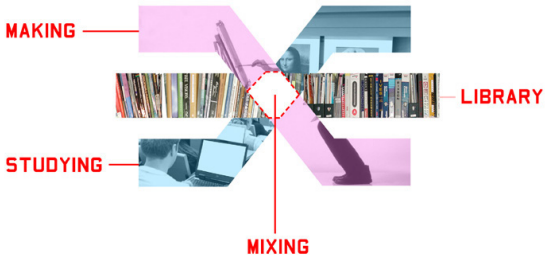
Perot Museum of Nature and Science by Morphosis Architect
concept of dynamic exploration and discovery, mirroring the natural sciences it houses. The building’s section reveals a dramatic interplay of solid and void, with the central atrium connecting multiple levels of exhibit spaces, fostering vertical and horizontal circulation. A continuous ribbon-like ramp weaves through the structure, serving as both a functional and experiential journey that immerses visitors in curated views of the exhibits and the cityscape beyond.

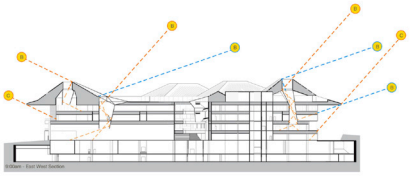


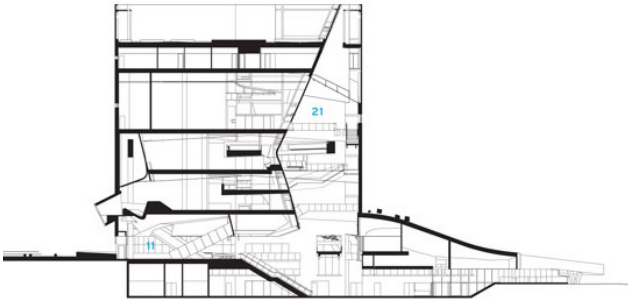
Entrance Façade of the Baroque Museum of Catalonia by David Closes - fragmented design

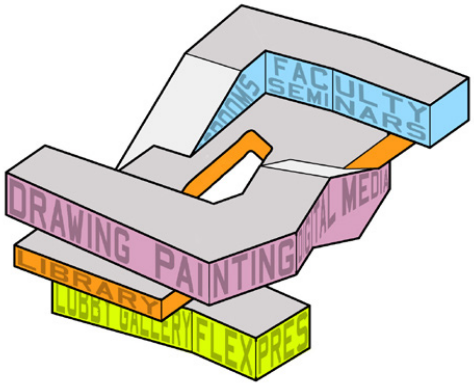


Stanford University Diller Scofidio + Renfro
Exemplifies fragmented and deconstructed design ethos, breaking traditional architectural boundaries. The structure is composed of intersecting forms and dynamic voids that create moments of spatial tension and unexpected connections.

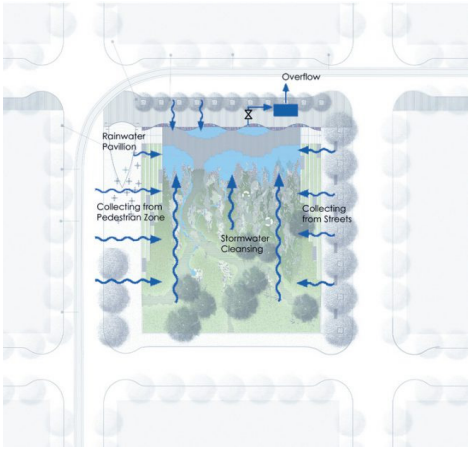




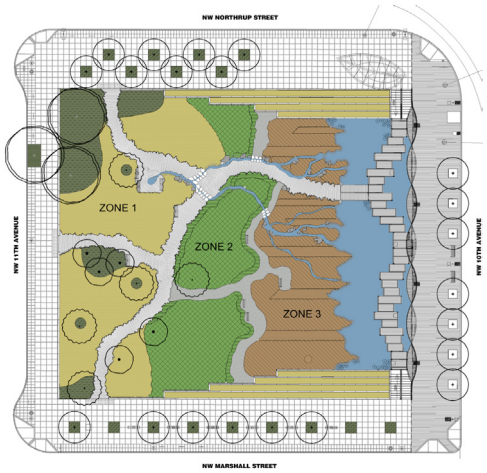




Landscape Design
Catchment, Water & Biodiversty

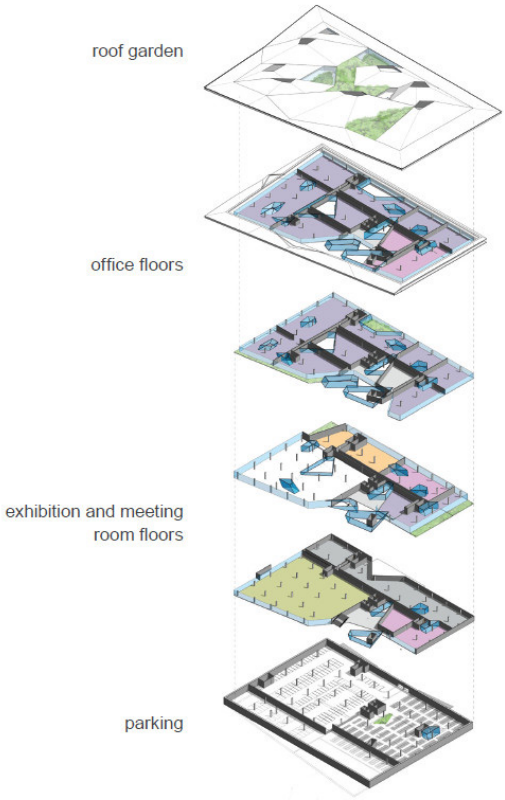


Tanner Springs Park in Portland
Oregon, is famous for its innovative and ecologically sensitive design, showcasing urban sustainability and a harmonious blend of natural and built environments. Designed by Atelier Dreiseitl and GreenWorks, it transforms a former industrial site into a serene urban oasis, integrating wetland ecosystems with modern landscape architecture. The park is celebrated for its striking features, such as the artistic water wall made from recycled railway tracks, native vegetation that supports local wildlife, and a system of rainwater management that mimics natural hydrological cycles. It serves as a model for integrating nature into dense urban settings.



The landscape architecture of Ewha Womans University
The landscape situated in Seoul, South Korea, is designed with both functionality and aesthetics in mind, supporting the educational, cultural, and social needs of the university community. The campus features a mix of open spaces, green areas, and pedestrian pathways, facilitating easy circulation and providing areas for relaxation, social interaction, and outdoor learning. Key elements, such as terraced landscapes and courtyards, enhance connectivity between the campus's various buildings while also offering sustainable solutions for water management and promoting biodiversity. The landscape design effectively integrates nature into the urban environment, providing a calm and engaging atmosphere that fosters academic and personal growth.

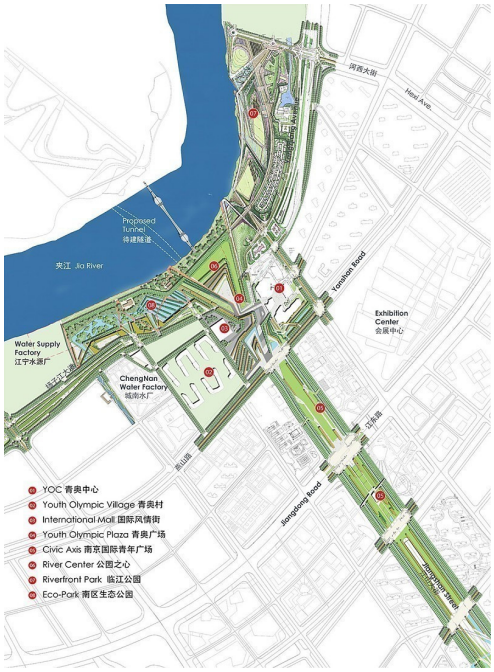
The landscape architecture of the Nanjing Youth Olympic Park in China
designed to serve multiple functions, creating a vibrant space for both sports and public enjoyment. The park integrates athletic facilities, recreational areas, and cultural spaces, promoting physical activity, social interaction, and community engagement.

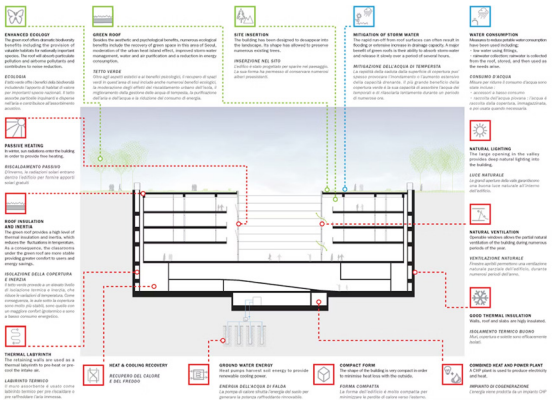


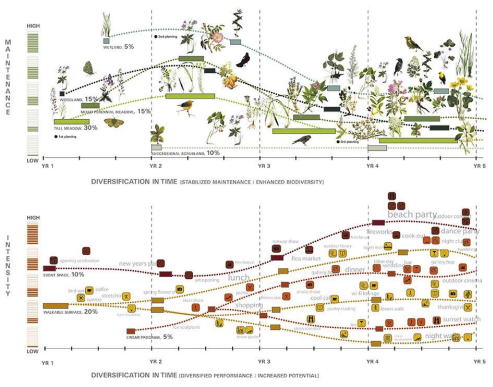
Landscape Design
Catchment, Water & Biodiversty

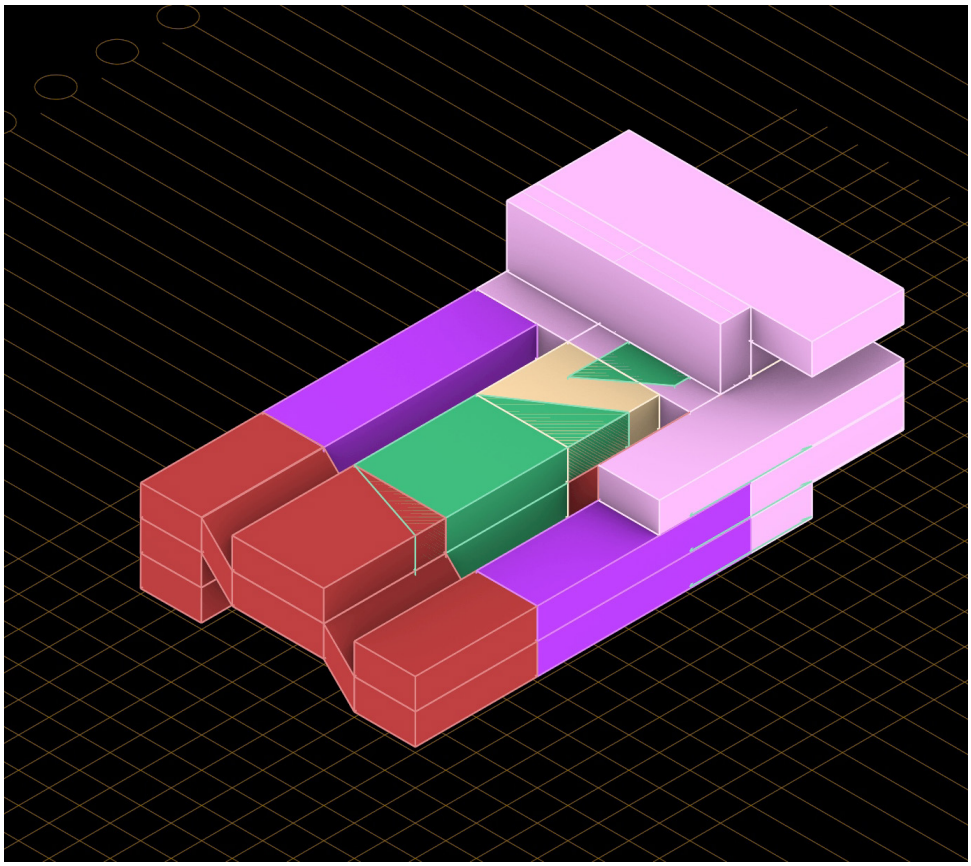
It includes extensive green spaces, walking paths, and water features, designed to provide visitors with areas for relaxation, events, and outdoor activities. The park’s design emphasizes sustainability and ecological awareness, with features like rainwater management systems and native plantings that enhance biodiversity.

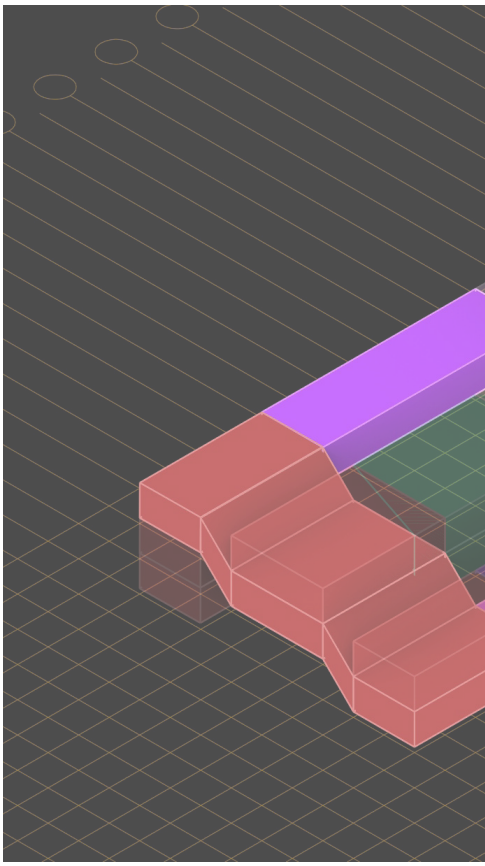
The High Line in New York City, designed by Diller Scofidio + Renfro transforms an old elevated railway track into a dynamic urban landscape, blending nature with architecture. The park serves multiple functions: it provides a unique public space for walking, relaxing, and socializing in the heart of the city, while also enhancing the surrounding urban environment with lush greenery and art installations. The High Line promotes ecological sustainability by incorporating native plants, stormwater management systems, and green infrastructure, contributing to the city’s biodiversity. Additionally, it fosters community engagement, cultural events, and offers stunning views of the city, making it a significant cultural and recreational landmark.

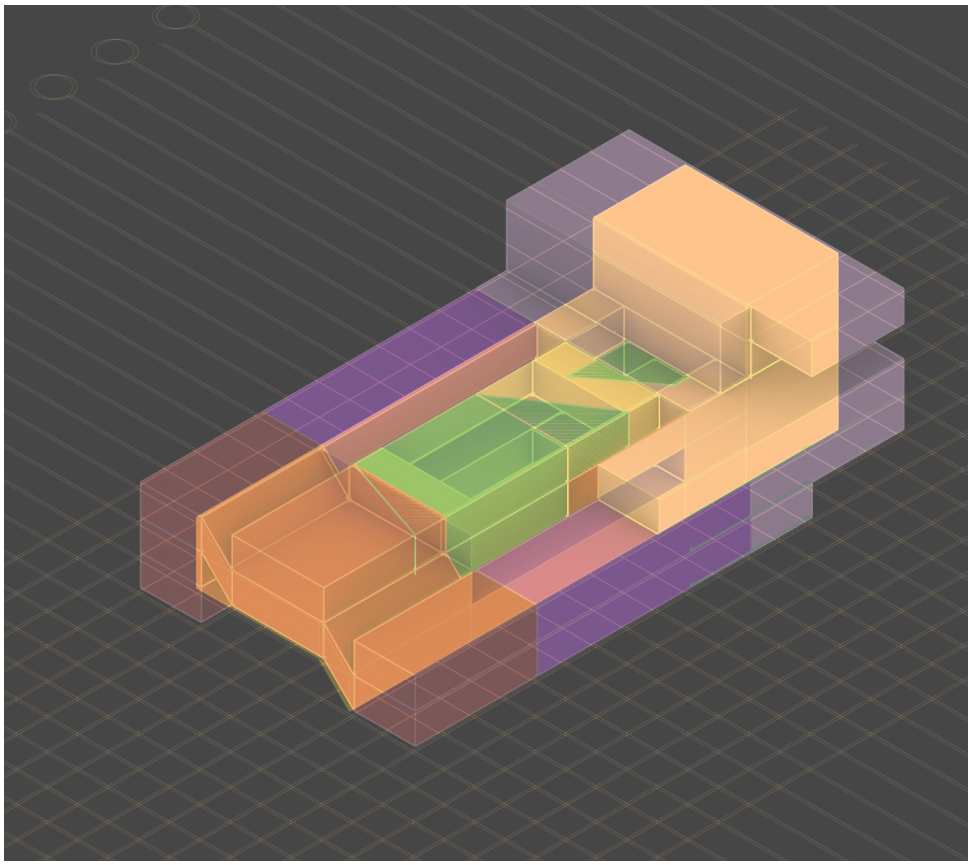


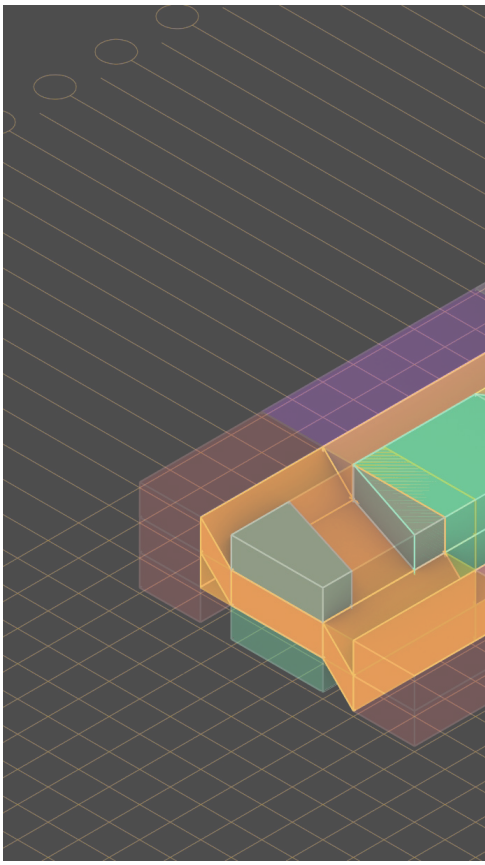


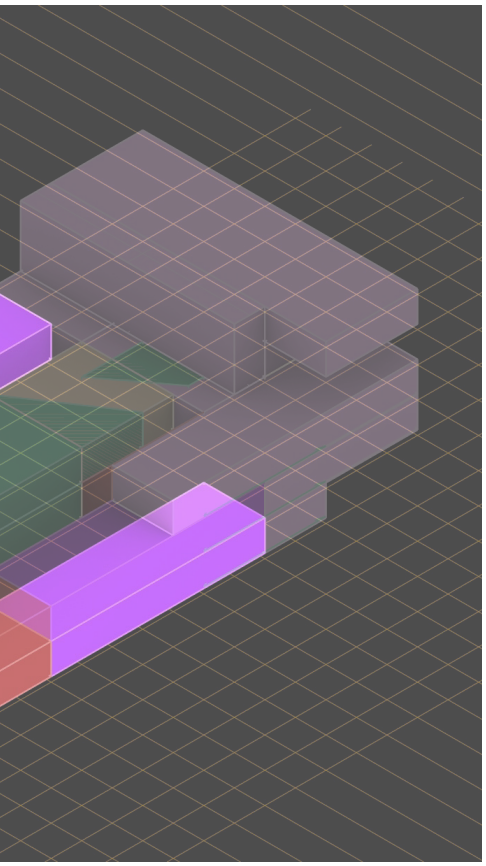


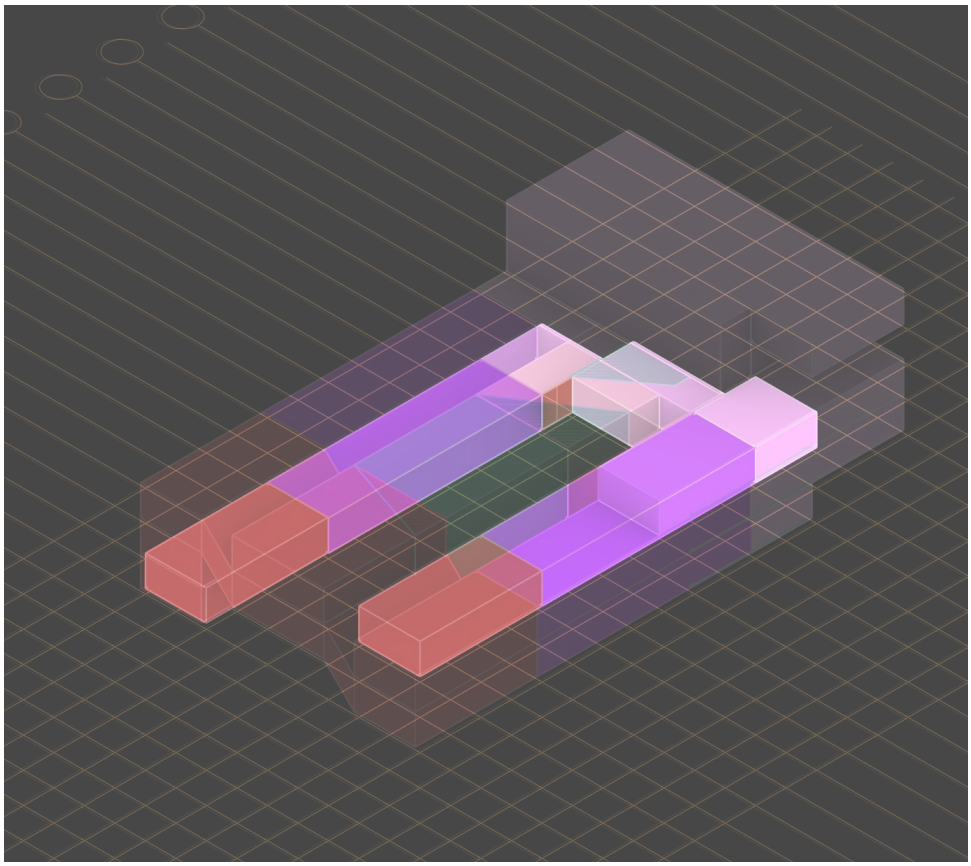


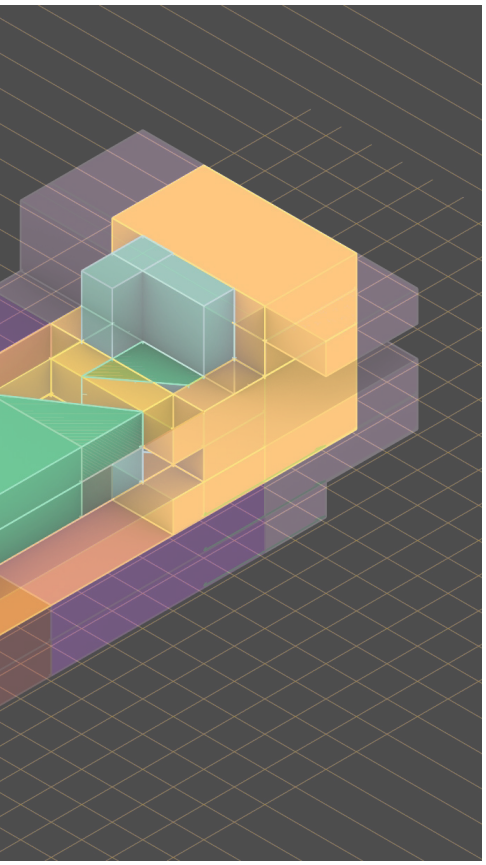


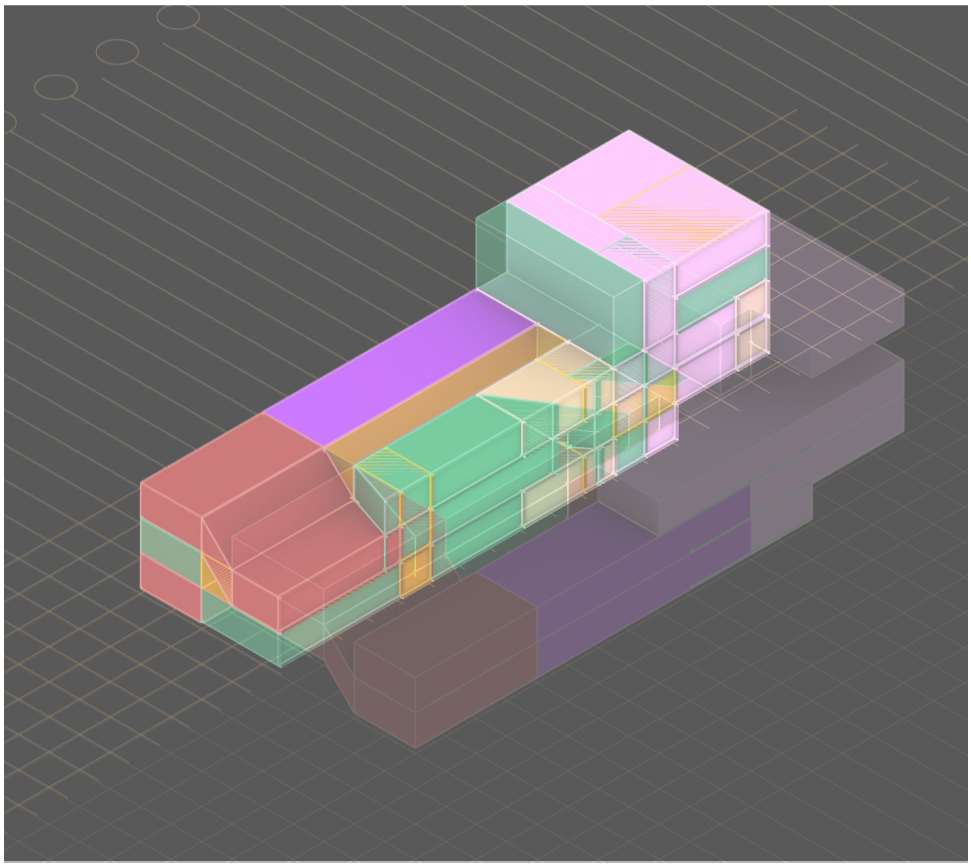


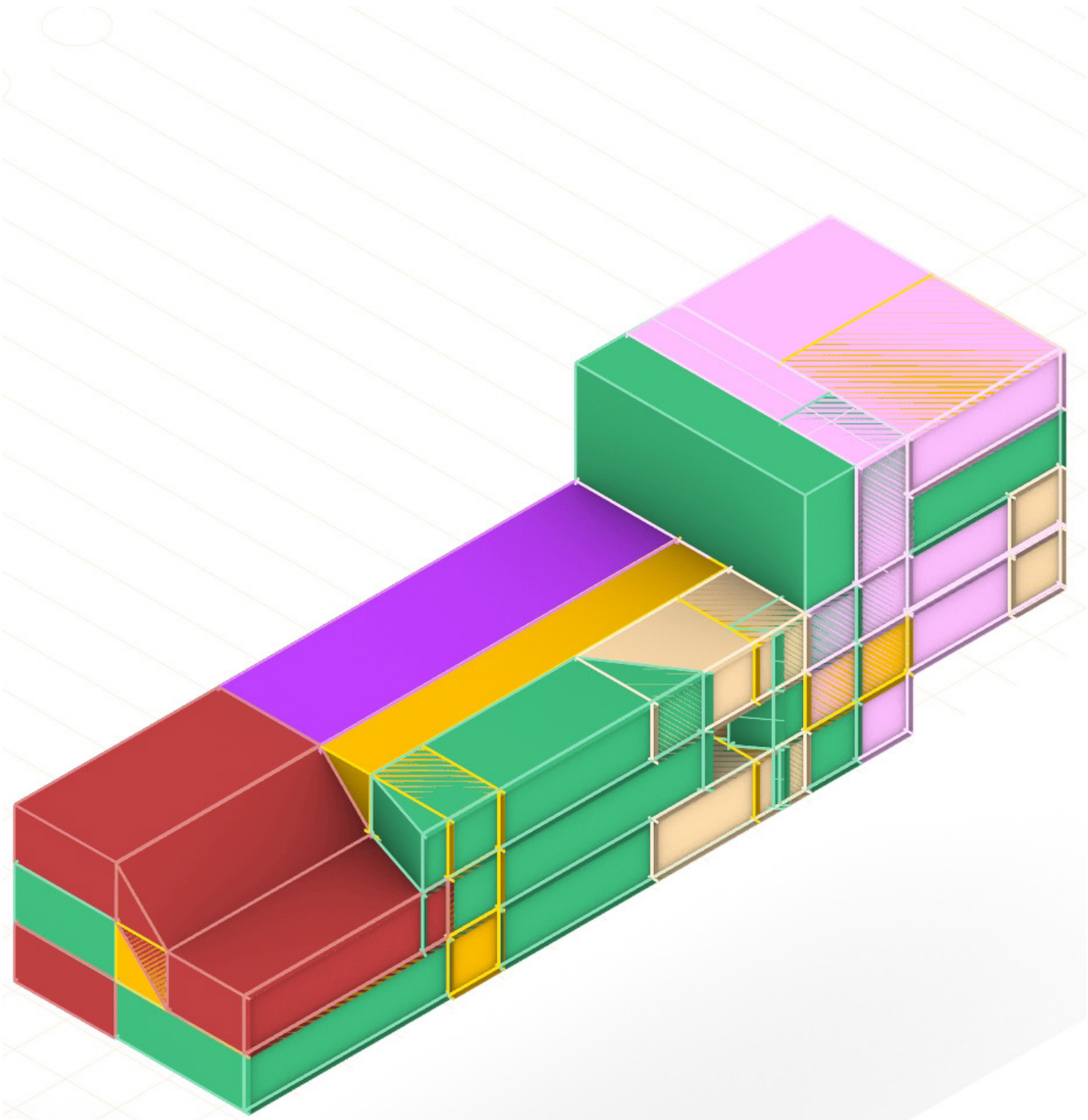


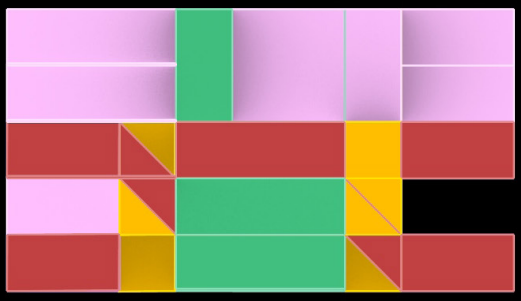












The Vision: L, M, S, XS

Designing more than just an Public Condenser

IT University of Copenhagen

Community Ga

Amager Faelled

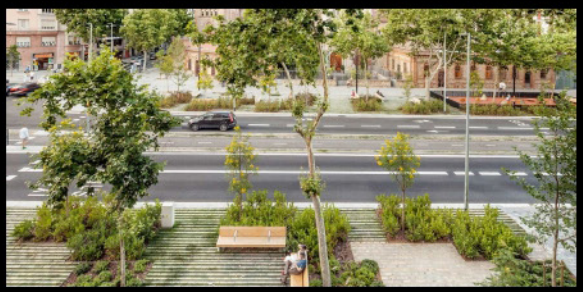
Vugg Horg

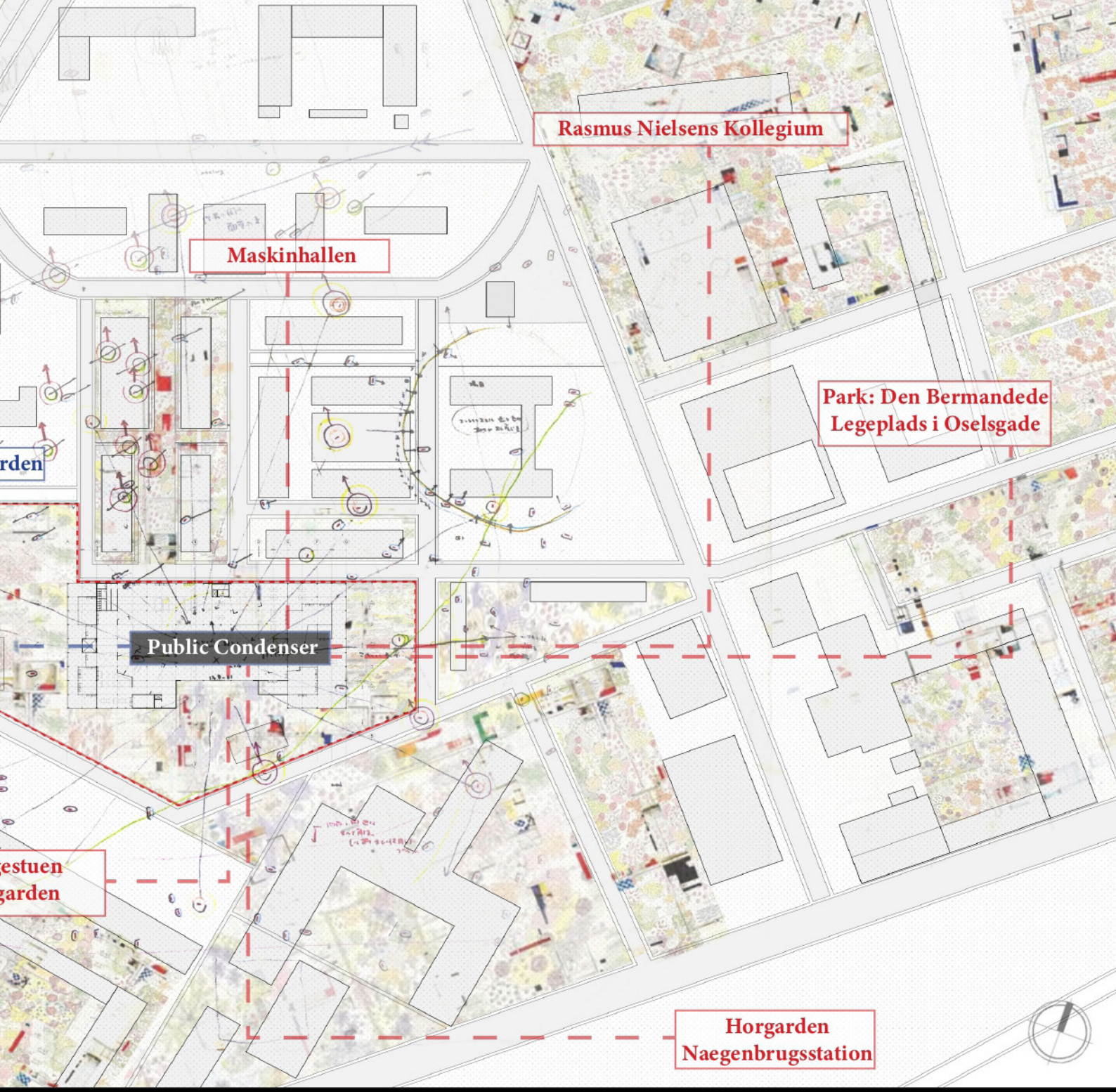
L: The Green Mile- Healing Corridor

At the largest scale, the project extends beyond its immediate footprint, envisioning the creation of The Green Mile Garden, a physical and symbolic thread connecting Ørestad Fælled, the University, and Sundholm.

M: Public Condenser

The Public Condenser house communal spaces for education spaces for learning, art workshops for creativity, theatre for cultural exchange. Within the building, children are given the tools and spaces to learn, while university students take on roles as mentors.





S: Spaces for Reflection and Isolation

For individuals struggling with mental illness, the built environment can be a source of either healing or alienation. The project creates small, intimate spaces for solitude, reflection and recovery routes, offering moments of stillness in an otherwise chaotic world.

XS: Non-Human Sanctuary

The project acknowledges the interdependence between humans and nature by providing sanctuaries for non-human life. birds, insects, and other creatures find spaces to nest and rest.

Introduction to the Programmes and "Characters"?

A Dense Forest of Social Instruments

Public Condenser

Health/ Wellbeing

Environmental Sustainability- nature, climate and human wellbeing

Job Opportunity: Nature

Economic Sustainability- Job creation and long term growth

Education

Social Sustainability- cultural, education and community connection

Improve Media Portrayal and reputation

Sustainability realm + building Hard Power

UNI Project, a portable library by Howler+ Yoon

Nomadic Museum by Shigeru Ban

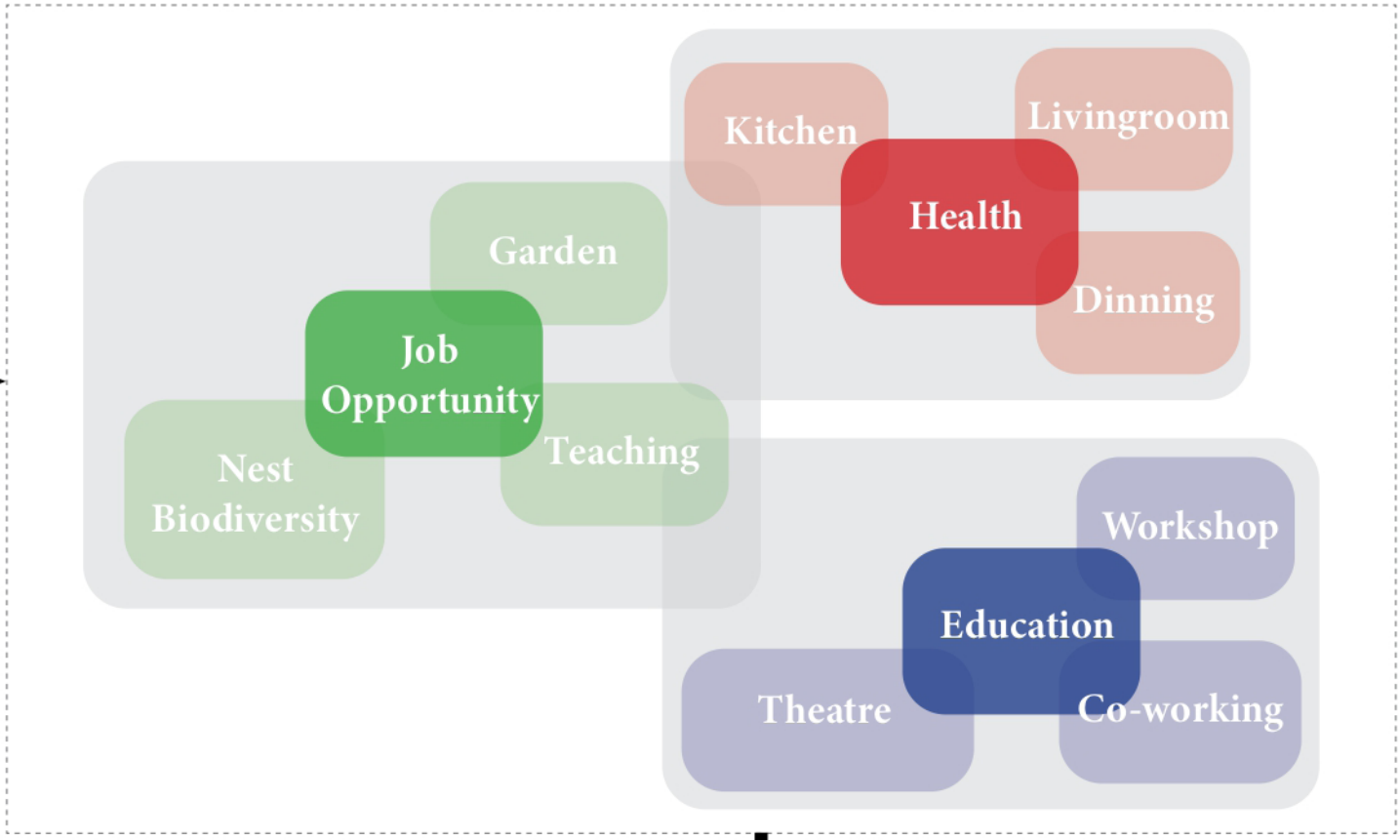
The Floating University (Berlin, 2018)

The People's Library at Occupy Wall Street

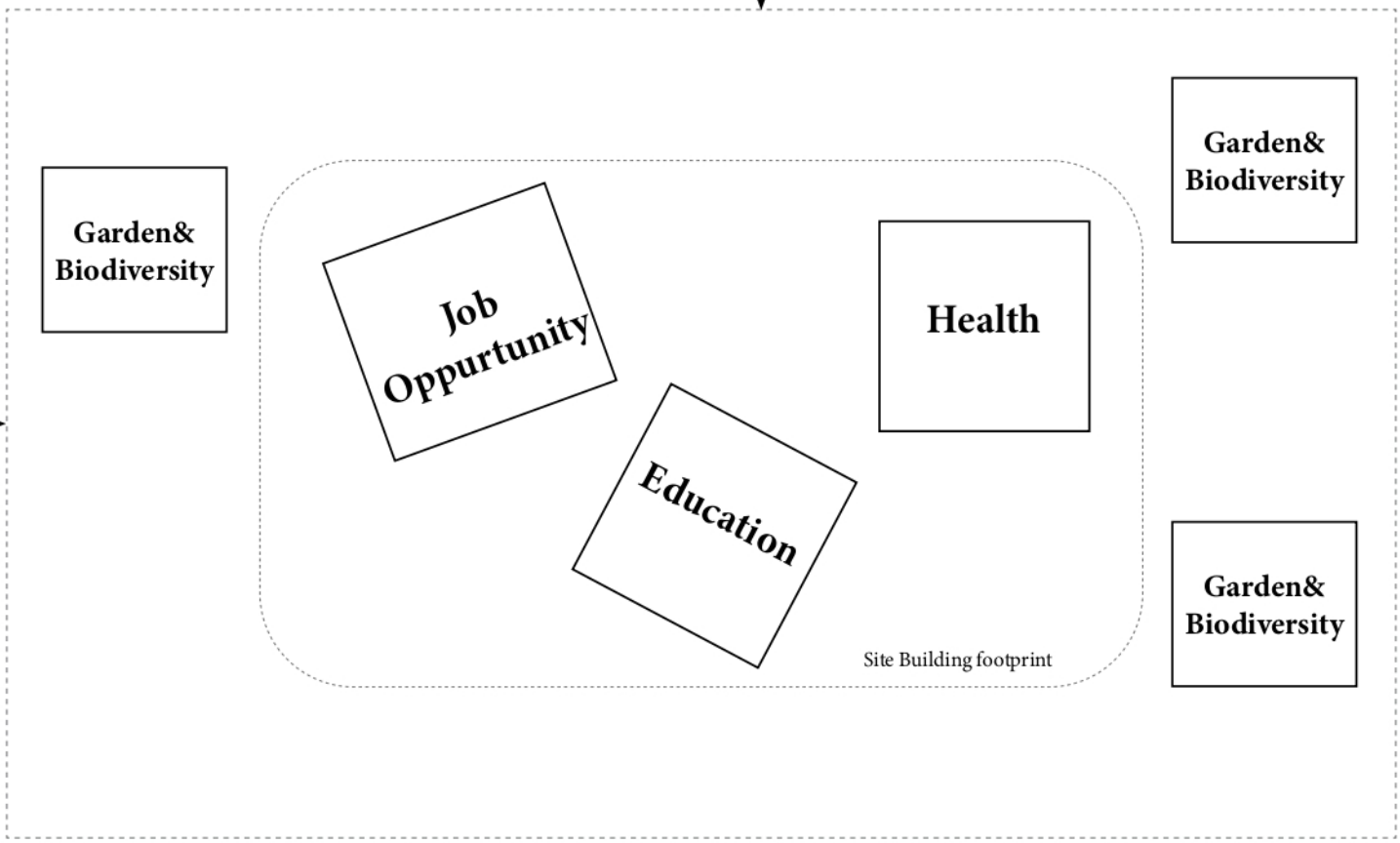
The Reading Nest by Mark Reigelman

MINI LIVING Urban Cabins

Interventionist Architectural Spaces transformed into participatory pop up/ learners



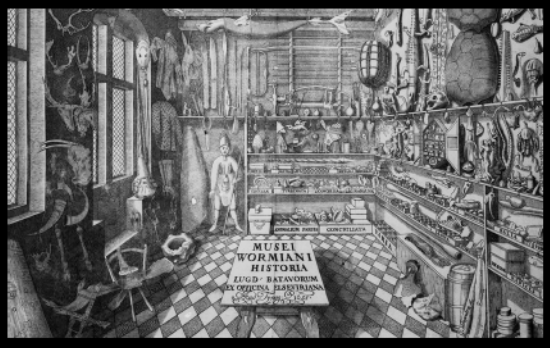
A Catalyst for Interaction- 'A School of Life'



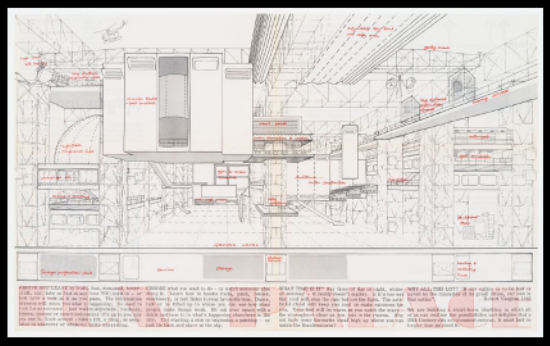
Site turns into a Learning Field,

Learning Devices, Fields & Cities

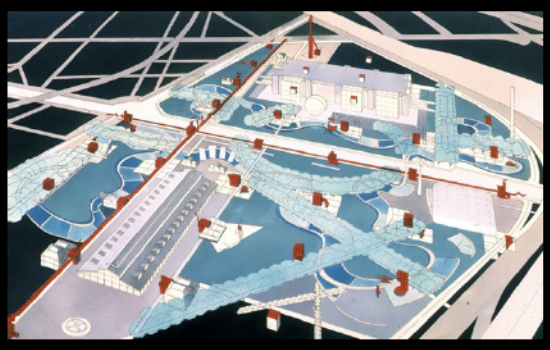
Split into three parts ranging from architectural object, the urban field and the city/ regional network:



Learning Devices: singular room to the building, may orchestrate and frame learning processes in a socially collaborative and interactive manner.

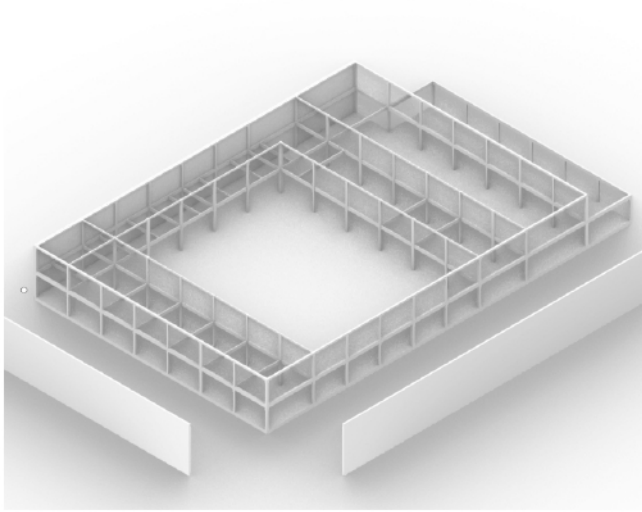


Learning Field: broaden the focus from the building towards the reprogramming of urban landscapes as strategies to remediate the social and ecological fabric.

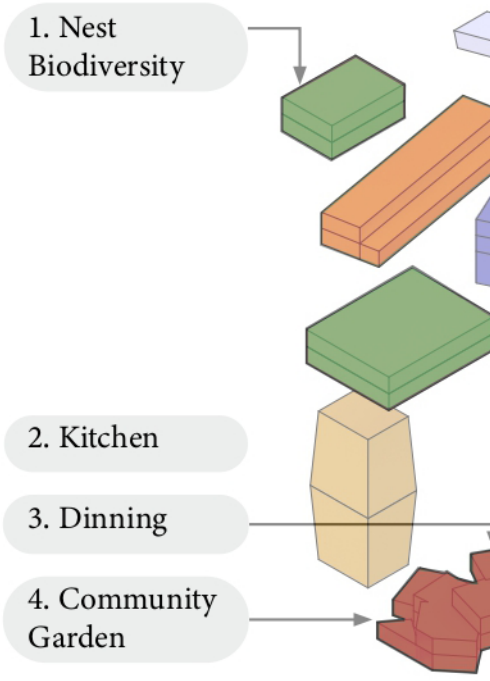


Learning Cities: Learning Cities describe a new formula for urbanism whereby educational and cultural interventions are injected into the existing; strategies for socio-cultural revitalisation.

