

ME(GA)

An exploration about the human experience in the abnormally large



Booklet

Thesis name:	ME(GA)
Direction:	Matter, Space, Structure
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ABOUT ME,

ABOUT THE NOW,

& ABOUT THE FUTURE

Hi,

My name is Camilla and I am into a lot of things. People, cultures, design, art, mathematics, and don't get me started on nature with all its treasures and secrets. What fuels my engine is curiosity, and that is probably the reason I am who I am today.

So, who am I? I am an open-minded, determined, reasonable down to earth individual. I love patterns and nothing makes me as happy as colours, on paper, on clothes, on walls, legos, well where ever they go I guess. On my spare time I train boxing, and enjoy everything that comes with a little bit of wind in my hair. I love an adventure and never turn down a little skiing or a hike through the woods.

While I am mathematically inclined and interested design constructions, I have always been curious about architecture and creative design processes. This brought me to enrol for the architecture and engineering program at Chalmers, where I could get the best of both worlds. Today, I am an architecture student currently pursuing my master's degree at Chalmers University of Technology. I believe my education has provided me with a solid base of skills, and together with my passion for design I am looking forward to enter the world of architects where I would keep my promise to myself – to stay creative and curious.

COURSES AT MASTERS LEVEL

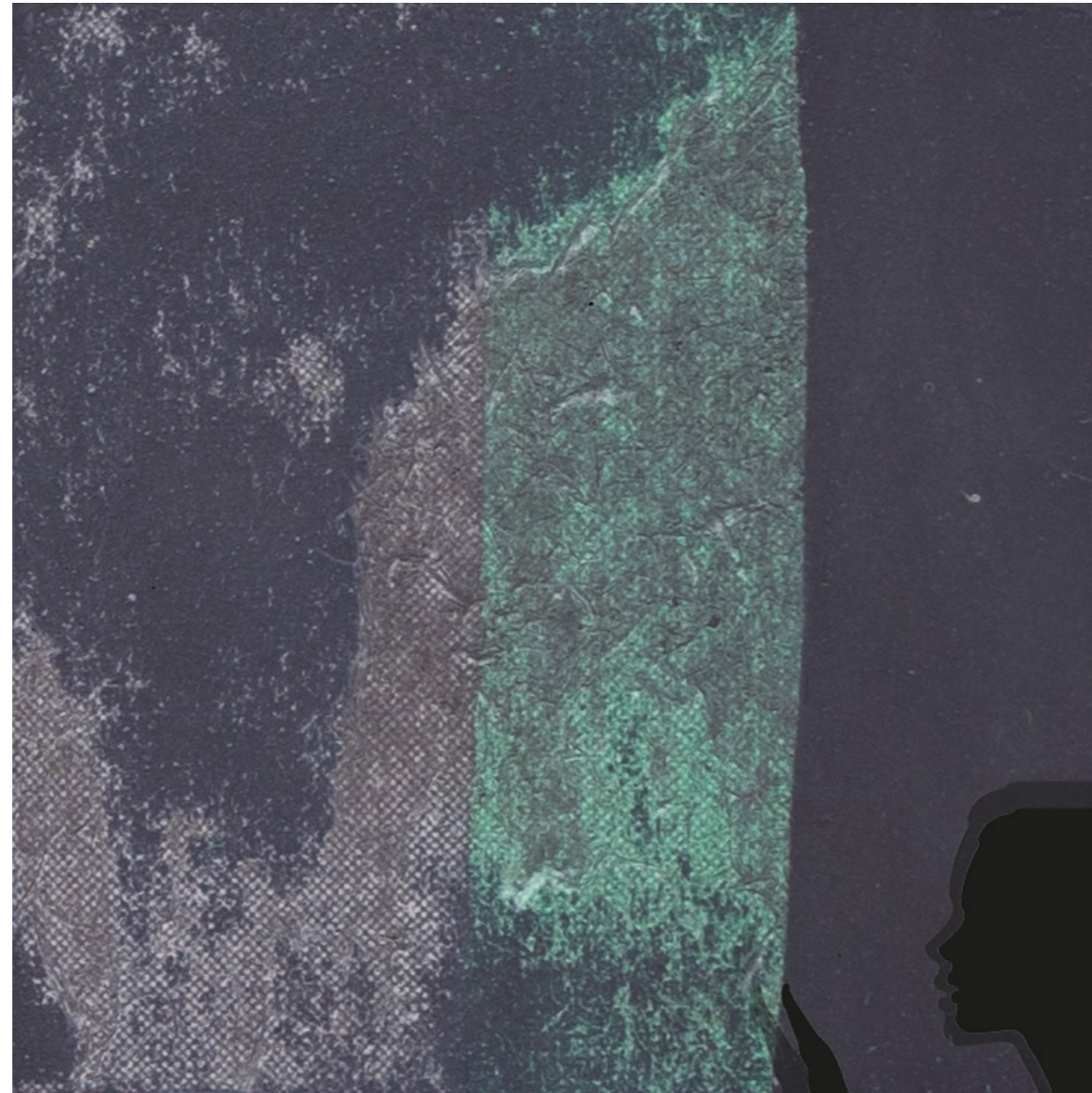
Sustainable Development and the Design Professions
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Design & Communication Tools
Matter, Space, Structure 2 (studio)
History, Theory & Method 5
Master Thesis Preparation Course 1
Matter, Space, Structure 3 (studio)

OTHER

- CAE-certificate grade A
- President of Tree Seed Association of Chalmers Architecture department (2020)
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2023-	Ästad Vineyard, Varberg, Gardener and caretaker of grapes
2022	Port Arhur, Gothenburg, Bartender
2021-2022	Folk, Folkteatern Gothenburg, Bartender
2021	Martin & Servera Restaurant Wholesale, Gothenburg, Salesman
2018	Bring CityMail, Visby, Mailman
2015-18	O'Learys Visby, Visby, Bar manager
2015	Munkkällaren, Visby, Bartender/waitress
2013-15	O'Learys Lindvallen, Sälén, Bartender
2013	Bella Gästis, Hunnebostrand, Waiter
2012	Langley Resort Fort Royal, Guadeloupe, the Caribbean, Bartender
2012	Feskarbröderna, Gothenburg, Salesman
2012	Bloomsday Pub, Barcelona, Bartender



ABSTRACT

During the experimental era of the 60s, the megastructure was not uncommon to see in architectural proposals of future cities. It can be explained as a speculative urban planning concept which imagines parts of or the whole urban fabric to be intertwined into one giant single structure. It was seen as a possible way to address challenges posed by urbanization and fast population growth and was, in other words, not purely fantasy, but believed to be critical to future cities.

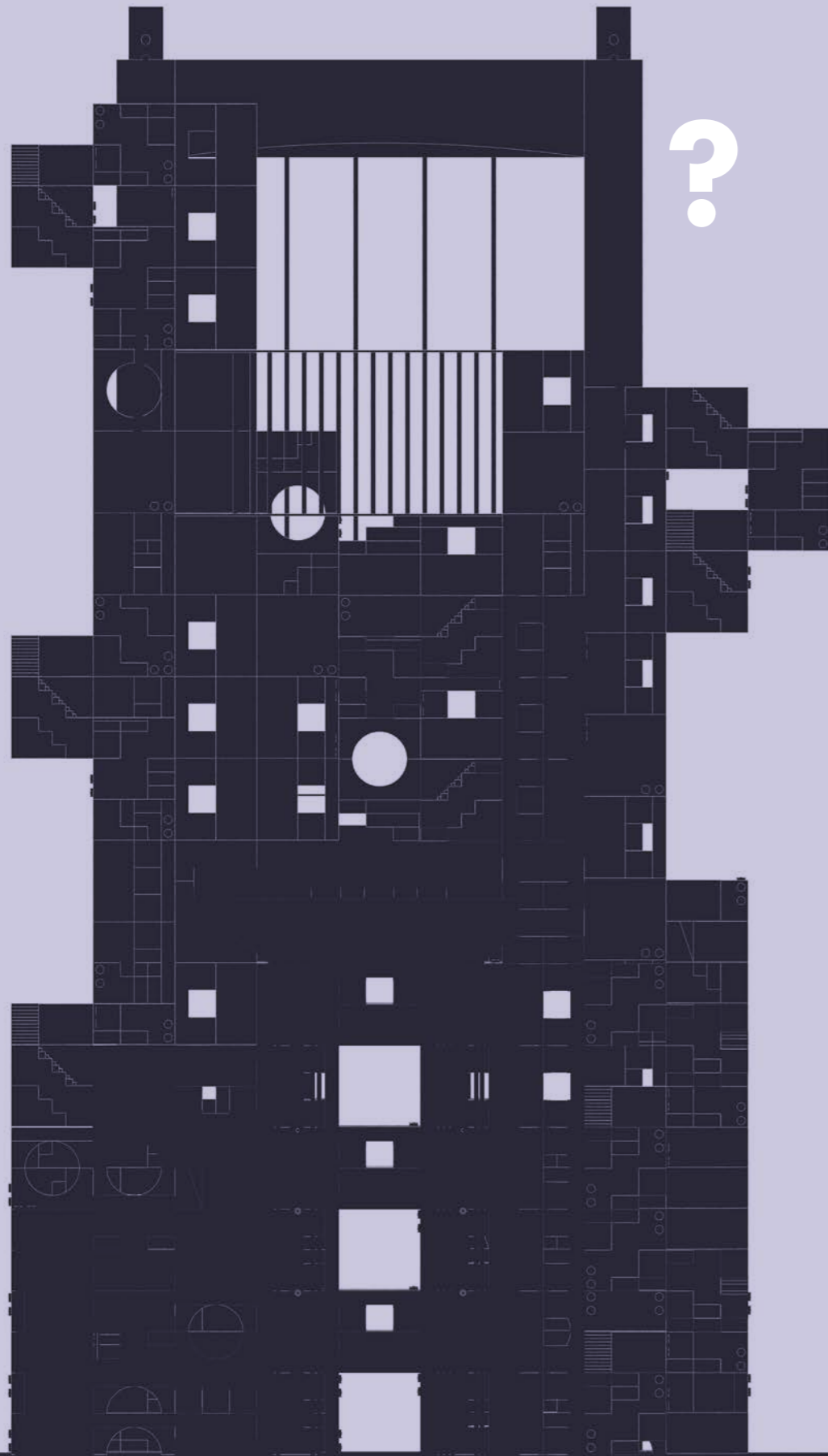
However, critics of the megastructures argue that their abnormal size and complexity not only makes them economically insubstantial, but also environmentally and socially unsustainable with a risk of generating isolated and homogenous societies. Large projects always have a tendency towards monotony, and the need for variety in human experience is often forgotten.

This thesis positions itself around the hypothesis that looking at the world today, the human experience has become more valuable, and aims to investigate the concept of a megastructure through a human scale perspective. Is it possible for humans to connect to something that massive?

To do this, design explorations on different scales revolving around connections to matter, space and context have been curated. These explorations were then reworked through different means of representation, to investigate how they can be represented with a sense of texture, weight, and tactility, capable of conveying meaning and emotion in a way that is both subtle and powerful, but also tell a story and engage with their users in a deeper and more meaningful way.

The design proposal is a product of its own design process and resulted in a megastructure in co-existence with an existing structure, the Älvsborgsbridge, in Gothenburg. The structure is called "The Connector" and emphasizes connections to the elements, materiality, to other human beings, and to mother earth herself.

KEYWORDS: Megastructure, superstructure, materiality, connectivity, tactility, representation



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CHAPTER I

BACKGROUND

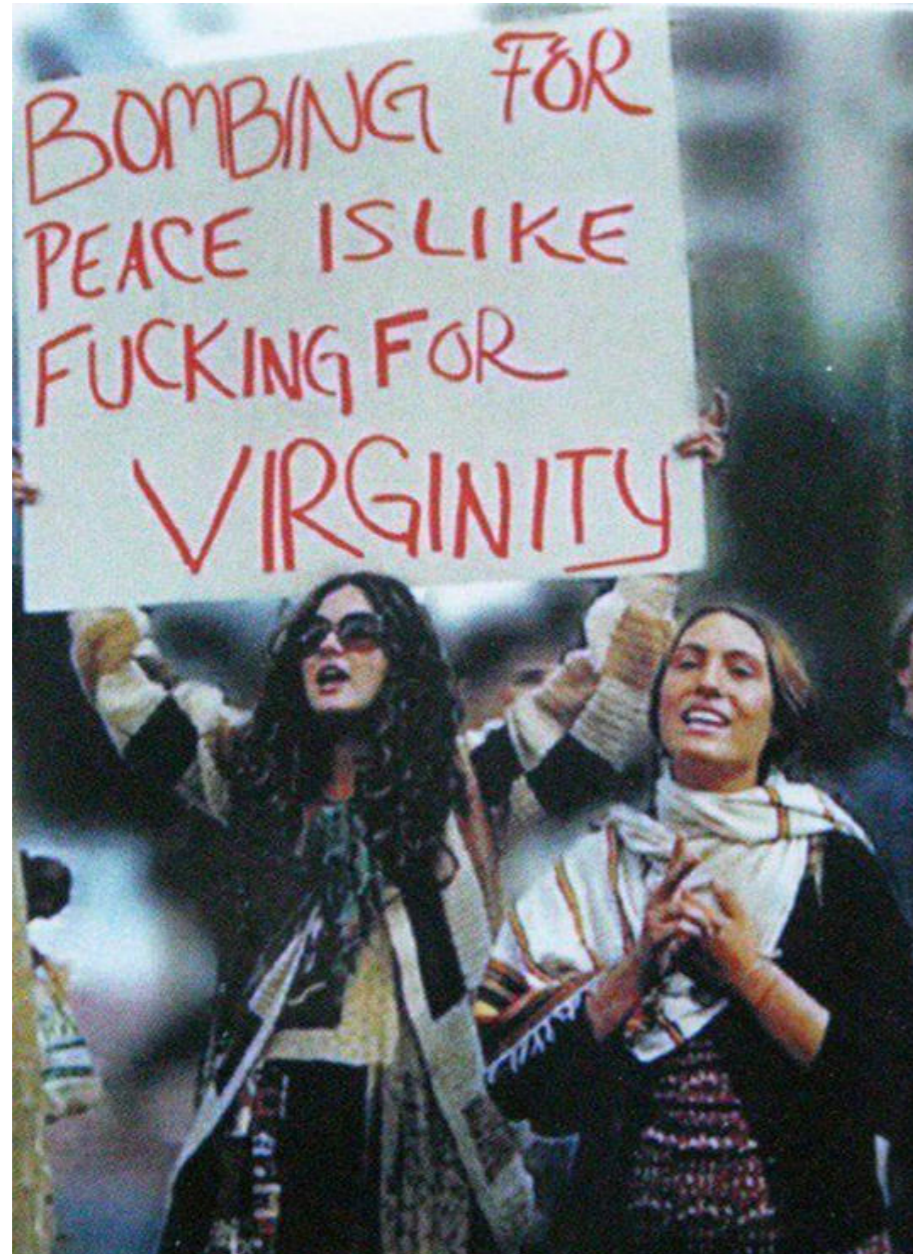


Image from: <https://historydaily.org/protests-signs-from-the-1960s>

A sign in the 1960s during during a Vietnam War protest.

1.1 - THE 60s IN GENERAL

This project developed from an interest of alternative cultures, countercultures, especially those derived from the 60s. The 1960s counterculture was a social and cultural movement that emerged in America and Europe as a response to the dissatisfaction societal norms and injustices of the time. It was a period of rebellion and experimentation, characterized by a rejection of traditional institutions and a desire for social change (Bousalis, 2021).

In America, the counterculture was heavily influenced by the civil rights movement and the anti-war movement. The Vietnam War was a major catalyst for social unrest and protest, with young people organizing demonstrations and rallies with a message of love to demand an end to the war. The Civil Rights Act of 1964 and the Voting Rights Act of 1965 also sparked a wave of activism, as African Americans and other minorities fought for equal rights and an end to discrimination (Gitlin, 1987). Another thing defining features of the American counterculture was the emphasis on individualism and self-expression. This was reflected in the fashion, music, and art of the time, as young people rejected mainstream culture and embraced alternative forms of expression (Rorabaugh, 2015).

In Europe, the British Prime Minister Harold Macmillan delivered his "Wind of change" speech, where it was declared that the British government had no intention to block independence for British colonies in Africa. In May 1968, civil unrest was shaking throughout France, leaving political leaders in fear of civil war or revolution. The unrest began with a group of students protesting capitalism, consumerism, imperialism and traditional institutions (Kammen, 2012).

It would be safe to say that the social and cultural movements from the 60s have inevitably left their mark and influenced the world. Rorabaugh states in her book "American Hippies" that these movements profoundly changed the United States forever and Gitlin argues that there is a specific answer to not only why the 60s has been a heated subject, but still are. He claims that "the genies that the 60s loosed are still abroad in the land, inspiring and unsettling and offending, making trouble", and highlights the fact that the movements of the era "forced upon us" central issues of the western world - fundamental questions of value.

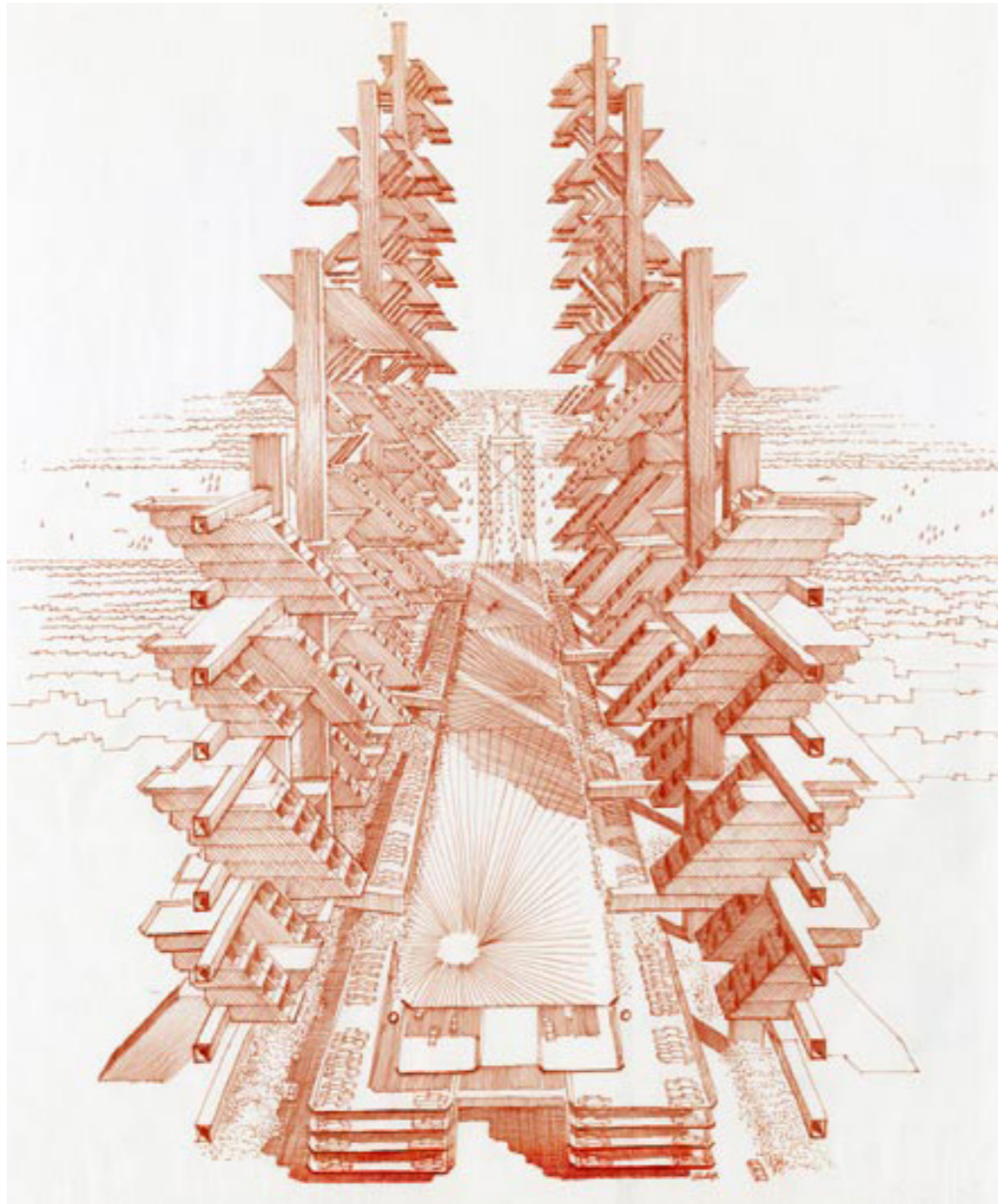


Image from: <https://www.archpaper.com/2010/11/rudolphs-lomex-in-retrospect/>

LoMex (The Lower Manhattan Expressway), Paul Rudolph (1967)
Courtesy Paul Rudolph Archive, Library of Congress

I.2 ARCHITECTURE IN THE 60s

As the era unfolded, what emerged were new cultural forms and a dynamic subculture that celebrated experimentation. With injustices openly questioned and radical ideas that set out to confront existing conventions and practices in various fields, which is also visible in the architectural world.