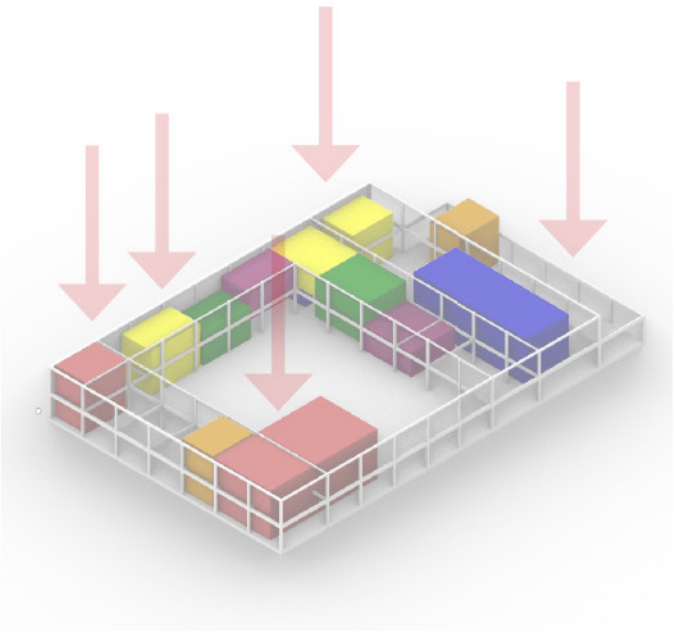
Restoration on the Fabrik



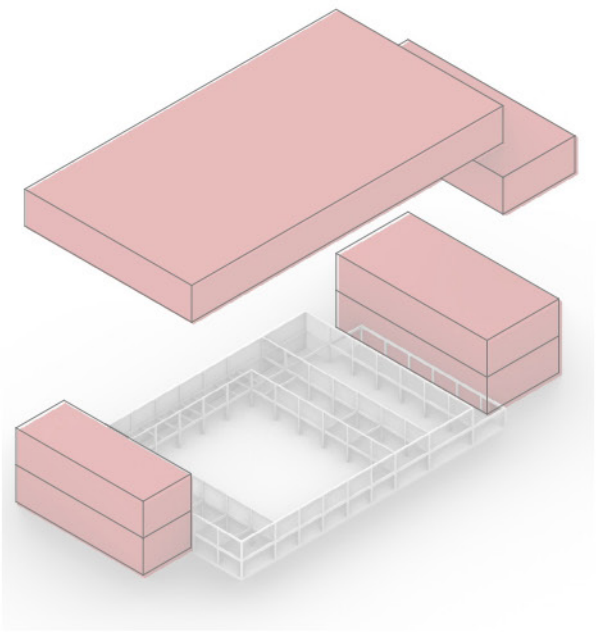
Renovation: Maintaining Existing Structure & Reconstructing facades



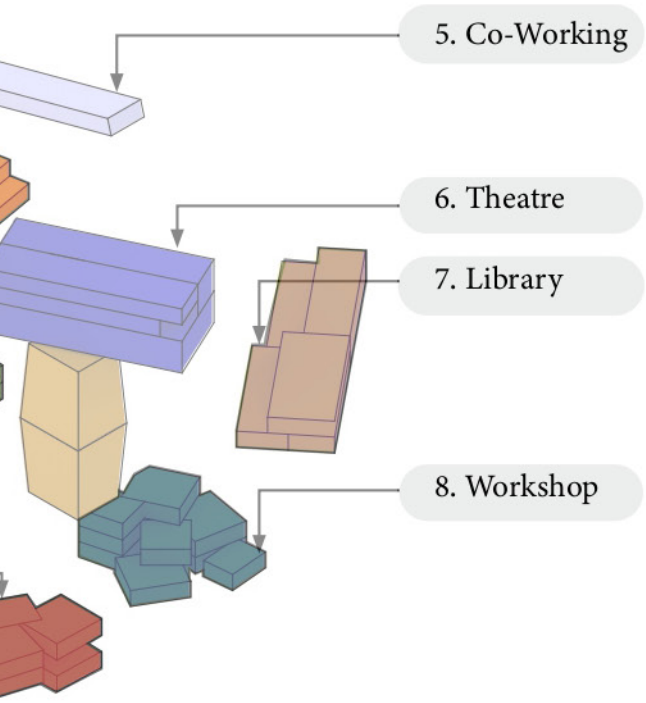
Anthropomorphising Architecture :



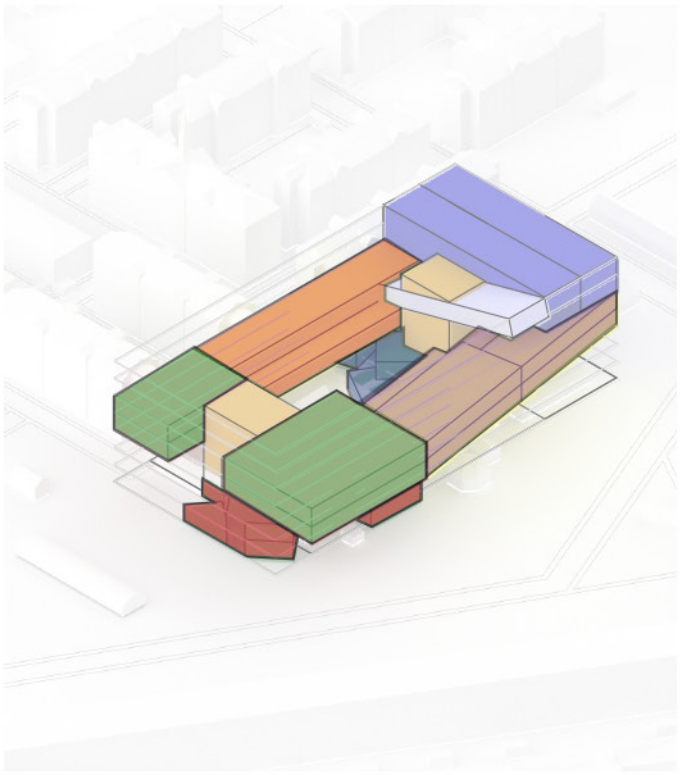
A Public Condenser plugged in with a series of learning devices



New Insertions, additions and opening up

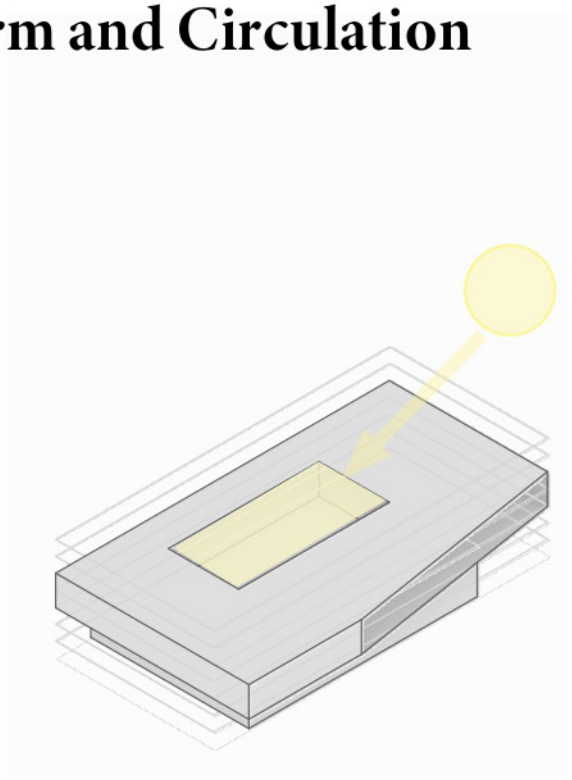


Introducing the characters/ programmes

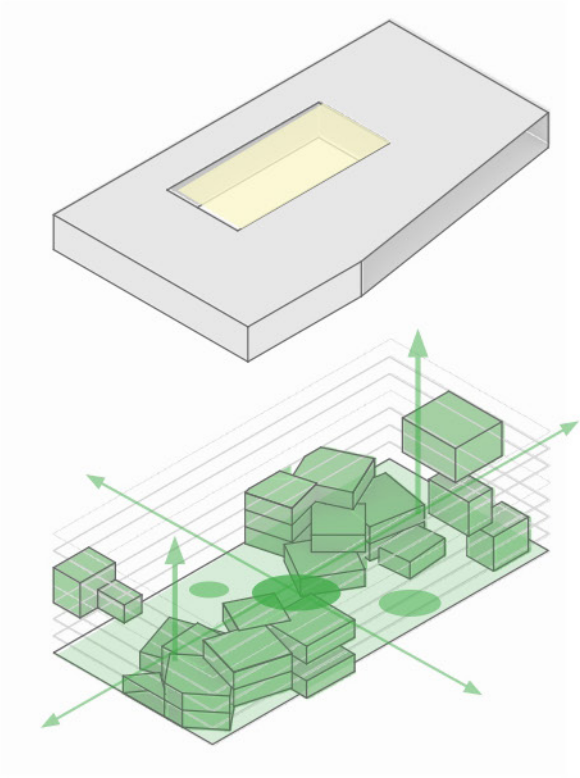


A Learning Field

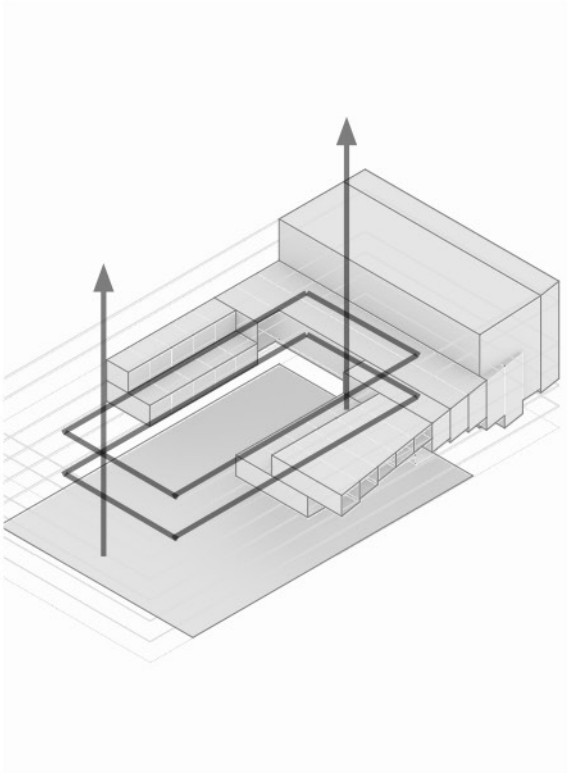
Form and Circulation



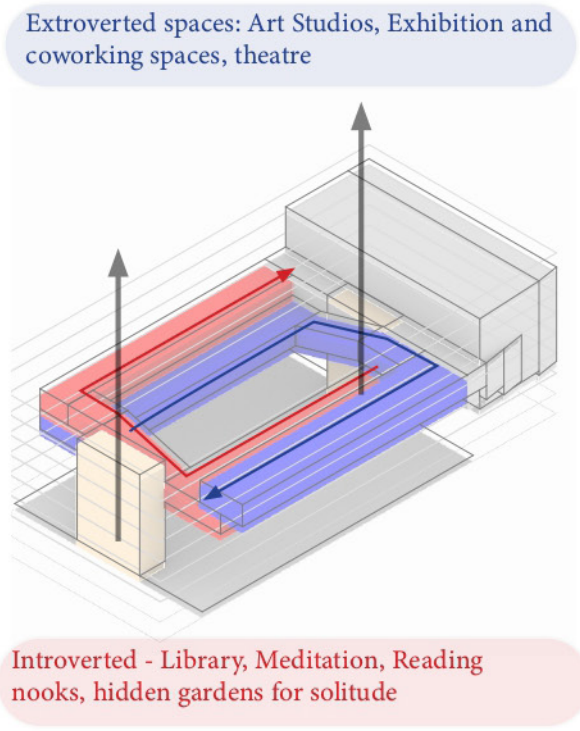
Atrium



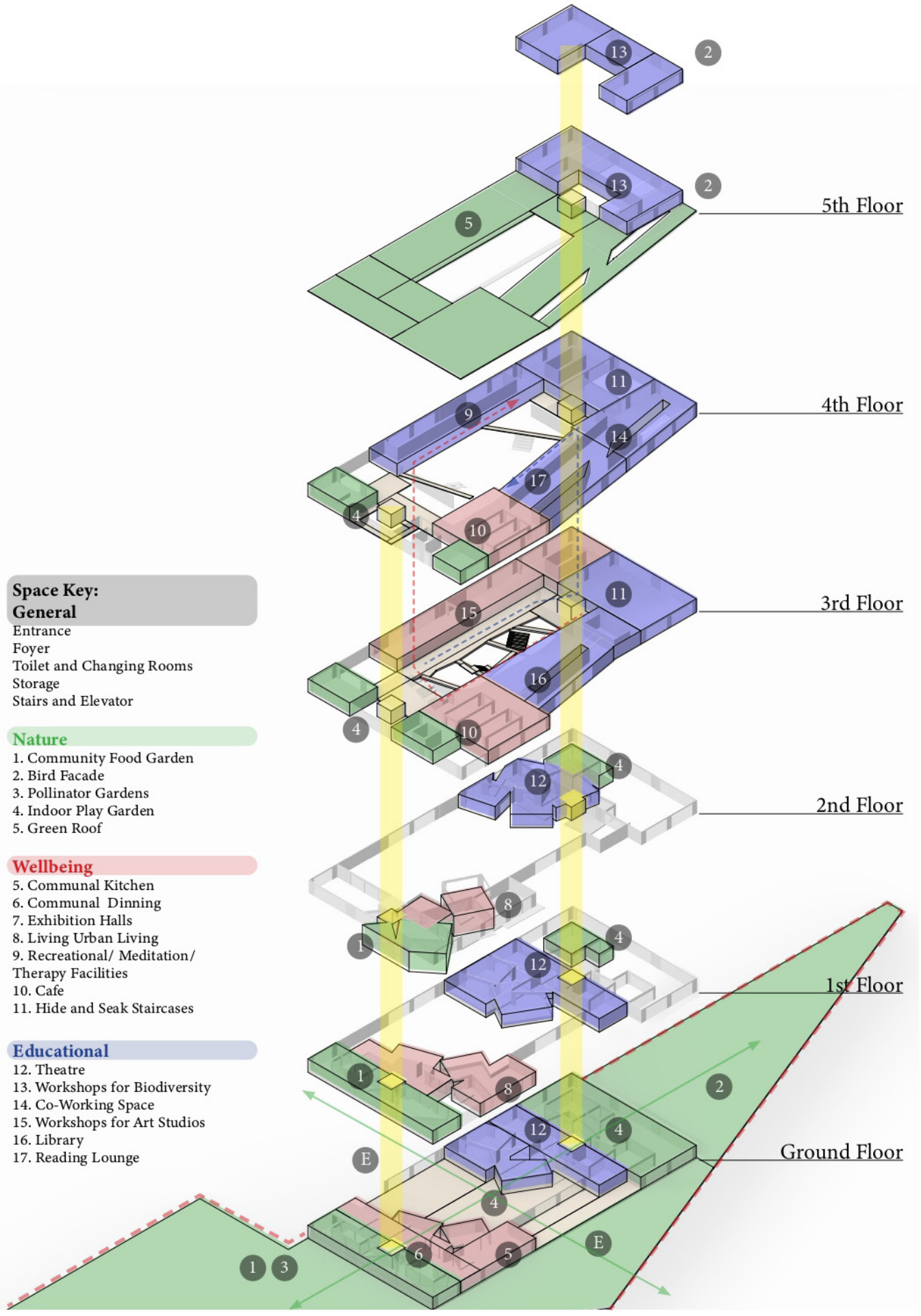
Sustainable Street- Mountains



Terraces

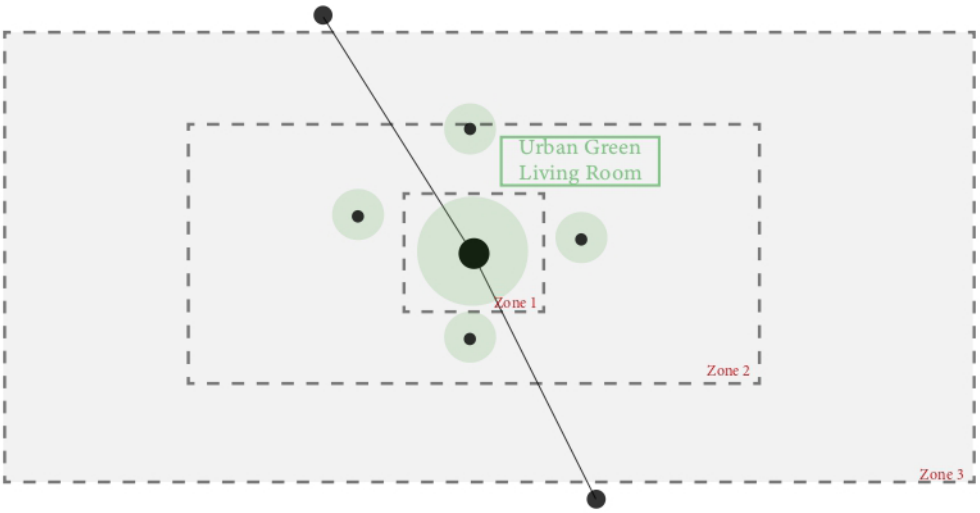


Circulation for Introverts and Extroverts.

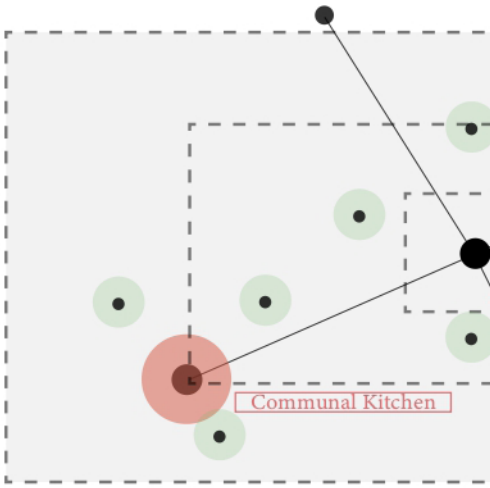


Ferrari (Tzu-Shou) Huang

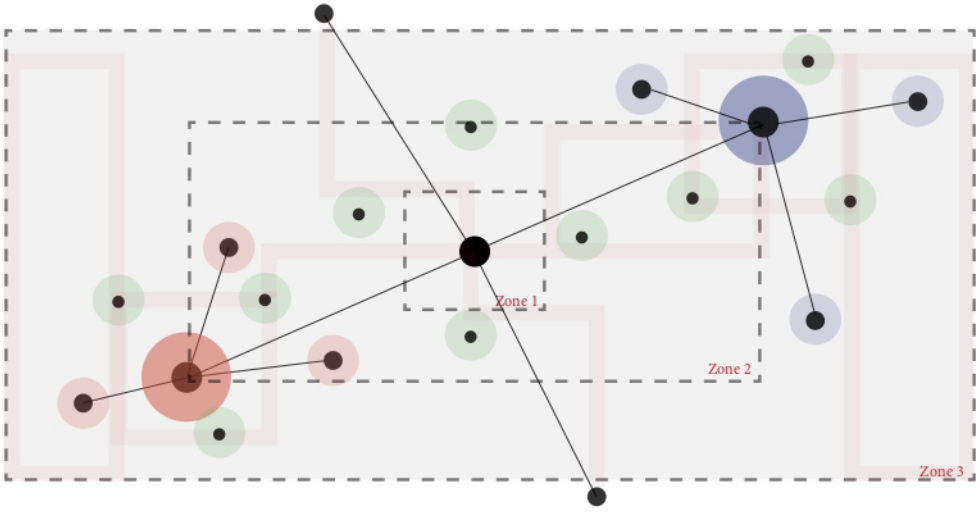
Creating Interaction



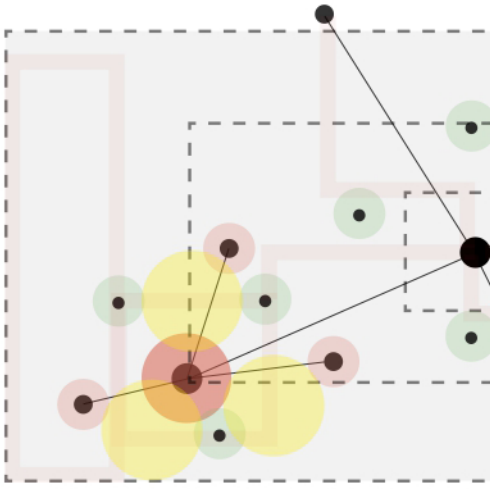
Central Axis- The Heart



Guide to P

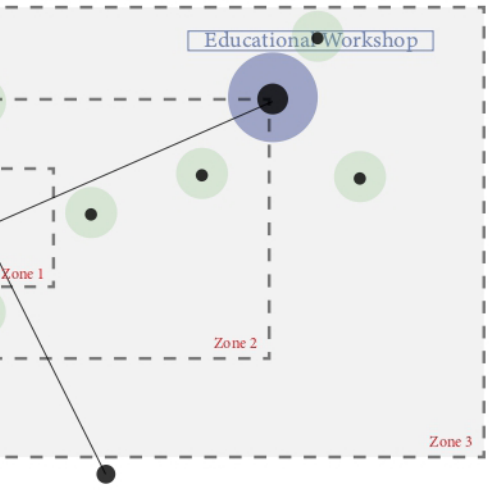


Circulation

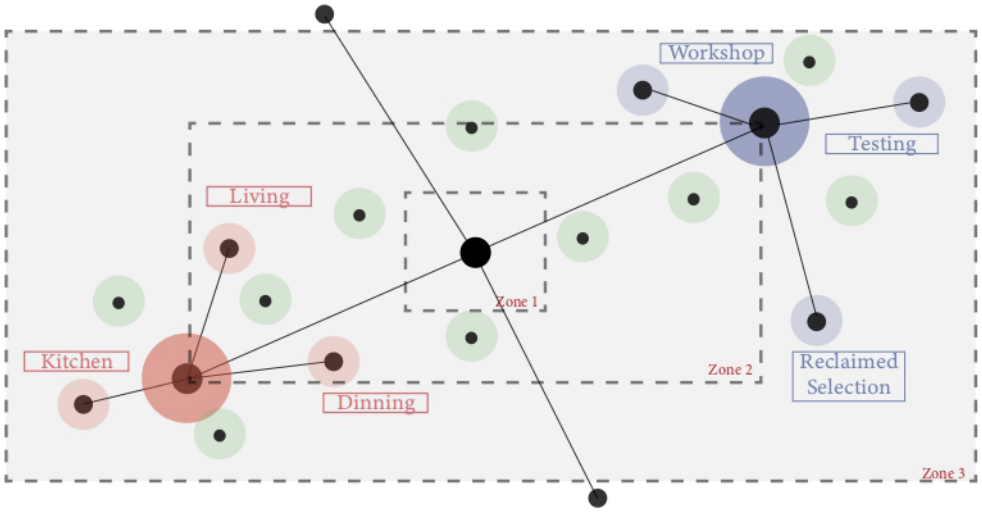


Clashing voids and prog

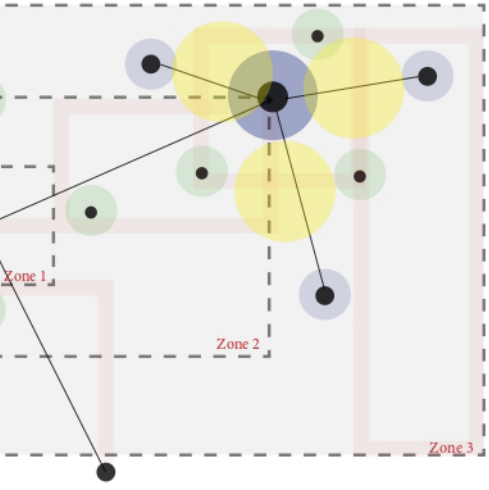
Participatory Architecture: Including people, architecture are community involv
in the process of building then they began to start to own a building fo



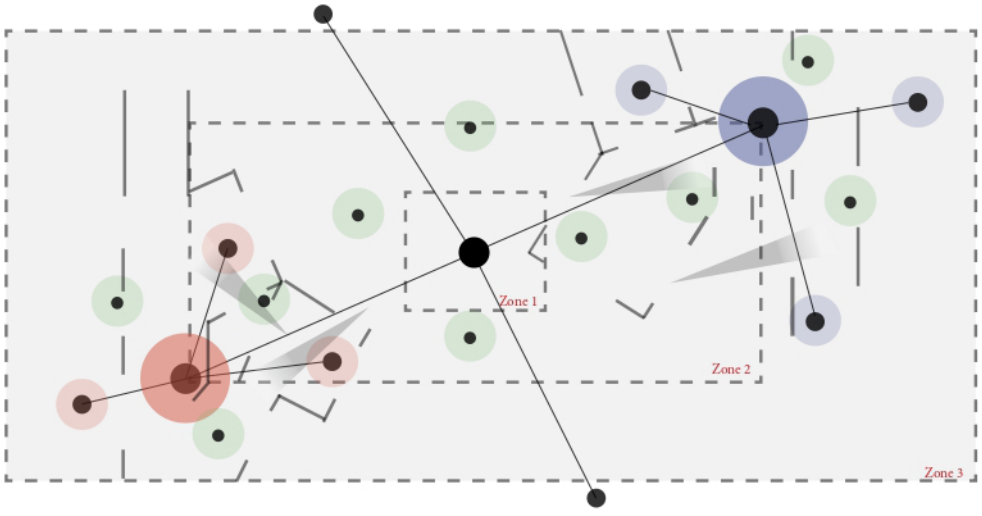
rogramme



Programme within programme



grammes for interaction

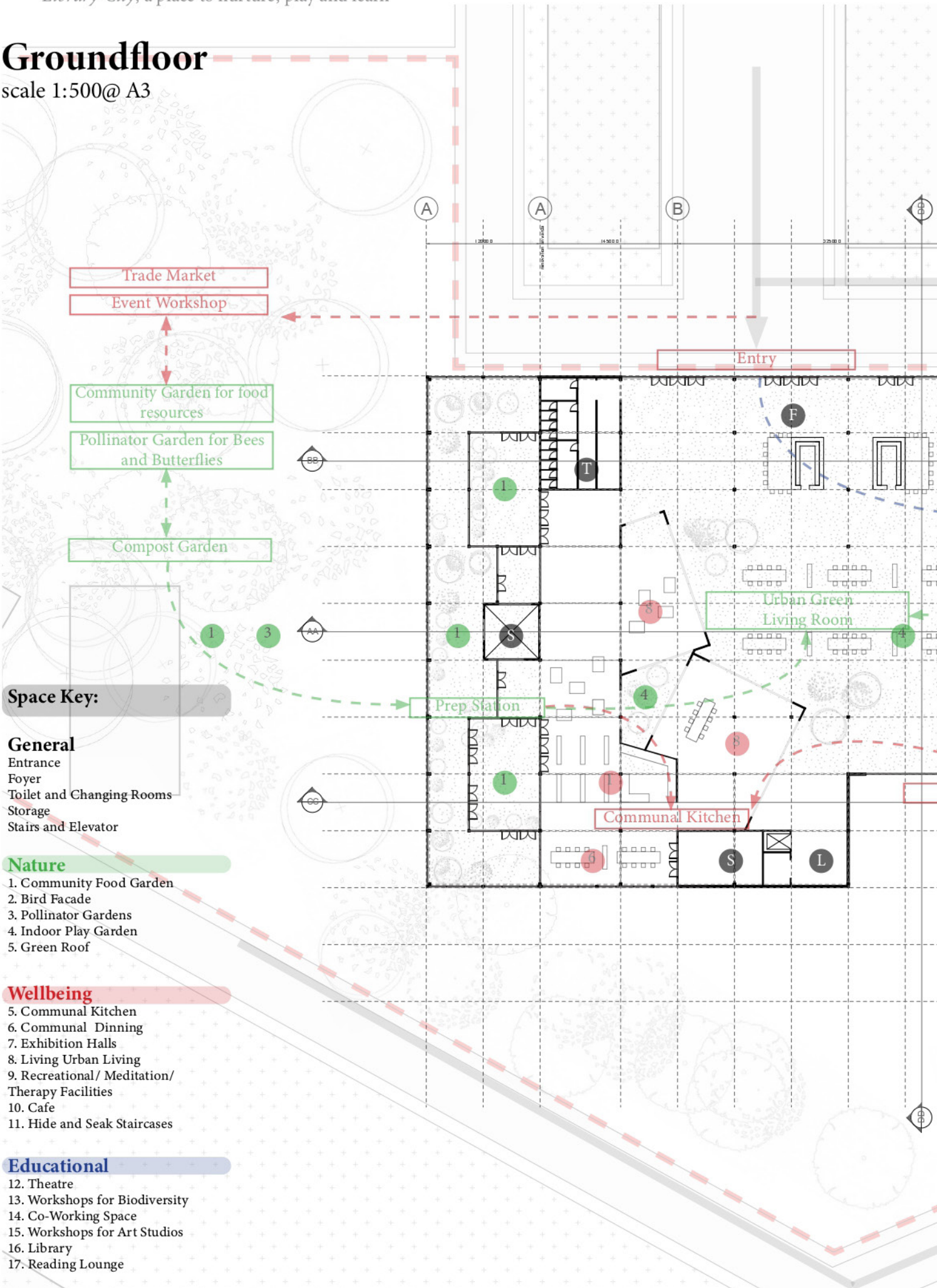


Framing and Thresholds

ved projects. If you build something, poeple take it for granted, but if you engage
or the life of that building, once they own it, they start taking care of it.

Groundfloor

scale 1:500@ A3



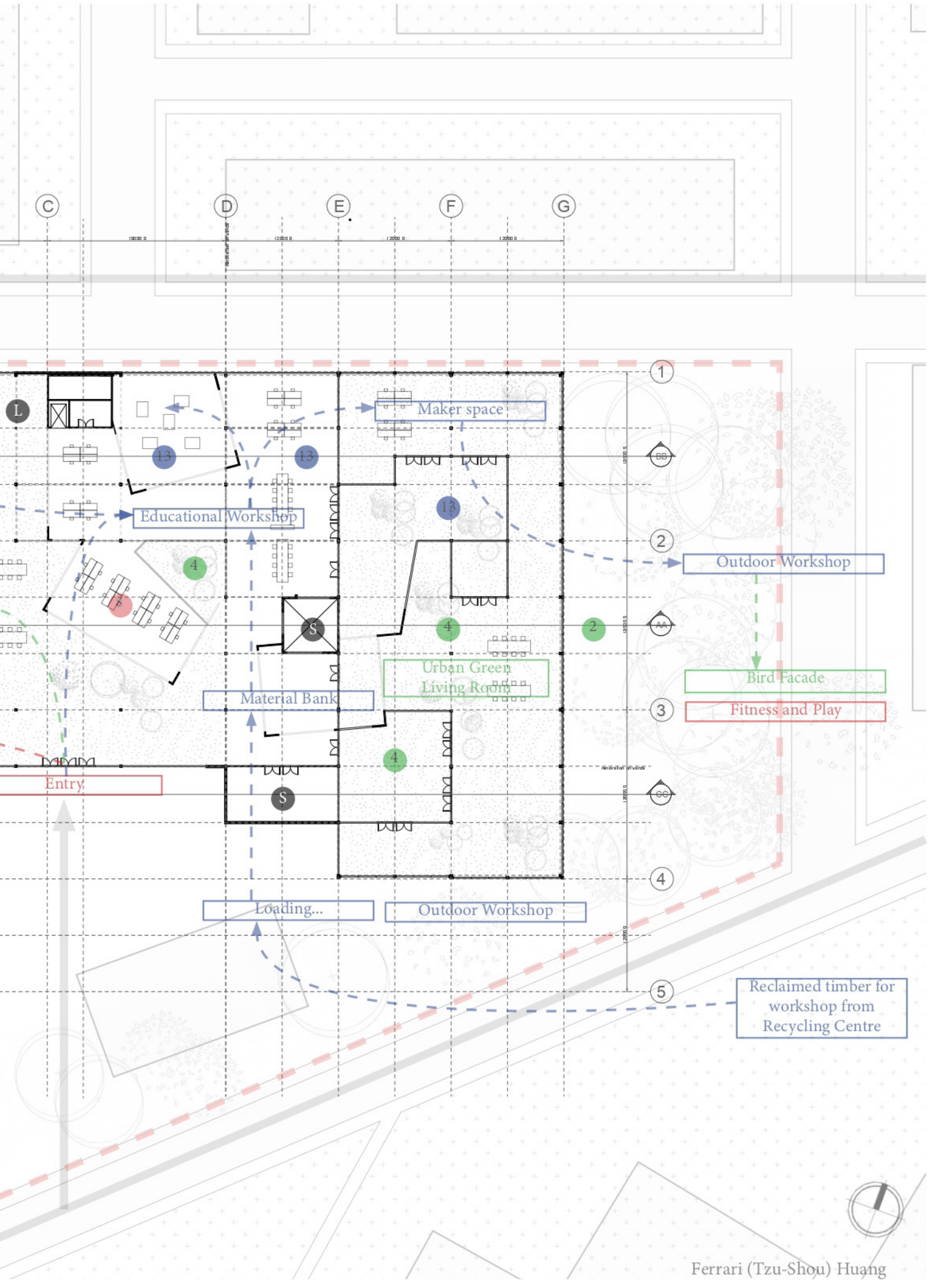
Space Key:

General
Entrance
Foyer
Toilet and Changing Rooms
Storage
Stairs and Elevator

Nature
1. Community Food Garden
2. Bird Facade
3. Pollinator Gardens
4. Indoor Play Garden
5. Green Roof

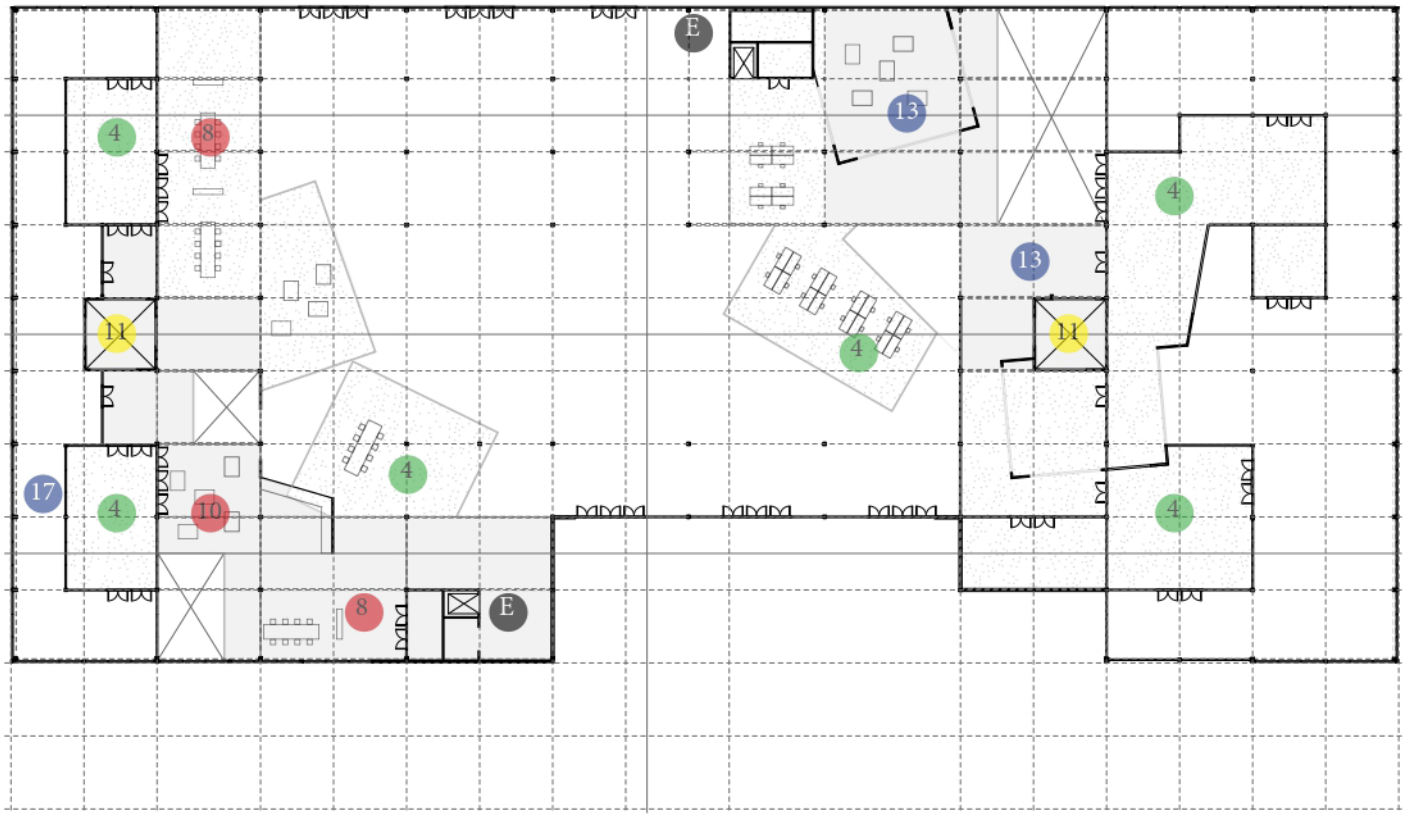
Wellbeing
5. Communal Kitchen
6. Communal Dinning
7. Exhibition Halls
8. Living Urban Living
9. Recreational/ Meditation/ Therapy Facilities
10. Cafe
11. Hide and Seak Staircases

Educational
12. Theatre
13. Workshops for Biodiversity
14. Co-Working Space
15. Workshops for Art Studios
16. Library
17. Reading Lounge

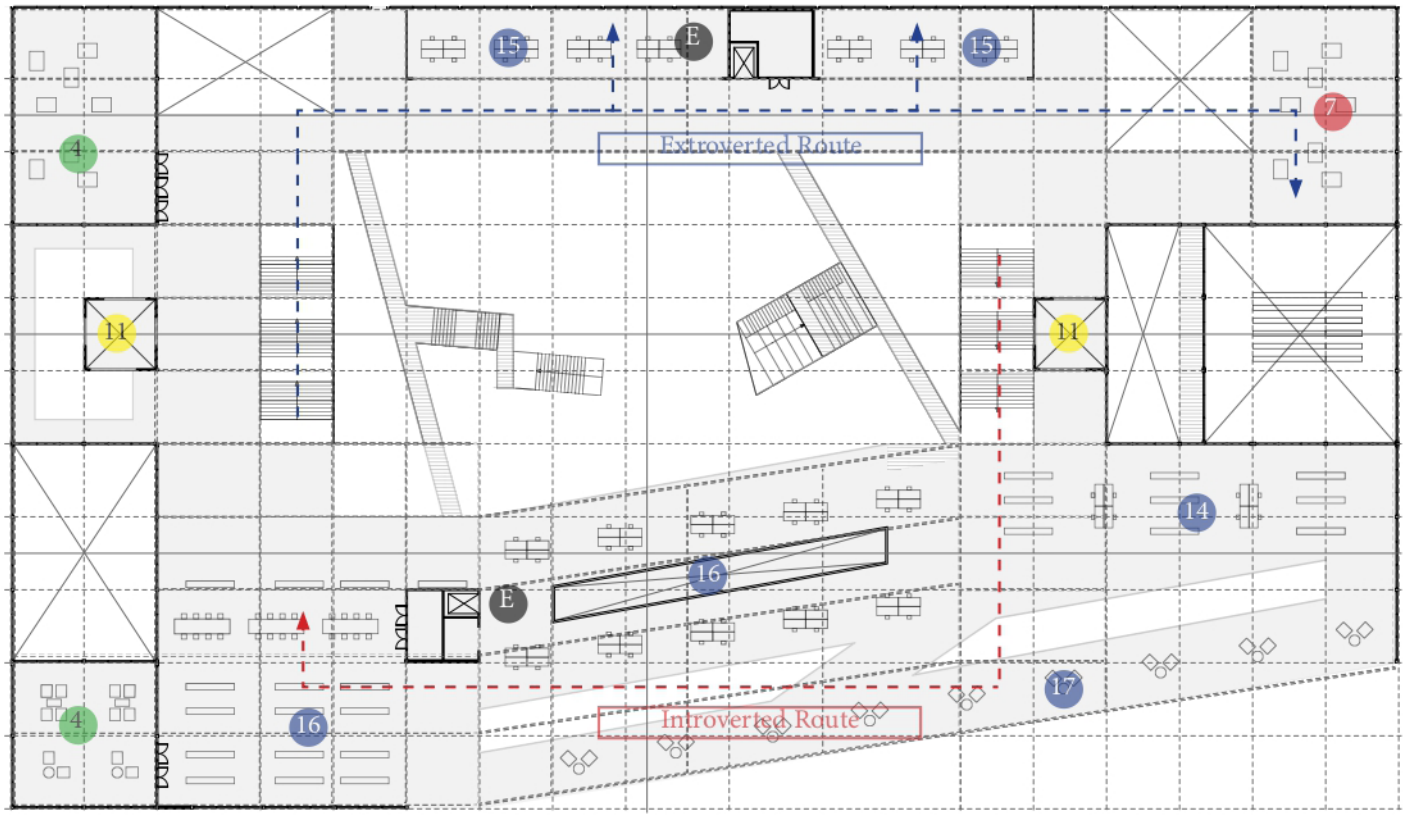


Ferrari (Tzu-Shou) Huang

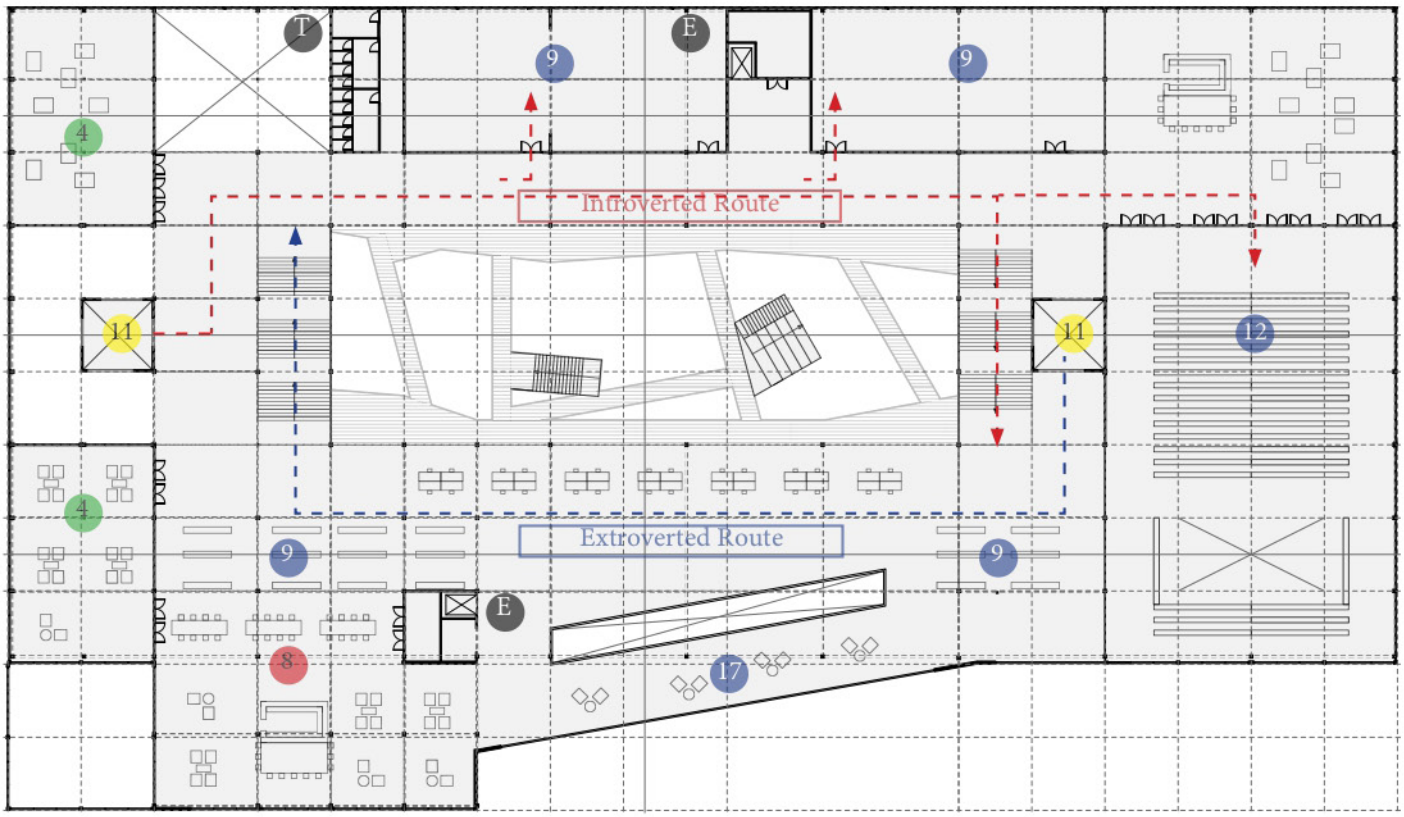
Floorplans scale 1:500 @ A3



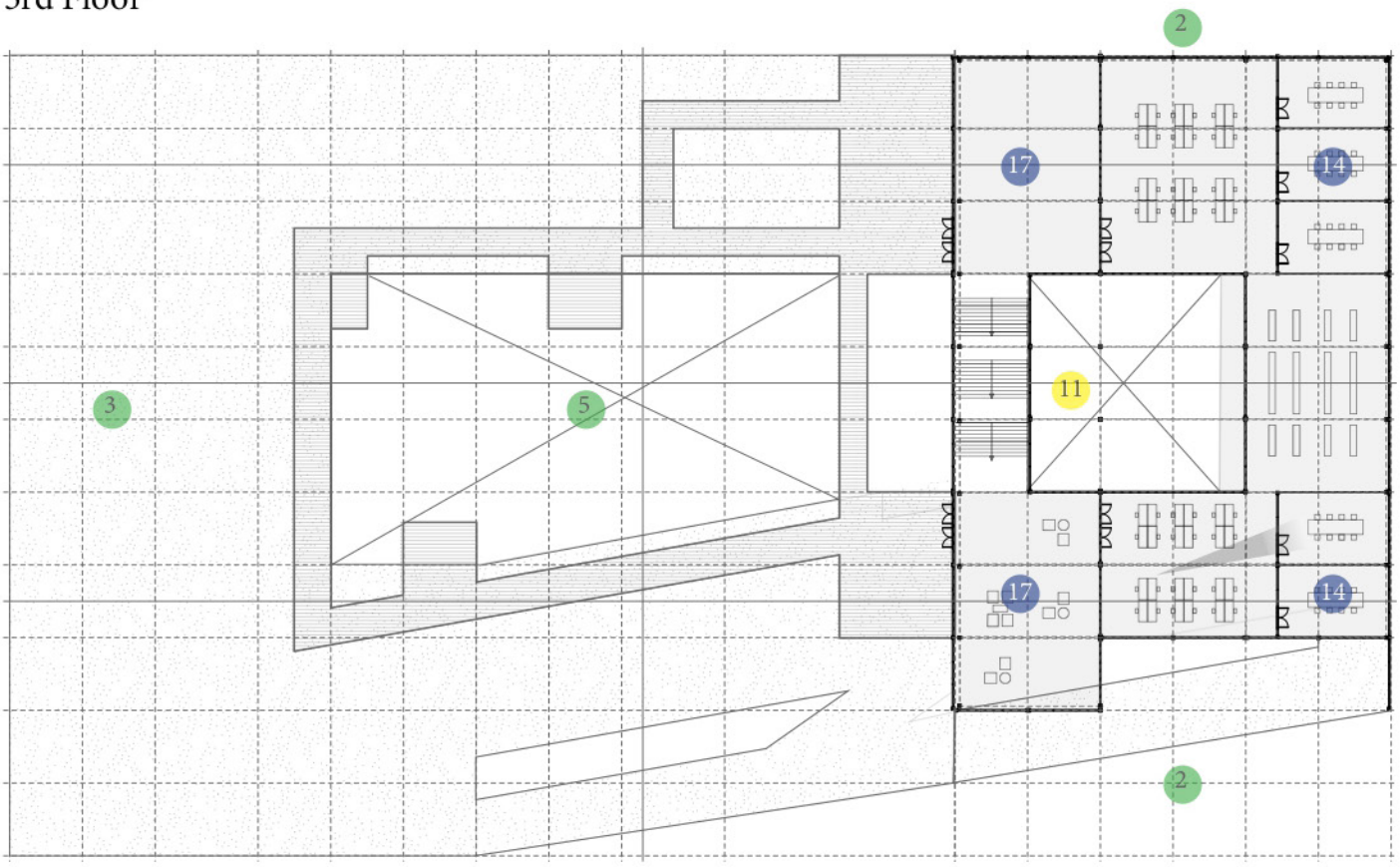
1st Floor



4th Floor



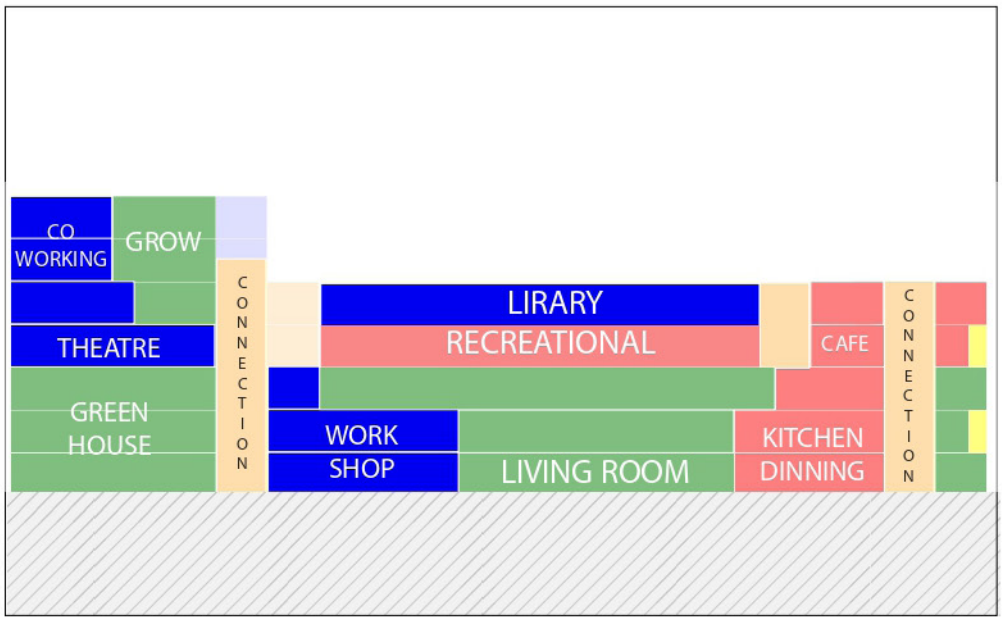
3rd Floor



5th Floor

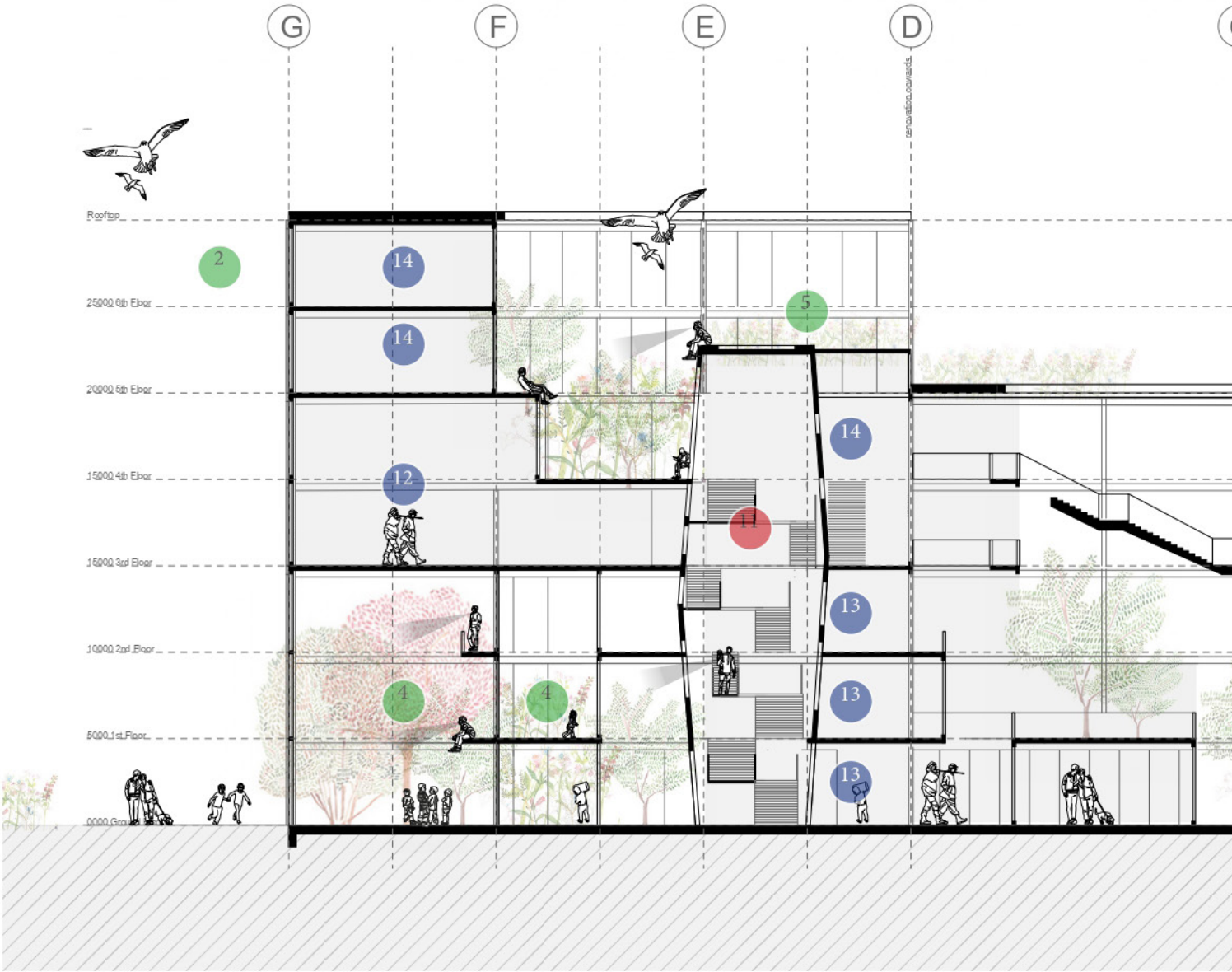
Ferrari (Tzu-Shou) Huang

Section AA thru Urban Living Room, Workshop, Communal Kitchen, and Garden microcl



Massing Diagram

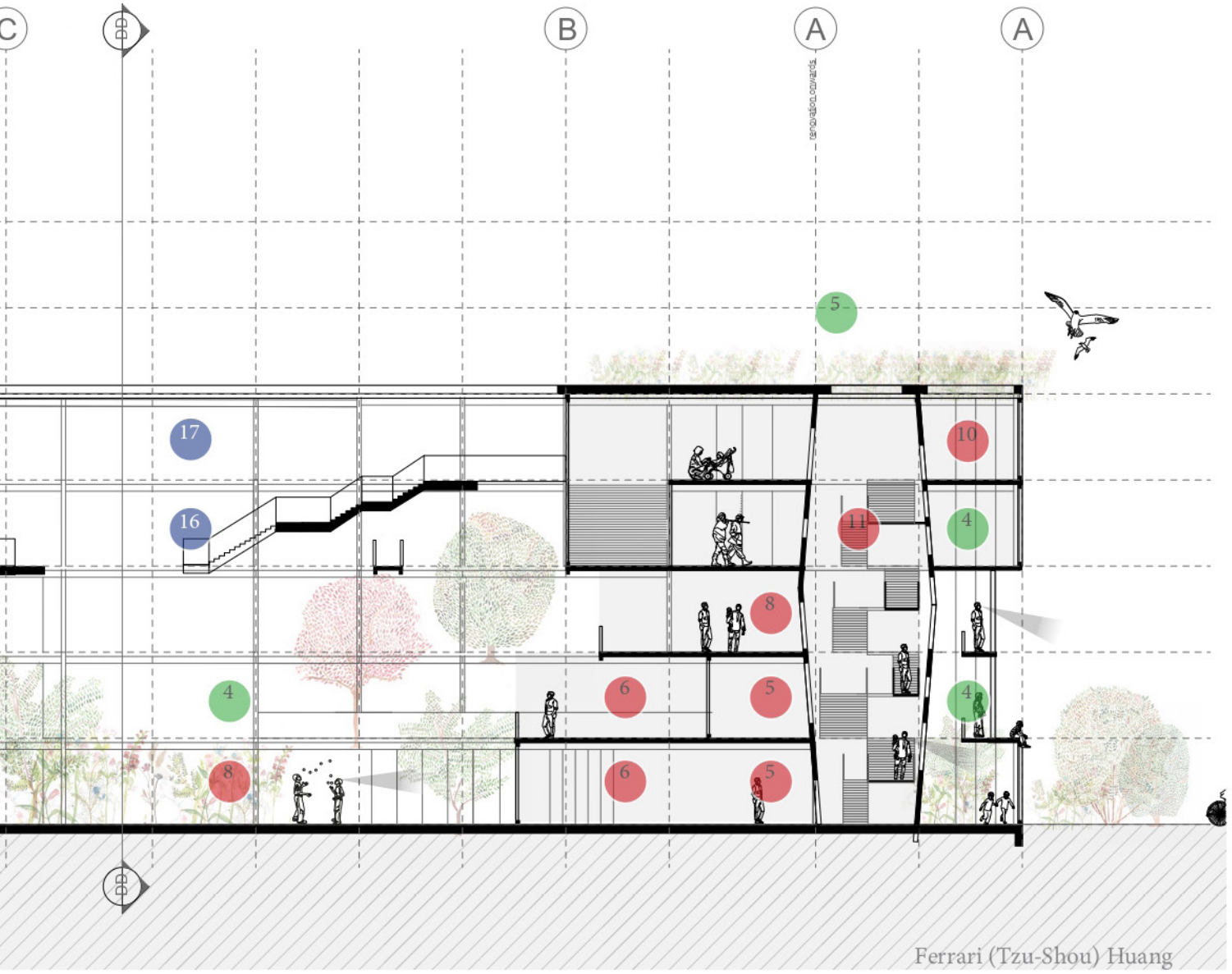
Entrance at the Heart o



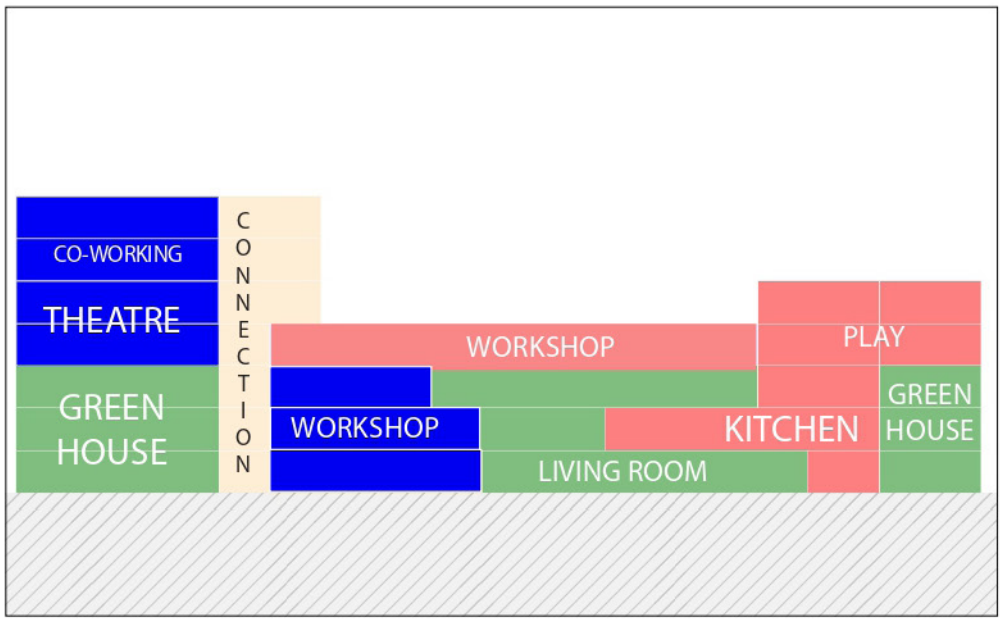
imates

f the Public Condenser

Community Kitchen, Dinning and Garden

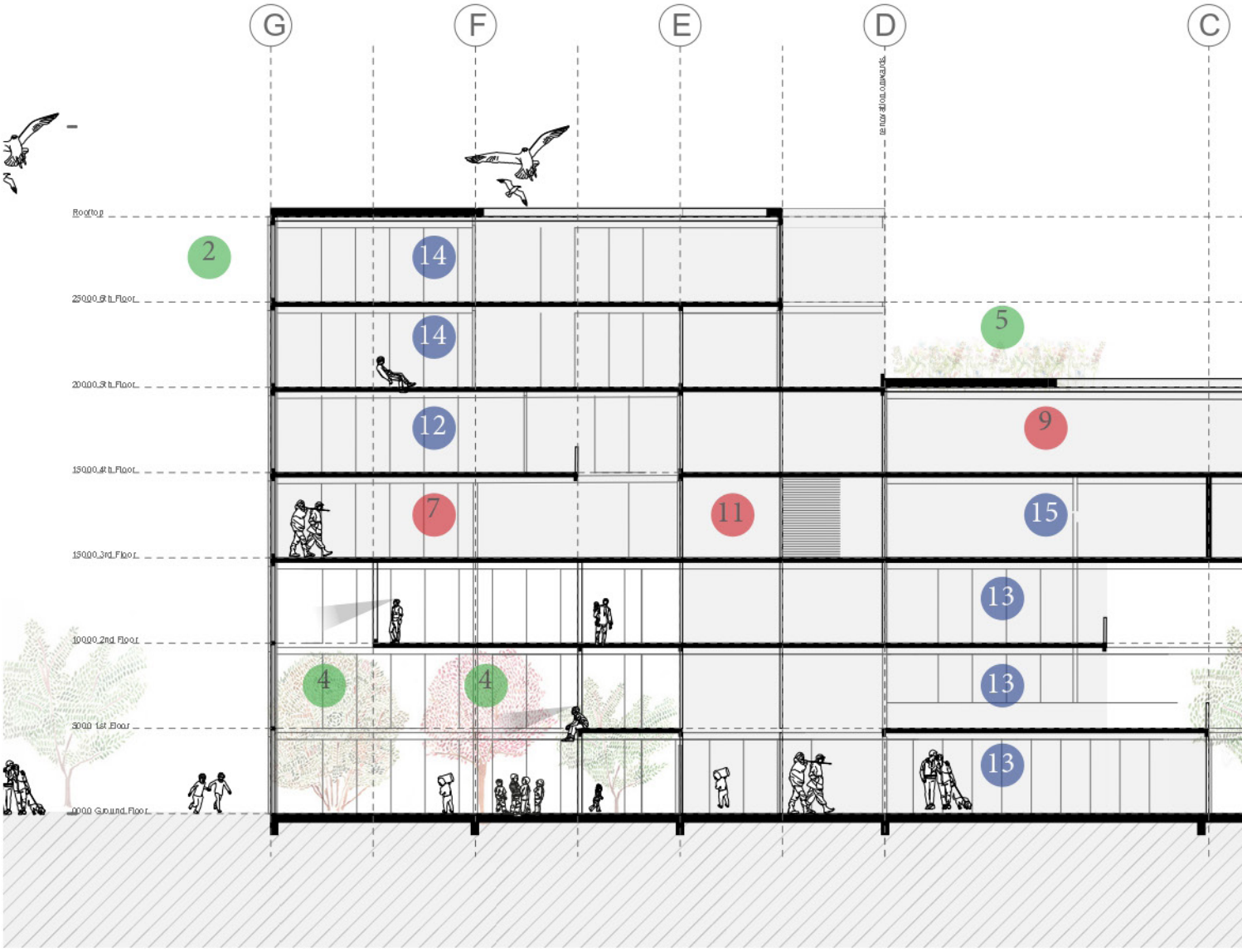


Section BB thru Biodiversity workshops, Art Studios, Recreational Facilities, Coworking and



Massing Diagram

Theatre and Sta



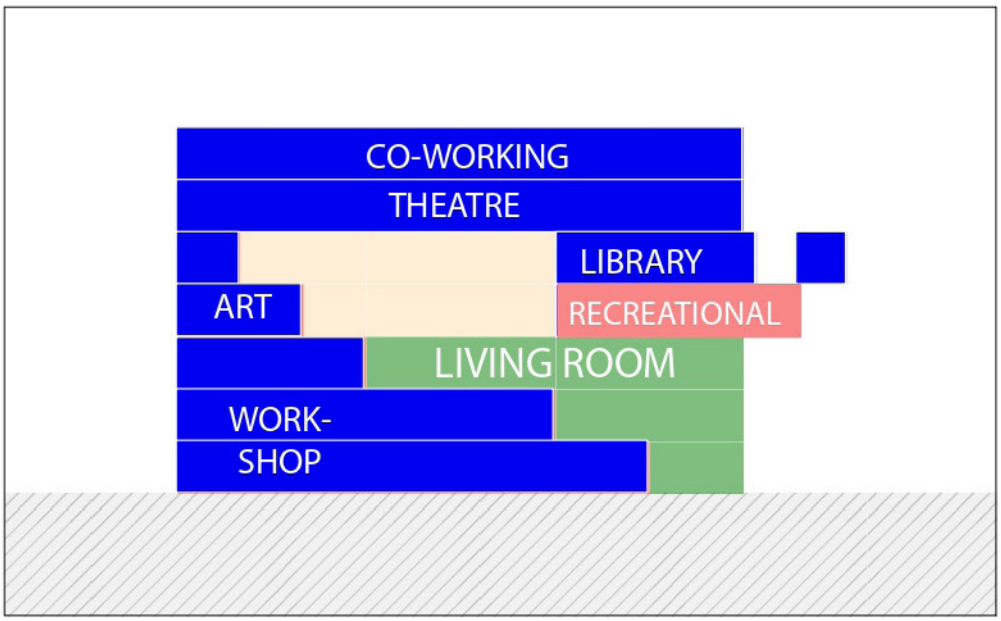
l Garden microclimates

ircase auditorium

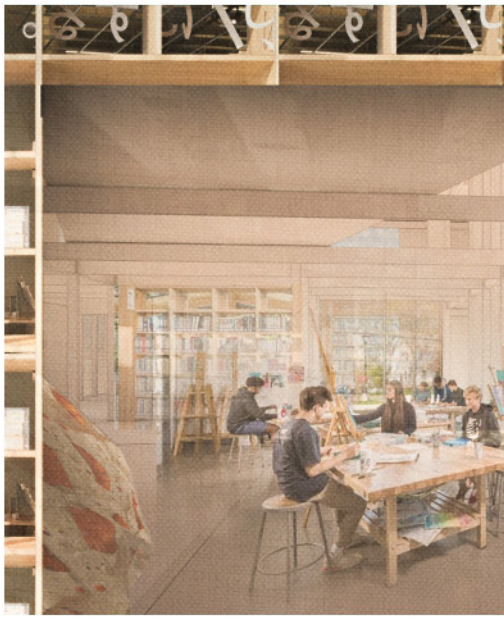
Biodiversity Workshop within microclimate garden

Ferrari (Tzu-Shou) Huang

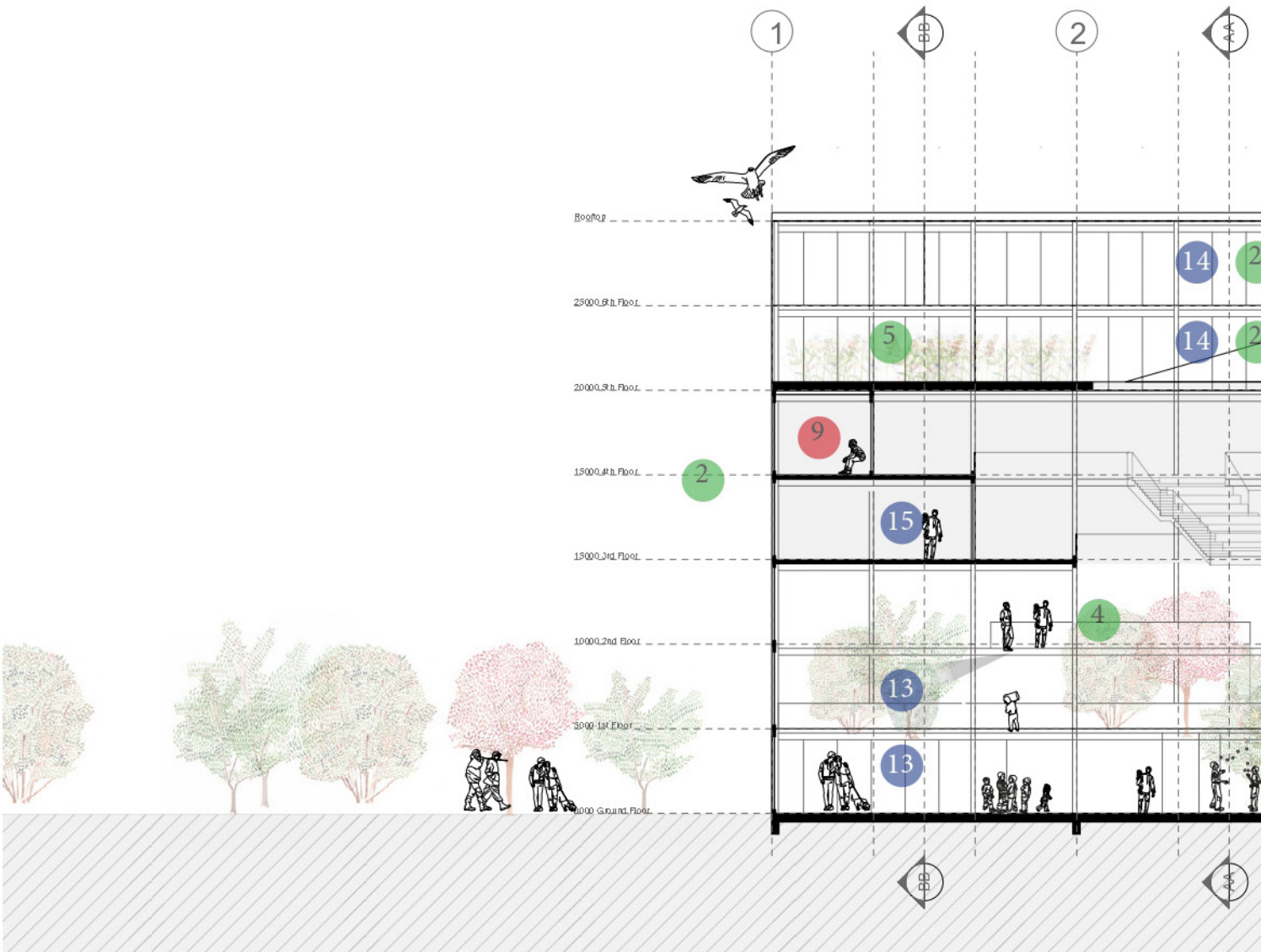
Section DD thru Urban Living Room, Recreational Facilities, Art Studios, Libraries and Ga



Massing Diagram

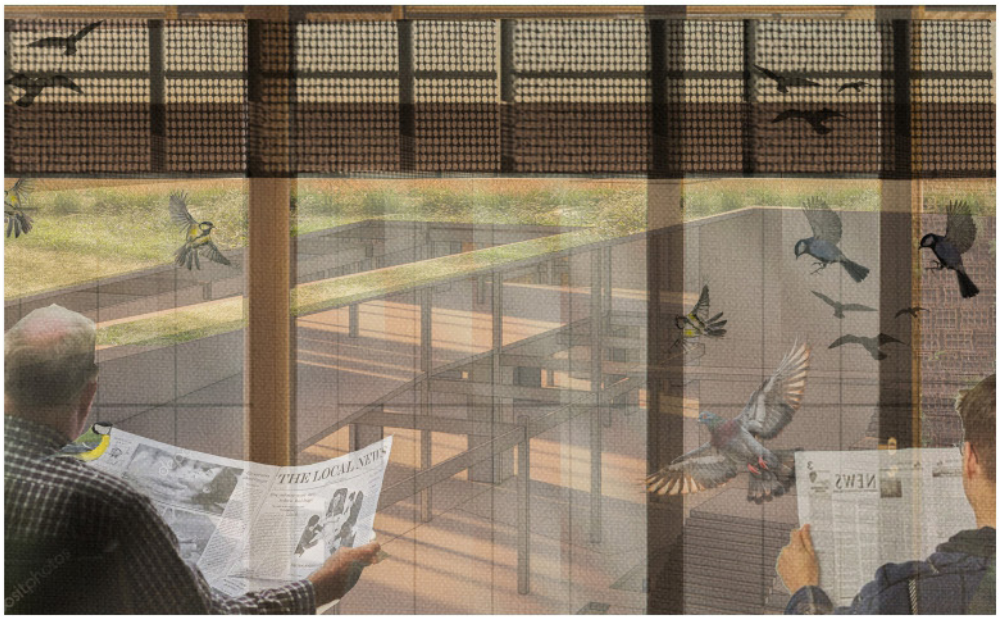


Art Studios

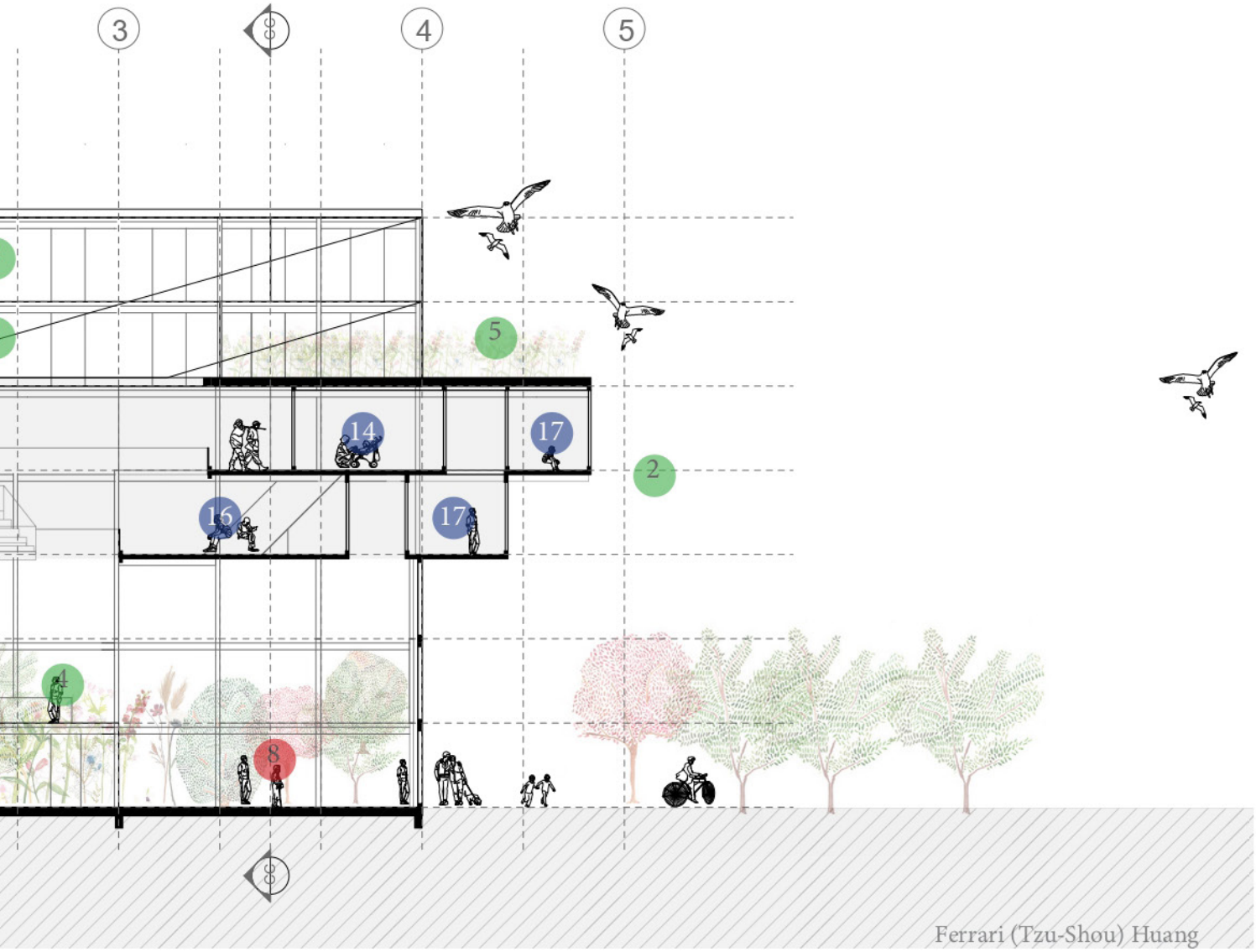


arden microclimates

and Library



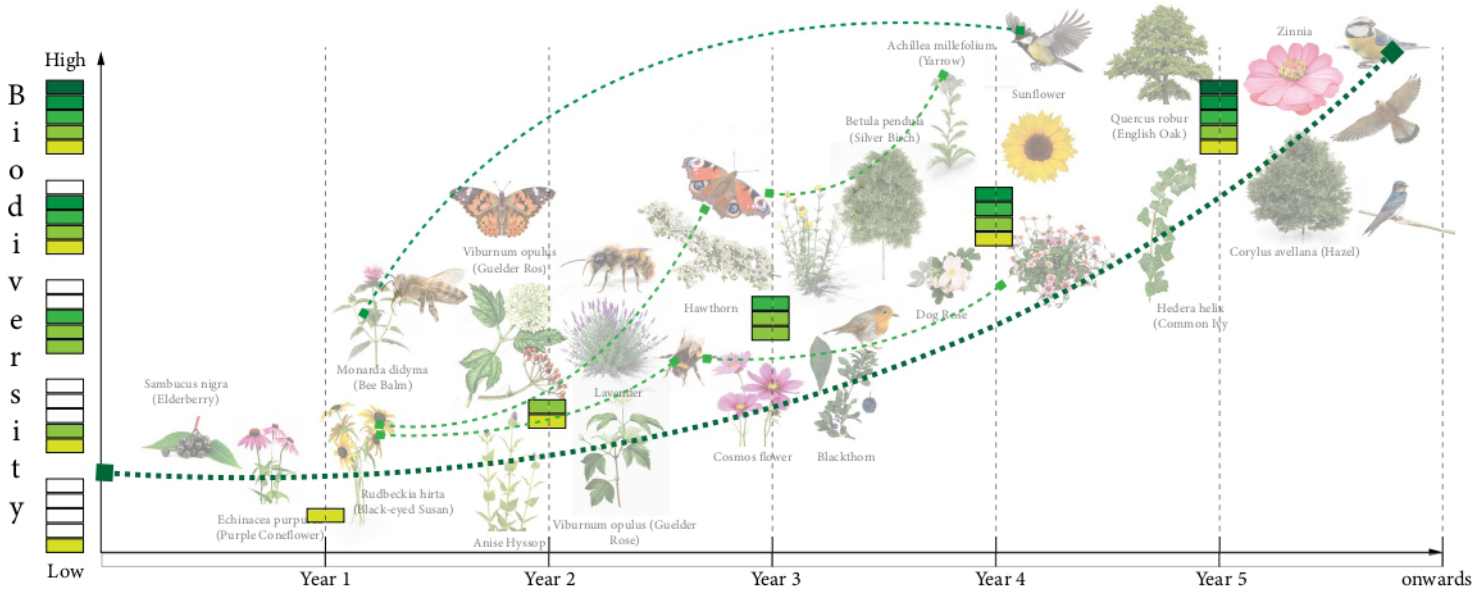
Reading nooks and bird watching



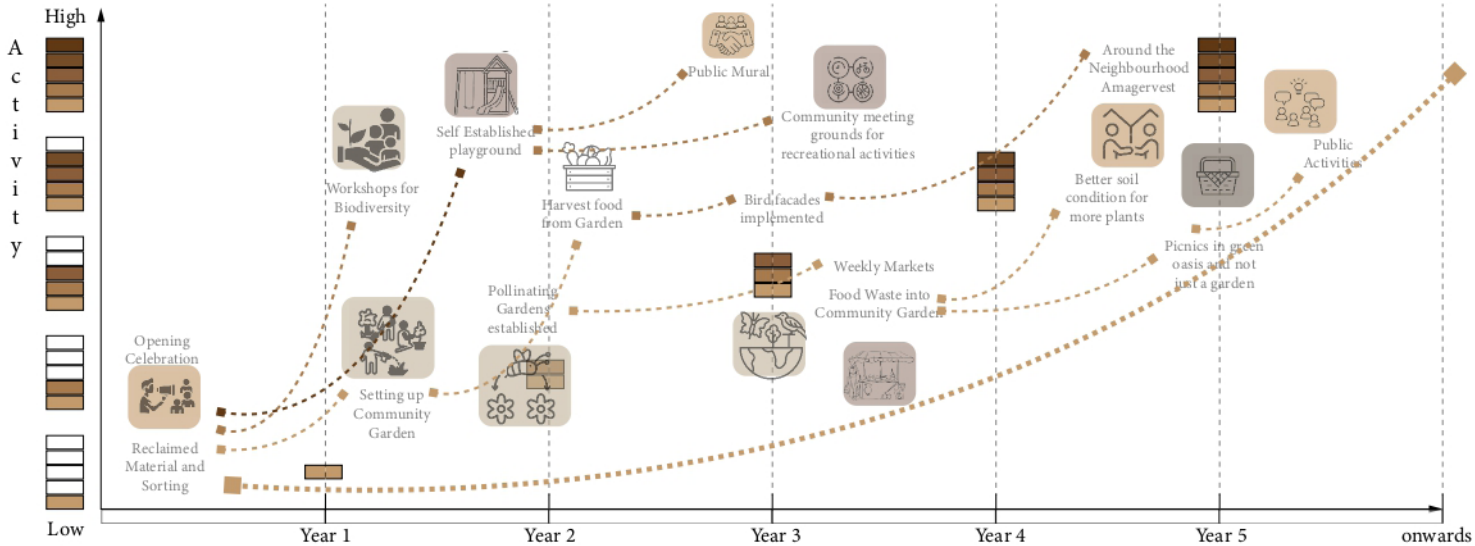
Ferrari (Tzu-Shou) Huang

A Constantly Morphing Architecture

An architetcure that ages with you+ changing Education and Public Space



Diversification in Time (Enhanced Biodiversity with Community Maintenance)

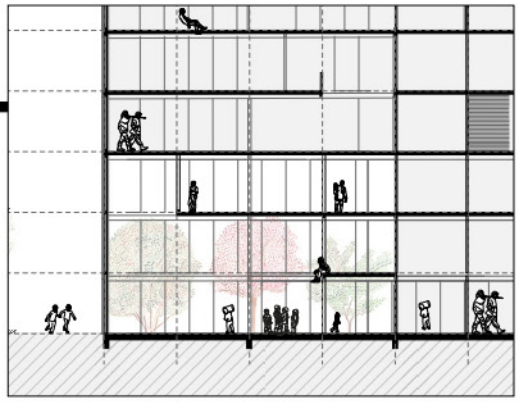


Diversification in Time (Potential for Participatory Garden Architecture)

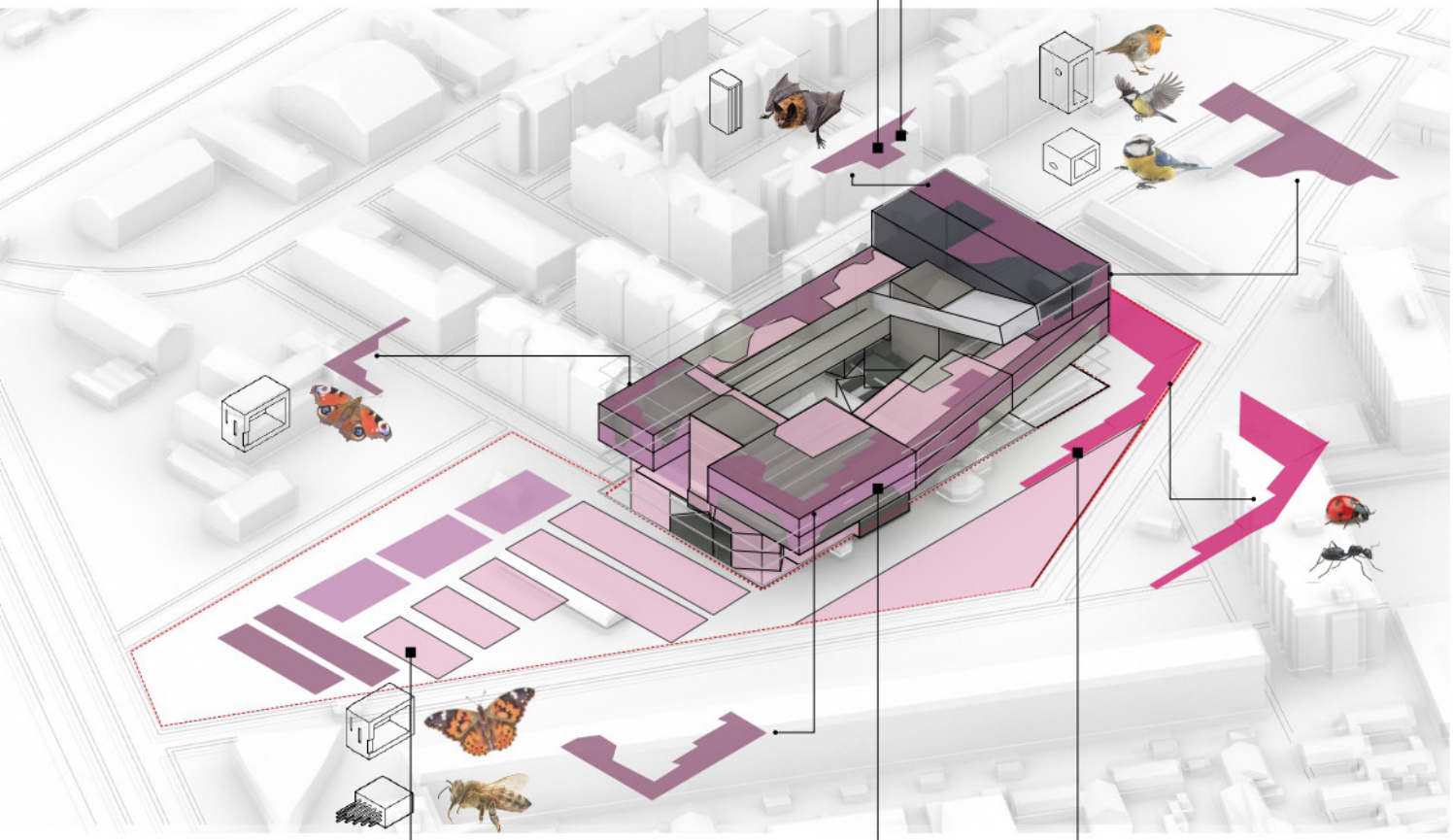
A School of Life- microclimate gardens

Facilitate and admire from a far!

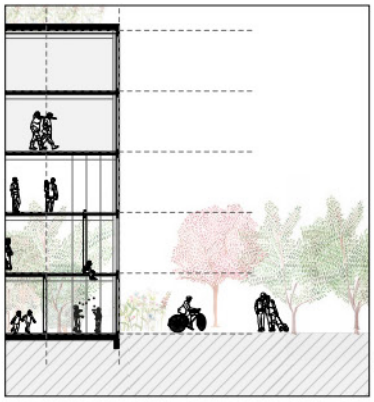
Bird and Bats Facade to nest



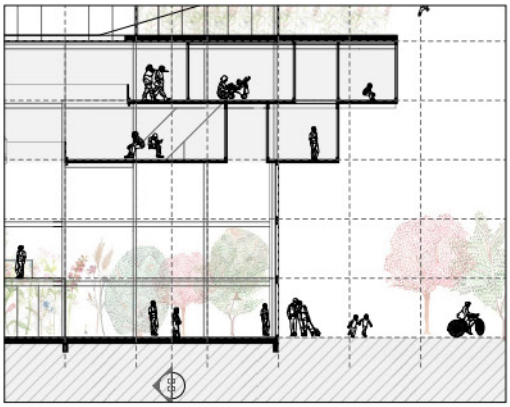
Non-humans nest Construction Workshop



Indoor and Outdoor gardens for food



Pollinating Garden for Butterflies and Bees to nest



Animal-Assisted Therapy- Open Insect Farms

Ferrari (Tzu-Shou) Huang

Chapter 6:

Design process for P3

Movement
Diller Scoffidio, ‘Flesh’

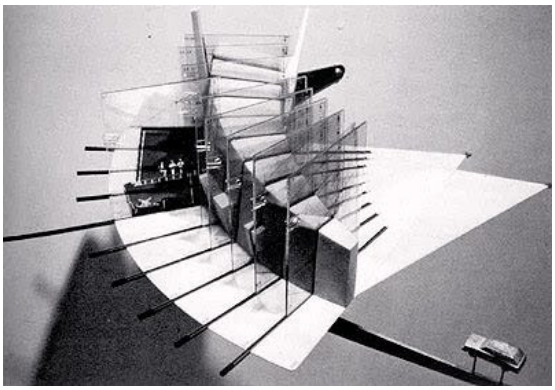
Flesh, Diller Scoffidio + Renfro
The book delves into the duo’s experimental projects, which often blur the boundaries between space, performance, and media. It critically examines how architecture interacts with issues of surveillance, sexuality, and the ephemeral nature of human experience.

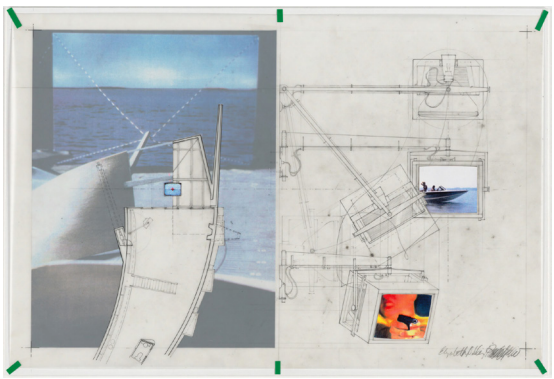
Key Themes & Concepts in Flesh
1. The Body & Architecture – How architecture frames, restricts, or liberates the human body.

2. Surveillance & Control – The role of architecture in monitoring and manipulating behavior.

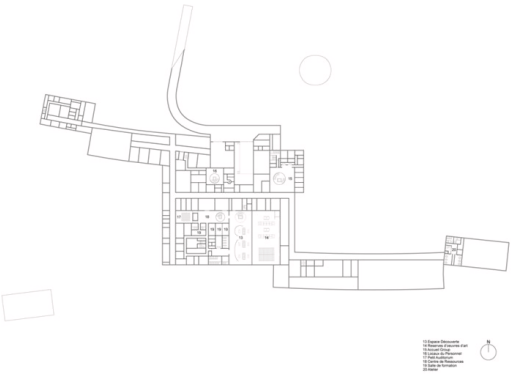
3. Ephemeral & Interactive Design – Projects that incorporate movement, technology, and sensory experiences.

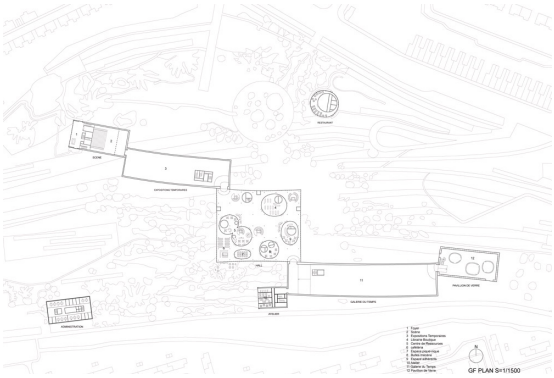
5. Cultural Critique – Commentary on consumerism, public space, and social norms.





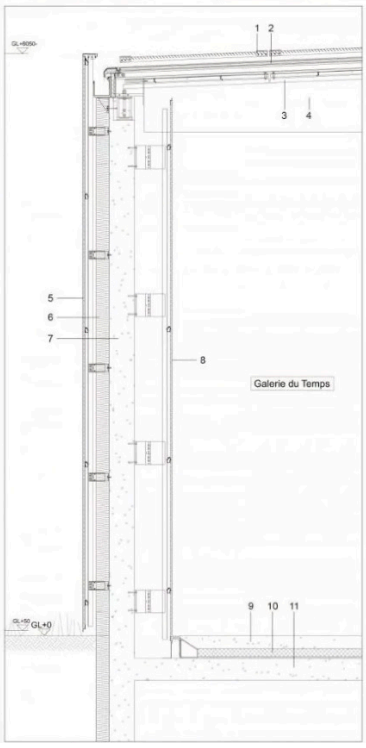
SANAA Typologies
Louvre-Lens Museum

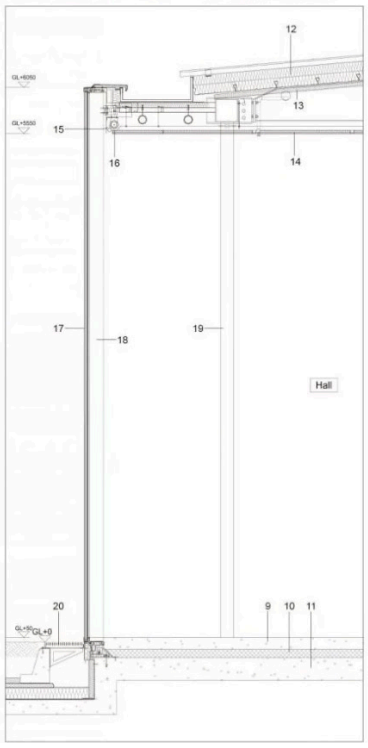


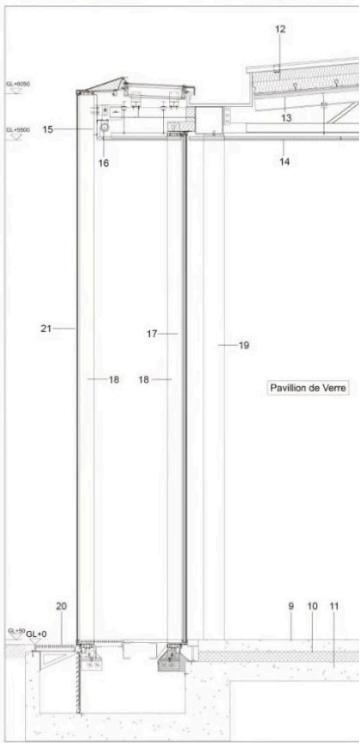


1 parasol
2 acristalamiento doble 10+(8+8) mm
3 persiana interior
4 viga T de acero 250 e=20 mm y h600-1100 e=10 mm
5 panel de aluminio en nido de abeja e=2+20+1 mm
6 aislamiento e=140 mm
7 hormigón e=280 mm
8 panel de aluminio nido de abeja e=1+(1.18.1) mm
9 pavimento de hormigón pulido e=150 mm
10 aislamiento 90 mm (suelo radiante)
11 forjado de hormigón e=240 mm
12 panel de revestimiento
13 panel acústico
14 chapa perforada 1.8 mm
15 chapa plegada de acero
16 persiana enrollable
17 acristalamiento doble 10+(8+8) mm
18 parteluz
19 pilar
20 rejilla galvanizada
21 vidrio laminado 6+6 mm

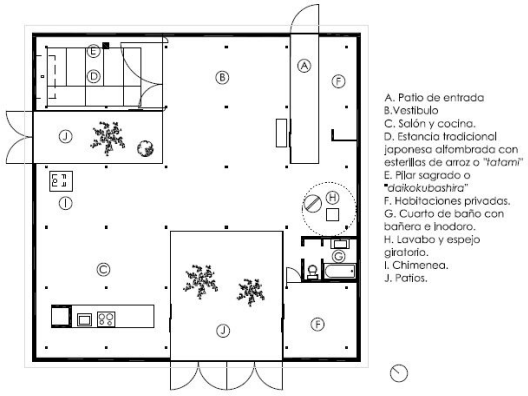
1 sunshade grille
2 double glazing skylight 10+(8+8) mm
3 interior mobile louver
4 paint on steel T-beam w250t=20 x h600-1100t=10 mm
5 aluminum honeycomb panel t=2+20+1 mm
6 insulation t=140 mm
7 concrete t=280 mm
8 aluminum honeycomb panel t=1+(1+18+1) mm
9 polished concrete paving t=150 mm
10 insulation 90 mm (floor heating)
11 structural concrete t=240 mm
12 roof cladding system
13 acoustic board
14 1.8 mm perforated metal
15 folded steel sheet
16 rolling sunshade screen
17 double glazing 10+(8+8) mm
18 mullion
19 column
20 galvanized grating
21 laminated glass 6+6 mm

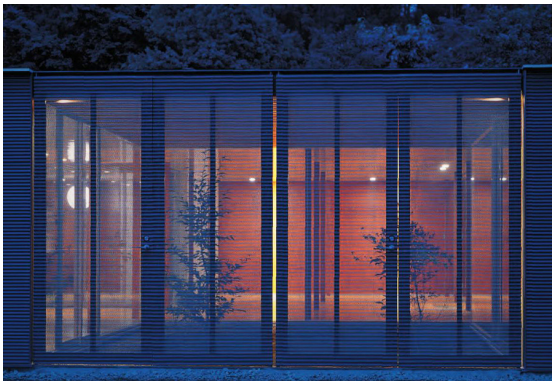






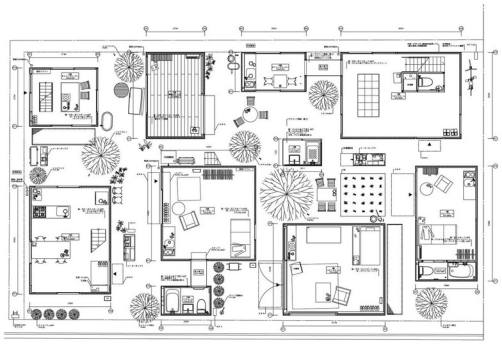
SANAA Typologies
Weekend House

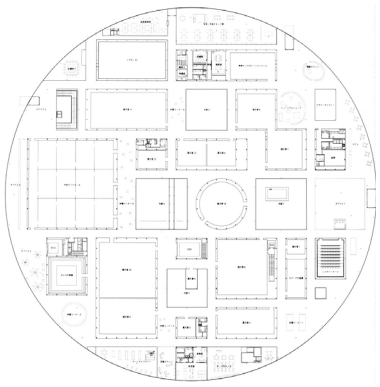


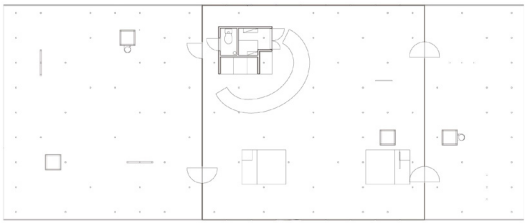


SANAA Typologies

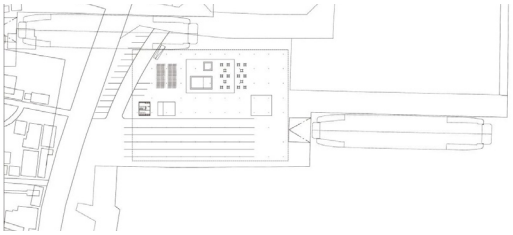
21st Century Museum of Contemporary Art, Kanazawa

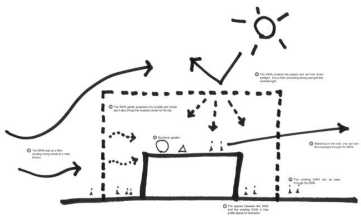


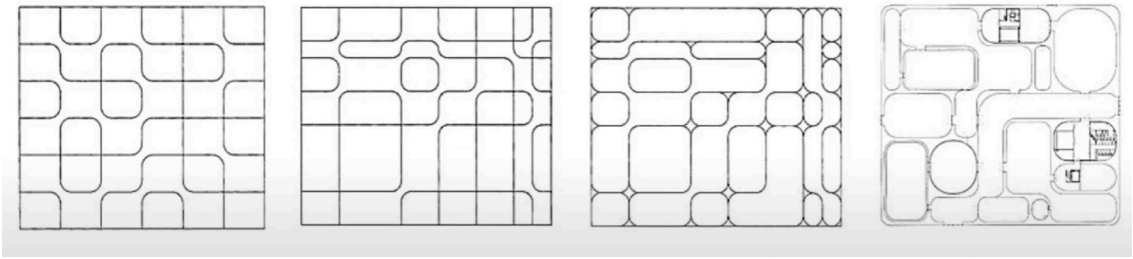


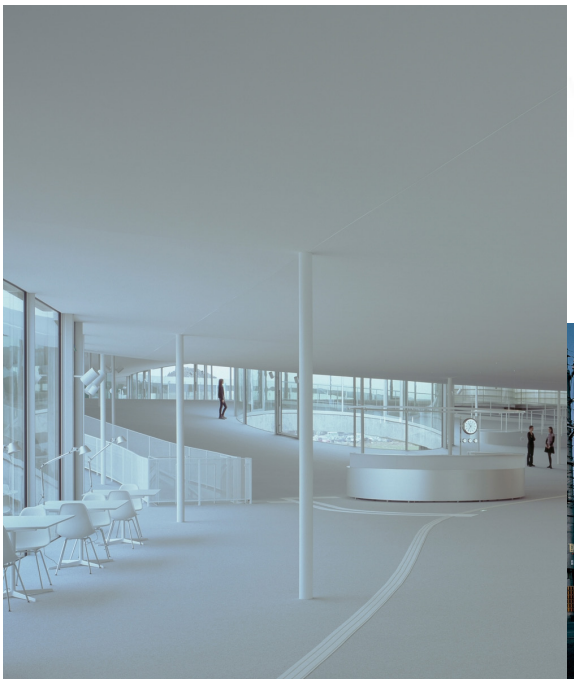


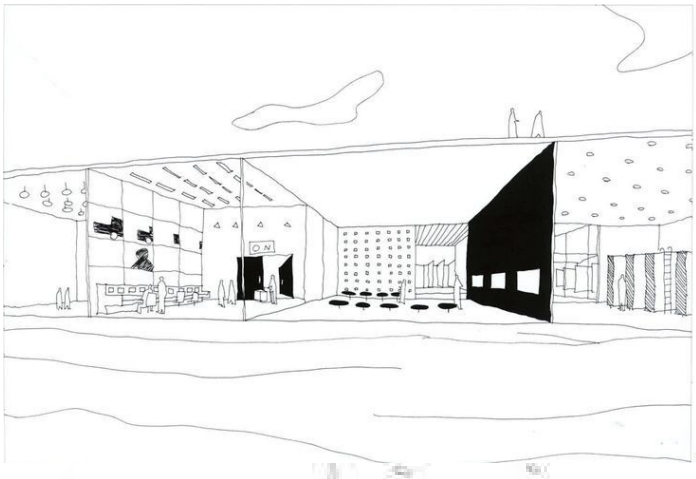
SANAA Typologies
Ferry Terminal, Cultural Centre in Almere

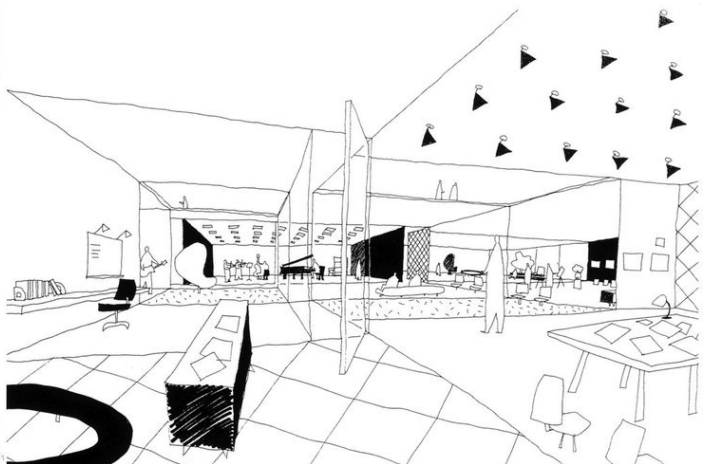


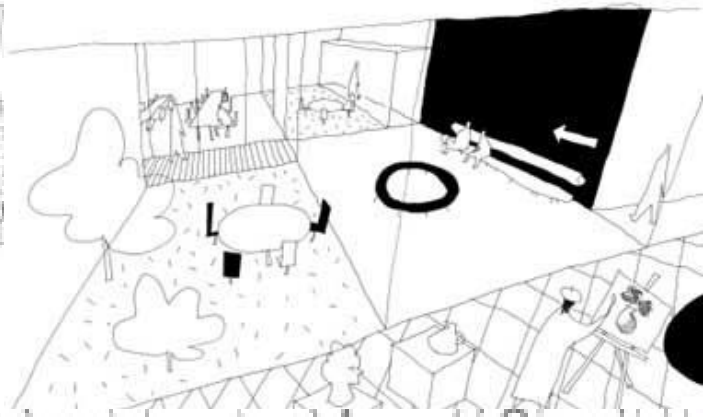


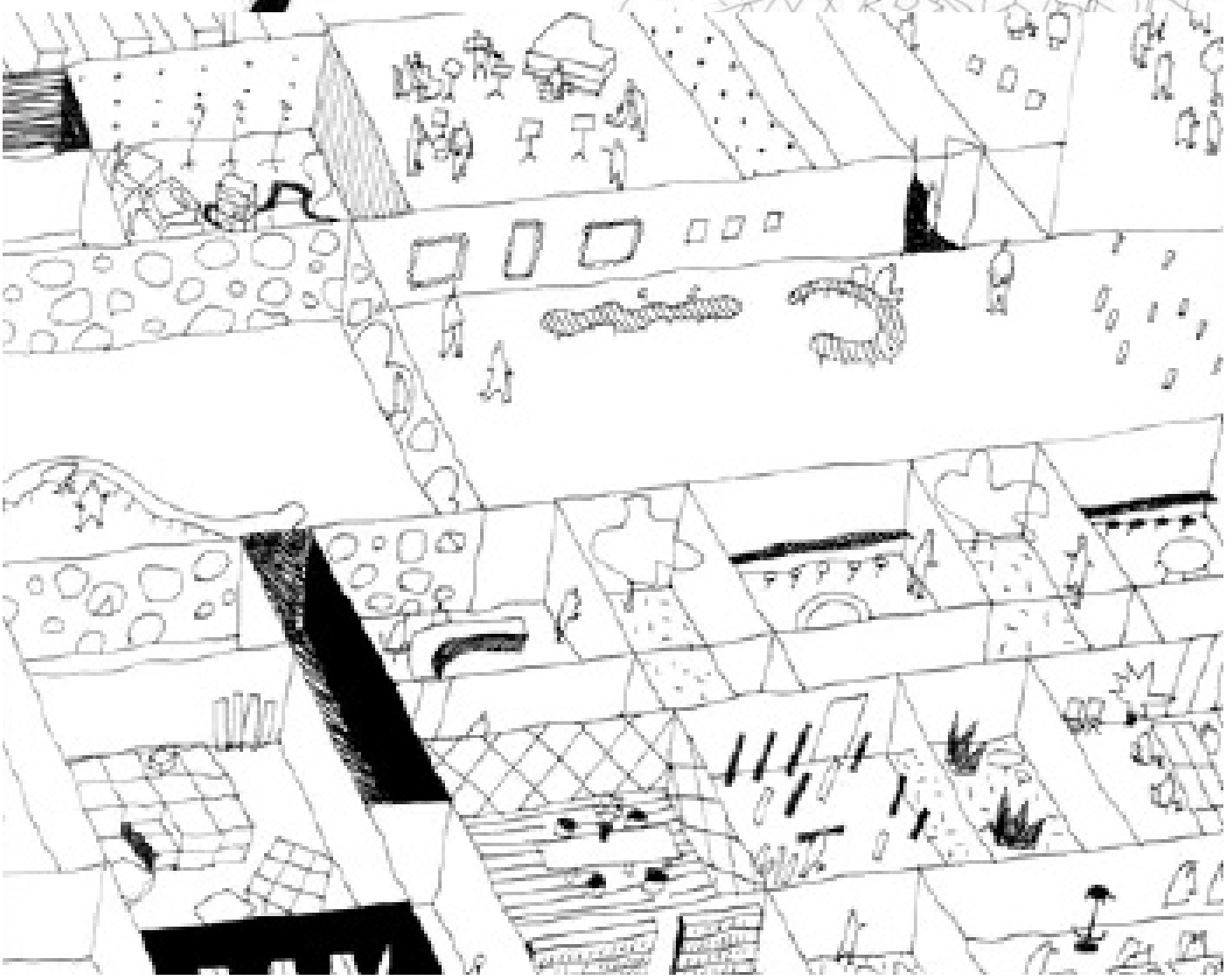


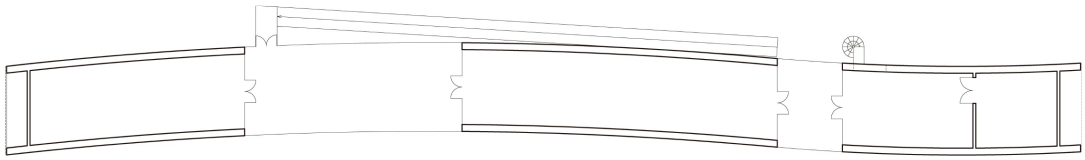


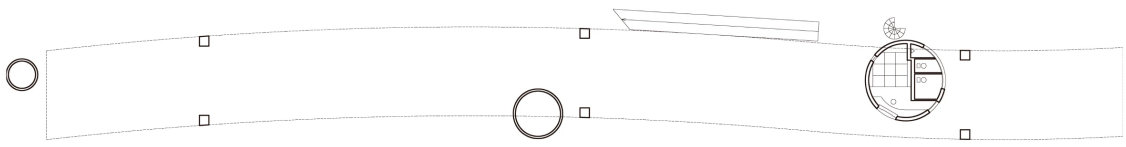


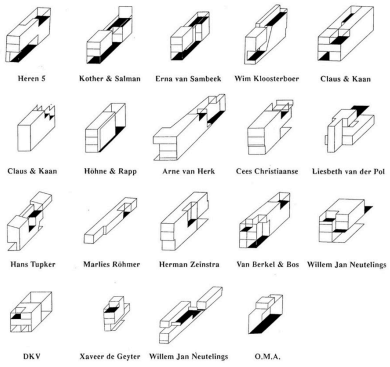


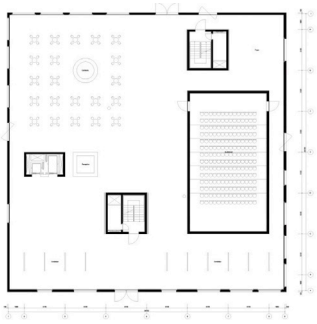


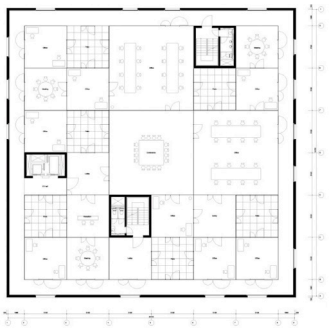


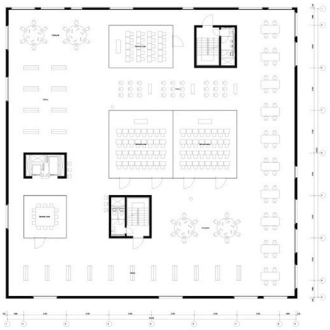


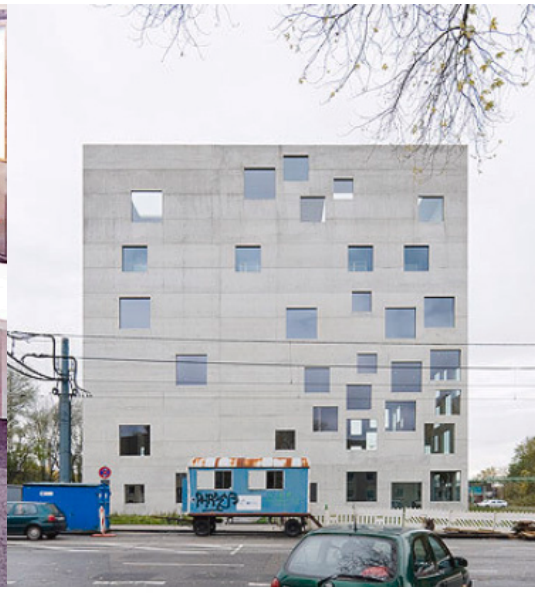


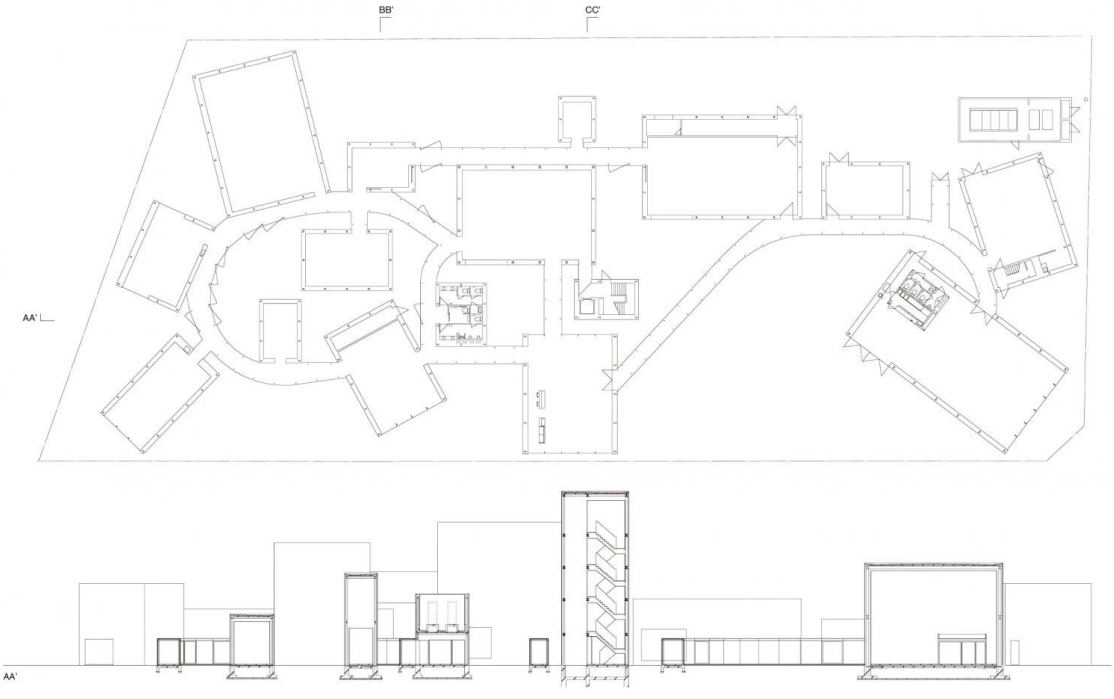

Heren 5
Kother & Salman
Erna van Sambeek
Wim Kloosterboer
Claus & Kaan
Claus & Kaan
Höhne & Rapp
Arne van Herk
Cees Christiaanse
Liesbeth van der Pol
Hans Tupker
Marlies Röhmer
Herman Zeinstra
Van Berkel & Bos
Willem Jan Neutelings
DKV
Xaveer de Geyter
Willem Jan Neutelings
O.M.A.