The on-going progressive changes in society visible in the 60s sparked a series of experimentation amongst the architects, and the grand visions dreamt up by the modernists were soon challenged by utopian experiments from the "anti-architecture" or "radical design" groups. Influences from politics, pop culture and the development of technology piled up and resulted in out-of-the-world concepts that corresponded to these major shifts happening across the globe (Lo, 2018).

A city walking on legs - why not? (Archigram – The Walking City)

"The events that were happening on a local, national and regional scale arguably affected the way in which architects and designers started to approach not only for whom they were designing, but why (they were designing)" says Sean Anderson, associate curator for the department of architecture and design at the Museum of Modern Art (MoMA) in New York (Lo, 2018).

I.3 THE MEGASTRUCTURE.

The megastructure is a speculative urban planning concept which imagines parts of or the whole urban fabric to be intertwined into one giant single structure or into several interconnected big structures. It can be defined as an "over-scaled, massive, multi-unit architectural mass", where permanent structures are supporting smaller, more or less temporary ones (Cook, 1973).

During the experimental era of the 60s, the megastructure was not uncommon to see in architectural proposals of future cities. It was seen as a way to address challenges posed by urbanization and fast population growth through optimization of land use and create self-contained environments that could support a large amount of people (Banham, 1976). In other words, it was not purely fantasy, but believed to be critical to future cities.

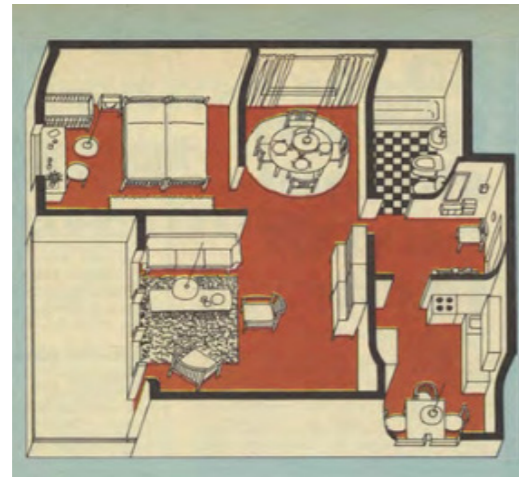
However, few of the imagined projects were actually built. Critics of the megastructures argues that their abnormal size and complexity not only makes them economically insubstantial, but also environmentally and socially unsustainable with a risk of generating isolated and homogenous societies. Another issue is the construction. "Looking back over the first half of the sixties and the characteristic megastructures of the period, it is noticeable - alarming even - how few of them actually offer any nut-and-bolt proposals as to how the transient elements should be secured to the megastructure" Banham writes. He also points out that even though the idea of the megastructure did make much of the "urban crisis", they present "a physiognomy of manic optimism" and are somewhat naive to reality.

1.4 POSITIONING

Since the megastructure as a whole is massive, positioning the thesis is of great importance. What are our fundamental questions about value, and how has it changed since the 60s? To begin to answer the question the theory chapter is helpful, but a complementary analysis of now & then has been curated based on a different medium with perhaps a broader perspective of design – The IKEA Catalogue.

IKEA is a multinational furniture company founded in 1943 by Ingvar Kamprad. In 2016 IKEA launched their own museum, located in Älmhult, Sweden – where it all began. In addition to the physical museum, they also maintain a digital museum where you can browse all the previous IKEA catalogues.

What can be told from the state of the world from within the catalogue? What did we dream about? What was our vision of the ideal? What did we hope for in the future, and what did we fear?



Funky floorplan (1966)



The IKEA-Machine (1966)



Cover of 1960s catalogue.

60s:

You wished to be modern. Stylish. International and aware of trends. You wished to be married to a good spouse. To have beautiful children, behaving according to their sex and staying in school as they grow older. You wished of a happy home. We can have it all if we work for it.

Development of technology seemed to never come to an end. Technology equals future, so you better prepare your livingroom for next generation televisions. Why not make it the main feature?

2020:

We have to be more sustainable. We have to save energy and water. Renovate, refurbish, repurpose, and do it yourself. All is needed for a bright future, or even a future at all. Creativity and diversity is celebrated. The core family is still there, but alternative lifestyles emphasized and welcomed. We wish to be interesting, aware and peaceful.

Smart technology is present but not the vocal point. What matters is human connections. Invite friends over. Impress with vegetarian dishes and play board games in the kitchen. Perhaps what we fear is isolation, to not have a purpose. Post pandemic effects still lingering.

The view on health has shifted. It is not only the physical aspect that matters. Your mind is equally important and probably interconnected to your physical health. Space for relaxation is needed in our stressful societies.

CONCLUSION: the human experience have become more valuable.



Cover of 2020s catalogue.

En ljusare framtid

Hon har precis gått i pension, är nyinflyttad i stan och super-taggad på att kickstarta sin nya fas i livet i den här eleganta och kompakta ettan. Genom att flytta till en liten bostad som är helt i hennes stil, upptäcker hon att hon nu faktiskt har mer av allt: mer frihet, mer tid och mer energi för det liv hon verkligen älskar.

"A brighter future", or even a future at all would be nice.

Låt LENNART fixa förvaringen

International trendy names like Manhattan, Cosmo and Twist found in the old catalogues are no more. We now shop local.

1.5 METHOD

This thesis positions itself around the hypothesis that looking at the world today, the human experience has become more valuable, and aims to investigate the concept of a megastructure through a human scale perspective. Is it possible for humans to connect to something that massive?

To do this, design explorations on different scales revolving around connections to matter, space and context have been curated. The explorations will be curated with inspiration from reference projects (see page 12-16). These explorations have been divided according to scale to gain a deeper holistic understanding of the structure and are as follows:

- Small - connection to material
- Medium - connection to space
- Large - connection to context
- Xtra Large - interconnectivity (structural network)

These explorations were then reworked through different means of representation, to investigate how they can be represented with a sense of texture, weight, and tactility, capable of conveying meaning and emotion in a way that is both subtle and powerful, but also tell a story and engage with their users in a deeper and more meaningful way.

DELIMITATIONS

Critique of the megastructures based on theory chapter:

- economically, environmental, and socially unsustainable
- may generate isolated, homogenic spaces (repetitiveness)
- complex but without any real construction details
- could be somewhat naive to reality.

This thesis will focus on the human experiences and connections in an abnormally large structure like the megastructure, such somewhat dealing with the social aspect listed above.

The method will work against generating isolated, homogenic spaces, and aims to create space that rejects isolation. The aim is not to create specific construction details, but to speculate around possible ideas for construction as well as brief technical solutions.

The sustainability aspect have been considered briefly. The general idea is that the material used to construct this structure consists of re-used material such as parts of walls, floors, beams, and other building elements available at the time. Furthermore, assumptions have been made that there will be innovations for sustainable casting in the future, such as using waste products. The economical aspect have been completely disregarded.

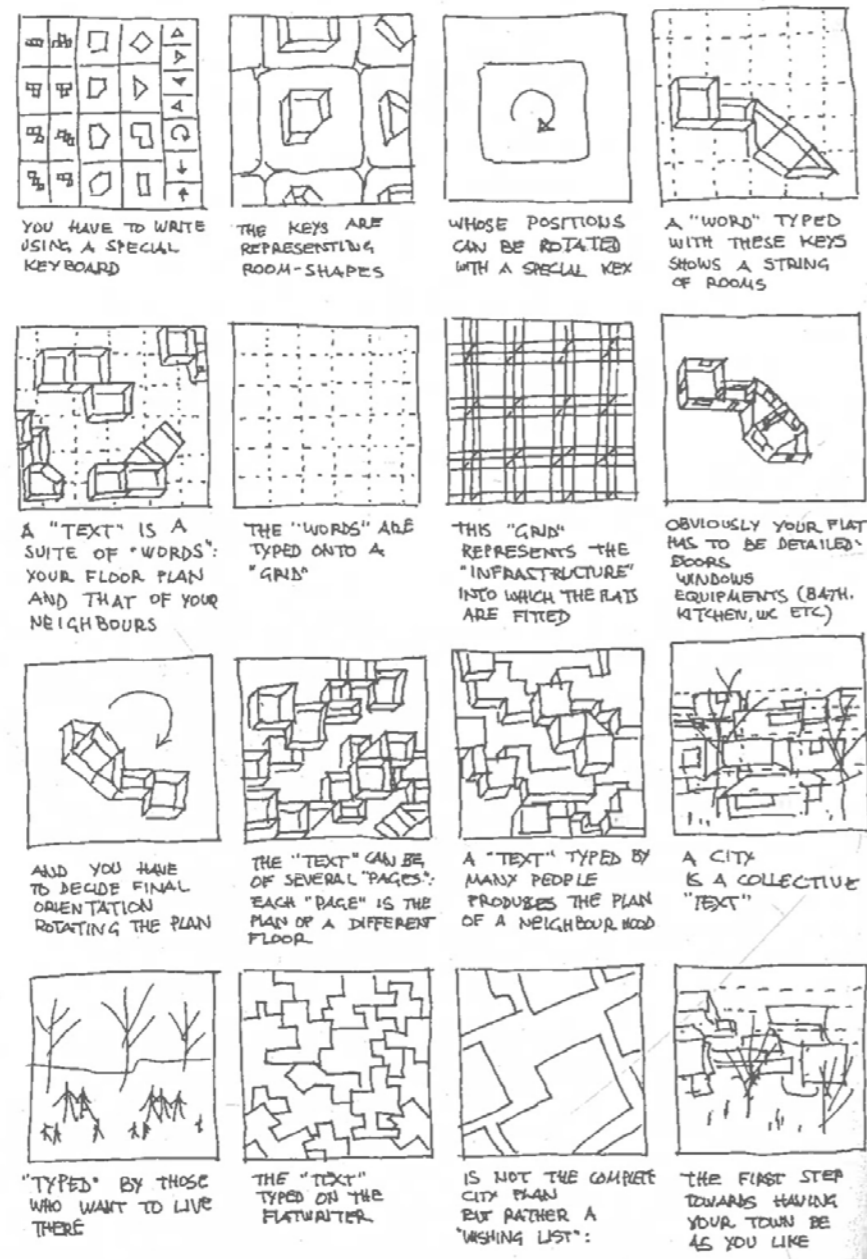
1.6 THESIS QUESTIONS:

1. How can something as big as a megastructure reject the tendency of monotony and not forget, but celebrate the need of variation in human experience?
2. How can the design elements of megastructures be manipulated to reject the feeling of repetitiveness, creating a space that is not prone to isolation, but connects both to a human scale and with a local context?
3. (How can design elements incorporated in a megastructure be imbued with a sense of texture, weight, and tactility, making them capable of conveying meaning and emotion in a way that is both subtle and powerful, and tell a story and engage with their users in a deeper and more meaningful way?)



CONTINUOUS MONUMENT, SUPERSTUDIO, 1969
Architecture at an absolute neutral level, negotiating and absorbing everything as it passes by. Critical model of global urbanization, representing a humanity that is stuck in networks and total communication.

Image from: <https://www.archdaily.com/>



Flatwriter, 1971, Yona Friedman
Image from the book "Pro Domo" p. 136

I.7 REFERENCES

REFERENCE #1 YONA FRIEDMAN & THE FLATWRITER CONCEPTUAL

Yona Friedman (1923-2020) was a Hungarian-born architect and urban planner active at the time, who gained international recognition for his innovative and visionary, and sometimes provocative ideas about architecture and society (Harris, 2023).

In the 1950s, Friedman began developing his ideas for a "mobile architecture" where he proposes a new model that is based on a network of interconnected structures (megastructures) that can be adapted and reconfigured over time to meet the changing needs of urban residents. The concept of mobile architecture culminated in his concept "The Spatial City", which is conceived as a three-dimensional framework stretched above the existing city. The framework is open and modular, allowing for the incorporation of different types of spaces, structures, and functions. In Friedman's book "Pro Domo", one can read that the structures in the framework are "designed to be lightweight and easy to assemble, using simple materials and techniques that can be easily replicated by local communities" (Friedman, 2008).

However, Friedman does not offer any "nut-and-bolt proposals" as to how they will be constructed. What is particularly interesting with The Spatial City though, is that it intended to be a participatory model of urban planning that empowers the residents of the Spatial City to have the freedom to design and customize their living spaces as they desire. To present knowledge in a form that could be easily digested, Friedman developed a vehicle for communication, his "manuals". These are handbooks in the form of a comic book that explain, step by step through text and drawings, issues and choices in architecture and urban planning (Friedman, 2008).

The image to the left shows a tool called the "Flatwriter", in manual format. It is to be understood as a typewriter with a special keyboard conceived to enable the process of self-planning; for the user to design the plan of his future home in the Spatial city, or for a citizen to re-design his neighbourhood in the Spatial City. (The title should be taken literally; the "Flatwriter" was meant to design apartments).



Way Out West: Berlin - Elevation Through Square
Peter Cook, 1988.

Image from: <https://byggeri-arkitektur.dk/>

“Architecture is what you do
with the potential of life.”

- Peter Cook, 2015

(in an article for indianexpress.com when hosting exhibition in India for the first time)

REFERENCE #2 PETER COOK & THE IMPORTANCE OF IMAGINATION CONCEPTUAL/REPRESENTATION

Sir Peter Cook (1936- and yes, he is knighted), a British avant-garde architect has profoundly shaped and helped shape architecture and architectural thinking since the 60s. Using visually strong collages and drawings, he and his neo-futuristic collective Archigram imagined new, provocative ways of possible future cities and out-of-this-world concepts like the Walking City, the Instant City and the Plug-in-City, were introduced to the world (Louisiana Museum of Modern Art, 2022).

To take, the Plug-in-City for example, it can be understood as a hypothetical fantasy city containing modular residential units that “plug in” to a central infrastructural mega machine. The Plug-in City is in fact not a classical city, but a constantly evolving megastructure that incorporates residences, transportation, and other essential services - all movable by giant cranes (Cook P. , 1999).

Peter Cook and Archigram used drawing as the primary medium to represent these concepts, and the drawings bridges the fantastical and the visionary with the classical architectural drawing, resulting in pop-artsy, colourful collages always related to a real place and often are accompanied by floorplans, and he pinpoints the importance of the drawing as a tool in architecture as a way of expressing future visions and generate debate (Louisiana Museum of Modern Art, 2022).

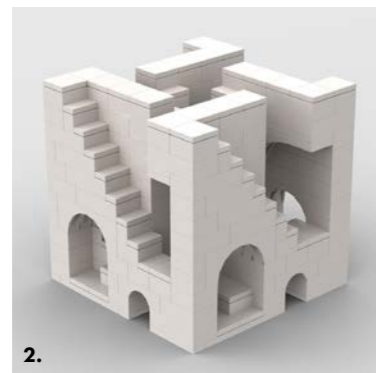
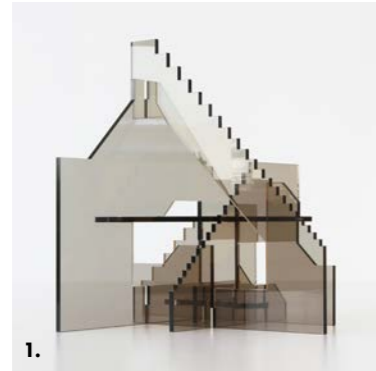
He highlights the importance of imagination, and argues that “It is precisely here, on paper, that there is the most excellent chance of moving away from the prevailing notions of cities and ways of life – detached from the demands and obligations that lie in thinking of concrete solutions and materials”.

REFERENCE #3

DAVID UMEMOTO

METHOD/MODELMAKING

Standing at the juncture of architecture and sculpture, the concrete work David Umemoto shows volumes designed as puzzles with limitless possibilities of combinations. The casted volumes are more complex than the volumes generated in the Flatwriter, but still shows how space can be studied in terms of void and mass. This project is relevant not only because of this, but also displays methodology.



1. Digital Architecture "Rotating Stairs" - Modular acrylic installation, 2021
 2. Brick Model No.2 (based on "Spinning Stairs" concrete sculpture)
 3. Concrete Modular Work, year varies (unknown name)

REFERENCE #4

PROJECTS BY RICARDO BOFILL

BUILT REFERENCES

Renowned for his radical approach, Bofill's projects are particularly noted for addressing issues of urban planning on a political and social level. Many of his works express a sense of large-scale experimentation, and together with the use lively colours and bold geometries of precast concrete, he has been celebrated as one of the most representative postmodern architects in Europe (Myers, 2022). As such, he work of Bofill served as a source of inspiration to allow the design proposal of this thesis to reject the "strict rules of repetition" and to achieve a dynamic mix of shapes and spaces within a large structure.



Walden 7, Barcelona, Spain (1975)
 Image from: <https://ricardobofill.com>

"From the building's interior, it immediately becomes clear that the cells all differ from one another. Not only does each have a separate entrance, but the location of the entrance door ensures visual privacy. In other words, it was not a question of dividing up a large building in the traditional manner, but of creating a series of individual cells that combined to form a block" (ricardobofill.com).