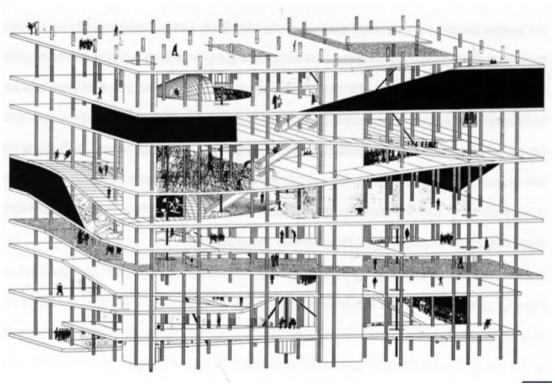


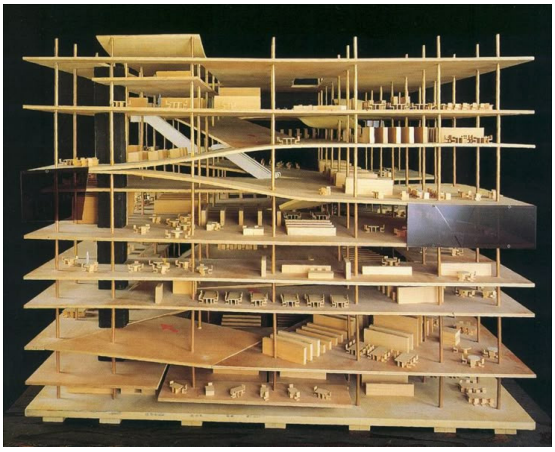


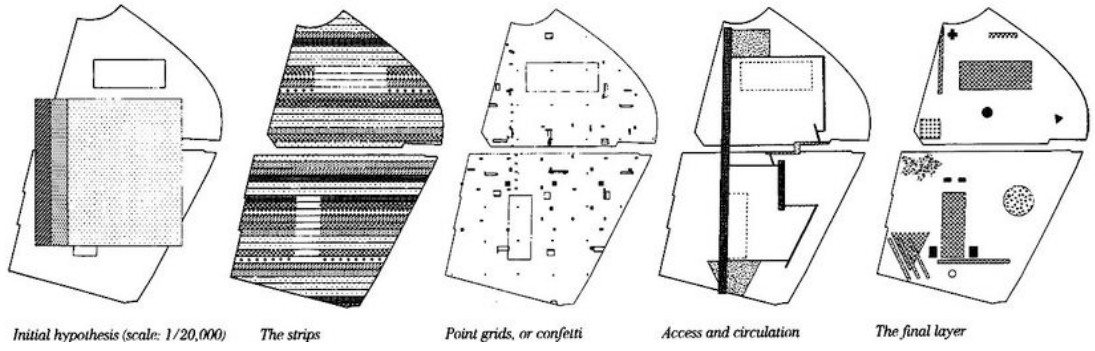


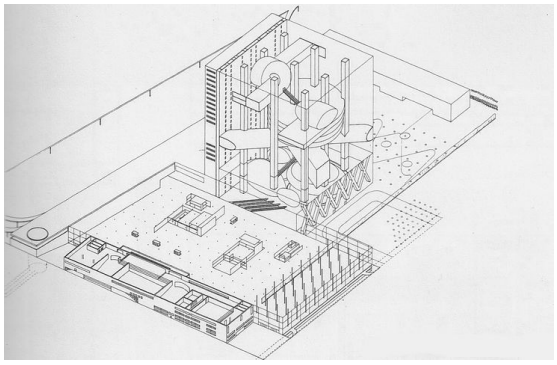

BB'
CC'
AA'
AA'

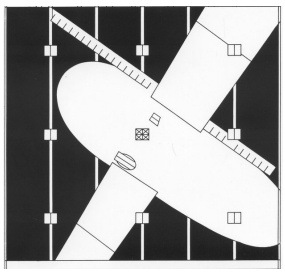
Rem Koolhaas

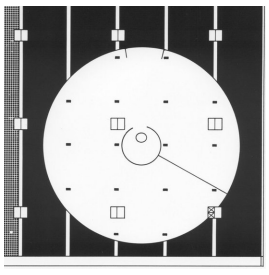


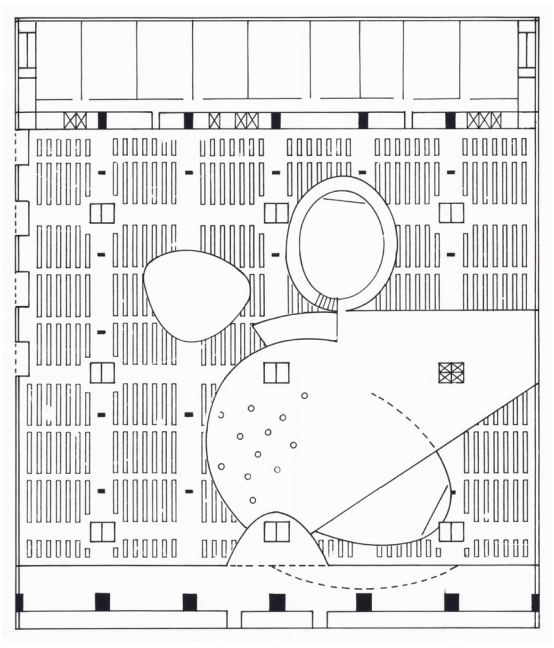


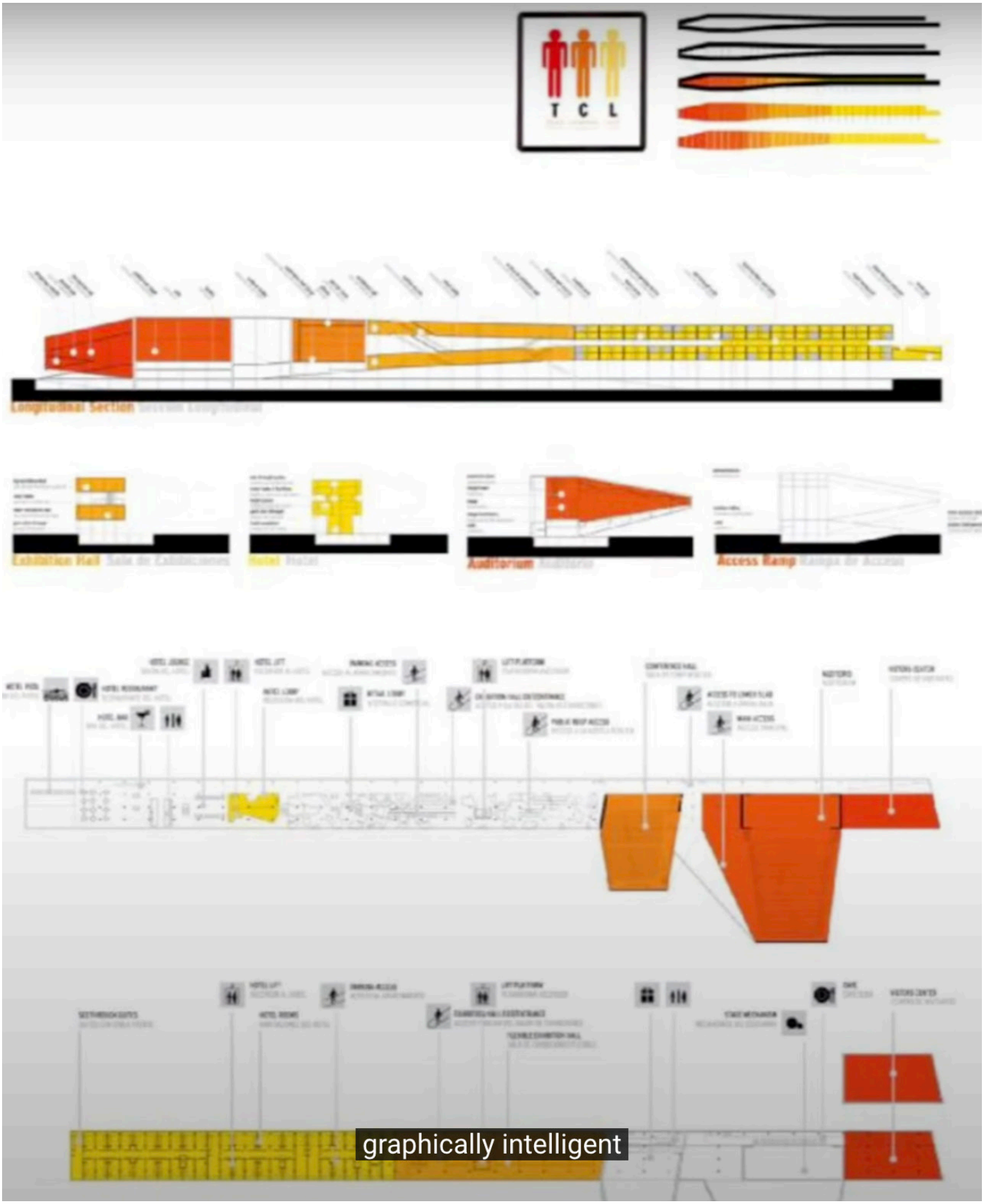




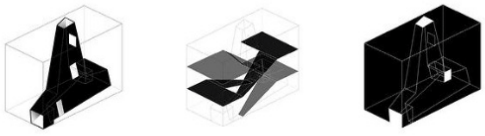


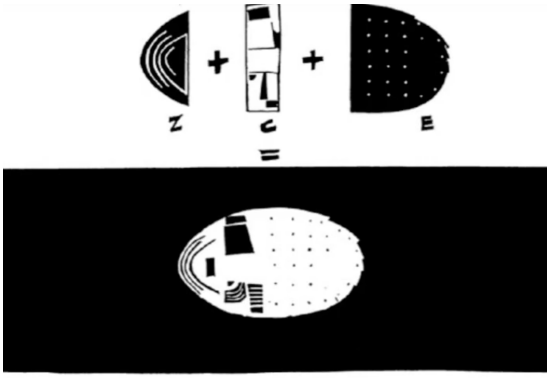


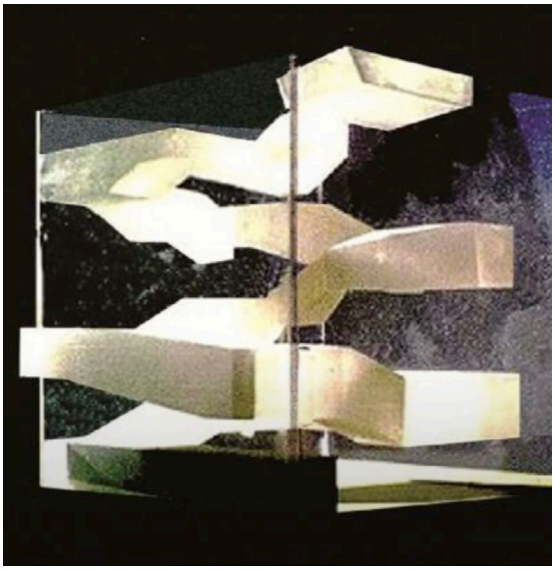


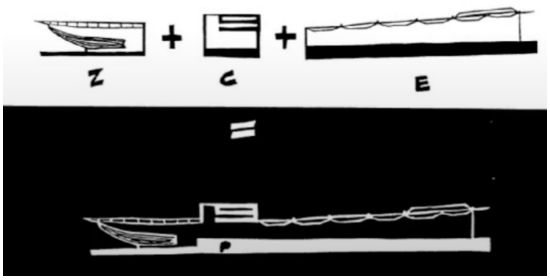

T C L
Longitudinal Section
Exhibition Hall
Hotel
Auditorium
Access Ramp
graphically intelligent

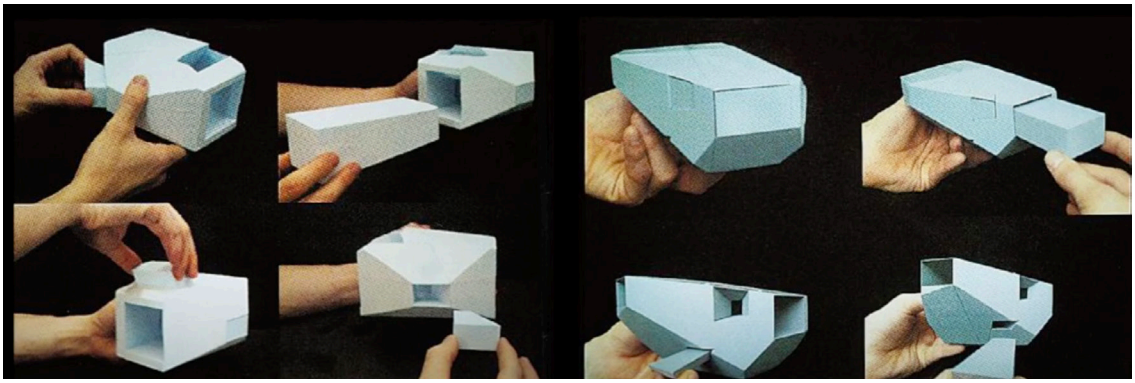
Rem Koolhaas

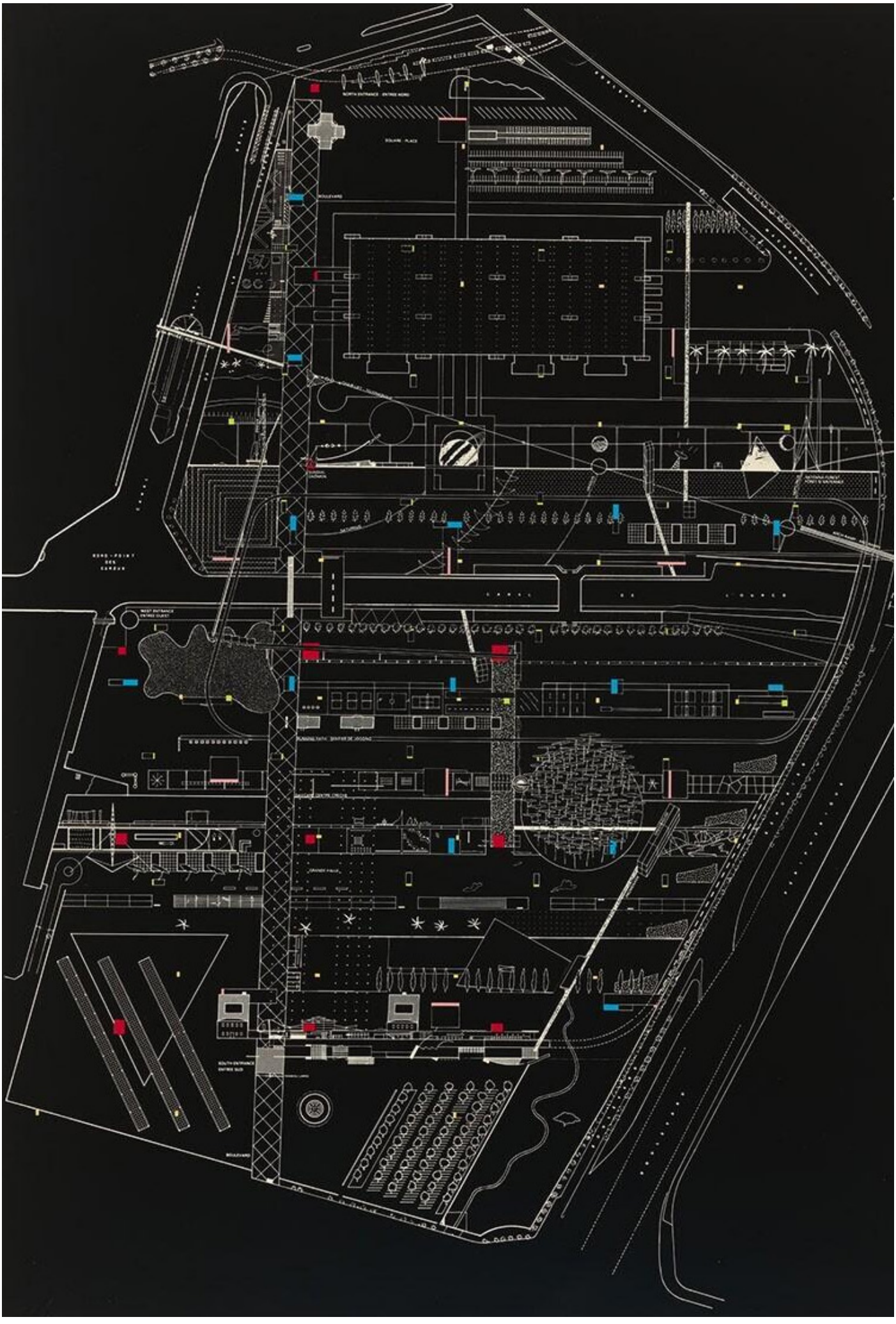




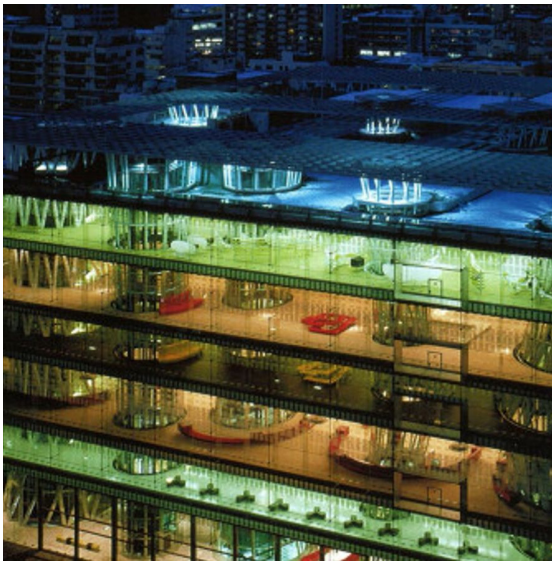


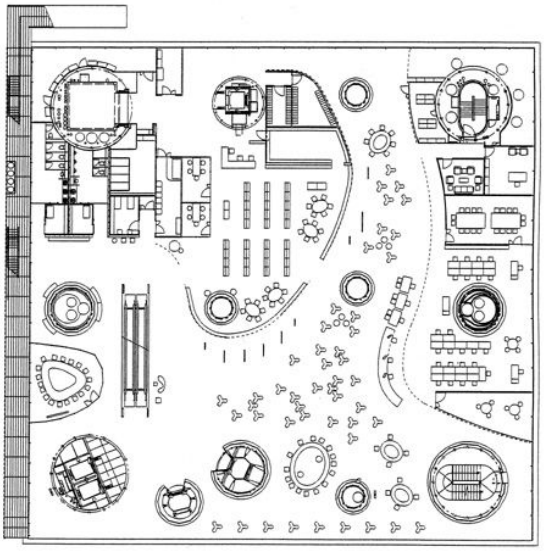


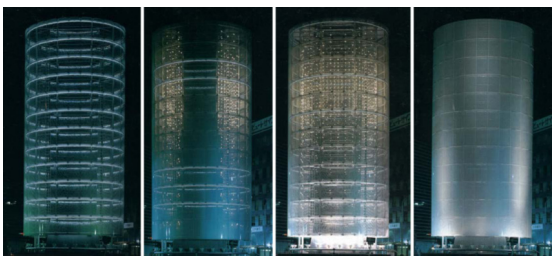


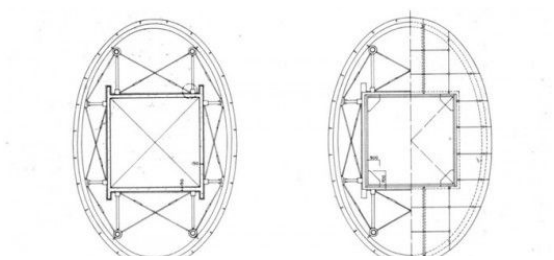


Toyo Ito

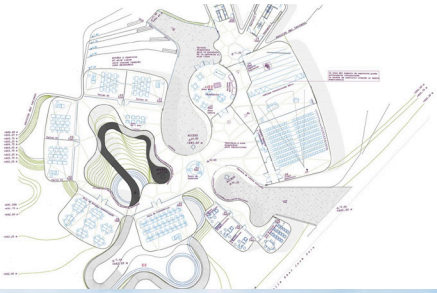


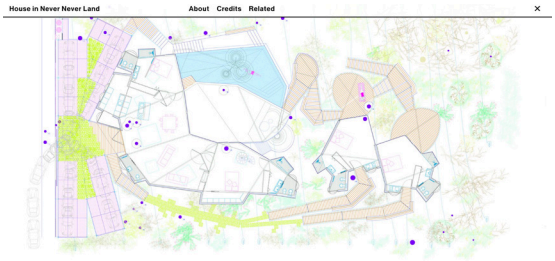


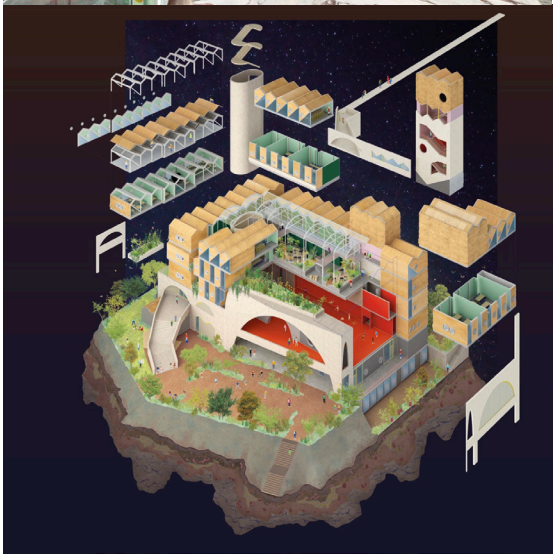




Andre Jaques





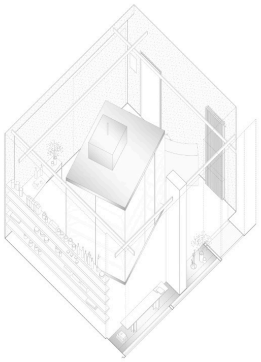


Sam Chermayeff

FRESKO

YEAR: 2021
LOCATION: BERLIN
INTERIOR CONCEPT: SAM CHERMAYEFF OFFIC
ARNO BRANDLHUBER
ARCHITECT: SAM CHERMAYEFF OFFICE
LIGHT DESIGN: AAS
PRODUCED: ERTL UND ZULL

CLOSE



Fresko is a new food shop. As the name suggests it is about fresh food; cheese, ready to eat meals and so on. For this we needed a fridge so we made the whole thing a fridge. The concrete background suggests that the fridge is also itself outside.

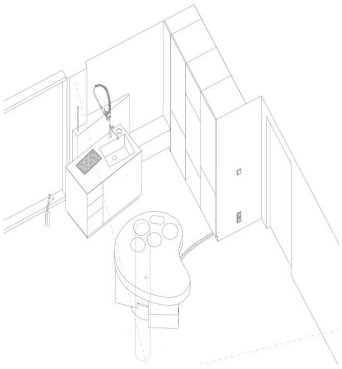
ENQUIRE

NEXT PROJECT

KITCHEN FOR MOSTAFA

YEAR: 2022
LOCATION: BERLIN
PRODUCED: ERTL UND ZULL

CLOSE



Kitchen for apartment in Kurfürstenstrasse 142. Freely shaped island with induction cooktops stand on cluster of wide oven and drawers. An angled sink counter with integrated drain board allows social interaction while doing dishes. Built-in storage accommodates dishwasher and fridge.

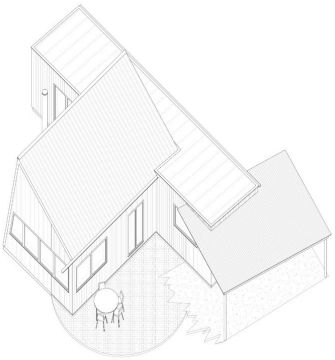
ENQUIRE

Sam Chermayeff

HOUSE EVER

YEAR: 2021
LOCATION: BERLIN

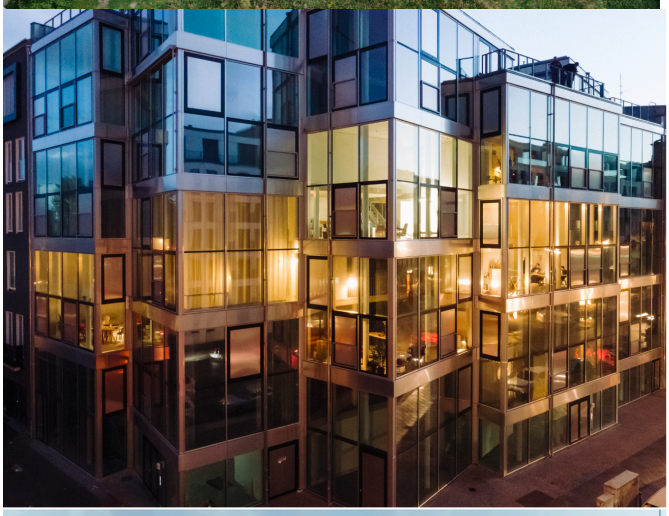
CLOSE



This house combines two typologies, a barrack and barn, which become sleeping and living (public) areas respectively. Sleeping becomes small and intimate and the living becomes airy. Bathrooms and services connect where the two volumes overlap.

ENQUIRE

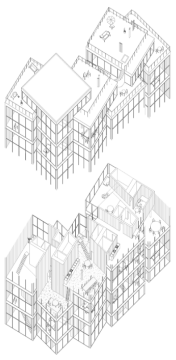
NEXT PROJECT



BUILDING GROUP KURFÜRSTENSTRASSE 142

YEAR: 2012
LOCATION: BERLIN
DESIGNED BY: JUNE 14 MEYER-GROHBRÜGGE &
CHERMAYEFF
PHOTOS: OLIVER HELBIG

CLOSE

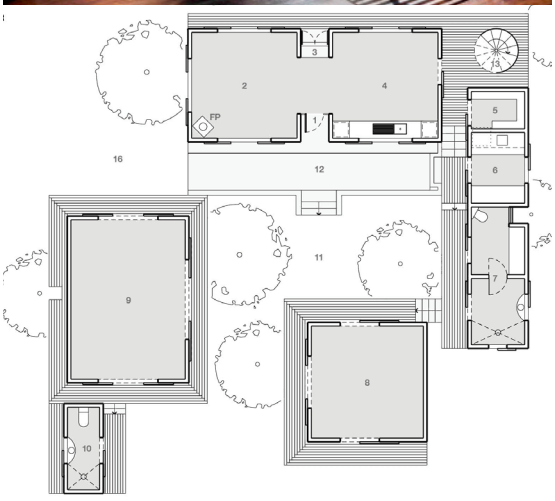


In our era of digital atomization, the notion of the commune feels both anachronistic and, perhaps, nostalgically out of reach. Meanwhile, in the real world, we continue to tangibly exist amongst other people – side by side on the train, in various cubicles of approximately equal size, or standing in line for any number of reasons.

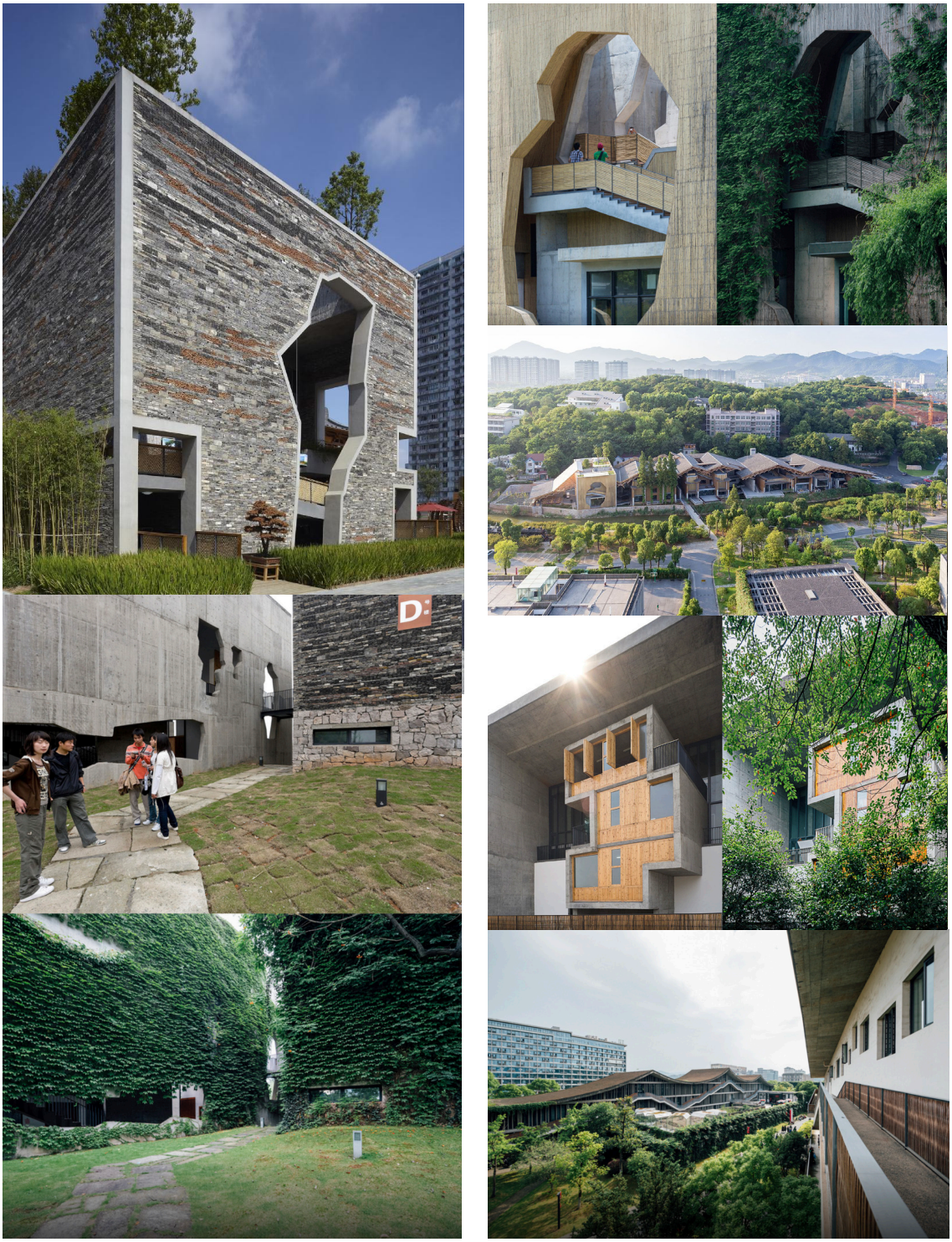
So we ask: How can we live together differently?

There are countless, reasons – ranging from privacy concerns to simply knowing better –we no

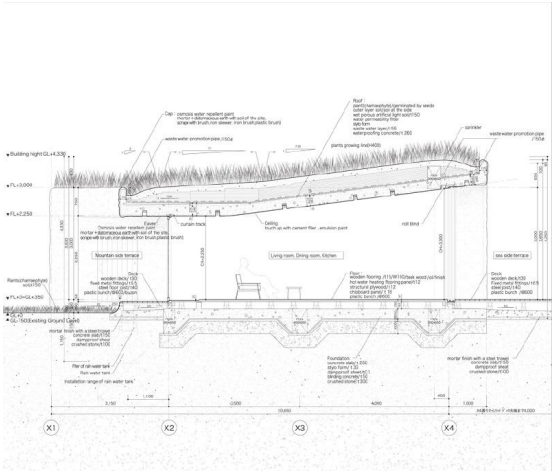
Glenn Murcutt
Interactive and Touching the earth gently

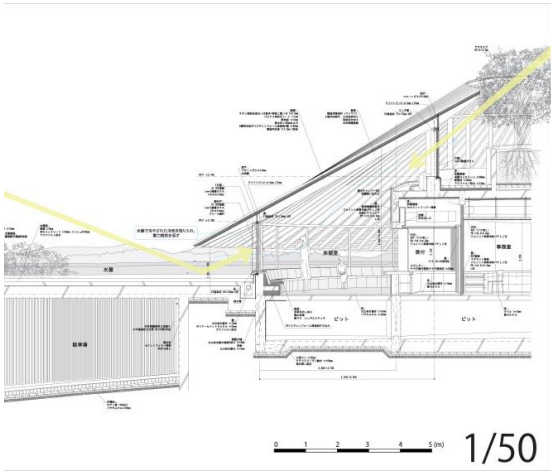


Amateur Architecture Studio, Wang Shu
Witnessing Growth

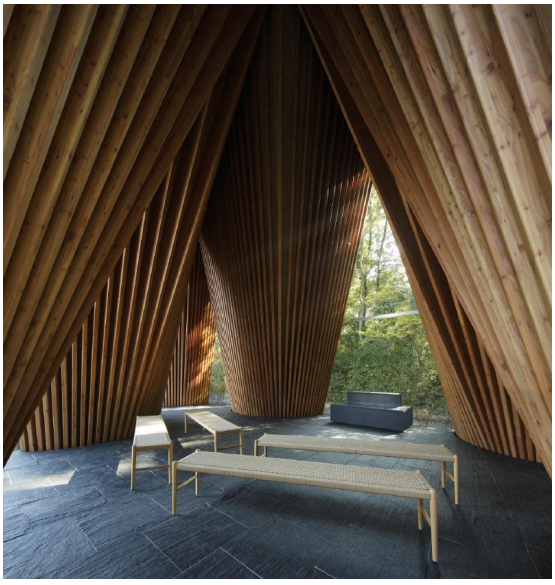


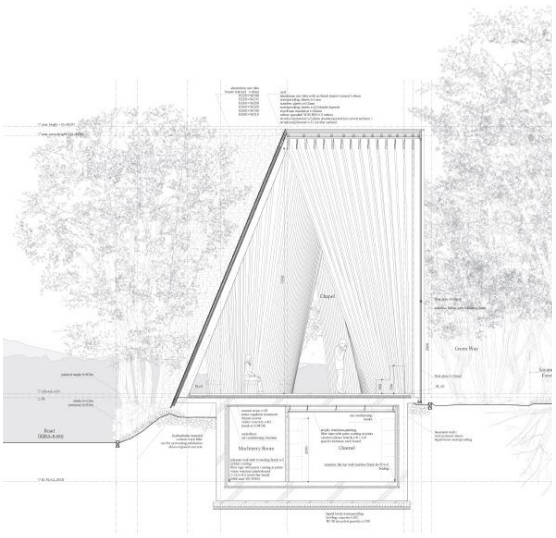
Hiroshi Nakamura
Immaterliaty and Sequencing



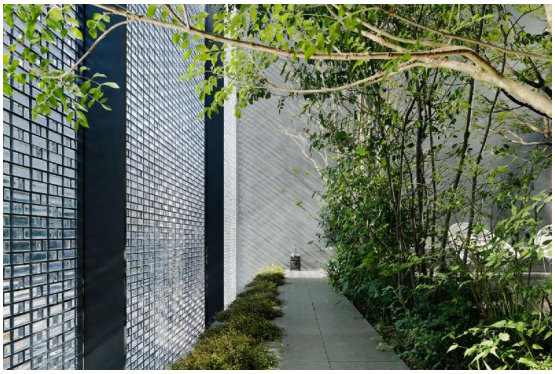


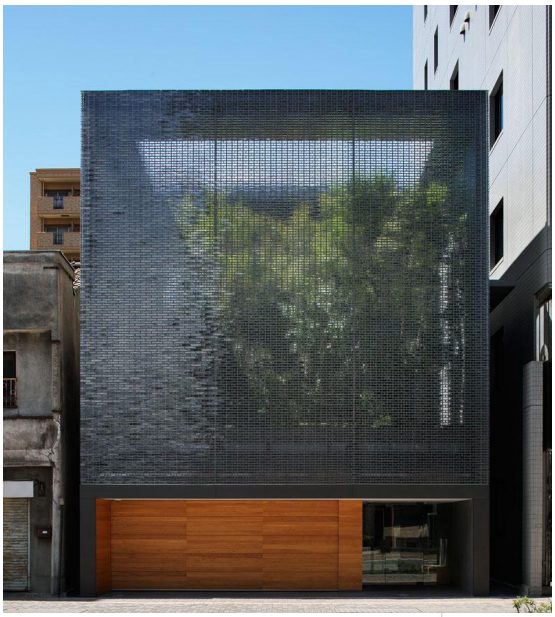
Hiroshi Nakamura
Immaterliaty and Sequencing

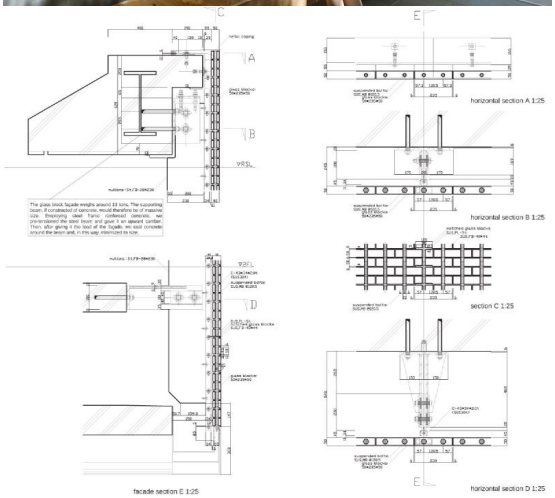




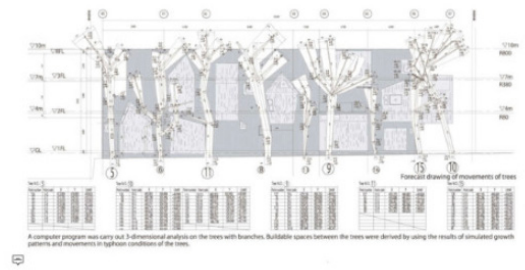
Hiroshi Nakamura
Immaterliaty and Sequencing

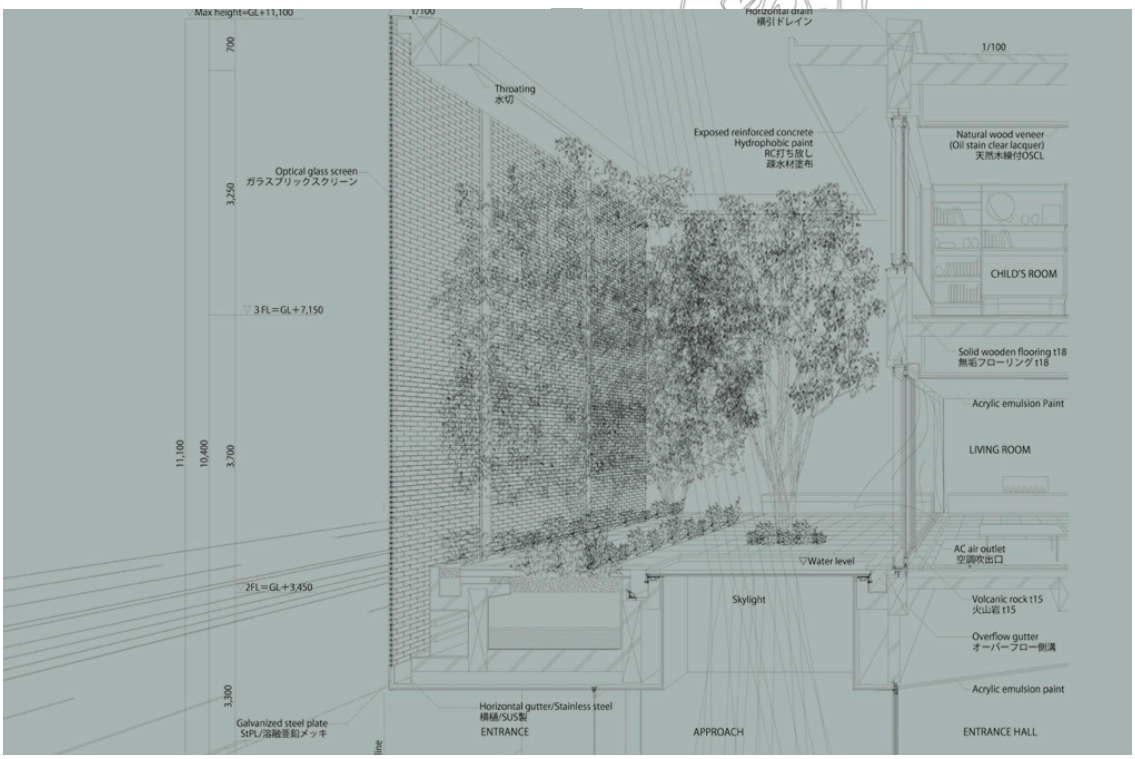




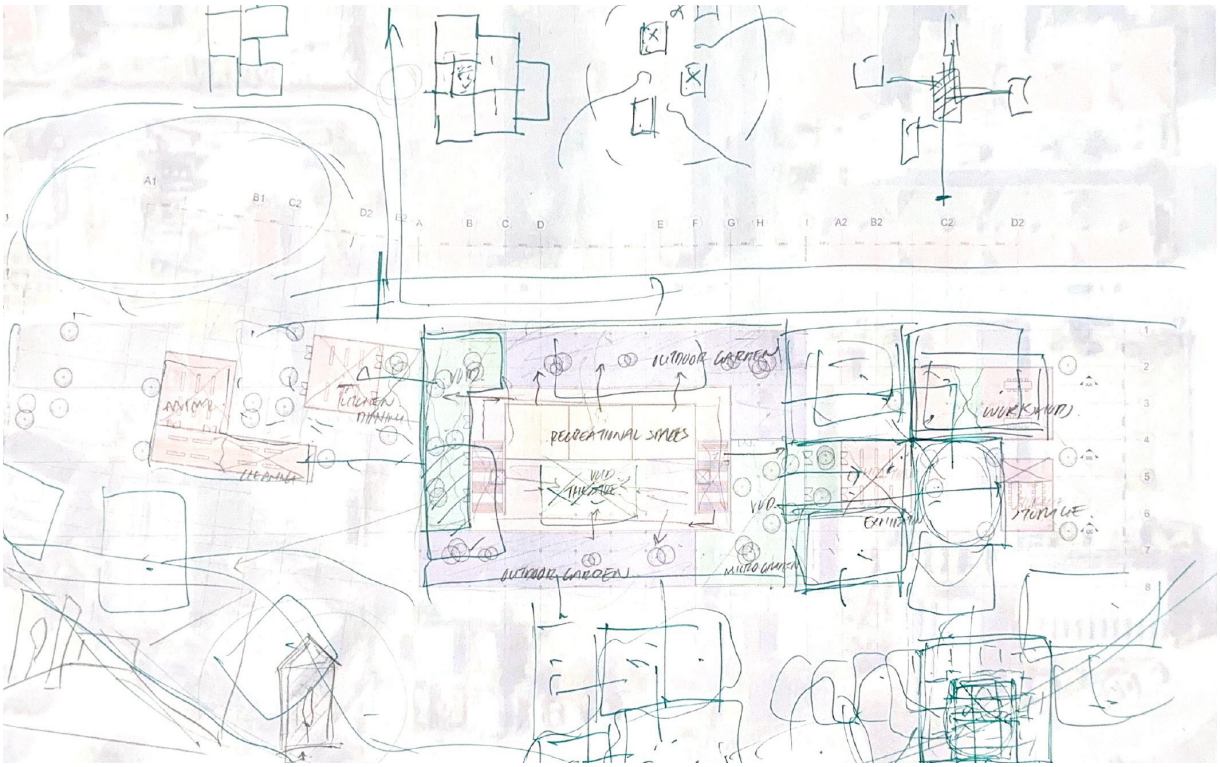


Hiroshi Nakamura
Immaterliaty and Sequencing

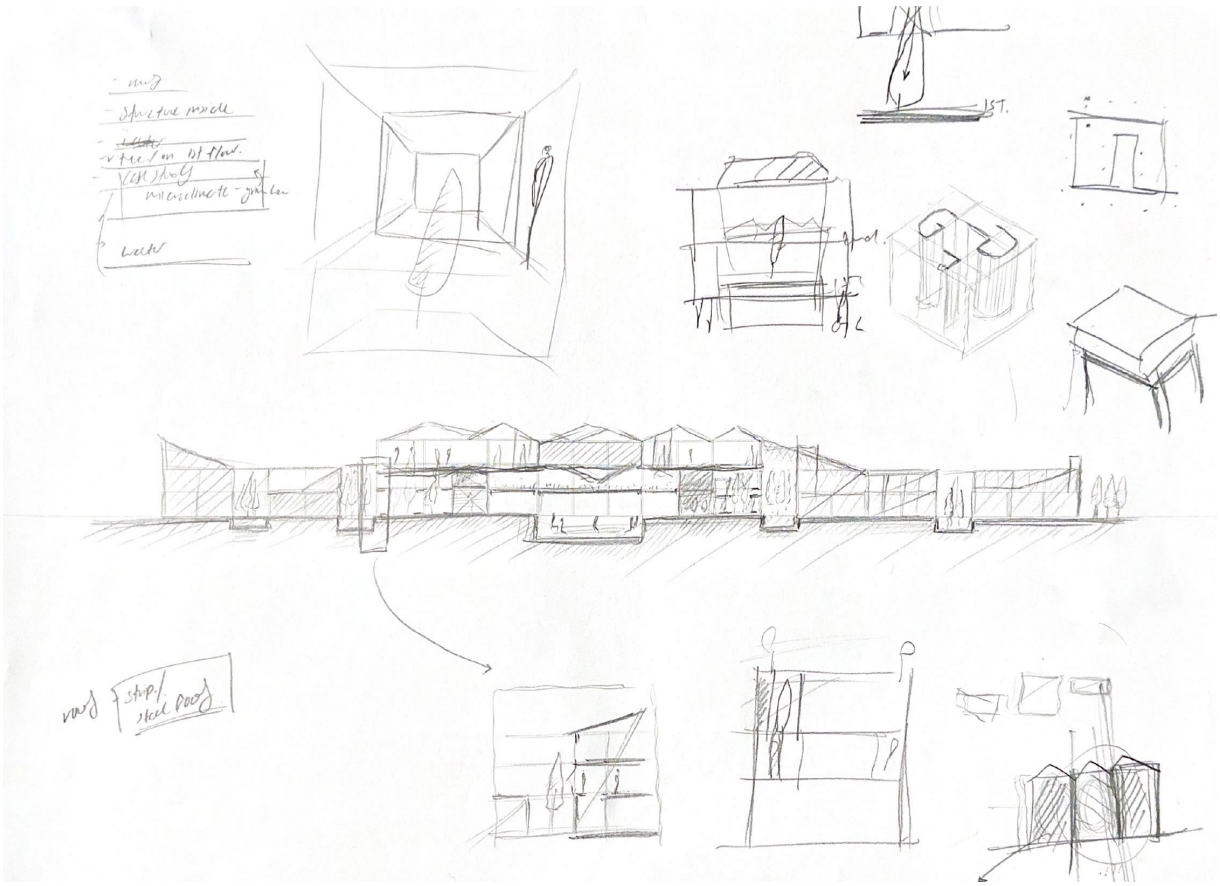




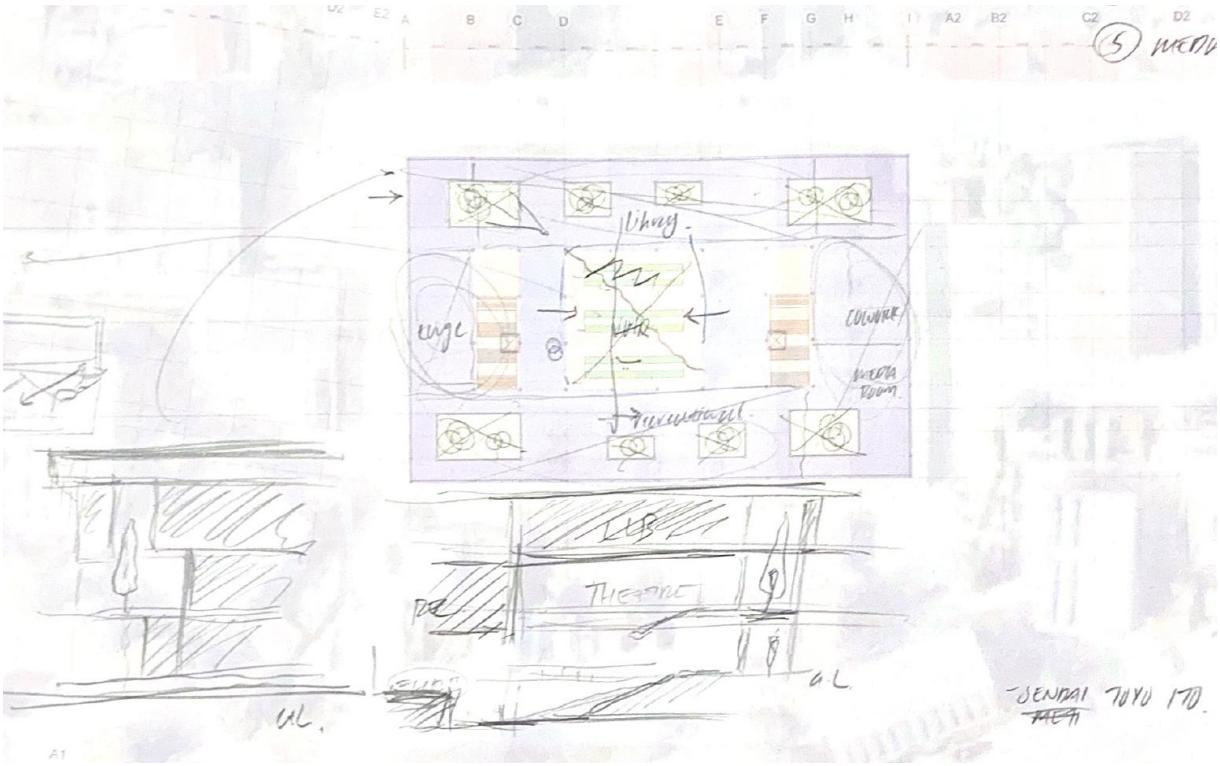
Ideas after P2



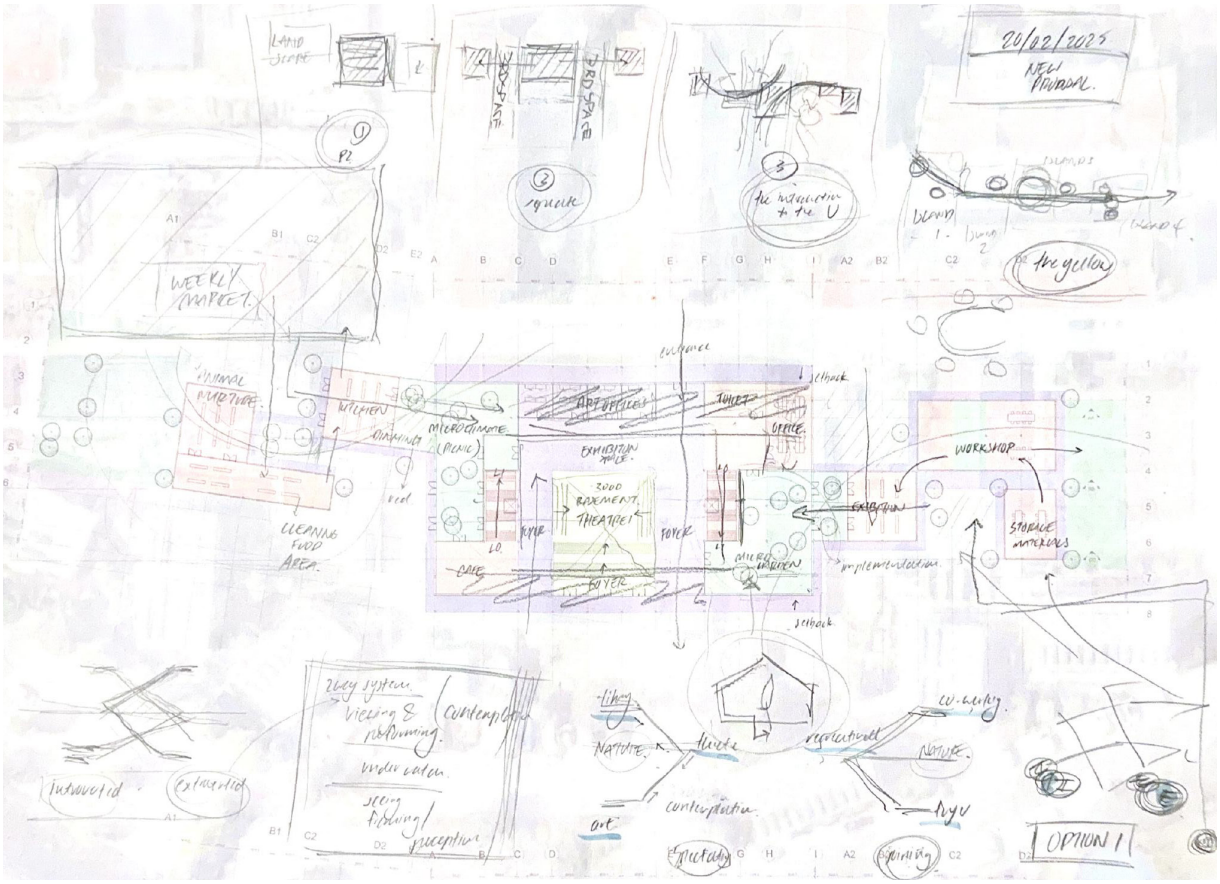
Since P2, divided to spread out “Megastructure” - Moving the programme out



Section initial moments

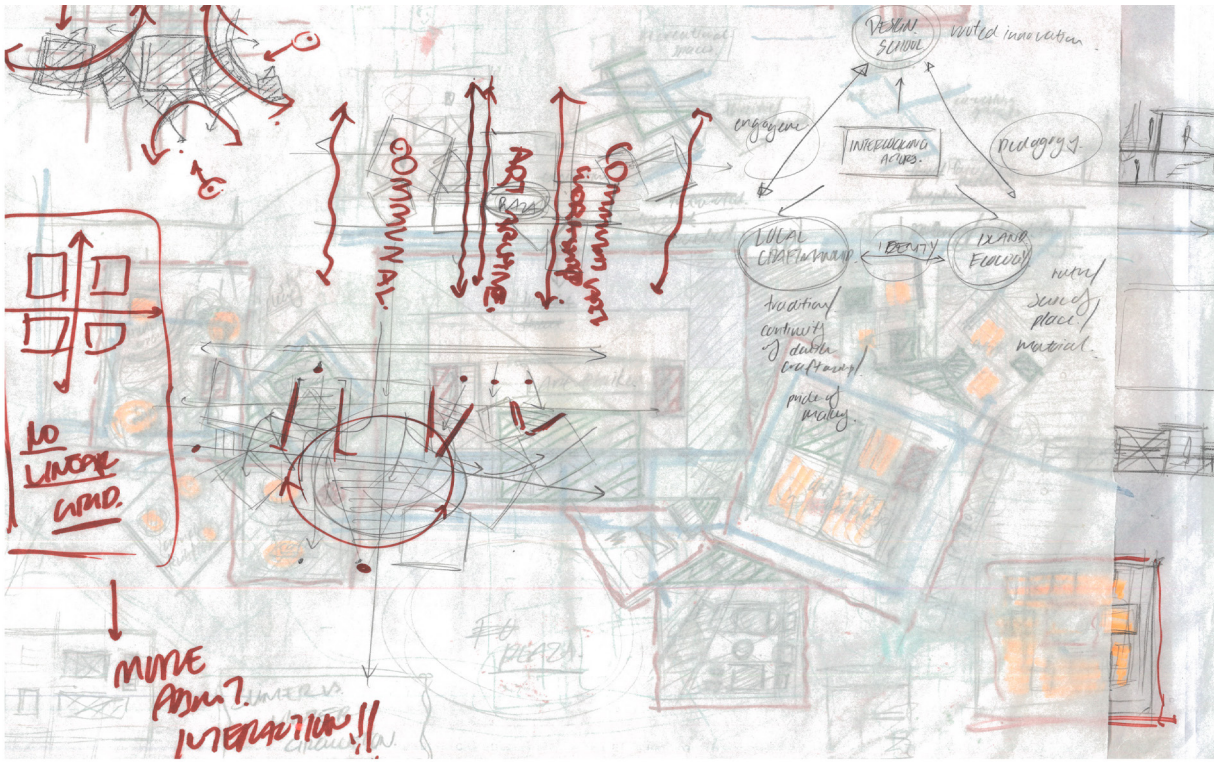


Journey through section should be traveling through in and out of the building

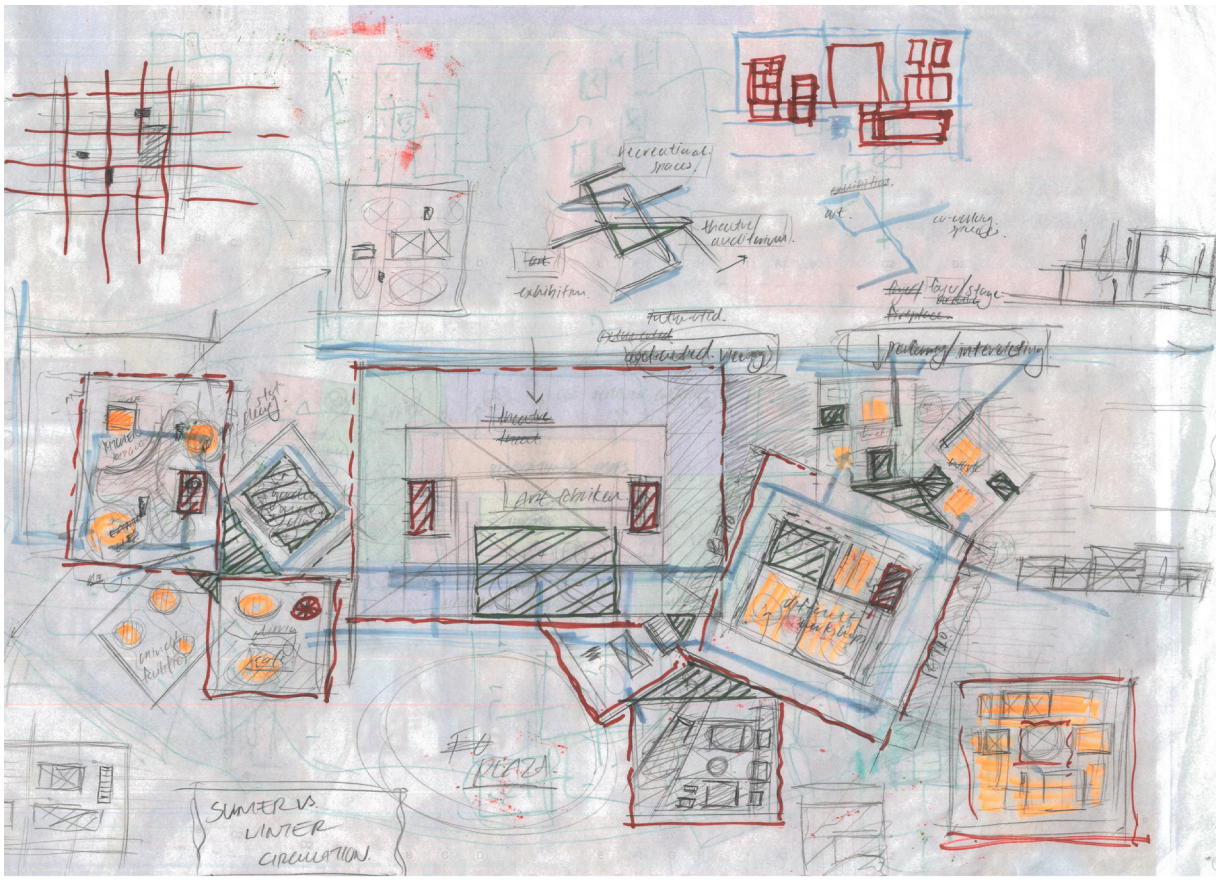


How are the programmes placed? How are they related to the neighbouring existing building functions?