La Muralla Roja, Alicante, Spain (1973)

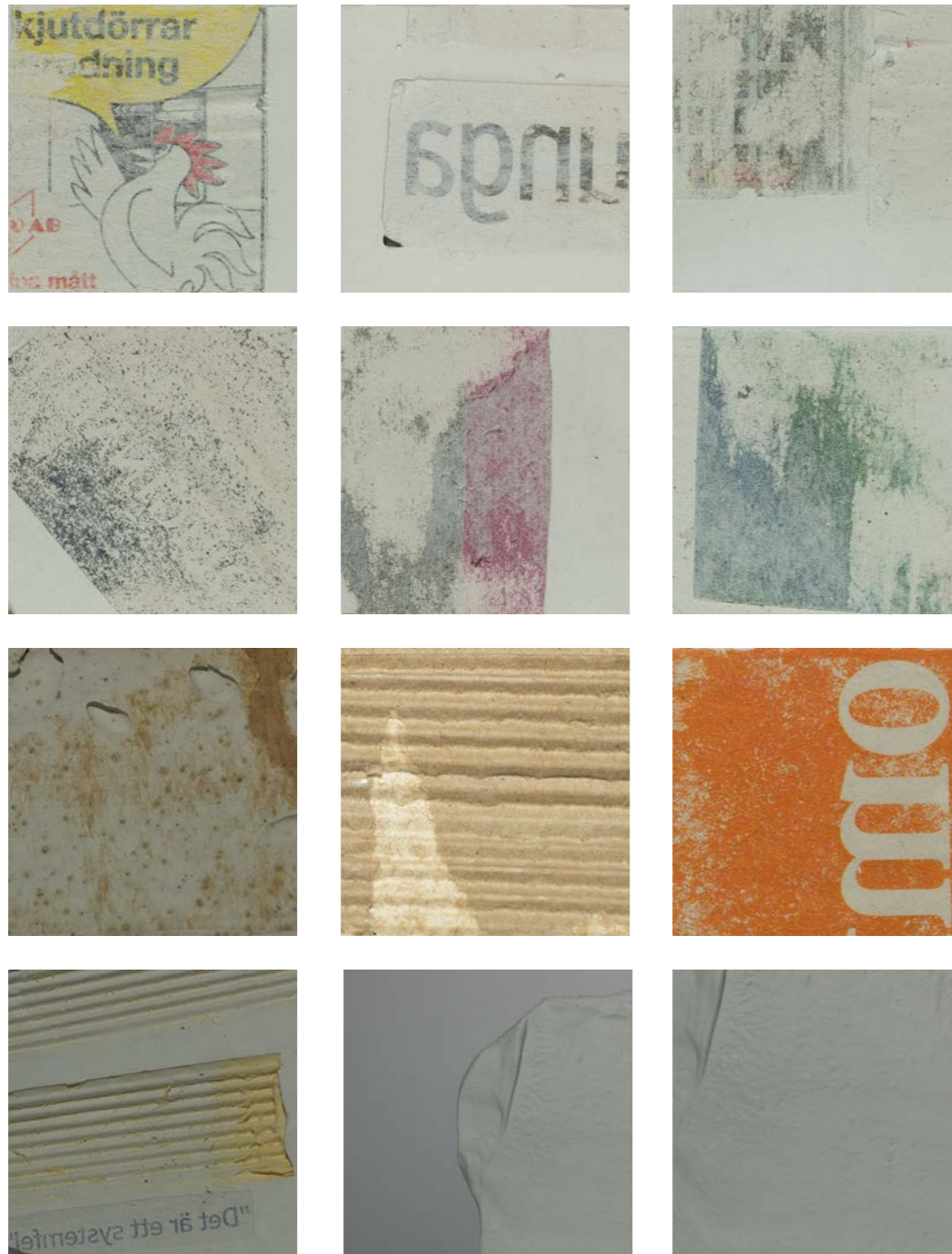
There is also interesting use of colour, where the architectural elements are colourcoded based on their function and/or structural function: "The criterion of applying to the building a gamut of various colours responds to the intention to give a determined relief to the distinct architectural elements, according to their structural functions."

CHAPTER II

DESIGN EXPLORATIONS.
S-XL

II.1 SMALL

CONNECTION TO MATERIAL



Plaster tiles with imprints from newspapers, magazines and cardboard.

IMPRINT CASTING

The aim of this exploration was to examine the ways in which memories can be embedded in architectural form through manipulation of material. The goal is to enhance the narrative of the material through imbuing a storytelling capability into it.

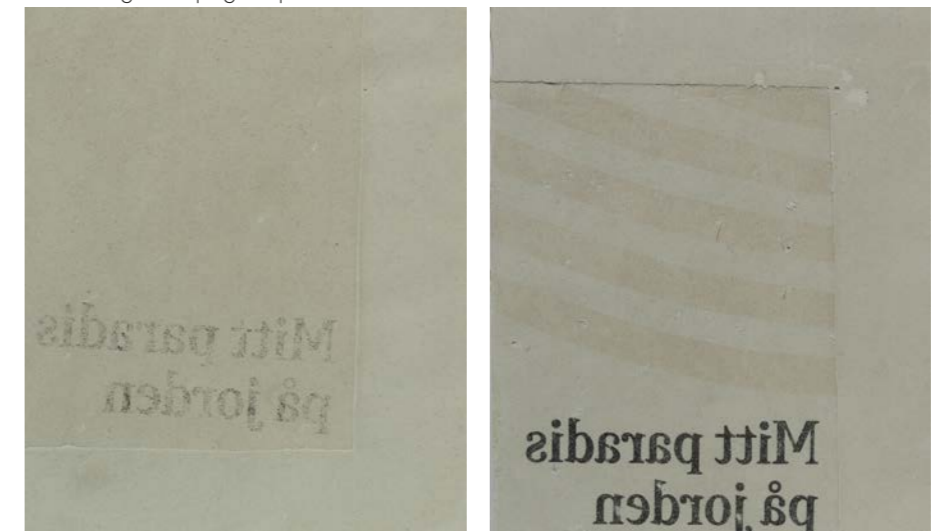
For the first iteration, this was done by casting a number of plaster tiles. The tiles are casted upon cut outs from newspapers, travel magazines, and cardboard, trying to transfer imprints onto the plaster. This method proved to be succesful, resulting in rather clear imprints where both texture, text and colour was transfered to a high degree.

Apart from the cardborad, two different types of paper was tested: rough pages from newspaper and sheer magazine pages, and there was one noticeable difference. The newspaper pages almost fused with the material transferring not only the print on the page but the texture of it.

The prints on the sheer magazine pages did not transfer as easily. On the first try the imprint was almost non-existant. However, re-casting on the same piece of paper proved to work perfectly, concluding that the sheer paper needed to be wet to generate a succesful transfer.

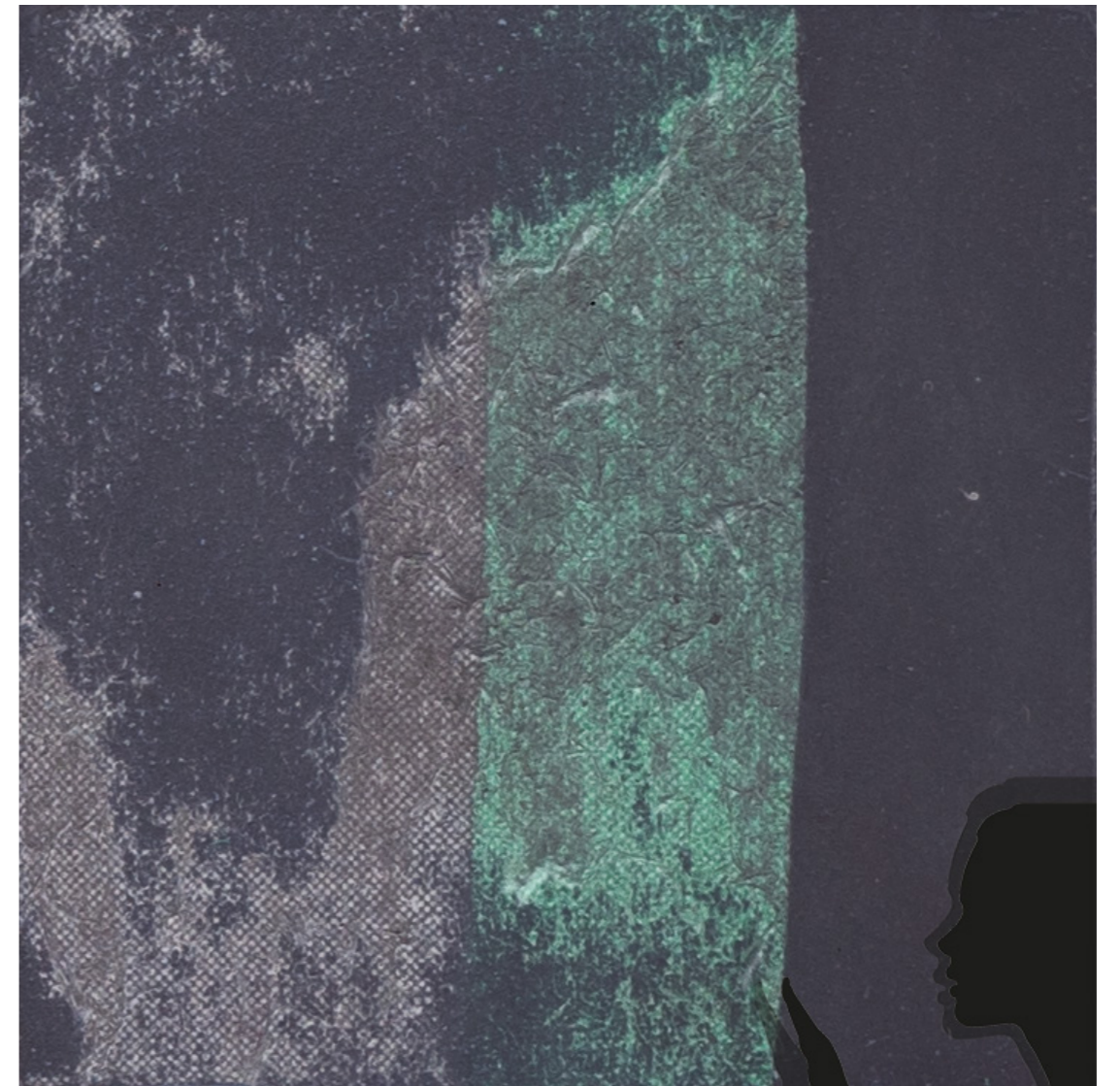
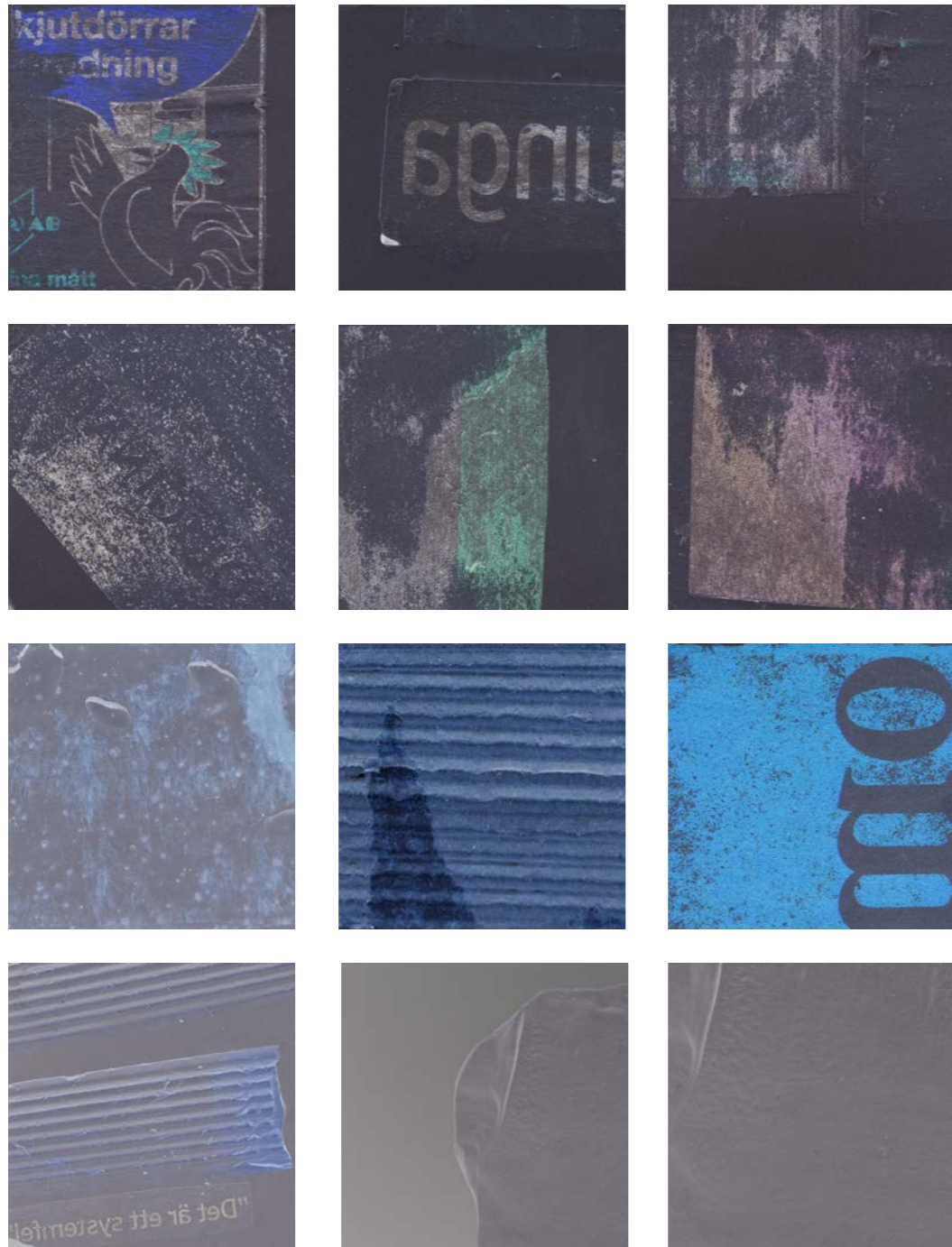
Lastly, the imprints were tested with inversion. This was due to the belief that this would be effictive in a future story-telling perspective. Results are found on the next page.

Sheer magazine page imprint



First try

Second try (wet)



Imprint plaster tile #5 - inverted, with feels

The inversion makes the images look like an x-ray.

II.2 MEDIUM

CONNECTION TO SPACE



Side

Smooth texture where the layers of LEGO bricks used for the cast is visible.

ALPHABET OF SHAPES

Megastructures can be understood to consist of permanent structures supporting smaller, more or less temporary ones. With inspiration from Yona Friedmans model of "the Flatwriter" combined with modelmaking from David Umemoto & Oloof Duus, it is time to set the rules for the less temporary geometry that will inhabit the megastructure.

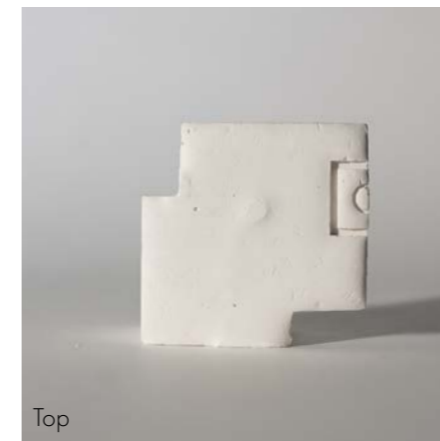
Small geometric models was casted, with the aim to be used as an alphabet of shapes for generating possible combinations of form without any or little visible logic.

In addition, the second aim was to create casts that could easily be modified and disassembled, preferably without any additional material costs apart from the plaster. The casts of the models are thus constructed in LEGO - something easily reassembled and changeable, while providing a strict geometrical language.

ITERATION NO.1

Building the frames for casting with LEGO gives endless combinations of shapes and results in three different surface textures. The bottom side is imprinted by the LEGOs, giving a high complexity texture while the top side is left "unattended", which results in a rough but still quite smooth texture. The four sides are confined to the flat sides of the LEGO bricks, which gives them a very smooth and brick-like texture.

The loss of mass is highly noticeable in this iteration. The plaster is fragile and basically falling apart when removing the cast. They are, by just existing, becoming ruins.



Top



Bottom



Bottom + side

Two units stacked on top of each other rotated to highlight different textures. Here the smooth texture is mixed with complexity. Monumental vibe.

ITERATION NO.2

For this iteration the aim was to manipulate the plaster by adding colour pigments to the water in the plaster mix. The pigments used water colour pigments from Winsor & Newton and are yellow ("Lemon Yellow Hue"), red ("Alizarin Crimson Hue"), blue ("Ultramarine") and green ("Viridian Hue").

To achieve sufficient colourization the pigments are to be completely dissolved in water before adding plaster, resulting in units with a pastel colour.

One observation is that the models are noticeably less damaged in this iteration. This is believed to be due to not letting the plaster dry completely in the cast before dismembering it. Thus, taking the mold apart before complete hardening shows signs of minimal material loss.



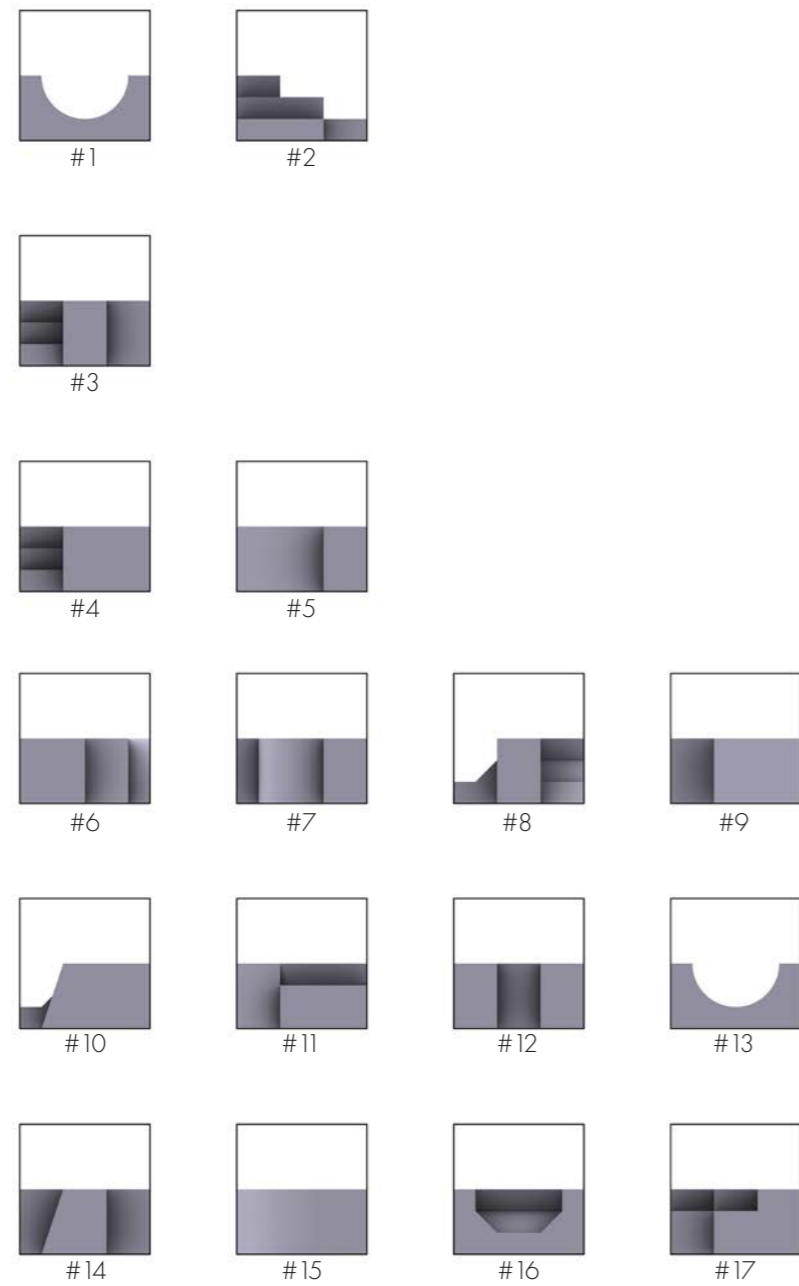
side



Bottom + side



Bottom + side



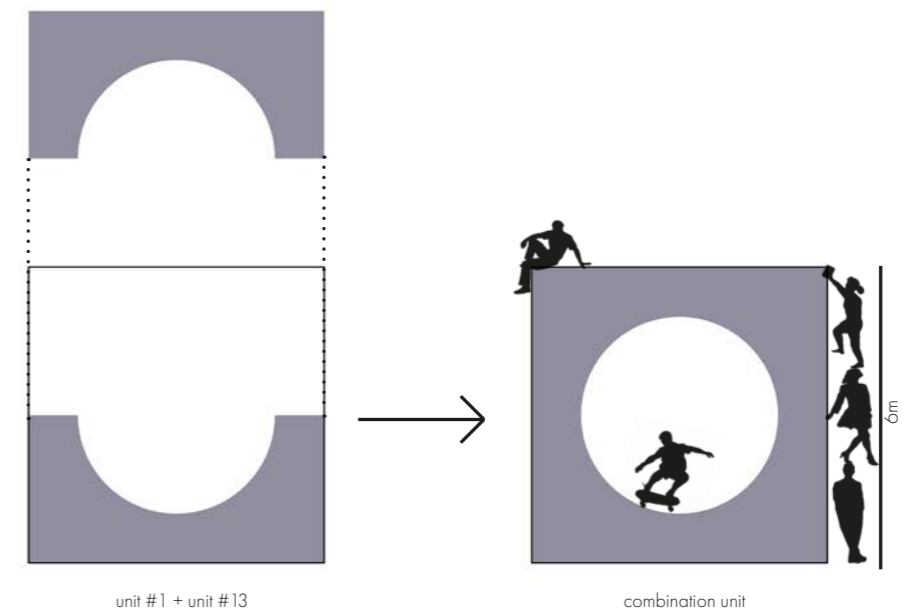
Side view of all 17 models from iteration no. 2 with neutral colours (numbered in no specific order).