Designing the Learning Street

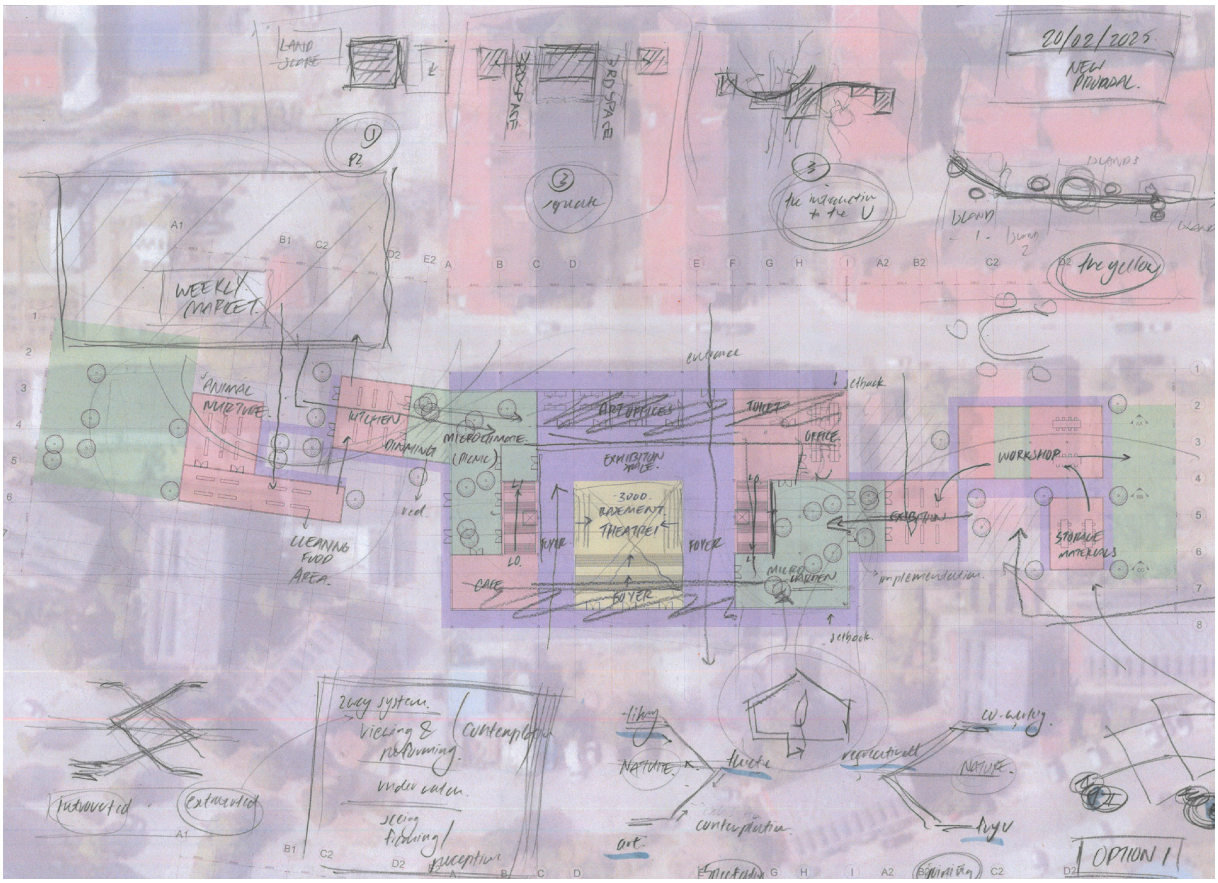


Different Programme, different feeling eg extroverted and introverted

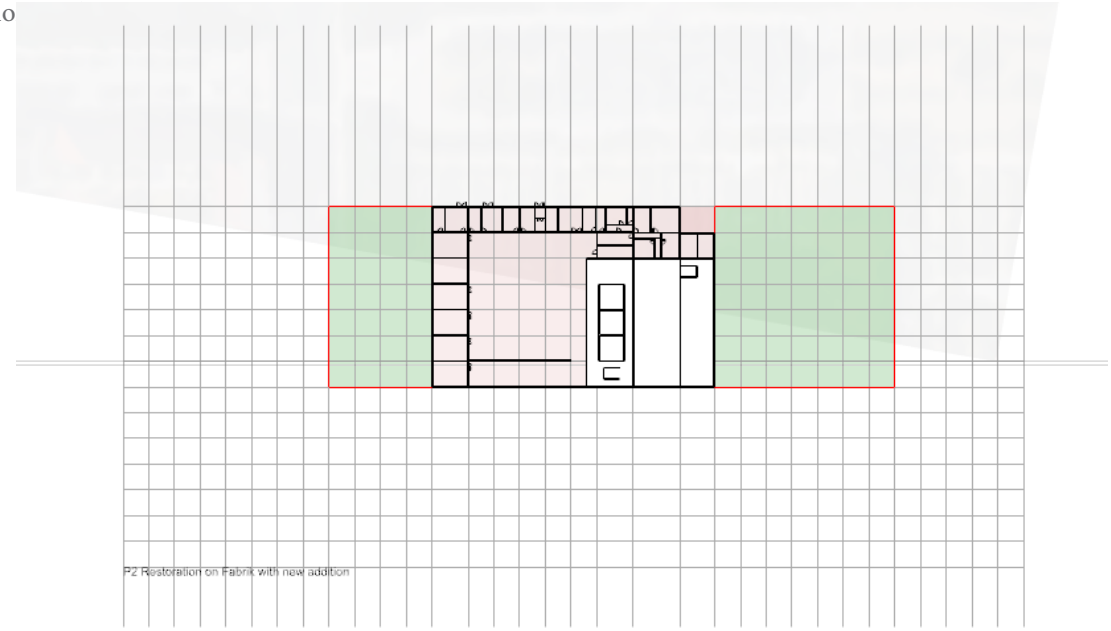


Rotating the building so there is a pocket of breathing room

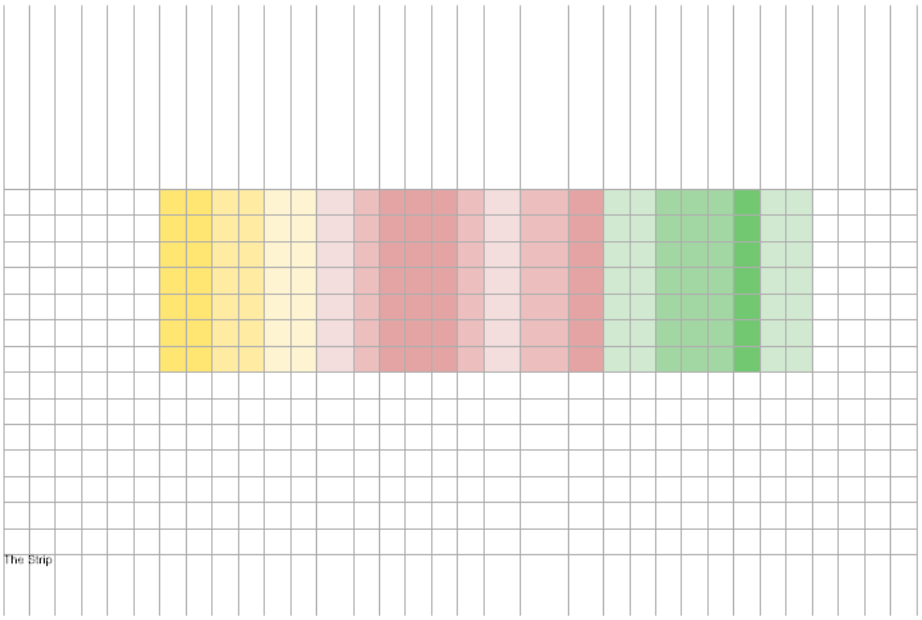
The mistake that started the rotating idea... what if there are no hallways?



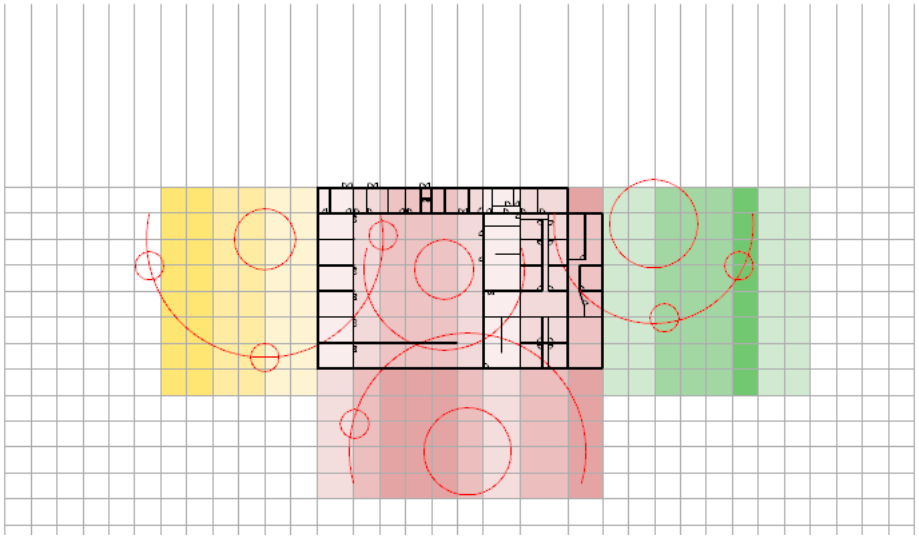
The Linear Journey through the site building- the learning street



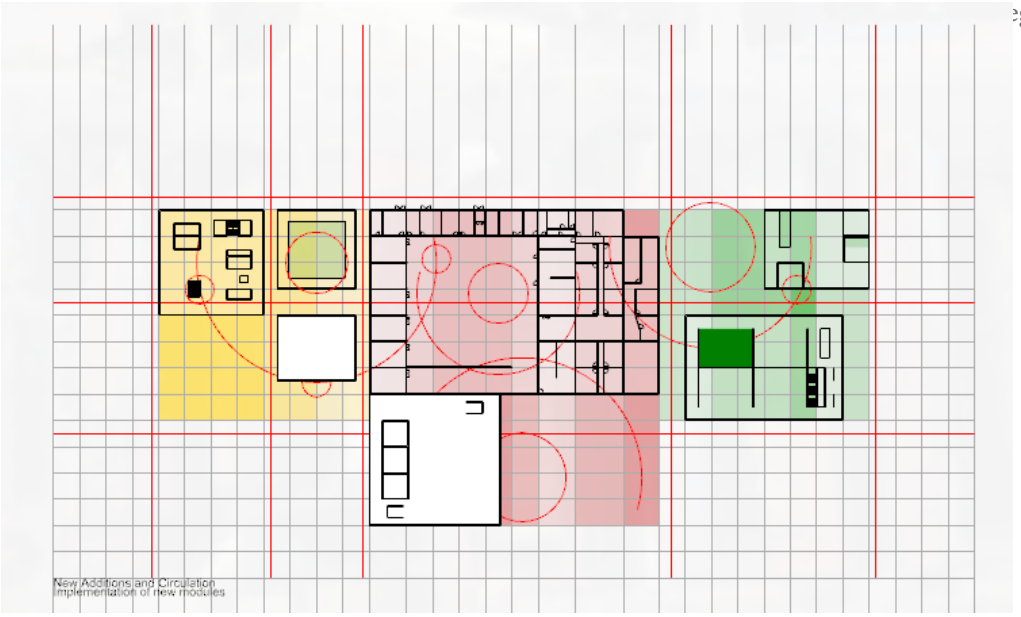
Existing Fabriken



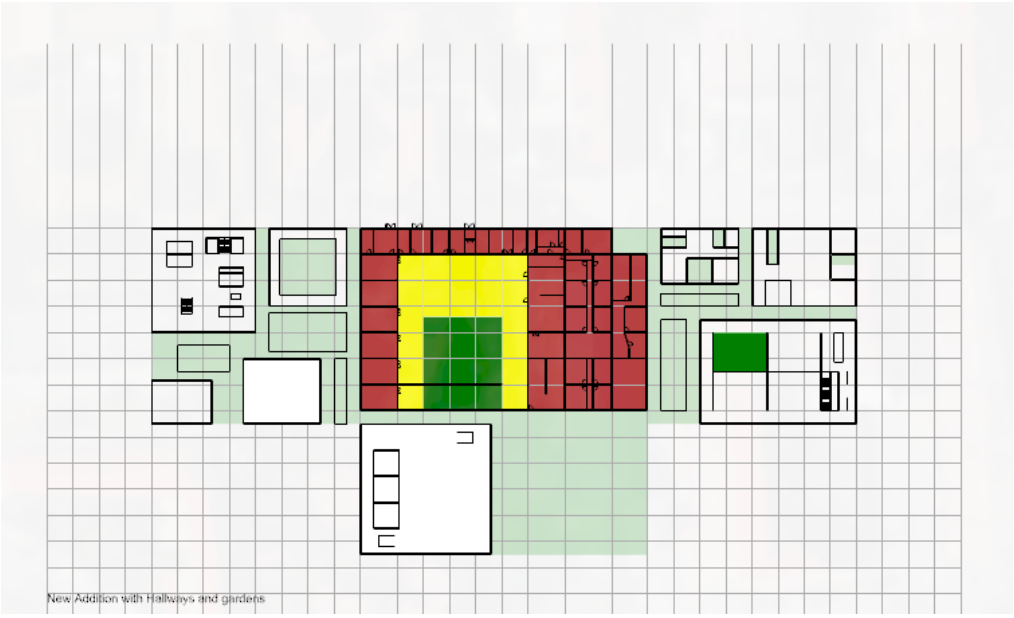
Divided up into strips



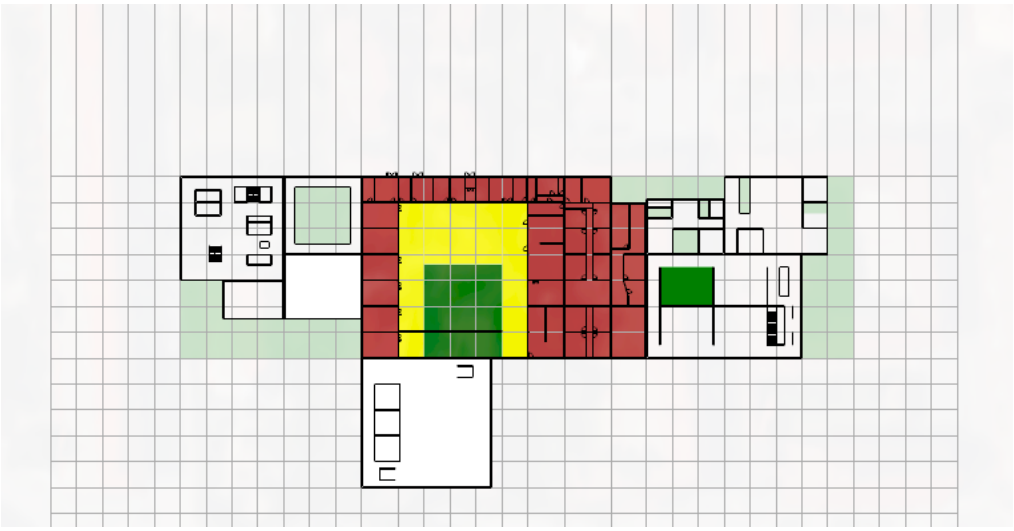
introducing the courtyards



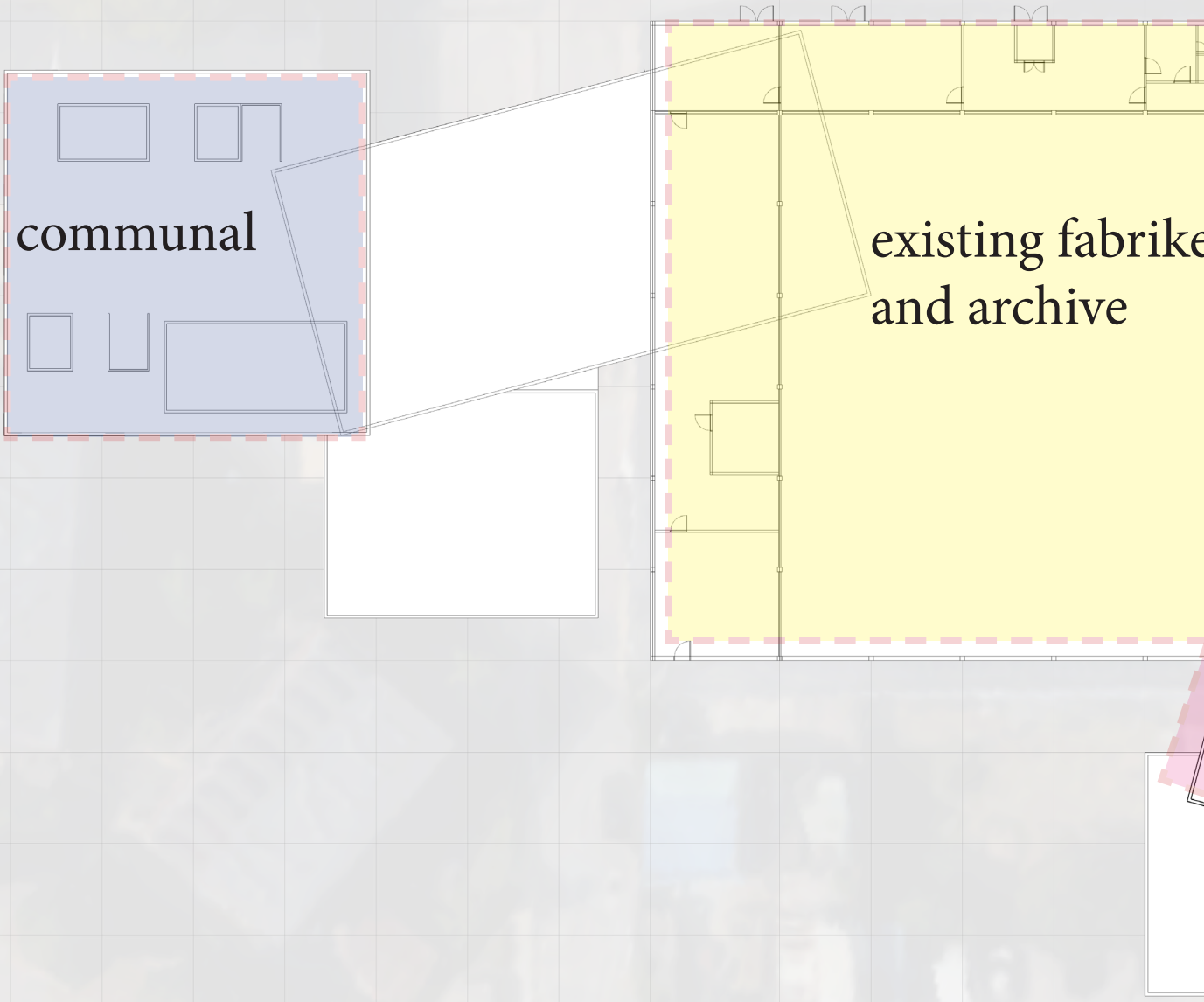
The Typologies are placed around the courtyards

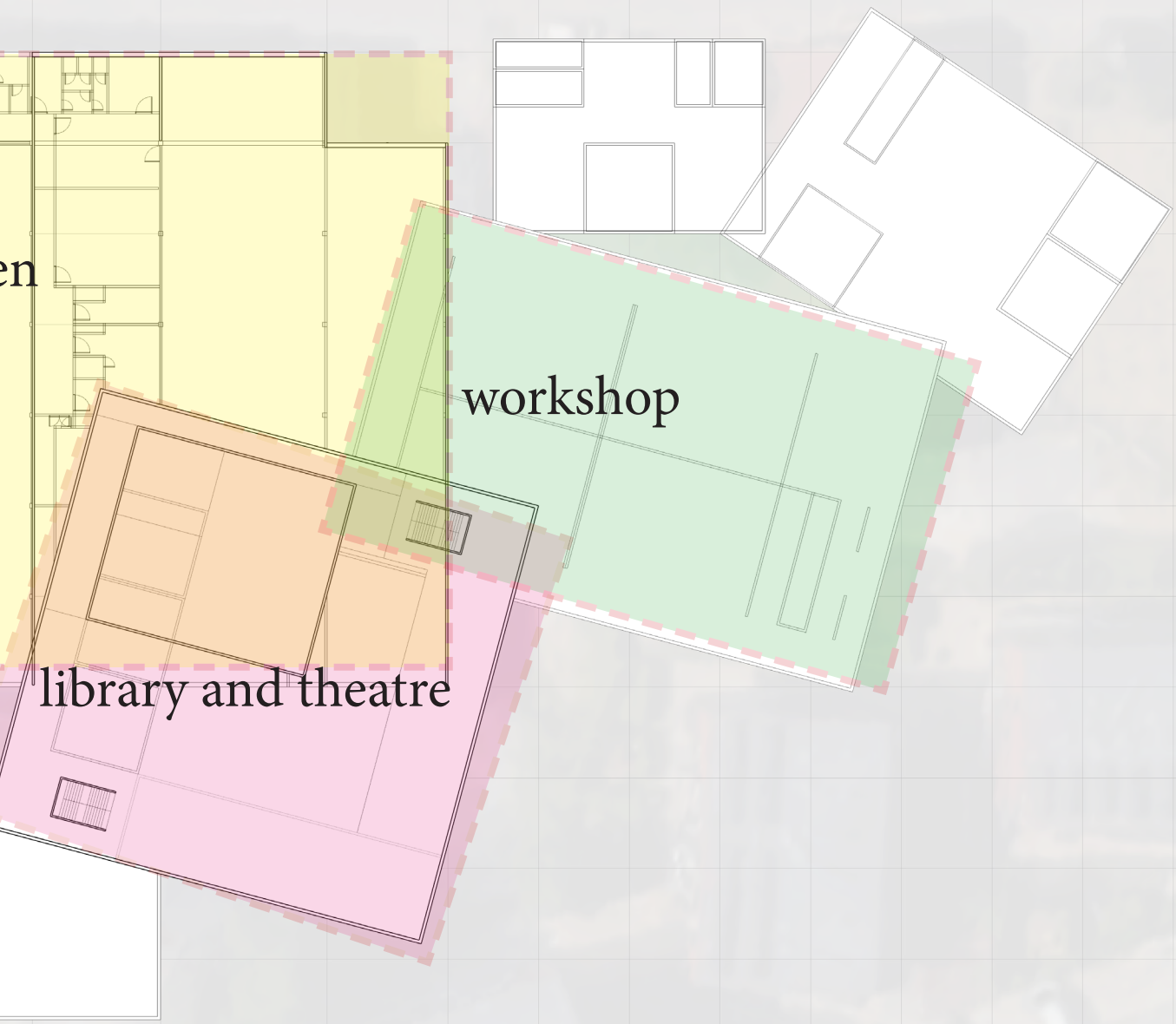


Introducing Hallways

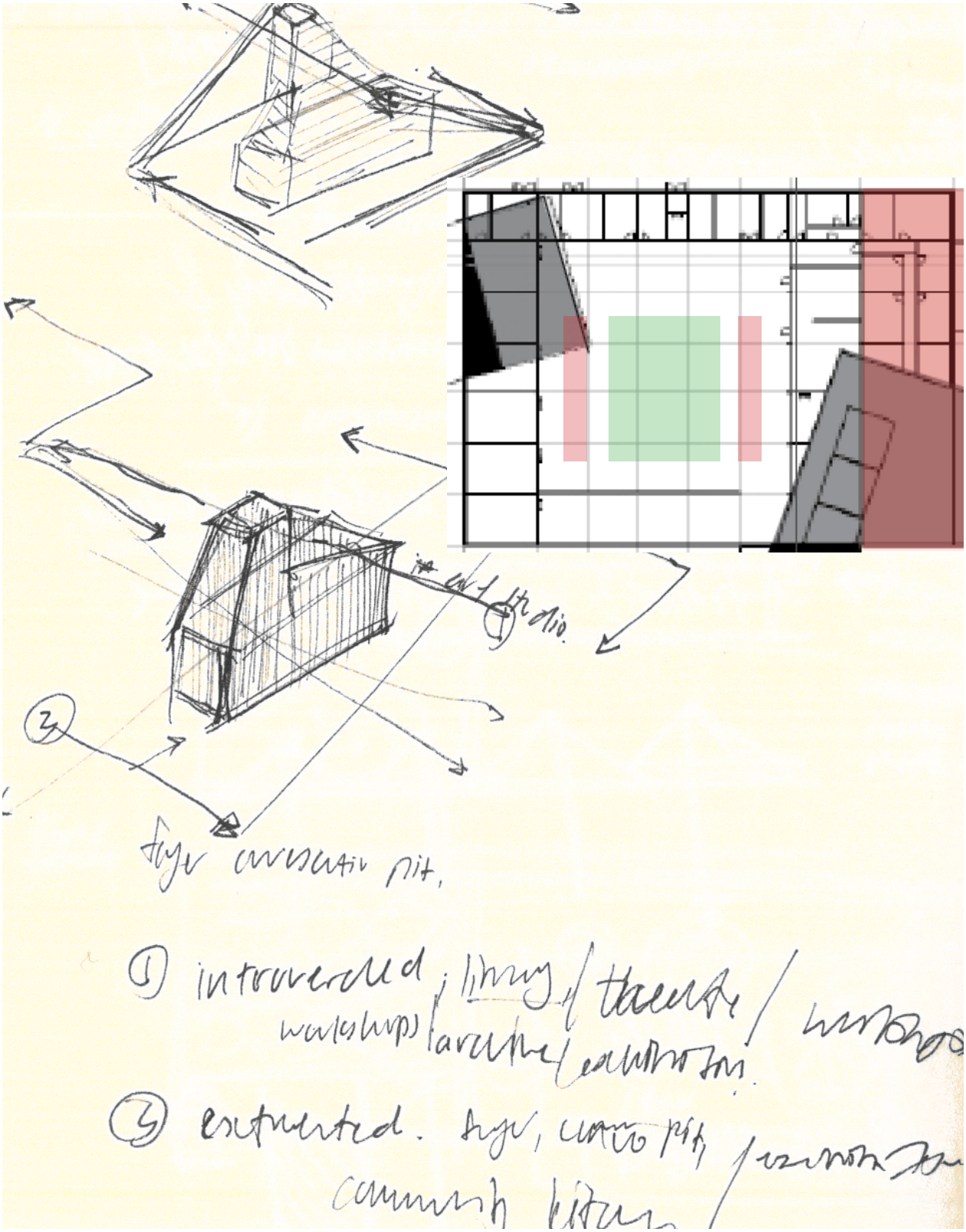


What if there are no hallways?


communal
existing fabrike
and archive

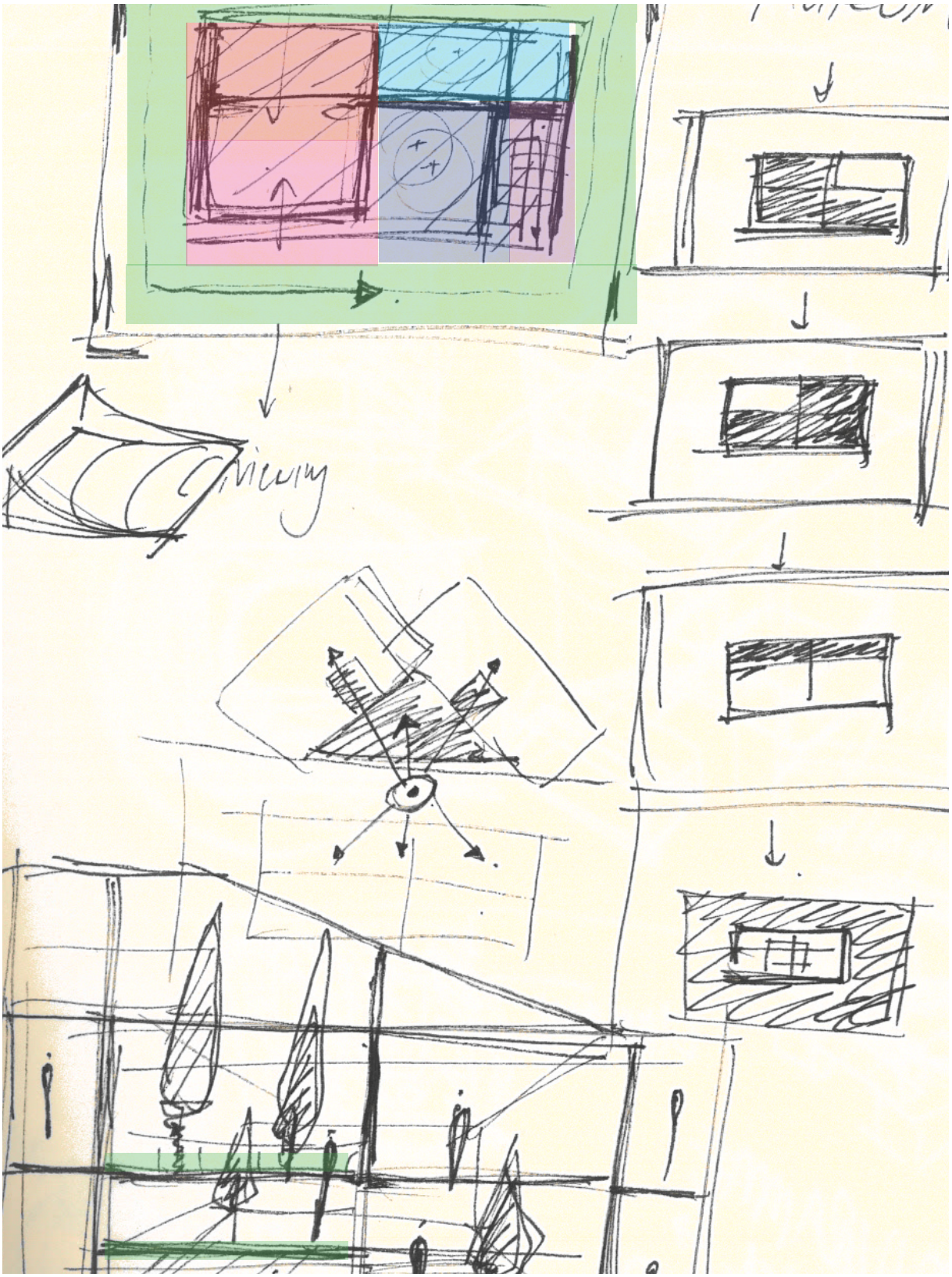

en
workshop
library and theatre

2 Interweaving U
The Fabriken Typology



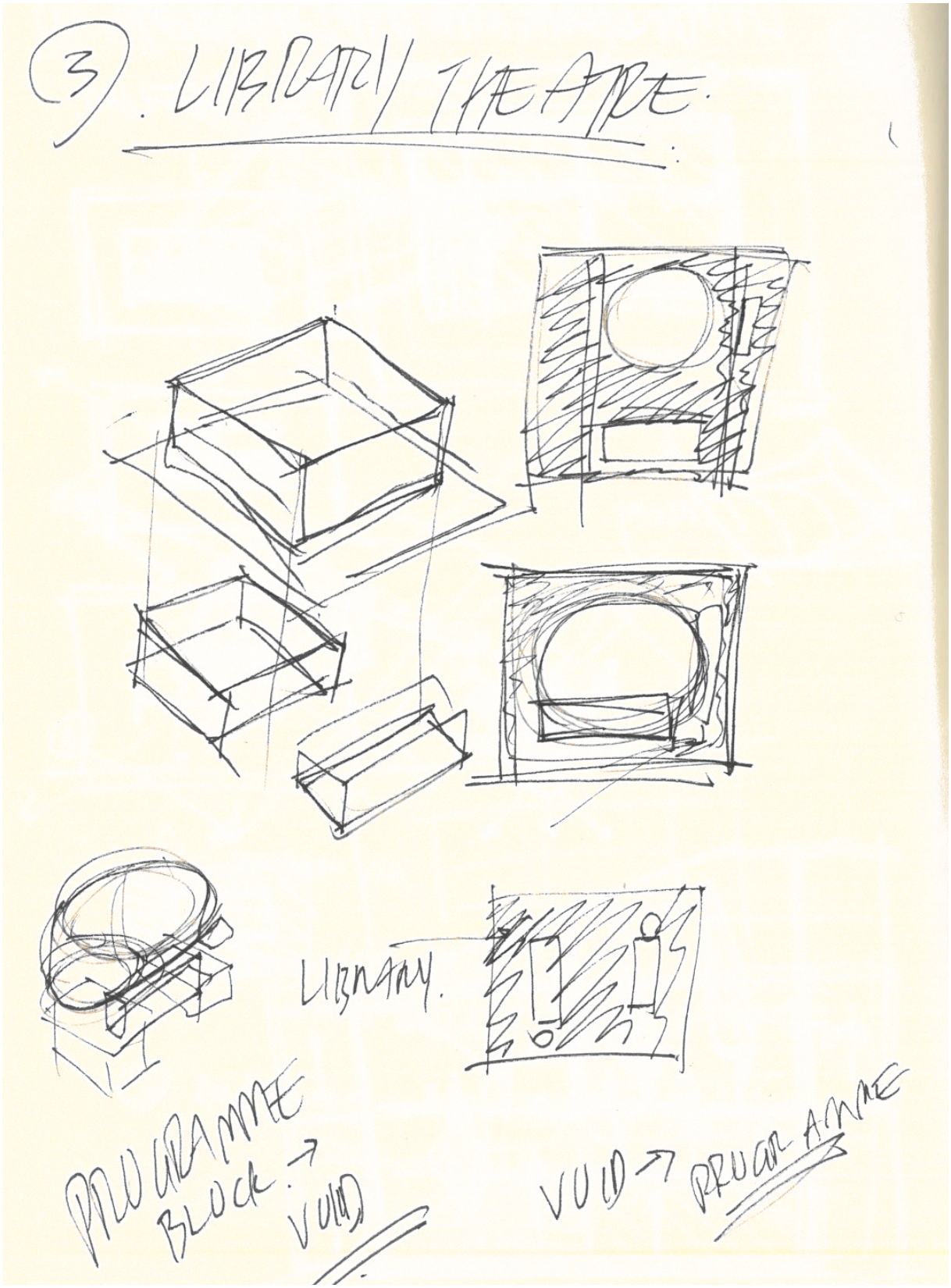
While retaining the existing structural core, two primary circulation routes are introduced: one extroverted and expressive, designed for making and collaboration; the other more introverted and reflective, supporting learning and focused activity.

Museum or Workshop?
Workshop Typology

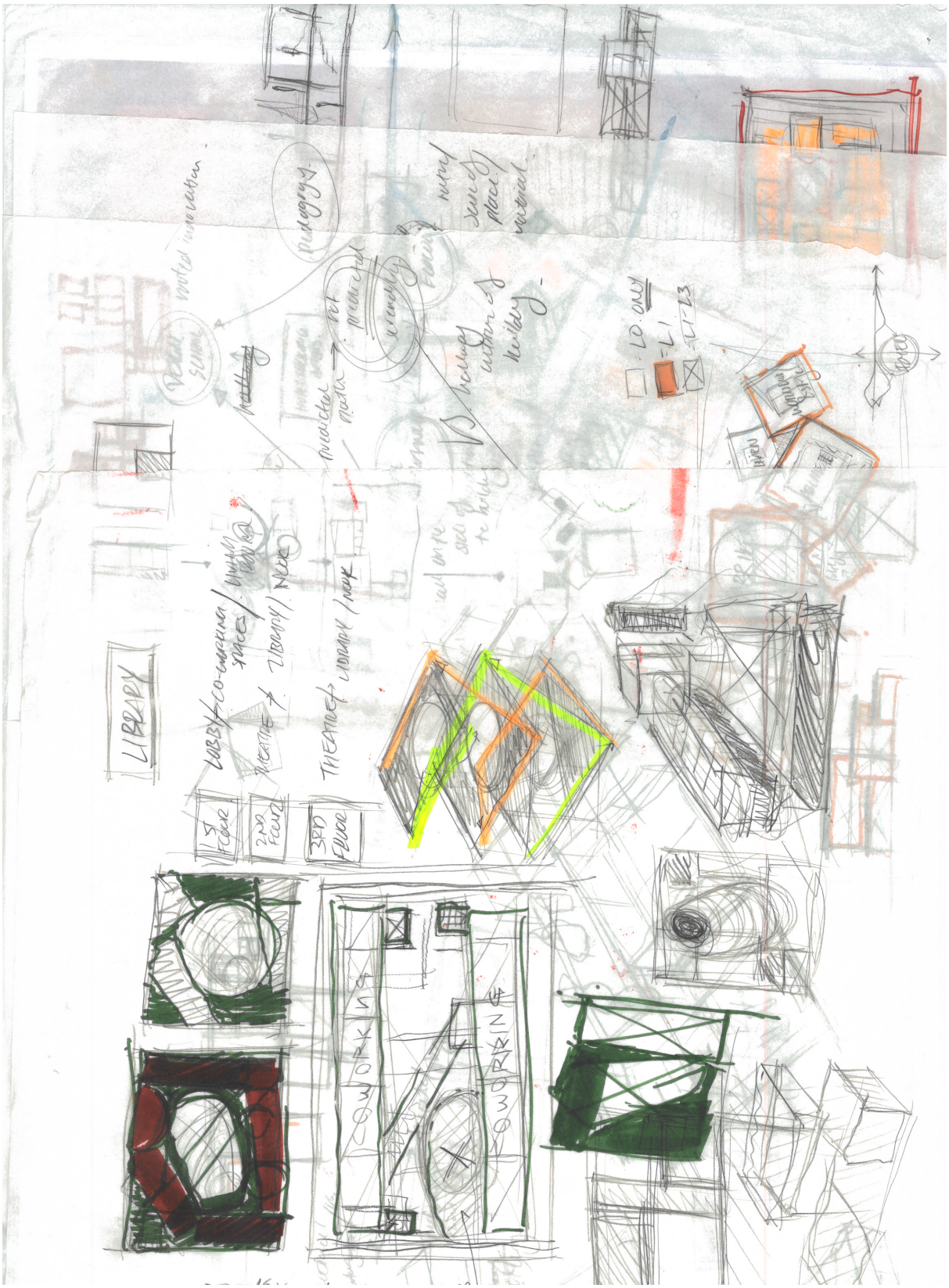


“By placing the workshops at the center and the hallways along the perimeter, circulation becomes a form of passive engagement. As people move through the outer corridors and observe the activity within, the workshops transform into a kind of theatrical stage—where making becomes performance, and the workers become part of an ever-changing exhibition.

Void is Programme and Programme is Void
Library Theatre Typology

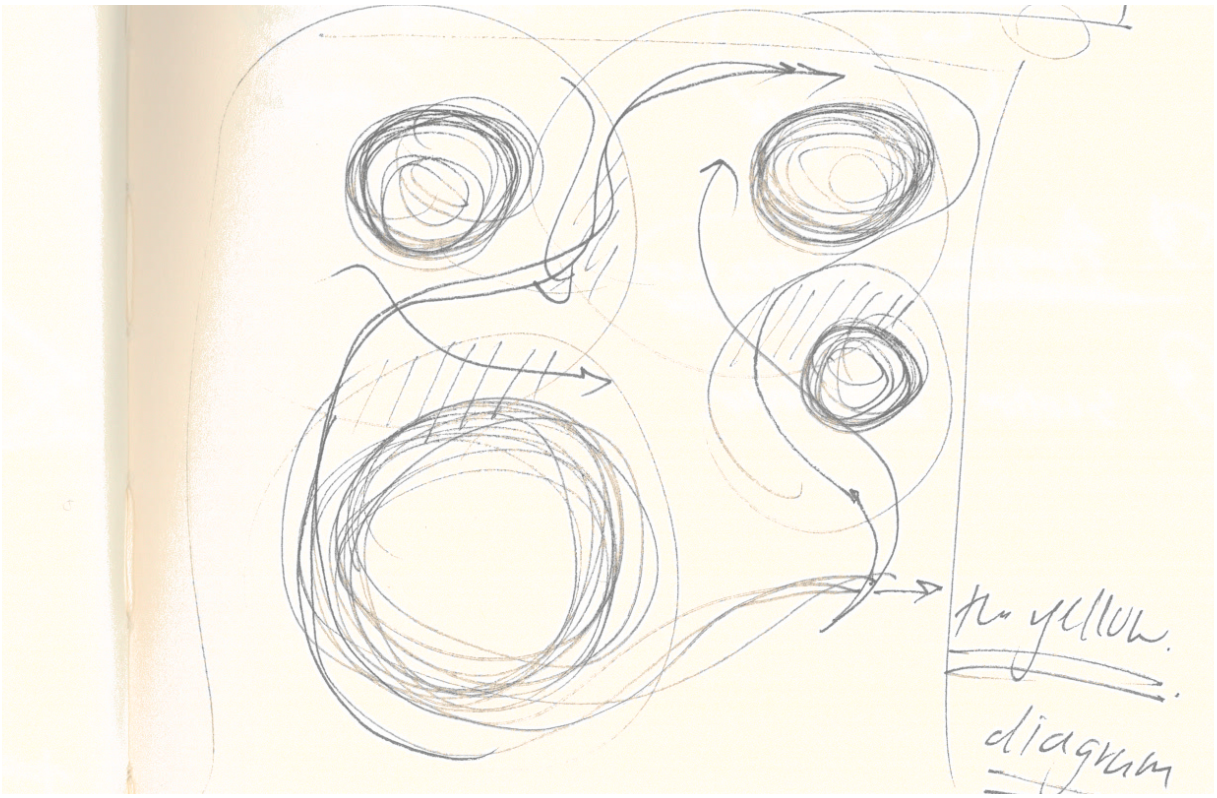


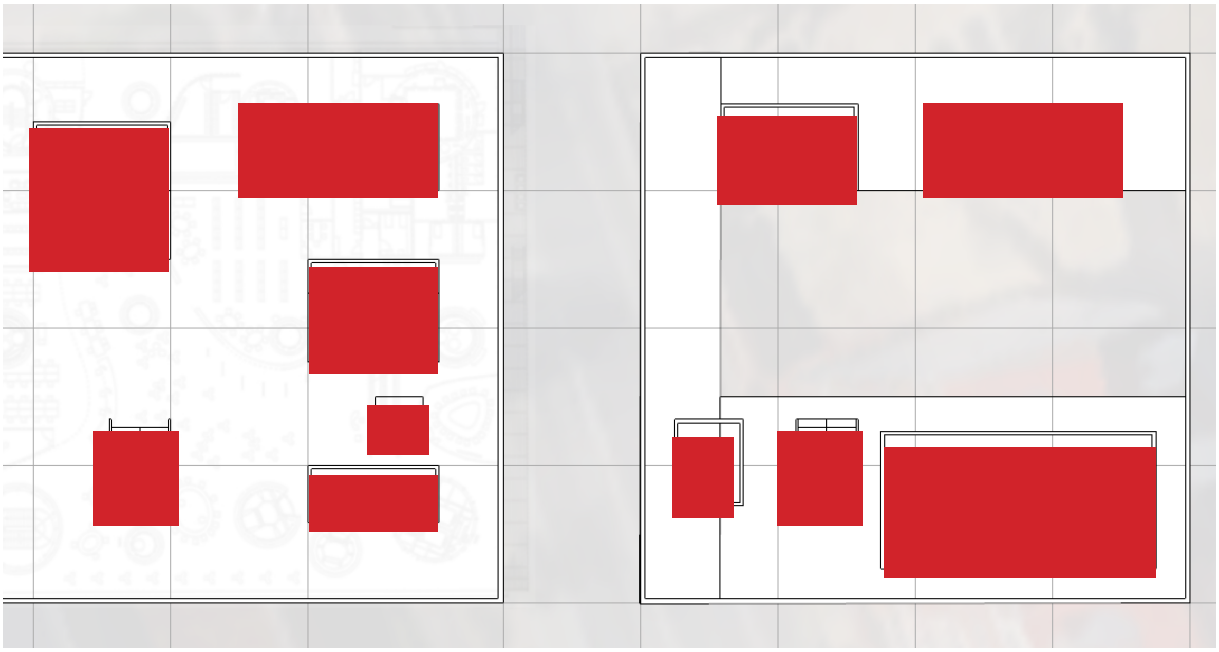
"In Rem Koolhaas' Paris Library proposal, the 'void' becomes the main program—an open, unoccupied space generating activity around it.



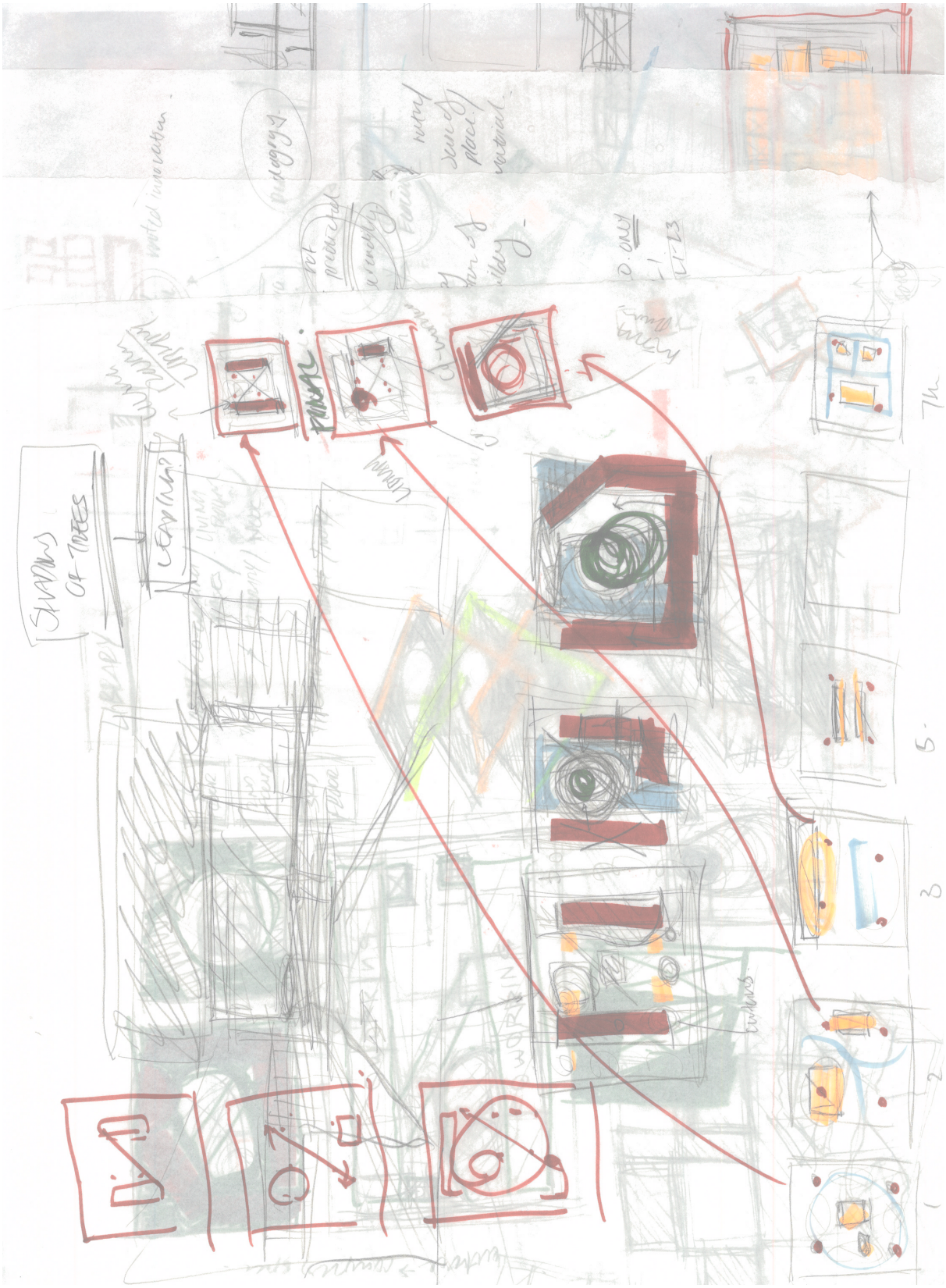
Meanwhile, traditional programs are compressed into peripheral zones, redefining space not by what it contains, but by what it intentionally leaves empty. This inversion challenges conventional notions of function and spatial hierarchy.

Free-Flowing Plans: Designing for Interaction
Communal Typology



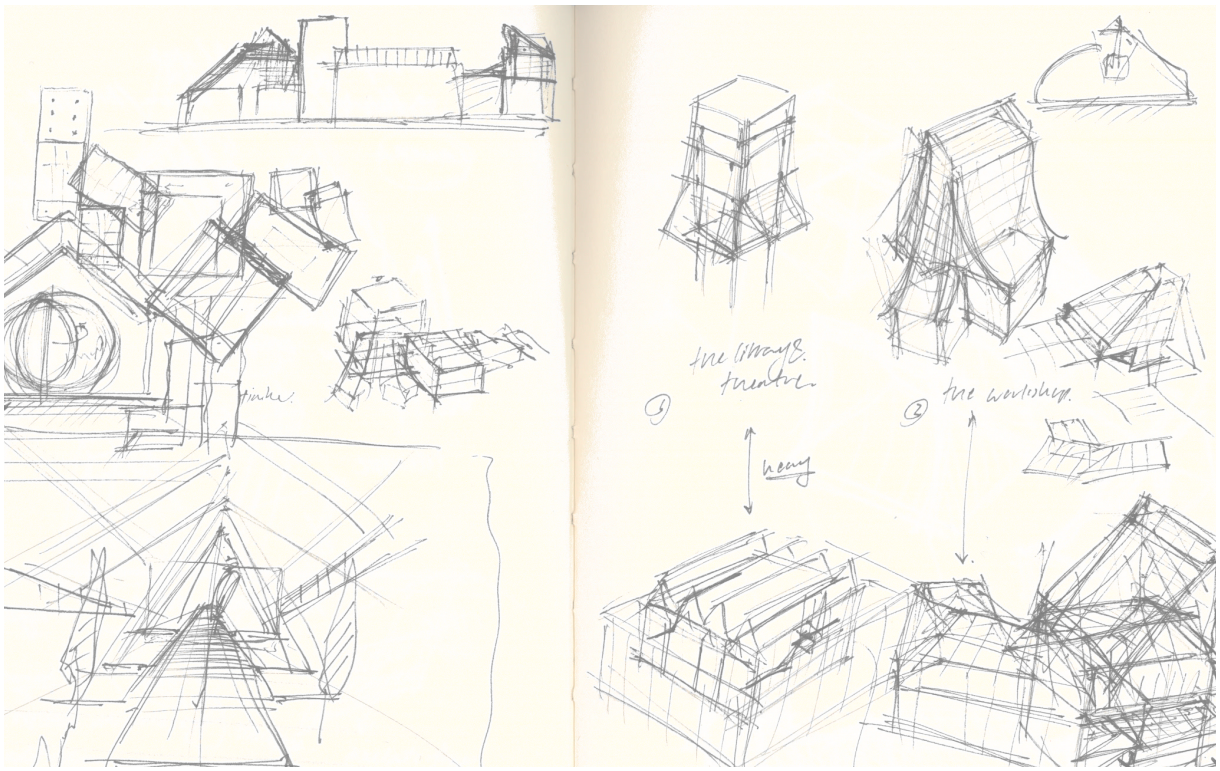


Inspired by Toyo Ito's Sendai Mediatheque and its free-flowing floor plan, imagine a building where the programs are centrally located, and the circulation gradually transitions into and merges with the programmatic spaces, blurring the boundaries between movement and function

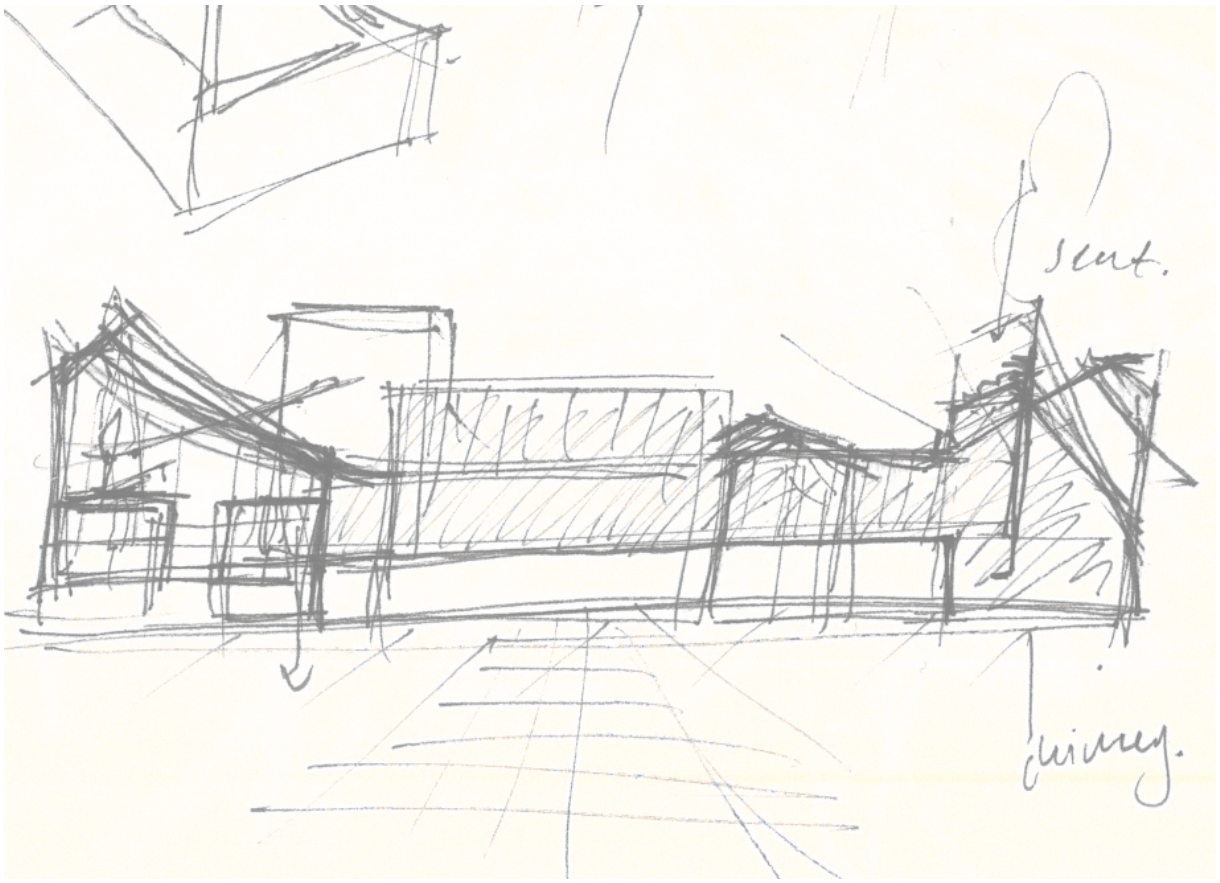


The design aims to foster interaction by blurring the boundaries between circulation and programs, encouraging spontaneous encounters and fluid movement throughout the space.

Detailing- design process

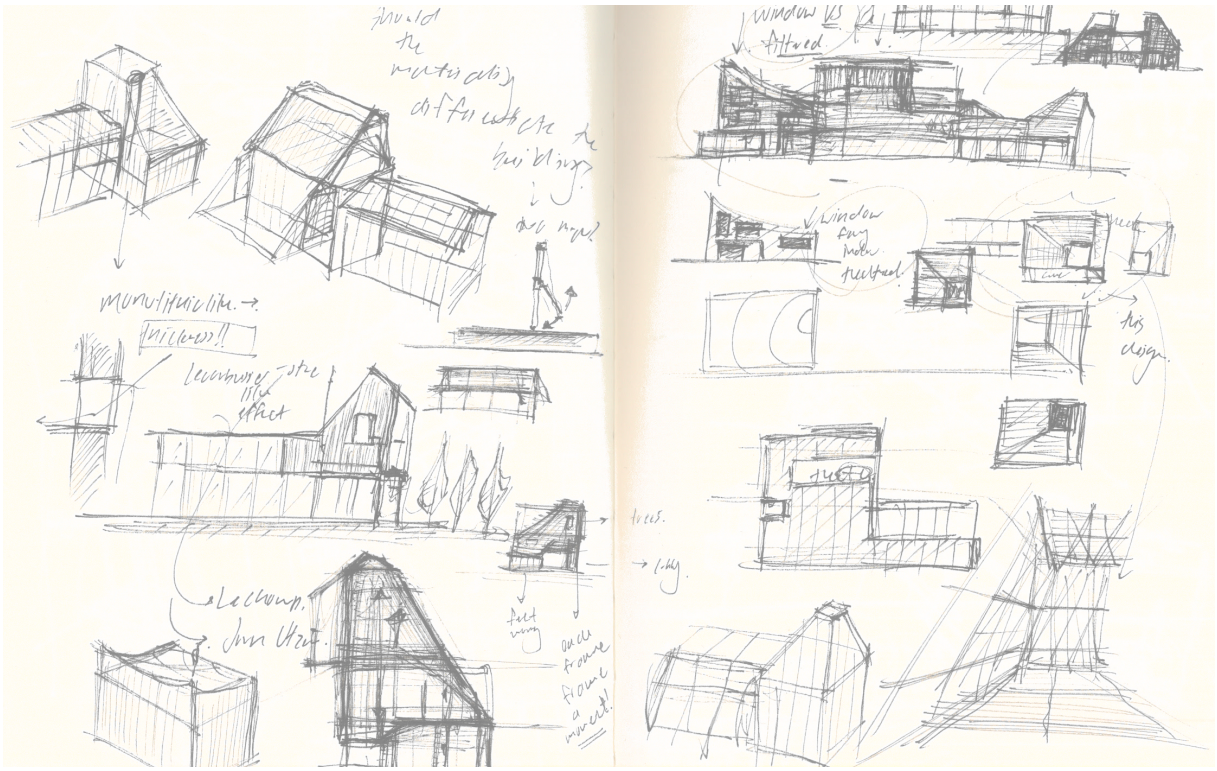


Interlocking Form Finding

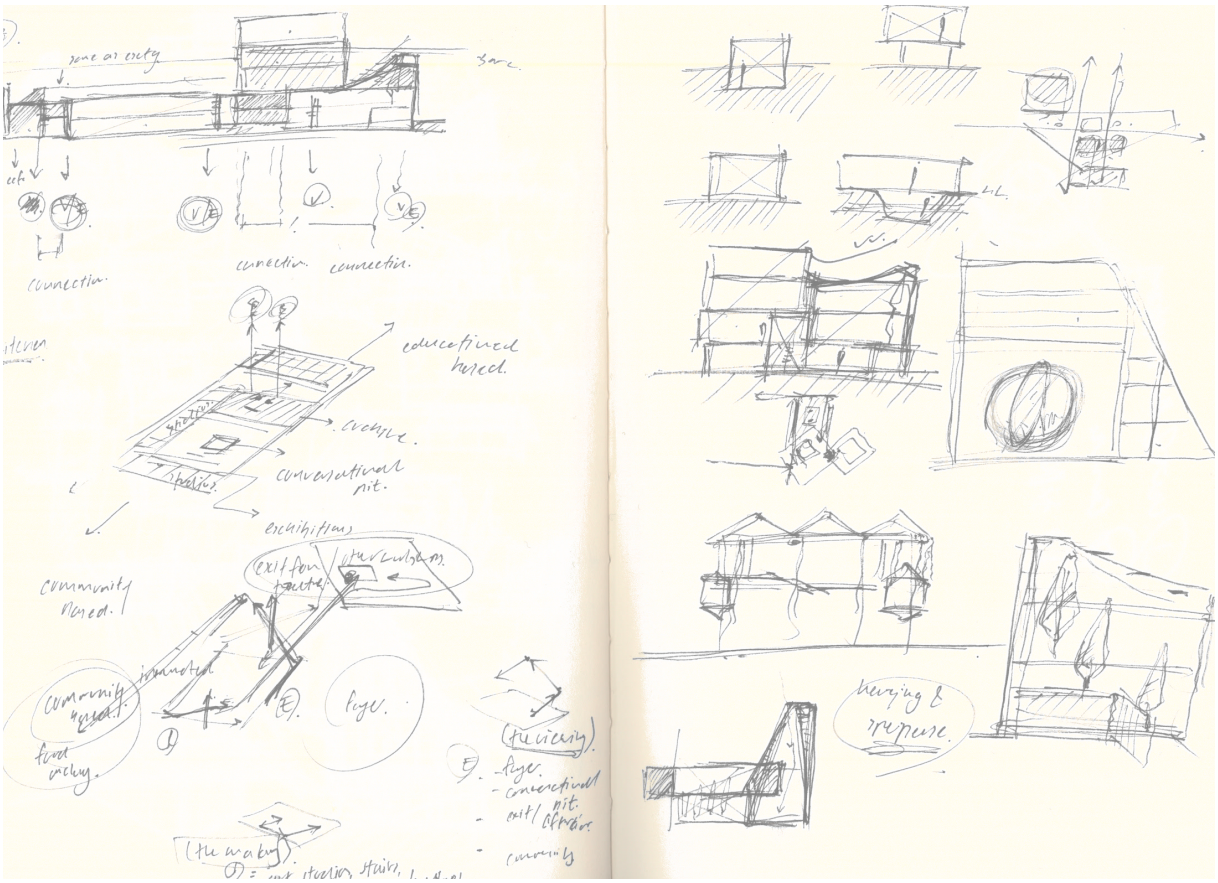


Each typology seen as a disinct character exterior form

Detailing- design process



Circulation and form are experienced primarily through sectional relationships

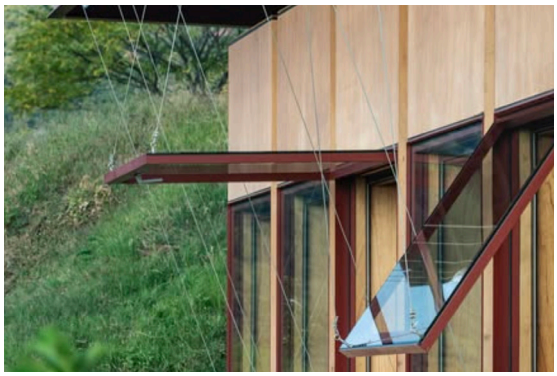


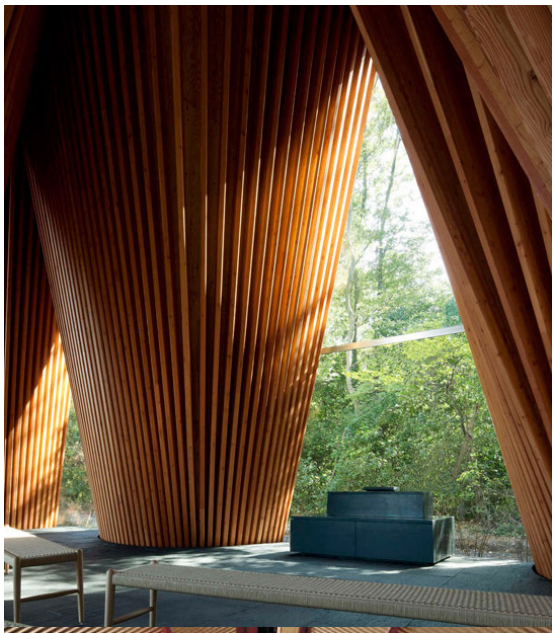
Shown in section, movement occurring underground, at ground level, and above ground. These spatial apertures collectively shape the architectural experience.

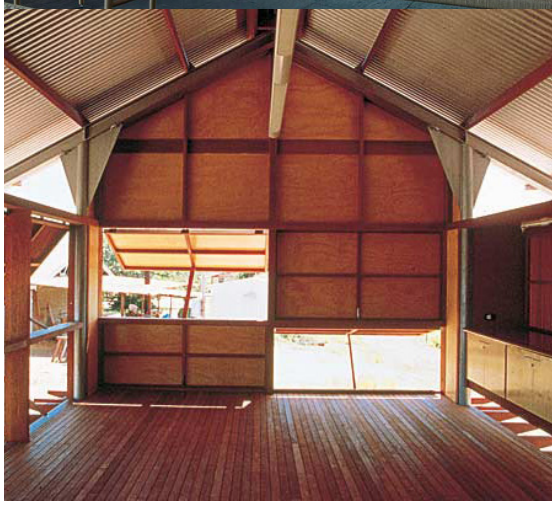
Materiality

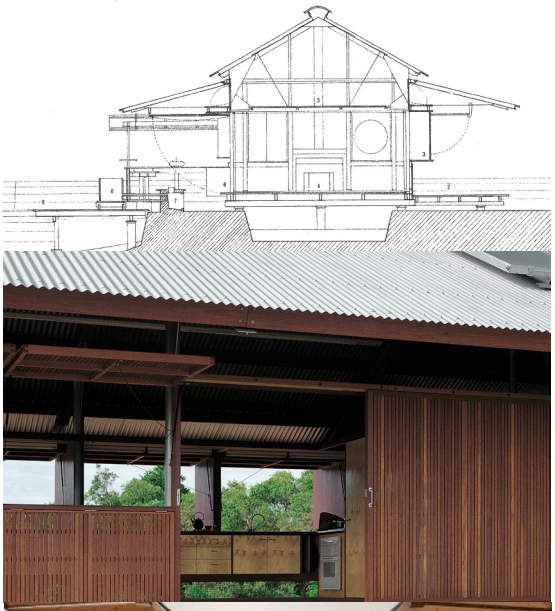
Facade - Wood

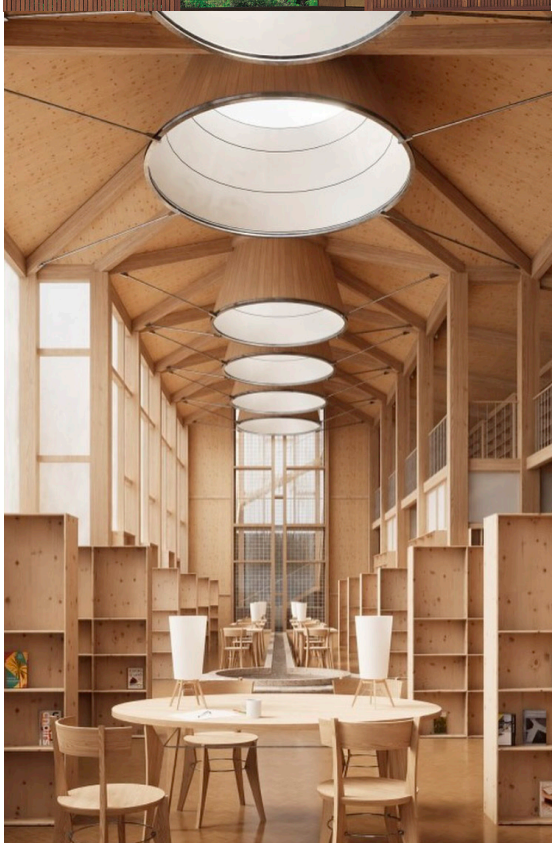
Wood with Stone and brick



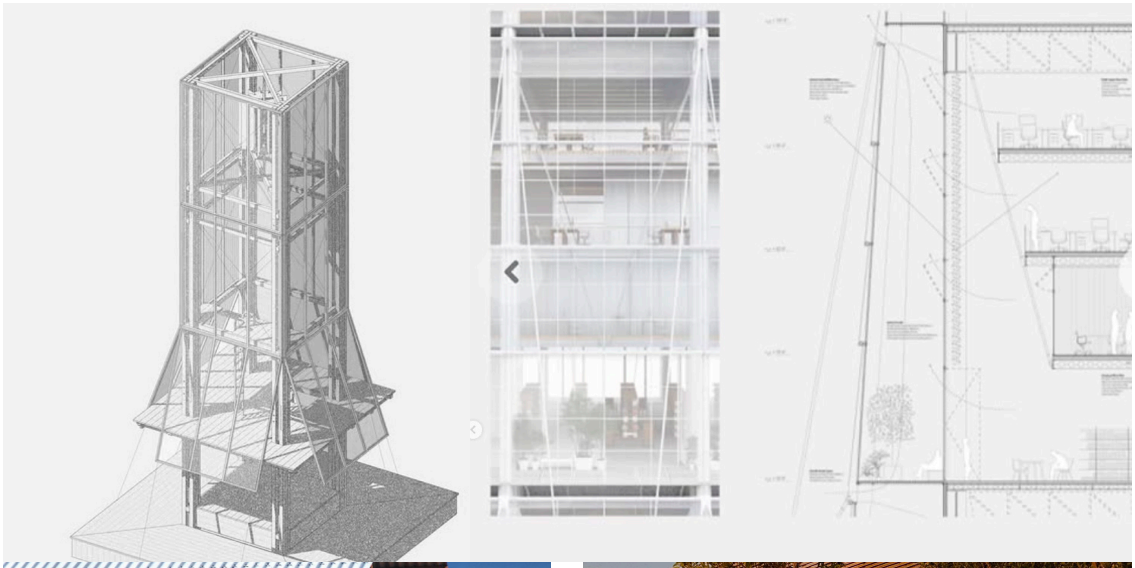


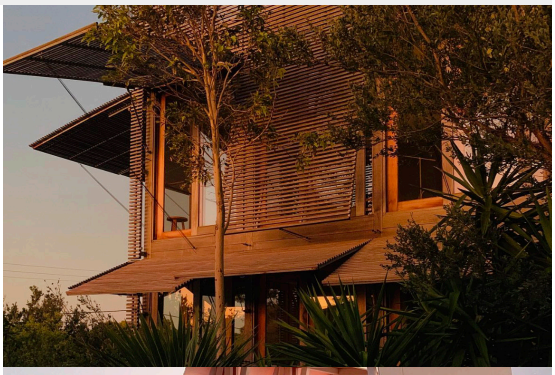


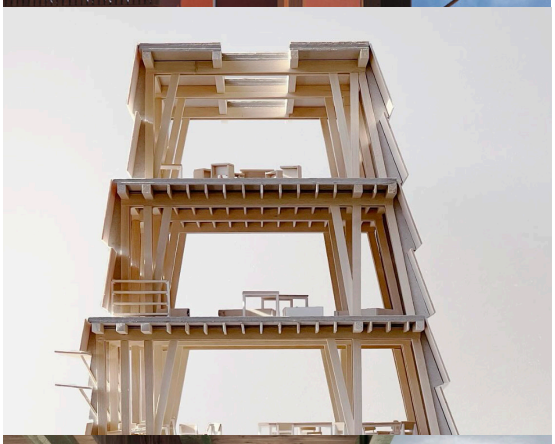


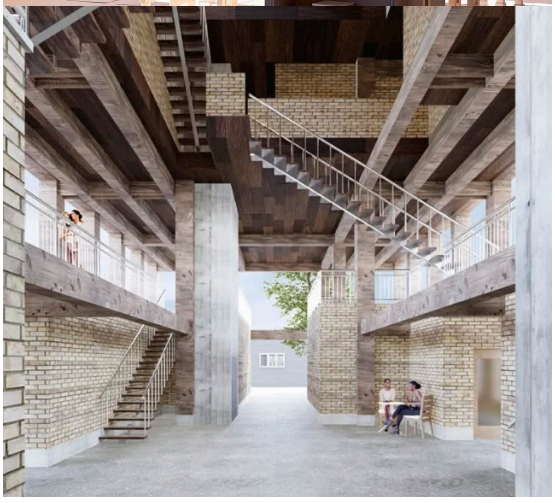


Examining timber facades with a focus on architects such as Glenn Murcutt, Hiroshi Nakamura, and Bolthauser Architekten — specifically analyzing Glenn Murcutt's design characteristics, including his sensitivity to climate, integration with landscape, and use of lightweight, expressive timber structure.







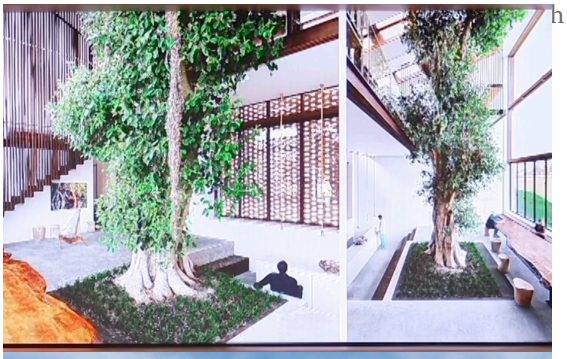


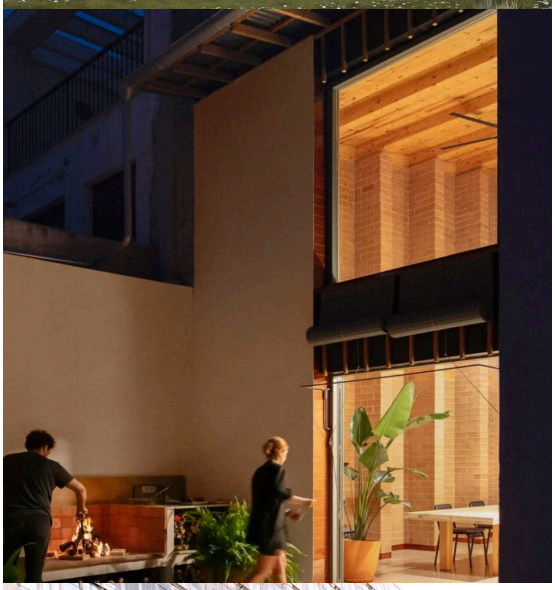
Materiality

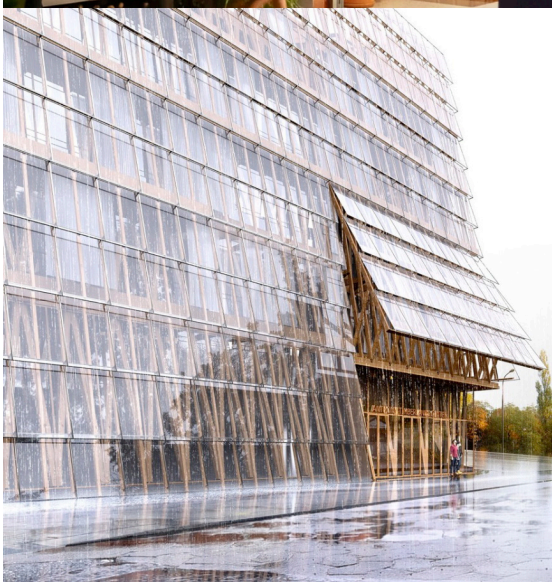
Main Structure & Secondary Structure

Wood with Stone and brick

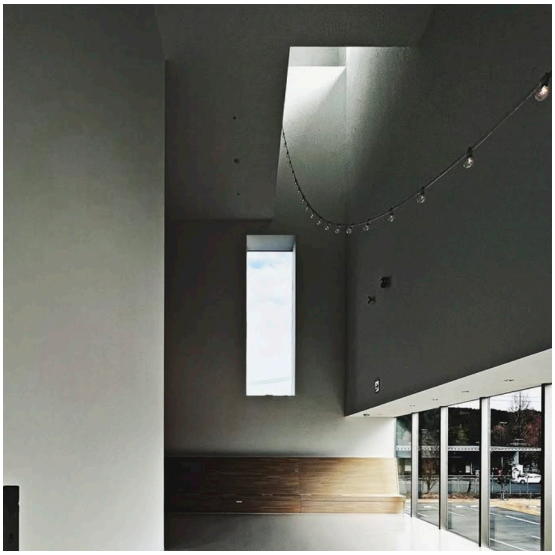
h a ‘seed’

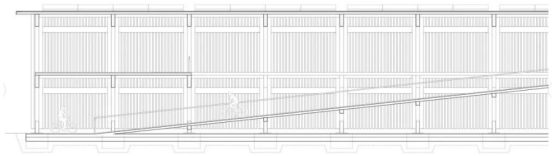


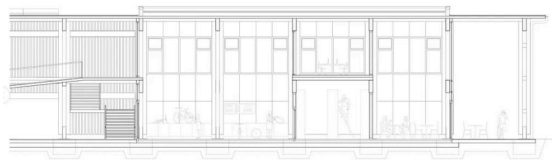


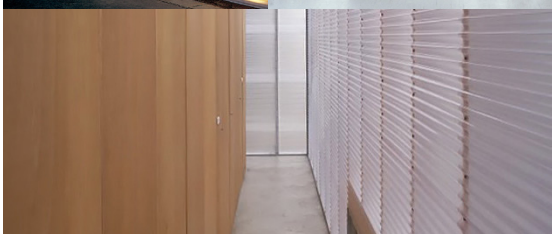


Materiality
Wall



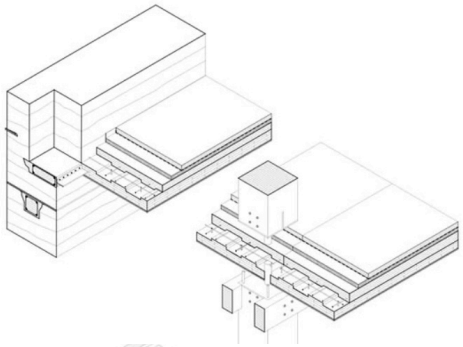


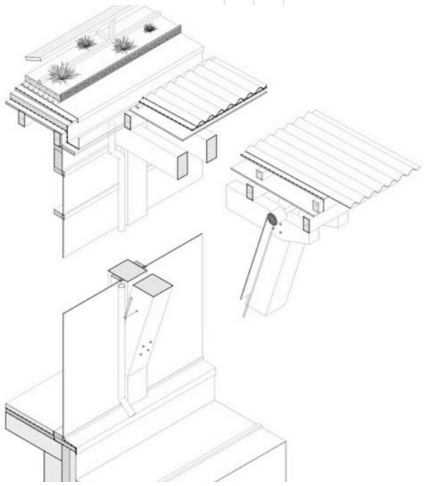




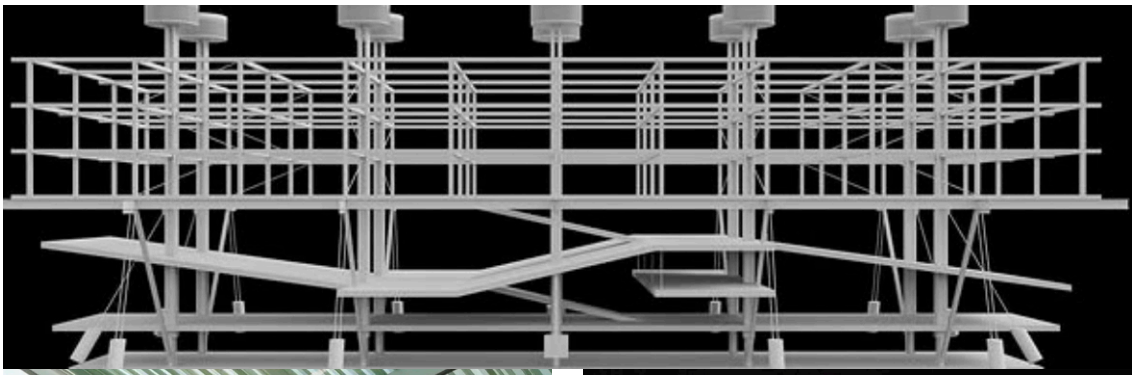
Timber materiality is explored through inspirations from Henning Larsen, Alvar Aalto, SANAA, Shigeru Ban, and Herzog & de Meuron — employing timber as a medium for warmth, sensory comfort, and spatial intimacy, evoking notions of safety and human-scale architecture.

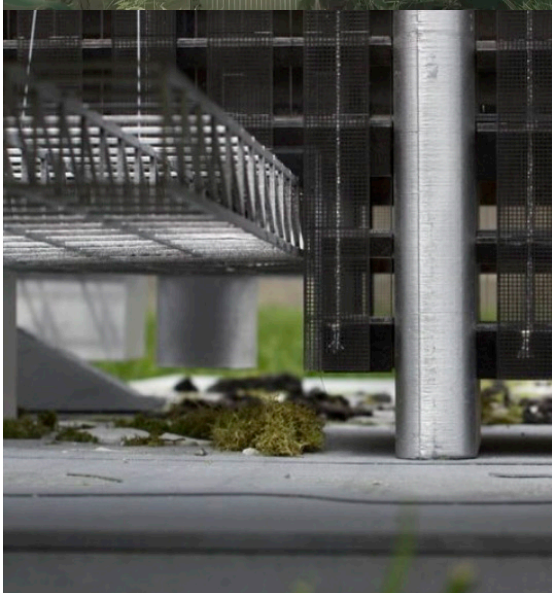
Materiality
Roof

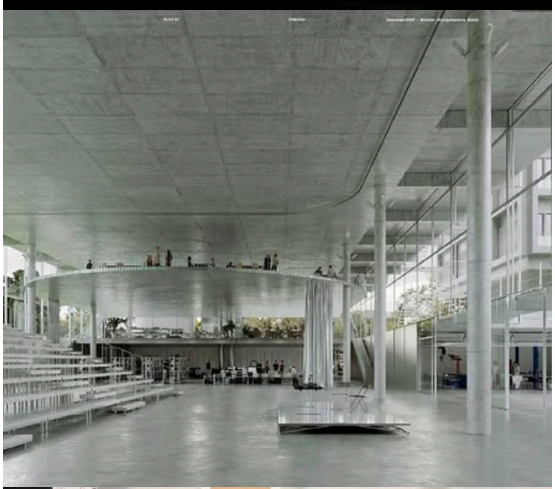




Materiality
Metal Main Structure

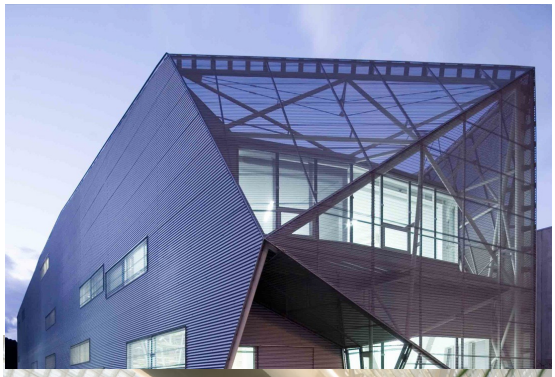


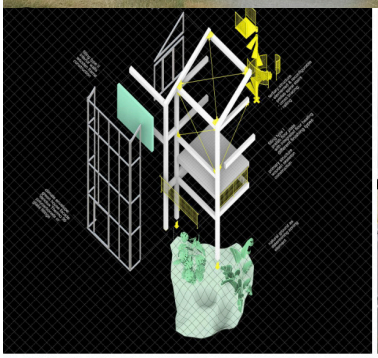


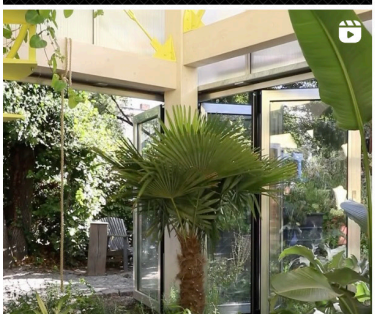
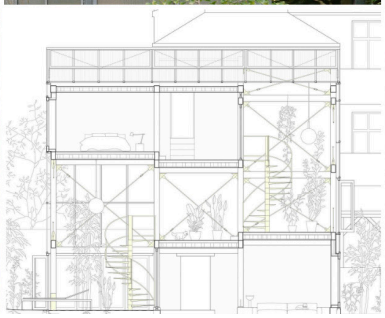


Steel is explored not merely as a structural element, but as a means to challenge the boundaries between what is structural and what is suspended — questioning notions of stability and instability, drawing inspiration from the work of Christian Kerez.

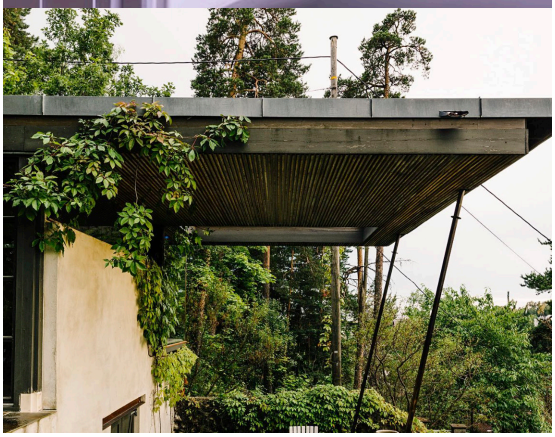
Materiality
Metal Main Structure





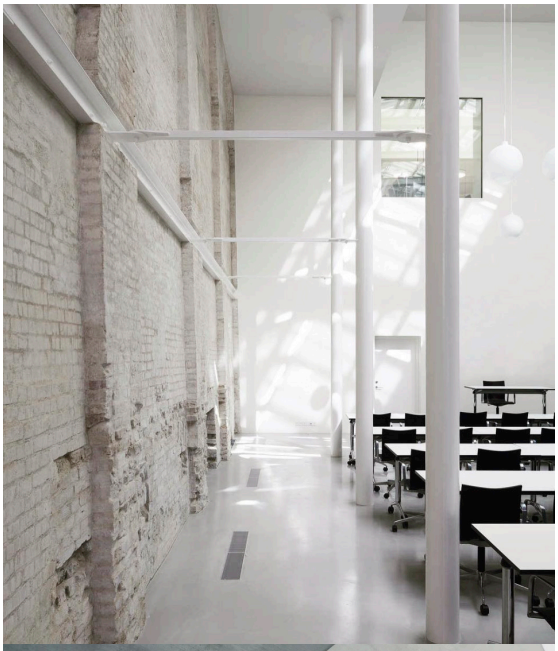



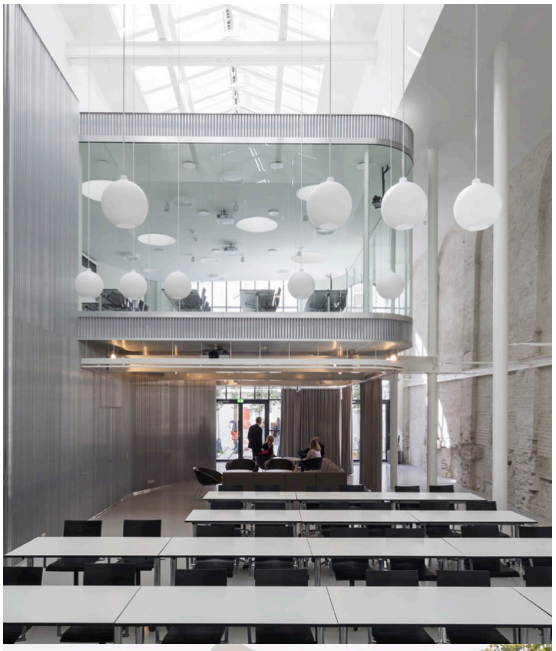
Materiality
Concrete



Including architectural inspirations from Christian Kerez — exploring the functional and aesthetic potentials of concrete; Dorte Mandrup's restoration projects — balancing material sensitivity with contemporary interventions; OPEN Architecture — employing concrete as sculptural form; and Christian Gasparini's in-situ construction techniques — emphasizing curvilinear, monolithic aesthetics

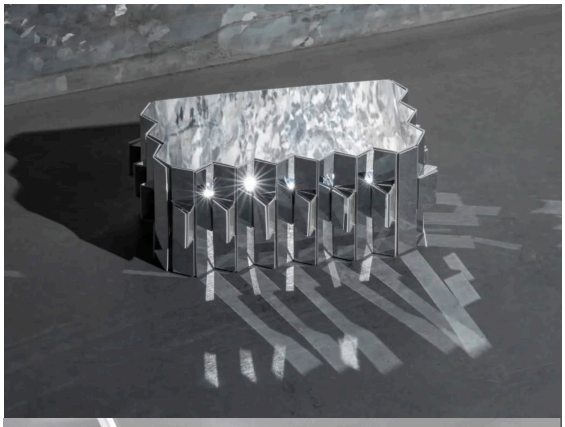
Materiality
Concrete

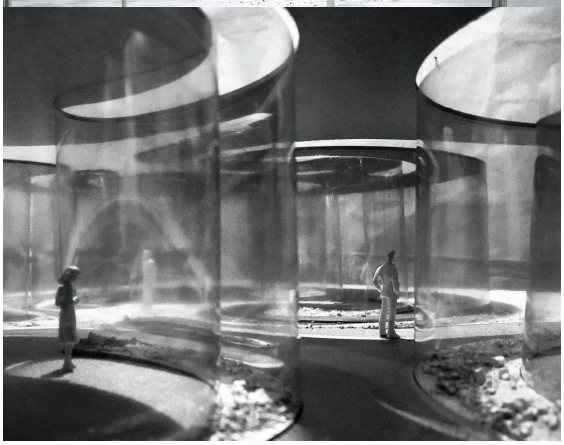




Materiality
work by Christ & Gantenbein

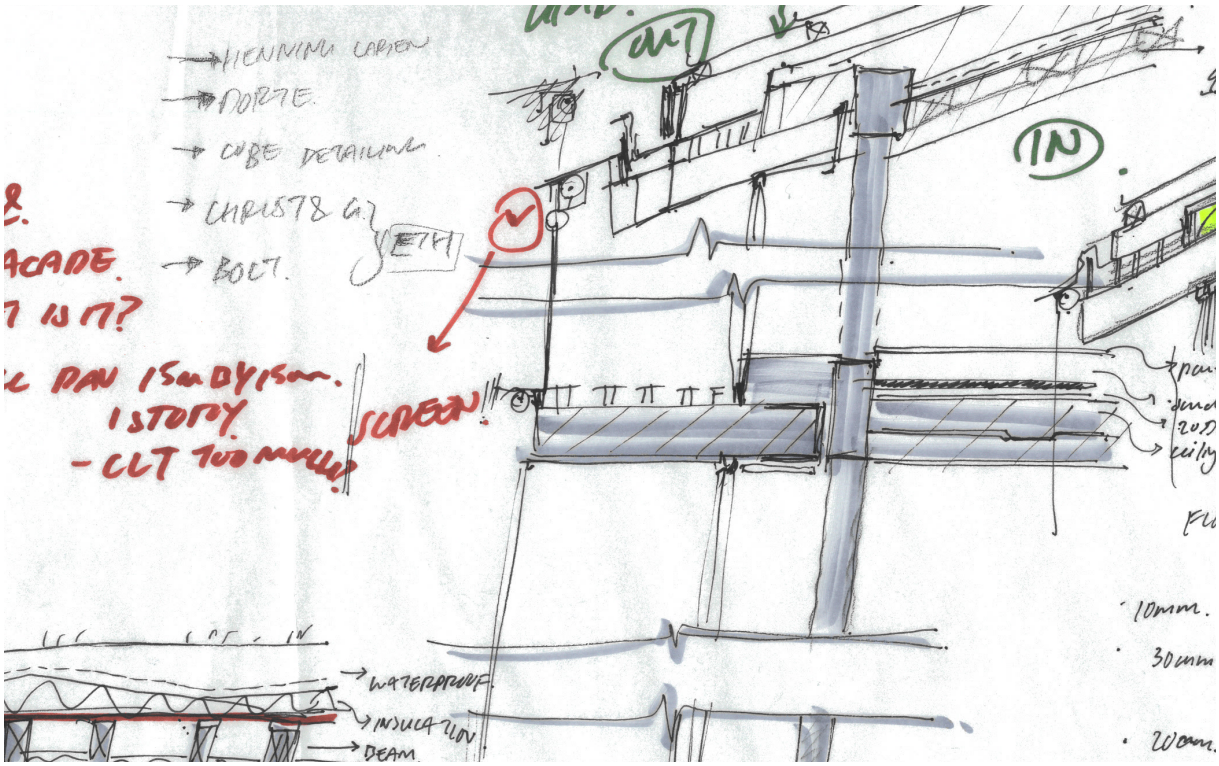
Exploration of material contrasts through the use of mirrors, heavy structural elements, exposed concrete, and brick — creating spatial tension, textural richness, and layered reflections. Carefully positioned openings frame views, while mirrors reflect light and surrounding trees, blurring boundaries between architecture and landscape.



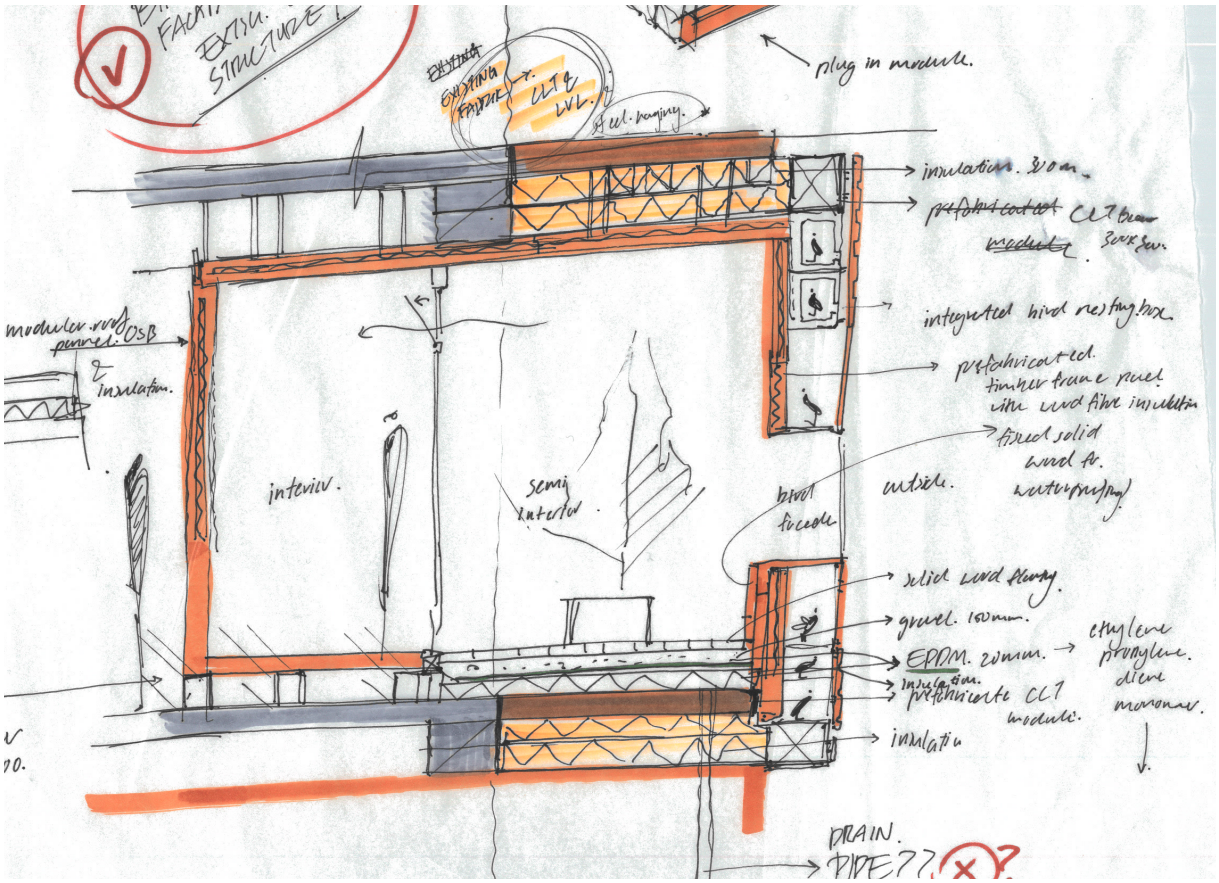


Materiality
work by Christ & Gantenbein

Detailing- design process

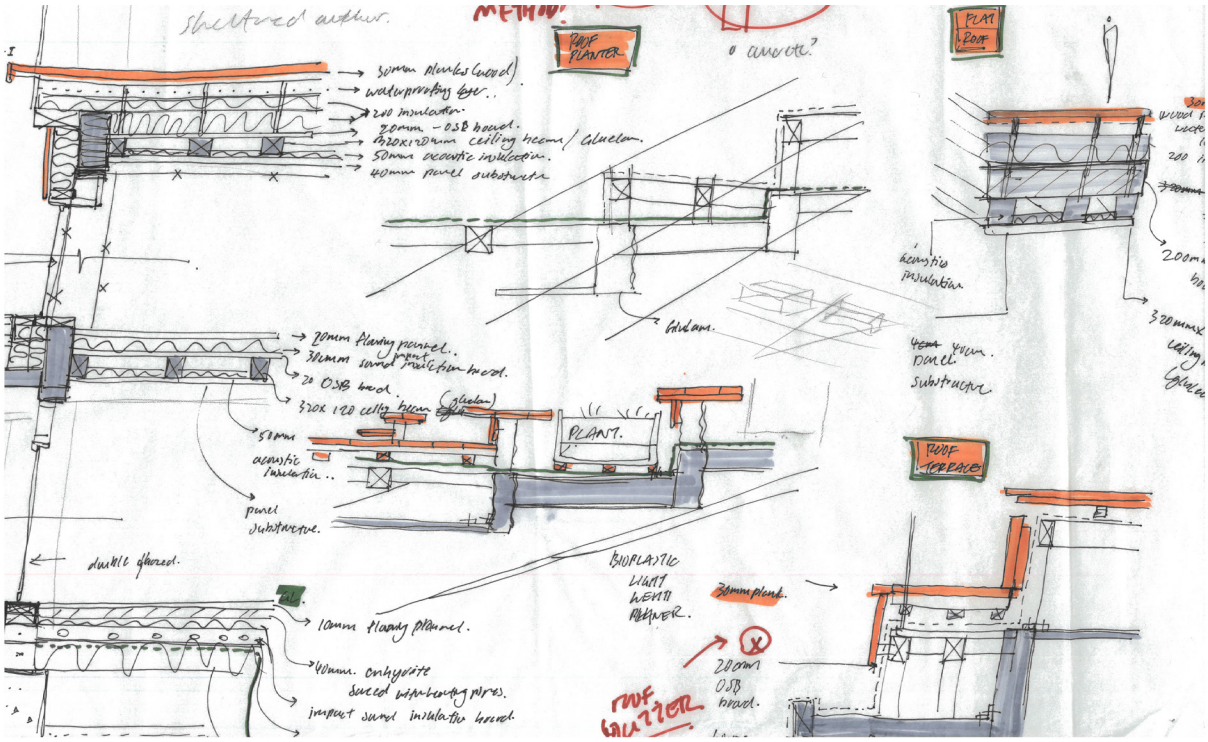


Herzog inspired detail, interlocking joinery

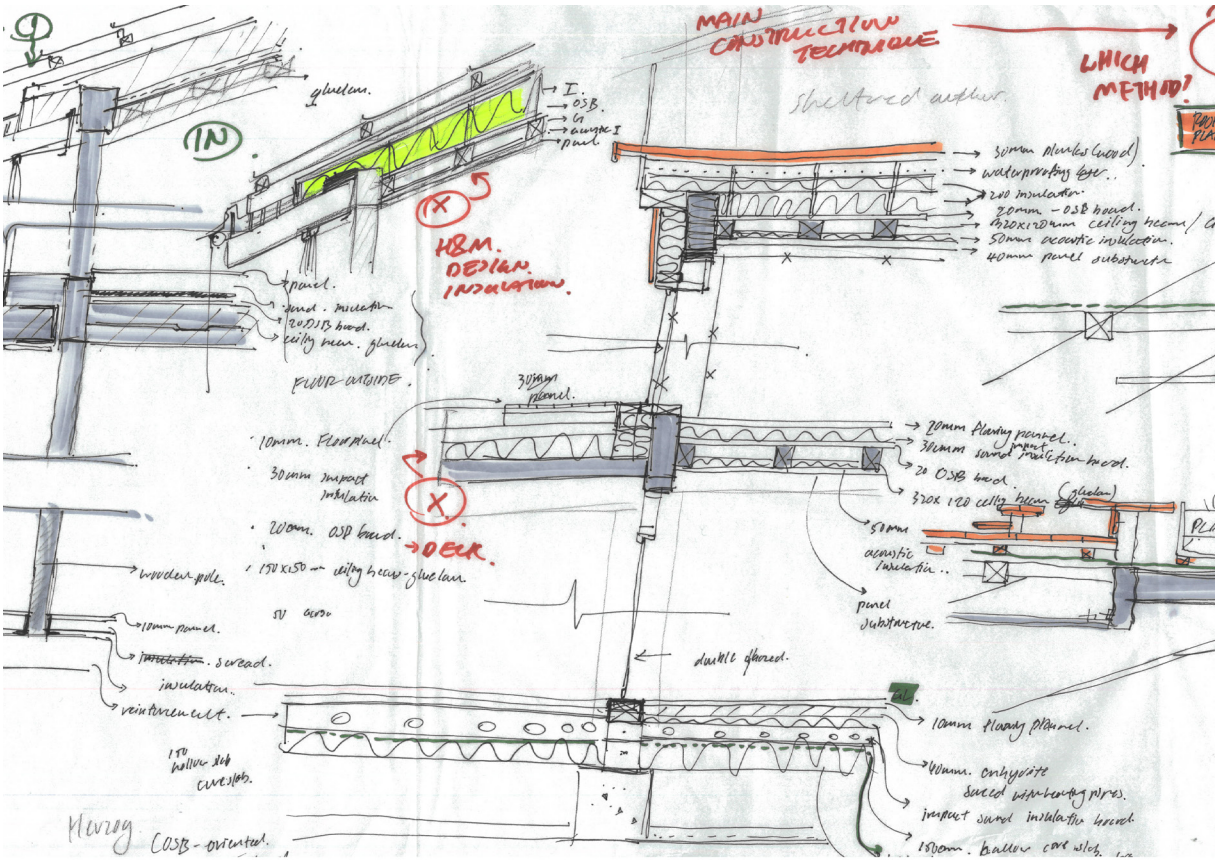


fabriken concrete existing structure with new biodiversity facade

Detailing- design process



Modular greenroof construction



CLT construction, what about the moisture for the bioversity tower ? Something to think about

Chapter 6:

P3

P3 poster- Introduction to new design

Our Stories Begins with a 'Seed'

Main Research
How can we design an inclusive public condenser that reshapes Sundholm's identity as a hub for growth, learning, and ecological stewardship?

Sub-Questions:
1. How can an ecological "Green Mile" reframe Sundholm Amager Vest's "parallel society" narrative?

2. How can architectural design promote mental well-being for children, community role models, and parents facing mental health challenges?

3. What design strategies can establish a self-sustaining ecosystem within the Green Mile, balancing biodiversity, native species conservation, and the needs of human and non-human inhabitants?

The Public Condenser, a place to nurture, learn and grow
is a hybrid design where architecture, nature, and community intersect to promote mental well-being, education, and social cohesion. This approach extends beyond human needs, creating a green space that serves as a refuge for non-humans; plants, insects, and wildlife—a living system supporting biodiversity.

Project Components
1. The Green Mile- At an urban scale, the Green Mile connects Ørestad Fælledby, the University, and Sundholm. It is an inclusive space fostering ecological awareness and community bonds.
2. The Public Condenser Building- A vibrant gathering space for humans and wildlife, using bio-based materials and design elements for plant and animal integration. It promotes interaction with nature and inclusivity for all inhabitants.
3. Collaboration with MIT Senseable Lab- A prototype developed in partnership with MIT Senseable Lab will launch in Amsterdam in May. It monitors biodiversity using cuttingedge technologies, enhancing ecological

Environmental sustainability
is dynamic and evolving. Spatial design and activities must actively raise user awareness about energy and sustainability. To create a sustainable future for Sundholm, the design integrates three key dimensions:
- ***Environmental Sustainability:*** Deeply connected to nature, climate health, and human well-being.
- ***Social Sustainability***: Fosters cultural vibrancy, education, and community connection.
- ***Economic Sustainability***: Prioritizes resource efficiency, job creation, and long-term growth.

3 Phrase Research Framework

Phase 1: Hybridity and Multiplicity

Education
Learn through Play
Learn and Play theorists determine the building's circulation and function. How can different targeted groups perceive play?

+

Phase 2: Healthiness

Hospital- Heal through Nature
Architecture qualities experience is through biobased ecological materiality, facade and indoor/ exterior experience

Phase 3: Sustainability

Job opportunity
Biodiversity a place to nest
Sustainability movement, green corridors and biodiversity connection.

=

Catalyst for Interaction

The Nest. The Home
A series of characters within Sundholm and surrounding site, working together as a network like biofilms

Interviews at Site

Children from Sundholm:

" all my friends live here and they play out a lot and school is 20 minutes away"

"kids roam on the streets in their free time - 6-7th grade and further on - SPORTS, football is the national sport (also handball, badminton, volleyball) lack of skating areas"

Media Portrayal of Sundholm

"This place is doomed - drugs and alcohol."

"not a nice area"

"does not want to live here"

University Students

"Personally never been but heard about it, seen the documentaries. People who live there suffer from mental health, addictions. Never felt in danger in the area. If you study here you don't really know the sundholm - they don't mix."

Communities from Sundholm:

"They characterized the people in the area as a mix of different groups: "the crazy," children, and fellow artists.

Despite the variety of residents, there is a feeling of community. The artists appreciate the vibrancy and uniqueness of the space, highlighting it as an important aspect of the area's identity""

Constructing Hard and Soft Power

Hard Power

Coercive control via force or resources like housing, education, healthcare, jobs, transportation, gated communities, surveillance, or segregationist urban planning.

Identity

Soft Power

Persuasive influence through culture and ideas, such as community centers, inclusive spaces, or murals reflecting marginalized identities and aspirations.

E d u c a t i o n
Learn throughPlay

Learn and Play theorists determine the building's circulation and function

How can different targeted groups perceive play?

+

Healthcare Heal through Nature

Architecture qualities experience is through biobased ecological materiality, facade and indoor/ exterior experience

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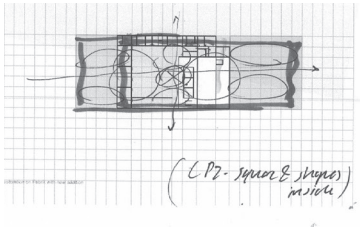
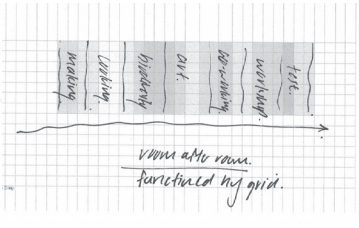
Job o p p o r t u n i t y

Sustainability movement, green corridors and biodiversity connection?

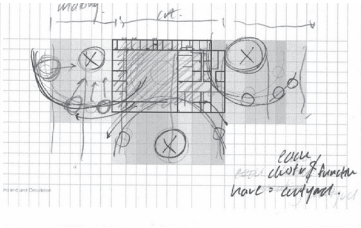
Site Circulation and Form Finding



Restoration of the Fabrikken – A revitalization project preserving industrial heritage while integrating contemporary functions.

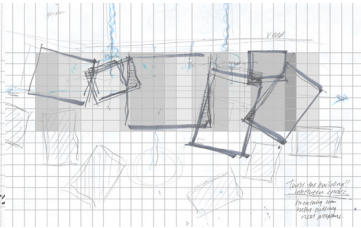


The Strip Strategy – A linear organization dividing the triangular site into parallel bands, each dedicated to distinct functions.



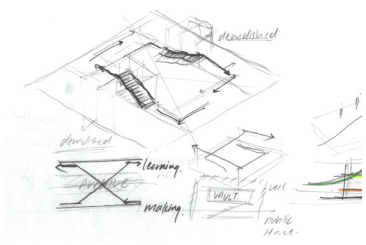
Thresholds and Circulation – Defining primary entrances and courtyards that lead to newly established pavilion structures and programmatic zones.

Rethinking Hallways – No hallways ? An immersive spatial experience fostering hands-on engagement and maximizing interaction.

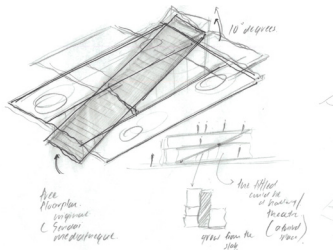


Breathing Spaces – In between transitional zones shaped by twisting the building, drawing angles from the residential fabric as a dialogue with history.

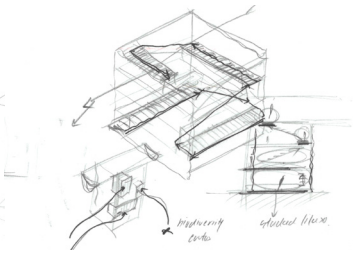
Typologies & Characters



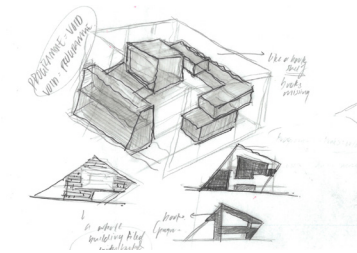
Art Fabriken – The nucleus of art and learning



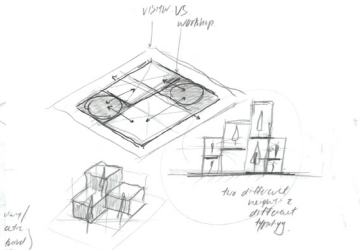
Communal Kitchen, Dinning, Living room and Garden



Biodiversity tower and Garden

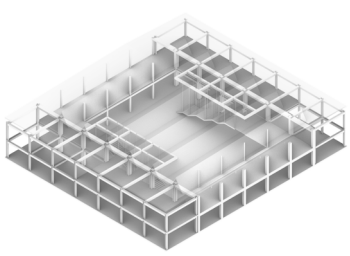


Theatre, Library and Co-working

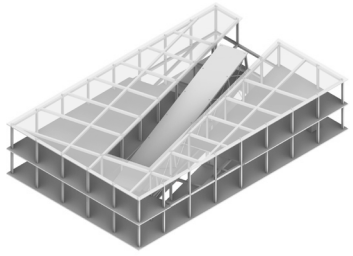


Museum and Workshop

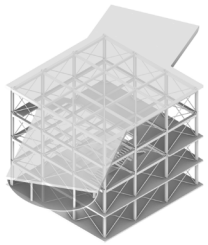
Artchitecture working as social instruments



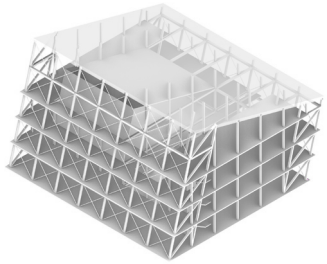
The Fabrikken – The nucleus of the pavilions, with two distinct routes: one guiding you to creation, the other to learning. Two 3D "U" shapes lead visitors through sequential programs



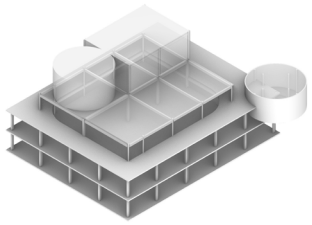
Fragmented Free Plan – Divided into three distinct volumes, one subtly tilted. The central core acts as an anchor, while adjacent slabs extend outward



Stacked Rectangles – A vertical sequence of stacked volumes, with staircases forming a central spine within the biodiversity tower. The building features two distinct microclimates, and a curved top floor reflecting sunlight and guides moisture back into the garden.