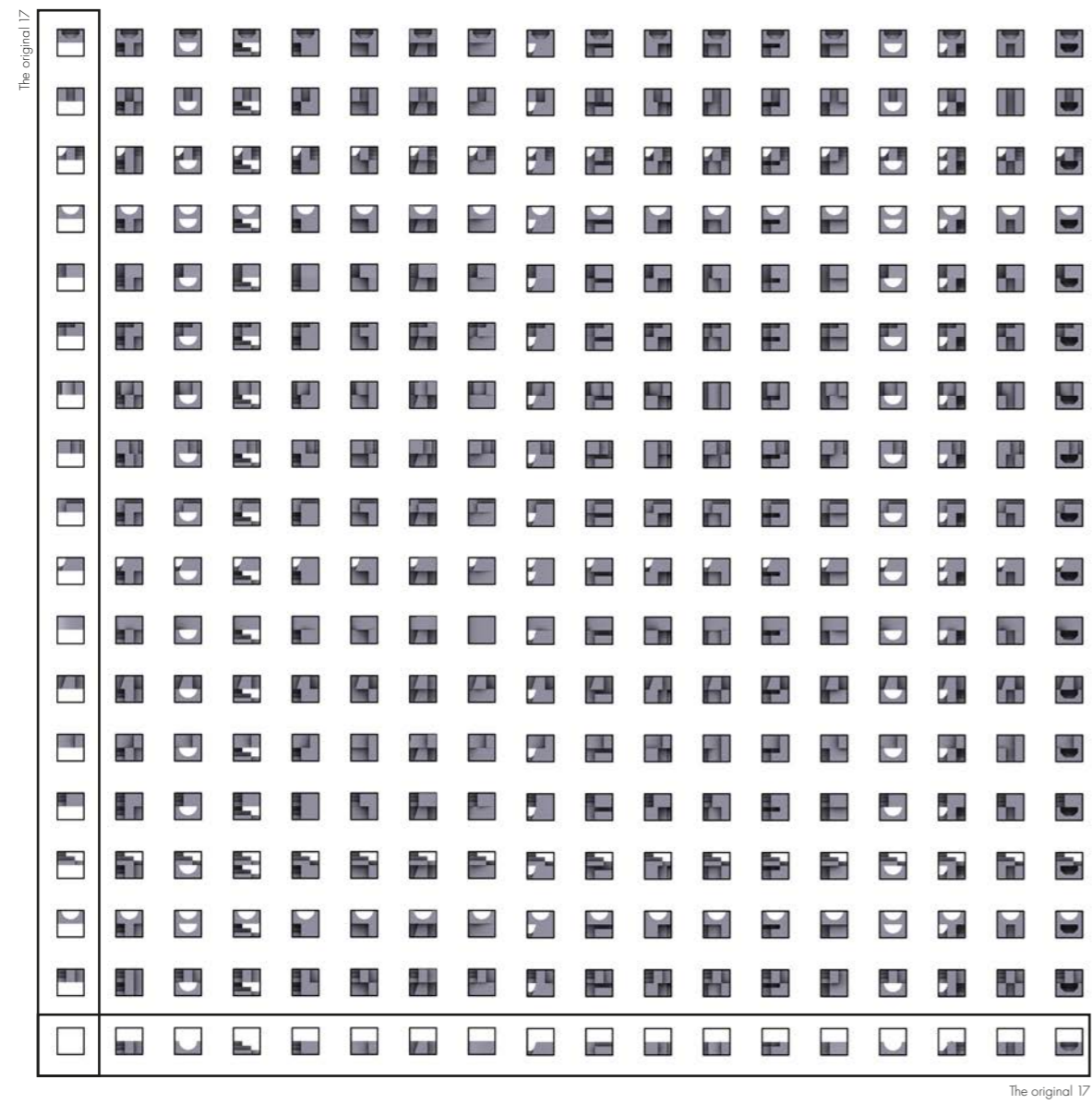
THE ALPHAPET

To collect all casted models and study the different combinations, a digital translation was performed. To the left, all 17 models from iteration no.2 are showed in digital form. The colours have been discarded in the translation, simply because they had no direct meaning.

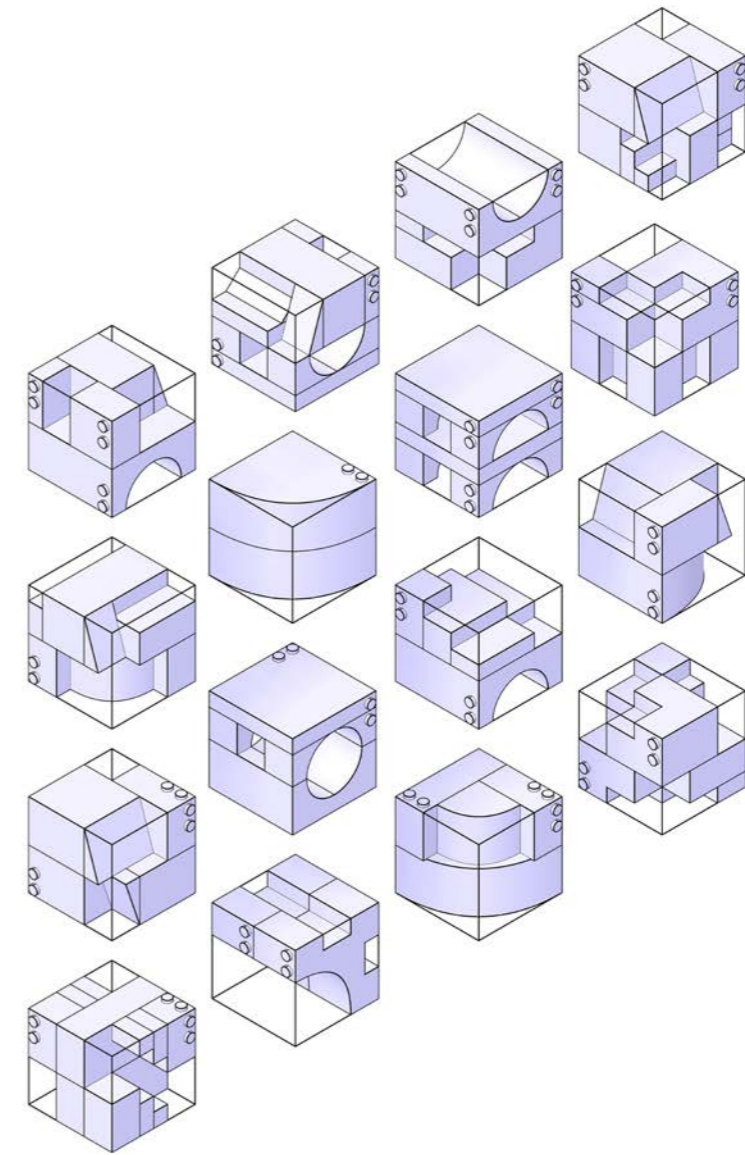
An "automatic" scale seem to have been implemented. This is shown as a bounding box added in the print, displaying the only rule for the casts, a 6x6 bottom plane (LEGO scale, but can be thought of as meters, eg 1 box is 6x6x6 meter). Due to this, one single model can be seen as a 3 meter high, and close to/less than 40 square meters big unit.

If stacked together, they fill the whole 6x6x6 meter bounding box, which seems like reasonable human scale to continue exploring.

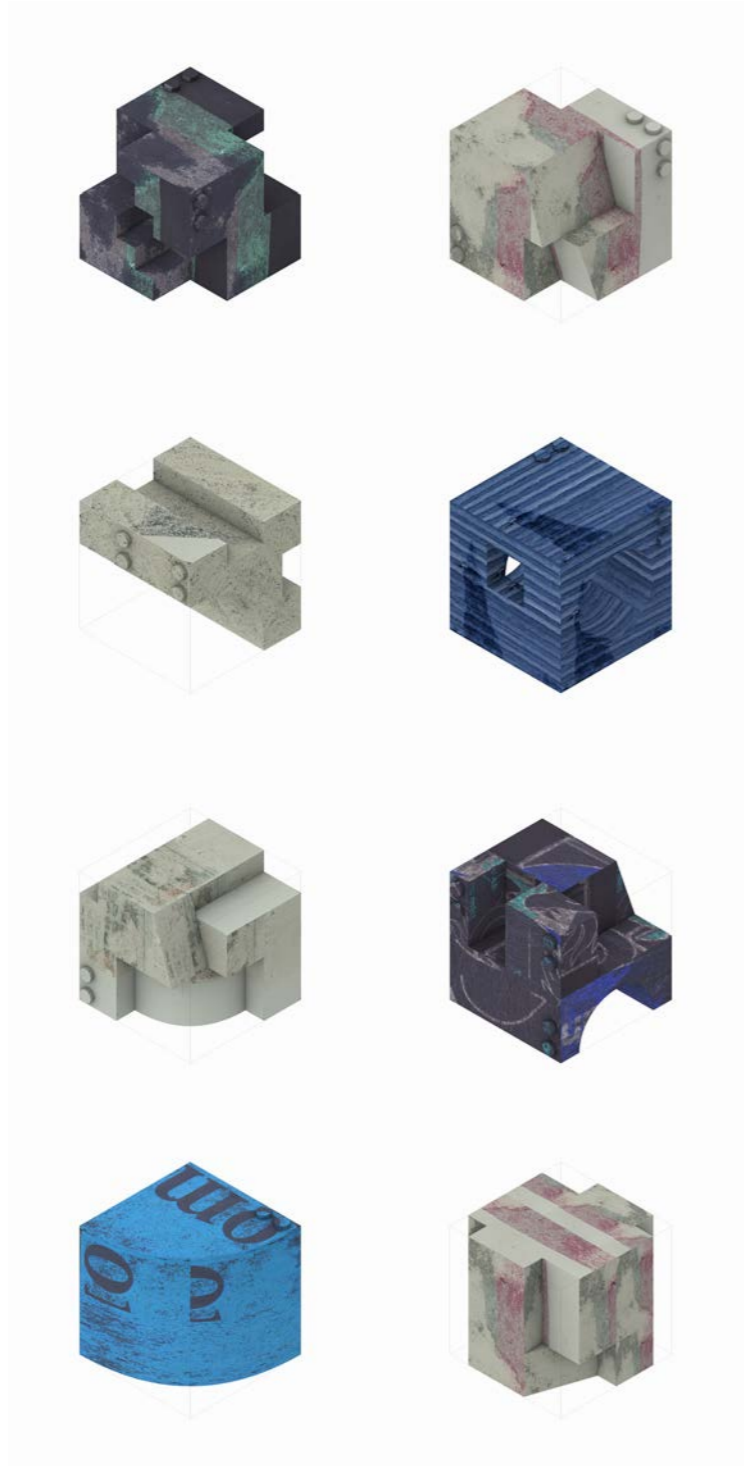




Side view of all 289 possible combinations of the 17 original units (highlighted)



Isometric view of 16 selected units for further development.



The units are selected believed to suit a certain purpose, such as stairs, "housing", platforms, or simply because they offer possible interesting spaces.



Units with imprints texture mapped onto them, starting to get a feeling of materiality and tactility.



THE SENTIMENTAL FUTURE?
Collage of Gothenburg facades

II.3 LARGE

CONNECTIONS TO CONTEXT



Semi circular windows

Wooden colourful facade

Plain pillars

Decorations around windows

Bottom level - plaster/stone

"Vaults" as entrance to courtyards

Decorations around vaults

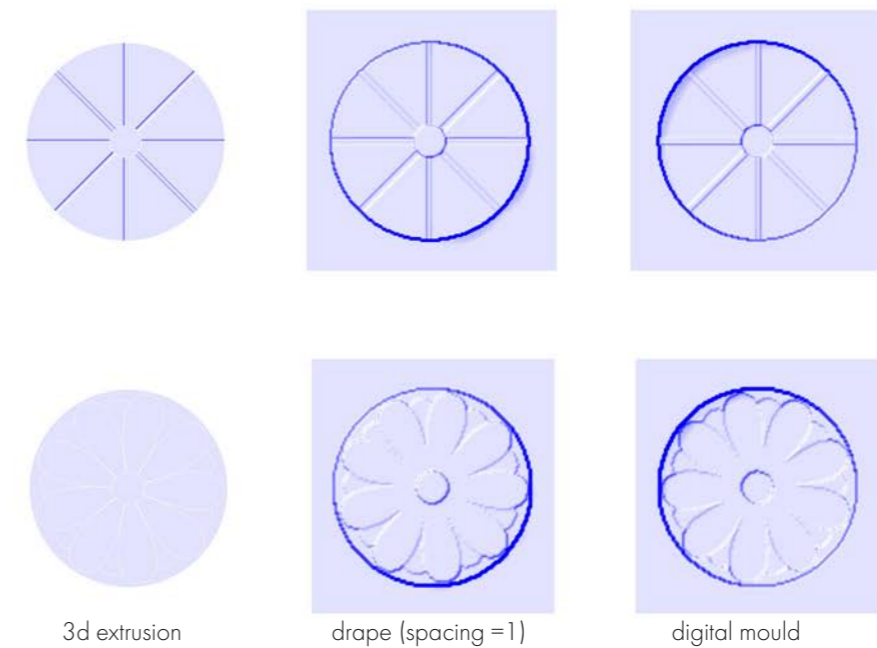
Kennedygatan, Kungsladugård, Göteborg
(www.familjebostäder.se)

DIGITAL CASTING

How to make the structure connected to its surroundings? The aim of this exploration is to investigate using whole buildings (or parts of them) to make imprints. Details of the area Kungsladugård with its famous "Landshövdingehus" has been translated into digital form to be represented as "digital casts". This was done through a three step process:

1. Model details in 3d (3d extrusion)
2. Cover the extrusion with the function "drape"
3. Reverse the draped shape to get the mould

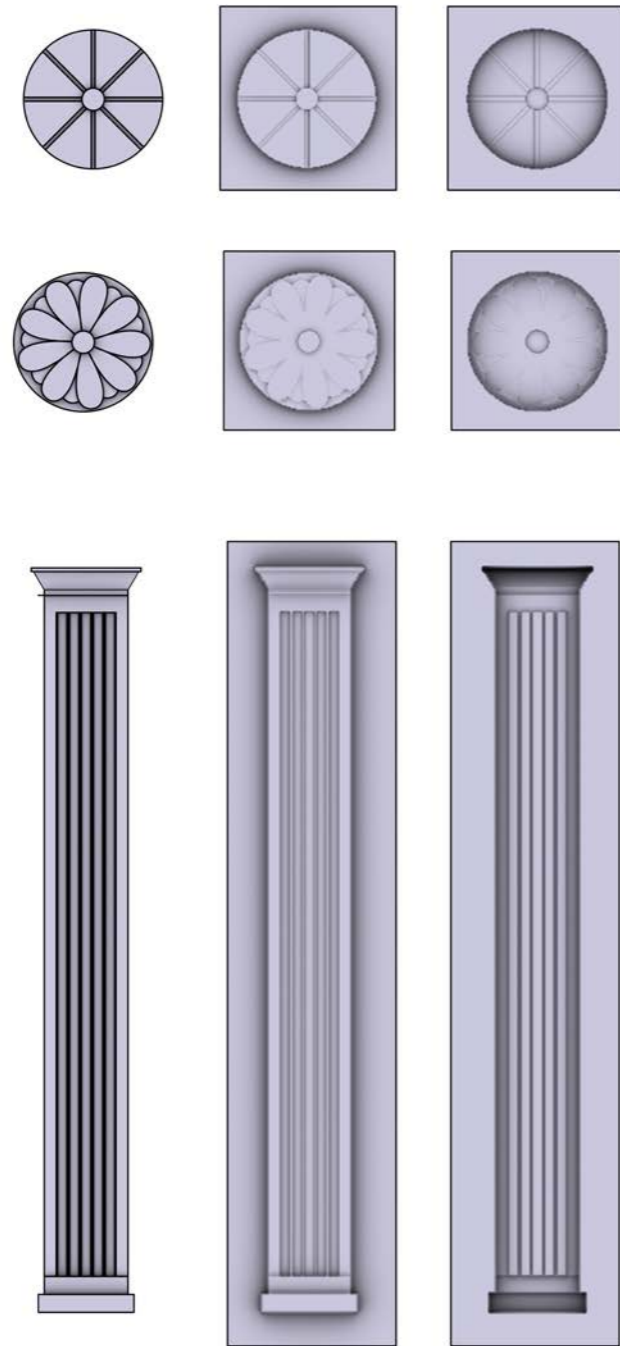
The digital cast is not aiming to be an exact replica of its original, but to be a digital translation with noticeable similarities. The process resulted in moulds of the original detail with a softer touch due to the drape effect. One could imagine that the original detail was covered by a digital cloth, thus resulting in a mould with less definition and softer edges. In the drape-command, the "tightness" of the digital cloth is determined by a factor called "spacing". The moulds in this attempt are created with spacing = 1, which tightens the cloth around the object as much as possible, leaving a mould with high resemblance to the original. This effect was sought after to mimic a real casting process, which is not perfect and would probably result in some imperfections in the mould.