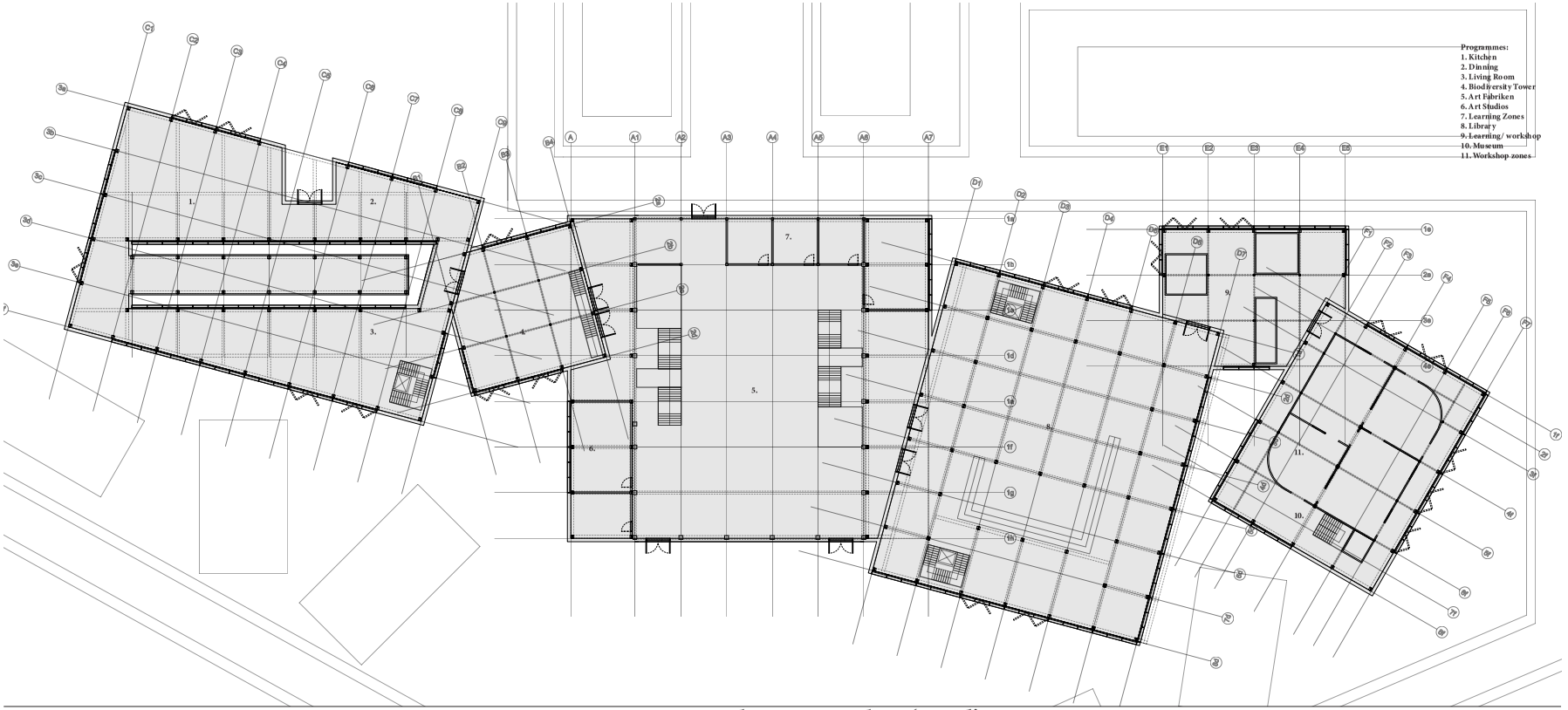


Void as Program, Program as Void – A hybrid typology of library, co-working, and theatre. Challenges traditional circulation by treating empty hallways as integral, with the program inhabiting the voids.



A museum or a workshop?- outer ring serves as a viewing space, and the inner core accommodates workshop functions. The workers themselves become integral to the museum experience.

Groundfloor Scale 1:250



Architecture and Public Building
Public Building

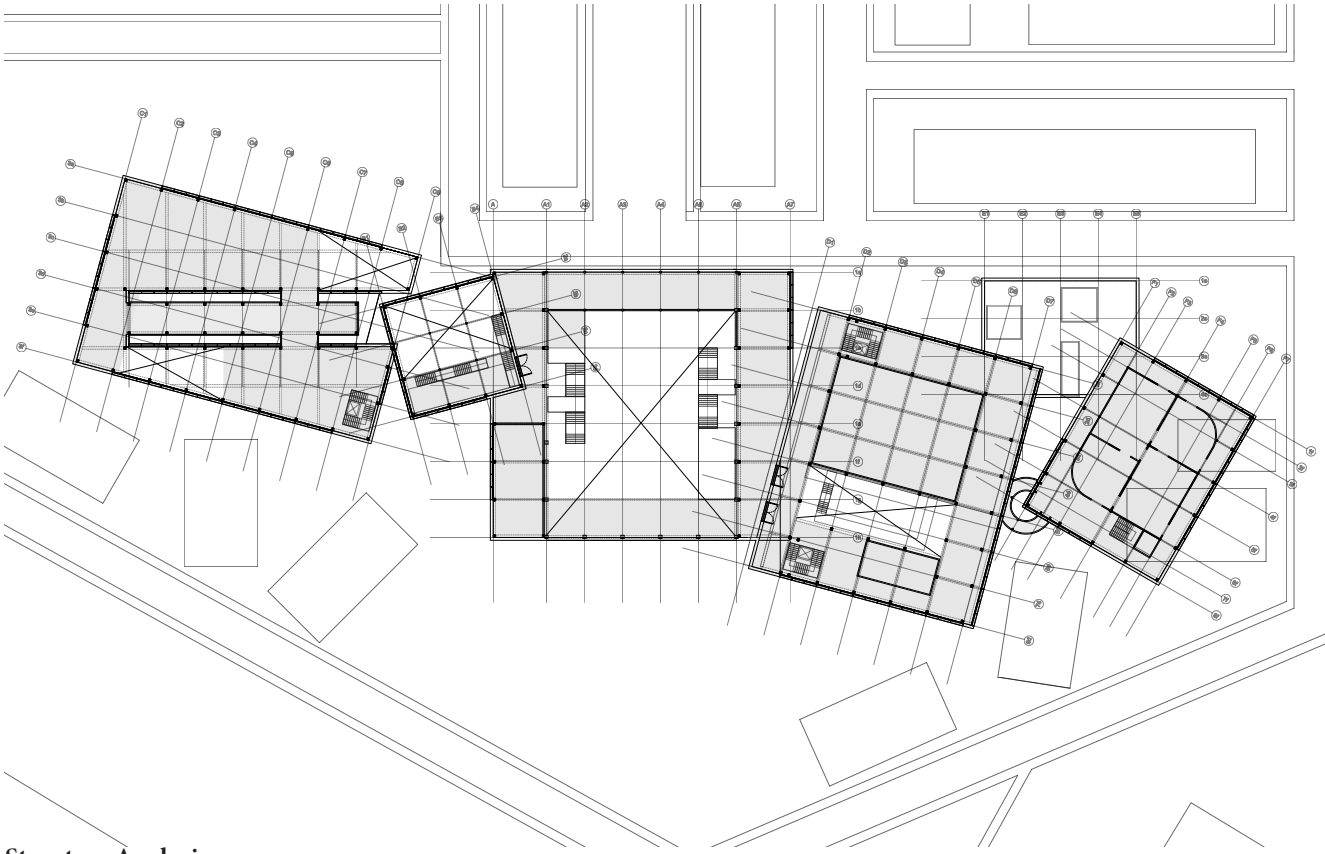
Our Stories begins with a *'Seed'*

A 'Public Condenser', a place to nurture, play and learn

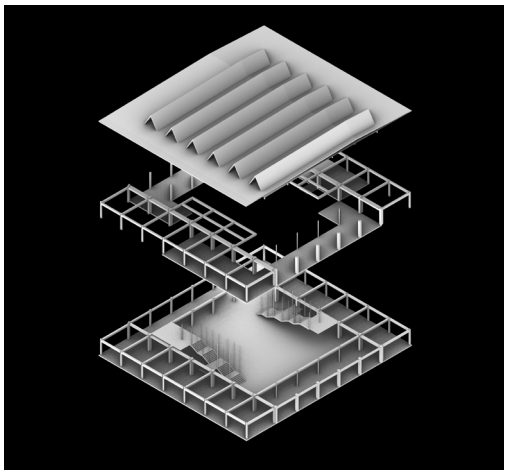
MSc 3/4 - Public Condenser, Copenhagen
Tzu-Shou (Ferrari) Huang 5915600

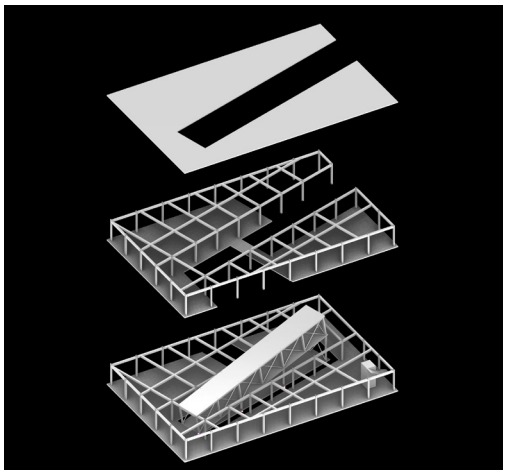
P3 poster- typology structure

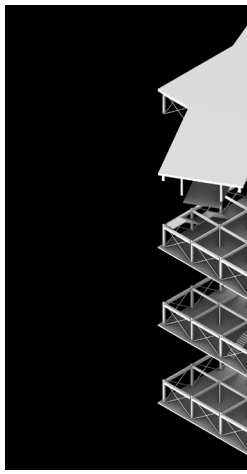
First Floor



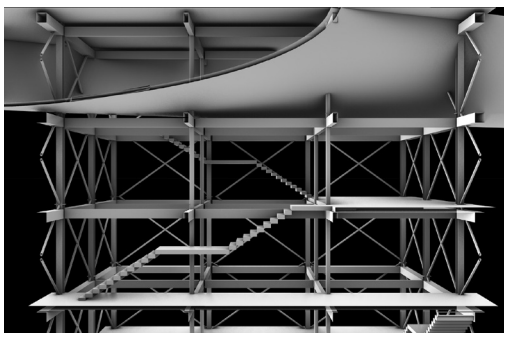
Structure Analysis

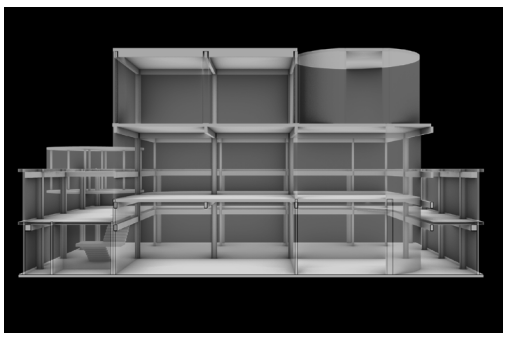




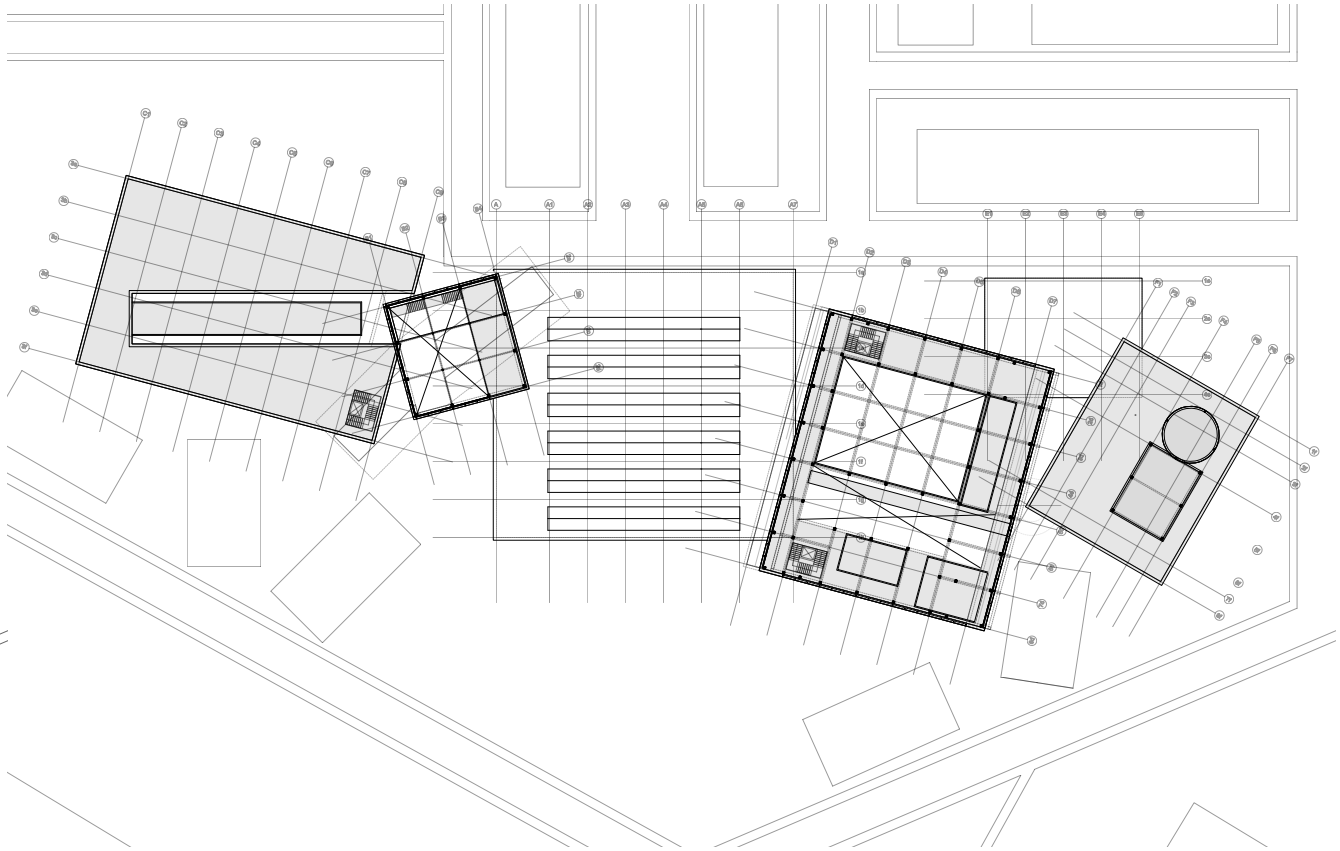


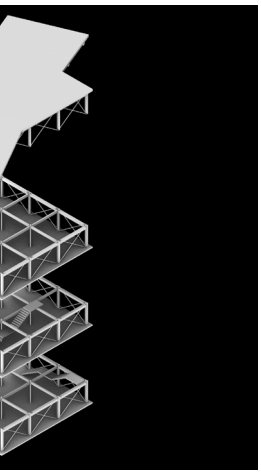
Experiencing typology

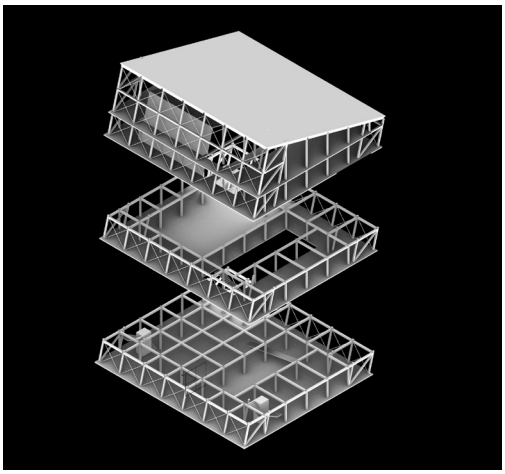


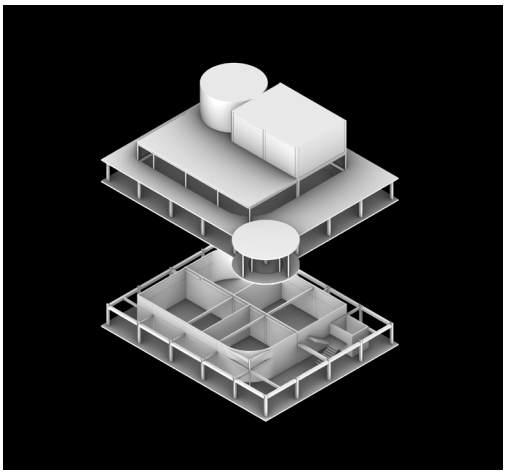


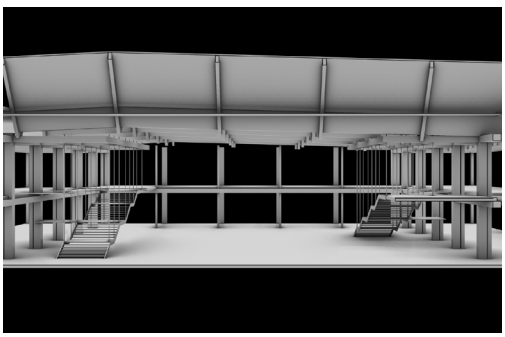
Second Floor

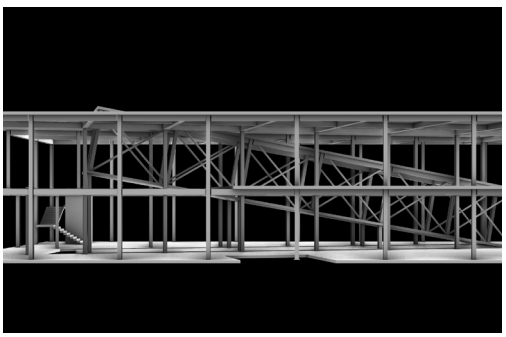








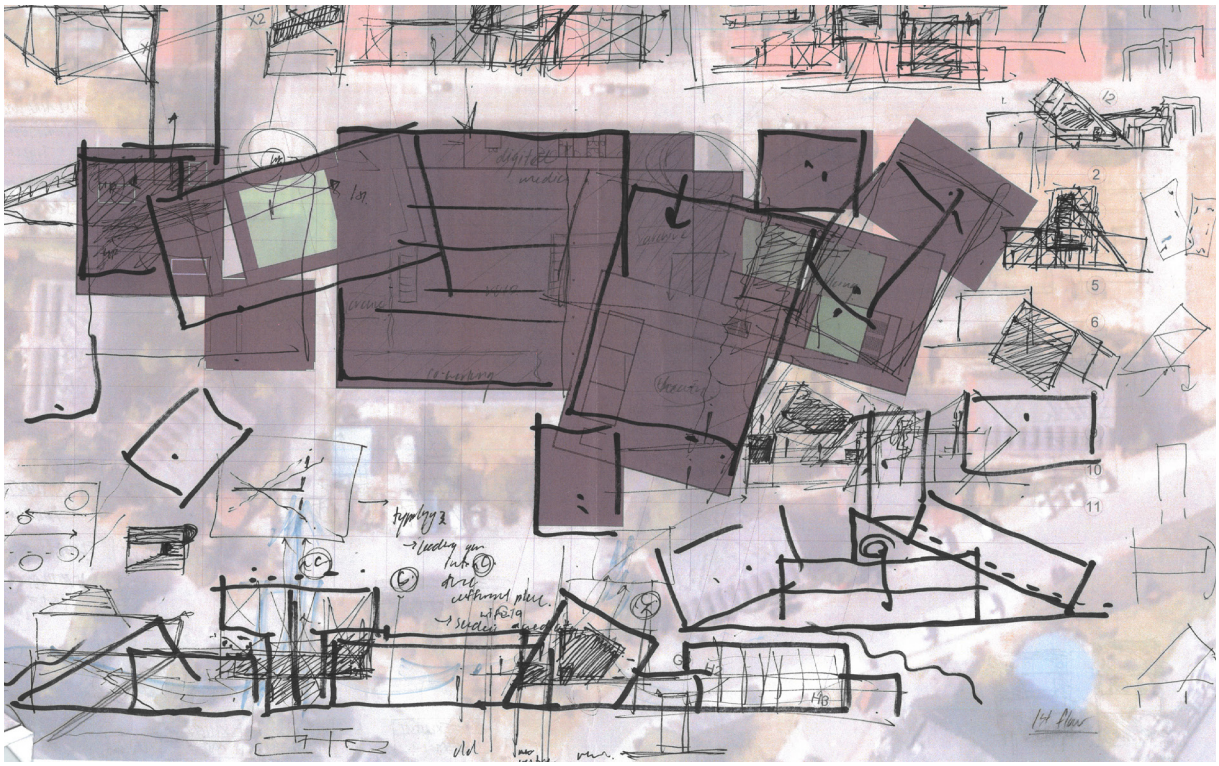




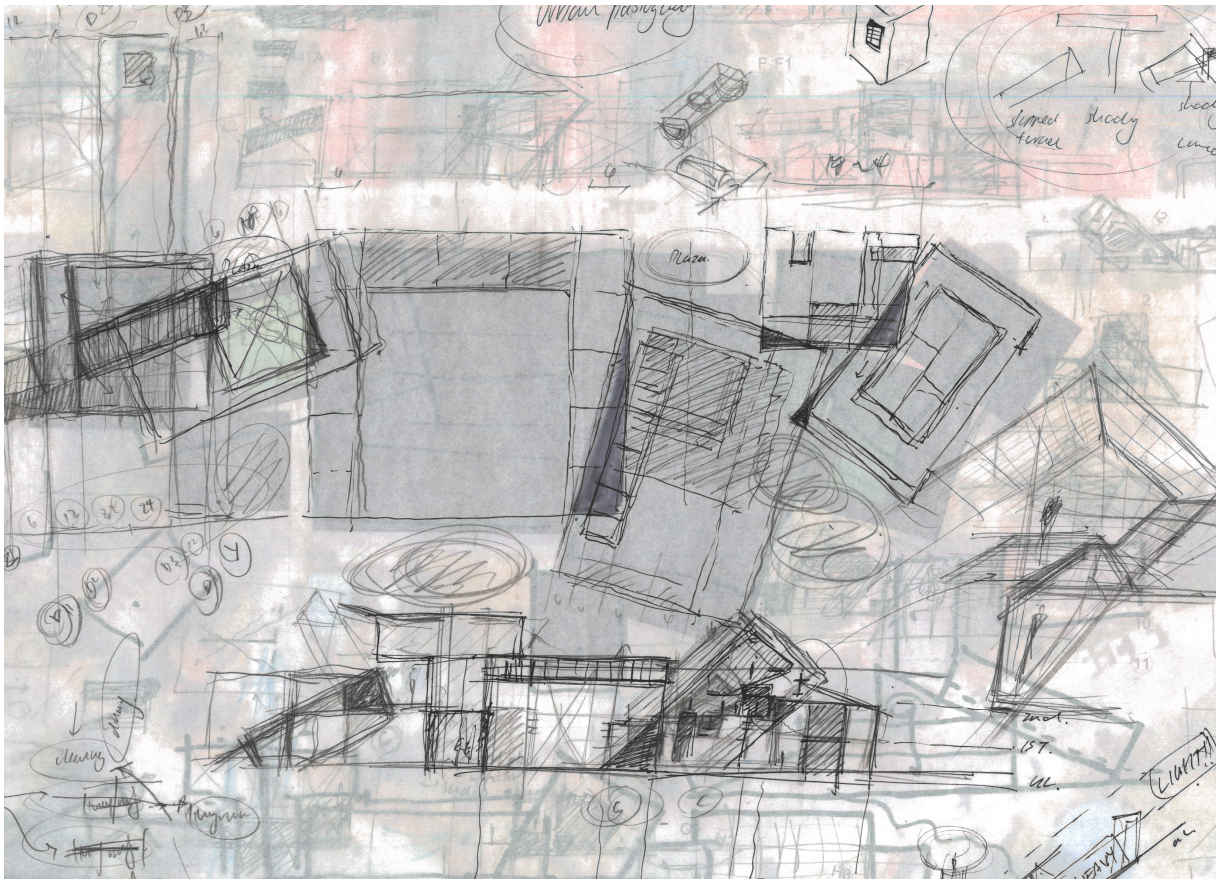
Chapter 6:

Design process for P4

Section creating a narrative. Form becomes function

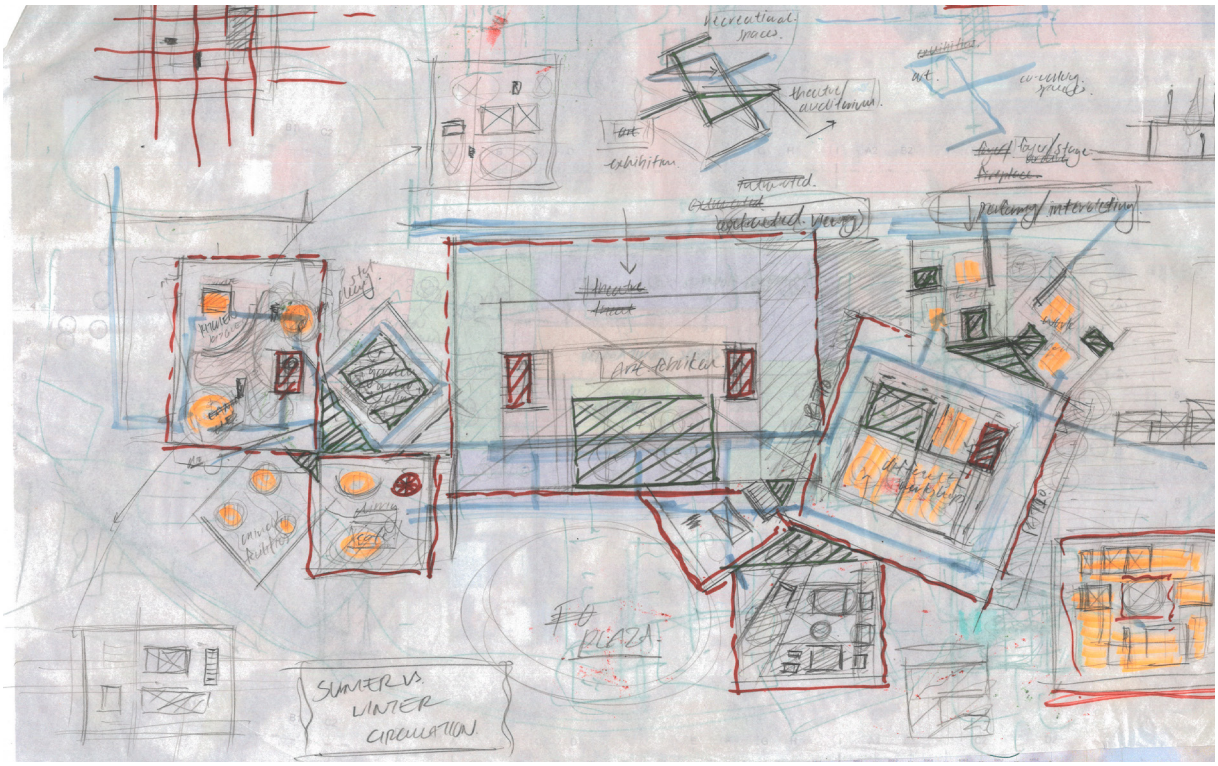


fragmented floorplan, how do I show it through section and elevation?

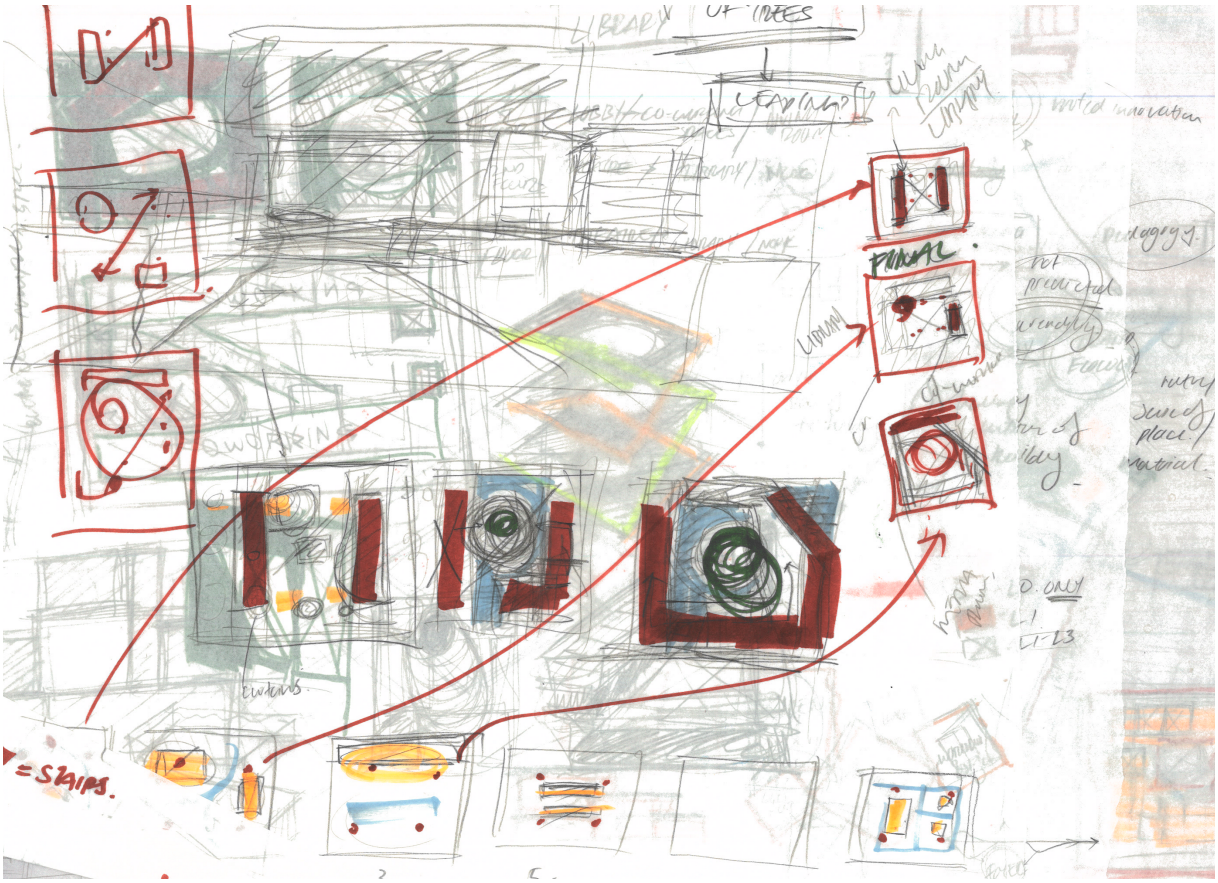


Sections should show circulation clearly, with tilted slabs creating multifunctional spaces above and below.

Defining Experience Through Form and Flow

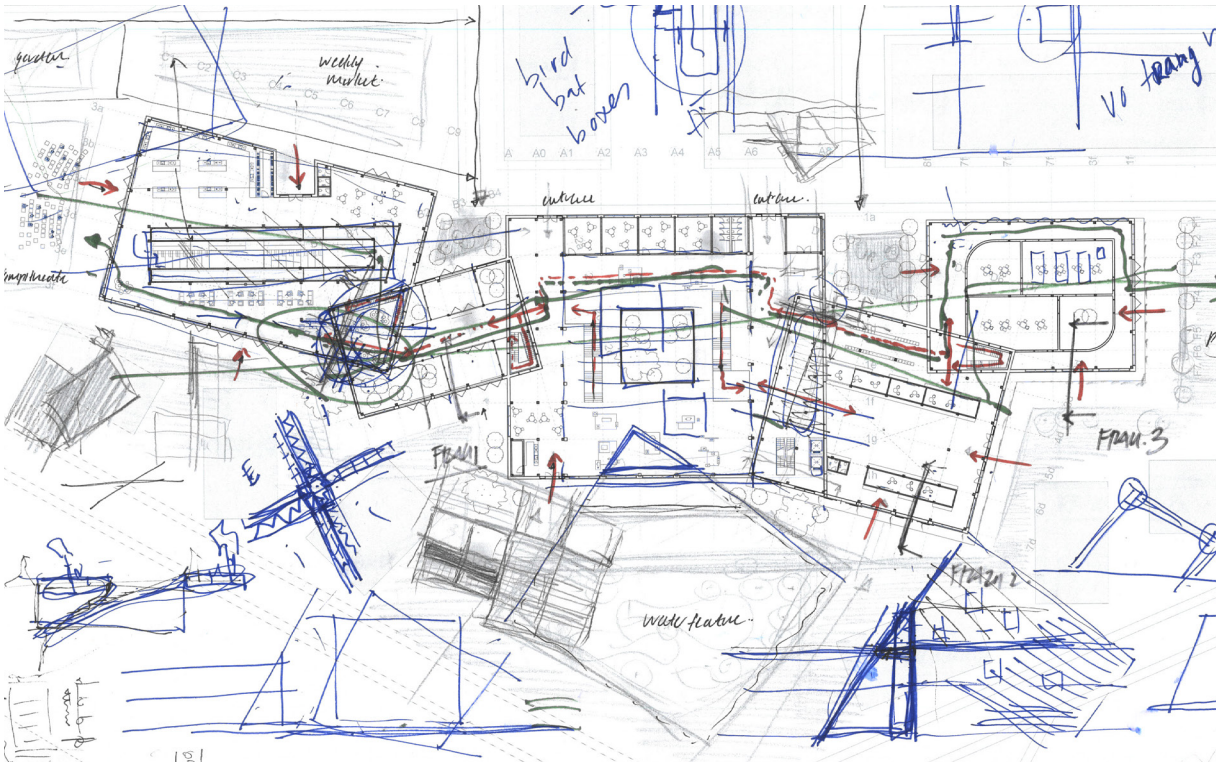


Each typology has its own distinct circulation and experience.\\

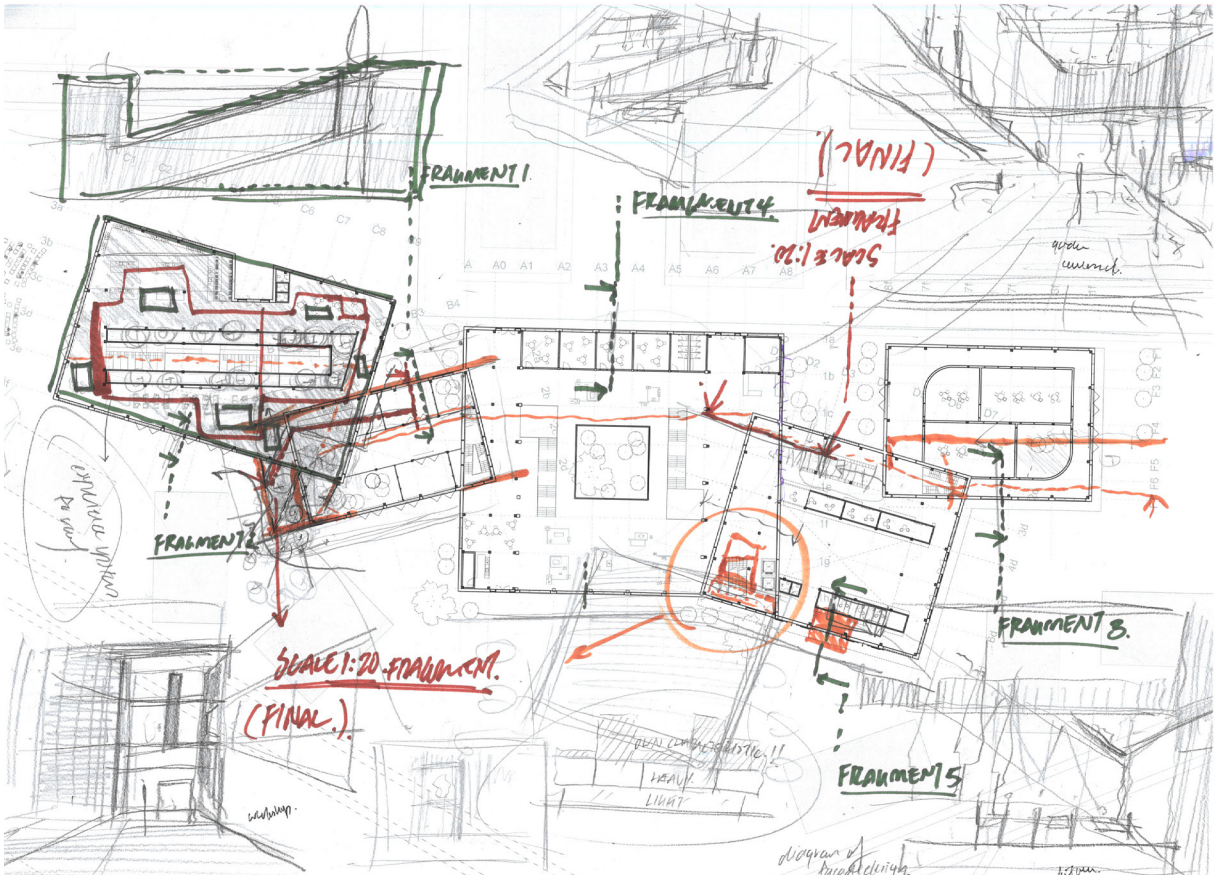


Library Experience: void shapes program, and program defines void.

Spatial Interplay: Circulation, Void, and Program

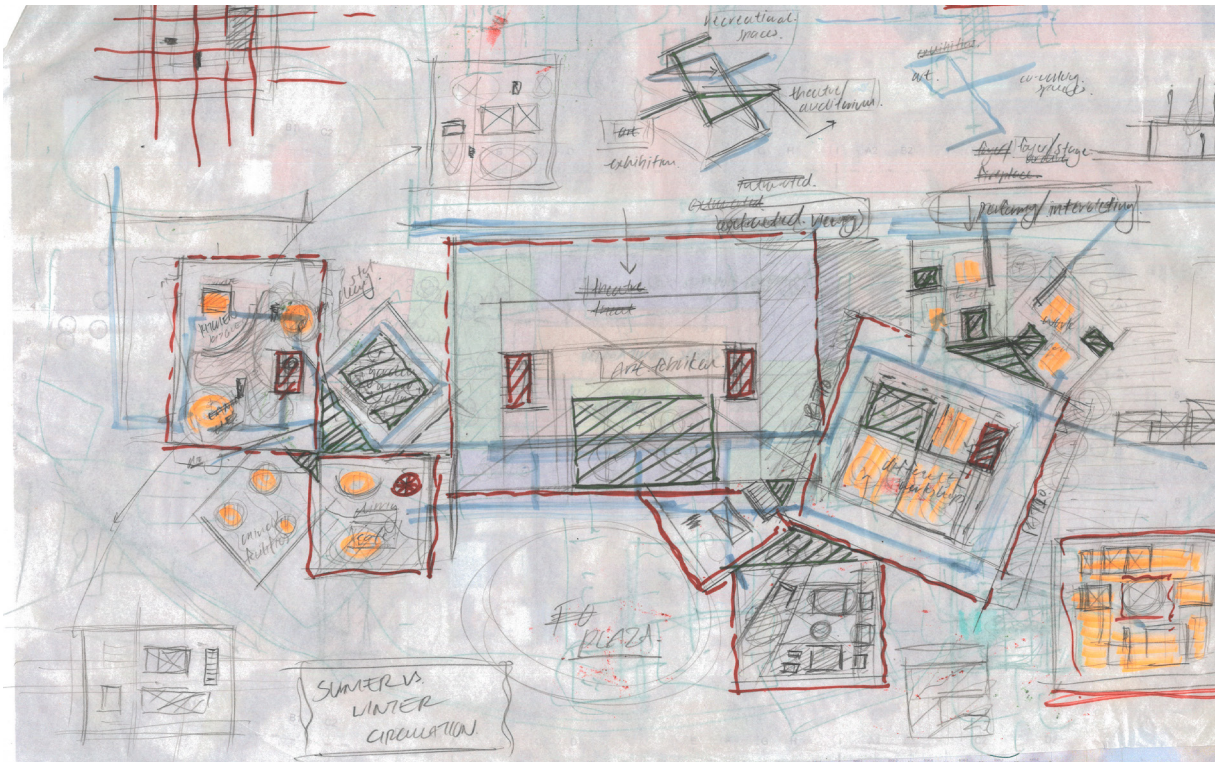


At the intersection, overlapping spaces create dynamic connections. Materiality should highlight this layering through contrasts of texture and transparency.

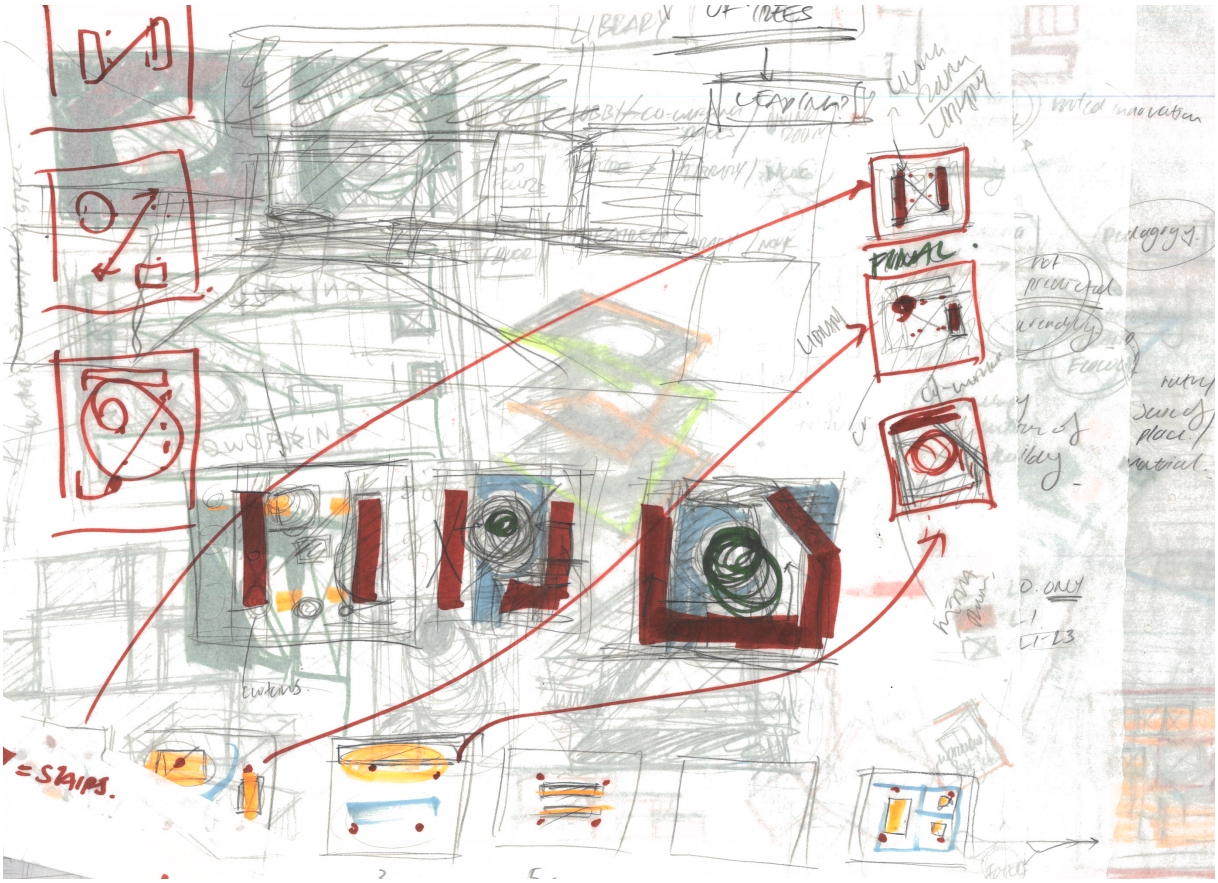


Moments within the building unfold along a deliberate linear journey, inspired by SANAA's Louvre, blending spatial experience with movement.

Defining Experience Through Form and Flow

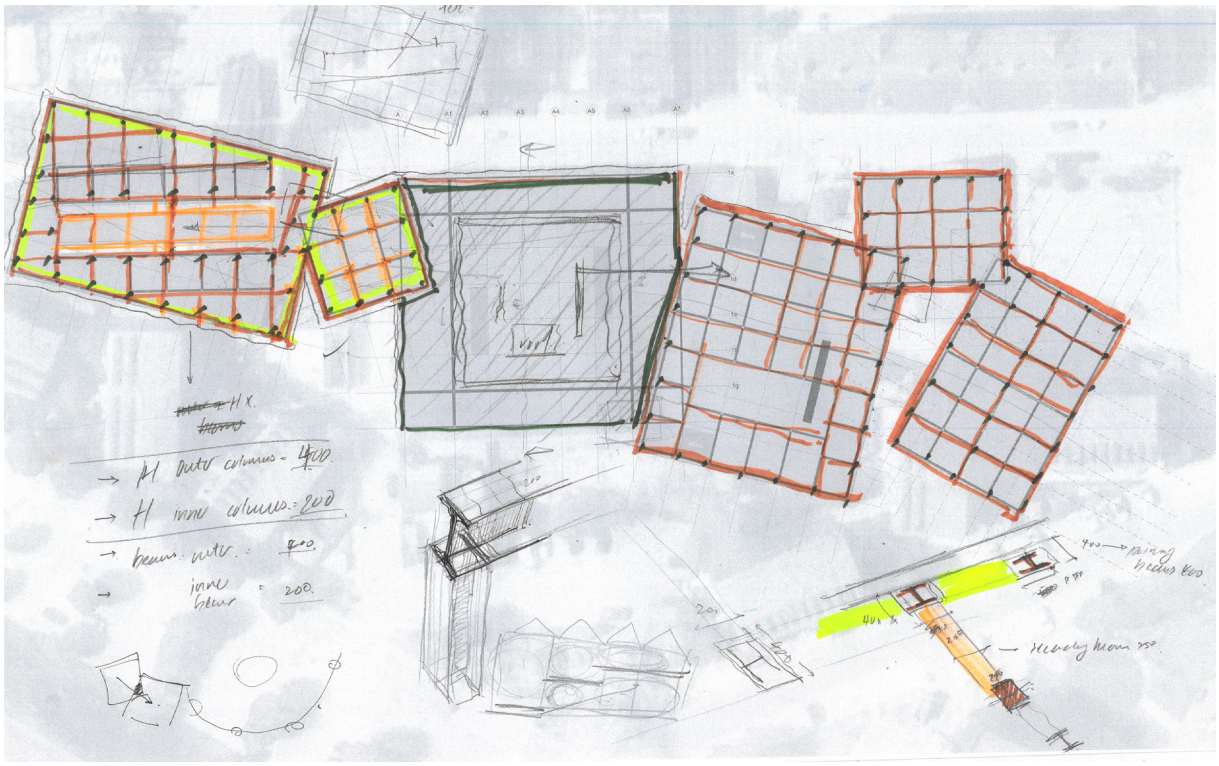


Each typology features its own distinct circulation and spatial experience.

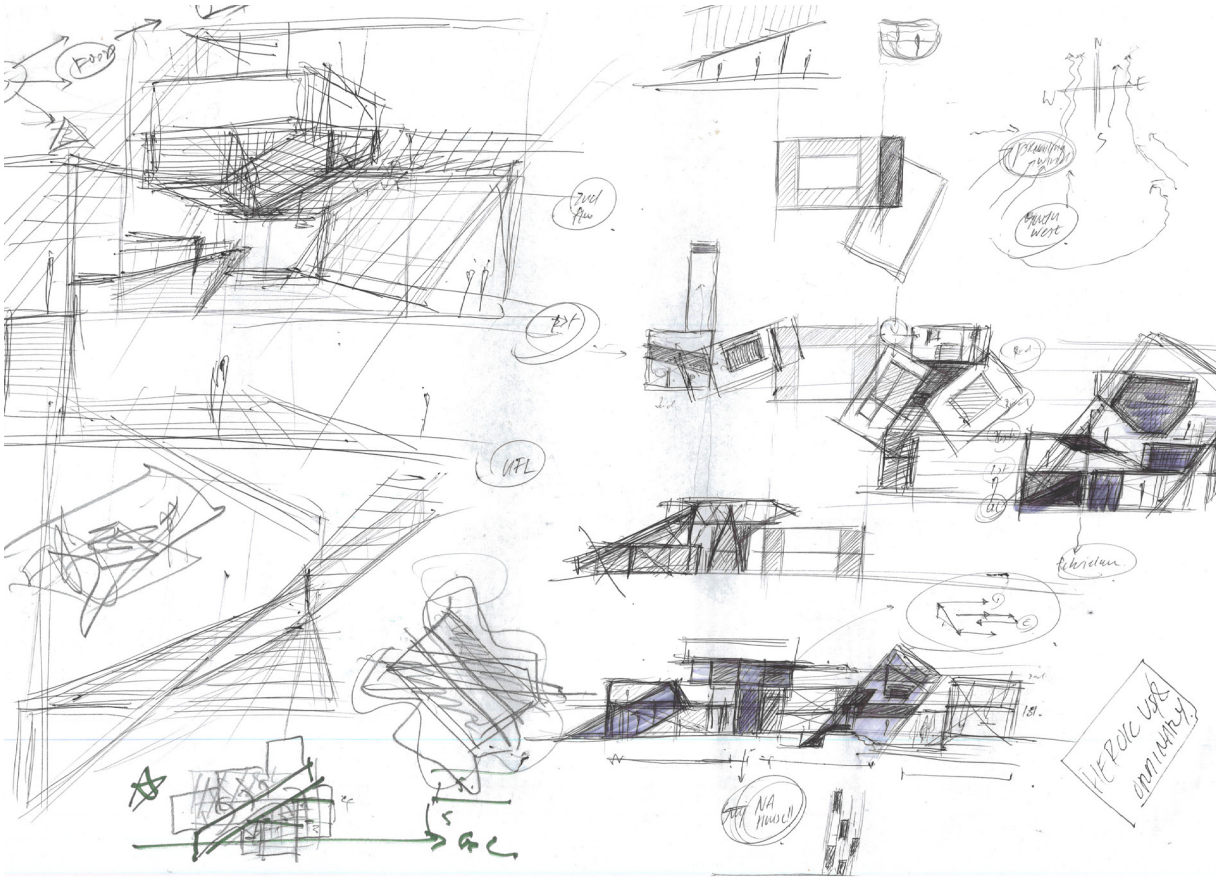


Library Experience: Void shapes program, and program defines void.

Spatial Dynamics: Framing, Overlap, and Programmatic Voids

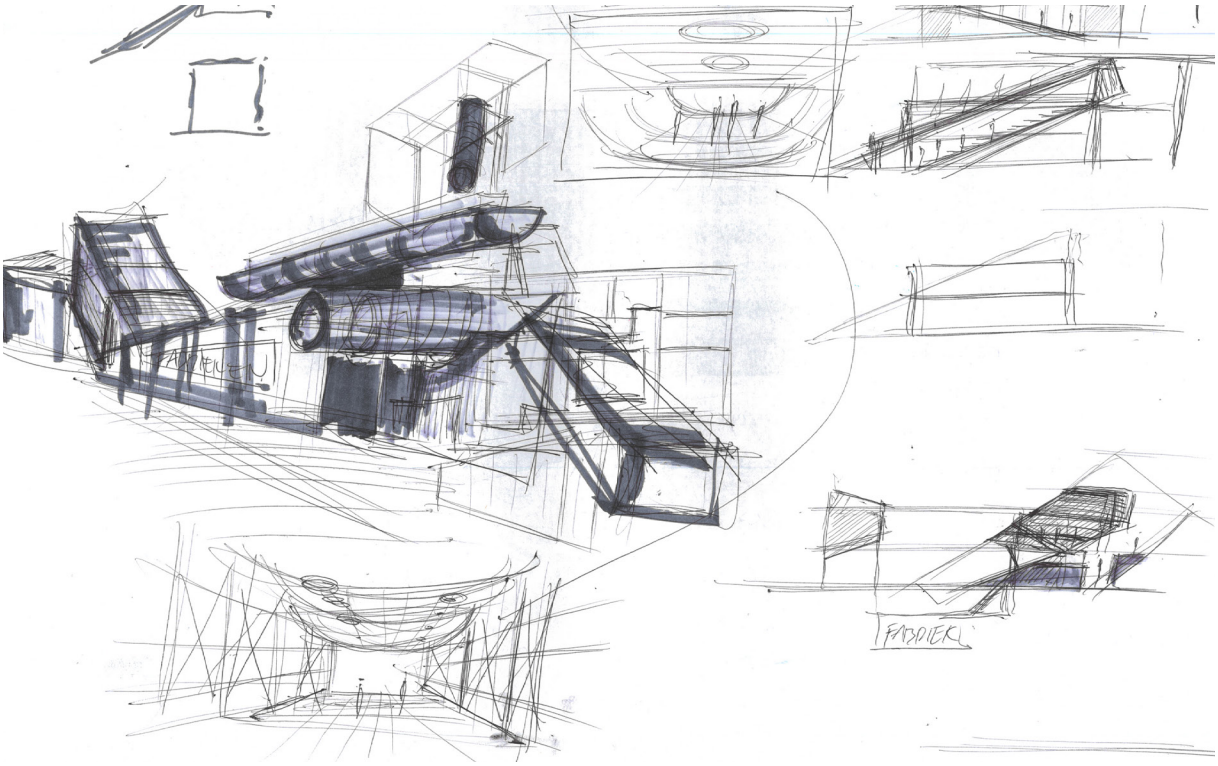


Steel acts as the unifying element, seamlessly connecting all typologies into a cohesive whole.

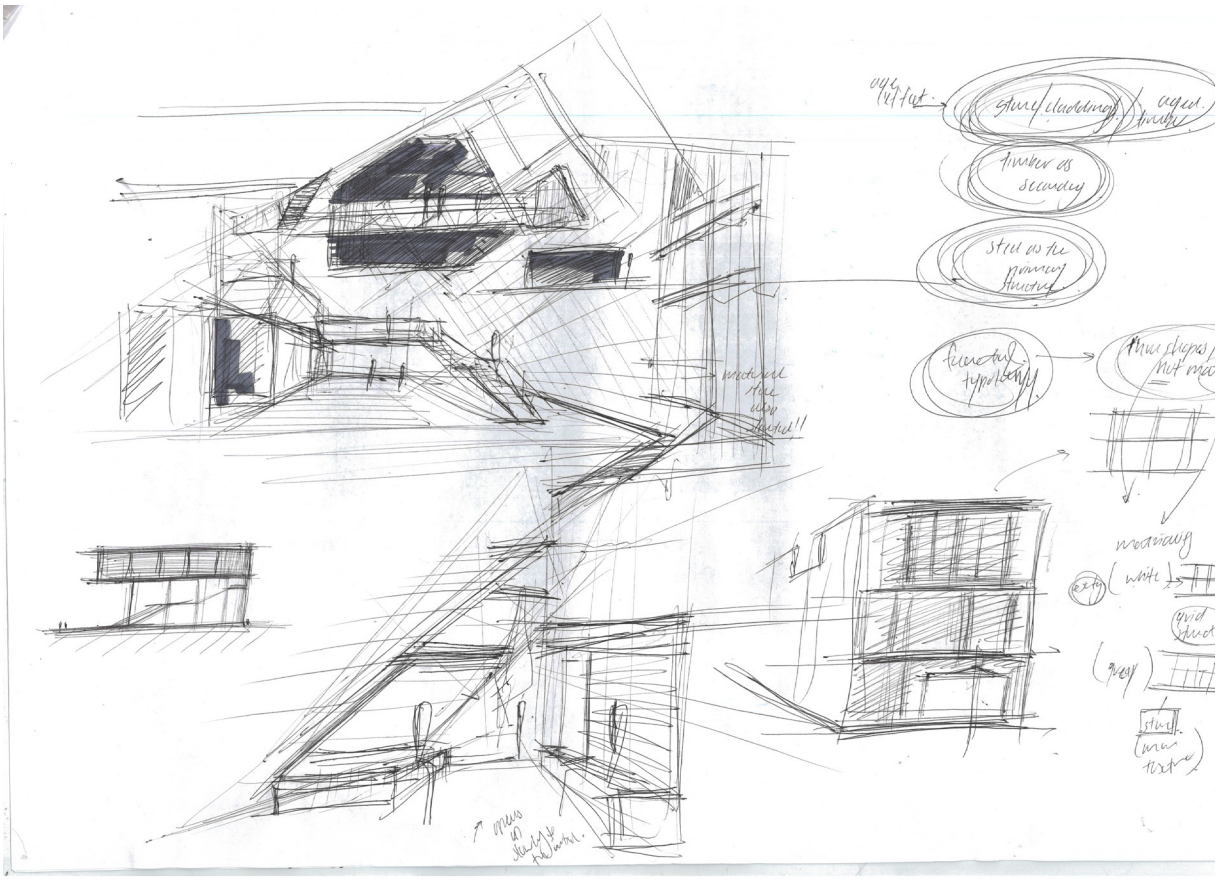


Moments within the space create tension and release through the interplay of overlapping forms.