3d extrusion

drape (spacing = 1)

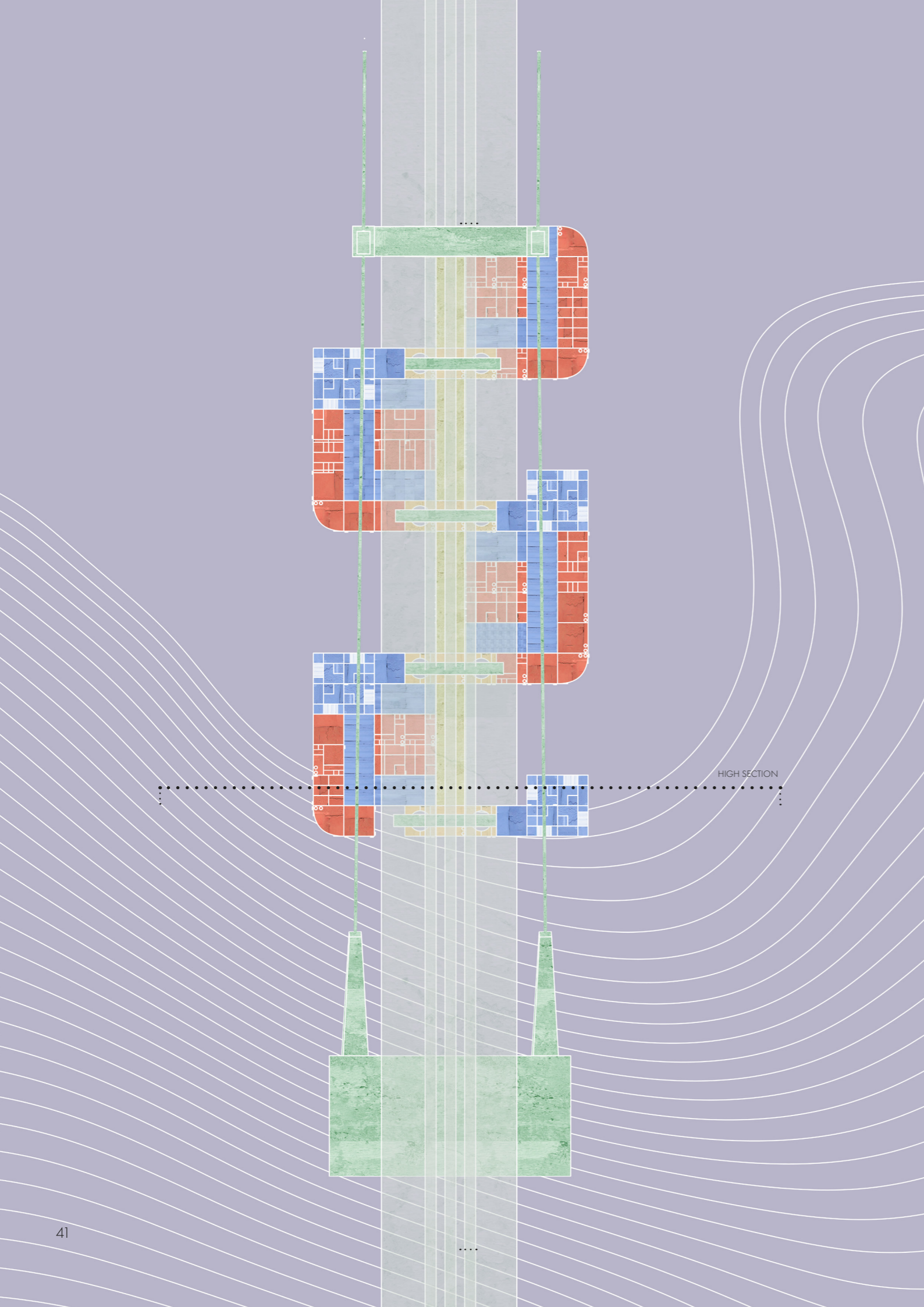
digital mould



Details of the area Kungsladugård made with "digital moulds"

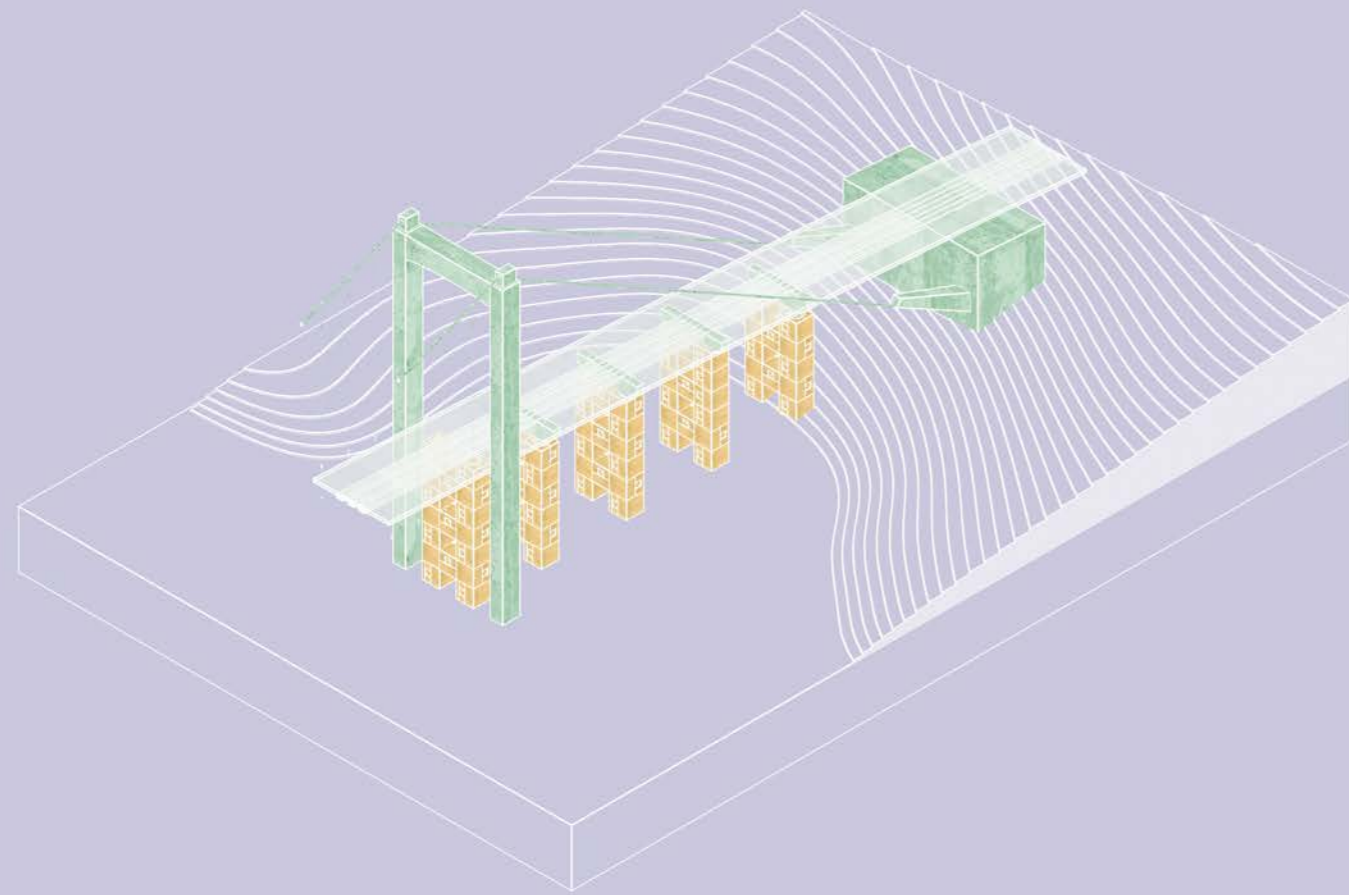


Decorative pillar casted digitally.

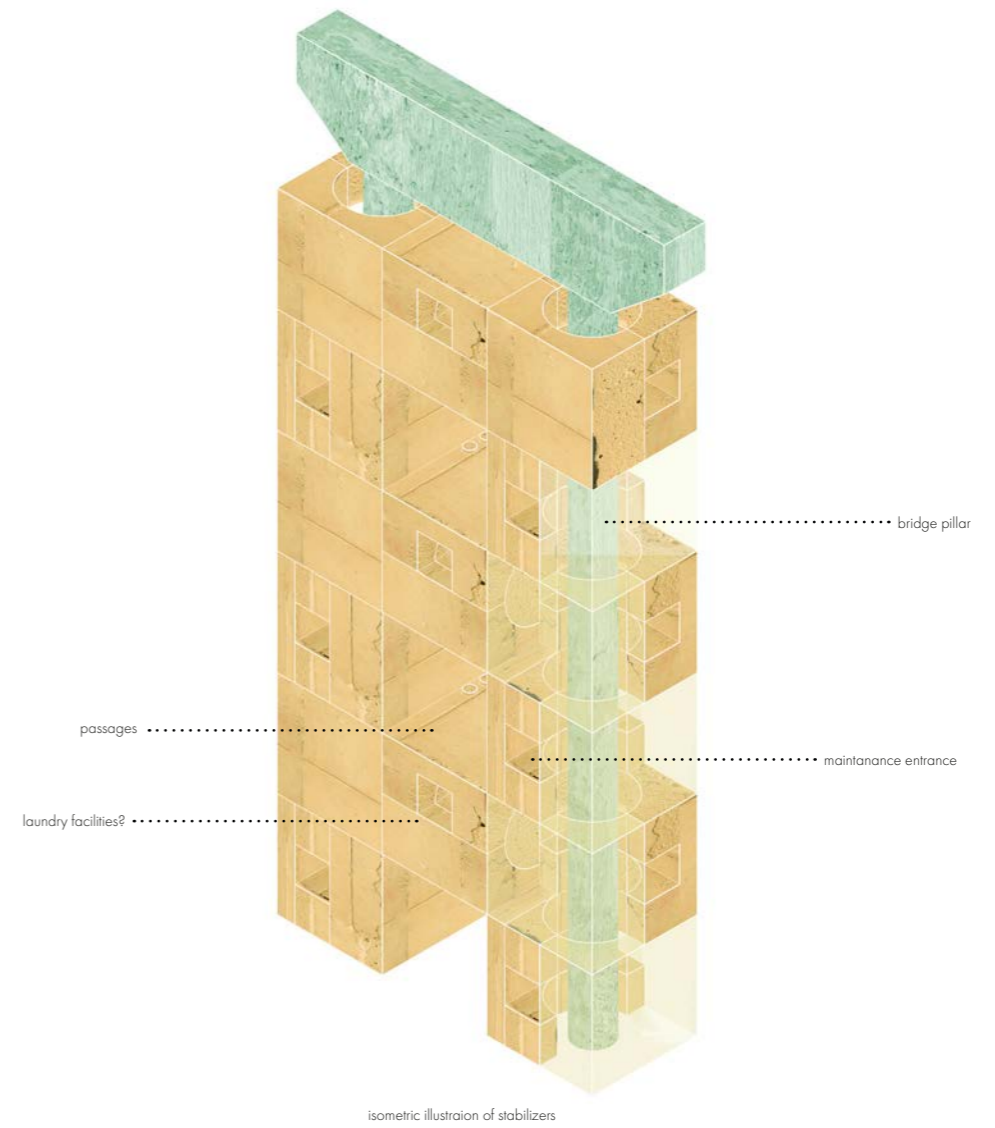


II.4 X-TRA LARGE

INTERCONNECTIVITY
& THE STRUCTURAL NETWORK



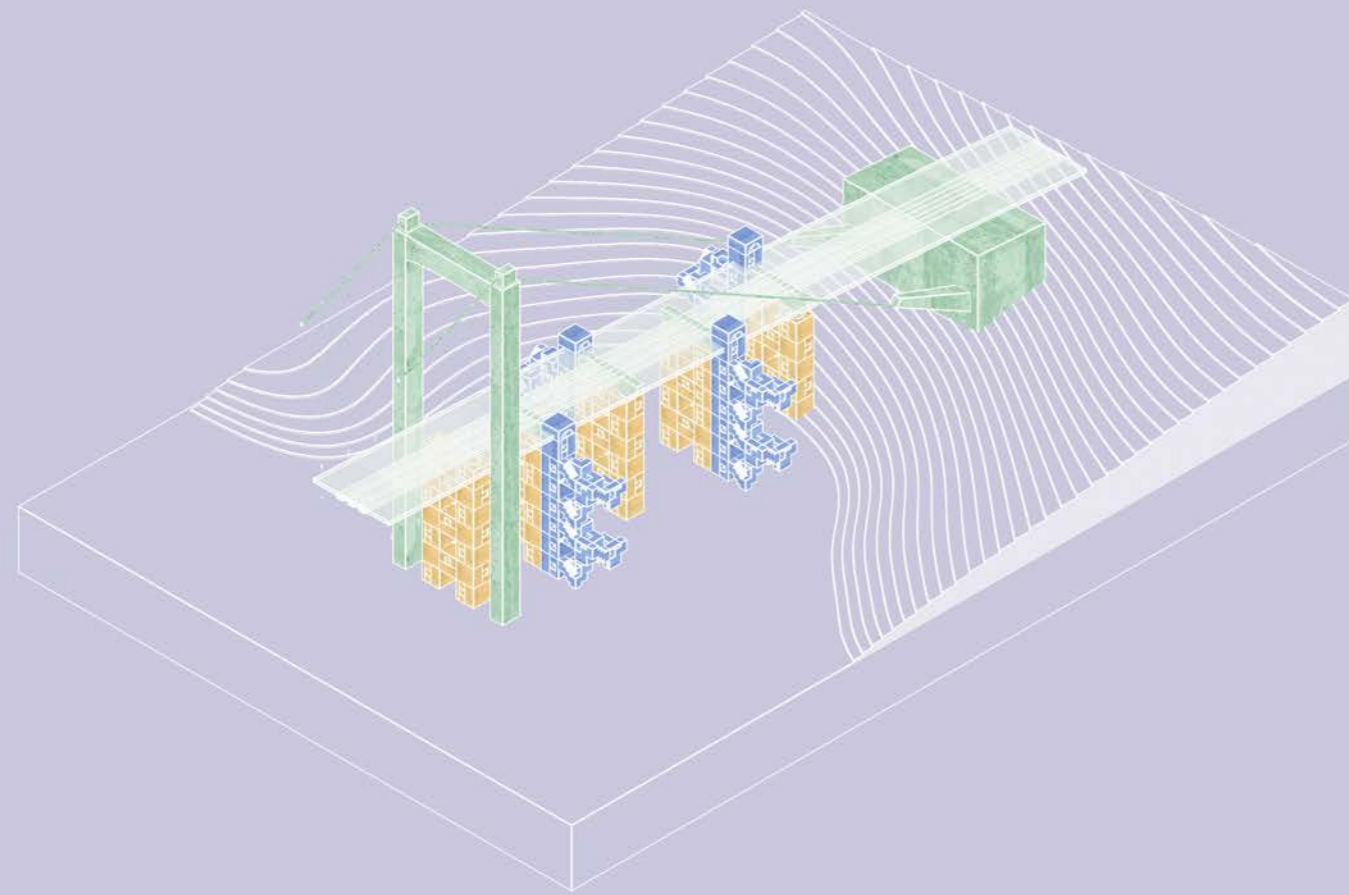
Digital model - stabilizers



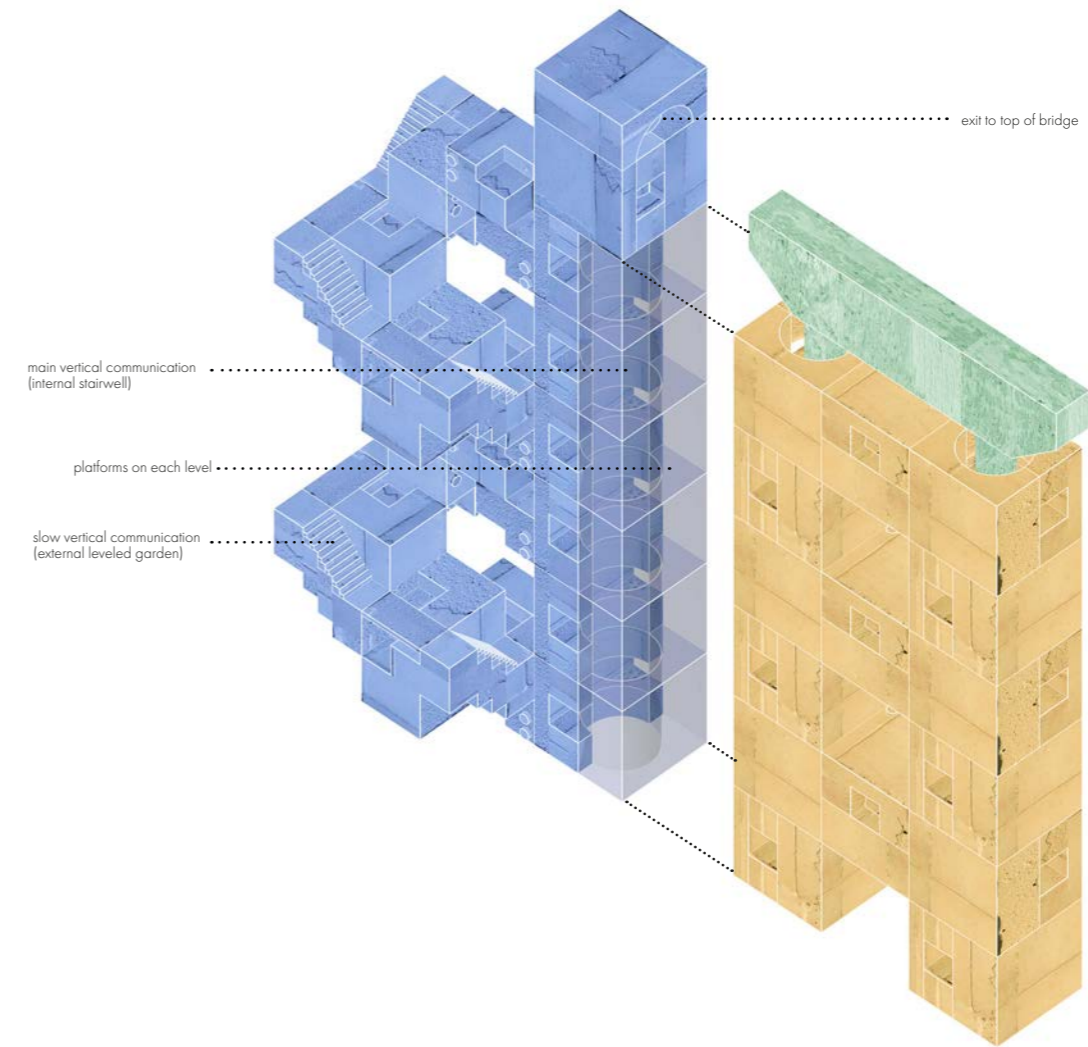
isometric illustration of stabilizers

THE STABILIZERS (YELLOW)

The stabilizers were constructed by combining element no.X and no.X, which generated a square unit with a circular internal void that could wrap around the existing round pillars of the bridge. This makes the old bridge and the new structure exist in symbiosis, one supporting the other. The stabilizers empower the bridge to be able to bear the extra load from the new structure, while the pillars ground the new structure and enables it to grow.



Digital model - vertical gardens

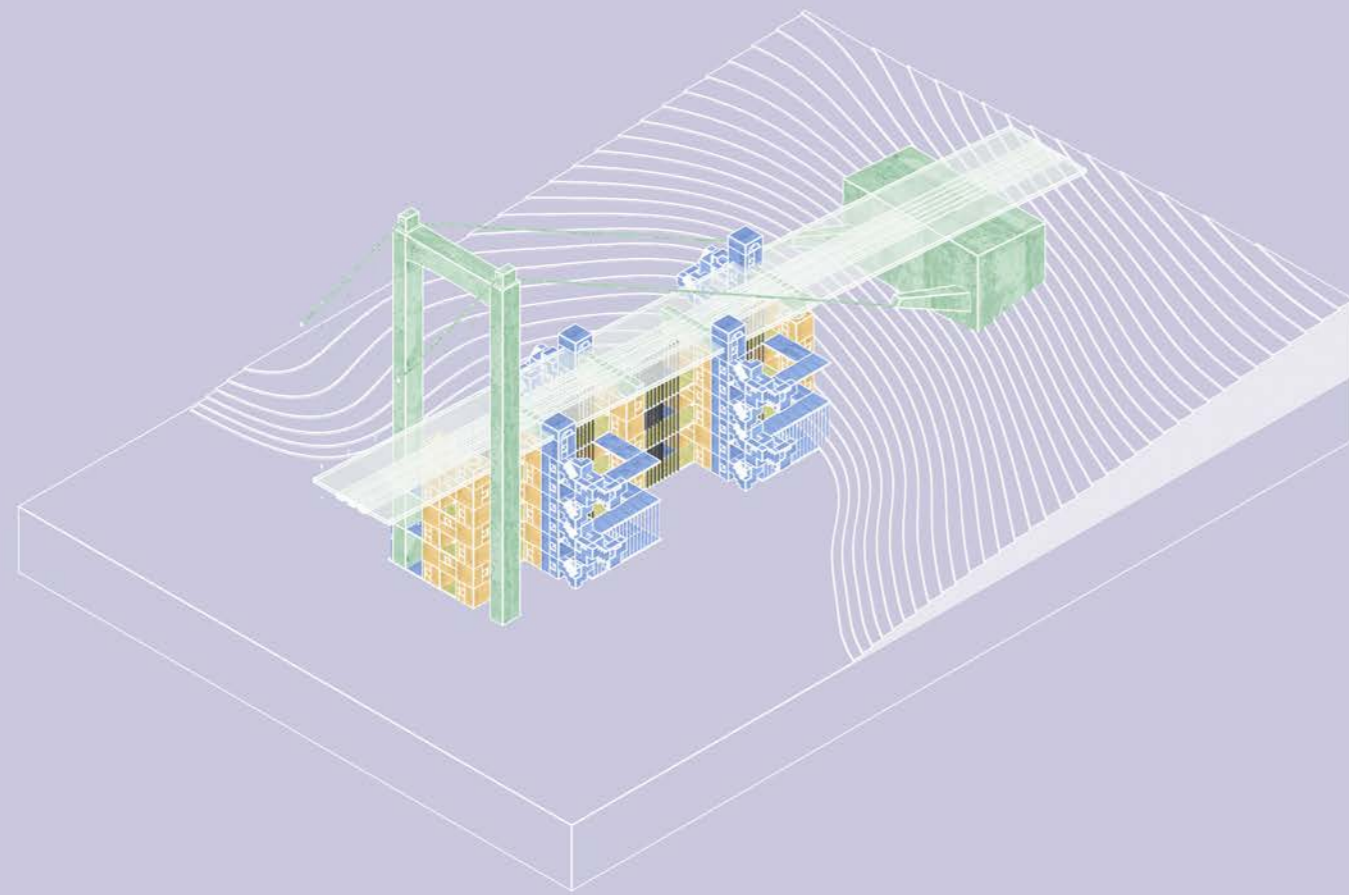


isometric illustration of the vertical gardens and its attachment to the stabilizers

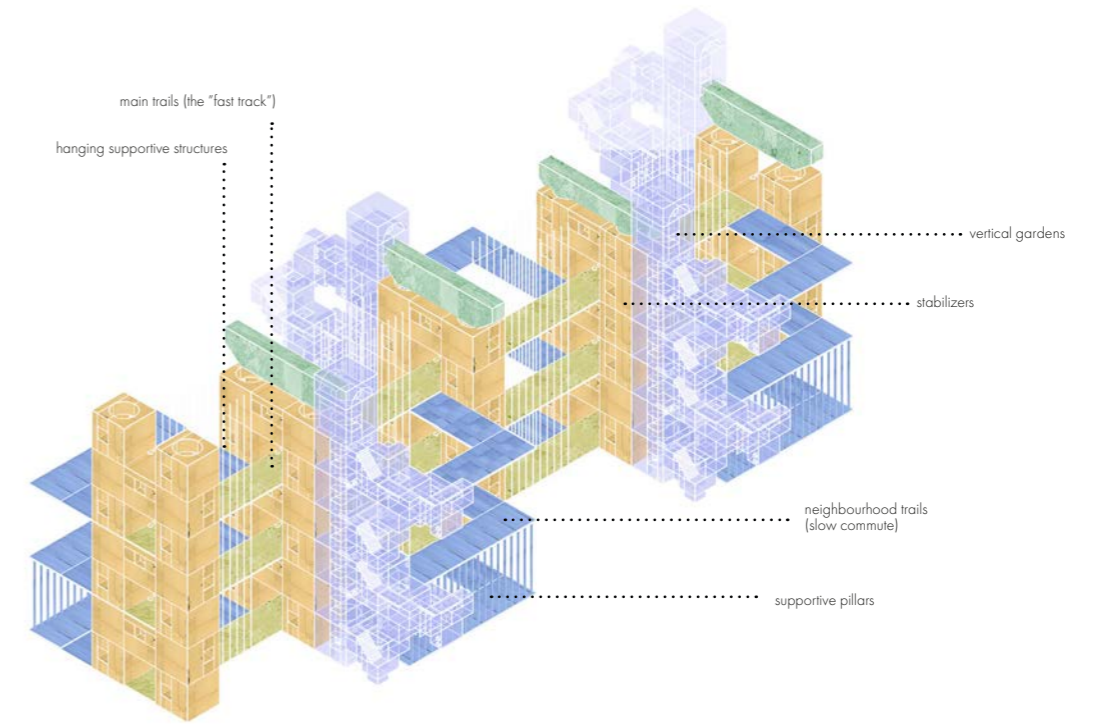
THE VERTICAL GARDENS(BLUE)

The vertical gardens are attached to the stabilizers, as an element of further stabilization as a complement to their main function which is vertical communication. The communication takes place in two different paces, whereas one is embedded in the square units (no. X from unit combinations diagram) and serves as the main vertical communication line. This is the stairwell where you move up and down quickly within the structure.

There is also a second, slower vertical communication on the outside of the stairwell. This is where you botanize amongst plants and trees, this is where you stroll around thinking about the world and your place in it. This is where you hang with friends and watch the sun set over the harbour inlet.



Digital model - horizontal movement

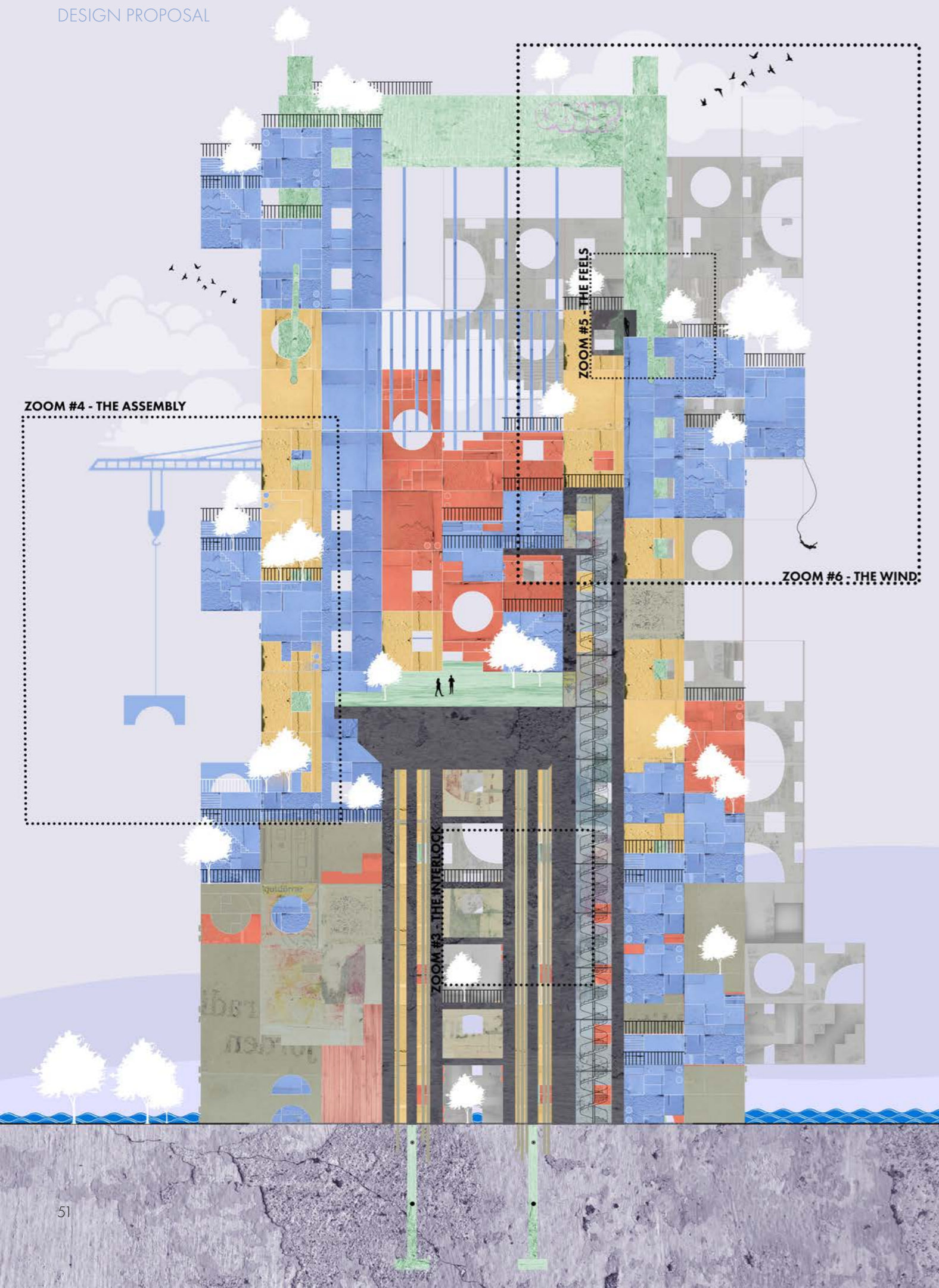


Horizontal movement diagram

THE HORIZONTAL TRAILS

The stabilizers and the vertical gardens are interconnected through a web of horizontal trails. The main trails (yellow) run straight ahead between the stabilizers on every other level and serves as the "main street". This trail gets you to all the different neighbourhoods within the structure without having to detour. The main trails are supported through hanging structures from the bridge, while also being secured to the ground.

The neighbourhood trails (blue) run through each of the neighbourhoods allowing you to reach your unit and the communal areas. The pace here is slower, but the trail is still wide to enhance detours while interacting with fellow citizens. The trails are laid out in an "S-shape" to form courtyards from the bottom level up, and each leg of this path is connected to a vertical garden. The trails are supported from below with beams.



THE CONNECTOR

What we will prioritize in the future is human connections. Connections to the elements, each other and to mother earth herself. This design proposal is a product of its own design process and will serve as a hub for connections and restrain isolation. Through several design explorations on different scales, the final purpose of this thesis is to piece the puzzle together and to take you on a visual journey and connect to the architecture within the megastructure.

SKY LEVEL

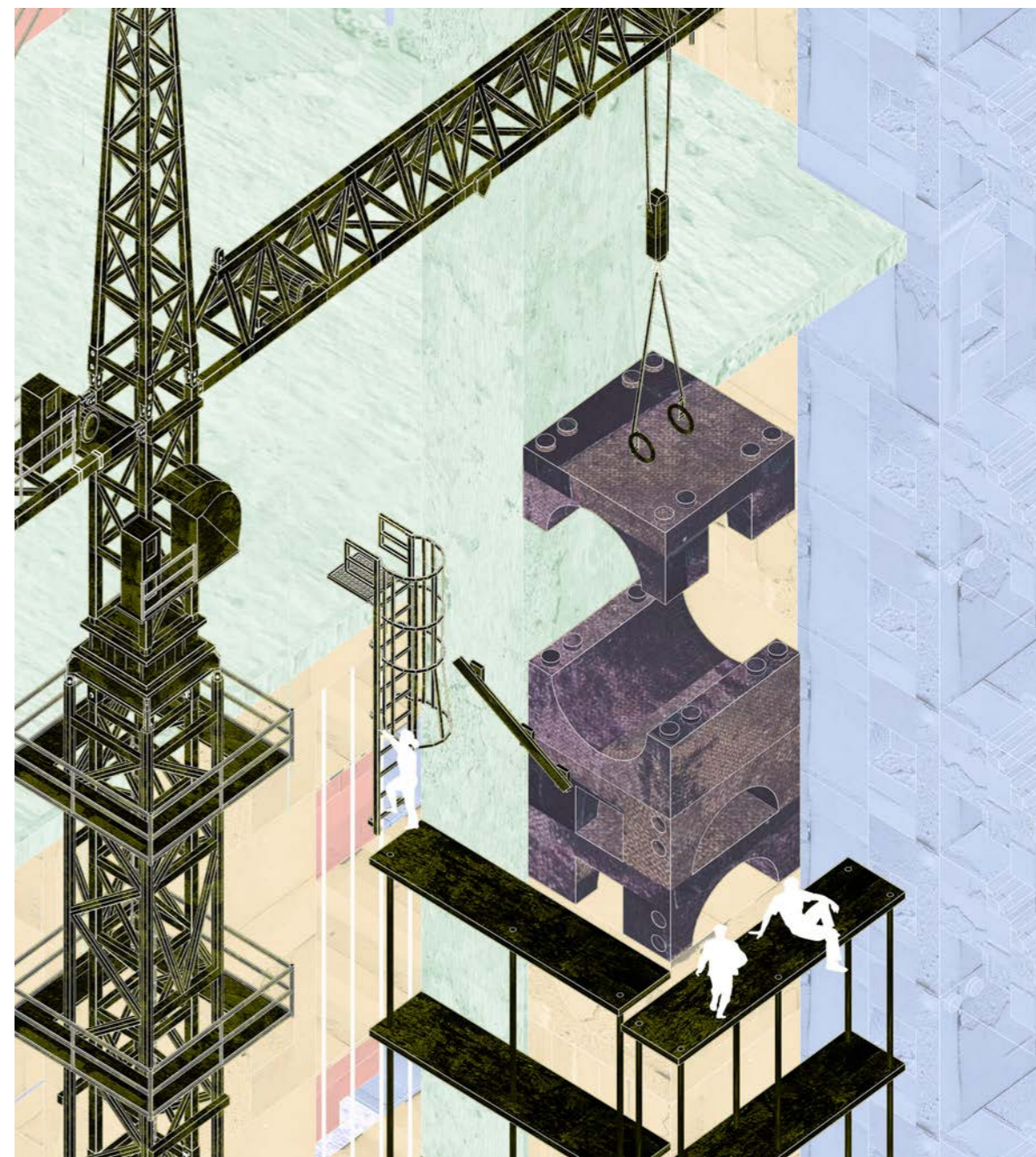
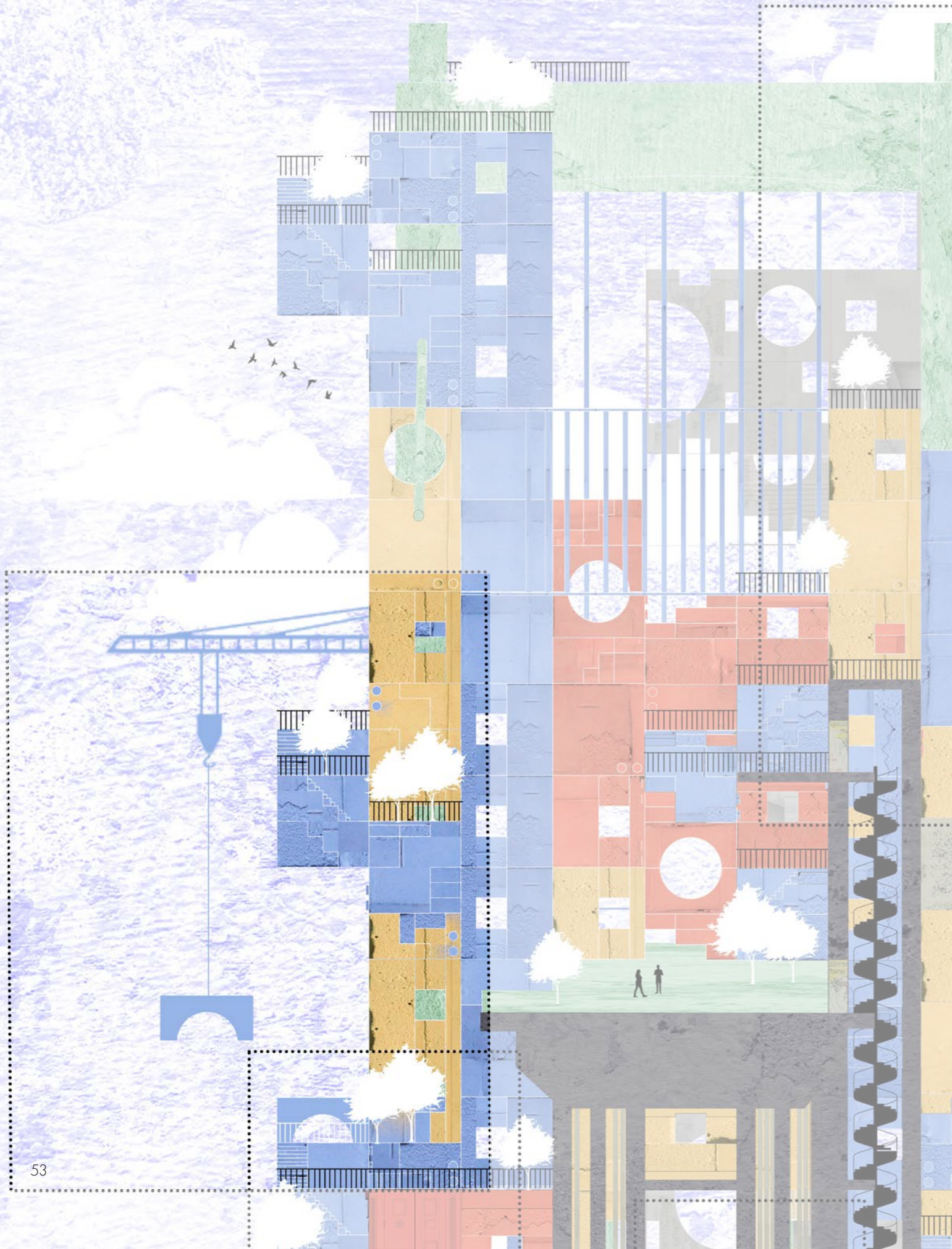
As time goes by, the structure grows to infiltrate the top of the bridge. The sky level is dedicated to the brave, to the ones not afraid of heights. This is where you can feel the wind in your hair and connect to the natural elements in an urban way.

BRIDGE LEVEL

The bridge as we know it is no more. Still possible to cross the water, but only in a natural way. Across the width of the roadway there grows trees and greenery, enabling nature to co-exist with the structure and reclaim its space.