Exploring Void and Program: Shaping Interior Experience

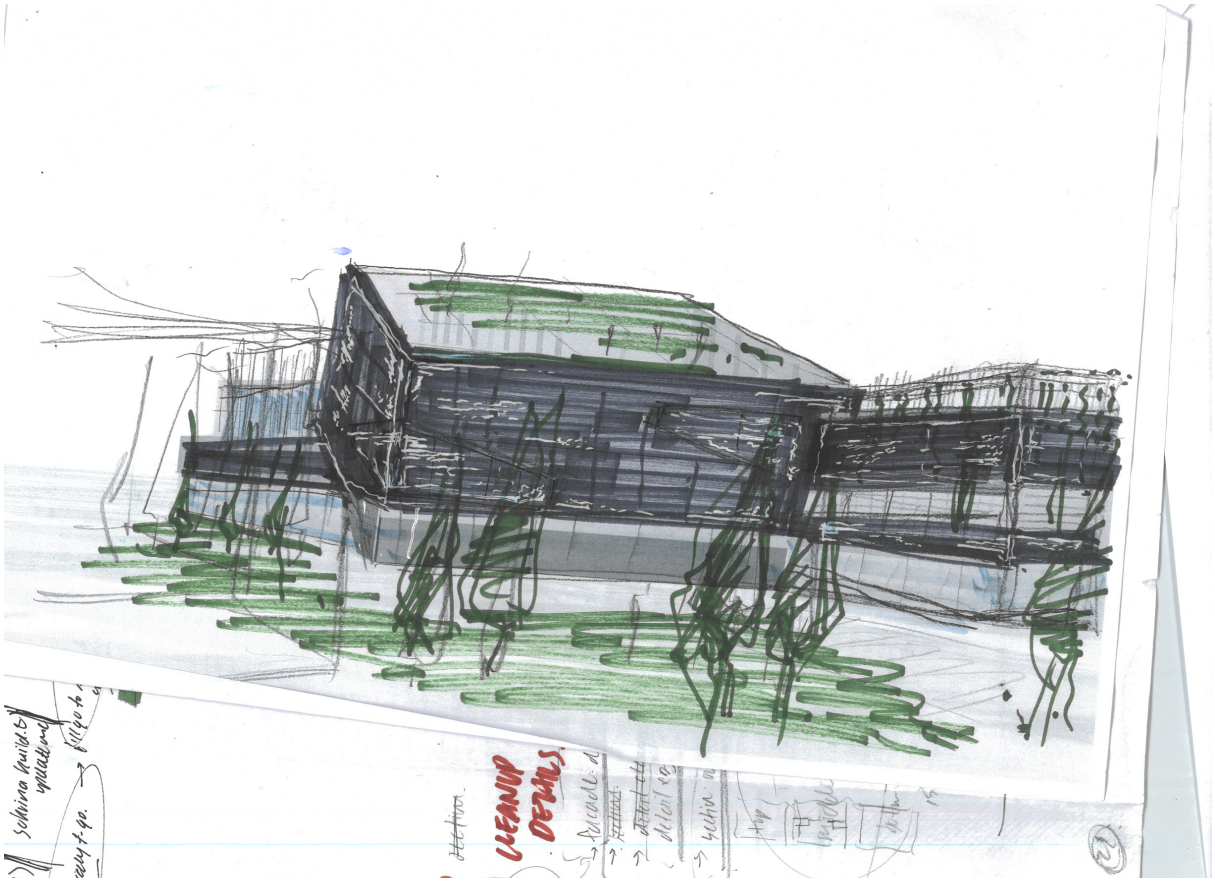


Framing interior spaces through overlapping shapes, where the exterior form directly reflects this layered composition—echoing Shinohara’s approach.



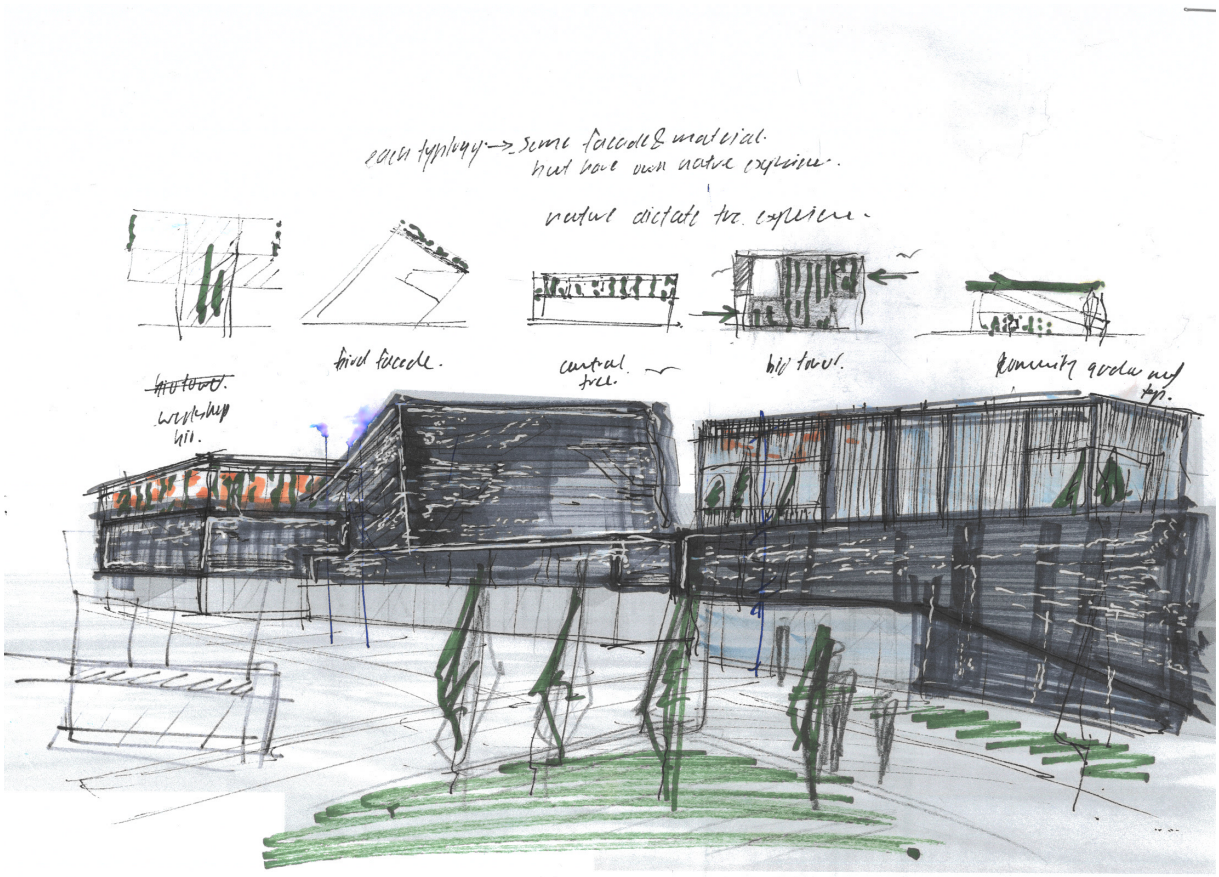
The interior of the initial library experience blurs boundaries—voids shape the program, and the program defines the voids.

Initial Materiality Concept



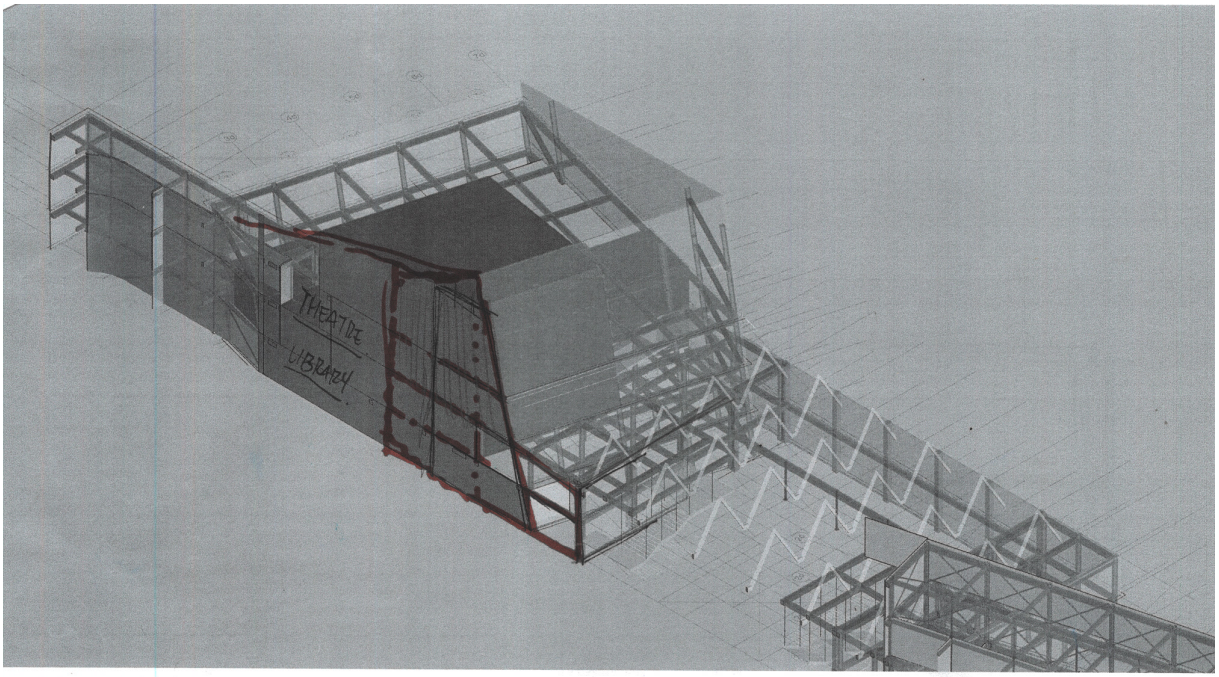
The design emphasizes a visual hierarchy with heavier, textured materials at the top and glazing at the base to create lightness and transparency. Reclaimed bricks—drawing inspiration from the work of Jia Kun and Wang Shu—introduce warmth, craftsmanship, and a tactile quality rooted in tradition and sustainability.

Design Inspiration: Fondazione Prada? Designing Junctions



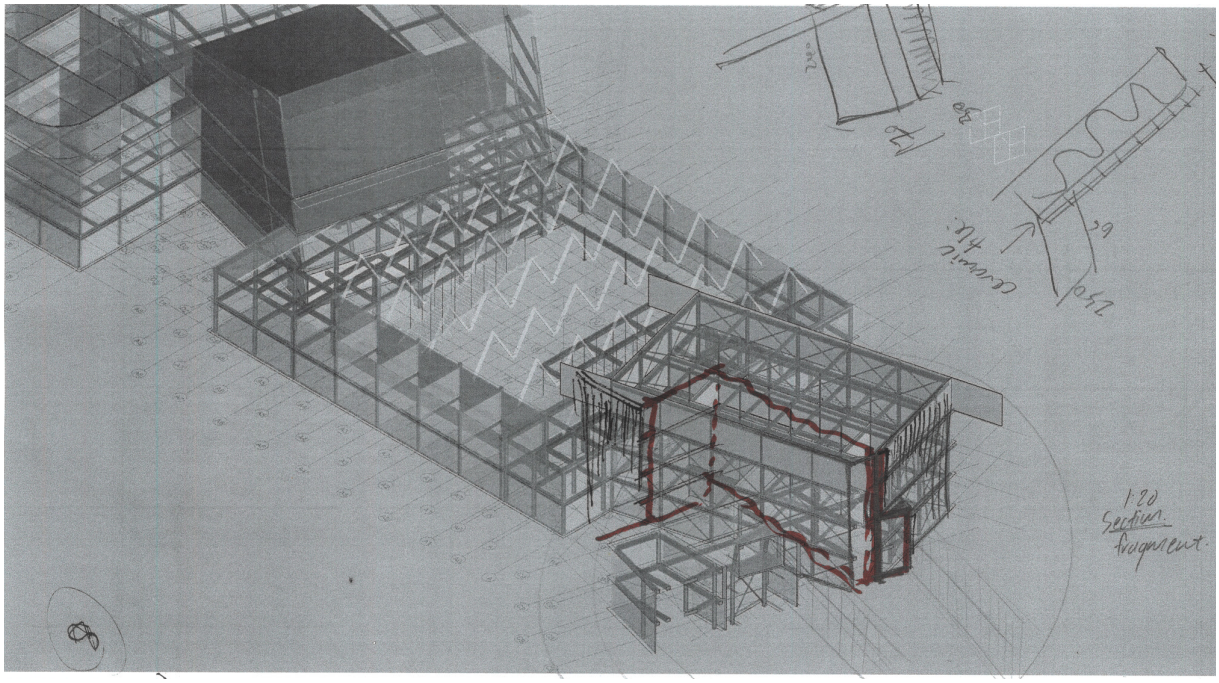
Inspired by Rem Koolhaas’ Fondazione Prada, this project embraces a playful approach to massing and form, diverging from Prada’s more rigid geometry. Each typology expresses its own materiality, yet collectively they read as a unified composition when viewed from a distance, balancing diversity and cohesion.

Detailing begins...



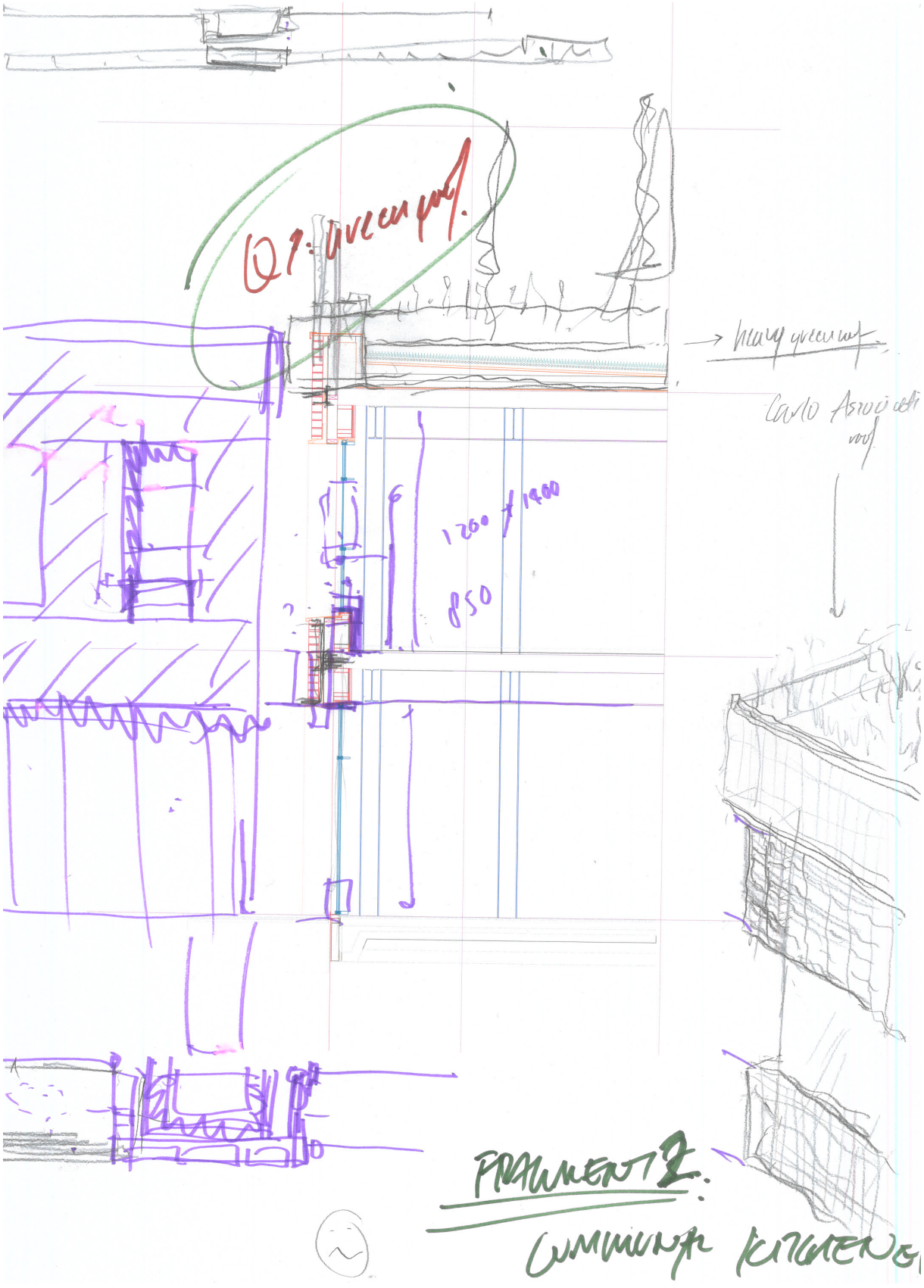
Begin by thoroughly understanding the unique construction and material details of each typology independently. Analyze their structural systems, façade assemblies, and material transitions. Once individual details are clear, develop connection strategies that respond to differences in scale, movement, thermal expansion, and material behavior. This layered approach ensures seamless integration while preserving the identity and performance of each typology at their intersections.

How does the Junctions work? Exterior , Interior Overlap



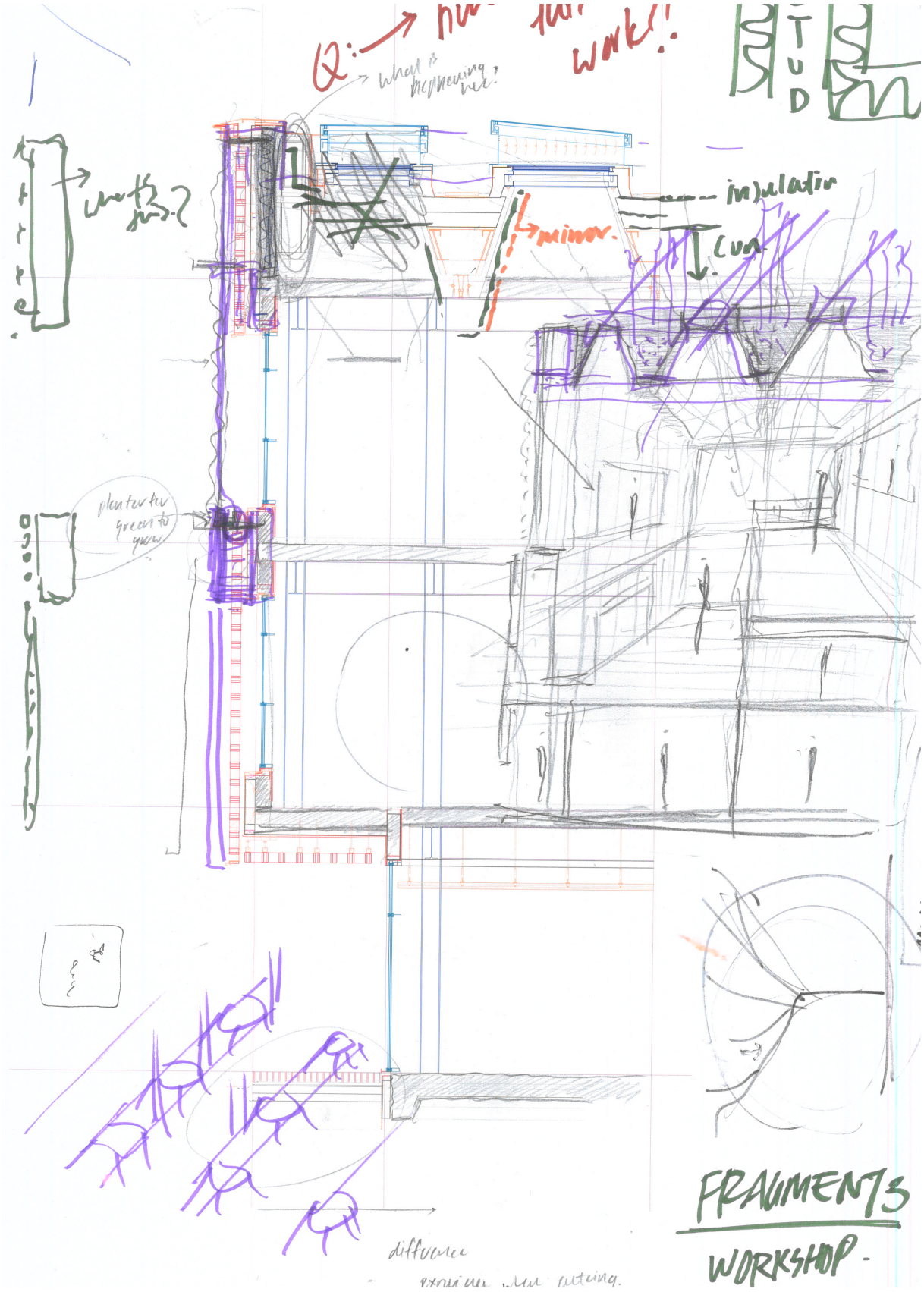
Key Junctions Highlighted by Henk and Florian
1) The interface between the renovated Fabriken and the Library typologies, focusing on material transitions and user experience. 2) The connection between the Biodiversity Tower and the Communal typology, emphasizing ecological integration and adaptive façade detailing.

Brick System 1: Communal Typology



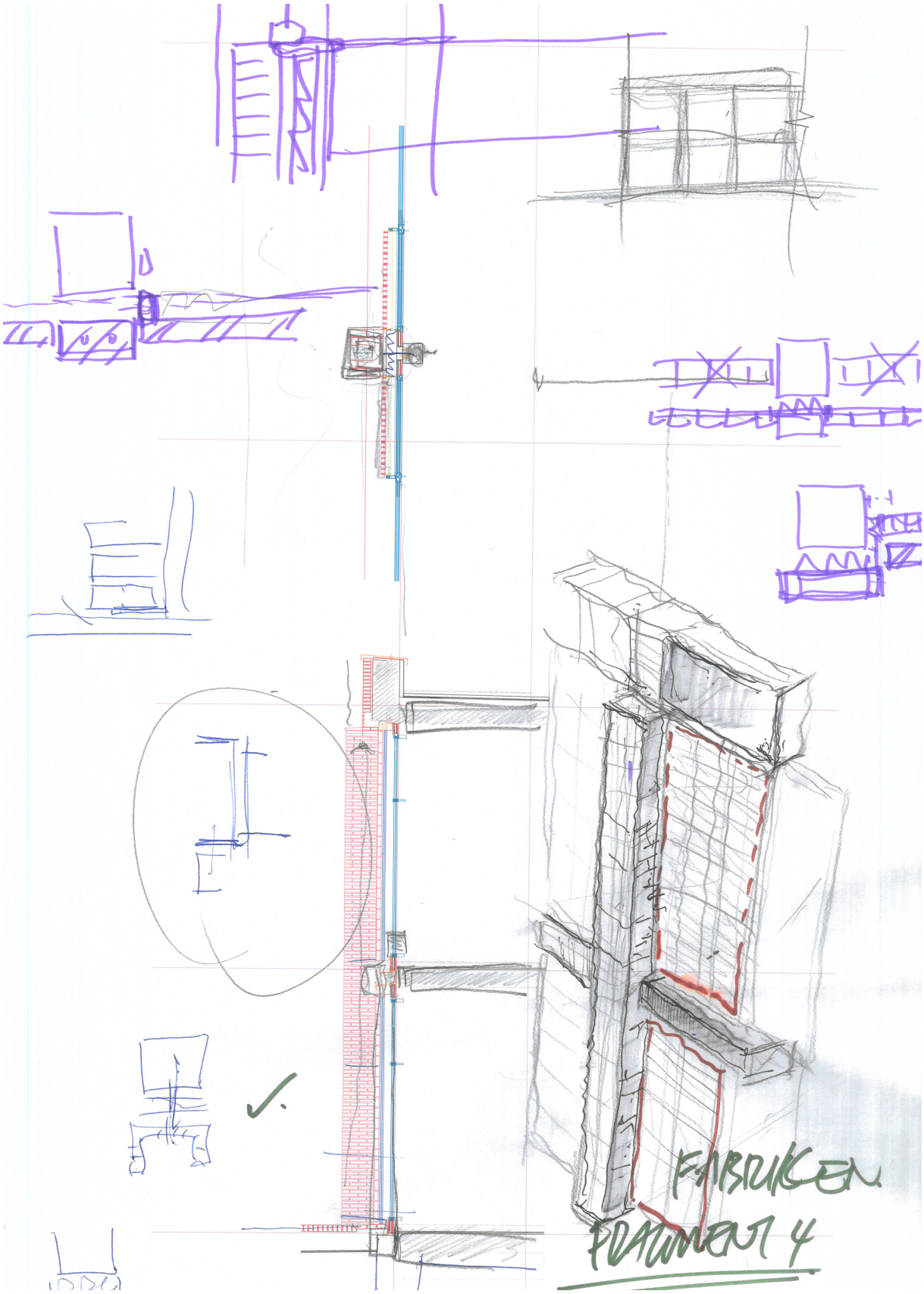
This brick panel system is anchored to the concrete slab and composed of hollow bricks. The perforated assembly allows light to pass through, transforming the building into a glowing lantern at night while maintaining a solid expression by day.

Brick System 1: Workshop Typology Tripartite Façade



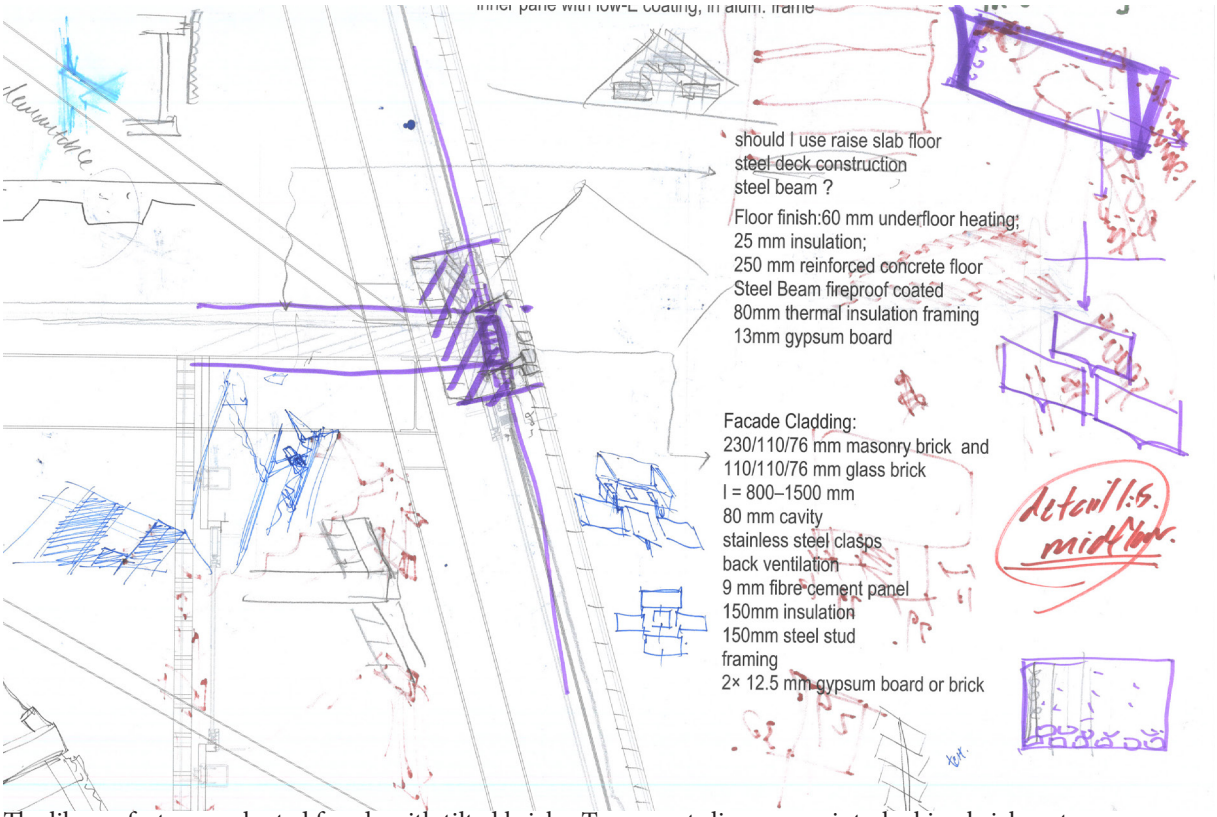
The façade is composed of three distinct layers: glazed at the base, brick in the middle, and a green vegetated canopy inspired by Vietnamese architecture at the top. A concealed roof skylight and internal mirrors optimize natural light penetration into the workshop, while a green roof crowns the assembly, enhancing insulation and biodiversity.

Brick System 2: Fabriken Facade Retrofit

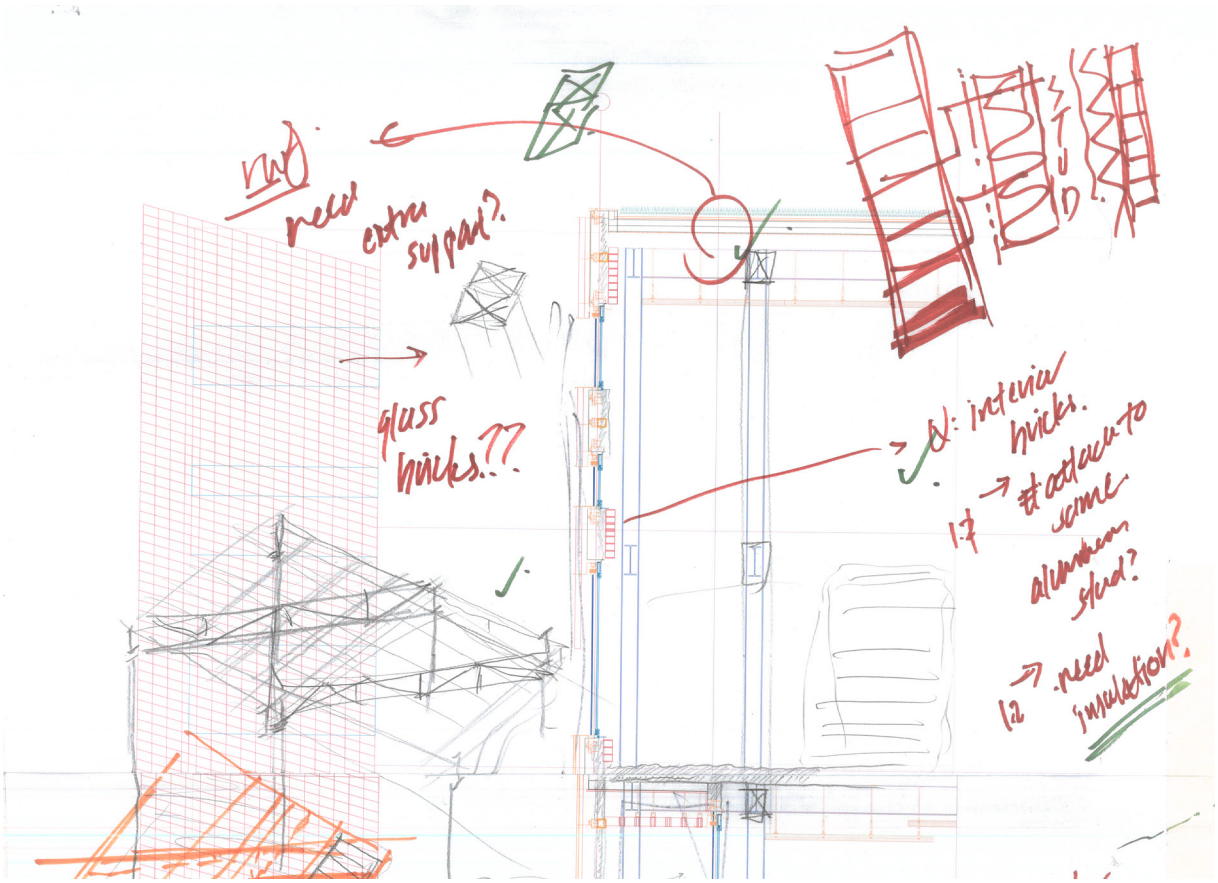


The Fabriken retains its original structural frame, while the deteriorated, uninsulated walls are replaced. New façade assemblies consist of precast concrete panels paired with hollow brick infill, enhancing thermal performance and preserving the industrial character through a contemporary material system.

Brick system 3L Library: Interlocking Brick & Balcony Openings

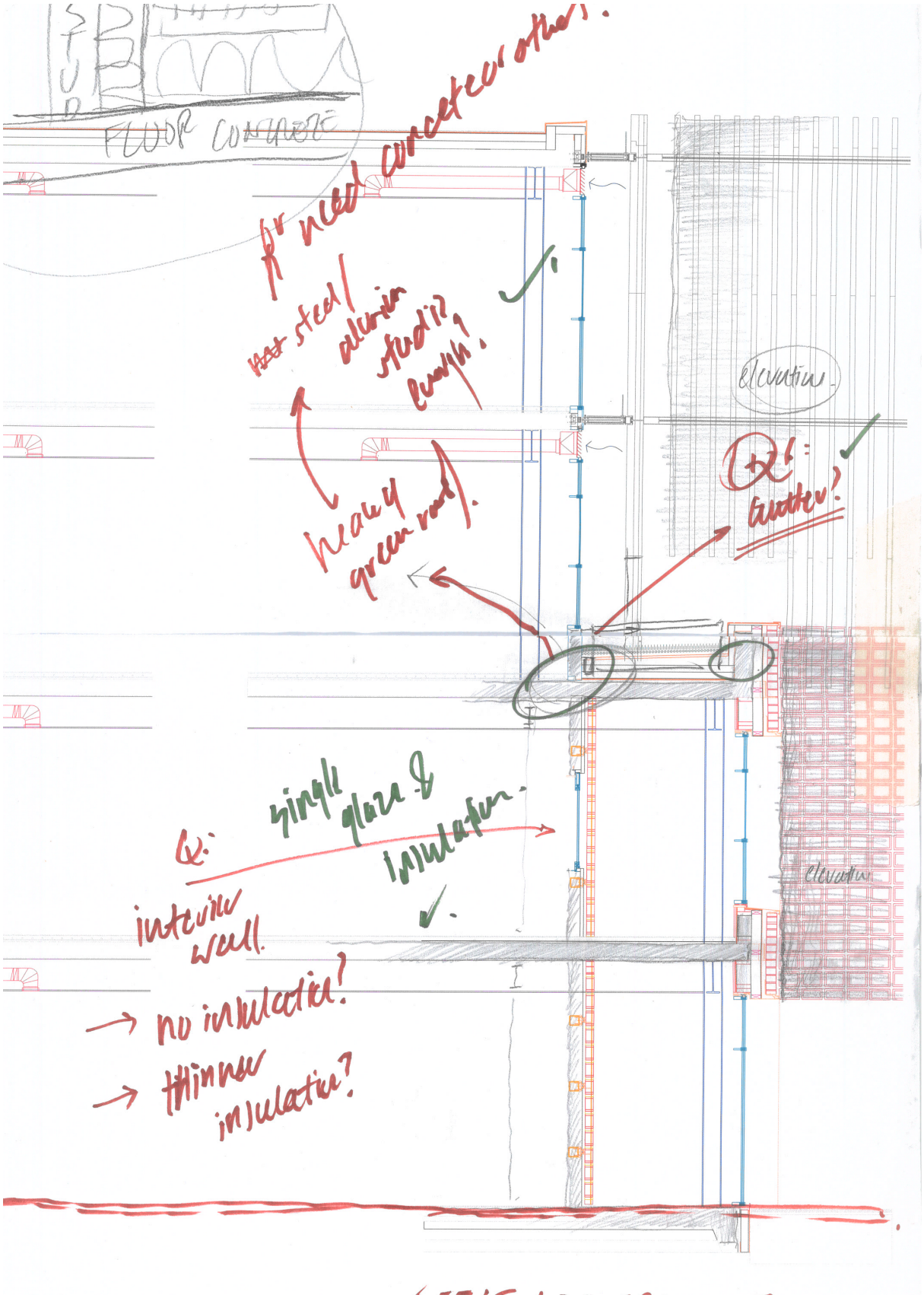


The library features a slanted façade with tilted bricks. To prevent slippage, an interlocking brick system was developed, ensuring structural stability while maintaining the intended angled expression. This detail allows for a dynamic facade without compromising safety or integrity.



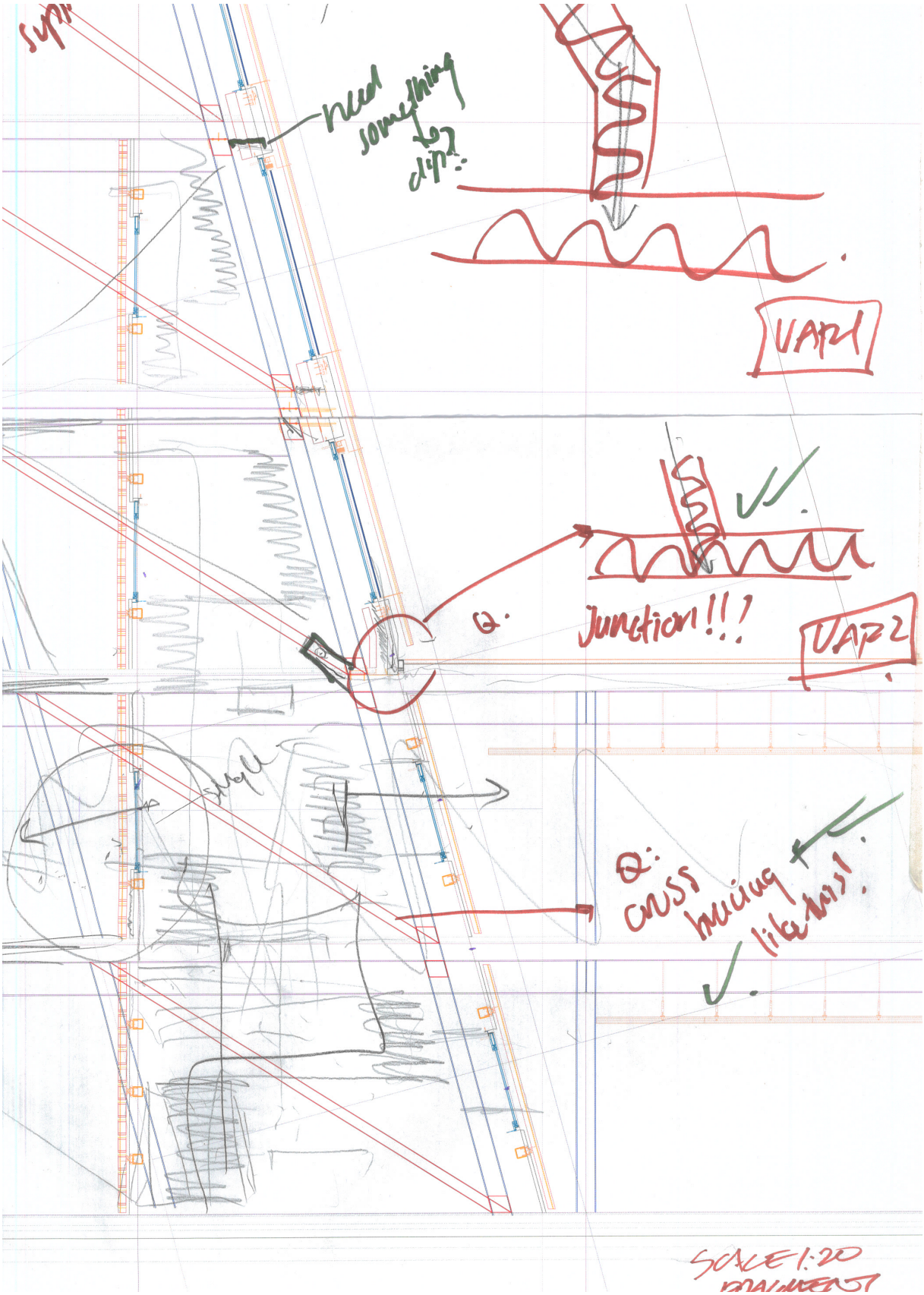
Balcony areas are articulated with glass brick inserts, bringing light into the interior while maintaining privacy and visual texture. These openings punctuate the façade, creating moments of transparency within the solid brick envelope.

Junction: Biodiversity Tower × Communal



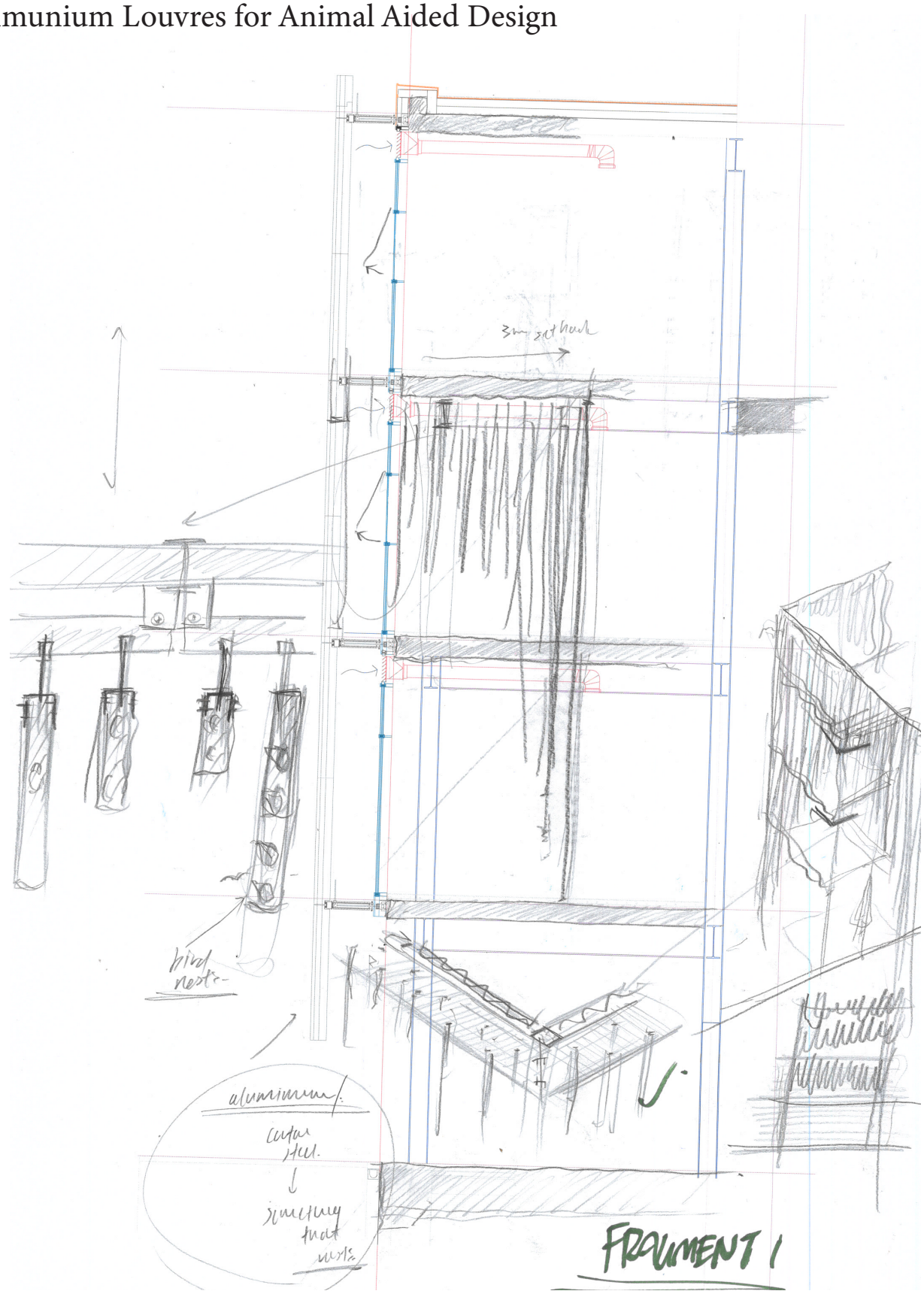
The intersection is articulated through aluminum louvres layered over hollow brick façade panels, balancing permeability and enclosure. A green roof bridges the two typologies, enhancing ecological continuity. The detailing ensures passive ventilation, filtered light, and integrated habitats while maintaining a coherent architectural language.

Junction 2: Library Meets Fabriken



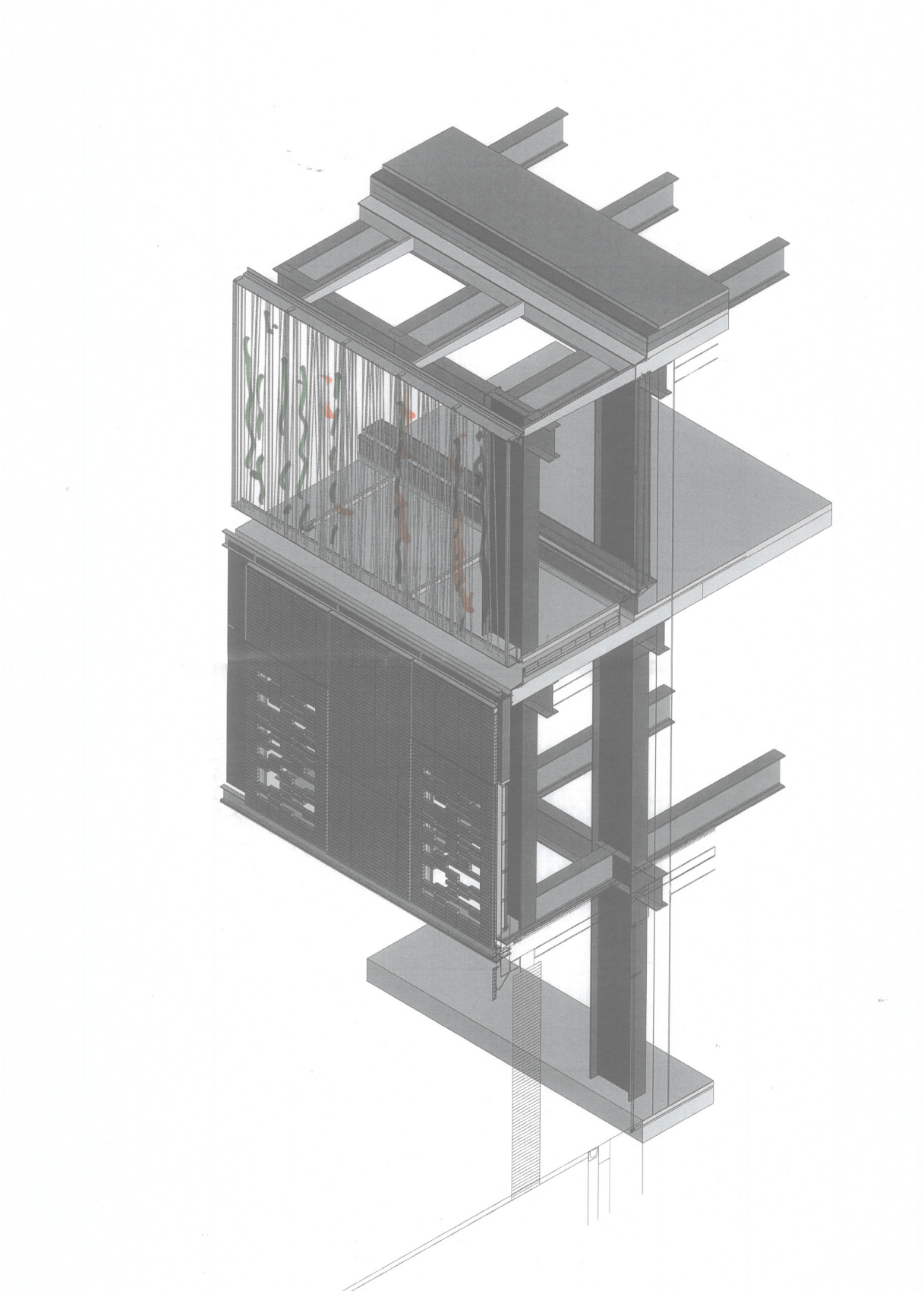
At the interface between the library and fabriken typologies, a shared brick wall marks the programmatic transition. Externally, the wall maintains a continuous brick expression, while internally, it signals the shift through exposed brick, single-glazed openings, and minimal acoustic treatment—subtly cueing users that they are entering a new spatial program.

Biodiversity Tower
Almunium Louvres for Animal Aided Design



Loggias and building offsets support Animal-Aided Design, creating habitat niches throughout the structure. Aluminum louvres act like seasonal curtains: open in summer to invite biodiversity, closed in winter to provide shelter from harsh conditions. This adaptive facade enhances ecological integration year-round.

Workshop Typology: Preliminary Study



This initial exploration of the workshop typology integrates principles inspired by Vietnamese architectural vernacular, particularly the application of living green walls. Facades serve dual functions: enhancing environmental performance through passive cooling and biodiversity integration. The articulated brick façade is designed to accommodate small fauna, creating microhabitats within its cavities.

Chapter 6:

P4

Chapter 7

Chapter 7 - MIT Senseable Lab

6.1 Initial Concepts
6.2 Development Design Concept
6.3 Further Development Design Concept

Reflection

1. Relation between the graduation project topic, the master track, and the master program

This graduation project, *"Our Stories begins with a seed"*, directly engages with the ambitions of TU Delft's MSc Architecture, Urbanism & Building Sciences program by addressing spatial, social, and ecological complexity through a design-based research approach. Rooted in the *Public Building* studio's theme of "Power," the project critically examines how public architecture can serve as an inclusive and transformative force within a stigmatized community.

This project explores how design can reconcile marginalized urban realities with ecological stewardship and inclusive education. The studio's lens of the *Commons* reinforces a foundational question in my work: **How can we design an inclusive public condenser that not only enriches biodiversity and fosters social cohesion but also reshapes Sundholm's identity as a space for growth, learning, and ecological stewardship? How might an ecological "Green Mile"—reintroducing biodiversity in response to the potential loss of Ørestad Fælled—nurture well-being for marginalized communities and transform Sundholm Amager Vest's "parallel society" narrative?**

Sundholm, located in Amager Vest, Copenhagen, represents an ideal testbed for such questions. Labelled a "parallel society," the area houses marginalized groups—including the homeless, refugees, and mentally vulnerable. This project repositions Sundholm not as a place of failure, but of potential: a site where architecture becomes a public act of care, resilience, and connectivity.

2. Influence of research on the design and vice versa

The project was developed using a research-by-design methodology, where conceptual research and spatial experimentation informed and re-informed one another in an iterative loop. The research began by deconstructing Copenhagen's dual image—global sustainability leader versus local social segregation—and mapping media portrayals, protest movements, and biodiversity data in Sundholm.

Through interviews, site visits, and mappings, key community needs emerged: a lack of safe, shared spaces, fractured social identity, and loss of natural environments. These findings directly shaped the design brief, which proposes a hybrid public condenser—a library, educational center, and ecological sanctuary—embedded in the proposed "Green Mile": a socio-ecological corridor connecting Sundholm to Ørestad Faelled and the University.

The design process itself became a form of inquiry. For instance, early iterations of spatial layout for the library prioritized visibility and openness; however, feedback and analysis of mental health literature revealed the importance of layered thresholds and quiet, enclosed spaces. This led to the introduction of inward-facing courtyards, sensory zones, and non-human sanctuaries within the architecture—an empathetic response to both human and ecological users.

Moreover, collaboration with the MIT Senseable Lab provided scientific grounding to integrate biodiversity sensing technology into the design. These interactions made the project more than a metaphorical "green" space—it became a **living instrument** to observe and support ecological recovery.

3. Value of personal working methods and collaboration with tutors

My personal working method throughout the project involved balancing digital and analog processes to foster both precision and intuition. Concept development often began with hand sketches, narrative

diagrams, and mapping exercises that translated socio-political findings into spatial intentions. These were followed by physical models and digital simulations to explore materiality, light, and spatial behavior.

Tutors played a critical role in shaping both the conceptual clarity and technical rigor of the project. Their continuous feedback encouraged me to zoom in on overlooked user groups, address the ethics of environmental storytelling, and constantly re-evaluate the relationship between architectural expression and user agency. The studio’s culture of open dialogue helped crystallize the project’s ambition to serve both human and non-human life, through spaces that are adaptable, inclusive, and sensorially rich.

4. Relation between the project and its context

The building’s placement, at the seam of the fragmented Sundholm triangle, symbolically and physically bridges the district. Landscape, movement, and programming are designed to **invite encounters**, not enforce them. Passive spaces like arcades, sensory gardens, and terraces blend into public routes, while more active functions—maker spaces, classrooms, and community kitchens—enable social reintegration through co-creation and shared purpose.

By embedding nesting structures, biodiversity gardens, and natural materials, the project also responds to the broader ecological condition of Amager Vest, contributing to the restoration of urban biodiversity and setting a precedent for climate-resilient public buildings.

5. Meaning of multiplicity in the design

Multiplicity is at the core of this project—in both its spatial logic and conceptual ambition. Architecturally, the Public Condenser is designed as a multi-scalar, multi-species, multi-programmatic space. From the smallest nesting pod for insects to large, shared community rooms, the architecture adapts to varied uses and temporal rhythms.

Functionally, spaces overlap and transition. Classrooms become performance areas, gardens double as data collection zones, and circulation routes become informal gathering spaces.

Conceptually, the design performs across intersecting layers—**educational, ecological, emotional, and political**—supporting different users (children, students, families, homeless individuals, biodiversity researchers) while fostering a culture of shared learning and mutual care.

6. Academic and societal relevance, scope, and implications

This project addresses urgent societal issues: urban inequality, mental health, biodiversity loss, and the exclusion of vulnerable populations. While deeply grounded in the specific context of Sundholm, the design principles are transferable to other cities facing similar challenges.

An architecture that integrate education, ecological care, and communal life—can serve as a **prototype** for neighborhoods globally. In a time where urban design often prioritizes capital over community, this project argues for architecture as a **civic and ecological commons**.

Ethically, the project promotes **non-anthropocentric design**—giving agency to non-human species—and calls for inclusive representation in the shaping of public space. Technologically, its integration with biodiversity monitoring offers a blueprint for smart, climate-responsive infrastructure that serves both present and future generations.

Academically, the project contributes to the field of architecture by synthesizing theory, research, activism, and spatial design. It brings together literature from Lefebvre, Huizinga, and Kaplan with emerging sensing technologies and grounded fieldwork, demonstrating how **research-by-design can be both poetic and practical**.

Final Words

This project began with a seed—a metaphor for potential, regeneration, and care. Through the design of a public condenser in Sundholm, it grew into a space of learning, healing, and ecological responsibility. It asks: *What kind of city do we want to build? Who do we build it with—and for?*

By creating a hybrid architecture that invites play, nurtures biodiversity, and fosters human connection, this project envisions a future where cities don’t just house people—but help them grow, together.

Bibliography