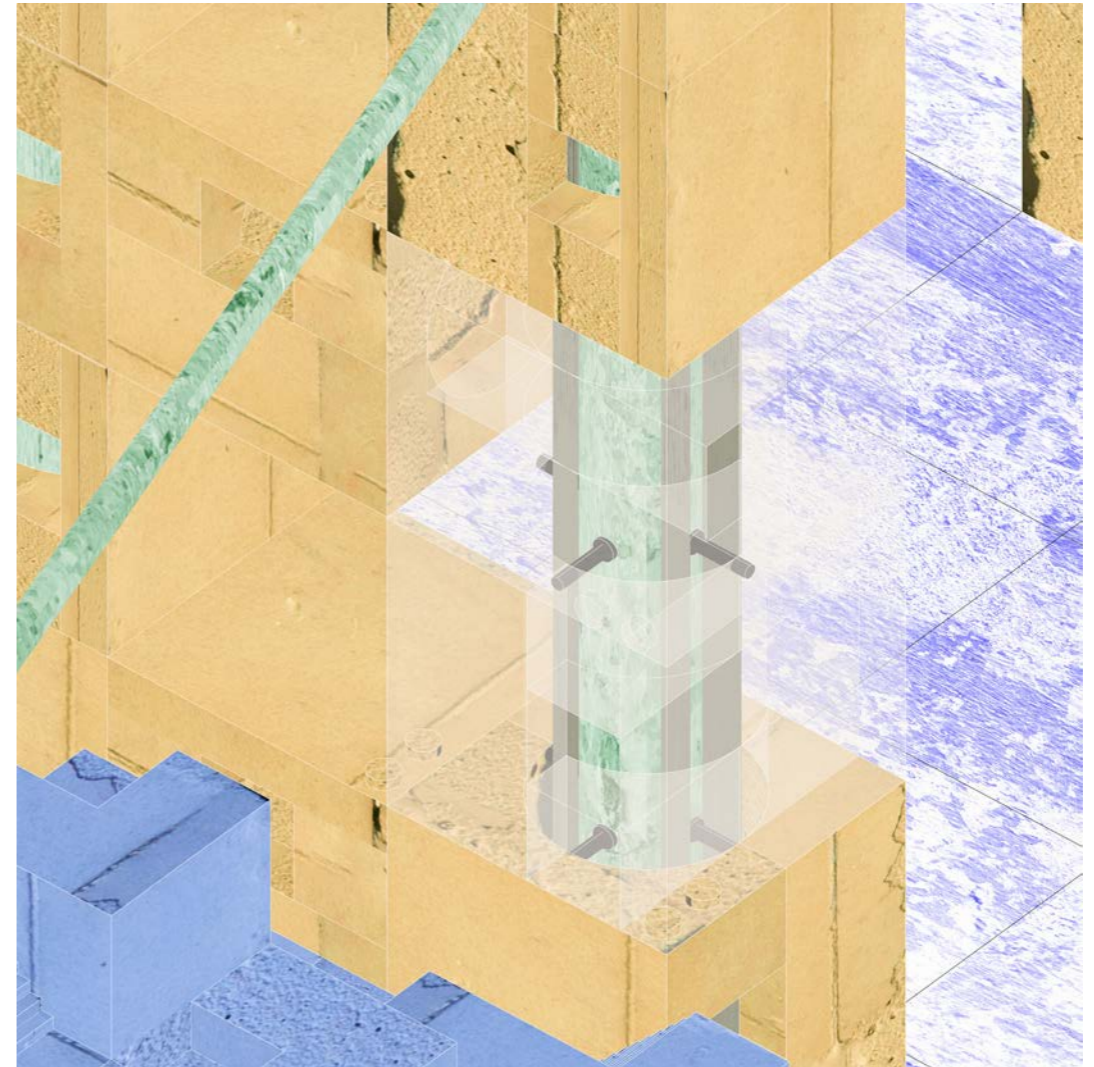
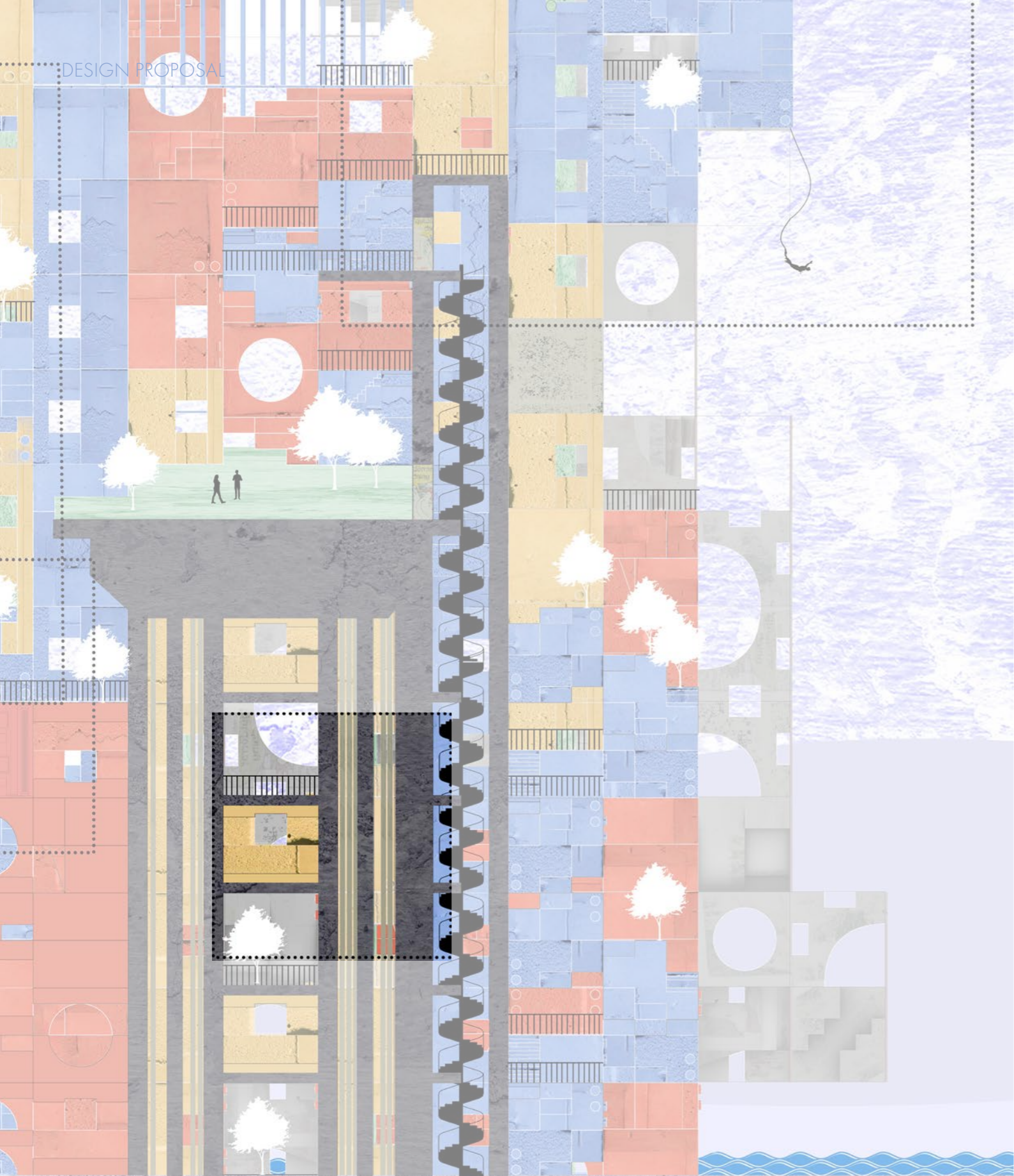
FOUNDATION LEVEL

Resting on and reinforcing the old infrastructure, the new structures begin to grow from the bottom up. This is where the community starts to scintillate and where every day life happens. People cook food, people rest, people wash their clothes and people get into arguments. People connect with themselves, each other, and the materiality of the structure.



CONSTRUCTION PROCESS

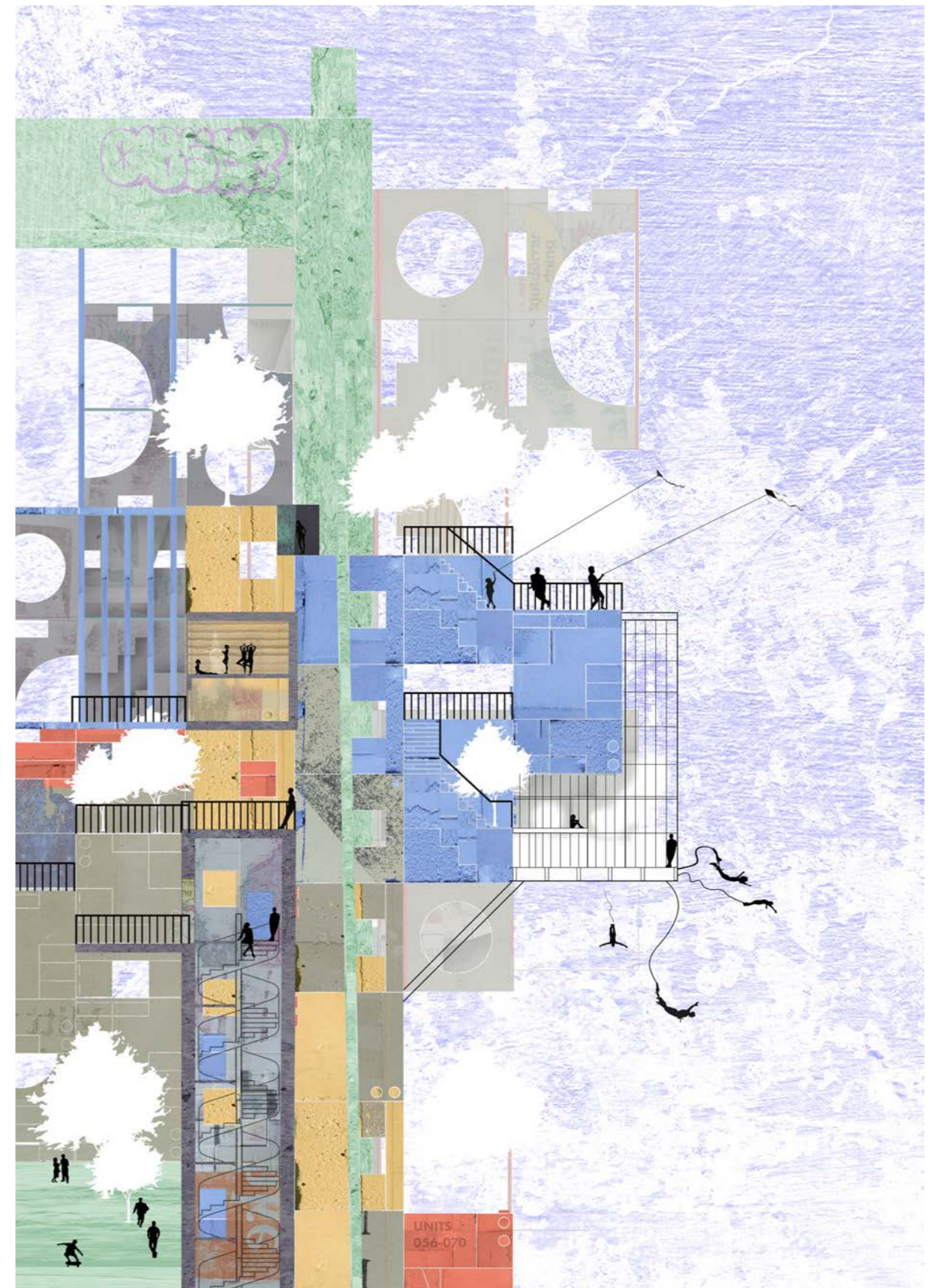
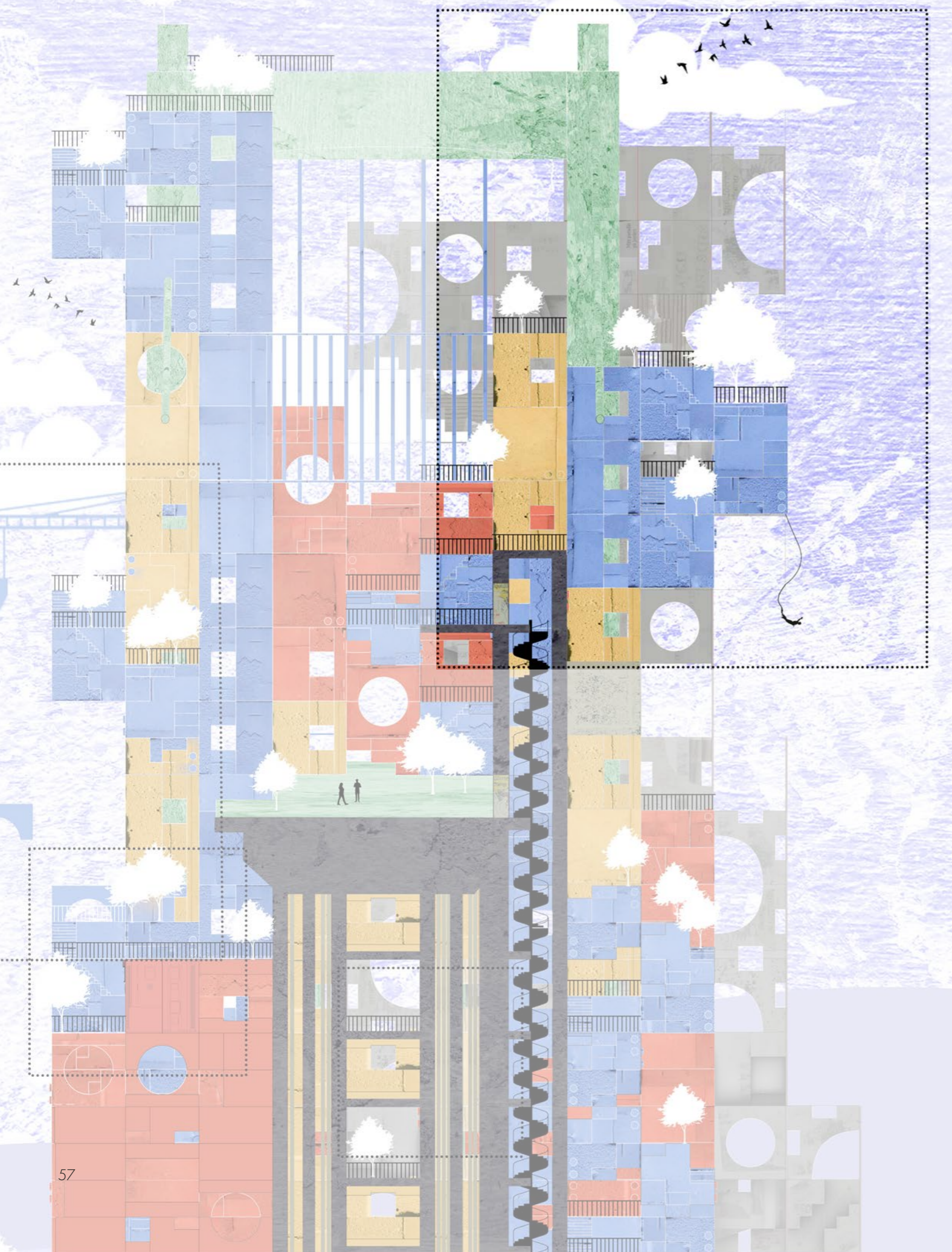
The units are constructed with structural imprints making them easy enough to stack together. The units are constructed on the ground and lifted into place by cranes. Through a little bit of human assistance, this is how the Connector connects to itself, making it possible for it to create new connections and keep on growing.



BRIDGE INTERLOCK

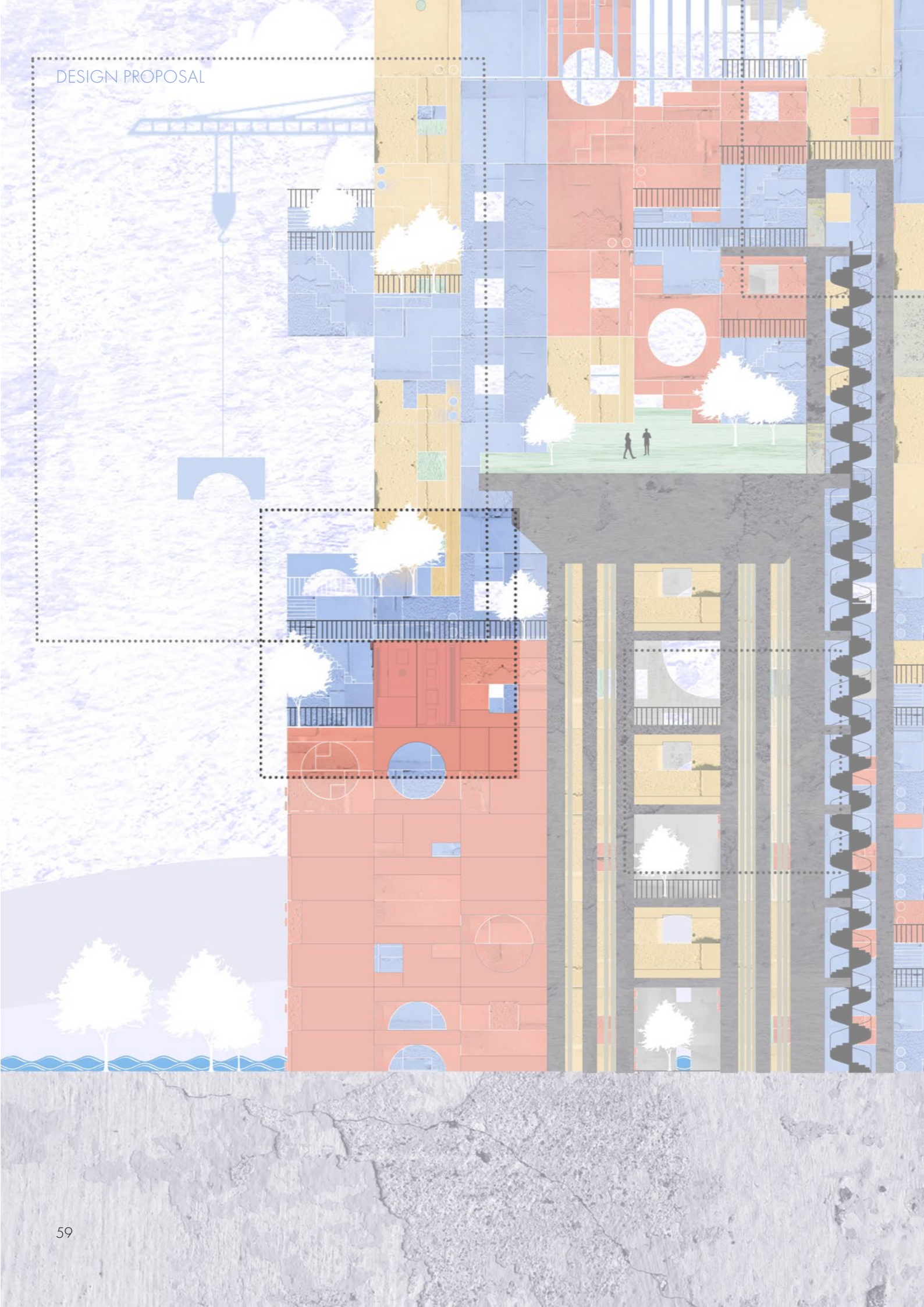
The stabilizers (yellow) are wrapped around the foundation pillars of the existing bridge. This makes the old and the new structures exist in symbiosis, one supporting the other. The stabilizers empower the bridge to be able to bear the extra load from the new structure, while the pillars ground the new structure and enables it to grow.

Within the cavity inside the stabilizers, plumbing and electrical wires are hidden away safely. This area can be reached with maintenance entrances on each level.



THE HUMAN SPACE

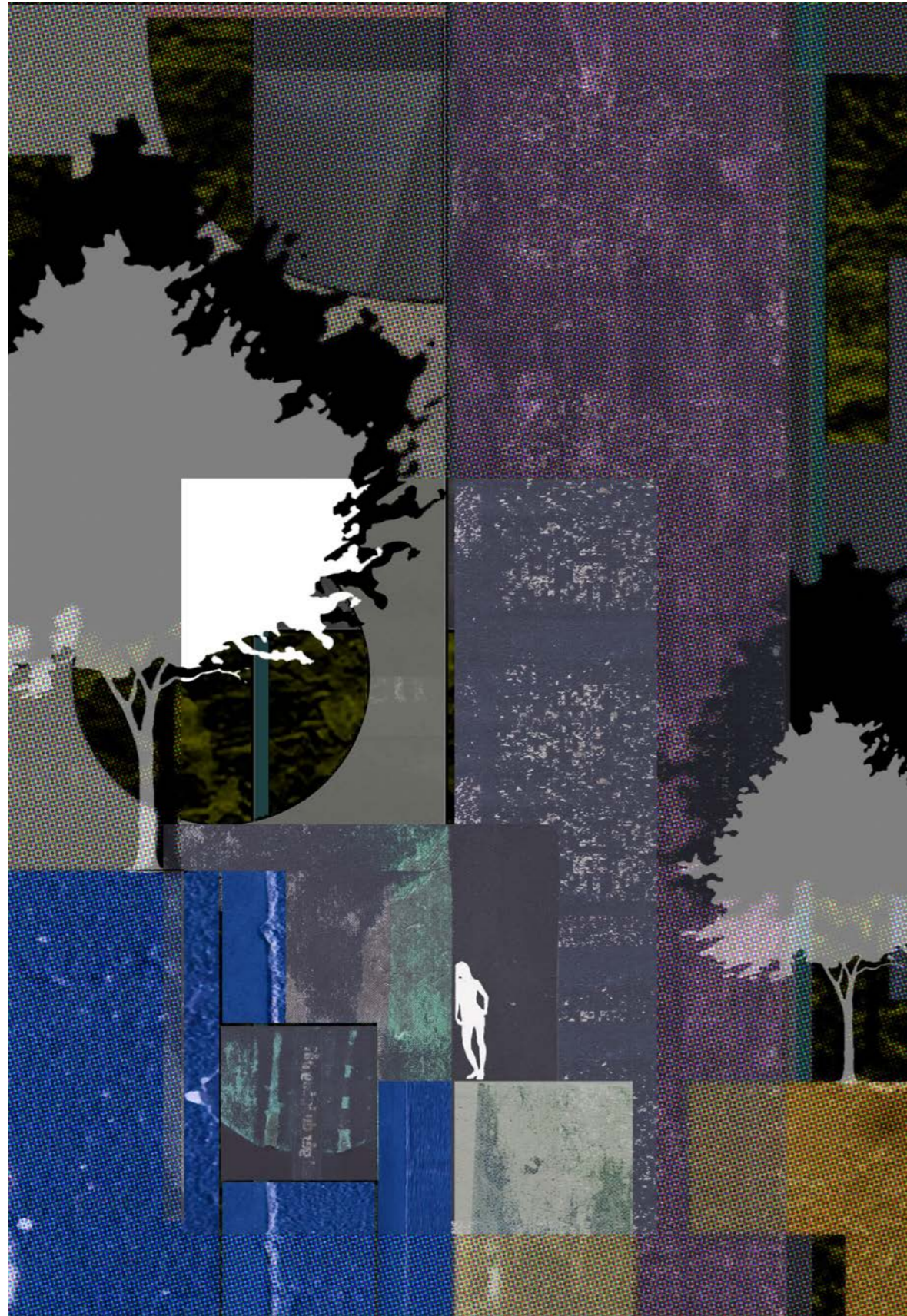
Connection to sky, nature, and climate. Hear the birds as they fly and take a well-deserved break in the yoga center or experience the rawness of the wind as you whirl through the vortex in the sky cage.



THE UNITS

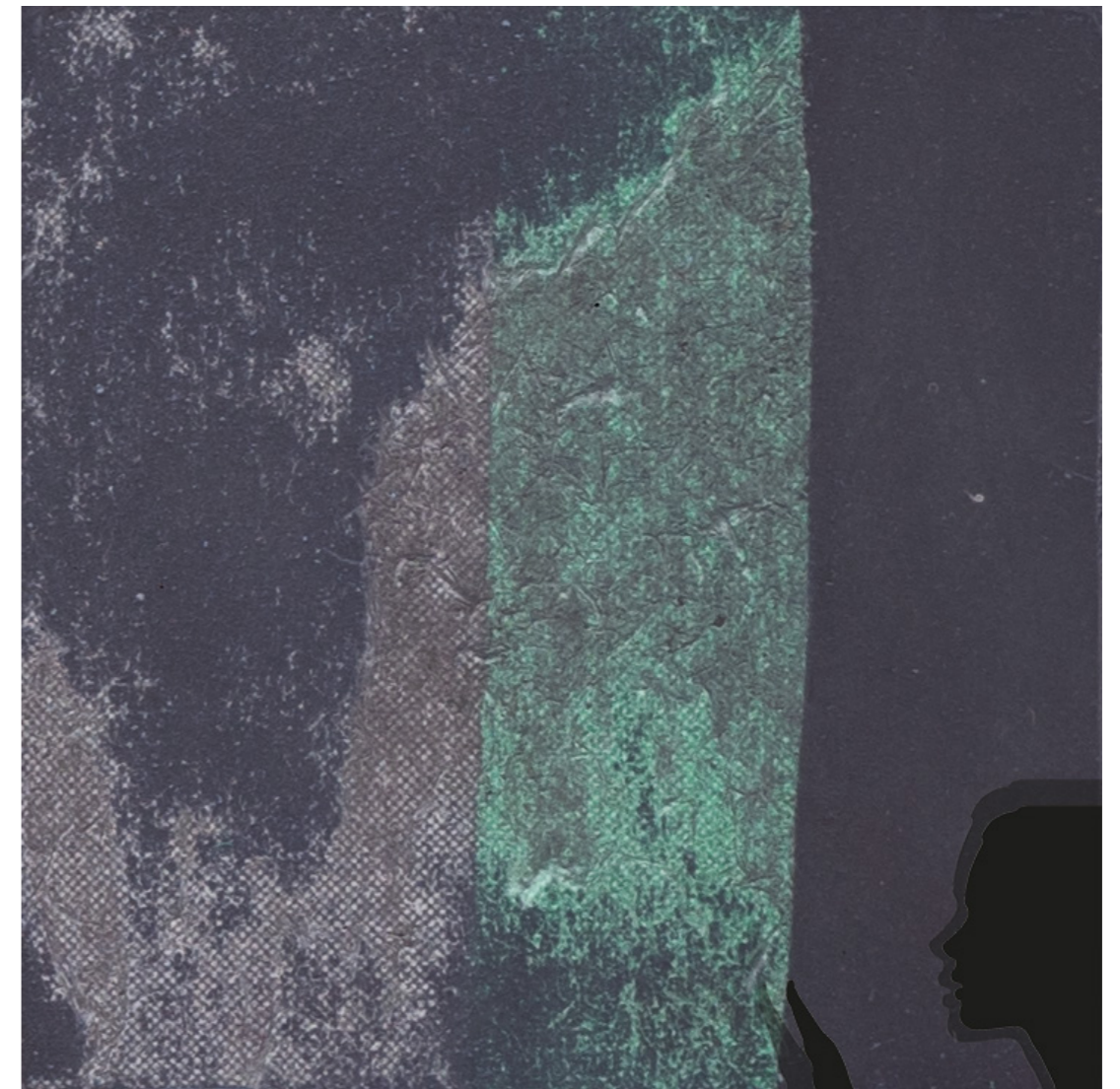
Each of the units are unique in their facades, constructed with different material that is available at the time. This one connects to the classic houses in Kungsladugård, with its wooden facades and decorative elements. Some parts are made of recycled wood, and some are casted using these wooden elements as a mould.

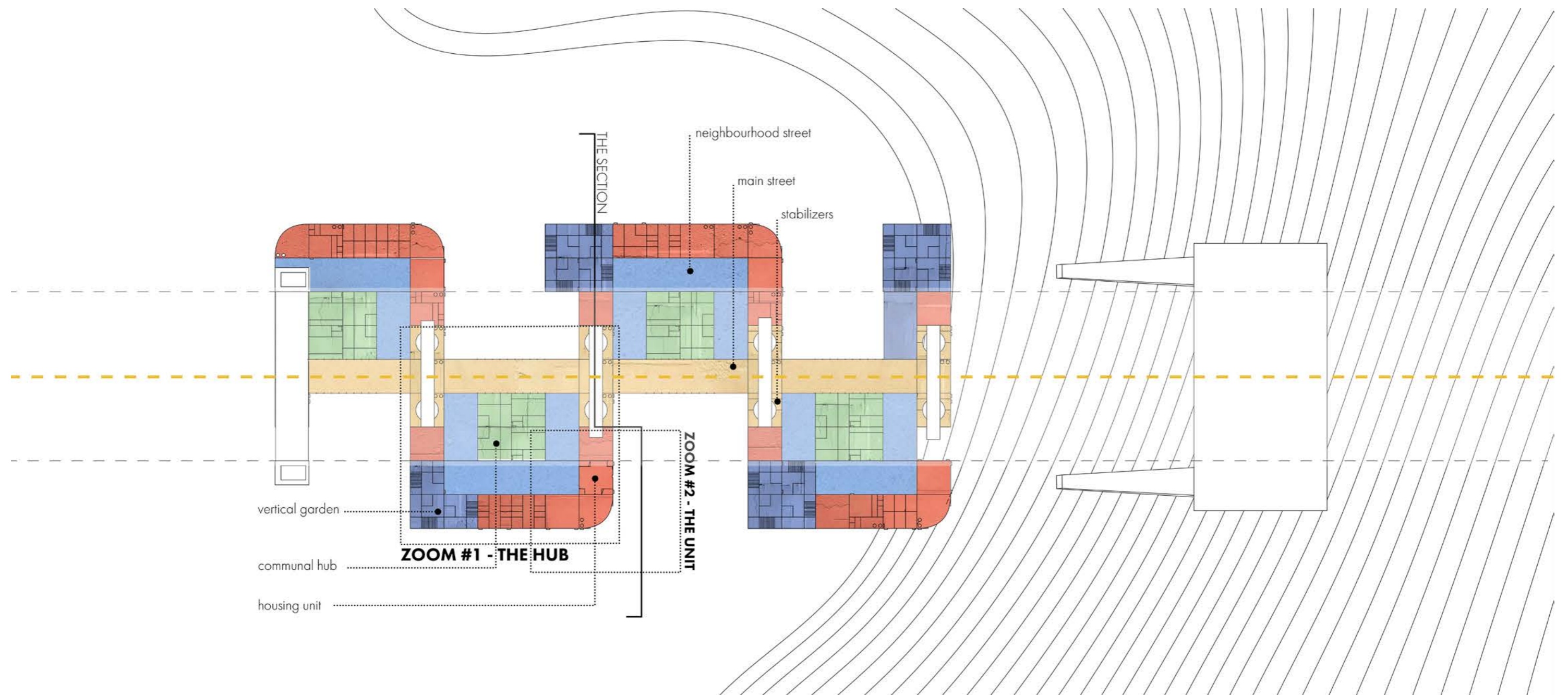
As seen in the plan illustrations (pageXX), none of the units has been fitted with kitchens. Instead, these functions are located within a communal hub, making natural choirs of life a possibility to connect to other citizens of the structure and leaving a grand space for human connections within the private units. This unit is a double unit and measures up to approximately 70 square meters.



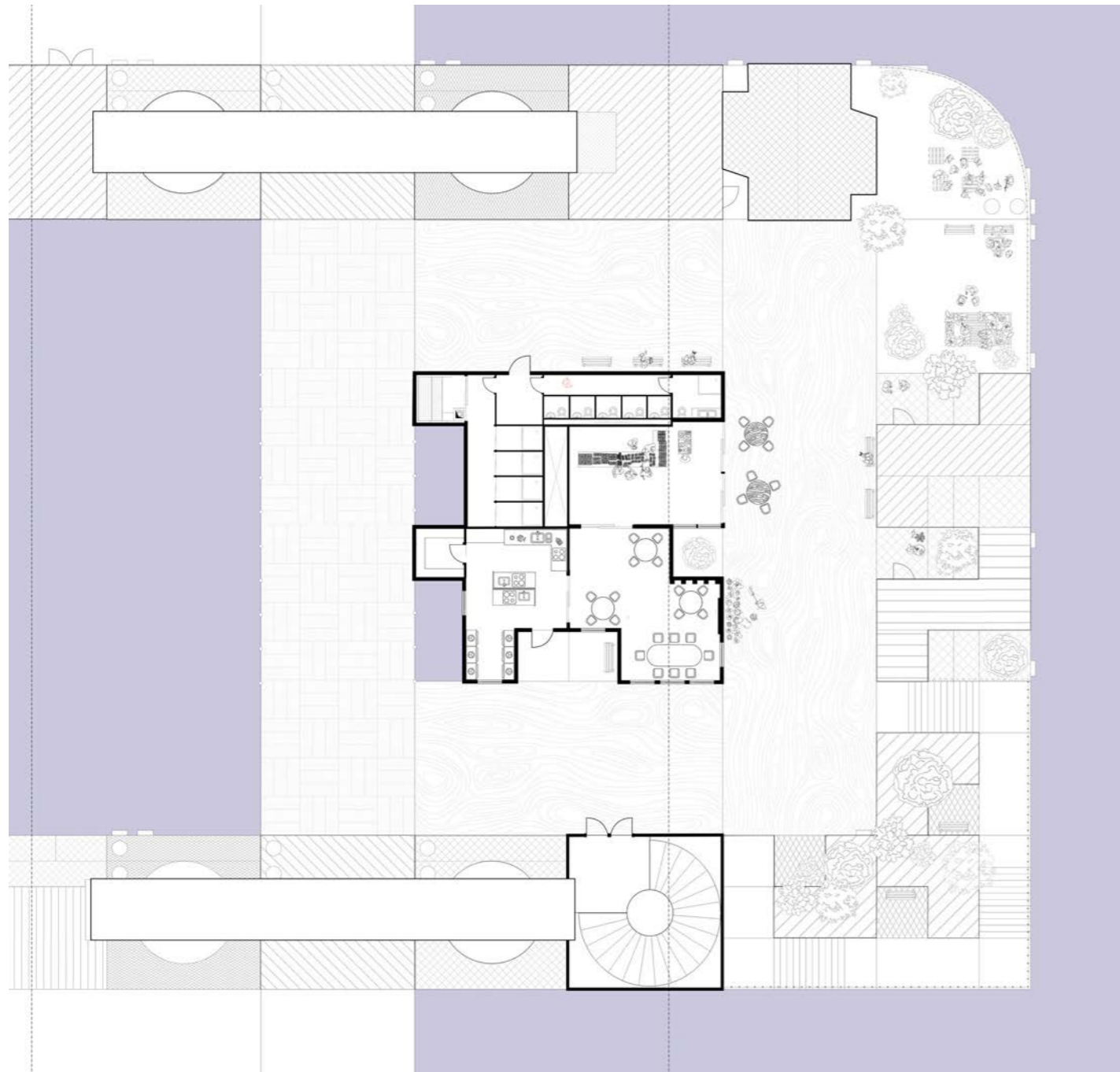
THE TECTONIC EXPERIENCE
(The ME-experience in the MEGA)

Using material from the small exploration, these drawings try to capture human emotion as they experience the tectonics of the structure, and every experience differ from person to person.

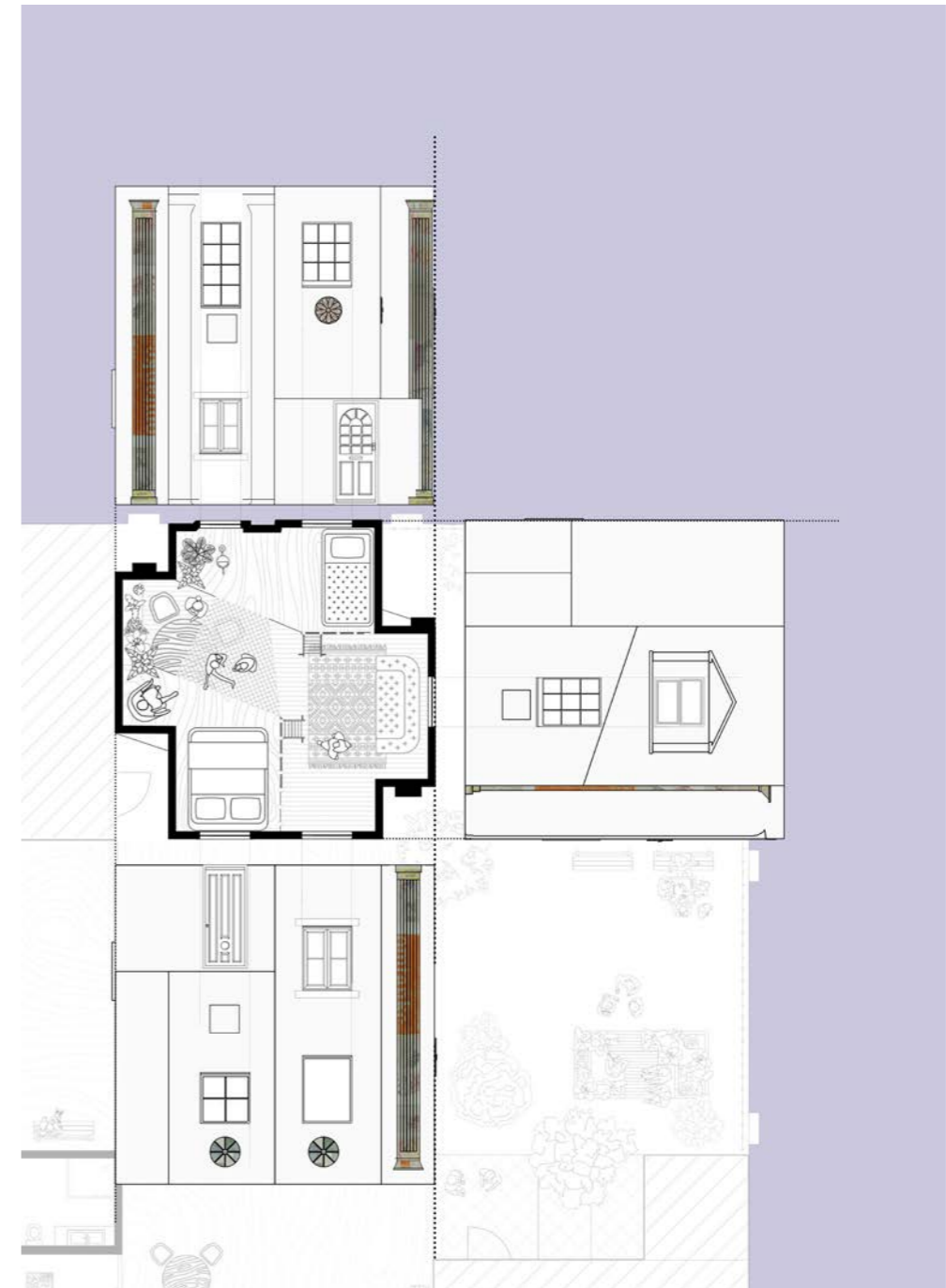




THE ILLUSTRATIVE PLAN



THE COMMUNAL HUB



THE UNIT - EXAMPLE OF LAYOUT AND FACADE

DISCUSSION

One could argue that these large-scale, massive megastructures that was imagined in the 60s is no longer current to the same extent. On one hand, the fundamental questions of value seem to have shifted. Nowadays, we value the small-scale, the close, calm and comforting over the giant, interconnected city. There is also the inevitable question about the environmental impact of the building industry, making architects around the globe carefully consider reuse over building new. This makes the implementation on a megastructure somewhat contradictory. Is there a place for megastructures in today's society? Is it possible to construct a megastructure that suits the people of today and their dreams, which can at the same time function as a hub for human relations?

In the aftermath of this thesis process, I could not really argue from an environmental point of view, since that was not the focus of this study. However, I imagine this to be an interesting perspective in the future, and to conduct similar explorations but with a focus on adaptive reuse of old buildings.

The focus of this thesis was creating a megastructure that rejects the rules of repetition and how to handle the human perspective by scaling down certain elements and make them connectable. However, in "Conversations with Architects" one could read a discussion between Heinrich Klotz and Paul Rudolph, where the issue of the massive scale in Megastructures are being brought up. Klotz asks the question "when dealing with such quantity, how can you possibly pay attention to every detail?", and I do think it is a relevant question to ask myself in the aftermath of this thesis. I set out with a goal to investigate the small scale, the human scale, but there is no human scale unless everything else works. I had to figure out the connections, the flows, the communication lines, which was a lot of fun and took a great deal of imagination, but it was also time consuming and left not enough time for the small scale details. However, I do believe I found out the answer to why the human experience is often forgotten in megastructure projects - it takes alot of imagination.

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